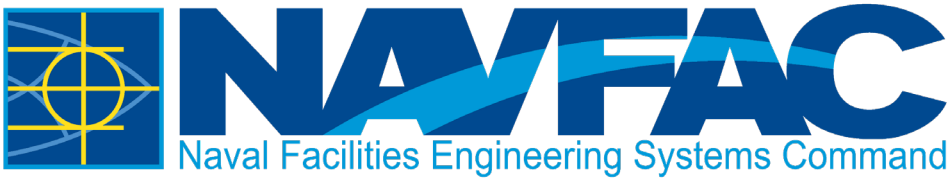

Naval Facilities Engineering Systems Command Hawaii
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Final

First Quarter 2021 - Quarterly Groundwater Monitoring Report Red Hill Bulk Fuel Storage Facility

JOINT BASE PEARL HARBOR-HICKAM, O‘AHU, HI

April 2021

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Naval Facilities Engineering Systems Command Hawaii
JBPHH HI

Final

First Quarter 2021 - Quarterly Groundwater Monitoring Report Red Hill Bulk Fuel Storage Facility

JOINT BASE PEARL HARBOR-HICKAM, O'AHU, HI

April 2021

Prepared for NAVFAC Hawaii by
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EXECUTIVE SUMMARY

This groundwater monitoring report presents the results of the First Quarter 2021 groundwater monitoring event conducted on January 18 through January 27, 2021, at the Red Hill Bulk Fuel Storage Facility (Facility), Joint Base Pearl Harbor-Hickam, Hawai‘i. The Facility is located in the south-central portion of the island of O‘ahu, Hawai‘i and currently contains 14 active and 6 inactive underground fuel storage tanks. The State of Hawai‘i Department of Health (DOH) Facility identification number is 9-102271. The DOH Release identification numbers are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted as part of the Red Hill groundwater long-term monitoring (LTM) program pursuant to the *Groundwater Protection Plan* (DON 2014) and performed under the Comprehensive Long-Term Environmental Action Navy V, contract task order N6274218F0126. Data collected for this groundwater monitoring event also support Sections 6 and 7 of the *Administrative Order on Consent* [AOC] *in the Matter of Red Hill Bulk Fuel Storage Facility, EPA Docket No: RCRA 7003-R9-2015-01 and DOH Docket No: 15-UST-EA-01*, Attachment A, Statement of Work (EPA Region 9 and DOH 2015). The purpose of the sampling is to assess the condition of groundwater beneath the Facility and to ensure that the United States Department of the Navy remains in compliance with DOH Underground Storage Tank release response requirements as described in Hawai‘i Administrative Rules Chapter 11-280.1, Subchapter 6, Release Response Action. The sampling was conducted in accordance with the Naval Facilities Engineering Systems Command, Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b), the DOH *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (DOH 2018), and the AOC Statement of Work Sections 6 and 7 *Work Plan/Scope of Work* (DON 2017a). A *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2021b) were also prepared for AOC Statement of Work Sections 6 and 7 that contain updated information related to the groundwater sampling.

During the First Quarter 2021 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from 18 monitoring locations within the Red Hill groundwater monitoring network in accordance with the *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2021b). These included:

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Twelve single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10, RHMW19, and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility
- One sampling zone each at two multilevel monitoring wells (RHMW13 and RHMW15) located within the Facility boundary

Of the multilevel monitoring wells listed above, the following zones were sampled during this event, based on either the zone’s proximity to the approximate elevation of the piezometric surface of the regional basal aquifer, or the zone being the topmost zone within the high-hydraulic-conductivity portions of unweathered basalt in that monitoring location:

- RHMW11 Zone 5
- RHMW13 Zone 5

- RHMW14 Zone 3
- RHMW15 Zone 5

The following multilevel monitoring zones were not sampled in this sampling event in accordance with the *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2021b):

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 4
- RHMW15 Zones 1 to 4

The following multilevel monitoring zones were not sampled in this sampling event due to low hydraulic conductivity at these zones:

- RHMW11 Zones 6 to 8
- RHMW14 Zones 4 to 8

Of the monitoring locations sampled during the First Quarter 2021 groundwater monitoring event, primary and field duplicate samples were collected from sampling point RHMW2254-01, monitoring well RHMW02, and multilevel monitoring well RHMW13 Zone 5 (RHMW13-05).

Analytical results from the sampling event were compared to the current LTM screening criteria. The LTM screening criteria were agreed upon by the AOC Parties and were presented in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016). The LTM screening criteria were updated (as applicable) with the most current (Fall 2017) DOH Tier 1 groundwater environmental action levels for sites where groundwater is a potential or current drinking water resource and the nearest surface water body is greater than 150 meters from the release site (DOH 2017).

The analytical results for groundwater samples collected from RHMW01, RHMW02, and RHMW03 were also compared to the Site-Specific Risk-Based Levels (SSRBLs) for total petroleum hydrocarbons (TPH)-diesel range organics (TPH-d) (4,500 micrograms per liter [µg/L]) and benzene (750 µg/L). The use of these screening SSRBLs was described in the Red Hill *Groundwater Protection Plan* (DON 2014) and later presented in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016).

No detectable amounts of nonaqueous-phase liquid (NAPL) or sheen were present in groundwater from any monitoring well during First Quarter 2021 groundwater monitoring event. A slight brown color was observed in the groundwater collected from HDMW2253-03, similar to observations made in previous events. Other than the slight brown color, no odors, sheen, or NAPL were noted at HDMW2253-03.

No odors were noted in any of the groundwater samples. Chemical of potential concern (COPC) concentrations exceeded LTM screening criteria only for samples collected from RHMW02. No SSRBL exceedances were reported.

Analytical results for the groundwater monitoring event are summarized as follows:

- *RHMW2254-01 (primary and duplicate), RHMW01, RHMW04, RHMW05, RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, RHMW19, RHMW11-05, RHMW13-05 (primary and duplicate), RHMW14-03, RHMW15-05, HDMW2253-03,* and *OWDFMW01:* No COPCs were detected.
- *RHMW02 (primary and duplicate):* TPH-d (1,500 and 1,600 µg/L), 1-methylnaphthalene (25 and 23 µg/L), 2-methylnaphthalene (17 and 16 µg/L), and naphthalene (44 and 41 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d with silica gel cleanup (SGC) analysis was detected at significantly lower concentrations than the non-SGC analysis, suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-d with SGC analysis (390 and 380 µg/L) and TPH-residual range organics (TPH-o) (180 J and 330 µg/L) were detected at concentrations below their respective LTM screening criteria (400 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (180 J µg/L) and TPH-o (220 J µg/L) were detected at estimated concentrations below their respective LTM screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products. No other COPCs were detected.

Analytical results of natural attenuation parameters (NAPs) suggest that biodegradation is occurring in the vicinity of RHMW02, based on depleted dissolved oxygen (DO), nitrate, and sulfate concentrations and elevated dissolved methane concentrations. Likewise, the concentrations of SGC TPH-d and polynuclear aromatic hydrocarbons found at RHMW02 further underscore that biodegradation is occurring at the site. Even though RHMW01 was non-detect for TPH-d and TPH-o, the depleted DO, dissolved methane, depleted nitrate, and reduced sulfate concentrations at this well suggest biodegradation is occurring, which is consistent with historical observations at this location. Depleted DO and COPC detections at RHMW03 indicate that biodegradation is likely occurring there. Evaluation of COPC results and NAP concentrations at all other monitoring locations does not indicate biodegradation in those locations.

Lead scavengers were not detected at RHMW13 during the First Quarter 2021 monitoring event, which completes 1 year of sampling with no detections at all sampled RHMW13 multilevel monitoring well zones. Based on no detections of lead scavengers at all sampled RHMW13 multilevel monitoring well zones for 1 year of sampling, it is recommended that testing for lead scavengers be discontinued for RHMW13.

Based on the groundwater monitoring results, pursuant to the Red Hill *Groundwater Protection Plan* (DON 2014) and in accordance with AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015), groundwater monitoring at locations within the Red Hill groundwater monitoring network will continue. It is also recommended that the Red Hill groundwater LTM program continue testing for NAPs at each monitoring event and continue SGC TPH-d and TPH-o analysis for all locations with non-SGC TPH-d or TPH-o detections.

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CONTENTS

Executive Summary iii

Acronyms and Abbreviations ix

1. Introduction 1

    1.1 Site Description 1
    1.2 Physical Setting 5
    1.3 Background 6
        1.3.1 Previous Groundwater Monitoring Results 7
        1.3.2 TPH Analysis Concerns 14
        1.3.3 Previous Reports 15

2. Groundwater Monitoring Activities 18

    2.1 Groundwater Sampling 19
        2.1.1 Single-Screen (Non-Multilevel) Monitoring Well Sampling 19
        2.1.2 Multilevel Monitoring Well Sampling 20
    2.2 Field Quality Assurance/Quality Control 22
    2.3 Sample Handling and Analysis 22
    2.4 Decontamination 23
    2.5 Investigation-Derived Waste Management 23

3. Data Evaluation and Quality Assessment 23

    3.1 Groundwater Level Measurements 23
    3.2 Analytical Results 25
        3.2.1 Analytical Results 39
    3.3 Groundwater Contaminant Concentrations 39
    3.4 Data Validation and Assessment 39
    3.5 Data Assessment and Usability Conclusions 43

4. Natural Attenuation Evaluation 45

    4.1 Evaluation Using Natural Attenuation Parameters 46
        4.1.1 Dissolved Oxygen and Oxidation-Reduction Potential 46
        4.1.2 Nitrate 47
        4.1.3 Ferrous Iron 47
        4.1.4 Methane 47
        4.1.5 Sulfate 48
        4.1.6 Chloride 48
        4.1.7 Alkalinity 48
        4.1.8 TPH with Silica Gel Cleanup 49
        4.1.9 Total and Dissolved Organic Carbon 49
    4.2 NAP Concentrations 50

5. Lead Scavengers 53

6. Summary, Conclusions, and Recommendations 54

    6.1 Summary 54
    6.2 Conclusions and Recommendations 55

7. References 56

APPENDIXES

A Cumulative Historical Monitoring Results

B Field Activity Documentation, First Quarter 2021 (on CD-ROM at end of document)

C Analytical Documentation, First Quarter 2021 (on CD-ROM at end of document)

FIGURES

1 Site Location Map 3

2 COPC Detections 33

3A Natural Attenuation Parameter Results 35

3B Natural Attenuation Parameter Results 37

TABLES

1-1 Current Status of the Facility's Fuel Storage Tanks as of January 2021 2

1-2 Distance of Sampling Locations to South Hālawa Stream 6

1-3 Red Hill Groundwater LTM Program Analytical Laboratories 7

1-4 Summary Statistics of Cumulative Groundwater COPC Data as of the First Quarter 2021 Quarterly Groundwater Monitoring Event 9

1-5 Previous Groundwater Monitoring Reports 16

2-1 Groundwater Sampling Program for the First Quarter 2021 Quarterly Monitoring Event 21

3-1 Groundwater Elevations 24

3-2 Groundwater and QC Sample Results for the First Quarter 2021 Quarterly Groundwater Monitoring Event 27

3-3 Field Duplicate Analyte RPDs 40

3-4 Nitrate Result Confirmation 42

4-1 Comparison of TPH Concentrations Without and With Silica Gel Cleanup, First Quarter 2021 Quarterly Groundwater Monitoring Event 51

5-1 Lead Scavengers Results at RHMW13, Second Quarter 2020 – First Quarter 2021 53

ACRONYMS AND ABBREVIATIONS

%D	percent difference
%R	percent recovery
µg/L	microgram per liter
AOC	Administrative Order on Consent
bgs	below ground surface
CIR	clean, inspect, and repair
COPC	chemical of potential concern
CSM	conceptual site model
DL	detection limit
DO	dissolved oxygen
DOC	dissolved organic carbon
DoD	Department of Defense, United States
DOH	Department of Health, State of Hawai‘i
EAL	environmental action level
EPA	Environmental Protection Agency, United States
F-24	North Atlantic Treaty Organization-grade F-24 jet fuel
F-76	Marine Diesel Fuel
Facility	Red Hill Bulk Fuel Storage Facility
ID	identification
IDW	investigation-derived waste
IRR	Investigation and Remediation of Releases
J	estimated value
JBPHH	Joint Base Pearl Harbor-Hickam
JP-5	Jet Fuel Propellant No. 5
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
LTM	long-term monitoring
mg/L	milligram per liter
mL	milliliter
MS	matrix spike
MSD	matrix spike duplicate
NAP	natural attenuation parameter
NAPL	nonaqueous-phase liquid
NAVFAC	Naval Facilities Engineering Systems Command
Navy	Department of the Navy, United States
No.	number
ORP	oxidation-reduction potential
PAH	polynuclear aromatic hydrocarbon
PID	photoionization detector
ppm	parts per million
QA	quality assurance
QC	quality control
QSM	Quality Systems Manual

RPD	relative percent difference
SAP	sampling and analysis plan
SGC	silica gel cleanup
SIM	selected ion monitoring
SOW	scope of work
SSRBL	Site-Specific Risk-Based Level
TGM	Technical Guidance Manual
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons – diesel range organics
TPH-g	total petroleum hydrocarbons – gasoline range organics
TPH-o	total petroleum hydrocarbons – residual range organics (i.e., TPH-oil)
U	non-detect value
U.S.	United States
UJ	non-detect estimated value
VOC	volatile organic compound
WP	work plan

1. Introduction

This groundwater monitoring report presents the results of the First Quarter 2021 groundwater monitoring event conducted on January 18 through January 27, 2021, at the Red Hill Bulk Fuel Storage Facility (Facility), Joint Base Pearl Harbor-Hickam (JBPHH), O'ahu, Hawai'i (Figure 1). In accordance with the *Groundwater Protection Plan* (DON 2014), the purpose of the sampling is to (1) assess the condition of groundwater beneath the Facility with respect to chemical constituents associated with Jet Fuel Propellant and Marine Diesel Fuel (F-76), and (2) ensure that the United States (U.S.) Department of the Navy (Navy) remains in compliance with the State of Hawai'i Department of Health (DOH) Underground Storage Tank release response requirements codified in Hawai'i Administrative Rules Chapter 11-280.1, Subchapter 6, Release Response Action. The DOH Facility identification number (no.) for the Facility is 9-102271. The DOH Release identification nos. are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted under Naval Facilities Engineering Systems Command (NAVFAC) Pacific Contract No. N62742-17-D-1800 as part of the long-term groundwater and soil vapor monitoring program at the Facility for Naval Supply Systems Command Fleet Logistics Center Pearl Harbor. Soil vapor monitoring at Red Hill is conducted under another contract and reported separately. The groundwater sampling was conducted in accordance with the NAVFAC Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b); the DOH *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (TGM) (DOH 2018); and the Administrative Order on Consent (AOC) Statement of Work Sections 6 and 7, *Work Plan/Scope of Work* (WP/SOW) (DON 2017a). A *Sampling and Analysis Plan* (SAP) and addenda (DON 2017b; 2017c; 2017d; 2021b) containing updated information for the groundwater sampling were also prepared for AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015).

This report presents the results for sampling activities conducted at groundwater monitoring locations both within and outside of the Facility boundaries. Cumulative historical monitoring results for the Red Hill groundwater monitoring network are presented in tables and charts in Appendix A. Field activity and analytical documentation for the monitoring event are presented in Appendix B and Appendix C, respectively.

1.1 SITE DESCRIPTION

The Facility is located on Federal Government land (on land zoned by the City and County of Honolulu as a mix of F-1 Federal and Military and P-1 Restricted Preservation districts) in south-central O'ahu, approximately 2.5 miles northeast of Pearl Harbor (Figure 1). It is located on a low ridge on the western edge of the Ko'olau Mountain Range that divides Hālawa Valley and Moanalua Valley. The Facility occupies 144 acres of land, and the majority of the ground surface of the site lies at an elevation of approximately 200–500 feet above mean sea level. Proximate to the Facility lie Hālawa Industrial Park and Hālawa Correctional Facility to the north, preservation land to the northeast, residential neighborhoods in Moanalua Valley to the southeast, and additional residential neighborhoods and the U.S. Coast Guard reservation to the southwest. A quarry is located less than one-quarter mile to the northwest.

The Facility currently contains 14 active and 6 inactive underground fuel storage tanks that are operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor. Each tank has a capacity of approximately 12 million gallons. The bottoms of the Facility's tanks are located a minimum of approximately 100 feet above the basal aquifer. The fuel storage tanks currently contain Jet Fuel Propellant No. 5 (JP-5), North Atlantic Treaty Organization-grade F-24 jet fuel (F-24), and F-76. The current status of each tank is summarized in Table 1-1.

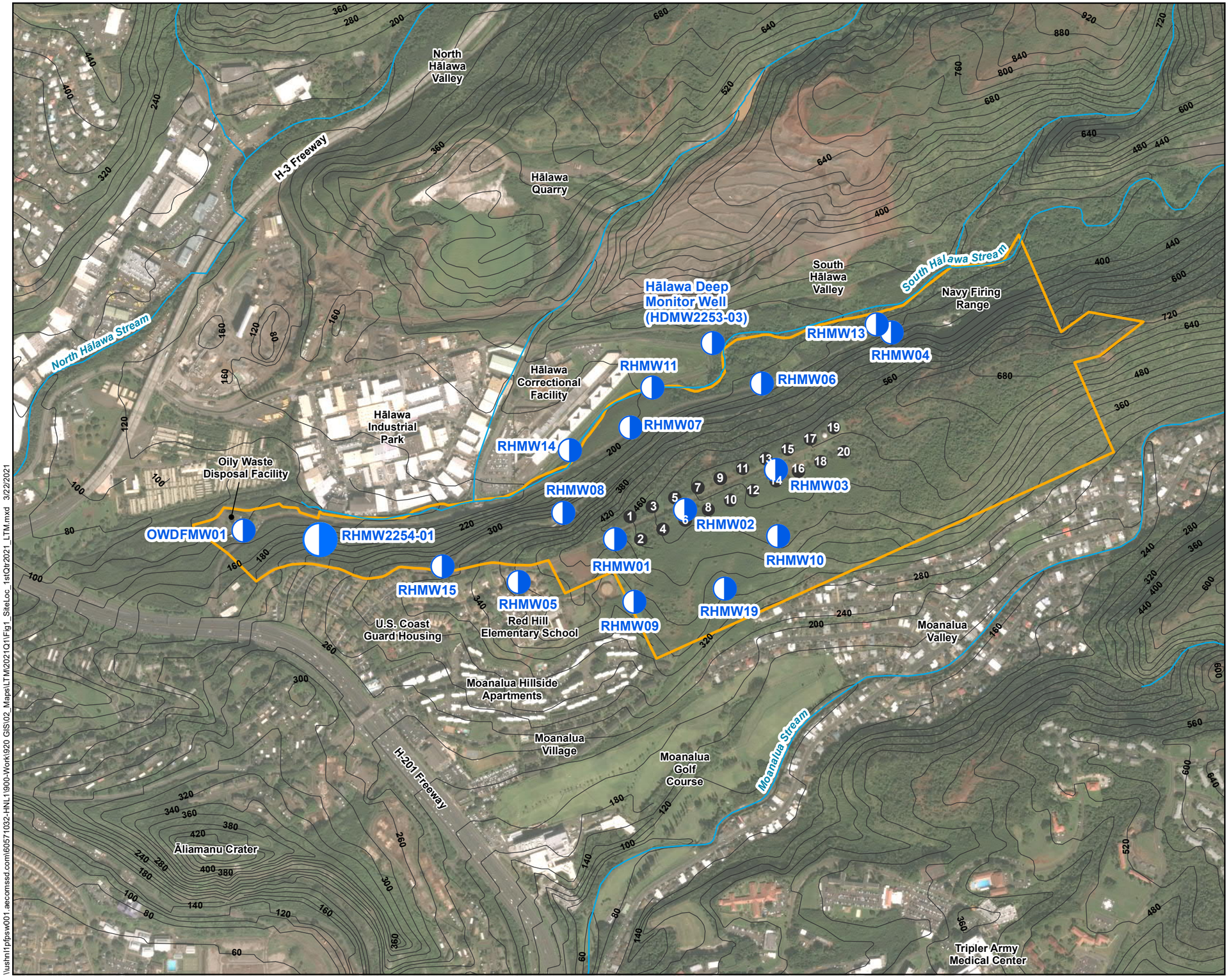
Table 1-1: Current Status of the Facility's Fuel Storage Tanks as of January 2021

Tank ID	Fuel Type	Status [a]	Capacity (million gallons) [b]
F-1	Empty	Inactive	12.0
F-2	F-24	Active	12.0
F-3	F-24	Active	12.0
F-4	F-24	Active	12.0
F-5	F-24	Active	12.7
F-6	F-24	Active	12.7
F-7	JP-5	Active	12.7
F-8	JP-5	Active	12.7
F-9	JP-5	Active	12.7
F-10	JP-5	Active	12.7
F-11	JP-5	Active	12.7
F-12	JP-5	Active	12.7
F-13	Empty	Inactive (CIR)	12.7
F-14	Empty	Inactive (CIR)	12.7
F-15	F-76	Active	12.7
F-16	F-76	Active	12.7
F-17	Empty	Inactive (CIR)	12.7
F-18	Empty	Inactive (CIR)	12.7
F-19	Empty	Inactive	12.7
F-20	JP-5	Active	12.7

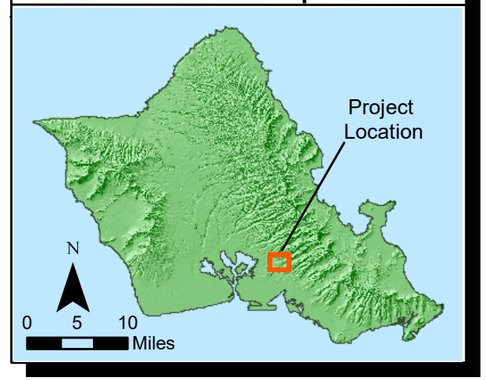
ID identification
CIR clean, inspect, and repair
[a] Active status indicates that a tank is currently available for use. Inactive status indicates that a tank is currently not available for use. CIR status indicates a tank is currently scheduled for cleaning, inspection, and repair activities.
[b] Tank capacity in this table is approximate and is not necessarily the tank-rated capacity or maximum allowable fill volume.

One sampling point at Red Hill Shaft (RHMW2254-01), 12 single-screen monitoring wells (RHMW01 to RHMW10, RHMW19, and OWDFMW01), and two multilevel monitoring wells (RHMW13 and RHMW15) are located within the Facility boundary. One deep monitor well (HDMW2253-03) and two multilevel monitoring wells (RHMW11 and RHMW14) are located outside the Facility boundary.

Of the non-multilevel monitoring locations, RHMW01 to RHMW10, RHMW19, and OWDFMW01 are conventional monitoring wells with single screens typically installed across or near the water table. Sampling point RHMW2254-01 is located inside the shaft of Navy Supply Well 2254-01. HDMW2253-03 is a deep monitor well installed by the State of Hawai'i Department of Land and Natural Resources at the Hālawa Correctional Facility and has a solid casing installed to approximately 50 feet below the water table.



Location Map



Legend

- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Topographic Contour (feet above mean sea level)
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

N

0 400 800 1,600 Feet

Figure 1
Site Location Map
1st Qtr 2021 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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RHMW11, RHMW13, RHMW14, and RHMW15 are multilevel monitoring wells that are screened at the piezometric surface of the regional basal aquifer and at other depths above and below the piezometric surface.

- RHMW11 has eight monitoring zones: one zone (Zone 8) near the groundwater table, two zones (Zones 6 and 7) below the groundwater table with sampling ports within the saprolite layer (the layer of heavily weathered and altered clay-rich basalts), and five zones (Zones 1 to 5) below the groundwater table with sampling ports within the basalt layer.
- RHMW13 has five monitoring zones all located within high-hydraulic-conductivity portions of unweathered basalt: one monitoring zone (Zone 5) near the approximate elevation of the piezometric surface of the regional basal aquifer, and four zones (Zones 1 to 4) below the elevation of the regional basal aquifer.
- RHMW14 has eight monitoring zones: one monitoring zone (Zone 8) near the approximate elevation of the piezometric surface of the regional basal aquifer, four zones (Zones 4 to 7) below the approximate elevation of the piezometric surface of the regional basal aquifer with sampling ports within basalt with relatively lower hydraulic conductivity, and three zones (Zones 1 to 3) below the elevation of the piezometric surface of the regional basal aquifer with sampling ports within the relatively higher-hydraulic-conductivity portions of the unweathered basalt of the regional basal aquifer.
- RHMW15 has five monitoring zones, all located within high-hydraulic-conductivity portions of unweathered basalt: one monitoring zone (Zone 5) near the approximate elevation of the piezometric surface of the regional basal aquifer, and four zones (Zones 1 to 4) below the elevation of the regional basal aquifer.

1.2 PHYSICAL SETTING

The Facility is situated on the southwest flank of the Koʻolau shield volcano and is primarily underlain by Koʻolau volcanic series basalts. Climatological conditions in the area of the Facility consist of warm to moderate temperatures and low to moderate rainfall. The average annual precipitation is approximately 40 inches, which occurs mainly between November and April (Giambelluca, Nullet, and Schroeder 1986). Average temperatures range from the low 60s to high 80s (degrees Fahrenheit) (Juvik and Juvik 1998).

The Facility is located at the administrative boundary between the Waimalu Aquifer System of the Pearl Harbor Aquifer Sector and the Moanalua Aquifer System of the Honolulu Aquifer Sector. The underlying aquifer is classified as a basal, unconfined, flank-type and is currently used as a drinking water source. The aquifer is considered fresh, with less than 250 milligrams per liter (mg/L) of chloride, and is considered an irreplaceable resource with a high vulnerability to contamination (Mink and Lau 1990).

The nearest drinking water supply well is Navy Supply Well 2254-01 (also known as Red Hill Shaft), located within the Facility's lower access tunnel. Navy Supply Well 2254-01 is located approximately 2,600 feet topographically downgradient of the fuel storage tanks (Figure 1) and provides potable water to the JBPHH Water System, which serves approximately 65,200 military customers. NAVFAC Hawaii Utilities Energy Management Division operates Navy Supply Well 2254-01 and its associated water development tunnel.

The nearest surface water body is South Hālawa Stream, which is an ephemeral stream present along the north side of the Facility. Wells RHMW01 through RHMW03, RHMW05, RHMW09, RHMW10,

RHMW15, and RHMW19 are located greater than 150 meters from any portion of South Hālawa Stream. Sampling point RHMW2254-01 and wells RHMW04, RHMW06 through RHMW08, RHMW11, RHMW13, RHMW14, HDMW2253-03, and OWDFMW01 are located within 150 meters of a portion of Hālawa Stream. The approximate distance from each well and sampling point to Hālawa Stream is presented in Table 1-2.

Table 1-2: Distance of Sampling Locations to South Hālawa Stream

Sampling Location	Approximate Closest Distance to South Hālawa Stream (meters)
RHMW2254-01	85
RHMW01	232
RHMW02	299
RHMW03	271
RHMW04	81
RHMW05	225
RHMW06	104
RHMW07	81
RHMW08	64
RHMW09	376
RHMW10	452
RHMW11	3 [a]
RHMW13	47
RHMW14	10 [a]
RHMW15	153
RHMW19	441
HDMW2253-03	20
OWDFMW01	143

[a] RHMW11 and RHMW14 are located alongside the concrete-lined portion of South Hālawa Stream.

Despite some wells being located within 150 meters of surface water (South Hālawa Stream), there are no indications of any complete pathways to nearby surface water bodies. Both South Hālawa Stream and Moanalua Stream (located in Moanalua Valley east of the Facility) are intermittent streams (USGS 2017) located approximately 100 feet or more above the water table of the basal aquifer. Moreover, the bottoms of the fuel tanks are located at least 50 feet below the bottom of the streams, and the segment of South Hālawa Stream between Red Hill and Hālawa Correctional Facility is concrete-lined. Thus, groundwater conditions do not affect the nearby stream, and analytical results for the long-term monitoring (LTM) program are therefore compared to the screening criteria based on DOH environmental action levels (EALs) Table D-1b (i.e., groundwater EALs for sites where "groundwater is a current or potential drinking water resource" and the nearest "surface water body is not located within 150 meters of release site") (DOH 2017).

1.3 BACKGROUND

The U.S. Government constructed the Facility in the early 1940s. Twenty tanks were constructed of reinforced concrete lined with steel. The fueling system is a self-contained underground unit that was installed into native rock composed primarily of basalt with some interbedded tuffs and breccias (DON 2010). Each tank measures approximately 250 feet in height and 100 feet in diameter. The upper domes of the tanks lie at depths varying between 100 and 200 feet below ground surface. The tanks currently

contain JP-5, F-24, and F-76. In the past, the tanks also stored Navy special fuel oil, Navy distillate, aviation gasoline, and motor gasoline (DON 2010).

1.3.1 Previous Groundwater Monitoring Results

Groundwater samples for the Red Hill groundwater LTM program have been analyzed by the various offsite laboratories listed in Table 1-3. The Red Hill groundwater LTM program results spanning from 2005 onward are summarized in Table 1-4.

Table 1-3: Red Hill Groundwater LTM Program Analytical Laboratories

Groundwater Monitoring Event	Analytical Laboratory
1st Qtr 2020 – 1st Qtr 2021	APPL
4th Qtr 2019	APPL (all COPCs and NAPs except TOC and DOC for select samples) ARI (TOC and DOC for select samples)
2nd Qtr 2019 – 3rd Qtr 2019	APPL
1st Qtr 2019	APPL (all COPCs and NAPs except TOC during the December 2018 event) ARI (TOC during the December 2018 event only)
3rd Qtr 2018 – 4th Qtr 2018	APPL (all COPCs and NAPs except TOC and DOC) ALS Environmental - Houston (TOC and DOC only)
4th Qtr 2016 – 2nd Qtr 2018	APPL (all COPCs and all NAPs except TOC) Eurofins Lancaster Laboratories (TOC only)
1st Qtr 2017 – 3rd Qtr 2017, 1st Qtr 2018, 3rd Qtr 2018 (split samples only)	EPA Region 9 Laboratory
2nd Qtr 2015 – 3rd Qtr 2016	ALS Environmental - Kelso
4th Qtr 2012 – 1st Qtr 2015	Calscience Environmental Laboratories, Inc. (currently Eurofins Calscience)
4th Qtr 2010 – 3rd Qtr 2012	APPL
1st Qtr 2008 – 3rd Qtr 2010	SGS Environmental Services, Inc. - Alaska Division
3rd Qtr 2006 [a] – 3rd Qtr 2007 [b]	Accutest Laboratories - Florida (currently SGS Accutest Laboratories Southeast)
1st Qtr 2005 – 4th Qtr 2005	Columbia Analytical Services, Inc. (currently ALS Environmental - Kelso)

APPL Agriculture & Priority Pollutants Laboratories, Inc.
ARI Analytical Resources, Inc.
COPC chemical of potential concern
DOC dissolved organic carbon
EPA Environmental Protection Agency, United States
NAP natural attenuation parameter
Qtr quarter
TOC total organic carbon

[a] Groundwater LTM samples were not collected during the First and Second Quarters 2006 due to Phase I and Phase II site investigation activities (DON 2007) occurring at that time.
[b] Groundwater LTM samples were not collected during the Fourth Quarter 2007.

Groundwater sampling locations are depicted on Figure 1. Detailed cumulative results of historical groundwater monitoring are tabulated in Appendix A.1, and concentration graphs of chemicals of potential concern (COPCs) over time are presented in Appendix A.2. All historical data are compared to the most recently updated (Fall 2017) DOH EALs (DOH 2017). Total petroleum hydrocarbons (TPH)-diesel range organics (TPH-d) and benzene are also compared to the Site-Specific Risk-Based Levels (SSRBLs), as discussed in the Red Hill *Groundwater Protection Plan* (DON 2014), as supplemented by the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016). Historical results indicate that most, and generally the highest, detected concentrations of COPCs occur in monitoring well RHMW02.

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Table 1-4: Summary Statistics of Cumulative Groundwater COPC Data as of the First Quarter 2021 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		RHMW2254-01						Inside-Tunnel Wells							Outside-Tunnel Wells						
Analyte	DOH EAL (µg/L)	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Location of Max Concentration	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Location of Max Concentration	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration
TPH-d	400	15	110	12%	No	280	23-Apr-20	284	80	78%	**Yes**	RHMW02	6500	20-Jan-16	85	324	21%	**Yes**	OWDFMW01	3100	22-Jul-15
TPH-g	300	1	117	0.8%	No	14	4-Feb-09	97	227	30%	**Yes**	RHMW02	660	28-Jan-13	2	405	0.5%	No	RHMW11 Zone 5	34	3-Aug-20
TPH-o	500	3	76	3.8%	No	59	8-Sep-05	68	107	39%	**Yes**	RHMW01	890	17-Feb-05	39	301	11%	No	OWDFMW01	390	22-Jul-15
Benzene	5	0	126	0%	—	—	—	20	331	5.7%	No	RHMW02	0.26	4-Feb-09	24	386	6%	No	OWDFMW01	1.3	19-Jul-12
Ethylbenzene	30	2	124	2%	No	1	8-Sep-05	52	299	15%	No	RHMW02	1.3	10-Jul-06	0	410	0%	—	—	—	—
Toluene	40	3	123	2.4%	No	0.71	22-Oct-12	11	340	3.1%	No	RHMW01	2.5	15-Jan-14	4	406	1.0%	No	HDMW2253-03	3.8	22-Oct-14
Xylenes, Total (p/m-, o-xylene)	20	2	124	2%	No	0.81	22-Oct-18	70	281	20%	No	RHMW02	1.4	6-Jul-17	2	408	0.5%	No	OWDFMW01	0.39	21-Apr-11
1-Methylnaphthalene	10	1	110	0.9%	No	0.0276	22-Oct-08	160	196	45%	**Yes**	RHMW02	142	10-Jul-06	11	398	2.7%	No	OWDFMW01	0.03	19-Jan-16
2-Methylnaphthalene	10	4	125	3.1%	No	0.038	6-Dec-05	168	205	45%	**Yes**	RHMW02	88.5	20-Sep-05	16	418	3.7%	No	OWDFMW01	0.02	19-Jan-16
Naphthalene	17	13	141	8%	No	0.099	23-Jul-13	236	224	51%	**Yes**	RHMW02	343	10-Jul-06	32	443	7%	No	RHMW09	1	8-Feb-17

Notes:
Bold and shaded text indicates analyte detected above DOH EAL.
RHMW2254-01 is the sampling point located inside the shaft of the Navy Supply Well 2254-01.
Inside Wells: RHMW01, RHMW02, RHMW03, RHMW05.
Outside Wells: RHMW04, RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, RHMW19, RHMW11, RHMW13, RHMW14, RHMW15, HDMW2253-03, OWDFMW01.
As of the Third Quarter 2018 Groundwater Monitoring Report, the "No. of Detects" and "No. of Non-detects" includes all primary and replicate results; versions of this table previous to the Third Quarter 2018 report included only the maximum detected concentration between primary and replicate samples.
As of the Second Quarter 2019 Groundwater Monitoring Report, the "No. of Detects" and "No. of Non-detects" includes EPA Region 9 Laboratory split sampling data; versions of this table previous to the Second Quarter 2019 report included only data from Navy-contracted laboratories.
TPH-d and TPH-o results at wells other than RHMW01, RHMW02, and RHMW03 from the Second Quarter 2020 onwards are partially or wholly due to laboratory solvent contamination. See Fourth Quarter 2020 report narrative for additional discussion.
— = no data
% = percent
µg/L = microgram per liter
DOH = Department of Health, State of Hawai'i
EAL = Environmental Action Level
EPA = Environmental Protection Agency, United States
no. = number
TPH-d = total petroleum hydrocarbons-diesel range organics
TPH-g = total petroleum hydrocarbons-gasoline range organics
TPH-o = total petroleum hydrocarbons-residual range organics (i.e., TPH-oil)

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No measurable amount of nonaqueous-phase liquid (NAPL) has ever been detected in any Red Hill monitoring well. Of the 35 previously sampled monitoring locations (including both non-multilevel wells and multilevel well monitoring zones) from 2005 to 2020, five monitoring locations have had COPCs in concentrations exceeding the screening criteria (i.e., RHMW01, RHMW02, RHMW05, HDWMW2253-03, and OWDFMW01). No detections of COPCs have ever exceeded screening criteria at the sampling point (RHMW2254-01) in Red Hill Shaft. Of the three monitoring wells that the SSRBLs apply to (RHMW01, RHMW02, and RHMW03), only TPH-d in RHMW02 has ever exceeded the SSRBL. Sampling results analyzed by Navy-contracted laboratories from 2005 to 2020 are summarized below:

- *RHMW2254-01* is a sampling point located inside the shaft of Navy Supply Well 2254-01. Detections of TPH-gasoline range organics (TPH-g), TPH-d, TPH-residual range organics (TPH-o), and polynuclear aromatic hydrocarbons (PAHs) occurred occasionally during monitoring events between 2005 and October 2017, but no COPCs were detected above the screening criteria. Ethylbenzene, toluene, and total xylenes were detected below screening criteria during the Fourth Quarter (October) 2018 groundwater monitoring event, but were non-detect during the subsequent monthly (November and December 2018) monitoring events; thus, the Fourth Quarter 2018 detections could not be verified and have not occurred since. TPH-d detections below screening criterion were reported during First and Second Quarters 2020 monitoring events. Evaluations of TPH chromatograms suggested that the reported TPH detections were not related to the release of petroleum fuels. TPH chromatograms of the First through Fourth Quarter 2020 groundwater samples, field quality control (QC), and laboratory QC showed similar chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons; therefore, the RHMW2254-01 2020 monitoring events TPH detections were attributable to contamination during sample extraction and were not related to the release of petroleum fuels. No COPCs have been detected since Second Quarter 2020.
- *RHMW01*, located immediately southwest of Tank 1, was installed in 2001 (DON 2002). TPH-d has consistently been detected at RHMW01 but has not exceeded the DOH screening criterion (400 micrograms per liter [µg/L]) since the First Quarter (January) 2016 monitoring event. TPH-d has never exceeded the SSRBL (4,500 µg/L). The TPH-d detections during the 2020 quarterly monitoring events were mostly or wholly due to petroleum biodegradation by-products, as indicated by TPH chromatograms and TPH with silica gel cleanup (SGC) results. PAHs were periodically detected below the screening criteria. Sporadic detections of benzene and toluene below their respective screening criteria occurred in 2005, 2014, and 2017. Other than those noted above, no other COPCs have been detected.
- *RHMW02,* located next to Tank 6, was installed in 2005 (DON 2007). TPH-g was detected and exceeded the screening criterion (300 µg/L) during Fourth Quarter 2012 and First Quarter 2013 monitoring events. TPH-d has consistently been detected; concentrations exceeded the screening criterion (400 µg/L) in all monitoring events and exceeded the SSRBL in 2008, 2014, 2015, and 2016. TPH-o was detected below the screening criterion (500 µg/L) in most monitoring events from 2015 onward. SGC TPH-d and TPH-o results showed reduced or non-detect concentrations compared to non-SGC TPH-d and TPH-o results, indicating that the majority of the reported non-SGC TPH mass has likely been biodegradation by-products. PAHs regularly exceeded their screening criteria during monitoring events from 2005 onward. Ethylbenzene and total xylenes were also detected in most events between 2005 and 2018 at trace concentrations below the screening criteria. Benzene and toluene were also detected at trace concentrations below the screening criteria between 2008 and 2016, although less frequently than ethylbenzene and total xylenes. No other COPCs have been detected.
- *RHMW03*, located next to Tank 14, was installed in 2005 (DON 2007). TPH-d and TPH-o were frequently detected but at concentrations below the screening criteria. SGC TPH-d and

TPH-o results were frequently non-detect. TPH-g, toluene, and PAHs were occasionally detected at trace concentrations below screening criteria between 2005 and 2016. No COPCs have been detected above the screening criteria.

- *RHMW04*, located northeast of the tank farm, was installed in 2005 as a background monitoring location (DON 2007). TPH-d, TPH-o, benzene, total xylenes, and PAHs were sporadically detected below screening criteria. TPH-d and TPH-o detections below screening criteria were reported during First through Third Quarter 2020 monitoring events. Evaluation of the chromatograms of the groundwater samples, field QC, and laboratory QC showed similar chromatographic signatures, indicating that during the 2020 quarterly monitoring events TPH-d and TPH-o detections were mostly or wholly due to non-petroleum-related contamination during sample extraction. No other COPCs have been detected.
- *RHMW05*, located southwest of the tank farm and east of sampling point RHMW2254-01, was installed in 2009. TPH-d exceeded the screening criterion during monitoring events in 2009 and 2010, but subsequent TPH-d detections were below the screening criterion; evaluations of historical TPH chromatograms suggested non-petroleum chemical signatures. TPH-o, toluene, and PAHs were occasionally detected below screening criteria. TPH-d and TPH-o detections below screening criteria were reported during First and Third Quarter 2020 monitoring events. Evaluation of the chromatograms of the First through Fourth Quarter 2020 groundwater samples, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the TPH-d and TPH-o detections during the First and Third Quarter 2020 monitoring events were mostly or wholly due to non-petroleum-related contamination during sample extraction. No COPCs were detected during the Second Quarter 2020 monitoring event. TPH-d and TPH-o were not detected during the Fourth Quarter 2020 monitoring event.
- *RHMW06 & RHMW07*, located north of the tank farm, were installed in 2014 in response to the January 2014 release (DON 2015a). TPH-d, TPH-o, and PAHs were occasionally detected below screening criteria. No COPCs have ever been detected above screening criteria. TPH-d was detected below its screening criterion in RHMW07 during the First and Second Quarter 2020 groundwater monitoring events. TPH-o was detected below its screening criterion at RHMW06 during the Third Quarter 2020 groundwater monitoring event; evaluation of the chromatograms of the samples, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the 2020 quarterly monitoring events detections at RHMW06 and RHMW07 were due to non-petroleum-related contamination during sample extraction. TPH-d and TPH-o were not detected during the Fourth Quarter 2020 monitoring event.
- *RHMW08 & RHMW09*, located respectively west and south of Tank 1, were installed in 2016 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). Naphthalene was detected below the screening criterion by U.S. Environmental Protection Agency (EPA) Region 9 during the February 2017 split sampling event at RHMW09. TPH-d and/or TPH-o were detected below the screening criteria at RHMW08 from November 2016 to March 2017 and during the First through Third Quarter 2020 events. TPH-d was detected at RHMW09 during the Third Quarter 2020 event. After evaluation of the chromatograms of the samples, field QC, and laboratory QC showed similar chromatographic signatures, the 2020 quarterly monitoring event detections were found to be mostly or wholly attributable to non-petroleum contamination during sample extraction.
- *RHMW10*, located south of Tank 14, was installed in April 2017 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). TPH-d and TPH-o were sporadically detected at concentrations below the screening criteria. No other COPCs have been detected.
- *RHMW11*, located at the Hālawa Correctional Facility north of the tank farm, was installed in November 2017 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON

2017a). Five of the eight multilevel monitoring zones (RHMW11 Zones 1 to 5) were sampled during the First, Second, and Third Quarter 2018 events. Sampling was discontinued for RHMW11 Zones 1 to 4 due to lack of COPC detections in groundwater samples collected from all five zones during the First Quarter 2018 through Third Quarter 2018 events. Groundwater samples continued to be collected from RHMW11 Zone 5 thereafter, which is the topmost zone within the high-hydraulic-conductivity portions of unweathered basalt at RHMW11. RHMW11 Zone 7 (one of three zones located in the saprolite formation with low hydraulic conductivity) was sampled during the Third Quarter 2019 monitoring event to collect general chemistry data from formation water within the saprolite. TPH-o was detected during the Second Quarter 2020 event and TPH-d was detected during the Third Quarter event at RHMW11 Zone 5; however, evaluation of the chromatograms of the sample, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the Second and Third Quarter 2020 monitoring event detections were due to non-petroleum-related contamination during sample extraction. TPH-g was detected during the Third Quarter 2020 event; yet, no PAHs or other COPCs were detected at RHMW11-05. During the Third Quarter 2020 event xylenes were detected in the trip blank, suggesting that volatile organic compound (VOC) contamination may have been present prior to analysis. No COPCs have been detected in any other of the RHMW11 multilevel monitoring zones that have been sampled (RHMW11 Zones 1 to 4 and Zone 7).

- *RHMW12,* located at the Hālawa Correctional Facility north of the tank farm, was installed in January 2020. The well is screened in the geologic units overlying the regional aquifer; thus, the well does not reach down to and is not screened in the regional basal aquifer, and has not been integrated into the LTM program.
- *RHMW13*, located northeast of the tank farm, was installed in December 2019 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). RHMW13 has five monitoring zones all located within high-hydraulic-conductivity portions of unweathered basalt. Groundwater samples have been collected from all multilevel monitoring zones. TPH-d and TPH-o were detected at RHMW13 Zone 4 and RHMW13 Zone 5 during the Second Quarter 2020 monitoring event; however, evaluation of the chromatograms of the samples, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the detections were due to non-petroleum contamination during sample extraction. No COPCs have been detected in any other RHMW13 multilevel monitoring zones (RHMW13 Zones 1 to 3).
- *RHMW14,* located at the Hālawa Correctional Facility northwest of Tank 1, was installed in March 2019 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). RHMW14 has eight multilevel monitoring zones. Three of the eight zones (RHMW14 Zones 1 to 3) are within relatively higher-hydraulic-conductivity portions of the unweathered basalt formation, while the other five zones (RHMW14 Zones 4 to 8) are within relatively lower-hydraulic-conductivity portions of the basalt. Groundwater samples have been collected from six of eight multilevel monitoring zones (RHMW14 Zones 1 to 5 and Zone 7). TPH-o was detected at RHMW14 Zone 3 during the Second Quarter 2020 monitoring event, and TPH-d was detected during the Third Quarter 2020 monitoring event. Evaluation of the sample, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons, thus the detections were mostly or wholly due to non-petroleum contamination during sample extraction. No COPCs have been detected in any other RHMW14 multilevel monitoring zones that have been sampled (RHMW14 Zones 1 to 2, 4 to 5, and 7).
- *RHMW15*, located between RHMW2254-01 and RHMW05 within the Facility boundaries, was installed in July 2019 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). RHMW15 has five multilevel monitoring zones located within relatively higher-hydraulic-conductivity portions of the unweathered basalt formation, with RHMW15

Zone 5 located near the piezometric surface of the regional basal aquifer. All monitoring zones of RHMW15 were initially sampled during the Third Quarter 2019 monitoring event. No COPCs have been detected in any of the RHMW15 multilevel monitoring zones.

- *RHMW19*, located south of tank 8, was installed in June 2020 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). TPH-o (150 J) was detected at an estimated concentration below the screening criterion during the Third Quarter 2020 monitoring event; however, TPH-d was detected in laboratory method blank at the same concentration (150 J). Therefore, the sample result was qualified as non-detect (U) due to laboratory method blank contamination. Evaluation of the samples, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons, suggesting that the TPH-o detection was also due to non-petroleum contamination during sample extraction. No other COPCs have been detected at RHMW19.
- *HDMW2253-03*, located north of the tank farm at the Hālawa Correctional Facility, was installed in 2000 by the State of Hawaiʻi Department of Land and Natural Resources below the groundwater table without a well screen. The well was installed with the intent of monitoring water supply parameters, not potential presence of contamination from nearby facilities. TPH-d was detected above the screening criterion during the First Quarter 2013 quarterly monitoring event. HDMW2253-03 was not sampled during quarterly and monthly monitoring events from April to July 2017 due to experimental testing conducted by the State of Hawaiʻi Department of Land and Natural Resources Commission on Water Resource Management and the University of Hawaiʻi. During the Second Quarter 2020 monitoring event, TPH-d was detected; however, evaluation of TPH chromatograms suggested that the reported TPH detections were due to non-petroleum contamination during sample extraction and were not related to the release of petroleum fuels. No other COPCs have exceeded screening criteria. No COPCs were detected since the Second Quarter 2020 monitoring event.
- *OWDFMW01*, located at the former Oily Waste Disposal Facility west of Navy Supply Well 2254-01, was installed in 1998 (DON 2000). TPH-d exceeded the screening criterion during quarterly monitoring events in 2010, 2012, 2013, 2015, and 2020. Evaluations of historical TPH chromatograms suggested that the reported TPH detections were not related to the release of petroleum fuels. Even though the Second Quarter 2020 TPH-d result exceeded its screening criterion, evaluation of TPH chromatograms (original analysis and re-extract analysis) and laboratory QC showed similar chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons; therefore, the TPH detections were attributable to contamination during sample extraction. Third Quarter 2020 TPH-d and TPH-o detections were below screening criterion. Evaluation of the sample, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons, thus the Third Quarter 2020 detections were due to laboratory solvent contamination. No other COPCs have ever exceeded screening criteria.

1.3.2 TPH Analysis Concerns

As discussed in previous quarterly monitoring reports, the TPH and PAH concentrations for the Second Quarter 2018 through Fourth Quarter 2018 monitoring events were higher than the reported results from the Fourth Quarter 2016 through First Quarter 2018 monitoring events. The increase in concentrations starting from the Fourth Quarter 2017 through Third Quarter 2018 is attributable to changes made to the Navy-contracted laboratory's extraction and analysis protocols to optimize the laboratory's EPA Method 8015 and EPA Method 8270 selected ion monitoring (SIM) standard operating procedures. The changes were prompted by the January–March 2017 split sampling and October 2017 TPH-d performance testing results conducted by the EPA Region 9 laboratory in Richmond, California, and the Navy-contracted laboratory (EPA Region 9 and DOH 2018; DON

2017e). The split sampling and performance testing results showed that although both laboratories' processes and protocols were in accordance with the EPA Method 8015, the EPA Region 9 laboratory had higher TPH-d and PAH recoveries than the Navy-contracted laboratory for analytes present in groundwater samples at high concentrations (EPA Region 9 and DOH 2017a, 2018; DON 2018b). The differences in recoveries were due to the EPA Region 9 laboratory protocols being more effective at recovering higher TPH-d and PAH concentrations, especially for samples with higher concentrations of polar hydrocarbons and metabolites. Changes made to the Navy-contracted laboratory's protocols included: using calibration standards identical to those used by the EPA Region 9 laboratory, sample acidification to pH less than 5 prior to extraction, switching extraction methodologies from EPA Method 3510C (separatory funnel liquid-liquid extraction) to EPA Method 3520C (continuous liquid-liquid extraction), using a rotary evaporator for extract condensation, and reducing the field-collected sample volume for optimal extraction within the liquid-liquid extractor vessel. The Third Quarter 2018 split sampling event results indicated that TPH-d and PAH data generated by the Navy-contracted laboratory were approximately 12–37 percent lower than results reported by the EPA Region 9 laboratory (DON 2018a). The Navy-contracted laboratory's recoveries have increased since the First Quarter 2017 split sampling event, during which recoveries were approximately 65 percent lower than the EPA Region 9 laboratory's results. After the method optimizations, there were no apparent increases in the TPH and PAH concentration trends. Evaluation of the split sampling data was presented in detail in the *Third Quarter 2018 Groundwater Monitoring Report* (DON 2018a).

Starting from the First Quarter 2020 monitoring event, increasing concentrations of non-petroleum-related impurities were observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. Extraction of samples for EPA Method 8015 uses a relatively large amount of solvent (300 milliliters [mL]) that is concentrated (5 mL or less) prior to analysis. Thus, the trace impurities are magnified in the final extract for TPH analysis. The solvent contamination is evident in samples from the Second, Third, and Fourth Quarter 2020 monitoring events. Additional EPA Method 8270 analysis of the RHMW13-05 March 2020 sample tentatively identified three compounds (i.e., 2-ethyl-1-hexanol, cis-1-butyl-2-methylcyclopropane, and octadecanoic acid) used in polymeric materials and plasticizers; no other compounds associated with the solvent contamination could be positively identified using the method in the *Fourth Quarter 2020 Groundwater Monitoring Report* (DON 2021a).

EPA Method 8015 TPH detections due to laboratory contamination were previously flagged with an asterisk (*) but as of the Third Quarter 2020 report have been flagged by the letter "A" to facilitate recognition among other qualifiers. Additionally, the cumulative groundwater COPC graphs (Appendix A.2) and Figure 2 (COPC detections) differentiate TPH detections due to laboratory contamination.

1.3.3 Previous Reports

The Red Hill groundwater LTM reports listed in Table 1-5 were prepared and submitted to DOH. Starting from the Fourth Quarter 2016 groundwater monitoring event, information for both the inside-tunnel and outside-tunnel monitoring locations has been combined into one report.

Table 1-5: Previous Groundwater Monitoring Reports

Combined Reports for Inside- and Outside-Tunnel Wells					
Year	Title	Sampling Period		Submittal Date	
2020	4th Qtr 2020 GW Monitoring Rpt	October		Feb	
	3rd Qtr 2020 GW Monitoring Rpt	Jul to Aug		Nov	
	2nd Qtr 2020 GW Monitoring Rpt	Mar to Apr		Jul	
	1st Qtr 2020 GW Monitoring Rpt	Jan		Apr	
2019	4th Qtr 2019 GW Monitoring Rpt	Oct to Nov		Feb 2020	
	3rd Qtr 2019 GW Monitoring Rpt	Jul to Aug		Nov	
	2nd Qtr 2019 GW Monitoring Rpt	April		Aug	
	1st Qtr 2019 GW Monitoring Rpt	Dec 2018 to Jan 2019		May	
2018	4th Qtr 2018 GW Monitoring Rpt	Oct to Nov		Mar 2019	
	3rd Qtr 2018 GW Monitoring Rpt	Jul to Aug		Nov	
	2nd Qtr 2018 GW Monitoring Rpt	Apr		Oct	
	1st Qtr 2018 GW Monitoring Rpt	Mar		Jul	
2017	4th Qtr 2017 GW Monitoring Rpt	Oct		Jan 2018	
	3rd Qtr 2017 GW Monitoring Rpt	May to Jul		Oct	
	2nd Qtr 2017 GW Monitoring Rpt	Feb to Apr		Jul	
	1st Qtr 2017 GW Monitoring Rpt	Nov 2016 to Jan 2017		Apr	
2016	4th Qtr 2016 GW Monitoring Rpt	Oct		Dec	
Separate Reports for Inside- and Outside-Tunnel Wells		Inside-Tunnel Wells		Outside-Tunnel Wells	
Year	Title	Sampling Period	Submittal Date	Sampling Period	Submittal Date
2016	3rd Qtr 2016 GW Monitoring Rpt	Jul	Oct	Jul	Oct
	2nd Qtr 2016 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2016 GW Monitoring Rpt	Jan	Mar	Jan	Mar
2015	4th Qtr 2015 GW Monitoring Rpt	Oct	Jan 2016	Oct	Feb 2016
	3rd Qtr 2015 GW Monitoring Rpt	Jul	Nov	Jul	Nov
	2nd Qtr 2015 GW Monitoring Rpt	Apr	Aug	Apr	Aug
	1st Qtr 2015 GW Monitoring Rpt	Jan	Mar	Jan	Mar
	Draft Monitoring Well Installation Rpt for RHMW06 and RHMW07	—	—	—	Mar
2014	4th Qtr 2014 GW Monitoring Rpt	Oct	Jan 2015	Oct	Jan 2015
	3rd Qtr 2014 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	GW Sampling Rpt for Tank 5 Release Response on June 23 and 24	Jun 23, 24	Jul	—	—
	GW Sampling Rpt for Tank 5 Release Response on May 27 and 28	May 27, 28	Jun	—	—
[2014]	2nd Qtr 2014 GW Monitoring Rpt	Apr	Jun	Apr	Jun
	GW Sampling Rpt for Tank 5 Release Response on Apr 7	Apr	Apr	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 25 and 26	Mar 25, 26	Apr	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 10	Mar 10	Mar	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 5 and 6	Mar 5, 6	Mar	—	—
	GW Sampling Rpt for Additional Sampling (Inside-Tunnel)/GW Monitoring Rpt for Additional Sampling of HDMW2253-03 (Outside-Tunnel)	Jan	Jan	Jan	Feb
	1st Qtr 2014 GW Monitoring Rpt	Jan	Apr	Jan	Apr

Separate Reports for Inside- and Outside-Tunnel Wells		Inside-Tunnel Wells		Outside-Tunnel Wells	
Year	Title	Sampling Period	Submittal Date	Sampling Period	Submittal Date
2013	4th Qtr 2013 GW Monitoring Rpt	Oct	Jan 2014	Oct	Jan 2014
	3rd Qtr 2013 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2013 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2013 GW Monitoring Rpt	Jan	Apr	Jan	Apr
2012	4th Qtr 2012 GW Monitoring Rpt	Oct	Jan 2013	Nov	Jan 2013
	3rd Qtr 2012 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2012 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2012 GW Monitoring Rpt	Jan, Feb	Oct	Jan	Mar
2011	4th Qtr 2011 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2011 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2011 GW Monitoring Rpt	Apr	Jun	Apr	Jun
	1st Qtr 2011 GW Monitoring Rpt	Jan	Mar	Jan	Mar
2010	4th Qtr 2010 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2010 GW Monitoring Rpt	Jul	Aug	Jul	Aug
	2nd Qtr 2010 GW Monitoring Rpt	Apr	May	Apr	May
	1st Qtr 2010 GW Monitoring Rpt	Jan, Feb, Mar	Apr	Jan	Apr
2009	4th Qtr 2009 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2009 GW Monitoring Rpt	Jul	Sep	Aug	Sep
	2nd Qtr 2009 GW Monitoring Rpt	May	Jul	—	—
	1st Qtr 2009 GW Monitoring Rpt	Feb	May	—	—
2008	4th Qtr 2008 GW Monitoring Rpt	Oct, Dec	Feb 2009	—	—
	3rd Qtr 2008 GW Monitoring Rpt	Jul	Oct	—	—
	2nd Qtr 2008 GW Monitoring Rpt	Apr	May	—	—
	1st Qtr 2008 GW Monitoring Rpt	Jan	Mar	—	—
2007	3rd Qtr 2007 GW Monitoring Results	Sep	Oct	—	—
	2nd Qtr 2007 GW Monitoring Results	Jun	Aug	—	—
	1st Qtr 2007 GW Monitoring Results	Mar	May	—	—
2006	4th Qtr 2006 GW Monitoring Results	Dec	Jan 2007	—	—
	3rd Qtr 2006 GW Monitoring Results	Jul	Sep	—	—
2005	4th Qtr 2005 GW Sampling Rpt	4th Qtr	Feb 2006	—	—
	3rd Qtr 2005 GW Sampling Rpt	3rd Qtr	Nov	—	—
	2nd Qtr 2005 GW Sampling Rpt	2nd Qtr	Aug	—	—
	1st Qtr 2005 GW Sampling Rpt	1st Qtr	Apr	—	—

— no data
GW groundwater
Qtr quarter
Rpt report

2. Groundwater Monitoring Activities

During the First Quarter 2021 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from 18 monitoring locations within the Red Hill groundwater monitoring network in accordance with the SAP and addenda (DON 2017b; 2017c; 2017d; 2021b):

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Twelve single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10, RHMW19, and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility
  - RHMW11 Zone 5
  - RHMW14 Zone 3
- One sampling zone each at multilevel monitoring wells (RHMW13 and RHMW15) located within the Facility boundary
  - RHMW13 Zone 5
  - RHMW15 Zone 5

In addition, field duplicate samples were collected from:

- Sampling point RHMW2254-01
- Monitoring well RHMW02
- Multilevel monitoring well RHMW13 Zone 5 (RHMW13-05)

The following multilevel monitoring zones were not sampled in this sampling event due to lack of detections of COPCs in previous monitoring events:

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 4
- RHMW15 Zones 1 to 4

The following multilevel monitoring zones were not sampled in this sampling event due to low hydraulic conductivity at these zones:

- RHMW11 Zones 6 to 8
- RHMW14 Zones 4 to 8

All samples were collected in accordance with the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a), SAP (DON 2017b; 2017c), SAP Addendum 01 (DON 2017d), and SAP Addendum 03 (DON 2021b). The WP/SOW and SAP are consistent with DOH underground storage tank release response requirements (Hawai'i Administrative Rules, Chapter 11-280.1), NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b), and the Red Hill *Groundwater Protection Plan* (DON 2014). Prior to purging and sampling, ambient and headspace vapor readings (VOCs, oxygen, hydrogen sulfide, carbon monoxide, and lower explosive levels of vapors) were measured using a MultiRAE multi-gas monitor at all inside-tunnel sampling locations, RHMW09, and OWDFMW01. VOCs were measured using a MiniRAE 3000 photoionization detector (PID) at all other outside-tunnel sampling locations. The depth to groundwater was measured using Solinst oil/water interface probes and calibrated Solinst water level measuring tapes for inside tunnel wells (see Appendix B.2 for tape correction factors). The depth to groundwater was measured using Solinst oil/water interface probes and calibrated Heron water level measuring tapes for outside wells (see Appendix B.2 for tape correction factors). No NAPL or sheen was observed in any well. PID detections were observed in the monitoring well headspace at RHMW06, RHMW09, RHMW11 Zone 5, RHMW13 Zone 5, and RHMW14 Zone 5, with PID measurements ranging from 0.1 parts per million (ppm) to 4.2 ppm (Table 3-1). Field measurements and observations are presented in the groundwater purge logs in Appendix B.1.

2.1 GROUNDWATER SAMPLING

2.1.1 Single-Screen (Non-Multilevel) Monitoring Well Sampling

Prior to collecting groundwater samples, the non-multilevel monitoring wells were purged of standing water in the well casings. These monitoring locations each contain a dedicated bladder pump, which was used to purge the well and collect samples. The groundwater wells were purged using low-flow sampling methodology at flow rates of approximately 0.10–0.30 liter per minute to minimize VOC loss and drawdown.

To operate the pump, a portable air compressor with an in-line filter was connected to a QED Environmental Systems MicroPurge MP10 Controller, which was then connected to the pump. The compressor was turned on to power the pump, and the controller was used to adjust the pumping rate to less than 1 liter of water per minute. Compressed nitrogen gas was used to purge and sample these non-multilevel monitoring wells.

Water quality parameters were monitored on a periodic basis during well purging using an In-Situ Inc. smarTROLL multiparameter handheld water quality meter. Parameters measured included total dissolved solids, pH, temperature, specific conductivity, dissolved oxygen (DO), turbidity, oxidation-reduction potential (ORP), and salinity. The water quality parameters were used to evaluate whether the natural characteristics of the aquifer formation water were present within the monitoring wells before the samples were collected. A minimum of six readings were collected at each well during the purging process. When feasible depending on the well's inside diameter allowing space for both the bladder pump tubing and calibrated tape, water level measurements were collected and recorded during purging to detect indications of drawdown; if drawdown approaching 0.2 foot was detected, the rate of low-flow purging was reduced. Purging was considered complete when at least three consecutive water quality measurements stabilized within the specified range for each parameter noted in groundwater sampling logs (Appendix B.1) and in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b). The readings were recorded in the groundwater sampling logs (Appendix B.1).

Once water quality parameters stabilized, groundwater samples were immediately collected from the wells using the bladder pumps. Groundwater samples from these non-multilevel monitoring wells were

collected no more than 2.5 hours after purging was completed. Groundwater samples were collected in sample containers that were pre-preserved (as necessary) and provided by the analytical laboratory. Samples collected for ferrous iron analysis were filtered in the field using new, individual 0.45-micron filters attached at the end of the pump/probe discharge tubing.

2.1.2 Multilevel Monitoring Well Sampling

Due to the multilevel design of monitoring wells RHMW11, RHMW13, RHMW14, and RHMW15, purging was not required immediately prior to collecting groundwater from the sampled monitoring zone, since the measurement ports allow groundwater to flow directly from the surrounding formation and there is no filter pack.

Groundwater was collected using sampling probes from the following multilevel monitoring zones: RHMW11 Zone 5, RHMW13 Zone 5, RHMW14 Zone 3, and RHMW15 Zone 5.

A string of four sealed 250-mL sample containers was connected to the sampling probe, which was lowered to each monitoring zone, and the containers filled with groundwater from the formation through a sampling port in the central casing of the well. Once sampling containers were filled, the sampling port was closed, and the probe and container string were brought to the surface. The groundwater was then transferred to the appropriate laboratory-supplied containers. For collection of groundwater quality parameters, the sample containers were flushed with nitrogen to remove air from within the containers prior to collection of groundwater. The nitrogen flush was performed to minimize DO enrichment due to high water pressure in the formation, which would otherwise have forced air in the sample containers to mix into the groundwater collected. Groundwater quality parameters were collected at least three times during the sampling of each multilevel monitoring well zone and recorded in the groundwater sampling logs (Appendix B.1). Additionally, cumulative data on water pressure, temperature, and elevation from multilevel monitoring well sampling is presented in Appendix D of the *Fourth Quarter 2020 Groundwater Monitoring Report* (DON 2021a). Observations and additional discussion of groundwater DO enrichment were presented in the *First Quarter 2018 Groundwater Monitoring Report* (DON 2018f).

Groundwater samples were collected in sample containers that were pre-preserved (as necessary) and provided by the analytical laboratory. Samples collected for ferrous iron were filtered in the field using new, individual 0.45-micron filters attached at the end of the pump/probe discharge tubing.

Groundwater sampling at multilevel monitoring well zones requires a few hours for each zone due to the limited volume (1 liter) collected from each deployment of the sample container string. During the Second Quarter 2019 monitoring event, a one-time evaluation was conducted to evaluate whether the groundwater geochemistry changes during the sampling duration. Three additional aliquots of groundwater (from run #2, run #7, and run #13) were collected from RHMW11-05 and analyzed for anions and alkalinity. The results indicated that the groundwater geochemistry is consistent during the 4-hour sampling duration at RHMW11-05. Data related to these samples were presented in the *Second Quarter 2019 Groundwater Monitoring Report* (DON 2019c).

The analytical program for the First Quarter 2021 groundwater monitoring event is shown in Table 2-1.

Table 2-1: Groundwater Sampling Program for the First Quarter 2021 Quarterly Monitoring Event

Parameter	Analytical Method	Analyte(s) [a]	Screening Criterion (µg/L) [a]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW19	RHMW11-05	RHMW13-05	RHMW14-03	RHMW15-05	HDMW2253-03	OWDFMW01
TPH	EPA 8260	TPH-g	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EPA 8015	TPH-d	400	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		TPH-o	500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TPH with SGC [c]	EPA 3630/8015	TPH-d	400	—	—	✓	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		TPH-o	500	—	—	✓	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VOCs	EPA 8260	Benzene	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Ethyl Benzene	30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Toluene	40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Total Xylenes	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PAHs	EPA 8270 SIM	1-Methylnaphthalene	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		2-Methylnaphthalene	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Naphthalene	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fuel Additives	EPA 8270	Phenol	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Lab Procedure	2-(2-Methoxyethoxy)Ethanol	800 [b]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lead Scavengers [d]	EPA 8011	1,2-Dibromoethane	0.04	—	—	—	—	—	—	—	—	—	—	—	✓	—	✓	—	—	—	—
	EPA 8260	1,2-Dichloroethane	5	—	—	—	—	—	—	—	—	—	—	—	✓	—	✓	—	—	—	—
NAPs	Field parameter	DO, ORP	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SM 3500-Fe	Ferrous Iron	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	RSK 175M	Methane	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EPA 300.0	Nitrate, Sulfate, Chloride	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EPA 353.2	Nitrate-Nitrite as Nitrogen	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EPA 2320	Carbonate, Bicarbonate, and Total Alkalinity	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EPA 9060A	TOC	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

— not analyzed
✓ analyzed

[a] COPCs and associated screening criteria were provided in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter from the Regulatory Agencies (EPA Region 9 and DOH 2016) and updated with the most current DOH Tier 1 EALs in Table D-1b (DOH 2017) where appropriate.
[b] Screening criterion is from EPA Tap Water Regional Screening Levels, target hazard quotient = 1.0, November 2020 (EPA 2020).
[c] TPH-d and TPH-o with SGC were analyzed only in samples with positive detections of TPH-d and TPH-o without SGC.
[d] Lead scavengers are collected only from newly installed monitoring wells for at least 1 year of sampling, and may be discontinued if sample results are below the Groundwater Action Levels established in the February 4, 2016, scoping completion letter (EPA Region 9 and DOH 2016). Lead scavenger analysis was performed during the First Quarter 2021 monitoring event for RHMW19 and RHMW13-05, which have not yet completed the minimum 1 year of sampling. The lead scavenger requirement has been completed for all other monitoring locations.

2.2 FIELD QUALITY ASSURANCE/QUALITY CONTROL

A quality assurance (QA)/QC program was implemented in the field in accordance with the NAVFAC Pacific *Project Procedures Manual* (DON 2015b), DOH TGM (DOH 2018), the project WP/SOW (DON 2015c), AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a), SAP (DON 2017b; 2017c), SAP Addendum 01 (DON 2017d), and SAP Addendum 03 (DON 2021b) to support generating data of known and defensible quality. The QA/QC program was designed to minimize error, provide early identification and correction of potential problems, and evaluate the performance of the sampling program.

Field instruments were calibrated each morning prior to starting field activities. The PID was calibrated with 100 ppm isobutylene calibration gas. The multi-gas monitor was calibrated with 100 ppm isobutylene calibration gas and a multi-gas monitor calibration gas composed of 50 ppm carbon monoxide, 25 ppm dihydrogen sulfide, 19 percent oxygen, and 50 percent of the lower explosive limit of methane. The water quality meter was calibrated with an auto-calibration solution prior to recording measurements.

To assess the effectiveness of the equipment decontamination process, one equipment blank sample was collected from the reusable sample container used during the multilevel monitoring well zone sampling. The equipment blank sample was collected on site by pouring distilled water onto the decontaminated multilevel monitoring well sample container string and then into the sample containers. A field blank sample was also collected to assess the quality of the locally sourced Menehune Water Company distilled water used to collect the equipment blank. The field blank was collected by pouring distilled water directly into sample containers. The field blank and equipment blank samples were analyzed for the same COPCs as the groundwater samples.

As all non-multilevel monitoring locations have dedicated bladder pumps installed, no field and equipment blanks were collected from non-multilevel monitoring locations.

To help assess the precision of the data collection activity, including sampling and analysis, field duplicates were collected at the same approximate time as their respective primary samples. During the First Quarter 2021 monitoring event, one field duplicate each was collected from RHMW2254-01, RHMW02, and RHMW13 Zone 5.

One trip blank was used at each sampling location to accurately represent the condition of the samples in each shipment. The hermetically sealed trip blank samples were supplied pre-filled by the analytical laboratory and remained with the associated groundwater sample in the cooler during the field event and transported to and from the site.

2.3 SAMPLE HANDLING AND ANALYSIS

The samples were labeled and logged in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure III-E, *Record Keeping, Sample Labeling, and Chain-of-Custody Procedures* (DON 2015b). Immediately after collection, all samples were labeled, logged in the field logbooks, custody-sealed, sealed with tape, and placed in a resealable plastic bag. To meet the recommended holding time for nitrate analysis, efforts were made to ship samples to the laboratory on the day of collection. Samples not shipped on the day of collection were stored in secure and controlled cold storage overnight and shipped the following day.

Prior to shipping, the samples were logged in a chain-of-custody form and loaded into a cooler with double-bagged wet ice. Packed coolers were sent by field personnel via express-courier overnight shipping in custody-sealed coolers to Agriculture & Priority Pollutants Laboratories, Inc. in Clovis, California. Sample transport and custody details are provided in the chain-of-custody records in the laboratory reports in Appendix C.1.

2.4 DECONTAMINATION

Decontamination activities were performed in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-F, *Equipment Decontamination* (DON 2015b). A staging and decontamination area was established near each well location. Non-disposable sampling equipment (e.g., water level meter, oil/water interface probe, and multilevel monitoring well sample container string) was decontaminated at the beginning of each day and after purging and sampling each well. The decontamination process included washing and scrubbing the equipment with stiff-bristled nylon brushes and a non-phosphate detergent (e.g., Alconox) solution, followed by rinsing once with isopropyl alcohol and twice with distilled water. Liquid wastes generated during decontamination activities were captured and containerized in properly labeled, U.S. Department of Transportation-approved 55-gallon drums or other suitable temporary containers and managed as investigation-derived waste (IDW).

2.5 INVESTIGATION-DERIVED WASTE MANAGEMENT

IDW generated during the monitoring events consisted of purged groundwater from the monitoring wells and decontamination water. The IDW was handled, stored, and labeled in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-A-6, *Investigation-Derived Waste Management* (DON 2015b). Approximately 150 gallons of fluid from all wells were containerized in three clearly labeled, 55-gallon-capacity drums, covered with a tarp, and stored on site in an area designated by the Navy, pending disposal. Disposable personal protective equipment and sampling equipment and supplies were collected in plastic trash bags and disposed of as municipal waste.

3. Data Evaluation and Quality Assessment

Field observations and measurements and laboratory groundwater analytical results collected during the First Quarter 2021 groundwater monitoring event were evaluated along with available correction factors and historical groundwater concentrations. A data quality assessment consisting of a review of the overall groundwater sample collection and analysis process was performed to determine whether the analytical data generated met the quality objectives for the project. The data quality assessment was performed in accordance with the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a) and the SAP and addenda (DON 2017b; 2017c; 2017d; 2021b). The field QC program consisted of standardized sample collection and management procedures and the collection of field duplicate samples, matrix spike (MS) samples, and trip blank samples. The laboratory QA program consisted of the use of standard analytical methods and the preparation and analyses of MS/MS duplicate (MSD) samples, surrogate spikes, blanks, and laboratory control samples (LCSs)/LCS duplicates (LCSDs).

3.1 GROUNDWATER LEVEL MEASUREMENTS

Depths to groundwater were gauged from the notched and surveyed top of casing using calibrated water level measuring tapes at non-multilevel monitoring well locations prior to sampling (Table 3-1). Additionally, a Heron or Solinst oil/water interface probe was used to detect NAPL, which was measured if present.

The oil/water interface probe and water level measuring tapes were decontaminated between well measurements by washing with a non-phosphate detergent solution and rinsing with isopropyl alcohol and distilled water to prevent cross-contamination. Measuring points for all non-multilevel monitoring wells are detailed in three well elevation survey reports (DON 2018c; 2018e; 2019a) and presented in Table 3-1.

Table 3-1: Groundwater Elevations

Monitoring Well No.	Sampling Date	PID Reading at Wellhead (ppm)	Depth to Water (ft btoc) [a]	Measuring Tape Correction Factor [Tape ID] (ft) [b]	Well Horizontal Displacement Correction Factor (ft) [c]	Corrected Depth to Water (ft btoc)	Measuring Point Elevation (ft msl) [d]	Groundwater Elevation (ft msl)
RHMW2254-01	1/26/2021	0.0	— [h]	—	—	—	100.4501	—
RHMW01	1/25/2021	0.0	83.68	-0.02 [N-1]	—	83.66	101.9955	18.34
RHMW02	1/25/2021	0.0	86.34	-0.02 [N-1]	-0.06	86.26	104.5970	18.34
RHMW03	1/25/2021	0.0	102.60	-0.03 [N-1]	-0.04	102.53	120.8980	18.37
RHMW04	1/25/2021	0.0	294.02	-0.03 [N-2]	-0.02	293.97	312.1062	18.14
RHMW05	1/26/2021	0.0	82.93	-0.02 [N-1]	-0.01	82.90	101.3102	18.41
RHMW06 [f]	1/19/2021	0.1 [e]	241.06	-0.02 [N-2]	-0.01	241.03	259.1275	18.10
RHMW07 [f]	1/19/2021	0.0	197.94	-0.02 [N-2]	-0.01	197.91	220.4517	22.54
RHMW08 [f]	1/19/2021	0.0	292.45	-0.03 [N-2]	-0.03	292.39	310.4817	18.09
RHMW09 [f]	1/26/2021	0.1	377.52	-0.04 [N-2]	-0.24	377.24	395.4299	18.19
RHMW10 [f]	1/20/2021	0.0	477.55	-0.04 [N-2]	-0.09	477.42	495.6388	18.22
RHMW19 [f]	1/20/2021	0.0	426.45	-0.04 [N-2]	— [i]	426.41	444.6381	18.23
RHMW11-05 [g]	1/21/2021	0.1	—	—	-0.09	—	—	—
RHMW13-05 [g]	1/20/2021	0.1	—	—	— [i]	—	—	—
RHMW14-03 [g]	1/19/2021	4.2	—	—	— [i]	—	—	—
RHMW15-05 [g]	1/18/2021	0.0	—	—	— [i]	—	—	—
HDMW2253-03	1/21/2021	0.0	207.64	-0.02 [N-2]	-0.01	207.61	226.6812	19.07
OWDFMW01	1/27/2021	0.0	120.01	-0.03 [N-1]	-0.03	119.95	138.1361	18.19

— not applicable
btoc below top of casing
ft foot or feet
msl mean sea level
N-1 500-foot calibrated water level tape (Appendix B.2)
N-2 1000-foot calibrated water level tape (Appendix B.2)

[a] Depth to water readings were taken using the calibrated water level measuring tapes.
[b] Water level measuring tape calibration information and correction factors are presented in Appendix B.2.
[c] Well horizontal displacement correction factor based on gyroscopic survey of the monitoring well's vertical plumbness. Correction factors are presented in the *Technical Memorandum, Gyroscopic Survey Results and Calculated Correction Factors for Groundwater Monitoring Network Wells at the Red Hill Bulk Fuel Storage Facility* (DON 2018d).
[d] Well Elevation Survey Reports: (DON 2018c; 2018e; 2019a).
[e] Ambient PID measurements were recorded at 0.1 ppm for RHMW06; all other ambient PID measurements were 0.0 ppm.
[f] Depth to water is measured from the top of the gray plate at monitoring wells RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, and RHMW19.
[g] Depth to water measurements cannot be measured in multilevel monitoring wells RHMW11, RHMW13, RHMW14, and RHMW15.
[h] Depth to water at the Red Hill Shaft sampling point was not measured due to safety concerns related to entering the shaft access manhole.
[i] The horizontal displacement correction factor for RHMW19 and the zones in multilevel wells RHMW13, RHMW14, and RHMW15 are currently unavailable but will be published in a forthcoming deliverable.

Groundwater elevations beneath and near the site ranged from 18.10 to 22.54 feet above mean sea level during the First Quarter 2021 groundwater monitoring event. Graphs of cumulative historical depth to water readings are presented in Appendix A.4.

PID readings at the wellheads ranged from 0.0 to 4.2 ppm, with PID detections at RHMW06, RHMW09, RHMW11-05, RHMW13-05, and RHMW14-03. The highest PID detection at the wellhead was 4.2 ppm at RHMW14-03. The ambient PID reading at RHMW06 was 0.1 ppm. PID measurements of ambient conditions for all other monitoring locations was 0.0 ppm, indicating that wellhead VOCs detections at RHMW09, RHMW11-05, RHMW13-05, and RHMW14-03 were likely not caused by field conditions, such as vehicle exhaust or high humidity, at these locations.

No odor, sheen, or NAPL was observed during sampling at any location. The groundwater collected from HDMW2253-03 showed a slight brown coloration, similar to observations made in previous events. All other groundwater samples were observed as clear of color and sediment.

Due to safety concerns related to entering the Red Hill Shaft access manhole, depth to groundwater measurement at RHMW2254-01 is no longer collected starting from the Second Quarter 2019 groundwater monitoring event. Additionally, due to the design of the multilevel monitoring wells, depths to groundwater cannot be measured in the monitoring zones of RHMW11, RHMW13, RHMW14, and RHMW15. Cumulative results of water pressure, temperature, and elevation for multilevel monitoring wells are presented in Appendix D of the *Fourth Quarter 2020 Groundwater Monitoring Report* (DON 2021a).

3.2 ANALYTICAL RESULTS

The following are the chemicals analyzed and the respective analytical methods for this monitoring event:

- TPH-d and TPH-o by EPA SW846 Test Method 8015B
- TPH-g, benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
- 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene by EPA Method 8270D SIM
- Phenol by EPA Method 8270D
- 2-(2-methoxyethoxy)-ethanol by a proprietary laboratory procedure
- Nitrate, chloride, and sulfate by EPA Method 300.0
- Nitrate-nitrite as nitrogen, methane, ferrous iron, and alkalinity by EPA 353.2, RSK 175, SM 3500-Fe-B, and SM2320B, respectively
- Total organic carbon (TOC) by EPA Method 9060A

The sampling results include the chemicals analyzed and the respective analytical methods for each groundwater sample are identified in Table 3-2. Copies of the laboratory reports are presented in Appendix C.1. Copies of the third-party data validation reports are presented in Appendix C.2.

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Table 3-2: Groundwater and QC Sample Results for the First Quarter 2021 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW2254-01	RHMW2254-01	RHMW01	RHMW02	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW11-05	RHMW13-05	RHMW13-05
						COC ID	ERH1214	ERH1215	ERH1217	ERH1219	ERH1220	ERH1222	ERH1224	ERH1226	ERH1228	ERH1232	ERH1230	ERH1240	ERH1236	ERH1242	ERH1244	ERH1245
						Collection Date	1/26/2021	1/26/2021	1/25/2021	1/25/2021	1/25/2021	1/25/2021	1/25/2021	1/26/2021	1/19/2021	1/19/2021	1/19/2021	1/26/2021	1/20/2021	1/21/2021	1/20/2021	1/20/2021
						Sample Type	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N	N	FD
						FD Parent Sample	—	ERH1214	—	—	ERH1219	—	—	—	—	—	—	—	—	—	—	ERH1244
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																						
Benzene	71-43-2	8260B	5	750	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Ethylbenzene	100-41-4	8260B	30	—	µg/L	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	108-88-3	8260B	40	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Xylenes	1330-20-7	8260B	20	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U
TPH-d (C10-C24) [b]	PHCC10C24	8015B_E	400	4500	µg/L	< 300.0 U	< 300.0 U	< 300.0 U	**1500**	**1600**	**180 J**	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L	—	—	—	**390**	**380**	< 300.0 U	—	—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) [b]	PHCC24C40	8015B_E	500	—	µg/L	< 300.0 U	< 300.0 U	< 300.0 U	**180 J**	**330**	**220 J**	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L	—	—	—	< 300.0 U	< 300.0 U	< 300.0 U	—	—	—	—	—	—	—	—	—	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	**25**	**23**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L	< 0.10 UJ	< 0.10 U	< 0.10 U	**17**	**16**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Naphthalene	91-20-3	8270DSIM	17	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	**44**	**41**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Fuel Additives																						
Phenol	108-95-2	8270D	300	—	µg/L	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U
Lead Scavengers																						
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.019 U	< 0.019 U
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.30 U	< 0.30 U
Natural Attenuation Parameters																						
Methane	74-82-8	RSK175	—	—	µg/L	< 1.00 U	—	**560**	**5400**	—	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	**9.6**	—
Iron, Ion (Fe2+)	15438-31-0	3500-FE-B	—	—	mg/L	< 0.32 U	—	**0.37 J**	**1.9 J**	—	< 0.32 UJ	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	—
Nitrate (as NO3 anion)	14797-55-8_A	300.0	—	—	mg/L	**2.6**	—	< 0.18 U	< 0.18 UJ	—	**3.0 J**	**2.1**	**1.3**	**0.93 J**	**1.6 J**	**1.5 J**	**0.71**	**0.72 J**	< 0.18 U	< 0.18 UJ	—
Nitrate (as Nitrogen) [c]	14797-55-8_A	Manual Calc	—	—	mg/L	**0.59**	—	—	—	—	**0.68**	**0.47**	**0.29**	**0.21**	**0.36**	**0.34**	**0.16**	**0.16**	—	—	—
Sulfate (as SO4)	14808-79-8	300.0	—	—	mg/L	**19.0**	—	**4.9**	< 0.20 U	—	**22.6**	**9.2**	**15.4**	**36.5**	**44.2**	**9.8**	**3.8**	**3.4**	**11.2**	**9.7**	—
Chloride (as Cl)	16887-00-6	300.0	—	—	mg/L	**119**	—	**42.7 J**	**21.6**	—	**21.7**	**72.8**	**134**	**475**	**455**	**45.0**	**22.7**	**19.9**	**52.7**	**54.0**	—
Nitrogen, Nitrate-Nitrite	NO3NO2N	353.2	—	—	mg/L	**0.82**	—	< 0.090 U	< 0.039 U	—	**1.8**	**0.49**	**0.83**	**0.60**	**1.1**	**1.4**	**0.59**	**0.41**	< 0.090 U	< 0.090 U	—
Alkalinity, Bicarbonate	71-52-3	2320B	—	—	mg/L	**62.6**	—	**81.2**	**189**	—	**277**	**76.6**	**82.2**	**116**	**78.0**	**103**	**64.2**	**69.8**	**110**	**96.0**	—
Alkalinity, Carbonate (as CO3)	3812-32-6	2320B	—	—	mg/L	< 1.70 U	—	< 1.70 U	< 1.70 U	—	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	—
Alkalinity, Total (as CaCO3)	ALK	2320B	—	—	mg/L	**62.6**	—	**81.2**	**189**	—	**277**	**76.6**	**82.2**	**116**	**78.0**	**103**	**64.2**	**69.8**	**110**	**96.0**	—
Total Organic Carbon	TOC	9060A	—	—	mg/L	**0.20 J**	—	**0.45 J**	**3.2**	—	**1.4**	**0.22 J**	**0.51 J**	**0.23 J**	**0.32 J**	**0.47 J**	**0.19 J**	**0.14 J**	**13.7 J**	**1.1 J**	—
Dissolved Oxygen	—	Field	—	—	mg/L	**8.23**	—	**1.05**	**3.16**	—	**1.13**	**8.99**	**8.07**	**6.88**	**4.23**	**6.71**	**8.54**	**8.61**	**1.66**	**0.33**	—
Oxidation-Reduction Potential	—	Field	—	—	mV	**532.2**	—	**63.3**	**51.1**	—	**540.7**	**120.2**	**508.3**	**55.6**	**59.1**	**49.6**	**53.6**	**51.5**	**270.6**	**534.1**	—

Table 3-2: Groundwater and QC Sample Results for the First Quarter 2021 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW14-03	RHMW15-05	RHMW19	HDMW2253-03	OWDFMW01	Multilevel Well	Multilevel Well	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08
						COC ID	ERH1247	ERH1249	ERH1212	ERH1234	ERH1238	ERH1251	ERH1252	ERH1213	ERH1216	ERH1218	ERH1221	ERH1223	ERH1225	ERH1227	ERH1231	ERH1229
						Collection Date	1/19/2021	1/18/2021	1/20/2021	1/21/2021	1/27/2021	1/20/2021	1/20/2021	1/26/2021	1/25/2021	1/25/2021	1/25/2021	1/25/2021	1/26/2021	1/19/2021	1/19/2021	1/19/2021
						Sample Type	N	N	N	N	N	FB	EB	TB	TB	TB	TB	TB	TB	TB	TB	TB
						FD Parent Sample	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																						
Benzene	71-43-2	8260B	5	750	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ
Ethylbenzene	100-41-4	8260B	30	—	µg/L	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
Toluene	108-88-3	8260B	40	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ
Xylenes	1330-20-7	8260B	20	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ	< 0.30 UJ
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ	< 18.0 UJ
TPH-d (C10-C24) [b]	PHCC10C24	8015B_E	400	4500	µg/L	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	—	—	—	—	—	—	—	—	—	—
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) [b]	PHCC24C40	8015B_E	500	—	µg/L	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	—	—	—	—	—	—	—	—	—	—
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	—	—	—	—	—	—	—	—	—	—
Naphthalene	91-20-3	8270DSIM	17	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	—	—	—	—	—	—	—	—	—	—
Fuel Additives																						
Phenol	108-95-2	8270D	300	—	µg/L	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	—	—	—	—	—	—	—	—	—	—
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	—	—	—	—	—	—	—	—	—	—
Lead Scavengers																						
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L	—	—	< 0.019 U	—	—	< 0.019 U	< 0.019 U	—	—	—	—	—	—	—	—	—	—
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L	—	—	< 0.30 U	—	—	< 0.30 U	< 0.30 U	—	—	—	—	—	—	—	—	—	—
Natural Attenuation Parameters																						
Methane	74-82-8	RSK175	—	—	µg/L	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	—	—	< 1.00 U	< 1.00 UJ	< 1.00 UJ	**2.8 J**	< 1.00 UJ	< 1.00 UJ	< 1.00 UJ	< 1.00 UJ	< 1.00 UJ
Iron, Ion (Fe2+)	15438-31-0	3500-FE-B	—	—	mg/L	**0.16 J**	< 0.32 U	< 0.32 U	**0.77 J**	< 0.32 U	—	—	—	—	—	—	—	—	—	—	—	—
Nitrate (as NO3 anion)	14797-55-8_A	300.0	—	—	mg/L	**0.64 J**	**1.8**	**0.84**	**0.94**	**2.6**	—	—	—	—	—	—	—	—	—	—	—	—
Nitrate (as Nitrogen) [c]	14797-55-8_A	Manual Calc	—	—	mg/L	**0.14**	**0.41**	**0.19**	**0.21**	**0.59**	—	—	—	—	—	—	—	—	—	—	—	—
Sulfate (as SO4)	14808-79-8	300.0	—	—	mg/L	**3.0**	**9.2**	**2.9**	**28.2**	**351**	—	—	—	—	—	—	—	—	—	—	—	—
Chloride (as Cl)	16887-00-6	300.0	—	—	mg/L	**17.5**	**50.5**	**22.4**	**90.0**	**1230**	—	—	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate-Nitrite	NO3NO2N	353.2	—	—	mg/L	**0.37**	**0.43**	**0.39**	**0.23**	**2.2**	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Bicarbonate	71-52-3	2320B	—	—	mg/L	**62.9**	**65.6**	**66.6**	**47.1**	**161**	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Carbonate (as CO3)	3812-32-6	2320B	—	—	mg/L	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (as CaCO3)	ALK	2320B	—	—	mg/L	**62.9**	**65.6**	**66.6**	**47.1**	**161**	—	—	—	—	—	—	—	—	—	—	—	—
Total Organic Carbon	TOC	9060A	—	—	mg/L	**13.9**	**1.3**	< 0.350 U	**0.13 J**	**0.51 J**	—	—	—	—	—	—	—	—	—	—	—	—
Dissolved Oxygen	—	Field	—	—	mg/L	**1.23**	**1.18**	**8.88**	**1.33**	**5.71**	—	—	—	—	—	—	—	—	—	—	—	—
Oxidation-Reduction Potential	—	Field	—	—	mV	**437.7**	**292.0**	**51.7**	**48.8**	**513.4**	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-2: Groundwater and QC Sample Results for the First Quarter 2021 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW09	RHMW10	RHMW11-05	RHMW13-05	RHMW14-03	RHMW15-05	RHMW19	HDMW2253-03	OWDFMW01	Multilevel Well
						COC ID	ERH1239	ERH1235	ERH1241	ERH1243	ERH1246	ERH1248	ERH1211	ERH1233	ERH1237	ERH1250
						Collection Date	1/26/2021	1/20/2021	1/21/2021	1/20/2021	1/19/2021	1/18/2021	1/20/2021	1/21/2021	1/27/2021	1/20/2021
						Sample Type	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
						FD Parent Sample	—	—	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																
Benzene	71-43-2	8260B	5	750	µg/L		< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 UJ
Ethylbenzene	100-41-4	8260B	30	—	µg/L		< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 UJ
Toluene	108-88-3	8260B	40	—	µg/L		< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 UJ
Xylenes	1330-20-7	8260B	20	—	µg/L		< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 UJ
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L		< 18.0 U	< 18.0 UJ	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 UJ	< 18.0 U	< 18.0 U	< 18.0 UJ
TPH-d (C10-C24) [b]	PHCC10C24	8015B_E	400	4500	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) [b]	PHCC24C40	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—
Naphthalene	91-20-3	8270DSIM	17	—	µg/L		—	—	—	—	—	—	—	—	—	—
Fuel Additives																
Phenol	108-95-2	8270D	300	—	µg/L		—	—	—	—	—	—	—	—	—	—
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L		—	—	—	—	—	—	—	—	—	—
Lead Scavengers																
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L		—	—	—	< 0.019 U	—	—	< 0.019 U	—	—	< 0.019 U
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L		—	—	—	< 0.30 U	—	—	< 0.30 UJ	—	—	< 0.30 UJ
Natural Attenuation Parameters																
Methane	74-82-8	RSK175	—	—	µg/L		< 1.00 U	< 1.00 UJ	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 UJ	< 1.00 U	< 1.00 U	—
Iron, Ion (Fe2+)	15438-31-0	3500-FE-B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Nitrate (as NO3 anion)	14797-55-8_A	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Nitrate (as Nitrogen) [c]	14797-55-8_A	Manual Calc	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Sulfate (as SO4)	14808-79-8	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Chloride (as Cl)	16887-00-6	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate-Nitrite	NO3NO2N	353.2	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Alkalinity, Bicarbonate	71-52-3	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Alkalinity, Carbonate (as CO3)	3812-32-6	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (as CaCO3)	ALK	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Total Organic Carbon	TOC	9060A	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Dissolved Oxygen	—	Field	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Oxidation-Reduction Potential	—	Field	—	—	mV		—	—	—	—	—	—	—	—	—	—

Notes:

Bold text indicates detected value.

Bold and shaded text indicates analyte exceeds the screening criterion.

— = not analyzed or not applicable
µg/L = microgram per liter
CAS = Chemical Abstracts Service
COC = chain-of-custody
EB = equipment blank (rinsate)
FB = field blank (source water)
FD = field duplicate
ID = identification
J = estimated value
mg/L = milligram per liter
mV = millivolt
N = normal (primary) sample
no. = number
QC = quality control
U = nondetect value
R = Rejected
SSRBL = Site-Specific Risk-Based Level
TB = trip blank
TPH-g = total petroleum hydrocarbons-gasoline range organics
TPH-d = total petroleum hydrocarbons-diesel range organics
TPH-o = total petroleum hydrocarbons-residual range organics (i.e., TPH-oil)

[a] SSRBL applies to RHMW01, RHMW02, and RHMW03.

[b] For EPA 8015 TPH-d and TPH-o, analysis of silica gel clean extract was performed on samples with TPH-d and/or TPH-o detection.

[c] Nitrate result converted to nitrate as nitrogen by multiplying nitrate result by a factor of 0.2259 (CalEPA 2011).

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Analytical results were compared to the current LTM screening criteria as established by the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016) and updated with the most recent DOH (2017) Tier 1 EALs in Table D-1b (Section 1.2). The field and QC sample results of the First Quarter 2021 groundwater monitoring event are summarized in Table 3-2.

Figure 2 presents COPC detections, and Figure 3A and Figure 3B present the natural attenuation parameter (NAP) results at all monitoring locations. A description of laboratory data qualifiers and definitions and basic concepts of the terms DL, LOD, and LOQ are presented in the DoD Environmental Data Quality Workgroup Fact Sheet included as Appendix C.3.

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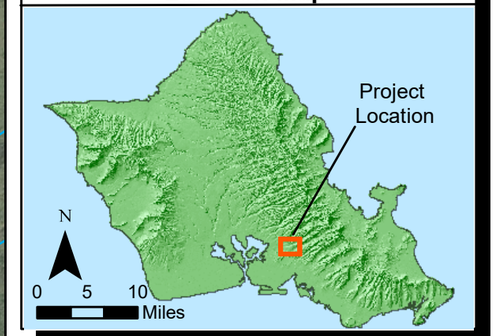
			Location	RHMW02	RHMW02
			Sample ID	ERH1219	ERH1220
			Collection Date	1/25/2021	1/25/2021
			Sample Type	N	FD
			FD Parent Sample	—	ERH1219
Analyte	Criteria	SSRBL	Unit	Result	Result
TPH-d (C10-C24)	400	4500	µg/L	**1500**	**1600**
TPH-d (C10-C24) with SGC	400	—	µg/L	**390**	**380**
TPH-o (C24-C40)	500	—	µg/L	**180 J**	**330**
TPH-o (C24-C40) with SGC	500	—	µg/L	< 300 U	< 300 U
1-Methylnaphthalene	10	—	µg/L	**25**	**23**
2-Methylnaphthalene	10	—	µg/L	**17**	**16**
Naphthalene	17	—	µg/L	**44**	**41**

			Location	RHMW03
			Sample ID	ERH1222
			Collection Date	1/25/2021
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-d (C10-C24)	400	4500	µg/L	**180 J**
TPH-d (C10-C24) with SGC	400	—	µg/L	< 300 U
TPH-o (C24-C40)	500	—	µg/L	**220 J**
TPH-o (C24-C40) with SGC	500	—	µg/L	< 300 U

Location Map



Legend

- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015
3. Only analytes with detections and associated SGC data (if applicable) are shown.
4. COPC screening criteria is based on DOH Tier 1 groundwater environmental action levels for sites where groundwater is a potential or current drinking water resource and the nearest surface water body is greater than 150 meters from the release site.
5. Results marked with the qualifier "A" indicates result is mostly or wholly due to laboratory TPH-d/o contamination.

ABBREVIATIONS:

FD	field duplicate sample
ID	identification
J	estimated value
N	primary (normal) sample
SGC	silica gel cleanup
SSRBL	site-specific risk based level
TPH	total petroleum hydrocarbon
TPH-d	TPH-diesel range organics
TPH-g	TPH-gasoline range organics
TPH-o	TPH-oil/residual range organics
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter
1300	Exceeds screening criterion

Bold text indicates detected value.

N

0 400 800 1,600 Feet

Figure 2
COPC Detections
1st Qtr 2021 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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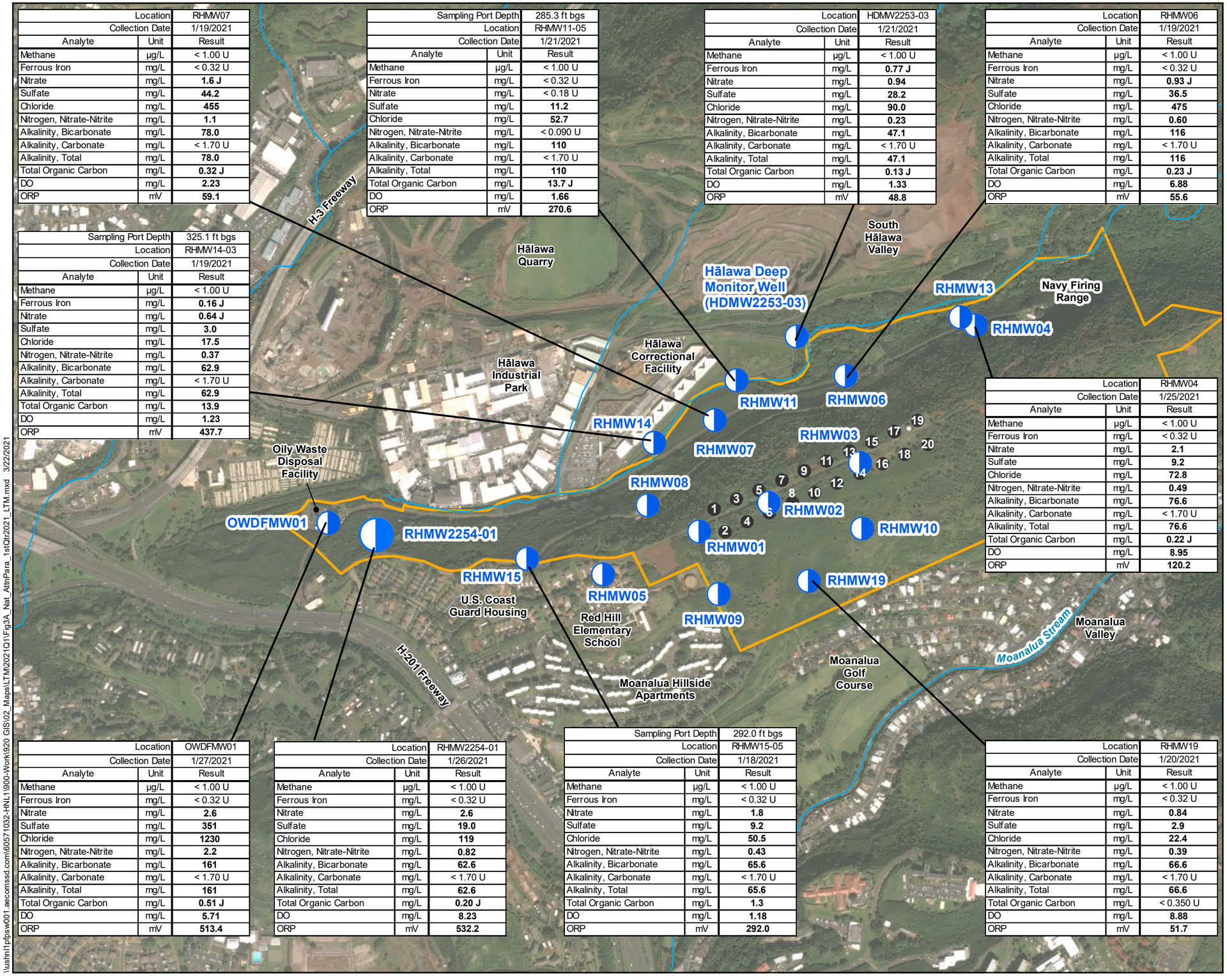


Location	RHMW07
Collection Date	1/19/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.6 J**
Sulfate	mg/L	**44.2**
Chloride	mg/L	**455**
Nitrogen, Nitrate-Nitrite	mg/L	**1.1**
Alkalinity, Bicarbonate	mg/L	**78.0**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**78.0**
Total Organic Carbon	mg/L	**0.32 J**
DO	mg/L	**2.23**
ORP	mV	**59.1**

Sampling Port Depth	285.3 ft bgs
Location	RHMW11-05
Collection Date	1/21/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	< 0.18 U
Sulfate	mg/L	**11.2**
Chloride	mg/L	**52.7**
Nitrogen, Nitrate-Nitrite	mg/L	< 0.090 U
Alkalinity, Bicarbonate	mg/L	**110**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**110**
Total Organic Carbon	mg/L	**13.7 J**
DO	mg/L	**1.66**
ORP	mV	**270.6**

Location	HDMW2253-03
Collection Date	1/21/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	**0.77 J**
Nitrate	mg/L	**0.94**
Sulfate	mg/L	**28.2**
Chloride	mg/L	**90.0**
Nitrogen, Nitrate-Nitrite	mg/L	**0.23**
Alkalinity, Bicarbonate	mg/L	**47.1**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**47.1**
Total Organic Carbon	mg/L	**0.13 J**
DO	mg/L	**1.33**
ORP	mV	**48.8**

Location	RHMW06
Collection Date	1/19/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**0.93 J**
Sulfate	mg/L	**36.5**
Chloride	mg/L	**475**
Nitrogen, Nitrate-Nitrite	mg/L	**0.60**
Alkalinity, Bicarbonate	mg/L	**116**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**116**
Total Organic Carbon	mg/L	**0.23 J**
DO	mg/L	**6.88**
ORP	mV	**55.6**

Sampling Port Depth	325.1 ft bgs
Location	RHMW14-03
Collection Date	1/19/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	**0.16 J**
Nitrate	mg/L	**0.64 J**
Sulfate	mg/L	**3.0**
Chloride	mg/L	**17.5**
Nitrogen, Nitrate-Nitrite	mg/L	**0.37**
Alkalinity, Bicarbonate	mg/L	**62.9**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**62.9**
Total Organic Carbon	mg/L	**13.9**
DO	mg/L	**1.23**
ORP	mV	**437.7**

Location	RHMW04
Collection Date	1/25/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.1**
Sulfate	mg/L	**9.2**
Chloride	mg/L	**72.8**
Nitrogen, Nitrate-Nitrite	mg/L	**0.49**
Alkalinity, Bicarbonate	mg/L	**76.6**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**76.6**
Total Organic Carbon	mg/L	**0.22 J**
DO	mg/L	**8.95**
ORP	mV	**120.2**

Location	OWDFMW01
Collection Date	1/27/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.6**
Sulfate	mg/L	**351**
Chloride	mg/L	**1230**
Nitrogen, Nitrate-Nitrite	mg/L	**2.2**
Alkalinity, Bicarbonate	mg/L	**161**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**161**
Total Organic Carbon	mg/L	**0.51 J**
DO	mg/L	**5.71**
ORP	mV	**513.4**

Location	RHMW2254-01
Collection Date	1/26/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.6**
Sulfate	mg/L	**19.0**
Chloride	mg/L	**119**
Nitrogen, Nitrate-Nitrite	mg/L	**0.82**
Alkalinity, Bicarbonate	mg/L	**62.6**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**62.6**
Total Organic Carbon	mg/L	**0.20 J**
DO	mg/L	**8.23**
ORP	mV	**532.2**

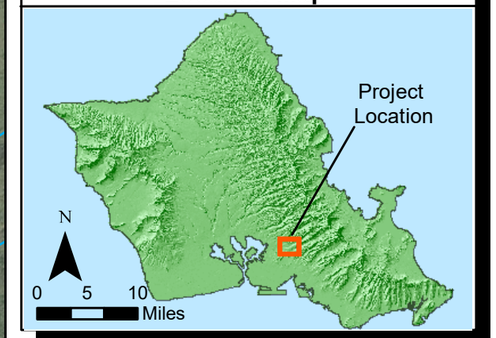
Sampling Port Depth	292.0 ft bgs
Location	RHMW15-05
Collection Date	1/18/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.8**
Sulfate	mg/L	**9.2**
Chloride	mg/L	**50.5**
Nitrogen, Nitrate-Nitrite	mg/L	**0.43**
Alkalinity, Bicarbonate	mg/L	**65.6**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**65.6**
Total Organic Carbon	mg/L	**1.3**
DO	mg/L	**1.18**
ORP	mV	**292.0**

Location	RHMW19
Collection Date	1/20/2021

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**0.84**
Sulfate	mg/L	**2.9**
Chloride	mg/L	**22.4**
Nitrogen, Nitrate-Nitrite	mg/L	**0.39**
Alkalinity, Bicarbonate	mg/L	**66.6**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**66.6**
Total Organic Carbon	mg/L	< 0.350 U
DO	mg/L	**8.88**
ORP	mV	**51.7**

Location Map



Legend

- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

ABBREVIATIONS:

bgs	below ground surface
DO	dissolved oxygen
ft	feet
J	estimated value
mg/L	milligrams per liter
mV	millivolts
NA	not analyzed or not applicable
ORP	oxidation-reduction potential
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Bold text indicates detected value.

N

0 400 800 1,600 Feet

Figure 3A
Natural Attenuation Parameter Results
1st Qtr 2021 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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Location		RHMW08
Collection Date		1/19/2021
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.5 J**
Sulfate	mg/L	**9.8**
Chloride	mg/L	**45.0**
Nitrogen, Nitrate-Nitrite	mg/L	**1.4**
Alkalinity, Bicarbonate	mg/L	**103**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**103**
Total Organic Carbon	mg/L	**0.47 J**
DO	mg/L	**6.71**
ORP	mV	**49.6**

Sampling Port Depth		230.3 ft bgs
Location		RHMW13-05
Collection Date		1/20/2021
Analyte	Unit	Result
Methane	µg/L	**9.6**
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	< 0.18 UJ
Sulfate	mg/L	**9.7**
Chloride	mg/L	**54.0**
Nitrogen, Nitrate-Nitrite	mg/L	< 0.090 U
Alkalinity, Bicarbonate	mg/L	**96.0**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**96.0**
Total Organic Carbon	mg/L	**1.1 J**
DO	mg/L	**0.33**
ORP	mV	**534.1**

Location		RHMW03
Collection Date		1/25/2021
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 UJ
Nitrate	mg/L	**3.0 J**
Sulfate	mg/L	**22.6**
Chloride	mg/L	**21.7**
Nitrogen, Nitrate-Nitrite	mg/L	**1.8**
Alkalinity, Bicarbonate	mg/L	**277**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**277**
Total Organic Carbon	mg/L	**1.4**
DO	mg/L	**1.13**
ORP	mV	**540.7**

Location		RHMW05
Collection Date		1/26/2021
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.3**
Sulfate	mg/L	**15.4**
Chloride	mg/L	**134**
Nitrogen, Nitrate-Nitrite	mg/L	**0.83**
Alkalinity, Bicarbonate	mg/L	**82.2**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**82.2**
Total Organic Carbon	mg/L	**0.51 J**
DO	mg/L	**8.07**
ORP	mV	**508.3**

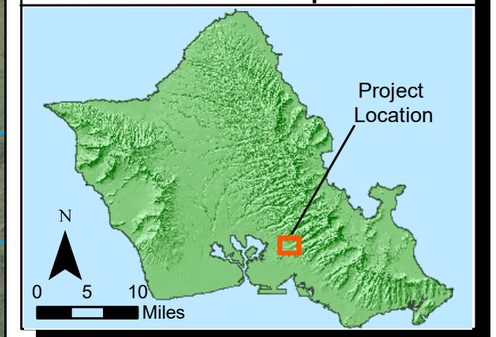
Sample ID		RHMW01
Collection Date		1/25/2021
Analyte	Unit	Result
Methane	µg/L	**560**
Ferrous Iron	mg/L	**0.37 J**
Nitrate	mg/L	< 0.18 U
Sulfate	mg/L	**4.9**
Chloride	mg/L	**42.7 J**
Nitrogen, Nitrate-Nitrite	mg/L	< 0.090 U
Alkalinity, Bicarbonate	mg/L	**81.2**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**81.2**
Total Organic Carbon	mg/L	**0.45 J**
DO	mg/L	**1.05**
ORP	mV	**63.3**

Location		RHMW09
Collection Date		1/19/2021
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**0.71**
Sulfate	mg/L	**3.8**
Chloride	mg/L	**22.7**
Nitrogen, Nitrate-Nitrite	mg/L	**0.59**
Alkalinity, Bicarbonate	mg/L	**64.2**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**64.2**
Total Organic Carbon	mg/L	**0.19 J**
DO	mg/L	**8.54**
ORP	mV	**53.6**

Location		RHMW02
Collection Date		1/25/2021
Analyte	Unit	Result
Methane	µg/L	**5400**
Ferrous Iron	mg/L	**1.9 J**
Nitrate	mg/L	< 0.18 UJ
Sulfate	mg/L	< 0.20 U
Chloride	mg/L	**21.6**
Nitrogen, Nitrate-Nitrite	mg/L	< 0.039 U
Alkalinity, Bicarbonate	mg/L	**189**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**189**
Total Organic Carbon	mg/L	**3.2**
DO	mg/L	**3.16**
ORP	mV	**51.1**

Location		RHMW10
Collection Date		1/20/2021
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**0.72 J**
Sulfate	mg/L	**3.4**
Chloride	mg/L	**19.9**
Nitrogen, Nitrate-Nitrite	mg/L	**0.41**
Alkalinity, Bicarbonate	mg/L	**69.8**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**69.8**
Total Organic Carbon	mg/L	**0.14 J**
DO	mg/L	**8.61**
ORP	mV	**51.5**

Location Map



Legend

- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

ABBREVIATIONS:

bgs	below ground surface
DO	dissolved oxygen
ft	feet
J	estimated value
mg/L	milligrams per liter
mV	millivolts
NA	not analyzed or not applicable
ORP	oxidation-reduction potential
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Bold text indicates detected value.

N

0 400 800 1,600 Feet

Figure 3B
Natural Attenuation Parameter Results
1st Qtr 2021 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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3.2.1 Analytical Results

Analytical results for the First Quarter 2021 groundwater monitoring event are summarized as follows:

- *RHMW2254-01 (primary and duplicate), RHMW01, RHMW04, RHMW05, RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, RHMW19, RHMW11-05, RHMW13-05 (primary and duplicate), RHMW14-03, RHMW15-05, HDMW2253-03,* and *OWDFMW01:* No COPCs were detected.
- *RHMW02 (primary and duplicate):* TPH-d (1,500 and 1,600 µg/L), 1-methylnaphthalene (25 and 23 µg/L), 2-methylnaphthalene (17 and 16 µg/L), and naphthalene (44 and 41 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d with SGC analysis was detected at significantly lower concentrations than the non-SGC analysis, suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-d with SGC analysis (390 and 380 µg/L), and TPH-o (180 J and 330 µg/L) were detected at concentrations below their respective LTM screening criteria (400 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (180 J µg/L) and TPH-o (220 J µg/L) were detected at estimated concentrations below their LTM respective screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products. No other COPCs were detected.

Consistent with previous monitoring events, no NAPL or visible sheen was observed, and no odors were noted in the groundwater collected from all monitoring locations for the duration of the sampling. Similar to observations made during previous monitoring events, a slight brown color was observed in the groundwater collected from HDMW2253-03, which is not screened and terminates 50 feet below the groundwater surface. Other than the slight brown color, no odors, sheen, or NAPL were noted at HDMW2253-03.

3.3 GROUNDWATER CONTAMINANT CONCENTRATIONS

A table of cumulative historical groundwater results is included as Appendix A.1. The historical groundwater COPC concentrations for TPH-g; TPH-d; TPH-o; benzene, toluene, ethylbenzene, and xylenes; 1-methylnaphthalene; 2-methylnaphthalene; and naphthalene are illustrated in Appendix A.2. Starting with the March 2020 groundwater data, the cumulative groundwater COPC graphs (Appendix A.2) differentiate TPH-d and TPH-o detections due to laboratory contamination. Cumulative NAP measurements starting from the Fourth Quarter 2016 event are illustrated in Appendix A.3.1, and current NAP measurements are illustrated in Appendix A.3.2. There are no graphs for lead scavengers, fuel additives, and analytes that are no longer included as COPCs for the Red Hill groundwater LTM program (EPA Region 9 and DOH 2016). The only detections of lead scavengers and other fuel additives in groundwater samples were below-screening-criteria concentrations of 1,2-dichloroethane from April 2015 to January 2016 at OWDFMW01 and phenol (one detection) during a December 2016 sampling event at RHMW09.

3.4 DATA VALIDATION AND ASSESSMENT

The analytical laboratory data for the First Quarter 2021 groundwater monitoring event were submitted to a third-party data validator (Laboratory Data Consultants, Inc.) for data validation and assessment. Analytical data from monitoring events from 2005 to Third Quarter 2016 underwent a limited data verification for all events in which a third-party data validation was not performed (DON 2018a). Analytical data from Fourth Quarter 2016 onward were validated by a third-party data validator.

The objective of data validation is to provide data of known quality for project decisions. Data quality is judged in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity. Data validation is performed in accordance with the data validation procedures in the NAVFAC Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b), and consistent with the protocol in the DoD QSM Version 5.1 (DoD and DOE 2017), as presented in the SAP and addenda (DON 2017b; 2017c; 2017d; 2021b). A number of factors may affect the quality of data, including sample collection methods; sample analysis methods; and adherence to established procedures for sample collection, preservation, management, shipment, and analysis. Data validation reports are presented in Appendix C.2.

Precision

Precision is defined as the reproducibility of replicate measurements. Precision is evaluated by the relative percent difference (RPD) of field duplicates, LCS/LCSD, MS/MSD, and laboratory duplicate results. Field duplicate and MS/MSD samples were collected at a rate of approximately 10 percent of primary samples. Field duplicates were sent to the laboratory along with the primary samples. Primary and field duplicate RPDs are presented in Table 3-3. When COPCs were not detected in the primary and field duplicate samples, no RPDs could be calculated.

Table 3-3: Field Duplicate Analyte RPDs

Sampling Location	Analyte	Screening Criterion (µg/L)	Sample ID	Concentration (µg/L)	RPD [a, b]
RHMW02	TPH-d	400	ERH1219	1,500	6%
			ERH1220	1,600	
	TPH-d w/SGC	400	ERH1219	390	3%
			ERH1220	380	
	TPH-o	500	ERH1219	180 J	59%
			ERH1220	330	
	1-Methylnaphthalene	10	ERH1219	25	8%
			ERH1220	23	
	2-Methylnaphthalene	10	ERH1219	17	6%
			ERH1220	16	
	Naphthalene	17	ERH1219	44	7%
			ERH1220	41	

% percent
J estimated value
N/A not applicable; COPCs not detected in primary and field duplicate samples
U non-detect value

[a] Field duplicate RPD measurement performance criterion for groundwater is 50 percent in accordance with the criteria presented in Table 5-1 of the SAP (DON 2017b, 2018c) and Table 3-2 of the SAP addenda (DON 2017d, 2018g).

[b] RPD = $\frac{|(x2 - x1)|}{((X2+X1)/2)}$

All primary and field duplicate samples RPDs except for TPH-o in RHMW02 were within the 50 percent measurement performance criteria (Table 3-3). Data were not flagged based on field duplicate imprecision. No other COPCs besides those listed in Table 3-3 were detected in the primary and field duplicate samples collected during the First Quarter 2021 groundwater monitoring event.

No other precision concerns were identified during validation of sample results. Data usability of the samples is discussed in Section 3.5.

Accuracy

Accuracy is defined as the degree of conformity of a measurement to a standard or true value. Accuracy is evaluated through measurement of the percent recovery (%R) of an analyte in a reference standard or spiked sample. Accuracy also encompasses the percent difference (%D) between the initial calibration verification and the continuing calibration verification. Accuracy limits for surrogates, LCS, MS, and MSD samples are either prescribed by the DoD or established by the individual laboratory. The acceptance criteria for accuracy are dependent on the analytical method and based on historical laboratory or DoD data.

Due to presence of headspace in the sample vials, 66 results for 1,2-dichloroethane, benzene, ethylbenzene, toluene, total xylenes, TPH-g, and methane were flagged as non-detect estimated (UJ), and one (1) detected result for methane was flagged as estimated (J) from the laboratory-prepared trip blanks. Headspace were observed only in the trip blank samples, and headspace was not observed in the groundwater samples.

One chloride result was flagged as estimated (J) due to low initial calibration verification %R.

Five nitrate results and five TOC results were flagged as estimated (J) due to high continuing calibration verification %Rs.

One 2-methylnaphthalene result was flagged as non-detect estimated due to low MS and MSD %Rs.

No other accuracy concerns identified during validation affected sample results. Data usability is discussed in Section 3.5.

Representativeness

Representativeness is the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness was achieved by conducting sampling in accordance with the sample collection procedures described in the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a) and the SAP (DON 2017b; 2017c; 2017d), including standardized sample collection methods identified in NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b).

Representativeness is also evaluated through compliance with the method-recommended sample holding time and sample preservation methods and through the analysis of blank samples, including method blank, equipment blank, field blank, and trip blank samples. All sample holding times and sample preservation were evaluated in accordance with EPA SW-846 method recommendations and DoD QSM Version 5.1 (DoD and DOE 2017).

All samples were associated with a trip blank and laboratory blanks. Field and equipment blanks were collected and analyzed to demonstrate efficiency of field equipment decontamination.

One nitrate-nitrite as nitrogen result was flagged as non-detect (U) due to laboratory contamination as indicated by the results of the associated calibration blanks.

One ferrous iron result was flagged as estimated (J) and another ferrous iron result flagged as non-detect estimated (UJ) due to samples' analyses occurring one day past the 7-day method-recommended sample holding time.

Three nitrate results were flagged as estimated (J) and two nitrate results flagged as non-detect estimated (UJ) due to the samples being extracted beyond the method-recommended 48-hr holding time. These samples were analyzed between 50.28 and 53.33 hours after collection. All groundwater samples were also analyzed for nitrate-nitrite as nitrogen, which can be used to confirm the nitrate results. Nitrate was recovered between 24 and 94 percent of the calculated equivalent nitrate concentration based on nitrate-nitrite as nitrogen results (Table 3-4). Of the samples that were extracted out of holding time, the RHMW03, RHMW06, and RHMW14-03 nitrate results recovered below 90 percent of the calculated equivalent nitrate concentration, indicating possible low bias.

Table 3-4: Nitrate Result Confirmation

Location	Sample ID	Nitrate Result (mg/L)	Nitrate-Nitrite as Nitrogen Result (mg/L)	Calculated Equivalent Nitrate Concentration Based on Nitrate-Nitrite as Nitrogen Result (mg/L) [a]	%R
RHMW2254-01	ERH1214	2.6	0.82	3.63	72%
RHMW01	ERH1217	< 0.18 U	< 0.090 U	— [c]	— [c]
RHMW02 [b]	ERH1219	< 0.18 UJ	< 0.039 U	— [c]	— [c]
RHMW03 [b]	ERH1222	3.0 J	1.8	7.97	38%
RHMW04	ERH1224	2.1	0.49	2.17	97%
RHMW05	ERH1226	1.3	0.83	3.68	35%
RHMW06 [b]	ERH1228	0.93 J	0.60	2.66	35%
RHMW07	ERH1232	1.6 J	1.1	4.87	33%
RHMW08	ERH1230	1.5 J	1.4	6.20	24%
RHMW09	ERH1240	0.71	0.59	2.61	27%
RHMW10	ERH1236	0.72 J	0.41	1.82	40%
RHMW11-05	ERH1242	< 0.18 U	< 0.090 U	— [c]	— [c]
RHMW13-05 [b]	ERH1244	< 0.18 UJ	< 0.090 U	— [c]	— [c]
RHMW14-03 [b]	ERH1247	0.64 J	0.37	1.64	39%
RHMW15-05	ERH1249	1.8	0.43	1.90	94%
RHMW19	ERH1212	0.84	0.39	1.73	49%
HDMW2253-03	ERH1234	0.94	0.23	1.02	92%
OWDFMW01	ERH1238	2.6	2.2	9.75	27%

— not calculable
% percent
J estimated value
U non-detect value
UJ non-detect estimate value
[a] Nitrate-nitrite as nitrogen result converted to nitrate by multiplying nitrate-nitrite as nitrogen result by a factor of 4.43 (CalEPA 2011).
[b] Groundwater samples from these locations were analyzed outside of the holding time for nitrate.
[c] No equivalent nitrate concentration or %R was calculated due to the nitrate or nitrate-nitrite results reported as non-detect(s).

The representativeness of the data is considered acceptable after qualification for recommended holding time. Data usability is discussed in Section 3.5.

Completeness

Completeness is defined as the overall percentage of valid analytical results (including estimated results) compared to the total number of analytical results reported by the analytical laboratory.

Of the 591 results reported, none of the results from the First Quarter 2021 event were rejected. In instances where re-analysis was performed for a sample thus yielding two possible results for an analyte, the validators rejected the least technically acceptable result; none of the rejected data caused a data gap for the monitoring event. The completeness of the data (100 percent) met the 90 percent completeness goal.

Comparability

Comparability expresses the confidence with which one data set can be compared to another. Comparability can be related to accuracy and precision because these quantities are measures of data reliability. Data with acceptable precision and accuracy are considered comparable if collection techniques, analytical procedures, methods, and reporting are equivalent.

Samples collected from 2005 through the current monitoring event have been analyzed by multiple laboratories (Table 1-3). Data comparability is complicated by differences in analytical methods and extraction and analysis protocols used. For example, TPH-g and naphthalene have been reported using different EPA methods (either or both EPA 8260 and EPA 8270 SIM), and TPH-d and TPH-o have been reported using the same method (EPA 8015) but with differing carbon ranges over time (e.g., C10–C28, C10–C24 for reporting TPH-d) and different extraction methods (i.e., separatory funnel liquid-liquid extraction [EPA 3510] versus continuous liquid-liquid extraction [EPA 3520]), yielding different TPH concentrations.

Current analytical methods used are aimed to have laboratory limits lower than the current screening criteria. Starting from the Fourth Quarter 2016 event, analytical method DLs, LODs, and LOQs have been lower for most analytes than they had been during previous events, except for the EPA Method 8015 TPH-d and TPH-o DLs, LODs, and LOQs starting from March 2020. The method used to analyze TPH-g was also changed from EPA Method 8015 to EPA Method 8260 to improve sensitivity. The changed reporting limits should be considered when results are compared to data from earlier events. An evaluation of data reported between laboratories is presented in the AOC Statement of Work Sections 6 and 7 *Conceptual Site Model* (CSM) report (DON 2019b) as part of the AOC Statement of Work Sections 6 and 7 investigation.

The laboratory used standard analytical methods for all analyses. In all cases, the DLs and LODs attained were below the specified LOQs. Target analytes detected below the LOQs flagged (J) by the laboratory should be considered estimated.

Sensitivity

The LOQs are established by the laboratory based on the LODs or instrument DLs, historical data, and limits established for the various methods. The LOQs and LODs for samples may require adjustment by the laboratory due to matrix interference or when high levels of target analytes necessitate dilution before analysis. Matrix interference and sample dilutions decrease sensitivity and increase the LOQs/LODs. No results in this data set had increased LOQs or LODs that impacted sensitivity and data usability.

3.5 DATA ASSESSMENT AND USABILITY CONCLUSIONS

The precision, accuracy, representativeness, comparability, completeness, and sensitivity criteria were evaluated, and with some exceptions the criteria were met. Results associated with QC data that failed acceptance criteria are discussed in Section 3.2. Data quality issues that need to be taken into account for project decisions are summarized below.

The RPD for TPH-o at RHMW02 exceeded the 50 percent measurement performance criteria by 9 percent. However, the primary and field duplicate TPH-o detections for RHMW02 were below screening criteria and were consistent with historical detections of TPH-o at this monitoring location. Thus, the field duplicate imprecision does not impact the data usability.

The presence of headspace in the vials analyzed for benzene, ethylbenzene, toluene, total xylenes, TPH-g, and methane led to 67 results qualified as either estimated or non-detect estimated due to possible low bias. The affected results were from laboratory-prepared trip blanks, associated with groundwater samples from RHMW01 through RHMW08, RHMW10, RHMW19, and the field and equipment blanks. Since the associated groundwater and field and equipment blanks results are either non-detect or detected in concentrations in line with historical results, the data are not impacted.

The low initial calibration verification %R for the chloride led to the RHMW01 result flagged as estimated due to possible low bias. However, as the RHMW01 chloride result is in line with historical data, the data is not impacted by the low bias.

The high continuing calibration verification %Rs affected five nitrate results (RHMW06, RHMW07, RHMW08, RHMW10, and RHMW14-03) and five TOC results (RHMW01, RHMW04, RHMW11-05, RHMW13-05, and HDMW2253-03). The results were flagged as estimated (J) to indicate possible high bias. Since the nitrate and TOC results are consistent with historical concentrations for these locations, the data is not impacted by the possible high bias.

The 2-methylnaphthalene result for RHMW2254-01 (primary sample) was flagged as non-detect estimated due to low MS and MSD %Rs. However, as the non-detect result is consistent with historical data for this location, the data is not impacted by the low bias.

The ferrous iron results for RHMW02 and RHMW03 were analyzed one day past the 7-day method recommended holding time. The result was in line with historical data for these locations, thus the data is not impacted by the possible low bias due to the holding time exceedance. Furthermore, natural attenuation can be confirmed through additional parameters and COPC detections.

Five nitrate results (RHMW02, RHMW03, RHMW06, RHMW13-05, and RHMW14-03) were analyzed beyond the method-recommended 48-hour holding time. Samples were analyzed between 50.28 and 53.33 hours after collection. All results were qualified as estimated (J). The nitrate data for RHMW02, RHMW03, and RHMW13-05 were within range of previous events' concentrations nitrate and for nitrate-nitrite as nitrogen, thus the data is not impacted by the holding time exceedance. The nitrate data for RHMW06 and RHMW14-03 were lower than historical data; however, nitrate data can be confirmed using the nitrate-nitrite as nitrogen results, which remained consistent with historical data. Evaluation of natural attenuation should be performed using the nitrate data along with the nitrate-nitrate as nitrogen data, thus the RHMW06 and RHMW14-03 data were not significantly impacted by the holding time exceedance.

The third-party data assessment (Appendix C.2) concluded that all data generated during the monitoring events reported herein are usable for the intended purpose with the limitations described above.

4. Natural Attenuation Evaluation

The natural attenuation evaluation uses the following lines of evidence:

- The use of historical groundwater primary indicators (COPC data) to demonstrate contaminant concentration over time.
- The use of secondary lines of evidence (hydrogeologic and geochemical data) to evaluate whether natural attenuation processes are active at the site and the rate at which such processes can reduce contaminant concentrations to below screening levels.
- Comparison of TPH-d and TPH-o with and without SGC to evaluate the degree of weathering of the dissolved fuel hydrocarbons based on the fraction of polar-weathered hydrocarbons and total recoverable hydrocarbons.

Two objectives for analyzing NAPs are to assess whether natural attenuation is occurring on site and to evaluate the potential for natural attenuation to reduce the concentrations of petroleum-related constituents in groundwater. Secondary lines of evidence for natural attenuation are based on additional information collected during the groundwater monitoring events and include DO, ORP, pH, specific conductance, dissolved ferrous iron, methane, nitrate, and sulfate.

Biodegradation is the result of microbial-mediated oxidation-reduction reactions in which the simultaneous oxidation of an electron donor and reduction of an electron acceptor occur. Fuel hydrocarbons can be biodegraded by microorganisms in the subsurface under aerobic or anaerobic conditions.

Biodegradation of fuel hydrocarbons causes changes to the groundwater geochemistry. During aerobic biodegradation of hydrocarbons, DO concentrations are depleted as aerobic respiration occurs because DO is the most thermodynamically favored electron acceptor used in biodegradation. ORP is a measure of electron activity and an indicator of the relative tendency of a solute species to gain or lose electrons. Higher ORP measurements suggest that aerobic respiration is occurring.

After DO is depleted in aerobic respiration, anaerobic respiration ensues, and the potential electron acceptors (i.e., nitrate, ferric iron, sulfate, and carbon dioxide) are used in biodegradation. Use of these electron acceptors proceeds along a natural succession in the order as listed above because of decreasing energetic efficiency (Leeson et al. 2004). Nitrate is the most thermodynamically favored electron acceptor of the anaerobic pathways, biodegrading to nitrite (followed by nitrogen gas) and carbon dioxide. Ferric iron in soil can be consumed by anaerobic biodegradation when both DO and nitrate have been depleted in anaerobic groundwater, yielding dissolved ferrous iron in groundwater. Sulfate can be consumed by anaerobic degradation after DO, nitrate, and ferric iron are depleted, yielding precipitated iron sulfides. Lower concentrations of sulfate in groundwater compared to background levels indicate that sulfate reduction is an ongoing biological process for petroleum hydrocarbon degradation within plume areas. When all the soluble electron acceptors (i.e., DO, nitrate, ferric iron, and sulfate) are depleted, groundwater conditions can become conducive to fermentation, and methane can be generated.

Alkalinity is a general indicator of the buffering capacity of an aquifer system against pH changes due to attenuation processes in the groundwater. Production of carbon dioxide during biodegradation causes carbonate minerals to dissolve, increasing alkalinity concentrations in the groundwater. Alkalinity is used in conjunction with pH measurements to evaluate the groundwater's capacity to neutralize metabolic acids produced by biodegradation.

Both aerobic and anaerobic biodegradation may be occurring at the site. COPCs such as naphthalene are known to degrade both aerobically and anaerobically, and geochemical parameters indicative of biodegradation may vary with location and with time (Wiedemeier et al. 1999). A more detailed evaluation of natural attenuation at the Red Hill groundwater monitoring locations is presented in the AOC Statement of Work Sections 6 and 7 CSM report (DON 2019b) and the *Investigation and Remediation of Releases (IRR) Report* (DON 2020).

The field water quality data parameters for the First Quarter 2021 groundwater monitoring event are included in the field sampling logs (Appendix B.1). Table 3-2, Figure 3A and Figure 3B summarize DO, ORP, and other NAP results. Graphs of the DO, ORP, and NAP results are presented in Appendix A.3.

Unweathered petroleum contains (non-polar) hydrocarbons that, when weathered in the environment, create polar compounds as byproducts of biological sources and processes. SGC is commonly used to separate polar from nonpolar compounds. Polar compounds will preferentially adsorb to silica, while non-polar compounds will not. DOH TGM Section 9.3.1.2, Total Petroleum Hydrocarbons, discusses the use of SGC to separate out the polar TPH fraction and compare the remaining non-polar TPH fraction to the screening criteria: "*Comparison of data for groundwater samples tested with and without silica gel cleanup could be useful for assessing the state of natural biodegradation within a plume of petroleum-contaminated groundwater and optimizing remedial and monitoring actions*" (DOH 2018). Analysis of SGC TPH-d or SGC TPH-o was performed on samples with detected concentrations of TPH-d or TPH-o without SGC (see Section 4.1.8 for additional discussion).

4.1 EVALUATION USING NATURAL ATTENUATION PARAMETERS

NAPs were collected during the groundwater monitoring field activities and included DO and ORP, nitrate, ferrous iron, methane, sulfate, and chloride. These parameters indicate the conditions under which natural attenuation is likely occurring.

4.1.1 Dissolved Oxygen and Oxidation-Reduction Potential

DO and ORP concentrations for the First Quarter 2021 groundwater monitoring event were generally consistent with previous measurements. The background (RHMW04) DO measurement for the monitoring event was 8.99 mg/L, which is consistent with literature values for O'ahu groundwater (Hunt Jr. 2004); the background ORP measurement was 120.2 millivolts.

The First Quarter 2021 ORP measurements were higher than historical measurements for the following monitoring locations: RHMW2254-01, RHMW01, RHMW02, RHMW03, RHMW05, RHMW11-05, RHMW13-05, RHMW14-03, RHMW15-05, and OWDFMW01. The same field multiparameter instrument was used for all above-mentioned locations; all other locations used a different field multiparameter instrument. Evaluation of the field data indicates that the higher ORP values were due to a multiparameter instrument issue, and not attributable to changes in the groundwater chemistry. Thus, ORP data for the above listed monitoring locations should be evaluated along with historical data due to the high bias with the First Quarter 2021 measurements.

Similar to previous events, the monitoring locations with consistent COPC detections had depressed DO measurements (1.05 to 3.16 mg/L at RHMW01, RHMW02, and RHMW03) and low ORP values (-20.3 to 30.4 millivolts) compared to background measurements. In RHMW01, RHMW02, and RHMW03, the depleted DO in conjunction with the historical presence of dissolved-phase COPCs and other NAP results such as the dissolved methane concentrations (560 and 5,400 µg/L at RHMW01 and RHMW02, respectively) indicates that both aerobic and anaerobic respirations are likely

occurring. The presence of dissolved-phase COPCs and the DO depletion at RHMW03 are indicative of aerobic biodegradation, but the non-detect concentration of methane (< 1.00 U µg/L) indicates that methanogenesis is likely not occurring at RHMW03.

RHMW11-05, RHMW13-05, RHMW14-03, RHMW15-05, and HDMW2253-03 also had low DO measurements (ranging from 0.36 to 1.53 mg/L), consistent with previous events and with historical multilevel monitoring well DO measurements. The consistently low DO, high ORP, and lack of COPC detections indicate that the low DO values are the baseline for these monitoring locations (and a facet of multilevel monitoring wells) and are not related to attenuation of the COPCs.

4.1.2 Nitrate

Of the known anaerobic pathways for hydrocarbon biodegradation, nitrate is the most thermodynamically favored electron acceptor; decreased nitrate concentrations suggest that anaerobic respiration may be occurring. For the First Quarter 2021 monitoring event, RHMW01, RHMW02, RHMW11-05, and RHMW13-05 had non-detect or very low nitrate concentrations.

The non-detect nitrate results in RHMW01 and RHMW02 in conjunction with the DO and ORP measurements suggest that anaerobic respiration is likely occurring at these two wells.

Similar to previous NAP measurements at multilevel monitoring wells RHMW11 and RHMW13, non-detect or very low nitrate concentrations recorded during the First Quarter 2021 monitoring event are baseline for multilevel monitoring zones and not related to attenuation of the COPCs.

Evaluation of the nitrate results in conjunction with the DO and ORP results for wells other than RHMW01 and RHMW02 suggests that attenuation is likely not occurring and decreased nitrate concentrations are likely the result of natural variation between monitoring events or the result of laboratory blank contamination impacts.

4.1.3 Ferrous Iron

During biodegradation, bacteria will typically break down ferric iron in soil once oxygen is depleted, which causes ferrous iron to be released to groundwater. Elevated levels of ferrous iron indicate that the groundwater environment has undergone iron reduction for anaerobic respiration. Ferrous iron was detected in: RHMW01 (0.37 J mg/L), RHMW02 (1.9 J mg/L), RHMW14-03 (0.16 J mg/L), and HDMW2253-03 (0.77 J mg/L). When compared to the other monitoring locations, COPC detections, and evaluated with other NAPs discussed above, the ferrous iron results for RHMW01 and RHMW02 also suggest that anaerobic biodegradation is likely occurring at these wells. The ferrous iron concentration at HDMW2253-03 is within the historical concentration range for this location. The COPC and other NAP results do not indicate anaerobic biodegradation at RHMW14-03.

4.1.4 Methane

An additional line of evidence for biological degradation of petroleum hydrocarbons includes the presence of methane, a reaction byproduct of fermentative biological reactions that can occur after oxygen is depleted by aerobic biodegradation. Methane was detected in the samples from RHMW01 (560 µg/L), RHMW02 (5,400 µg/L), and RHMW13-05 (9.6 µg/L). The elevated methane concentrations along with the historical results of TPH detections found at RHMW01 and consistent TPH detections at RHMW02 suggest that methanogenic biodegradation is occurring in these wells. The relatively low concentration of methane found at RHMW13-05 coupled with TPH non-detections or previous detections that were attributable to laboratory contamination suggest that methanogenesis is likely not occurring.

4.1.5 Sulfate

Sulfate is normally consumed by bacteria only after DO, nitrate, and ferric iron have been depleted. Concentrations of sulfate lower than background concentrations, when evaluated in conjunction with depressed DO and nitrate concentrations, suggest that anaerobic activity is occurring. The concentration of sulfate in groundwater at RHMW01, RHMW02, RHMW09, RHMW10, RHMW14-03, and RHMW19 were lower than the background sulfate concentration in RHMW04 (9.2 mg/L). The sulfate results in conjunction with COPC detections suggest that anaerobic activity may be occurring at RHMW01 and RHMW02.

Sulfate results for many monitoring locations fell below the historical data range during the Fourth Quarter 2020 and First Quarter 2021 monitoring events. The low sulfate results for several wells during the Fourth Quarter 2020 event rebounded to expected sulfate concentrations during the First Quarter 2021 (see Appendix A.3.1 for cumulative NAPs graphs for RHMW2254-01, RHMW04, RHMW07, OWDFMW01, and HDMW2253-03). Of the First Quarter 2021 data, sulfate results were still lower than historical range for the following locations: RHMW03, RHMW05, RHMW06, RHMW08, RHMW09, RHMW10, RHMW19, RHMW13-05, and RHMW14-03. QC parameters associated with these samples were within acceptance criteria, and no immediate cause (i.e., field condition, sampling issue, or analytical laboratory concern) for the lower sulfate results can be identified. Sulfate results for the upcoming monitoring events will continue to be assessed to see if a decreasing sulfate trend is occurring at these locations.

4.1.6 Chloride

Chloride is a general water quality parameter, and background concentrations of chloride in the aquifer are a result of mineral dissolution. Evaluation of NAP data from the Fourth Quarter 2016 monitoring event onward and the groundwater geochemistry parameters indicates that the chloride concentrations at the site are due to the aquifer geochemistry and are not related to anaerobic dechlorination.

Chloride concentrations at RHMW01, RHMW02, RHMW03, RHMW08, RHMW09, RHMW10, RHMW19, RHMW11-05, RHMW13-05, RHMW14-03, and RHMW15-05 were below the background (RHMW04) concentration of 72.8 mg/L. All other locations analyzed had chloride concentrations higher than background.

Chloride results for several monitoring locations fell below the historical data range during the Fourth Quarter 2020 and First Quarter 2021 monitoring events: during Fourth Quarter 2020 event, RHMW2254-01, RHMW02, RHMW03, RHMW04, RHMW05, RHMW08, HDMW2253-03, and OWDFMW01; and during the First Quarter 2021 event, RHMW02, RHMW03, RHMW08, RHMW09, RHMW10, and RHMW14-03. QC parameters associated with these samples were generally within acceptance criteria, and no immediate cause (i.e., field condition, sampling issue, or analytical laboratory concern) for the lower chloride results can be identified. Chloride results for the upcoming monitoring events will continue to be assessed to see if a decreasing sulfate trend is occurring at these locations.

4.1.7 Alkalinity

The alkalinity concentrations in RHMW01, RHMW02, RHMW03, RHMW05, RHMW06, RHMW07, RHMW08, OWDFMW01, RHMW11-05, and RHMW13-05 were greater than the background concentration (RHMW04) of 76.6 mg/L. The elevated alkalinity at RHMW01, RHMW02, and RHMW03 may be attributable to natural attenuation processes occurring at these locations, which is underscored by historical detections of TPH; the elevated alkalinity at the other monitoring locations

may be attributable to aquifer geochemistry, based on the lack of COPC detections and lack of other NAP results indicative of biodegradation.

4.1.8 TPH with Silica Gel Cleanup

SGC TPH-d and TPH-o results for RHMW02 and RHMW03 showed significantly reduced or non-detect concentrations compared to non-SGC TPH-d and TPH-o results (Table 4-1). The SGC TPH-d and TPH-o results suggest that petroleum weathering is occurring at RHMW01, RHMW02, and RHMW03, especially when evaluated in conjunction with the other NAPs.

For RHMW02, the SGC TPH-d concentrations for the primary and field duplicate samples were 390 and 380 µg/L (with non-SGC TPH-d concentrations of 1,500 and 1,600 µg/L), respectively. The SGC TPH-d results indicate that biodegradation is occurring. The historical recoveries of TPH-d with SGC to TPH-d (without SGC) for RHMW02 have ranged from 14 to 57 percent, thus indicating that 43–86 percent of the reported results for TPH-d are likely biodegradation byproducts.

Non-SGC chromatograms for the RHMW02 sample show signal evidence of soluble components of degraded jet fuel, with a large portion of the mass showing a signature indicative of polar metabolites from petroleum degradation. The corresponding SGC chromatogram for RHMW02 is characteristic of dissolved aromatic hydrocarbons expected from jet fuel. Further evaluation of the SGC TPH results and natural attenuation, along with the potential role of other site-specific factors (e.g., complex geology, surface water recharge, infiltration rates), was included in the AOC Statement of Work Sections 6 and 7 CSM Report (DON 2019b) and the IRR Report (DON 2020).

Table 4-1 presents a comparison of TPH-d and TPH-o concentrations without and with SGC for RHMW01, RHMW02, and RHMW03 from the Fourth Quarter 2016 monitoring event onward.

4.1.9 Total and Dissolved Organic Carbon

TOC concentrations in groundwater samples include all volatile, non-volatile, soluble, and insoluble forms of carbon present in the sample, while dissolved organic carbon (DOC) concentrations include only the volatile, non-volatile, and soluble forms of carbon. TOC and DOC concentrations are useful especially for samples with known high concentrations of polar hydrocarbons and metabolites, which are not efficiently extracted and analyzed using the TPH-d and TPH-o analysis. However, as the TOC and DOC method (EPA 9060) does not discriminate between petroleum and non-petroleum hydrocarbons, TOC and DOC must be evaluated in conjunction with TPH and other NAP results to determine if the TOC and DOC concentrations found in groundwater samples may be contributed by petroleum constituents in groundwater.

For the First Quarter 2021 monitoring event, only TOC was analyzed for in the groundwater samples; DOC is usually analyzed only for the first sampling event for newly installed monitoring wells. TOC results in RHMW01, RHMW02, and RHMW03 are in line with historical TPH, SGC TPH, and NAP data, indicating that petroleum constituents and petroleum biodegradation byproducts are present at these wells, contributing to TOC concentrations. Additionally, the TOC concentrations were higher than corresponding TPH concentrations (e.g., for RHMW02 *primary*, TOC was 3.2 mg/L [3,200 µg/L] and TPH-d was 1.5 mg/L [1,500 µg/L]), confirming that the TPH method does not capture all polar hydrocarbons and metabolites present in the groundwater and supporting evidence of natural attenuation occurring at these locations. Additionally, the TOC concentrations at other locations may also indicate the presence of polar hydrocarbons and metabolites that are not captured in the TPH extraction. To further illustrate, TPH-d and TPH-o were non-detects at RHMW11-05; however, TOC was 13.7 mg/L (13,700 µg/L). Therefore, the COPC and NAP concentrations at locations other than

RHMW01, RHMW02, and RHMW03 do not indicate that biodegradation is currently occurring and instead suggest a non-petroleum source of carbon.

4.2 NAP CONCENTRATIONS

Graphs of cumulative groundwater NAP results are presented in Appendix A.3.1, and graphs of NAP results for the First Quarter 2021 event are presented in Appendix A.3.2. Evaluation of the NAP data from the Fourth Quarter 2016 monitoring event onward indicates that there is no evidence that seasonal variations (i.e., wet- and dry-season effects) influence NAP concentrations (and thus biodegradation) in groundwater at the Red Hill monitoring well network.

The NAP concentrations at RHMW01, RHMW02, and RHMW03 indicate that aerobic or anaerobic biodegradation may be occurring at these locations. This is confirmed by the SGC TPH results, which generally present a relatively low ratio of non-biodegraded (non-polar) hydrocarbons to biodegradation byproduct hydrocarbons (polar hydrocarbons and metabolites). However, evaluation of NAPs along with TPH trends (based on numerical TPH results alone) must be conducted with caution. The variability from one laboratory to another of TPH-d procedures and results precludes reliable trend analyses, such that higher or lower results over time may be due not to changing conditions in the groundwater at the Facility but rather to changes in the laboratory's TPH extraction and analysis protocols. Nonetheless, the RHMW03 NAP results (i.e., depleted DO and relatively high concentrations of other electron acceptors) indicate that continuous aerobic biodegradation is occurring at this location, possibly due to an influx of oxygenated water at this location providing sufficient DO so that anaerobic biodegradation is not evident. Similarly, continuous aerobic and anaerobic biodegradation is occurring at RHMW01 and RHMW02, based on the depleted electron acceptors and presence of dissolved methane. Notably, methane concentrations at RHMW01 have generally decreased over time, which may be an indicator of reduced available biodegradable fuel at the subsurface from various natural source-zone depletion processes and natural attenuation.

Additional evaluation of the 2014 fuel release, natural source-zone depletion, and natural attenuation at the Facility is discussed in the AOC Statement of Work Sections 6 and 7 CSM Report (DON 2019b) and IRR Report (DON 2020).

Table 4-1: Comparison of TPH Concentrations Without and With Silica Gel Cleanup, First Quarter 2021 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, Oʻahu, Hawaiʻi

Monitoring Well	Monitoring Event [a]	TPH-d (non-SGC) (µg/L)	TPH-d w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-d Result	TPH-o (non-SGC) (µg/L)	TPH-o w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-o Result
RHMW01	1st Qtr 2021	< 300.0 U	—	—	< 300.0 U	—	—
	4th Qtr 2020	170 J A	< 300.0 U	100%	< 300.0 U	< 300.0 U	—
	3rd Qtr 2020	200 J A	< 300.0 U	100%	< 300.0 U	< 300.0 U	—
	2nd Qtr 2020	190 J *	< 300.0 U	100%	< 300.0 U	< 300.0 U	—
	1st Qtr 2020	180 J	39 J	78%	< 40 U	< 40 U	—
	3rd Qtr 2019	210	< 25 U	100%	< 40 U	< 40 U	—
	2nd Qtr 2019	230	57	75%	< 40 U	< 40 U	—
	4th Qtr 2018	170 J	67 J	61%	< 40 UJ	< 40 UJ	—
	3rd Qtr 2018	350	< 25 U	100%	< 40 U	< 40 U	—
	1st Qtr 2018	150	< 25 U	100%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	86	< 25 U	100%	67	< 40 U	100%
	4th Qtr 2017 [b]	83	< 25 UJ	100%	59	< 40 UJ	100%
	3rd Qtr 2017	110	< 25 U	100%	< 40 U	< 40 U	—
	Jun 2017	98	36	63%	< 40 U	< 40 U	—
	May 2017	110	< 51 U [c]	100%	< 40 U	< 40 U	—
	4th Qtr 2016	120	< 25 U	100%	< 40 U	< 40 U	—
RHMW02	1st Qtr 2021	**1,500**	390	74%	180 J	< 300.0 U	100%
	1st Qtr 2021	**1,600**	380	76%	330	< 300.0 U	100%
	4th Qtr 2020	**2,000**	**560**	72%	290 J	< 300.0 U	100%
	4th Qtr 2020	**2,000**	360	82%	270 J	< 300.0 U	100%
	3rd Qtr 2020	**1,800**	**450**	75%	190 J	< 300.0 U	100%
	3rd Qtr 2020	**1,900**	**470**	75%	180 J	< 300.0 U	100%
	2nd Qtr 2020 [b]	**1,700 J**	350	79%	260 J	< 300.0 U	100%
	2nd Qtr 2020 [b]	**1,500 J**	310 J	79%	290 J	< 300.0 U	100%
	1st Qtr 2020 [b]	**1,500 J**	280	81%	< 40 U	< 40 U	—
	1st Qtr 2020 [b]	**1,700**	360	79%	< 40 U	< 40 U	—
	4th Qtr 2019 [b]	**1,700**	**520**	69%	200	< 40 U	100%
	4th Qtr 2019 [b]	**1,800**	**430**	76%	190	< 40 U	100%
	3rd Qtr 2019 [b]	**2,400**	**690**	71%	190	< 40 U	100%
	3rd Qtr 2019 [b]	**2,600**	**480**	82%	200	< 40 U	100%
	2nd Qtr 2019 [b]	**2,300**	**430**	81%	< 40 U	< 40 U	—
	2nd Qtr 2019 [b]	**2,200**	**440**	80%	< 40 U	< 40 U	—
	1st Qtr 2019 [b]	**2,400**	**420**	83%	< 40 U	< 40 U	—
	1st Qtr 2019 [b]	**2,700**	**430**	84%	< 40 U	< 40 U	—
	4th Qtr 2018 [b]	**2,000 J**	370 J	82%	< 40 UJ	< 40 UJ	—
	4th Qtr 2018 [b]	**2,100 J**	**430 J**	80%	< 40 UJ	< 40 UJ	—
	3rd Qtr 2018 [b]	**2,100**	**580**	72%	< 40 U	< 40 U	—
	3rd Qtr 2018 [b]	**1,500**	260	83%	< 40 U	< 40 U	—
	2nd Qtr 2018 [b]	**2,700**	**510**	81%	< 40 U	< 40 U	—
	2nd Qtr 2018 [b]	**2,800**	**420**	85%	< 40 U	< 40 U	—
	1st Qtr 2018 [b]	**1,900**	**640**	66%	< 40 U	< 40 U	—
	1st Qtr 2018 [b]	**1,800**	**460**	74%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	**1,300 J**	230	82%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	**1,600**	230	86%	< 40 U	< 40 U	—
	3rd Qtr 2017	**1,000**	250	75%	< 40 U	< 40 U	—
	Jun 2017	**1,000**	**570**	43%	< 40 U	< 40 U	—
	May 2017	**1,000**	**< 480 U** [c]	100%	< 40 U	< 40 U	—
	4th Qtr 2016	**1,300 J**	300	77%	< 40 U	< 40 U	—

Table 4-1: Comparison of TPH Concentrations Without and With Silica Gel Cleanup, First Quarter 2021 Quarterly Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, Oʻahu, Hawaiʻi

Monitoring Well	Monitoring Event [a]	TPH-d (non-SGC) (µg/L)	TPH-d w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-d Result	TPH-o (non-SGC) (µg/L)	TPH-o w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-o Result
RHMW03	1st Qtr 2021	180 J	< 300.0 U	100%	220 J	< 300.0 U	100%
	4th Qtr 2020	220 J	< 300.0 U	100%	260 J	< 300.0 U	100%
	3rd Qtr 2020	200 J	< 300.0 U	100%	210 J	< 300.0 U	100%
	2nd Qtr 2020	220 J	< 300.0 U	100%	240 J	< 300.0 U	100%
	1st Qtr 2020	260	< 25 U	100%	250	< 40 U	100%
	4th Qtr 2019	150	< 25 U	100%	230	< 40 U	100%
	3rd Qtr 2019	300	< 25 U	100%	270	< 40 U	100%
	2nd Qtr 2019	300	< 25 U	100%	190	< 40 U	100%
	1st Qtr 2019	380	< 25 U	100%	310	< 40 U	100%
	4th Qtr 2018	220 J	< 25 UJ	100%	190 J	< 40 UJ	100%
	3rd Qtr 2018	300	< 25 U	100%	140	< 40 U	100%
	2nd Qtr 2018	160	< 25 U	100%	110	< 40 U	100%
	1st Qtr 2018	190	< 25 U	100%	180	< 40 U	100%
	4th Qtr 2017 [b]	160	< 25 U	100%	160	< 40 U	100%
	4th Qtr 2017 [b]	210	< 25 U	100%	200	< 40 U	100%
	3rd Qtr 2017	49	< 25 U	100%	46	< 40 U	100%
	Jun 2017	46	50	0%	36 J	34	6%
	May 2017	50	< 25 U	100%	46	< 40 U	100%
	4th Qtr 2016	65	< 25 U	100%	59	< 40 U	100%

Note: **Bold text** indicates concentrations exceeding the TPH-d screening criterion of 400 µg/L.

% = percent

* = result is due to laboratory solvent contamination (indicator used in *Second Quarter 2020 Groundwater Monitoring Report*)

µg/L = microgram per liter

A = result is due to laboratory solvent contamination

J = estimated value

Qtr = quarter

SGC = silica gel cleanup

U = non-detect value

[a] Table presents only quarterly and monthly monitoring events during which TPH with SGC is analyzed.

[b] Primary and field duplicate samples.

[c] Result was flagged as non-detect during data validation due to laboratory method blank contamination.

5. Lead Scavengers

The scoping completion letter for AOC Statement of Work Sections 6 and 7 dated February 4, 2016, (EPA Region 9 and DOH 2016) required that lead scavengers (1,2-dichloroethane and 1,2-dibromoethane) be analyzed for at least 1 year of sampling, and indicated that lead scavenger testing can be then discontinued at a given well if analyte concentrations are below DOH EALs.

Lead scavengers were analyzed in groundwater samples collected from newly installed Red Hill monitoring wells. RHMW13 is a multilevel monitoring well installed in March 2020. RHMW13 Zone 5 was sampled during 1 year of monitoring (Second Quarter 2020 to First Quarter 2021); other monitoring zones were also sampled during Second Quarter 2020 (Zones 1, 2, 3 and 4) in accordance with the SAP and addenda (DON 2017b; 2017c; 2017d; 2021b). Analytical results for 1,2-dibromoethane and 1,2-dichloroethane for all zones are presented in Table 5-1. Analytical results for RHMW13 show non-detect concentrations for the lead scavengers during all monitoring events. LODs are below the respective screening criteria. Full analytical and validation reports are presented in Appendix C and in previous groundwater monitoring reports.

Table 5-1: Lead Scavengers Results at RHMW13, Second Quarter 2020 – First Quarter 2021

			Analyte	1,2-Dibromoethane	1,2-Dichloroethane
			CAS No.	106-93-4	107-06-2
			Analytical Method	8011	8260B
			Screening Criterion [a]	0.04	5.0
			Unit	µg/L	µg/L
Sampling Location	Sampling Date	Sample ID	Sample Type	Result [b]	Result [b]
RHMW13-01	03/03/2020	ERH1023	N	< 0.019 U	< 0.3 U
RHMW13-02	03/04/2020	ERH1025	N	< 0.019 U	< 0.3 U
RHMW13-03	03/05/2020	ERH1027	N	< 0.019 U	< 0.3 U
	04/23/2020	ERH1076	N	< 0.019 U	< 0.3 U
RHMW13-04	03/09/2020	ERH1029	N	< 0.019 U	< 0.3 U
	04/27/2020	ERH1078	N	< 0.019 U	< 0.3 U
RHMW13-05	03/10/2020	ERH1031	N	< 0.019 U	< 0.3 U
	03/10/2020	ERH1032	FD	< 0.019 U	< 0.3 U
	04/28/2020	ERH1080	N	< 0.019 U	< 0.3 U
	04/28/2020	ERH1081	FD	< 0.019 U	< 0.3 U
	07/29/2020	ERH1135	N	< 0.019 U	< 0.3 U
	07/29/2020	ERH1136	FD	< 0.019 U	< 0.3 U
	10/21/2020	ERH1187	N	< 0.019 U	< 0.3 U
	10/21/2020	ERH1188	FD	< 0.019 U	< 0.3 U
	01/20/2021	ERH1244	N	< 0.019 U	< 0.3 U
	01/21/2021	ERH1245	FD	< 0.019 U	< 0.3 U

CAS Chemical Abstracts Service
FD field duplicate sample
N normal or primary sample
U non-detect
[a] DOH EALs: Table D-1b, Groundwater Action Levels (groundwater is a current or potential drinking water resource; surface water body is not located within 150 meters of release site) (DOH 2017).
[b] Results reported as less than the laboratory's LOD.

In accordance with the February 4, 2016, scoping completion letter, RHMW13 underwent 1 year of monitoring and had lead scavenger non-detect concentrations below the groundwater action levels. Thus, testing for lead scavengers will be discontinued for RHMW13.

Lead scavengers were also analyzed in groundwater samples collected from RHMW19; lead scavengers were not detected. Testing for lead scavengers at RHMW19 will continue until 1 year of monitoring is completed (anticipated to be during Second Quarter 2021 monitoring event) and will be evaluated if testing can be discontinued in accordance with the February 4, 2016 scoping completion letter.

6. Summary, Conclusions, and Recommendations

6.1 SUMMARY

During the First Quarter 2021 groundwater monitoring event, groundwater samples were collected from 18 monitoring locations within the Red Hill groundwater monitoring network. These included:

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Twelve single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10, RHMW19, and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility:
  - RHMW11 Zone 5
  - RHMW14 Zone 3
- One sampling zone each at multilevel monitoring wells (RHMW13 and RHMW15) located within the Facility boundary:
  - RHMW13 Zone 5
  - RHMW15 Zone 5

Of the monitoring locations sampled during this event, primary and field duplicate samples were collected from:

- Sampling point RHMW2254-01
- Monitoring well RHMW02
- Multilevel monitoring well RHMW13 Zone 5 (RHMW13-05)

The following multilevel monitoring zones were not sampled in this sampling event due to lack of detections of COPCs in previous monitoring events:

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 4
- RHMW15 Zones 1 to 4

The following multilevel monitoring zones were not sampled in this sampling event due to low hydraulic conductivity at these zones:

- RHMW11 Zones 6 to 8
- RHMW14 Zones 4 to 8

No detectable amounts of NAPL or sheen were present, and no odors were noted in the groundwater collected from all monitoring locations during the First Quarter 2021 monitoring event. A slight brown color was observed in the groundwater collected from HDMW2253-03. Other than the slight brown color, no odors, sheen, or NAPL were noted at HDMW2253-03.

During the First Quarter 2021 event, COPCs were detected at RHMW02 and RHMW03. No SSRBL exceedances were reported. Analytical results for the groundwater monitoring event are summarized as follows:

- *RHMW2254-01 (primary and duplicate), RHMW01, RHMW04, RHMW05, RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, RHMW19, RHMW11-05, RHMW13-05 (primary and duplicate), RHMW14-03, RHMW15-05, HDMW2253-03,* and *OWDFMW01:* No COPCs were detected.
- *RHMW02 (primary and duplicate):* TPH-d (1,500 and 1,600 µg/L), 1-methylnaphthalene (25 and 23 µg/L), 2-methylnaphthalene (17 and 16 µg/L), and naphthalene (44 and 41 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d with SGC analysis was detected at significantly lower concentrations than the non-SGC analysis, suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-d with SGC analysis (390 and 380 µg/L), and TPH-residual range organics (TPH-o) (180 J and 330 µg/L) were detected at concentrations below their respective LTM screening criteria (400 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (180 J µg/L) and TPH-o (220 J µg/L) were detected at estimated concentrations below their respective LTM screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products. No other COPCs were detected.

The NAP and SGC TPH data present evidence of aerobic and anaerobic biodegradation occurring in the vicinity of RHMW02 based on depleted DO, elevated dissolved methane concentrations, depleted nitrate and sulfate concentrations, and high alkalinity concentrations compared to other monitoring wells in the network. Additionally, SGC TPH-d concentrations at RHMW02 indicate that the majority of the reported non-SGC TPH mass is likely biodegradation byproducts. The concentrations of NAPs and depressed SGC TPH at RHMW03 suggest that aerobic and anaerobic biodegradation are also occurring there. Historical COPC detections and depleted DO, dissolved methane, depleted nitrate, and reduced sulfate concentrations at RHMW01 suggest anaerobic biodegradation is occurring in that location.

6.2 CONCLUSIONS AND RECOMMENDATIONS

During the First Quarter 2021 groundwater monitoring event, TPH-d, TPH-o, 1-methylnapthalene, 2-methylnaphthalene, and naphthalene were detected at RHMW02, and TPH-d and TPH-o were detected at RHMW03. No COPCs, fuel additives, nor lead scavengers were detected at any other monitoring locations.

No SSRBL exceedances occurred at RHMW02 and RHMW03. Screening criteria exceedances (TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene) occurred only at RHMW02.

Based on the groundwater monitoring results, pursuant to the *Groundwater Protection Plan* (DON 2014) and in accordance with AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015), groundwater monitoring at locations within the Red Hill groundwater monitoring network will continue.

Based on no detections of lead scavengers at all sampled RHMW13 multilevel monitoring well zones for 1 year of sampling, it is recommended that testing for lead scavengers be discontinued for RHMW13.

It is recommended that the Red Hill groundwater LTM program continue testing for NAPs at each monitoring event and continue SGC TPH-d and TPH-o analysis for all locations with non-SGC TPH-d or TPH-o detections.

7. References

California Environmental Protection Agency (CalEPA). 2011. "Interconverting Nitrate as Nitrate (Nitrate-NO3) and Nitrate as Nitrogen (Nitrate-N)." California Department of Public Health: Division of Drinking Water and Environmental Management (DDWEM) and Drinking Water and Radiation Laboratory (DWRL). April 15.

Department of Defense and Department of Energy, United States (DoD and DOE). 2017. *Department of Defense (DoD) and Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories*. DoD QSM Ver. 5.1; DOE Quality Systems for Analytical Services Ver. 3.1. Prepared by DoD Environmental Data Quality Workgroup and DOE Consolidated Audit Program Operations Team.

Department of Health, State of Hawaii (DOH). 2017. *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater, Hawai'i Edition*. Hazard Evaluation and Emergency Response. Revised 2017. Fall.

———. 2018. *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan*. Interim Final. Honolulu, HI: Hazard Evaluation and Emergency Response Office. Latest Update: October.

Department of the Navy (DON). 2000. *Remedial Investigation Phase II, Red Hill Oily Waste Disposal Facility, Halawa, Oahu, Hawaii*. Prepared by Earth Tech, Inc., Honolulu, HI. Volume I, Technical Report. Pearl Harbor, HI: Naval Facilities Engineering Command, Pacific. September.

———. 2002. *Red Hill Bulk Fuel Storage Facility Investigation Report (Final) for Fleet Industrial Supply Center (FISC), Oahu, Hawaii*. Prepared by AMEC Earth&Environmental, Inc., Huntsville, AL. Pearl Harbor, HI: Naval Facilities Engineering Command, Pacific. August.

———. 2007. *Red Hill Bulk Fuel Storage Facility Final Technical Report, Pearl Harbor, Hawaii*. Prepared by TEC, Inc. Pearl Harbor, HI: Naval Facilities Engineering Command, Pacific. August.

———. 2010. *Work Plan, Long-Term Monitoring, Red Hill Bulk Fuel Storage Facility, Pearl Harbor, Oahu, Hawaii*. Prepared by Environet, Inc., Honolulu, HI. Prepared for Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2014. *Interim Update, Red Hill Bulk Fuel Storage Facility Final Groundwater Protection Plan, Pearl Harbor, Hawaii. (January 2008)*. Pearl Harbor, HI: Naval Facilities Engineering Command, Pacific. August.

———. 2015a. *Draft Monitoring Well Installation Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, Hawaii*. Prepared by Battelle, Columbus, OH; and Parsons, South Jordan, UT. JBPHH HI: Naval Facilities Engineering Command, Hawaii. March.

———. 2015b. *Final Project Procedures Manual, U.S. Navy Environmental Restoration Program, NAVFAC Pacific*. JBPHH HI: Naval Facilities Engineering Command, Pacific. May.

———. 2015c. *Work Plan/Sampling and Analysis Plan, Long-Term Groundwater and Soil Vapor Monitoring, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii*. Prepared by Element Environmental, LLC, Aiea, HI. JBPHH HI: Naval Facilities Engineering Command, Hawaii. September.

———. 2017a. *Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; January 4, 2017, Revision 02*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2017b. *Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; January 19, 2017, Revision 00*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2017c. *Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; April 20, 2017, Revision 01*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2017d. *Sampling and Analysis Plan Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; September 1, 2017, Revision 00*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2017e. *Navy's Response to Split Sampling Results from First Quarter 2017, Administrative Order on Consent Statement of Work Section 6 and Section 7, Red Hill Bulk Fuel Storage Facility (Red Hill), Joint Base Pearl Harbor-Hickam, Oahu, Hawaii*. Letter from: Richard D. Hayes III, Navy Region Hawaii, to: Bob Pallarino, EPA Region 9, and Steven Y. K. Chang, Hawaii DOH. October 11.

———. 2018a. *Final Third Quarter 2018 - Quarterly Groundwater Monitoring Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. Prepared by AECOM Technical Services, Inc. JBPHH HI: Naval Facilities Engineering Command, Hawaii. November.

———. 2018b. *Final Fourth Quarter 2017 - Quarterly Groundwater Monitoring Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. Prepared by AECOM Technical Services, Inc. JBPHH HI: Naval Facilities Engineering Command, Hawaii. January.

———. 2018c. *Well Elevation Survey Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; Revision 00*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI. January.

———. 2018d. *Technical Memorandum, Gyroscopic Survey Results and Calculated Correction Factors for Groundwater Monitoring Network Wells at the Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. JBPHH HI: Naval Facilities Engineering Command, Hawaii. May.

———. 2018e. *Well Elevation Surveys for Red Hill Monitoring Well RHMW11 and Navy 'Aiea Halawa Shaft 2255-032, Honolulu, O'ahu, Hawai'i*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Letter Report. Prepared for Naval Facilities Engineering Command, Hawaii, JBPHH HI. May 11.

———. 2018f. *Final First Quarter 2018 - Quarterly Groundwater Monitoring Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. Prepared by AECOM Technical Services, Inc. JBPHH HI: Naval Facilities Engineering Command, Hawaii. July.

———. 2019a. *Well Elevation Surveys for Red Hill Monitoring Well RHMW14 and Test Boring RHTB01, Honolulu, O'ahu, Hawai'i*. Prepared for: Defense Logistics Agency Energy, Fort Belvoir, VA. Prepared by: AECOM Technical Services, Inc., Honolulu, HI. Letter Report. Naval Facilities Engineering Command, Hawaii, JBPHH HI. June 7.

———. 2019b. *Conceptual Site Model, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; June 30, 2019, Revision 01*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2019c. *Final Second Quarter 2019 - Quarterly Groundwater Monitoring Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. Prepared by AECOM Technical Services, Inc. JBPHH HI: Naval Facilities Engineering Command, Hawaii. August.

———. 2020. *Investigation and Remediation of Releases Report, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; March 25, 2020, Revision 00*. Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

———. 2021a. *Final Fourth Quarter 2020 - Quarterly Groundwater Monitoring Report Red Hill Bulk Fuel Storage Facility Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i*. Naval Facilities Engineering Systems Command, Hawaii. February.

———. 2021b. *Sampling and Analysis Plan Addendum 04 Outline: Continuous Soil Vapor Monitoring Pilot Test, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i, Naval Facilities Engineering Command, Hawaii, JBPHH HI; February 11, 2021; Draft*. Prepared

by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

Environmental Protection Agency, United States (EPA). 2020. *Regional Screening Levels for Chemical Contaminants at Superfund Sites*. EPA Office of Superfund. November.

Environmental Protection Agency, United States, Region 9; and Department of Health, State of Hawaii (EPA Region 9 and DOH). 2015. *Administrative Order on Consent In the Matter of Red Hill Bulk Fuel Storage Facility, EPA Docket No: RCRA 7003-R9-2015-01; DOH Docket No: 15-UST-EA-01*. September.

———. 2016. *Final Scoping for AOC SOW Sections 6 and 7, and Navy's Proposed Chemical of Potential Concern (COPC) Recommendations*. Letter from: Bob Pallarino, EPA Red Hill Project Coordinator, and Steven Chang, Hawaii DOH Red Hill Project Coordinator, to: James A. K. Miyamoto, Naval Facilities Engineering Command, Hawaii, Joint Base Pearl Harbor-Hickam. February 4.

———. 2017a. *Split Sampling Results from First Quarter 2017*. Letter from: Bob Pallarino, EPA Region 9 Project Coordinator, and Steven Chang, Hawaii DOH Project Coordinator, to: Mark Manfredi, Red Hill Project Coordinator, Naval Facilities Hawaii. September 12.

———. 2017b. "Split Sampling Results from Fourth Quarter 2017." Red Hill Technical Documents 2017. October 2017.

Giambelluca, T. W., M. A. Nullet, and T. A. Schroeder. 1986. *Rainfall Atlas of Hawaii*. Report R76. Honolulu, HI: Department of Land and Natural Resources, Division of Water and Land Development. June.

Hunt Jr., C. D. 2004. *Ground-Water Quality and Its Relation to Land Use on Oahu, Hawaii, 2000–01*. Water-Resources Investigations Report 03-4305. National Water-Quality Assessment Program. U.S. Geological Survey.

Juvik, S. P., and J. O. Juvik, eds. 1998. *Atlas of Hawaii*. Honolulu, HI: University of Hawaii Press.

Leeson, A., E. Becvar, B. Henry, J. Fortenberry, and C. Coyle. 2004. *Principles and Practices of Enhanced Anaerobic Bioremediation of Chlorinated Solvents*. Technical Report TR-2250-ENV. Port Hueneme, CA: Naval Facilities Engineering Service Center. September.

Mink, John F., and L. Stephen Lau. 1990. *Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii*. Technical Report No. 179. Honolulu, HI: University of Hawaii, Water Resources Research Center. November 1987; rev. February 1990.

United States Geological Survey (USGS). 2017. *Honolulu Quadrangle, Hawaii - Honolulu County. 7.5-Minutes Series: Scale 1:24,000.*

Wiedemeier, T. H., H. S. Rifai, C. J. Newell, and J. T. Wilson. 1999. *Natural Attenuation of Fuels and Chlorinated Solvents in the Subsurface*. New York: John Wiley & Sons, Inc.

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Appendix A:
Cumulative Historical Monitoring Results

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Appendix A.1:
Cumulative Groundwater COPC Results

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Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	< 50	U			—				< 50	U			—				< 100	U			—				< 0.50	U			—				< 0.50	U			—				< 1.0	UJ	t		—			
RHMW2254-01	RH-B-002	2/16/2005[bf]	< 50	U			—				< 53	U			—				< 110	U			—				< 0.50	U			—				< 0.50	U			—				< 1.2	UJ	t		—			
RHMW2254-01	RH-B-003	2/16/2005*[bf]	< 50	U			—				< 50	U			—				< 100	U			—				< 0.50	U			—				< 0.50	U			—				< 0.81	UJ	t		—			
RHMW2254-01	RH-B-004	6/28/2005[ae]	< 13	U			—				**43**	**J**			—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-005	6/28/2005*[ae]	< 13	U			—				**67**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-006	6/28/2005*[af]	< 13	U			—				**58**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-007	9/8/2005[ae]	< 13	U			—				**45**	**J**			—				**59**	**J**			—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-008	9/8/2005[af]	< 13	U			—				< 19	U			—				< 28	U			—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-009	9/8/2005*[af]	< 13	U			—				< 50	U		d	—				< 100	U		d	—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	—				—				—				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RH-B-010	12/6/2005[ae]	< 13	U			—				**38**	**J**			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-011	12/6/2005*[ae]	< 13	U			—				**24**	**J**			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-012	12/7/2005[af]	< 13	U			—				< 20	U			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	< 50	U			—				< 110	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	< 50	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	< 50	U			—				< 98	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	< 50	U			—				< 98	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	< 50	U			—				< 97	U			—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	< 10.0	U			—				< 102	UJ	b		—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				< 100	U			—				—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				< 10.3	U			—				—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	< 10.0	U			—				< 86.0	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	< 10.0	U			—				< 83.3	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	< 10.0	U			—				< 84.2	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	—				—				—				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	—				—				—				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	**14.0**	**J**			—				< 92.0	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	< 19.1	UJ	b t		—				< 169	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	< 30.0	U			—				< 163	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	< 30	U			—				< 158	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW2254-01	RHMW2254-01-WG18	1/27/2010	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	4/13/2010	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	7/13/2010	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	ES004	10/19/2010	—				< 12.12	U			< 80.0	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES014	1/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES019	4/19/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES040	7/20/2011	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES050	10/25/2011	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES062	2/1/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES074	4/17/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES077	7/17/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES006	10/22/2012	—				< 18	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				**0.71**	**J**			—			
RHMW2254-01	ES014	1/29/2013	—				< 30	U			**22**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES023	4/23/2013	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES032	7/23/2013	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES041	10/22/2013	—				< 21	UJ	b t		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES050	1/16/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES060	1/29/2014[d]	—				< 16	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES067	3/6/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES075	3/26/2014[d]	—				—				< 10	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES085	4/22/2014[d]	—				< 30	U			< 10	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES094	5/28/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES102	6/24/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES107	7/22/2014	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES117	10/28/2014	—				< 30	U			**22**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES125	1/27/2015	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES134	4/21/2015	< 25	U			—				< 14	UJ	b		—				< 37	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW2254-01	ES149	7/21/2015	< 25	U			—				**17**	**J**			—				**42**	**J**			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW2254-01	ERH009	10/20/2015	< 25	U			—				< 16	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.99	UJ	t		—				—			
RHMW2254-01	ERH021	1/20/2016	< 25	U			—				< 21	UJ	b		—				< 54	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.16	UJ	t		—			
RHMW2254-01	ERH037	4/20/2016	< 25	U			—				< 21	U	b f		—				< 61	U	b f		—				< 0.10	U	f		—				< 0.10	U			—				—			
RHMW2254-01	ERH051	7/20/2016	< 25	U			—				< 21	U			—				< 27	U	b f		—				< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH088	10/18/2016	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	< 0.50	U			—				—				—				< 0.020	U			—				< 0.020	U			—				—			
RHMW2254-01	RH-B-002	2/16/2005[bf]	< 0.50	U			—				—				—				< 0.022	U			—				< 0.022	U			—				—			
RHMW2254-01	RH-B-003	2/16/2005*[bf]	< 0.50	U			—				—				—				< 0.021	U			—				< 0.021	U			—				—			
RHMW2254-01	RH-B-004	6/28/2005[ae]	< 0.50	U		b	—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-005	6/28/2005*[ae]	< 0.50	U		b	—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-006	6/28/2005*[af]	< 0.50	U		b	—				—				—				< 0.021	U		b	—				< 0.021	U		b	—				—			
RHMW2254-01	RH-B-007	9/8/2005[ae]	< 0.22	U			—				—				—				< 0.020	U		b	—				**0.085**				—				—			
RHMW2254-01	RH-B-008	9/8/2005[af]	< 0.22	U			—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-009	9/8/2005*[af]	< 0.22	U			—				—				—				< 0.020	U		b	—				**0.045**				—				—			
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	< 0.50	U			—				—				—				—				—				—				< 1.0	U			—			
RHMW2254-01	RH-B-010	12/6/2005[ae]	< 0.22	U			—				—				—				**0.038**				—				**0.036**				—				—			
RHMW2254-01	RH-B-011	12/6/2005*[ae]	< 0.22	U			—				—				—				**0.022**				—				< 0.024	UJ	b		—				—			
RHMW2254-01	RH-B-012	12/7/2005[af]	< 0.22	U			—				—				—				**0.0071**	**J**			—				**0.011**	**J**			—				—			
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.26	U			< 0.26	U			—				< 0.26	U			< 1.0	U			—			
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.24	U			< 0.24	U			—				< 0.24	U			< 1.0	U			—			
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—			
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				< 0.0310	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	< 0.620	U			—				—				< 0.0435	UJ	b		< 0.0561	UJ	b		—				< 0.0332	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	< 0.620	U			—				—				< 0.0156	U			< 0.0156	U			—				< 0.0323	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	< 0.620	U			—				—				**0.0276**	**J**			< 0.0150	U			—				**0.0466**	**J**			< 0.620	U			—			
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	< 0.93	U			—				—				—				—				—				—				< 0.620	U			—			
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	< 0.93	U			—				—				—				—				—				—				< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0161	U			< 0.0161	U			—				< 0.0333	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0156	U			**0.0180**	**J**			—				< 0.0323	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				< 0.0341	U			< 0.620	U			—			
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	< 1	U			—				—				< 0.017	U			< 0.017	U			—				< 0.0352	U			< 0.62	U			—			
RHMW2254-01	RHMW2254-01-WG18	1/27/2010	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.0375**	**J**			< 1.24	U			—			
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	4/13/2010	< 1.24	U			—				—				< 0.0330	U			< 0.0330	U			—				< 0.0682	U			< 1.24	U			—			
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	7/13/2010	< 1.24	U			—				—				< 0.0320	U			< 0.0320	U			—				< 0.0664	U			< 1.24	U			—			
RHMW2254-01	ES004	10/19/2010	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES014	1/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES019	4/19/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES040	7/20/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES050	10/25/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES062	2/1/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES074	4/17/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES077	7/17/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW2254-01	ES006	10/22/2012	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—			
RHMW2254-01	ES014	1/29/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.052**	**J**			—				—			
RHMW2254-01	ES023	4/23/2013	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
RHMW2254-01	ES032	7/23/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.099**	**J**			—				—			
RHMW2254-01	ES041	10/22/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.036**	**J**			—				—			
RHMW2254-01	ES050	1/16/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.046**	**J**			—				—			
RHMW2254-01	ES060	1/29/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.049**	**J**			—				—			
RHMW2254-01	ES067	3/6/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.081**	**J**			—				—			
RHMW2254-01	ES075	3/26/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW2254-01	ES085	4/22/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—			
RHMW2254-01	ES094	5/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW2254-01	ES102	6/24/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—			
RHMW2254-01	ES107	7/22/2014	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				< 0.048	U			—				—			
RHMW2254-01	ES117	10/28/2014	< 1.0	U			—				—				< 0.097	U			< 0.049	U			—				< 0.049	U			—				—			
RHMW2254-01	ES125	1/27/2015	< 1.0	U			—				—				< 0.10	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW2254-01	ES134	4/21/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW2254-01	ES149	7/21/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW2254-01	ERH009	10/20/2015	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW2254-01	ERH021	1/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW2254-01	ERH037	4/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW2254-01	ERH051	7/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0051	U	b f		—				—			
RHMW2254-01	ERH088	10/18/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	—				—				< 0.0083	U		b	—				—				—				< 0.50	U			—				—		
RHMW2254-01	RH-B-002	2/16/2005[bf]	—				—				< 0.0081	U		b	—				—				—				< 0.50	U			—				—		
RHMW2254-01	RH-B-003	2/16/2005*[bf]	—				—				< 0.0082	U		b	—				—				—				< 0.50	U			—				—		
RHMW2254-01	RH-B-004	6/28/2005[ae]	—				—				< 0.0095	U		b	—				—				—				< 0.50	U		b	—				—		
RHMW2254-01	RH-B-005	6/28/2005*[ae]	—				—				< 0.0097	U		b	—				—				—				< 0.50	U		b	—				—		
RHMW2254-01	RH-B-006	6/28/2005*[af]	—				—				< 0.0095	U		b	—				—				—				< 0.50	U		b	—				—		
RHMW2254-01	RH-B-007	9/8/2005[ae]	—				—				< 0.0095	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RH-B-008	9/8/2005[af]	—				—				< 0.0095	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RH-B-009	9/8/2005*[af]	—				—				< 0.0095	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	RH-B-010	12/6/2005[ae]	—				—				< 0.0096	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RH-B-011	12/6/2005*[ae]	—				—				< 0.0094	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RH-B-012	12/7/2005[af]	—				—				< 0.0095	U		b	—				—				—				< 0.12	U			—				—		
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	—				< 0.20	U			—				—				—				—				< 0.20	U			—				—		
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—		
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	—				< 0.31	U			—				—				—				—				< 0.15	U			—				—		
RHMW2254-01	RHMW2254-01-WG18	1/27/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—		
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	4/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—		
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	7/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—		
RHMW2254-01	ES004	10/19/2010	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES014	1/20/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES019	4/19/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES040	7/20/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES050	10/25/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES062	2/1/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES074	4/17/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES077	7/17/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—		
RHMW2254-01	ES006	10/22/2012	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES014	1/29/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES023	4/23/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES032	7/23/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES041	10/22/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES050	1/16/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES060	1/29/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES067	3/6/2014[d]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ES075	3/26/2014[d]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ES085	4/22/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES094	5/28/2014[d]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ES102	6/24/2014[d]	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ES107	7/22/2014	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES117	10/28/2014	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES125	1/27/2015	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—		
RHMW2254-01	ES134	4/21/2015	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—		
RHMW2254-01	ES149	7/21/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—		
RHMW2254-01	ERH009	10/20/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—		
RHMW2254-01	ERH021	1/20/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—		
RHMW2254-01	ERH037	4/20/2016	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ERH051	7/20/2016	—				—				—				—				—				—				—				—				—		
RHMW2254-01	ERH088	10/18/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH092	10/18/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH115	11/14/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH116	11/14/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH135	12/12/2016	—				< 18	U			**14**	**J**		Y	—				**16**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH137	12/12/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH161	1/9/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH162	1/9/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH161 (EPA split)	1/9/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH205	2/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH206	2/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH205 (EPA split)	2/6/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH257	3/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH258	3/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH257 (EPA split)	3/6/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	< 25	UJ	c		—				**100**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH292	4/3/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH293	4/3/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH329	5/2/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH330	5/2/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH349	6/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH350	6/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH378	7/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH379	7/5/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH409	10/24/2017	—				< 18	U			**65**	**J**	e	q Z	—				< 40	UJ	q		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH410	10/24/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH542	3/14/2018	—				< 18	U			< 25	UJ	h		—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH543	3/14/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH588	4/23/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH589	4/23/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH634	7/23/2018	—				< 18	U			< 25	U			—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH635	7/23/2018*	—				< 18	U			< 25	UJ	s		—				< 40	UJ	l	s	—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH678	10/22/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				**1**				—				**0.24**	**J**			—			
RHMW2254-01	ERH679	10/22/2018*	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				**0.99**	**J**			—				**0.21**	**J**			—			
RHMW2254-01	ERH712	11/13/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH713	11/13/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH715	11/14/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH716	11/14/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH719	12/12/2018	—				< 18	U			< 25	UJ	s		< 25	U			< 40	UJ	s		< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH720	12/12/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH722	12/13/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH723	12/13/2018*	—				< 18	U			< 25	U			< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH730	1/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	q	l	—			
RHMW2254-01	ERH731	1/23/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	l		—			
RHMW2254-01	ERH733	1/24/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH734	1/24/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH782	4/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH783	4/22/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH785	4/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH786	4/23/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH838	7/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH838	7/22/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH907	10/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH908	10/21/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH971	1/21/2020	—				< 18	U			**100**			Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH972	1/21/2020*	—				< 18	U			**< 25**	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1039	4/23/2020	—				< 18	U			**180**	**J**	q,l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1040	4/23/2020	—				< 18	U			**280**	**J**	l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1105	7/21/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1106	7/21/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1157	10/13/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1158	10/13/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1214	1/26/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH1215	1/26/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	RH-W-001	2/17/2005[b]	< 50	U		[b]	—				**1,400**			Y	—				**770**			Y	—				< 0.50	U		[b]	—				< 0.50	U		[b]	—				< 0.50	U		[b]	—			
RHMW01	RH-W-002	2/17/2005*[b]	< 50	U		[b]	—				**1,500**				—				**890**				—				< 0.50	U		[b]	—				< 0.50	U		[b]	—				< 0.50	U		[b]	—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH092	10/18/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH115	11/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH116	11/14/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH135	12/12/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH137	12/12/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH161	1/9/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH162	1/9/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH161 (EPA split)	1/9/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH205	2/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH206	2/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH205 (EPA split)	2/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH257	3/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH258	3/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH257 (EPA split)	3/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	—				< 0.5	U			< 0.2	U			< 0.026	UJ	c		< 0.026	UJ	c		< 0.5	U			< 0.026	U			—				< 0.2	U			< 0.5	U		
RHMW2254-01	ERH292	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH293	4/3/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH329	5/2/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH330	5/2/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH349	6/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH350	6/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH378	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH379	7/5/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH409	10/24/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH410	10/24/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH542	3/14/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH543	3/14/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH588	4/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH589	4/23/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH634	7/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH635	7/23/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH678	10/22/2018	**0.81**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH679	10/22/2018*	**0.73**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH712	11/13/2018	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH713	11/13/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH715	11/14/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH716	11/14/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH719	12/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH720	12/12/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH722	12/13/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH723	12/13/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH730	1/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH731	1/23/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH733	1/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH734	1/24/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH782	4/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH783	4/22/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH785	4/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH786	4/23/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH838	7/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH838	7/22/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH907	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH908	10/21/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH971	1/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH972	1/21/2020*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1039	4/23/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1040	4/23/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1105	7/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1106	7/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1157	10/13/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1158	10/13/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW2254-01	ERH1214	1/26/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	UJ	c		—				< 0.10	U			—				—			
RHMW2254-01	ERH1215	1/26/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	UJ	c		—				< 0.10	U			—				—			
RHMW01	RH-W-001	2/17/2005[b]	< 0.50	U		[b]	—				—				—				**0.14**				—				**0.25**				—				—			
RHMW01	RH-W-002	2/17/2005*[b]	< 0.50	U		[b]	—				—				—				**0.057**				—				**0.21**				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH092	10/18/2016*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW2254-01	ERH115	11/14/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH116	11/14/2016*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH135	12/12/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH137	12/12/2016*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH161	1/9/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH162	1/9/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH161 (EPA split)	1/9/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH205	2/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH206	2/6/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH205 (EPA split)	2/6/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH257	3/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH258	3/6/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH257 (EPA split)	3/6/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH292	4/3/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH293	4/3/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH329	5/2/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH330	5/2/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH349	6/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH350	6/6/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH378	7/5/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH379	7/5/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH409	10/24/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH410	10/24/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH542	3/14/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH543	3/14/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH588	4/23/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH589	4/23/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH634	7/23/2018	—				—				—				—				—				—				—				< 4.00	UJ	h		< 80.0	U		
RHMW2254-01	ERH635	7/23/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH678	10/22/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH679	10/22/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH712	11/13/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH713	11/13/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH715	11/14/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH716	11/14/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH719	12/12/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH720	12/12/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH722	12/13/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH723	12/13/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH730	1/23/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH731	1/23/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH733	1/24/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH734	1/24/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH782	4/22/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH783	4/22/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH785	4/23/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH786	4/23/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH838	7/22/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH838	7/22/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH907	10/21/2019	—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW2254-01	ERH908	10/21/2019*	—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW2254-01	ERH971	1/21/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH972	1/21/2020*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1039	4/23/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1040	4/23/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1105	7/21/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	e	
RHMW2254-01	ERH1106	7/21/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH1157	10/13/2020	—				—				—				—				—				—				—				< 4.00	UJ	s,l		< 80.0	U		
RHMW2254-01	ERH1158	10/13/2020	—				—				—				—				—				—				—				< 4.00	UJ	s,l		< 80.0	U		
RHMW2254-01	ERH1214	1/26/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1215	1/26/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	RH-W-001	2/17/2005[b]	—				—				< 0.0083	U			—				—				—				< 0.50	U		[b]	—				—			
RHMW01	RH-W-002	2/17/2005*[b]	—				—				< 0.0082	U			—				—				—				< 0.50	U		[b]	—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30			
		SSRBL	—				—				4500				—				—				—				750				750				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RH-W-003	6/28/2005[a]	< 13	U			—				**1,300**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b
RHMW01	RH-W-004	6/28/2005*[a]	< 13	U			—				**1,100**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b
RHMW01	RH-W-005	9/8/2005[a]	< 13	U			—				**950**			Y	—				**540**			Y	—				< 0.14	U			—				**0.15**	J		
RHMW01	RH-W-006	9/8/2005*[a]	< 13	U			—				**1,100**			Y	—				**720**			Y	—				< 0.14	U			—				**0.15**	J		
RHMW01	RHMW01W01	9/20/2005[a]	—				—				—				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	RH-W-007	12/6/2005[a]	< 13	U			—				**670**			Z	—				—				—				< 0.14	U			—				< 0.12	UJ	t	
RHMW01	RH-W-008	12/6/2005*[a]	< 13	U			—				**740**			Z	—				—				—				< 0.14	U			—				< 11	U		
RHMW01	RHMW01-GW02	7/10/2006[a]	< 50	U			—				**509**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	RHMW01-GW06	12/5/2006[a]	< 50	U			—				**303**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	RHMW01-WG07	3/27/2007[a]	< 50	U			—				**307**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	RHMW01-WG08	6/12/2007[a]	< 50	U			—				**274**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	RHMW01-WG08	6/12/2007[a]	< 50	U			—				**261**				—				—				—				< 0.20	U			—				< 0.27	U		
RHMW01	RHMW01-WG10	1/15/2008[a]	< 10.0	U			—				**574**			Y	—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG11	4/15/2008[a]	**13.6**	J			—				**427**	J			—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG12	7/29/2008[ad]	< 10.0	U			—				**327**	J			—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG13	10/22/2008[ad]	< 10.0	U			—				**459**				—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG14	2/4/2009[a]	**14.4**	J			—				**387**	J			—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG15	5/13/2009[a]	< 16.6	UJ	b	t	—				**373**	J			—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG16	7/15/2009[a]	< 30.0	U			—				**248**	J			—				—				—				< 0.120	U			—				< 0.310	U		
RHMW01	RHMW01-WG17	10/14/2009[a]	< 30	U			—				**299**	J			—				—				—				< 0.12	U			—				< 0.31	U		
RHMW01	RHMW01-WG18	1/27/2010	< 60.0	U			—				**312**	J			—				—				—				< 0.240	U			—				< 0.620	U		
RHMW01	RHMW01-WG19	4/13/2010	< 60.0	U			—				**377**	J			—				—				—				< 0.240	U			—				< 0.620	U		
RHMW01	RHMW01-WG20	7/13/2010	< 60.0	U			—				**228**	J			—				—				—				< 0.240	U			—				< 0.620	U		
RHMW01	ES009	11/3/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES015	1/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES033	4/28/2011[d]	—				< 12.12	U			**300**			O	—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES041	7/20/2011	—				< 12.12	U			**290**			O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
RHMW01	ES057	11/2/2011	—				< 12.12	U			**210**			O	—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES069	2/14/2012	—				< 12.12	U			**210**			Y	—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES075	4/17/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES088	7/20/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW01	ES001	10/22/2012	—				< 20	UJ	b		**85**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES010	2/4/2013	—				< 13	UJ	t		**79**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES019	4/22/2013	—				< 30	U			**340**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES028	7/22/2013	—				< 30	UJ	h		**99**			Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h	
RHMW01	ES037	10/21/2013	—				< 21	UJ	b	t	**92**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES048	1/15/2014[d]	—				—				**250**			Y	—				—				—				< 0.50	U			—				**2.5**			
RHMW01	ES056	1/28/2014[d]	—				< 26	UJ	b		**130**			Y	—				—				—				< 0.50	U			—				**1.3**			
RHMW01	ES062	2/24/2014[d]	—				< 30	U			**89**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES064	3/5/2014[d]	—				—				**93**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES069	3/10/2014[d]	—				—				**38**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES072	3/25/2014[d]	—				—				**82**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES077	4/7/2014[d]	—				—				**140**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES080	4/21/2014[d]	—				< 30	U			**88**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES091	5/27/2014[d]	—				—				**66**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES098	6/23/2014[d]	—				—				**77**				—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES103	7/21/2014	—				< 30	U			**67**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES113	10/27/2014	—				< 30	U			**120**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES120X	1/27/2015	—				< 30	U			**33**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW01	ES130	4/20/2015	< 25	U			—				**170**			Y	—				< 23	UJ	b		—				< 0.10	U			—				< 0.10	U		
RHMW01	ES143	6/25/2015	—				—				**130**			Y	—				**40**	J			—				—				—				—			
RHMW01	ES145	7/20/2015	< 25	U			—				**150**	J	s	Y	—				**21**	J	s		—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH011	10/20/2015	< 25	U			—				**330**			Y	—				< 54	UJ	b		—				< 0.10	UJ	h		—				< 0.42	UJ	t	
RHMW01	ERH024	1/20/2016	< 25	U			—				**430**			Y	—				< 60	UJ	b		—				< 0.10	U			—				< 0.17	UJ	t	
RHMW01	ERH039	4/20/2016	< 25	U			—				**360**			Y	—				< 120	U	b	f Y	—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH053	7/20/2016	< 25	U			—				**250**			Y	—				< 59	U	b	f	—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH090	10/17/2016	—				< 18	U			**120**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U		
RHMW01	ERH117	11/14/2016	—				< 18	U			**94**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH143	12/13/2016	—				< 18	U			< 96	U	f	O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH172	1/11/2017	—				< 18	U			**88**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH172 (EPA split)	1/11/2017	< 25	UJ	c		—				**280**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW01	ERH223	2/8/2017	—				< 18	U			**150**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH223 (EPA split)	2/8/2017	< 25	UJ	c		—				**300**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW01	ERH275	3/8/2017	—				< 18	U			**83**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH275 (EPA split)	3/8/2017	< 25	UJ	c		—				**130**	J			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW01	ERH310	4/3/2017	—				< 18	U			**97**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW01	ERH332	5/1/2017	—				< 18	U			**110**			Y	< 51	U	b	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			COPC			non-COPC			non-COPC		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RH-W-003	6/28/2005[a]	< 0.50	U		[b]	—				—				—				**0.054**				—				**0.073**				—				—			
RHMW01	RH-W-004	6/28/2005*[a]	< 0.50	U		[b]	—				—				—				**0.051**				—				**0.055**				—				—			
RHMW01	RH-W-005	9/8/2005[a]	< 0.22	U			—				—				—				**0.038**				—				**0.83**				—				—			
RHMW01	RH-W-006	9/8/2005*[a]	< 0.22	U			—				—				—				**0.038**				—				**0.78**				—				—			
RHMW01	RHMW01W01	9/20/2005[a]	< 0.50	U			—				—				—				—				—				—				< 1.0	U			—			
RHMW01	RH-W-007	12/6/2005[a]	< 0.33	U			—				—				—				**0.098**				—				**0.51**				—				—			
RHMW01	RH-W-008	12/6/2005*[a]	< 0.33	U			—				—				—				**0.11**				—				**0.48**				—				—			
RHMW01	RHMW01-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW01	RHMW01-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW01	RHMW01-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW01	RHMW01-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW01	RHMW01-WG08	6/12/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—			
RHMW01	RHMW01-WG10	1/15/2008[a]	< 0.620	U			—				—				**0.0640**				**0.0478**	**J**			—				**0.210**				**5.98**				—			
RHMW01	RHMW01-WG11	4/15/2008[a]	< 0.620	U			—				—				**0.101**				**0.0789**				—				**0.216**				< 0.620	U			—			
RHMW01	RHMW01-WG12	7/29/2008[ad]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.114**				< 0.620	U			—			
RHMW01	RHMW01-WG13	10/22/2008[ad]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.103**				< 0.620	U			—			
RHMW01	RHMW01-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				**0.173**				< 0.620	U			—			
RHMW01	RHMW01-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.182**				< 0.620	U			—			
RHMW01	RHMW01-WG16	7/15/2009[a]	< 0.620	U			—				—				**9.44**				**3.07**				—				**5.61**				< 0.620	U			—			
RHMW01	RHMW01-WG17	10/14/2009[a]	< 1	U			—				—				< 0.0174	U			< 0.0174	U			—				**0.193**				< 0.62	U			—			
RHMW01	RHMW01-WG18	1/27/2010	< 1.24	U			—				—				< 0.0334	U			**0.0559**				—				**0.330**				< 1.24	U			—			
RHMW01	RHMW01-WG19	4/13/2010	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—			
RHMW01	RHMW01-WG20	7/13/2010	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.184**				< 1.24	U			—			
RHMW01	ES009	11/3/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.17**	**J**			—				—			
RHMW01	ES015	1/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW01	ES033	4/28/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW01	ES041	7/20/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.12**	**J**			—				—			
RHMW01	ES057	11/2/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW01	ES069	2/14/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW01	ES075	4/17/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW01	ES088	7/20/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.13**	**J**			—				—			
RHMW01	ES001	10/22/2012	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW01	ES010	2/4/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.10**	**J**			—				—			
RHMW01	ES019	4/22/2013	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW01	ES028	7/22/2013	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.048**	**J**			—				—			
RHMW01	ES037	10/21/2013	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW01	ES048	1/15/2014[d]	< 1.0	U			—				—				**0.040**	**J**			**0.039**	**J**			—				**0.062**	**J**			—				—			
RHMW01	ES056	1/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.045**	**J**			—				—			
RHMW01	ES062	2/24/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—			
RHMW01	ES064	3/5/2014[d]	< 1.0	U			—				—				< 0.050	U			**0.038**	**J**			—				< 0.050	U			—				—			
RHMW01	ES069	3/10/2014[d]	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW01	ES072	3/25/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
RHMW01	ES077	4/7/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW01	ES080	4/21/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW01	ES091	5/27/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
RHMW01	ES098	6/23/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW01	ES103	7/21/2014	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
RHMW01	ES113	10/27/2014	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW01	ES120X	1/27/2015	< 1.0	U			—				—				< 0.11	U			< 0.054	U			—				< 0.054	U			—				—			
RHMW01	ES130	4/20/2015	< 0.20	U			—				—				**0.014**	**J**			**0.0093**	**J**			—				**0.056**				—				—			
RHMW01	ES143	6/25/2015	—				—				—				**0.0068**	**J**			**0.0058**	**J**			—				**0.040**			X	—				—			
RHMW01	ES145	7/20/2015	< 0.20	U			—				—				**0.014**	**J**			**0.013**	**J**			—				**0.057**				—				—			
RHMW01	ERH011	10/20/2015	< 0.20	UJ	h		—				—				**0.037**				**0.024**				—				**0.20**				—				—			
RHMW01	ERH024	1/20/2016	< 0.20	U			—				—				**0.029**				**0.023**				—				**0.18**				—				—			
RHMW01	ERH039	4/20/2016	< 0.20	U			—				—				< 0.024	UJ	f v		< 0.014	UJ	f v		—				< 0.23	UJ	f		—				—			
RHMW01	ERH053	7/20/2016	< 0.20	U			—				—				**0.032**	**J**	v		**0.0068**	**J**	v		—				**0.21**				—				—			
RHMW01	ERH090	10/17/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH117	11/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH143	12/13/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH172	1/11/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH172 (EPA split)	1/11/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW01	ERH223	2/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH223 (EPA split)	2/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			**0.13**				—				**0.2**	**J**			< 0.5	U		
RHMW01	ERH275	3/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH275 (EPA split)	3/8/2017	—				< 0.5	U			< 0.2	U			< 0.026	UJ	c		< 0.026	UJ	c		< 0.5	U			**0.089**				—				**0.4**	**J**			< 0.5	U		
RHMW01	ERH310	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH332	5/1/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RH-W-003	6/28/2005[a]	—				—				< 0.0095	U			—				—				—				< 0.50	U		[b]	—				—			
RHMW01	RH-W-004	6/28/2005*[a]	—				—				< 0.0095	U			—				—				—				< 0.50	U		[b]	—				—			
RHMW01	RH-W-005	9/8/2005[a]	—				—				< 0.00096	U			—				—				—				< 0.12	U			—				—			
RHMW01	RH-W-006	9/8/2005*[a]	—				—				< 0.00096	U			—				—				—				< 0.12	U			—				—			
RHMW01	RHMW01W01	9/20/2005[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	RH-W-007	12/6/2005[a]	—				—				< 0.0096	U		[b]	—				—				—				< 0.12	U			—				—			
RHMW01	RH-W-008	12/6/2005*[a]	—				—				< 0.0095	U		[b]	—				—				—				< 0.12	U			—				—			
RHMW01	RHMW01-GW02	7/10/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	RHMW01-GW06	12/5/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	RHMW01-WG07	3/27/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	RHMW01-WG08	6/12/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	RHMW01-WG08	6/12/2007[a]	—				< 0.20	U			—				—				—				—				< 0.20	U			—				—			
RHMW01	RHMW01-WG10	1/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG11	4/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG12	7/29/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG13	10/22/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG14	2/4/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG15	5/13/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG16	7/15/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—			
RHMW01	RHMW01-WG17	10/14/2009[a]	—				< 0.31	U			—				—				—				—				< 0.15	U			—				—			
RHMW01	RHMW01-WG18	1/27/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—			
RHMW01	RHMW01-WG19	4/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—			
RHMW01	RHMW01-WG20	7/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—			
RHMW01	ES009	11/3/2010[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES015	1/20/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES033	4/28/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES041	7/20/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES057	11/2/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES069	2/14/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES075	4/17/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES088	7/20/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW01	ES001	10/22/2012	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES010	2/4/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES019	4/22/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES028	7/22/2013	—				< 0.50	UJ	h		—				—				—				—				< 0.50	UJ	h		—				—			
RHMW01	ES037	10/21/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES048	1/15/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES056	1/28/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES062	2/24/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES064	3/5/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES069	3/10/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES072	3/25/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES077	4/7/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES080	4/21/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES091	5/27/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES098	6/23/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW01	ES103	7/21/2014	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES113	10/27/2014	—				< 0.50	U			—				—				—				—				< 0.50	UJ	c		—				—			
RHMW01	ES120X	1/27/2015	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW01	ES130	4/20/2015	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			
RHMW01	ES143	6/25/2015	—				—				—				—				—				—				—				—				—			
RHMW01	ES145	7/20/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW01	ERH011	10/20/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—			
RHMW01	ERH024	1/20/2016	< 0.0040	U			< 0.004	U			—				—				—				< 0.015	U			< 0.020	U			—				—			
RHMW01	ERH039	4/20/2016	—				—				—				—				—				—				—				—				—			
RHMW01	ERH053	7/20/2016	—				—				—				—				—				—				—				—				—			
RHMW01	ERH090	10/17/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW01	ERH117	11/14/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH143	12/13/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH172	1/11/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH172 (EPA split)	1/11/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW01	ERH223	2/8/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH223 (EPA split)	2/8/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW01	ERH275	3/8/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH275 (EPA split)	3/8/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW01	ERH310	4/3/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH332	5/1/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH352	6/5/2017	—				< 18	U			**98**			O	**36**			O	< 40	U			< 40	U			**0.18**	**J**			—				< 0.50	U			—				< 0.50	U			—			
RHMW01	ERH383	7/5/2017	—				< 18	U			**110**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW01	ERH412	10/25/2017	—				< 18	U			**86**			Y	< 25	U			**67**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH413	10/25/2017*	—				—				**83**			Y	< 25	UJ	s		**59**				< 40	UJ	s		—				—				—				—				—				—			
RHMW01	ERH412 (EPA split)	10/25/2017	—				—				< 210	U	b	F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH545	3/12/2018	—				< 18	U			**150**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH545 (EPA split)	3/12/2018	—				—				**180**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH591	4/25/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH637	7/24/2018	—				< 18	UJ	s		**350**			O	< 25	U			< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW01	ERH637 (EPA split)	7/24/2018	—				—				**160**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH681	10/25/2018	—				< 18	U			**170**	**J**	h	Y	**67**	**J**		O	< 40	UJ	h		< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH736	1/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	l		—			
RHMW01	ERH788	4/23/2019	—				< 18	U			**230**			O	**57**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH844	7/23/2019	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH910	10/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH974	1/20/2020	—				< 18	U			**180**	**J**	s	O	**39**	**J**			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH1042	4/20/2020	—				< 18	U			**190**	**J**		Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH1108	7/20/2020	—				< 18	U			**200**	**J**		Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH1160	10/12/2020	—				< 18	U			**170**	**J**			< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH1217	1/25/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	RHMW02W01	9/20/2005[a]	< 50	U			—				**2,660**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02Q01	9/20/2005*[a]	< 50	U			—				**2,500**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02-GW02	7/10/2006[a]	**124**	**J**	s		—				**2,800**				—				—				—				< 0.50	U			—				**1.3**				—				< 0.50	U			—			
RHMW02	RHMW05-GW02	7/10/2006*[a]	**119**	**J**	s		—				**2,790**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02-GW06	12/5/2006[a]	**110**	**J**	s		—				**2,600**				—				—				—				< 0.50	U			—				**1.2**				—				< 0.50	U			—			
RHMW02	RHMWA01-GW06	12/5/2006*[a]	**138**	**J**	s		—				**2,690**				—				—				—				< 0.50	U			—				**1.1**				—				< 0.50	U			—			
RHMW02	RHMW02-WG07	3/27/2007[a]	**122**	**J**	s		—				**2,750**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMWA01-WG07	3/27/2007*[a]	**148**	**J**	s		—				**2,250**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMW02-WG08	6/12/2007[a]	**52.5**	**J**			—				**2,750**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMWA01-WG08	6/12/2007*[a]	**56.5**	**J**			—				**2,900**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMW02-WG09	9/10/2007[a]	**76**	**J**	s		—				**2,810**				—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW02	RHMWA01-WG09	9/10/2007*[a]	**78.2**	**J**	s		—				**3,180**				—				—				—				< 0.2	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW02	RHMW02-WG10	1/15/2008[a]	**64.3**	**J**			—				**2,310**			Y	—				—				—				**0.170**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG10	1/15/2008*[a]	**66.2**	**J**			—				**3,230**			Y	—				—				—				**0.170**	**J**			—				**0.350**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG11	4/15/2008[a]	**58.9**	**J**			—				**3,120**			Y	—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG11	4/15/2008*[a]	**58.9**	**J**			—				**3,020**			Y	—				—				—				**0.150**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG12	7/29/2008[ad]	**61.7**	**J**			—				**4,470**				—				—				—				< 0.120	U			—				**0.580**	**J**			—				< 0.310	U			—			
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	**61.2**	**J**			—				**3,640**				—				—				—				**0.120**	**J**			—				**0.560**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG13	10/22/2008[ad]	**52.8**	**J**			—				**4,540**				—				—				—				**0.140**	**J**			—				**0.450**	**J**			—				< 0.310	U			—			
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	**52.9**	**J**			—				**6,300**				—				—				—				**0.150**	**J**			—				**0.420**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG14	2/4/2009[a]	**52.3**	**J**			—				**2,840**				—				—				—				**0.260**	**J**			—				**0.490**	**J**			—				< 0.310	U			—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	**54.3**	**J**			—				**2,840**				—				—				—				**0.240**	**J**			—				**0.520**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG15	5/13/2009[a]	< 39.1	U	b	t	—				**1,620**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	< 36.7	U	b	t	—				**2,000**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG16	7/15/2009[a]	< 30.0	U			—				**1,450**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	< 30.0	U			—				**1,300**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG17	10/13/2009[a]	**36.9**	**J**			—				**2,570**				—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	< 30	U			—				**2,570**				—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW02	RHMW02-WG18	1/26/2010	**42.3**	**J**			—				**2,130**			Y	—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG18	1/26/2010*	**38.1**	**J**			—				**3,410**			Y	—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMW02-WG19	4/13/2010	**39.3**	**J**			—				**2,350**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG19	4/13/2010*	**39.0**	**J**			—				**2,080**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMW02-WG20	7/13/2010	**46.5**	**J**			—				**3,060**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG20	7/13/2010*	**45.4**	**J**			—				**3,110**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	ES002	10/18/2010	—				**150**			O	**1,700**			O	—				—				—				< 0.32	U			—				**0.25**	**J**			—				< 0.34	U			—			
RHMW02	ES003	10/18/2010*	—				**160**			O	**1,700**			O	—				—				—				< 0.32	U			—				**0.32**	**J**			—				< 0.34	U			—			
RHMW02	ES010	1/18/2011[d]	—				**17**	**J**		O	**1,100**			O	—				—				—				< 0.32	U			—				**0.29**	**J**			—				< 0.34	U			—			
RHMW02	ES011	1/18/2011*[d]	—				**20**			O	**980**			O	—				—				—				< 0.32	U			—				**0.25**	**J**			—				< 0.34	U			—			
RHMW02	ES020	4/19/2011[d]	—				**24**			O	**1,100**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES021	4/19/2011*[d]	—				**29**			O	**1,100**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES037	7/19/2011	—				< 12.12	U			**1,100**			O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES038	7/19/2011*	—				< 12.12	U			**1,800**	**J**	s	O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES046	10/24/2011	—				< 12.12	U			**750**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES047	10/24/2011*	—				< 12.12	U			**730**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES061	1/26/2012	—				< 12.12	U			**1,700**			O	—				—				—				< 0.32	U			—				**0.30**	**J**			—				< 0.34	U			—			
RHMW02	ES071	4/16/2012	—				< 12.12	U			**1,200**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES072	4/16/2012*	—				< 12.12	U			**1,100**			O	—				—				—				< 0.32	U			—				**0.23**	**J**			—				< 0.34	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH352	6/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH383	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH412	10/25/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH413	10/25/2017*	—				—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH412 (EPA split)	10/25/2017	—				—				—				< 0.025	U			< 0.025	U			—				**0.17**				—				—			
RHMW01	ERH545	3/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH545 (EPA split)	3/12/2018	—				—				—				< 0.025	U			< 0.025	U			—				**0.19**				—				—			
RHMW01	ERH591	4/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH637	7/24/2018	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH637 (EPA split)	7/24/2018	—				—				—				< 0.025	U			< 0.025	U			—				**0.13**				—				—			
RHMW01	ERH681	10/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH736	1/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH788	4/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH844	7/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH910	10/22/2019	< 0.30	U			—				—				< 0.10	UJ	I		< 0.10	UJ	I		—				< 0.10	UJ	I		—				—			
RHMW01	ERH974	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH1042	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH1108	7/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH1160	10/12/2020	< 0.30	U			—				—				< 0.10	UJ	I		< 0.10	U			—				< 0.10	U			—				—			
RHMW01	ERH1217	1/25/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW02	RHMW02W01	9/20/2005[a]	< 2.5	U			—				—				**104**				**88.5**				—				**120**				**283**	J	c		—			
RHMW02	RHMW02Q01	9/20/2005*[a]	< 2.5	U			—				—				**102**				**87.2**				—				**123**				**319**				—			
RHMW02	RHMW02-GW02	7/10/2006[a]	< 0.50	U			—				—				**142**				**65.8**				—				**171**				**343**				—			
RHMW02	RHMW05-GW02	7/10/2006*[a]	< 2.5	U			—				—				**133**				**67.1**				—				**180**				**335**				—			
RHMW02	RHMW02-GW06	12/5/2006[a]	< 0.50	U			—				—				**124**				**45.1**				—				**160**				**257**				—			
RHMW02	RHMWA01-GW06	12/5/2006*[a]	< 0.50	U			—				—				**114**				**51.1**				—				**147**				**269**				—			
RHMW02	RHMW02-WG07	3/27/2007[a]	< 0.50	U			—				—				**72.1**				**30.3**				—				**105**				**196**				—			
RHMW02	RHMWA01-WG07	3/27/2007*[a]	< 0.50	U			—				—				**59.4**				**26.2**				—				**90.1**				**207**				—			
RHMW02	RHMW02-WG08	6/12/2007[a]	< 0.5	U			—				—				**67.3**				**26.5**				—				**87.2**				**209**				—			
RHMW02	RHMWA01-WG08	6/12/2007*[a]	< 0.50	U			—				—				**88.3**				**33**				—				**128**				**207**				—			
RHMW02	RHMW02-WG09	9/10/2007[a]	< 0.36	U			—				—				**109**				**21.5**				—				**144**				**206**				—			
RHMW02	RHMWA01-WG09	9/10/2007*[a]	< 0.38	U			—				—				**102**				**19.7**				—				**136**				**264**				—			
RHMW02	RHMW02-WG10	1/15/2008[a]	**1.06**				—				—				**67.0**				**23.8**				—				**93.6**				**195**				—			
RHMW02	RHMWA01-WG10	1/15/2008*[a]	**1.10**				—				—				**73.2**				**27.6**				—				**102**				**194**				—			
RHMW02	RHMW02-WG11	4/15/2008[a]	**0.740**	J			—				—				**75.8**				**34.5**				—				**73.0**				**290**				—			
RHMW02	RHMWA01-WG11	4/15/2008*[a]	**0.750**	J			—				—				**71.9**				**40.8**				—				**105**				**293**				—			
RHMW02	RHMW02-WG12	7/29/2008[ad]	< 0.620	U			—				—				**102**				**31.5**				—				**140**				**320**				—			
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	< 0.620	U			—				—				**96.0**				**42.2**				—				**132**				**309**				—			
RHMW02	RHMW02-WG13	10/22/2008[ad]	**0.450**	J			—				—				**72.1**				**13.7**				—				**97.4**				**239**				—			
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	**0.490**	J			—				—				**62.4**				**12.7**				—				**82.3**				**245**				—			
RHMW02	RHMW02-WG14	2/4/2009[a]	**0.400**	J			—				—				**21.2**	J	s		**10.5**				—				**15.2**				**42.8**				—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	**0.470**	J			—				—				**22.8**				**11.1**				—				**16.6**				**43.0**				—			
RHMW02	RHMW02-WG15	5/13/2009[a]	**0.310**	J			—				—				**17.9**				**0.136**				—				**1.17**				< 0.620	U			—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	< 0.620	U			—				—				**24.6**				**0.107**				—				**1.08**				< 0.620	U			—			
RHMW02	RHMW02-WG16	7/15/2009[a]	< 0.620	U			—				—				**13.2**				**3.66**				—				**8.37**				**10.1**				—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	< 0.620	U			—				—				**10.6**				**2.58**				—				**6.71**				**11.2**				—			
RHMW02	RHMW02-WG17	10/13/2009[a]	< 1	U			—				—				**2.46**				**0.486**				—				**6.77**				**23.3**				—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	< 1	U			—				—				**4.03**				**0.783**				—				**7.82**				**20.0**				—			
RHMW02	RHMW02-WG18	1/26/2010	< 1.24	U			—				—				**9.03**				**3.85**				—				**17.3**				**31.5**				—			
RHMW02	RHMWA01-WG18	1/26/2010*	< 1.24	U			—				—				**8.26**				**2.65**				—				**15.7**				**9.30**				—			
RHMW02	RHMW02-WG19	4/13/2010	< 1.24	U			—				—				**6.61**				**1.69**				—				**14.3**				**20.6**				—			
RHMW02	RHMWA01-WG19	4/13/2010*	< 1.24	U			—				—				**5.90**				**1.90**				—				**12.7**				**21.4**				—			
RHMW02	RHMW02-WG20	7/13/2010	**0.690**	J			—				—				**7.43**				**1.06**				—				**59.9**				**107**				—			
RHMW02	RHMWA01-WG20	7/13/2010*	**0.660**	J			—				—				**7.05**				**0.937**				—				**61.1**				**102**				—			
RHMW02	ES002	10/18/2010	**0.60**	J			—				—				**15**				**5.0**				—				**59**				—				—			
RHMW02	ES003	10/18/2010*	**0.51**	J			—				—				**15**				**6.3**				—				**54**				—				—			
RHMW02	ES010	1/18/2011[d]	**0.48**	J			—				—				**19**				**3.6**				—				**57**				—				—			
RHMW02	ES011	1/18/2011*[d]	**0.58**	J			—				—				**23**				**5.6**				—				**63**				—				—			
RHMW02	ES020	4/19/2011[d]	**0.41**	J			—				—				**5.1**				**0.43**				—				**3.5**				—				—			
RHMW02	ES021	4/19/2011*[d]	**0.41**	J			—				—				**5.2**				**0.53**				—				**4.2**				—				—			
RHMW02	ES037	7/19/2011	< 0.38	U			—				—				**0.85**				**0.16**	J			—				**2.2**				—				—			
RHMW02	ES038	7/19/2011*	< 0.38	U			—				—				**0.90**				**0.12**	J			—				**2.7**				—				—			
RHMW02	ES046	10/24/2011	< 0.38	U			—				—				**0.53**				**0.15**	J			—				**0.80**				—				—			
RHMW02	ES047	10/24/2011*	< 0.38	U			—				—				**0.62**				**0.20**				—				**1.0**				—				—			
RHMW02	ES061	1/26/2012	< 0.38	U			—				—				**0.57**				**0.17**	J			—				**1.7**				—				—			
RHMW02	ES071	4/16/2012	< 0.38	U			—				—				**0.30**				< 0.12	U			—				**0.86**				—				—			
RHMW02	ES072	4/16/2012*	< 0.38	U			—				—				**1.2**				**0.61**				—				**2.9**				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH352	6/5/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH383	7/5/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH412	10/25/2017	—				< 0.50	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW01	ERH413	10/25/2017*	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH412 (EPA split)	10/25/2017	—				—				—				—				—				—				—				—				—				—			
RHMW01	ERH545	3/12/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH545 (EPA split)	3/12/2018	—				—				—				—				—				—				—				—				—				—			
RHMW01	ERH591	4/25/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH637	7/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH637 (EPA split)	7/24/2018	—				—				—				—				—				—				—				—				—				—			
RHMW01	ERH681	10/25/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH736	1/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH788	4/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH844	7/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH910	10/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH974	1/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH1042	4/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH1108	7/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH1160	10/12/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	s,I		< 80.0	U		
RHMW01	ERH1217	1/25/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	RHMW02W01	9/20/2005[a]	—				< 2.5	U			—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02Q01	9/20/2005*[a]	—				< 2.5	U			—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02-GW02	7/10/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW05-GW02	7/10/2006*[a]	—				< 2.5	U			—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02-GW06	12/5/2006[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-GW06	12/5/2006*[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG07	3/27/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-WG07	3/27/2007*[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG08	6/12/2007[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-WG08	6/12/2007*[a]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG09	9/10/2007[a]	—				< 0.20	U			—				—				—				—				< 0.20	U			—				—				—			
RHMW02	RHMWA01-WG09	9/10/2007*[a]	—				< 0.20	U			—				—				—				—				< 0.20	U			—				—				—			
RHMW02	RHMW02-WG10	1/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG10	1/15/2008*[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG11	4/15/2008[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG11	4/15/2008*[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG12	7/29/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG13	10/22/2008[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG14	2/4/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG15	5/13/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG16	7/15/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG17	10/13/2009[a]	—				< 0.31	U			—				—				—				—				< 0.15	U			—				—				—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	—				< 0.31	U			—				—				—				—				< 0.15	U			—				—				—			
RHMW02	RHMW02-WG18	1/26/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG18	1/26/2010*	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMW02-WG19	4/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG19	4/13/2010*	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMW02-WG20	7/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG20	7/13/2010*	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW02	ES002	10/18/2010	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES003	10/18/2010*	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES010	1/18/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES011	1/18/2011*[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES020	4/19/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES021	4/19/2011*[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES037	7/19/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES038	7/19/2011*	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES046	10/24/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES047	10/24/2011*	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES061	1/26/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES071	4/16/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES072	4/16/2012*	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES082	7/18/2012	—				< 12.12	U			**1,700**			Y	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES002	10/22/2012	—				**320**				**2,200**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				**0.59**	**J**			—			
RHMW02	ES003	10/22/2012*	—				**360**				**1,800**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				**0.60**	**J**			—			
RHMW02	ES011	1/28/2013	—				**660**				**1,700**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES012	1/28/2013*	—				**650**				**1,500**			Y	—				—				—				< 0.50	U			—				**0.24**	**J**			—				< 0.50	U			—			
RHMW02	ES020	4/22/2013	—				< 54	UJ	t		**2,600**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES021	4/22/2013*	—				< 56	UJ	t		**3,300**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES029	7/22/2013	—				**55**	**J**	h		**2,500**			Y	—				—				—				< 0.50	UJ	h		—				**0.17**	**J**	h		—				< 0.50	UJ	h		—			
RHMW02	ES030	7/22/2013*	—				**61**	**J**	h		**2,600**			Y	—				—				—				< 0.50	UJ	h		—				**0.19**	**J**	h		—				< 0.50	UJ	h		—			
RHMW02	ES038	10/21/2013	—				< 48	UJ	b		**2,400**			Y	—				—				—				< 0.50	U			—				**0.14**	**J**			—				< 0.50	U			—			
RHMW02	ES039	10/21/2013*	—				< 63	UJ	b		**2,400**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES046	1/15/2014[d]	—				—				**5,000**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES047	1/15/2014*[d]	—				—				**5,200**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES057	1/28/2014[d]	—				< 50	U	b		**2,300**			Y	—				—				—				**0.14**	**J**			—				**0.20**	**J**			—				< 0.50	U			—			
RHMW02	ES058	1/28/2014*[d]	—				< 52	U	b		**2,100**			Y	—				—				—				**0.15**	**J**			—				**0.20**	**J**			—				< 0.50	U			—			
RHMW02	ES063	2/24/2014[d]	—				**40**	**J**			**2,200**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES065	3/5/2014[d]	—				—				**2,100**				—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES066	3/5/2014*[d]	—				—				**2,200**				—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES070	3/10/2014[d]	—				—				**930**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES071	3/10/2014*[d]	—				—				**890**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES073	3/25/2014[d]	—				—				**1,700**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES074	3/25/2014*[d]	—				—				**1,700**			Y	—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U			—			
RHMW02	ES078	4/7/2014[d]	—				—				**3,500**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				< 0.50	U			—			
RHMW02	ES079	4/7/2014*[d]	—				—				**3,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES081	4/21/2014[d]	—				**53**				**1,900**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES082	4/21/2014*[d]	—				**50**				**1,500**				—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U			—			
RHMW02	ES092	5/27/2014[d]	—				—				**1,500**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES093	5/27/2014*[d]	—				—				**1,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES099	6/23/2014[d]	—				—				**1,800**				—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U			—			
RHMW02	ES100	6/23/2014*[d]	—				—				**1,600**				—				—				—				< 0.50	U			—				**0.18**	**J**			—				< 0.50	U			—			
RHMW02	ES104	7/21/2014	—				**48**	**J**			**1,200**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES105	7/21/2014*	—				**49**	**J**			**1,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES114	10/27/2014	—				**57**				**2,000**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES115	10/27/2014	—				**53**				**2,000**			Y	—				—				—				< 0.50	U			—				**0.14**	**J**			—				< 0.50	U			—			
RHMW02	ES126	1/28/2015	—				**54**				**1,100**			Y	—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U			—			
RHMW02	ES127	1/28/2015*	—				**59**				**1,700**			Y	—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES131	4/20/2015	**46**	**J**			—				**5,200**			Y	—				**360**			Y	—				**0.090**	**J**			—				**0.18**	**J**			—				< 0.10	U			—			
RHMW02	ES132	4/20/2015*	**47**	**J**			—				**5,400**			Y	—				**360**			Y	—				**0.080**	**J**			—				**0.19**	**J**			—				< 0.10	U			—			
RHMW02	ES144	6/25/2015	—				—				**3,800**			Y	—				**250**			Y	—				—				—				—				—				—				—			
RHMW02	ES146	7/20/2015	**40**	**J**			—				**3,900**	**J**	s	Y	—				**240**	**J**	s	Y	—				< 0.10	U			—				**0.16**	**J**			—				**0.060**	**J**			—			
RHMW02	ES147	7/20/2015*	**41**	**J**			—				**3,200**			Y	—				**260**			Y	—				**0.10**	**J**			—				**0.17**	**J**			—				< 0.10	U			—			
RHMW02	ERH012	10/20/2015	**47**	**J**			—				**6,100**			Y	—				**310**			Y	—				**0.090**	**J**	**h**		—				**0.29**	**J**	h		—				< 0.3	UJ	b h t		—			
RHMW02	ERH013	10/20/2015*	**47**	**J**			—				**6,200**			Y	—				**320**			Y	—				**0.090**	**J**	**h**		—				**0.26**	**J**	h		—				< 0.49	UJ	b h t		—			
RHMW02	ERH025	1/20/2016	**36**	**J**			—				**6,500**			Y	—				**340**			Y	—				**0.080**	**J**			—				**0.014**	**J**			—				< 0.07	UJ	t		—			
RHMW02	ERH040	4/20/2016	< 35	U	f		—				**4,400**			Y	—				**390**			Y	—				< 0.10	U			—				< 0.17	U	f		—				< 0.10	U			—			
RHMW02	ERH041	4/20/2016*	< 35	U	f		—				**3,700**			Y	—				**400**			Y	—				**0.070**	**J**			—				< 0.17	U	f		—				< 0.10	U			—			
RHMW02	ERH054	7/20/2016	**31**	**J**	s		—				**3,600**			Y	—				**280**			Y	—				**0.070**	**J**			—				< 0.13	U	f		—				< 0.10	U			—			
RHMW02	ERH055	7/20/2016*	**30**	**J**	s		—				**3,200**			Y	—				**270**			Y	—				**0.080**	**J**			—				< 0.14	U	f		—				< 0.10	U			—			
RHMW02	ERH091	10/19/2016	—				**35**				**1,300**				**300**			Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH124	11/15/2016	—				**26**			Y	**1,300**			O	—				**100**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH144	12/13/2016	—				< 18	U			**1,300**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH174	1/10/2017	—				**63**			Y	**1,400**			O	—				**42**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH174 (EPA split)	1/10/2017	**41**	**J**	c		—				**4,000**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW02	ERH216	2/7/2017	—				**65**			Y	**1,000**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH216 (EPA split)	2/7/2017	**32**	**J**	c		—				**2,700**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW02	ERH265	3/7/2017	—				**73**			W	**1,200**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH265 (EPA split)	3/7/2017	**37**	**J**	c		—				**2,500**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW02	ERH300	4/4/2017	—				**57**			W	**940**			O	—				**84**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH334	5/1/2017	—				**94**			Y	**1,000**			Y	< 480	U	b	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH354	6/5/2017	—				**65**			Y	**1,000**			O	**570**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH391	7/6/2017	—				**33**			Y	**1,000**			O	**250**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH415	10/23/2017	—				**43**			Y	**1300**	**J**	q	O	**230**	**J**	q e	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH416	10/23/2017*	—				**76**			Y	**1,600**			O	**230**			Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH415 (EPA split)	10/23/2017	—				—				**3300**			F13	**550**			F3	< 320	U			< 320	U			—				—				—				—				—			
RHMW02	ERH547	3/13/2018	—				**47**			Y	**1,900**			O	**640**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH548	3/13/2018*	—				**42**			Y	**1,800**			O	**460**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH547 (EPA split)	3/13/2018	—				—				**2,900**			F13	**430**			F13	< 300	U			< 300	U			—				—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			COPC			non-COPC			non-COPC		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES082	7/18/2012	**0.43**	**J**			—				—				**4.7**				**0.88**				—				**17**				—			
RHMW02	ES002	10/22/2012	**0.51**	**J**			—				—				**24**				**14**				—				**63**				—			
RHMW02	ES003	10/22/2012*	**0.47**	**J**			—				—				**21**				**12**				—				**61**				—			
RHMW02	ES011	1/28/2013	**0.65**	**J**			—				—				**47**				**35**				—				**110**				—			
RHMW02	ES012	1/28/2013*	**0.69**	**J**			—				—				**41**				**31**				—				**100**				—			
RHMW02	ES020	4/22/2013	**0.58**	**J**			—				—				**16**				**13**				—				**53**				—			
RHMW02	ES021	4/22/2013*	**0.58**	**J**			—				—				**20**				**16**				—				**61**				—			
RHMW02	ES029	7/22/2013	**0.45**	**J**	h		—				—				**21**				**9.1**				—				**73**				—			
RHMW02	ES030	7/22/2013*	**0.50**	**J**	h		—				—				**18**				**6.6**				—				**67**				—			
RHMW02	ES038	10/21/2013	**0.37**	**J**			—				—				**9.0**				**9.0**				—				**30**				—			
RHMW02	ES039	10/21/2013*	**0.37**	**J**			—				—				**7.5**				**7.5**				—				**25**				—			
RHMW02	ES046	1/15/2014[d]	**0.48**	**J**			—				—				**6.0**				**4.9**				—				**18**				—			
RHMW02	ES047	1/15/2014*[d]	**0.45**	**J**			—				—				**5.3**				**4.3**				—				**17**				—			
RHMW02	ES057	1/28/2014[d]	**0.38**	**J**			—				—				**8.8**				**5.4**				—				**18**				—			
RHMW02	ES058	1/28/2014*[d]	**0.34**	**J**			—				—				**9.0**				**5.9**				—				**18**				—			
RHMW02	ES063	2/24/2014[d]	**0.29**	**J**			—				—				**5.2**				**2.5**				—				**15**				—			
RHMW02	ES065	3/5/2014[d]	**0.29**	**J**			—				—				**2.6**				**1.5**				—				**10**				—			
RHMW02	ES066	3/5/2014*[d]	**0.32**	**J**			—				—				**3.9**				**2.9**				—				**13**				—			
RHMW02	ES070	3/10/2014[d]	**0.30**	**J**			—				—				**3.7**				**2.5**				—				**11**				—			
RHMW02	ES071	3/10/2014*[d]	**0.31**	**J**			—				—				**4.2**				**3.0**				—				**12**				—			
RHMW02	ES073	3/25/2014[d]	**0.38**	**J**			—				—				**9.0**				**4.9**				—				**33**				—			
RHMW02	ES074	3/25/2014*[d]	**0.41**	**J**			—				—				**8.1**				**4.0**				—				**33**				—			
RHMW02	ES078	4/7/2014[d]	**0.40**	**J**			—				—				**6.2**				**4.4**				—				**25**				—			
RHMW02	ES079	4/7/2014*[d]	**0.33**	**J**			—				—				**9.0**				**7.6**				—				**31**				—			
RHMW02	ES081	4/21/2014[d]	**0.43**	**J**			—				—				**8.7**				**8.1**				—				**31**				—			
RHMW02	ES082	4/21/2014*[d]	**0.42**	**J**			—				—				**8.3**				**7.7**				—				**32**				—			
RHMW02	ES092	5/27/2014[d]	**0.31**	**J**			—				—				**9.3**				**2.7**				—				**34**				—			
RHMW02	ES093	5/27/2014*[d]	**0.32**	**J**			—				—				**7.8**				**1.5**				—				**28**				—			
RHMW02	ES099	6/23/2014[d]	**0.40**	**J**			—				—				**11**				**3.4**				—				**38**				—			
RHMW02	ES100	6/23/2014*[d]	**0.37**	**J**			—				—				**12**				**4.5**				—				**41**				—			
RHMW02	ES104	7/21/2014	**0.36**	**J**			—				—				**25**				**20**				—				**71**				—			
RHMW02	ES105	7/21/2014*	**0.33**	**J**			—				—				**26**				**22**				—				**76**				—			
RHMW02	ES114	10/27/2014	**0.32**	**J**			—				—				**59**				**43**				—				**140**				—			
RHMW02	ES115	10/27/2014	**0.29**	**J**			—				—				**54**				**36**				—				**130**				—			
RHMW02	ES126	1/28/2015	**0.35**	**J**			—				—				**34**				**7.6**				—				**90**				—			
RHMW02	ES127	1/28/2015*	**0.35**	**J**			—				—				**25**				**2.7**				—				**63**				—			
RHMW02	ES131	4/20/2015	**0.26**	**J**			—				—				**31**				**15**				—				**39**				—			
RHMW02	ES132	4/20/2015*	**0.30**	**J**			—				—				**68**				**37**				—				**140**				—			
RHMW02	ES144	6/25/2015	—				—				—				**71**				**48**				—				**150**				—			
RHMW02	ES146	7/20/2015	**0.26**	**J**			—				—				**65**				**43**				—				**150**				—			
RHMW02	ES147	7/20/2015*	**0.27**	**J**			—				—				**66**				**43**				—				**160**				—			
RHMW02	ERH012	10/20/2015	**0.32**	**J**	h		—				—				**60**				**27**				—				**120**				—			
RHMW02	ERH013	10/20/2015*	**0.30**	**J**	h		—				—				**57**				**24**				—				**88**				—			
RHMW02	ERH025	1/20/2016	**0.21**	**J**			—				—				**48**				**7.9**				—				**120**				—			
RHMW02	ERH040	4/20/2016	< 0.16	U	f		—				—				**59**				**38**				—				**100**				—			
RHMW02	ERH041	4/20/2016*	< 0.18	U	f		—				—				**61**				**39**				—				**110**				—			
RHMW02	ERH054	7/20/2016	< 0.21	U	f		—				—				**36**				**13**				—				**67**				—			
RHMW02	ERH055	7/20/2016*	< 0.23	U	f		—				—				**33**				**12**				—				**62**				—			
RHMW02	ERH091	10/19/2016	< 0.30	U			—				—				**25**				**9.2**				—				**49**				—			
RHMW02	ERH124	11/15/2016	< 0.30	U			—				—				**29**				**12**				—				**58**				—			
RHMW02	ERH144	12/13/2016	**0.19**	**J**			—				—				**17**				**11**				—				**40**				—			
RHMW02	ERH174	1/10/2017	**0.26**	**J**			—				—				**25**				**11**				—				**69**				—			
RHMW02	ERH174 (EPA split)	1/10/2017	—				< 0.5	U			**0.2**	**J**	s		**33**	**J**	c		**11**	**J**	c		**12**				**77**	**J**	v		—				**110**				**72**		
RHMW02	ERH216	2/7/2017	**0.23**	**J**			—				—				**22**				**16**				—				**57**				—				—		
RHMW02	ERH216 (EPA split)	2/7/2017	—				< 0.5	U			< 0.2	U			**28**	**J**	c v		—				**18**				—				**100**	**J**	s		**64**		
RHMW02	ERH265	3/7/2017	< 0.30	U			—				—				**22**				**17**				—				**49**				—				—		
RHMW02	ERH265 (EPA split)	3/7/2017	—				< 0.5	U			**0.2**	**J**			**21**	**J**	c s v		—				**18**				—				**73**				**67**		
RHMW02	ERH300	4/4/2017	< 0.30	U			—				—				**20**				**17**				—				**52**				—				—		
RHMW02	ERH334	5/1/2017	< 0.30	U			—				—				**28**				**24**				—				**65**				—				—		
RHMW02	ERH354	6/5/2017	< 0.30	U			—				—				**25**				**16**				—				**62**				—				—		
RHMW02	ERH391	7/6/2017	**1.4**	**J**			—				—				**14**				**1.5**				—				**56**				—				—		
RHMW02	ERH415	10/23/2017	**0.25**	**J**			—				—				**14**	**J**	q		**7.4**	**J**	e q		—				**38**	**J**	q		—				—		
RHMW02	ERH416	10/23/2017*	**0.26**	**J**			—				—				**15**				**8.6**				—				**37**				—				—		
RHMW02	ERH415 (EPA split)	10/23/2017	—				—				—				**19**				**13**				—				**50**				—				—		
RHMW02	ERH547	3/13/2018	**0.28**	**J**			—				—				**20**				**13**				—				**53**				—				—		
RHMW02	ERH548	3/13/2018*	**0.37**	**J**			—				—				**25**				**18**				—				**65**				—				—		
RHMW02	ERH547 (EPA split)	3/13/2018	—				—				—				**23**				**15**				—				**50**				—				—		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES082	7/18/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—			
RHMW02	ES002	10/22/2012	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES003	10/22/2012*	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES011	1/28/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES012	1/28/2013*	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES020	4/22/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES021	4/22/2013*	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES029	7/22/2013	—				< 0.50	UJ	h		—				—				—				—				< 0.50	UJ	h		—				—			
RHMW02	ES030	7/22/2013*	—				< 0.50	UJ	h		—				—				—				—				< 0.50	UJ	h		—				—			
RHMW02	ES038	10/21/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES039	10/21/2013*	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES046	1/15/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES047	1/15/2014*[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES057	1/28/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES058	1/28/2014*[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES063	2/24/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—			
RHMW02	ES065	3/5/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES066	3/5/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES070	3/10/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES071	3/10/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES073	3/25/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES074	3/25/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES078	4/7/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES079	4/7/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES081	4/21/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES082	4/21/2014*[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES092	5/27/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES093	5/27/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES099	6/23/2014[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES100	6/23/2014*[d]	—				—				—				—				—				—				—				—				—			
RHMW02	ES104	7/21/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES105	7/21/2014*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES114	10/27/2014	—				< 0.50	U			—				—				—				< 0.50	UJ	c		—				—				—			
RHMW02	ES115	10/27/2014	—				< 0.50	U			—				—				—				< 0.50	UJ	c		—				—				—			
RHMW02	ES126	1/28/2015	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES127	1/28/2015*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW02	ES131	4/20/2015	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			
RHMW02	ES132	4/20/2015*	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			
RHMW02	ES144	6/25/2015	—				—				—				—				—				—				—				—				—			
RHMW02	ES146	7/20/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW02	ES147	7/20/2015*	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW02	ERH012	10/20/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—			
RHMW02	ERH013	10/20/2015*	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—			
RHMW02	ERH025	1/20/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW02	ERH040	4/20/2016	—				—				—				—				—				—				—				—				—			
RHMW02	ERH041	4/20/2016*	—				—				—				—				—				—				—				—				—			
RHMW02	ERH054	7/20/2016	—				—				—				—				—				—				—				—				—			
RHMW02	ERH055	7/20/2016*	—				—				—				—				—				—				—				—				—			
RHMW02	ERH091	10/19/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW02	ERH124	11/15/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH144	12/13/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH174	1/10/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH174 (EPA split)	1/10/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW02	ERH216	2/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH216 (EPA split)	2/7/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW02	ERH265	3/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH265 (EPA split)	3/7/2017	—				—				—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U		
RHMW02	ERH300	4/4/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH334	5/1/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH354	6/5/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH391	7/6/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH415	10/23/2017	—				< 0.50	U			—				—				—				< 0.30	U			—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH416	10/23/2017*	—				< 0.50	U			—				—				—				< 0.30	U			—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH415 (EPA split)	10/23/2017	—				—				—				—				—				—				—				—				—				—			
RHMW02	ERH547	3/13/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH548	3/13/2018*	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH547 (EPA split)	3/13/2018	—				—				—				—				—				—				—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH593	4/24/2018	—				**51**				**2,700**			O	**510**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH594	4/24/2018*	—				**44**				**2,800**			O	**420**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH639	7/24/2018	—				**78**				**2,100**			O	**580**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH640	7/24/2018*	—				**78**				**1500**			O	**260**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH639 (EPA split)	7/24/2018	—				—				**2,400**			F13	**570**			F13	< 300	U			< 300	U			—				—				—				—				—				—			
RHMW02	ERH683	10/23/2018	—				**81**			Y	**2,000**	**J**	h	O	**370**	**J**	h	O	< 40	UJ	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH684	10/23/2018*	—				**92**			Y	**2,100**	**J**	h	O	**430**	**J**	h	O	< 40	UJ	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH738	1/21/2019	—				**48**			W	**2,400**			O	**420**			O	< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW02	ERH739	1/21/2019*	—				**22**			W	**2,700**			O	**430**			O	< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW02	ERH790	4/24/2019	—				**48**				**2,300**			O	**430**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH791	4/24/2019*	—				**57**				**2,200**			O	**440**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH846	7/23/2019	—				**79**				**2,400**			O	**690**			O	**190**				< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW02	ERH847	7/23/2019*	—				< 18	U			**2,600**			O	**480**			O	**200**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH912	10/22/2019	—				**81**				**1,700**			O	**520**			O	**200**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH913	10/22/2019*	—				**74**				**1,800**			O	**430**			O	**190**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH976	1/20/2020	—				**58**				**1500**	**J**	s	O	**280**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH977	1/20/2020*	—				**49**				**1,700**			O	**360**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1044	4/22/2020	—				**49**				**1,700**	**J**	l	O	**350**			O	**260**	**J**	l		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1045	4/22/2020	—				**63**				**1500**	**J**	l	O	**310**	**J**		O	**290**	**J**	l		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1110	7/20/2020	—				**46**				**1900**			O	**470**			O	**180**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1111	7/20/2020	—				**95**				**1800**			O	**450**			O	**190**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1162	10/12/2020	—				**66**				**2000**			O	**360**			O	**270**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1163	10/12/2020	—				**53**				**2000**			O	**560**			O	**290**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1219	1/25/2021	—				< 18	U			**1500**			O	**390**			O	**180**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	ERH1220	1/25/2021	—				< 18	U			**1600**			O	**380**			O	**330**				< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	RHMW03W01	9/20/2005[a]	< 0.50	U			—				**162**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	RHMW03-GW02	7/10/2006[a]	< 50	U			—				**142**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	RHMW03-GW06	12/5/2006[a]	< 50	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	RHMW03-WG07	3/27/2007[a]	< 50	U			—				**95.7**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	RHMW03-WG08	6/12/2007[a]	< 50	U			—				**123**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	RHMW03-WG09	9/10/2007[a]	< 50	U			—				< 96	U			—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW03	RHMW03-WG10	1/15/2008[a]	< 10.0	U			—				**242**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG11	4/15/2008[a]	< 10.0	U			—				**190**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG12	7/29/2008[ad]	< 10.0	U			—				**199**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG13	10/22/2008[ad]	< 10.0	U			—				**244**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG14	2/4/2009[a]	**16.1**	**J**			—				**207**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG15	5/13/2009[a]	< 14.8	UJ	b t		—				< 161	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG16	7/15/2009[a]	< 30.0	U			—				< 150	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW03	RHMW03-WG17	10/14/2009[a]	< 30	U			—				< 163	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW03	RHMW03-WG18	1/27/2010	< 60.0	U			—				< 330	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW03	RHMW03-WG19	4/13/2010	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW03	RHMW03-WG20	7/13/2010	< 60.0	U			—				< 324	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW03	ES001	10/18/2010[d]	—				< 12.12	U			**330**			Y	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES012	1/19/2011	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES025	4/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES035	7/19/2011	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES049	10/24/2011	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES060	1/26/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES073	4/16/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES081	7/18/2012	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW03	ES004	10/22/2012	—				< 30	U			**45**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**0.54**	**J**			—			
RHMW03	ES013	1/28/2013	—				< 30	U			**59**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES022	4/22/2013	—				< 30	U			**69**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES031	7/22/2013	—				< 30	UJ	h		**48**	**J**		Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h		—			
RHMW03	ES040	10/21/2013	—				< 23	UJ	b		**54**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES059	1/28/2014[d]	—				< 20	UJ	b		**74**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES083	4/21/2014[d]	—				< 30	U			**39**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES106	7/22/2014	—				< 30	U			**37**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES116	10/27/2014	—				< 30	U			**80**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES123	1/28/2015	—				< 30	U			**39**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES133	4/20/2015	< 25	U			—				**100**			Y	—				**110**			Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ES148	7/20/2015	< 25	U			—				**130**			Y	—				**150**			Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH014	10/20/2015	< 25	U			—				**130**			Y	—				< 160	UJ	b	Y	—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.4	UJ	h t		—			
RHMW03	ERH026	1/20/2016	< 25	U			—				**150**			Y	—				< 160	UJ	b	Y	—				< 0.10	U			—				< 0.10	U			—				< 0.14	UJ	t		—			
RHMW03	ERH042	4/20/2016	< 25	U			—				< 95	U	f	Y	—				< 170	U	b f	Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH056	7/20/2016	< 25	U			—				< 70	U	f	Y	—				< 110	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH093	10/19/2016	—				< 18	U			**65**			Y	< 25	U			**59**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH593	4/24/2018	< 0.30	U			—				—				**26**				**25**				—				**70**				—				—			
RHMW02	ERH594	4/24/2018*	< 0.30	U			—				—				**27**				**27**				—				**73**				—				—			
RHMW02	ERH639	7/24/2018	< 0.30	U			—				—				**16**				**10**				—				**38**				—				—			
RHMW02	ERH640	7/24/2018*	< 0.30	U			—				—				**19**				**14**				—				**48**				—				—			
RHMW02	ERH639 (EPA split)	7/24/2018	—				—				—				**19**				**12**				—				**47**				—				—			
RHMW02	ERH683	10/23/2018	< 0.30	U			—				—				**21**				**20**				—				**51**				—				—			
RHMW02	ERH684	10/23/2018*	< 0.30	U			—				—				**20**				**18**				—				**49**				—				—			
RHMW02	ERH738	1/21/2019	< 0.30	UJ	s		—				—				**11**				**8.8**				—				**32**				—				—			
RHMW02	ERH739	1/21/2019*	< 0.30	UJ	s		—				—				**9.6**				**7.2**				—				**26**				—				—			
RHMW02	ERH790	4/24/2019	< 0.30	U			—				—				**9.0**				**7.9**				—				**28**				—				—			
RHMW02	ERH791	4/24/2019*	< 0.30	U			—				—				**8.7**				**7.4**				—				**26**				—				—			
RHMW02	ERH846	7/23/2019	< 0.30	UJ	s		—				—				**12**				**11**				—				**33**				—				—			
RHMW02	ERH847	7/23/2019*	< 0.30	U			—				—				**12**				**11**				—				**34**				—				—			
RHMW02	ERH912	10/22/2019	< 0.30	U			—				—				**30**				**26**				—				**66**				—				—			
RHMW02	ERH913	10/22/2019*	< 0.30	U			—				—				**31**				**27**				—				**68**				—				—			
RHMW02	ERH976	1/20/2020	< 0.30	U			—				—				**23**				**23**				—				**52**				—				—			
RHMW02	ERH977	1/20/2020*	< 0.30	U			—				—				**24**				**23**				—				**57**				—				—			
RHMW02	ERH1044	4/22/2020	< 0.30	U			—				—				**13**				**12**				—				**33**				—				—			
RHMW02	ERH1045	4/22/2020	< 0.30	U			—				—				**13**				**11**				—				**32**				—				—			
RHMW02	ERH1110	7/20/2020	< 0.30	U			—				—				**31**				**26**				—				**64**				—				—			
RHMW02	ERH1111	7/20/2020	< 0.30	U			—				—				**29**				**30**				—				**73**				—				—			
RHMW02	ERH1162	10/12/2020	< 0.30	U			—				—				**45**	**J**	l		**45**				—				**98**				—				—			
RHMW02	ERH1163	10/12/2020	< 0.30	U			—				—				**52**	**J**	l		**51**				—				**97**				—				—			
RHMW02	ERH1219	1/25/2021	< 0.30	U			—				—				**25**				**17**								**44**				—				—			
RHMW02	ERH1220	1/25/2021	< 0.30	U			—				—				**23**				**16**								**41**				—				—			
RHMW03	RHMW03W01	9/20/2005[a]	< 0.50	U			—				—				< 0.24	U			< 0.24	U			—				< 0.24	U			< 1.0	U			—			
RHMW03	RHMW03-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW03	RHMW03-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW03	RHMW03-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW03	RHMW03-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			
RHMW03	RHMW03-WG09	9/10/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—			
RHMW03	RHMW03-WG10	1/15/2008[a]	< 0.620	U			—				—				< 0.0156	U			< 0.0156	U			—				< 0.0323	U			< 0.620	U			—			
RHMW03	RHMW03-WG11	4/15/2008[a]	< 0.620	U			—				—				< 0.0268	UJ	b		< 0.0279	UJ	b		—				< 0.0341	U			< 0.620	U			—			
RHMW03	RHMW03-WG12	7/29/2008[ad]	< 0.620	U			—				—				**0.0294**	**J**			< 0.0156	U			—				**0.0689**	**J**			< 0.620	U			—			
RHMW03	RHMW03-WG13	10/22/2008[ad]	< 0.620	U			—				—				**0.0658**				**0.0937**				—				**0.219**				< 0.620	U			—			
RHMW03	RHMW03-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0161	U			< 0.0161	U			—				< 0.0333	U			< 0.620	U			—			
RHMW03	RHMW03-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0152	U			< 0.0152	U			—				< 0.0313	U			< 0.620	U			—			
RHMW03	RHMW03-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0158	U			< 0.0158	U			—				< 0.0326	U			< 0.620	U			—			
RHMW03	RHMW03-WG17	10/14/2009[a]	< 1	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.0348	U			< 0.62	U			—			
RHMW03	RHMW03-WG18	1/27/2010	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—			
RHMW03	RHMW03-WG19	4/13/2010	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—			
RHMW03	RHMW03-WG20	7/13/2010	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—			
RHMW03	ES001	10/18/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES012	1/19/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES025	4/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES035	7/19/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES049	10/24/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES060	1/26/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES073	4/16/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES081	7/18/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
RHMW03	ES004	10/22/2012	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.029**	**J**			—				—			
RHMW03	ES013	1/28/2013	< 1.0	U			—				—				**0.10**	**J**			**0.069**	**J**			—				**0.32**				—				—			
RHMW03	ES022	4/22/2013	< 1.0	U			—				—				< 0.053	U			< 0.053	U			—				< 0.053	U			—				—			
RHMW03	ES031	7/22/2013	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.064**	**J**			—				—			
RHMW03	ES040	10/21/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW03	ES059	1/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.15**	**J**			—				—			
RHMW03	ES083	4/21/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.11**	**J**			—				—			
RHMW03	ES106	7/22/2014	< 1.0	U			—				—				< 0.047	U			< 0.047	U			—				< 0.047	U			—				—			
RHMW03	ES116	10/27/2014	< 1.0	U			—				—				< 0.11	U			< 0.054	U			—				< 0.054	U			—				—			
RHMW03	ES123	1/28/2015	< 1.0	U			—				—				< 0.097	U			< 0.048	U			—				< 0.048	U			—				—			
RHMW03	ES133	4/20/2015	< 0.20	U			—				—				**0.015**	**J**			**0.0083**	**J**			—				**0.035**				—				—			
RHMW03	ES148	7/20/2015	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—			
RHMW03	ERH014	10/20/2015	< 0.20	UJ	h		—				—				**0.0039**	**J**			< 0.0034	UJ	b		—				< 0.0094	UJ	b		—				—			
RHMW03	ERH026	1/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW03	ERH042	4/20/2016	< 0.20	U			—				—				< 0.0084	U	f		< 0.0075	U	f		—				< 0.0050	U			—				—			
RHMW03	ERH056	7/20/2016	< 0.20	U			—				—				**0.0073**	**J**			**0.0040**	**J**			—				< 0.025	U	f		—				—			
RHMW03	ERH093	10/19/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH593	4/24/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH594	4/24/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH639	7/24/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH640	7/24/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH639 (EPA split)	7/24/2018	—				—				—				—				—				—				—				—				—			
RHMW02	ERH683	10/23/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH684	10/23/2018*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH738	1/21/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH739	1/21/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH790	4/24/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH791	4/24/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH846	7/23/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH847	7/23/2019*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH912	10/22/2019	—				—				—				—				—				—				—				< 4.00	UJ		l	< 80.0	U		
RHMW02	ERH913	10/22/2019*	—				—				—				—				—				—				—				< 4.00	UJ		l	< 80.0	U		
RHMW02	ERH976	1/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH977	1/20/2020*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH1044	4/22/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH1045	4/22/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH1110	7/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH1111	7/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW02	ERH1162	10/12/2020	—				—				—				—				—				—				—				< 4.00	UJ		s,l	< 80.0	U		
RHMW02	ERH1163	10/12/2020	—				—				—				—				—				—				—				< 4.00	UJ		s,l	< 80.0	U		
RHMW02	ERH1219	1/25/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH1220	1/25/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	RHMW03W01	9/20/2005[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-GW02	7/10/2006[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-GW06	12/5/2006[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG07	3/27/2007[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG08	6/12/2007[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG09	9/10/2007[a]	—				< 0.20	U			—				—				—				< 0.20	U			—				—				—			
RHMW03	RHMW03-WG10	1/15/2008[a]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG11	4/15/2008[a]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG12	7/29/2008[ad]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG13	10/22/2008[ad]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG14	2/4/2009[a]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG15	5/13/2009[a]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG16	7/15/2009[a]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG17	10/14/2009[a]	—				< 0.31	U			—				—				—				< 0.15	U			—				—				—			
RHMW03	RHMW03-WG18	1/27/2010	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW03	RHMW03-WG19	4/13/2010	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW03	RHMW03-WG20	7/13/2010	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW03	ES001	10/18/2010[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES012	1/19/2011	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES025	4/20/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES035	7/19/2011	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES049	10/24/2011	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES060	1/26/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES073	4/16/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES081	7/18/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
RHMW03	ES004	10/22/2012	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES013	1/28/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES022	4/22/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES031	7/22/2013	—				< 0.50	UJ	h		—				—				—				< 0.50	UJ	h		—				—				—			
RHMW03	ES040	10/21/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES059	1/28/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES083	4/21/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES106	7/22/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES116	10/27/2014	—				< 0.50	U			—				—				—				< 0.50	UJ	c		—				—				—			
RHMW03	ES123	1/28/2015	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW03	ES133	4/20/2015	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			
RHMW03	ES148	7/20/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW03	ERH014	10/20/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—			
RHMW03	ERH026	1/20/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW03	ERH042	4/20/2016	—				—				—				—				—				—				—				—				—			
RHMW03	ERH056	7/20/2016	—				—				—				—				—				—				—				—				—			
RHMW03	ERH093	10/19/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ERH125	11/15/2016	—				< 18	U			**51**			Y	—				**42**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH152	12/14/2016	—				< 18	U			**56**			Y	—				**49**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH181	1/12/2017	—				< 18	U			**51**			Y	—				**46**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH181 (EPA split)	1/12/2017	< 25	UJ	c		—				**190**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW03	ERH231	2/8/2017	—				< 18	U			**67**			Y	—				**71**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH231 (EPA split)	2/8/2017	< 25	UJ	c		—				**170**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW03	ERH268	3/7/2017	—				< 18	U			**55**			Y	—				**41**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH268 (EPA split)	3/7/2017	< 25	UJ	c		—				**170**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW03	ERH303	4/4/2017	—				< 18	U			**47**			Y	—				**47**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH336	5/1/2017	—				< 18	U			**50**			Y	< 25	U			**46**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH356	6/6/2017	—				< 18	U			**46**			Y	**50**			Y	**36**	**J**			**34**	**J**			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH393	7/6/2017	—				< 18	U			**49**			Y	< 25	U			**46**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH418	10/23/2017	—				< 18	U			**160**			Y	< 25	U			**160**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH419	10/23/2017*	—				—				**210**			O	< 25	U			**200**				< 40	U			—				—				—				—				—				—			
RHMW03	ERH418 (EPA split)	10/23/2017	—				—				< 180	U	b	F6	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH550	3/12/2018	—				< 18	U			**190**				< 25	U			**180**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH550 (EPA split)	3/12/2018	—				—				**150**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH596	4/25/2018	—				< 18	U			**160**			Y	< 25	U			**110**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH642	7/25/2018	—				< 18	U			**300**			Y	< 25	U			**140**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH642 (EPA split)	7/25/2018	—				—				**180**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH686	10/23/2018	—				< 18	U			**220**	**J**	h	Y	< 25	UJ	h		**190**	**J**	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH741	1/22/2019	—				< 18	U			**380**			Y	< 25	U			**310**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH793	4/24/2019	—				< 18	U			**300**			Y	< 25	U			**190**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH849	7/22/2019	—				< 18	U			**300**			Y	< 25	U			**270**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH915	10/21/2019	—				< 18	U			**150**			Y	< 25	U			**230**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH979	1/20/2020	—				< 18	U			**260**			Y	< 25	U			**250**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH1047	4/20/2020	—				< 18	U			**220**	**J**		O	< 300.0	U			**240**	**J**	I		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH1113	7/22/2020	—				< 18	U			**200**	**J**		O	< 300.0	U			**210**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH1165	10/12/2020	—				< 18	U			**220**	**J**			< 300.0	U			**260**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH1222	1/25/2021	—				< 18	U			**180**	**J**			< 300.0	U			**220**	**J**			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	RHMW04W01	9/19/2005[a]	< 50.0	U			—				**338**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	RHMW04-GW02	7/10/2006[a]	< 50.0	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	< 30.0	U			—				< 157	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	< 30.0	U			—				< 161	U			—				—				—				**0.250**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	< 30.0	U			—				< 169	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	< 30.0	U			—				< 174	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW04	RHMW04-WG-03	1/26/2010[d]	< 60.0	U			—				< 334	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW04	RHMWA01-WG-03	1/26/2010*[d]	< 60.0	U			—				< 330	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW04	RHMW04-WG-04	4/26/2010[d]	< 60.0	U			—				< 348	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW04	RHMWA01-WG-04	4/26/2010*[d]	< 60.0	U			—				< 352	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW04	ES112	7/23/2014	—				< 30	U			**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	ES119	10/29/2014	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	ES129	1/29/2015	—				< 30	U			**10**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	ES139	4/22/2015	< 25	UJ	s		—				< 21	U			—				< 28	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW04	ES156	8/20/2015	< 25	U			—				< 24	UJ	b		—				< 40	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH006	10/19/2015	< 25	U			—				< 22	UJ	b		—				< 53	UJ	b		—				**0.08**	**J**	h		—				< 0.10	UJ	h		—				< 0.42	UJ	h t		—			
RHMW04	ERH019	1/19/2016	< 25	U			—				< 36	UJ	b		—				< 52	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH020	1/19/2016	< 25	U			—				< 29	UJ	b		—				< 53	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.11	UJ	t		—			
RHMW04	ERH034	4/19/2016	< 25	U			—				< 20	U	b f		—				< 33	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH048	7/19/2016	< 25	U			—				< 23	U	f		—				< 54	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH096	10/25/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH128	11/14/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH138	12/13/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH166	1/9/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH166 (EPA split)	1/9/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW04	ERH208	2/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH208 (EPA split)	2/6/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW04	ERH260	3/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH260 (EPA split)	3/6/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW04	ERH295	4/3/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH381	7/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH421	10/24/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH552	3/14/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH598	4/25/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH644	7/26/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH688	10/24/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	ERH743	1/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ERH125	11/15/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH152	12/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH181	1/12/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH181 (EPA split)	1/12/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH231	2/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH231 (EPA split)	2/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH268	3/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH268 (EPA split)	3/7/2017	—				< 0.5	U			< 0.2	U			< 0.027	UJ	c		< 0.027	UJ	c		< 0.5	U			< 0.027	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH303	4/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH336	5/1/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH356	6/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH393	7/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH418	10/23/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH419	10/23/2017*	—				—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH418 (EPA split)	10/23/2017	—				—				—				< 0.025	U			< 0.025	U			—				< 0.025	U			—				—			
RHMW03	ERH550	3/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH550 (EPA split)	3/12/2018	—				—				—				< 0.025	U			< 0.025	U			—				< 0.025	U			—				—			
RHMW03	ERH596	4/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH642	7/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH642 (EPA split)	7/25/2018	—				—				—				< 0.027	U			< 0.027	U			—				< 0.027	U			—				—			
RHMW03	ERH686	10/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH741	1/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH793	4/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH849	7/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH915	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH979	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH1047	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH1113	7/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH1165	10/12/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW03	ERH1222	1/25/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	RHMW04W01	9/19/2005[a]	< 0.50	U			—				—				< 0.28	U			< 0.28	U			—				< 0.28	U			< 1.0	U			—			
RHMW04	RHMW04-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.26	U			< 0.26	U			—				< 0.26	U			< 1.0	U			—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	< 0.620	U			—				—				< 0.0162	U			< 0.0162	U			—				< 0.0335	U			< 0.620	U			—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	< 0.620	U			—				—				< 0.0167	U			< 0.0167	U			—				< 0.0344	U			< 0.620	U			—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0172	U			< 0.0172	U			—				< 0.0356	U			< 0.62	U			—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	< 0.62	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.0348	U			< 0.62	U			—			
RHMW04	RHMW04-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0326	U			< 0.0326	U			—				< 0.0674	U			< 1.24	U			—			
RHMW04	RHMWA01-WG-03	1/26/2010*[d]	< 1.24	U			—				—				< 0.0338	U			< 0.0338	U			—				< 0.0696	U			< 1.24	U			—			
RHMW04	RHMW04-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—			
RHMW04	RHMWA01-WG-04	4/26/2010*[d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—			
RHMW04	ES112	7/23/2014	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW04	ES119	10/29/2014	< 1.0	U			—				—				< 0.099	U			< 0.050	U			—				< 0.050	U			—				—			
RHMW04	ES129	1/29/2015	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—			
RHMW04	ES139	4/22/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW04	ES156	8/20/2015	< 0.20	U			—				—				< 0.0050	U			**0.0059**	**J**			—				**0.0075**	**J**			—				—			
RHMW04	ERH006	10/19/2015	< 0.20	UJ	h		—				—				**0.0043**	**J**			< 0.0047	UJ	b		—				< 0.0051	UJ	b		—				—			
RHMW04	ERH019	1/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW04	ERH020	1/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW04	ERH034	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW04	ERH048	7/19/2016	< 0.20	U			—				—				**0.0070**	**J**			**0.0068**	**J**			—				**0.18**				—				—			
RHMW04	ERH096	10/25/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH128	11/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH138	12/13/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH166	1/9/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH166 (EPA split)	1/9/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW04	ERH208	2/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH208 (EPA split)	2/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW04	ERH260	3/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH260 (EPA split)	3/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW04	ERH295	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH381	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH421	10/24/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH552	3/14/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH598	4/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH644	7/26/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH688	10/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW04	ERH743	1/21/2019	**0.18**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ERH125	11/15/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH152	12/14/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH181	1/12/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH181 (EPA split)	1/12/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH231	2/8/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH231 (EPA split)	2/8/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH268	3/7/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH268 (EPA split)	3/7/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH303	4/4/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH336	5/1/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH356	6/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH393	7/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH418	10/23/2017	—				< 0.50	U			—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW03	ERH419	10/23/2017*	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH418 (EPA split)	10/23/2017	—				—				—				—				—				—				—				—				—			
RHMW03	ERH550	3/12/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH550 (EPA split)	3/12/2018	—				—				—				—				—				—				—				—				—			
RHMW03	ERH596	4/25/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH642	7/25/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH642 (EPA split)	7/25/2018	—				—				—				—				—				—				—				—				—			
RHMW03	ERH686	10/23/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW03	ERH741	1/22/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW03	ERH793	4/24/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW03	ERH849	7/22/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH915	10/21/2019	—				—				—				—				—				—				—				< 4.00	UJ	I		< 80.0	U		
RHMW03	ERH979	1/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW03	ERH1047	4/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH1113	7/22/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW03	ERH1165	10/12/2020	—				—				—				—				—				—				—				< 4.00	UJ	s,I		< 80.0	U		
RHMW03	ERH1222	1/25/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	RHMW04W01	9/19/2005[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW04	RHMW04-GW02	7/10/2006[a]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	—				< 0.31	U			—				—				—				< 0.15	U			—				—				—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	—				< 0.31	U			—				—				—				< 0.15	U			—				—				—			
RHMW04	RHMW04-WG-03	1/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMWA01-WG-03	1/26/2010*[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMW04-WG-04	4/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMWA01-WG-04	4/26/2010*[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
RHMW04	ES112	7/23/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW04	ES119	10/29/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW04	ES129	1/29/2015	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
RHMW04	ES139	4/22/2015	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			
RHMW04	ES156	8/20/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW04	ERH006	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—			
RHMW04	ERH019	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW04	ERH020	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—			
RHMW04	ERH034	4/19/2016	—				—				—				—				—				—				—				—				—			
RHMW04	ERH048	7/19/2016	—				—				—				—				—				—				—				—				—			
RHMW04	ERH096	10/25/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH128	11/14/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH138	12/13/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH166	1/9/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH166 (EPA split)	1/9/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH208	2/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH208 (EPA split)	2/6/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH260	3/6/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH260 (EPA split)	3/6/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH295	4/3/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH381	7/5/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH421	10/24/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH552	3/14/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH598	4/25/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH644	7/26/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH688	10/24/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW04	ERH743	1/21/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30			
		SSRBL	—				—				4500				—				—				—				750				750				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	ERH795	4/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW04	ERH851	7/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW04	ERH917	10/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW04	ERH981	1/21/2020	—				< 18	U			**120**			Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U		
RHMW04	ERH1049	4/22/2020	—				< 18	U			**240**	**J**	I	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW04	ERH1115	7/22/2020	—				< 18	U			< 300.0	U			—				**160**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U		
RHMW04	ERH1167	10/12/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW04	ERH1224	1/25/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	RHMW05-WG15	5/13/2009[a]	< 13.2	UJ	b t		—				**200**	**J**		Z	—				—				—				< 0.120	U			—				< 0.310	U		
RHMW05	RHMW05-WG16	7/15/2009[a]	< 30.0	U			—				**491**			Z	—				—				—				< 0.120	U			—				< 0.310	U		
RHMW05	RHMW05-WG17	10/13/2009[a]	< 30.0	U			—				**673**			Z	—				—				—				< 0.12	U			—				< 0.31	U		
RHMW05	RHMW05-WG18	1/26/2010	< 60.0	U			—				**2,060**			Z	—				—				—				< 0.240	U			—				< 0.620	U		
RHMW05	RHMW05-WG19	4/13/2010	< 60.0	U			—				< 300	U			—				—				—				< 0.240	U			—				< 0.620	U		
RHMW05	RHMW05-WG20	7/13/2010	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U		
RHMW05	ES005	10/20/2010	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES013	1/19/2011	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES024	4/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES039	7/19/2011	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
RHMW05	ES051	10/25/2011	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES063	2/1/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES070	4/16/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
RHMW05	ES079	7/17/2012	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
RHMW05	ES080	7/17/2012*	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
RHMW05	ES005	10/22/2012	—				< 15	UJ	b		**17**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES015	1/29/2013	—				< 30	U			**62**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES024	4/23/2013	—				< 21	UJ	t		**27**	**J**			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES033	7/23/2013	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES042	10/22/2013	—				< 17	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES049	1/16/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES061	1/29/2014[d]	—				< 23	UJ	b		**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES068	3/6/2014[d]	—				—				< 21	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES076	3/26/2014[d]	—				—				**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES084	4/22/2014[d]	—				< 30	U			< 10	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES095	5/28/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES101	6/24/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES108	7/22/2014	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES118	10/28/2014	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES124	1/27/2015	—				< 30	U			< 13	U			—				—				—				< 0.50	U			—				< 0.50	U		
RHMW05	ES135	4/21/2015	< 25	U			—				< 17	UJ	b		—				< 34	UJ	b		—				< 0.10	U			—				< 0.10	U		
RHMW05	ES142	6/25/2015	—				—				**15**	**J**			—				**41**	**J**			—				—				—				—			
RHMW05	ES150	7/21/2015	< 25	U			—				**18**	**J**	s		—				**44**	**J**	s		—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH010	10/20/2015	< 25	U			—				< 20	UJ	b		—				< 54	UJ	b		—				< 0.10	UJ	h		—				< 0.59	UJ	t	
RHMW05	ERH022	1/20/2016	< 25	U			—				< 27	UJ	b		—				< 45	UJ	b		—				< 0.10	U			—				< 0.18	UJ	t	
RHMW05	ERH023	1/20/2016*	< 25	U			—				< 26	UJ	b		—				< 44	UJ	b		—				< 0.10	U			—				< 0.12	UJ	t	
RHMW05	ERH038	4/20/2016	< 25	U			—				< 22	U	b f		—				< 65	U	b f		—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH052	7/20/2016	< 25	U			—				< 21	U			—				< 29	U	b f		—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH089	10/19/2016	—				< 18	U			< 25	U			< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.30	U		
RHMW05	ERH126	11/15/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.30	U		
RHMW05	ERH136	12/12/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.30	U		
RHMW05	ERH164	1/10/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.30	U		
RHMW05	ERH164 (EPA split)	1/10/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW05	ERH212	2/7/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH212 (EPA split)	2/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW05	ERH278	3/8/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH278 (EPA split)	3/8/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U	
RHMW05	ERH313	4/3/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH338	5/1/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH358	6/6/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH387	7/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH423	10/24/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH554	3/13/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH600	4/23/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH646	7/23/2018	—				< 18	U			< 25	UJ	s		—				< 40	UJ	l s		—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH690	10/22/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH745	1/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH797	4/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW05	ERH853	7/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			COPC			non-COPC			non-COPC		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	ERH795	4/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH851	7/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH917	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH981	1/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH1049	4/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH1115	7/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH1167	10/12/2020	< 0.30	U			—				—				< 0.10	UJ	I		< 0.10	U			—				< 0.10	U			—			
RHMW04	ERH1224	1/25/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW05	RHMW05-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0158	U			< 0.0158	U			—				< 0.0326	U			< 0.620	U		
RHMW05	RHMW05-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				< 0.0341	U			< 0.620	U		
RHMW05	RHMW05-WG17	10/13/2009[a]	< 1	U			—				—				< 0.017	U			< 0.017	U			—				< 0.0352	U			< 0.62	U		
RHMW05	RHMW05-WG18	1/26/2010	< 1.24	U			—				—				**0.0207**	**J**			**0.0246**	**J**			—				< 0.0712	U			< 1.24	U		
RHMW05	RHMW05-WG19	4/13/2010	< 1.24	U			—				—				**0.0335**	**J**			< 0.0326	U			—				**0.0752**	**J**			< 1.24	U		
RHMW05	RHMW05-WG20	7/13/2010	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.0643**	**J**			< 1.24	U		
RHMW05	ES005	10/20/2010	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES013	1/19/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES024	4/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES039	7/19/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES051	10/25/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES063	2/1/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES070	4/16/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES079	7/17/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES080	7/17/2012*	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—			
RHMW05	ES005	10/22/2012	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.038**	**J**			—			
RHMW05	ES015	1/29/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.075**	**J**			—			
RHMW05	ES024	4/23/2013	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				**0.033**	**J**			—			
RHMW05	ES033	7/23/2013	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.033**	**J**			—			
RHMW05	ES042	10/22/2013	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.17**	**J**			—			
RHMW05	ES049	1/16/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—			
RHMW05	ES061	1/29/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.064**	**J**			—			
RHMW05	ES068	3/6/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.038**	**J**			—			
RHMW05	ES076	3/26/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.092**	**J**			—			
RHMW05	ES084	4/22/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.066**	**J**			—			
RHMW05	ES095	5/28/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—			
RHMW05	ES101	6/24/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—			
RHMW05	ES108	7/22/2014	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—			
RHMW05	ES118	10/28/2014	< 1.0	U			—				—				< 0.096	U			< 0.048	U			—				< 0.048	U			—			
RHMW05	ES124	1/27/2015	< 1.0	U			—				—				< 0.096	U			< 0.048	U			—				< 0.048	U			—			
RHMW05	ES135	4/21/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—			
RHMW05	ES142	6/25/2015	—				—				—				**0.0046**	**J**			**0.0029**	**J**			—				< 0.0050	U			—			
RHMW05	ES150	7/21/2015	< 0.20	U			—				—				**0.0041**	**J**			**0.0036**	**J**			—				**0.0058**	**J**			—			
RHMW05	ERH010	10/20/2015	< 0.20	UJ	h		—				—				**0.0050**	**J**			< 0.0066	UJ	b		—				< 0.0074	UJ	b		—			
RHMW05	ERH022	1/20/2016	< 0.20	U			—				—				< 0.0050	U			**0.0031**	**J**			—				< 0.0050	U			—			
RHMW05	ERH023	1/20/2016*	< 0.20	U			—				—				< 0.0050	U			**0.0039**	**J**			—				**0.0046**	**J**			—			
RHMW05	ERH038	4/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—			
RHMW05	ERH052	7/20/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0060	U	b f		—			
RHMW05	ERH089	10/19/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW05	ERH126	11/15/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW05	ERH136	12/12/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW05	ERH164	1/10/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—			
RHMW05	ERH164 (EPA split)	1/10/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW05	ERH212	2/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH212 (EPA split)	2/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW05	ERH278	3/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH278 (EPA split)	3/8/2017	—				< 0.5	U			< 0.2	U			< 0.027	UJ	c		< 0.027	UJ	c		< 0.6	U			< 0.027	U			—				< 0.2	U			< 0.6	U		
RHMW05	ERH313	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH338	5/1/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH358	6/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH387	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH423	10/24/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH554	3/13/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH600	4/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH646	7/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH690	10/22/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH745	1/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH797	4/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH853	7/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	ERH795	4/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW04	ERH851	7/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH917	10/21/2019	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW04	ERH981	1/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH1049	4/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH1115	7/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ		l
RHMW04	ERH1167	10/12/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	s,l		< 80.0	U		
RHMW04	ERH1224	1/25/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	RHMW05-WG15	5/13/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW05	RHMW05-WG16	7/15/2009[a]	—				< 0.310	U			—				—				—				—				< 0.150	U			—				—				—			
RHMW05	RHMW05-WG17	10/13/2009[a]	—				< 0.31	U			—				—				—				—				< 0.15	U			—				—				—			
RHMW05	RHMW05-WG18	1/26/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW05	RHMW05-WG19	4/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW05	RHMW05-WG20	7/13/2010	—				< 0.620	U			—				—				—				—				< 0.300	U			—				—				—			
RHMW05	ES005	10/20/2010	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES013	1/19/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES024	4/20/2011[d]	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES039	7/19/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES051	10/25/2011	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES063	2/1/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES070	4/16/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES079	7/17/2012	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES080	7/17/2012*	—				< 0.40	U			—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES005	10/22/2012	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES015	1/29/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES024	4/23/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES033	7/23/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES042	10/22/2013	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES049	1/16/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES061	1/29/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES068	3/6/2014[d]	—				—				—				—				—				—				—				—				—				—			
RHMW05	ES076	3/26/2014[d]	—				—				—				—				—				—				—				—				—				—			
RHMW05	ES084	4/22/2014[d]	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES095	5/28/2014[d]	—				—				—				—				—				—				—				—				—				—			
RHMW05	ES101	6/24/2014[d]	—				—				—				—				—				—				—				—				—				—			
RHMW05	ES108	7/22/2014	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES118	10/28/2014	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES124	1/27/2015	—				< 0.50	U			—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES135	4/21/2015	< 0.0040	U			< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW05	ES142	6/25/2015	—				—				—				—				—				—				—				—				—				—			
RHMW05	ES150	7/21/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH010	10/20/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH022	1/20/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH023	1/20/2016*	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH038	4/20/2016	—				—				—				—				—				—				—				—				—				—			
RHMW05	ERH052	7/20/2016	—				—				—				—				—				—				—				—				—				—			
RHMW05	ERH089	10/19/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW05	ERH126	11/15/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH136	12/12/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH164	1/10/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH164 (EPA split)	1/10/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW05	ERH212	2/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH212 (EPA split)	2/7/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW05	ERH278	3/8/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH278 (EPA split)	3/8/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.8	U			—			
RHMW05	ERH313	4/3/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH338	5/1/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH358	6/6/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH387	7/5/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH423	10/24/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH554	3/13/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH600	4/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH646	7/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH690	10/22/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW05	ERH745	1/21/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH797	4/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW05	ERH853	7/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH919	10/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH983	1/21/2020	—				< 18	U			**93**			Z	< 25	UJ	s		**92**			Z	< 40	UJ	s		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH1051	4/21/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH1117	7/21/2020	—				< 18	U			< 300.0	U			—				**150**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH1169	10/13/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH1226	1/25/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	RHMW06-GW-01	10/21/2014[d]	< 20	U			—				< 86	U			—				< 86	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	RHMW06-GW-02	1/23/2015[d]	< 20	U			—				< 76	U			—				< 76	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ES140	4/23/2015	< 25	U			—				**20**	**J**			—				< 47	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ES155	7/28/2015	< 25	U			—				< 20	U			—				< 50	U			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH004	10/19/2015	< 25	U			—				< 17	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 1.1	UJ	b h t		—			
RHMW06	ERH005	10/19/2015	< 25	U			—				< 21	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.5	UJ	b h t		—			
RHMW06	ERH018	1/19/2016	< 25	U			—				< 21	UJ	b		—				< 54	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.1	UJ	t		—			
RHMW06	ERH033	4/19/2016	< 25	U			—				< 28	U	b	f	—				< 48	U	b	f	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH047	7/19/2016	< 25	U			—				< 23	U			—				< 27	U	b	f	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH097	10/19/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH120	11/14/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH139	12/12/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH168	1/9/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH168 (EPA split)	1/9/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH210	2/7/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH210 (EPA split)	2/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH284	3/7/2017	—				< 18	U			< 25	U			—				**47**			Y	—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH284 (EPA split)	3/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH319	4/3/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH369	7/4/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH425	10/24/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH556	3/12/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH602	4/23/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH648	7/23/2018	—				< 18	U			< 25	U			—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH692	10/23/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH747	1/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH799	4/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH855	7/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH921	10/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH985	1/20/2020	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH1053	4/20/2020	—				< 18	U			< 300.0	U			< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH1119	7/20/2020	—				< 18	U			< 300.0	U			< 300.0	U			**150**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH1171	10/12/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH1228	1/19/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-01	10/20/2014[d]	< 20	U			—				**57**	**J**			—				< 78	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	< 20	U			—				**66**	**J**			—				< 77	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-02	1/22/2015[d]	< 20	U			—				< 75	U			—				< 75	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	< 20	U			—				< 81	U			—				< 81	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ES141	4/23/2015	< 25	U			—				**26**	**J**			—				< 47	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ES154	7/27/2015	< 25	U			—				**22**	**J**			—				**48**	**J**			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH003	10/19/2015	< 25	U			—				< 26	UJ	b		—				< 59	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.64	UJ	b h t		—			
RHMW07	ERH017	1/19/2016	< 25	U			—				< 28	UJ	b		—				< 44	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH032	4/19/2016	< 25	U			—				< 26	U	b	f	—				< 52	U	b	f	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH045	7/19/2016	< 25	U			—				< 22	U			—				< 40	U	b	f	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH046	7/19/2016	< 25	U			—				< 17	U	f		—				< 160	U	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH098	10/19/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH121	11/14/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH140	12/13/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH179	1/10/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH179 (EPA split)	1/10/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW07	ERH218	2/8/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH218 (EPA split)	2/8/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW07	ERH270	3/7/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH270 (EPA split)	3/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW07	ERH305	4/3/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH371	7/4/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH427	10/25/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH558	3/13/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH604	4/24/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH650	7/24/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH694	10/23/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH919	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW05	ERH983	1/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW05	ERH1051	4/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW05	ERH1117	7/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW05	ERH1169	10/13/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW05	ERH1226	1/25/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	RHMW06-GW-01	10/21/2014[d]	< 0.30	U			—				—				< 0.011	U			**0.0064**	**J**			—				< 0.053	U			—				—			
RHMW06	RHMW06-GW-02	1/23/2015[d]	< 0.30	U			—				—				< 0.010	U			< 0.010	U			—				< 0.052	U			—				—			
RHMW06	ES140	4/23/2015	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—			
RHMW06	ES155	7/28/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW06	ERH004	10/19/2015	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	UJ	b		—				—			
RHMW06	ERH005	10/19/2015	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW06	ERH018	1/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW06	ERH033	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
RHMW06	ERH047	7/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0047	U	b f		—				—			
RHMW06	ERH097	10/19/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH120	11/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH139	12/12/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH168	1/9/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH168 (EPA split)	1/9/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW06	ERH210	2/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH210 (EPA split)	2/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U		
RHMW06	ERH284	3/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH284 (EPA split)	3/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW06	ERH319	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH369	7/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH425	10/24/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH556	3/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH602	4/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH648	7/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH692	10/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH747	1/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH799	4/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH855	7/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH921	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH985	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH1053	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH1119	7/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH1171	10/12/2020	< 0.30	U			—				—				< 0.10	U	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW06	ERH1228	1/19/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	RHMW07-GW-01	10/20/2014[d]	< 0.30	U			—				—				< 0.0096	U			**0.0084**	**J**			—				< 0.048	U			—				—			
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	< 0.30	U			—				—				< 0.010	U			**0.0060**	**J**			—				< 0.050	U			—				—			
RHMW07	RHMW07-GW-02	1/22/2015[d]	< 0.30	U			—				—				< 0.011	U			< 0.011	U			—				< 0.055	U			—				—			
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	< 0.30	U			—				—				< 0.010	U			< 0.010	U			—				< 0.050	U			—				—			
RHMW07	ES141	4/23/2015	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—			
RHMW07	ES154	7/27/2015	< 0.20	U			—				—				**0.0051**	**J**			**0.0095**	**J**			—				**0.0060**	**J**			—				—			
RHMW07	ERH003	10/19/2015	< 0.20	UJ	h		—				—				**0.0067**	**J**			< 0.01	UJ	b		—				< 0.01	UJ	b		—				—			
RHMW07	ERH017	1/19/2016	< 0.20	U			—				—				**0.0046**	**J**			**0.0077**	**J**			—				**0.0038**	**J**			—				—			
RHMW07	ERH032	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0036	U	f		—				< 0.0050	U			—				—			
RHMW07	ERH045	7/19/2016	< 0.20	U			—				—				< 0.0050	U			**0.0037**	**J**			—				< 0.0074	U	b f		—				—			
RHMW07	ERH046	7/19/2016	< 0.20	U			—				—				< 0.0050	U			**0.0033**	**J**			—				< 0.0077	U	b f		—				—			
RHMW07	ERH098	10/19/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH121	11/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH140	12/13/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH179	1/10/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH179 (EPA split)	1/10/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW07	ERH218	2/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH218 (EPA split)	2/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW07	ERH270	3/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH270 (EPA split)	3/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW07	ERH305	4/3/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH371	7/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH427	10/25/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH558	3/13/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH604	4/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH650	7/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH694	10/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH919	10/21/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH983	1/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH1051	4/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH1117	7/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW05	ERH1169	10/13/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW05	ERH1226	1/25/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	RHMW06-GW-01	10/21/2014[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW06	RHMW06-GW-02	1/23/2015[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW06	ES140	4/23/2015	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW06	ES155	7/28/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH004	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH005	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH018	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH033	4/19/2016	—				—				—				—				—				—				—				—				—				—			
RHMW06	ERH047	7/19/2016	—				—				—				—				—				—				—				—				—				—			
RHMW06	ERH097	10/19/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW06	ERH120	11/14/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH139	12/12/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH168	1/9/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH168 (EPA split)	1/9/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH210	2/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH210 (EPA split)	2/7/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH284	3/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH284 (EPA split)	3/7/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH319	4/3/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH369	7/4/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH425	10/24/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH556	3/12/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH602	4/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH648	7/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH692	10/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH747	1/21/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH799	4/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH855	7/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH921	10/21/2019	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW06	ERH985	1/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH1053	4/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH1119	7/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH1171	10/12/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	s,l		< 80.0	U		
RHMW06	ERH1228	1/19/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	RHMW07-GW-01	10/20/2014[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-02	1/22/2015[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	< 0.020	U			< 0.50	U			—				—				—				—				< 0.100	U			—				—				—			
RHMW07	ES141	4/23/2015	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW07	ES154	7/27/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH003	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH017	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH032	4/19/2016	—				—				—				—				—				—				—				—				—				—			
RHMW07	ERH045	7/19/2016	—				—				—				—				—				—				—				—				—				—			
RHMW07	ERH046	7/19/2016	—				—				—				—				—				—				—				—				—				—			
RHMW07	ERH098	10/19/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW07	ERH121	11/14/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH140	12/13/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH179	1/10/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH179 (EPA split)	1/10/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH218	2/8/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH218 (EPA split)	2/8/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH270	3/7/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH270 (EPA split)	3/7/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH305	4/3/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH371	7/4/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH427	10/25/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH558	3/13/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH604	4/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH650	7/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH694	10/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH749	1/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	I		—			
RHMW07	ERH801	4/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH857	7/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH923	10/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH987	1/20/2020	—				< 18	U			**120**			Z	< 25	U			**84**			Z	**39**	J		Y	< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH1055	4/20/2020	—				< 18	U			< 300.0	UJ	s		< 300.0	U			**150**	**J**	s,I	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH1121	7/20/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH1173	10/14/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH1232	1/19/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH102	10/19/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH122	11/15/2016	—				< 18	U			**33**			Y	< 25	U			**32**	**J**			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH141	12/12/2016	—				< 18	U			**27**	**J**		Y	—				**29**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH157	12/21/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH158	12/21/2016*	—				< 18	U			**63**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH169	1/11/2017	—				< 18	U			**28**	**J**		Y	—				**29**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH170	1/11/2017*	—				< 18	U			**23**	**J**		Y	—				**27**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH169 (EPA split)	1/11/2017	< 25	UJ	c		—				**160**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH170 (EPA split)	1/11/2017*	< 25	UJ	c		—				**150**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH220	2/6/2017	—				< 18	U			**26**	**J**		Y	—				**31**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH221	2/6/2017*	—				< 18	U			**25**	**J**		Y	—				**28**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH220 (EPA split)	2/6/2017	< 25	UJ	c		—				**130**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH221 (EPA split)	2/6/2017*	< 25	UJ	c		—				**120**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH262	3/6/2017	—				< 18	U			**27**	**J**		Y	—				**23**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH263	3/6/2017*	—				< 18	U			**25**	**J**		Y	—				**25**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH262 (EPA split)	3/6/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH263 (EPA split)	3/6/2017*	< 25	UJ	c		—				**98**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH297	4/4/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH298	4/4/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH340	5/2/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH360	6/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH376	7/4/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH429	10/23/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH560	3/12/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH606	4/23/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH652	7/24/2018	—				< 18	UJ	s		< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW08	ERH696	10/24/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH751	1/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH803	4/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH859	8/7/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH925	10/30/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH989	1/20/2020	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH1057	4/20/2020	—				< 18	U			**150**	**J**	s	Z	< 300.0	U			**170**	**J**	s,I	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH1123	7/22/2020	—				< 18	U			< 300.0	U			< 300.0	U			**150**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH1175	10/13/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH1230	1/19/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH103	10/25/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH129	11/15/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH146	12/12/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH178	1/11/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH178 (EPA split)	1/11/2017	< 25	UJ	c		—				< 71	U			—				< 290	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW09	ERH225	2/8/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH247	2/8/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH225 (EPA split)	2/8/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW09	ERH247 (EPA split)	2/8/2017*	< 25	UJ	c		—				< 71	U			—				< 280	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW09	ERH272	3/7/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH272 (EPA split)	3/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW09	ERH307	4/4/2017	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH314	4/4/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH385	7/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH431	10/24/2017	—				< 18	U			< 25	UJ	s		—				< 40	UJ	s		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH562	3/13/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH608	4/25/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH654	7/25/2018	—				< 18	UJ	s		< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW09	ERH698	10/23/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH753	1/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW09	ERH805	4/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH861	7/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH749	1/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH801	4/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH857	7/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH923	10/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH987	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH1055	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH1121	7/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH1173	10/14/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW07	ERH1232	1/19/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH102	10/19/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH122	11/15/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH141	12/12/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH157	12/21/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH158	12/21/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH169	1/11/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH170	1/11/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH169 (EPA split)	1/11/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH170 (EPA split)	1/11/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH220	2/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH221	2/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH220 (EPA split)	2/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH221 (EPA split)	2/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH262	3/6/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH263	3/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH262 (EPA split)	3/6/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH263 (EPA split)	3/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW08	ERH297	4/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH298	4/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH340	5/2/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH360	6/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH376	7/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH429	10/23/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH560	3/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH606	4/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH652	7/24/2018	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH696	10/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH751	1/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH803	4/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH859	8/7/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH925	10/30/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH989	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH1057	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH1123	7/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH1175	10/13/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW08	ERH1230	1/19/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH103	10/25/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH129	11/15/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH146	12/12/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH178	1/11/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH178 (EPA split)	1/11/2017	—				< 0.5	U			< 0.2	U			< 0.024	UJ	c		< 0.024	UJ	c		< 0.5	U			< 0.024	U			—				< 0.2	U			< 0.5	U		
RHMW09	ERH225	2/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH247	2/8/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH225 (EPA split)	2/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				**1.0**				< 0.5	U		
RHMW09	ERH247 (EPA split)	2/8/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW09	ERH272	3/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH272 (EPA split)	3/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW09	ERH307	4/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH314	4/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH385	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH431	10/24/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH562	3/13/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH608	4/25/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH654	7/25/2018	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH698	10/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH753	1/22/2019	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH805	4/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH861	7/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH749	1/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH801	4/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH857	7/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH923	10/22/2019	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW07	ERH987	1/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH1055	4/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH1121	7/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH1173	10/14/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW07	ERH1232	1/19/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH102	10/19/2016	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	h	
RHMW08	ERH122	11/15/2016	< 0.02	UJ	c		—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH141	12/12/2016	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH157	12/21/2016	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH158	12/21/2016*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH169	1/11/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH170	1/11/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH169 (EPA split)	1/11/2017	—				—				—				< 0.0025	U			—				—				—				**3.1**	**J**			< 2.5	U			—			
RHMW08	ERH170 (EPA split)	1/11/2017*	—				—				—				< 0.0025	U			—				—				—				**3.1**	**J**			< 2.5	U			—			
RHMW08	ERH220	2/6/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH221	2/6/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH220 (EPA split)	2/6/2017	—				—				—				< 0.0025	U			—				—				—				**3.9**	**J**			< 2.5	U			—			
RHMW08	ERH221 (EPA split)	2/6/2017*	—				—				—				< 0.0025	U			—				—				—				**3.8**	**J**			< 2.5	U			—			
RHMW08	ERH262	3/6/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH263	3/6/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH262 (EPA split)	3/6/2017	—				—				—				< 0.0025	U			—				—				—				**2.7**	**J**			< 2.5	U			—			
RHMW08	ERH263 (EPA split)	3/6/2017*	—				—				—				< 0.0025	U			—				—				—				**2.8**	**J**			< 2.5	U			—			
RHMW08	ERH297	4/4/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH298	4/4/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH340	5/2/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH360	6/5/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH376	7/4/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH429	10/23/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH560	3/12/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH606	4/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH652	7/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH696	10/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH751	1/21/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH803	4/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH859	8/7/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH925	10/30/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH989	1/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH1057	4/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH1123	7/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH1175	10/13/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	s,l		< 80.0	U		
RHMW08	ERH1230	1/19/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH103	10/25/2016	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH129	11/15/2016	< 0.02	UJ	c		—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH146	12/12/2016	< 0.02	U			—				—				—				—				—				< 0.30	U			—				**1.1**	**J**			< 80.0	U		
RHMW09	ERH178	1/11/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH178 (EPA split)	1/11/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH225	2/8/2017	< 0.02	U			< 0.50	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH247	2/8/2017*	< 0.02	U			< 0.50	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH225 (EPA split)	2/8/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH247 (EPA split)	2/8/2017*	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH272	3/7/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH272 (EPA split)	3/7/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH307	4/4/2017	< 0.02	U			< 0.50	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH314	4/4/2017*	< 0.02	U			< 0.50	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH385	7/5/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH431	10/24/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH562	3/13/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH608	4/25/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH654	7/25/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH698	10/23/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW09	ERH753	1/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW09	ERH805	4/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW09	ERH861	7/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH								TPH								TPH								TPH								TPH								TPH								Volatiles								Volatiles								Volatiles								Volatiles								Volatiles							
		Analyte Type	COPC								COPC								COPC								COPC								COPC								COPC								non-COPC								COPC								non-COPC								COPC								non-COPC							
		Analytical Method	8015								8260								8015								8015								8015								8015								8260								524.2								8260								524.2								8260								524.2							
		Analyte	TPH-g ****								TPH-g ****								TPH-d								TPH-d with Silica Gel Cleanup								TPH-o								TPH-o with Silica Gel Cleanup								Benzene								Benzene								Ethylbenzene								Ethylbenzene								Toluene								Toluene							
		CAS No.	Gas								Gas								Diesel								Disel SGC								Oil								Oil SGC								71-43-2								71-43-2								100-41-4								100-41-4								108-88-3								108-88-3							
		Unit	µg/L								µg/L								µg/L								µg/L								µg/L								µg/L								µg/L								µg/L								µg/L								µg/L								µg/L							
		DOH EAL	300								300								400								400								500								500								5								5								30								30								40								40							
		SSRBL	—								—								4500								—								—								—								750								750								—								—								—								—							
Well Name	Sample ID	Date Sampled	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note	Result	Q		rc		note
RHMW09	ERH927	10/22/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW09	ERH991	1/21/2020	—						< 18	U					**100**				Z		< 25	U					**98**				Z		< 40	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW09	ERH1059	4/21/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW09	ERH1127	7/21/2020	—						< 18	U					**150**	**J**			Z		< 300.0	U					< 300.0	U					< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW09	ERH1177	10/19/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW09	ERH1240	1/26/2021	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH345	5/4/2017	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH346	5/4/2017*	—						< 18	U					**89**				Z		**56**				Z		**190**						**140**						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH365	6/5/2017	—						< 18	U					< 25	UJ	h				< 25	UJ	h				< 40	U					< 40	UJ	h				< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH366	6/5/2017*	—						< 18	U					< 25	UJ	h				< 25	UJ	h				< 40	U					< 40	UJ	h				< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH373	7/4/2017	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	UJ	q				—						< 0.50	UJ	q				—						< 0.30	UJ	q				—					
RHMW10	ERH374	7/4/2017*	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH433	10/25/2017	—						< 18	U					< 25	U					—						**61**						—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH564	3/13/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH610	4/24/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH656	7/24/2018	—						< 18	UJ	s				< 25	U					—						< 40	U					—						< 0.30	UJ	s				—						< 0.50	UJ	s				—						< 0.30	UJ	s				—					
RHMW10	ERH700	10/31/2018	—						< 18	U					**120**	**J**	s		W		< 25	U					**62**	**J**	s				< 40	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH755	1/24/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH807	4/23/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH863	7/24/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH929	11/13/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH993	1/28/2020	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH1061	4/21/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH1125	7/21/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH1179	10/13/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW10	ERH1236	1/20/2021	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-01	ERH573	3/21/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-01	ERH619	5/2/2018	—						< 18	U					< 340	U	b				< 25	U					< 450	U	b				< 40	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-01	ERH674	7/30/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-02	ERH575	3/22/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-02	ERH621	4/30/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-02	ERH672	8/1/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-03	ERH579	3/27/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-03	ERH623	4/30/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-03	ERH670	8/1/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-04	ERH577	3/27/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-04	ERH625	4/26/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-04	ERH668	8/2/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH581	3/28/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.26	U	t				—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH582	3/28/2018*	—						< 18	U					< 25	U					—						< 40	U					—						< 0.24	U	t				—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH627	5/1/2018	—						< 18	U					< 380	U	b				< 25	U					< 530	U	b				< 40	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH628	5/1/2018*	—						< 18	U					< 300	U	b				< 25	U					< 400	U	b				< 40	U					< 0.30	UJ	s				—						< 0.50	UJ	s				—						< 0.30	UJ	s				—					
RHMW11-05	ERH665	7/31/2018	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH666	7/31/2018*	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	UJ	s				—						< 0.50	UJ	s				—						< 0.30	UJ	s				—					
RHMW11-05	ERH709	10/29/2018	—						< 18	U					< 110	U	f		Y		< 25	U					< 120	U	f				< 40	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH710	10/29/2018*	—						< 18	U					—						—						—						—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH764	1/28/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH816	4/29/2019	—						< 18	U					< 25	UJ	l				—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH878	8/1/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	UJ	c				—					
RHMW11-05	ERH938	10/29/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH1002	1/30/2020	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH1070	4/20/2020	—						< 18	U					< 260	U	f		Z		< 300.0	U					**240**	**J**	l		Z		< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH1133	8/3/2020	—						**34**						**160**	**J**			Z		< 300.0	U					< 300.0	U					<300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH1185	10/22/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-05	ERH1242	1/21/2021	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-07	ERH874	8/5/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW11-07	ERH940	10/30/2019	—						< 18	U					< 25	U					—						< 40	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-01	ERH1023	3/3/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-02	ERH1025	3/4/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-03	ERH1027	3/5/2020	—						< 18	U					< 300.0	U					—						< 300.0	U					—						< 0.30	UJ	s				—						< 0.50	UJ	s				—						< 0.30	UJ	s				—					
RHMW13-03	ERH1076	4/23/2020	—						< 18	U					< 200	UJ	f,l		Z		—						< 300.0	U					—						< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-04	ERH1029	3/9/2020	—						< 18	U					**220**	**J**			Z		< 300.0	U					**240**	**J**			Z		< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-04	ERH1078	4/27/2020	—						< 18	U					< 160	U	b,f		Z		< 300.0	U					< 300.0	U					< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-05	ERH1031	3/10/2020	—						< 18	U					**240**	**J**			Z		< 300.0	U					**240**	**J**			Z		< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-05	ERH1032	3/10/2020	—						< 18	U					**200**	**J**			Z		< 300.0	U					**170**	**J**			Z		< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-05	ERH1080	4/28/2020	—						< 18	U					< 210	U	b,f		Z		< 300.0	U					< 300.0	U					< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					
RHMW13-05	ERH1081	4/28/2020	—						< 18	U					< 180	U	b,f		Z		< 300.0	U					< 300.0	U					< 300.0	U					< 0.30	U					—						< 0.50	U					—						< 0.30	U					—					

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW09	ERH927	10/22/2019	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—			
RHMW09	ERH991	1/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH1059	4/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH1127	7/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH1177	10/19/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW09	ERH1240	1/26/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH345	5/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH346	5/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH365	6/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH366	6/5/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH373	7/4/2017	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH374	7/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH433	10/25/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH564	3/13/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH610	4/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH656	7/24/2018	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH700	10/31/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH755	1/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH807	4/23/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH863	7/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH929	11/13/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH993	1/28/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH1061	4/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH1125	7/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH1179	10/13/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
RHMW10	ERH1236	1/20/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-01	ERH573	3/21/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-01	ERH619	5/2/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-01	ERH674	7/30/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-02	ERH575	3/22/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-02	ERH621	4/30/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-02	ERH672	8/1/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-03	ERH579	3/27/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-03	ERH623	4/30/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-03	ERH670	8/1/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-04	ERH577	3/27/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-04	ERH625	4/26/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-04	ERH668	8/2/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH581	3/28/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH582	3/28/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH627	5/1/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH628	5/1/2018*	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH665	7/31/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH666	7/31/2018*	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH709	10/29/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH710	10/29/2018*	< 0.30	U			—				—				—				—				—				—				—				—			
RHMW11-05	ERH764	1/28/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH816	4/29/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH878	8/1/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH938	10/29/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH1002	1/30/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH1070	4/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH1133	8/3/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH1185	10/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-05	ERH1242	1/21/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-07	ERH874	8/5/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW11-07	ERH940	10/30/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-01	ERH1023	3/3/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-02	ERH1025	3/4/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-03	ERH1027	3/5/2020	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-03	ERH1076	4/23/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-04	ERH1029	3/9/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-04	ERH1078	4/27/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1031	3/10/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1032	3/10/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1080	4/28/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1081	4/28/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW09	ERH927	10/22/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH991	1/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH1059	4/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH1127	7/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW09	ERH1177	10/19/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH1240	1/26/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH345	5/4/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH346	5/4/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH365	6/5/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH366	6/5/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH373	7/4/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH374	7/4/2017*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH433	10/25/2017	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH564	3/13/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH610	4/24/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH656	7/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH700	10/31/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH755	1/24/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH807	4/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH863	7/24/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH929	11/13/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH993	1/28/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH1061	4/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH1125	7/21/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH1179	10/13/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	I		< 80.0	U		
RHMW10	ERH1236	1/20/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH573	3/21/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH619	5/2/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH674	7/30/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH575	3/22/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH621	4/30/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH672	8/1/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-03	ERH579	3/27/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-03	ERH623	4/30/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-03	ERH670	8/1/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH577	3/27/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH625	4/26/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH668	8/2/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH581	3/28/2018	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH582	3/28/2018*	< 0.02	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH627	5/1/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH628	5/1/2018*	< 0.019	U			—				—				—				—				—				< 0.30	UJ	s		—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH665	7/31/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH666	7/31/2018*	< 0.019	U			—				—				—				—				—				< 0.30	UJ	s		—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH709	10/29/2018	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW11-05	ERH710	10/29/2018*	< 0.019	U			—				—				—				—				—				< 0.30	U			—				—				—			
RHMW11-05	ERH764	1/28/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH816	4/29/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH878	8/1/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW11-05	ERH938	10/29/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1002	1/30/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1070	4/20/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1133	8/3/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1185	10/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1242	1/21/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-07	ERH874	8/5/2019	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-07	ERH940	10/30/2019	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-01	ERH1023	3/3/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-02	ERH1025	3/4/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-03	ERH1027	3/5/2020	< 0.019	U			—				—				—				—				—				< 0.30	UJ	c,s		—				< 4.00	U			< 80.0	UJ	I	
RHMW13-03	ERH1076	4/23/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-04	ERH1029	3/9/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-04	ERH1078	4/27/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-05	ERH1031	3/10/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1032	3/10/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1080	4/28/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-05	ERH1081	4/28/2020	< 0.019	U			—				—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30			
		SSRBL	—				—				4500				—				—				—				750				750				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW13-05	ERH1135	7/29/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW13-05	ERH1136	7/29/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW13-05	ERH1187	10/21/2020	—				< 18	U			< 180	U	b		< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U		
RHMW13-05	ERH1188	10/21/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW13-05	ERH1244	1/20/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW13-05	ERH1245	1/20/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-01	ERH942	10/21/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-01	ERH1004	1/20/2020	—				< 18	U			< 160	U	f	Z	< 25	U			< 95	U	f	Z	< 40	U			< 0.30	U			—				< 0.50	U		
RHMW14-02	ERH944	10/22/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-02	ERH1006	1/21/2020	—				< 18	U			< 130	U	f	Z	< 25	U			< 110	U	f	Z	< 40	U			< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH882	7/30/2019	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH883	7/30/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH946	10/28/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH947	10/28/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1008	1/22/2020	—				< 18	U			< 25	UJ	l		—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1009	1/22/2020*	—				< 18	U			< 25	UJ	l		< 25	U			< 220	UJ	f l	W	< 74	U	f	W	< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1072	4/21/2020	—				< 18	U			< 300.0	U			< 300.0	U			**150**	**J**	l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1138	7/30/2020	—				< 18	U			**150**	**J**		Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1190	10/20/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-03	ERH1247	1/19/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-04	ERH880	7/29/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-04	ERH949	10/24/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-05	ERH872	7/31/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-05	ERH951	10/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-07	ERH876	8/6/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW14-07	ERH953	10/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-01	ERH955	11/4/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-02	ERH957	11/5/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-03	ERH959	11/7/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-03	ERH1011	1/27/2020	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-04	ERH961	10/31/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-04	ERH1013	1/28/2020	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH963	11/6/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH964	11/6/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH1015	1/29/2020	—				< 18	U			< 220	U	f	Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH1074	4/22/2020	—				< 18	U			< 160	UJ	f,l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH1140	7/28/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH1192	10/19/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW15-05	ERH1249	1/18/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW19	ERH1103	7/15/2020	—				< 18	U			< 150	U	b	Z	< 300.0	U			**150**	**J**		Z	<300.0	U			< 0.30	U			—				< 0.50	U		
RHMW19	ERH1155	10/7/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
RHMW19	ERH1212	1/20/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U		
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	< 30	U			—				< 185	U			—				—				—				< 0.12	U			—				< 0.31	U		
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	< 60.0	U			—				**322**	**J**			—				—				—				< 0.240	U			—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	< 60.0	U			—				< 352	U			—				—				—				< 0.240	U			—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U		
HDMW2253-03	ES006	10/21/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
HDMW2253-03	ES016	1/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
HDMW2253-03	ES028	4/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.42**	**J**			—				< 0.46	U		
HDMW2253-03	ES043	7/21/2011[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
HDMW2253-03	ES053	10/26/2011	—				< 12.12	U			< 80.8	U			—				—				—				**0.92**	**J**			—				< 0.46	U		
HDMW2253-03	ES057	1/24/2012	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U		
HDMW2253-03	ES076	4/26/2012	—				< 12.12	U			**160**			Y	—				—				—				**0.20**	**J**			—				< 0.46	U		
HDMW2253-03	ES083	7/19/2012	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U		
HDMW2253-03	ES009	11/7/2012	—				< 15	UJ	b	h	**25**	**J**		Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h	
HDMW2253-03	ES018	1/30/2013	—				< 30	U			**600**				—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES027	4/24/2013	—				< 30	U			**45**	**J**			—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES036	7/24/2013	—				< 30	U			< 21	U			—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES045	10/23/2013	—				< 15	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES051	1/22/2014[d]	—				—				**18**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES052	1/22/2014*[d]	—				—				**18**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES055	1/27/2014[d]	—				< 27	UJ	b		**35**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES088***	4/23/2014[d]	—				< 27	UJ	b		**220**			Y	—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES111	7/23/2014	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES120	10/22/2014	—				< 30	U			**14**	**J**		Y	—				—				—				< 0.50	U			—				**3.8**				—			
HDMW2253-03	ES128	1/29/2015	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES136	4/22/2015	< 25	U			—				**13**	**J**			—				< 55	UJ	b		—				< 0.10	U			—				< 0.10	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW13-05	ERH1135	7/29/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1136	7/29/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1187	10/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1188	10/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1244	1/20/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW13-05	ERH1245	1/20/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-01	ERH942	10/21/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-01	ERH1004	1/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-02	ERH944	10/22/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-02	ERH1006	1/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH882	7/30/2019	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH883	7/30/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH946	10/28/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH947	10/28/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1008	1/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1009	1/22/2020*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1072	4/21/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1138	7/30/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1190	10/20/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-03	ERH1247	1/19/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-04	ERH880	7/29/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-04	ERH949	10/24/2019	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—			
RHMW14-05	ERH872	7/31/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-05	ERH951	10/23/2019	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—			
RHMW14-07	ERH876	8/6/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW14-07	ERH953	10/23/2019	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—			
RHMW15-01	ERH955	11/4/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-02	ERH957	11/5/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-03	ERH959	11/7/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-03	ERH1011	1/27/2020	< 0.30	U			—				—				< 0.10	UJ	s		< 0.10	UJ	s		—				< 0.10	UJ	s		—				—			
RHMW15-04	ERH961	10/31/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-04	ERH1013	1/28/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH963	11/6/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH964	11/6/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH1015	1/29/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH1074	4/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH1140	7/28/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH1192	10/19/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW15-05	ERH1249	1/18/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW19	ERH1103	7/15/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW19	ERH1155	10/7/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
RHMW19	ERH1212	1/20/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.035	U			< 0.62	U			—			
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0500	U			< 0.0500	U			—				< 0.103	U			< 1.24	U			—			
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0348	U			< 0.0348	U			—				< 0.0720	U			< 1.24	U			—			
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	< 1.24	U			—				—				< 0.0348	U			< 0.0348	U			—				**0.0596**	**J**			< 1.24	U			—			
HDMW2253-03	ES006	10/21/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES016	1/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES028	4/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES043	7/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES053	10/26/2011	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES057	1/24/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES076	4/26/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES083	7/19/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
HDMW2253-03	ES009	11/7/2012	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—			
HDMW2253-03	ES018	1/30/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—			
HDMW2253-03	ES027	4/24/2013	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				**0.16**	**J**			—				—			
HDMW2253-03	ES036	7/24/2013	< 1.0	U			—				—				< 0.047	U			< 0.047	U			—				**0.030**	**J**			—				—			
HDMW2253-03	ES045	10/23/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.041**	**J**			—				—			
HDMW2253-03	ES051	1/22/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
HDMW2253-03	ES052	1/22/2014*[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
HDMW2253-03	ES055	1/27/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.064**	**J**			—				—			
HDMW2253-03	ES088***	4/23/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—			
HDMW2253-03	ES111	7/23/2014	< 1.0	U			—				—				< 0.053	U			< 0.053	U			—				< 0.053	U			—				—			
HDMW2253-03	ES120	10/22/2014	< 1.0	U			—				—				< 0.10	U			< 0.051	U			—				< 0.051	U			—				—			
HDMW2253-03	ES128	1/29/2015	< 1.0	U			—				—				< 0.11	U			< 0.053	U			—				< 0.053	U			—				—			
HDMW2253-03	ES136	4/22/2015	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW13-05	ERH1135	7/29/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1136	7/29/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1187	10/21/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1188	10/21/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1244	1/20/2021	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1245	1/20/2021	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-01	ERH942	10/21/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	UJ	I		< 80.0	U		
RHMW14-01	ERH1004	1/20/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-02	ERH944	10/22/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	UJ	I		< 80.0	U		
RHMW14-02	ERH1006	1/21/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH882	7/30/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH883	7/30/2019*	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH946	10/28/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH947	10/28/2019*	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH1008	1/22/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH1009	1/22/2020*	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH1072	4/21/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH1138	7/30/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH1190	10/20/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH1247	1/19/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW14-04	ERH880	7/29/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-04	ERH949	10/24/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-05	ERH872	7/31/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-05	ERH951	10/23/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-07	ERH876	8/6/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-07	ERH953	10/23/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-01	ERH955	11/4/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-02	ERH957	11/5/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-03	ERH959	11/7/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-03	ERH1011	1/27/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW15-04	ERH961	10/31/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW15-04	ERH1013	1/28/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH963	11/6/2019	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH964	11/6/2019*	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1015	1/29/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1074	4/22/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1140	7/28/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1192	10/19/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1249	1/18/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW19	ERH1103	7/15/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW19	ERH1155	10/7/2020	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW19	ERH1212	1/20/2021	< 0.019	U			—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	—				< 0.31	U			—				—				—				< 0.15	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	ES006	10/21/2010[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES016	1/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES028	4/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES043	7/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES053	10/26/2011	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES057	1/24/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES076	4/26/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES083	7/19/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES009	11/7/2012	—				< 0.50	UJ	h		—				—				—				< 0.50	UJ	h		—				—				—			
HDMW2253-03	ES018	1/30/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES027	4/24/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES036	7/24/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES045	10/23/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES051	1/22/2014[d]	—				—				—				—				—				—				—				—				—			
HDMW2253-03	ES052	1/22/2014*[d]	—				—				—				—				—				—				—				—				—			
HDMW2253-03	ES055	1/27/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES088***	4/23/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES111	7/23/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES120	10/22/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES128	1/29/2015	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES136	4/22/2015	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			< 0.015	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ES151	7/22/2015	< 25	U			—				< 18	UJ	b		—				< 77	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
HDMW2253-03	ERH001	10/19/2015	**16**	**J**			—				< 21	UJ	b		—				< 56	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.37	UJ	h t		—			
HDMW2253-03	ERH015	1/19/2016	< 25	U			—				< 43	UJ	b		—				< 63	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.24	UJ	t		—			
HDMW2253-03	ERH029	4/19/2016	< 21	U	f		—				< 25	U	b f		—				< 48	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
HDMW2253-03	ERH043	7/19/2016	< 25	U			—				< 13	U	f		—				< 32	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
HDMW2253-03	ERH095	10/18/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH127	11/16/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH145	12/13/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH176	1/10/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH176 (EPA split)	1/10/2017	< 25	UJ	c		—				< 71	U			—				< 290	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
HDMW2253-03	ERH214	2/7/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH214 (EPA split)	2/7/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
HDMW2253-03	ERH280	3/8/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH280 (EPA split)	3/8/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
HDMW2253-03	ERH437	10/31/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH568	3/12/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH614	4/23/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH660	7/23/2018	—				< 18	UJ	s		< 25	UJ	s		—				< 40	UJ	l s		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH704	10/22/2018	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH759	2/7/2019	—				< 18	UJ	c l		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH811	4/25/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH867	7/25/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH931	10/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH997	1/23/2020	—				< 18	U			< 25	UJ	l		—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH1065	4/23/2020	—				< 18	U			**190**	**J**	l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH1131	7/23/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH1183	10/15/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
HDMW2253-03	ERH1234	1/21/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	< 30.0	U			—				< 171	U			—				—				—				**0.470**				—				< 0.310	U			—				< 0.310	U			—			
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	< 30	U			—				< 167	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	< 60.0	U			—				**1,490**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	< 60.0	U			—				**288**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
OWDFMW01	ES007	10/21/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES008	10/21/2010*[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES017	1/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.54**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES018	1/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.69**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES029	4/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				**0.21**	**J**			—			
OWDFMW01	ES031	4/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.29**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES044	7/21/2011[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES045	7/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES055	10/26/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES056	10/26/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES058	1/24/2012	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				**0.70**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES059	1/24/2012*	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				**0.58**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES077	4/26/2012	—				< 12.12	U			**220**			W	—				—				—				**0.71**	**J**			—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES084	7/19/2012	—				< 12.12	U			< 80.8	U			—				—				—				**1.3**				—				< 0.46	U			—				< 0.34	U			—			
OWDFMW01	ES008	11/7/2012	—				< 17	UJ	b h		**2,500**			Y	—				—				—				**0.38**	**J**	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h		—			
OWDFMW01	ES007	11/7/2012*	—				< 30	UJ	h		**2,500**			Y	—				—				—				**0.49**	**J**	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h		—			
OWDFMW01	ES016	1/30/2013	—				< 30	U			**1,000**				—				—				—				**0.39**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES017	1/30/2013*	—				< 30	U			**1,000**				—				—				—				**0.17**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES025	4/24/2013	—				< 30	U			**1,900**			Y	—				—				—				**0.82**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES026	4/24/2013*	—				< 30	U			**1,600**			Y	—				—				—				**0.67**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES034	7/24/2013	—				< 30	U			**470**			Y	—				—				—				**0.42**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES035	7/24/2013*	—				< 30	U			**340**			Y	—				—				—				**0.44**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES043	10/23/2013	—				< 17	UJ	b		**170**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES044	10/23/2013*	—				< 14	UJ	b		**200**			Y	—				—				—				**0.17**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES053	1/27/2014[d]	—				< 26	UJ	b		**170**			Y	—				—				—				**0.15**	**J**			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES054	1/27/2014*[d]	—				< 23	UJ	b		**140**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES086	4/23/2014[d]	—				< 30	U			**270**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES087***	4/23/2014*[d]	—				< 31	UJ	b		**32**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES109	7/24/2014	—				< 30	U			**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES110	7/24/2014*	—				< 30	U			**15**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES121	10/22/2014	—				< 30	U			**19**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES122	10/22/2014*	—				< 30	U			**19**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES121X	1/26/2015	—				< 30	U			**24**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES122X	1/26/2015*	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
OWDFMW01	ES137	4/22/2015	< 25	U			—				**120**			Z	—				< 110	UJ	b	Z	—				**0.070**	**J**			—				< 0.10	U			—				< 0.10	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ES151	7/22/2015	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
HDMW2253-03	ERH001	10/19/2015	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	UJ	b		—				< 0.0042	UJ	b		—				—			
HDMW2253-03	ERH015	1/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
HDMW2253-03	ERH029	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
HDMW2253-03	ERH043	7/19/2016	< 0.20	U			—				—				< 0.0050	U			**0.0027**	**J**			—				< 0.015	U	b f		—				—			
HDMW2253-03	ERH095	10/18/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH127	11/16/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH145	12/13/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH176	1/10/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH176 (EPA split)	1/10/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
HDMW2253-03	ERH214	2/7/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH214 (EPA split)	2/7/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U		
HDMW2253-03	ERH280	3/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH280 (EPA split)	3/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
HDMW2253-03	ERH437	10/31/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH568	3/12/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH614	4/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH660	7/23/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH704	10/22/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH759	2/7/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH811	4/25/2019	< 0.30	U			—				—				< 0.10	UJ	s		< 0.10	UJ	s		—				< 0.10	UJ	s		—				—			
HDMW2253-03	ERH867	7/25/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH931	10/23/2019	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—			
HDMW2253-03	ERH997	1/23/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH1065	4/23/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH1131	7/23/2020	< 0.30	U			—				—				< 0.10	UJ	s		< 0.10	UJ	s		—				< 0.10	UJ	s		—				—			
HDMW2253-03	ERH1183	10/15/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
HDMW2253-03	ERH1234	1/21/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	< 0.620	U			—				—				< 0.0164	U			< 0.0164	U			—				< 0.0339	U			< 0.620	U			—			
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0168	U			< 0.0168	U			—				< 0.0346	U			< 0.62	U			—			
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0320	U			< 0.0320	U			—				< 0.0664	U			< 1.24	U			—			
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—			
OWDFMW01	ES007	10/21/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES008	10/21/2010*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES017	1/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES018	1/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES029	4/21/2011[d]	**0.39**	**J**			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES031	4/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES044	7/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES045	7/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES055	10/26/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES056	10/26/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES058	1/24/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES059	1/24/2012*	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES077	4/26/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES084	7/19/2012	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			
OWDFMW01	ES008	11/7/2012	< 1	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.025**	**J**			—				—			
OWDFMW01	ES007	11/7/2012*	< 1	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.035**	**J**			—				—			
OWDFMW01	ES016	1/30/2013	< 1	U			—				—				< 0.050	U			< 0.050	U			—				**0.032**	**J**			—				—			
OWDFMW01	ES017	1/30/2013*	< 1	U			—				—				< 0.050	U			< 0.050	U			—				**0.039**	**J**			—				—			
OWDFMW01	ES025	4/24/2013	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.063**	**J**			—				—			
OWDFMW01	ES026	4/24/2013*	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.068**	**J**			—				—			
OWDFMW01	ES034	7/24/2013	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.081**	**J**			—				—			
OWDFMW01	ES035	7/24/2013*	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				**0.12**	**J**			—				—			
OWDFMW01	ES043	10/23/2013	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—			
OWDFMW01	ES044	10/23/2013*	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—			
OWDFMW01	ES053	1/27/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.093**	**J**			—				—			
OWDFMW01	ES054	1/27/2014*[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.085**	**J**			—				—			
OWDFMW01	ES086	4/23/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.035**	**J**			—				—			
OWDFMW01	ES087***	4/23/2014*[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.035**	**J**			—				—			
OWDFMW01	ES109	7/24/2014	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.031**	**J**			—				—			
OWDFMW01	ES110	7/24/2014*	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.027**	**J**			—				—			
OWDFMW01	ES121	10/22/2014	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				**0.047**	**J**			—				—			
OWDFMW01	ES122	10/22/2014*	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—			
OWDFMW01	ES121X	1/26/2015	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—			
OWDFMW01	ES122X	1/26/2015*	< 1.0	U			—				—				< 0.10	U			< 0.051	U			—				< 0.051	U			—				—			
OWDFMW01	ES137	4/22/2015	< 0.20	U			—				—				**0.023**				**0.017**	**J**			—				**0.025**				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Semivolatiles			Semivolatiles		
		Analyte Type	Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Lead Scavenger			Fuel Additive			Fuel Additive		
		Analytical Method	8011			8260			504.1			524.2			8260SIM			8260SIM			8260			524.2			8270			8270/8270 Mod.		
		Analyte	1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			1,2-Dichloroethane *****			Phenol			2-(2-Methoxyethoxy)-ethanol		
		CAS No.	106-93-4			106-93-4			106-93-4			106-93-4			106-93-4			107-06-2			107-06-2			107-06-2			108-95-2			111-77-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	0.04			0.04			0.04			0.04			0.04			5			5			5			300			800		
		SSRBL	—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ES151	7/22/2015	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—			
HDMW2253-03	ERH001	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				—				< 0.015	U			—				—			
HDMW2253-03	ERH015	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				< 0.015	U			—				—			
HDMW2253-03	ERH029	4/19/2016	—				—				—				—				—				—				—				—			
HDMW2253-03	ERH043	7/19/2016	—				—				—				—				—				—				—				—			
HDMW2253-03	ERH095	10/18/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
HDMW2253-03	ERH127	11/16/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH145	12/13/2016	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH176	1/10/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH176 (EPA split)	1/10/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.4	U			—			
HDMW2253-03	ERH214	2/7/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH214 (EPA split)	2/7/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
HDMW2253-03	ERH280	3/8/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH280 (EPA split)	3/8/2017	—				—				—				< 0.0025	U			—				—				< 0.0025	U			< 2.5	U			—			
HDMW2253-03	ERH437	10/31/2017	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH568	3/12/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH614	4/23/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH660	7/23/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH704	10/22/2018	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
HDMW2253-03	ERH759	2/7/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH811	4/25/2019	—				—				—				—				—				—				—				< 4.00	UJ	h		< 80.0	UJ	l	
HDMW2253-03	ERH867	7/25/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH931	10/23/2019	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH997	1/23/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
HDMW2253-03	ERH1065	4/23/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH1131	7/23/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
HDMW2253-03	ERH1183	10/15/2020	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH1234	1/21/2021	—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	—				< 0.310	U			—				—				—				< 0.150	U			—				—				—			
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	—				< 0.31	U			—				—				—				< 0.15	U			—				—				—			
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	—				< 0.620	U			—				—				—				< 0.300	U			—				—				—			
OWDFMW01	ES007	10/21/2010[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES008	10/21/2010*[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES017	1/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES018	1/21/2011*[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES029	4/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES031	4/21/2011*[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES044	7/21/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES045	7/21/2011*[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES055	10/26/2011[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES056	10/26/2011*[d]	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES058	1/24/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES059	1/24/2012*	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES077	4/26/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES084	7/19/2012	—				< 0.40	U			—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES008	11/7/2012	—				< 0.50	UJ	h		—				—				—				< 0.50	UJ	h		—				—				—			
OWDFMW01	ES007	11/7/2012*	—				< 0.50	UJ	h		—				—				—				< 0.50	UJ	h		—				—				—			
OWDFMW01	ES016	1/30/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES017	1/30/2013*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES025	4/24/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES026	4/24/2013*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES034	7/24/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES035	7/24/2013*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES043	10/23/2013	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES044	10/23/2013*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES053	1/27/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES054	1/27/2014*[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES086	4/23/2014[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES087***	4/23/2014*[d]	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES109	7/24/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES110	7/24/2014*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES121	10/22/2014	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES122	10/22/2014*	—				< 0.50	U			—				—				—				< 0.50	UJ	c		—				—				—			
OWDFMW01	ES121X	1/26/2015	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES122X	1/26/2015*	—				< 0.50	U			—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES137	4/22/2015	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			**0.010**	**J**			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30			
		SSRBL	—				—				4500				—				—				—				750				750				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES138	4/22/2015*	< 25	U			—				**120**			Z	—				**140**			Z	—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ES152	7/22/2015	< 25	U			—				**3,100**			Z	—				**390**			Z	—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ES153	7/22/2015*	< 25	U			—				**3,000**			Z	—				**330**			Z	—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ERH002	10/19/2015	< 25	U			—				**680**			Z	—				**100**	**J**			—				< 0.10	UJ	h		—				< 0.10	UJ	t		—			
OWDFMW01	ERH016	1/19/2016	< 25	U			—				**320**			Z	—				< 69	UJ	b		—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ERH030	4/19/2016	< 13	U	f		—				< 38	U	b f		—				< 56	U	b f		—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ERH031	4/19/2016	< 9	U	f		—				< 36	U	b f		—				< 67	U	b f		—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ERH044	7/19/2016	< 25	U			—				< 16	U	f		—				< 40	U	b f		—				< 0.10	U			—				< 0.10	U			—			
OWDFMW01	ERH104	10/20/2016	—				< 18	U			**54**			Y	—				**110**				—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH105	10/20/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH118	11/15/2016	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH119	11/15/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH147	12/14/2016	—				< 18	U			< 58	U		Z	—				**39**	**J**			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH148	12/14/2016*	—				< 18	U			< 57	U		Z	—				**46**				—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH184	1/12/2017	—				< 18	U			< 25	U			—				**45**			Y	—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH184 (EPA split)	1/12/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH227	2/9/2017	—				< 18	U			< 23	U		Z	—				**44**				—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH227 (EPA split)	2/9/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH286	3/8/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH286 (EPA split)	3/8/2017	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH321	4/4/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH389	7/5/2017	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH435	10/26/2017	—				< 18	U			**110**			Y	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH566	3/14/2018	—				< 18	U			**310**	**J**	s	Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH612	4/26/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH658	7/26/2018	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH702	10/24/2018	—				< 18	U			**250**	**J**	h	Y	< 25	UJ	h		**160**	**J**	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH757	1/23/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—			
OWDFMW01	ERH809	4/25/2019	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH865	7/24/2019	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH865	7/24/2019	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH995	1/22/2020	—				< 18	U			**120**			Z	—				**120**			Z	—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH1063	4/22/2020	—				< 18	U			**450**	**J**	l	Z	< 300.0	U			**280**	**J**	l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH1129	7/22/2020	—				< 18	U			**150**	**J**		Z	< 300.0	U			**150**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH1181	10/14/2020	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
OWDFMW01	ERH1238	1/27/2021	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				COPC				COPC				non-COPC			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17			
		SSRBL	—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES138	4/22/2015*	< 0.20	U			—				—				**0.020**				**0.015**	J			—				**0.023**				—				—			
OWDFMW01	ES152	7/22/2015	< 0.20	U			—				—				**0.0088**	J			**0.0086**	J			—				**0.014**	J			—				—			
OWDFMW01	ES153	7/22/2015*	< 0.20	U			—				—				**0.0096**	J			**0.0097**	J			—				**0.016**	J			—				—			
OWDFMW01	ERH002	10/19/2015	< 0.20	UJ	h		—				—				**0.019**	J			< 0.013	UJ	b		—				**0.025**				—				—			
OWDFMW01	ERH016	1/19/2016	< 0.20	U			—				—				**0.030**				**0.020**				—				**0.024**				—				—			
OWDFMW01	ERH030	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
OWDFMW01	ERH031	4/19/2016	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—			
OWDFMW01	ERH044	7/19/2016	< 0.20	U			—				—				< 0.0050	U			**0.0027**	J			—				< 0.019	U	b f		—				—			
OWDFMW01	ERH104	10/20/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH105	10/20/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH118	11/15/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH119	11/15/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH147	12/14/2016	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH148	12/14/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH184	1/12/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH184 (EPA split)	1/12/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
OWDFMW01	ERH227	2/9/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH227 (EPA split)	2/9/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	UJ	h		< 0.025	U			—				< 0.2	U			< 0.5	UJ	h	
OWDFMW01	ERH286	3/8/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH286 (EPA split)	3/8/2017	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
OWDFMW01	ERH321	4/4/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH389	7/5/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH435	10/26/2017	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH566	3/14/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH612	4/26/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH658	7/26/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH702	10/24/2018	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH757	1/23/2019	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH809	4/25/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH865	7/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH865	7/24/2019	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH995	1/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH1063	4/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH1129	7/22/2020	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH1181	10/14/2020	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	U			—				< 0.10	U			—				—			
OWDFMW01	ERH1238	1/27/2021	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	8011				8260				504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES138	4/22/2015*	< 0.0040	UJ	h		< 0.20	U			—				—				< 0.010	U			**0.0081**	**J**			—				—				—				—			
OWDFMW01	ES152	7/22/2015	< 0.0040	U			< 0.20	U			—				—				—				**0.012**	**J**			—				—				—				—			
OWDFMW01	ES153	7/22/2015*	< 0.0040	U			< 0.20	U			—				—				—				**0.012**	**J**			—				—				—				—			
OWDFMW01	ERH002	10/19/2015	< 0.0040	U			< 0.20	UJ	h		—				—				< 0.010	U			**0.0009**	**J**			—				—				—				—			
OWDFMW01	ERH016	1/19/2016	< 0.0040	U			< 0.20	U			—				—				—				**0.0096**	**J**			—				—				—				—			
OWDFMW01	ERH030	4/19/2016	—				—				—				—				—				—				—				—				—				—			
OWDFMW01	ERH031	4/19/2016	—				—				—				—				—				—				—				—				—				—			
OWDFMW01	ERH044	7/19/2016	—				—				—				—				—				—				—				—				—				—			
OWDFMW01	ERH104	10/20/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH105	10/20/2016*	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH118	11/15/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH119	11/15/2016*	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH147	12/14/2016	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH148	12/14/2016*	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH184	1/12/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH184 (EPA split)	1/12/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
OWDFMW01	ERH227	2/9/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH227 (EPA split)	2/9/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	UJ	h		—			
OWDFMW01	ERH286	3/8/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH286 (EPA split)	3/8/2017	—				—				—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
OWDFMW01	ERH321	4/4/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH389	7/5/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH435	10/26/2017	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH566	3/14/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH612	4/26/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH658	7/26/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH702	10/24/2018	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH757	1/23/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH809	4/25/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH865	7/24/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH865	7/24/2019	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH995	1/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH1063	4/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH1129	7/22/2020	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH1181	10/14/2020	—				—				—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
OWDFMW01	ERH1238	1/27/2021	—				—				—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2021 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

Notes:
A data verification effort was conducted after the Second Quarter 2018 groundwater monitoring event to verify reported values and make data qualification consistent with the current data validation procedures. As such, data presented in the Third Quarter 2018 groundwater monitoring event (and succeeding) cumulative data tables may differ from data presented in cumulative data tables in previous reports.
Table A.1-6 presents a comparison of values, qualifiers, and notes between pre- and post-data verification.
DOH Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site).

Grey highlight	Exceeds EAL
Bold	Detected value
*	Duplicate sample
***	Samples ES087 and ES088 possibly switched prior to analysis.
****	TPH-g analyzed by either 8015 or 8260.
*****	Analyzed by either 8260, 8260 SIM, 8011, 504.1, and/or 524.2.
%D	RH-B-003
%R	percent recovery
%RSD	percent relative standard deviation
µg/L	micrograms per liter
COPC	chemical of potential concern
DL	detection limit
DOH	Department of Health, State of Hawai‘i
EAL	environmental action level
ID	identification
MDL	method detection limit
MRL	method reporting limit
QC	quality control
r	correlation coefficient
r^2	coefficient of determination
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
TPH	total petroleum hydrocarbons
TPH-g	total petroleum hydrocarbons-gasoline range organics
[a]	MDL values were used for non-detects.
[b]	MRL values were used for non-detects.
[c]	No analytical lab reports found, could not verify results.
[d]	No analytical lab reports available, used data table from groundwater monitoring report.
[e]	Results from stilling basin, pumps offline.
[f]	Results from stilling basin, pumps online.
[g]	Analyzed by Method 6010B.
[h]	Analyzed by Method 6020.
[k]	Analyzed by Method 200.8.

Result Qualifiers (Q)

J	Estimated value.
U	The compound was analyzed for but not detected above the stated limit.
R	Rejected

Reason Codes (rc)

b	Presumed contamination from preparation (method blank).
c	Calibration %RSD, r, r^2, or %D were noncompliant.
e	Matrix Spike/Matrix Spike Duplicate or Duplicate RPD was high.
f	Presumed contamination from field blank or equipment rinsate.
h	Holding times were exceeded.
i	Internal standard performance was unsatisfactory.
l	Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.
m	Instrument performance check was noncompliant.
q	Matrix Spike/Matrix Spike Duplicate recovery was poor.
r	Calibration RRF was <0.05.
s	Surrogate recovery was outside QC limits.
t	Presumed contamination from trip blank.
v	Unusual problems found with the data. Description of the problem can be found in the associated laboratory or groundwater monitoring report.

Data Notes (note)

I	RL/DL elevated due to chromatographic interference.
W	Chromatographic signature was mostly non-petroleum hydrocarbon peaks.
X	Possible high bias due to matrix interference.
Y, F13	Chromatographic pattern was inconsistent with the profile of the reference fuel standard; or, fuel or product type: mixed or unknown
Z	Chromatographic signature does not resemble a petroleum product.
O, F4	Chromatogram is main match to hydrocarbons in diesel fuel range; or, fuel type: diesel fuel
F3	Fuel type: kerosene or jet fuel
F6	Product type: hydraulic fluid

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Appendix A.2:
Groundwater COPC Graphs

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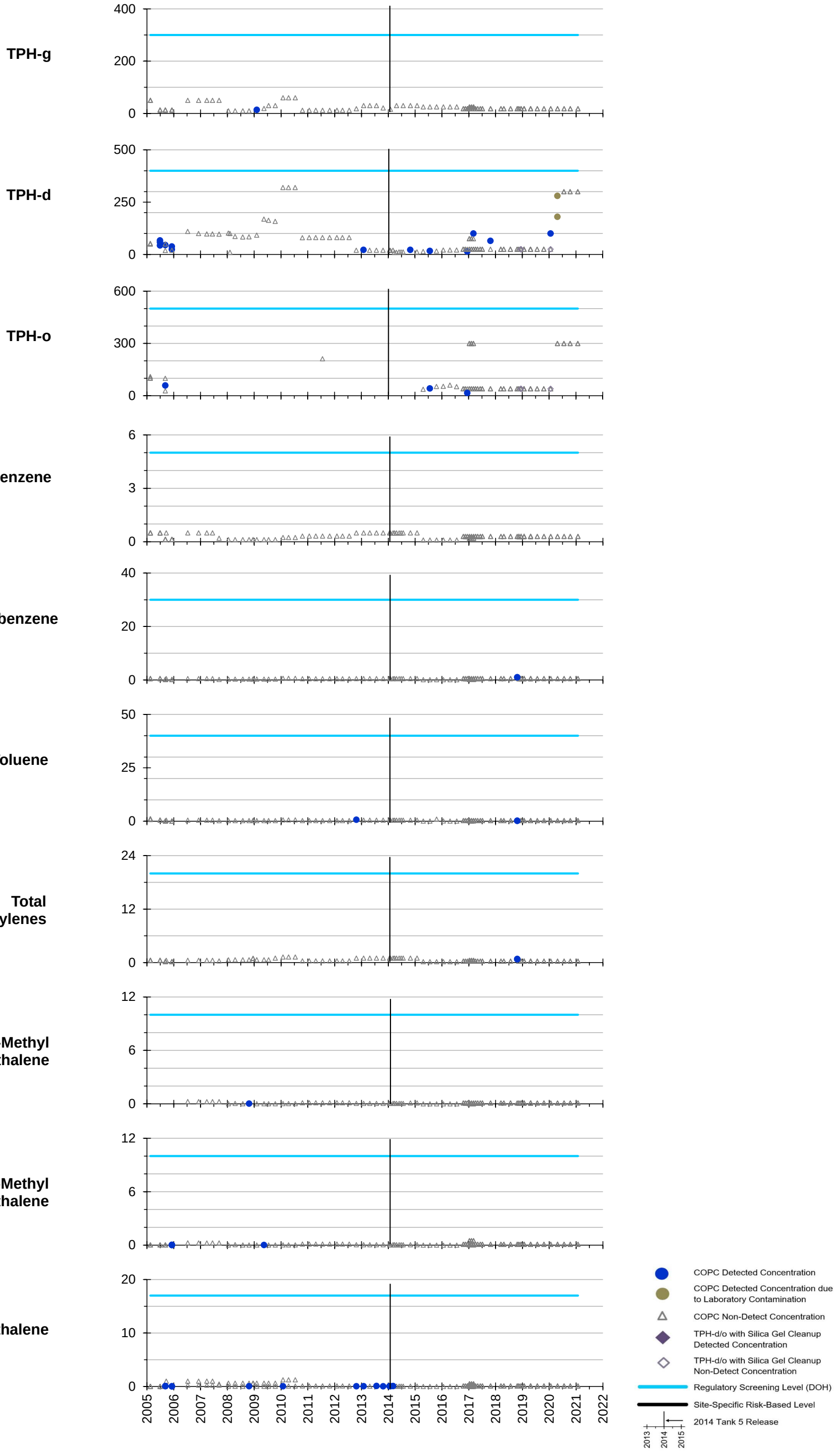
Appendix A.2 Groundwater Concentration Graphs

RHMW2254-01

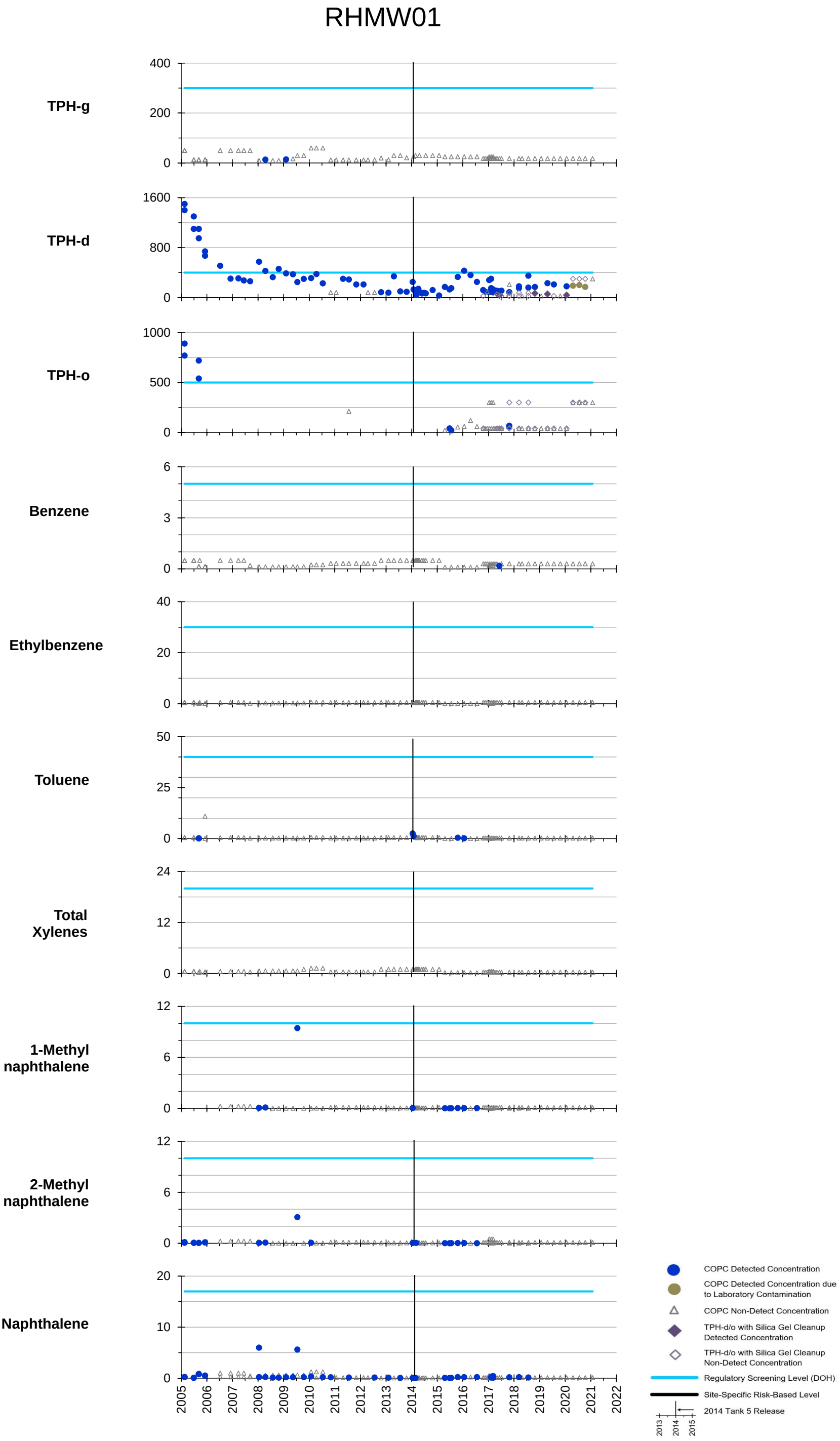


All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



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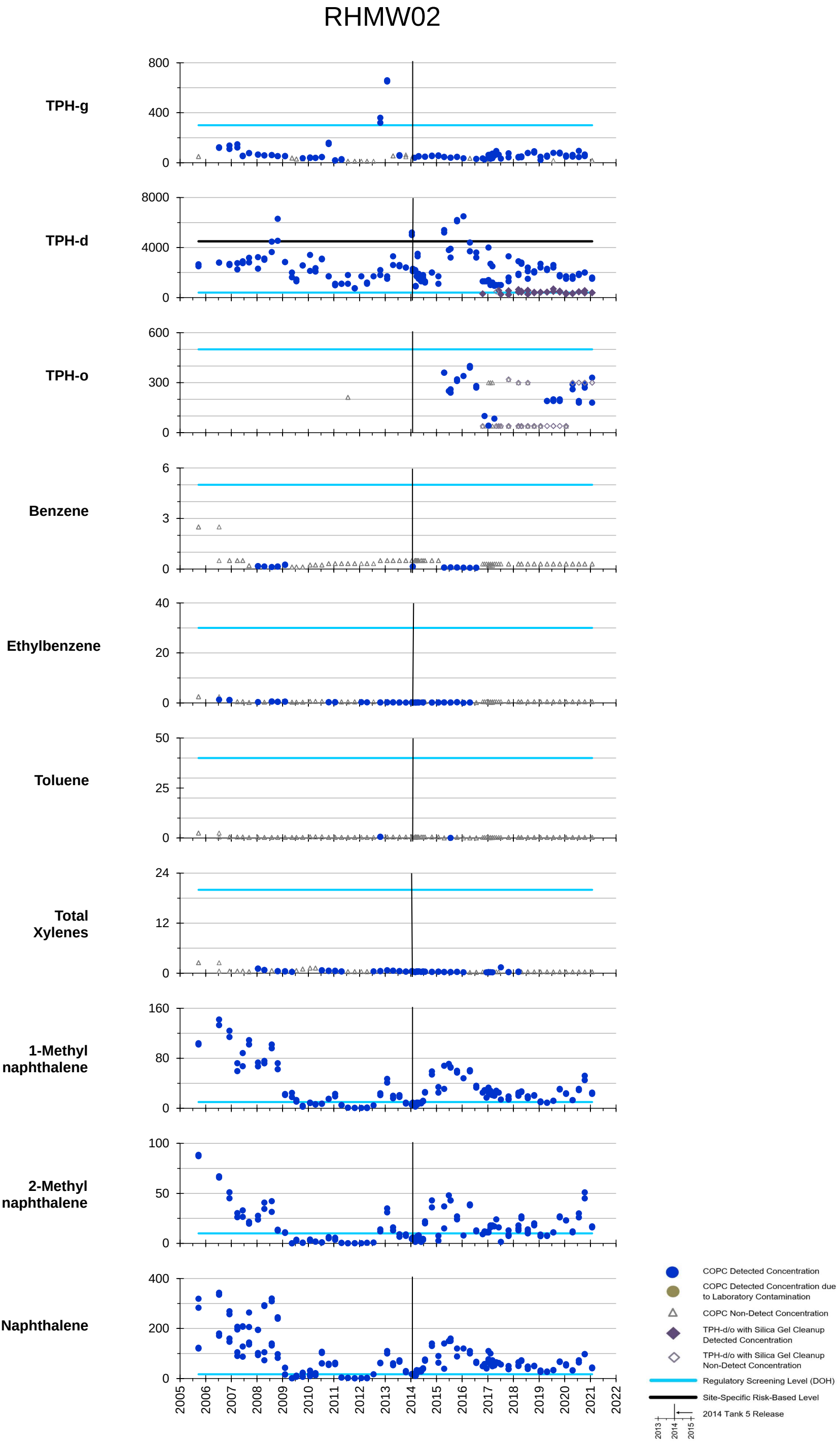
Appendix A.2 Groundwater Concentration Graphs



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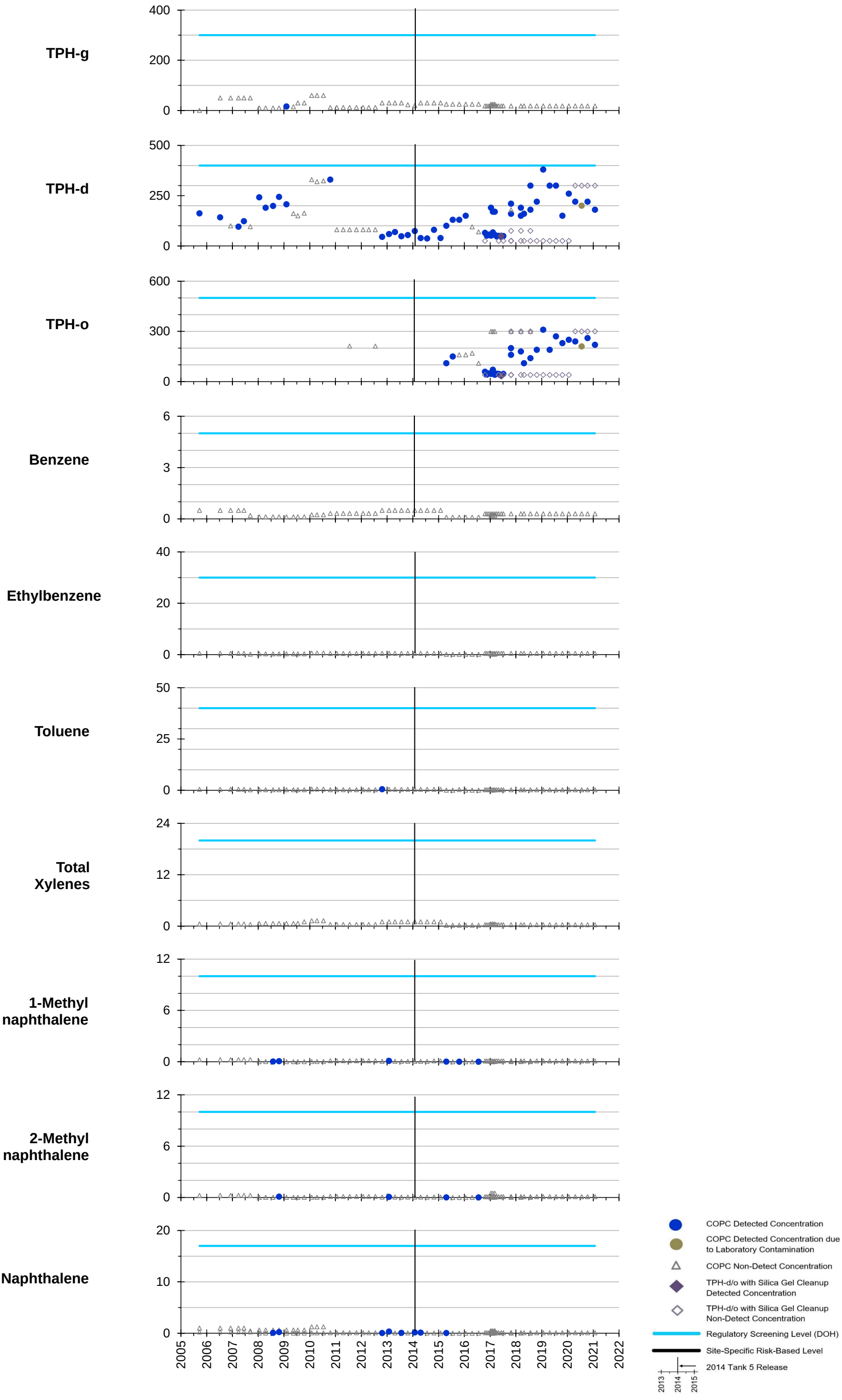
Appendix A.2 Groundwater Concentration Graphs

RHMW03



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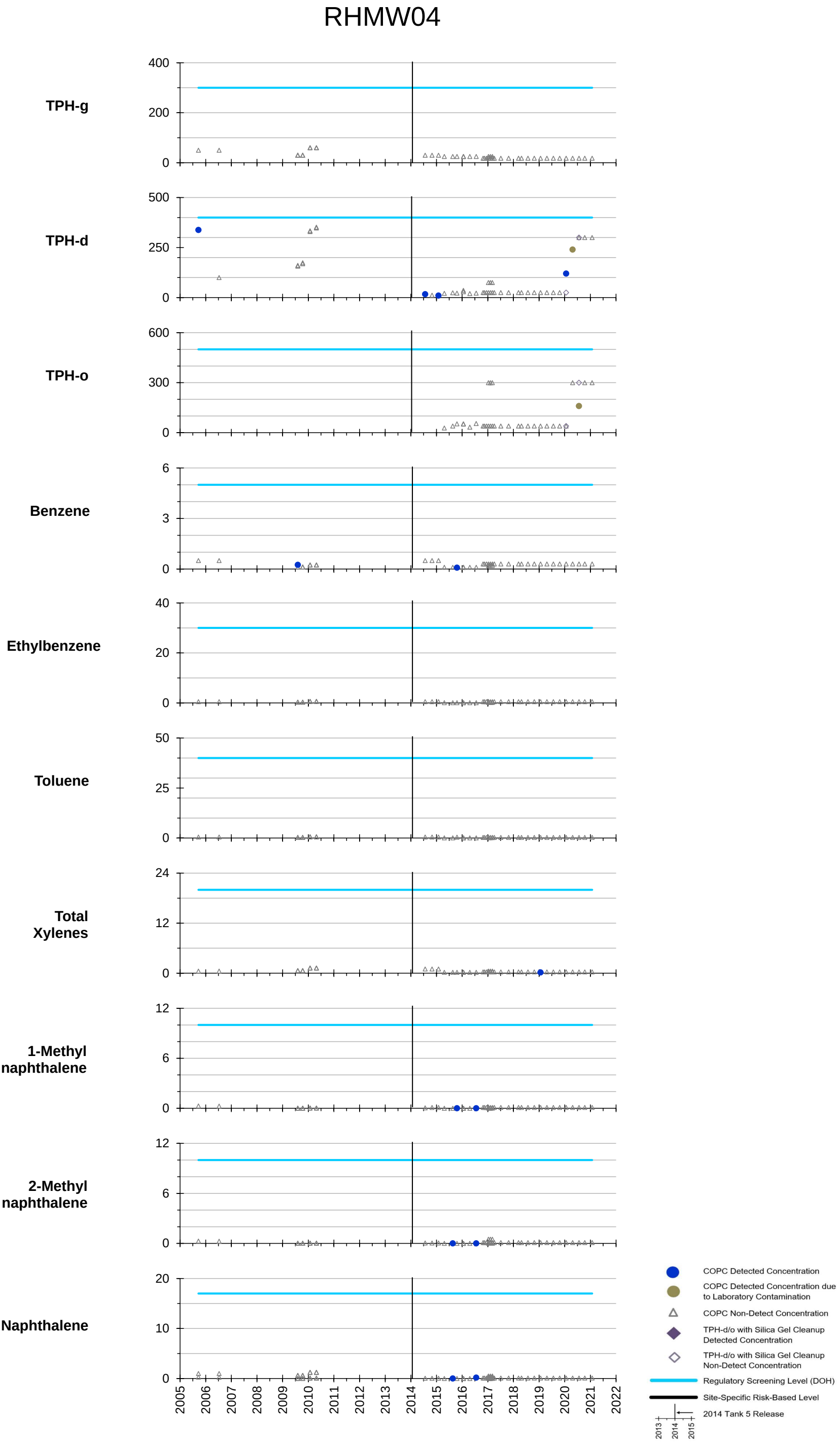
Appendix A.2 Groundwater Concentration Graphs



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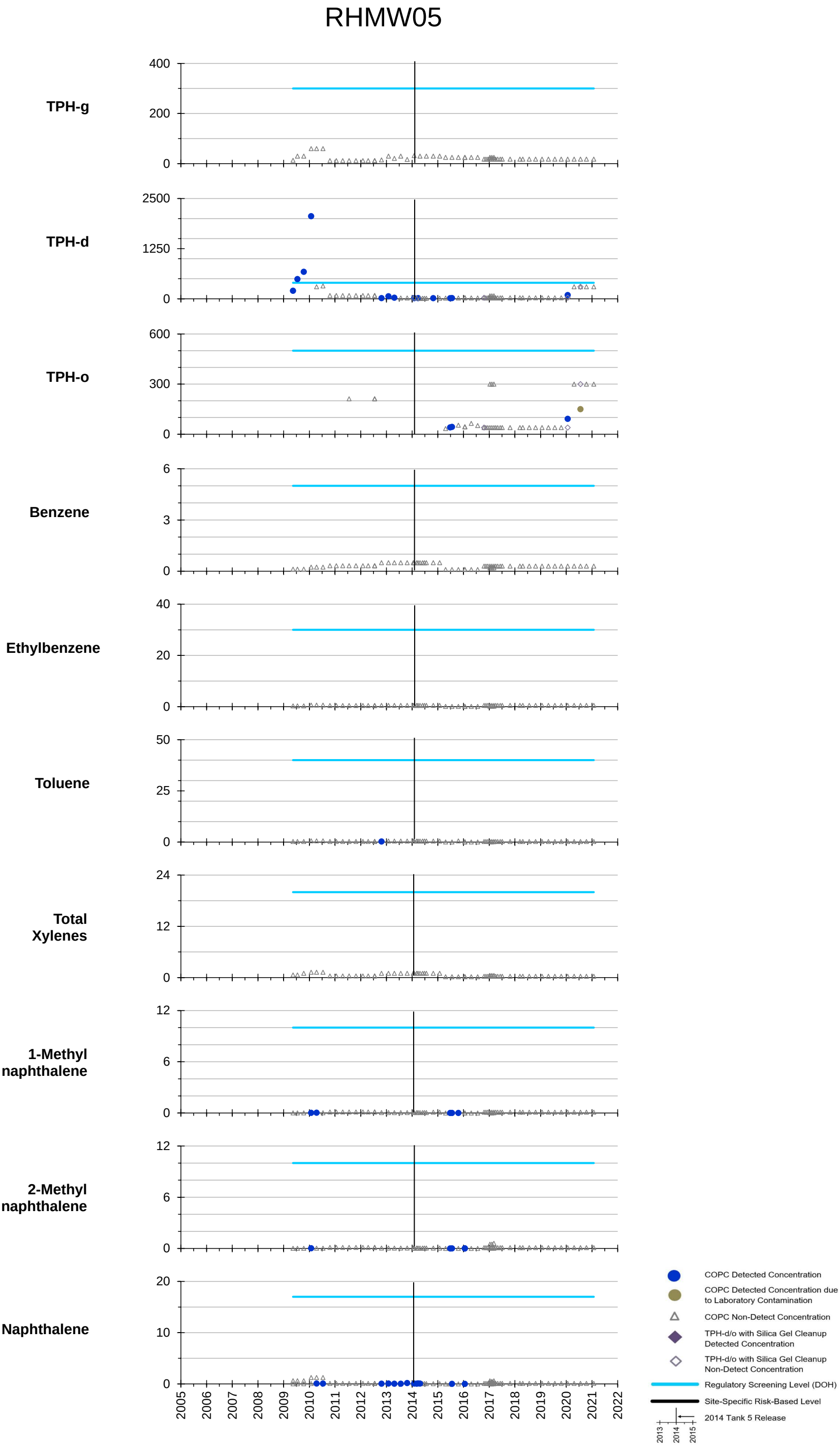
Appendix A.2 Groundwater Concentration Graphs



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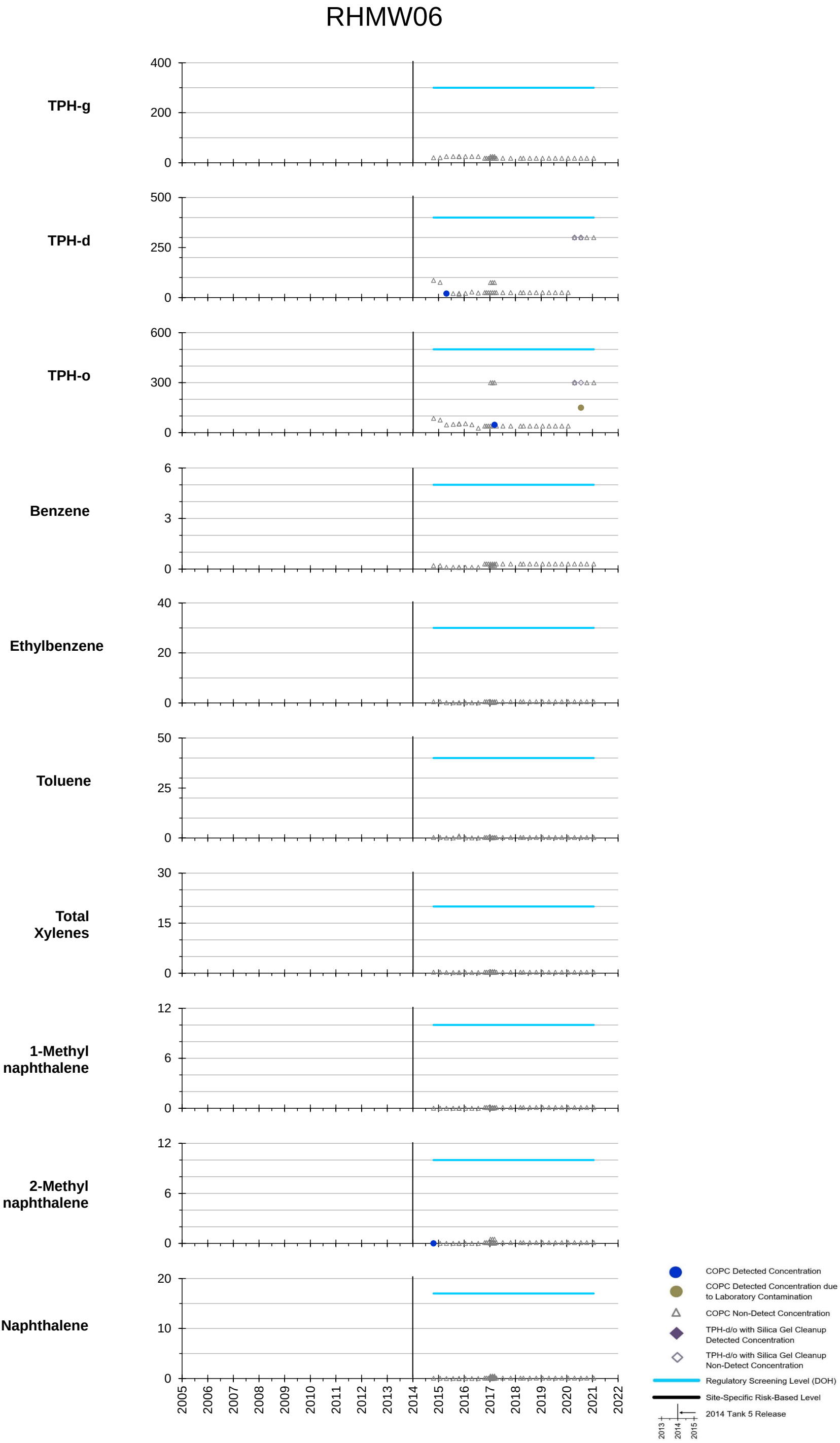

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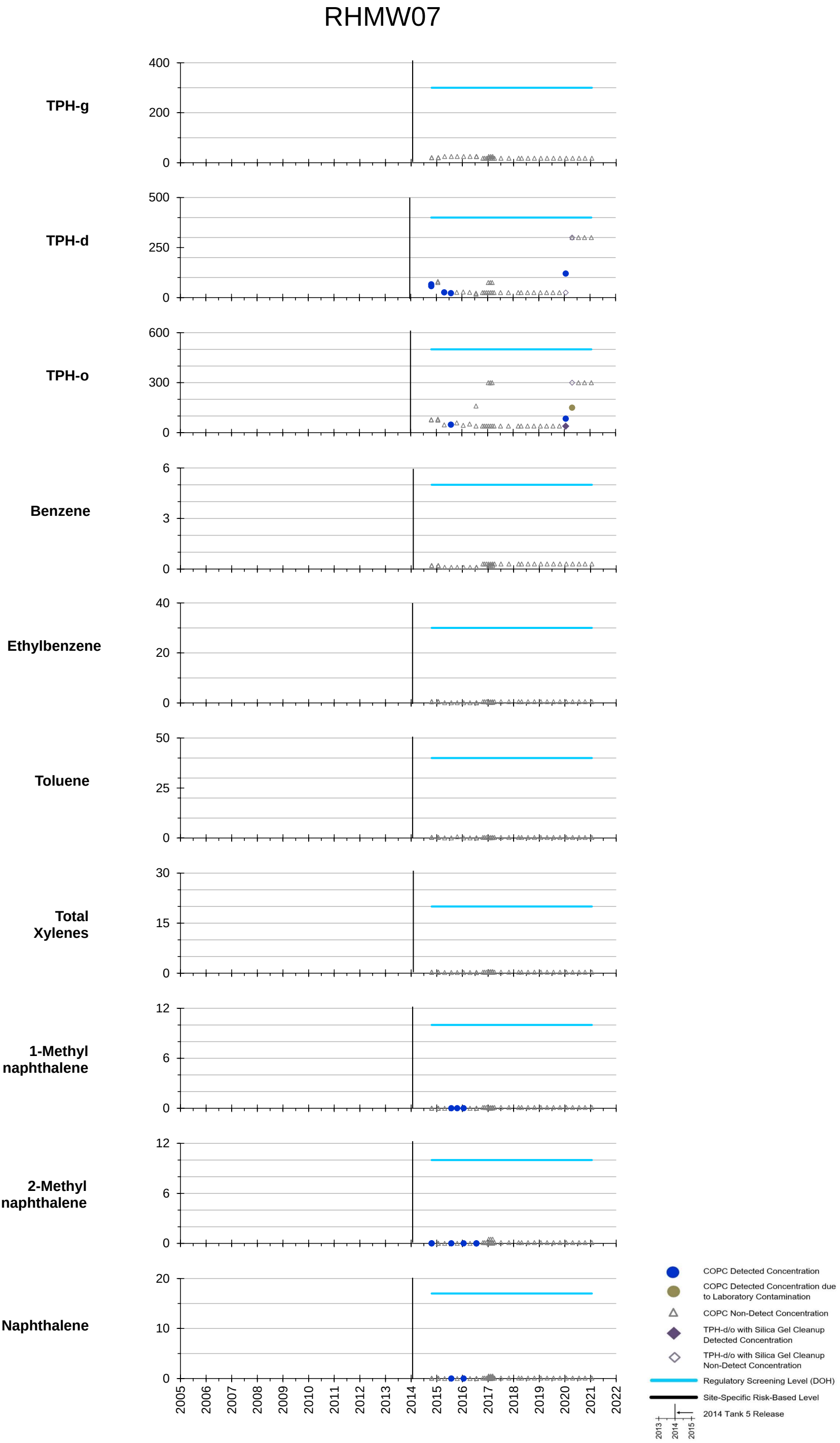

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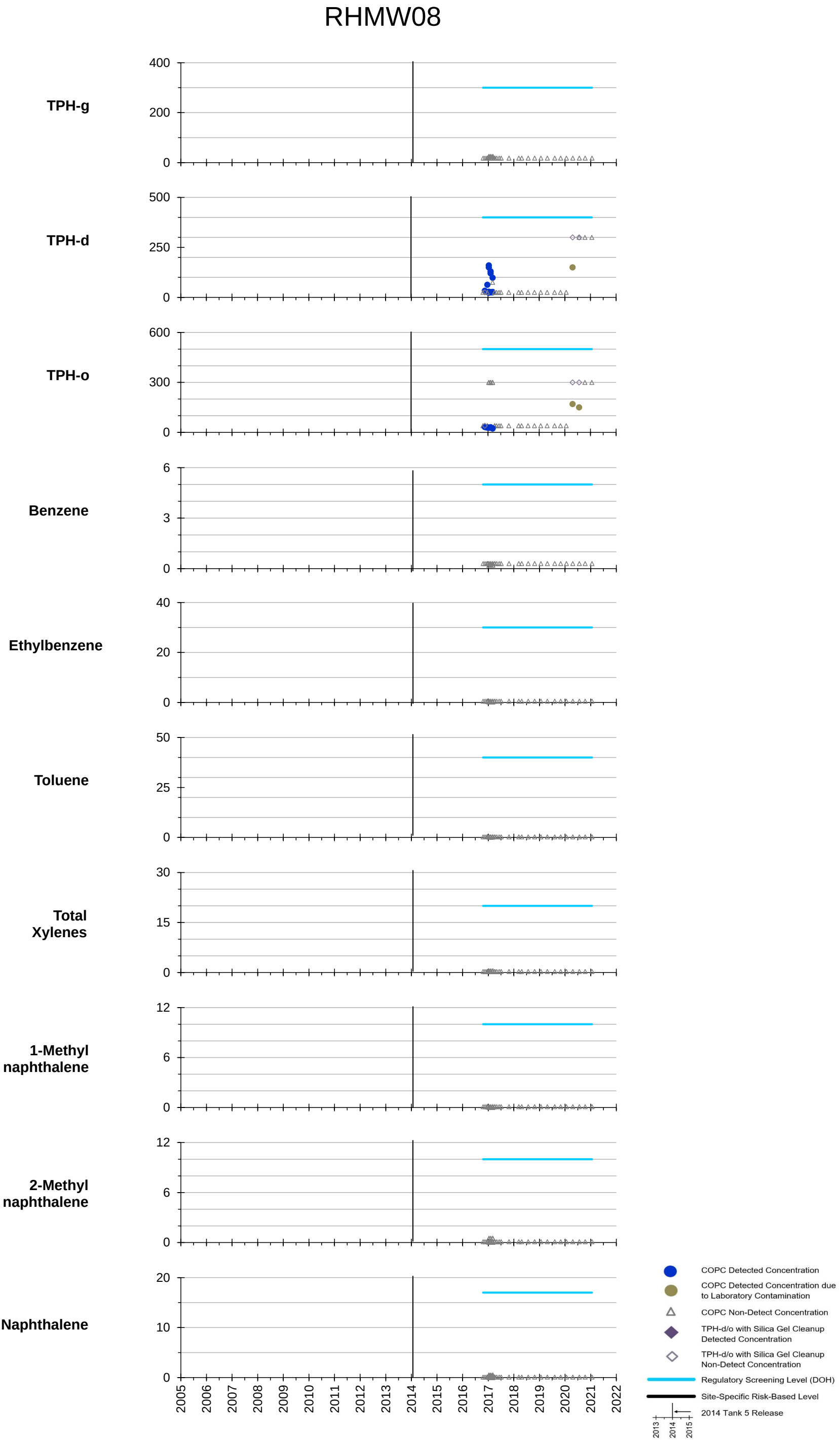

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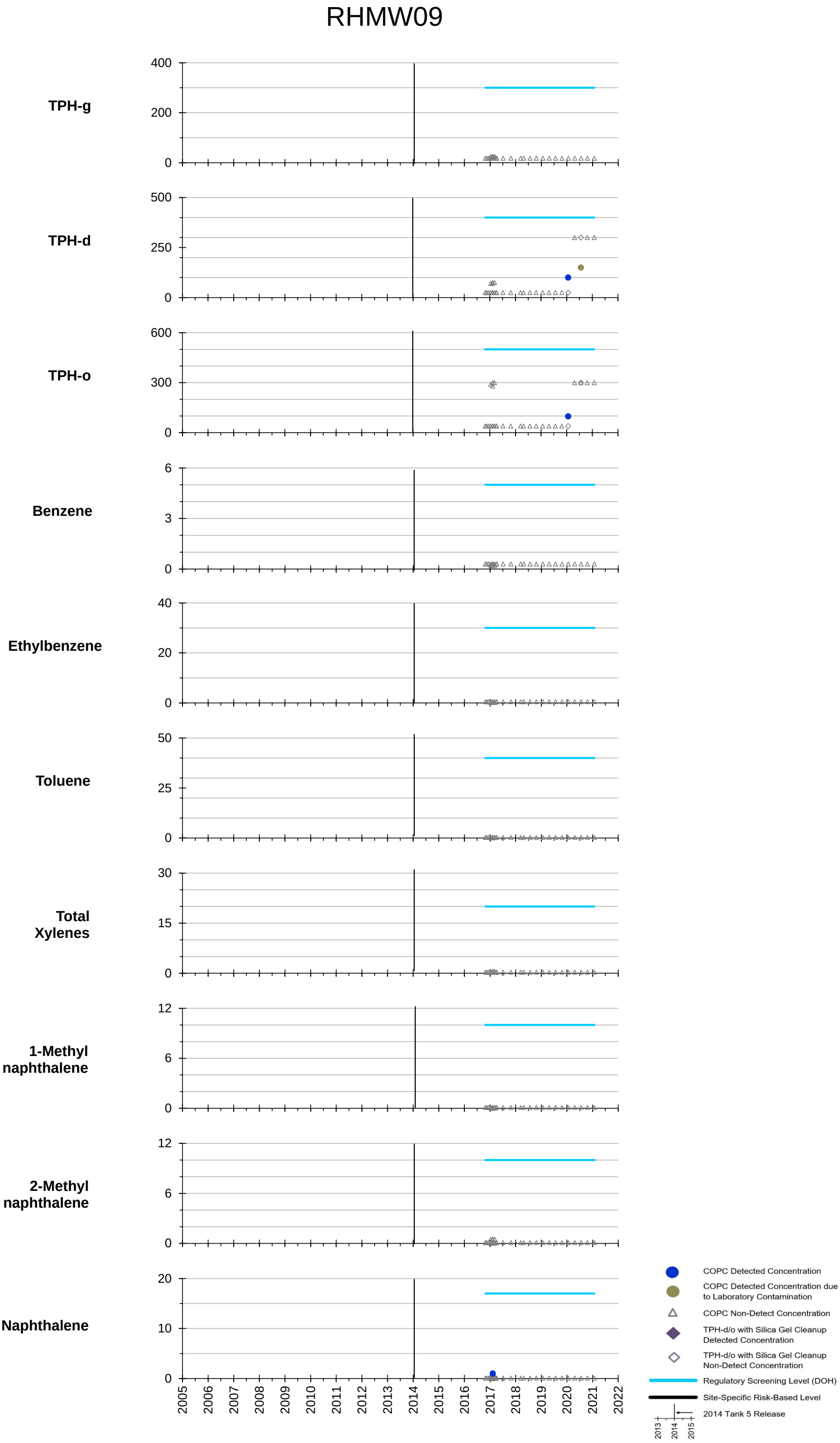

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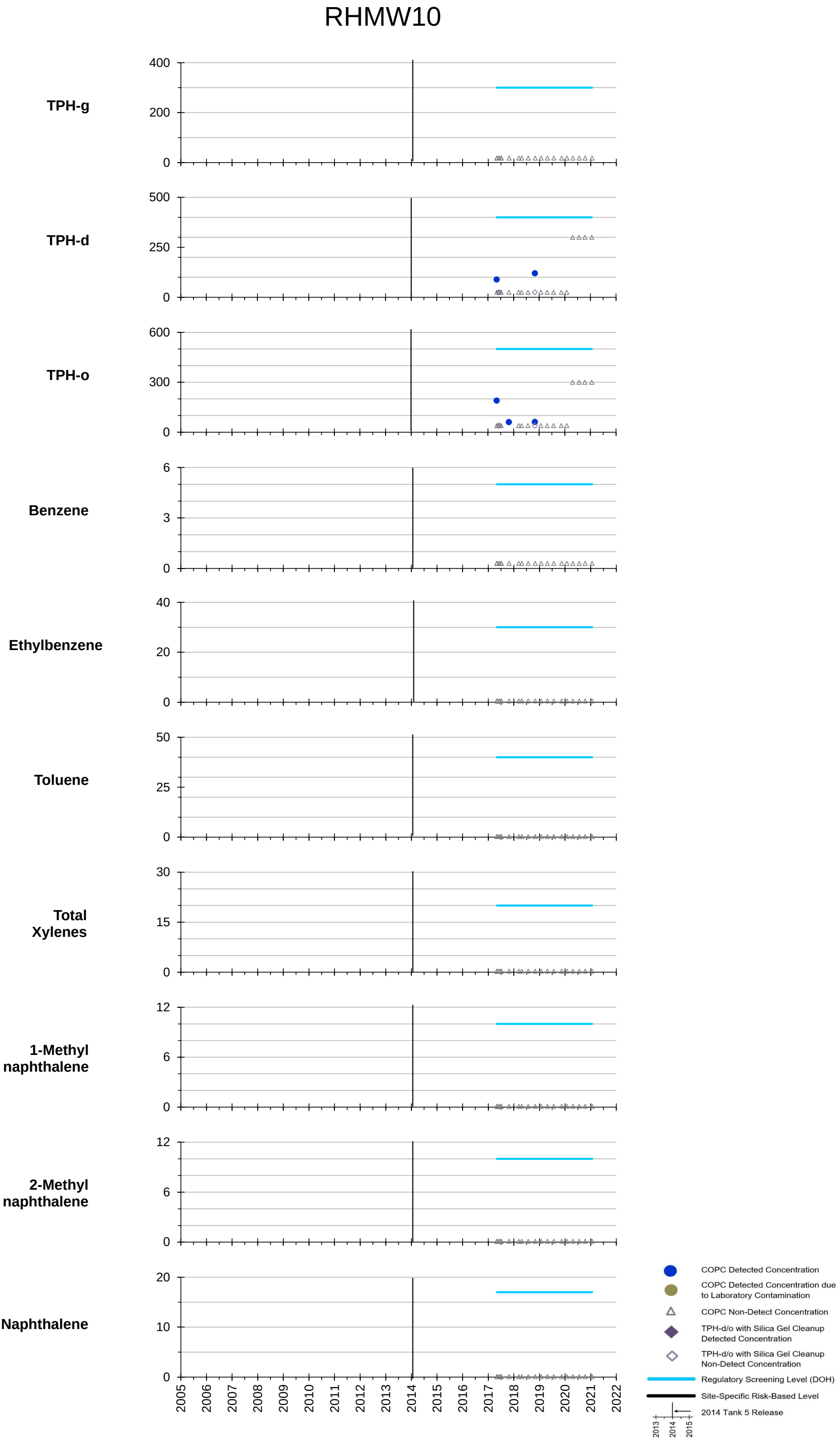

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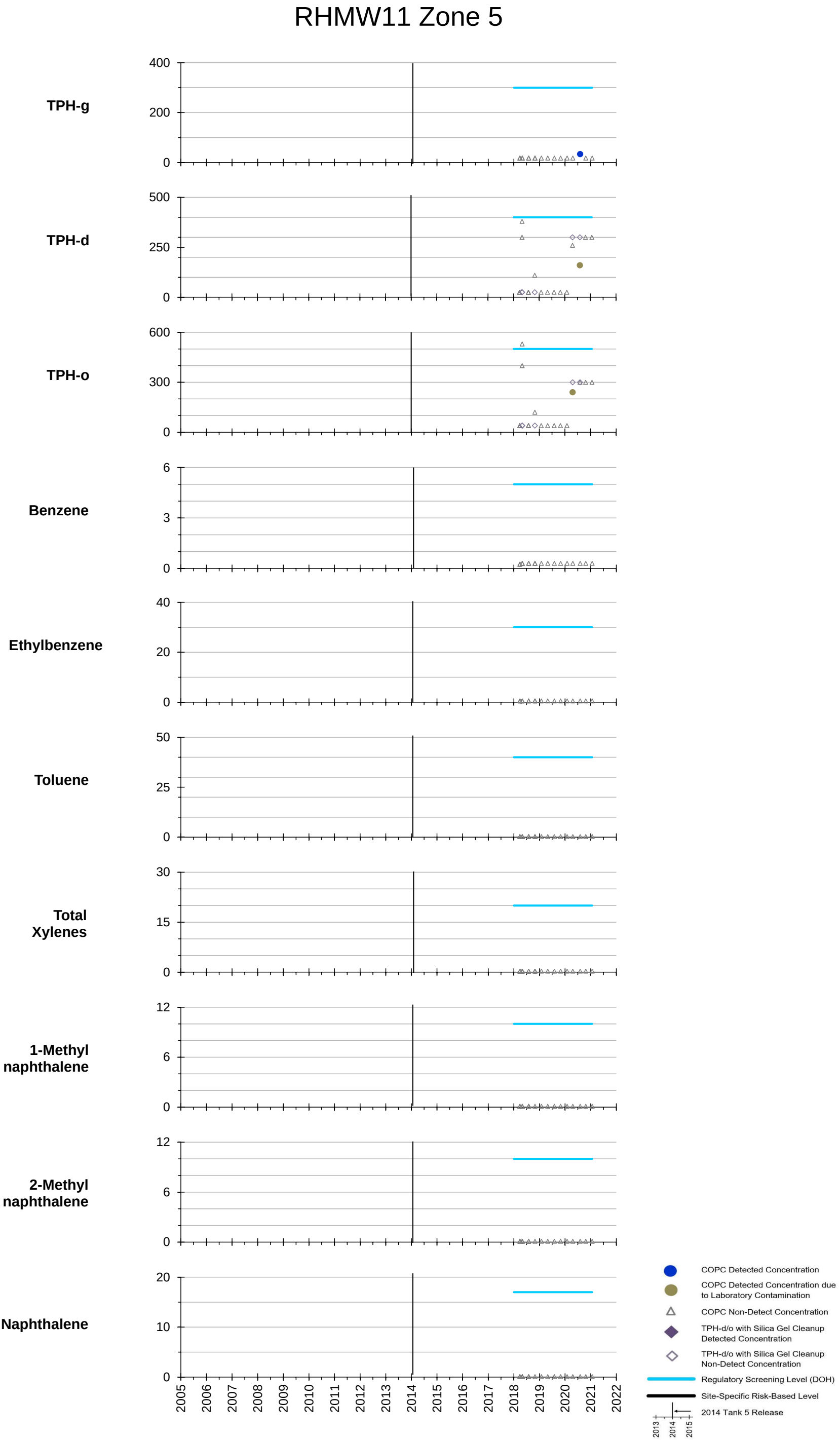

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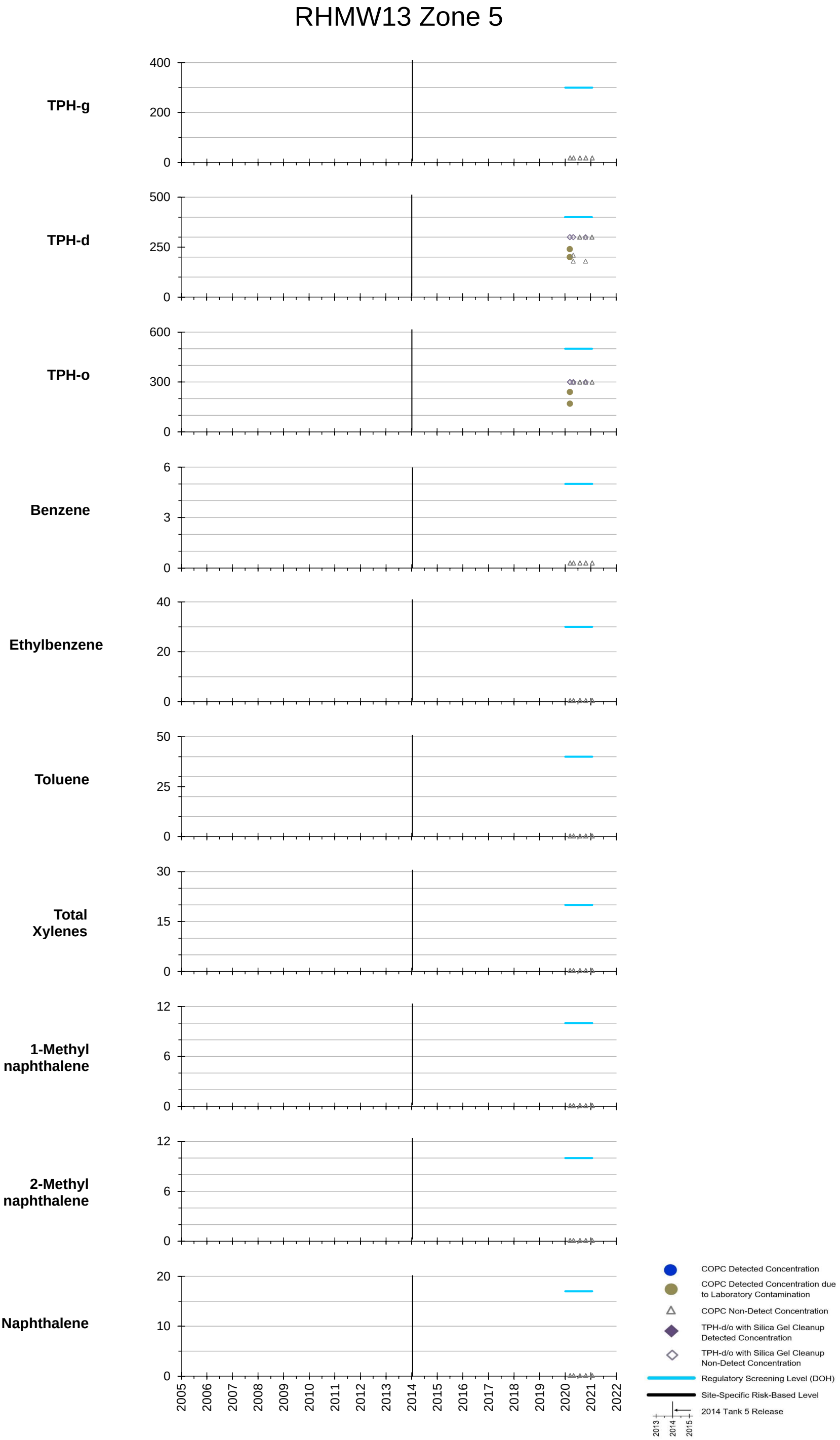

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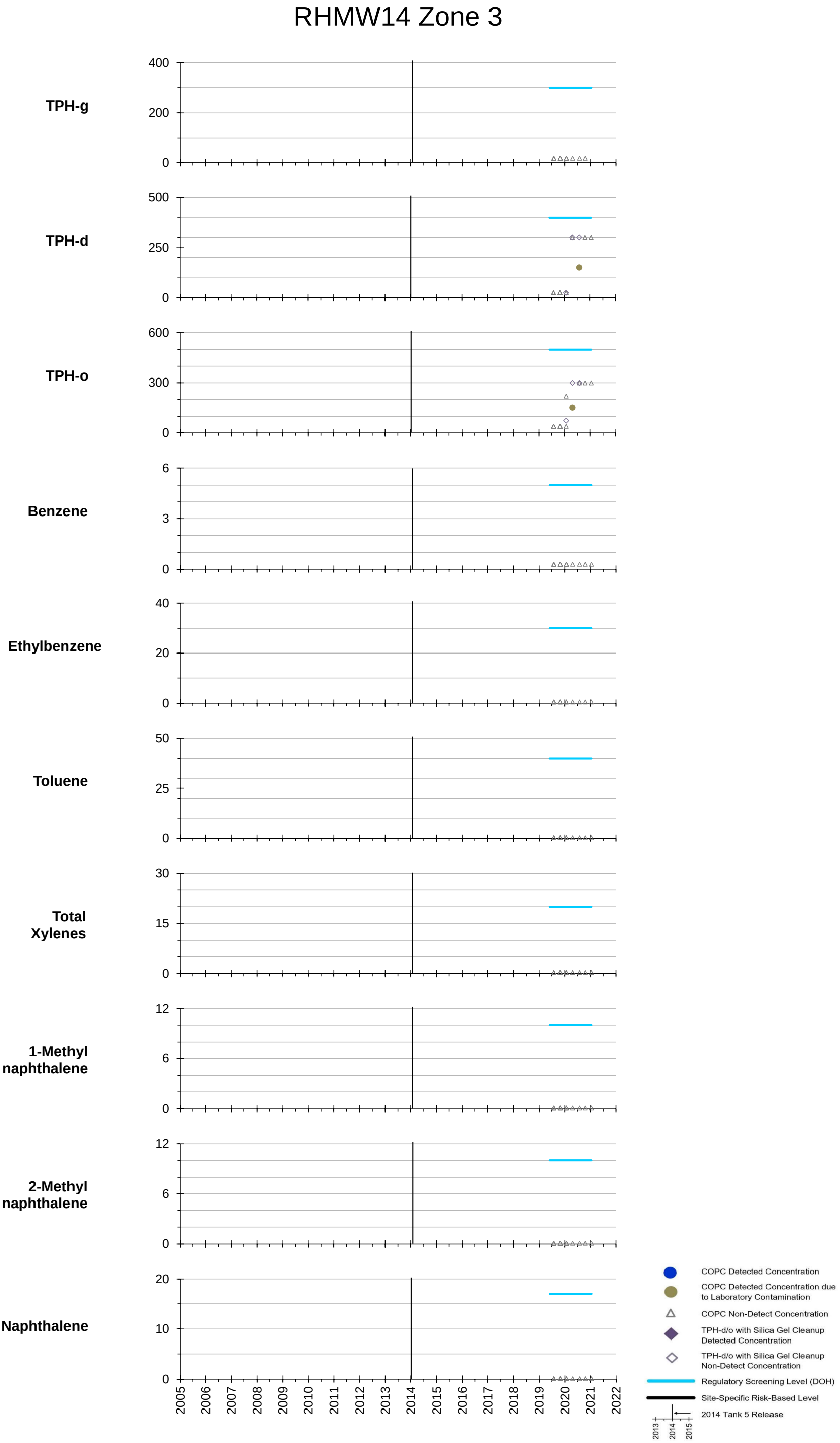

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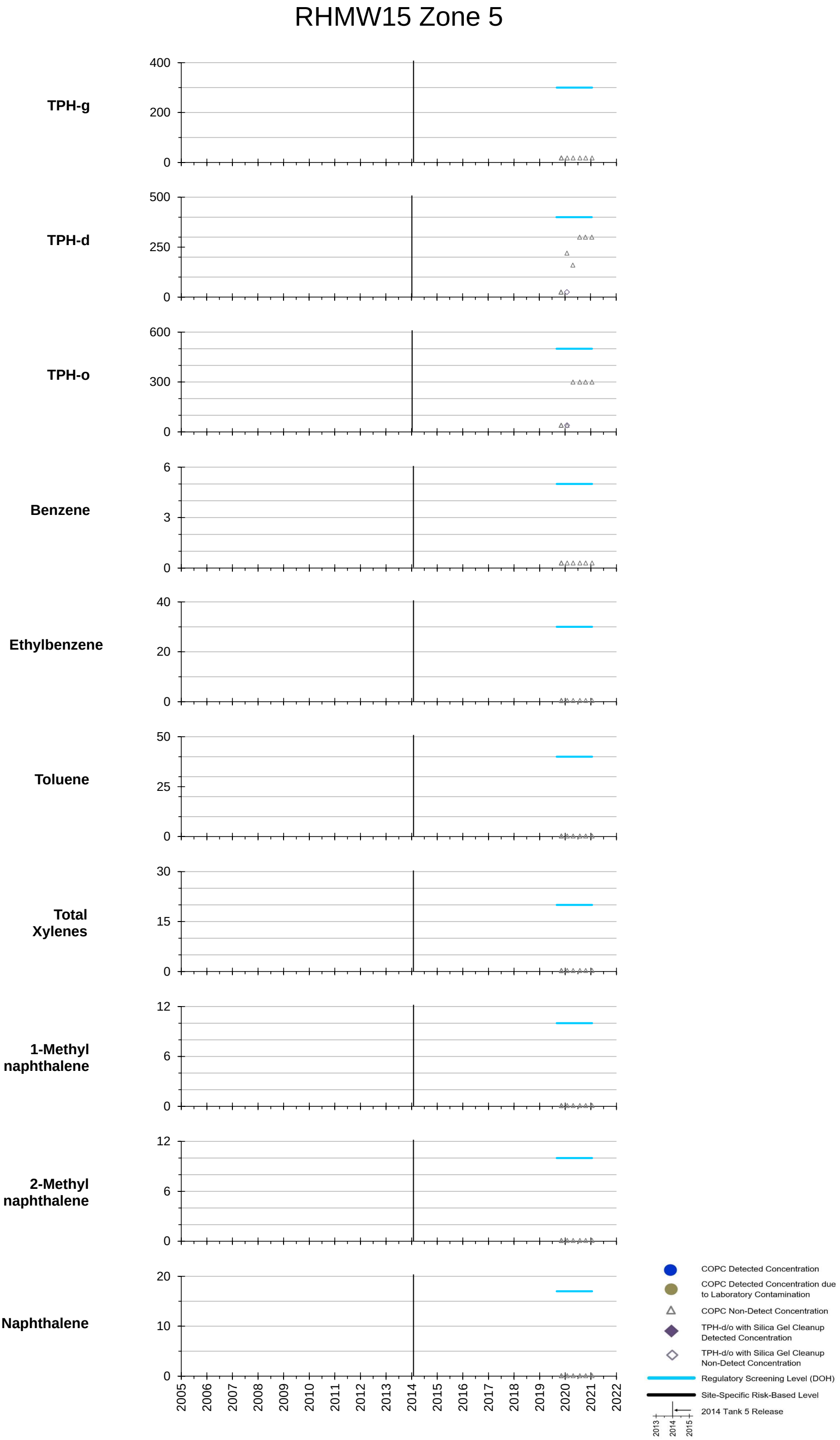

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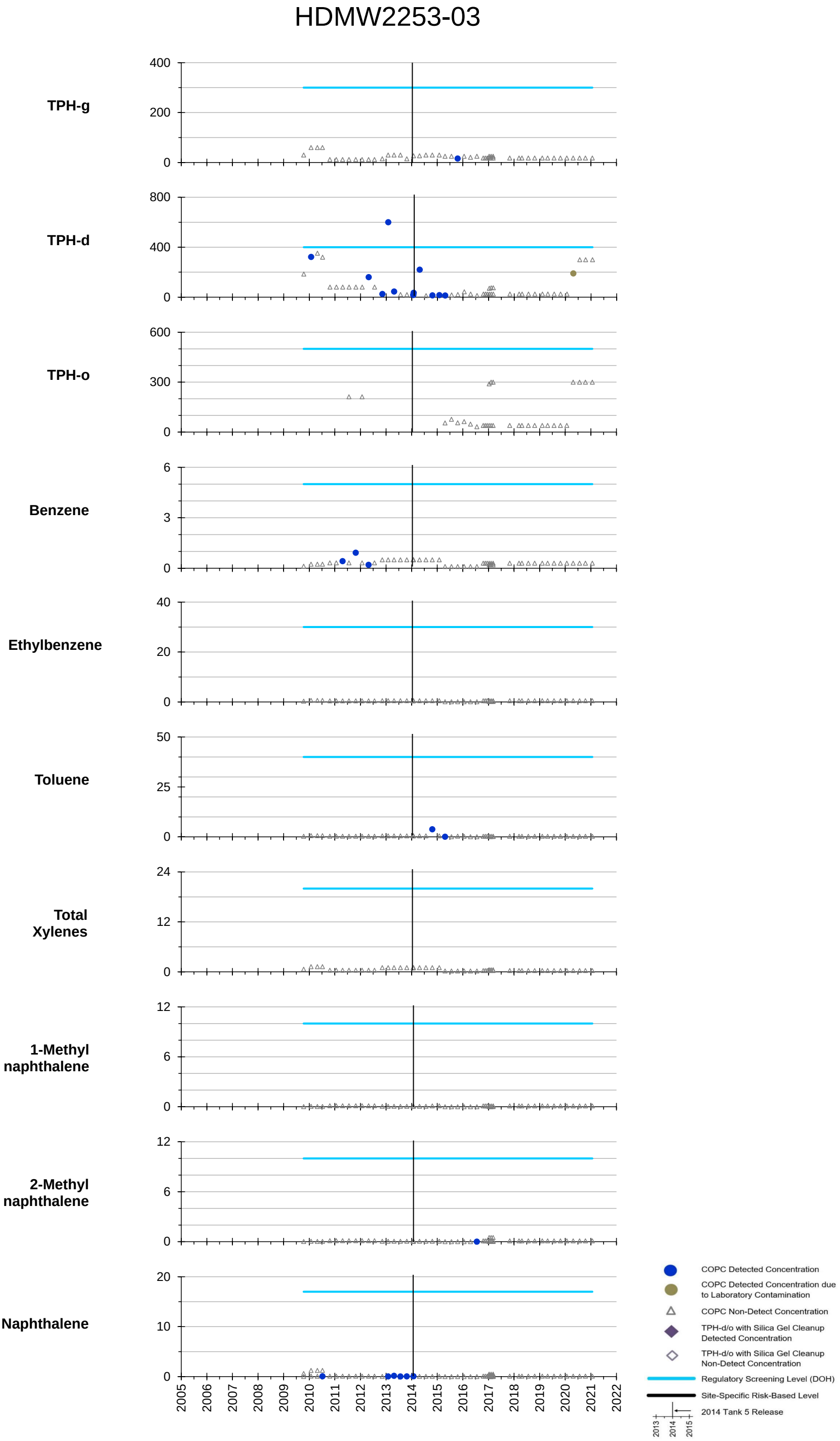
Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



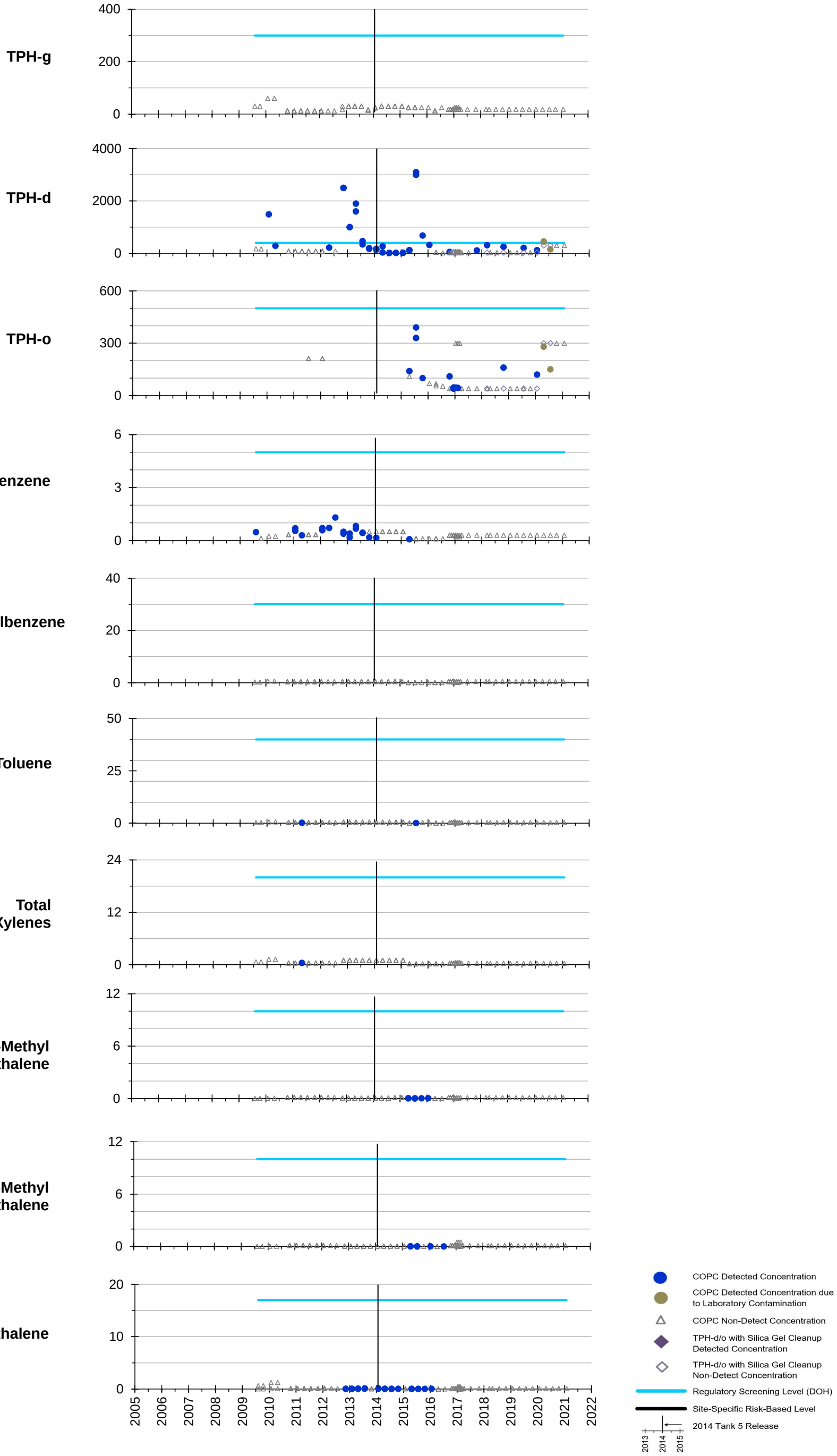
All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs

OWDFMW01



All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

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Appendix A.3:
Natural Attenuation Parameter Graphs

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Appendix A.3.1:
Cumulative Natural Attenuation Parameter Graphs

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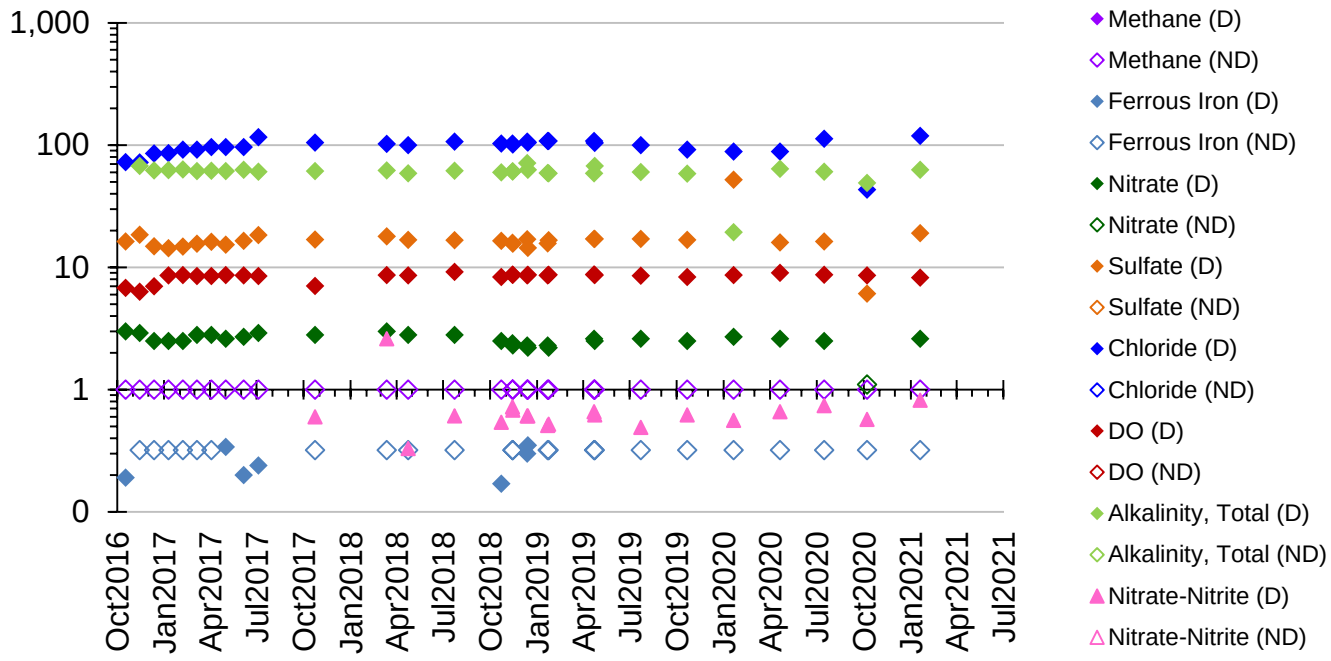
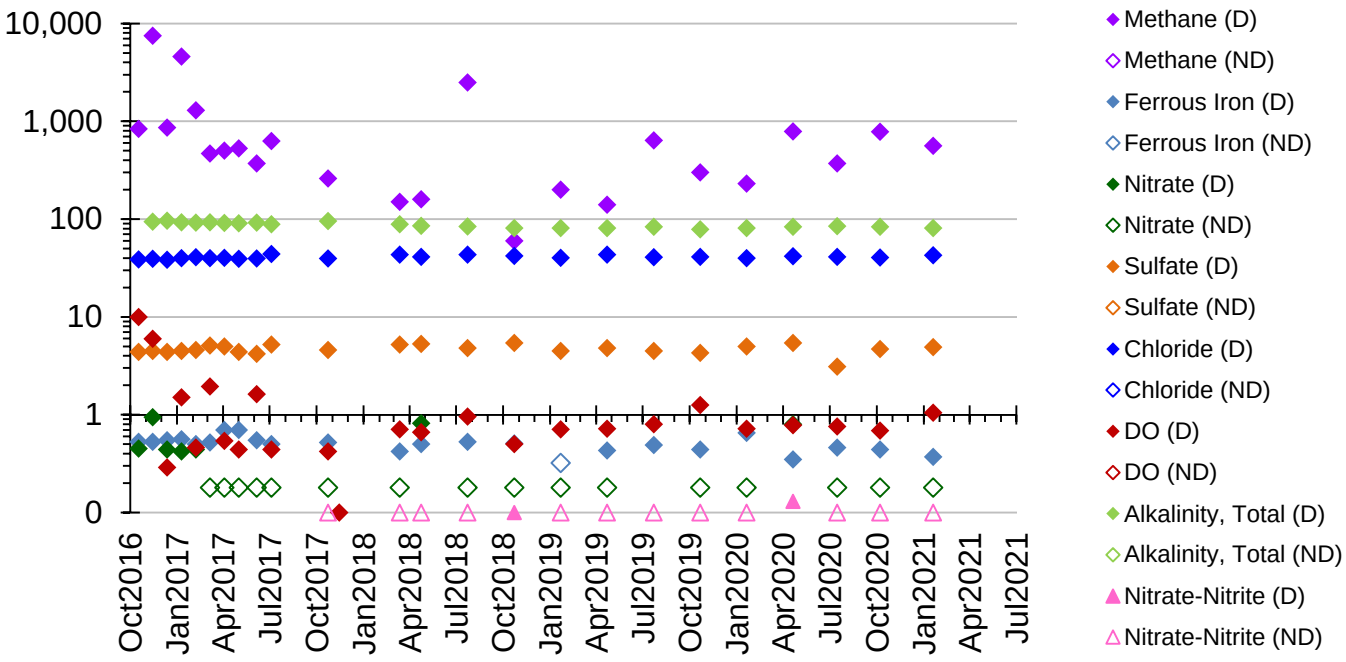
Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs

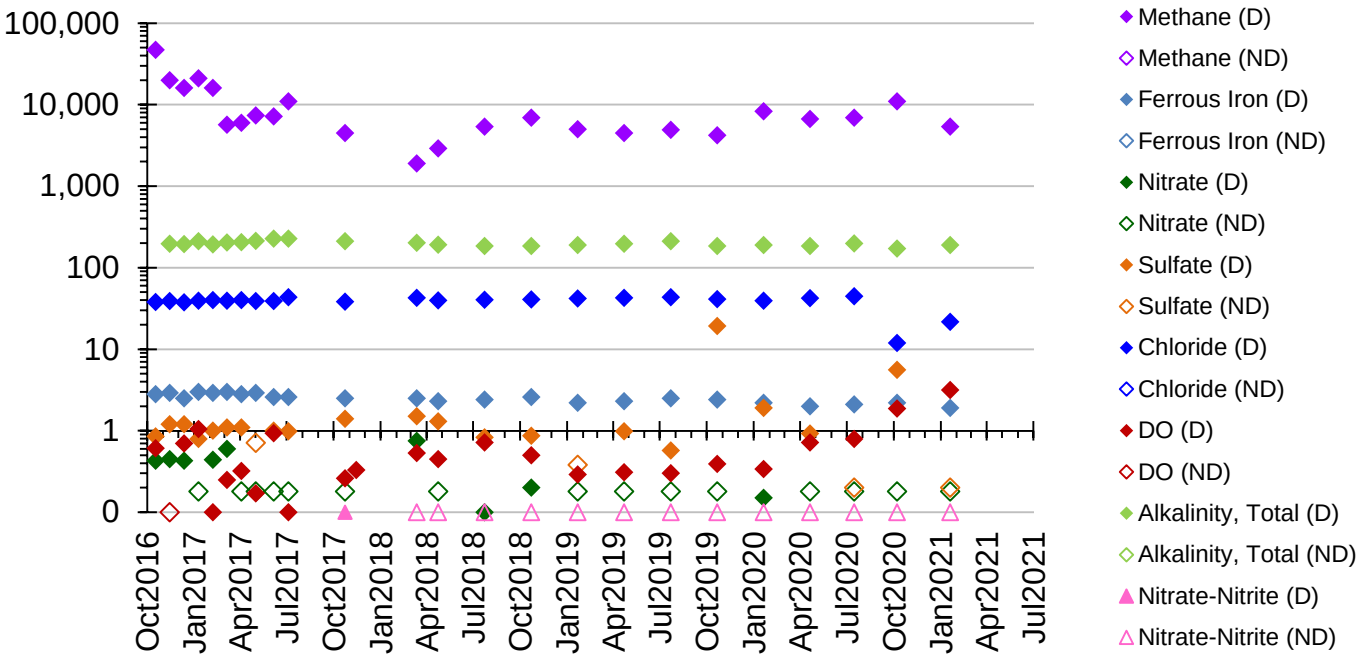
RHMW2254-01 NAPs



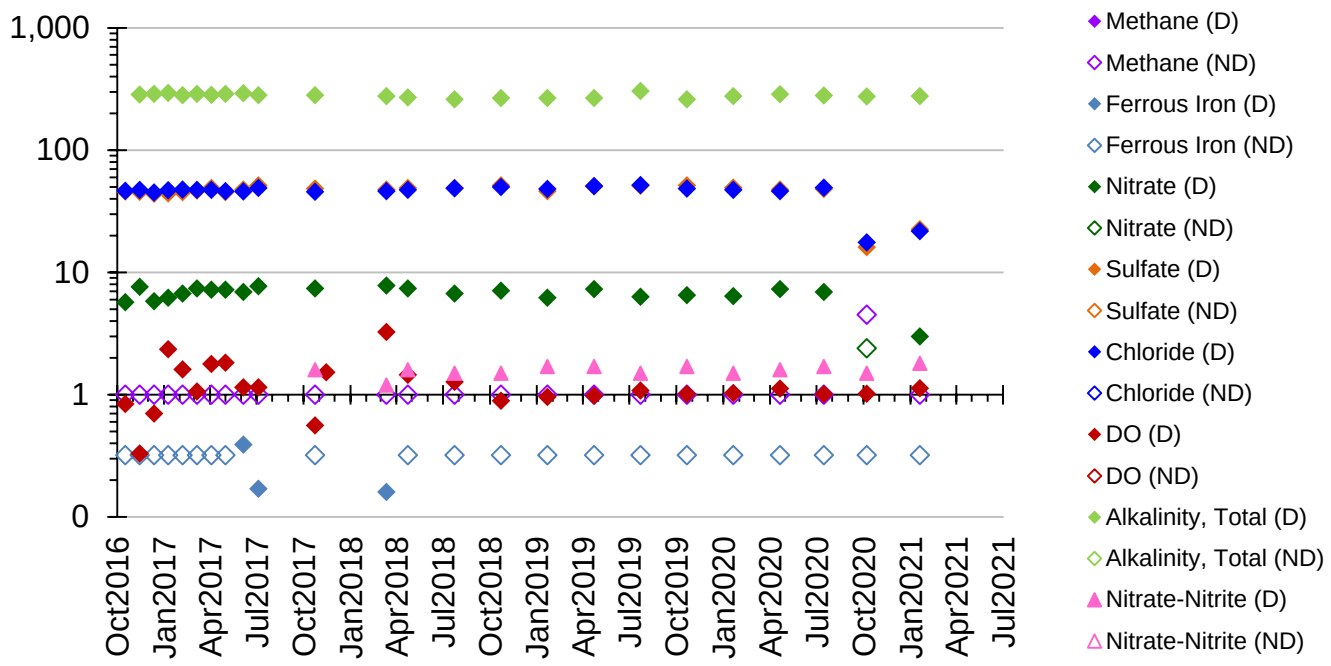
RHMW01 NAPs



RHMW02 NAPs



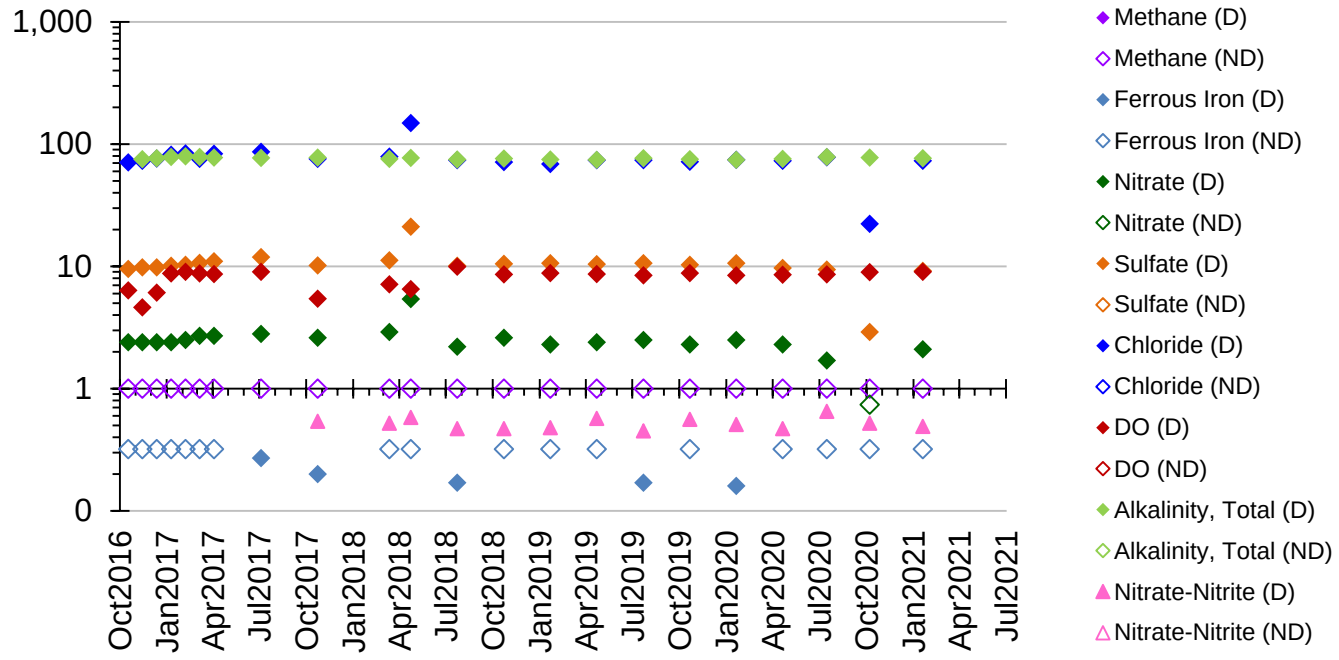
RHMW03 NAPs



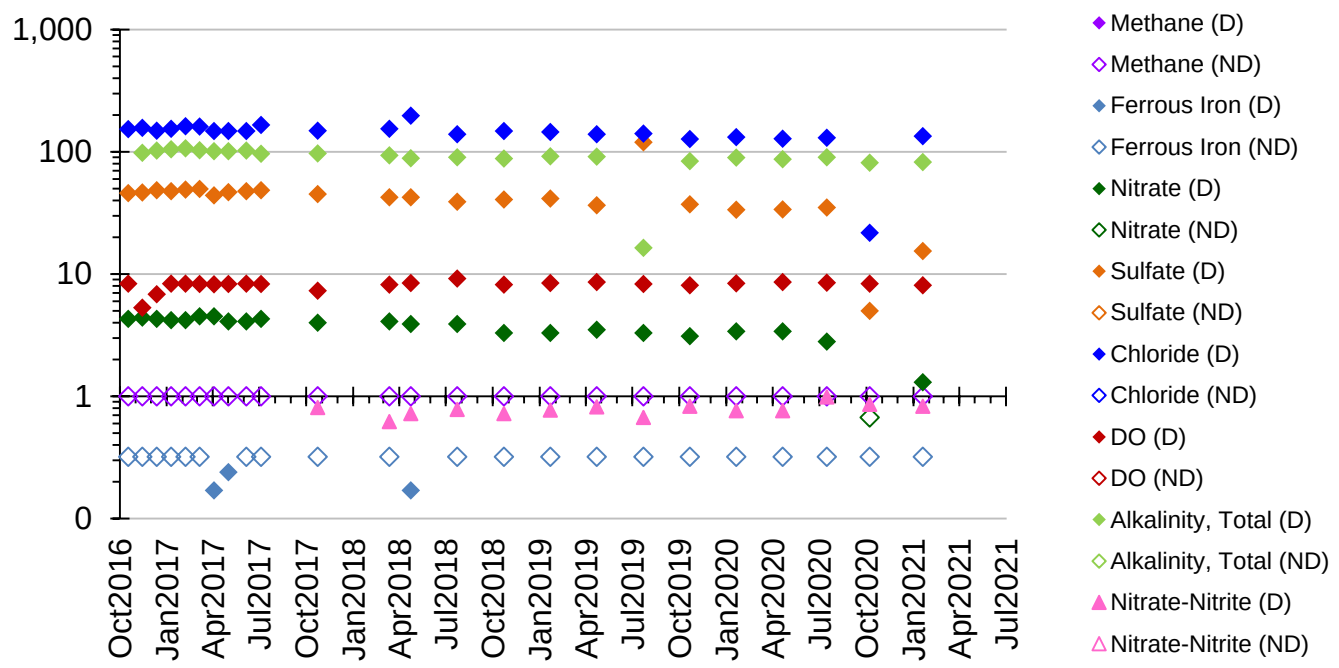
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

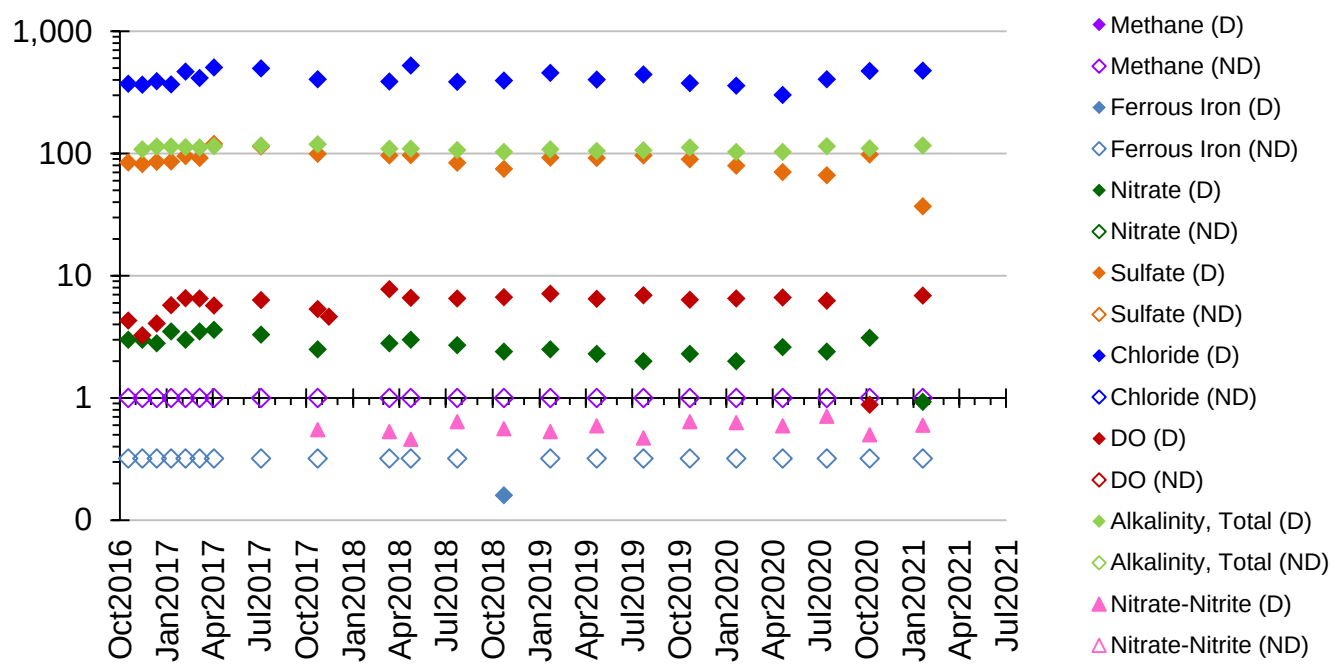
RHMW04 NAPs



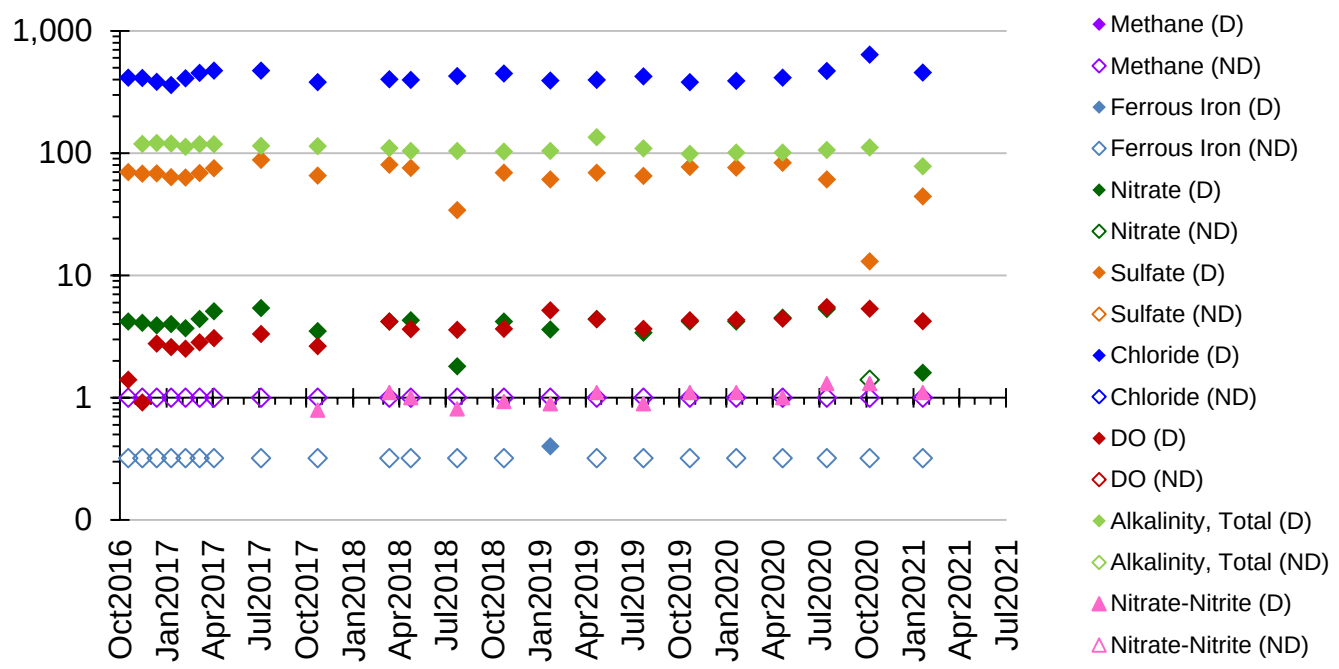
RHMW05 NAPs



RHMW06 NAPs



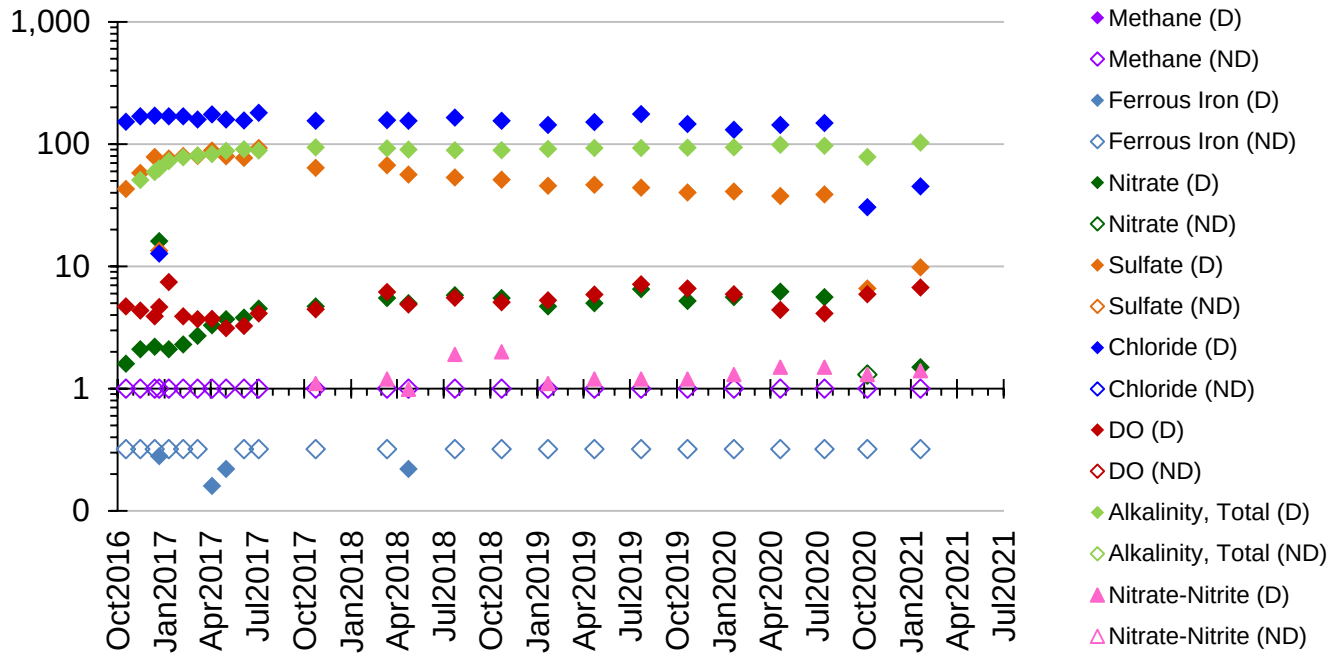
RHMW07 NAPs



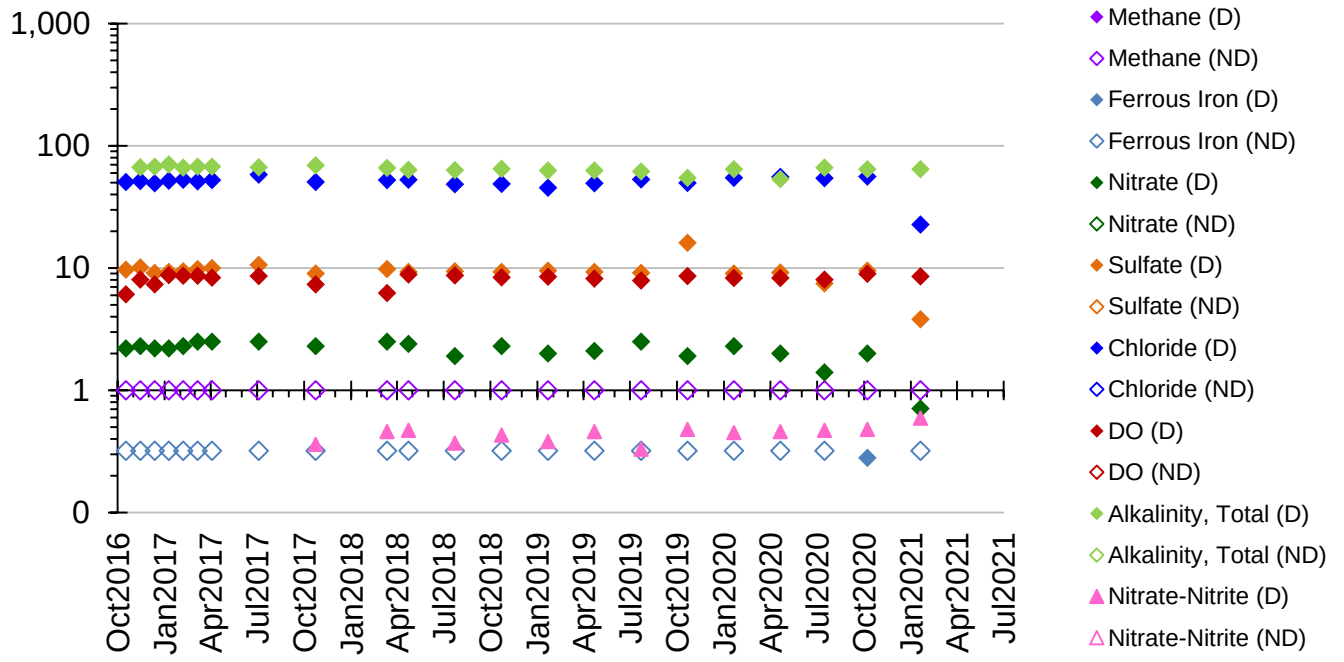
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

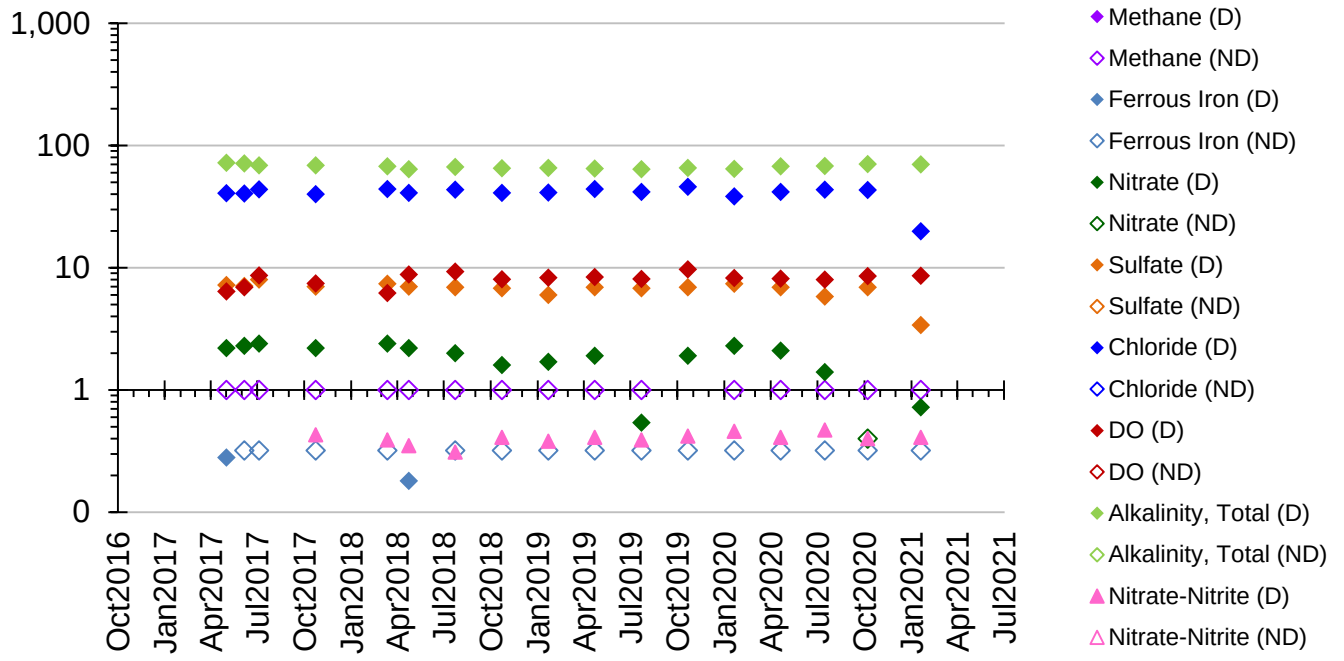
RHMW08 NAPs



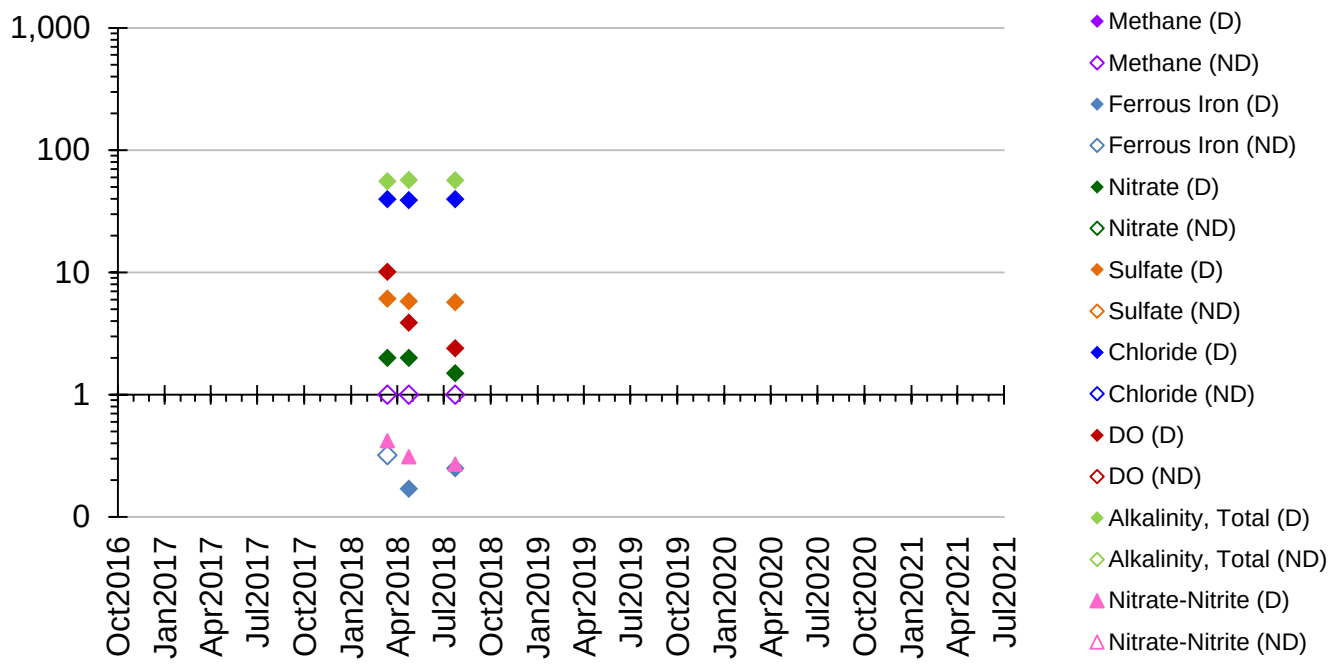
RHMW09 NAPs



RHMW10 NAPs

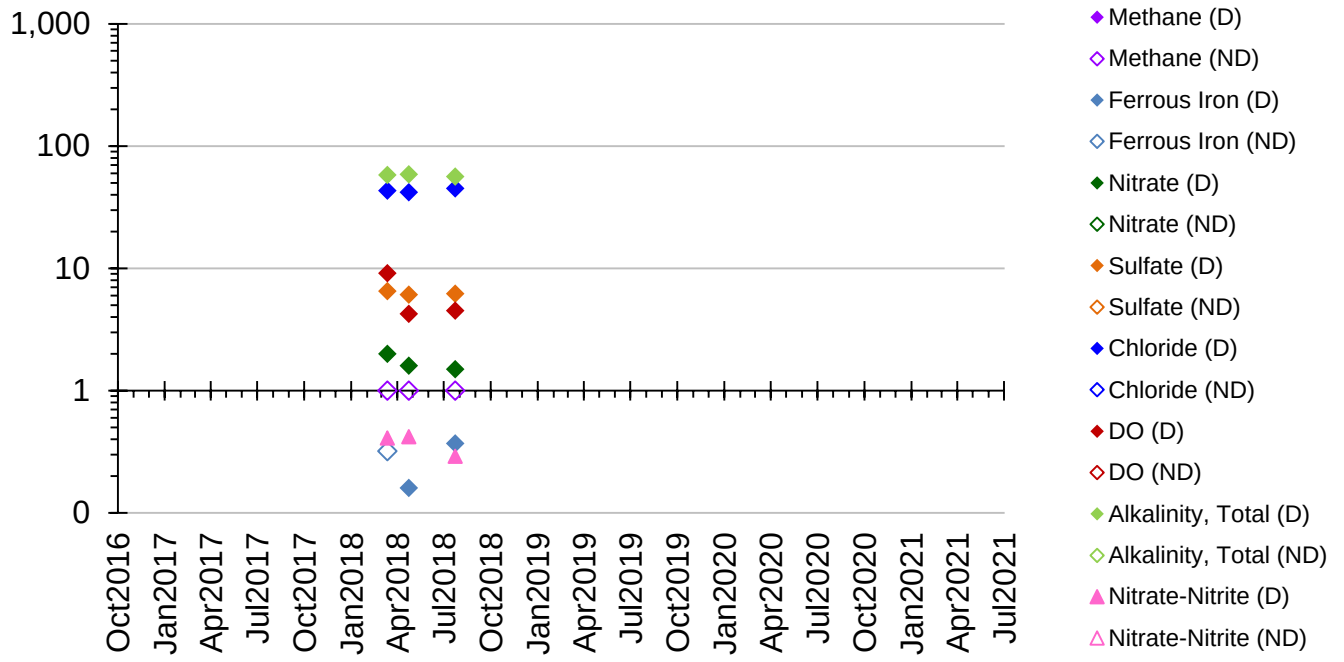


RHMW11 Zone 1 NAPs

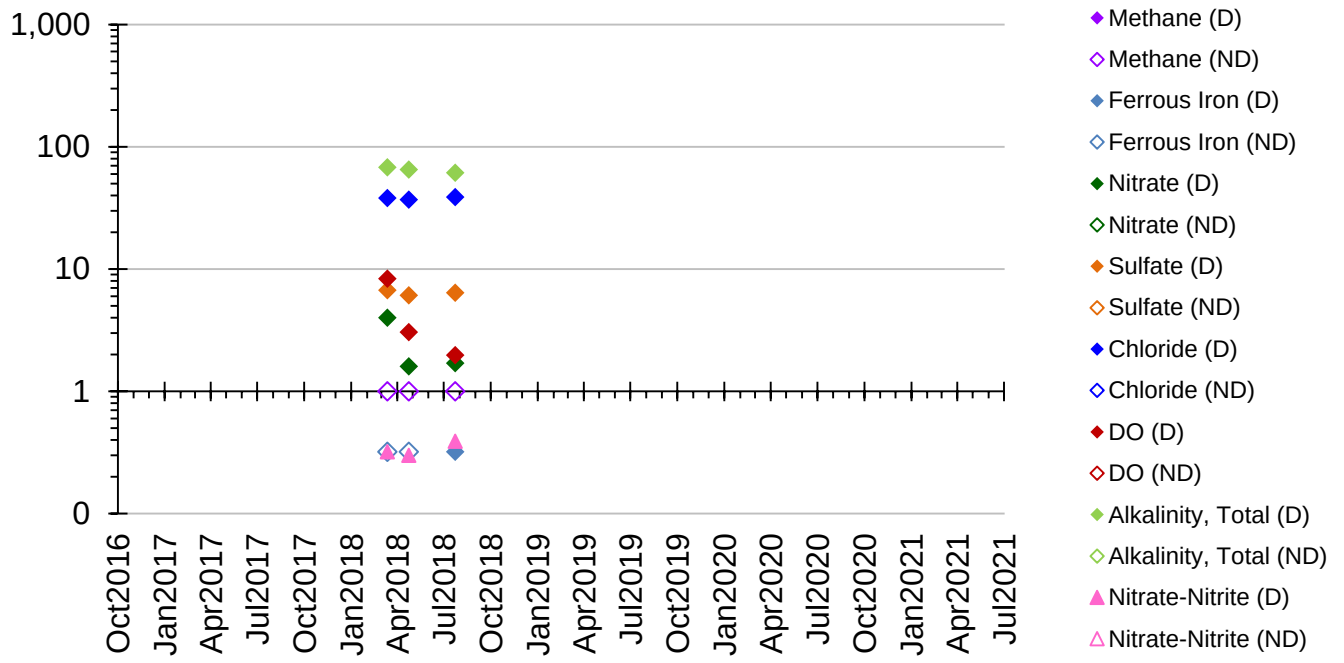


Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

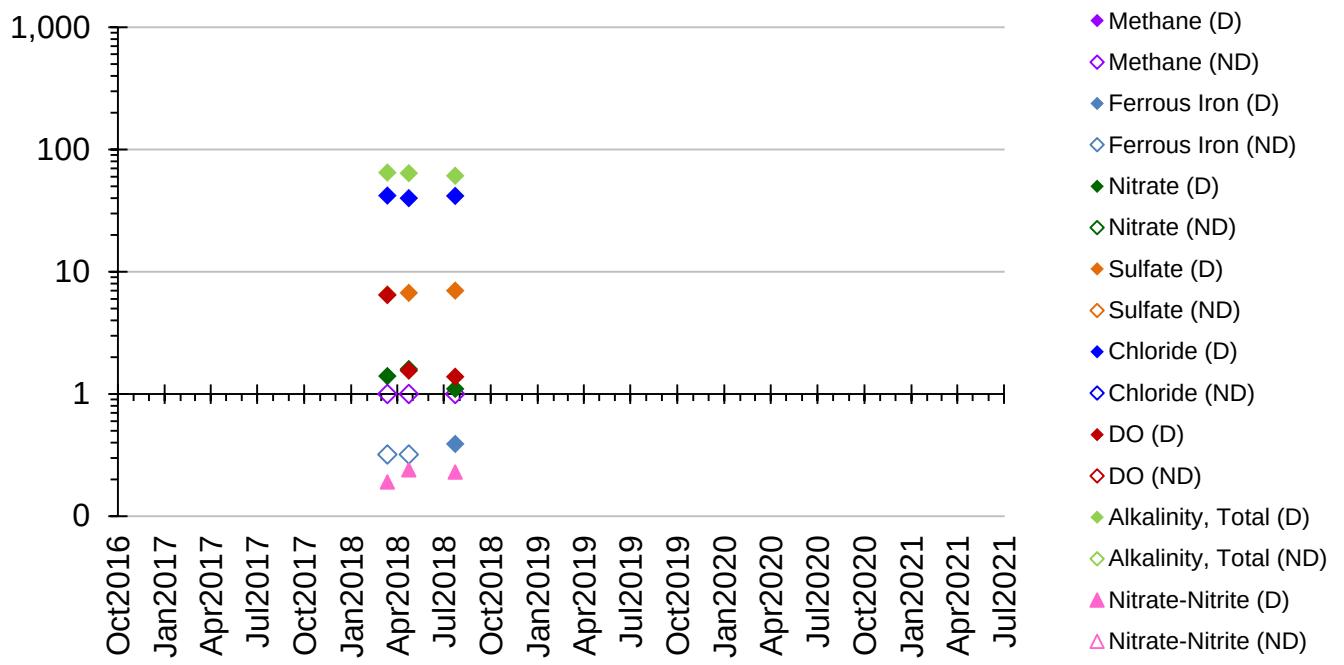
RHMW11 Zone 2 NAPs



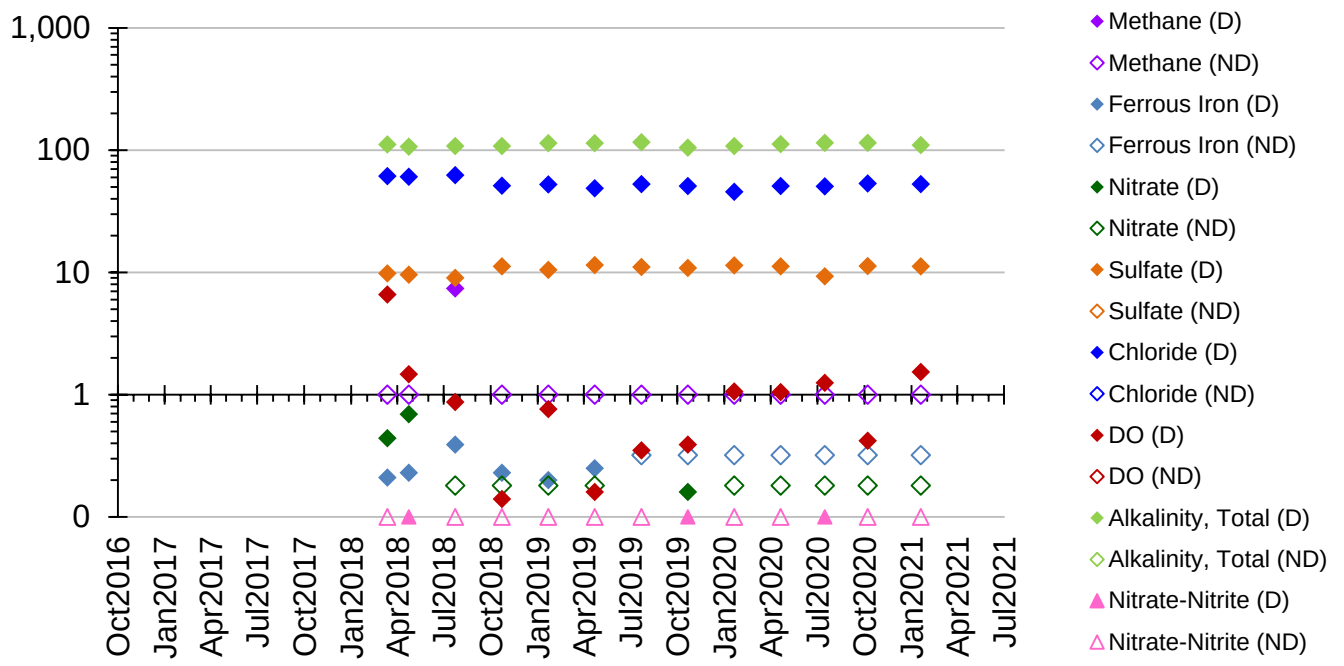
RHMW11 Zone 3 NAPs



RHMW11 Zone 4 NAPs



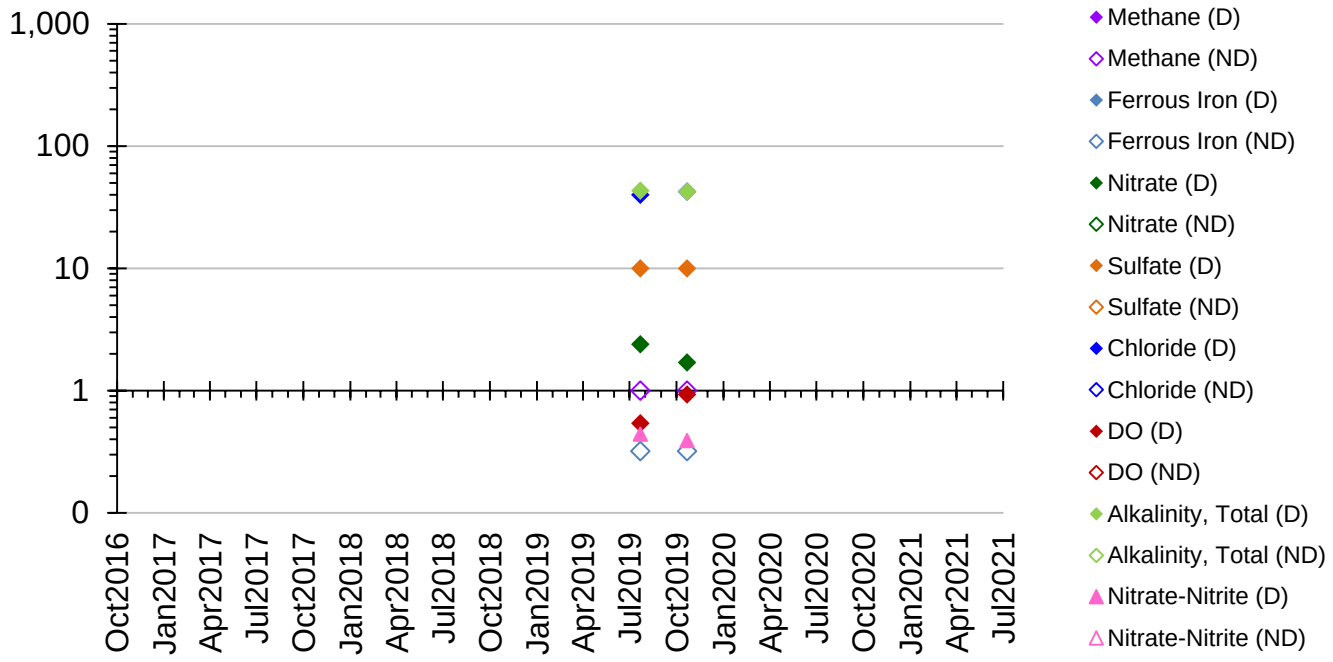
RHMW11 Zone 5 NAPs



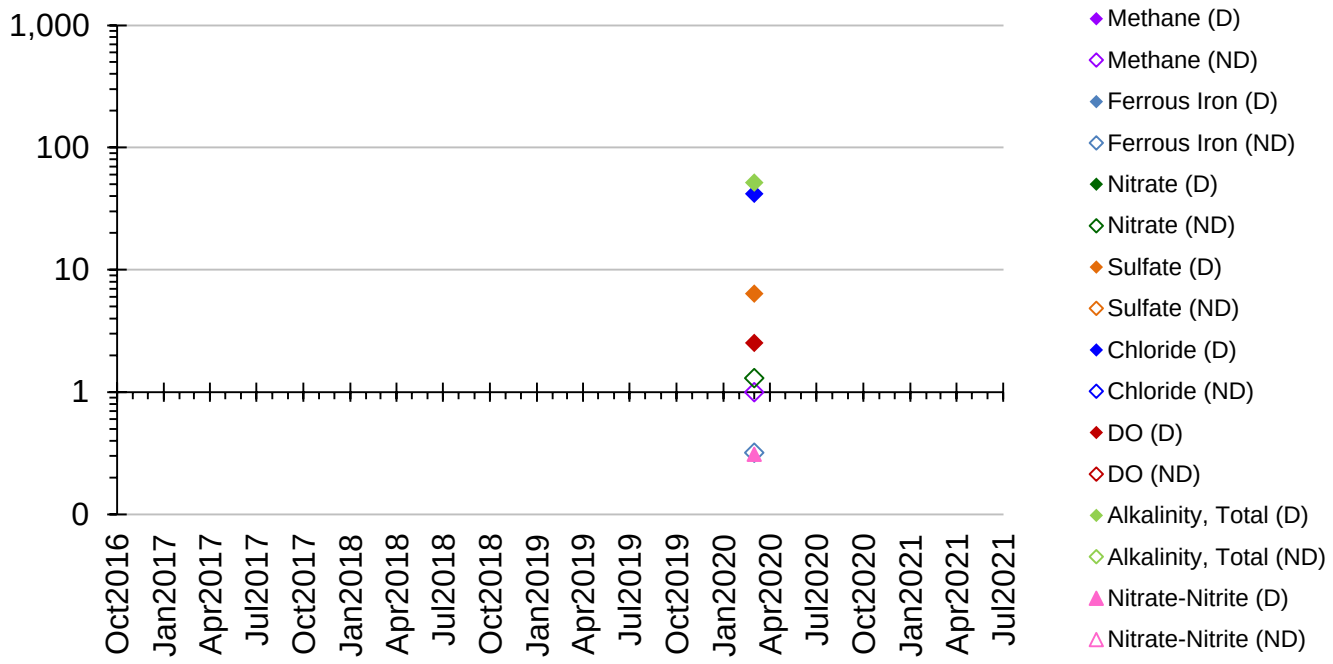
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

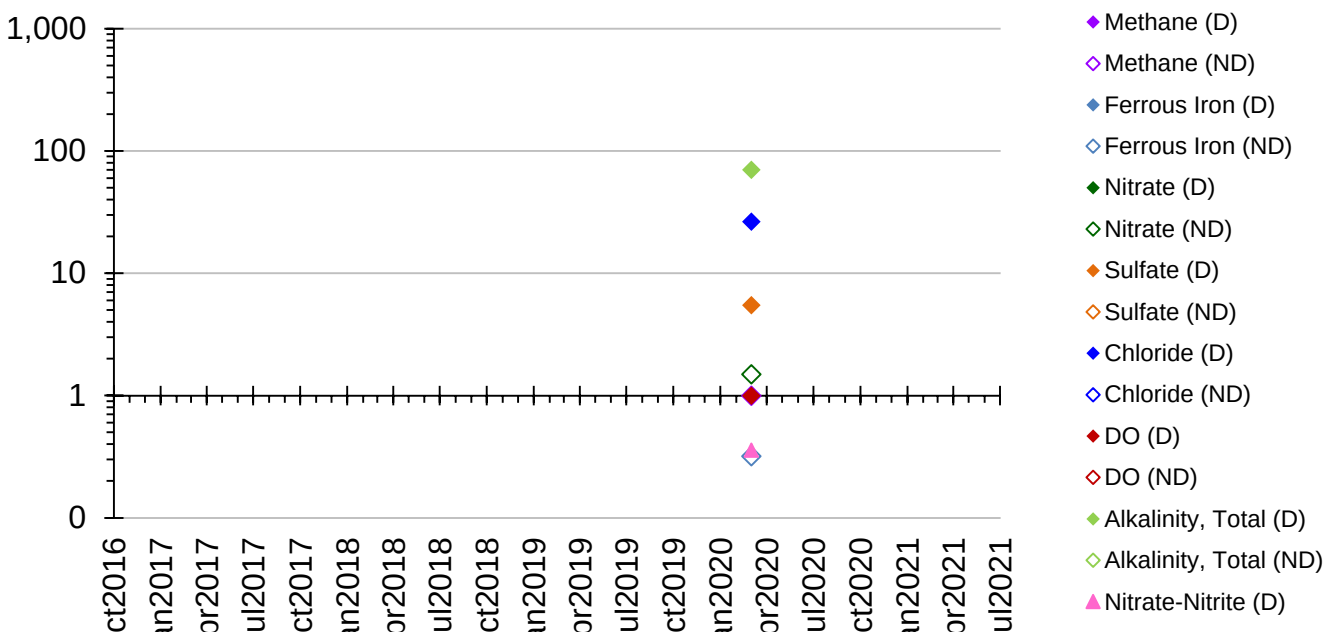
RHMW11 Zone 7 NAPs



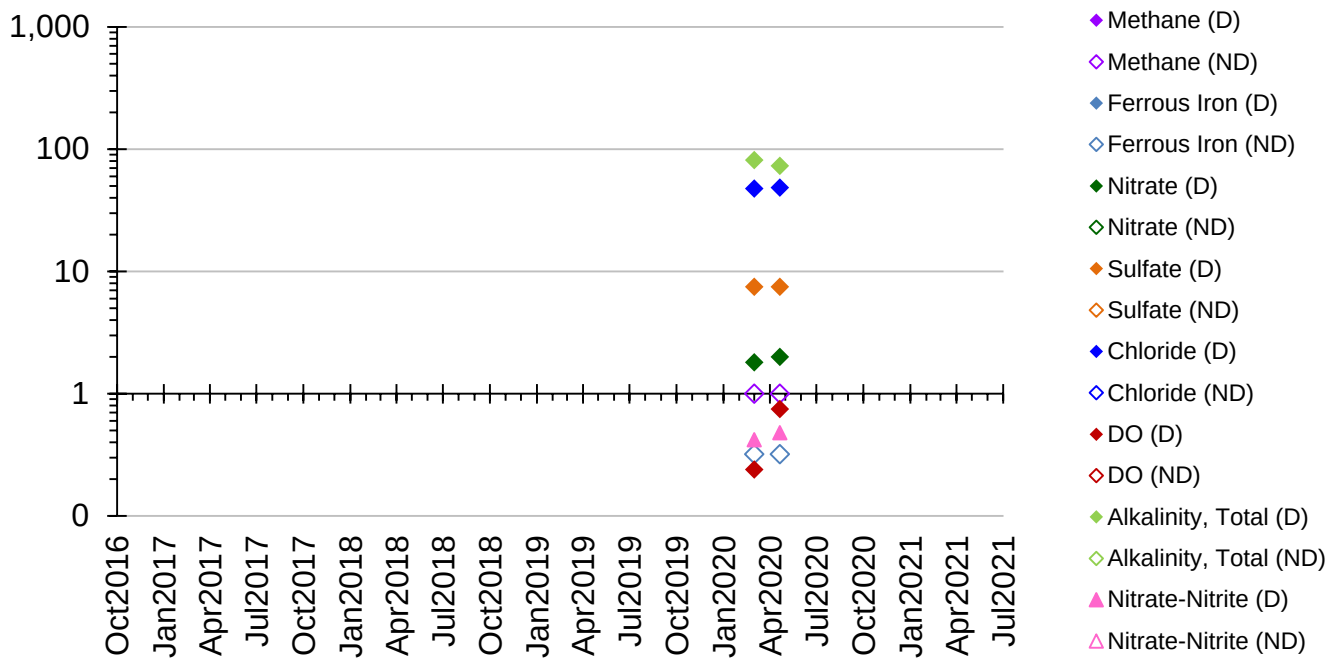
RHMW13 Zone 1 NAPs



RHMW13 Zone 2 NAPs



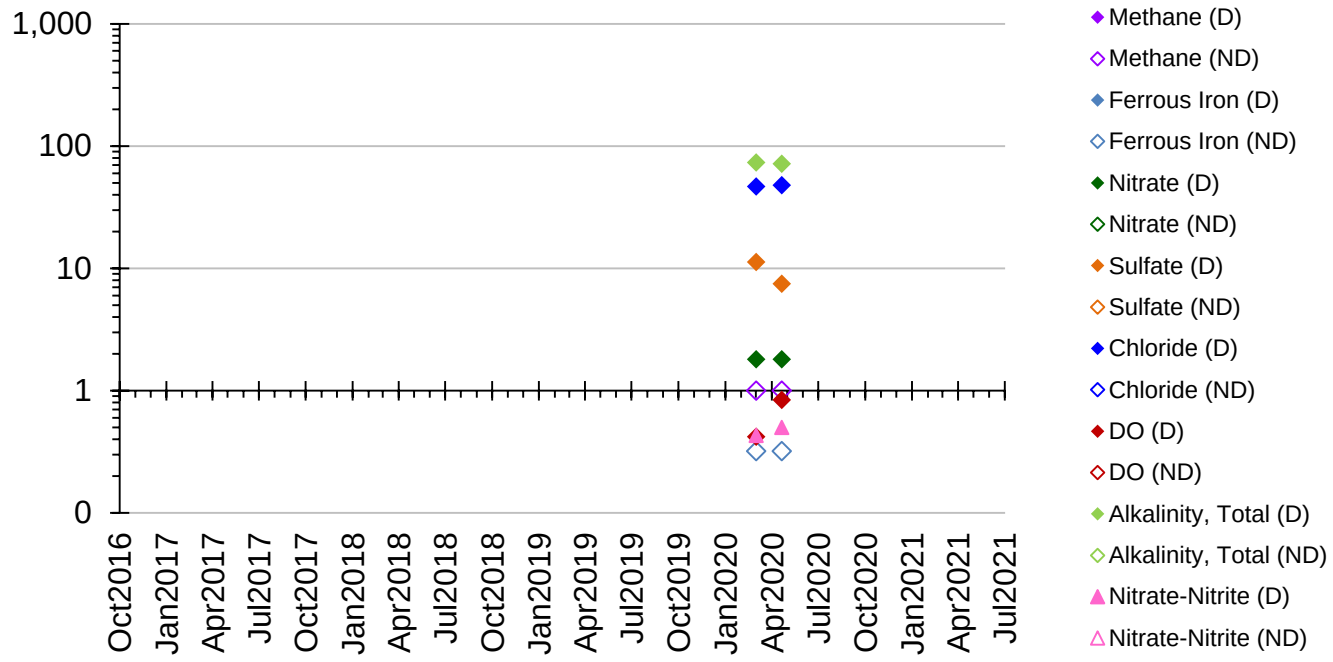
RHMW13 Zone 3 NAPs



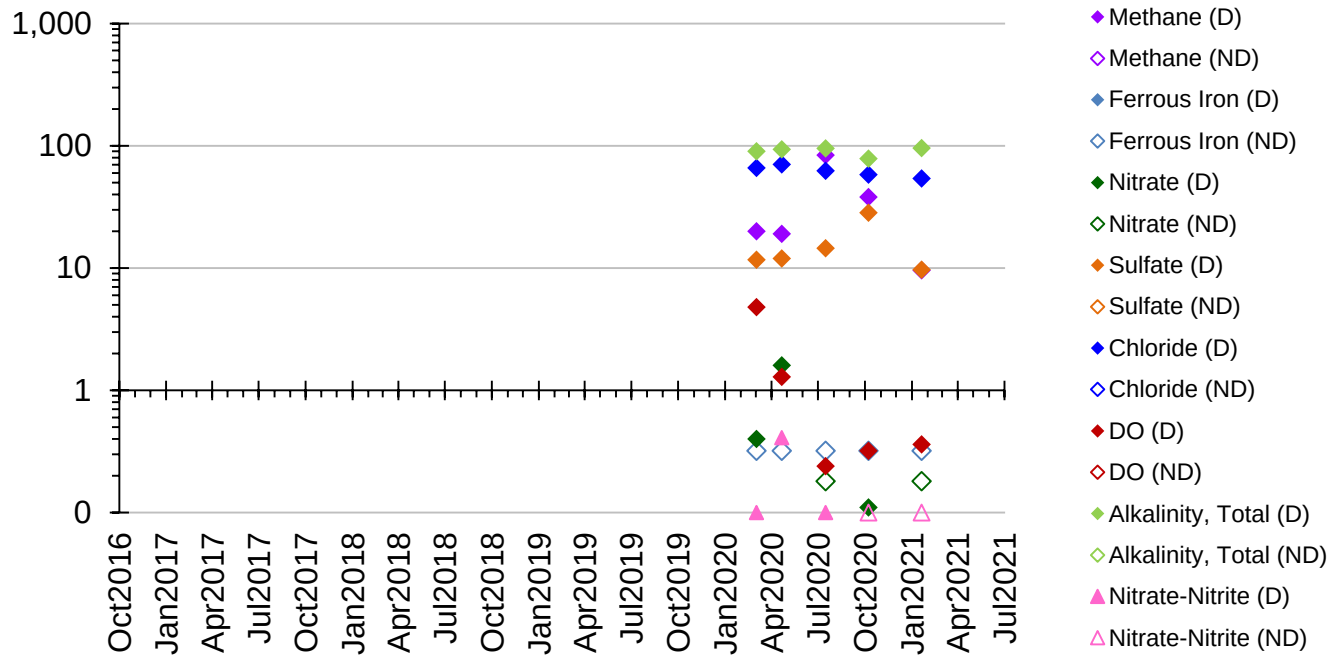
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

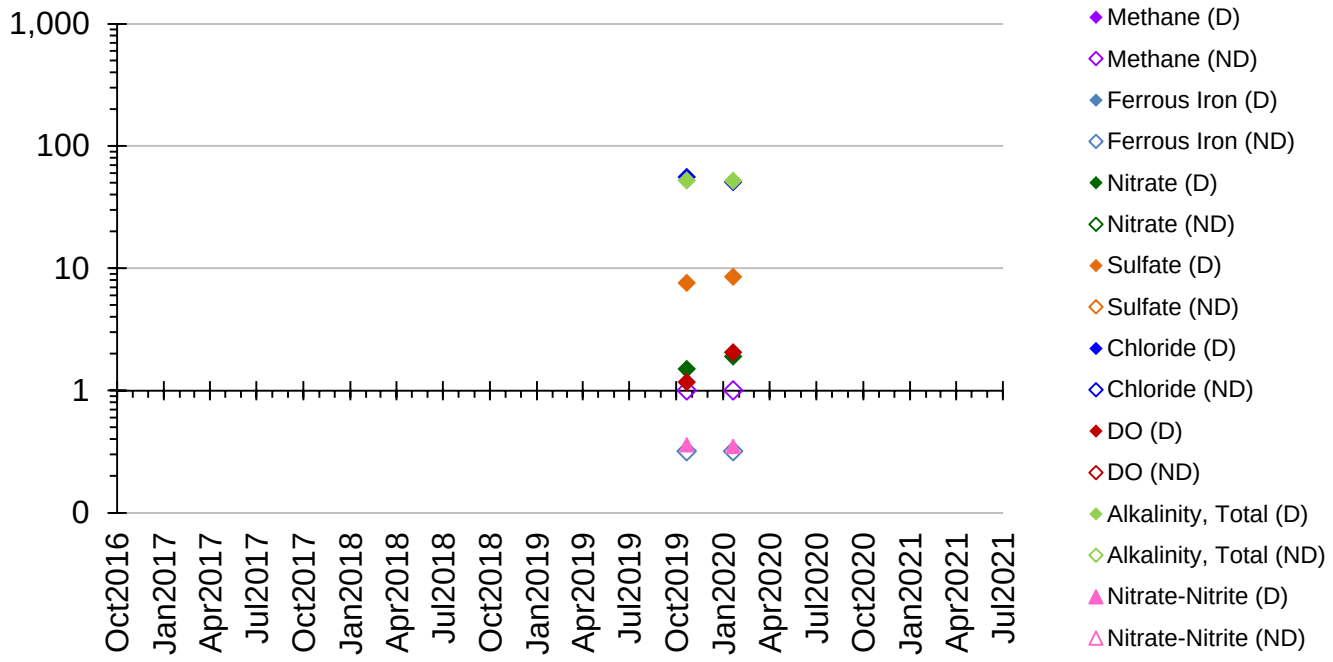
RHMW13 Zone 4 NAPs



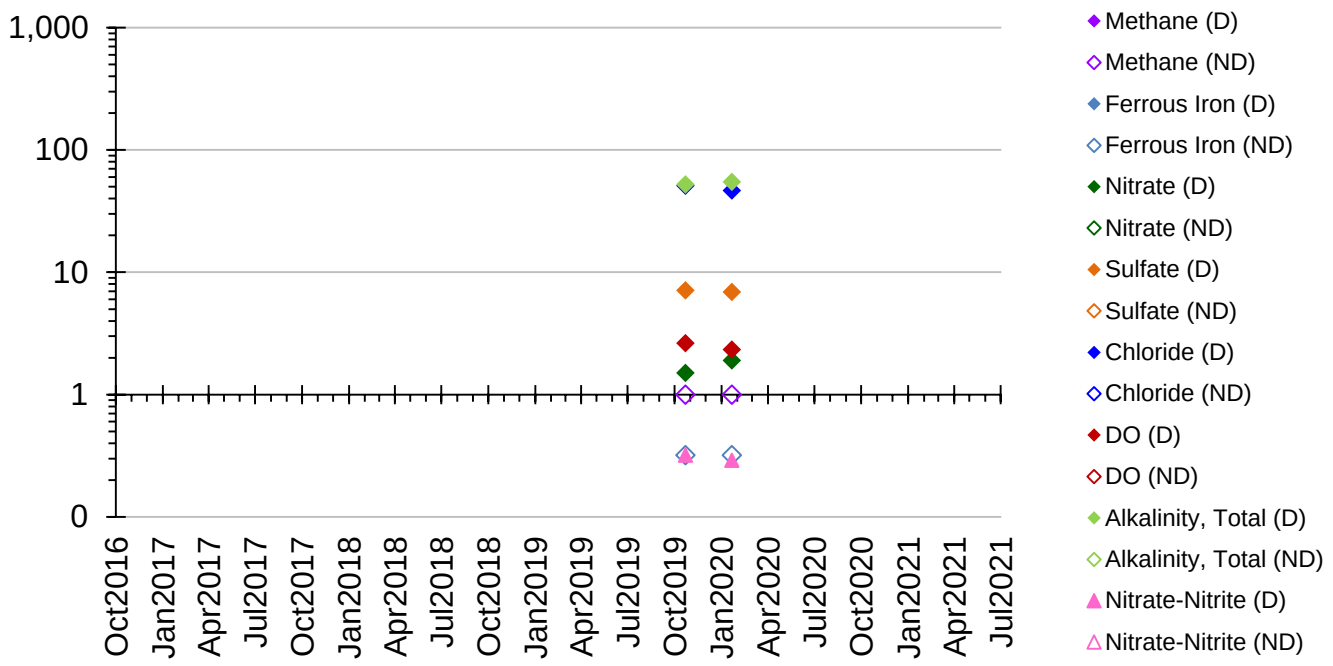
RHMW13 Zone 5 NAPs



RHMW14 Zone 1 NAPs



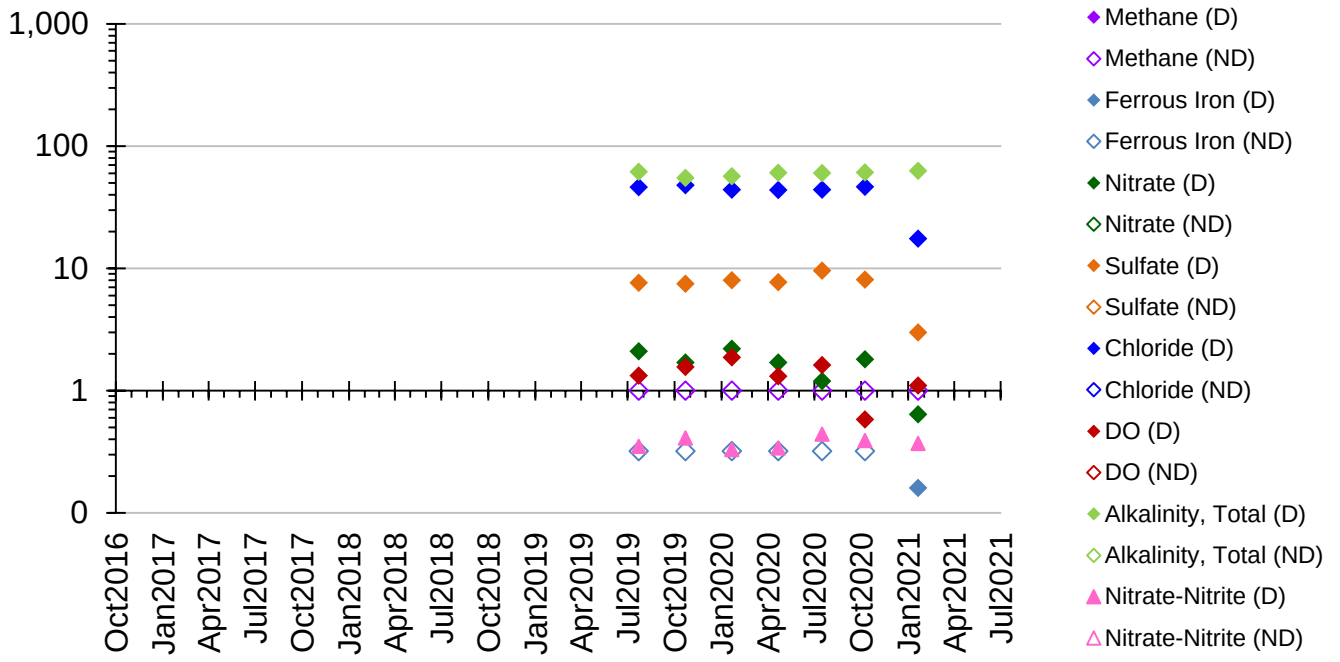
RHMW14 Zone 2 NAPs



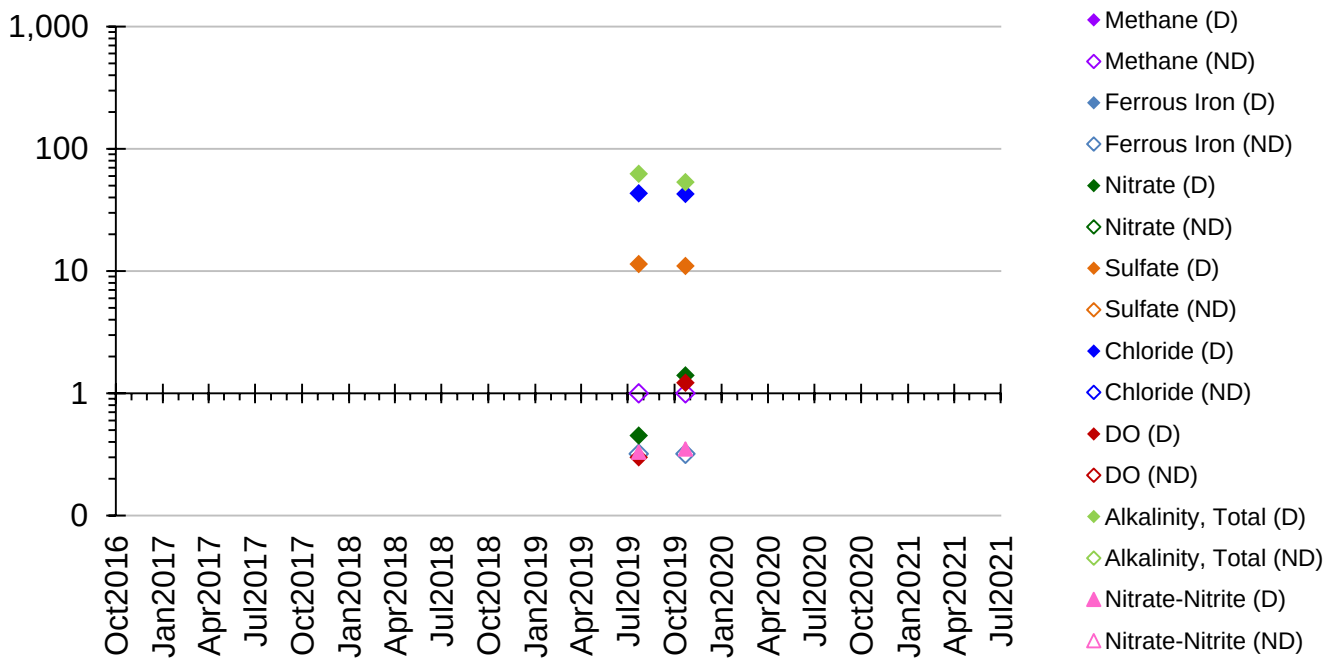
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

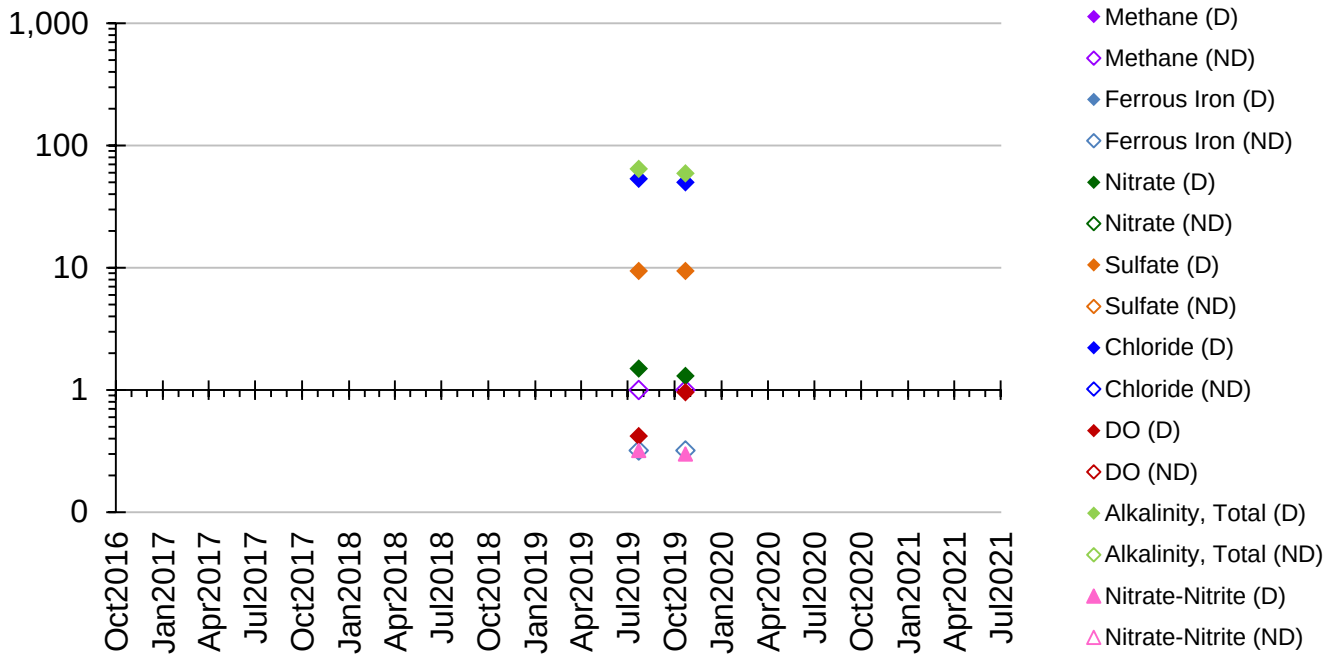
RHMW14 Zone 3 NAPs



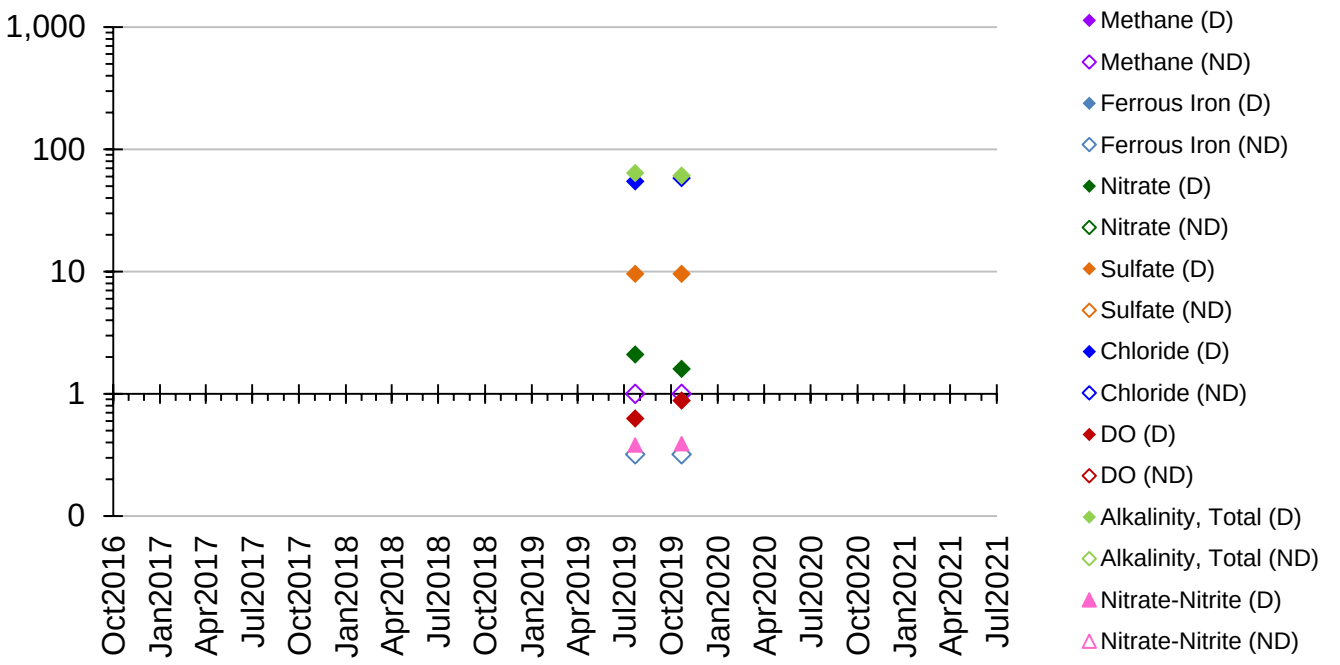
RHMW14 Zone 4 NAPs



RHMW14 Zone 5 NAPs



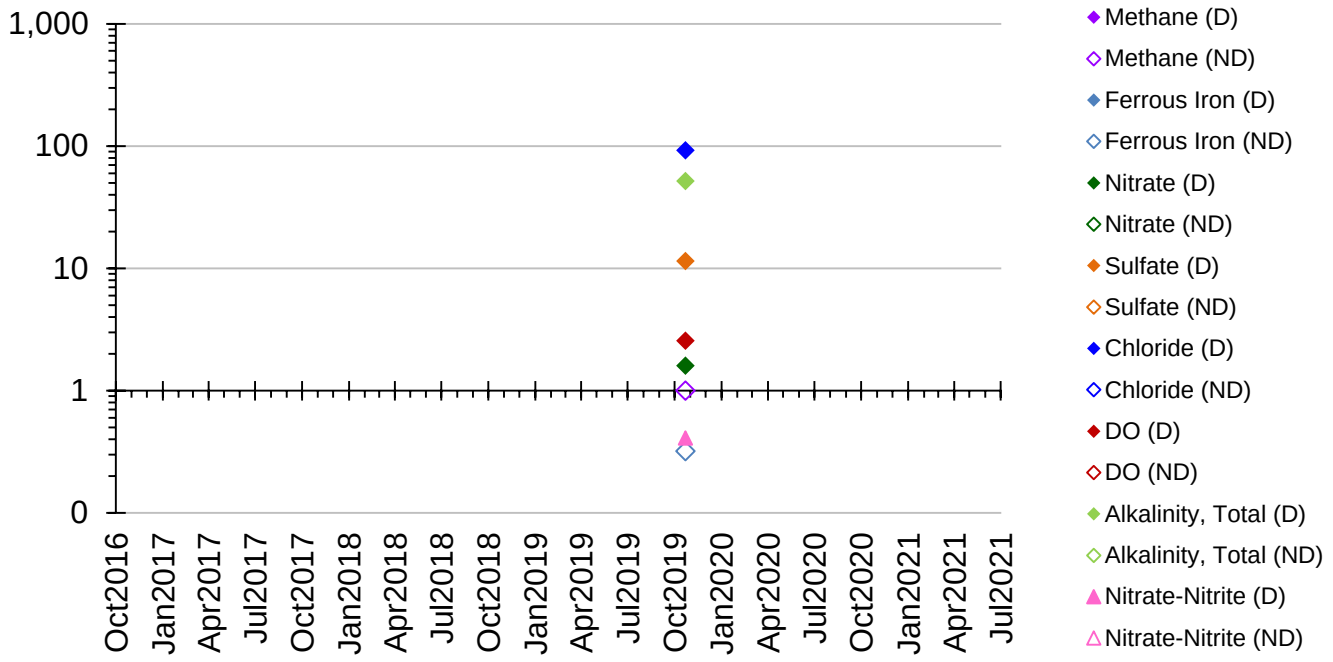
RHMW14 Zone 7 NAPs



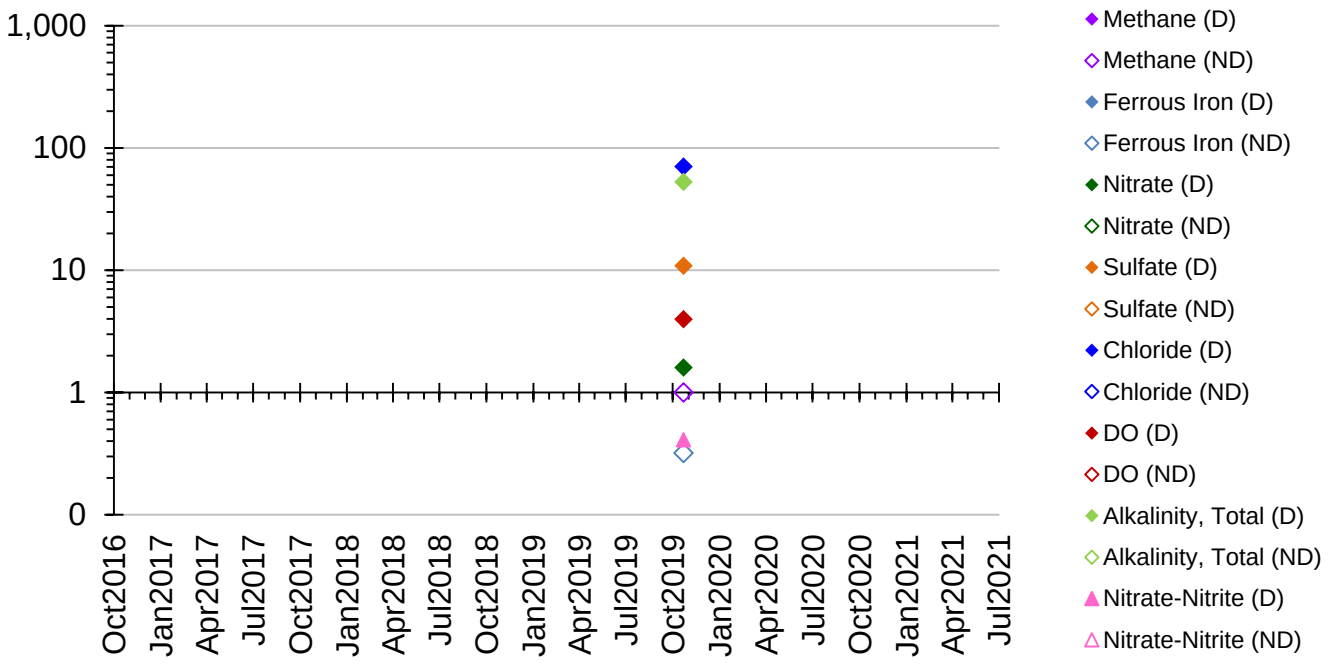
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

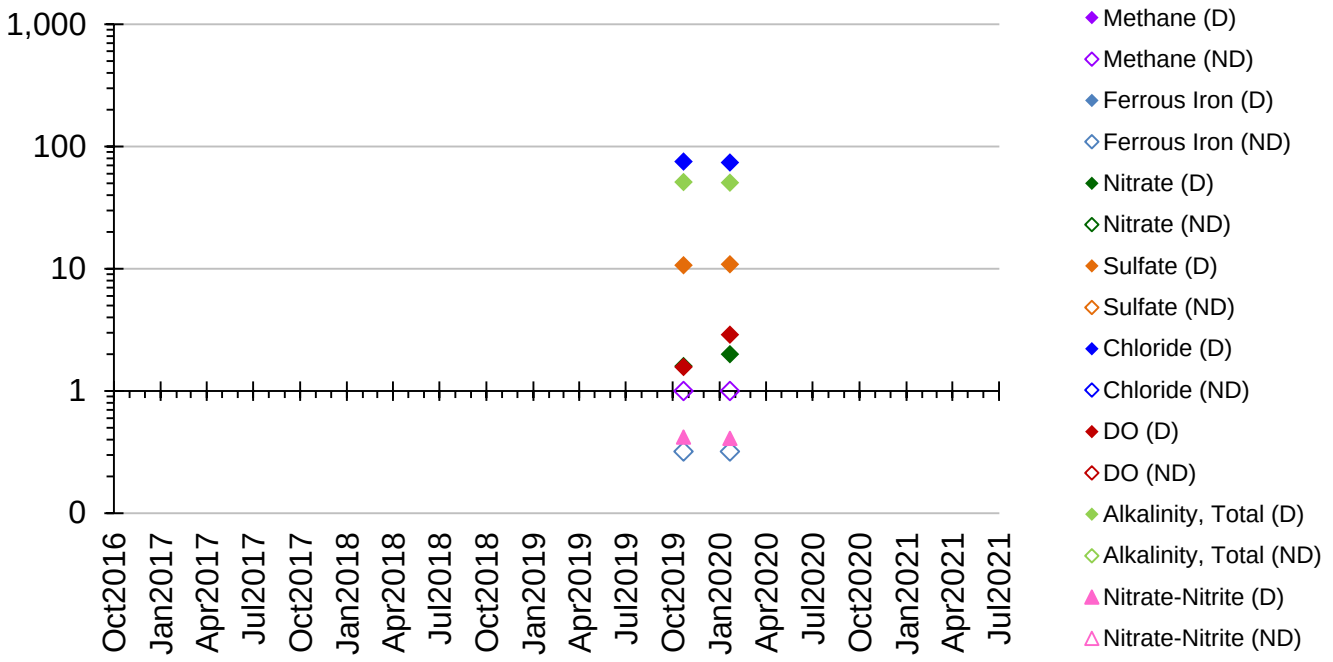
RHMW15 Zone 1 NAPs



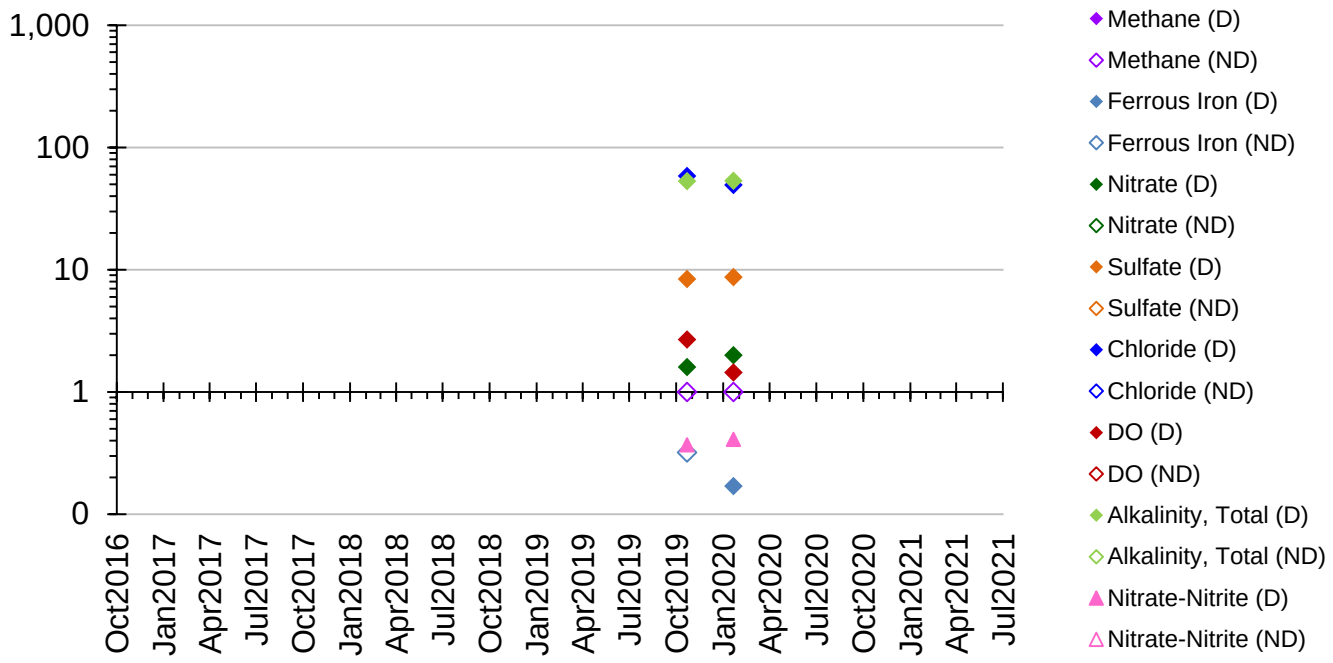
RHMW15 Zone 2 NAPs



RHMW15 Zone 3 NAPs



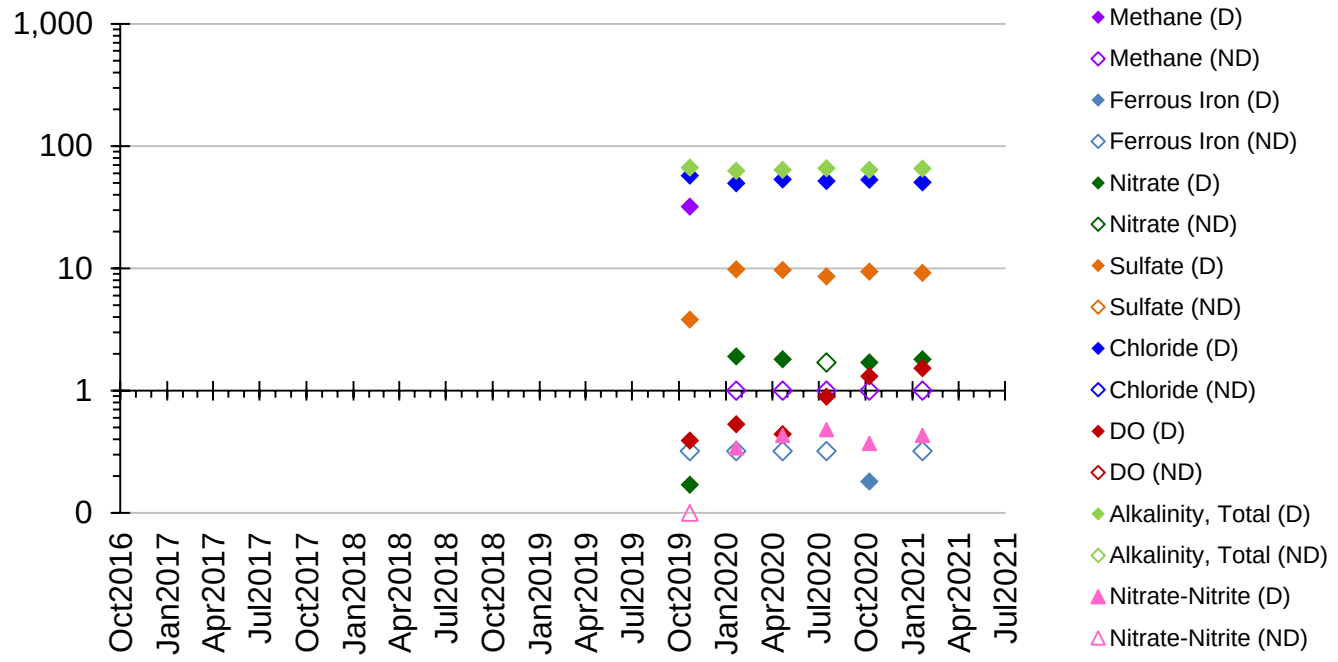
RHMW15 Zone 4 NAPs



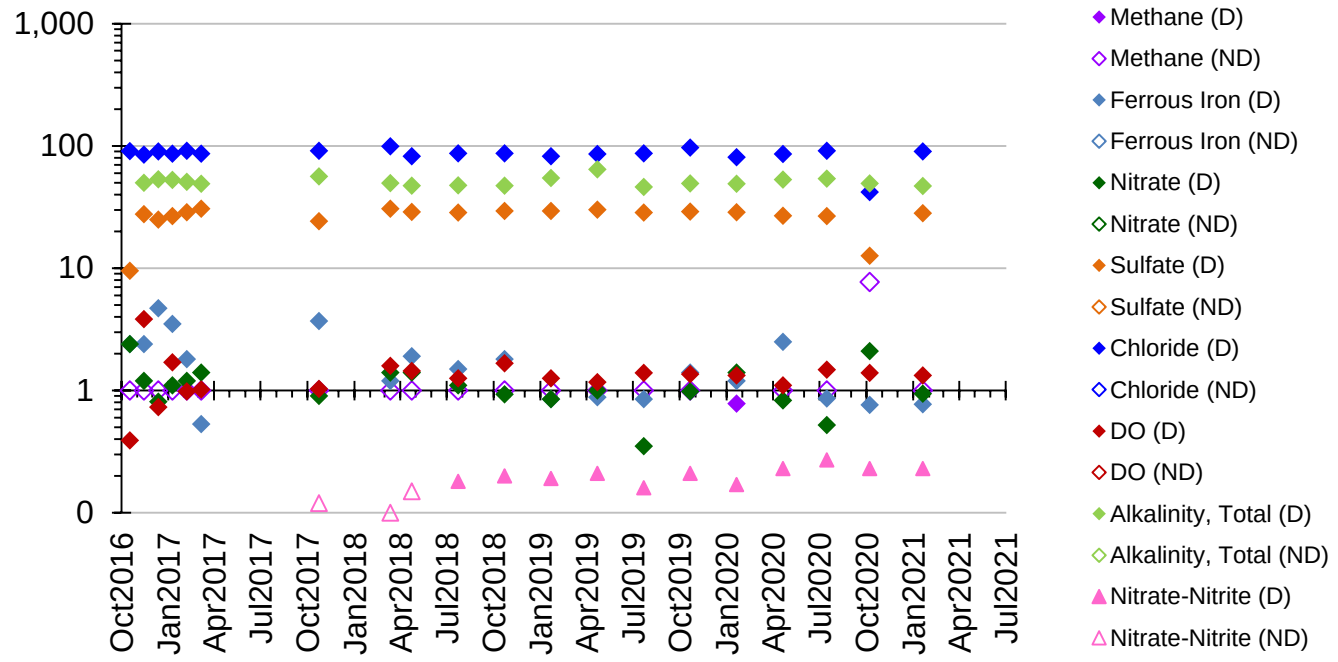
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1: Cumulative Natural Attenuation Parameters Graphs (cont'd)

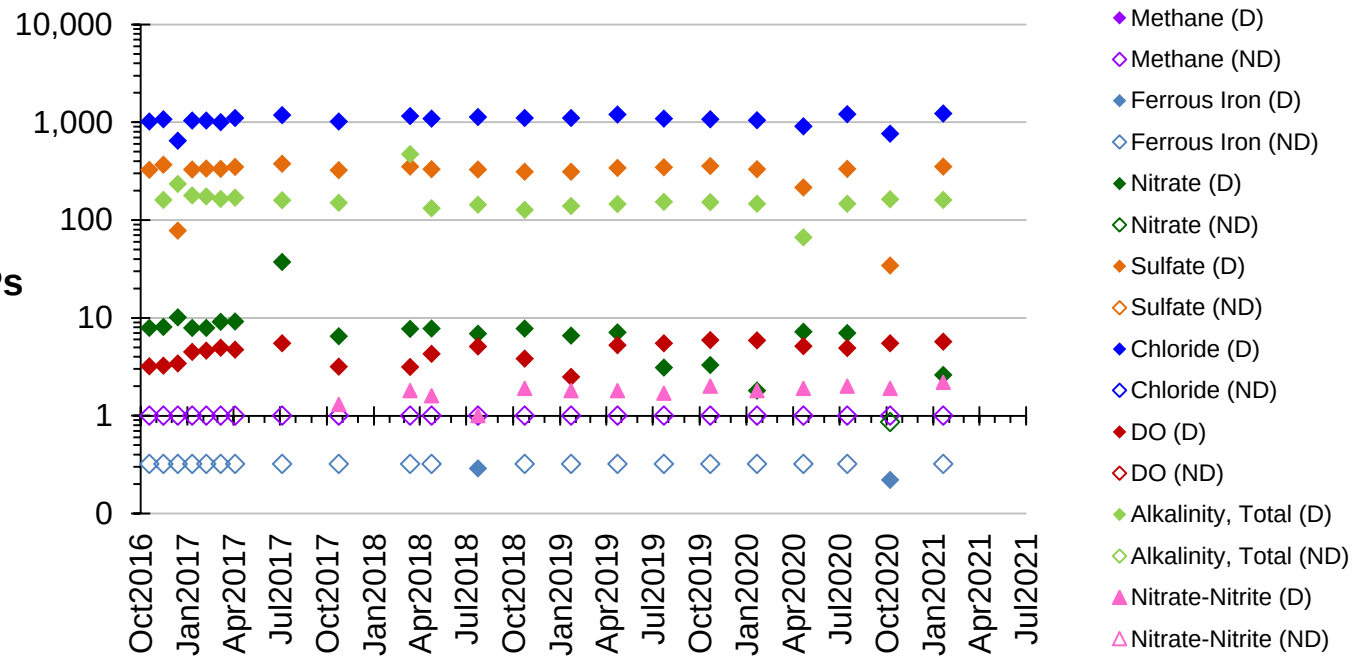
RHMW15 Zone 5 NAPs



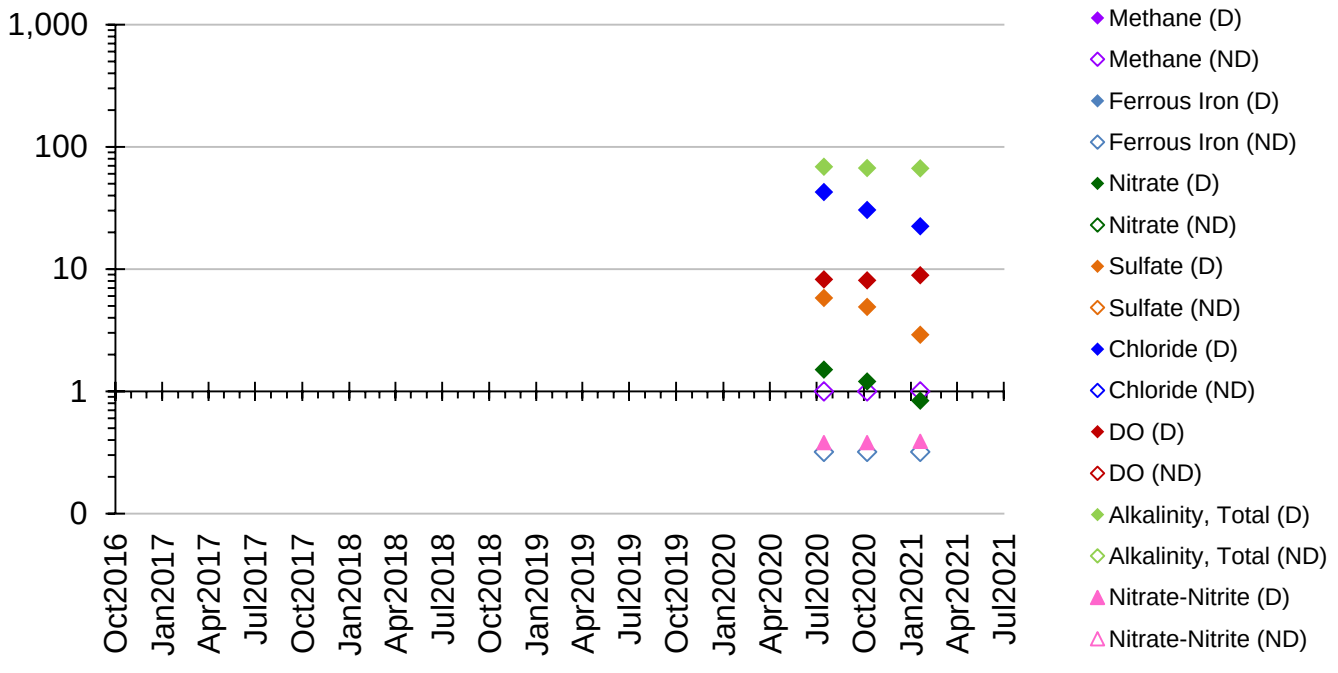
HDMW2253-03 NAPs



OWDFMW01 NAPs



RHMW19 NAPs



Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

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Appendix A.3.2:
First Quarter 2021 Natural Attenuation Parameter Graphs

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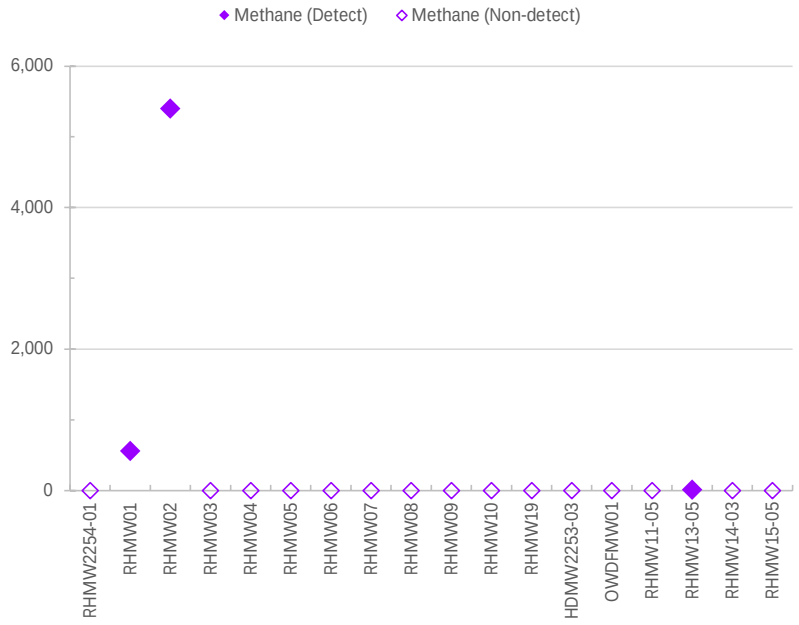
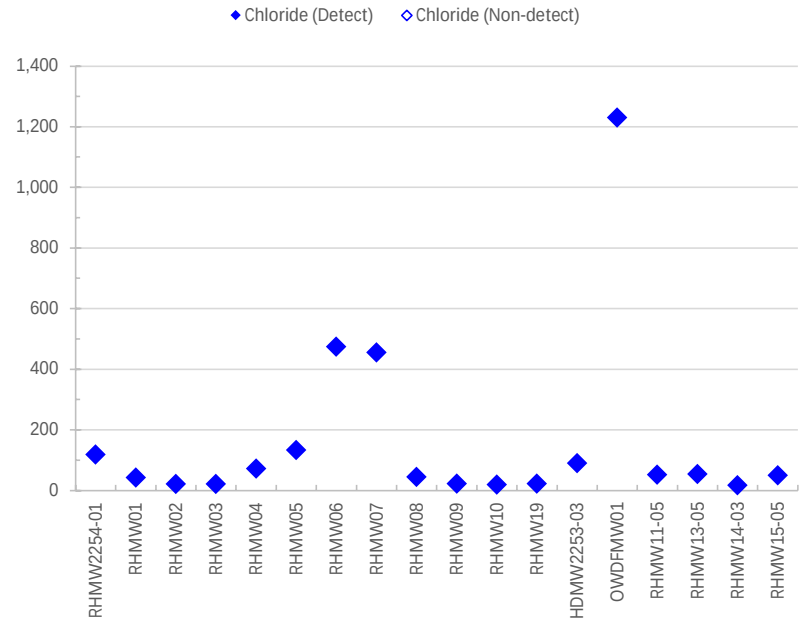
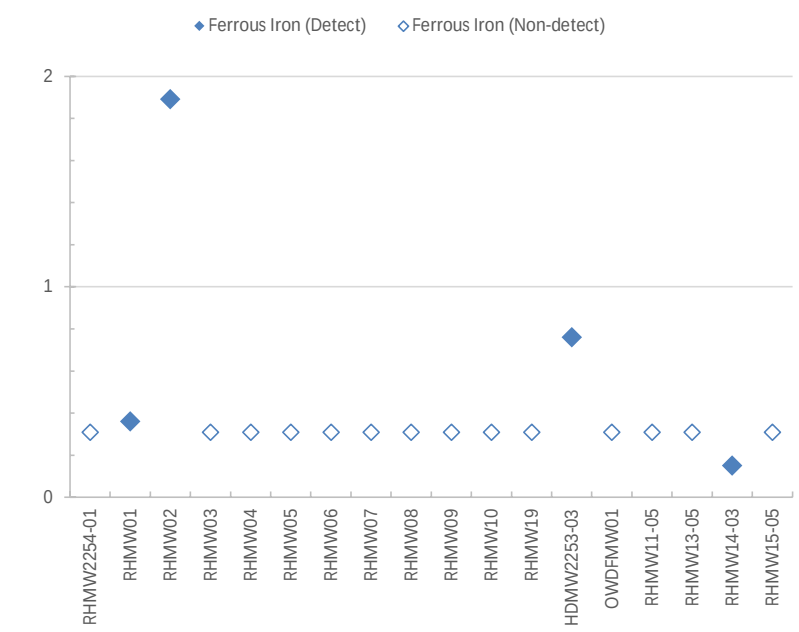
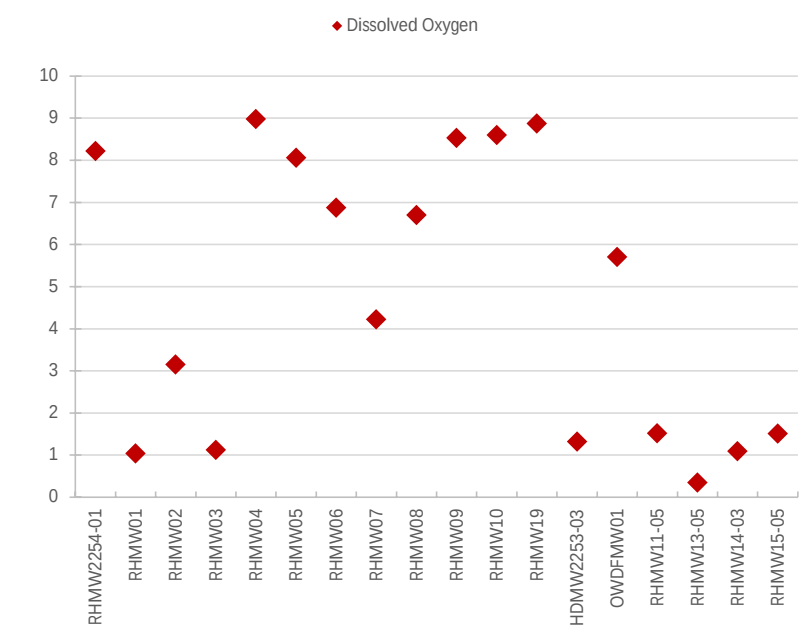
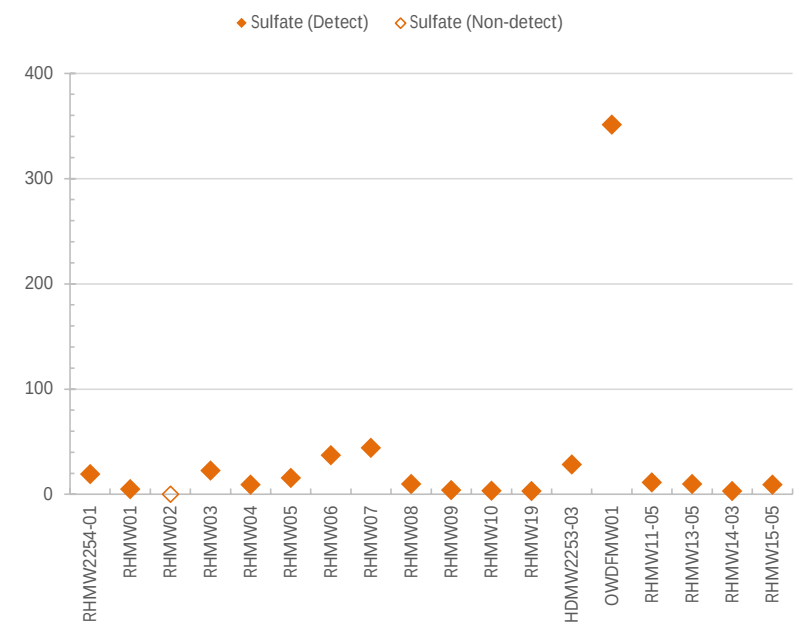
Appendix A.3.2: First Quarter 2021 Natural Attenuation Paramaters

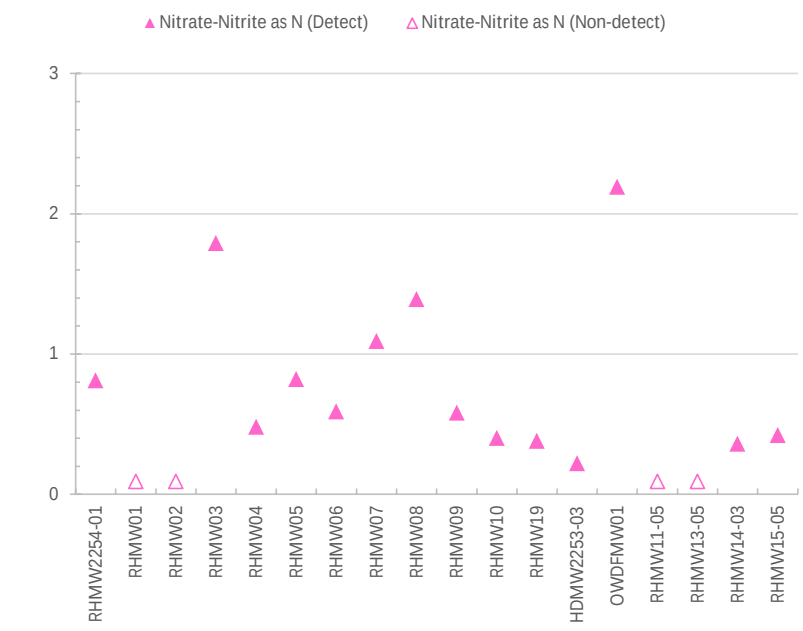


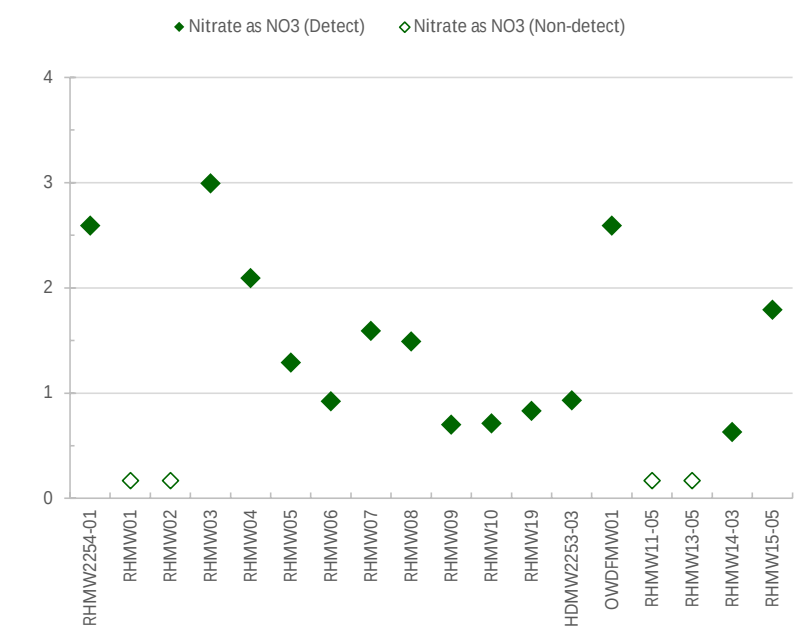


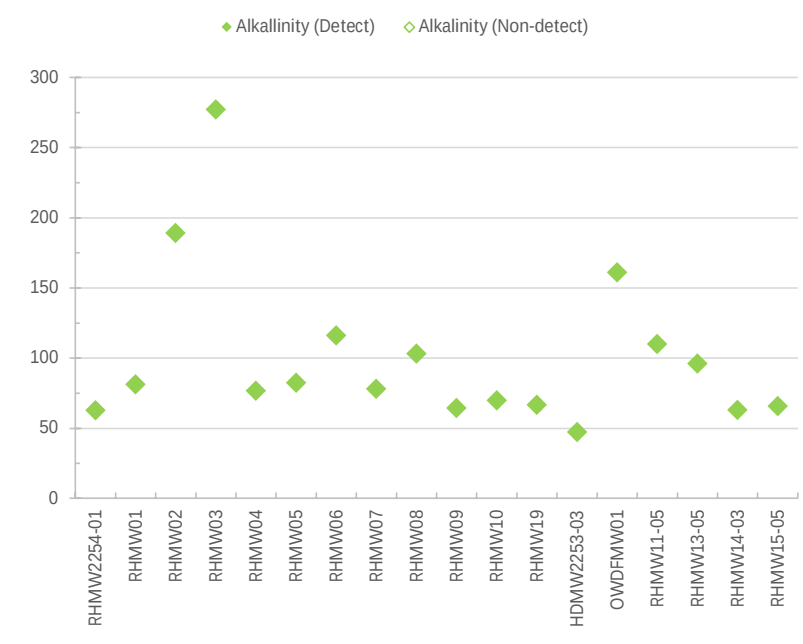












Methane results in micrograms per liter (µg/L). All other results in milligrams per liter (mg/L).

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Appendix A.4:
Depth to Water

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Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2021 Groundwater Monitoring Event

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW19	HDMW2253-03	OWDFMW01
27-Jan-2021 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	119.95
26-Jan-2021 [c]	—	—	—	—	—	82.90	—	—	—	377.24	—	—	—	—
25-Jan-2021 [c]	—	83.66	86.26	102.53	293.97	—	—	—	—	—	—	—	—	—
21-Jan-2021 [c]	—	—	—	—	—	—	—	—	—	—	—	—	207.61	—
20-Jan-2021 [c]	—	—	—	—	—	—	—	—	—	—	477.42	426.41	—	—
19-Jan-2021 [c]	—	—	—	—	—	—	241.03	197.91	292.39	—	—	—	—	—
19-Oct-2020 [c]	—	—	—	—	—	—	—	—	—	377.33	—	—	—	—
15-Oct-2020	—	83.69	86.39	102.56	—	83.12	—	—	—	—	—	—	—	—
15-Oct-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	207.41	—
14-Oct-2020 [c]	—	—	—	—	—	—	—	197.34	—	—	—	—	—	119.68
13-Oct-2020 [c]	—	—	—	—	—	82.94	—	—	292.35	—	477.36	—	—	—
12-Oct-2020 [c]	—	83.68	86.29	102.48	293.86	—	240.97	—		—	—	—	—	—
07-Oct-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	426.50	—	—
24-Jul-2020	—	83.28	85.94	102.13	—	82.63	—	—	—	—	—	—	—	—
23-Jul-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	206.97	—
22-Jul-2020 [c]	—	—	—	—	293.39	—	—	—	292.07	—	—	—	—	120.11
21-Jul-2020 [c]	—	—	—	—	—	82.54	—	—	—	376.81	476.91	—	—	—
20-Jul-2020 [c]	—	83.36	85.96	102.51	—	—	240.58	197.68	—	—	—	—	—	—
15-Jul-2020	—	—	—	—	—	—	—	—	—	—	—	426.12	—	—
23-Apr-2020	—	82.93	85.68	101.82	—	82.27	—	—	—	—	—	—	—	—
23-Apr-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	206.82	—
22-Apr-2020 [c]	—	—	85.56	—	293.21	—	—	—	—	—	—	—	—	119.25
21-Apr-2020 [c]	—	—	—	—	—	82.31	—	—	—	376.56	476.70	—	—	—
20-Apr-2020 [c]	—	82.87	—	101.78	—	—	240.23	197.42	291.54	—	—	—	—	—
20-Apr-2020	—	82.93	85.68	101.82	—	82.27	—	—	—	—	—	—	—	—
31-Jan-2020	—	—	85.88	102.17	—	82.52	—	—	—	—	—	—	—	—
28-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	476.89	—	—	—
23-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	206.99	—
22-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	119.22
21-Jan-2020 [c]	—	—	—	—	293.27	82.24	—	—	—	376.54	—	—	—	—
20-Jan-2020 [c]	—	82.87	85.51	101.74	—	—	240.25	197.47	291.55	—	—	—	—	—
13-Nov-2019 [c]	—	—	—	—	—	—	—	—	—	—	477.02	—	—	—
30-Oct-2019 [c]	—	—	—	—	—	—	—	—	291.96	—	—	—	—	—
29-Oct-2019	—	83.15	85.84	102.19	—	82.09	—	—	—	—	—	—	—	—
24-Oct-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	206.99	—
23-Oct-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	119.34
22-Oct-2019 [c]	—	83.11	85.80	—	—	—	—	197.46	—	376.70	—	—	—	—
21-Oct-2019 [c]	—	—	—	101.87	293.36	82.32	240.34	—	—	—	—	—	—	—
7-Aug-2019 [c]	—	—	—	—	—	—	—	—	291.30	—	—	—	—	—
29-Jul-2019	—	82.67	85.34	101.57	—	82.06	—	—	—	—	—	—	—	—
25-Jul-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	206.23	—
24-Jul-2019 [c]	—	—	—	—	—	—	—	—	—	—	476.27	—	—	118.97
23-Jul-2019 [c]	—	82.58	85.25	—	292.80	—	—	—	—	376.14	—	—	—	—
22-Jul-2019 [c]	—	—	—	101.48	—	82.04	239.83	196.93	—	—	—	—	—	—
26-Apr-2019	—	82.45	85.18	101.41	—	81.88	—	—	—	—	—	—	—	—
25-Apr-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	205.97	118.92
24-Apr-2019 [c]	—	—	85.16	102.41	—	—	—	—	—	—	476.19	—	—	—
23-Apr-2019 [c]	—	82.47	—	—	—	—	—	—	291.08	375.98	—	—	—	—
22-Apr-2019 [c]	—	—	—	—	292.81	81.98	239.91	197.05	—	—	—	—	—	—
7-Feb-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	205.81	—
24-Jan-2019	—	82.30	84.96	101.22	—	81.66	—	—	—	—	—	—	—	—
24-Jan-2019 [c]	81.01	—	—	—	—	—	—	—	—	—	476.15	—	—	—
23-Jan-2019 [c]	82.64	—	—	—	—	—	—	196.99	—	—	—	—	—	118.85
22-Jan-2019 [c]	—	82.39	—	101.19	—	—	—	—	—	375.99	—	—	—	—
21-Jan-2019 [c]	—	—	85.00	—	292.48	81.80	239.57	—	290.98	—	—	—	—	—
13-Dec-2018 [c]	81.16	—	—	—	—	—	—	—	—	—	—	—	—	—
12-Dec-2018 [c]	82.81	—	—	—	—	—	—	—	—	—	—	—	—	—
14-Nov-2018 [c]	81.14	—	—	—	—	—	—	—	—	—	—	—	—	—
13-Nov-2018 [c]	82.53	—	—	—	—	—	—	—	—	—	—	—	—	—
31-Oct-2018 [c]	—	—	—	—	—	—	—	—	—	—	476.54	—	—	—
30-Oct-2018	—	82.64	85.34	101.58	—	81.99	—	—	—	—	—	—	—	—
25-Oct-2018 [c]	—	82.76	—	—	—	—	—	—	—	—	—	—	—	—
24-Oct-2018 [c]	—	—	—	—	293.09	—	—	—	291.59	—	—	—	—	119.28
23-Oct-2018 [c]	—	—	85.53	101.71	—	—	240.16	197.58	—	376.39	—	—	—	—
22-Oct-2018 [c]	81.73	—	—	—	—	82.14	—	—	—	—	—	—	206.65	—
21-Aug-2018	—	—	86.32	102.58	—	—	—	—	—	—	—	—	—	—
26-Jul-2018 [c]	—	—	—	—	293.80	—	—	—	—	—	—	—	—	119.74
25-Jul-2018	—	83.55	86.33	102.58	—	82.89	—	—	—	—	—	—	—	—
24-Jul-2018 [c]	—	—	—	102.48	—	—	—	—	—	377.21	—	—	—	—
24-Jul-2018 [c]	—	83.65	86.19	—	—	—	—	197.97	292.35	—	476.89	—	—	—
23-Jul-2018 [c]	82.26	—	—	—	—	82.92	240.77	—	—	—	—	—	207.36	—
Jun-2018	—	83.63	86.34	102.57	—	82.99	—	—	—	—	—	—	—	—
22-May-2018	—	83.61	86.29	102.56	—	82.97	—	—	—	—	—	—	—	—
26-Apr-2018	—	—	—	—	—	—	—	—	—	—	—	—	—	119.80
25-Apr-2018	—	83.47	86.14	102.38	—	82.86	—	—	—	—	—	—	—	—
25-Apr-2018	—	83.43	—	102.33	293.63	—	—	—	—	377.28	—	—	—	—
24-Apr-2018	—	—	86.19	—	—	—	—	197.50	—	—	477.30	—	—	—
23-Apr-2018	82.08	—	—	—	—	82.73	240.65	—	292.04	—	—	—	207.33	—
20-Mar-2018	—	83.56	86.24	102.55	—	82.89	—	—	—	—	—	—	—	—
14-Mar-2018	82.40	—	—	—	293.82	—	—	—	—	—	—	—	—	119.62
13-Mar-2018	—	—	86.24	—	—	82.92	—	198.30	—	377.40	477.40	—	—	—
12-Mar-2018	—	83.44	—	102.40	—	—	240.81	—	292.25	—	—	—	207.43	—
21-Nov-2017	—	83.66	—	102.62	—	—	—	—	—	—	—	—	—	—
15-Nov-2017	—	—	86.28	—	—	—	—	—	—	—	—	—	—	—
14-Nov-2017	—	—	—	—	—	—	240.96	—	—	—	—	—	—	—
31-Oct-2017	—	—	—	—	—	—	—	—	—	—	—	—	207.59	—
26-Oct-2017	—	—	—	—	—	—	—	—	—	—	—	—	—	119.81
25-Oct-2017	—	83.79	—	—	—	—	—	198.06	—	—	477.79	—	—	—
24-Oct-2017	81.36	—	—	—	294.07	83.21	—	—	—	377.73	—	—	—	—
23-Oct-2017	—	—	86.38	102.76	—	—	241.18	—	292.77	—	—	—	—	—
21-Jul-2017	—	83.43	86.50	—	—	82.81	—	—	—	—	—	—	—	—
06-Jul-2017	—	—	85.88	102.09	—	—	—	—	—	—	—	—	—	—
05-Jul-2017	82.14	82.11	—	—	293.38	82.49	—	—	—	377.23	—	—	—	119.39
04-Jul-2017	—	—	—	—	—	—	240.55	197.78	292.14	—	477.26	—	—	—
22-Jun-2017	—	82.94	85.59	101.89	—	82.30	—	—	—	—	—	—	—	—
06-Jun-2017	82.66	—	—	101.76	—	82.17	—	—	—	—	—	—	—	—
05-Jun-2017	—	82.80	85.42	—	—	—	—	—	291.68	—	477.20	—	—	—
26-May-2017	—	82.45	85.13	101.39	—	81.80	—	—	—	—	—	—	—	—
04-May-2017	—	—	—	—	—	—	—	—	—	—	476.45	—	—	—
02-May-2017	80.12	—	—	—	—	—	—	—	291.42	—	—	—	—	—
01-May-2017	—	82.50	85.09	101.34	—	81.82	—	—	—	—	—	—	—	—
20-Apr-2017	—	82.59	85.25	101.50	—	81.94	—	—	—	—	—	—	—	—
04-Apr-2017	—	—	85.27	101.55	—	—	—	—	291.38	376.70	—	—	—	118.87
03-Apr-2017	80.23	82.43	—	—	292.78	81.81	239.86	197.07	—	—	—	—	—	—
24-Mar-2017	—	82.49	85.19	101.45	—	81.84	—	—	—	—	—	—	—	—
08-Mar-2017	—	82.28	—	—	—	81.61	—	—	—	—	—	—	206.13	188.61
07-Mar-2017	—	—	84.99	101.30	—	—	239.63	197.08	—	376.30	—	—	—	—
06-Mar-2017	80.06	—	—	—	292.62	—	—	—	291.19	—	—	—	—	—
22-Feb-2017	—	82.37	85.01	101.31	—	81.72	—	—	—	—	—	—	—	—
09-Feb-2017	—	—	—	—	—	—	—	—	—	—	—	—	—	119.03
08-Feb-2017	—	82.69	—	101.55	—	—	—	197.25	—	376.67	—	—	—	—

Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2021 Groundwater Monitoring Event (cont'd)

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW19	HDMW2253-03	OWDFMW01
07-Feb-2017	—	—	85.24	—	—	81.91	239.90	—	—	—	—	—	206.32	—
06-Feb-2017	80.29	—	—	—	292.85	—	—	—	291.51	—	—	—	—	—
31-Jan-2017	—	82.45	85.13	101.46	—	82.04	—	—	—	—	—	—	—	—
12-Jan-2017	—	—	—	101.59	—	—	—	—	—	—	—	—	—	118.93
11-Jan-2017	—	82.70	—	—	—	—	—	—	291.26	376.10	—	—	—	—
10-Jan-2017	—	—	85.29	—	—	82.10	—	197.02	—	—	—	—	206.12	—
09-Jan-2017	80.39	—	—	—	292.48	—	239.76	—	—	—	—	—	—	—
21-Dec-2016	—	—	—	—	—	—	—	—	291.69	—	—	—	—	—
20-Dec-2016	—	82.67	85.36	101.61	—	82.01	—	—	—	—	—	—	—	—
14-Dec-2016	—	—	—	101.81	—	—	—	—	—	—	—	—	—	119.09
13-Dec-2016	—	82.88	85.51	—	292.61	—	—	197.13	—	—	—	—	206.33	—
12-Dec-2016	80.49	—	—	—	—	82.12	240.04	—	291.42	376.28	—	—	—	—
18-Nov-2016	80.45	82.85	85.55	101.78	293.11	82.19	240.17	197.45	291.63	376.74	—	—	—	119.07
17-Nov-2016	—	82.92	85.56	101.82	—	82.24	—	—	—	—	—	—	—	—
16-Nov-2016	—	—	—	—	—	—	—	—	—	—	—	—	206.83	—
15-Nov-2016	—	—	85.35	101.87	—	82.25	—	—	291.81	377.05	—	—	—	119.29
14-Nov-2016	80.52	82.87	—	—	293.22	—	240.31	197.56	—	—	—	—	—	—
25-Oct-2016	—	—	—	—	293.33	—	—	—	—	377.09	—	—	—	—
20-Oct-2016	80.68	—	—	—	—	—	—	—	—	—	—	—	—	119.39
19-Oct-2016	—	83.01	85.69	101.95	—	82.39	—	—	—	—	—	—	—	—
19-Oct-2016	—	—	85.69	102.02	—	82.37	240.47	197.68	291.94	—	—	—	—	—
18-Oct-2016	80.68	—	—	—	—	—	—	—	—	—	—	—	207.02	—
17-Oct-2016	—	83.00	—	—	—	—	—	—	—	—	—	—	—	—
21-Sep-2016	—	83.13	85.74	102.06	—	82.44	—	—	—	—	—	—	—	—
23-Aug-2016	—	83.27	85.96	102.20	—	82.63	—	—	—	—	—	—	—	—
20-Jul-2016	80.96	83.32	85.99	102.31	—	82.63	—	—	—	—	—	—	—	—
19-Jul-2016	—	—	—	—	293.60	—	240.70	197.79	—	—	—	—	207.42	119.65
21-Jun-2016	—	83.16	85.77	102.03	—	82.54	—	—	—	—	—	—	—	—
23-May-2016	—	83.14	85.81	102.03	—	82.50	—	—	—	—	—	—	—	—
20-Apr-2016	80.57	82.97	85.63	101.91	—	82.31	—	—	—	—	—	—	—	—
19-Apr-2016	—	—	—	—	293.21	—	240.35	197.76	—	—	—	—	206.97	119.28
15-Mar-2016	—	82.89	85.60	101.82	—	82.26	—	—	—	—	—	—	—	—
17-Feb-2016	—	83.17	85.81	102.10	—	—	—	—	—	—	—	—	—	—
20-Jan-2016	81.00	83.31	85.97	102.21	—	—	—	—	—	—	—	—	—	—
19-Jan-2016	—	—	—	—	293.61	—	240.69	198.24	—	—	—	—	207.42	119.82
17-Dec-2015	—	83.76	86.36	102.56	—	83.18	—	—	—	—	—	—	—	—
18-Nov-2015	—	84.25	86.93	103.24	—	84.62	—	—	—	—	—	—	—	—
20-Oct-2015	82.34	84.00	86.38	103.38	—	—	—	—	—	—	—	—	—	—
19-Oct-2015	—	—	—	—	294.61	—	241.69	198.88	—	—	—	—	208.40	120.88
23-Sep-2015	—	84.26	86.91	103.21	—	83.63	—	—	—	—	—	—	—	—
27-Aug-2015	—	84.44	87.13	103.41	—	83.69	—	—	—	—	—	—	—	—
20-Aug-2015	—	—	—	—	295.10	—	—	—	—	—	—	—	—	—
28-Jul-2015	—	—	—	—	—	—	241.98	—	—	—	—	—	—	—
27-Jul-2015	—	—	—	—	—	—	—	198.61	—	—	—	—	—	—
22-Jul-2015	—	—	—	—	—	—	—	—	—	—	—	—	208.69	120.99
21-Jul-2015	82.24	—	—	—	—	83.76	—	—	—	—	—	—	—	—
20-Jul-2015	—	84.58	87.24	103.44	—	—	—	—	—	—	—	—	—	—
25-Jun-2015	—	84.58	87.28	103.57	—	83.75	—	—	—	—	—	—	—	—
28-May-2015	—	84.29	86.97	103.24	—	83.95	—	—	—	—	—	—	—	—
23-Apr-2015	—	—	—	—	—	—	—	198.40	—	—	—	—	—	—
22-Apr-2015	—	—	—	—	294.43	—	241.59	—	—	—	—	—	—	120.68
21-Apr-2015	82.99	—	—	—	—	83.72	—	—	—	—	—	—	—	—
20-Apr-2015	—	84.33	86.97	103.18	—	—	—	—	—	—	—	—	—	—
26-Mar-2015	—	83.83	86.04	102.79	—	83.24	—	—	—	—	—	—	—	—
27-Feb-2015	—	83.68	86.28	102.52	—	83.06	—	—	—	—	—	—	—	—
29-Jan-2015	—	—	—	—	293.91	—	—	—	—	—	—	—	206.67	—
28-Jan-2015	—	—	86.35	102.63	—	—	—	—	—	—	—	—	—	—
27-Jan-2015	81.37	83.63	—	—	—	83.03	—	—	—	—	—	—	—	—
26-Jan-2015	—	—	—	—	—	—	—	—	—	—	—	—	—	120.54
23-Dec-2014	—	83.67	86.37	102.64	—	83.05	—	—	—	—	—	—	—	—
20-Nov-2014	—	83.87	86.56	102.78	—	83.35	—	—	—	—	—	—	—	—
28-Oct-2014	83.44	—	—	—	—	83.21	—	—	—	—	—	—	—	—
27-Oct-2014	—	83.79	86.51	102.78	—	—	—	—	—	—	—	—	—	—
22-Oct-2014	—	—	—	—	—	—	—	—	—	—	—	—	207.99	120.49
25-Sep-2014	—	84.64	87.27	103.51	—	84.10	—	—	—	—	—	—	—	—
27-Aug-2014	—	84.01	86.65	102.87	—	83.04	—	—	—	—	—	—	—	—
24-Jul-2014	—	—	—	—	—	—	—	—	—	—	—	—	—	120.57
23-Jul-2014	—	—	—	—	294.33	—	—	—	—	—	—	—	208.08	—
22-Jul-2014	82.19	—	—	102.98	—	83.49	—	—	—	—	—	—	—	—
21-Jul-2014	—	84.13	86.80	—	—	—	—	—	—	—	—	—	—	—
23-Jun-2014	—	84.06	86.72	103.99	—	83.54	—	—	—	—	—	—	—	—
10-Jun-2014	—	83.93	86.55	—	—	83.34	—	—	—	—	—	—	—	—
27-May-2014	—	83.91	86.60	102.85	—	83.31	—	—	—	—	—	—	—	—
22-May-2014	—	83.81	86.47	—	—	83.15	—	—	—	—	—	—	—	—
08-May-2014	—	84.03	86.68	—	—	83.46	—	—	—	—	—	—	—	—
21-Apr-2014	—	83.93	86.58	102.80	—	83.27	—	—	—	—	—	—	—	—
07-Apr-2014	—	83.42	86.43	—	—	83.21	—	—	—	—	—	—	—	—
28-Mar-2014	—	83.76	86.42	102.65	—	83.18	—	—	—	—	—	—	—	—
24-Feb-2014	—	83.54	86.24	102.47	—	82.97	—	—	—	—	—	—	—	—
10-Feb-2014	—	84.49	86.16	102.47	—	82.83	—	—	—	—	—	—	—	—
04-Feb-2014	81.08	83.54	86.20	—	—	82.89	—	—	—	—	—	—	207.72	—
03-Feb-2014	81.08	83.54	86.20	—	—	82.91	—	—	—	—	—	—	207.72	—
31-Jan-2014	81.03	83.53	86.19	—	—	82.88	—	—	—	—	—	—	207.73	—
30-Jan-2014	81.09	83.53	86.21	—	—	82.93	—	—	—	—	—	—	207.67	—
29-Jan-2014	80.35	83.56	86.22	—	—	82.94	—	—	—	—	—	—	207.75	—
28-Jan-2014	80.40	83.56	86.25	102.52	—	82.94	—	—	—	—	—	—	207.76	—
27-Jan-2014	80.33	83.55	86.23	—	—	82.93	—	—	—	—	—	—	207.8	—
24-Jan-2014	80.38	83.57	86.23	—	—	82.93	—	—	—	—	—	—	207.75	—
23-Jan-2014	80.40	83.58	86.24	—	—	82.94	—	—	—	—	—	—	207.8	—
22-Jan-2014	80.40	83.53	86.20	—	—	82.87	—	—	—	—	—	—	207.66	—
16-Jan-2014	80.60	—	—	—	—	83.09	—	—	—	—	—	—	—	—
15-Jan-2014	—	83.94	86.62	—	—	—	—	—	—	—	—	—	—	—
23-Dec-2013	—	84.09	86.72	103.00	—	83.72	—	—	—	—	—	—	—	—
21-Nov-2013	—	84.26	86.91	103.16	—	83.70	—	—	—	—	—	—	—	—
23-Oct-2013	—	—	—	—	—	—	—	—	—	—	—	—	—	120.74
22-Oct-2013	—	84.47	87.08	103.31	—	83.80	—	—	—	—	—	—	—	—
21-Oct-2013	—	84.47	87.08	103.31	—	—	—	—	—	—	—	—	—	—
26-Sep-2013	—	84.57	87.20	103.43	—	84.00	—	—	—	—	—	—	—	—
29-Aug-2013	—	84.66	86.28	103.50	—	84.09	—	—	—	—	—	—	—	—
24-Jul-2013	—	—	—	—	—	—	—	—	—	—	—	—	—	120.72
23-Jul-2013	82.56	—	—	—	—	83.85	—	—	—	—	—	—	—	—
22-Jul-2013	—	84.29	86.96	103.23	—	—	—	—	—	—	—	—	—	—
13-Jul-2013	—	84.29	86.96	103.23	—	83.85	—	—	—	—	—	—	—	—
27-Jun-2013	—	84.22	86.86	103.12	—	83.66	—	—	—	—	—	—	—	—
30-May-2013	—	84.03	86.69	102.95	—	83.41	—	—	—	—	—	—	—	—
25-Apr-2013	—	83.84	86.50	102.78	—	83.41	—	—	—	—	—	—	—	—
24-Apr-2013	—	—	—	—	—	—	—	—	—	—	—	—	208.03	120.15
23-Apr-2013	82.61	—	—	—	—	83.41	—	—	—	—	—	—	—	—
22-Apr-2013	—	83.84	86.50	102.78	—	—	—	—	—	—	—	—	—	—
28-Mar-2013	—	83.82	86.48	102.75	—	83.19	—	—	—	—	—	—	—	—
28-Feb-2013	—	84.04	86.62	102.87	—	83.43	—	—	—	—	—	—	—	—

Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2021 Groundwater Monitoring Event (cont'd)

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW19	HDMW2253-03	OWDFMW01
04-Feb-2013	—	84.04	—	—	—	—	—	—	—	—	—	—	—	—
01-Feb-2013	—	—	86.62	102.87	—	83.43	—	—	—	—	—	—	—	—
30-Jan-2013	—	—	—	—	—	—	—	—	—	—	—	—	208.15	120.55
29-Jan-2013	82.78	—	—	—	—	83.61	—	—	—	—	—	—	—	—
28-Jan-2013	—	—	86.75	102.98	—	—	—	—	—	—	—	—	—	—
13-Jan-2013	—	84.05	86.87	103.14	—	83.70	—	—	—	—	—	—	—	—
12-Dec-2012	—	84.21	86.87	103.14	—	83.70	—	—	—	—	—	—	—	—
07-Nov-2012	—	—	—	—	—	—	—	—	—	—	—	—	208.20	—
12-Nov-2012	—	84.23	86.85	103.10	—	83.70	—	—	—	—	—	—	—	—
23-Oct-2012	83.05	—	—	—	—	83.72	—	—	—	—	—	—	—	—
22-Oct-2012	—	84.19	86.81	103.05	—	—	—	—	—	—	—	—	—	—
Oct-2012	—	84.19	86.81	103.50	—	83.72	—	—	—	—	—	—	—	—
Aug-2012	—	84.19	86.81	103.30	—	83.62	—	—	—	—	—	—	—	—
20-Jul-2012	—	84.05	—	—	—	—	—	—	—	—	—	—	—	—
19-Jul-2012	—	—	—	—	—	—	—	—	—	—	—	—	207.87	120.15
18-Jul-2012	—	—	86.70	103.09	—	—	—	—	—	—	—	—	—	—
17-Jul-2012	—	—	—	—	—	83.50	—	—	—	—	—	—	—	—
Jul-2012	—	84.20	86.64	102.89	—	83.41	—	—	—	—	—	—	—	—
Jun-2012	—	84.34	86.95	103.17	—	83.97	—	—	—	—	—	—	—	—
May-2012	—	84.09	86.71	102.98	—	83.53	—	—	—	—	—	—	—	—
26-Apr-2012	—	—	—	—	—	—	—	—	—	—	—	—	207.76	120.29
17-Apr-2012	—	83.60	—	—	—	—	—	—	—	—	—	—	—	—
16-Apr-2012	—	—	86.34	102.71	—	83.17	—	—	—	—	—	—	—	—
Mar-2012	—	83.41	86.51	102.45	—	82.79	—	—	—	—	—	—	—	—
14-Feb-2012	—	83.75	—	—	—	—	—	—	—	—	—	—	—	—
01-Feb-2012	—	—	—	—	—	83.15	—	—	—	—	—	—	—	—
Feb-2012	—	83.80	86.41	102.71	—	83.20	—	—	—	—	—	—	—	—
26-Jan-2012	—	—	86.31	102.56	—	—	—	—	—	—	—	—	—	—
24-Jan-2012	—	—	—	—	—	—	—	—	—	—	—	—	207.60	120.02
Jan-2012	—	83.57	86.18	102.56	—	82.90	—	—	—	—	—	—	—	—
Dec-2011	—	83.49	86.10	102.36	—	82.85	—	—	—	—	—	—	—	—
02-Nov-2011	—	83.71	—	—	—	—	—	—	—	—	—	—	—	—
Nov-2011	—	83.60	86.25	102.47	—	83.00	—	—	—	—	—	—	—	—
26-Oct-2011	—	—	—	—	—	—	—	—	—	—	—	—	207.73	120.12
25-Oct-2011	—	—	—	—	—	83.15	—	—	—	—	—	—	—	—
24-Oct-2011	—	—	86.38	102.90	—	—	—	—	—	—	—	—	—	—
Oct-2011	—	83.71	—	—	—	—	—	—	—	—	—	—	—	—
Sep-2011	—	83.81	86.44	102.69	—	83.21	—	—	—	—	—	—	—	—
Aug-2011	—	83.81	86.42	102.66	—	83.21	—	—	—	—	—	—	—	—
20-Jul-2011	—	83.60	—	—	—	—	—	—	—	—	—	—	—	—
19-Jul-2011	—	—	86.28	102.49	—	83.08	—	—	—	—	—	—	—	—
Jul-2011	—	83.57	86.22	102.44	—	82.99	—	—	—	—	—	—	—	—
Jun-2011	—	83.41	86.11	102.33	—	82.81	—	—	—	—	—	—	—	—
May-2011	—	83.39	86.05	102.69	—	82.72	—	—	—	—	—	—	—	—
Apr-2011	—	83.54	86.18	102.39	—	82.90	—	—	—	—	—	—	—	—
Mar-2011	—	83.77	86.39	102.87	—	83.20	—	—	—	—	—	—	—	—
Feb-2011	—	83.82	86.48	103.02	—	83.20	—	—	—	—	—	—	—	—
Jan-2011	—	85.32	86.91	103.41	—	83.65	—	—	—	—	—	—	—	—
Dec-2010	—	84.87	87.55	103.98	—	84.22	—	—	—	—	—	—	—	—
Nov-2010	—	85.20	87.84	104.30	—	84.60	—	—	—	—	—	—	—	—
Oct-2010	—	85.29	87.91	104.13	—	84.75	—	—	—	—	—	—	—	—
Sep-2010	—	85.30	87.92	104.13	—	84.71	—	—	—	—	—	—	—	—
Jul-2010	—	85.03	87.66	103.89	—	84.48	—	—	—	—	—	—	—	—
Jun-2010	—	84.87	87.51	103.74	—	84.30	—	—	—	—	—	—	—	—
May-2010	—	84.80	87.43	103.66	—	84.23	—	—	—	—	—	—	—	—
Apr-2010	—	84.75	87.37	103.60	—	84.17	—	—	—	—	—	—	—	—
Mar-2010	—	84.53	87.15	103.38	—	83.96	—	—	—	—	—	—	—	—
Feb-2010	—	84.24	86.89	103.14	—	83.60	—	—	—	—	—	—	—	—
Jan-2010	—	84.36	87.00	103.22	—	83.75	—	—	—	—	—	—	—	—
Dec-2009	—	84.12	86.75	103.00	—	83.53	—	—	—	—	—	—	—	—
Nov-2009	—	83.91	86.56	102.81	—	83.25	—	—	—	—	—	—	—	—
Oct-2009	—	84.24	86.87	103.07	—	83.62	—	—	—	—	—	—	—	—
Sep-2009	—	84.21	86.84	103.07	—	83.61	—	—	—	—	—	—	—	—
Aug-2009	—	84.04	86.71	102.84	—	83.51	—	—	—	—	—	—	—	—
Jul-2009	—	83.75	86.42	102.67	—	83.09	—	—	—	—	—	—	—	—
May-2009	—	83.50	86.15	102.41	—	—	—	—	—	—	—	—	—	—
Apr-2009 [b]	—	83.72	86.37	102.59	—	—	—	—	—	—	—	—	—	—
Mar-2009	—	83.82	86.44	102.64	—	—	—	—	—	—	—	—	—	—
Feb-2009	—	—	86.35	102.56	—	—	—	—	—	—	—	—	—	—
Jan-2009	—	83.13	85.79	102.04	—	—	—	—	—	—	—	—	—	—
Nov-2008	—	83.91	86.56	102.80	—	—	—	—	—	—	—	—	—	—
Oct-2008	—	83.80	86.45	102.49	—	—	—	—	—	—	—	—	—	—
Jul-2008	—	83.37	86.10	102.45	—	—	—	—	—	—	—	—	—	—
Jan-2008	—	84.67	86.23	—	—	—	—	—	—	—	—	—	—	—
Sep-2007	—	—	86.80	103.44	—	—	—	—	—	—	—	—	—	—
28-Jun-2005	87.00	83.56	—	—	—	—	—	—	—	—	—	—	—	—
17-Feb-2005	86.48	82.64	—	—	—	—	—	—	—	—	—	—	—	—

Notes:

—	no data
btoc	below top of casing
ft	foot or feet
LTM	long-term monitoring
PVC	polyvinyl chloride

[a] Dates in month year format (e.g., Sep 2007) were obtained from oil/water interface reports, and exact dates were not available.

[b] The April 2009 measurements were pushed back a week (to 5/6/2009) due to the RHMW05 installation.

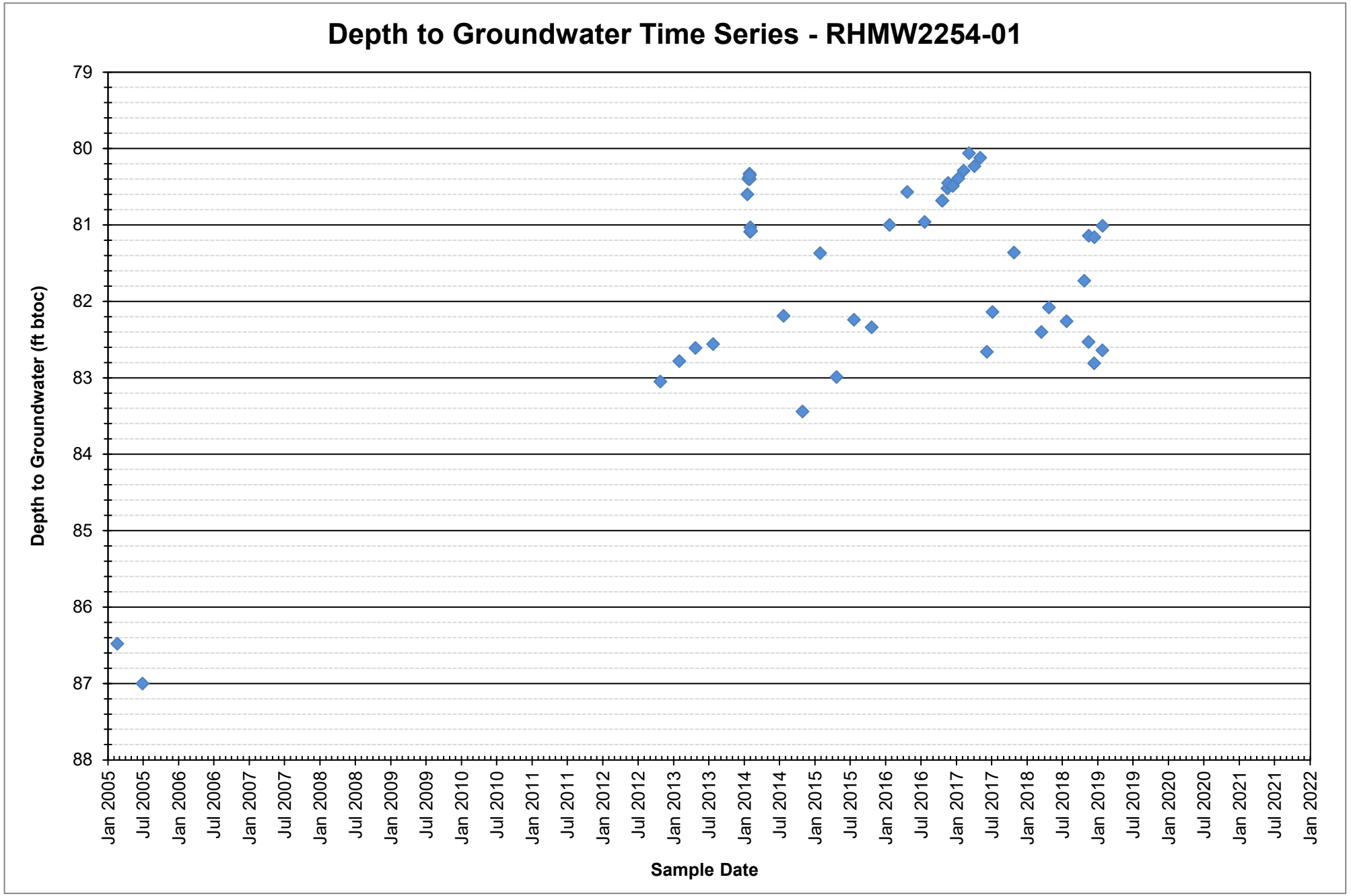
[c] The measurements have been corrected based on water level tape calibration and gyroscopic survey. See associated groundwater monitoring report.

Source:

Depth to groundwater values from recent oil/water interface reports and from the Appendix A Groundwater Tables GW-9, GW-10, GW-14, GW-15, and GW-17 through GW-24 in:
Department of the Navy. 2007. *Existing Data Summary and Evaluation Report for Groundwater Flow and Contaminant Fate and Transport Modeling, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; March 5, 2017 [Revision 00].* Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

Reference points for these depth to water measurements may have varied over time:

- Reference points for data prior to October 2016 are unknown.
- Reference points for RHMW01 to RHMW05, OWDFMW01, and HDMW2253-03 are the tops of permanent casings.
- Reference point for RHMW2254-01 was the top of the PVC casing for data prior to March 2018, and the high precision survey mark for data from March 2018 onwards.
- Reference points for RHMW06 to RHMW10 from October 2016 to July 2017 groundwater LTM events were the tops of the stand tubes (RHMW06 and RHMW07) and the tops of the slip rings (RHMW08, RHMW09, and RHMW10).
- Reference points for RHMW06 to RHMW10 from October 2017 groundwater LTM event onwards are the high precision survey mark on the tops of the gray plates.


Depth to Groundwater Time Series - RHMW2254-01
Depth to Groundwater (ft btoc)
79
80
81
82
83
84
85
86
87
88
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
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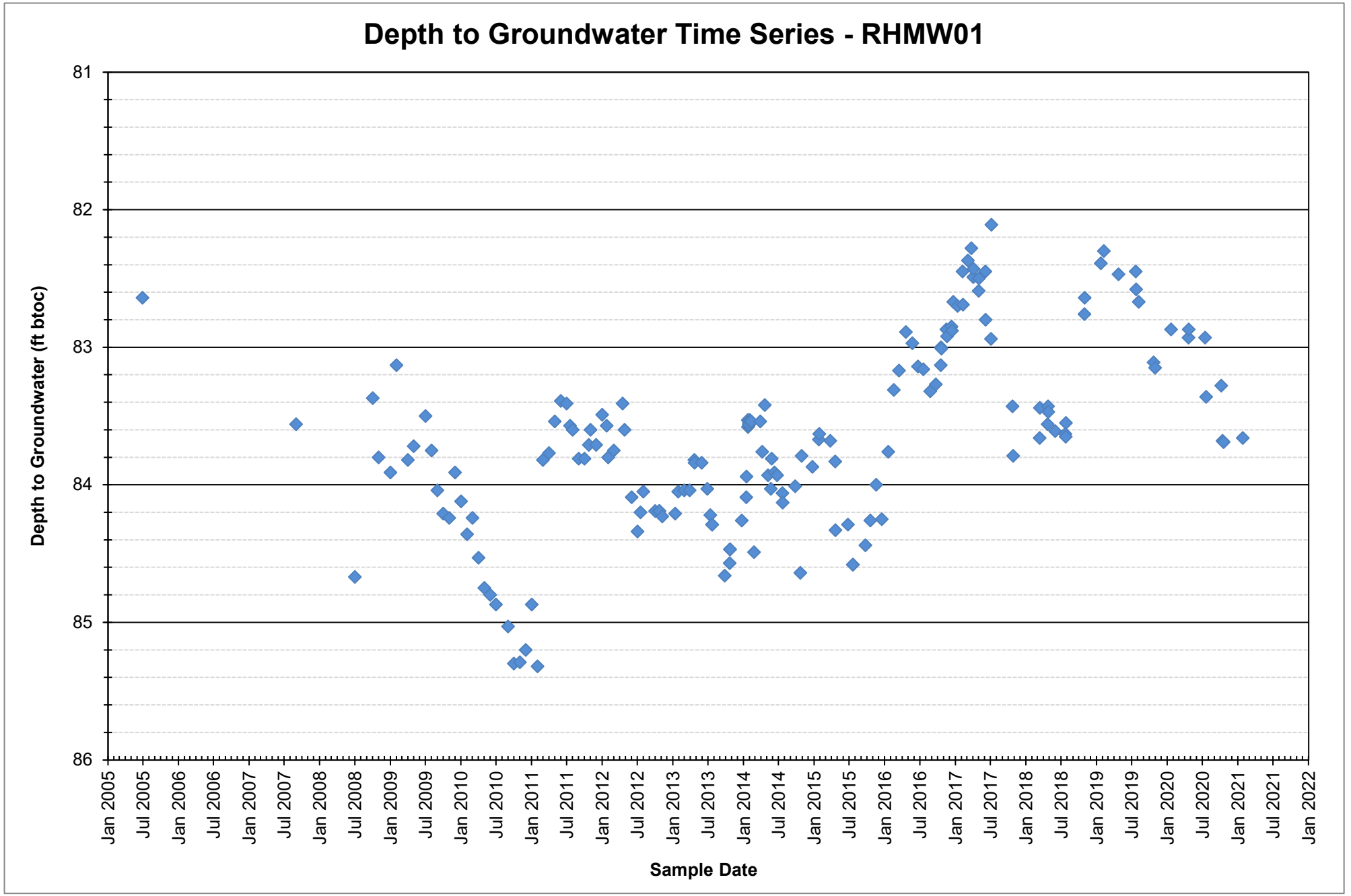
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW01
Depth to Groundwater (ft btoc)
81
82
83
84
85
86
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
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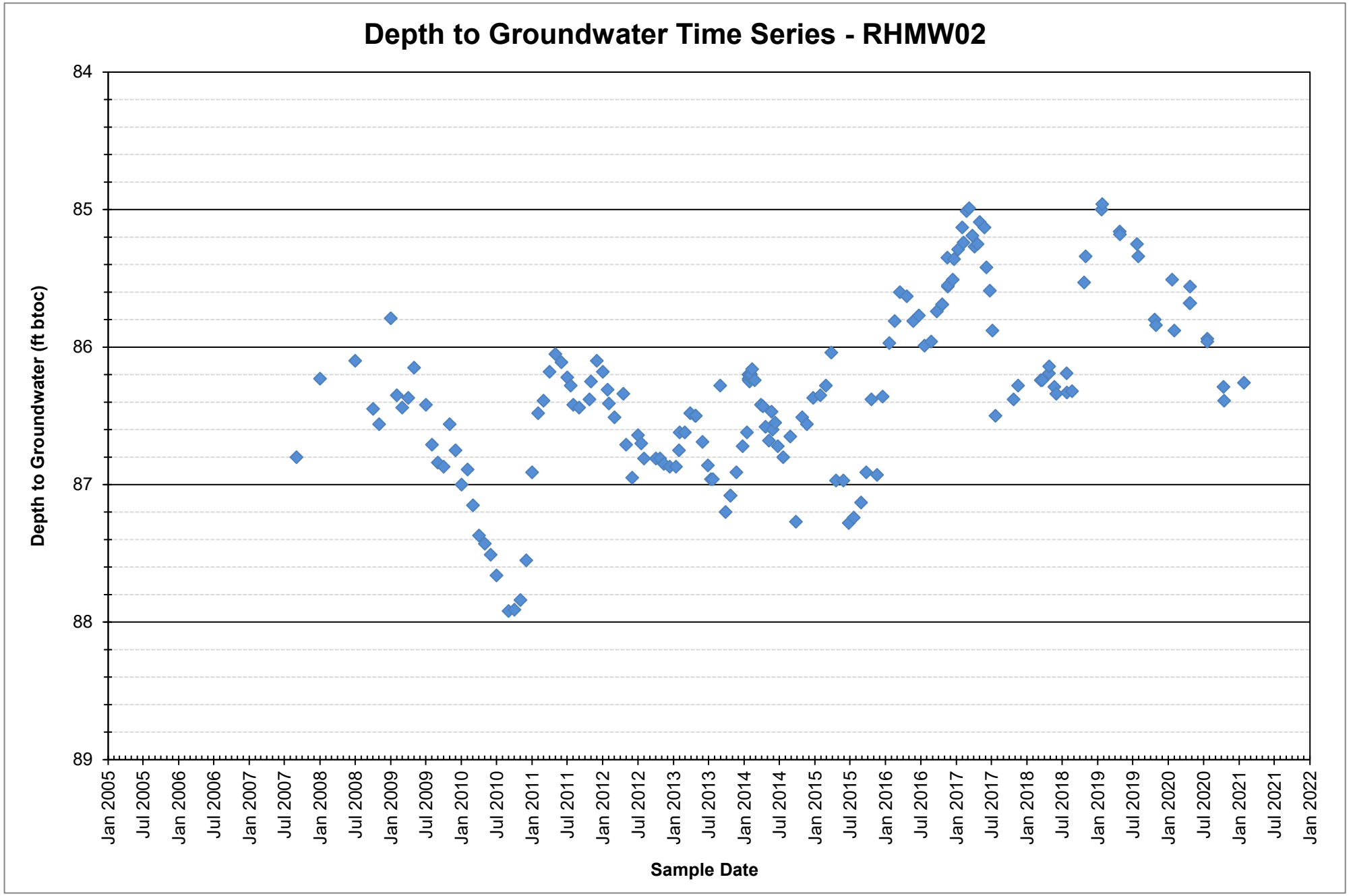
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW02
Depth to Groundwater (ft btoc)
84
85
86
87
88
89
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
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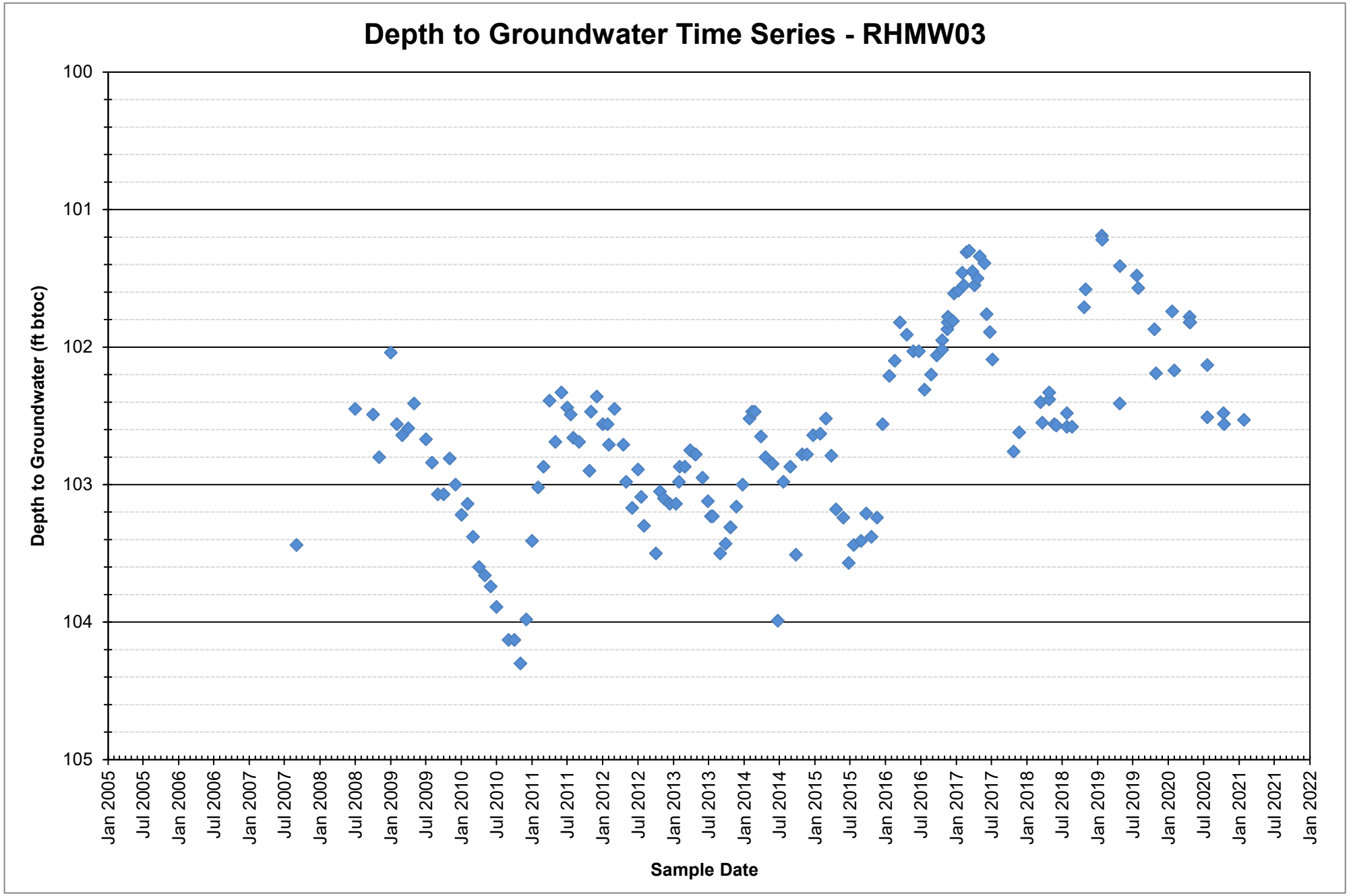
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW03
Depth to Groundwater (ft btoc)
100
101
102
103
104
105
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
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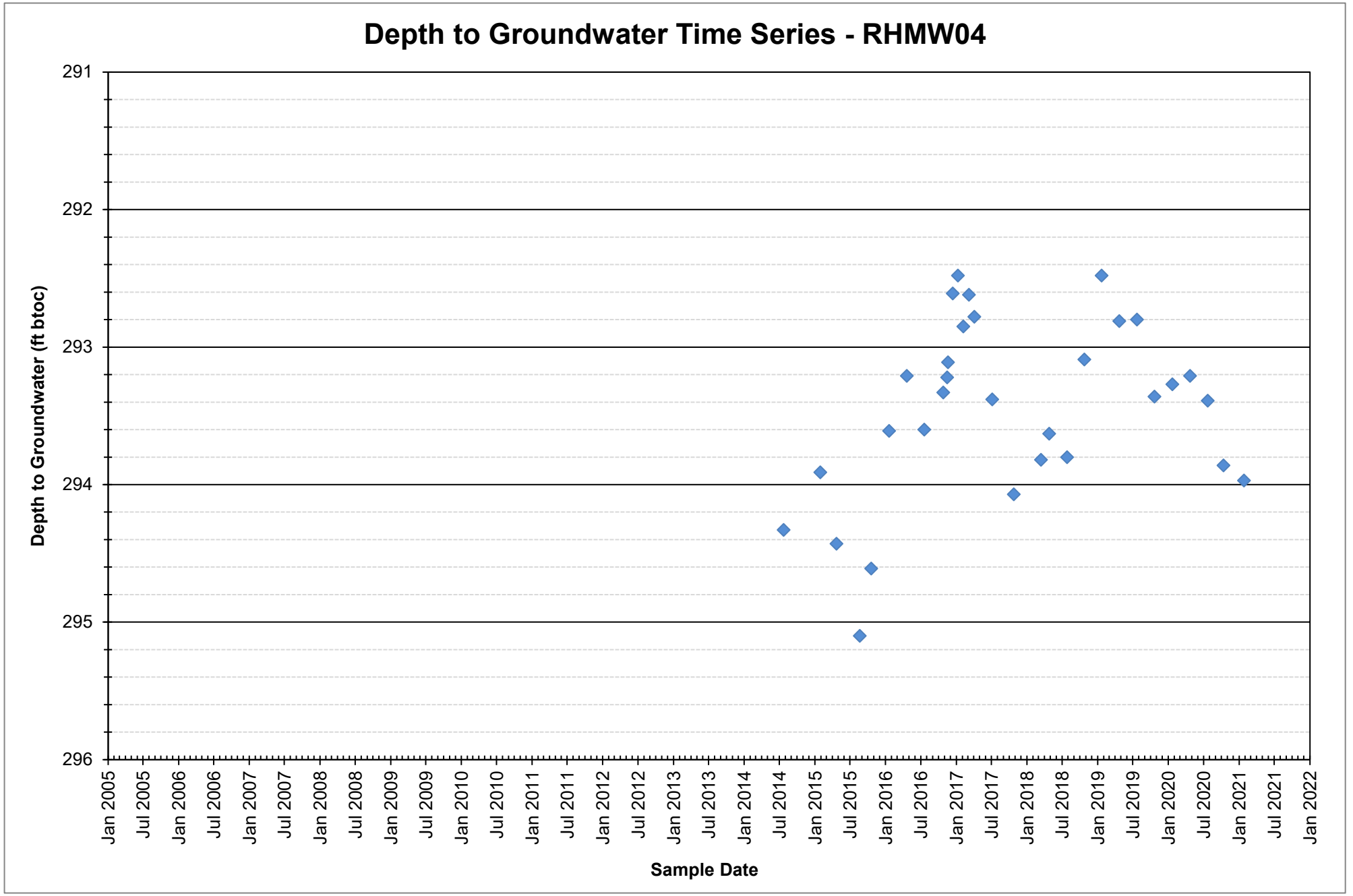
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW04
Depth to Groundwater (ft btoc)
291
292
293
294
295
296
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
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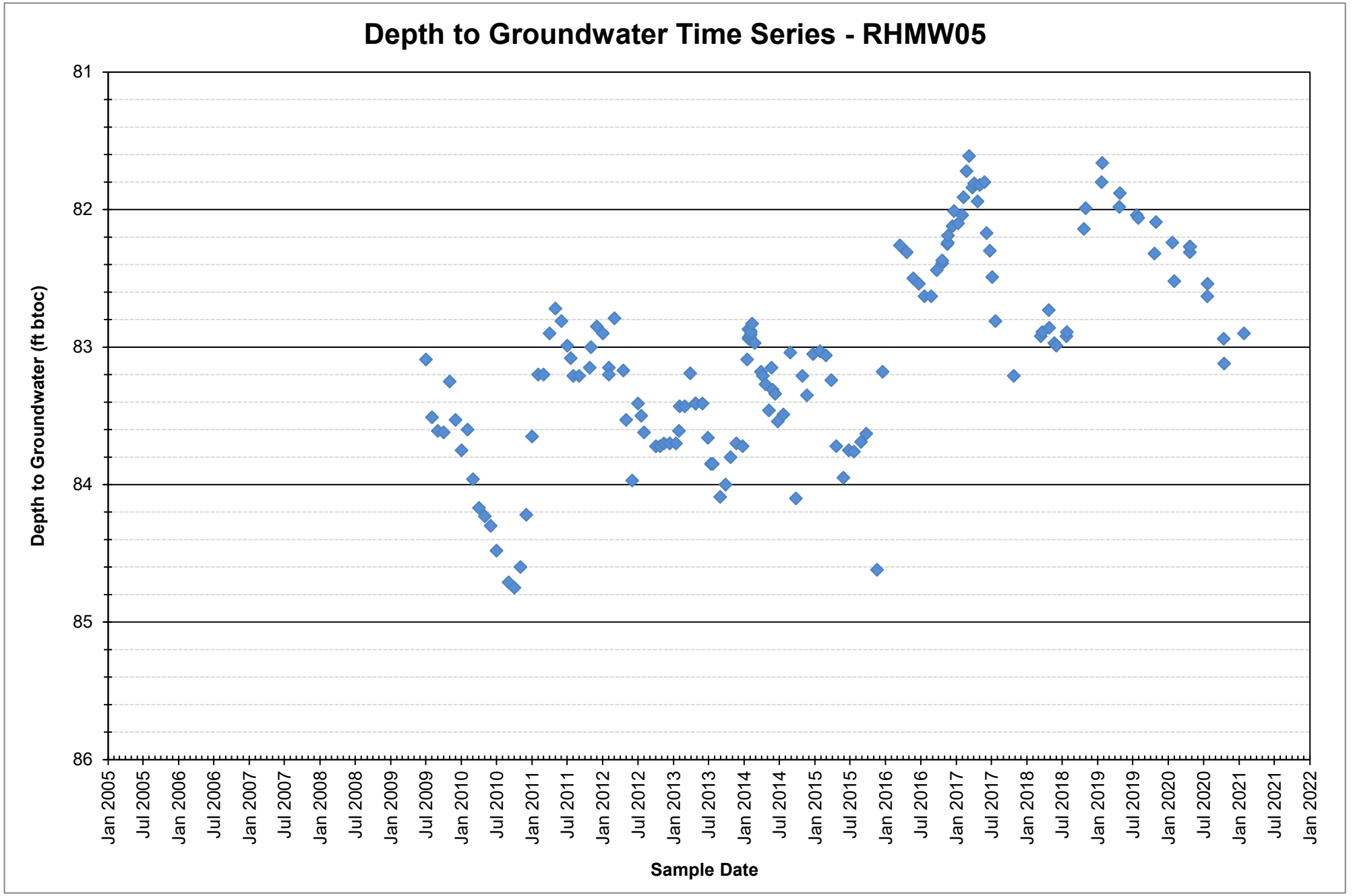
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW05
Depth to Groundwater (ft btoc)
81
82
83
84
85
86
Jan 2005
Jul 2005
Jan 2006
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Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
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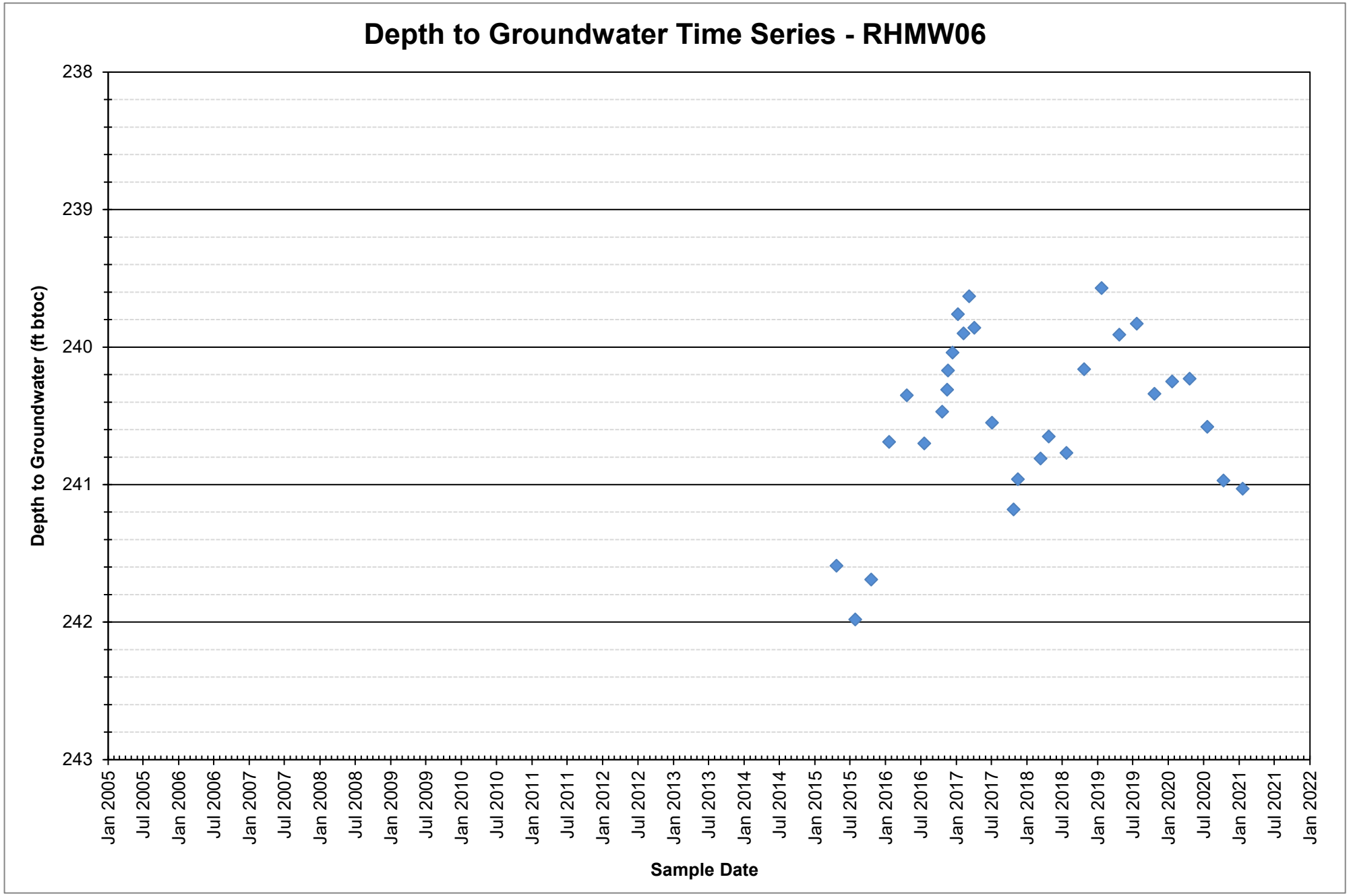
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW06
Depth to Groundwater (ft btoc)
238
239
240
241
242
243
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
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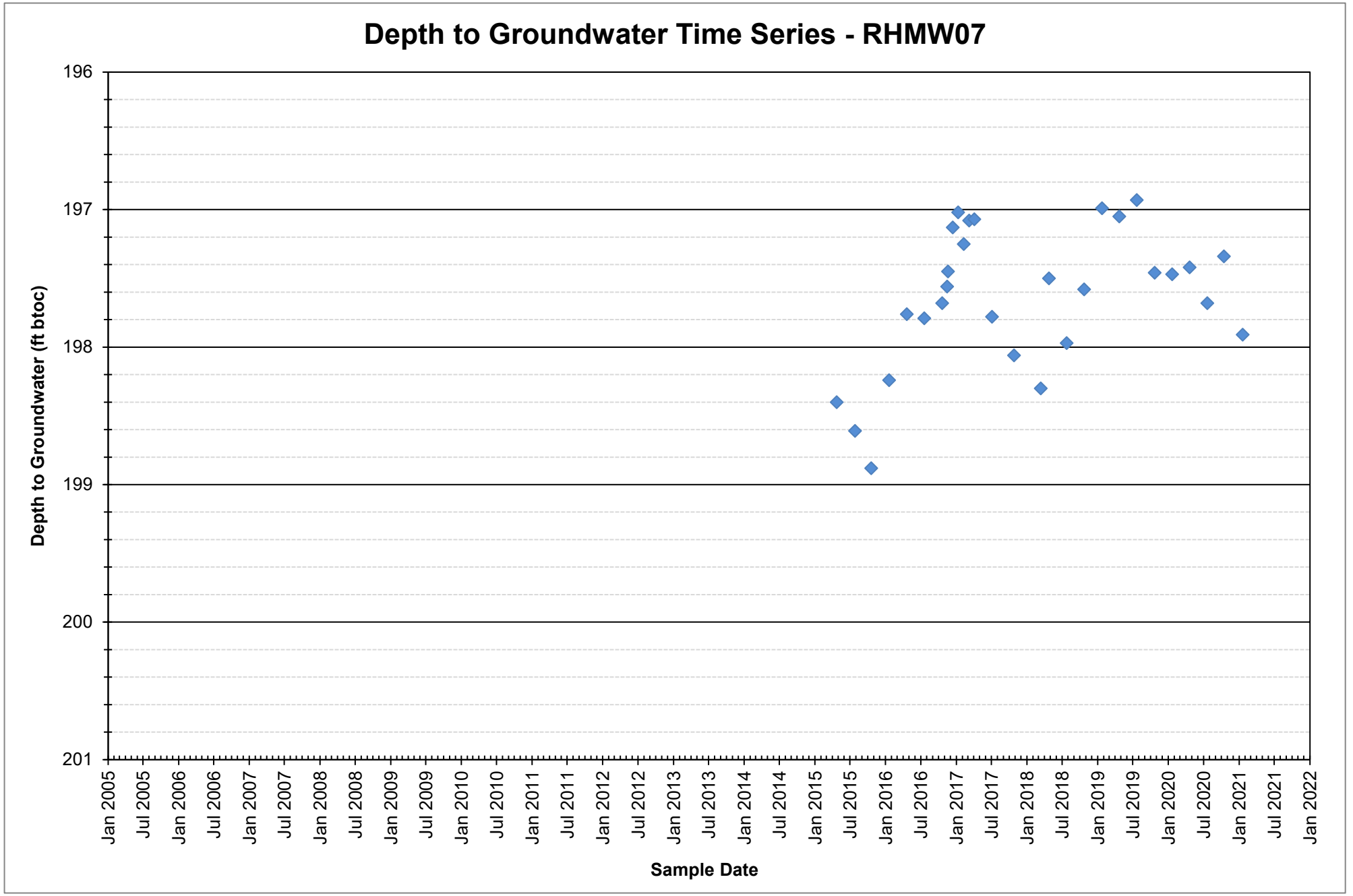
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW07
Depth to Groundwater (ft btoc)
196
197
198
199
200
201
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
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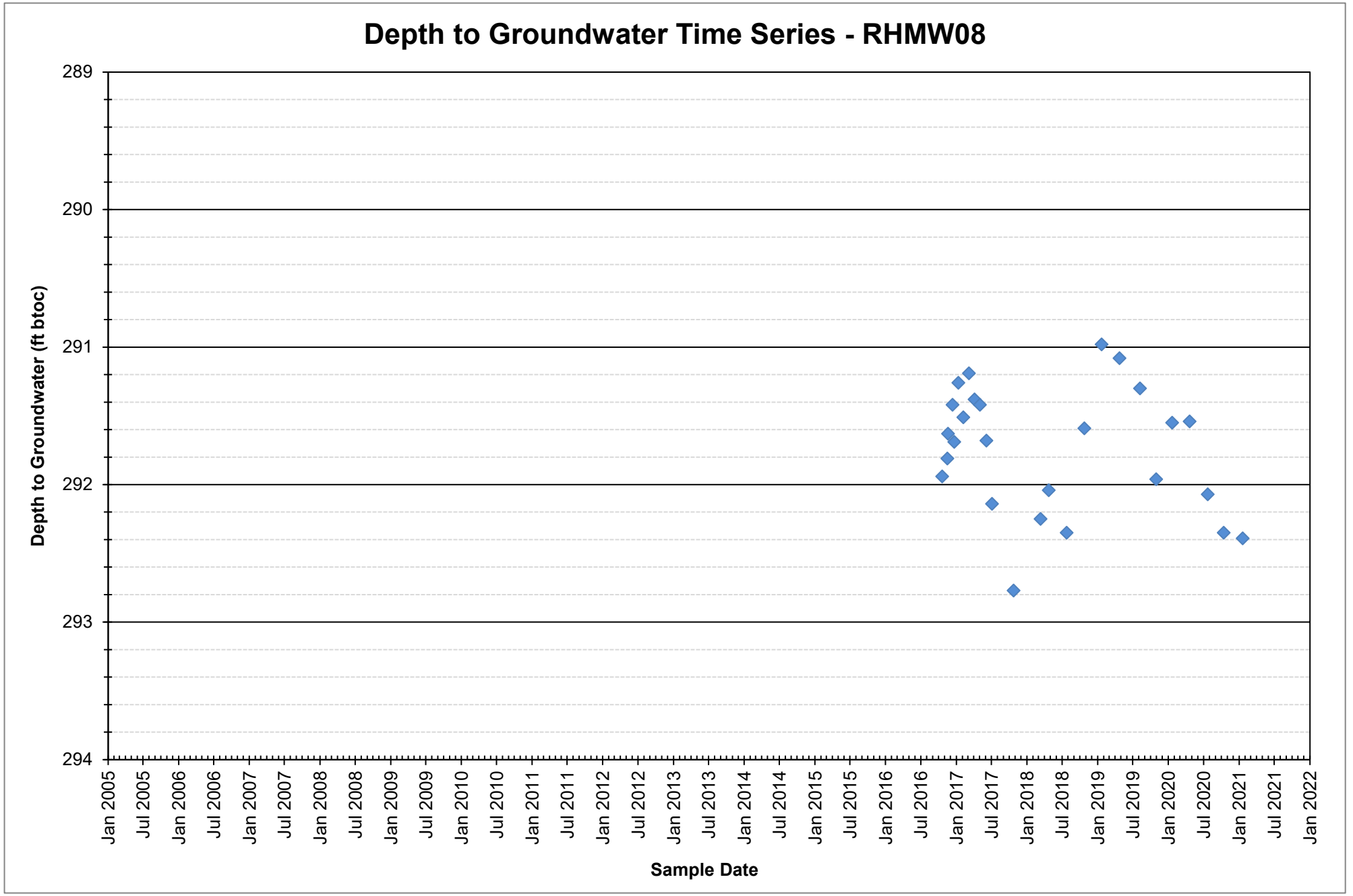
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW08
Depth to Groundwater (ft btoc)
289
290
291
292
293
294
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
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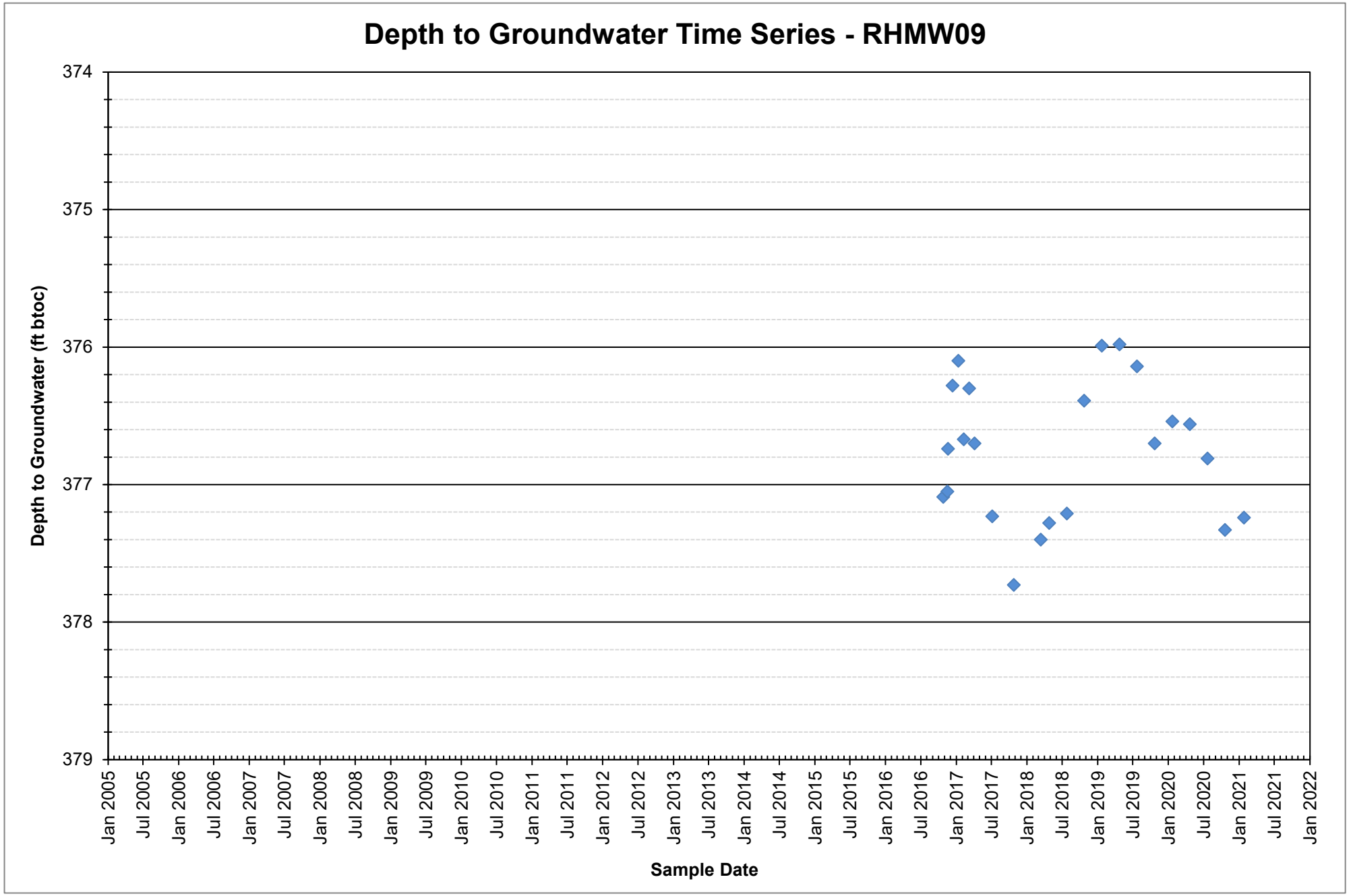
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW09
Depth to Groundwater (ft btoc)
374
375
376
377
378
379
Jan 2005
Jul 2005
Jan 2006
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Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
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Jan 2010
Jul 2010
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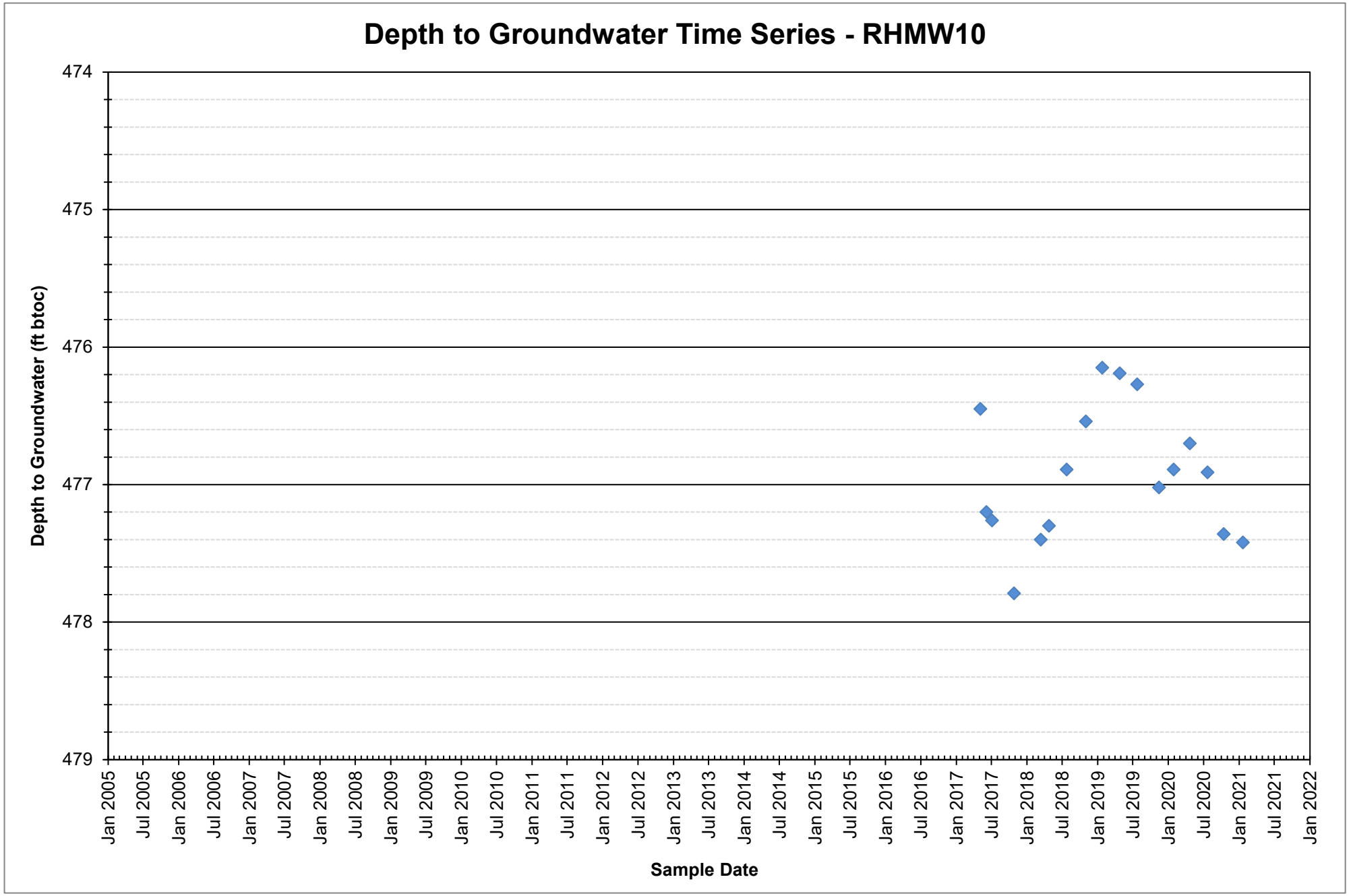
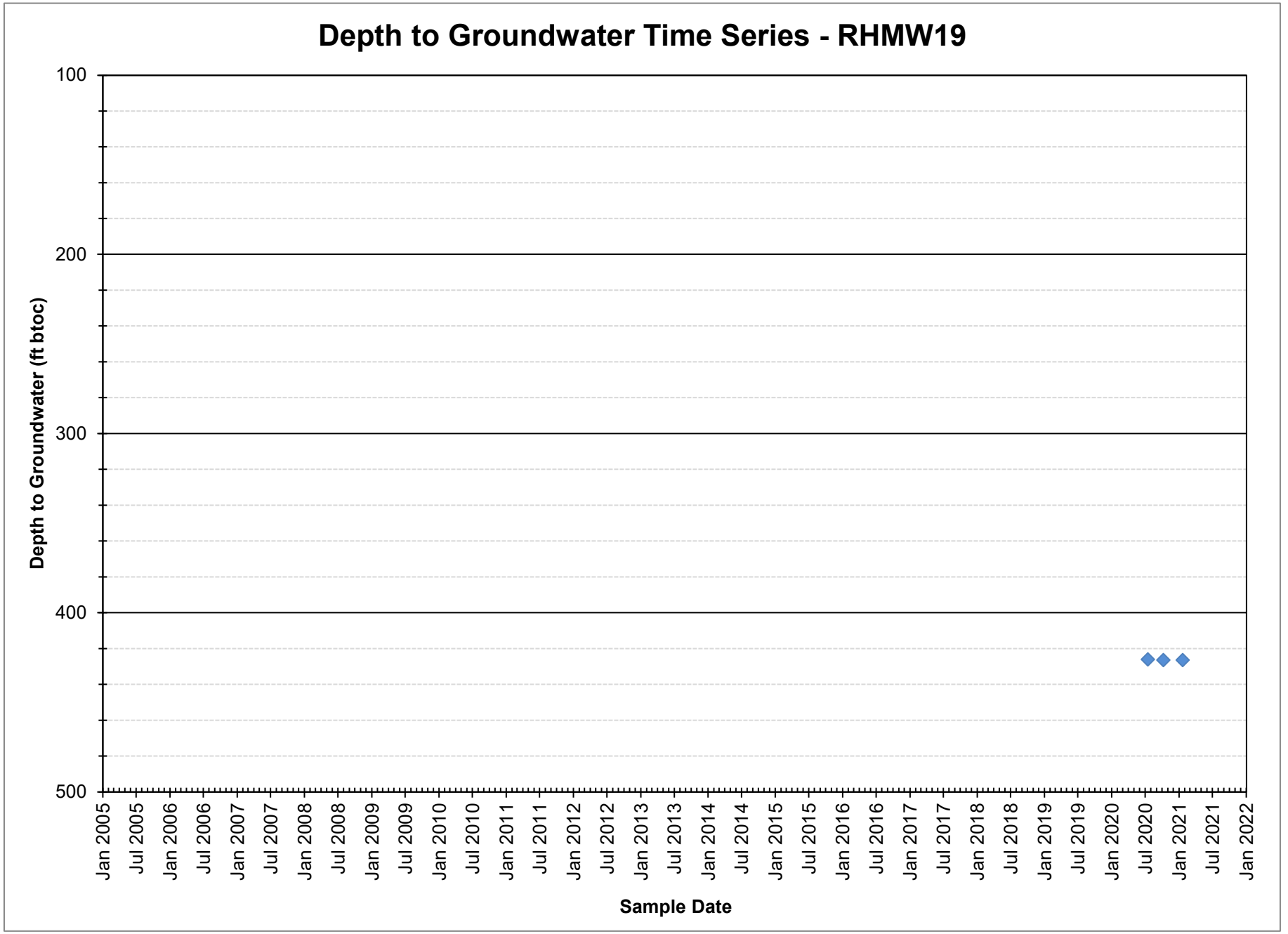
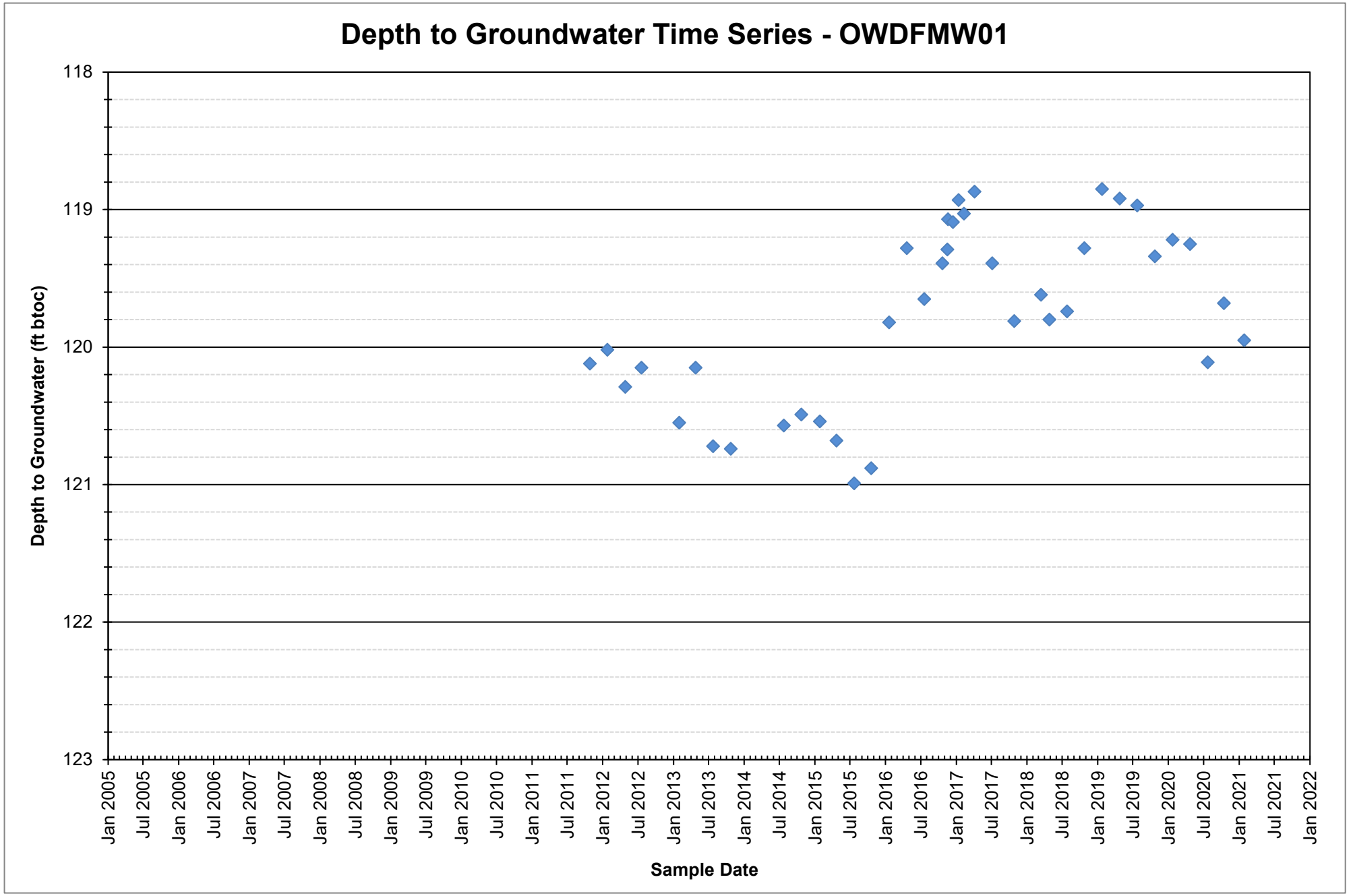
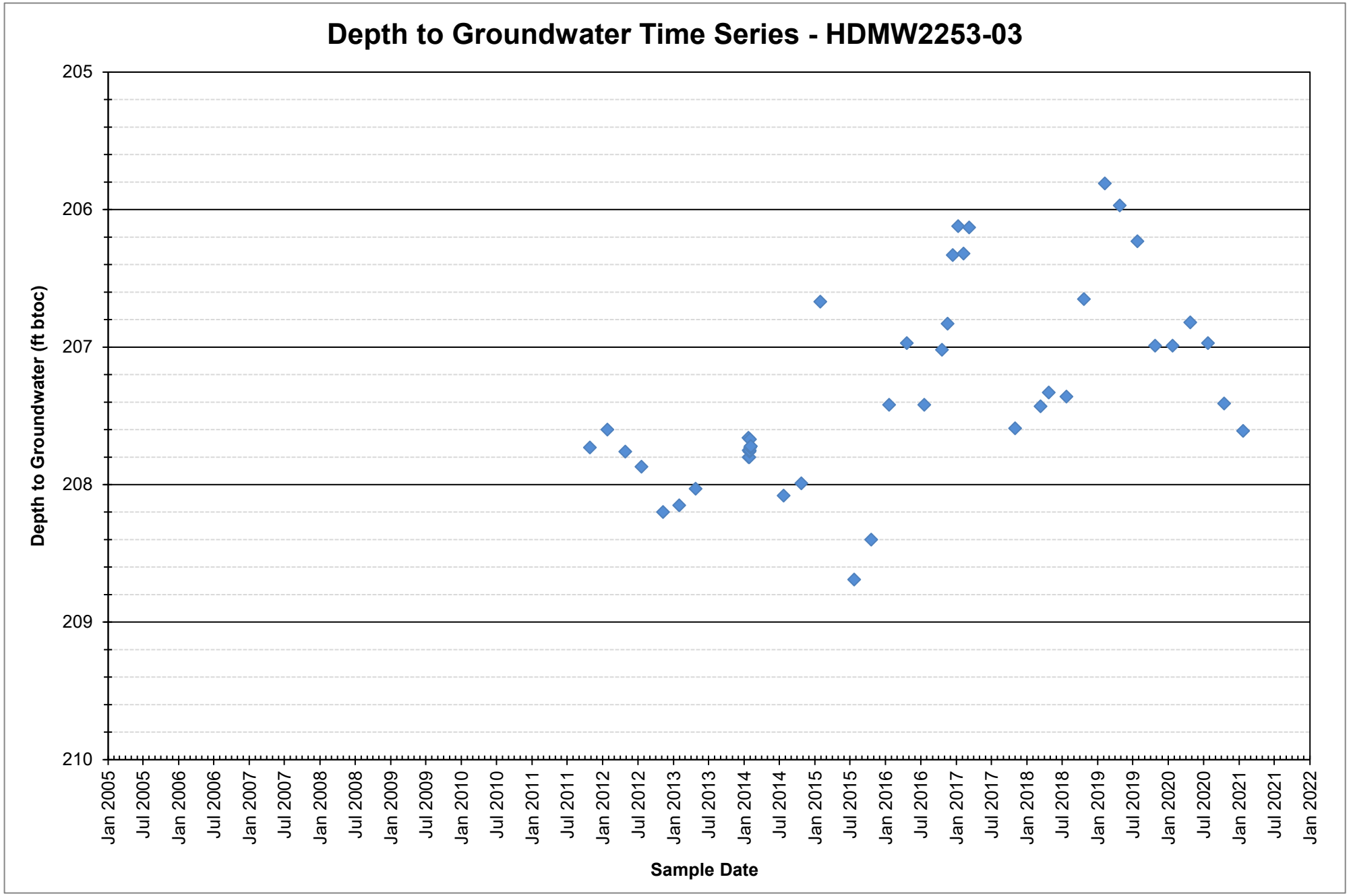
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW10
Depth to Groundwater (ft btoc)
474
475
476
477
478
479
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
Jan 2013
Jul 2013
Jan 2014
Jul 2014
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - RHMW19
Depth to Groundwater (ft btoc)
100
200
300
400
500
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
Jan 2013
Jul 2013
Jan 2014
Jul 2014
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - OWDFMW01
Depth to Groundwater (ft btoc)
118
119
120
121
122
123
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
Jan 2013
Jul 2013
Jan 2014
Jul 2014
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date


Depth to Groundwater Time Series - HDMW2253-03
Depth to Groundwater (ft btoc)
205
206
207
208
209
210
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
Jan 2010
Jul 2010
Jan 2011
Jul 2011
Jan 2012
Jul 2012
Jan 2013
Jul 2013
Jan 2014
Jul 2014
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Jul 2021
Jan 2022
Sample Date

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Appendix A.5:
Cumulative Groundwater General Chemistry

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Table A.5: Cumulative Groundwater General Chemistry, First Quarter 2021 Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte	Bromide		Calcium		Chloride		Fluoride		Iron		Dissolved Lead		Total Lead		Magnesium		Manganese		Nitrate		Potassium		Dissoved Silica		Total Silica		Dissolved Silica		Total Silica		Sodium		Sulfate	
		Unit	mg/L		µg/L		mg/L		mg/L		mg/L		µg/L		µg/L		µg/L		µg/L		mg/L		µg/L		mg/L		mg/L		mg/L		mg/L		µg/L		mg/L	
		Analytical Method	300.0		6010C		300.0		300.0		6010C		6010C		6010C		6010C		6010C		300.0		6010C		4500-SI-D		4500-SI-D		4500-SIO2-C		4500-SIO2-C		6010C		300.0	
		CAS No.	24959-67-9		7440-70-2		16887-00-6		16984-48-8		7439-89-6		7439-92-1		7439-92-1		7439-95-4		7439-96-5		14797-55-8_A		7440-09-7		7631-86-9		7631-86-9		7631-86-9		7631-86-9		7440-23-5		14808-79-8	
Well Name	Sample ID	Date Sampled	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
HDMW2253-03	ERH127	11/16/2016	**0.37**	J	**12900**		**84.7**		**0.17**		—		—		—		**17500**		**56.1**		**1.2**		**608**	J	**62.7**		**67.0**		—		—		**57100**		**27.6**	
OWDFMW01	ERH118	11/15/2016	**3.2**		**115000**		**1070**		< 0.45	U	—		—		—		**220000**		< 4.00	U	**8.1**	J	**7640**		**58.9**		**64.4**		—		—		**350000**		**368**	
RHMW01	ERH117	11/14/2016	**0.26**	J	**11500**		**39.4**		**0.28**		—		—		—		**9880**		**743**		**0.94**		**1900**	J	**68.1**		**65.9**		—		—		**35200**		**4.5**	
RHMW02	ERH124	11/15/2016	**0.26**	J	**12600**		**39.0**		**0.78**		—		—		—		**24800**		**1950**		**0.45**	J	**2440**	J	**84.4**		**83.7**		—		—		**53600**		**1.2**	
RHMW03	ERH125	11/15/2016	**0.29**	J	**25000**		**47.2**		**0.25**		—		—		—		**33400**		**36.7**		**7.6**	J	**3700**		**83.5**		**87.4**		—		—		**104000**		**45.7**	
RHMW04	ERH128	11/14/2016	**0.35**	J	**16900**		**72.8**		**0.16**		—		—		—		**18600**		< 4.00	U	**2.4**		**1960**	J	**62.4**		**57.2**		—		—		**34700**		**9.8**	
RHMW05	ERH126	11/15/2016	**0.62**		**7850**		**157**		**0.39**		—		—		—		**13200**		< 4.00	U	**4.4**		**4930**		**85.4**		**82.6**		—		—		**136000**		**46.5**	
RHMW06	ERH120	11/14/2016	**1.3**		**35100**		**365**		**0.23**		—		—		—		**54900**		< 4.00	U	**3.0**		**2330**	J	**71.2**		**72.1**		—		—		**165000**		**81.8**	
RHMW07	ERH121	11/14/2016	**1.3**		**55500**		**411**		**0.19**	J	—		—		—		**71900**		< 4.00	U	**4.1**		**3040**		**76.7**		**78.0**		—		—		**150000**		**67.9**	
RHMW08	ERH122	11/15/2016	**0.63**		**32700**		**169**		**0.35**		—		—		—		**12000**		< 4.00	U	**2.1**		**5680**		**39.0**		**36.3**		—		—		**109000**		**58.2**	
RHMW09	ERH129	11/15/2016	**0.29**	J	**12900**		**51.5**		**0.17**		—		—		—		**11600**		< 4.00	U	**2.3**	J	**2110**	J	**53.7**		**46.7**		—		—		**36600**		**10.1**	
RHMW09	ERH225	2/8/2017	**0.30**	J	**12800**		**52.7**		**0.14**		< 25.0	U	< 4.0	U	< 4.0	U	**11800**		< 4.00	U	**2.3**	J	**2060**	J	—		—		—		—		—		**35700**		**9.4**	
RHMW09	ERH307	4/4/2017	**0.37**	J	**12900**		**52.3**	J	**0.10**	J	< 25.0	U	< 4.0	U	< 4.0	U	**12000**		< 4.00	U	**2.5**		**1960**	J	**47.2**	J	**44.0**		—		—		**35900**		**9.9**	
RHMW10	ERH433	10/25/2017	**0.29**	J	**9650**		**40.0**		< 0.09	U	< 25.0	U	—		< 4.0	U	**9420**		< 4.00	U	**2.2**		**1730**	J	**41.3**		**37.5**		—		—		**32700**		**7.0**	
RHMW19	ERH1103	7/15/2020	< 0.16	UJ	**10600**		**42.7**		< 0.09	U	—		—		—		**9660**		< 4.00	U	**1.5**	**J**	**2110**	**J**	**41.3**		**45.5**		—		—		**31700**		**5.8**	
RHMW11-01	ERH573	3/21/2018	**0.30**	J	**10100**		**39.6**		< 0.09	U	—		—		—		**9340**		**3.3**	J	**2.0**		**1850**	J	**41.8**		**40.4**		—		—		**26600**		**6.1**	
RHMW11-02	ERH575	3/22/2018	**0.30**	J	**9300**		**43.2**		< 0.09	U	—		—		—		**8710**		**2.0**	J	**2.0**		**1870**	J	**42.0**		**41.8**		—		—		**28000**		**6.5**	
RHMW11-03	ERH579	3/27/2018	**0.27**	J	**8050**		**38.0**		< 0.09	U	—		—		—		**8040**		< 13.1	U	**4.0**	J	**1780**	J	**39.6**		**38.9**		—		—		**33800**		**6.7**	
RHMW11-04	ERH577	3/27/2018	**0.29**	J	**8320**		**41.9**		< 0.09	U	—		—		—		**8280**		**322**		**1.4**	J	**1290**	J	**33.9**		**33**		—		—		**36800**		**6.5**	
RHMW11-05	ERH581	3/28/2018	**0.33**	J	**19500**		**61.3**		**0.13**		**316**		—		< 4.0	U	**18900**		**482**		**0.44**	J	**1150**	J	**37.9**		**39.6**		—		—		**41500**		**9.8**	
RHMW11-07[a]	ERH874	8/5/2019	**0.44**	J	**6200**		**40.0**		< 0.09	U	—		—		—		**6130**		< 4.00	U	**2.4**	J	**737**	J	—		—		**41.1**		**43.1**		**34700**		**10.0**	
RHMW11-07[a]	ERH940	10/30/2019	**0.15**	J	**5620**		**42.4**		< 0.09	U	—		—		—		**5670**		**8.8**	J	**1.7**		**655**	J	—		—		**39.7**		**44.9**		**31400**		**10.0**	
RHMW13-01	ERH1023	3/3/2020	**0.21**	J	**12100**		**41.8**		< 0.09	U	—		—		—		**9320**		**2.6**	J	**< 1.3**	UJ	**1870**	J	—		—		**41.6**		**40.4**		**21600**		**6.4**	
RHMW13-02	ERH1025	3/4/2020	**0.19**	J	**10300**		**26.5**		< 0.09	U	—		—		—		**9710**		**5.9**	J	**< 1.5**	U	**1700**	J	—		—		**42.9**		**47.9**		**23500**		**5.5**	
RHMW13-03	ERH1027	3/5/2020	**0.22**	J	**11400**		**47.5**		**0.25**		—		—		—		**12100**		**1.4**	J	**1.8**		**1960**	J	—		—		**46.5**		**51.1**		**33900**		**7.5**	
RHMW13-04	ERH1029	3/9/2020	**0.33**	J	**10600**		**46.6**		**0.19**		—		—		—		**11800**		**4.8**	J	**1.8**	J	**2000**	J	—		—		**50.2**		**49.3**		**40700**		**11.3**	
RHMW13-05	ERH1031	3/10/2020	**0.40**	J	**21900**		**65.8**		**0.87**		—		—		—		**14900**		**117**		**0.40**	J	**3380**		—		—		**9.0**		**9.0**		**47500**		**11.7**	
RHMW14-01[a]	ERH942	10/21/2019	**0.15**	J	**10500**		**55.8**	J	< 0.09	U	—		—		—		**10500**		< 3.5	U	**1.5**	J	**1580**	J	—		—		**44.5**		**43.4**		**31300**		**7.6**	
RHMW14-02[a]	ERH944	10/22/2019	**0.15**	J	**10000**		**51.0**		< 0.09	U	—		—		—		**10300**		< 4.00	U	**1.5**		**1610**	J	—		—		**40.1**		**42.5**		**35000**		**7.1**	
RHMW14-03[a]	ERH882	7/30/2019	**0.41**	J	**8360**		**46.2**		**0.42**		—		—		—		**9530**		**24.9**		**2.1**	J	**1840**	J	—		—		**44.2**		**45.3**		**36200**		**7.6**	
RHMW14-03[a]	ERH946	10/28/2019	**0.14**	J	**7740**		**47.8**		< 0.09	U	—		—		—		**8820**		**7.3**	J	**1.7**	J	**1390**	J	—		—		**44.2**		**49.1**		**36100**		**7.5**	
RHMW14-04[a]	ERH880	7/29/2019	**0.43**	J	**7780**		**43.3**		**0.42**	J	—		—		—		**8840**		< 4.00	U	**0.45**	J	**1480**	J	—		—		**55.3**		**56.6**		**32100**		**11.4**	
RHMW14-04[a]	ERH949	10/24/2019	**0.13**	J	**8100**		**42.6**		< 0.09	U	—		—		—		**9260**		< 4.00	U	**1.4**		**482**	J	—		—		**54.8**		**55**		**32400**		**11.0**	
RHMW14-05[a]	ERH872	7/31/2019	**0.45**	J	**9430**		**53.4**	D	< 0.09	U	—		—		—		**12700**		**64.5**		**1.5**	J	**1600**	J	—		—		**51.1**		**52.7**		**36200**		**9.4**	
RHMW14-05[a]	ERH951	10/23/2019	**0.18**	J	**10300**		**49.8**		< 0.09	U	—		—		—		**14700**		**64.1**		**1.3**		**620**	J	—		—		**52.7**	J	**52.5**	J	**39000**		**9.4**	
RHMW14-07[a]	ERH876	8/6/2019	**0.44**	J	**12400**		**54.7**		< 0.09	U	—		—		—		**12200**		< 4.00	U	**2.1**	J	**1540**	J	—		—		**58.9**		**62.4**		**40100**		**9.6**	
RHMW14-07[a]	ERH953	10/23/2019	**0.15**	J	**11400**		**58.0**		< 0.09	U	—		—		—		**11400**	J	**15.8**		**1.6**		**799**	J	—		—		**61.1**		**63.1**		**36200**		**9.6**	
RHMW15-01	ERH955	11/4/2019	**0.22**	J	**17200**		**92.4**		< 0.09	U	—		—		—		**16100**		< 4.00	U	**1.6**		**2130**	J	—		—		**39.7**		**43.5**		**38600**		**11.5**	
RHMW15-02	ERH957	11/5/2019	**0.22**	J	**14900**		**70.4**		< 0.09	U	—		—		—		**15900**		< 4.00	U	**1.6**		**2310**	J	—		—		**41.4**		**44.5**		**42600**		**10.9**	
RHMW15-03	ERH959	11/7/2019	**0.22**	J	**13200**		**75.4**		< 0.09	U	—		—		—		**13800**		**3.0**	J	**1.6**		**2070**	J	—		—		**44.9**		**45.3**		**35300**		**10.7**	
RHMW15-04	ERH961	10/31/2019	**0.17**	J	**9490**		**58.4**		< 0.09	U	—		—		—		**9990**		**11.6**		**1.6**	J	**1730**	J	—		—		**42.6**		**46.2**		**28300**		**8.4**	
RHMW15-05	ERH963	11/6/2019	**0.19**	J	**13800**		**57.3**		< 0.09	U	—		—		—		**10600**	J	**191**	J	**0.17**	J	**1610**	J	—		—		**13.7**		**14.6**		**39600**	J	**3.8**	
RHMW2254-01	ERH115	11/14/2016	**0.36**	J	**15800**		**72.3**	J	**0.24**		—		—		—		**15400**		< 4.00	U	**2.9**		**2230**	J	**53.0**		**51.9**	J	—		—		**42200**		**18.5**	

Bold	Detected value
µg/L	micrograms per liter
mg/L	miligrams per liter
No.	number
ID	identification
—	No result
Result Qualifiers (Q)	
J	Estimated value
U	The compound was analyzed for but not detected above the stated limit
D	

[a] The results for RHMW11-07 that were collected in August 2019 and the results for RHMW14 from July-August 2019 were recollected in October 2019 after additional zone purging was performed.

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Appendix B:
Field Activity Documentation,
First Quarter 2021
(on CD-ROM at end of document)

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Appendix B.1:
Groundwater Sampling Logs

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Red Hill Groundwater Sampling Log

WELL NO. **RHMW2254-01** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 1/26/2021 TIME: 0820 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*82.70	NM								Deep Cycle
**82.66	NM	NM	N/A	115.79	NM	275	0831	13	14934
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				48	50	25	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace $O_{2:}$	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: Solinst (not used) Serial Number: 269453/N-1

Gas Detector Type: MultiRae Serial Number: 46Q3

Water Quality Meter Type: Smartroll Serial Number: 589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 17 Primary + 12 Dup + 20 MS/MSD + 4 TB = 53 Total

VOAs	Amber	Poly
HCl: 4+4+4 = **12**	1-L: 2+2+4 = **8**	250 mL H2SO4: **1**
H2SO4: 2 = **2**	1-L (800 mL): 2+2+4 = **8**	250 mL HCl (brown): **1 filtered**
	500-mL: 2+2+4 = **8**	250 mL unpreserved: **1**
	1-L (HCL): 2+2+4= **8**	

SAMPLE IDENTIFICATION NUMBER(S **ERH1214 (N, MS/MSD)** **ERH1215 (Dup)** **ERH1213 (Trip Blank)**

DATE: TIME: Start: 0910 End: 1036 Start: 0900

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Was the pump on or off?

On for dinking water sample

SAMPLED BY: MM, AM, KL SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW2254-01**		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0831					Water at Surface					
0840		3	355.83	7.07	0.55	8.18	0.13	21.90	511.4	0.3
0844		4	355.35	7.36	0.55	8.22	0.09	21.64	534.6	0.3
0848		5	356.33	7.44	0.55	8.22	0.00	21.63	542.0	0.3
0852		6	356.02	7.49	0.55	8.21	0.00	21.59	542.5	0.3
0856		7.2	356.27	7.52	0.55	8.21	0.00	21.59	534.2	0.3
0900		8.5	354.61	7.53	0.55	8.23	0.00	21.59	532.2	0.3
0910					Start sampling					

Red Hill Groundwater Sampling Log

WELL NO. **OWDFMW01** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/27/2021 TIME: 0815 CLIMATIC CONDITIONS: Partly cloudy, 72°F

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*120.09	119.99								start:4000
**119.74	120.01	120.28	N/A	NM	NM	80	1045	6	end:2300
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				68	60	13	13	17	17

Headspace VOCs: 0.0 ppm Ambient VOCs 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Solinst Serial Number: 269453/N-1

Gas Detector Type: Multi Rae Serial Number: 46Q3

Water Quality Meter Type: Smartroll Serial Number: 589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1238 (N)** **ERH1237 (Trip Blank)**

DATE: TIME: Start: 1200 End: 1320 Start: 0930

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: N/A

SAMPLED BY: MM, AM, KL SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**OWDFMW01**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0915					Water at surface					
0930					Pull pump check bladder					
0945					Reinstall pump					
1020					Pull pump, remove tear in tubing					
1045					Reinstall and start purge					
1110	120.12	3.00	2623.27	8.36	4.04	9.68	7.32	26.18	412.9	2.2
1114	120.12	3.12	2720.73	8.35	4.19	8.41	7.28	25.96	493.2	2.3
1118	120.18	3.25	2752.80	8.30	4.24	7.83	5.18	25.82	512.1	2.3
1122	120.20	3.37	2774.02	8.27	4.26	7.29	3.27	25.73	522.2	2.3
1126	120.22	3.50	2800.95	8.25	4.31	6.77	3.15	25.69	521.9	2.3
1130	120.24	3.62	2802.89	8.24	4.32	6.45	3.08	25.69	516.8	2.3
1134	120.26	3.75	2803.85	8.23	4.31	6.15	2.90	25.73	515.9	2.3
1138	120.26	3.87	2744.51	8.22	4.31	5.99	2.80	25.68	515.7	2.3
1142	120.29	4.00	2789.21	8.21	4.31	5.74	2.63	25.68	513.1	2.3
1146	120.31	4.12	2789.10	8.20	4.31	5.71	2.51	25.68	513.4	2.3
1200					Start sample					

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW01**	LOCATION:	Inside Tunnel	PROJECT NO.	60571032
DATE:	1/25/2021	TIME:	0750	CLIMATIC CONDITIONS:	Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*83.69	83.71*								Deep cycle
**83.70	83.68**	83.67**	-	99.8	NM	80	0815	3L	14513
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				47.5	45	7	7	8	8

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace $O_{2:}$	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0	ppm	Ambient H_2S:	0	%

O/W Interface Probe Type/Water Level Meter	Solinst/Solinst	Serial Number:	269463 / N-1
Gas Detector Type:	Multi Rae	Serial Number:	46Q3
Water Quality Meter Type:	Smartroll	Serial Number:	589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE:
COLOR: Clear
SEDIMENT: None
ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S): **ERH1217 (N)** **ERH1216 (Trip Blank)**

DATE: TIME: Start: 900 End: 1110 Start: 0830

Start: - End: -

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: N/A

SAMPLED BY: MM, KL, AM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW01**		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0812					Water at surface					
0824	83.68	0.4	196.13	6.95	0.3	4.77	0.11	24.77	127.1	0.1
828	83.67	0.9	195.55	6.93	0.3	2.79	0.07	24.66	113.1	0.1
832	83.67	1.3	195.44	6.92	0.3	2.07	0.00	24.55	92.3	0.1
836	83.67	1.7	195.41	6.92	0.3	1.37	0.00	24.45	80.5	0.1
840	83.67	2	195.38	6.92	0.3	1.28	0.00	24.38	69.4	0.1
844	83.67	2.2	195.33	6.92	0.3	1.16	0.00	24.33	63.1	0.1
848	83.67	2.4	195.40	6.92	0.3	1.11	0.00	24.32	63.3	0.1
852	83.67	2.5	195.45	6.92	0.3	1.05	0.00	24.32	63.3	0.1
900					Start sample					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW02** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 1/25/2021 TIME: 1120 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*86.41	86.42								Deep Cycle
**86.37	86.34	86.38	no product	99	N/A	275	1130	14	14513
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				52	50	25	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	15.6	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0	ppm	Ambient H_2S:	0	%

O/W Interface Probe Type/Water Level Meter: Solinst/Solinst Serial Number: 269453/N-1

Gas Detector Type: Multi Rae Serial Number: 46Q3

Water Quality Meter Type: Smartroll Serial Number: 589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 11 Dup + 1 Lab Study + 4 TB = 34 Total

VOAs	Amber	Poly	Lab Study
HCl: 4+4=**8**	1-L: 2+2 = **4**	250 mL H2SO4: **1**	1-L amber: **1**
H2SO4: **2**	1-L (800 mL): 2+2= **4**	250 mL HCl (brown): **1 filtered**	
	1-L (HCL): 2+2= **4**	250 mL unpreserved: **1**	
	500-mL: 2+2=**4**		

SAMPLE IDENTIFICATION NUMBER(S) **ERH1219 (N)** **ERH1220 (Dup)** **ERH1218 (Trip Blank)**

DATE: 10/12/2020 TIME: Start: 1220 End: 1355 Start: 1150

ERH1267 (Lab) **ERH1269** **ERH1270**

Start: 1220 End: 1355

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: N/A

SAMPLED BY: MM, KL, AM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW02		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1135					Water at surface					
1141	86.52	2L	314.52	6.54	0.48	2.14	0.18	24.33	26	0.2
1145	86.52	3L	314.09	6.57	0.48	1.24	0.16	24.15	46.7	0.2
1149	86.52	4L	312.44	6.61	0.48	1.64	0.10	24.11	43.7	0.2
1153	86.52	5L	311.93	6.61	0.48	2.13	0.10	24.05	44.3	0.2
1157	86.52	6L	312.07	6.61	0.48	2.48	0.10	24.01	40.6	0.2
1201	86.52	7L	312.92	6.62	0.48	2.79	0.10	23.96	44.5	0.2
1205	86.52	8L	313.35	6.64	0.48	3.03	0.10	23.88	44.8	0.2
1209	86.52	9.3L	313.38	6.64	0.48	3.12	0.10	23.86	47.3	0.2
1213	86.52	10.5L	313.73	6.64	0.48	3.16	0.09	23.83	50.7	0.2
1217	86.52	11.7L	313.84	6.64	0.48	3.16	0.08	23.82	51.1	0.2
1220					Start Sample					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW03** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 1/25/2021 TIME: 1423 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*102.59	102.63								Deep Cycle
**102.55	102.60	102.96	N/A	117.3	N/A	300	1435	7	14513
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				55	55	25	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace $O_{2:}$	13.4	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: Solinst/Solinst Serial Number: 269453/N-1

Gas Detector Type: Multi Rae Serial Number: 46Q3

Water Quality Meter Type: Smartroll Serial Number: 589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1222 (N)** **ERH1221 (Trip Blank)**

DATE: TIME: Start: 1510 End: 1540 Start: 1445

ERH1199 (Lab Study)

Start: - End: -

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: N/A

SAMPLED BY: MM, AM, KL SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW03**		LOCATION:		Inside Tunnel		PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1435					Water at surface					
1442	102.95	1.5	496.88	6.75	0.76	2.54	0.73	27.28	505.5	0.4
1446	102.90	3.0	494.21	6.73	0.76	1.45	1.41	26.58	547.8	0.4
1450	102.92	4.0	493.09	6.74	0.76	0.76	1.35	26.34	549.2	0.4
1454	102.93	5.0	494.64	6.76	0.76	1.21	0.56	26.37	546.5	0.4
1458	102.95	6.0	495.61	6.77	0.76	1.16	0.37	26.34	543.0	0.4
1502	102.96	7.0	495.19	6.78	0.76	1.13	0.15	26.33	540.7	0.4
1510					Start sample					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW04** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/25/2021 TIME: 0832 CLIMATIC CONDITIONS: 77°F, cloudy, rainy light wind 74% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen Used
*293.54	*294.13								1500/500
**293.47	**294.02	293.97	NA	305	NA	200	0926	26	2500/1400
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				140	140	28	28	32	32

Headspace VOCs: 0.1 ` ppm Ambient VOCs 0.1 ppm

Not in tunnel, only took PID VOC reading

O/W Interface Probe Type/Water Level Meter Solinst/Heron Serial Number: 01-7350/N-2

Gas Detector Type: Mini Rae 3000 Serial Number: 592-920683

Water Quality Meter Type: SmarTroll Serial Number: 589976

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 4 TB = 20 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH1167 (N)** **ERH1166 (Trip Blank)**

DATE: 10/12/2020 TIME: Start: 1422 End: 1500 Start: 1415

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: EC, RS, JV, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW04**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1245	Water at surface - high volume of bubbles. Waited to collect data									
1255	293.90	2.0	276.01	7.49	0.42	12.04	0.33	23.34	137.7	0.2
1300	293.90	3.5	271.43	7.47	0.42	10.17	0.33	23.14	134.8	0.2
1305	293.90	4.5	273.25	7.44	0.42	9.70	0.23	22.87	131.1	0.2
1310	293.90	6.0	271.34	7.43	0.42	9.42	0.15	22.96	128.1	0.2
1315	293.90	7.0	271.12	7.42	0.43	9.44	0.28	23.05	127.1	0.2
1319	Pause readings to re-calibrate D.O. to ensure accuracy									
1330	293.90	12.0	268.47	7.24	0.41	8.87	0.19	24.18	142.0	0.2
1335	293.90	13.0	276.73	7.30	0.43	9.08	0.22	22.94	133.8	0.2
1340	293.90	13.5	275.47	7.35	0.42	9.12	0.12	22.91	128.4	0.2
1341	Pause reading to spot check sensor with D.I. water. D.O. reading of 8.13									
1351	293.89	17.0	270.86	7.14	0.42	8.85	0.09	23.53	136.1	0.2
1356	293.89	18.5	275.32	7.27	0.42	9.04	0.23	22.85	127.1	0.2
1401	293.89	19.5	227.36	7.32	0.42	8.89	0.13	22.83	123.2	0.2
1406	293.88	20.5	275.93	7.35	0.42	8.95	+	22.87	121.3	0.2
1412	293.90	22.5	274.95	7.37	0.42	8.88	+	22.87	121.7	0.2
1417	293.89	23.5	275.38	7.38	0.43	8.95	+	22.87	120.2	0.2
1422	Sample at 1422 - Reduced flow rate to ~ 100 mL/min for VOA's collection.									
	Return to ~250 mL/min for ambers									
	+ Tubidity glass container broken - no reading									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW05** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 1/26/2021 TIME: 1200 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*82.98	82.98								Deep Cylce
**82.97	82.93	82.91	N/A	93	N/A	250	1223	5	14939
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				45	45	25	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace $O_{2:}$	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: Solinst/Solinst Serial Number: 269453/N-1

Gas Detector Type: Multi Rae Serial Number: 46Q3

Water Quality Meter Type: SmarTroll Serial Number: 589972

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 4 TB = 20 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1226 (N)** **ERH1225 (Trip Blank)**

DATE: TIME: Start: 1250 End: 1320 Start: 1230

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: N/A

SAMPLED BY: MM, AM, KL SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW05**		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1220					Water at surface					
1225	82.93	1.75	450.59	7.88	0.69	8.31	0.28	24.28	468.0	0.3
1229	82.93	2.1	450.02	7.98	0.69	8.10	0.25	24.23	494.6	0.3
1233	82.92	3.0	449.79	8.00	0.69	8.06	0.05	24.23	510.8	0.3
1237	82.92	4.0	449.73	8.00	0.69	8.08	0	24.23	514.7	0.3
1241	82.92	5.0	449.71	8.00	0.69	8.07	0	24.23	508.3	0.3
1250					Start sample					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW06** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/19/2021 TIME: 0800 CLIMATIC CONDITIONS: overcast rain 72°

no wind 82% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*241.13	*241.18								start:1300
**241.00	**241.06	**241.00	NA	263.2	NA	250	0911	20.5	end:300
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				120	120	25	25	25	25

Headspace VOCs: 0.1 ppm Ambient VOCs: 0.1 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: /N-2/01-7350

Gas Detector Type: Mini Rae 3000 Serial Number: 592-913390

Water Quality Meter Type: SmarTroll Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: None

ODOR/OTHER: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **2**	250 mL unpreserved: **1**
	1-L (HCL): **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1171 (N)** **ERH1170 (Trip Blank)**

DATE: 1/19/2021 TIME: Start: 1019 End: 1100 Start: 0942

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Keep nitrogen regulator at 130. Used PID to check sample: 0.0 ppm head space reading: 0.0 ppm

SAMPLED BY: GM, RS, JV and EC SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW06**		LOCATION:		Outside Tunnel		PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0911					Water at surface					
0918	241.08	1.9	1147.35	7.41	1.77	10.27	—	23.43	85.9	0.9
0923	241.08	3.0	1146.21	7.22	1.76	8.43	1.30	23.25	74.6	0.9
0928	241.09	5.0	1139.47	7.14	1.75	10.11	0.65	23.15	65.6	0.9
0933	241.09	6.0	1140.92	7.13	1.74	9.37	0.08	23.12	62.4	0.9
0938	241.03	8.0	1141.74	7.12	1.76	8.41	0.22	23.12	60.2	0.9
0943	241.03	10.0	1142.59	7.11	1.76	8.04	0.21	23.12	58.9	0.9
0948	241.03	11.5	1144.54	7.10	1.76	7.73	0.08	23.10	57.9	0.9
0953	241.04	12.8	1145.20	7.10	1.76	7.29	0.10	23.12	57.7	0.9
0958	241.03	14.2	1145..32	7.10	1.76	6.71	0.05	23.12	56.7	0.9
1003	241.03	15.5	1145.44	7.1	1.76	6.9	0	23.14	56.2	0.9
1008	241.04	16.2	1145.68	7.10	1.76	6.47	0.00	23.11	55.8	0.9
1013	241.04	17.6	1144.61	7.10	1.76	6.88	0.02	23.07	55.6	0.9
1015	Sample at 1025. Reduced flow rate to 100 mL/min for VOAs collection.									
	Returned to 250 mL/min for ambers									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW07** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/19/2021 TIME: 1447 CLIMATIC CONDITIONS: sunny, light-no wind

78°, 64% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*197.46	*198.04								start:1500
**197.37	**197.94	198.90	NA	217.76	NA	175	1502	9.5	end:500
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				95	95	30	30	30	30

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: N-2/01-7350

Gas Detector Type: Mini Rae 3000 Serial Number: 592-913390

Water Quality Meter Type: SmarTroll Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: No sediment

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1232** **ERH1231 (Trip Blank)**

DATE: 1/19/2021 TIME: Start: 1558 End: 1701 Start: 1506

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY GM, RS and JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW07**		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1502					Water at surface					
1520	—	3.0	1098.78	7.16	1.69	3.82	—	25.17	72.0	0.9
1525	198.25	4.0	1120.46	7.31	1.72	4.15	0.24	24.51	66.7	0.9
1530	198.25	5.0	1112.40	7.27	1.71	4.25	0.16	24.38	64.0	0.9
1535	198.33	6.00	1113.53	7.26	1.71	4.25	0.08	24.28	62.8	0.9
1540	198.38	6.9	1113.57	7.23	1.71	4.25	0.11	24.74	61.2	0.9
1545	198.25	7.5	1109.98	7.21	1.71	4.25	0.22	24.83	60.3	0.9
1550	198.31	8.0	1106.70	7.20	1.70	4.26	0.21	24.65	59.8	0.9
1555	198.35	9.0	1108.28	7.20	1.70	2.23	0.29	24.70	59.1	0.9
1558			Start sampling. Lowered flow rate to 100 mL/min for VOA sampling							
			Then increased back to 150 mL/min							

Red Hill Groundwater Sampling Log

WELL NO. **RHMW08** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/19/2021 TIME: 1155 CLIMATIC CONDITIONS: sunny, no-light winds

79°, 63% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*292.56	*292.57								start:900/2700
**292.41	**292.45	**292.55	N/A	311.3	NA	280	1214	19	end:300/1500
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				140	155	30	30	26	30

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Heron/Solinst Serial Number: /N-2/01-7350

Gas Detector Type: Mini Rae 3000 Serial Number: 592-913390

Water Quality Meter Type: SmarTroll Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: No Sediment

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **3**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1230 (N)** **ERH1229 (Trip Blank)**

DATE: 1/19/2021 TIME: Start: 1319 End: 1356 Start: 1211

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: GM, RS, and JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW08**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1214					Water at surface					
1220	292.55	2.0	479.55	8.49	0.74	7.06	0.17	25.06	60.7	0.4
1225	292.55	3.9	493.88	8.37	0.76	9.08	0.21	24.20	59.6	0.4
1230	292.55	5.1	495.81	8.29	0.76	9.84	0.08	23.97	57.0	0.4
1235	292.55	6.3	496.20	8.31	0.76	7.97	0.09	23.79	55.6	0.4
1240	292.55	9.0	495.40	8.31	0.76	7.49	0.05	23.75	54.0	0.4
1245	292.54	10.9	493.92	8.29	0.76	7.19	0.05	23.73	53.1	0.4
1250			Tank at 300 psi. Switched to other tank. Start at 2700 psi							
1251	292.51	11.2	493.34	8.27	0.76	7.13	0.05	24.23	52.0	0.4
1256	292.54	12.2	493.15	8.27	0.76	7.10	0.07	24.05	51.7	0.4
1301	292.54	14.1	492.37	8.26	0.76	7.10	0.08	23.93	50.8	0.4
1306	292.54	15.3	490.72	8.25	0.75	6.87	0.08	23.87	50.2	0.4
1311	292.54	16.9	488.54	8.26	0.75	6.78	0.13	23.83	49.8	0.4
1316	292.55	18.2	488.01	8.25	0.75	6.71	0.04	23.81	49.6	0.4
1319			Started sampling, reduced flow rate to 100 mL/min for VOAs.							
0920			Adjusted back to 280 mL/min for ambers							

Red Hill Groundwater Sampling Log

WELL NO. **RHMW09** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/26/2021 TIME: 0850 CLIMATIC CONDITIONS: overcast 76°F light wind 70% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*377.28	*377.68								s: 2000/2000
**377.18	**377.52	377.57	NA	396.69	NA	300	0929	26	e: 0/0
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				180	180	40	40	40	40

Headspace VOCs: 0.1 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: 01-7350/N-2

Gas Detector Type: Multi Rae 3000 Serial Number: 592-913390

Water Quality Meter Type: inSitu SmarTroll Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: No sediment

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1240 (N)** **ERH1239(Trip Blank)**

DATE: 1/26/2021 TIME: Start: 1057 End: 1157 Start: 0947

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: GM, RS, JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW09**		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0929					Water at surface					
0935	—	3.5	216.79	7.33	0.33	9.18	—	23.53	72.9	0.2
0940	377.52	4.0	216.73	7.64	0.33	8.61	0.19	23.27	66.4	0.2
0945	377.52	6.0	216.80	7.66	0.33	8.17	0.05	23.12	61.8	0.2
0950	377.52	7.5	212.03	7.77	0.33	9.33	0.05	23.10	60.6	0.2
0955	377.52	8.3	216.79	7.75	0.33	10.61	0.02	23.05	59.0	0.2
1000	377.52	9.9	216.41	7.72	0.33	9.84	0.03	22.99	58.1	0.2
1005	377.52	11.0	215.70	7.74	0.33	9.30	0.05	22.99	56.8	0.2
1010	377.52	12.0	215.42	7.72	0.33	9.02	0.06	22.95	56.2	0.2
1015	377.52	14.0	215.54	7.77	0.33	8.80	0.07	22.92	55.7	0.2
1020	377.52	15.0	215.49	7.73	0.30	8.78	0.05	22.93	55.2	0.2
1025	377.52	17.0	215.14	7.71	0.33	8.70	0.05	22.98	54.5	0.2
1030	377.52	18.0	215.26	7.70	0.33	8.65	0.03	22.99	54.5	0.2
1032					Spot check DO: 7.59 mg/L 84.6%					
1035	377.52	20.0	221.02	7.84	0.34	8.88	0.03	22.14	56.7	0.2
1040	377.52	21.4	217.68	7.75	0.33	8.64	0.01	23.05	55.1	0.2
1045	377.52	23.0	217.22	7.73	0.33	8.55	0.02	23.02	54.1	0.2
1050	377.52	24.5	217.11	7.73	0.33	8.57	0.03	23.04	53.2	0.2
1055	377.56	26.0	217.09	7.73	0.33	8.54	0.02	23.02	53.6	0.2
1057					Turned down flowrate ~100 mL/min for VOAs					
					Returned flowrate back up for ambers.					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW10** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/20/2021 TIME: 930 CLIMATIC CONDITIONS: 78° sunny light wind 66% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*477.70	*477.78								start:2700/2500
**477.49	**477.55	**477.49	N/A	497.37	NA	300mL/min	0952	32	end:500/0
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				230	235	40	40	40	40

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: 01-7350 / N-2

Gas Detector Type: Mini Rae 3000 Serial Number: 592-908699

Water Quality Meter Type: SmarTroll MP Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: No sediment, some ants

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 17 Primary + 4 TB = 21 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1236 (N)** **ERH1235(Trip Blank)**

DATE: 1/20/2021 TIME: Start: 1208 End: 1300 Start: 1205

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Ants present in sample line. Attempted to spray oout ants with DI water. Cleared as much as possible.
Doesn't appear to be ants within samples

SAMPLED BY: GM, RS, JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW10		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0952					Water at surface					
					Adjusting flow rate and attempting to remove ants from hose.					
1020	477.54	5.0	184.36	7.77	0.28	10.57	0.02	23.90	73.1	0.1
1025	477.53	7.8	184.00	7.86	0.28	9.91	0.02	23.33	61.5	0.1
1030					missed readings					
1035	477.52	9.0	186.43	7.84	0.29	9.82	0.06	23.57	56.9	0.1
1040	477.52	10.1	185.55	7.83	0.29	9.55	0.04	23.46	56.2	0.1
1045	477.52	12.0	184.35	7.80	0.29	9.30	0.02	23.41	55.0	0.1
1050	477.53	13.1	185.43	7.77	0.29	9.15	0.01	23.34	54.2	0.1
1055	—	14.1	185.13	7.76	0.28	9.01	—	23.27	53.9	0.1
					Stoped purging. Recalibrating DO sensor 96.7% 7.94 mg/L 24.6C					
1105	477.52	15.7	185.80	7.71	0.29	8.85	0.11	23.93	56.3	0.1
1110	477.52	17.0	186.20	7.76	0.29	8.89	0.03	23.40	54.0	0.1
1115	477.53	18.3	186.25	7.78	0.29	8.81	0.08	23.34	54.1	.0.1
1120	477.53	19.9	186.26	7.79	0.21	8.74	0.07	23.34	53.1	0.1
					Stopped purgng. Swapped nitrogen tanks b/c first was low					
1130	477.53	21.0	186.40	7.75	0.29	8.74	0.09	23.84	53.3	0.1
1135	477.51	22.5	186.30	7.73	0.29	8.73	0.05	23.44	53.3	0.1
1140	477.52	24.0	186.25	7.73	0.29	8.71	0.02	23.42	51.8	0.1
					Recalibrating DO sensor 95.9% 7.93 mg/L 24.3°C					
1150	477.51	26.0	185.83	7.68	0.29	8.61	0.10	23.52	55.4	0.1
1155	477.51	28.2	186.06	7.74	0.29	8.62	0.25	23.34	53.2	0.1
1200	477.52	30.0	186.12	7.77	0.29	8.64	0.18	23.29	51.7	0.1
1205	477.51	32.0	186.34	7.76	0.29	8.61	0.12	23.35	51.5	0.1
					Reduced flowrate to ~100mL/min for VOAs. Increased flowrate for ambers.					

Red Hill Groundwater Sampling Log

WELL NO. **HDMW2253-03** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/21/2021 TIME: 0827 CLIMATIC CONDITIONS: rainy, 70° 79% humidity humidity light wind

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
**207.05	*207.74								start:2400
**207.01	**207.64	207.64	NA	1575	NA	240	0910	14	end:1700
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				145	145	30	30	30	30

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: 01-7350/N-2

Gas Detector Type: Mini Rae 3000 Serial Number: 592-908699

Water Quality Meter Type: SmarTroll MP Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Slight brown

SEDIMENT: No Sediment, Slightly Turbid

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 4 TB = 20 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH1234 (N)** **ERH1233 (Trip Blank)**

DATE: 1/21/2021 TIME: Start: 0958 End: 1035 Start: 0922

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: GM, RS, JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**HDMW2253-03**		LOCATION:		Outside Tunnel		PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0910					Water at surface					
0915	—	—	299.54	7.53	0.46	12.07	—	23.00	33.6	0.2
0920	—	2.5	301.04	6.74	0.46	4.43	22.2	23.01	52.0	0.2
0925	207.64	4.0	299.55	6.74	0.46	2.33	15.8	22.80	50.8	0.2
0930	207.64	5.6	299.23	6.73	0.46	1.95	15.6	22.76	50.9	0.2
0935	207.64	7.0	298.93	6.71	0.46	1.73	14.7	22.76	49.7	0.2
0940	207.64	8.8	298.97	6.71	0.46	1.56	14.7	22.76	49.5	0.2
0945	207.65	10.2	298.77	6.70	0.46	1.44	14.4	22.77	49.4	0.2
0950	207.64	11.9	298.46	6.70	0.46	1.37	14.7	22.76	49.1	0.2
0955	207.47	13.0	298.51	6.69	0.46	1.33	14.1	22.75	48.8	0.2
0958			Start sampling reduced flow rate to 100 mL/min for VOA's							
			Increased flowrate for ambers							

Red Hill Groundwater Sampling Log

WELL NO. **RHMW19** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 1/20/2021 TIME: 1345 CLIMATIC CONDITIONS: 81°C overcast light wind

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*426.74	426.63*								s: 2600
**426.54	426.45**	426.46**	N/A	447.97	NA	300	1420	25	end: —
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				220	220	40	35	40	35

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Solinst/Heron Serial Number: 01-7350/N-2

Gas Detector Type: Mini Rae 3000 Serial Number: 592-908694

Water Quality Meter Type: SmarTroll MP Serial Number: 613179

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2) was used for this event.

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: Clear

SEDIMENT: No sediment

ODOR/OTHER: No odor

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 20 Primary + 7 TB = 27 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCL): **2**	250 mL HCl (brown): **1 filtered**
unpreserved: **3**	1-L (800 mL): **2**	250 mL unpreserved: **1**
	500-mL: **2**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1212 (N)** **ERH1211 (TB)**

DATE: 1/20/2021 TIME: Start: 1528 End: 1615 Start: 1426

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES:

SAMPLED BY: GM, RS, JV SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW19**		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1028					Water at surface					
1425	—	2.7	181.53	8.34	0.28	10.63	—	24.76	66.6	0.1
1430	426.46	4.0	182.09	8.08	0.25	9.54	0.65	23.99	62.7	0.1
1435	426.46	5.2	183.40	8.11	0.28	11.77	0.21	23.59	57.8	0.1
1440	426.46	6.8	183.86	8.18	0.28	10.36	0.31	23.48	56.2	0.1
1445	426.46	8.2	183.40	8.19	0.28	9.92	0.23	23.36	55.0	0.1
1450	—	10.0	183.06	8.19	0.28	9.65	—	23.34	53.2	0.1
			Stopped purging to calibrate D.O. 95.9% 7.71 mg/L 25.8°C							
1500	426.46	12.9	183.38	8.13	0.28	9.24	0.15	23.47	57.4	0.1
1505	—	14.3	184.26	8.18	0.28	9.90	—	23.26	54.2	0.1
			Stopped purging to calibrate D.O. sensor 98.5% 8.14 mg/L 24.3°C							
1510	426.46	16.0	183.92	8.13	0.28	8.94	0.14	23.66	56.5	0.1
1515	426.45	17.0	184.32	8.19	0.28	8.94	0.19	23.44	54.8	0.1
1520	426.46	18.0	184.28	8.18	0.28	8.88	0.09	23.39	53.0	0.1
1525	426.46	19.3	184.25	8.16	0.28	8.88	0.08	23.48	51.7	0.1
1526					Spot check DO with bottled water 6.9 mg/L					
1528					Start sampling reduced flow rate to ~100 mL/min for VOAs. Increased flowrate after for ambers.					

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill | Ambiant VOCs (ppm): 0.0 | Date: 1/21/2021

Monitoring Well No.: RHMW11 | Headspace VOCs (ppm): 0.1 | Sheet: 1 of 1

Sampling Zone No(s).: Zone 5 | Start Time: 9:11 | Atm. Reading: 14.73 | Sampling Equipment: EMS5285

Sampled by: BM, EB, WZ | End Time: 13:43 | Atm. Reading: 14.77 | MGI5244

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
9:12	5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71.70	✓	55.24	✓	pressure off, bring back up				
9:28	5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71.34	✓	55.31	✓	pressure off, bring back up				
9:44	5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71.39	✓	55.29	✓	55.27	✓	✓	72.69	VOAs & PAHs
10:01	5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	70.52	✓	55.31	✓	54.88	✓	✓	72.71	parameters
10:22	5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.56	✓	55.29	✓	55.28	✓	✓	72.67	PAHs, PID = 0
10:37	5	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71.48	✓	55.29	✓	55.07	✓	✓	72.69	PAHs & SVOCs PID=0
11:01	5	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.14	✓	55.27	✓	55.27	✓	✓	72.61	SVOCs
11:18	5	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.42	✓	55.26	✓	55.22	✓	✓	72.62	SVOCs, TPH-d/o
11:42	5	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.44	✓	55.31	✓	55.29	✓	✓	72.58	parameters
12:00	5	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	71.61	✓	55.24	✓	55.28	✓	✓	72.66	TPH d/o
12:22	5	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.40	✓	55.29	✓	55.24	✓	✓	72.56	TPH d/o & SVOCs (500 ml)
12:40	5	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.97	✓	55.29	✓	55.28	✓	✓	72.43	SVOCs (500 ml) and polys
13:04	5	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.61	✓	55.29	✓	55.22	✓	✓	72.04	poly & filter poly
13:23	5	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	72.59	✓	55.26	✓	55.25	✓	✓	72.43	parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
10:28	2L	307.57	6.76	0.46	1.66	0.32	23.53	270.6	0.2	
12:06	7L	251.67	7.78	0.39	1.60	0.09	26.17	333.7	0.2	
13:46	13L	257.22	7.93	0.63	1.53	0.17	25.68	339.3	0.2	

Sample Identification Numbers: ERH1242 (N) & ERH1241 (TB)

Sample Start Time: 10:00 | End Time: 13:37

Appearance of Sample: COLOR: clear

SEDIMENT: none

OTHER: -

Notes: ERH1241 at 08:03

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**, 1-L (HCl): **2**	250 mL H2SO4: **1**
H2SO4: **2**	500-mL: **2**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill | Ambiant VOCs (ppm): 0.0 | Date: 1/20/2021

Monitoring Well No.: RHMW13 | Headspace VOCs (ppm): 0.1 | Sheet: 1 of 2

Sampling Zone No(s).: Zone 5 | Start Time: 8:36 | Atm. Reading: 14.70 | Sampling Equipment: EMS5285

Sampled by: BM, WZ, EB | End Time: 17:49 | Atm. Reading: 14.63

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:36	5a	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	15.09	✓	15.07	✓	✓	14.83	parameters
9:05	5a	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.73	✓	15.05	✓	15.07	✓	✓	14.84	VOAs, PID=1.0 ppm
9:27	5a	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.71	✓	15.02	✓	15.04	✓	✓	14.83	VOAs, PAHs, PID=0.1 ppm
9:51	5a	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.73	✓	15.01	✓	15.07	✓	✓	14.81	PAHs, PID=0.0 ppm
10:13	5a	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	15.05	✓	15.09	✓	✓	14.83	PAHs, PID=0.1 ppm
10:36	5a	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	15.02	✓	15.10	✓	✓	14.86	PAHs, PID=0.0 ppm
10:59	5a	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	15.07	✓	15.09	✓	✓	14.88	PAHs
11:23	5a	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.75	✓	15.02	✓	15.07	✓	✓	14.83	PAHs, SVOCs
11:48	5a	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.71	✓	15.01	✓	15.05	✓	✓	14.81	SVOCs
12:12	5a	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.73	✓	15.02	✓	15.07	✓	✓	14.79	SVOCs
12:35	5a	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.71	✓	15.05	✓	15.12	✓	✓	14.81	SVOCs
12:58	5a	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.68	✓	15.02	✓	15.09	✓	✓	14.79	SVOCs
13:21	5a	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.70	✓	15.01	✓	15.05	✓	✓	14.81	parameters
13:46	5a	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.67	✓	15.04	✓	15.07	✓	✓	14.83	SVOCs, TPH d/o

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
9:18	1L	297.28	8.37	0.46	0.33	1.24	21.45	534.1	0.2	
13:52	13L	206.06	8.43	0.27	0.66	0.24	24.46	323.6	0.1	
17:51	24L	245.19	8.41	0.38	0.36	0.36	22.95	339.1	0.2	

Sample Identification Numbers: ERH1244 (N), ERH1245 (FD), & ERH1243 (TB)

Sample Start Time: 9:45 | End Time: 17:40

Appearance of Sample: COLOR: Clear

SEDIMENT: None

OTHER: -

Sampling Order:

Notes: ERH1243 @ 8:45, ERH1245 @ 09:45

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

20 Primary + 15 Dup = 35 Total

VOAs	**Amber**	**Poly**
HCl: 4+4=**8**	1-L: 2+2= **4**	1- 250 mL H2SO4: **1**
Unpres: 3+3=**6**	L (HCl): 2+2= **4**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	500-mL: 2+2= **4**	250 mL unpres.: **1**
	1-L (800 mL): 2+2= **4**	

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
14:09	5a	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.70	✓	15.04	✓	15.07	✓	✓	14.83	TPH d/o
14:31	5a	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.68	✓	15.06	✓	15.09	✓	✓	14.81	TPH d/o
14:53	5a	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.75	✓	15.07	✓	15.10	✓	✓	14.76	TPH d/o
15:14	5a	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.69	✓	15.03	✓	15.06	✓	✓	14.84	TPH d/o
15:36	5a	19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.68	✓	15.01	✓	15.07	✓	✓	14.80	TPH d/o
15:58	5a	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.72	✓	15.04	✓	15.10	✓	✓	14.83	SVOCs
16:21	5a	21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.70	✓	15.01	✓	15.07	✓	✓	14.81	SVOCs
16:42	5a	22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.68	✓	15.02	✓	15.09	✓	✓	14.83	SVOCs, polys
17:03	5a	23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.70	✓	15.01	✓	15.04	✓	✓	14.83	Polys & filter
17:27	5a	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.73	✓	14.99	✓	15.04	✓	✓	14.81	parameters

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill | Ambiant VOCs (ppm): 0.0 | Date: 1/19/2021

Monitoring Well No.: RHMW14 | Headspace VOCs (ppm): 4.2 | Sheet: 1 of 2

Sampling Zone No(s).: Zone 3 | Start Time: 8:41 | Atm. Reading: 14.68 | Sampling Equipment: EMS5285

Sampled by: BM, EB, BG | End Time: 16:17 | Atm. Reading: 14.72

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:41	3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.91	✓	85.43	✓	85.46	✓	✓	69.89	parameters
9:09	3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.78	✓	85.44	✓	85.47	✓	✓	69.89	VOAs, PAHs, PID=0.6 ppm
9:39	3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.86	✓	85.43	✓	85.46	✓	✓	69.84	PAHs, SVOCs, PID=0.0 ppm
10:02	3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.85	✓	85.44	✓	85.46	✓	✓	69.81	SVOCs, PID=0.0 ppm
10:22	3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.77	✓	85.43	✓	85.47	✓	✓	69.79	SVOCs, TPH d/o
10:42	3	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.78	✓	85.46	✓	85.48	✓	✓	69.78	TPH d/o
11:02	3	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.77	✓	85.45	✓	85.46	✓	✓	69.75	TPH d/o, SVOCs
11:30	3	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.80	✓	85.43	✓	85.44	✓	✓	69.73	SVOCs
11:51	3	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.71	✓	85.42	✓	85.46	✓	✓	69.72	parameters
12:13	3	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.87	✓	85.44	✓	85.46	✓	✓	69.68	SVOCs
12:33	3	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.71	✓	85.43	✓	85.43	✓	✓	69.68	SVOCs
12:52	3	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.67	✓	85.45	✓	85.44	✓	✓	69.62	SVOCs
13:13	3	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.74	✓	85.42	✓	85.43	✓	✓	69.62	SVOCs
13:31	3	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.61	✓	85.40	✓	85.43	✓	✓	69.60	TPH d/o

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
9:14	1L	168.76	6.16	0.28	1.23	0.42	23.69	437.7	0.1	
12:20	9L	161.08	7.04	0.25	1.09	0.32	33.31	684.2	0.1	Canisters were in the sun, explains high
16:22	21L	114.98	7.66	0.19	1.10	0.17	28.04	448.5	0.1	

Sample Identification Numbers: ERH1247 (N) & ERH1246 (TB)

Sample Start Time: 9:15 | End Time: 16:15

Appearance of Sample: COLOR: -

SEDIMENT: -

OTHER: -

Sampling Order:

Notes: ERH1246 at 8:30

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 12 MS/MSD

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2 + 4**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (HCl): **2 + 4**	250 mL HCl (brown): **1 filtered**
	500-mL: **2 + 4**	250 mL unpres.: **1**
	1-L (800 mL): **2**	

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
13:53	3	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.72	✓	85.41	✓	85.44	✓	✓	69.58	TPH d/o
14:14	3	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.62	✓	85.43	✓	85.43	✓	✓	69.53	TPH d/o
14:34	3	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.49	✓	85.41	✓	85.43	✓	✓	69.53	TPH d/o
14:53	3	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.56	✓	85.41	✓	85.43	✓	✓	69.55	SVOCs
15:14	3	19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.46	✓	85.40	✓	85.41	✓	✓	69.47	SVOCs
15:33	3	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.35	✓	85.42	✓	85.43	✓	✓	69.47	Polys
15:54	3	21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	69.44	✓	85.43	✓	85.43	✓	✓	69.44	parameters

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill | Ambiant VOCs (ppm): 0.0 | Date: 1/18/2021

Monitoring Well No.: RHMW15 | Headspace VOCs (ppm): 0.0 | Sheet: 1 of 2

Sampling Zone No(s).: Zone 5 | Start Time: 9:04 | Atm. Reading: 14.48 | Sampling Equipment: EMS5285

Sampled by: BM, EB, BG | End Time: 16:59 | Atm. Reading: 14.57

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
9:04	5a	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.84	✓	17.37	✓	17.43	✓	✓	16.01	parameters
9:35	5a	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.98	✓	17.40	✓	17.43	✓	✓	15.99	VOAs, TPH d/o PID=0.0 ppm
9:58	5a	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16.01	✓	17.40	✓	17.42	✓	✓	16.01	TPH d/o, PID = 0.0 ppm
10:24	5a	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16.01	✓	17.42	✓	17.44	✓	✓	16.01	TPH d/o, PAHs, PID=0.0 ppm
10:49	5a	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.95	✓	17.40	✓	17.45	✓	✓	15.98	PAHs, PID=0.0 ppm
11:16	5a	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.94	✓	17.42	✓	17.43	✓	✓	15.96	PAHs, PID=0.0 ppm
11:48	5a	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.91	✓	17.40	✓	17.42	✓	✓	15.98	PAHs, PID=0.0 ppm
12:14	5a	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.91	✓	17.39	✓	14.45	✓	✓	15.93	PAHs
12:38	5a	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.90	✓	17.42	✓	17.45	✓	✓	15.91	PAHs, PID=0.0 ppm
13:03	5a	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.91	✓	17.43	✓	17.43	✓	✓	15.91	PAHs, SVOCs
13:26	5a	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.88	✓	17.39	✓	17.42	✓	✓	15.88	SVOCs
13:52	5a	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.90	✓	17.40	✓	17.43	✓	✓	15.88	SVOCs
14:14	5a	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.86	✓	17.42	✓	17.39	✓	✓	15.85	parameters
14:41	5a	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.81	✓	17.40	✓	17.42	✓	✓	15.88	SVOCs

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (ppt)	Comments
9:45	1L	203.22	6.00	0.31	1.18	0.62	20.75	292.0	0.2	
14:45	13L	152.18	6.92	0.23	1.54	0.17	20.76	407.8	0.1	
17:05	19L	195.18	7.42	0.30	1.52	0.37	19.67	427.4	0.1	

Sample Identification Numbers: ERH1249 (N, MS/MSD), ERH1248 (TB)

Sample Start Time: 10:00 | End Time: 16:45

Appearance of Sample: COLOR:

SEDIMENT:

OTHER:

Sampling Order:

Notes: ERH1248 at 8:45

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

17 Primary + 8 MS/MSD = 25 Total

VOAs
HCl: **4 + 4 = 8**
H2SO4: **2**

Amber
1-L: **2 + 4 = 6**
L(HCl): **2 + 0 = 2**
500-mL: 2 **+ 0 = 2**
1-L (800 mL): **2 + 0 = 2**

Poly
250 mL H2SO4: **1**
250 mL HCl (brown): **1 filtered**
250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
15:04	5a	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.88	✓	17.40	✓	17.42	✓	✓	15.89	SVOCs
15:29	5a	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.83	✓	17.42	✓	17.45	✓	✓	15.86	SVOCs
15:51	5a	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.85	✓	17.40	✓	17.40	✓	✓	15.85	Polys
16:13	5a	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.80	✓	17.42	✓	17.47	✓	✓	15.83	Poly filter
16:36	5a	19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15.81	✓	17.43	✓	17.45	✓	✓	15.86	parameters

Appendix B.2:
Tape Correction

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For Participant

Owner: **U.S. Navy**
Tape ID: **N-1**
Make: **Solinst**
Serial number: **133795**
Length: **500 feet**
Dates: **9/13/2017 - 9/15/2017**

Table 1. Correction table for Solinst 500-foot tape (serial number 133795; tape identifier N-1), tested 9/13/2017 to 9/15/2017.

Tape interval, in feet		[1]Correction to add to depth to water, in feet
From	To	
0.00	*6.41*	*0.00*
6.42	14.02	0.00
14.03	52.17	-0.01
52.18	90.33	-0.02
90.34	128.49	-0.03
128.50	166.64	-0.04
166.65	204.80	-0.05
204.81	242.96	-0.06
242.97	392.45	-0.07
392.46	*500.00*	*-0.07*

Values in red italics are extrapolated outside the range defined by the shallowest and deepest test measurements

[1]Use of the indicated correction values is expected to improve accuracy in water-level measurements made with this tape. However, because of scatter in the calibration data, the indicated corrections for this tape may contain uncertainty on the order of 0.01 - 0.02 feet.

Table 2. Depth-to-water measurements and errors for Solinst 500-foot tape (serial number 133795; tape identifier N-1), tested 9/13/2017 to 9/15/2017.

Well site	Reference tape depth to water, in feet	N-1 depth to water, in feet	[1]Error, in feet
Halawa Kiosk	6.40	6.42	-0.02
Moanalua	17.60	17.61	-0.01
Halawa	43.37	43.39	-0.02
Waiawa	69.97	69.96	0.01
Waialae Shaft	152.41	152.44	-0.03
Kapakahi	261.97	262.04	-0.07
Waipio	392.38	392.45	-0.07

[1]Negative error indicates tape shortening; positive error indicates tape stretch

For Participant

Owner:	**U.S. Navy**
Tape ID:	**N-2**
Make:	**Solinst**
Serial number:	**133937**
Length:	**1,000 feet**
Dates:	**9/13/2017 - 9/15/2017**

Table 1. Correction table for Solinst 1,000-foot tape (serial number 133937; tape identifier N-2), tested 9/13/2017 to 9/15/2017.

Tape interval, in feet		[1]Correction to add to depth to water, in feet
From	To	
0.00	*6.40*	*0.01*
6.41	8.23	0.01
8.24	80.71	0.00
80.72	161.31	-0.01
161.32	253.61	-0.02
253.62	364.91	-0.03
364.92	516.53	-0.04
516.54	593.17	-0.05
593.18	*764.02*	*-0.05*
764.03	*1000.00*	*-0.06*

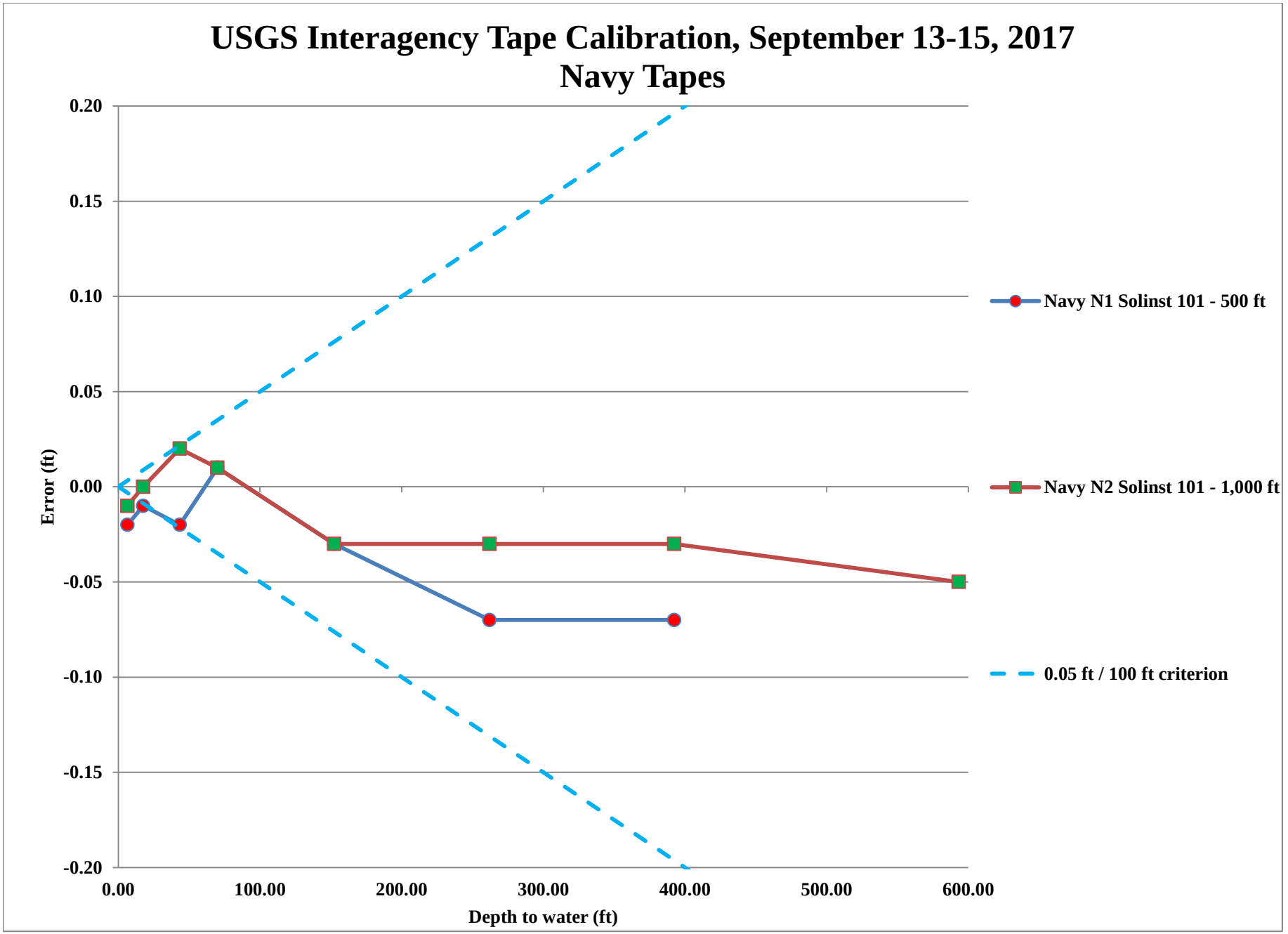
Values in red italics are extrapolated outside the range defined by the shallowest and deepest test measurements

[1]Use of the indicated correction values is expected to improve accuracy in water-level measurements made with this tape. However, because of scatter in the calibration data, the indicated corrections for this tape may contain uncertainty on the order of 0.01 - 0.02 feet.

Table 2. Depth-to-water measurements and errors for Solinst 1,000-foot tape (serial number 133937; tape identifier N-2), tested 9/13/2017 to 9/15/2017.

Well site	Reference tape depth to water, in feet	N-2 depth to water, in feet	[1]Error, in feet
Halawa Kiosk	6.40	6.41	-0.01
Moanalua	17.60	17.60	0.00
Halawa	43.37	43.35	0.02
Waiawa	69.97	69.96	0.01
Waialae Shaft	152.41	152.44	-0.03
Kapakahi	261.97	262.00	-0.03
Waipio	392.38	392.41	-0.03
Poliwai	593.12	593.17	-0.05

[1]Negative error indicates tape shortening; positive error indicates tape stretch


USGS Interagency Tape Calibration, September 13-15, 2017
Navy Tapes
0.20
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
Error (ft)
0.00
100.00
200.00
300.00
400.00
500.00
600.00
Depth to water (ft)
Navy N1 Solinst 101 - 500 ft
Navy N2 Solinst 101 - 1,000 ft
0.05 ft / 100 ft criterion

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Appendix B.3:
Instrument Calibration Log

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Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MINIRAE 3000	Manufacturer: RAE SYSTEMS
Serial Number: 592 - 908699	Last Service Date: 1/14/21
Parameter(s):	Calibration Gas: ISO-BUTYLENE 100 PPM
Calibration Procedure: ZERO CALIBRATION WITH NO GAS APPLIED. SPAN CALIBRATION WITH GAS APPLIED	

Daily Calibration Results	
Date: 1/13/21	Calibration Result: ZERO: 0.0 SPAN: 100.1
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date: 1/14/21	Calibration Result: ZERO: 0.0 SPAN: 100.1
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date: ~~1/8/21~~ JV 1/14/21	Calibration Result: ZERO: 0.1 SPAN: 100.0
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date: 1/20/21	Calibration Result: ZERO: 0.0 SPAN: 100.0
Name: JORGE VILLALOBOS	Signature:
Notes:	

Project: Red Hill Bulk Fuel Storage Facility
Date: 1/13/21
Instrument: MiniRae 3000

Job No.: 60571032
Operator: Jorge Villalobos
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: IN-SITU SmarTroll	Manufacturer: IN-SITU INC
Serial Number: 613179	Last Service Date:
Parameter(s): CONDUCTANCE, pH, ORP	Calibration Gas:
Calibration Procedure: 2 POINT CALIBRATION, SOAK SPONGE AND TAKE READINGS	CONDUCT THREE SEPARATE CALIBRATIONS, CONDUCTIVITY CALIBRATION: USE APPROPRIATE SOLUTION AND WAIT FOR STABILIZATION. pH Calibration: USE APPROPRIATE SOLUTIONS FROM LOWER 4, 7, 10 AND WAIT FOR STABILIZATION. ORP CALIBRATION: USE APPROPRIATE CALIBRATION SOLUTION AND WAIT FOR STABILIZATION.

Daily Calibration Results		
Date: 1/13/21	Calibration Result: pH 4.0: 4.44 7.0: 6.97 10: 9.43 ORP: 229mV 228mV Conductivity: 4486µS/cm 4480µS/cm RDO: 95.2%	
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT# 20010025: AUTOCAL SOLUTION LOT# 1934005?: pH 7	LOT#: 1932002: pH 10 SOLUTION LOT#: 19460167: ORP SOLUTION	
Date: 1/14/21	Calibration Result: pH 4.0: 4.06 7.0: 7.05 10: 9.94 RDO 95.6% ORP 228mV: 218.9mV	Conductivity 4490µS/cm: 4505 µS/cm
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT# 20010023: AUTOCAL SOLUTION LOT# 1934005?: pH 7 SOLUTION	LOT#: 1932002: pH 10 SOLUTION LOT#: 19460167: ORP SOLUTION	
Date: ~~1/16/21~~ JV	Calibration Result: ~~Conductivity: 4490 µS/cm: 4533 µS/cm~~ ~~pH: 4.0: 4.73~~ 7.0: 7.1 10.0: 9.51 ORP:	
Name: ~~JORGE VILLALOBOS~~ JV	Signature: ~~JV~~	
Notes:		
Date: ~~1/15/21~~ JV 1/14/21	Calibration Result: pH 4.0: 4.98 7.0: 6.95 10.0: 9.39 Cond 4490 µS/cm: 4474 µS/cm ORP 228mV: 223.7mV RDO: 95.4%	
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT# 20100071: AUTOCAL SOLUTION LOT#: 96H1221: pH 7 SOLUTION	LOT#: 9611?0: pH 10 SOLUTION LOT# JV ~~06F?44~~ 19460167: ORP SOLUTION	

Project: Red Hill Bulk Fuel Storage Facility
Date: 1/13/21
Instrument: In-Situ Smartroll

Job No.: 60571032
Operator: Jorge Villalobos
Calibration: Pass

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Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: IN-SITU SmarTroll	Manufacturer: IN-SITU-INC
Serial Number: 613179	Last Service Date:
Parameter(s): CONDUCTANCE, pH, ORP, DO	Calibration Gas:
Calibration Procedure: SEE PREVIOUS LOG.	

Daily Calibration Results		
Date: 1/20/21	Calibration Result: ORP: 228 mV : 218.7mV; pH 4.0 : 4.09, 7.0 : 6.94, 10.0 : 9.46; COND: 4490 µS/cm : 4487 µS/cm	D.O: 95.6% 8.15 mg/L
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT #: 20100071: AUTOCAL SOLUTION; LOT # 96H1221: pH 7 SOLUTION	LOT#: 96L150: pH 10 SOLUTION; LOT # ~~OGF794~~ 19460167: ORP SOLUTION	
Date: 1/21/21	Calibration Result: ORP: 240 mV : 228.2; pH: 4.0 : 4.7, 7.0 : 7.0, 10.0 : 9.5; COND: 4490 µS/cm : 4411 µS/cm	D.O: 97.7% 8.34 mg/L
Name: JORGE VILLALOBOS	Signature:	
Notes: ~~SAME AS DAY BEFORE~~ JV; LOT # 20100071: AUTOCAL SOLUTION; LOT # 96H1221: pH 7 SOLUTION	LOT# 96L150: pH 10 SOLUTION; LOT # OGF794: ORP SOLUTION	
Date: 1/25/21	Calibration Result: ORP: 240mV : 225.9mV; pH : 4.0 : 4.72, 7.0 : 7.00, 10.0 : 9.55; COND: 4490 µS/cm : 4460 µS/cm	D.O : 96.1% 8.06 mg/L
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT#: OGF794 : ORP SOLUTION; ~~TEST THE SAME AS BEFORE~~ JV; LOT # 20100071: AUTOCAL SOLUTION; LOT#: 96L150: pH 10 SOLUTION; LOT# 96H1221: pH7 SOLUTION		
Date: 1/26/21	Calibration Result: ORP: [illegible] JV; pH: 4.0 : 4.77, 7.0 : 6.99, 10.0 : 9.48; COND: 4490 µS/cm : 4464 µS/cm	98.4 % DO 8.41 mg/L
Name: JORGE VILLALOBOS	Signature:	
Notes: LOT # ~~OGF794~~ 19460167 ORP SOLUTION; LOT # 20100071: AUTOCAL SOLUTION; LOT # 96L150: pH10 SOLUTION; LOT # 96H1221: pH7 SOLUTION		ORP: 228 mV 219.3 mV

Project: Red Hill Bulk Fuel Storage Facility
Date: 1/20/21
Instrument: In-Situ Smartroll

Job No.: 60571032
Operator: Jorge Villalobos
Calibration: RS

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MINIRAE 3000	Manufacturer: RAE SYSTEMS
Serial Number: 592-903699	Last Service Date: 1/14/21
Parameter(s):	Calibration Gas: ISO-BUTYLENE 100 ppm
Calibration Procedure: ZERO CALIBRATION W/ NO GAS APPLIED. SPAN CALIBRATION W/ GAS APPLIED.	

Daily Calibration Results	
Date: 1/21/21	Calibration Result: ZERO: 0.0 ppm SPAN: 100.1 ppm
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date: 1/25/21	Calibration Result: ZERO: 0.2 ppm SPAN: 100.3 ppm
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date: 1/26/21	Calibration Result: ZERO: 0.2 ppm SPAN: 99.8 ppm
Name: JORGE VILLALOBOS	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill Bulk Fuel Storage Facility
Date: 1/21/21
Instrument: MiniRae 3000

Job No.: 60571032
Operator: Jorge Villalobos
Calibration: PASS

TUNNEL
AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MULTI RAE	Manufacturer: RAE SYSTEMS
Serial Number: 46Q3	Last Service Date: N/A
Parameter(s): VOCs, FRESH AIR, MULTI GAS	Calibration Gas: 100ppm ISO, MULTI GAS
Calibration Procedure: HOLD MIDDLE AND RIGHT BUTTONS TO NAVIGATE TO CALIBRATION SCREEN. SELECT FRESH AIR THEN FOLLOW INSTRUCTIONS. AFTER THAT, SELECT MULTI LEVEL SPAN THEN ATTACH MULTI GAS TO INSTRUMENT TO CALIBRATE. REPEAT FOR SINGLE SPAN WITH ISOBUTELYNE	

Daily Calibration Results	
Date: 1/25/21	Calibration Result: FRESH AIR: PASSED VOCS: PASSED MULTI-GAS: PASSED
Name: MARC MURAOKA	Signature: Marc Muraoka
Notes: ~~1/26/21~~	
Date: ~~Kevin~~ 1/26/21	Calibration Result: Fresh Air: pass multigas: pass VOCs: pass
Name: Kevin Lee	Signature: Kevin Lee
Notes:	
Date: 1/27/21	Calibration Result: FRESH AIR: PASSED MULTIGAS: PASS VOCs: PASS
Name: MARC MURAOKA	Signature: Marc Muraoka
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill Bulk Fuel Storage Facility

Job No.: 60571032

Date:

Operator:

Instrument:

Calibration:

TUNNEL

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: SMARTROLL	Manufacturer: IN SITU
Serial Number: 589972	Last Service Date: N/A
Parameter(s): pH, ORP, RDO, Sp Con	Calibration Gas: Auto Cal Solution ORP, pH 7.0, pH 10 RDO (sponge)
Calibration Procedure: NAVIGATE TO CAL SCREEN AFTER OPENING APP (BOTTOM LEFT FOUR LEAF CLOVER). INSERT AUTO CAL SOLUTION INTO CUP UNTIL AT LINE, THEN RUN CALIBRATION. WAIT UNTIL PARAMETERS STABILIZE. EMPTY CALIBRATION SOLUTION BACK INTO ORIGINAL CONTAINER, THEN WASH/SPRAY SENSORS WITH DI WATER. REPEAT WITH OTHER SOLUTIONS AND PARAMETERS.	

Daily Calibration Results	
Date: 1/25/21	Calibration Result: pH: 4.01, 7.11, 10.09 RDO: 99.7% ORP: 226 Sp Con: 4.42 mS/cm
Name: MARC MURAOKA	Signature: Marc Muraoka
Notes:	
Date: 1/26/21	Calibration Result: Sp Con: 4423 mS/cm ORP: 257.6 pH: 4.29, 7.13, 9.88 RDO: 102.8%
Name: Alex Maman	Signature: Alex Maman
Notes:	
Date: 1/27/21	Calibration Result: ORP: 243 Sp Con: 4.487 mS/cm pH: 4.13, 7.10, 10.09 RDO: 98.6%
Name: MARC MURAOKA	Signature: Marc Muraoka
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill Bulk Fuel Storage Facility

Job No.: 60571032

Date:

Operator:

Instrument:

Calibration:

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiRae 3000	Manufacturer: Rae System
Serial Number: 908698	Last Service Date: 1/7/21
Parameter(s): VOCs	Calibration Gas: isobutylene
Calibration Procedure: 'zero' in fresh air span with	

Daily Calibration Results	
Date: 1/11/21	Calibration Result: zero ⇒ 0.0 span ⇒ 99.9 ppm
Name: Dominic Mariano	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Job No.:

Date: Operator:

Instrument: Calibration:

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AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Smartroll	Manufacturer: In Situ
Serial Number: Rubbledoff 652064*	Last Service Date: 1/11/2021
Parameter(s): see below	Calibration Gas: N/A
Calibration Procedure: *on battery pack	pH → 7 - 19340057, 8/2021 10 - 19320102, 8/2021 4 - 20010025 8/2021 SpCond → 4.49mS/cm - 20010025 8/2021 ORP: 228mV - 19460167, exp 8/2021 DO: waterts sponge

Daily Calibration Results	
Date: 1/18/21	Calibration Result: 7.02, 9.73, 4.18 = pH DO = 98.8% SpCond = 4.493 mS/cm ORP = 228mV
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/19/21	Calibration Result: 7.07, 9.81, 4.22 = pH DO = 98.6% SpCond = 4.456mS/cm ORP = 225.7mV
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/20/21	Calibration Result: 7.03, 9.80, 4.17 = pH DO = 98.8% SC = 4.429 mS/cm ORP = 220.7mV
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/21/21	Calibration Result: 7.04, 9.81, 4.21 = pH DO = 98.4% SC = 4.407mS/cm ORP = 219.8
Name: Bianca Mintz	Signature:
Notes:	

Project: RM Bisf
Date: 1/18/2021
Instrument: Smartroll

Job No.: 60571032
Operator: Mintz
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiniRae 3000	Manufacturer: Rae Systems
Serial Number: 908694	Last Service Date: 1/7/21
Parameter(s): VOC's, H_2S, LEL, CO, O_2	Calibration Gas: zero gas lot# N/A exp: N/A
Calibration Procedure: • zero cal w/ fresh air • multigas cal w/ 25ppm H_2S, 50ppm CO, 50% LEL, 19% O_2 N/A • span cal w/ 100ppm isobutylene	multigas lot# N/A exp: N/A isobutylene lot# ~~9477/1~~ 24 2073 exp: 11/23

Daily Calibration Results	
Date: 1/12/21	Calibration Result: zero ⇒ 0.0 ppm span = 100.1 ppm
Name: Dominic Mariano	Signature:
Notes:	
Date: 1/18/21	Calibration Result: zero = 0.0ppm span = 100.1ppm
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/19/21	Calibration Result: zero: 0.0ppm span = 100.1ppm
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/20/21	Calibration Result: zero: 0.0ppm span: 100.4ppm
Name: Bianca Mintz	Signature:
Notes:	

Project: Red Hill CTO KBF012C

Job No.: 60571032.

Date: 1/18/21

Operator: Mintz

Instrument: Mini Rae

Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiniRae 3000	Manufacturer: Rae Systems
Serial Number: 908699	Last Service Date: 1/7/21
Parameter(s): VOCs, H_2S, LEL, CO, O_2	Calibration Gas: ✓
Calibration Procedure: zero cal w/ fresh air isobutylene (100ppm (span) Lot# 242073 exp 11/23	

Daily Calibration Results	
Date: 1/21/21	Calibration Result: zero = 0.0 span = 100.3 ppm
Name: Bianca Mintz	Signature:
Notes:	
Date: 1/22/21	Calibration Result: zero = 0.0 span = 100.2
Name: Bianca Mintz	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill Bulk Fuel Storage Facility

Job No.: 60571032

Date: 1/21/21

Operator: Mintz

Instrument: MiniRae 3000

Calibration: pm 5.1

Appendix C:
Analytical Documentation,
First Quarter 2021
(on CD-ROM at end of document)

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Table C-1: Cross Reference for Monitoring Well #, SDG#, COC ID, and Login ID

Monitoring Well #	SDG #	COC ID	Login ID
RHMW2254-01	94899	ERH1214	BA26001W
		ERH1215	BA26003W
RHMW01	94883	ERH1217	BA25867W
RHMW02	94899	ERH1220	BA26008W
		ERH1219	BA26006W
RHMW03	94899	ERH1222	BA26013W
RHMW04	94883	ERH1224	BA25870W
RHMW05	94920	ERH1226	BA26160W
RHMW06	94826	ERH1228	BA25529W
RHMW07	94826	ERH1232	BA25535W
RHMW08	94826	ERH1230	BA25532W
RHMW09	94899	ERH1240	BA26016W
RHMW10	94826	ERH1236	BA25538W
RHMW19	94863	ERH1212	BA25690W
RHMW11-05	94863	ERH1242	BA25696W
RHMW13-05	94863	ERH1244	BA25699W
	94863	ERH1245	BA25701W
RHMW14-03	94825	ERH1247	BA25526W
RHMW15-05	94808	ERH1249	BA25434W
HDMW2253-03	94863	ERH1234	BA25693W
OWDFMW01	94920	ERH1238	BA26163W

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Appendix C.1:
Analytical Laboratory Reports

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908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 12, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94808

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Two water samples were received January 20, 2021. Written results for the requested analyses are being provided on this February 12, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94808
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	7
Sample Results	12
QC Forms	25
Method 8015B Calibration Data	98
Method 8015B Raw Data	124
Method 8270D Calibration Data	139
Method 8270D Raw Data	187
Method 8270D SIM Calibration Data	211
Method 8270D SIM Raw Data	238
APPL SOP 2-MEE Calibration Data	263
APPL SOP 2-MEE Raw Data	290
Method 8260B Calibration Data	311
Method 8260B Raw Data	443
Method 8260B GRO Calibration Data	474
Method 8260B GRO Raw Data	572
Method RSK-175 Calibration Data	603
Method RSK-175 Raw Data	631
Method 300 Calibration Data	648
Method 300 Raw Data	674
Inorganic Analyses and Calibration Raw Data	680

CASE NARRATIVE

Case Narrative

ARF: 94808

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Two water samples were received January 20, 2021, at 3.0°C. The sample group was assigned Analytical Request Form (ARF) number 94808.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

SOP ANA2MEE: One RPD exceeded the 20% control limit.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94808	01/20/21	ERH1248	BA25433	01/18/21 8:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94808	01/20/21	ERH1248	BA25433	01/18/21 8:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94808	01/20/21	ERH1248	BA25433	01/18/21 8:45:00 AM	WATER	RSK 175	METHANE BY RSK 175
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	SM3500FeB	Ferrous Iron
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94808	01/20/21	ERH1249	BA25434	01/18/21 10:00:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

94808

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Brooke Gottmeier**
Phone: **808-954-4536** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **202124**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **01/20/21** Time: **09:45**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **3.0°C**
Color: **VFRG/C-Blk**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **01/27/21**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol + TICs
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com

Sample Distribution:
GC: 1-$87DC53W5, 1-$87DMEEW5, 1-$DOC53W5LIQ, 1-$SIM53LIQ51
Extractions: 1-_LIQ003, 1-_LIQ005, 1-_MWE2MEE
VOA: 2-$86BTOTXDOD5W, 2-$GASBL, 2-$GRO86BW, 2-$RSKMETH
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W, 1-$353TOXNW, 1-$35FE, 1-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID		APPL ID	Sampled		Analyses Requested
1.	ERH1248	LCSD	BA25433W	01/18/21	08:45	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1249	MS/MSD:8260,GRO&PAH	BA25434W	01/18/21	10:00	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

APPL Sample Receipt Form

ARF# **94808**

Sample	Container Type	Count	p
BA25433	[13] VOAs - HCL	4	NA
BA25434	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	8	NA
	[17] Amber Liter	8	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.3
	[40] 500mL Amber, unprsrvd	2	NA

Sample	Container Type	Count	p

94808

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202124

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Sampler (Print): BG, EB, BM

Purchase Order Number: 102604

Sampler (Signature): Wms for BG. EB. BM

Date Shipped: 1/19/2021

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1248	Trip Blank	1/18/21	845	HST	4	X			X												X		see other coders
ERH1249	RHMW15-05	1/18/21	1000	HST	25	X			X**		X*	X*	X	X*	X	X	X	X	X		X		

>NO MS/MSD for TPH d/o, Phenol, SVOCs.
N+MS/MSD for VOAs and PAHs

1/19/2021

W2

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: R1 3.0/3.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Wms (AECOM)	1/19/21	12:00					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-20-21	9:45	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94808**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/20/21

2) Coolers: Number of Coolers: 1

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R1 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 3.0/3.0 2: _____ 3: _____ 4: _____ 5: _____ 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA25433w04
Smaller than a pea: BA25433w02-03

Preservation Hold time:

18) No Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate: _____

Notes/Deficiencies:
ferrous iron arrived out of hold time

CUSTODY SEAL
AECOM (808)521-3051
Initials AM Date 1/19/21

Personnel receiving samples: MS Second reviewer: AA
Personnel labeling samples: MS
Project manager notified: MS Date/Time of notification 01/20/21
Name of client notified: _____ Date/Time of notification _____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #DOC53-210122A-260639

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	88.9	60-142			%	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.4	56-125			%	01/22/21	01/26/21

Quant Method:	DOC1218.M
Run #:	107114
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/27/21 9:40:38 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	88.3	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	78.0	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	72.2	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	76.9	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	77.2	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	111	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y107
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	88.9	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	106	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L040
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/26/21 2:52:55 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1249

Sample Collection Date: 01/18/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94808

APPL ID: BA25434

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K019
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/27/21 10:23:37 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1248

APPL ID: BA25433

Sample Collection Date: 01/18/21

QCG: #86BTO-210121AZ-260599

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/21/21	01/21/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	109	81-118			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	99.1	80-119			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/21/21	01/21/21

Quant Method: Z0119W.M
Run #: 0121Z11
Instrument: ZEUS
Sequence: 210119
Dilution Factor: 1
Initials: CHE

Printed: 01/26/21 1:04:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #86BTO-210121AZ-260599

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/21/21	01/21/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/21/21	01/21/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	109	81-118			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.0	85-114			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	97.1	80-119			%	01/21/21	01/21/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/21/21	01/21/21

Quant Method: Z0119W.M
Run #: 0121Z12
Instrument: ZEUS
Sequence: 210119
Dilution Factor: 1
Initials: CHE

Printed: 01/26/21 1:04:26 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1248

APPL ID: BA25433

Sample Collection Date: 01/18/21

QCG: #GRO86-210121AZ-260600

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/21/21	01/21/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	01/21/21	01/21/21

Quant Method:	ZGAS0104.M
Run #:	0121Z11
Instrument:	ZEUS
Sequence:	210119
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #GRO86-210121AZ-260600

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/21/21	01/21/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.0	85-114			%	01/21/21	01/21/21

Quant Method:	ZGAS0104.M
Run #:	0121Z12
Instrument:	ZEUS
Sequence:	210119
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1248

APPL ID: BA25433

Sample Collection Date: 01/18/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R06
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94808

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R07
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/27/21 11:49:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

ARF: 94808

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	1.8	0.5	0.18	0.04	mg/L	1	01/20/21	01/20/21
EPA 300.0	SULFATE	9.2	1.0	0.20	0.09	mg/L	1	01/20/21	01/20/21
EPA 300.0	CHLORIDE	50.5	5.0	1.00	0.40	mg/L	5	01/20/21	01/20/21

Printed: 01/27/21 10:39:33 AM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1249

APPL ID: BA25434

Sample Collection Date: 01/18/21

ARF: 94808

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.43	0.10	0.090	0.028	mg/L	1	01/21/21	01/21/21
SM 2320B	BICARBONATE AS CACO3	65.6	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	65.6	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/20/21	01/20/21
SW846 9060A	TOTAL ORGANIC CARBON	1.3	0.93	0.350	0.130	mg/L	1	01/21/21	01/21/21

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	60-142	87.3		56-125	74.0	
210122A-LCS	Lab Control Spike	60-142	86.7		56-125	84.7	
BA25434	ERH1249	60-142	88.9		56-125	77.4	

Comments: Batch: #DOC53-210122A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210122A-BLK	Time Analyzed:	1019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
BA25434	ERH1249	107114	01/26/21 1115

Comments: Batch: #DOC53-210122A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210122W-25526 - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	SURROGATE: OCTACOSANE (S)	87.3	60-142			%	01/22/21	01/26/21
BLANK	SURROGATE: ORTHO-TERPHEN	74.0	56-125			%	01/22/21	01/26/21

Quant Method: DOC1218.M
Run #: 107112
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 9:40:44 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210122A-LCS	Time Analyzed:	1047

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
BA25434	ERH1249	107114	01/26/21 1115

Comments: Batch: #DOC53-210122A

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **210122W-25526 LCS - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1790	89.5	36-132
OIL (C24-C40)	2000	1920	96.0	41-113
SURROGATE: OCTACOSANE (S)	150	130	86.7	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	127	84.7	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	01/22/21
Analysis Date :	01/26/21
Instrument :	Apollo
Run :	107113
Initials :	SSE

Printed: 01/27/21 9:40:31 AM
APPL Standard LCS

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	43-140	48.6		44-119	50.5	
210122A-LCS	Lab Control Spike	43-140	96.4		44-119	88.8	
BA25434	ERH1249	43-140	88.3		44-119	78.0	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	19-119	52.2		44-120	55.0	
210122A-LCS	Lab Control Spike	19-119	90.8		44-120	92.8	
BA25434	ERH1249	19-119	72.2		44-120	76.9	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	10-115	53.7		50-134	68.9	
210122A-LCS	Lab Control Spike	10-115	92.4		50-134	112	
BA25434	ERH1249	10-115	77.2		50-134	111	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
Blank ID:	210122A-BLK	Time Analyzed:	1656

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
BA25434	ERH1249	0105Y107	01/25/21 1747

Comments: Batch: #87DC5-210122A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25526 - 260605**
Batch ID: #87DC5-210122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	48.6	43-140			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUORBIPHENY	50.5	44-119			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUOROPHENO	52.2	19-119			%	01/22/21	01/25/21
BLANK	SURROGATE: NITROBENZENE-	55.0	44-120			%	01/22/21	01/25/21
BLANK	SURROGATE: PHENOL-D6 (S)	53.7	10-115			%	01/22/21	01/25/21
BLANK	SURROGATE: TERPHENYL-D14 (	68.9	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y105
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 11:24:09 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210122A-LCS	Time Analyzed:	1721

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
BA25434	ERH1249	0105Y107	01/25/21 1747

Comments: Batch: #87DC5-210122A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **210122W-25526 LCS - 260605**
Batch ID: #87DC5-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	62.5	57.4	91.8	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	241	96.4	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	125	111	88.8	44-119
SURROGATE: 2-FLUOROPHENOL (S)	250	227	90.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	125	116	92.8	44-120
SURROGATE: PHENOL-D6 (S)	250	231	92.4	10-115
SURROGATE: TERPHENYL-D14 (S)	125	140	112	50-134

Comments:

Primary	SPK
Quant Method :	Y0105.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Yoda
Run :	0105Y106
Initials :	MA

Printed: 01/27/21 11:23:57 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/05/21
Matrix: Water Instrument: Yoda
ID: 0105Y002.D Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94808
Case No: 94808 Date Analyzed: 01/25/21
Matrix: Water Instrument: Yoda
ID: 0105Y099.D Time Analyzed: 12:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y100.D	01/25/21 12:38
2	Blank	210122A BLK 1/800	0105Y105.D	01/25/21 16:56
3	Lab Control Spike	210122A LCS-1 1/0.8	0105Y106.D	01/25/21 17:21
4	ERH1249	BA25434W23 1/980	0105Y107.D	01/25/21 17:47
5		50ug/mL 8270 08/12/2	0105Y115.D	01/25/21 21:09
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	46.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	29.9
365	1 - 100% of mass 198	4.2
441	0.01 - 24% of mass 442	17.3
442	50 - 500% of mass 198	97.4
443	15 - 24% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	533085	5.05	2194340	6.47	1385450	8.48
	UPPER LIMIT	1066170	5.22	4388680	6.64	2770900	8.65
	LOWER LIMIT	266543	4.88	1097170	6.30	692725	8.31
	SAMPLE NO.						
01	210122A BLK 1/800	425738	5.05	1634420	6.46	1005650	8.47
02	210122A LCS-1 1/0.8	400800	5.05	1600610	6.46	971879	8.48
03	BA25434W23 1/980	428194	5.05	1673530	6.46	1037110	8.47
04	50ug/mL 8270 08/12/20	565875	5.05	2319310	6.47	1466190	8.48
05							
06							
07							
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12							
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15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2786020	10.21	2774520	13.29	2634210	14.98
	UPPER LIMIT	5572040	10.38	5549040	13.46	5268420	15.15
	LOWER LIMIT	1393010	10.04	1387260	13.12	1317105	14.81
	SAMPLE NO.						
01	210122A BLK 1/800	2061370	10.20	1858840	13.28	1771380	14.97
02	210122A LCS-1 1/0.8	2027580	10.20	1902850	13.28	1802110	14.97
03	BA25434W23 1/980	2145210	10.20	1911230	13.28	1855920	14.97
04	50ug/mL 8270 08/12/20	3029920	10.21	2959440	13.29	2751560	14.97
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	39-114	61.5		58-120	66.9	
210122A-LCS	Lab Control Spike	39-114	91.8		58-120	101	
BA25434-MS	Matrix Spike	39-114	84.5		58-120	104	
BA25434-MSD	Matrix SpikeD	39-114	76.1		58-120	97.3	
BA25434	ERH1249	39-114	88.9		58-120	106	

Comments: Batch: #SIM53-210122A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Linus
Blank ID:	210122A-BLK	Time Analyzed:	1638

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
210122A-MS	Matrix Spike	0118L038	01/25/21 1722
210122A-MSD	Matrix SpikeD	0118L039	01/25/21 1744
BA25434	ERH1249	0118L040	01/25/21 1806

Comments: Batch: #SIM53-210122A

Method Blank
EPA 8270D SIM LIQ-LIQ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25434 - 260603**
Batch ID: #SIM53-210122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2-METHYLNAPHT	61.5	39-114			%	01/22/21	01/25/21
BLANK	SURROGATE: FLUORANTHENE-	66.9	58-120			%	01/22/21	01/25/21

Quant Method:L0118.M
Run #:0118L036
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/26/21 2:53:02 PM

8270D-SIM

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Linus

LCS ID: 210122A-LCS Time Analyzed: 1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
210122A-MS	Matrix Spike	0118L038	01/25/21 1722
210122A-MSD	Matrix SpikeD	0118L039	01/25/21 1744
BA25434	ERH1249	0118L040	01/25/21 1806

Comments: Batch: #SIM53-210122A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **210122W-25434 LCS - 260603**
Batch ID: #SIM53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	6.25	5.61	89.8	41-115
2-METHYLNAPHTHALENE	6.25	5.64	90.2	39-114
NAPHTHALENE	6.25	5.62	89.9	43-114
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.74	91.8	39-114
SURROGATE: FLUORANTHENE-D10 (S)	6.25	6.31	101	58-120

Comments:

Primary	SPK
Quant Method :	L0118.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Linus
Run :	0118L037
Initials :	MA

Printed: 01/26/21 2:52:50 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **210122W-25434 MS - 260603**
Batch ID: #SIM53-210122A
Sample ID: BA25434
Client ID: ERH1249

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.56	ND	4.67	4.17	84.0	75.0	41-115	11.3	20
2-METHYLNAPHTHALENE	5.56	ND	4.68	4.17	84.2	75.0	39-114	11.5	20
NAPHTHALENE	5.56	ND	4.52	3.98	81.3	71.6	43-114	12.7	20
SURROGATE: 2-METHYLNAPHTHALEN	5.56	NA	4.70	4.23	84.5	76.1	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	5.56	NA	5.81	5.41	104	97.3	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0118.M	L0118.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/25/21	01/25/21
Instrument :	Linus	Linus
Run :	0118L038	0118L039
Initials :	MA	

Printed: 01/26/21 2:52:46 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 94808
Matrix: Water
ID: 0118L034.D

SDG No: 94808
Date Analyzed: 01/25/21
Instrument: Linus
Time Analyzed: 12:39

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21 (1)	0118L035.D	01/25/21 12:55
2	Blank	210122A BLK 1/800	0118L036.D	01/25/21 16:38
3	Lab Control Spike	210122A LCS-2 1/800	0118L037.D	01/25/21 17:00
4		BA25434W16 MS-2 1/90	0118L038.D	01/25/21 17:22
5		BA25434W18 MSD-2 1/9	0118L039.D	01/25/21 17:44
6	ERH1249	BA25434W23 1/980	0118L040.D	01/25/21 18:06
7		5 SIM 08/21/20	0118L046.D	01/25/21 20:18
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.1
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	53.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	24.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	16.5
442	50 - 500% of mass 198	90.5
443	15 - 24% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	64820	4.25	31514	6.25	57372	7.98
	UPPER LIMIT	129640	4.42	63028	6.42	114744	8.15
	LOWER LIMIT	32410	4.08	15757	6.08	28686	7.81
	SAMPLE NO.						
01	210122A BLK 1/800	64715	4.25	29769	6.27	53529	7.99
02	210122A LCS-2 1/800	64477	4.25	30653	6.25	55532	7.98
03	BA25434W16 MS-2 1/9	65468	4.25	30846	6.25	56528	7.98
04	BA25434W18 MSD-2 1/	64705	4.25	30138	6.25	56030	7.98
05	BA25434W23 1/980	65359	4.25	31129	6.25	56612	7.98
06	5 SIM 08/21/20	71331	4.25	32623	6.25	60248	7.98
07							
08							
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11							
12							
13							
14							
15							
16							
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18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	69725	11.12	64837	13.57		
	UPPER LIMIT	139450	11.29	129674	13.74		
	LOWER LIMIT	34863	10.95	32419	13.40		
	SAMPLE NO.						
01	210122A BLK 1/800	62085	11.13	58308	13.58		
02	210122A LCS-2 1/800	67366	11.12	63014	13.57		
03	BA25434W16 MS-2 1/9(	69951	11.12	65583	13.56		
04	BA25434W18 MSD-2 1/	68204	11.12	64404	13.56		
05	BA25434W23 1/980	69714	11.12	65273	13.56		
06	5 SIM 08/21/20	72741	11.12	71783	13.56		
07							
08							
09							
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16							
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20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	KYLO
Blank ID:	210125A-BLK	Time Analyzed:	1146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
BA25434	ERH1249	0125K019	01/26/21 1228

Comments: Batch: #87DME-210125A

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210125W-25526 - 260641**
Batch ID: #87DME-210125A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:KMEE0125.M
Run #:0125K017
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 9:59:14 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210125A-LCS	Time Analyzed:	1207

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
BA25434	ERH1249	0125K019	01/26/21 1228

Comments: Batch: #87DME-210125A

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **210125W-25526 LCS - 260641**
Batch ID: #87DME-210125A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	69.3	86.6	30-130

Comments:

Primary	SPK
Quant Method :	KMEE0125.M
Extraction Date :	01/25/21
Analysis Date :	01/26/21
Instrument :	KYLO
Run :	0125K018
Initials :	MA

Printed: 01/27/21 9:58:58 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94808
Case No: 94808 Date Analyzed: 01/26/21
Matrix: Water Instrument: KYLO
ID: 0125K013.D Time Analyzed: 10:06

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K014.D	01/26/21 10:19
2	Blank	210125A BLK 1/500	0125K017.D	01/26/21 11:46
3	Lab Control Spike	210125A LCS-1 1/500	0125K018.D	01/26/21 12:07
4	ERH1249	BA25434W14 2/500	0125K019.D	01/26/21 12:28
5		2MEE 500 1/26/21 (2)	0125K028.D	01/26/21 15:58
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	33.2
68	0 - 2.04% of mass 69	1.9
70	0 - 2.04% of mass 69	0.6
127	10 - 80% of mass 198	53.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	27.9
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	114.6
443	15 - 24% of mass 442	18.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K014.D Date Analyzed: 01/26/21

Instrument ID: KYLO Time Analyzed: 10:19

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	433460	5.33					
	UPPER LIMIT	866920	5.50					
	LOWER LIMIT	216730	5.16					
	SAMPLE NO.							
01	210125A BLK 1/500	370288	5.31					
02	210125A LCS-1 1/500	355190	5.31					
03	BA25434W14 2/500	256142	5.31					
04	2MEE 500 1/26/21 (2)	234567	5.32					
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/21/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210121AZ-LCS	Lab Control Spike	81-118	107		85-114	100	
210121AZ-LCSD	Lab Control SpikeD	81-118	108		85-114	99.2	
210121AZ-BLK	Blank	81-118	110		85-114	97.0	
BA25433	ERH1248	81-118	109		85-114	97.1	
BA25434	ERH1249	81-118	109		85-114	98.0	
BA25434-MS	Matrix Spike	81-118	106		85-114	98.0	
BA25434-MSD	Matrix SpikeD	81-118	107		85-114	98.8	

Comments: Batch: #86BTO-210121AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/21/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210121AZ-LCS	Lab Control Spike	80-119	100		89-112	108	
210121AZ-LCSD	Lab Control SpikeD	80-119	100		89-112	108	
210121AZ-BLK	Blank	80-119	98.9		89-112	106	
BA25433	ERH1248	80-119	99.1		89-112	107	
BA25434	ERH1249	80-119	97.1		89-112	108	
BA25434-MS	Matrix Spike	80-119	107		89-112	108	
BA25434-MSD	Matrix SpikeD	80-119	108		89-112	109	

Comments: Batch: #86BTO-210121AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210121AZ-BLK	Time Analyzed:	1103

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121AZ-LCS	Lab Control Spike	0121Z06	01/21/21 0931
210121AZ-LCSD	Lab Control SpikeD	0121Z07	01/21/21 0954
210121AZ-BLK	Blank	0121Z10	01/21/21 1103
BA25433	ERH1248	0121Z11	01/21/21 1127
BA25434	ERH1249	0121Z12	01/21/21 1150
210121AZ-MS	Matrix Spike	0125Z52	01/26/21 0250
210121AZ-MSD	Matrix SpikeD	0125Z53	01/26/21 0314

Comments: Batch: #86BTO-210121AZ

Method Blank
EPA 8260B BTEX WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210121W-25434 - 260599**
Batch ID: #86BTO-210121AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/21/21	01/21/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/21/21	01/21/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/21/21	01/21/21
BLANK	SURROGATE: 1,2-DICHLOROET	110	81-118			%	01/21/21	01/21/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.0	85-114			%	01/21/21	01/21/21
BLANK	SURROGATE: DIBROMOFLUOR	98.9	80-119			%	01/21/21	01/21/21
BLANK	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	01/21/21	01/21/21

Quant Method:Z0119W.M
Run #:0121Z10
Instrument:ZEUS
Sequence:210119
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/26/21 1:04:13 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210121AZ-LCS	Time Analyzed:	0931

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121AZ-LCS	Lab Control Spike	0121Z06	01/21/21 0931
210121AZ-LCSD	Lab Control SpikeD	0121Z07	01/21/21 0954
210121AZ-BLK	Blank	0121Z10	01/21/21 1103
BA25433	ERH1248	0121Z11	01/21/21 1127
BA25434	ERH1249	0121Z12	01/21/21 1150
210121AZ-MS	Matrix Spike	0125Z52	01/26/21 0250
210121AZ-MSD	Matrix SpikeD	0125Z53	01/26/21 0314

Comments: Batch: #86BTO-210121AZ

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210121W-25434 LCS - 260599**
Batch ID: #86BTO-210121AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	9.70	9.77	97.0	97.7	79-120	0.72	20
ETHYLBENZENE	10.00	10.2	10.3	102	103	79-121	0.98	20
TOLUENE	10.00	9.55	9.78	95.5	97.8	80-121	2.4	20
XYLENES (TOTAL)	30.0	30.5	30.6	102	102	79-121	0.33	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	26.8	27.0	107	108	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.0	24.8	100	99.2	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	25.0	25.0	100	100	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.0	27.1	108	108	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0119W.M	Z0119W.M
Extraction Date :	01/21/21	01/21/21
Analysis Date :	01/21/21	01/21/21
Instrument :	ZEUS	ZEUS
Run :	0121Z06	0121Z07
Initials :	CHE	

Matrix Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210126W-25434 MS - 260599**
Batch ID: #86BTO-210121AZ
Sample ID: BA25434
Client ID: ERH1249

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	10.3	10.1	103	101	79-120	2.0	20
ETHYLBENZENE	10.00	ND	10.7	10.4	107	104	79-121	2.8	20
TOLUENE	10.00	ND	10.6	10.4	106	104	80-121	1.9	20
XYLENES (TOTAL)	30.0	ND	32.5	32.0	108	107	79-121	1.6	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	26.5	26.8	106	107	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.5	24.7	98.0	98.8	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	26.7	27.1	107	108	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	27.1	27.3	108	109	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0125W.M	Z0125W.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0125Z52	0125Z53
Initials :	CHE	

Printed: 01/26/21 1:04:23 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/19/21
Matrix: Water Instrument: ZEUS
ID: 0119Z21.D Time Analyzed: 15:42

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/19	0119Z22.D	01/19/21 16:05
2		0.5ug/L VOC STD 1/19	0119Z23.D	01/19/21 16:28
3		1ug/L VOC STD 1/19/2	0119Z24.D	01/19/21 16:52
4		2ug/L VOC STD 1/19/2	0119Z25.D	01/19/21 17:15
5		5ug/L VOC STD 1/19/2	0119Z26.D	01/19/21 17:38
6		10ug/L VOC STD 1/19/	0119Z27.D	01/19/21 18:01
7		20ug/L VOC STD 1/19/	0119Z28.D	01/19/21 18:25
8		40ug/L VOC STD 1/19/	0119Z29.D	01/19/21 18:48
9		100ug/L VOC STD 1/19	0119Z30.D	01/19/21 19:11
10		(SS) 10ug/L VOC STD	0119Z32.D	01/19/21 19:57
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.1
75	30.0 - 60.0% of mas 95	44.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.6
174	50.0 - 200.0% of mass 95	109.4
175	5.0 - 9.0% of mass 174	8.0
176	95.0 - 101.0% of mass 174	96.7
177	5.0 - 9.0% of mass 176	7.3

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94808
Case No: 94808 Date Analyzed: 01/21/21
Matrix: Water Instrument: ZEUS
ID: 0121Z03.D Time Analyzed: 8:05

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		210121A CCV 10ug/L	0121Z05.D	01/21/21 9:08
2	Lab Control Spike	210121A LCS 10ug/L	0121Z06.D	01/21/21 9:31
3	Lab Control SpikeD	210121A LCSD 10ug/L	0121Z07.D	01/21/21 9:54
4	Blank	210121A BLK	0121Z10.D	01/21/21 11:03
5	ERH1248	BA25433W01	0121Z11.D	01/21/21 11:27
6	ERH1249	BA25434W01	0121Z12.D	01/21/21 11:50
7		Ending CCV 10ug/L 1/	0121Z13.D	01/21/21 12:13
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.6
75	30.0 - 60.0% of mas 95	45.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	113.5
175	5.0 - 9.0% of mass 174	7.7
176	95.0 - 101.0% of mass 174	95.0
177	5.0 - 9.0% of mass 176	6.4

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125Z23.D

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Time Analyzed: 15:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/25	0125Z24.D	01/25/21 16:07
2		0.5ug/L VOC STD 1/25	0125Z25.D	01/25/21 16:30
3		1ug/L VOC STD 1/25/2	0125Z26.D	01/25/21 16:53
4		2ug/L VOC STD 1/25/2	0125Z27.D	01/25/21 17:16
5		5ug/L VOC STD 1/25/2	0125Z28.D	01/25/21 17:39
6		10ug/L VOC STD 1/25/	0125Z29.D	01/25/21 18:02
7		20ug/L VOC STD 1/25/	0125Z30.D	01/25/21 18:25
8		40ug/L VOC STD 1/25/	0125Z31.D	01/25/21 18:47
9		100ug/L VOC STD 1/25	0125Z32.D	01/25/21 19:10
10		(SS) 10ug/L VOC STD	0125Z34.D	01/25/21 19:57
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 60.0% of mas 95	45.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	126.6
175	5.0 - 9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.2
177	5.0 - 9.0% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125Z44.D

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Time Analyzed: 23:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	210125A CCV/LCS 10ug	0125Z45.D	01/26/21 0:10
2	Lab Control SpikeD	210125A LCSD 10ug/L	0125Z46.D	01/26/21 0:33
3	Blank	210125A BLK	0125Z49.D	01/26/21 1:42
4		BA25434W02,3,6 MS 10	0125Z52.D	01/26/21 2:50
5		BA25434W03,2,6 MSD 1	0125Z53.D	01/26/21 3:14
6		Ending CCV 10ug/L 1/	0125Z70.D	01/26/21 9:45
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.1
75	30.0 - 60.0% of mas 95	45.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	124.7
175	5.0 - 9.0% of mass 174	7.4
176	95.0 - 101.0% of mass 174	98.8
177	5.0 - 9.0% of mass 176	6.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0121Z05.D Date Analyzed: 01/21/21

Instrument ID: ZEUS Time Analyzed: 9:08

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3767180	6.16	3090350	9.62	1136130	12.17
	UPPER LIMIT	7534360	6.33	6180700	9.79	2272260	12.34
	LOWER LIMIT	1883590	5.99	1545175	9.45	568065	12.00
	SAMPLE NO.						
01	210121A CCV 10ug/L	3767180	6.16	3090350	9.62	1136130	12.17
02	210121A LCS 10ug/L	3916540	6.16	3212920	9.62	1203200	12.17
03	210121A LCSD 10ug/L	3997930	6.16	3263700	9.62	1201150	12.17
04	210121A BLK	3793830	6.16	3187100	9.62	1244670	12.17
05	BA25433W01	3792040	6.16	3167360	9.62	1201660	12.17
06	BA25434W01	3761570	6.16	3127970	9.62	1226750	12.17
07	Ending CCV 10ug/L 1/2	3736630	6.16	3096290	9.62	1121280	12.17
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125Z45.D Date Analyzed: 01/26/21

Instrument ID: ZEUS Time Analyzed: 0:10

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3756220	6.16	2831710	9.62	1036740	12.17
	UPPER LIMIT	7512440	6.33	5663420	9.79	2073480	12.34
	LOWER LIMIT	1878110	5.99	1415855	9.45	518370	12.00
	SAMPLE NO.						
01	210125A CCV/LCS 10ug	3756220	6.16	2831710	9.62	1036740	12.17
02	210125A LCSD 10ug/L	3779070	6.16	2854070	9.62	1061380	12.17
03	210125A BLK	3705410	6.16	2791950	9.62	1050110	12.17
04	BA25434W02,3,6 MS 10	3843290	6.16	2892400	9.62	1054210	12.17
05	BA25434W03,2,6 MSD	3843860	6.16	2910480	9.62	1050620	12.17
06	Ending CCV 10ug/L 1/25	3363520	6.16	2555060	9.62	940096	12.17
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/21/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210121AZ-LCS	Lab Control Spike	85-114	98.4				
210121AZ-LCSD	Lab Control SpikeD	85-114	98.4				
210121AZ-BLK	Blank	85-114	97.0				
BA25433	ERH1248	85-114	97.1				
BA25434	ERH1249	85-114	98.0				
BA25434-MS	Matrix Spike	85-114	98.8				
BA25434-MSD	Matrix SpikeD	85-114	98.0				

Comments: Batch: #GRO86-210121AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210121AZ-BLK	Time Analyzed:	1103

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121AZ-LCS	Lab Control Spike	0121Z08	01/21/21 1017
210121AZ-LCSD	Lab Control SpikeD	0121Z09	01/21/21 1040
210121AZ-BLK	Blank	0121Z10	01/21/21 1103
BA25433	ERH1248	0121Z11	01/21/21 1127
BA25434	ERH1249	0121Z12	01/21/21 1150
210121AZ-MS	Matrix Spike	0125Z54	01/26/21 0337
210121AZ-MSD	Matrix SpikeD	0125Z55	01/26/21 0400

Comments: Batch: #GRO86-210121AZ

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210121W-25434 - 260600**
Batch ID: #GRO86-210121AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/21/21	01/21/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.0	85-114			%	01/21/21	01/21/21

Quant Method:ZGAS0104.M
Run #:0121Z10
Instrument:ZEUS
Sequence:210119
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/26/21 3:46:39 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210121AZ-LCS	Time Analyzed:	1017

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121AZ-LCS	Lab Control Spike	0121Z08	01/21/21 1017
210121AZ-LCSD	Lab Control SpikeD	0121Z09	01/21/21 1040
210121AZ-BLK	Blank	0121Z10	01/21/21 1103
BA25433	ERH1248	0121Z11	01/21/21 1127
BA25434	ERH1249	0121Z12	01/21/21 1150
210121AZ-MS	Matrix Spike	0125Z54	01/26/21 0337
210121AZ-MSD	Matrix SpikeD	0125Z55	01/26/21 0400

Comments: Batch: #GRO86-210121AZ

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210121W-25434 LCS - 260600**
Batch ID: #GRO86-210121AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	278	282	92.7	94.0	78-122	1.4	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.6	24.6	98.4	98.4	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0104.M	ZGAS0104.M
Extraction Date :	01/21/21	01/21/21
Analysis Date :	01/21/21	01/21/21
Instrument :	ZEUS	ZEUS
Run :	0121Z08	0121Z09
Initials :	CHE	

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210126W-25434 MS - 260600**
Batch ID: #GRO86-210121AZ
Sample ID: BA25434
Client ID: ERH1249

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	293	270	97.7	90.0	78-122	8.2	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.7	24.5	98.8	98.0	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0125.M	ZGAS0125.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0125Z54	0125Z55
Initials :	CHE	

Printed: 01/26/21 3:46:50 PM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

Blank ID: 210126A-BLK Time Analyzed: 1330

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25433	ERH1248	0126R06	01/26/21 1334
BA25434	ERH1249	0126R07	01/26/21 1338
210126A-MS	Matrix Spike	0126R08	01/26/21 1342
210126A-MSD	Matrix SpikeD	0126R13	01/26/21 1403

Comments: Batch: #RSKME-210126A

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

LCS ID: 210126A-LCS Time Analyzed: 1312

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25433	ERH1248	0126R06	01/26/21 1334
BA25434	ERH1249	0126R07	01/26/21 1338
210126A-MS	Matrix Spike	0126R08	01/26/21 1342
210126A-MSD	Matrix SpikeD	0126R13	01/26/21 1403

Comments: Batch: #RSKME-210126A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210126W-25434 - 260649**
Batch ID: #RSKME-210126A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method: RSK0914A.M
Run #: 0126R05
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 11:49:55 AM

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210126W-25434 LCS - 260649**
Batch ID: #RSKME-210126A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	74.0	72.9	88.7	87.4	72-125	1.5	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Rocky	Rocky
Run :	0126R02	0126R04
Initials :	LSI	

Matrix Spike Recoveries
METHANE

APPL ID: **210126W-25434 MS - 260649**
Batch ID: #RSKME-210126A
Sample ID: BA25434
Client ID: ERH1249

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	ND	73.1	76.3	87.6	91.5	72-125	4.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Rocky	Rocky
Run :	0126R08	0126R13
Initials :	LSI	

Printed: 01/27/21 11:49:43 AM
APPL MSD SCII

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/20/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210120A-BLK	Time Analyzed:	0933

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-LCS	Lab Control Spike	1	01/20/21 0918
210120A-BLK	Blank	2	01/20/21 0933
BA25434	ERH1249	3	01/20/21 1130
BA25434	ERH1249	4	01/20/21 1407
210120A-LCSD	Lab Control SpikeD	5	01/20/21 1421

Comments: Batch: #300W-210120A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.40 J	1.0	0.20	0.08	mg/L	01/20/21	01/20/21	#300W-210120A-BA25434
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/20/21	01/20/21	#300W-210120A-BA25434
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/20/21	01/20/21	#300W-210120A-BA25434

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 01/27/21 10:39:33 AM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/20/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210120A-LCS	Time Analyzed:	0918

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-LCS	Lab Control Spike	1	01/20/21 0918
210120A-BLK	Blank	2	01/20/21 0933
BA25434	ERH1249	3	01/20/21 1130
BA25434	ERH1249	4	01/20/21 1407
210120A-LCSD	Lab Control SpikeD	5	01/20/21 1421

Comments: Batch: #300W-210120A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	26.1	26.5	104	106	1.5	20	90-110	01/20/21	01/20/21	01/20/21	01/20/21	#300W-210120A-BA25434
EPA 300.0	NITRATE	22.1	23.6	23.7	107	107	0.42	20	90-110	01/20/21	01/20/21	01/20/21	01/20/21	#300W-210120A-BA25434
EPA 300.0	SULFATE	25.0	26.9	25.6	108	102	5.0	20	90-110	01/20/21	01/20/21	01/20/21	01/20/21	#300W-210120A-BA25434

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/21/21

Matrix: WATER Instrument: EVE

Blank ID: 210121A-BLK Time Analyzed: 1434

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A-BLK	Blank	14	01/21/21 1434
210121A-LCS	Lab Control Spike	15	01/21/21 1436
210121A-LCSD	Lab Control SpikeD	16	01/21/21 1438
210121A-MS	Matrix Spike	18	01/21/21 1443
210121A-MSD	Matrix SpikeD	19	01/21/21 1445
BA25434	ERH1249	20	01/21/21 1448

Comments: Batch: #353TO-210121A

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/22/21

Matrix: WATER Instrument: Tiamo

Blank ID: 210122A1-BLK Time Analyzed: 1253

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25434	ERH1249	6	01/22/21 1701

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/20/21
Matrix:	WATER	Instrument:	Manual Spec
Blank ID:	B210120-BLK	Time Analyzed:	2249

APPL ID.	Client Sample No.	File ID.	Date Analyzed
B210120-BLK	Blank	16	01/20/21 2249
B210120-LCS	Lab Control Spike	17	01/20/21 2250
B210120-LCSD	Lab Control SpikeD	20	01/20/21 2251
BA25434	ERH1249	30	01/20/21 2256

Comments: Batch: #35FE-B210120

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94808

Case No: 94808 Date Analyzed: 01/20/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210120A-BLK Time Analyzed: 2005

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-BLK	Blank	22	01/20/21 2005
210120A-LCS	Lab Control Spike	23	01/20/21 2045
210120A-LCSD	Lab Control SpikeD	24	01/20/21 2126
BA25434	ERH1249	36	01/21/21 0515

Comments: Batch: #TOCW5-210120A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
SM 2320B	TOTAL ALKALINITY	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/21/21	01/21/21	#353TO-210121A-BA25434
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/20/21	01/20/21	#35FE-B210120-BA25348
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/20/21	01/20/21	#TOCW5-210120A-BA25348

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210121A-LCS	Time Analyzed:	1436

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A-BLK	Blank	14	01/21/21 1434
210121A-LCS	Lab Control Spike	15	01/21/21 1436
210121A-LCSD	Lab Control SpikeD	16	01/21/21 1438
210121A-MS	Matrix Spike	18	01/21/21 1443
210121A-MSD	Matrix SpikeD	19	01/21/21 1445
BA25434	ERH1249	20	01/21/21 1448

Comments: Batch: #353TO-210121A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210122A1-LCS	Time Analyzed:	1256

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25434	ERH1249	6	01/22/21 1701

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/20/21
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	B210120-LCS	Time Analyzed:	2250

APPL ID.	Client Sample No.	File ID.	Date Analyzed
B210120-BLK	Blank	16	01/20/21 2249
B210120-LCS	Lab Control Spike	17	01/20/21 2250
B210120-LCSD	Lab Control SpikeD	20	01/20/21 2251
BA25434	ERH1249	30	01/20/21 2256

Comments: Batch: #35FE-B210120

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94808
Case No:	94808	Date Analyzed:	01/20/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210120A-LCS	Time Analyzed:	2045

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-BLK	Blank	22	01/20/21 2005
210120A-LCS	Lab Control Spike	23	01/20/21 2045
210120A-LCSD	Lab Control SpikeD	24	01/20/21 2126
BA25434	ERH1249	36	01/21/21 0515

Comments: Batch: #TOCW5-210120A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	2.99	3.03	99.7	101	1.3	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#353TO-210121A-BA2543
SM 2320B	BICARBONATE AS CACO3	250	231	233	92.4	93.2	0.86	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SM 2320B	TOTAL ALKALINITY AS CA	250	245	247	98.0	98.8	0.81	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SM3500Fe	FERROUS IRON	3.00	2.99	3.05	99.7	102	2.0	20	80-120	01/20/21	01/20/21	01/20/21	01/20/21	#35FE-B210120-BA25348
SW846 90	TOTAL ORGANIC CARBO	5.00	5.07	5.07	101	101	0.0	20	80-120	01/20/21	01/20/21	01/20/21	01/20/21	#TOCW5-210120A-BA253

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **210121W-25434 MS - 260547**

Sample ID: BA25434

Client ID: ERH1249

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 353.2	NITRATE-NITRITE AS	3.23	0.43	3.94	3.98	109	110	1.0	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	260547	BA25434

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/[illegible]

			1218004.D	1218005.D	1218006 D	1218007.D	1218008 D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
6																	
7																	
8																	
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1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

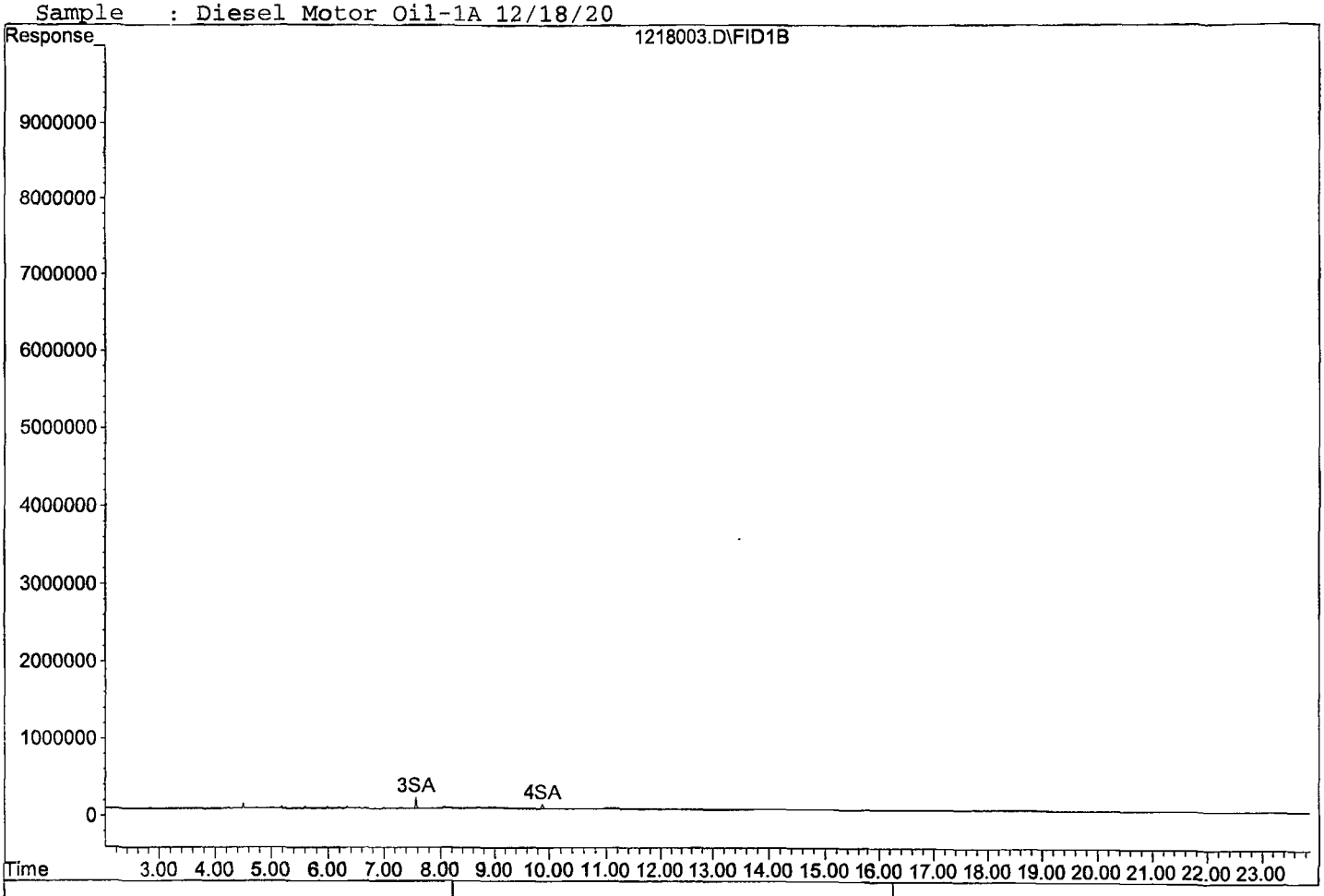
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

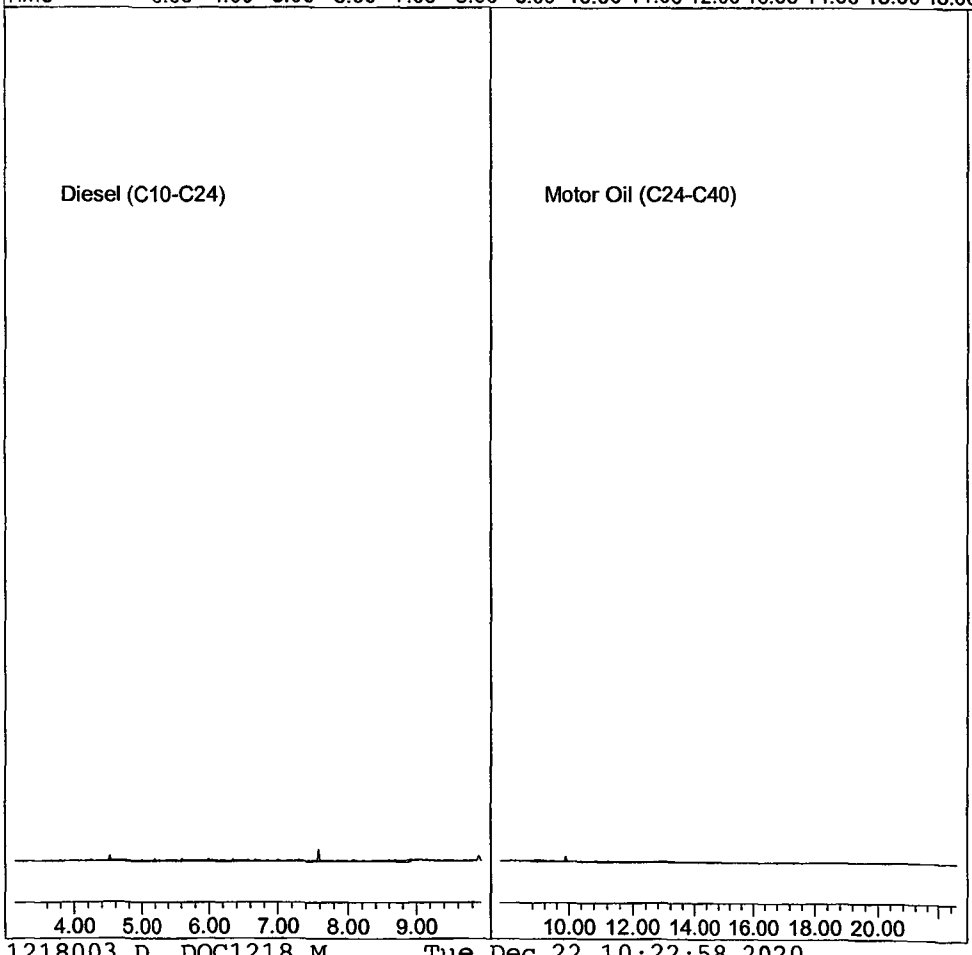
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

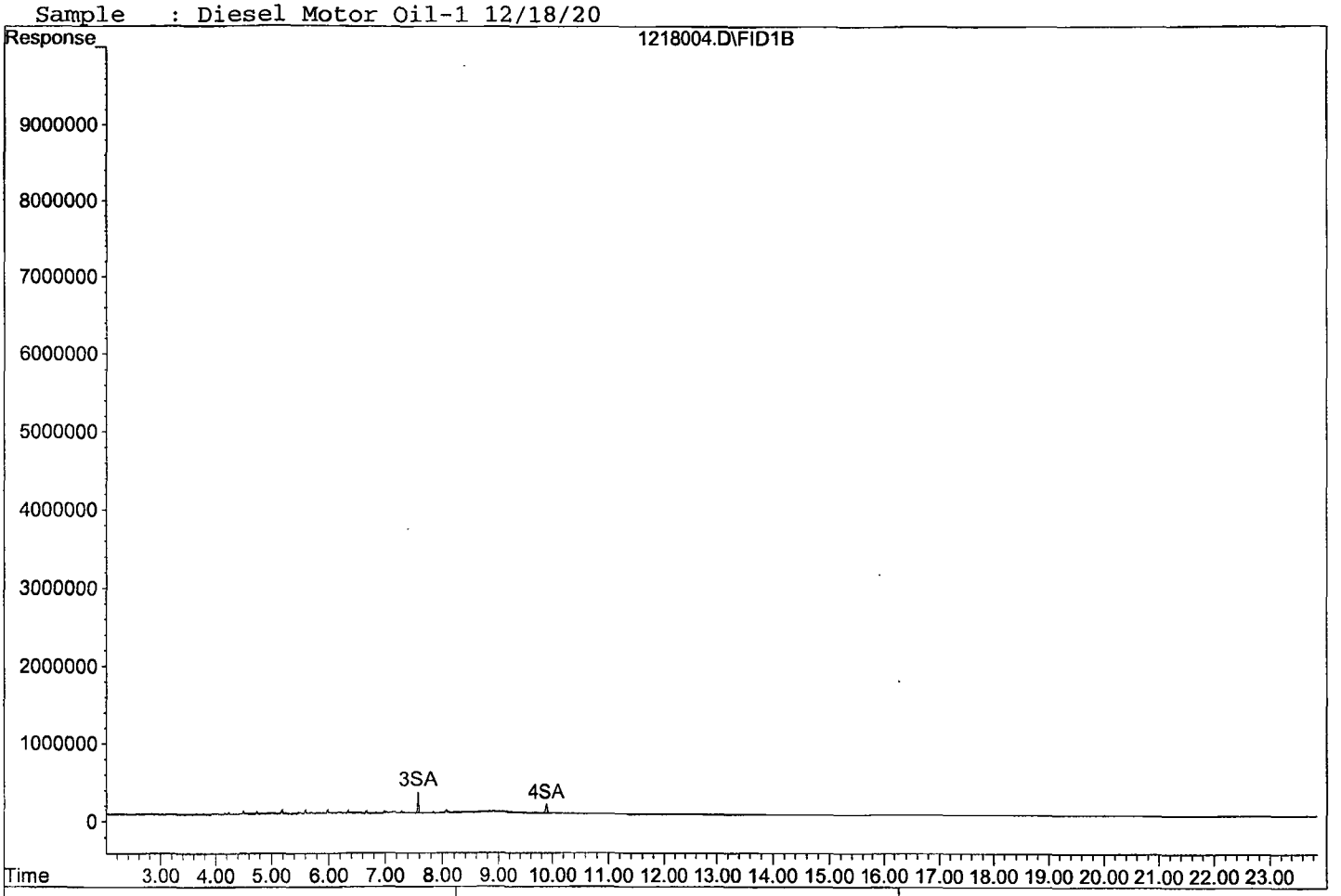
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

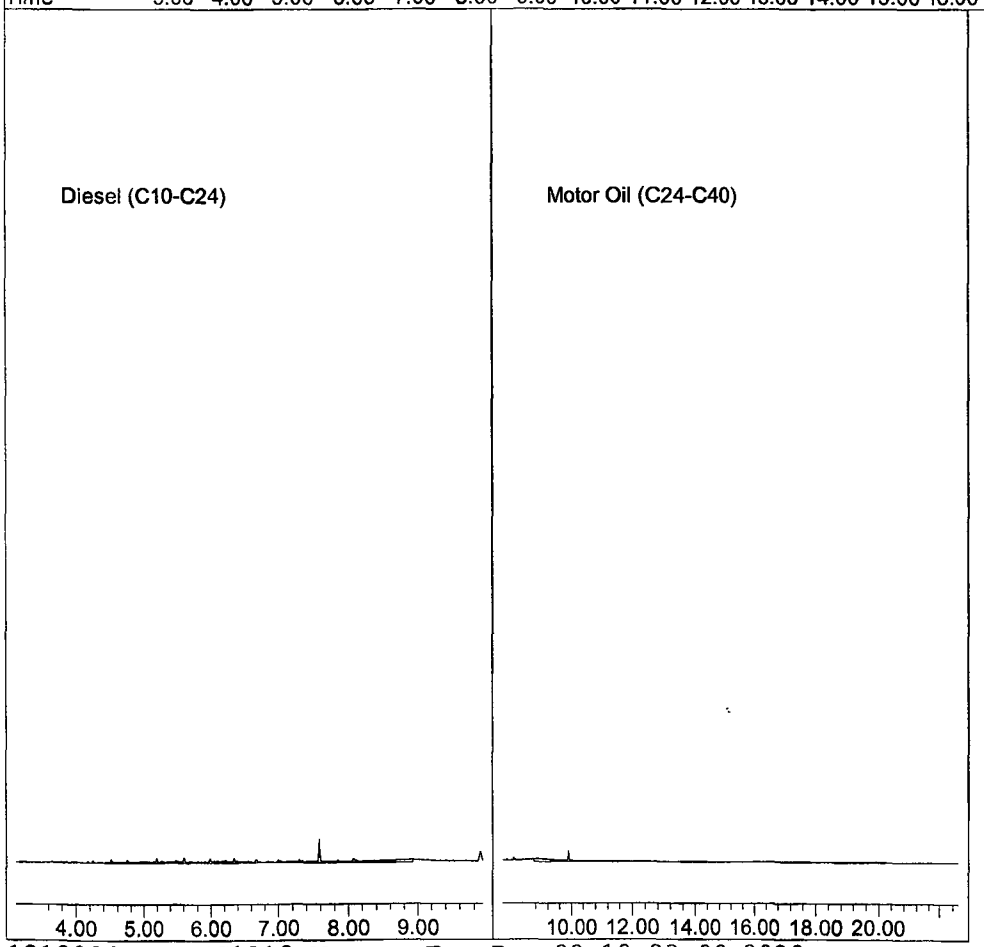
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery =		1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery =		1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

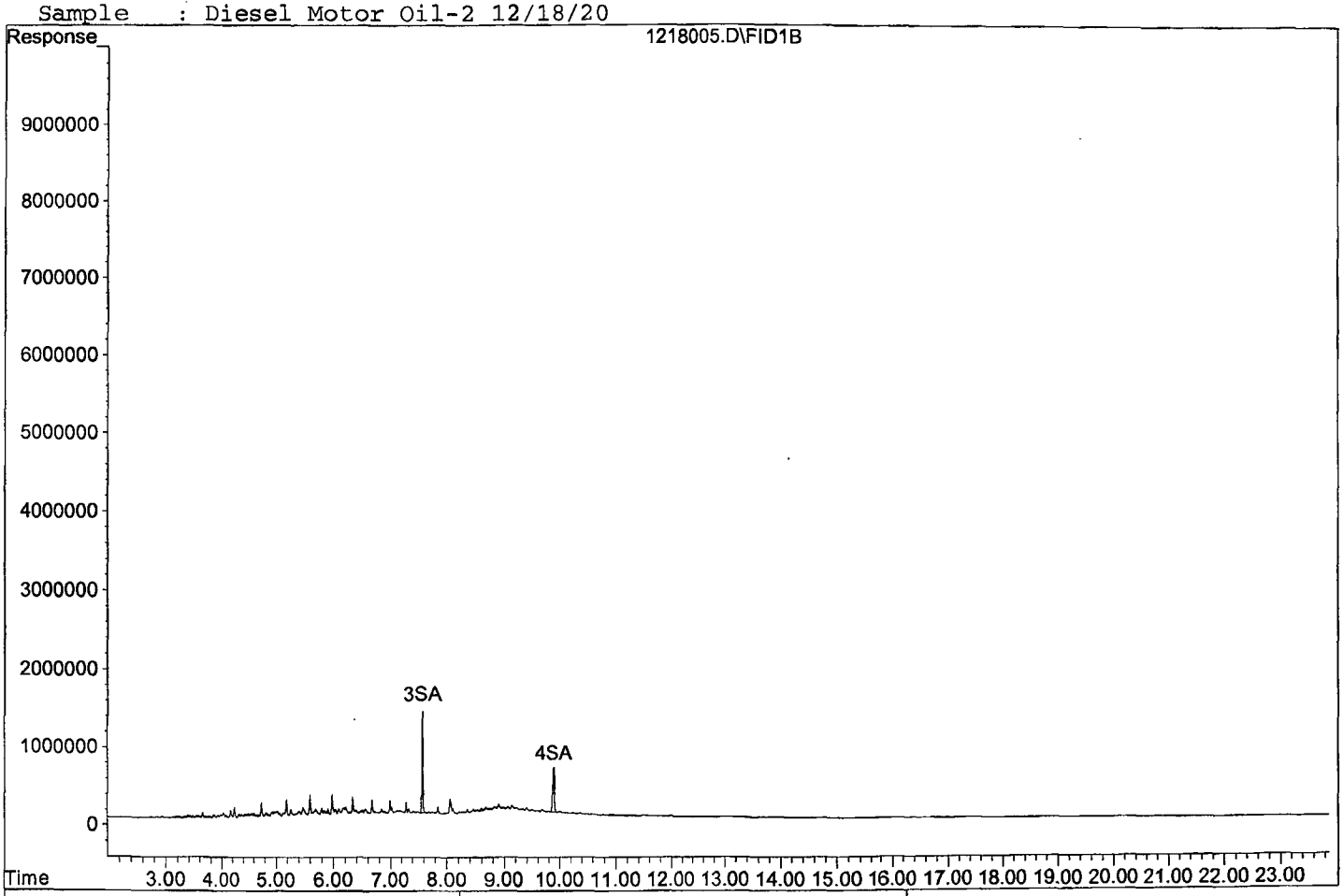
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

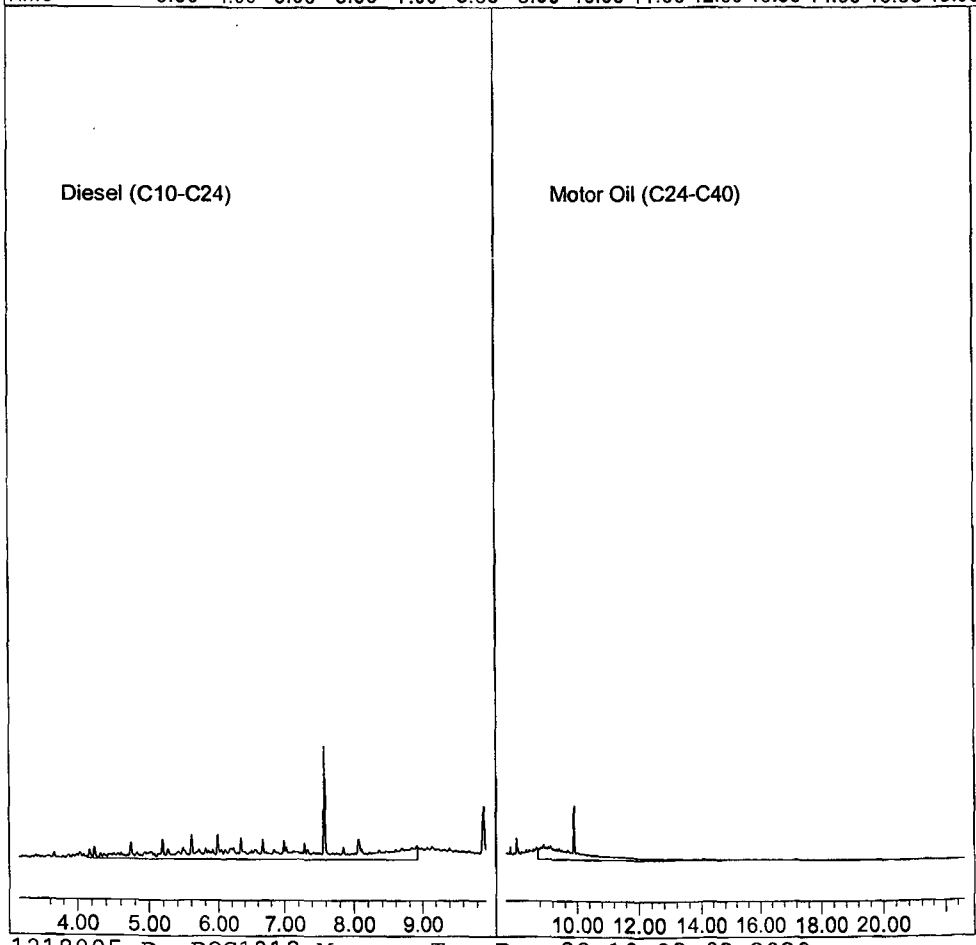
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

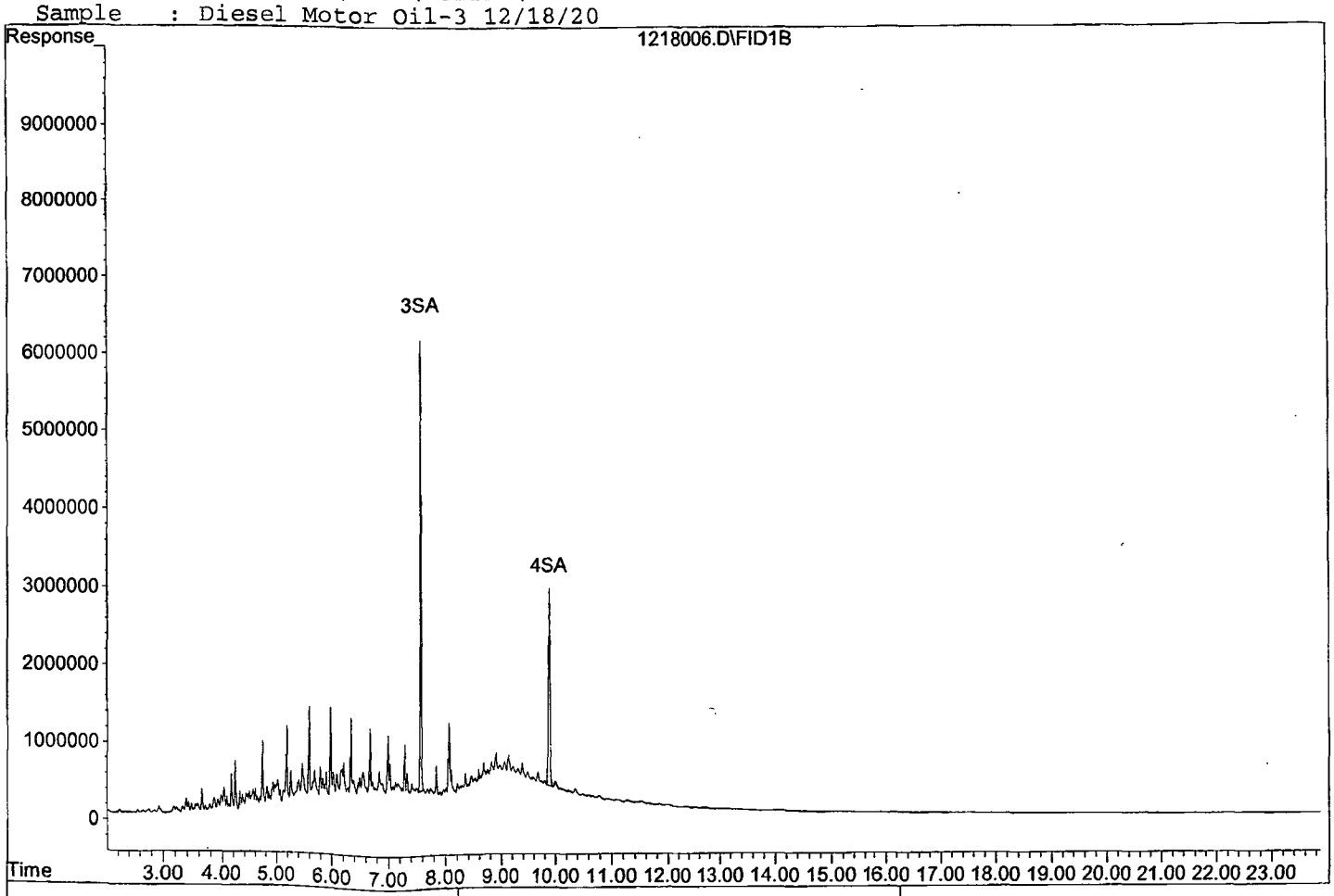
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

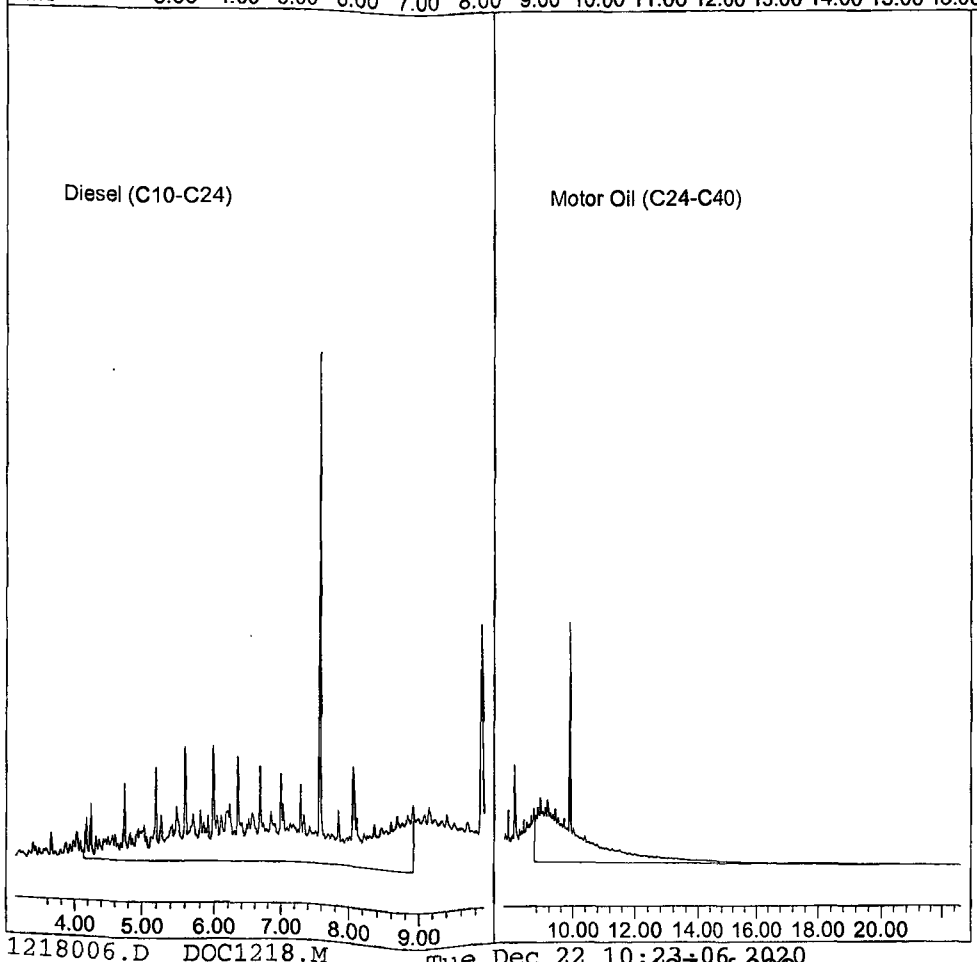
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000		Recovery =	40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000		Recovery =	40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

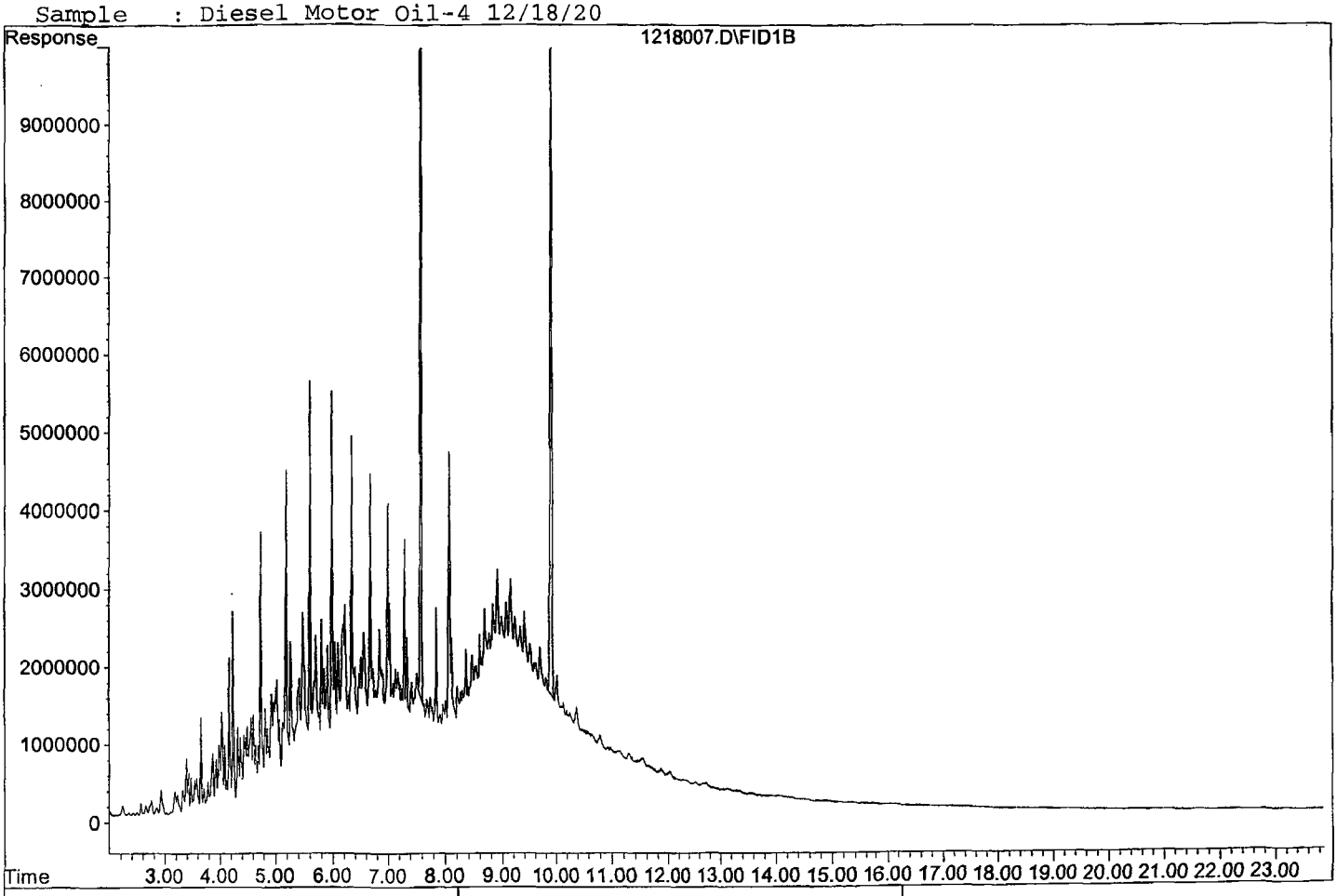
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

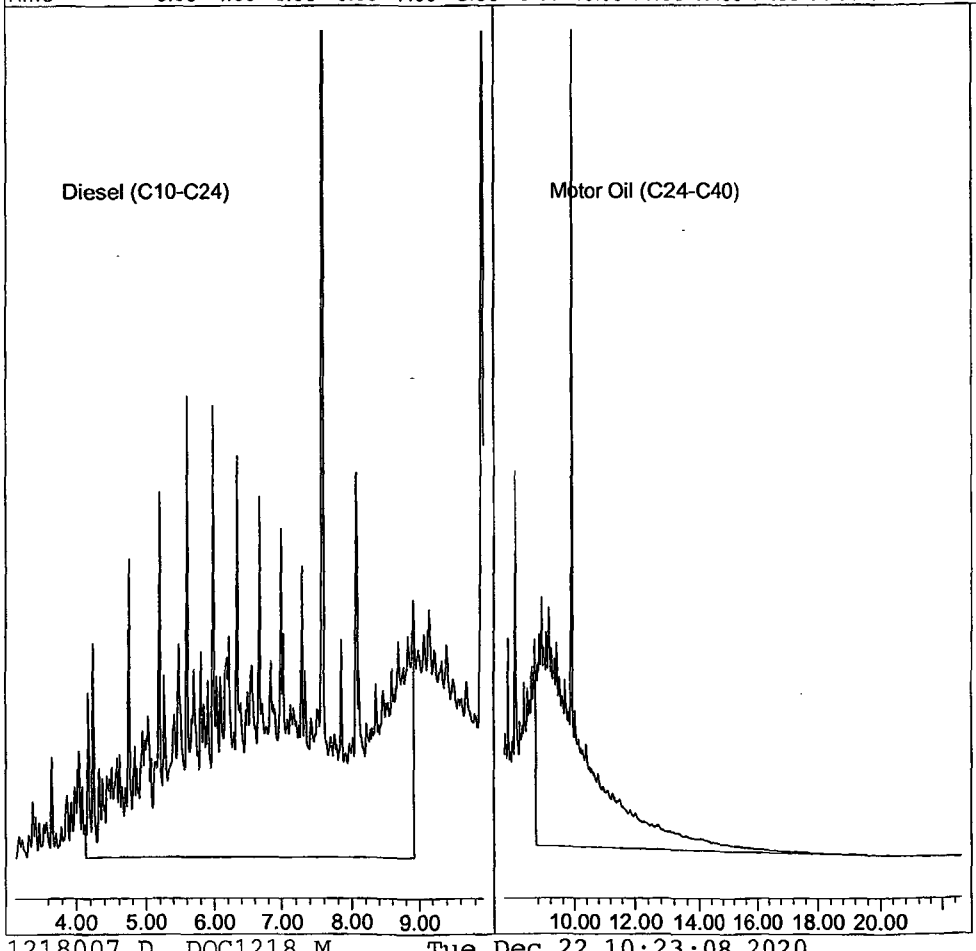
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

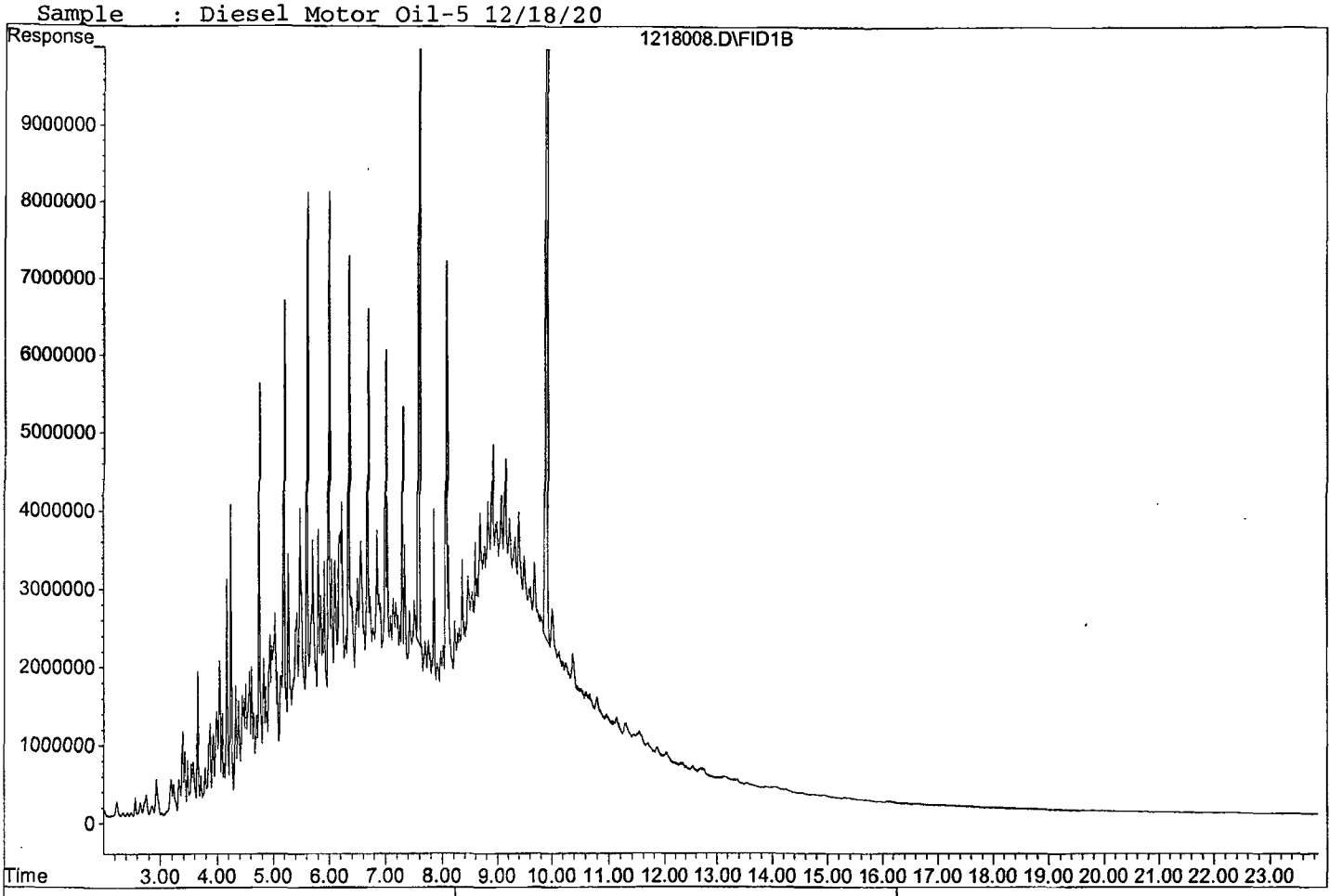
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

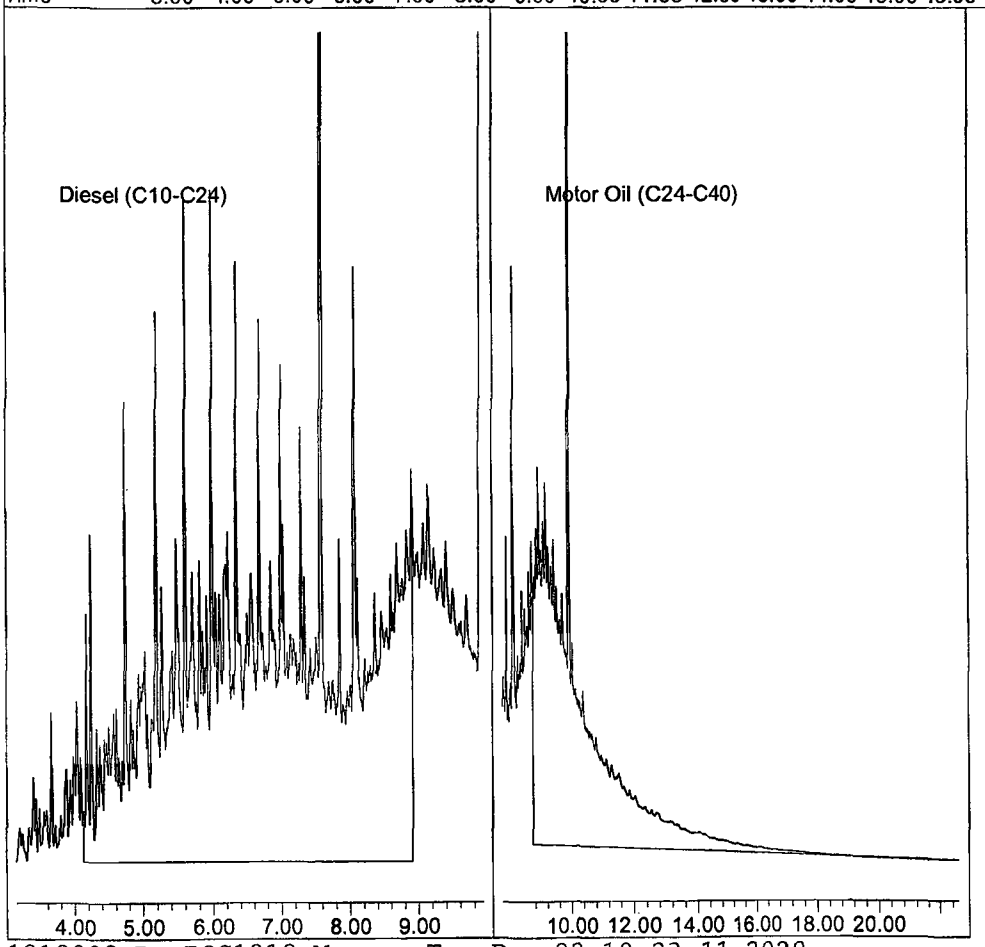
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000		Recovery =	224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000		Recovery =	237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

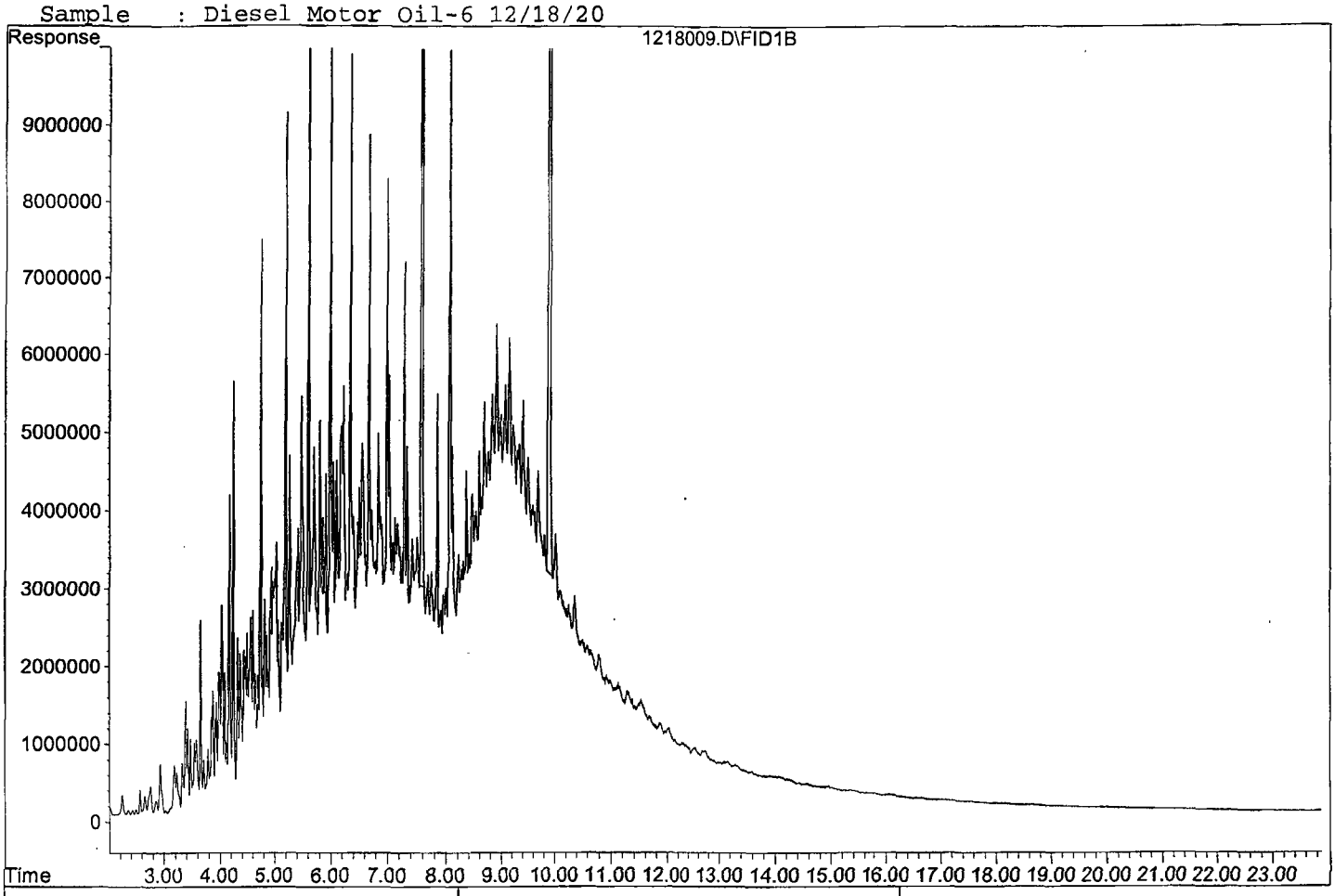
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

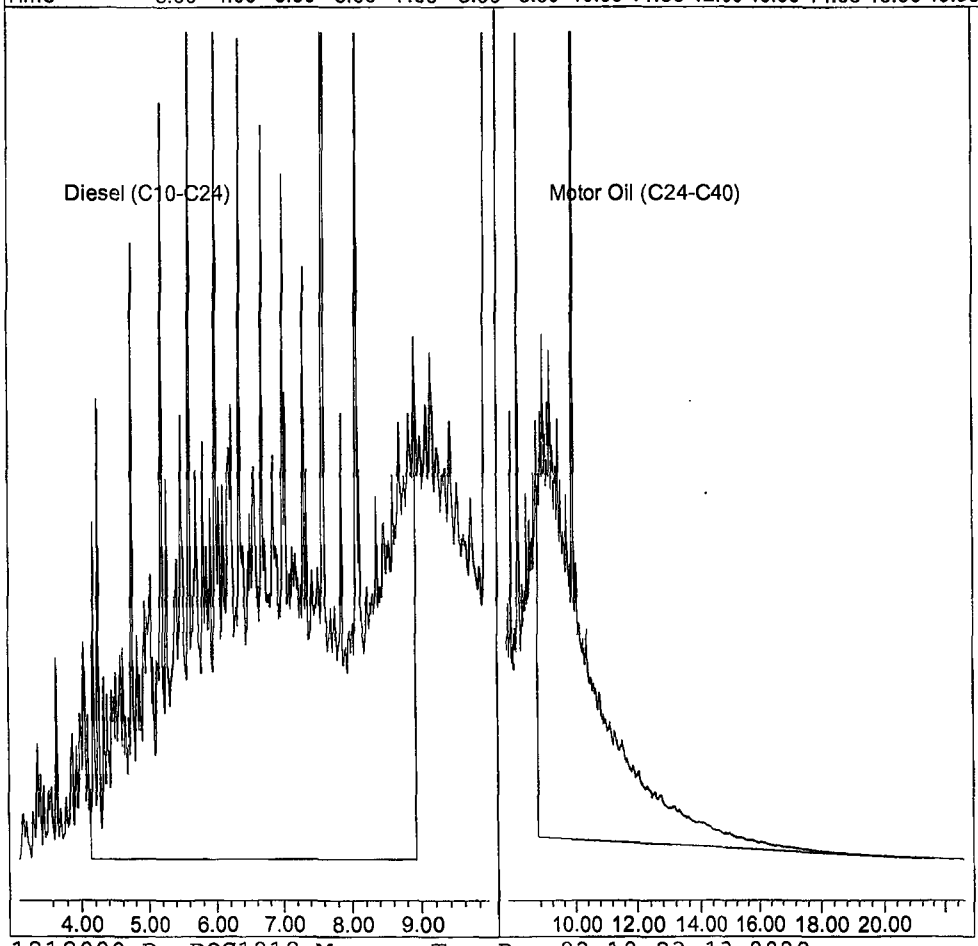
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572 ppb
Surrogate Spike 30.000		Recovery =	311.91%
4) SA Octacosane(S)	9.91	438795924	96.608 ppb
Surrogate Spike 30.000		Recovery =	322.03%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330 ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739 ppb

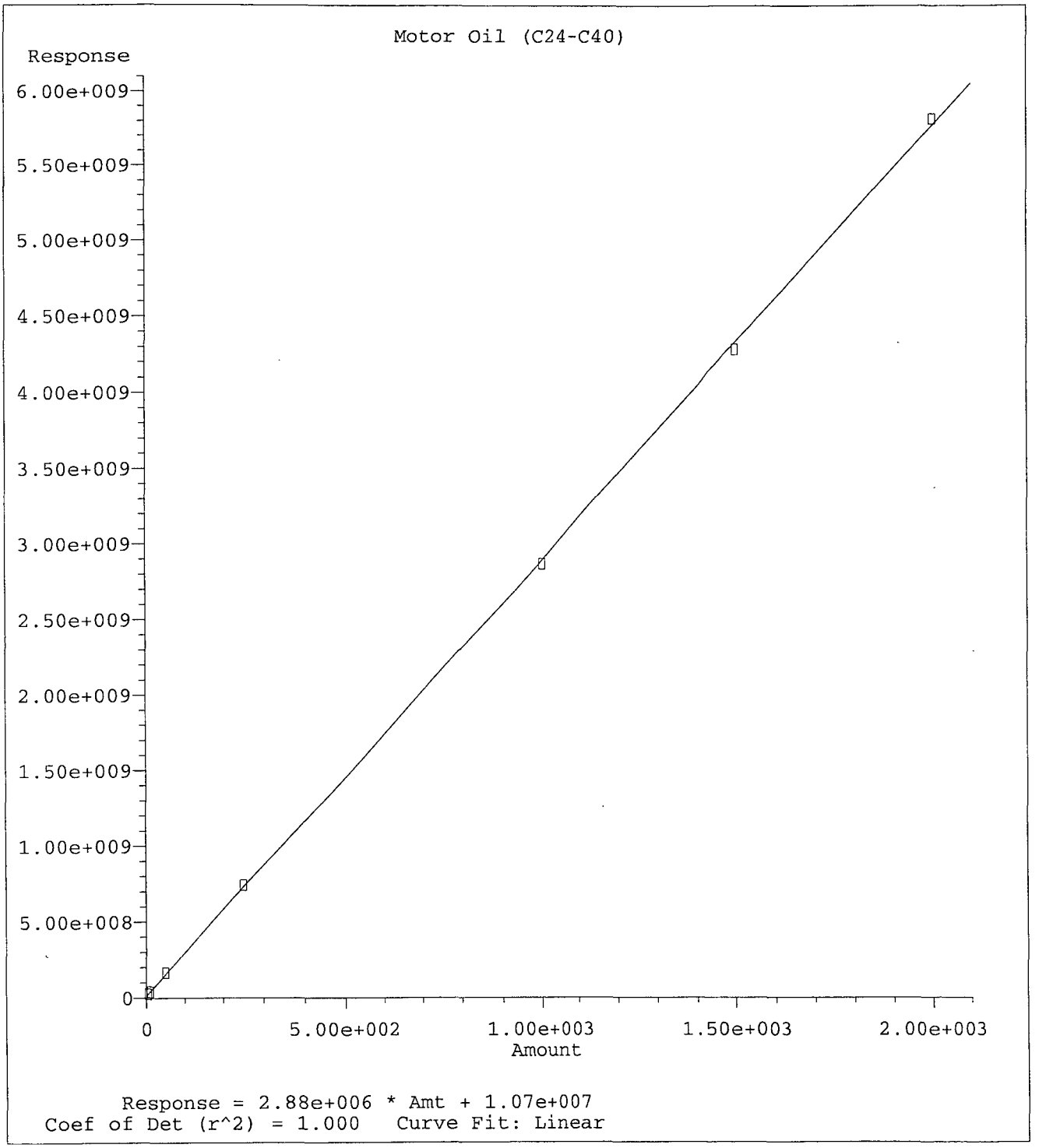
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20







Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

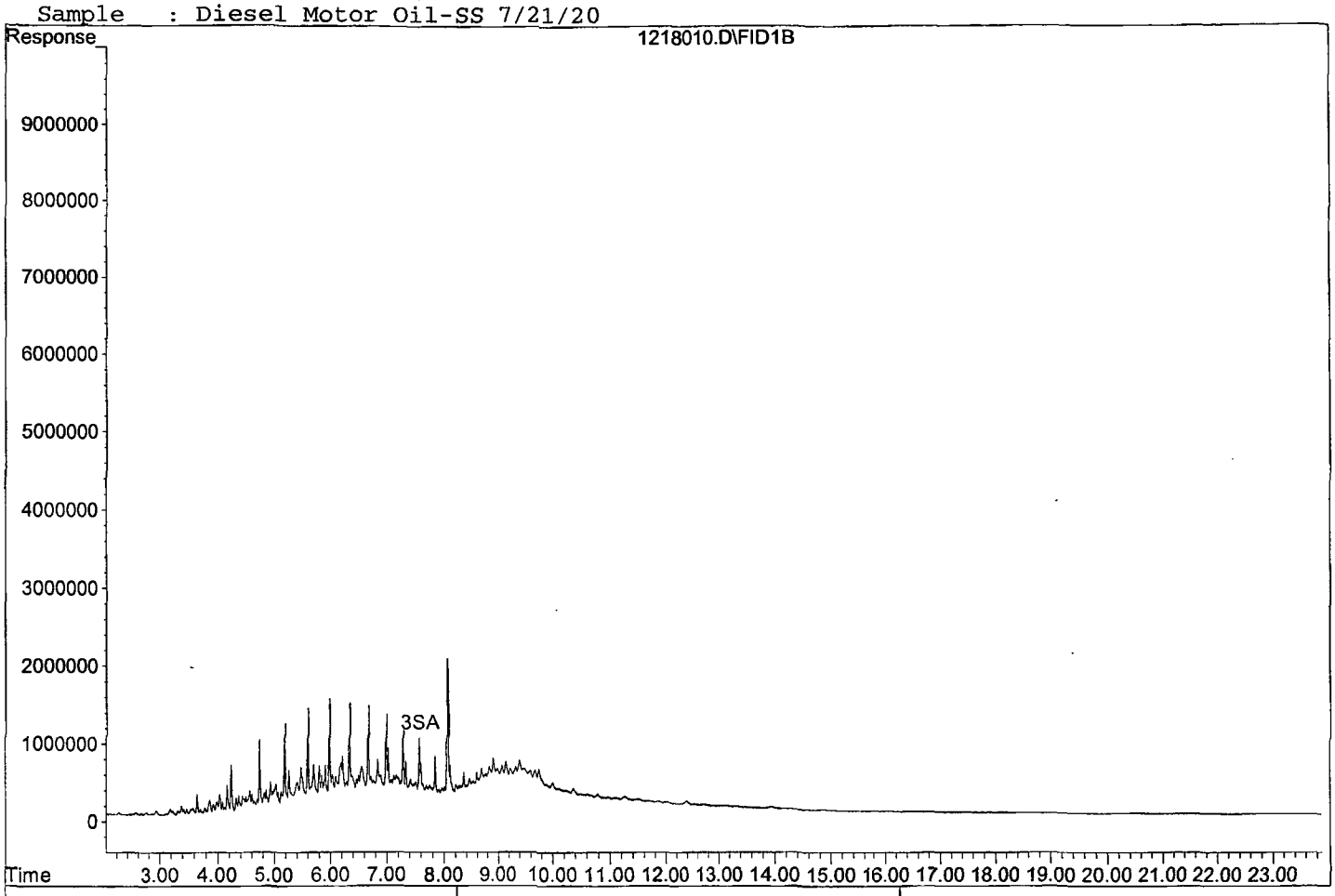
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

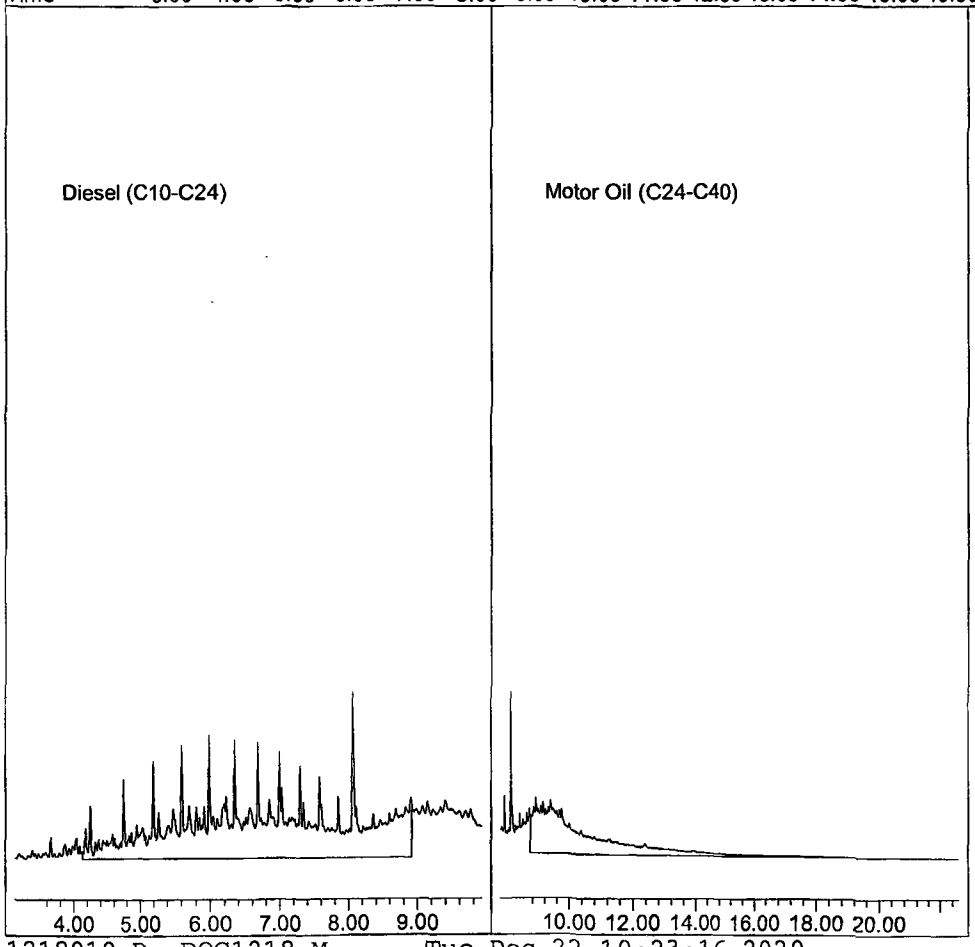
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000	Recovery =		2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000	Recovery =		0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107111.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2415920	1.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1552090	10	HBTML	6.4
3	SA	Ortho-Terphenyl(S)	2953720	2981650	0.95	SA	
4	SA	Octacosane(S)	2271000	2341700	3.1	SA	
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		Average			3.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107111.D Vial: 11
Acq On : 1-26-21 9:51:23 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 27 9:14 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

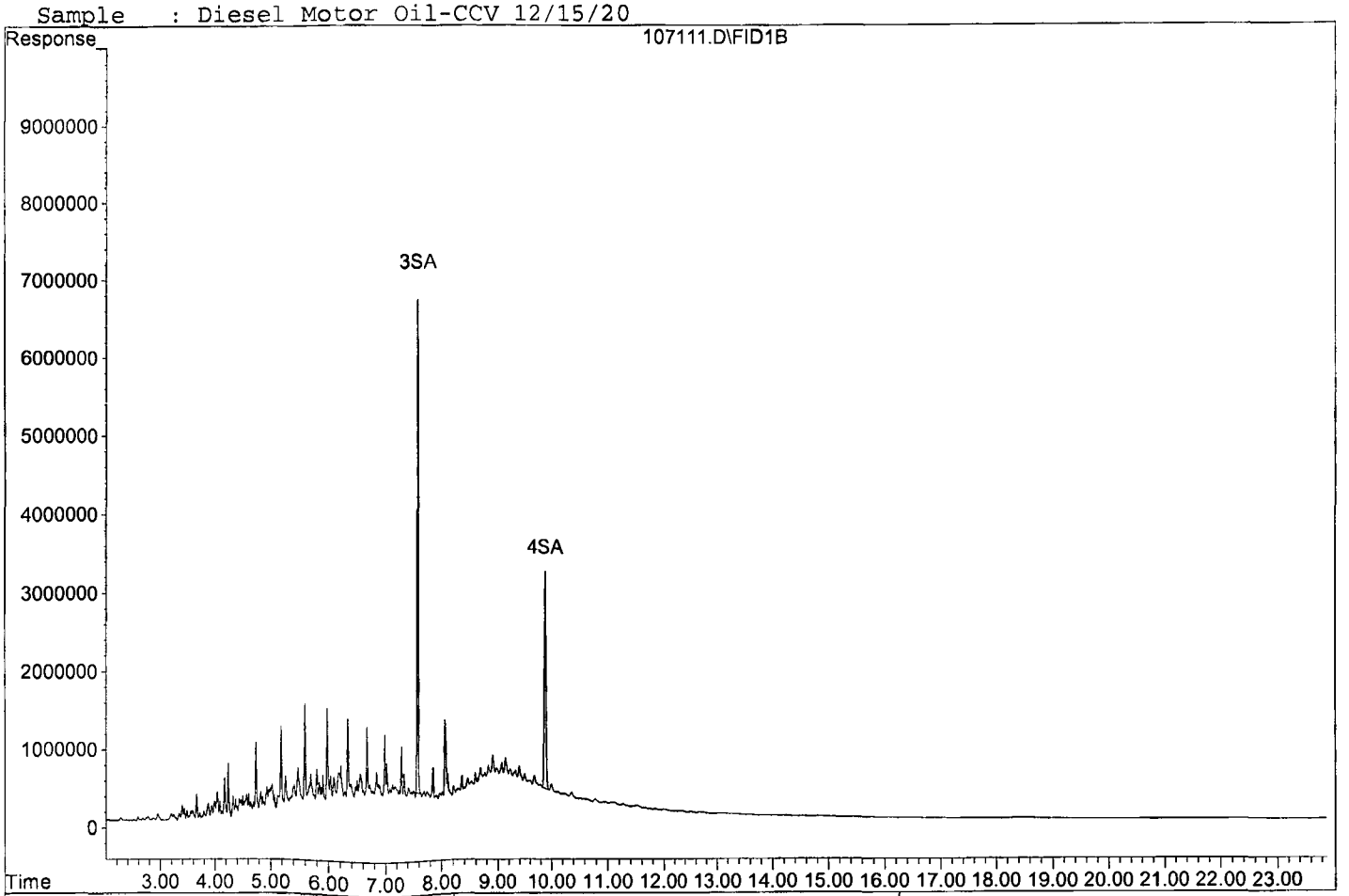
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

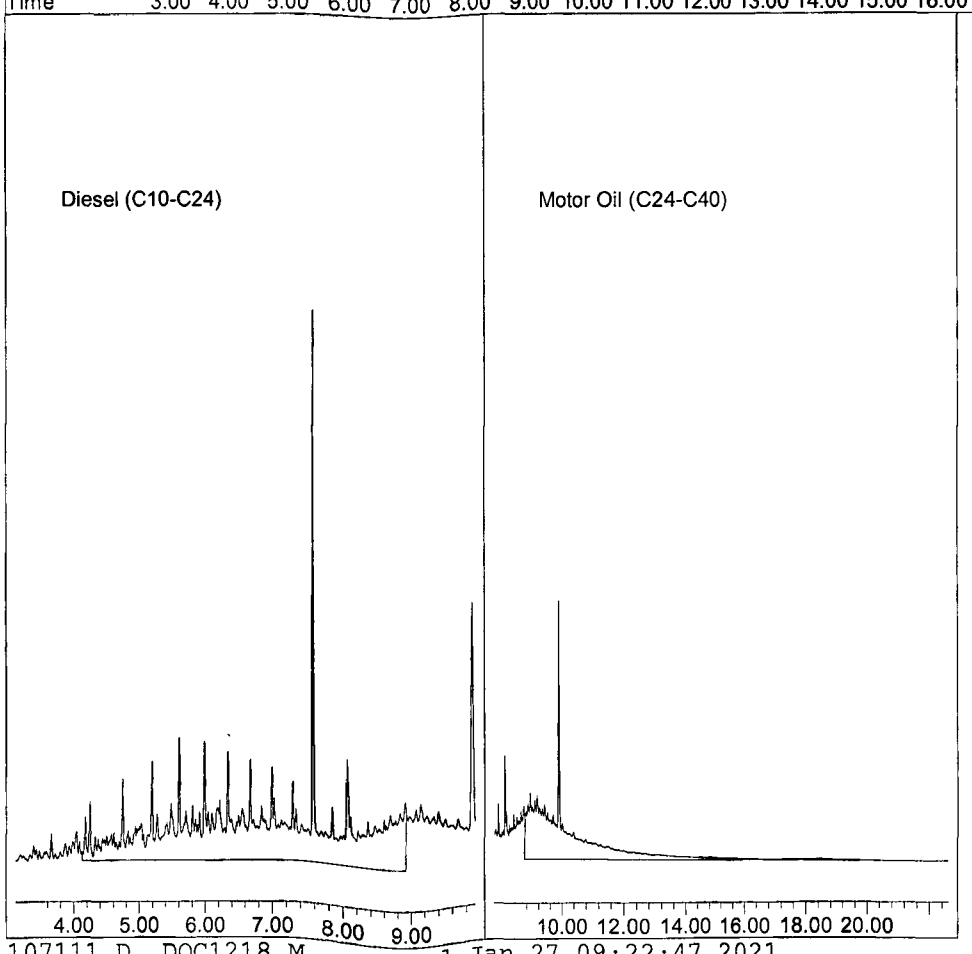
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	74541219	12.618 ppb
Surrogate Spike 30.000		Recovery =	42.06%
4) SA Octacosane(S)	9.88	58542440	12.889 ppb
Surrogate Spike 30.000		Recovery =	42.96%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1207959049	246.324 ppb
2) HBTM Motor Oil (C24-C40)	15.16	776047378	265.908 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107111.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107119.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2522880	2.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1603320	7.2	HBTML	9.9
3	SA	Ortho-Terphenyl(S)	2953720	3185830	7.9	SA	
4	SA	Octacosane(S)	2271000	2460990	8.4	SA	
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		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107119.D Vial: 19
Acq On : 1-26-21 13:35:30 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 26 15:28 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

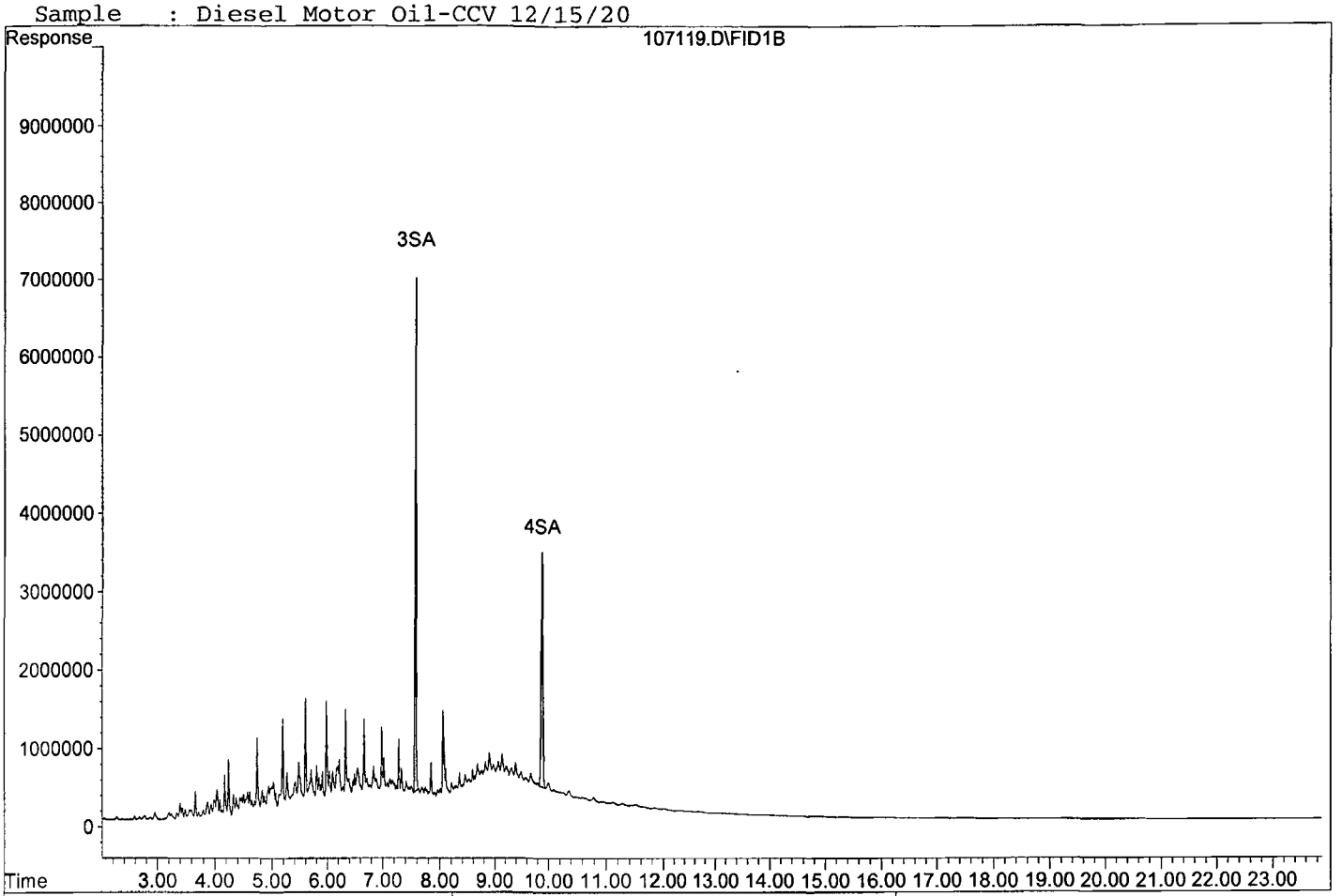
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

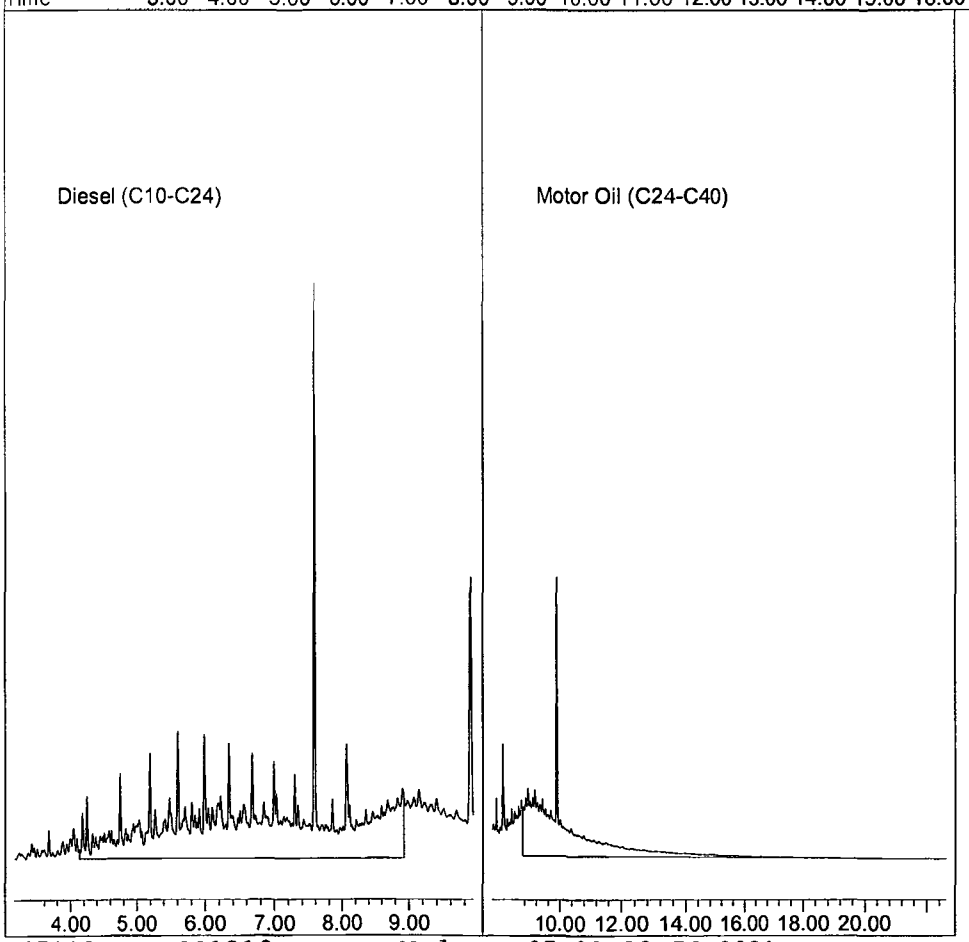
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	79645867	13.482 ppb
Surrogate Spike 30.000		Recovery =	44.94%
4) SA Octacosane(S)	9.88	61524758	13.546 ppb
Surrogate Spike 30.000		Recovery =	45.15%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1261442444	257.230 ppb
2) HBTM Motor Oil (C24-C40)	15.16	801661802	274.807 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107119.D
Sample : Diesel Motor Oil-CCV 12/15/20





ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107114.D Vial: 14
Acq On : 1-26-21 11:15:25 Operator:
Sample : BA25434W25 5/1010 Inst : Apollo
Misc : water Multiplr: 4.95
IntFile : events.e
Quant Time: Jan 26 13:23 2021 Quant Results File: DOC1218.RES

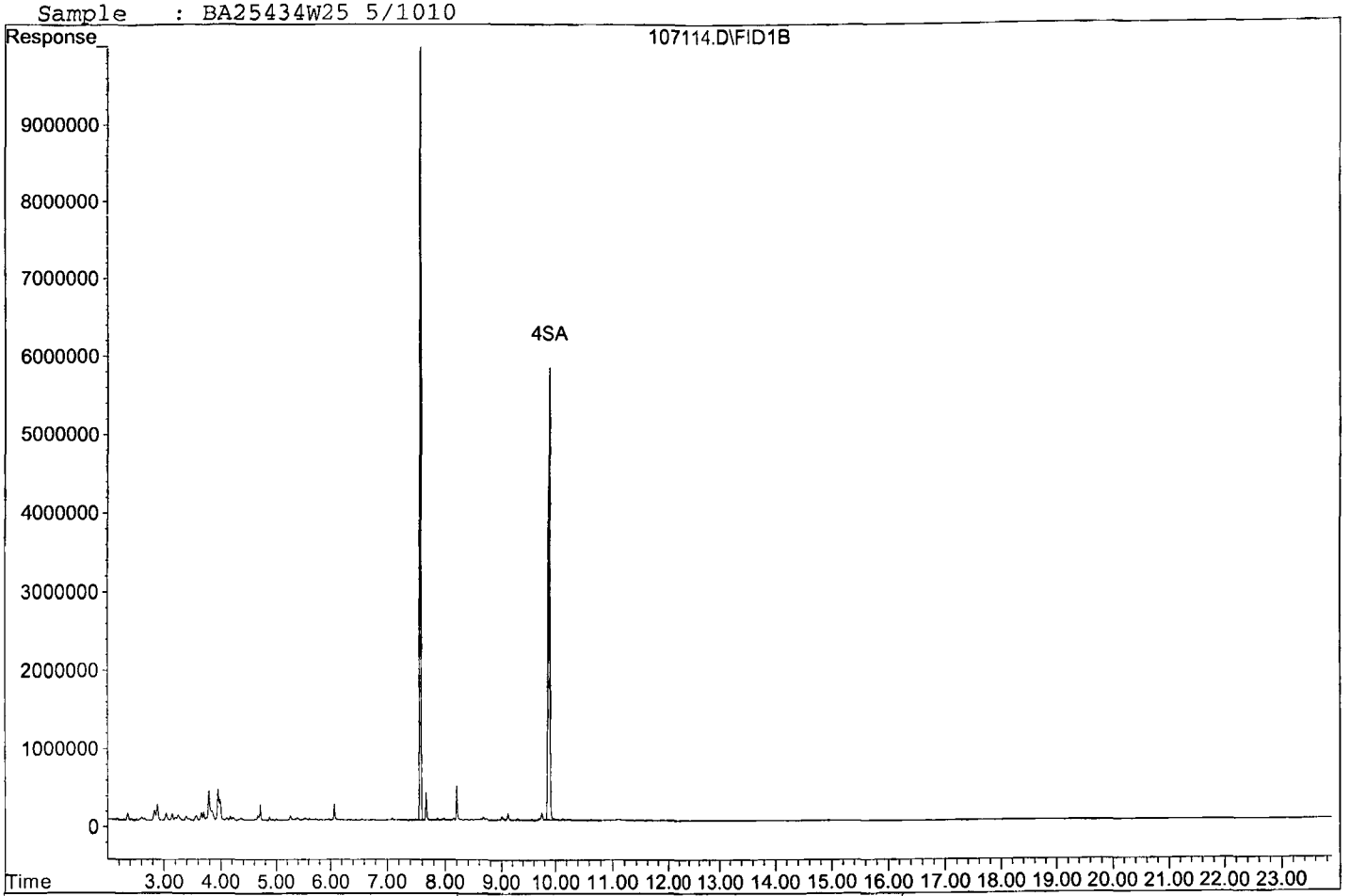
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

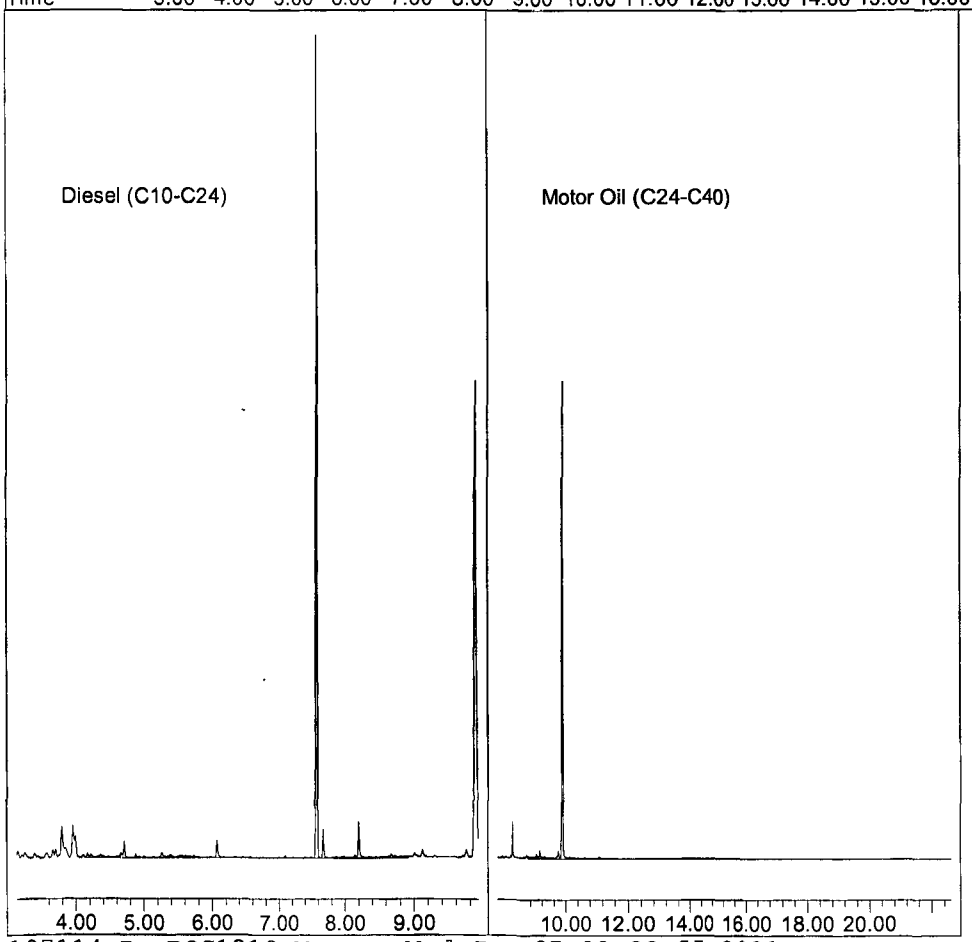
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	137077226	114.872 ppb
Surrogate Spike 148.515		Recovery =	77.35%
4) SA Octacosane(S)	9.89	121176538	132.075 ppb
Surrogate Spike 148.515		Recovery =	88.93%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	41557877	41.952 ppb
2) HBTM Motor Oil (C24-C40)	15.16	39700545	49.872 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107114.D
Sample : BA25434W25 5/1010





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107112.D Vial: 12
Acq On : 1-26-21 10:19:24 Operator:
Sample : 210122A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:22 2021 Quant Results File: DOC1218.RES

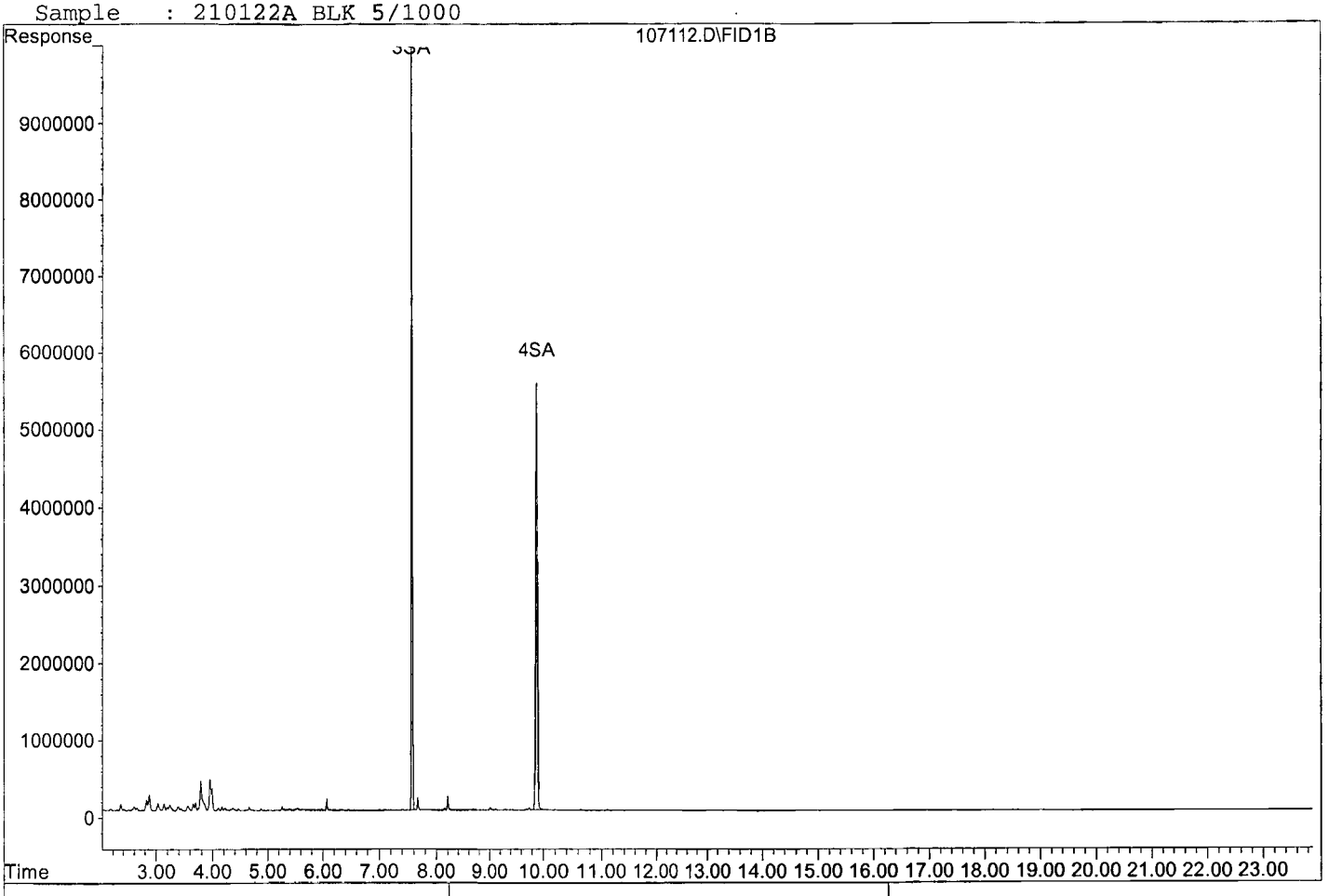
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

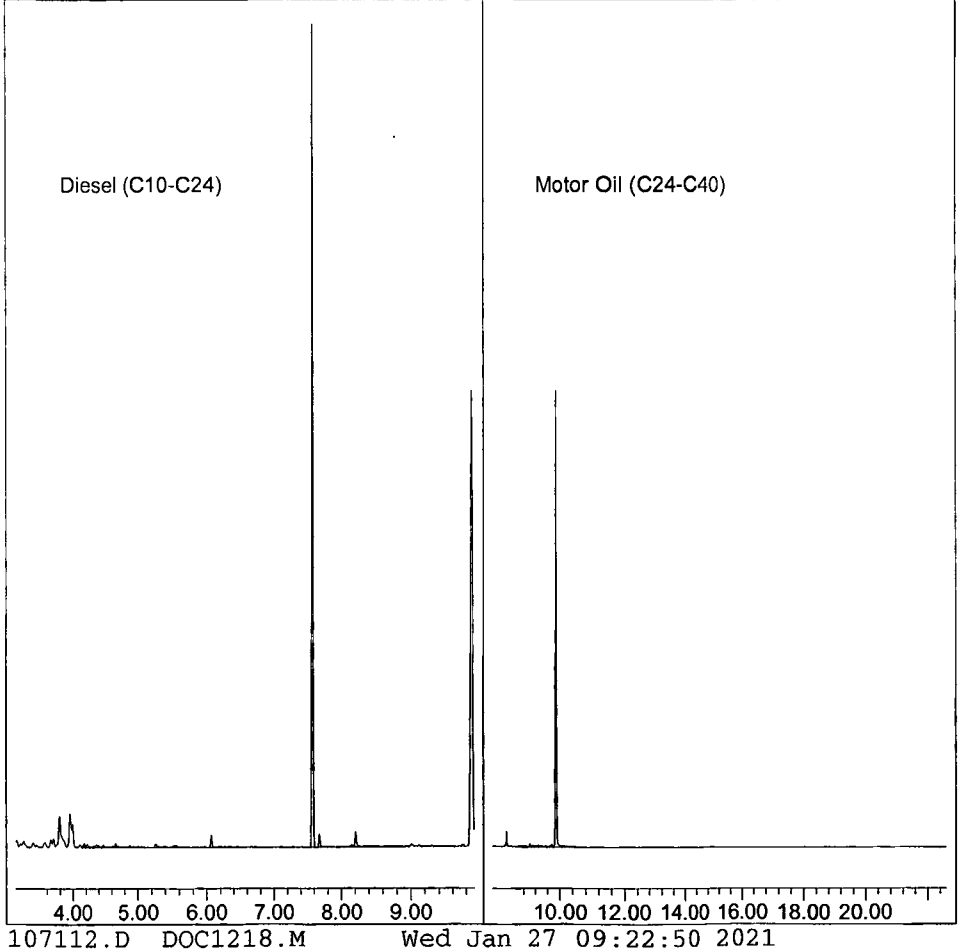
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	131200030	111.046 ppb
Surrogate Spike 150.000		Recovery =	74.03%
4) SA Octacosane(S)	9.88	118928389	130.921 ppb
Surrogate Spike 150.000		Recovery =	87.28%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	26352074	26.868 ppb
2) HBTM Motor Oil (C24-C40)	15.16	27606510	29.361 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107112.D
Sample : 210122A BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107113.D Vial: 13
Acq On : 1-26-21 10:47:24 Operator:
Sample : 210122A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:23 2021 Quant Results File: DOC1218.RES

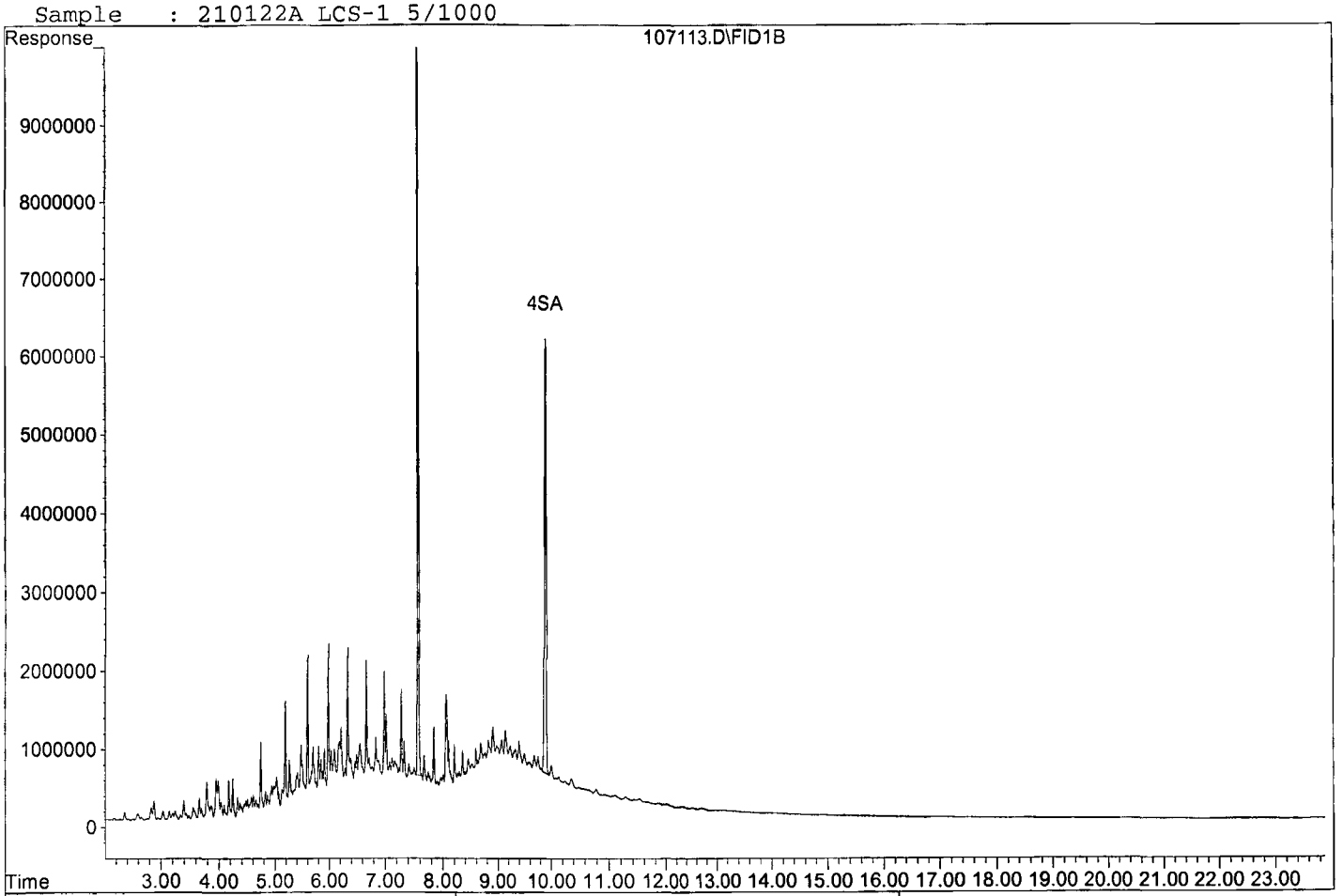
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

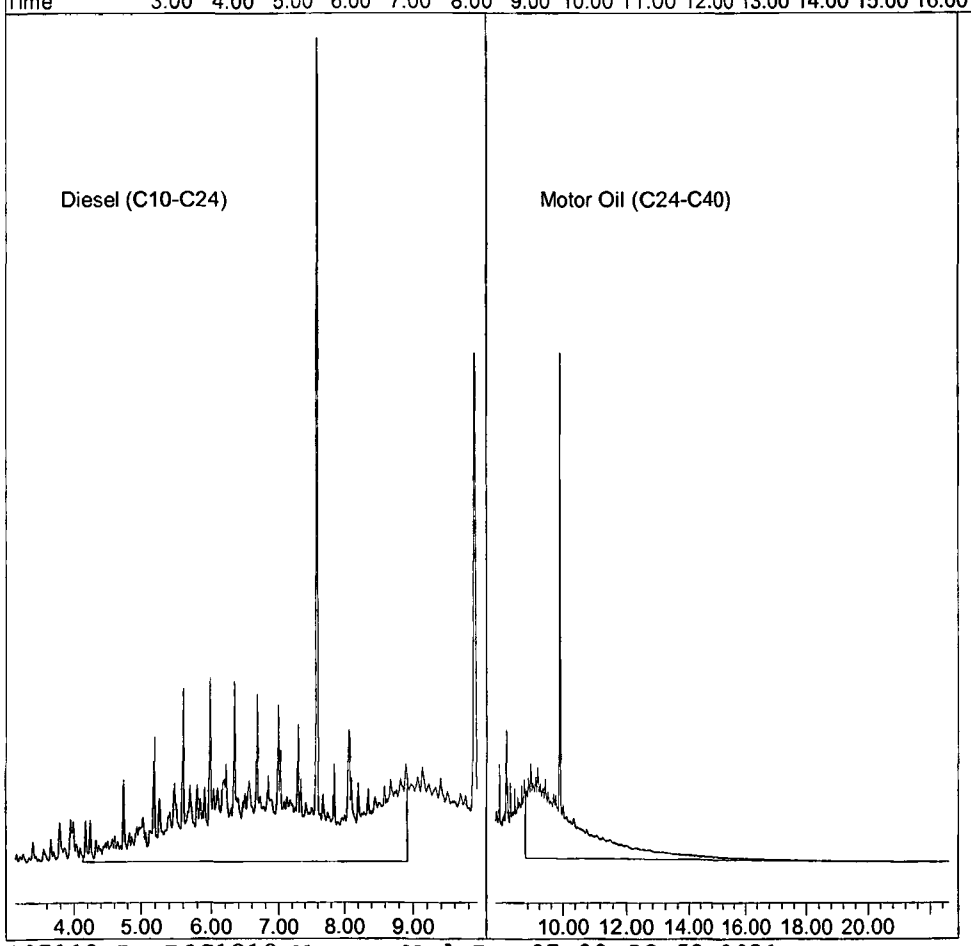
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	149887610	126.863 ppb
Surrogate Spike 150.000		Recovery =	84.58%
4) SA Octacosane(S)	9.89	118201428	130.120 ppb
Surrogate Spike 150.000		Recovery =	86.75%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1751334011	1785.637 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1113164484	1915.171 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107113.D
Sample : 210122A LCS-1 5/1000





107113.D DOC1218.M Wed Jan 27 09:22:53 2021

THC Surrogate

Prepared: 01/11/21

Expires: 01/11/22

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15902-50967**	**12/14/21**	**10/31/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 11/23/20

Expires: 11/23/21

Prepared By (Initials): LS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	A0156490-50988,50989,50993	11/23/21	02/28/27	3.84 mL	7.68 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	A0157842-50995,50996,50997	11/23/21	03/31/27	3.84 mL			25,000

Diesel / Motor Oil CCV

Prepared: 12/15/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50319 CL15440-50421	**08/05/21**	**06/30/25**	1250uL	10mL	MC	250

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	08/11/21	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0155668-50515,50518,50519**	08/11/21	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	08/05/21	**06/30/25**	1666uL			100

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210122A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 11-23-20 11-23-21		Surrogate ID 1	THC Surrogate 1-11-21 1-11-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:45	Water Bath Temp 1 °C	40/38.5 °C
pH2			Water Bath Temp 2 °C	38/41.1
pH3			Water Bath Temp 3 °C	37/36.5 °C

Spiked By: KY **Date** 01/22/21 **Witnessed By:** CFM **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP25 E-WB1				
2	210122A LCS-1		0.080	1	0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP26 E-WB2				
3	BA25434	BA25434W25			0.250	1	1010	5	2	01/22/21 12:48	94808
						equip	E-HP47 E-WB3				
4	BA25526 MS-1	BA25526W29	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP48 E-WB2				
5	BA25526 MSD-1	BA25526W24	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP49 E-WB3				
6	BA25526	BA25526W28			0.250	1	1010	5	2	01/22/21 12:48	94825
						equip	E-HP50 E-WB1				
7	BA25529	BA25529W17			0.250	1	1050	5	2	01/22/21 12:48	94826
						equip	E-HP51 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/26/21
Time	7:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	DL,KY
Concentration	YL,SB

Modified	01/26/21 8:19:48 AM

Reviewed By: SS **Date** 01/27/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	11	107111.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 9:51:23
10	12	107112.D	5	210122A BLK 5/1000	water	1-26-21 10:19:24
11	13	107113.D	5	210122A LCS-1 5/1000	water	1-26-21 10:47:24
12	14	107114.D	4.9505	BA25434W25 5/1010	water	1-26-21 11:15:25
13	19	107119.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 13:35:30

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

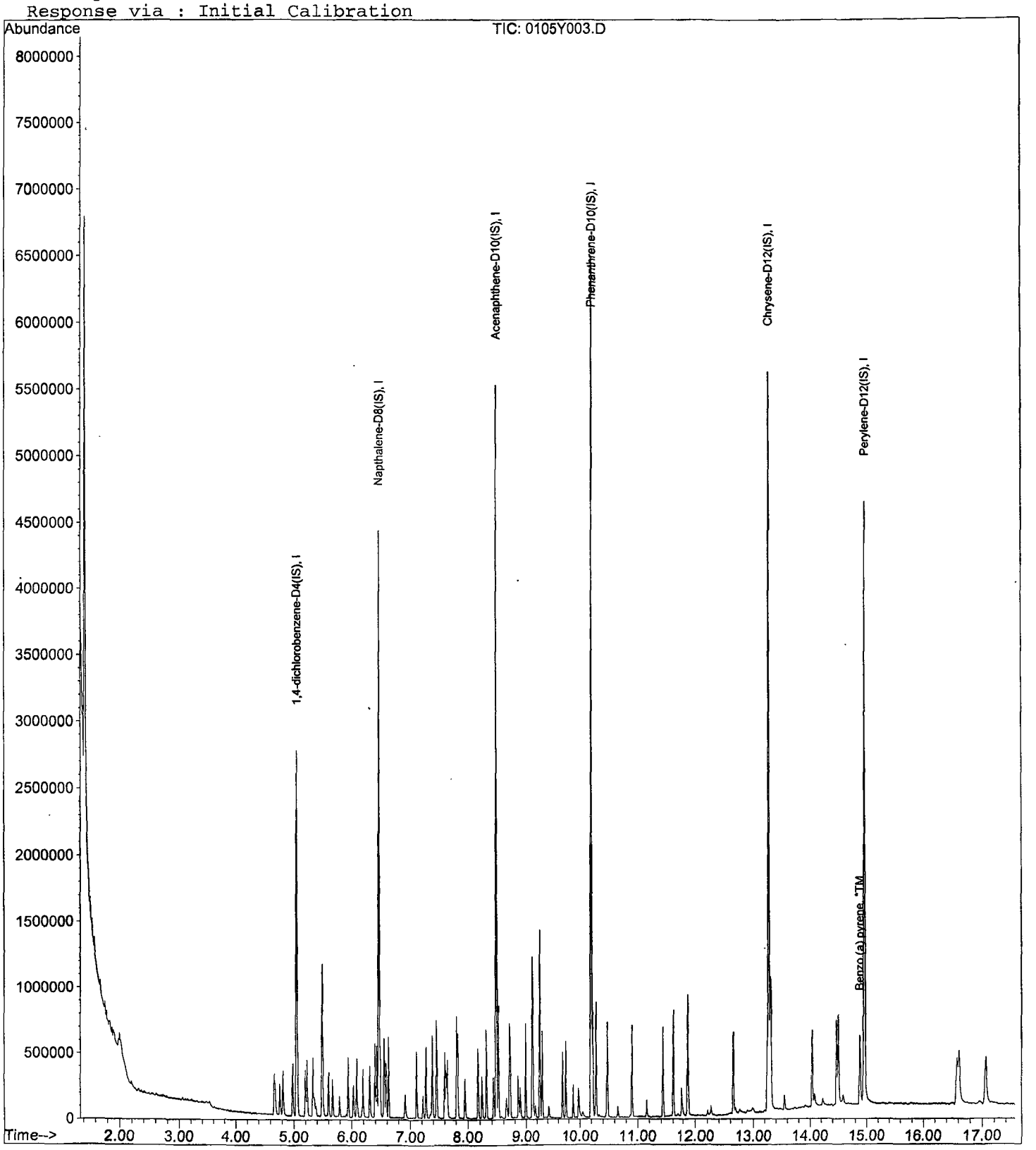
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037	# 1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

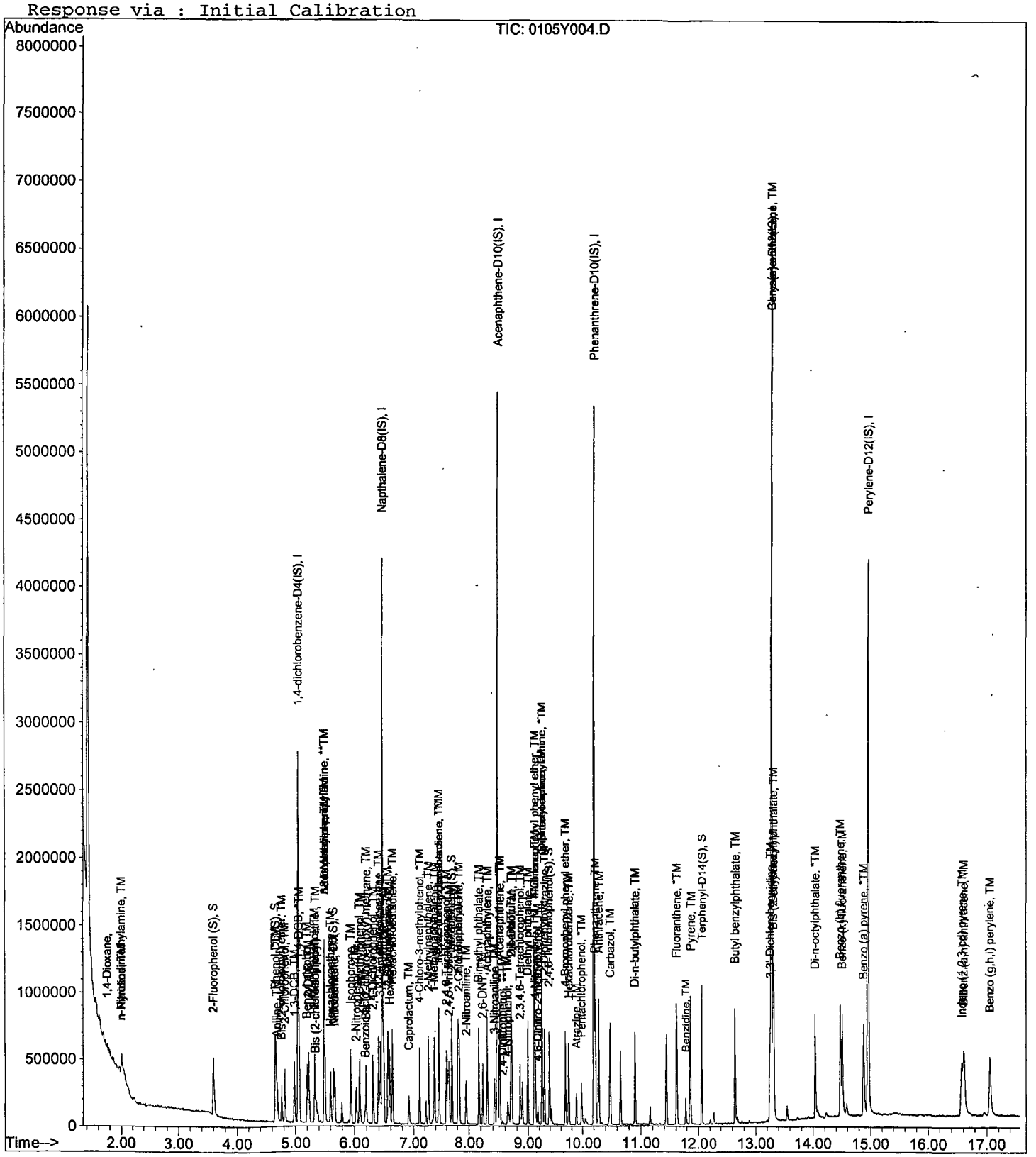
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411 ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%		
6) Phenol-D6 (S)	4.66	99	492275	20.31208 ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%		
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036 ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%		
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840 ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%		
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194 ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%		
82) Terphenyl-D14(S)	12.07	244	719678	9.80130 ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713		91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743 ppb		80
4) Pyridine	2.00	79	159922	10.10773 ppb		95
7) Phenol	4.67	94	284850	9.94852 ppb		94
8) Aniline	4.69	93	215040	10.28244 ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288 ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397 ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890 ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580 ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889 ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913 ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047 ppb		96
17) Acetophenone	5.49	105	301622	9.93857 ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173 ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080 ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192 ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780 ppb		91
24) Isophorone	5.95	82	433948	9.99676 ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219 ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036 ppb		99
27) Benzoic acid	6.19	105	96995	12.03014 ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695 ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390 ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216 ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228 ppb		98
32) Naphthalene	6.49	128	626299	10.16177 ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495 ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280 ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411 ppb		94
37) Caprolactum	6.93	55	62259	10.01107 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

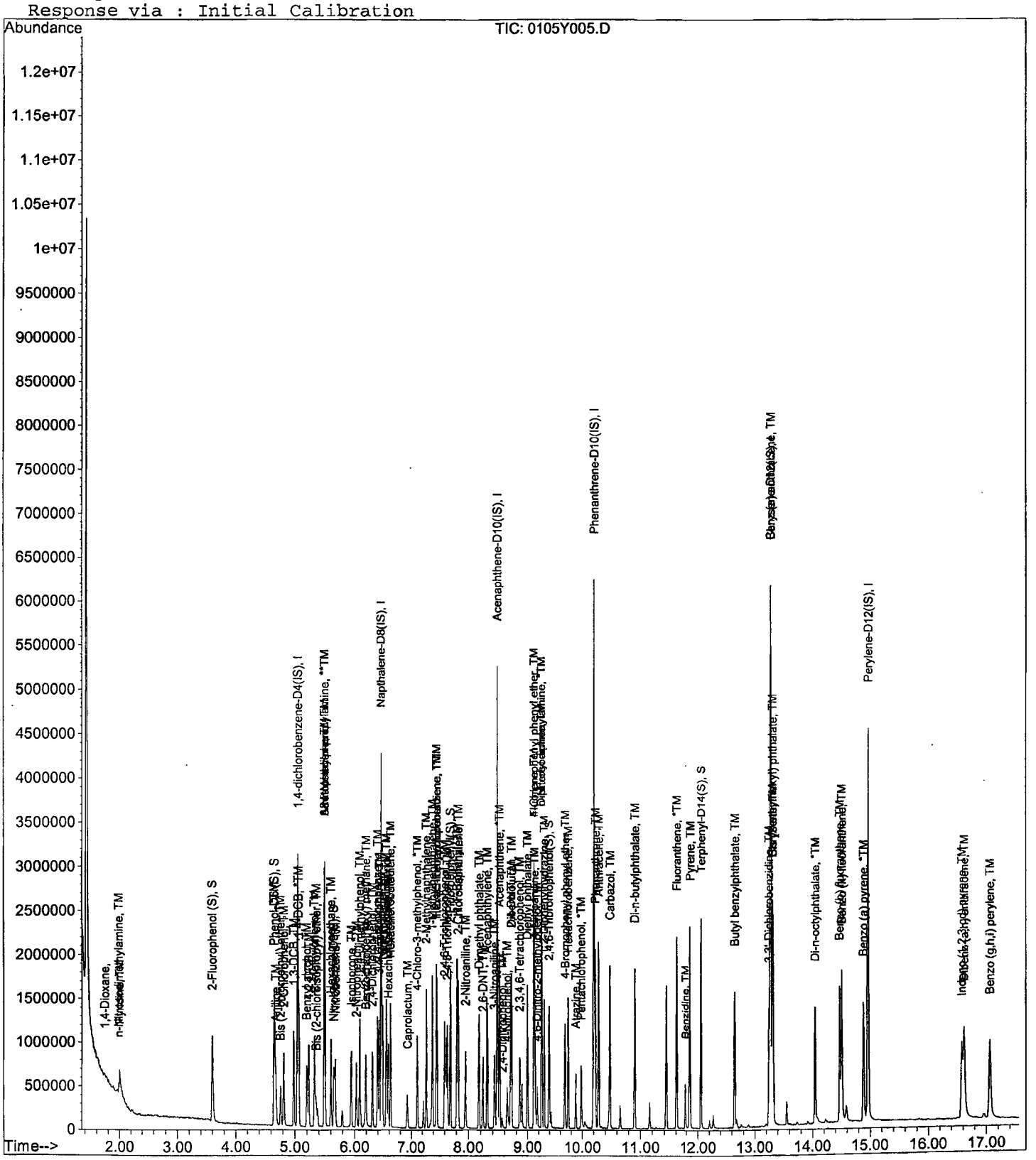
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery	= 19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery	= 19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

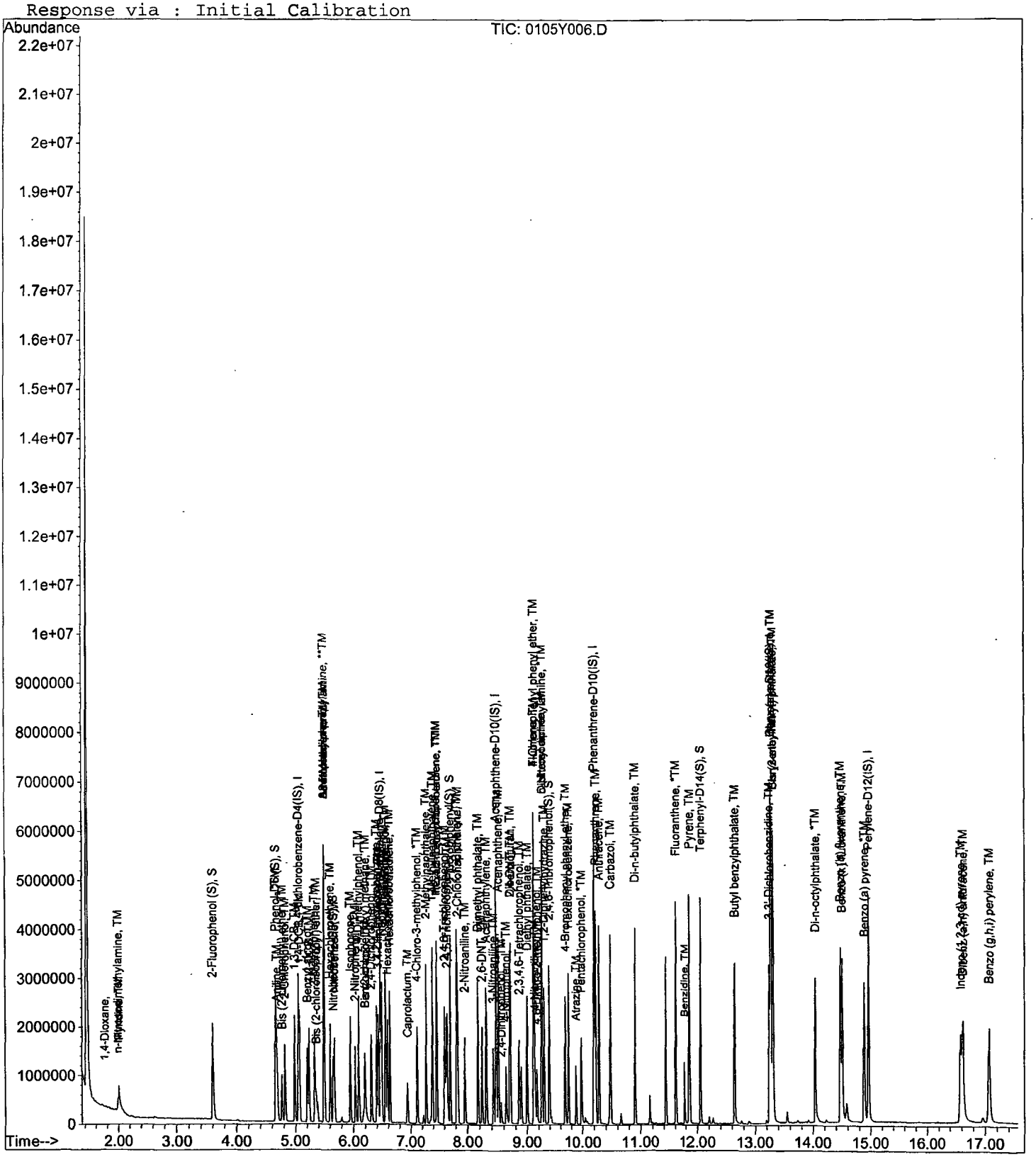
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967 ppb	0.00
Spiked Amount 200.000			Recovery =	40.315%	
6) Phenol-D6 (S)	4.67	99	2073058	80.33420 ppb	0.00
Spiked Amount 200.000			Recovery =	40.167%	
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156 ppb	0.00
Spiked Amount 100.000			Recovery =	39.782%	
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219 ppb	0.00
Spiked Amount 100.000			Recovery =	39.422%	
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158 ppb	0.00
Spiked Amount 200.000			Recovery =	39.906%	
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922 ppb	0.00
Spiked Amount 100.000			Recovery =	40.089%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747	54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850 ppb	93
4) Pyridine	1.99	79	710577	42.17927 ppb	100
7) Phenol	4.68	94	1249780	40.99379 ppb	96
8) Aniline	4.69	93	852672	38.29141 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360 ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826 ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439 ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338 ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093 ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316 ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142 ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767 ppb	98
17) Acetophenone	5.49	105	1298420	40.18079 ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972 ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083 ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355 ppb	99
24) Isophorone	5.95	82	1929574	40.57653 ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009 ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262 ppb	95
27) Benzoic acid	6.22	105	694050	39.13552 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698 ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676 ppb	97
32) Naphthalene	6.49	128	2700428	39.99560 ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681 ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710 ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202 ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790 ppb	96
37) Caprolactum	6.96	55	275073	40.37550 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

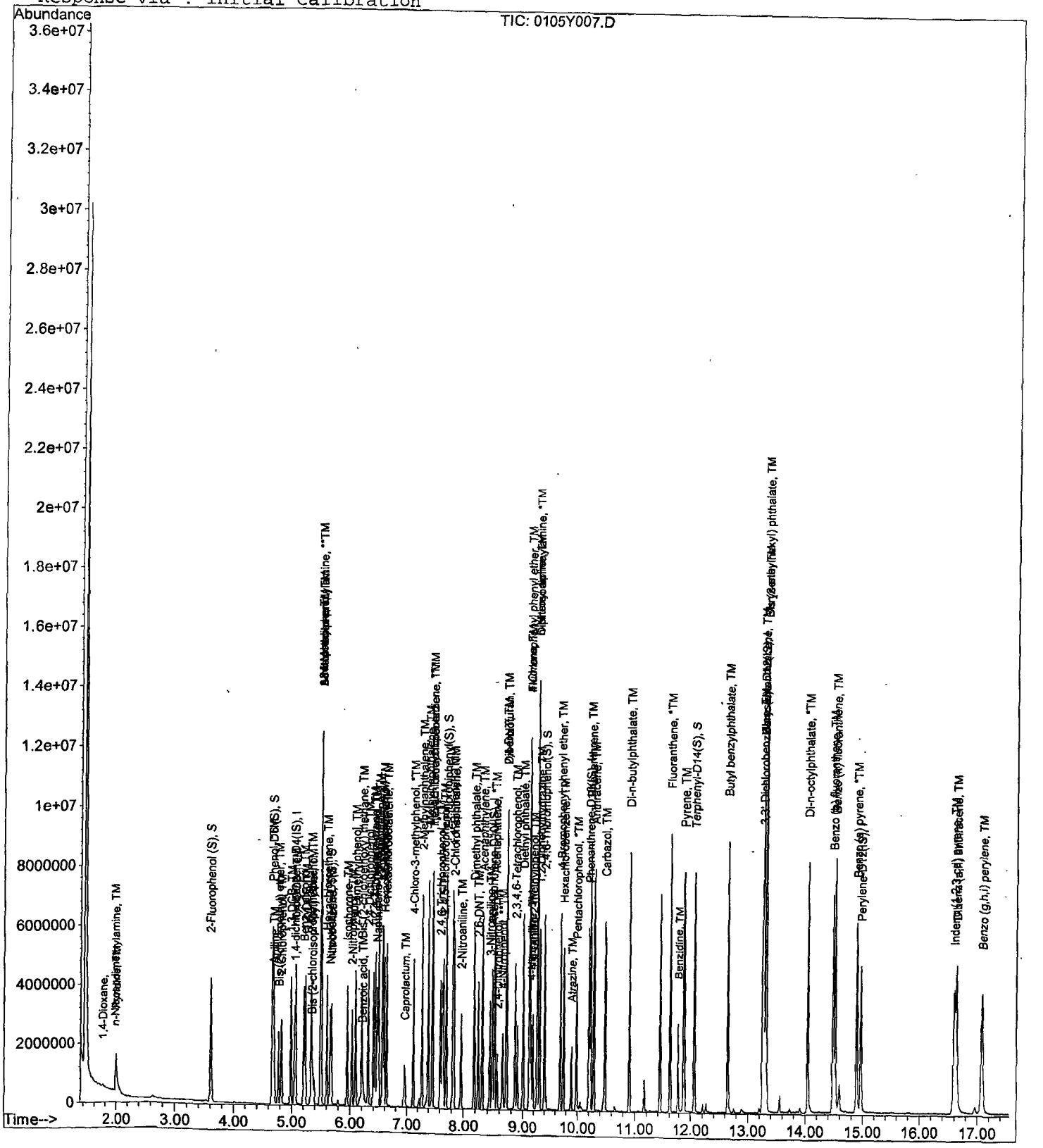
Data File : M:\YODA\DATA\Y210105\0105Y007.D
Acq On : 5 Jan 21 13:06
Sample : 40ug/mL 8270 01/05/21
Misc :

Vial: 7
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:10 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501 ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827 ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678 ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033 ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973 ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691 ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290 ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584 ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983 ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022 ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174 ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741 ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990 ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046 ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381 ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245 ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395 ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389 ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069 ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506 ppb	100
62)	Fluorene	9.11	166	2868571	49.36863 ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128 ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785 ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785 ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089 ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978 ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367 ppb	100
72)	Atrazine	9.89	200	418889	26.25754 ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356 ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640 ppb	100
75)	Anthracene	10.29	178	4512131	51.82540 ppb	100
76)	Carbazol	10.49	167	4021683	52.16528 ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661 ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724 ppb	100
80)	Benzidine	11.78	184	1334887	54.03870 ppb	100
81)	Pyrene	11.88	202	5487771	52.99187 ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593 ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347 ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761 ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599 ppb	100
87)	Chrysene	13.31	228	5235913	52.38491 ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495 ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338 ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646 ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782 ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159 ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960 ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590 ppb	100

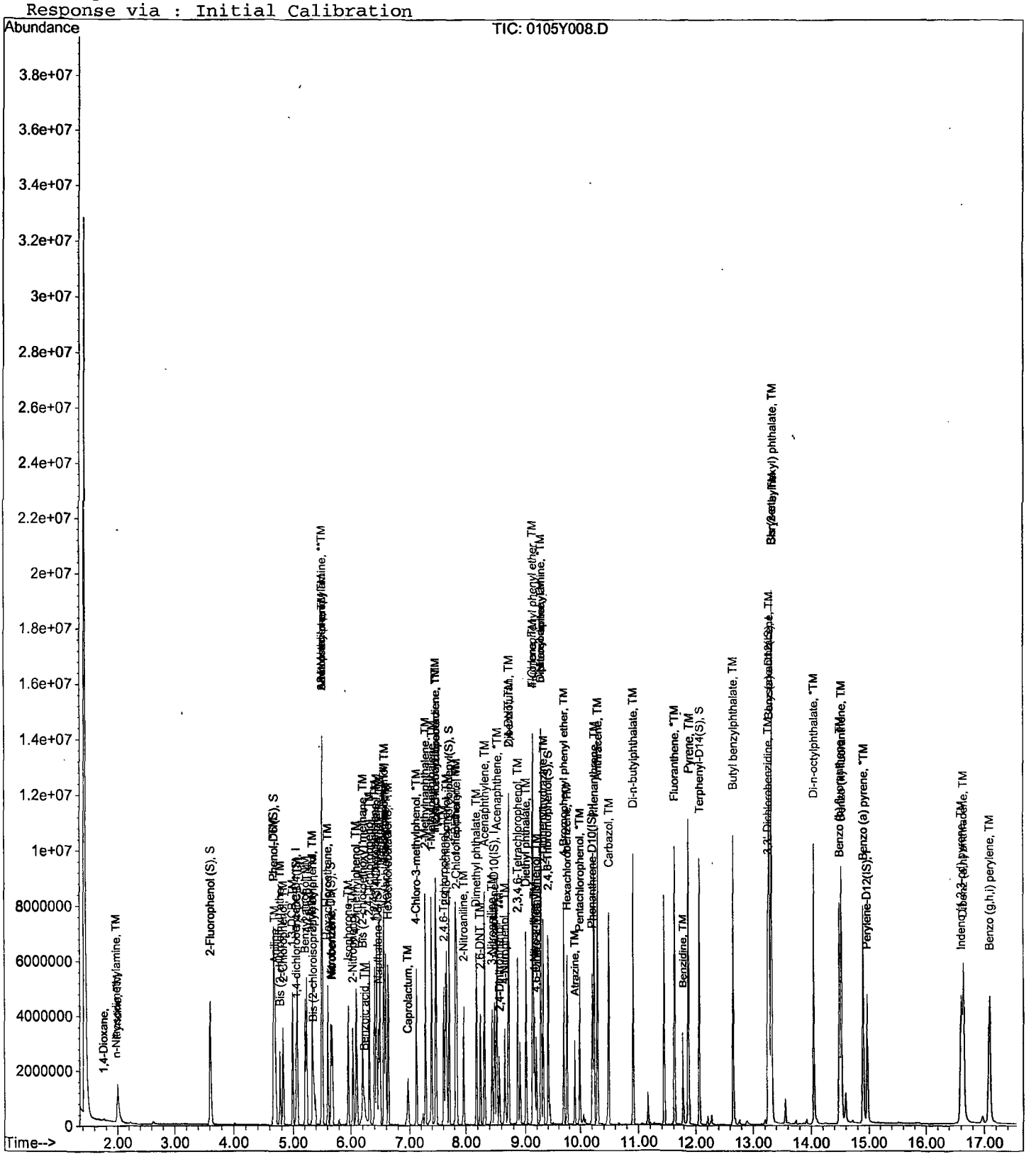
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382	ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%				
6) Phenol-D6 (S)	4.67	99	2714982	119.91052	ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%				
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297	ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%				
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223	ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868	ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%				
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361	ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380			95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310	ppb		92
4) Pyridine	1.99	79	901311	60.97669	ppb		97
7) Phenol	4.68	94	1606167	60.04495	ppb		96
8) Aniline	4.69	93	1200640	61.45164	ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145	ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776	ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182	ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978	ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043	ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365	ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897	ppb		96
17) Acetophenone	5.50	105	1702308	60.04028	ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638	ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425	ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967	ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951	ppb		89
24) Isophorone	5.96	82	2504820	59.55758	ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859	ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930	ppb		99
27) Benzoic acid	6.23	105	965560	57.47534	ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945	ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990	ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563	ppb		100
32) Naphthalene	6.49	128	3532998	59.16571	ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729	ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808	ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347	ppb		98
37) Caprolactum	6.98	55	354905	58.90188	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb	97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb	99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb	98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb	95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb	99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb	98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb	91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb	97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb	92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb	100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb	99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb	99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb	93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb	93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb	98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb	97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb	98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb	95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb	98
62)	Fluorene	9.11	166	3228662	60.22935	ppb	100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb	95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb #	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb	96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb	96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb	96
72)	Atrazine	9.89	200	456257	29.70998	ppb	98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb	99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb	99
75)	Anthracene	10.29	178	5016441	59.85415	ppb	100
76)	Carbazol	10.49	167	4476193	60.31428	ppb	98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb	99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb #	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb	99
81)	Pyrene	11.88	202	6087066	61.51608	ppb	100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb	99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb	99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb	98
87)	Chrysene	13.32	228	5981915	62.63562	ppb	99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb	99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb #	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb	99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb	100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb	98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb	97

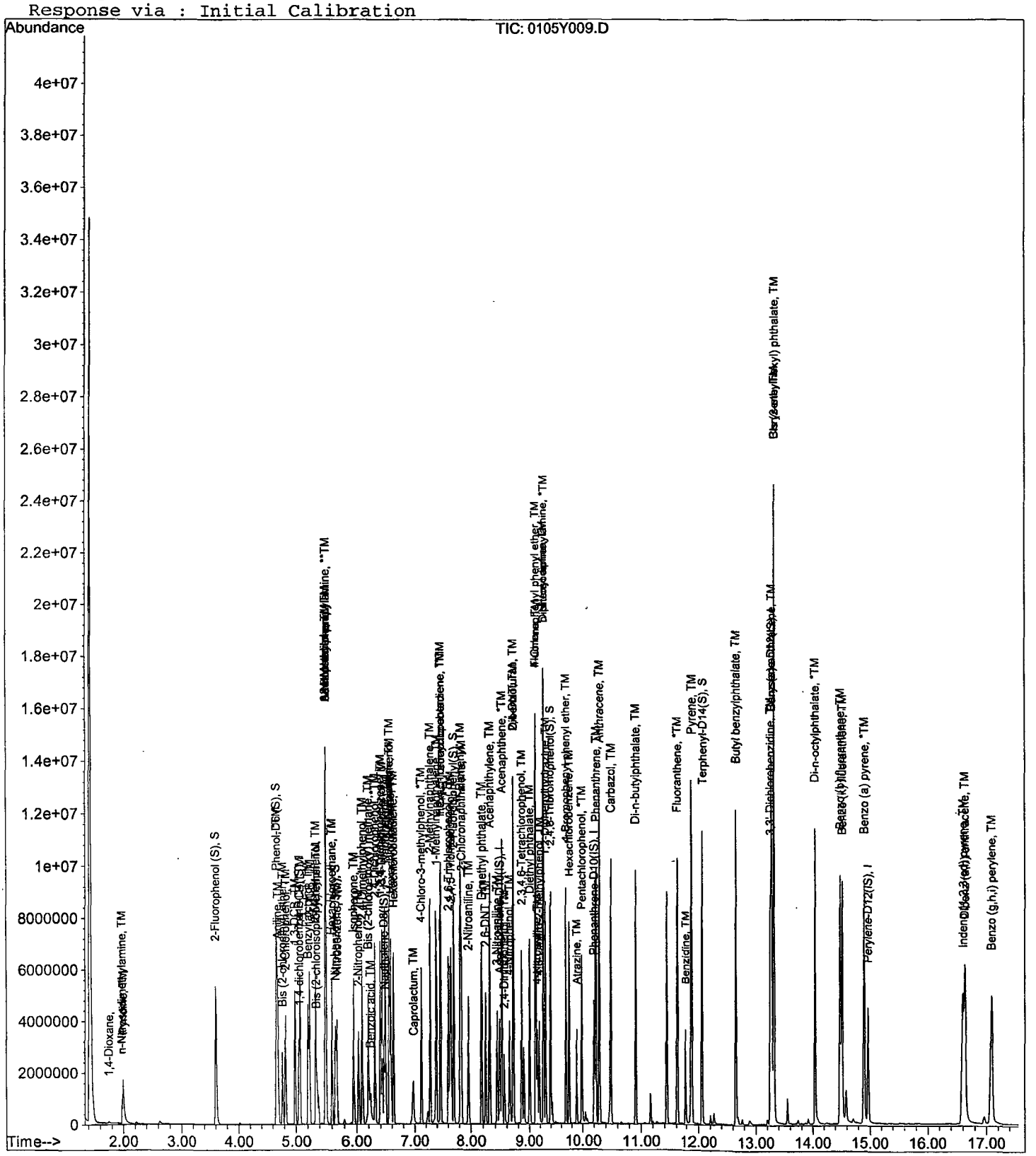
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

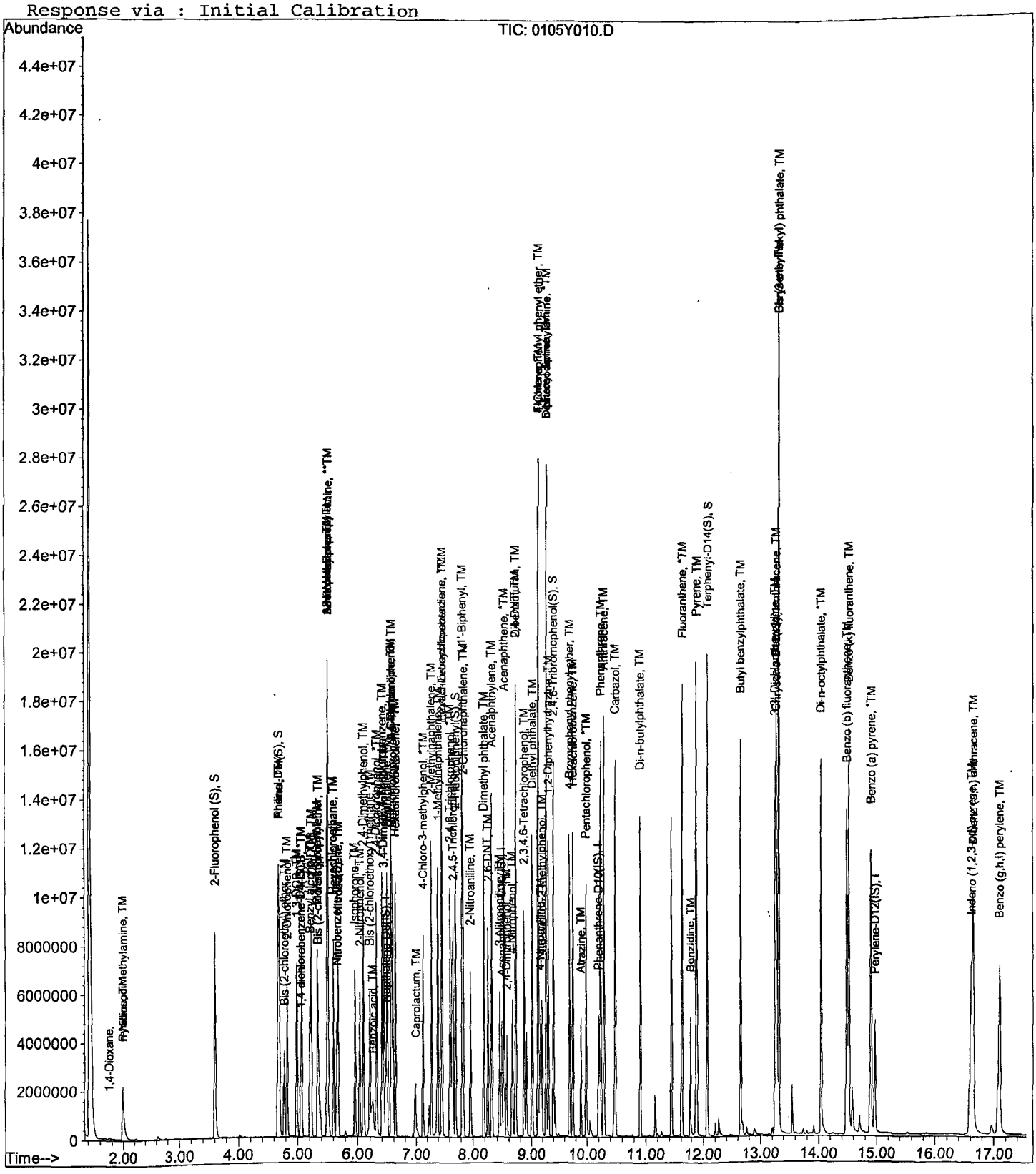
Data File : M:\YODA\DATA\Y210105\0105Y010.D
Acq On : 5 Jan 21 14:21
Sample : 80ug/mL 8270 01/05/21
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:10 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%			
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%			
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%			
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%			
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%			
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

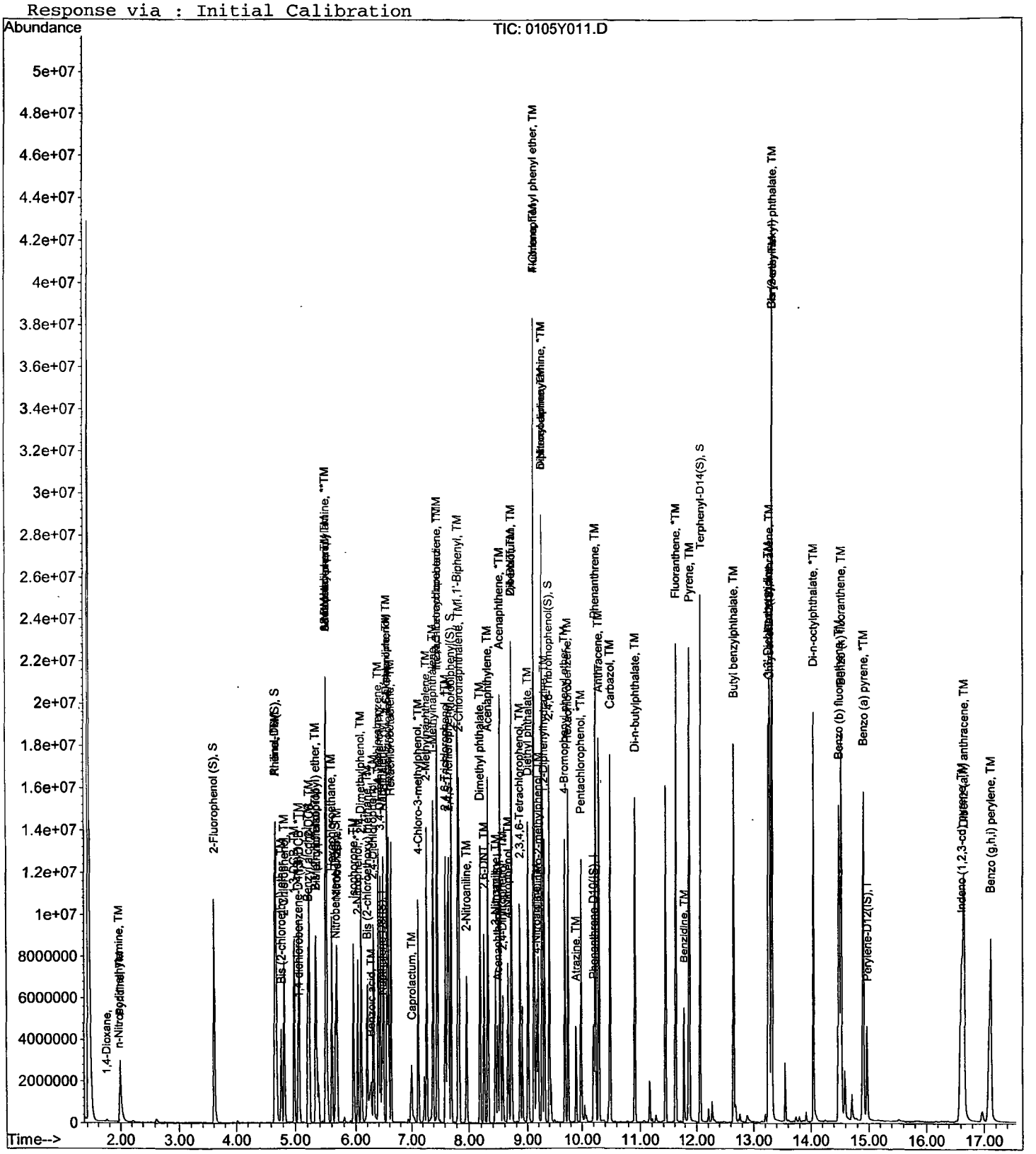
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 5 Jan 21 15:11
Matrix: Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
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118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery	= 6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery	= 0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery	= 0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery	= 0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

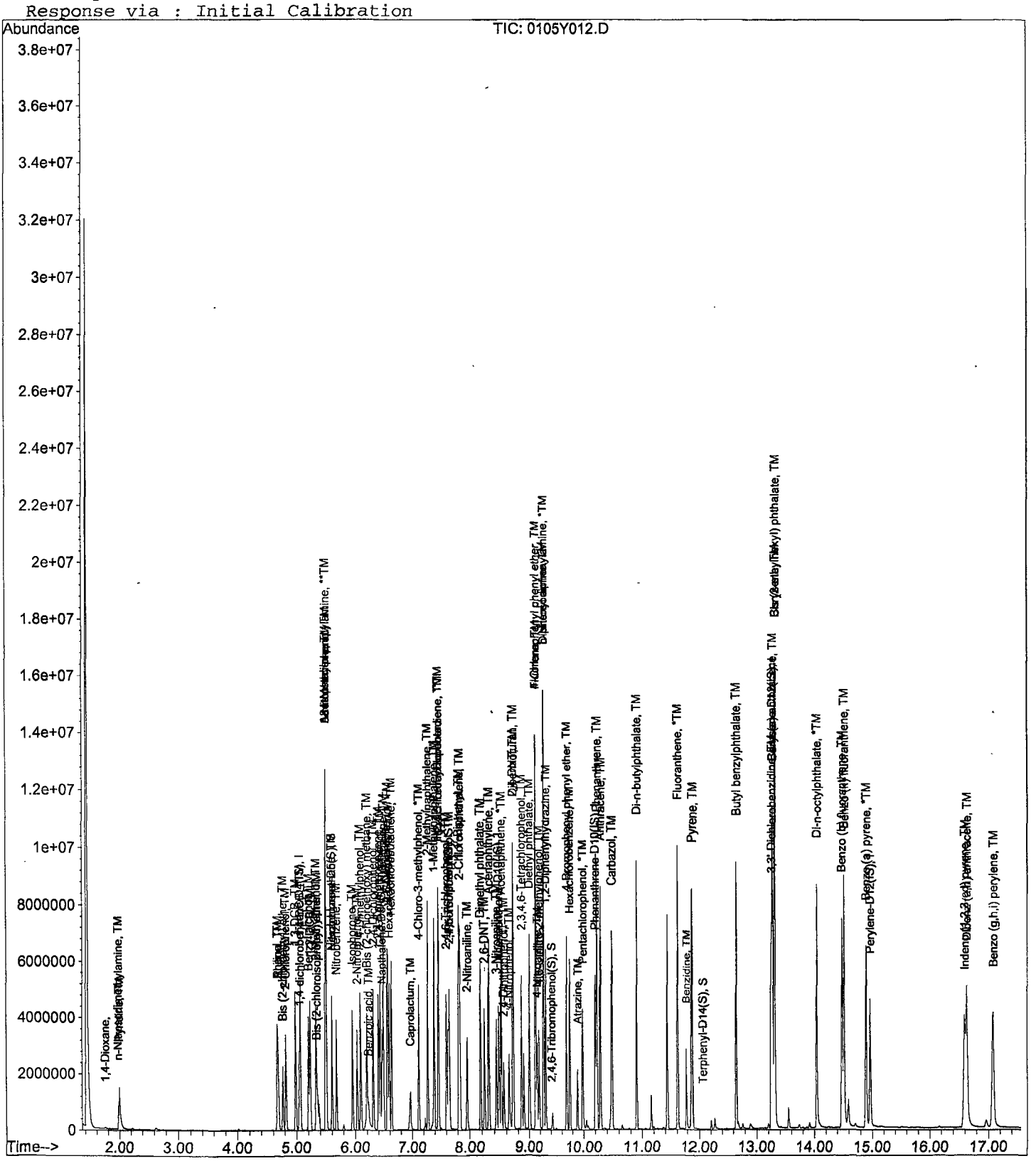
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2598	19			
3	TM	n-Nitrosodimethylamine	0.6105	0.5837	4.4	TM		
4	TM	Pyridine	1.336	1.259	5.8	TM		
5	S	2-Fluorophenol (S)	1.601	1.677	4.8	S		
6	S	Phenol-D6 (S)	2.046	2.237	9.3	S		
7	*TM	Phenol	2.418	2.670	10	*TM		
8	TM	Aniline	1.766	1.993	13	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.149	11	TM		
10	TM	2-Chlorophenol	1.829	1.960	7.2	TM		
11	TM	1,3-DCB	2.107	2.040	3.2	TM		
12	*TM	1,4-DCB	2.122	2.109	0.59	*TM		
13	TM	Benzyl alcohol	1.073	1.152	7.4	TM		
14	TM	1,2-DCB	1.992	2.001	0.46	TM		
15	TM	2-Methylphenol	1.401	1.499	7.0	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.158	19	TM		
17	TM	Acetophenone	2.563	2.781	8.5	TM		
18	TM	3&4-Methylphenol	1.892	2.095	11	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.706	14	**TM		
20	TM	Hexachloroethane	0.8684	0.8855	2.0	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5861	0.64	S		
23	TM	Nitrobenzene	0.6068	0.6171	1.7	TM		
24	TM	Isophorone	0.9746	0.9928	1.9	TM		
25	*TM	2-Nitrophenol	0.2562	0.2568	0.24	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4226	0.25	TM		
27	TML	Benzoic acid	0.3484	0.2255	35	TML	35	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5655	2.6	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4319	1.5	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4999	2.2	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6757	0.08	TM		
32	TM	Naphthalene	1.384	1.404	1.5	TM		
33	TM	4-Chloroaniline	0.5189	0.5719	10	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4310	1.0	TM		
35	TM	Hexachloropropene	0.4576	0.4222	7.7	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3466	4.1	*TM		
37	TM	Caprolactum	0.1396	0.1471	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4653	1.5	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9342	2.7	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9728	3.7	TM		
		Average			6.4			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5506	3.3	**TML	10	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8850	1.7	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5525	1.4	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.6007	1.8	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.852	1.2	S		
47	TM	1,1'-Biphenyl	2.012	2.117	5.2	TM		
48	TM	2-Chloronaphthalene	1.564	1.605	2.6	TM		
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM		
50	TM	Dimethyl phthalate	1.914	1.958	2.3	TM		
51	TM	2,6-DNT	0.4186	0.4214	0.66	TM		
52	TM	Acenaphthylene	2.382	2.404	0.89	TM		
53	TM	3-Nitroaniline	0.3908	0.4159	6.4	TM		
54	*TM	Acenaphthene	1.584	1.592	0.51	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.1597	28	**TML	22	*NT
56	**TM	4-Nitrophenol	0.3856	0.3629	5.9	**TM		
57	TM	Dibenzofuran	2.358	2.370	0.51	TM		
58	TM	2,4-DNT	0.6015	0.6003	0.20	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4473	7.7	TM		
60	TM	Diethyl phthalate	1.956	1.951	0.26	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.107	2.5	TM		
62	TM	Fluorene	1.985	2.067	4.1	TM		
63	TM	4-Nitroaniline	0.4251	0.4277	0.60	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2791	7.4	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1743	9.1	TM		
67	TM	Diphenyl amine	0.7523	0.7707	2.4	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7707	2.4	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9878	3.6	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3037	0.33	TM		
71	TM	Hexachlorobenzene	0.3129	0.3069	1.9	TM		
72	TM	Atrazine	0.2649	0.2618	1.1	TM		
73	*TM	Pentachlorophenol	0.2072	0.1985	4.2	*TM		
74	TM	Phenanthrene	1.386	1.423	2.7	TM		
75	TM	Anthracene	1.445	1.503	4.0	TM		
76	TM	Carbazol	1.280	1.304	1.9	TM		
77	TM	Di-n-butylphthalate	1.570	1.676	6.8	TM		
78	*TM	Fluoranthene	1.617	1.650	2.0	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.4028	1.3	TM		
		Average			3.6			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.767	6.0	TM	
82	S	Terphenyl-D14(S)	1.201	1.214	1.1	S	
83	TM	Butyl benzylphthalate	0.7149	0.7759	8.5	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6314	14	TM	
85	TM	Benz (a) anthracene	1.709	1.764	3.2	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.158	13	TM	
87	TM	Chrysene	1.610	1.788	11	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.792	14	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.522	0.39	TM	
92	*TM	Benzo (a) pyrene	1.467	1.547	5.5	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.673	1.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.456	1.6	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	533085	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2194335	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1385446	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2786023	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2774517	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.98	264	2634209	40.00000 ppb	0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2235576	104.80889 ppb	0.00
Spiked Amount 200.000				Recovery = 52.405%	
6) Phenol-D6 (S)	4.67	99	2981420	109.31539 ppb	0.00
Spiked Amount 200.000				Recovery = 54.658%	
22) Nitrobenzene-D5(S)	5.66	82	1607512	49.68240 ppb	0.00
Spiked Amount 100.000				Recovery = 49.682%	
46) 2-Fluorobiphenyl(S)	7.71	172	3207255	49.38865 ppb	0.00
Spiked Amount 100.000				Recovery = 49.389%	
64) 2,4,6-Tribromophenol(S)	9.40	330	966848	92.57566 ppb	0.00
Spiked Amount 200.000				Recovery = 46.288%	
82) Terphenyl-D14(S)	12.07	244	4209281	50.54570 ppb	0.00
Spiked Amount 100.000				Recovery = 50.546%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17311	4.06981	90
3) n-Nitrosodimethylamine	1.97	42	388923	47.80079 ppb	79
4) Pyridine	1.99	79	838890	47.11531 ppb	94
7) Phenol	4.68	94	1779060	55.21337 ppb	87
8) Aniline	4.69	93	1328128	56.43239 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	765351	55.65806 ppb	93
10) 2-Chlorophenol	4.82	128	1306315	53.58587 ppb	99
11) 1,3-DCB	4.98	146	1359350	48.42079 ppb	99
12) 1,4-DCB	5.07	146	1405572	49.70368 ppb	99
13) Benzyl alcohol	5.21	108	767506	53.69409 ppb	92
14) 1,2-DCB	5.23	146	1333446	50.23123 ppb	98
15) 2-Methylphenol	5.33	107	998997	53.52128 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	771502	59.36942 ppb	94
17) Acetophenone	5.50	105	1853156	54.26057 ppb	94
18) 3&4-Methylphenol	5.51	107	2791494	110.72488 ppb	96
19) n-Nitrosodi-n-propylamine	5.51	70	1136514	57.03056 ppb	95
20) Hexachloroethane	5.60	117	590038	50.98156 ppb	94
23) Nitrobenzene	5.69	77	1692605	50.84746 ppb	93
24) Isophorone	5.96	82	2723136	50.93502 ppb	95
25) 2-Nitrophenol	6.04	139	704319	50.12154 ppb	82
26) 2,4-Dimethylphenol	6.10	122	1159148	49.87449 ppb	98
27) Benzoic acid	6.24	105	618468	32.41632 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1551188	51.30726 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1184651	49.24379 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1371127	48.89941 ppb	99
31) 3,4-Dimethylphenol	6.43	107	1853438	49.96122 ppb	97
32) Naphthalene	6.49	128	3850481	50.72574 ppb	99
33) 4-Chloroaniline	6.56	127	1568589	55.10632 ppb	94
34) 2,6-Dichlorophenol	6.57	162	1182088	50.52388 ppb	94
35) Hexachloropropene	6.59	213	1158129	46.13169 ppb	100
36) Hexachlorobutadiene	6.63	225	950821	47.92895 ppb	99
37) Caprolactum	6.99	55	403612	52.69480 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1276387	50.74603	ppb		95
39)	2-Methylnaphthalene	7.27	142	2562457	51.35373	ppb		99
40)	1-Methylnaphthalene	7.40	142	2668197	51.86615	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	953472	44.91138	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1532645	49.15476	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	956785	49.31755	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1040231	49.07954	ppb		96
47)	1,1'-Biphenyl	7.82	154	3666052	52.61084	ppb		99
48)	2-Chloronaphthalene	7.84	162	2780318	51.30960	ppb		97
49)	2-Nitroaniline	7.96	65	902779	52.35141	ppb		83
50)	Dimethyl phthalate	8.18	163	3390923	51.16044	ppb		98
51)	2,6-DNT	8.25	165	729759	50.33121	ppb	#	65
52)	Acenaphthylene	8.31	152	4162756	50.44542	ppb		99
53)	3-Nitroaniline	8.44	138	720246	53.20650	ppb		93
54)	Acenaphthene	8.52	154	2757519	50.25560	ppb		99
55)	2,4-Dinitrophenol	8.57	184	276555	38.91683	ppb		90
56)	4-Nitrophenol	8.66	65	628519	47.05521	ppb		90
57)	Dibenzofuran	8.72	168	4103530	50.25269	ppb		92
58)	2,4-DNT	8.71	165	1039556	49.90133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	774684	46.15909	ppb		93
60)	Diethyl phthalate	9.01	149	3378496	49.87084	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1917773	51.24493	ppb		96
62)	Fluorene	9.12	166	3578838	52.06515	ppb		100
63)	4-Nitroaniline	9.16	138	740629	50.29902	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	606978	45.42608	ppb		97
67)	Diphenyl amine	9.27	169	5368202	102.44406	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5368202	102.44406	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3439953	51.78803	ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	1057645	49.83439	ppb	#	84
71)	Hexachlorobenzene	9.75	284	1068870	49.05094	ppb	#	82
72)	Atrazine	9.89	200	455920	24.71478	ppb		94
73)	Pentachlorophenol	9.99	266	691369	47.89642	ppb		98
74)	Phenanthrene	10.24	178	4955670	51.34732	ppb		100
75)	Anthracene	10.29	178	5232849	51.97712	ppb		99
76)	Carbazol	10.49	167	4540661	50.93377	ppb		96
77)	Di-n-butylphthalate	10.91	149	5838223	53.38008	ppb		98
78)	Fluoranthene	11.62	202	5745675	51.01696	ppb		99
80)	Benzidine	11.79	184	1396925	50.62677	ppb		98
81)	Pyrene	11.88	202	6127980	52.97578	ppb		99
83)	Butyl benzylphthalate	12.66	149	2690764	54.26218	ppb		85
84)	3,3'-Dichlorobenzidine	13.26	252	2189624	56.94079	ppb		100
85)	Benz (a) anthracene	13.28	228	6119145	51.61903	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4015164	56.28307	ppb	#	95
87)	Chrysene	13.32	228	6202258	55.55336	ppb		100
88)	Di-n-octylphthalate	14.05	149	6344526	54.24926	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5902044	57.03771	ppb		99
91)	Benzo (k) fluoranthene	14.53	252	5012644	50.19678	ppb		98
92)	Benzo (a) pyrene	14.91	252	5095190	52.74778	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5509560	49.49468	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	4794965	49.21957	ppb		98
95)	Benzo (g,h,i) perylene	17.12	276	4620679	48.55093	ppb		99

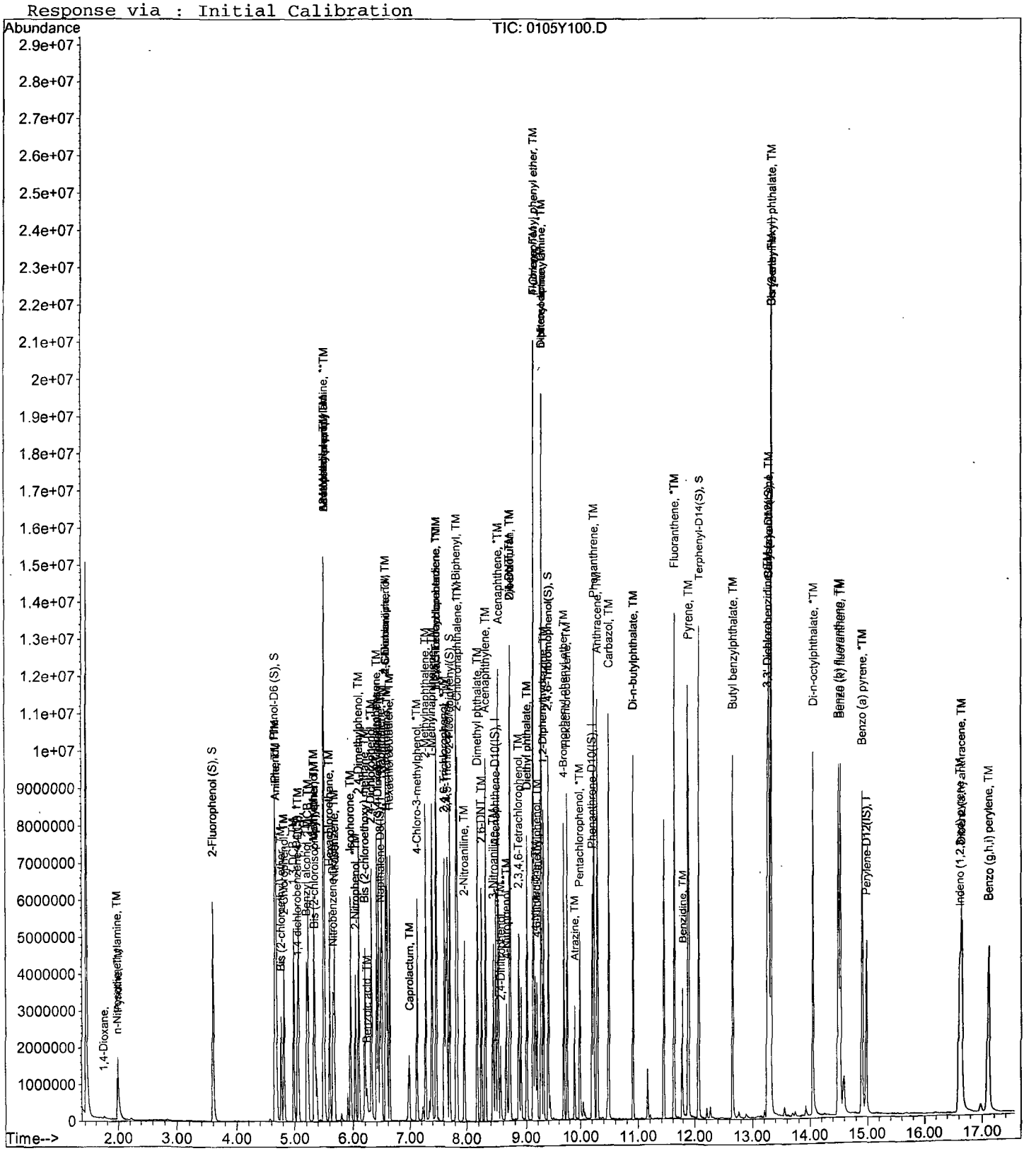
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2514	21		
3	TM	n-Nitrosodimethylamine	0.6105	0.5552	9.1	TM	
4	TM	Pyridine	1.336	1.243	7.0	TM	
5	S	2-Fluorophenol (S)	1.601	1.666	4.1	S	
6	S	Phenol-D6 (S)	2.046	2.251	10.0	S	
7	*TM	Phenol	2.418	2.713	12	*TM	
8	TM	Aniline	1.766	1.951	11	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.138	10	TM	
10	TM	2-Chlorophenol	1.829	1.954	6.8	TM	
11	TM	1,3-DCB	2.107	2.042	3.0	TM	
12	*TM	1,4-DCB	2.122	2.091	1.5	*TM	
13	TM	Benzyl alcohol	1.073	1.165	8.6	TM	
14	TM	1,2-DCB	1.992	2.018	1.3	TM	
15	TM	2-Methylphenol	1.401	1.509	7.7	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.120	15	TM	
17	TM	Acetophenone	2.563	2.815	9.8	TM	
18	TM	3&4-Methylphenol	1.892	2.088	10	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.731	16	**TM	
20	TM	Hexachloroethane	0.8684	0.8775	1.0	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6014	2.0	S	
23	TM	Nitrobenzene	0.6068	0.6264	3.2	TM	
24	TM	Isophorone	0.9746	0.9984	2.4	TM	
25	*TM	2-Nitrophenol	0.2562	0.2652	3.5	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4293	1.3	TM	
27	TML	Benzoic acid	0.3484	0.4027	16	TML	4.7
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5612	1.8	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4359	0.61	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4927	3.6	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6712	0.74	TM	
32	TM	Naphthalene	1.384	1.377	0.52	TM	
33	TM	4-Chloroaniline	0.5189	0.5718	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4359	2.2	TM	
35	TM	Hexachloropropene	0.4576	0.4382	4.2	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3495	3.4	*TM	
37	TM	Caprolactum	0.1396	0.1451	3.9	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4678	2.0	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9299	2.2	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9558	1.9	TM	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: 0 Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5836	2.5	**TML	5.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8826	2.0	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5658	1.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6136	0.27	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.837	2.0	S	
47	TM	1,1'-Biphenyl	2.012	2.076	3.2	TM	
48	TM	2-Chloronaphthalene	1.564	1.609	2.8	TM	
49	TM	2-Nitroaniline	0.4979	0.5253	5.5	TM	
50	TM	Dimethyl phthalate	1.914	1.967	2.8	TM	
51	TM	2,6-DNT	0.4186	0.4369	4.4	TM	
52	TM	Acenaphthylene	2.382	2.425	1.8	TM	
53	TM	3-Nitroaniline	0.3908	0.4202	7.5	TM	
54	*TM	Acenaphthene	1.584	1.599	0.96	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2223	0.38	**TML	2.5
56	**TM	4-Nitrophenol	0.3856	0.3999	3.7	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6278	4.4	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4700	3.0	TM	
60	TM	Diethyl phthalate	1.956	1.964	0.40	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.118	3.4	TM	
62	TM	Fluorene	1.985	2.070	4.3	TM	
63	TM	4-Nitroaniline	0.4251	0.4492	5.7	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2900	3.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1889	1.5	TM	
67	TM	Diphenyl amine	0.7523	0.7904	5.1	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7904	5.1	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9735	2.1	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2950	3.2	TM	
71	TM	Hexachlorobenzene	0.3129	0.3078	1.6	TM	
72	TM	Atrazine	0.2649	0.2565	3.2	TM	
73	*TM	Pentachlorophenol	0.2072	0.1967	5.1	*TM	
74	TM	Phenanthrene	1.386	1.418	2.3	TM	
75	TM	Anthracene	1.445	1.453	0.50	TM	
76	TM	Carbazol	1.280	1.292	0.92	TM	
77	TM	Di-n-butylphthalate	1.570	1.640	4.4	TM	
78	*TM	Fluoranthene	1.617	1.625	0.50	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.4060	2.1	TM	
		Average			2.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.760	5.5	TM	
82	S	Terphenyl-D14(S)	1.201	1.243	3.5	S	
83	TM	Butyl benzylphthalate	0.7149	0.7718	8.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6257	13	TM	
85	TM	Benz (a) anthracene	1.709	1.758	2.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.181	15	TM	
87	TM	Chrysene	1.610	1.742	8.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.838	9.0	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.642	4.5	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.666	9.9	TM	
92	*TM	Benzo (a) pyrene	1.467	1.555	6.0	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.670	1.2	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.478	0.06	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	565875	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2319312	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1466187	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3029918	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2959437	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2751561	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2357181	104.10644 ppb	0.00
Spiked Amount 200.000			Recovery	= 52.053%	
6) Phenol-D6 (S)	4.67	99	3184619	109.99973 ppb	0.00
Spiked Amount 200.000			Recovery	= 55.000%	
22) Nitrobenzene-D5(S)	5.66	82	1743523	50.98234 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.982%	
46) 2-Fluorobiphenyl(S)	7.71	172	3367365	48.99865 ppb	0.00
Spiked Amount 100.000			Recovery	= 48.999%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1062904	96.16852 ppb	0.00
Spiked Amount 200.000			Recovery	= 48.085%	
82) Terphenyl-D14(S)	12.07	244	4598336	51.76727 ppb	0.00
Spiked Amount 100.000			Recovery	= 51.767%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17786	3.93918	80
3) n-Nitrosodimethylamine	1.97	42	392741	45.47301 ppb	77
4) Pyridine	1.99	79	879245	46.52034 ppb	92
7) Phenol	4.68	94	1919316	56.11463 ppb	86
8) Aniline	4.69	93	1380352	55.25281 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	804929	55.14434 ppb	94
10) 2-Chlorophenol	4.82	128	1381800	53.39782 ppb	100
11) 1,3-DCB	4.98	146	1444690	48.47873 ppb	99
12) 1,4-DCB	5.07	146	1478994	49.26946 ppb	99
13) Benzyl alcohol	5.20	108	824248	54.32235 ppb	93
14) 1,2-DCB	5.23	146	1427364	50.65346 ppb	99
15) 2-Methylphenol	5.33	107	1067037	53.85397 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	792570	57.45652 ppb	95
17) Acetophenone	5.50	105	1991147	54.92267 ppb	93
18) 3&4-Methylphenol	5.51	107	2953267	110.35377 ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	1224298	57.87566 ppb	99
20) Hexachloroethane	5.60	117	620701	50.52328 ppb	94
23) Nitrobenzene	5.69	77	1816036	51.61570 ppb	94
24) Isophorone	5.96	82	2894471	51.22242 ppb	95
25) 2-Nitrophenol	6.04	139	768818	51.76334 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1244679	50.66881 ppb	99
27) Benzoic acid	6.24	105	1167506	52.35840 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	1627047	50.91647 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1263635	49.69658 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1428366	48.19580 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1946015	49.63007 ppb	98
32) Naphthalene	6.49	128	3990737	49.74051 ppb	100
33) 4-Chloroaniline	6.56	127	1657731	55.09981 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1263732	51.10291 ppb	93
35) Hexachloropropene	6.59	213	1270430	47.87810 ppb	99
36) Hexachlorobutadiene	6.63	225	1013152	48.31895 ppb	98
37) Caprolactum	6.99	55	420722	51.96880 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1356213	51.01424 ppb		93
39)	2-Methylnaphthalene	7.27	142	2695888	51.11649 ppb		98
40)	1-Methylnaphthalene	7.40	142	2770924	50.96059 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1069568	47.26961 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1617520	49.02007 ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	1036955	50.50650 ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1124538	50.13547 ppb		93
47)	1,1'-Biphenyl	7.82	154	3804968	51.59741 ppb		99
48)	2-Chloronaphthalene	7.84	162	2948560	51.41791 ppb		98
49)	2-Nitroaniline	7.96	65	962801	52.75744 ppb		86
50)	Dimethyl phthalate	8.18	163	3605631	51.40411 ppb		98
51)	2,6-DNT	8.25	165	800748	52.18600 ppb	#	75
52)	Acenaphthylene	8.31	152	4443485	50.88207 ppb		100
53)	3-Nitroaniline	8.44	138	770025	53.75129 ppb		90
54)	Acenaphthene	8.52	154	2931123	50.47777 ppb		99
55)	2,4-Dinitrophenol	8.57	184	407373	48.74129 ppb		88
56)	4-Nitrophenol	8.66	65	732829	51.84324 ppb		94
57)	Dibenzofuran	8.72	168	4408186	51.01076 ppb		91
58)	2,4-DNT	8.71	165	1150680	52.19382 ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.87	232	861302	48.49404 ppb		91
60)	Diethyl phthalate	9.01	149	3599071	50.20118 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2048253	51.71750 ppb		96
62)	Fluorene	9.12	166	3793658	52.15110 ppb		99
63)	4-Nitroaniline	9.16	138	823273	52.83271 ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	715429	49.23259 ppb	#	58
67)	Diphenyl amine	9.27	169	5986980	105.05568 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5986980	105.05568 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3686983	51.03896 ppb		94
70)	4-Bromophenyl phenyl ether	9.69	248	1117128	48.40007 ppb		90
71)	Hexachlorobenzene	9.75	284	1165833	49.19405 ppb	#	86
72)	Atrazine	9.89	200	485688	24.20914 ppb		95
73)	Pentachlorophenol	9.99	266	745061	47.46121 ppb		99
74)	Phenanthrene	10.24	178	5370053	51.16203 ppb		99
75)	Anthracene	10.29	178	5501731	50.24897 ppb		99
76)	Carbazol	10.49	167	4892232	50.46004 ppb		97
77)	Di-n-butylphthalate	10.90	149	6211786	52.22385 ppb		100
78)	Fluoranthene	11.62	202	6154749	50.25019 ppb		98
80)	Benzidine	11.79	184	1501770	51.02568 ppb		98
81)	Pyrene	11.88	202	6508989	52.75357 ppb		99
83)	Butyl benzylphthalate	12.65	149	2854964	53.97598 ppb		91
84)	3,3'-Dichlorobenzidine	13.25	252	2314715	56.43256 ppb	#	98
85)	Benz (a) anthracene	13.28	228	6504240	51.43917 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4368690	57.41217 ppb	#	93
87)	Chrysene	13.32	228	6444804	54.11884 ppb		100
88)	Di-n-octylphthalate	14.04	149	6799817	54.50924 ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5648925	52.26327 ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5731800	54.95044 ppb		99
92)	Benzo (a) pyrene	14.91	252	5349714	53.02070 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5745048	49.40904 ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5084924	49.96984 ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4825721	48.54283 ppb		99

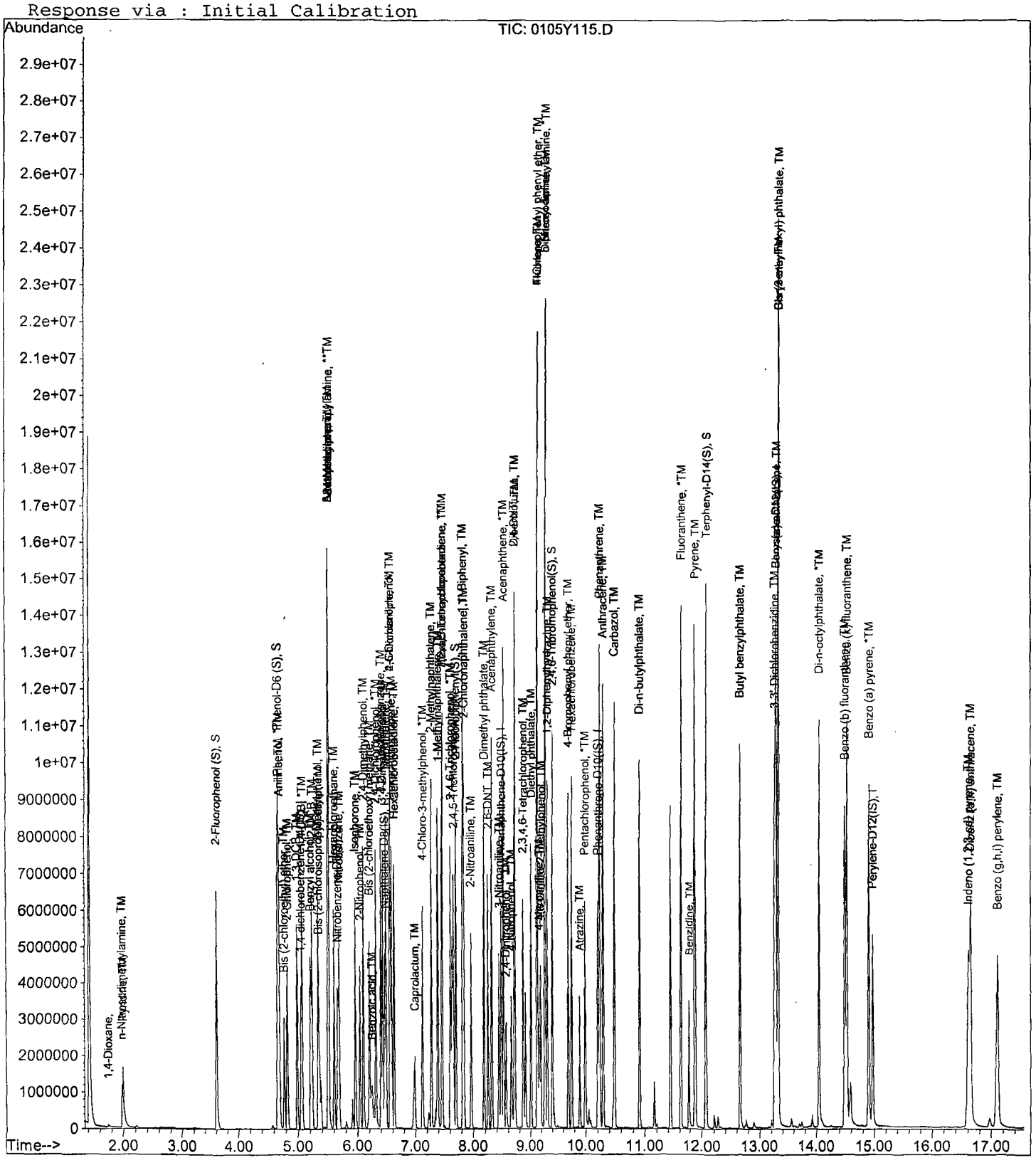
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y107.D Vial: 7
Acq On : 25 Jan 21 17:47 Operator: MA
Sample : BA25434W23 1/980 Inst : Yoda
Misc : Multiplr: 1.02

Quant Time: Jan 26 10:04 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	428194	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1673525	40.00000 ppb	-0.01
41) Acenaphthene-D10(IS)	8.47	164	1037113	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2145211	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1911233	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1855918	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2472466	147.25485 ppb	-0.01
Spiked Amount 204.082			Recovery =	72.155%	
6) Phenol-D6 (S)	4.66	99	3383869	157.61672 ppb	-0.01
Spiked Amount 204.082			Recovery =	77.232%	
22) Nitrobenzene-D5(S)	5.66	82	1898387	78.50161 ppb	0.00
Spiked Amount 102.041			Recovery =	76.932%	
46) 2-Fluorobiphenyl(S)	7.70	172	3791224	79.58135 ppb	0.00
Spiked Amount 102.041			Recovery =	77.989%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1379955	180.11164 ppb	0.00
Spiked Amount 204.082			Recovery =	88.255%	
82) Terphenyl-D14(S)	12.07	244	6394390	113.74279 ppb	0.00
Spiked Amount 102.041			Recovery =	111.468%	

Target Compounds Qvalue

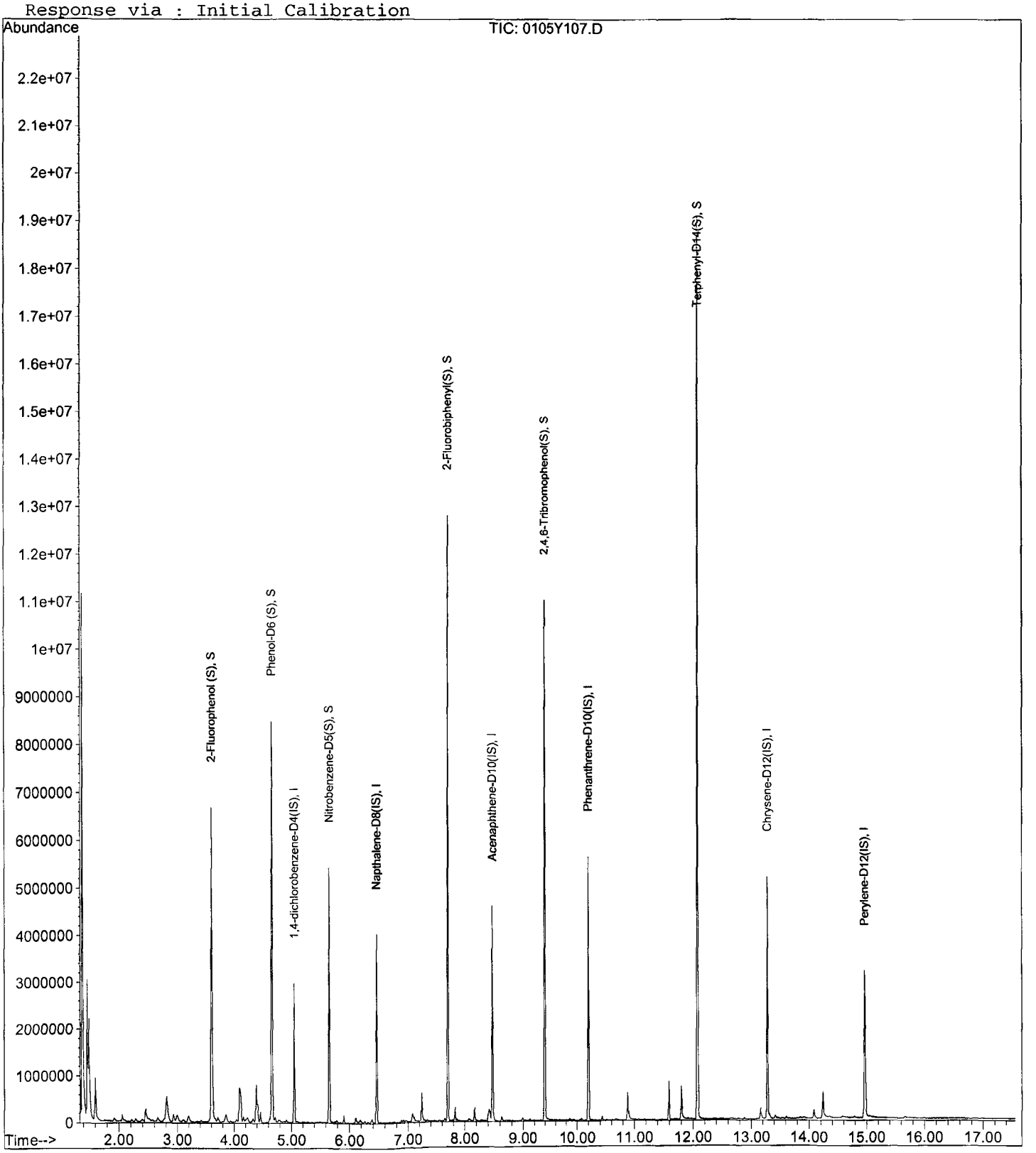
(#) = qualifier out of range (m) = manual integration
0105Y107.D Y0105.M Wed Jan 27 12:22:34 2021 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y107.D Vial: 7
Acq On : 25 Jan 21 17:47 Operator: MA
Sample : BA25434W23 1/980 Inst : Yoda
Misc : Multiplr: 1.02

Quant Time: Jan 26 10:04 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	425738	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1634419	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1005652	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2061374	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1858844	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1771379	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1777337	130.41950 ppb	0.00
Spiked Amount 250.000			Recovery =	52.168%	
6) Phenol-D6 (S)	4.66	99	2340174	134.29826 ppb	0.00
Spiked Amount 250.000			Recovery =	53.719%	
22) Nitrobenzene-D5(S)	5.65	82	1324847	68.71691 ppb	0.00
Spiked Amount 125.000			Recovery =	54.974%	
46) 2-Fluorobiphenyl(S)	7.70	172	2379678	63.10500 ppb	0.00
Spiked Amount 125.000			Recovery =	50.484%	
64) 2,4,6-Tribromophenol(S)	9.39	330	736575	121.45279 ppb	0.00
Spiked Amount 250.000			Recovery =	48.581%	
82) Terphenyl-D14(S)	12.08	244	3846067	86.16831 ppb	0.00
Spiked Amount 125.000			Recovery =	68.934%	

Target Compounds Qvalue

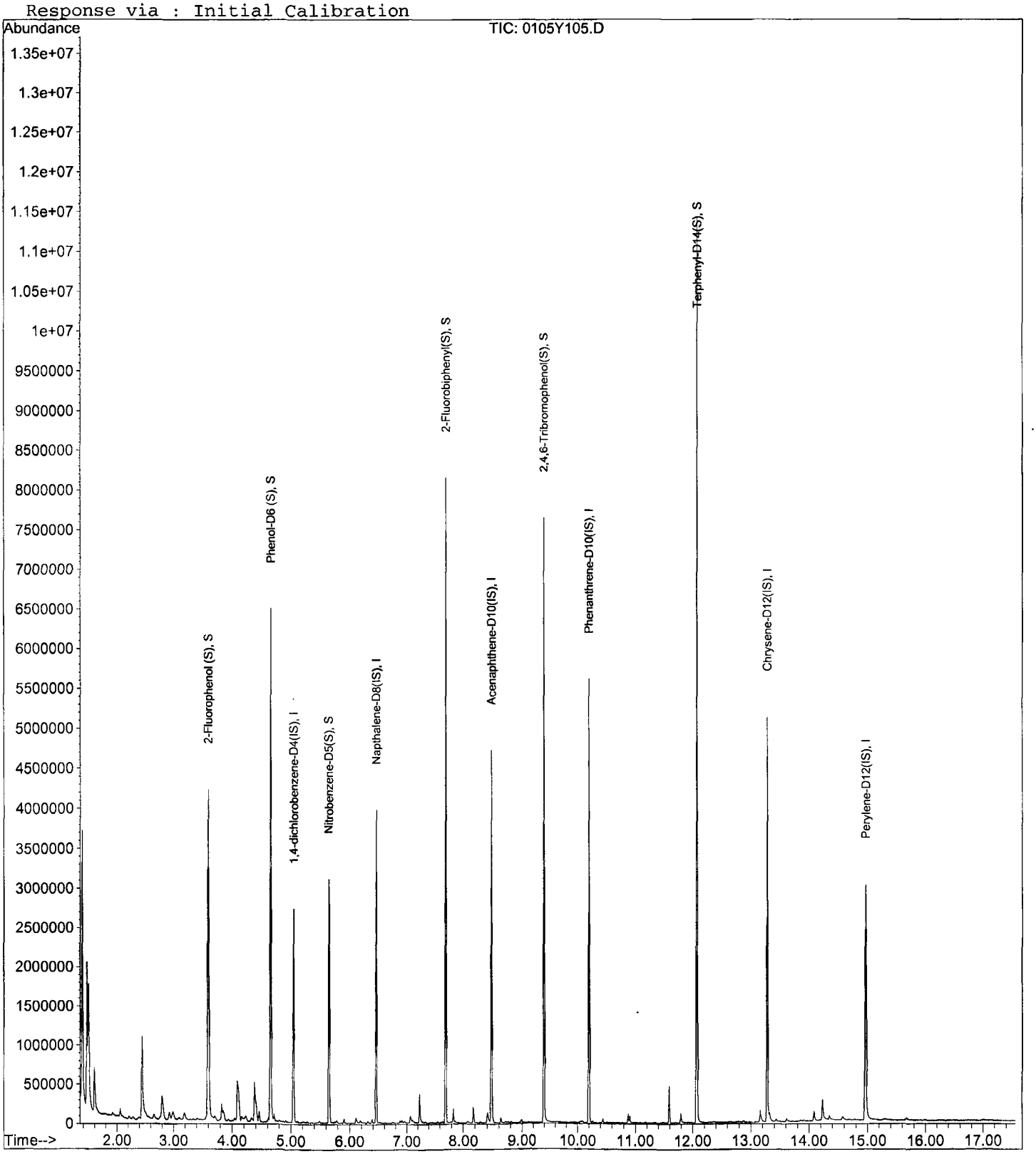
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	400800	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1600610	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	971879	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2027584	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1902852	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	1802107	40.00000 ppb		0.01
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	2913375	227.08259 ppb		0.00
Spiked Amount 250.000			Recovery =	90.833%		
6) Phenol-D6 (S)	4.67	99	3789371	230.99578 ppb		0.00
Spiked Amount 250.000			Recovery =	92.398%		
22) Nitrobenzene-D5(S)	5.66	82	2186247	115.79105 ppb		0.00
Spiked Amount 125.000			Recovery =	92.633%		
46) 2-Fluorobiphenyl(S)	7.71	172	4033199	110.67021 ppb		0.00
Spiked Amount 125.000			Recovery =	88.536%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1413508	241.17058 ppb		0.00
Spiked Amount 250.000			Recovery =	96.468%		
82) Terphenyl-D14(S)	12.08	244	6418869	140.48411 ppb		0.00
Spiked Amount 125.000			Recovery =	112.387%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	9641	3.76836	#	49
3) n-Nitrosodimethylamine	1.98	42	245236	50.11116 ppb		74
4) Pyridine	2.00	79	491006	45.84823 ppb		89
7) Phenol	4.68	94	1112494	57.40240 ppb		88
8) Aniline	4.69	93	797376	56.32880 ppb	#	60
9) Bis (2-chloroethyl) ether	4.77	63	523218	63.25995 ppb		98
10) 2-Chlorophenol	4.82	128	839432	57.24884 ppb		91
11) 1,3-DCB	4.98	146	829253	49.10960 ppb		98
12) 1,4-DCB	5.07	146	870236	51.16244 ppb		98
13) Benzyl alcohol	5.21	108	511672	59.51345 ppb		98
14) 1,2-DCB	5.23	146	825556	51.70395 ppb		96
15) 2-Methylphenol	5.34	107	656220	58.45081 ppb		99
16) Bis (2-chloroisopropyl) et	5.36	45	513339	65.67632 ppb		96
17) Acetophenone	5.50	105	1210671	58.93554 ppb		97
18) 3&4-Methylphenol	5.50	107	1753767	115.65361 ppb		96
19) n-Nitrosodi-n-propylamine	5.50	70	735717	61.37937 ppb		95
20) Hexachloroethane	5.61	117	317233	45.57118 ppb		86
23) Nitrobenzene	5.68	77	1110166	57.15168 ppb		98
24) Isophorone	5.95	82	1760498	56.43001 ppb		95
25) 2-Nitrophenol	6.03	139	451445	55.05380 ppb		93
26) 2,4-Dimethylphenol	6.09	122	690061	50.88086 ppb		95
27) Benzoic acid	6.22	105	634560	53.41547 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1026931	58.20806 ppb		99
29) 2,4-Dichlorophenol	6.31	162	758478	54.02957 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	780197	47.68235 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1180807	54.54579 ppb		95
32) Naphthalene	6.49	128	2447945	55.26402 ppb		99
33) 4-Chloroaniline	6.55	127	633425	38.13422 ppb		95
34) 2,6-Dichlorophenol	6.56	162	748224	54.80320 ppb		95
35) Hexachloropropene	6.58	213	322148	21.99000 ppb		99
36) Hexachlorobutadiene	6.63	225	447523	38.65823 ppb		98
37) Caprolactum	6.97	55	273017	61.08306 ppb		97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	821428	55.96502 ppb		99
39)	2-Methylnaphthalene	7.28	142	1592622	54.69600 ppb		100
40)	1-Methylnaphthalene	7.39	142	1578731	52.58982 ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	195904	21.39217 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	876192	50.07382 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	614426	56.43443 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	647219	54.41384 ppb		95
47)	1,1'-Biphenyl	7.82	154	2172479	55.55455 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	1702963	56.00113 ppb		96
49)	2-Nitroaniline	7.96	65	580016	59.93415 ppb		78
50)	Dimethyl phthalate	8.18	163	2257065	60.68031 ppb		99
51)	2,6-DNT	8.24	165	486326	59.76856 ppb	#	68
52)	Acenaphthylene	8.31	152	2569259	55.47996 ppb		99
53)	3-Nitroaniline	8.44	138	377668	49.71431 ppb		89
54)	Acenaphthene	8.51	154	1703669	55.32718 ppb		99
55)	2,4-Dinitrophenol	8.56	184	203896	50.24428 ppb		94
56)	4-Nitrophenol	8.65	65	433033	57.76938 ppb		86
57)	Dibenzofuran	8.72	168	2554036	55.73347 ppb		95
58)	2,4-DNT	8.71	165	691192	59.12217 ppb		93
59)	2,3,4,6-Tetrachlorophenol	8.87	232	537426	57.06092 ppb		96
60)	Diethyl phthalate	9.00	149	2258845	59.41514 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.13	204	1210780	57.65093 ppb		93
62)	Fluorene	9.12	166	2201854	57.07961 ppb		100
63)	4-Nitroaniline	9.15	138	465962	56.38930 ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	339890	43.69046 ppb	#	64
67)	Diphenyl amine	9.26	169	3297054	108.06867 ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3297054	108.06867 ppb		100
69)	1,2-Diphenylhydrazine	9.30	77	2242370	57.98291 ppb		89
70)	4-Bromophenyl phenyl ether	9.69	248	674732	54.60550 ppb		92
71)	Hexachlorobenzene	9.75	284	681749	53.73569 ppb	#	72
72)	Atrazine	9.90	200	335142	31.20419 ppb		98
73)	Pentachlorophenol	9.99	266	429091	51.05737 ppb		99
74)	Phenanthrene	10.23	178	3205663	57.04914 ppb		99
75)	Anthracene	10.30	178	3275781	55.88621 ppb		99
76)	Carbazol	10.48	167	2905206	55.97312 ppb		95
77)	Di-n-butylphthalate	10.91	149	3888527	61.06601 ppb		99
78)	Fluoranthene	11.61	202	3674770	56.04277 ppb		99
80)	Benzidine	11.78	184	416073	27.48331 ppb		98
81)	Pyrene	11.88	202	3878509	61.11069 ppb		99
83)	Butyl benzylphthalate	12.65	149	1776298	65.28747 ppb		98
84)	3,3'-Dichlorobenzidine	13.26	252	518589	24.57931 ppb		100
85)	Benz (a) anthracene	13.28	228	3619114	55.64341 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2630986	67.21797 ppb		98
87)	Chrysene	13.31	228	3728418	60.86638 ppb		99
88)	Di-n-octylphthalate	14.05	149	4073866	63.48831 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3658811	64.60696 ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3175254	58.09880 ppb		98
92)	Benzo (a) pyrene	14.90	252	3008431	56.90671 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3260499	53.51868 ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	2951436	55.35609 ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2860270	54.91342 ppb		100

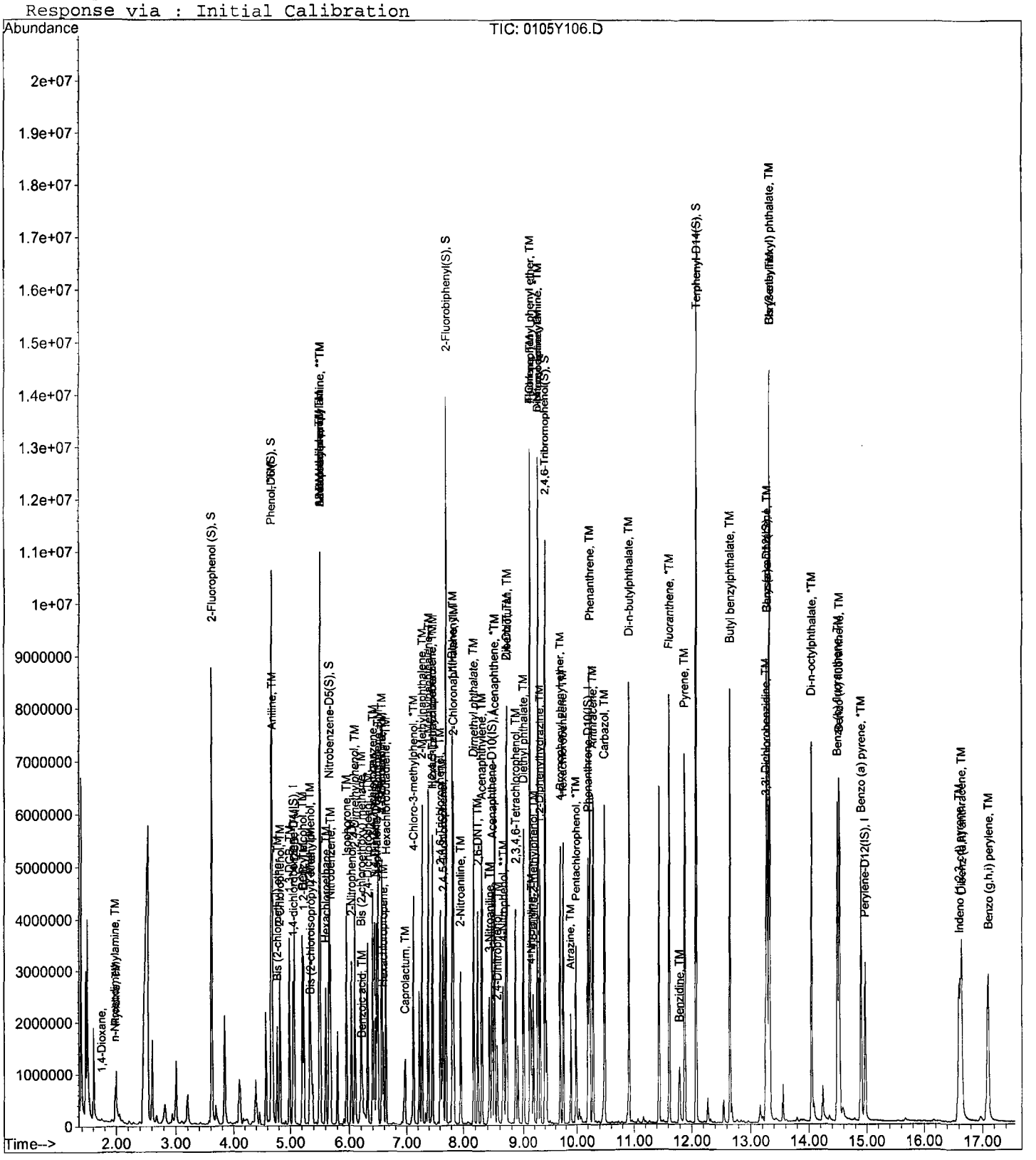
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

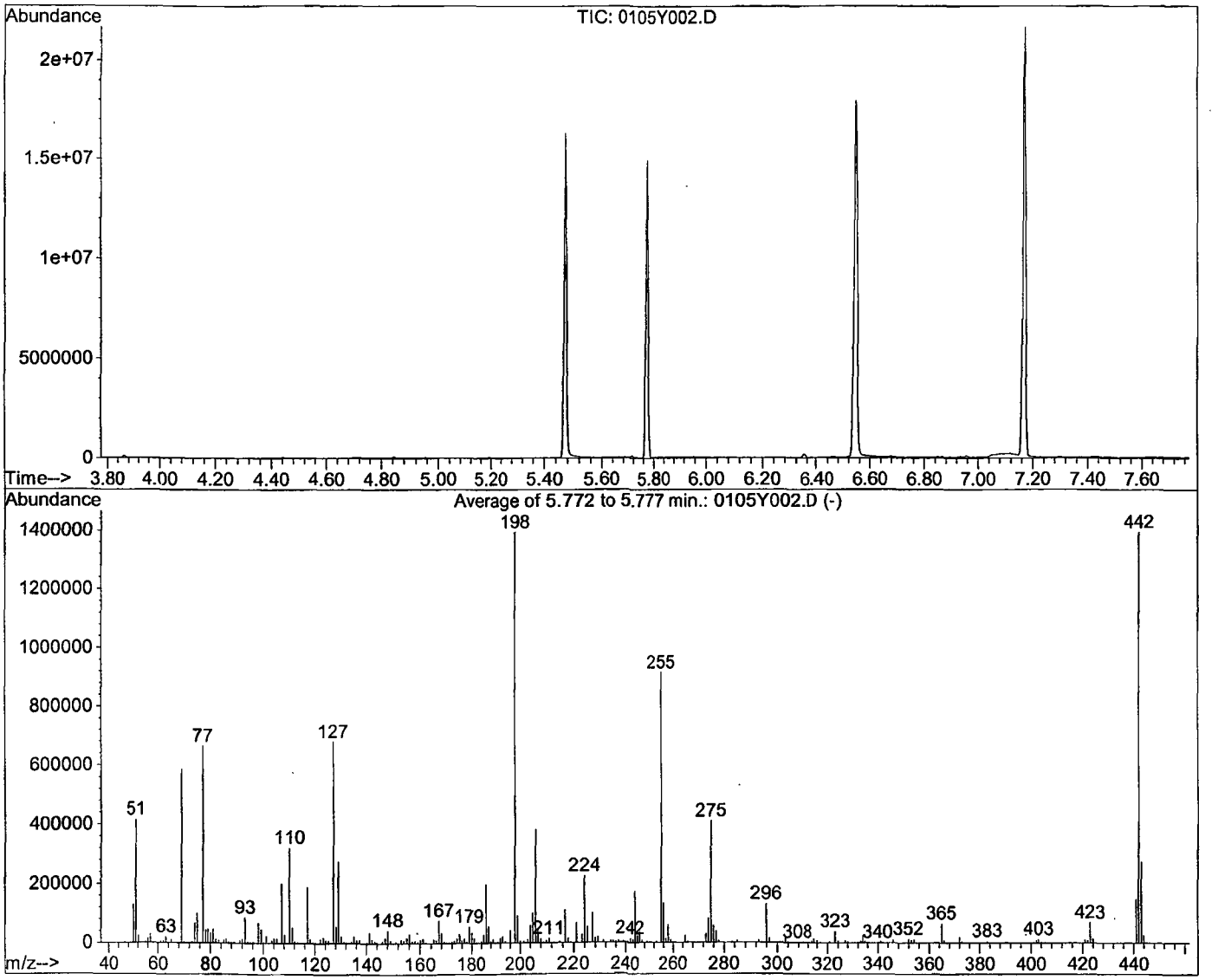
Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

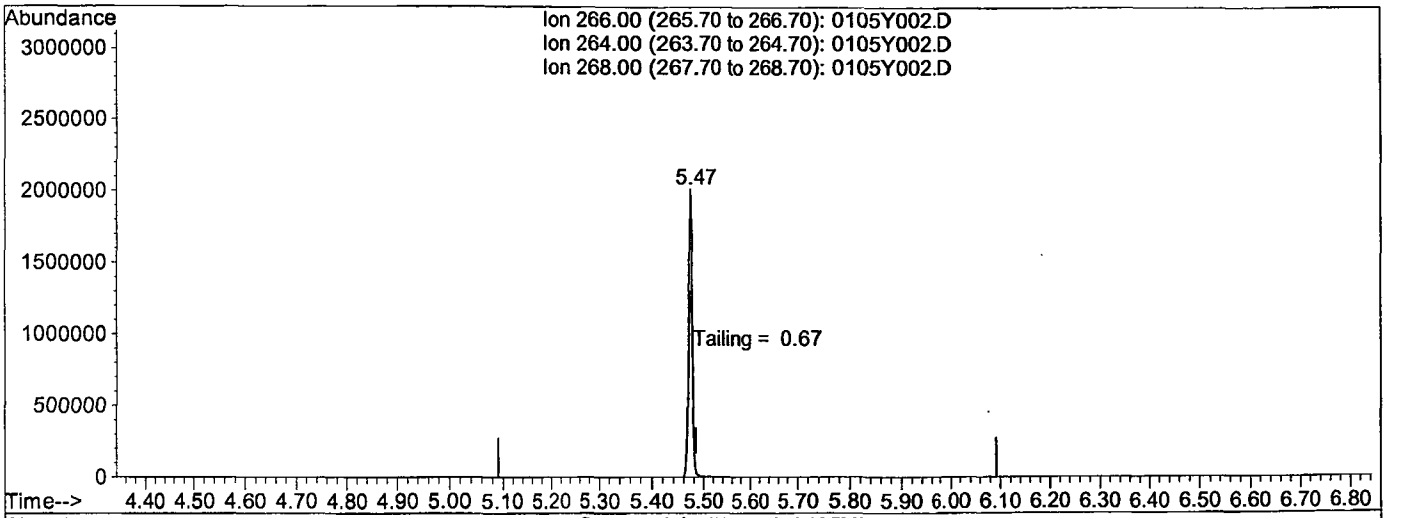
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

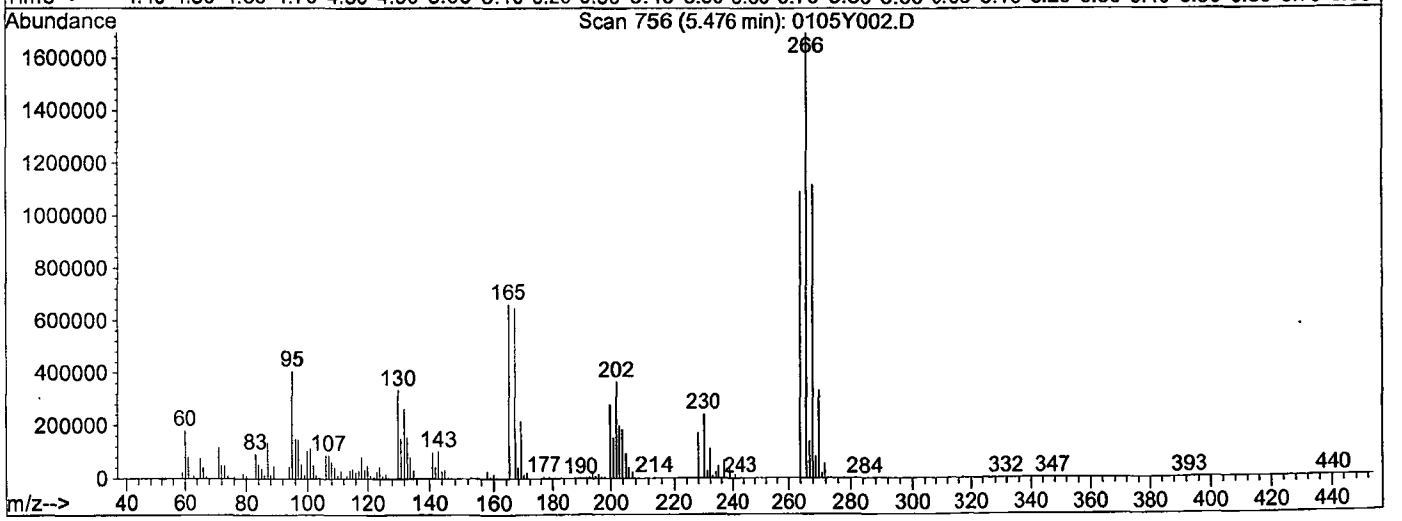
Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

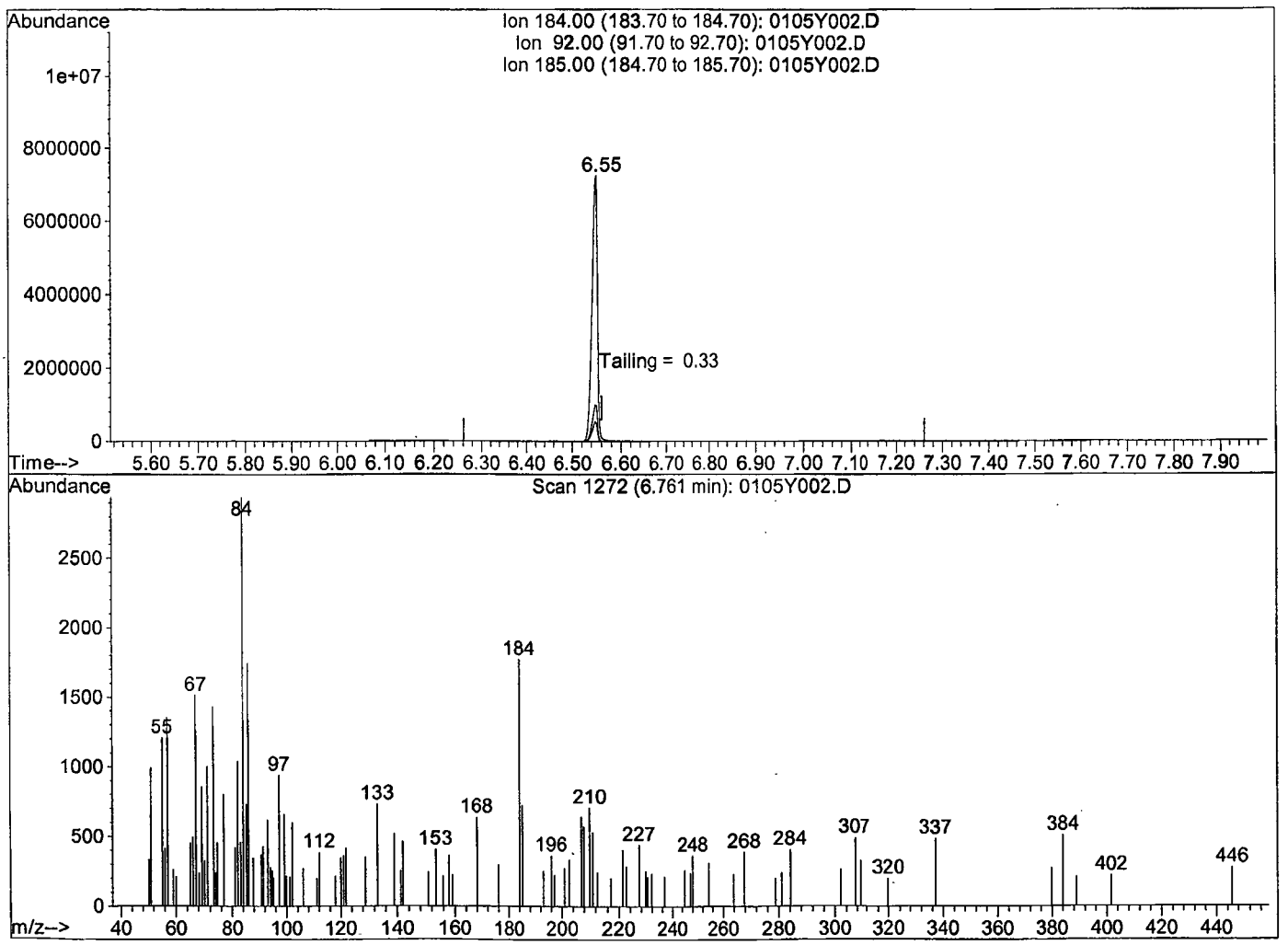
response 10909057

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

response 0

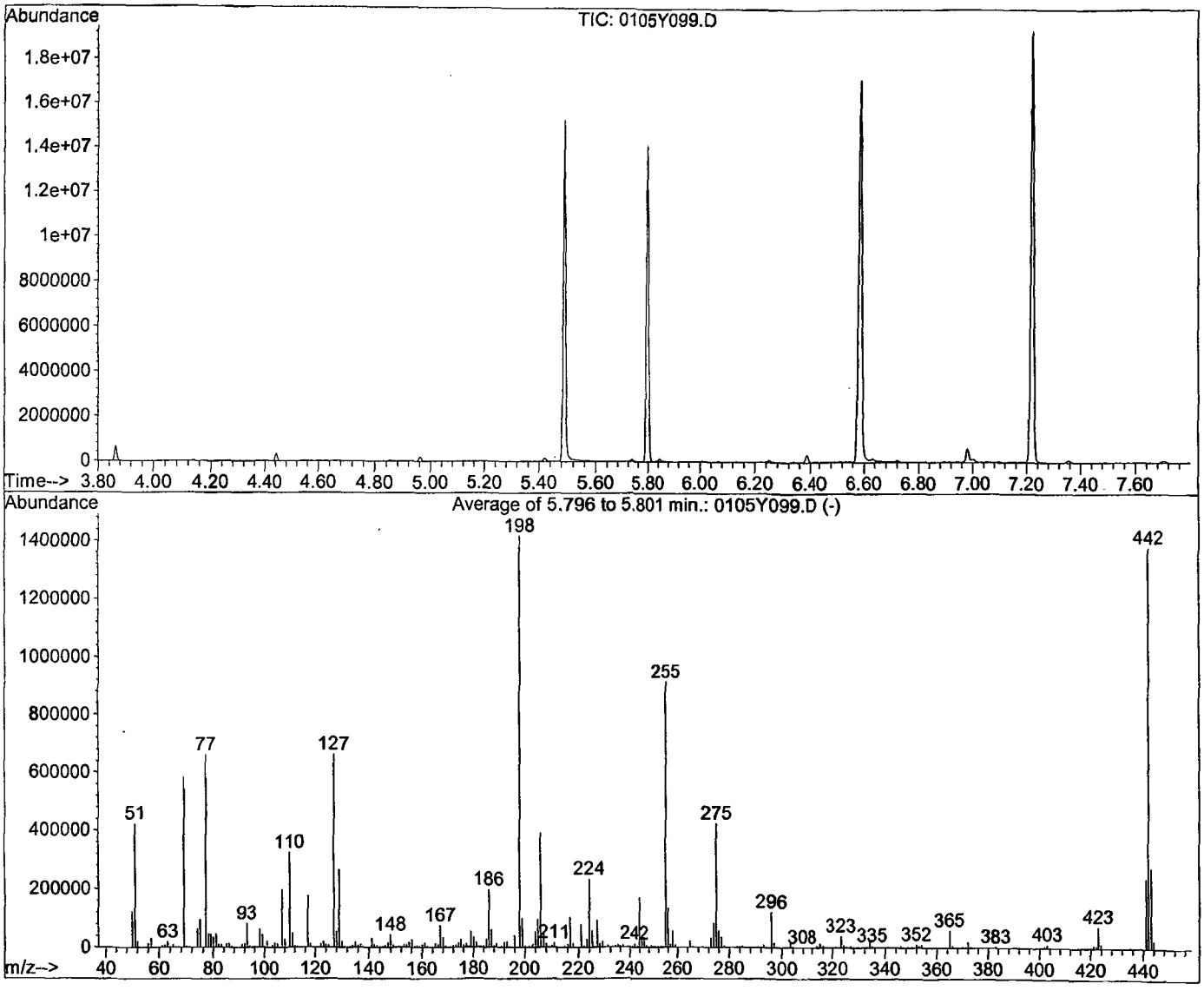
Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y099.D
Acq On : 25 Jan 21 12:23
Sample : SV TUNE 10/02/20
Misc :

Vial: 99
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 884, 885, 886; Background Corrected with Scan 875

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	423872	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	3612	PASS
127	198	10	80	46.7	662677	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1420459	PASS
199	198	5	9	6.9	98451	PASS
275	198	10	60	29.9	424256	PASS
365	198	1	100	4.2	59421	PASS
441	442	0.01	24	17.3	239381	PASS
442	198	50	500	97.4	1383403	PASS
443	442	15	24	19.9	274965	PASS

Data File Name:	**0105Y099.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:23**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**99**
Instrument Name:	**Yoda**

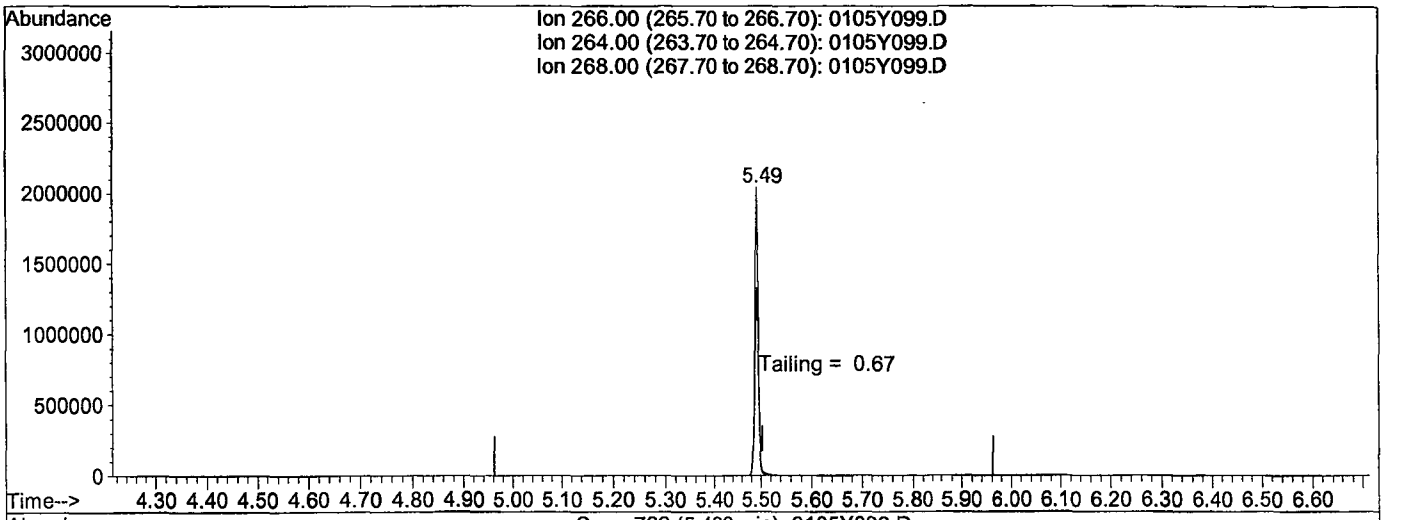
#	Name	Ret Time	Target Response
1)	DDT	7.12	144580000
2)	DDD	6.84	300557
3)	DDE	5.89	127448

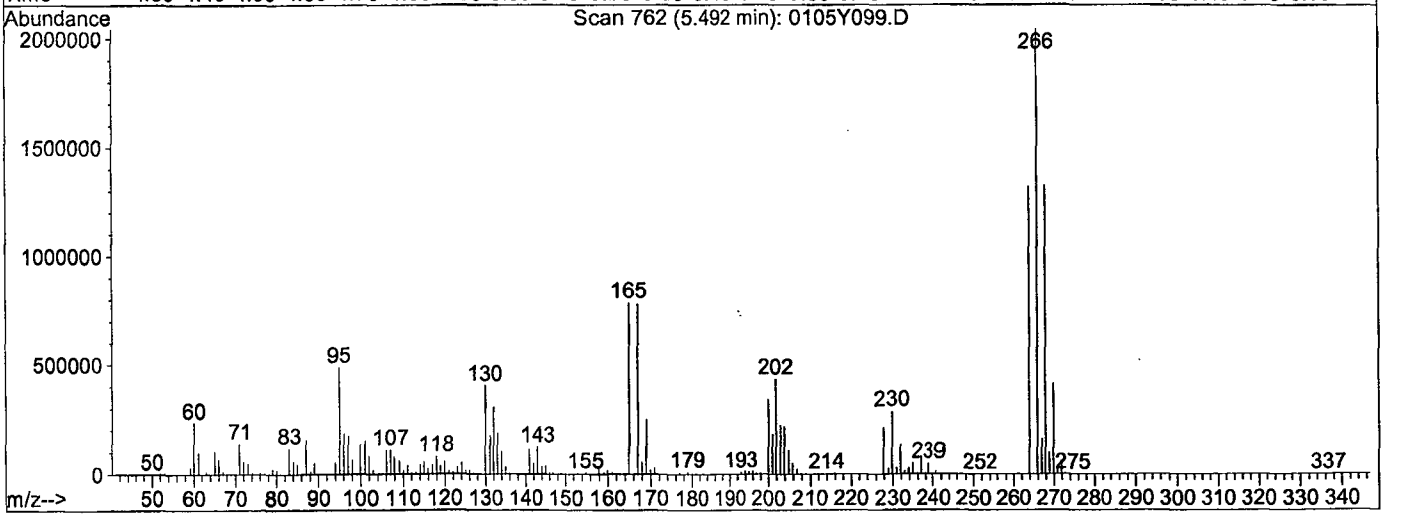
Breakdown **0.30**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(5) Pentachlorophenol

5.49min 0.0000

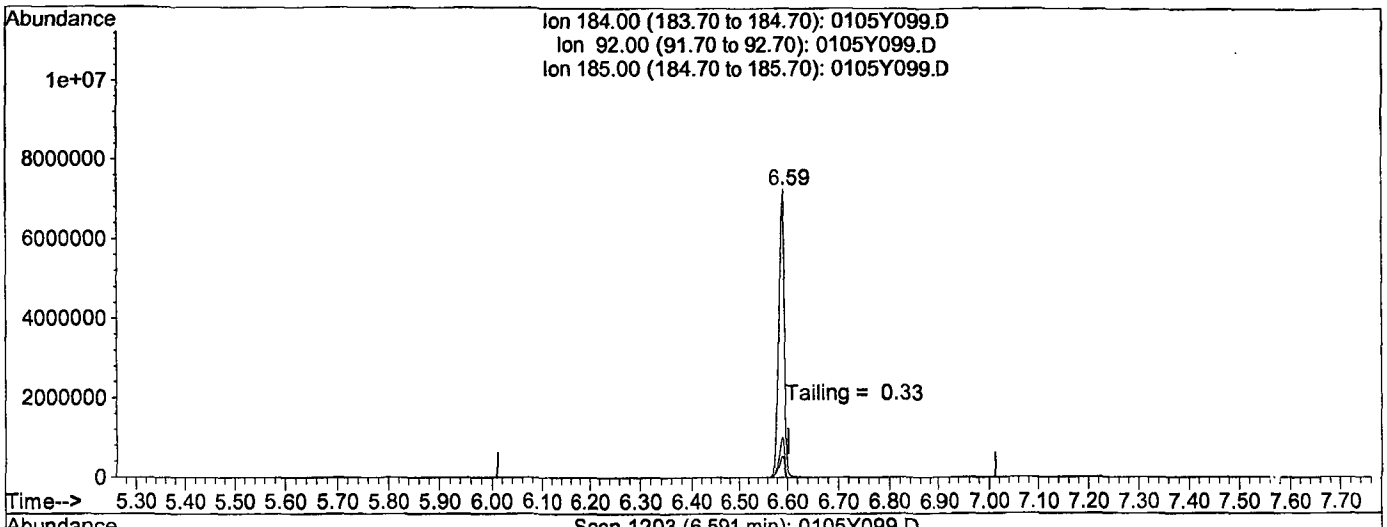
response 10863019

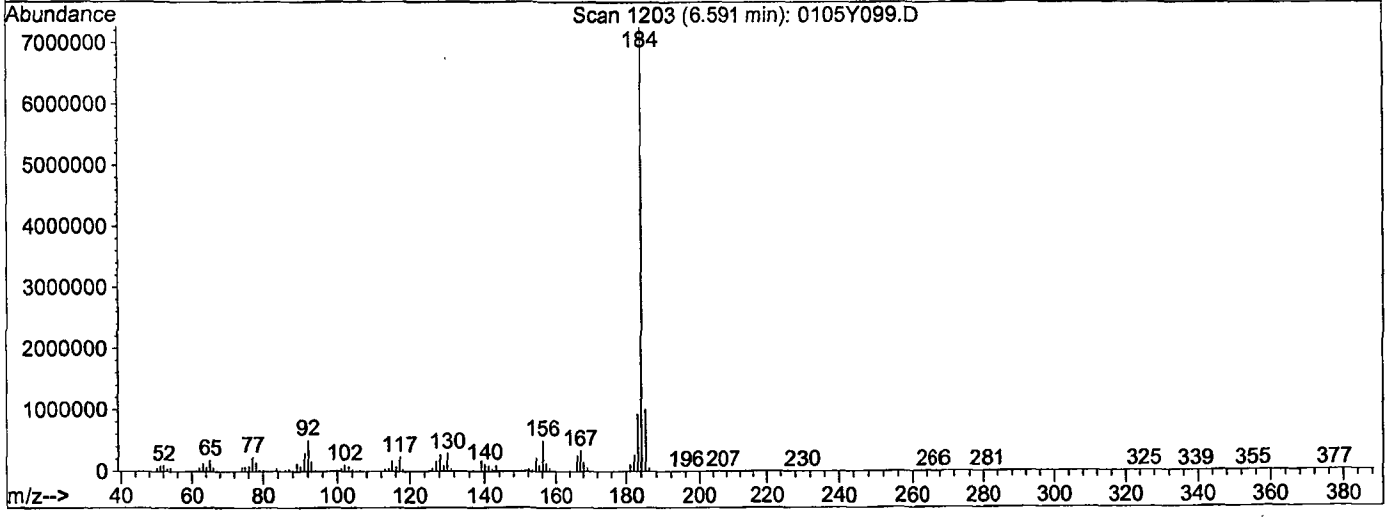
Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.81
268.00	64.30	63.53
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(6) Benzidine

6.59min 0.0000

response 54196247

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.24
185.00	14.10	13.77
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL			1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	**(4)**	**Prep'd By (Initials)**	**MA**
Prep Date	**05/29/20**		
Exp Date	**12/31/25**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	**8270 Spike**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/07/21**		
Exp Date	**01/07/22**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	**Acetone 60 mL Lot# 0242320**	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Name of Final Standard	8270 Surrogate	**Prep'd By (Initials)**	MA
Prep Date	10/06/20		
Exp Date	10/06/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	**A0158618-50006, A0152714-49436**	**09/30/27**	20 mL	200 mL	**Acetone246130/ MC59353 1:1**	1000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	**A0158684-50244,5024550248,50004**	**02/28/26**	20 mL	"	"	500 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	1:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
99	0105Y099.D	1	SV TUNE 10/02/20		25 Jan 21 12:23
100	0105Y100.D	1	50ug/mL 8270 01/05/21 (1)		25 Jan 21 12:38
5	0105Y105.D	1.25	210122A BLK 1/800		25 Jan 21 16:56
6	0105Y106.D	1.25	210122A LCS-1 1/0.8		25 Jan 21 17:21
7	0105Y107.D	1.02041	BA25434W23 1/980		25 Jan 21 17:47
15	0105Y115.D	1	50ug/mL 8270 08/12/20 (5)		25 Jan 21 21:09

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus

Initials: MA/AH

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

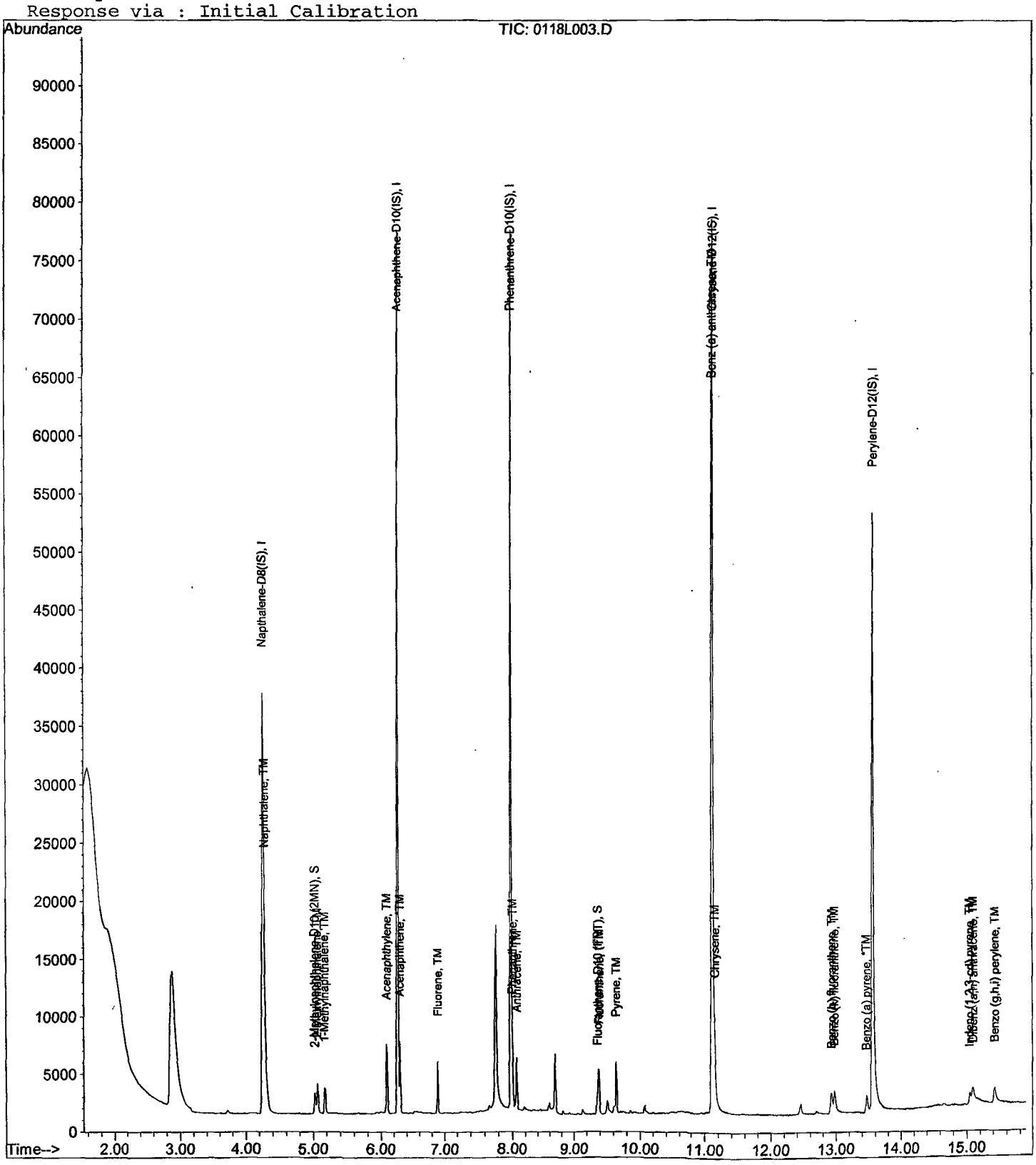
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562 ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%		
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183 ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	6554	0.21427 ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578 ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723 ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472 ppb		99
8) Acenaphthene	6.29	154	3730	0.21987 ppb		98
9) Fluorene	6.89	166	4201	0.21236 ppb		99
11) Phenanthrene	8.00	178	6614	0.21709 ppb		99
12) Anthracene	8.06	178	5555	0.20337 ppb		100
14) Fluoranthene	9.38	202	8388	0.20768 ppb	#	84
16) Pyrene	9.64	202	8654	0.21194 ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097 ppb		96
18) Chrysene	11.15	228	7901	0.21470 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777 ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570 ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787 ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285 ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333 ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832 ppb		97

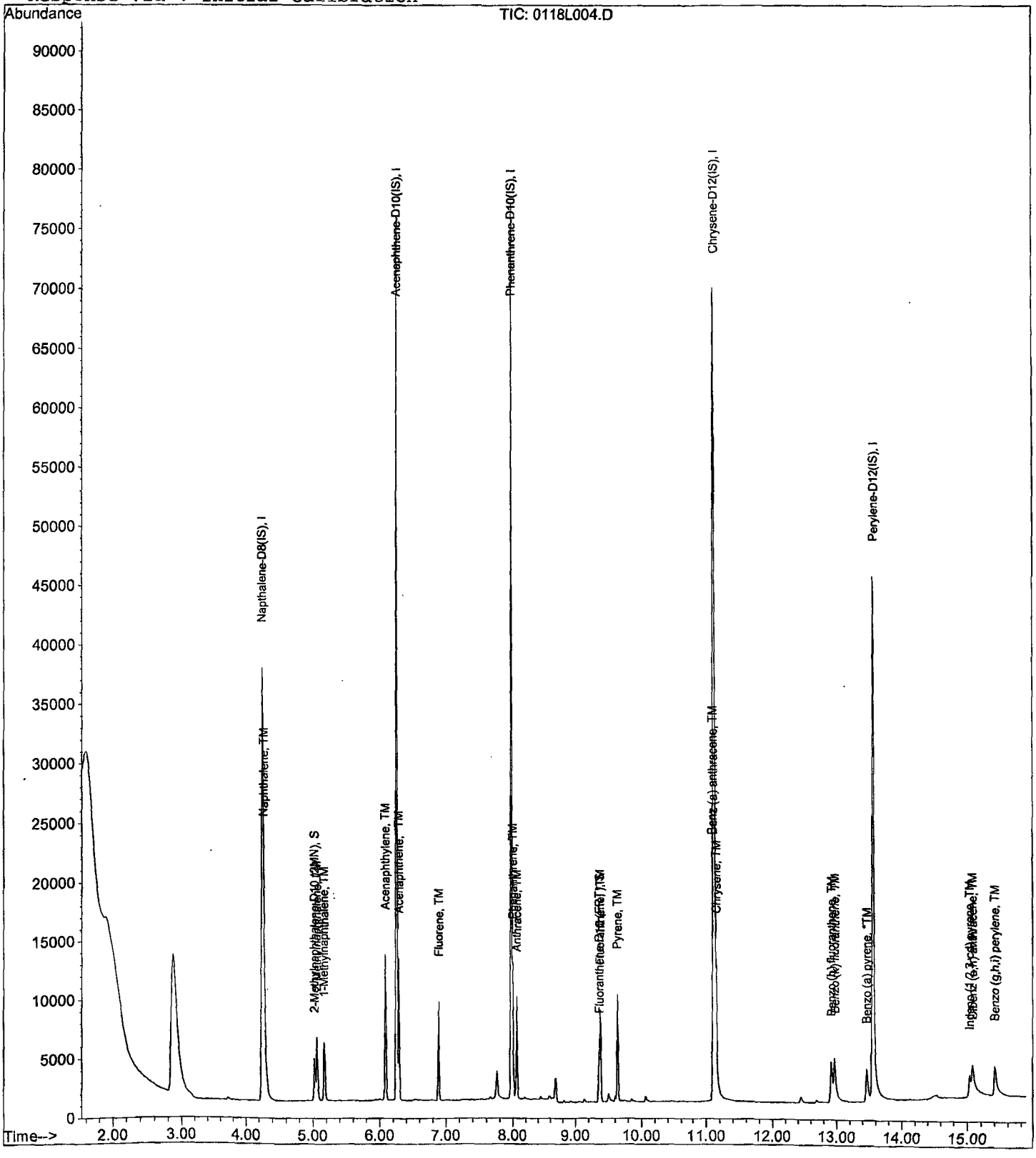
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979 ppb		0.00
Spiked Amount 5.000			Recovery =	5.200%		
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727 ppb		0.00
Spiked Amount 5.000			Recovery =	4.940%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	15152	0.53197 ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641 ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883 ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452 ppb		99
8) Acenaphthene	6.29	154	8507	0.53809 ppb		99
9) Fluorene	6.89	166	9747	0.52871 ppb		100
11) Phenanthrene	8.00	178	15220	0.53650 ppb		99
12) Anthracene	8.06	178	13445	0.52863 ppb		99
14) Fluoranthene	9.39	202	19405	0.51598 ppb		97
16) Pyrene	9.64	202	19829	0.52483 ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713 ppb		97
18) Chrysene	11.15	228	17766	0.52174 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842 ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592 ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124 ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285 ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279 ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408 ppb		92

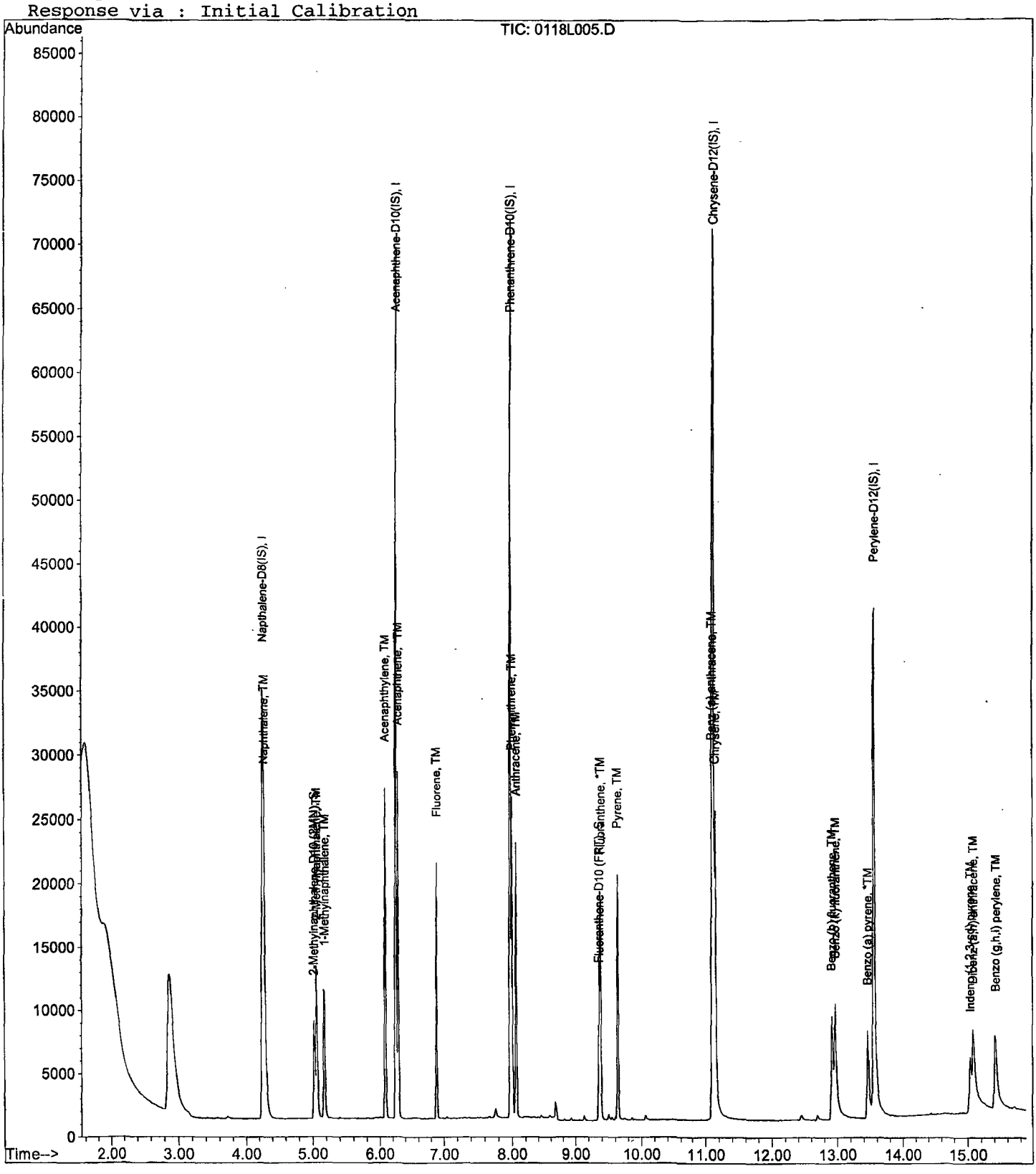
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779	ppb		0.00
Spiked Amount 5.000			Recovery = 10.160%				
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272	ppb		0.00
Spiked Amount 5.000			Recovery = 10.060%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	29158	1.03706	ppb		100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438	ppb		99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359	ppb		99
7) Acenaphthylene	6.08	152	55396	1.05240	ppb		99
8) Acenaphthene	6.29	154	16277	1.05847	ppb		100
9) Fluorene	6.89	166	18901	1.05405	ppb		99
11) Phenanthrene	8.00	178	29034	1.07377	ppb		100
12) Anthracene	8.06	178	25745	1.06201	ppb		100
14) Fluoranthene	9.39	202	38564	1.07584	ppb		98
16) Pyrene	9.65	202	38462	1.03286	ppb		100
17) Benz (a) anthracene	11.11	228	30159	0.95752	ppb		99
18) Chrysene	11.15	228	33925	1.01080	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864	ppb	#	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514	ppb		99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606	ppb		99
23) Benzo (a) pyrene	13.46	252	22522	0.92324	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232	ppb		94

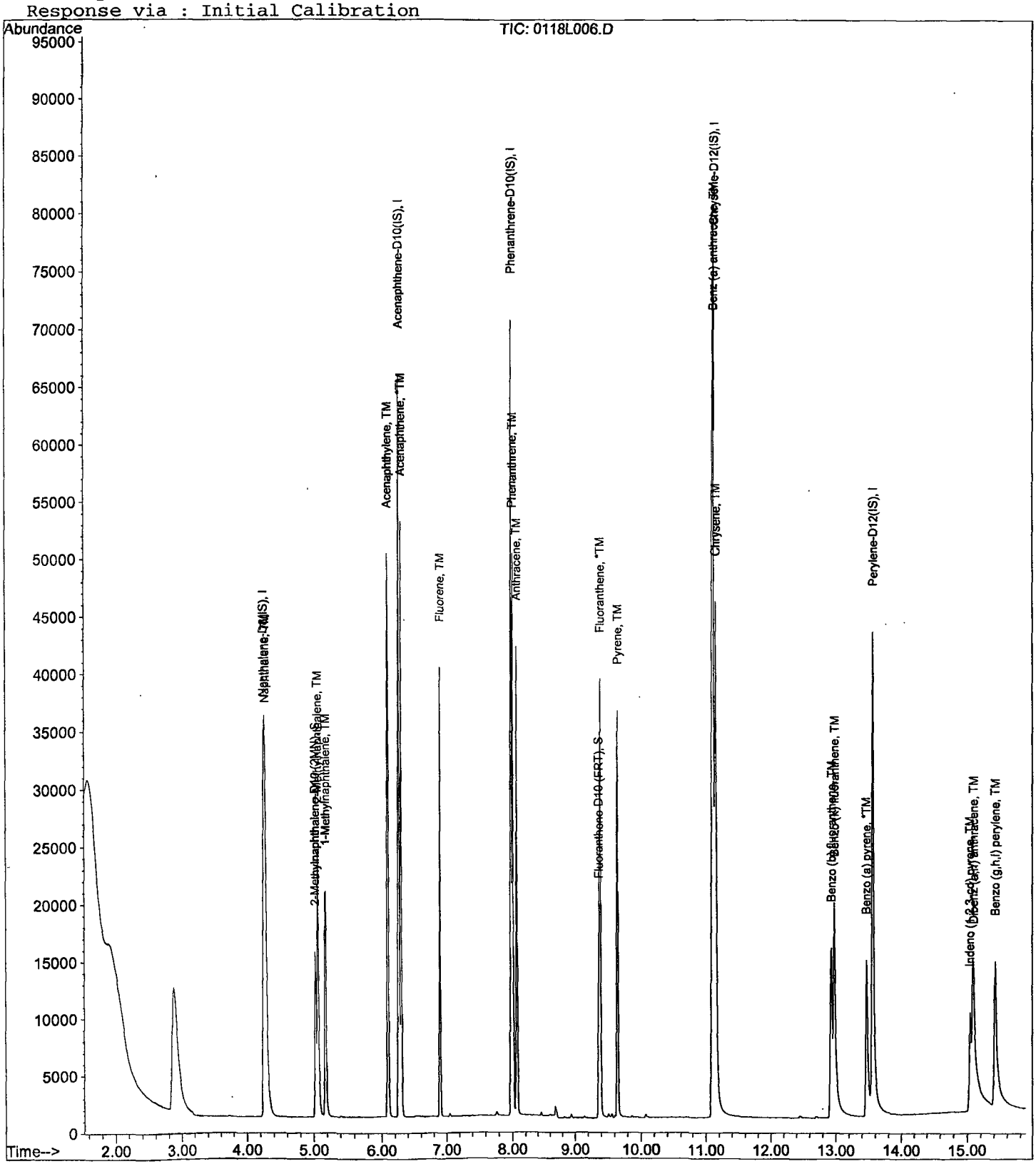
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.300%		
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.280%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	134538	4.98585 ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293 ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401 ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969 ppb		100
8) Acenaphthene	6.29	154	75592	5.12022 ppb		100
9) Fluorene	6.89	166	91323	5.30474 ppb		100
11) Phenanthrene	8.00	178	136722	5.27514 ppb		100
12) Anthracene	8.06	178	124850	5.37298 ppb		100
14) Fluoranthene	9.39	202	188170	5.47654 ppb		100
16) Pyrene	9.65	202	189979	5.19874 ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636 ppb		100
18) Chrysene	11.15	228	168073	5.10305 ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112 ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853 ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449 ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925 ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274 ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602 ppb		100

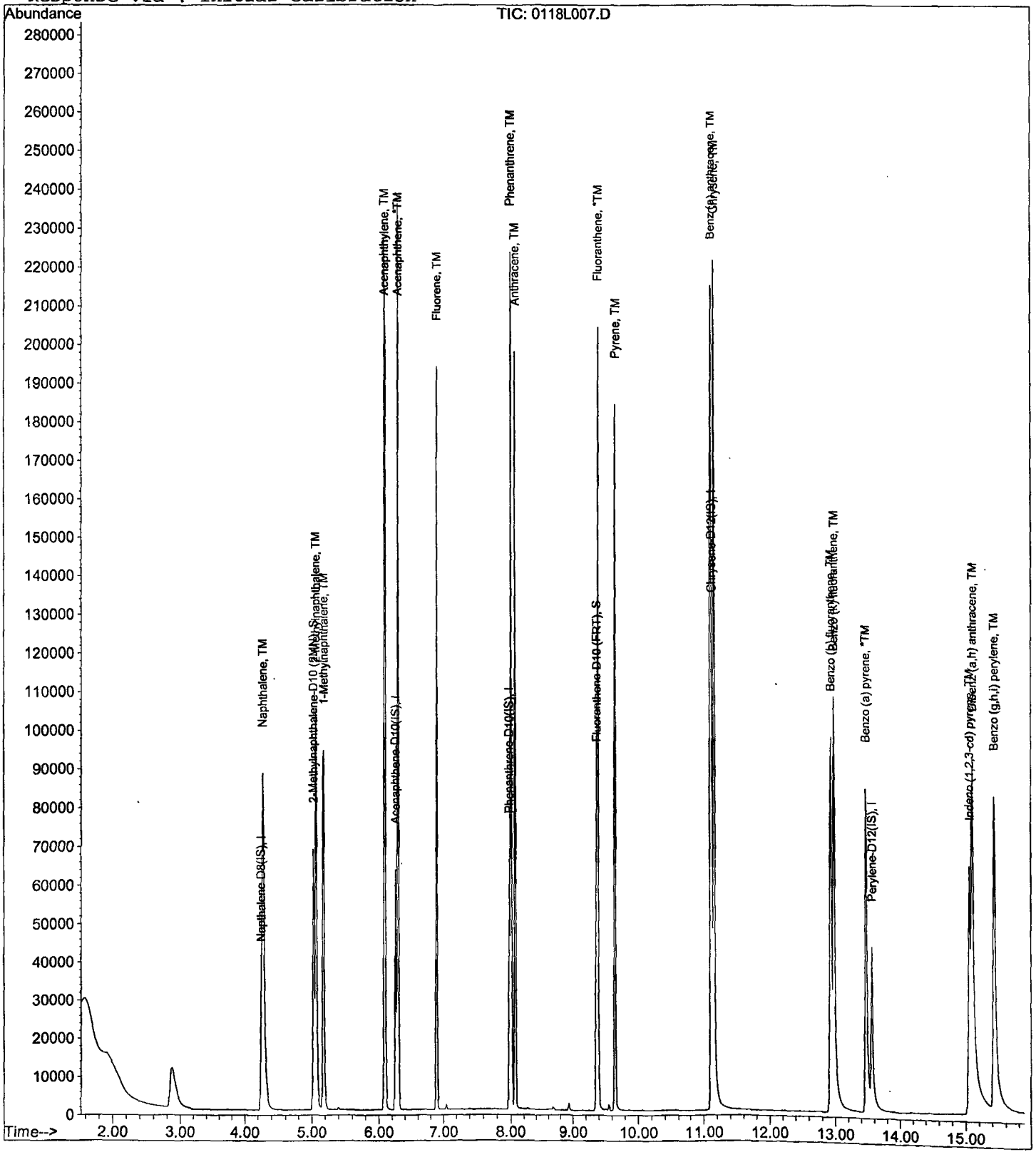
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897	ppb		0.00
Spiked Amount 5.000			Recovery = 98.180%				
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763	ppb		0.00
Spiked Amount 5.000			Recovery = 101.560%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	268559	9.44564	ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736	ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451	ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932	ppb		100
8) Acenaphthene	6.29	154	143677	9.22655	ppb		99
9) Fluorene	6.89	166	175331	9.65565	ppb		99
11) Phenanthrene	8.00	178	252445	9.28323	ppb		99
12) Anthracene	8.06	178	235818	9.67255	ppb		99
14) Fluoranthene	9.39	202	356187	9.88031	ppb		97
16) Pyrene	9.65	202	358384	9.35054	ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203	ppb		99
18) Chrysene	11.16	228	320451	9.27660	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742	ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043	ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132	ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641	ppb	#	90

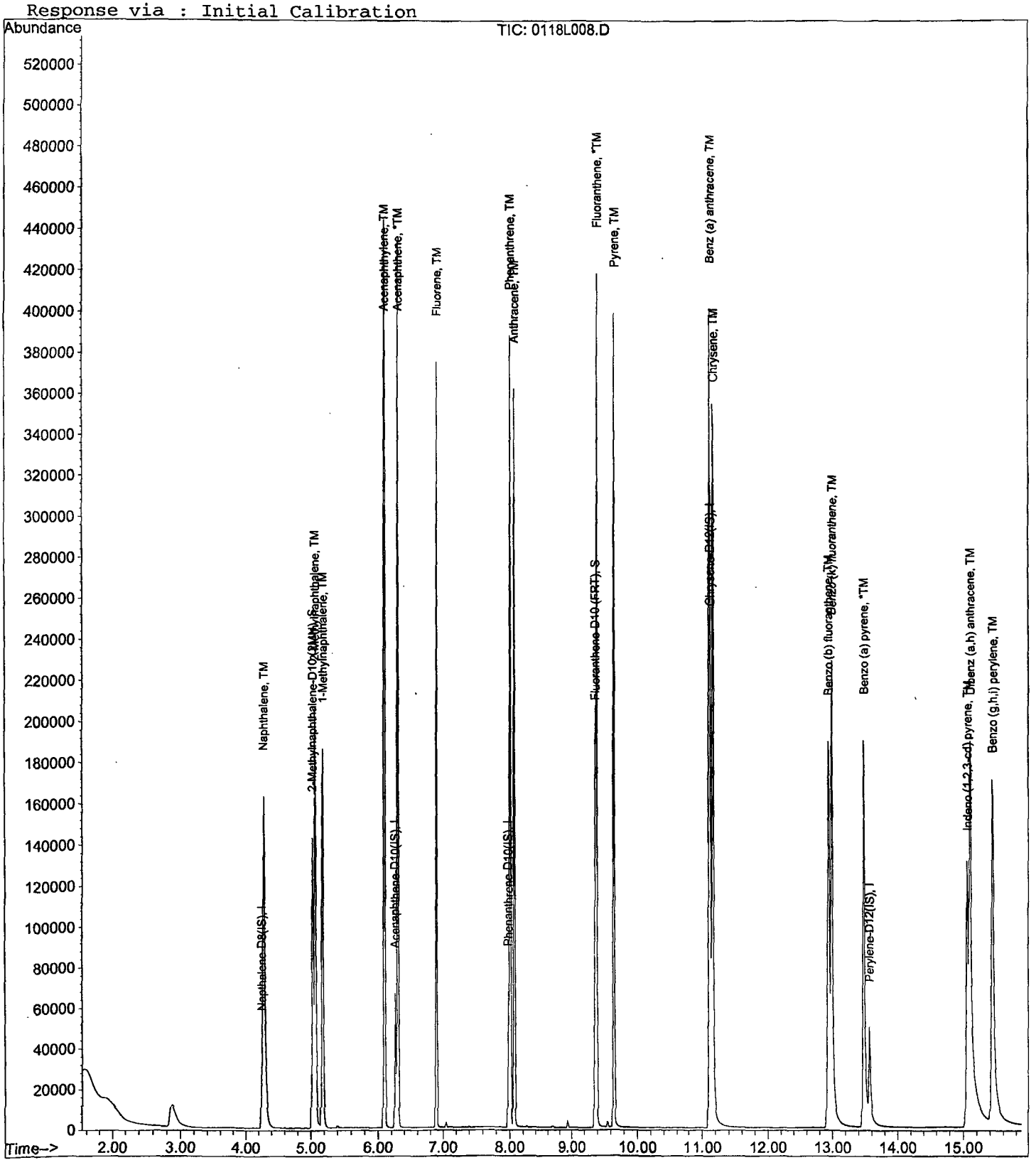
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000 ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275 ppb		0.00
Spiked Amount 5.000			Recovery	= 467.860%		
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323 ppb		0.01
Spiked Amount 5.000			Recovery	= 485.860%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	1196891	46.08087 ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476 ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633 ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017 ppb		97
8) Acenaphthene	6.30	154	631316	43.96491 ppb		89
9) Fluorene	6.89	166	764075	45.63163 ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079 ppb		98
12) Anthracene	8.08	178	1010706	44.13554 ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367 ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458 ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809 ppb		97
18) Chrysene	11.17	228	1338368	43.66618 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600 ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049 ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551 ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246 ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934 ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437 ppb		99

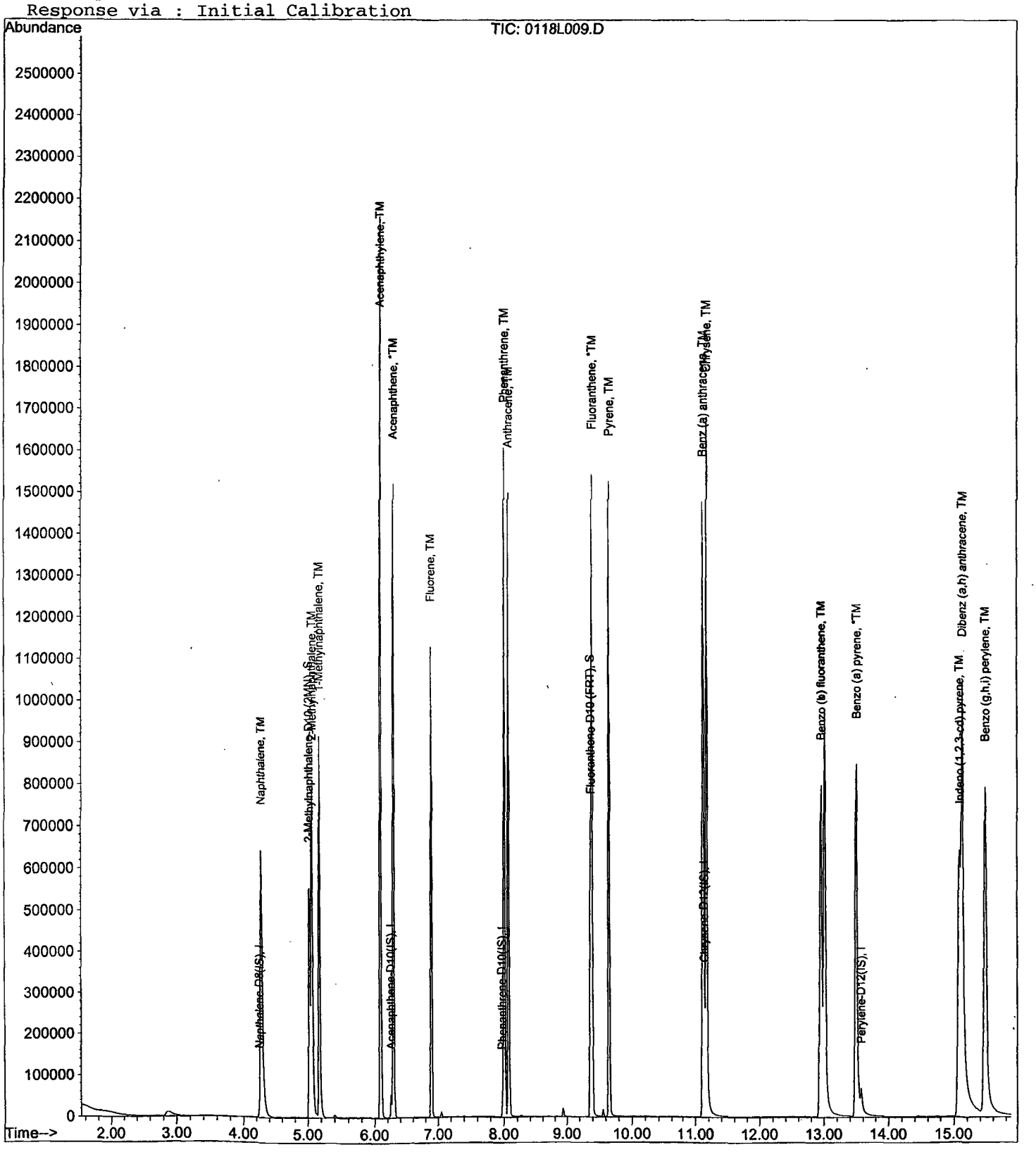
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000	ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000	ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000	ppb		0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210	ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%				
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423	ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	2224048	88.96172	ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956	ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247	ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934	ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300	ppb		96
9) Fluorene	6.90	166	1390953	82.59956	ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367	ppb		97
12) Anthracene	8.09	178	2040467	89.58105	ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099	ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549	ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522	ppb		96
18) Chrysene	11.19	228	2703165	90.38960	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219	ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732	ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829	ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873	ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705	ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621	ppb		99

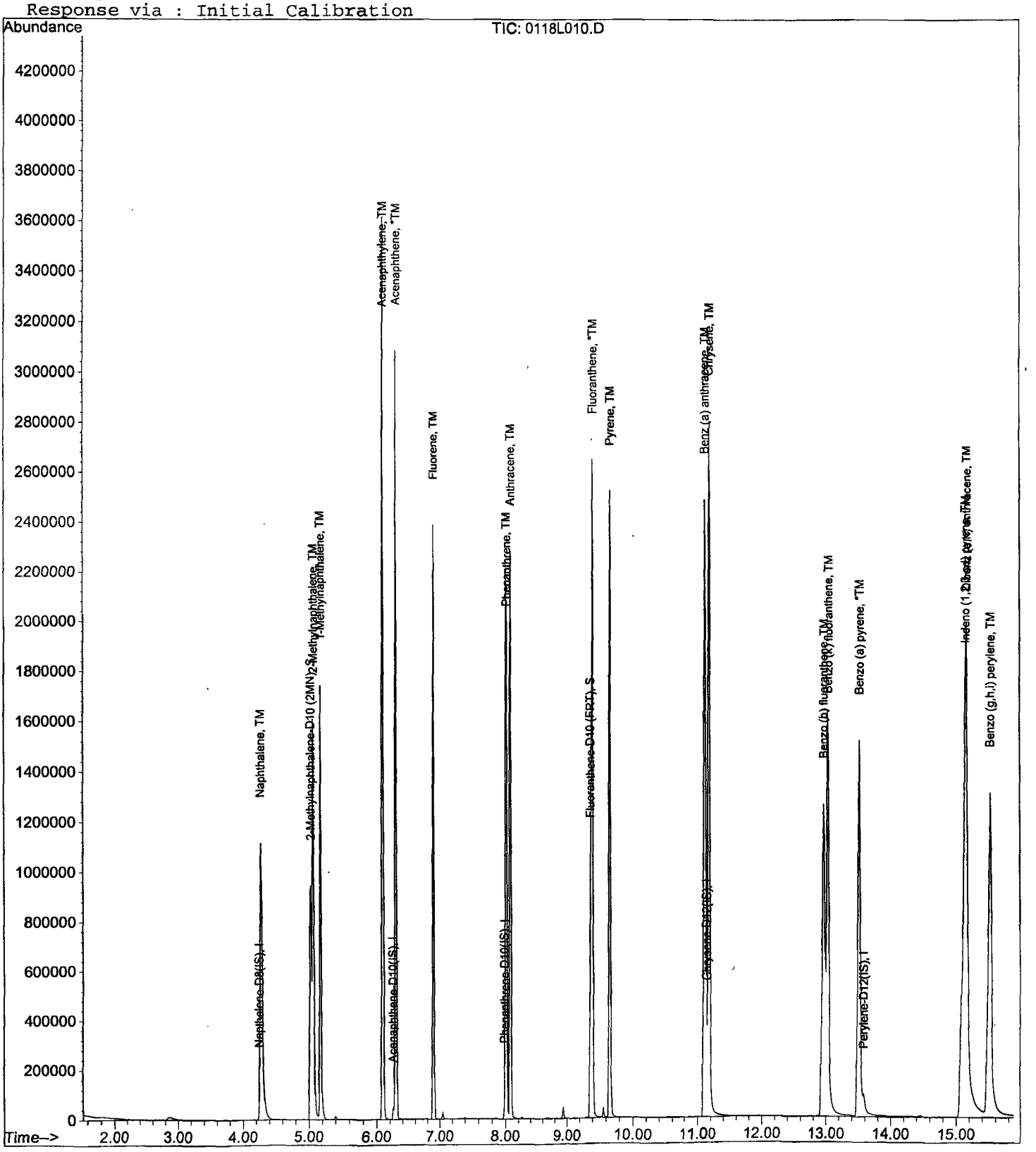
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069 ppb		0.00
Spiked Amount 5.000			Recovery =	0.020%		
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132 ppb		0.00
Spiked Amount 5.000			Recovery =	0.220%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	137423	5.27705 ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831 ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437 ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224 ppb		100
8) Acenaphthene	6.29	154	77645	5.22665 ppb		99
9) Fluorene	6.89	166	92294	5.32787 ppb		100
11) Phenanthrene	8.00	178	132877	5.01426 ppb		100
12) Anthracene	8.06	178	132921	5.59477 ppb		99
14) Fluoranthene	9.39	202	184979	5.26550 ppb		100
16) Pyrene	9.65	202	190804	5.11487 ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082 ppb		100
18) Chrysene	11.15	228	165836	4.93766 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773 ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329 ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901 ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275 ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374 ppb		93

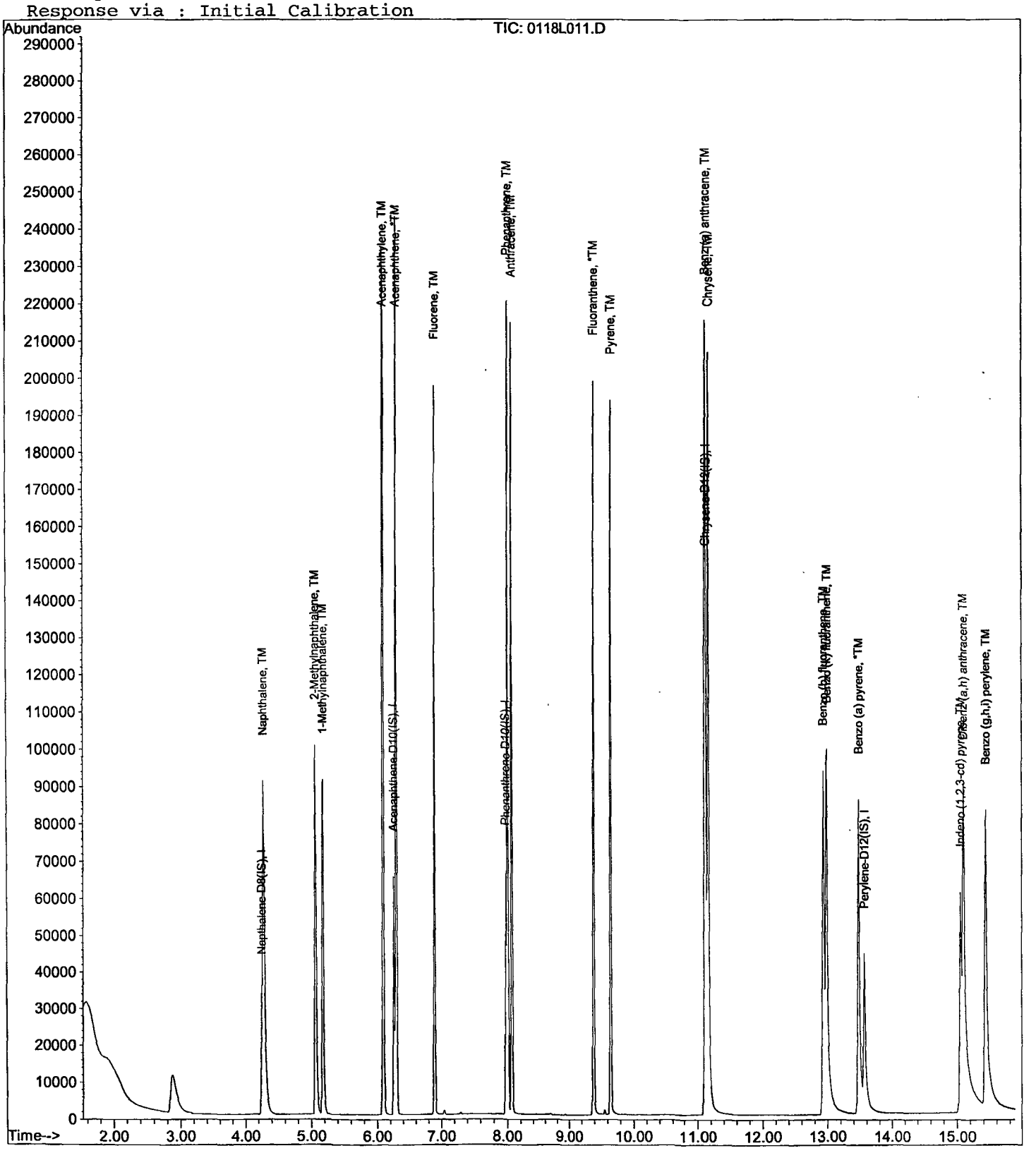
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L035.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.076	5.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.044	2.7	S	
4	TM	2-Methylnaphthalene	0.6368	0.6954	9.2	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6776	6.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.315	6.1	TM	
8	*TM	Acenaphthene	1.188	1.238	4.2	*TM	
9	TM	Fluorene	1.385	1.491	7.6	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.205	4.0	TM	
12	TM	Anthracene	1.039	1.106	6.4	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.348	0.25	S	
14	*TM	Fluoranthene	1.536	1.660	8.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.381	1.4	TM	
17	TM	Benz (a) anthracene	1.150	1.100	4.4	TM	
18	TM	Chrysene	1.226	1.183	3.5	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.107	1.9	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.007	2.8	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.381	9.0	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.059	12	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9671	9.3	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.105	9.5	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.7		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L035.D Vial: 35
Acq On : 25 Jan 21 12:55 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 25 13:41 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64820	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31514	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57372	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69725	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	64837	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	67696	2.43318 ppb		0.00
Spiked Amount 5.000			Recovery	= 48.660%		
13) Fluoranthene-D10 (FRT)	9.37	212	77334	2.49380 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.880%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	139433	5.28683 ppb		99
4) 2-Methylnaphthalene	5.06	142	90150	5.45995 ppb		97
5) 1-Methylnaphthalene	5.17	142	87838	5.34020 ppb		95
7) Acenaphthylene	6.08	152	271956	5.30591 ppb		99
8) Acenaphthene	6.29	154	78010	5.20973 ppb		98
9) Fluorene	6.89	166	93976	5.38211 ppb		98
11) Phenanthrene	8.00	178	138230	5.19853 ppb		100
12) Anthracene	8.06	178	126870	5.32192 ppb		100
14) Fluoranthene	9.39	202	190513	5.40459 ppb		97
16) Pyrene	9.65	202	192578	5.07172 ppb		96
17) Benz (a) anthracene	11.11	228	153431	4.78237 ppb		97
18) Chrysene	11.16	228	164971	4.82561 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.06	276	154332	5.09446 ppb		93
21) Benzo (b) fluoranthene	12.94	252	130572	5.14154 ppb		100
22) Benzo (k) fluoranthene	12.99	252	179036	5.45143 ppb		100
23) Benzo (a) pyrene	13.49	252	137291	5.60648 ppb	#	93
24) Dibenz (a,h) anthracene	15.11	278	125405	5.46307 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	143305	5.47497 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

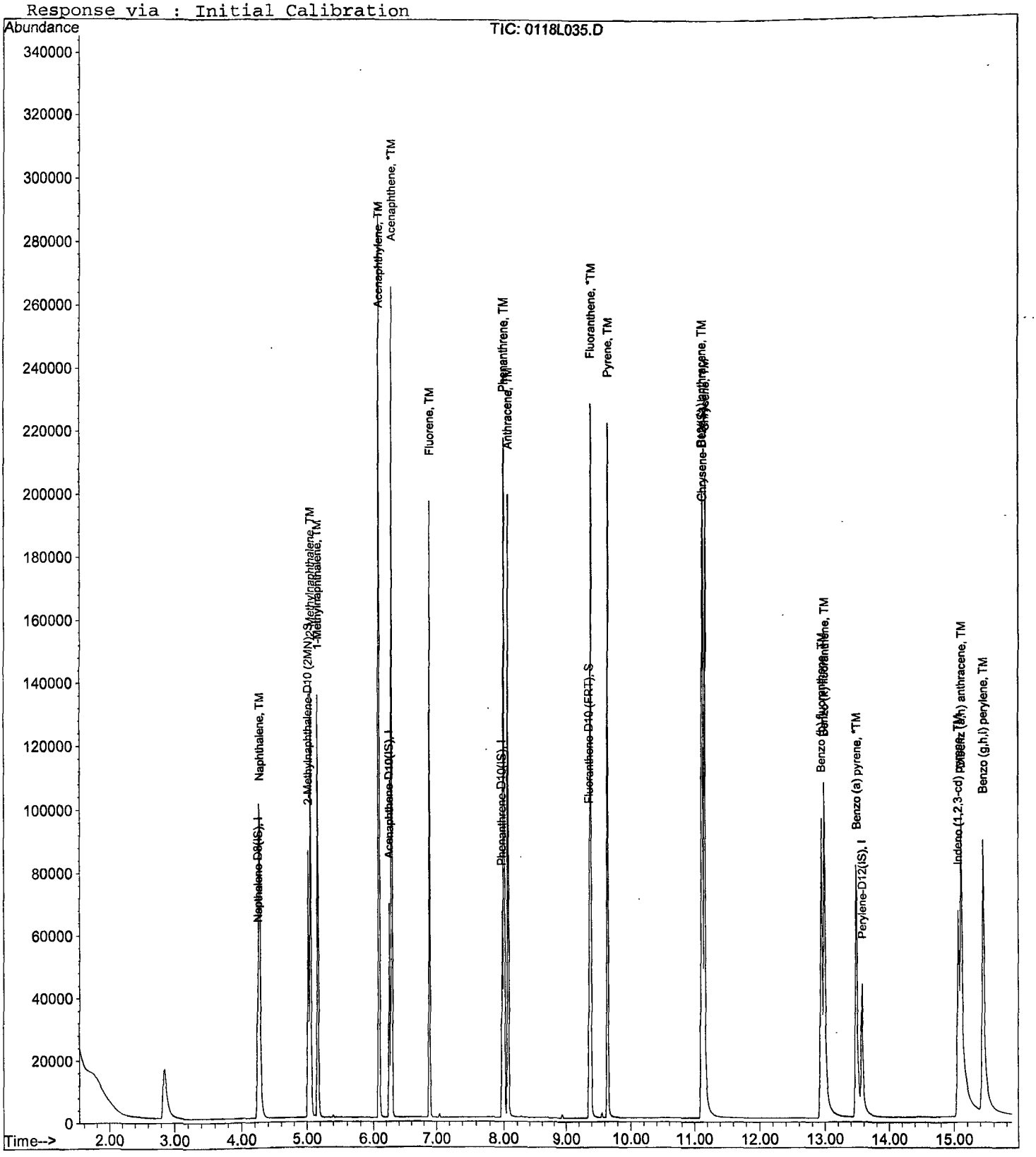
Data File : M:\LINUS\DATA\L210118\0118L035.D
Acq On : 25 Jan 21 12:55
Sample : 5 SIM 01/15/21 (1)
Misc :

Vial: 35
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 25 13:41 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.008	0.86	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.065	0.77	S	
4	TM	2-Methylnaphthalene	0.6368	0.6453	1.3	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6359	0.23	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.302	5.8	TM	
8	*TM	Acenaphthene	1.188	1.210	1.9	*TM	
9	TM	Fluorene	1.385	1.493	7.8	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.191	2.8	TM	
12	TM	Anthracene	1.039	1.103	6.2	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.363	0.90	S	
14	*TM	Fluoranthene	1.536	1.684	9.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.418	4.2	TM	
17	TM	Benz (a) anthracene	1.150	1.150	0.07	TM	
18	TM	Chrysene	1.226	1.252	2.2	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.246	15	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.175	20	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.259	0.59	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.091	16	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.047	18	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.119	11	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71331	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32623	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	60248	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72741	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	71783	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	75956	2.48087 ppb		0.00
Spiked Amount 5.000			Recovery = 49.620%			
13) Fluoranthene-D10 (FRT)	9.37	212	82143	2.52243 ppb		0.00
Spiked Amount 5.000			Recovery = 50.440%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	143861	4.95682 ppb		99
4) 2-Methylnaphthalene	5.06	142	92066	5.06702 ppb		98
5) 1-Methylnaphthalene	5.17	142	90713	5.01158 ppb		94
7) Acenaphthylene	6.08	152	280660	5.28958 ppb		99
8) Acenaphthene	6.29	154	78958	5.09378 ppb		99
9) Fluorene	6.89	166	97434	5.39046 ppb		99
11) Phenanthrene	8.00	178	143550	5.14089 ppb		100
12) Anthracene	8.06	178	132876	5.30779 ppb		100
14) Fluoranthene	9.39	202	202912	5.48155 ppb		98
16) Pyrene	9.65	202	206359	5.20932 ppb		97
17) Benz (a) anthracene	11.11	228	167243	4.99674 ppb		99
18) Chrysene	11.15	228	182215	5.10902 ppb	#	97
19) Indeno (1,2,3-cd) pyrene	15.06	276	181207	5.73359 ppb		96
21) Benzo (b) fluoranthene	12.93	252	168697	6.00001 ppb		97
22) Benzo (k) fluoranthene	12.99	252	180733	4.97060 ppb		97
23) Benzo (a) pyrene	13.48	252	156659	5.77836 ppb		95
24) Dibenz (a,h) anthracene	15.11	278	150309	5.91437 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	160638	5.54332 ppb	#	90

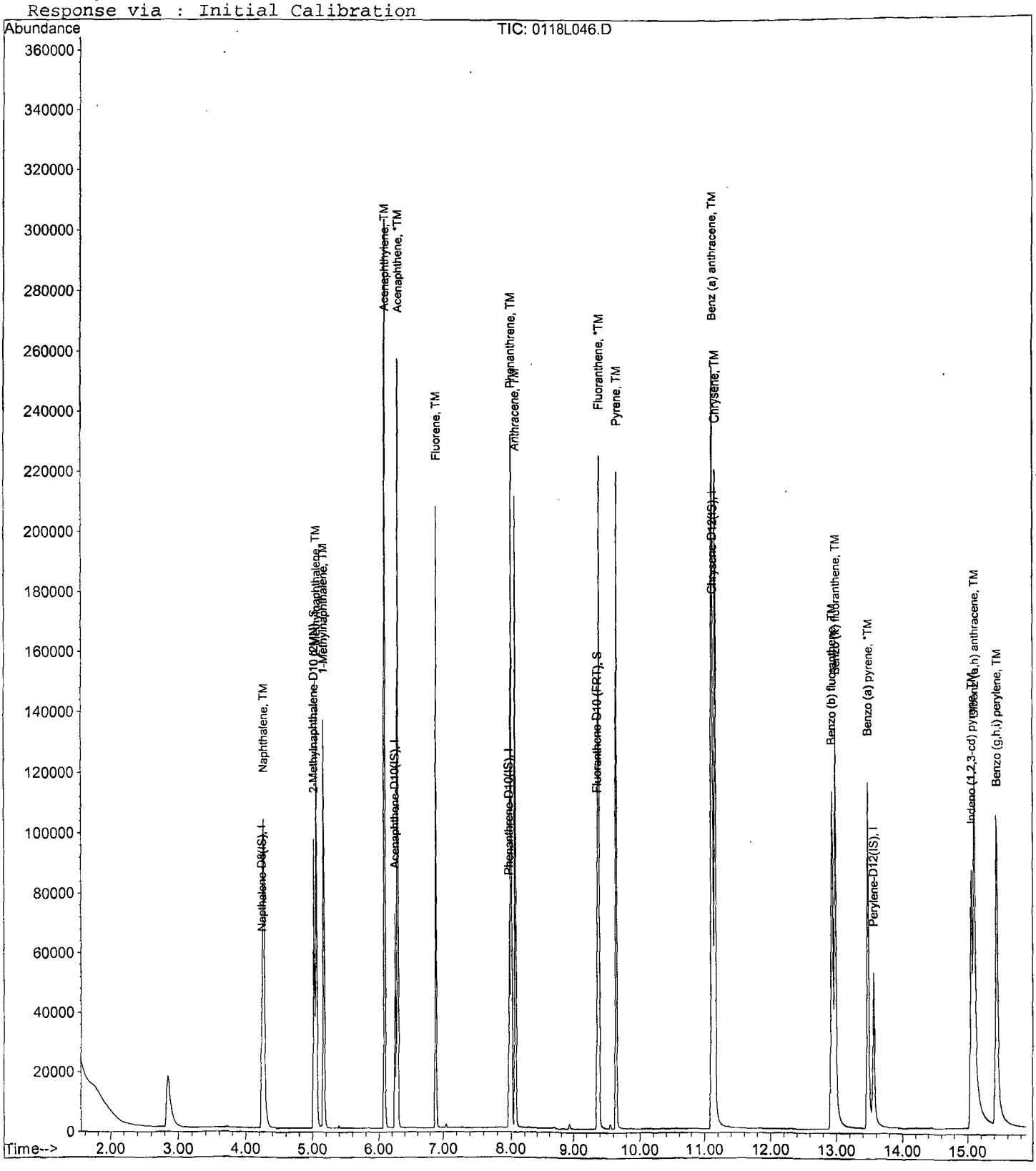
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L040.D Vial: 40
Acq On : 25 Jan 21 18:06 Operator: MA
Sample : BA25434W23 1/980 Inst : Linus
Misc : Multiplr: 1.02

Quant Time: Jan 26 9:47 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65359	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31129	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	56612	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	69714	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	65273	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	124679	4.53506 ppb	0.00
Spiked Amount 5.102			Recovery	= 88.886%	
13) Fluoranthene-D10 (FRT)	9.37	212	162111	5.40593 ppb	0.00
Spiked Amount 5.102			Recovery	= 105.958%	

Target Compounds Qvalue

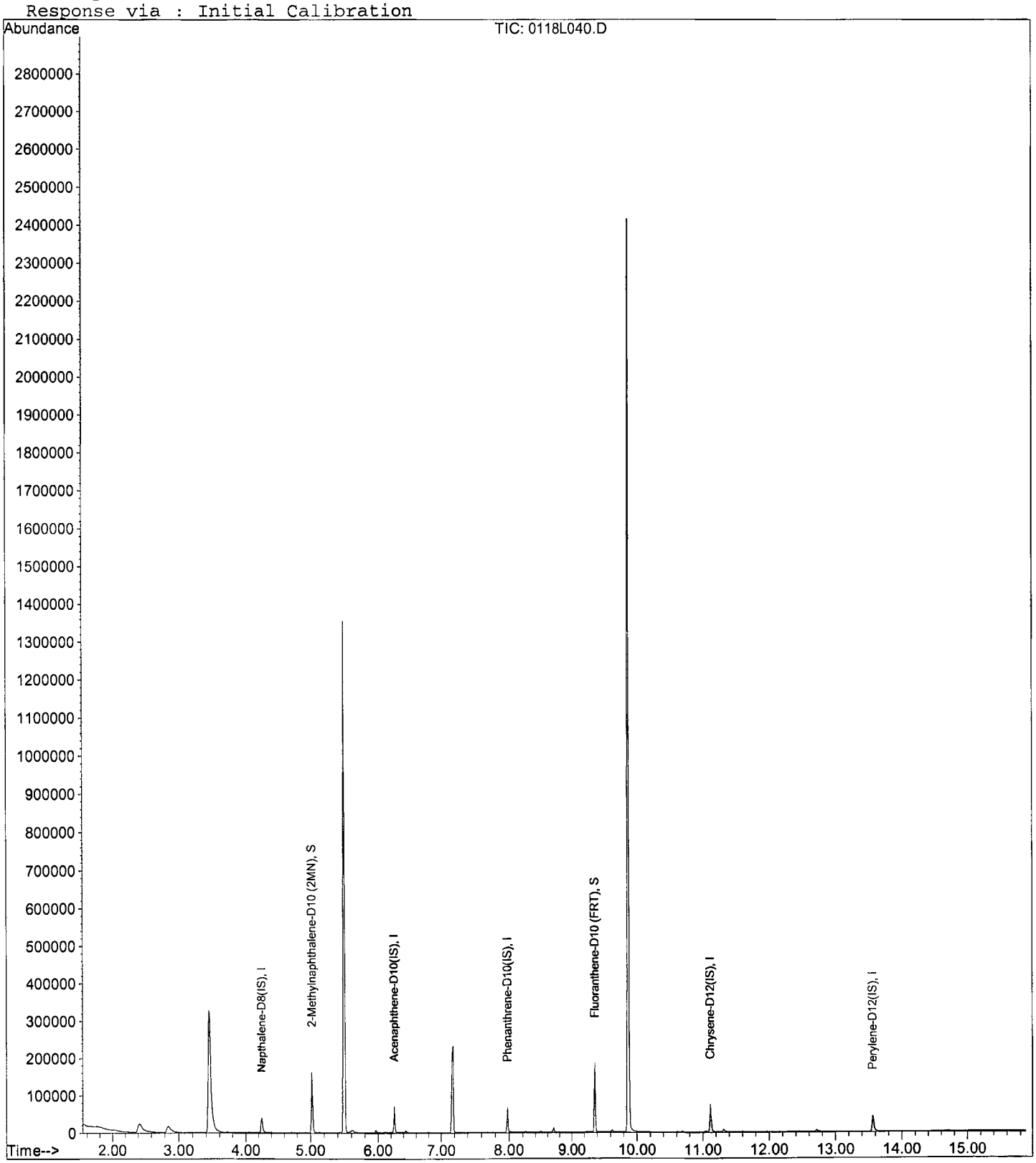
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L040.D Vial: 40
Acq On : 25 Jan 21 18:06 Operator: MA
Sample : BA25434W23 1/980 Inst : Linus
Misc : Multiplr: 1.02

Quant Time: Jan 26 9:47 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64715	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.27	164	29769	2.50000	ppb	0.01
10) Phenanthrene-D10(IS)	7.99	188	53529	2.50000	ppb	0.01
15) Chrysene-D12(IS)	11.13	240	62085	2.50000	ppb	0.01
20) Perylene-D12(IS)	13.58	264	58308	2.50000	ppb	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	85383	3.84235	ppb	0.00
Spiked Amount 6.250			Recovery = 61.472%			
13) Fluoranthene-D10 (FRT)	9.38	212	96778	4.18109	ppb	0.01
Spiked Amount 6.250			Recovery = 66.896%			

Target Compounds Qvalue

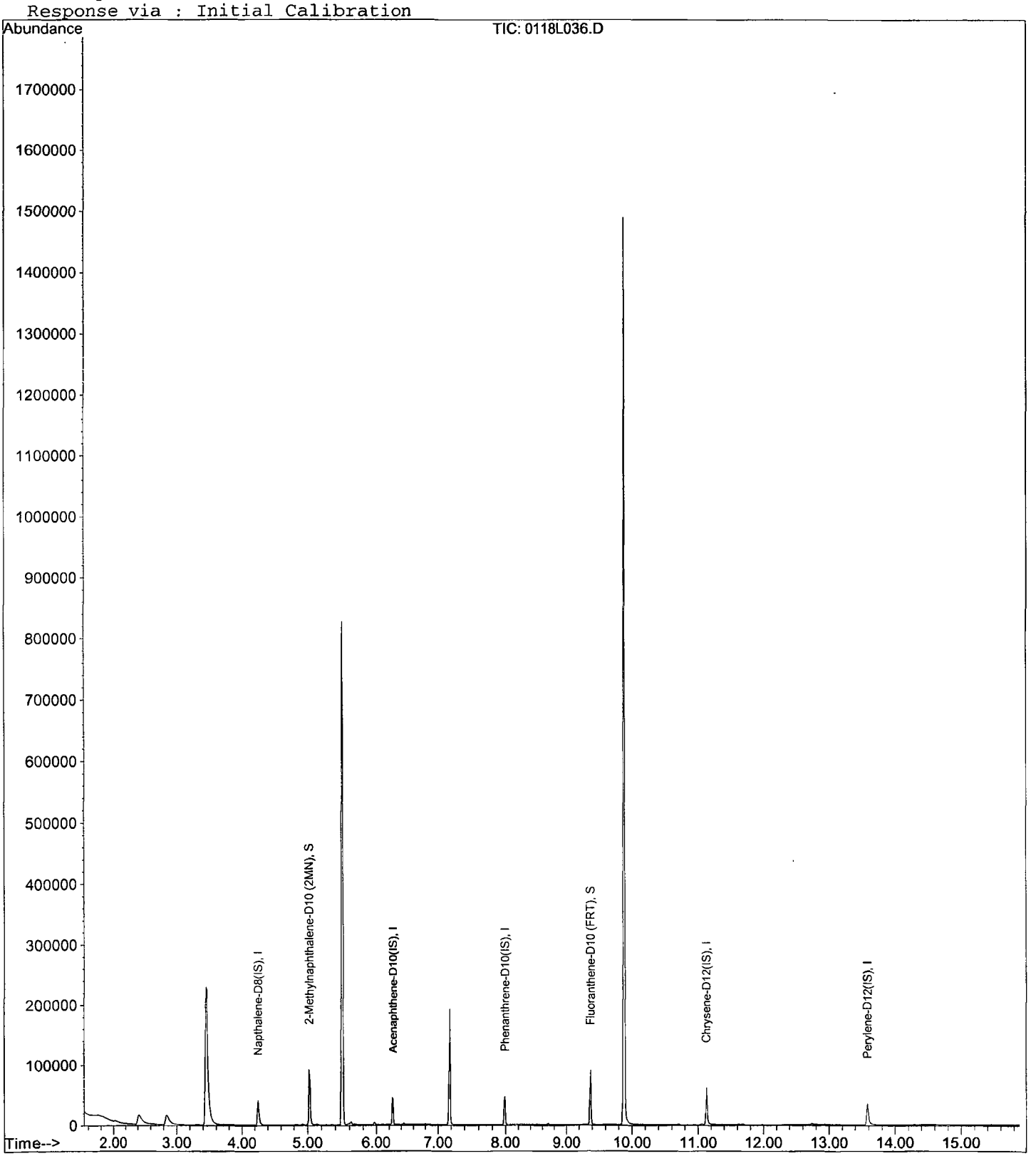
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L037.D Vial: 37
Acq On : 25 Jan 21 17:00 Operator: MA
Sample : 210122A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 25 17:16 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64477	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30653	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55532	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67366	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	63014	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	127177	5.74426 ppb		0.00
Spiked Amount 6.250			Recovery	= 91.904%		
13) Fluoranthene-D10 (FRT)	9.37	212	151551	6.31127 ppb		0.00
Spiked Amount 6.250			Recovery	= 100.976%		
Target Compounds						Qvalue
2) Naphthalene	4.26	128	117943	5.61974 ppb		100
4) 2-Methylnaphthalene	5.06	142	74143	5.64296 ppb		97
5) 1-Methylnaphthalene	5.17	142	73486	5.61427 ppb		96
7) Acenaphthylene	6.08	152	223120	5.59423 ppb		99
8) Acenaphthene	6.29	154	65314	5.60546 ppb		98
9) Fluorene	6.89	166	80637	5.93486 ppb		98
11) Phenanthrene	8.00	178	119939	5.82513 ppb		100
12) Anthracene	8.06	178	98983	5.36213 ppb		100
14) Fluoranthene	9.39	202	169711	6.21749 ppb		97
16) Pyrene	9.65	202	169504	5.77546 ppb		98
17) Benz (a) anthracene	11.11	228	135423	5.46110 ppb		98
18) Chrysene	11.16	228	154553	5.84897 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	141648	6.04938 ppb		99
21) Benzo (b) fluoranthene	12.94	252	134850	6.82951 ppb		99
22) Benzo (k) fluoranthene	12.99	252	155948	6.10725 ppb		98
23) Benzo (a) pyrene	13.48	252	107521	5.64725 ppb		97
24) Dibenz (a,h) anthracene	15.11	278	117295	6.57200 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	126635	6.22257 ppb		91

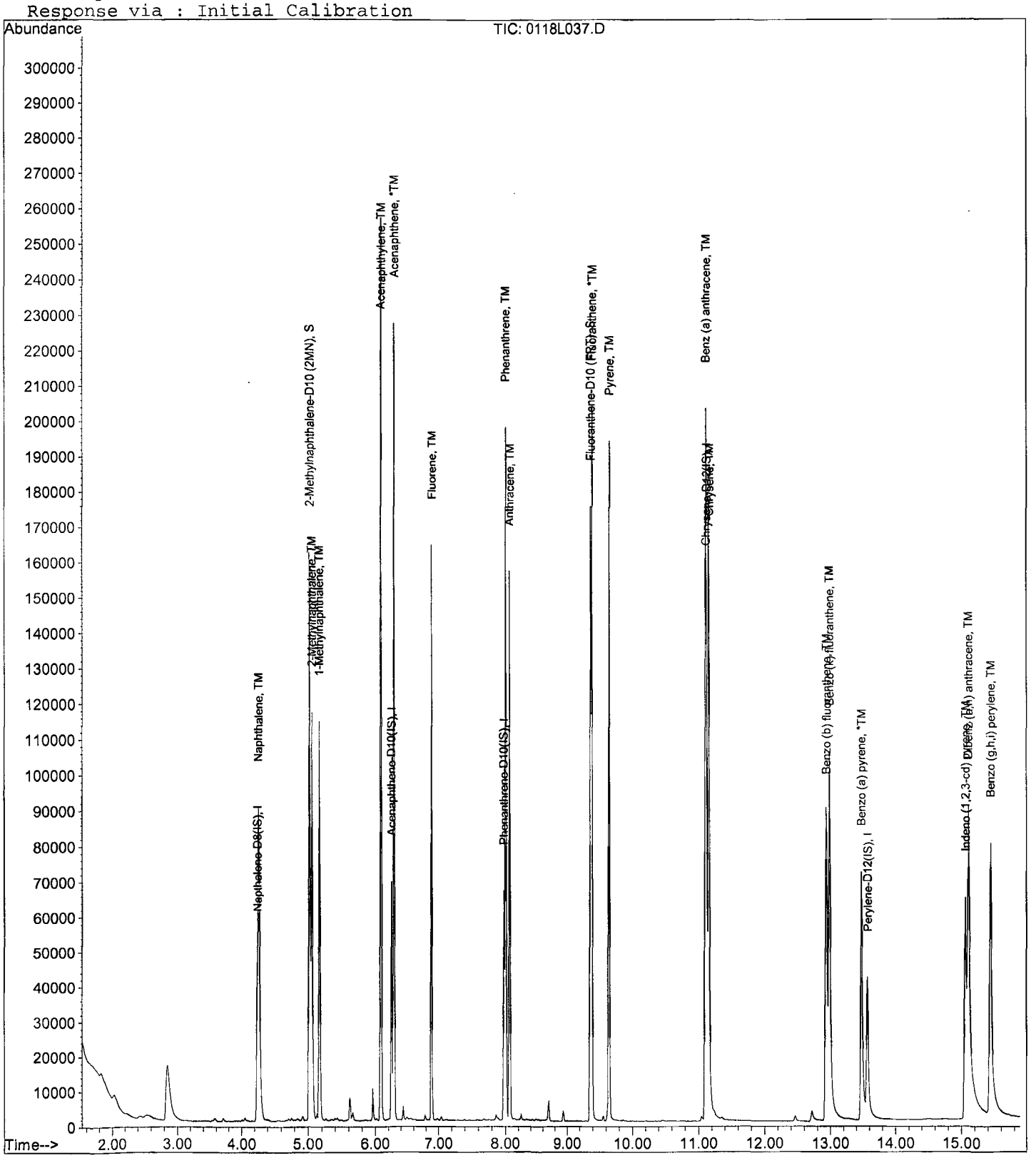
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L037.D Vial: 37
Acq On : 25 Jan 21 17:00 Operator: MA
Sample : 210122A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 25 17:16 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L038.D Vial: 38
Acq On : 25 Jan 21 17:22 Operator: MA
Sample : BA25434W16 MS-2 1/900 Inst : Linus
Misc : Multiplr: 1.11

Quant Time: Jan 25 18:08 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65468	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30846	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	56528	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69951	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	65583	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	118945	4.70321	ppb		0.00
Spiked Amount 5.556			Recovery = 84.654%				
13) Fluoranthene-D10 (FRT)	9.37	212	159755	5.80951	ppb		0.00
Spiked Amount 5.556			Recovery = 104.580%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	108266	4.51605	ppb		99
4) 2-Methylnaphthalene	5.06	142	70308	4.68451	ppb		97
5) 1-Methylnaphthalene	5.17	142	69868	4.67294	ppb		95
7) Acenaphthylene	6.08	152	228353	5.05743	ppb		99
8) Acenaphthene	6.29	154	64435	4.88482	ppb		98
9) Fluorene	6.89	166	81835	5.32030	ppb		98
11) Phenanthrene	8.00	178	125064	5.30400	ppb		100
12) Anthracene	8.06	178	107636	5.09168	ppb		100
14) Fluoranthene	9.39	202	179002	5.72650	ppb		99
16) Pyrene	9.65	202	183753	5.35963	ppb		100
17) Benz (a) anthracene	11.11	228	149007	5.14385	ppb		99
18) Chrysene	11.15	228	162605	5.26781	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.06	276	156056	5.70525	ppb	#	96
21) Benzo (b) fluoranthene	12.93	252	149578	6.46993	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	164207	5.49225	ppb		97
23) Benzo (a) pyrene	13.48	252	125898	5.64749	ppb		95
24) Dibenz (a,h) anthracene	15.11	278	128944	6.17038	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	138510	5.81286	ppb		97

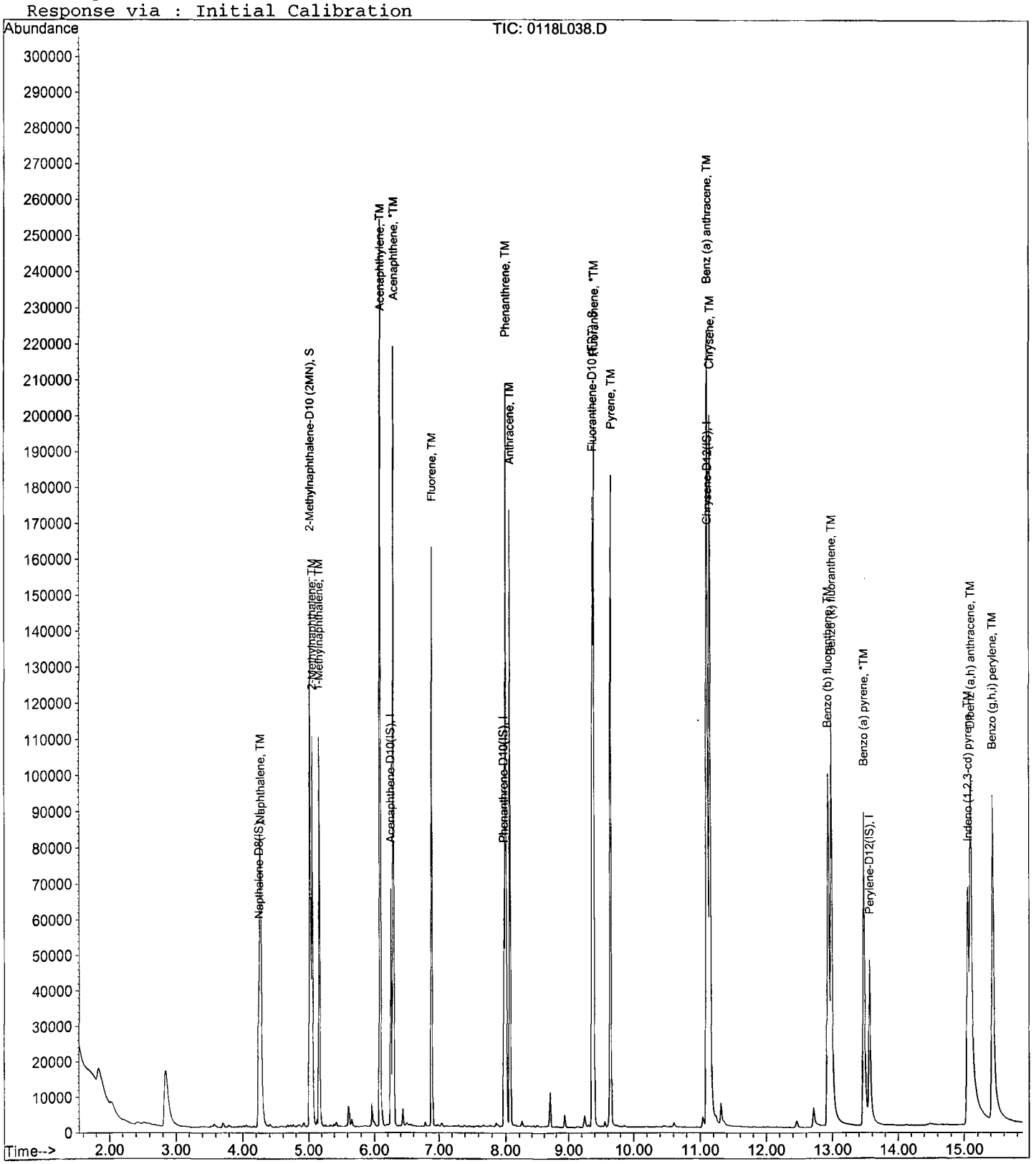
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L038.D Vial: 38
Acq On : 25 Jan 21 17:22 Operator: MA
Sample : BA25434W16 MS-2 1/900 Inst : Linus
Misc : Multiplr: 1.11

Quant Time: Jan 25 18:08 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L039.D Vial: 39
Acq On : 25 Jan 21 17:44 Operator: MA
Sample : BA25434W18 MSD-2 1/900 Inst : Linus
Misc : Multiplr: 1.11

Quant Time: Jan 25 18:08 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64705	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30138	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	56030	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68204	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	64404	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	105747	4.23065	ppb		0.00
Spiked Amount 5.556			Recovery = 76.158%				
13) Fluoranthene-D10 (FRT)	9.37	212	147451	5.40973	ppb		0.00
Spiked Amount 5.556			Recovery = 97.380%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	94320	3.98072	ppb		99
4) 2-Methylnaphthalene	5.06	142	61833	4.16842	ppb		98
5) 1-Methylnaphthalene	5.17	142	61635	4.17091	ppb		96
7) Acenaphthylene	6.08	152	202257	4.58470	ppb		99
8) Acenaphthene	6.29	154	58387	4.53030	ppb		98
9) Fluorene	6.89	166	75568	5.02828	ppb		99
11) Phenanthrene	8.00	178	117020	5.00697	ppb		100
12) Anthracene	8.06	178	99452	4.74635	ppb		100
14) Fluoranthene	9.39	202	165331	5.33616	ppb		100
16) Pyrene	9.65	202	168782	5.04906	ppb		99
17) Benz (a) anthracene	11.11	228	137640	4.87316	ppb		99
18) Chrysene	11.15	228	149058	4.95263	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.06	276	144267	5.40935	ppb	#	96
21) Benzo (b) fluoranthene	12.93	252	126084	5.55354	ppb		98
22) Benzo (k) fluoranthene	12.99	252	161792	5.51054	ppb		97
23) Benzo (a) pyrene	13.48	252	117268	5.35667	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	119947	5.84492	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	128668	5.49868	ppb		98

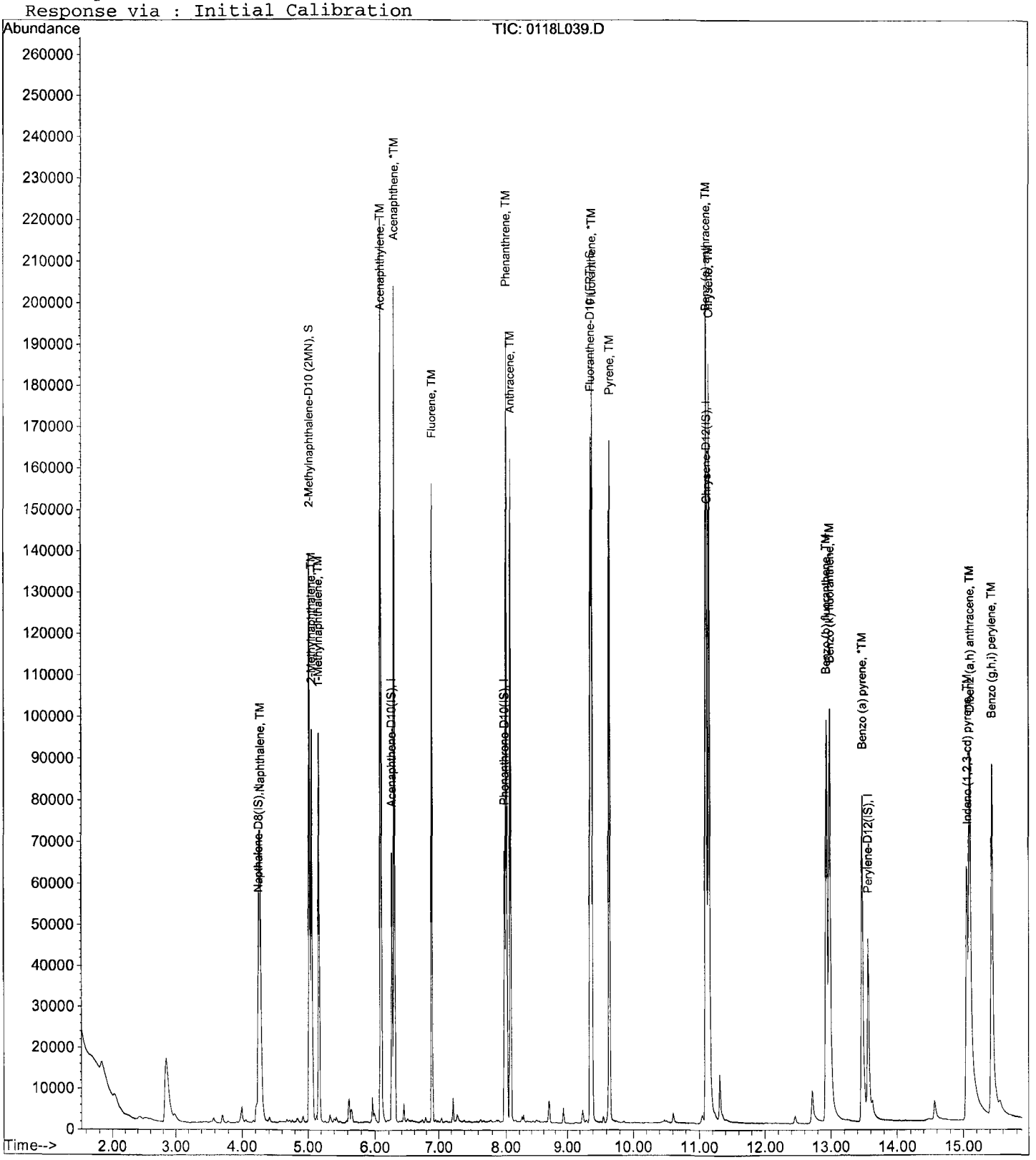
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L039.D Vial: 39
Acq On : 25 Jan 21 17:44 Operator: MA
Sample : BA25434W18 MSD-2 1/900 Inst : Linus
Misc : Multiplr: 1.11

Quant Time: Jan 25 18:08 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration

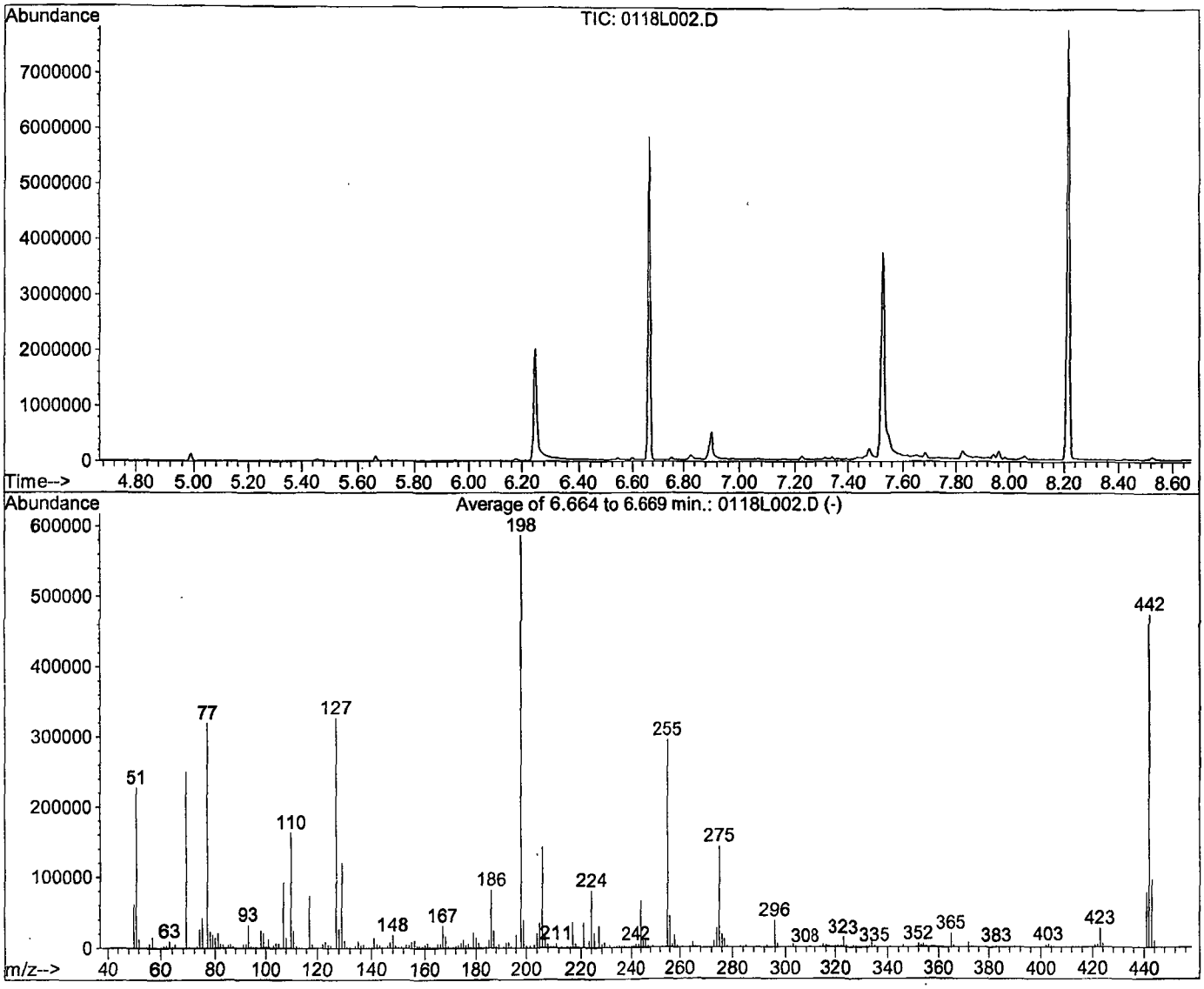


DFTPP

Data File : M:\LINUS\DATA\L210118\0118L002.D
Acq On : 18 Jan 21 11:17
Sample : SV Tune 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

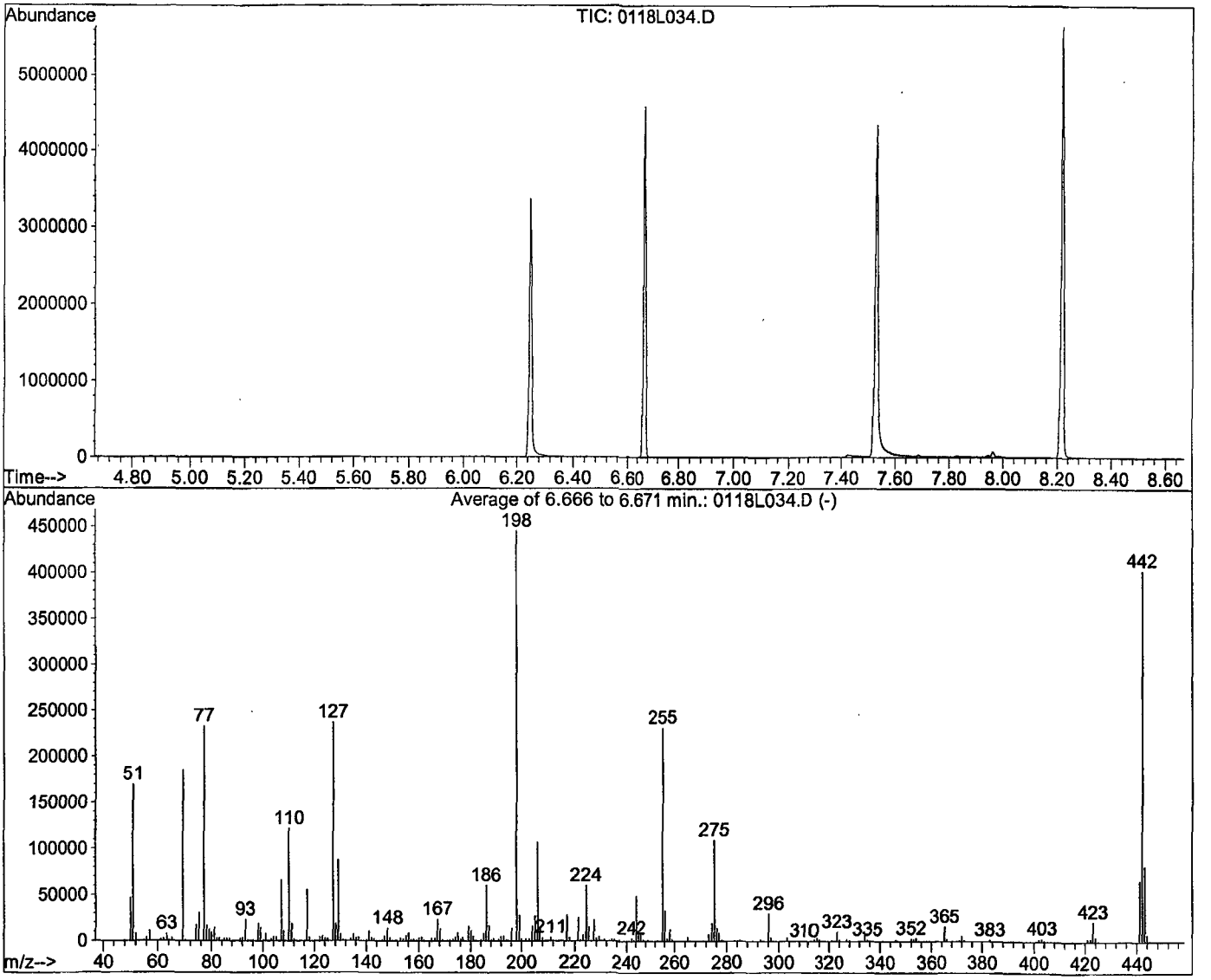
Breakdown **1.63**

DFTPP

Data File : M:\LINUS\DATA\L210118\0118L034.D
Acq On : 25 Jan 21 12:39
Sample : SV TUNE 10/02/20
Misc :

Vial: 34
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1639, 1640, 1641; Background Corrected with Scan 1630

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.1	169813	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1087	PASS
127	198	10	80	53.2	237333	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	445845	PASS
199	198	5	9	6.3	28235	PASS
275	198	10	60	24.5	109365	PASS
365	198	1	100	3.5	15823	PASS
441	442	0.01	24	16.5	66579	PASS
442	198	50	500	90.5	403563	PASS
443	442	15	24	20.2	81613	PASS

Data File Name:	**0118L034.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:39**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**34**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	36454500
2)	DDD	7.98	511535
3)	DDE	7.69	140202

Breakdown **1.76**

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**	**Prep'd By**	**MA**
Prep Date	**01/14/21**		
Exp Date	**01/14/22**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate	Prep'd By (Initials)	CD
Prep Date	08/11/20		
Exp Date	04/01/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0154854-49995,49992,50255,50256,50257**	**10/01/25**	5mL	100 mL	**Acetone #0234320**	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**	**Prep'd By (Initials)**	**CD**
Prep Date	**06/19/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Name of Final Standard	**SIM Spike**
Prep Date	**09/11/20**
Exp Date	**09/11/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	**CL13121- 41545 41546 41547 49548**	**12/31/22**	5 mL	25 mL	**Acetone 0246130**	40 ug/mL

Name of Final Standard	**SIM Surrogate**	Prep'd By (Initials)	LS
Prep Date	11/30/20		
Exp Date	11/30/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0154854-50257, 50258, 50259 A0161454-50790, 50794**	**10/31/2025 5/31/26**	5mL	100 mL	**Acetone #246130**	100 ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
34	0118L034.D	1	SV TUNE 10/02/20		25 Jan 21 12:39
35	0118L035.D	1	5 SIM 01/15/21 (1)		25 Jan 21 12:55
36	0118L036.D	1.25	210122A BLK 1/800		25 Jan 21 16:38
37	0118L037.D	1.25	210122A LCS-2 1/800		25 Jan 21 17:00
38	0118L038.D	1.11111	BA25434W16 MS-2 1/900		25 Jan 21 17:22
39	0118L039.D	1.11111	BA25434W18 MSD-2 1/900		25 Jan 21 17:44
40	0118L040.D	1.02041	BA25434W23 1/980		25 Jan 21 18:06
46	0118L046.D	1	5 SIM 08/21/20		25 Jan 21 20:18

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO
Initials: HA

			0125K004.D	0125K005.D	0125K006 D	0125K007 D	0125K003.D	0125K008 D	0125K009.D	0125K010 D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
4																		
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Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

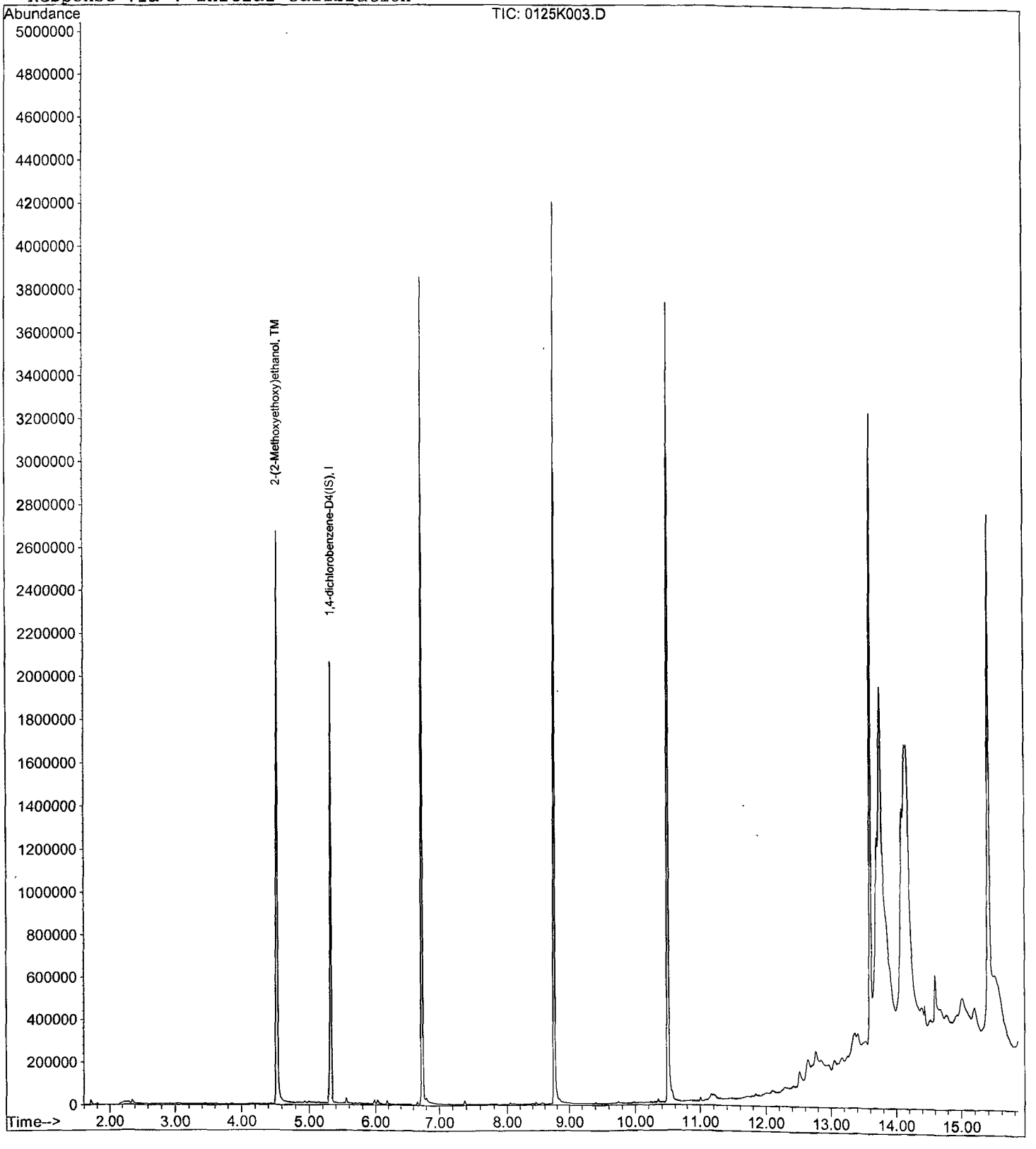
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

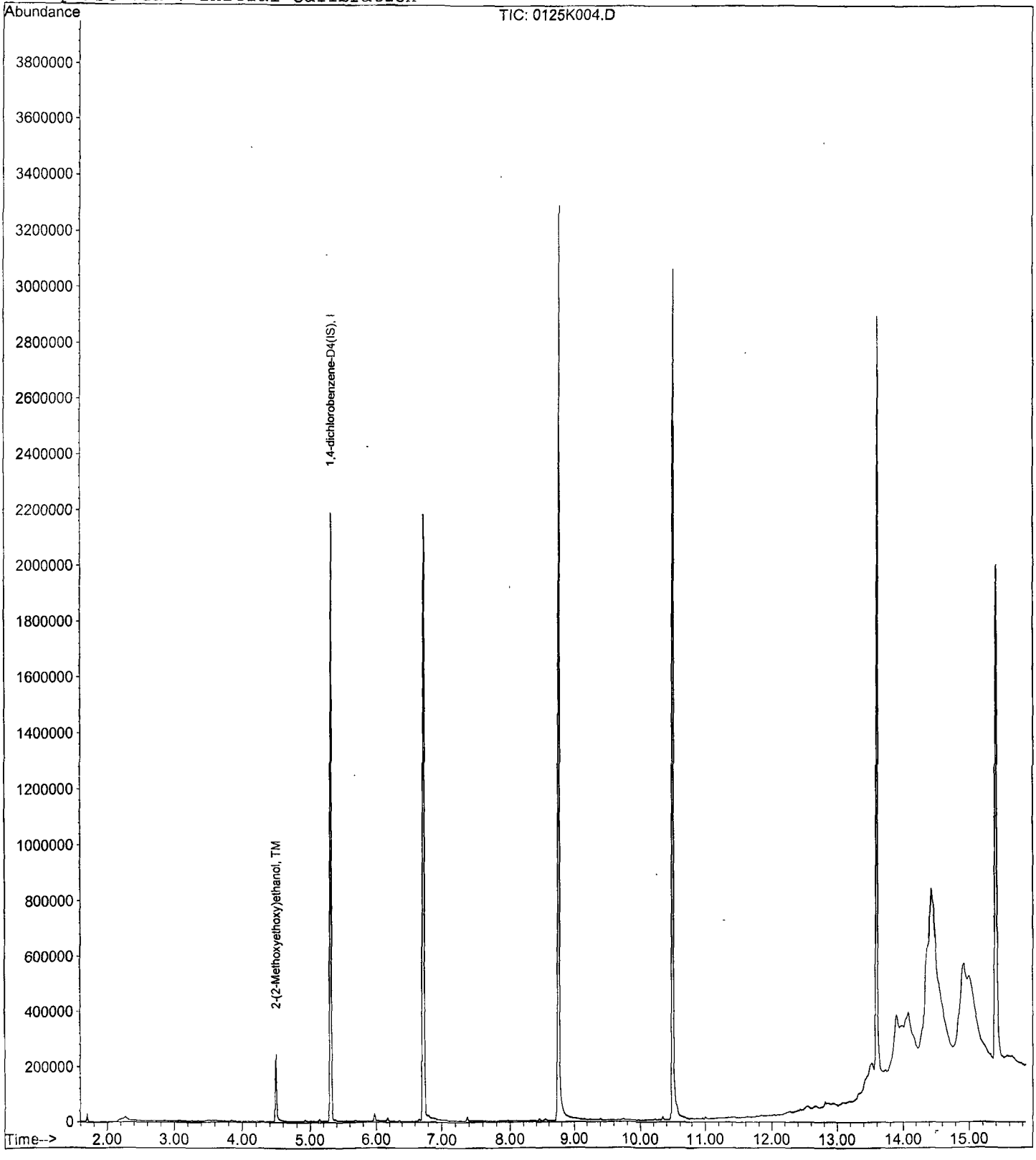
Data File : M:\KYLO\DATA\210125M\0125K004.D
Acq On : 25 Jan 21 13:07
Sample : 2MEE 50 5/1/20
Misc :

Vial: 4
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 25 15:36 2021

Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

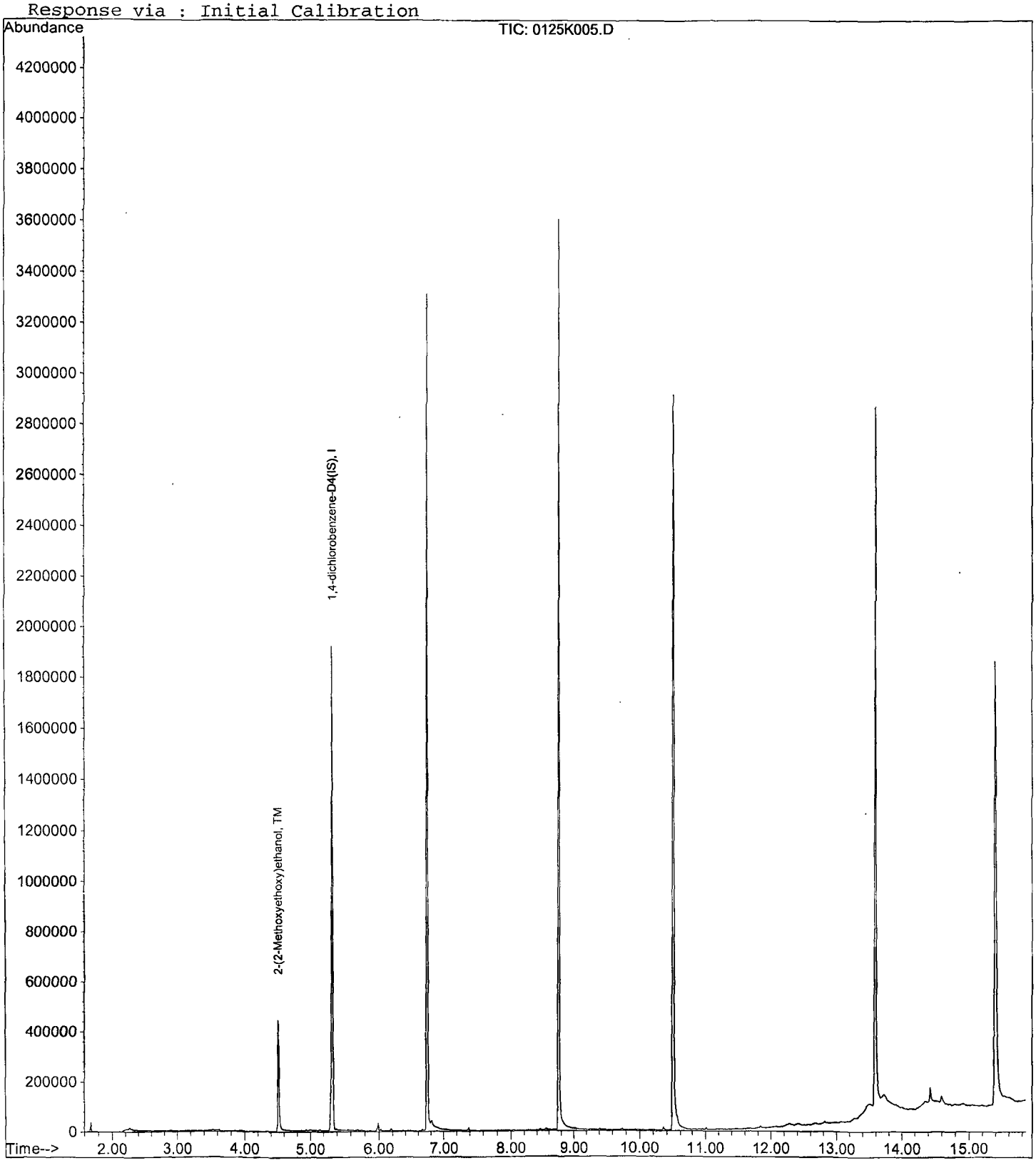
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

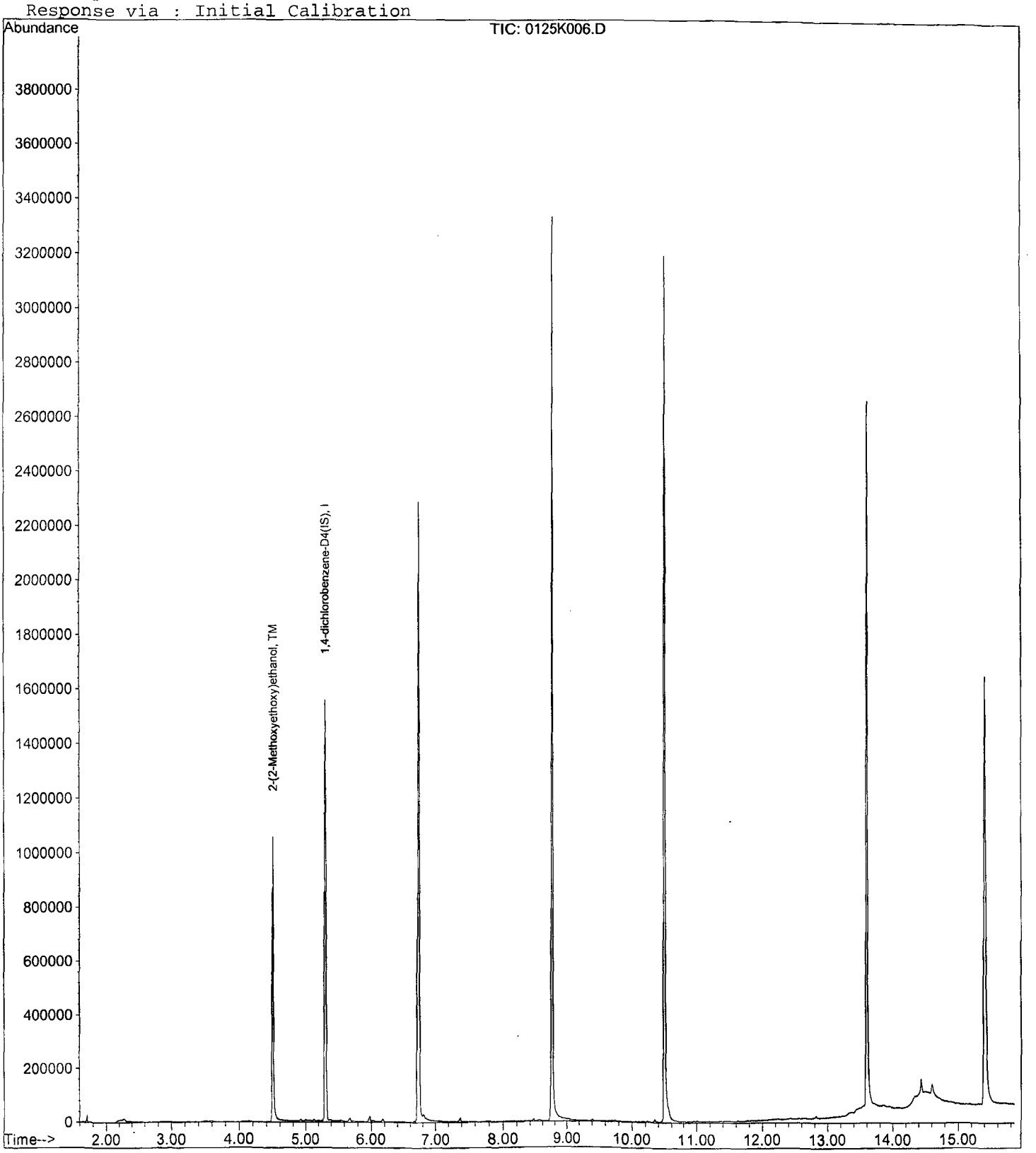
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000 ppb	-0.02
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274 ppb	99

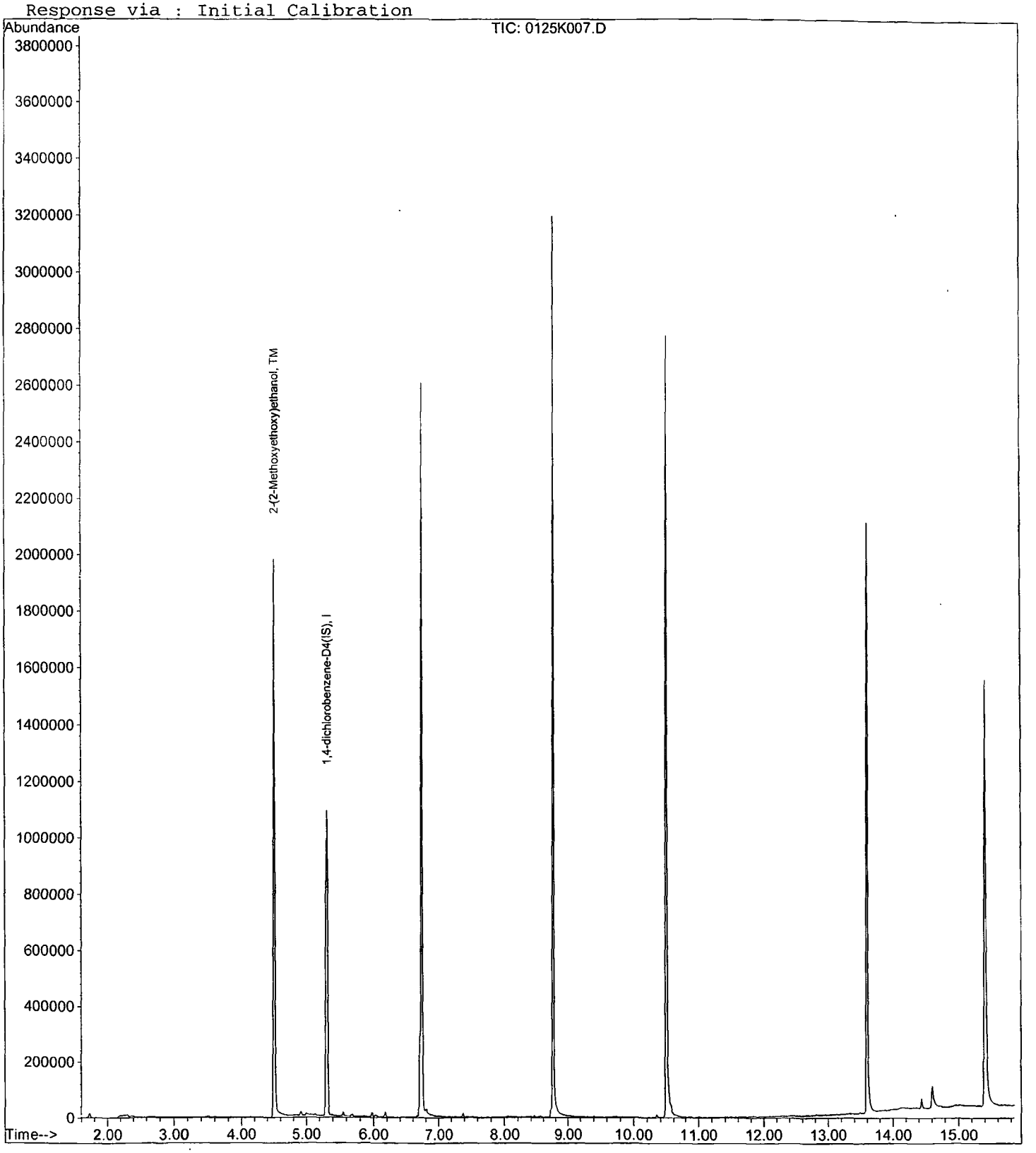
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

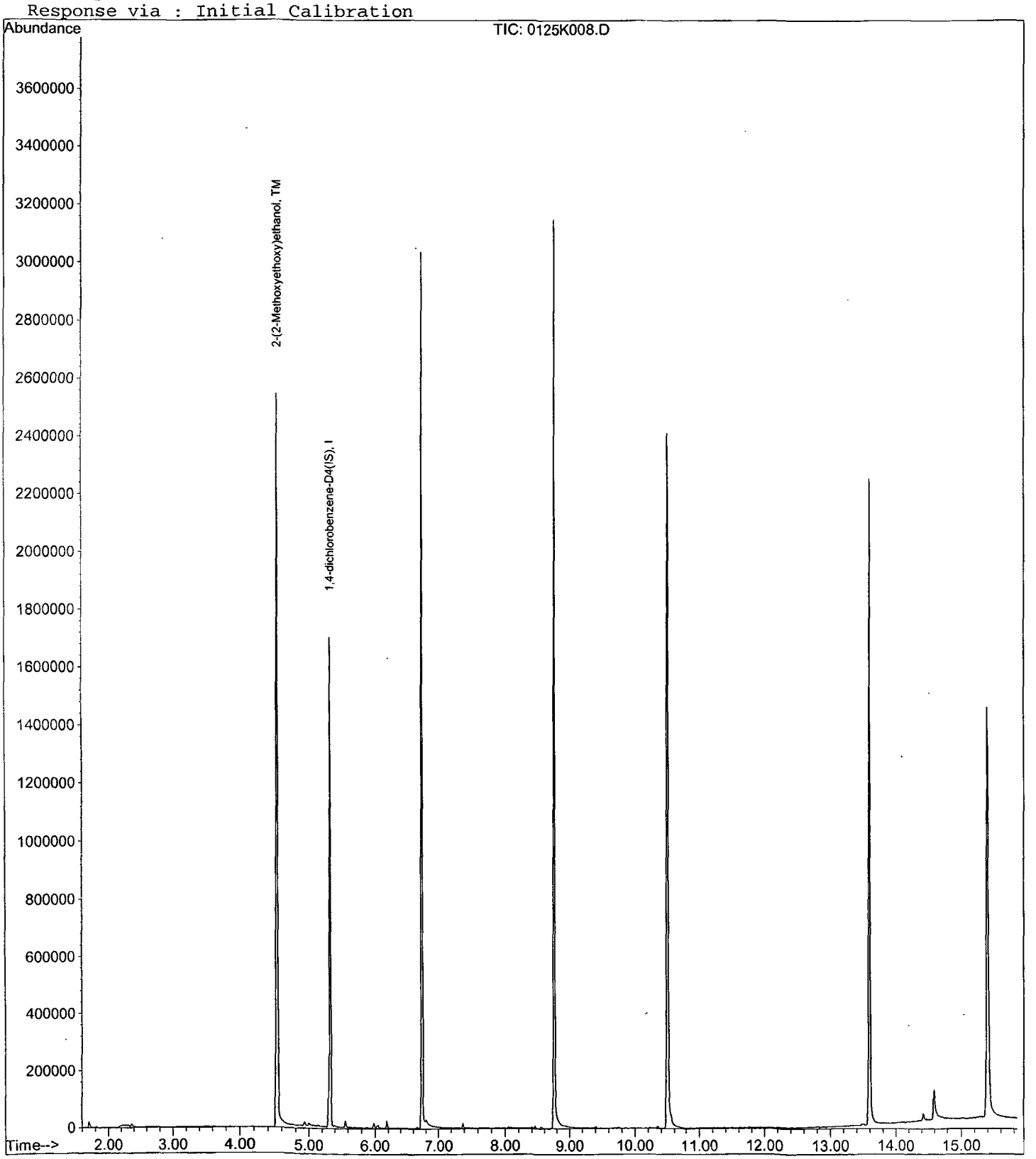
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

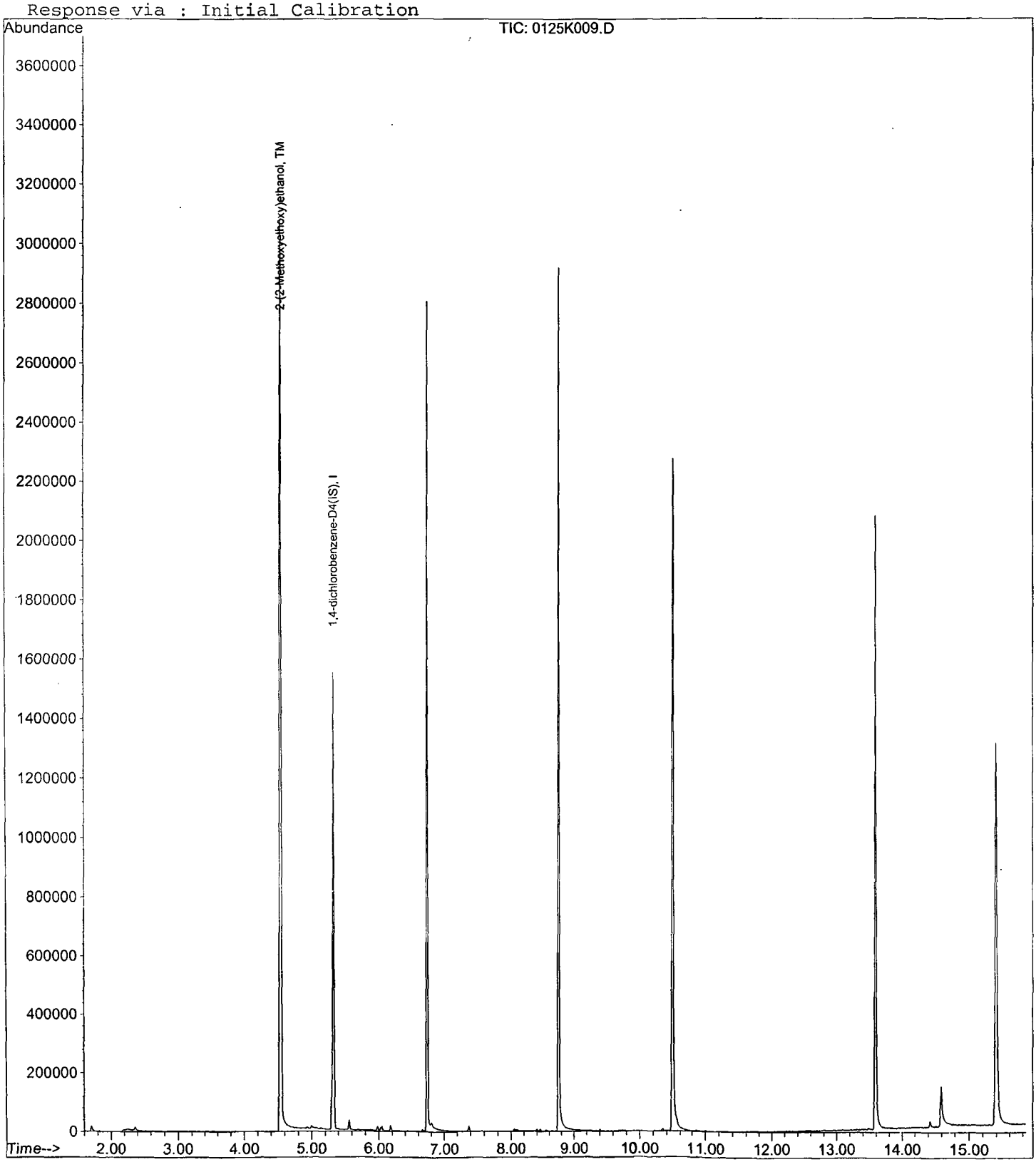
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

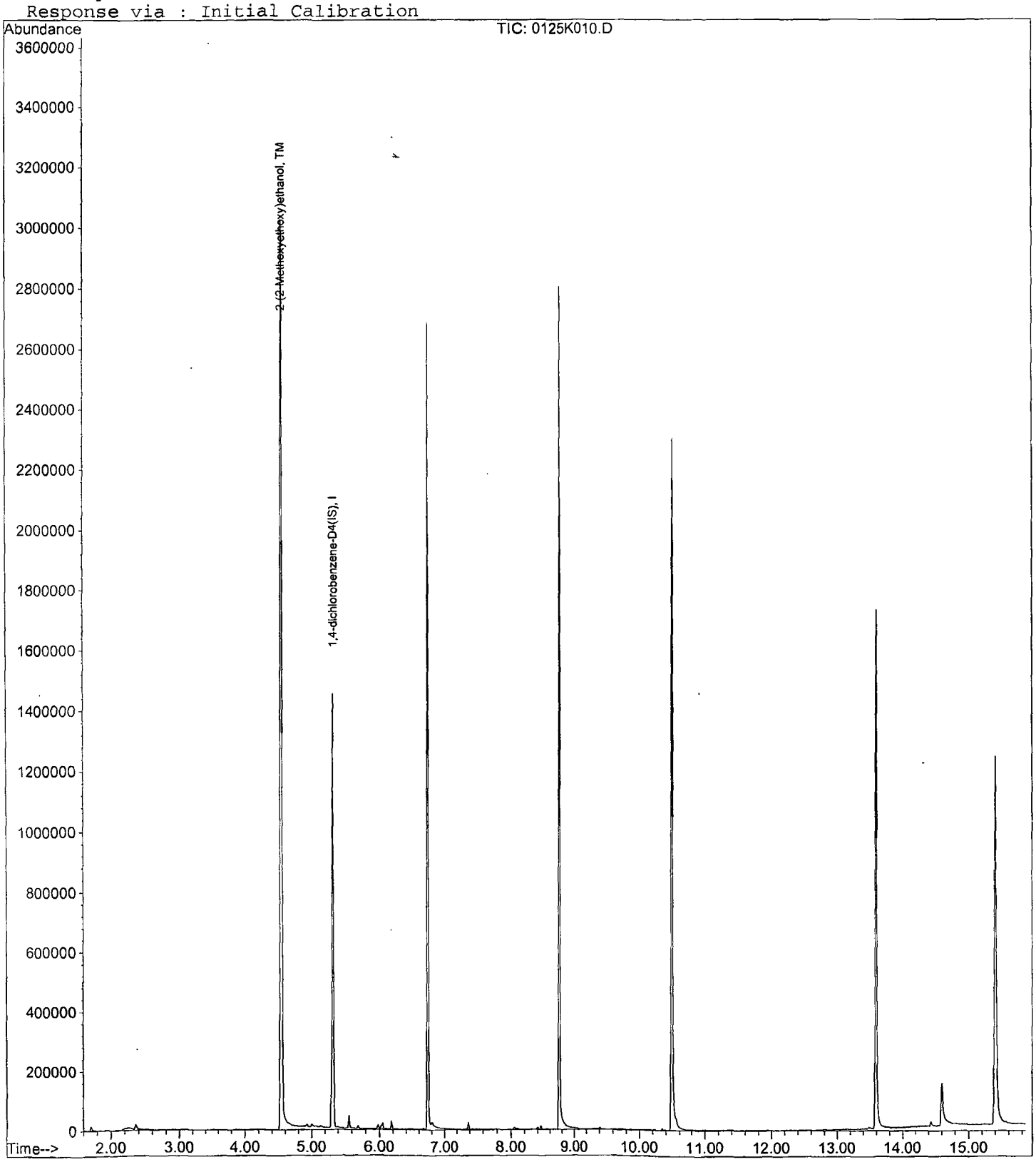
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

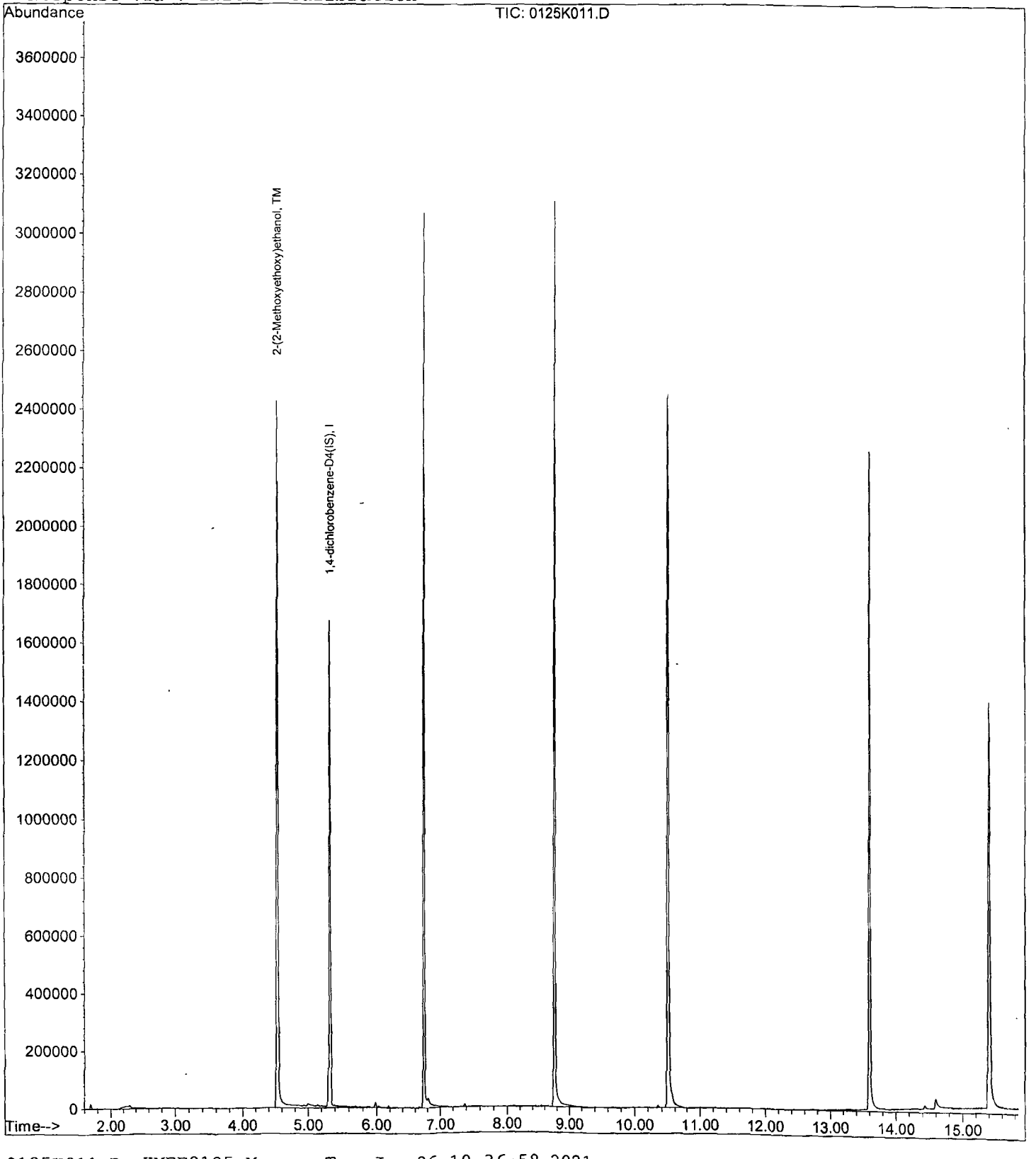
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K014.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2338	9.1	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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19							
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21							
22							
23							
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25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			9.1		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	433460	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1266566	454.49763	ppb	100

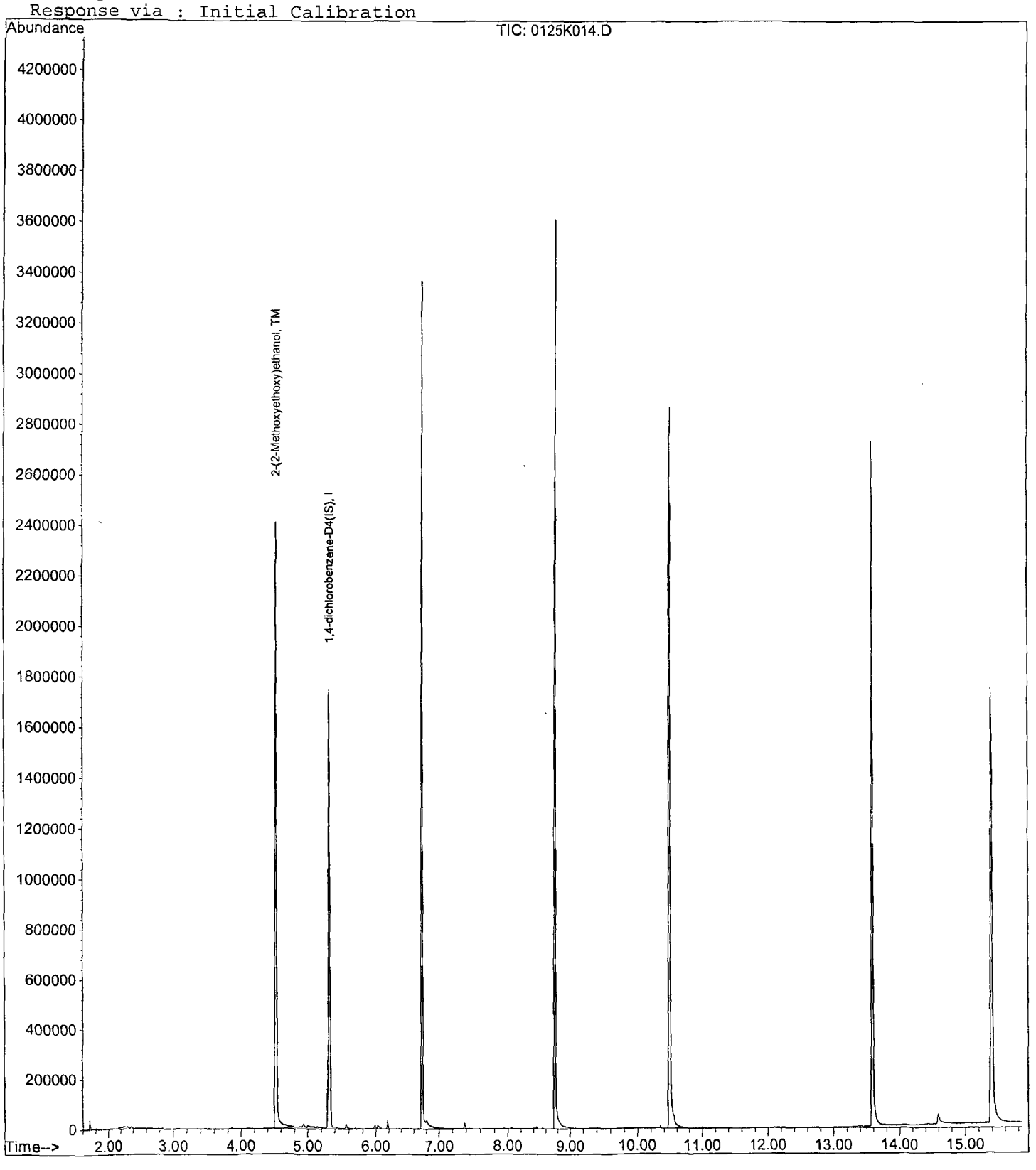
(#) = qualifier out of range (m) = manual integration
0125K014.D KMEE0125.M Tue Jan 26 10:37:01 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K028.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2666	3.7	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.7		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	234567	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	781801	518.42045	ppb	96

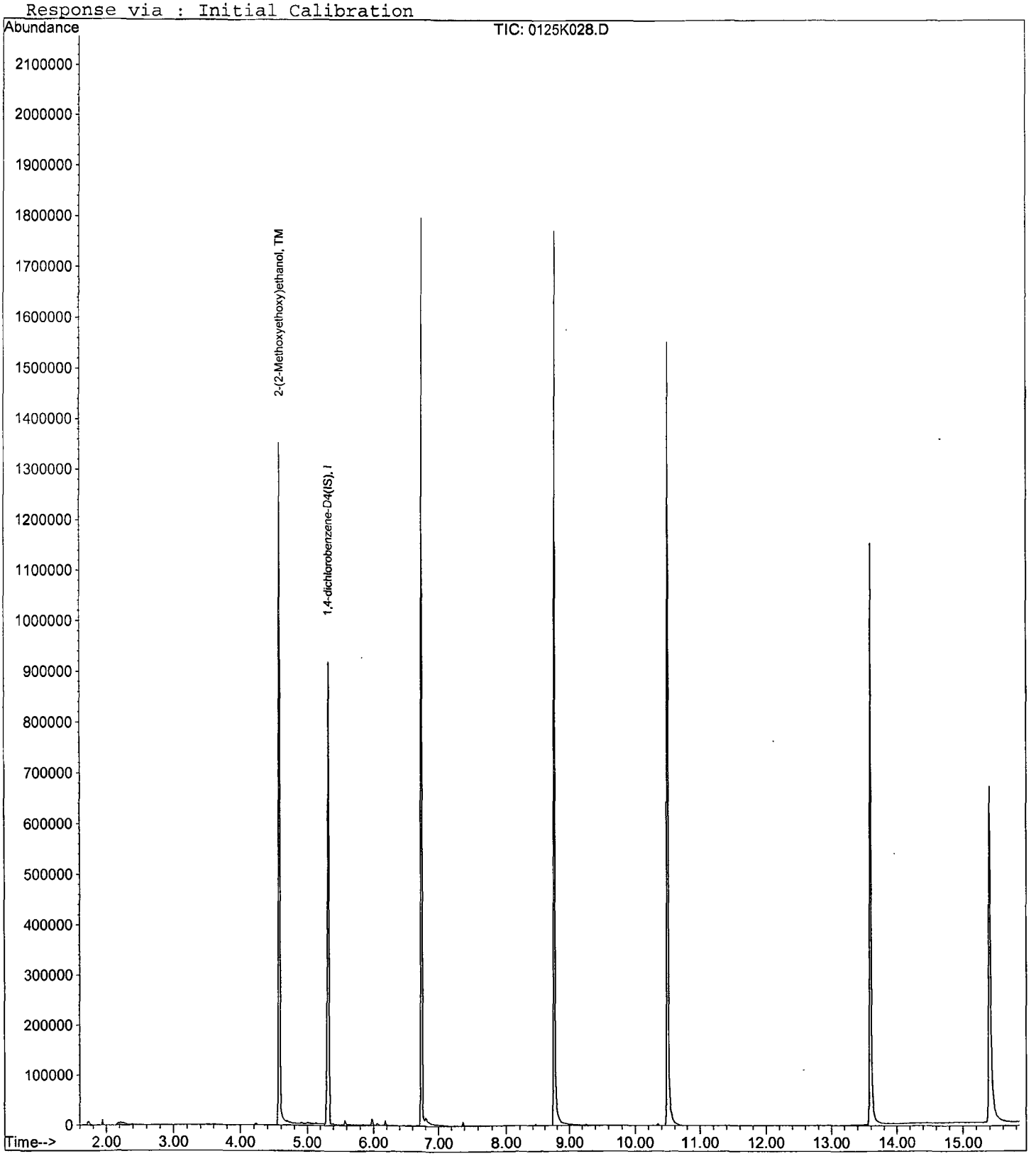
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K019.D Vial: 19
Acq On : 26 Jan 21 12:28 Operator:
Sample : BA25434W14 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	256142	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds Qvalue

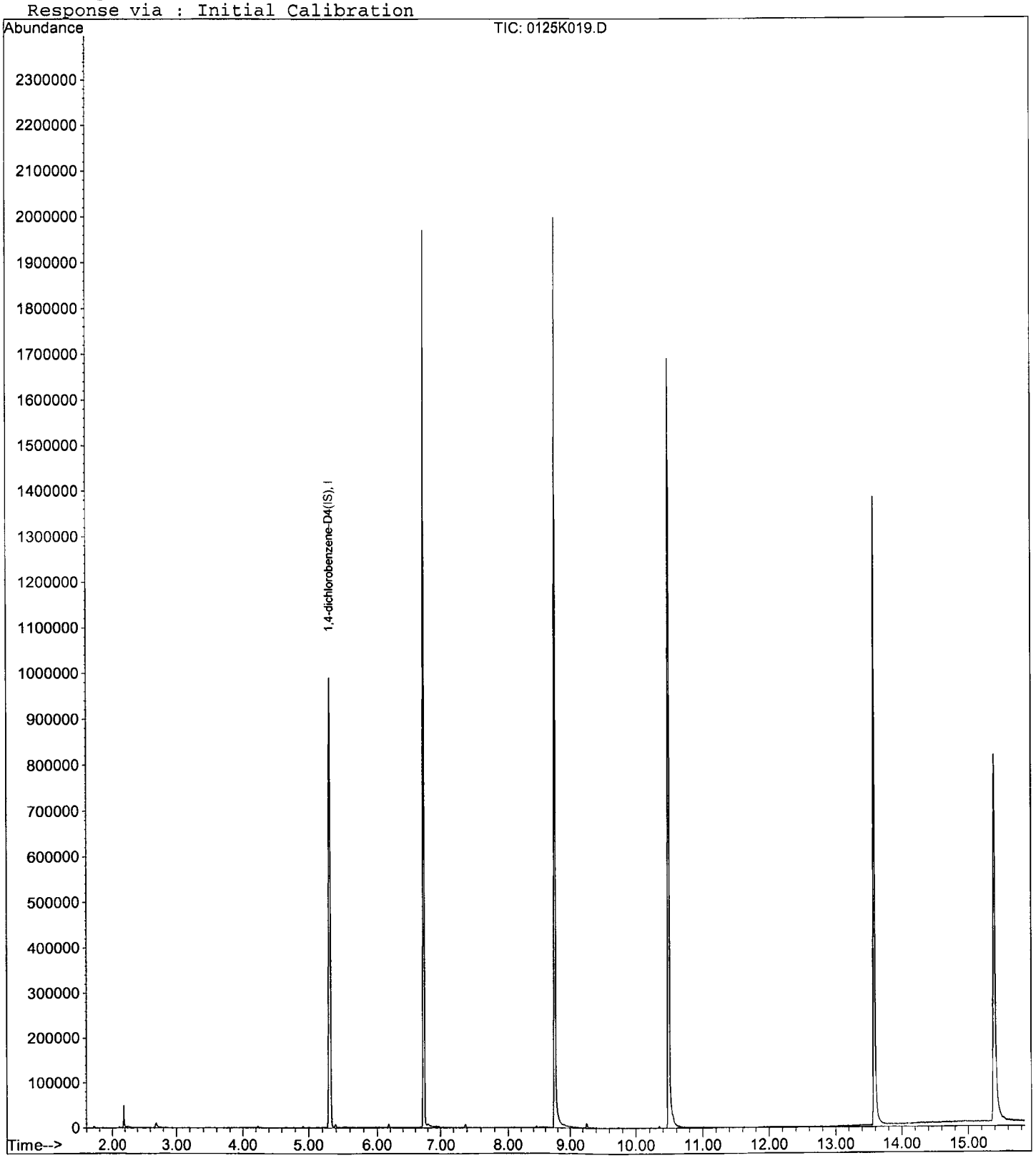
(#) = qualifier out of range (m) = manual integration
0125K019.D KMEE0125.M Wed Jan 27 13:48:38 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K019.D Vial: 19
Acq On : 26 Jan 21 12:28 Operator:
Sample : BA25434W14 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	370288	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

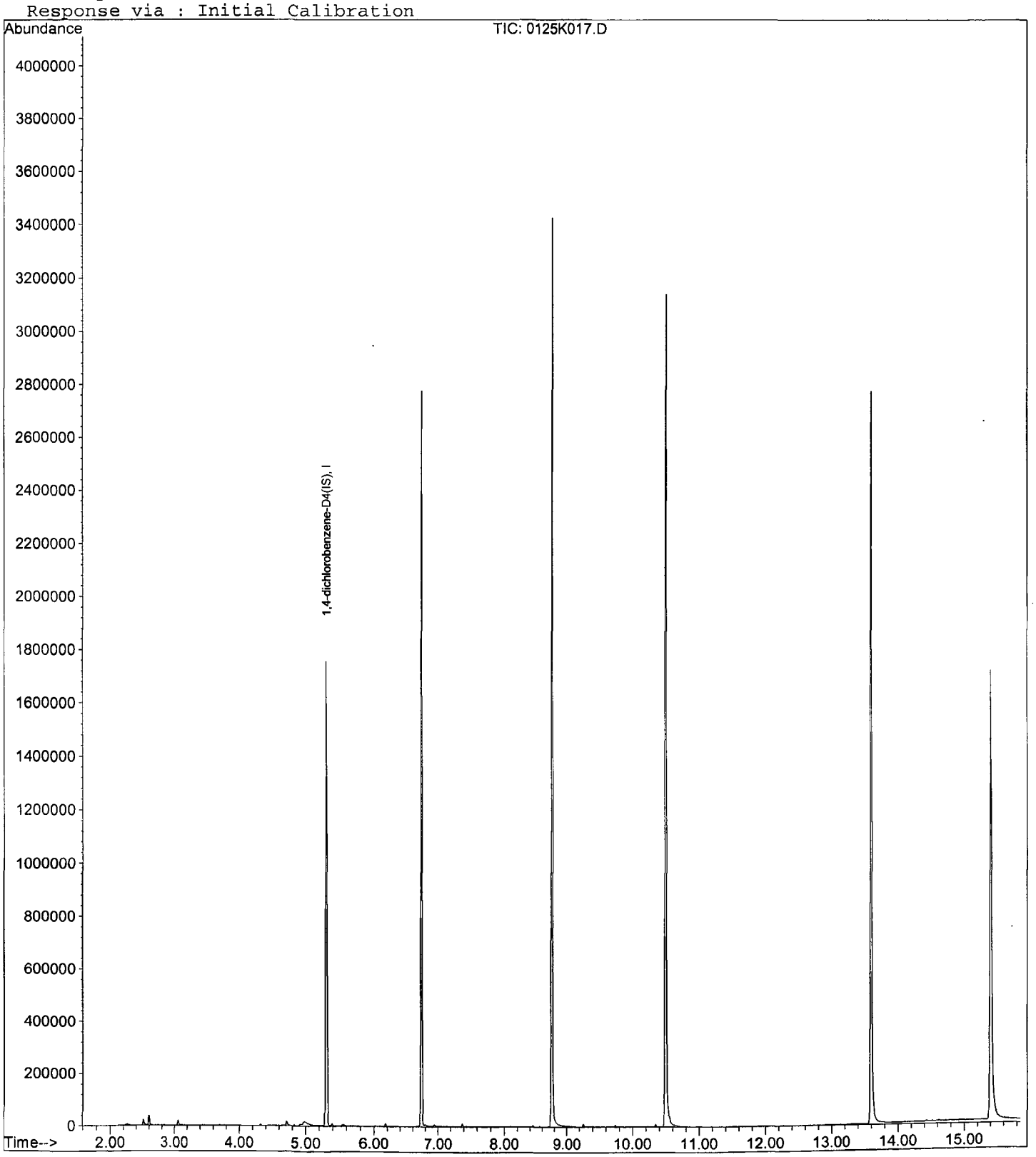
(#) = qualifier out of range (m) = manual integration
0125K017.D KMEE0125.M Wed Jan 27 13:48:29 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	355190	40.00000	ppb	-0.03
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.74	45	158285	69.31574	ppb	100

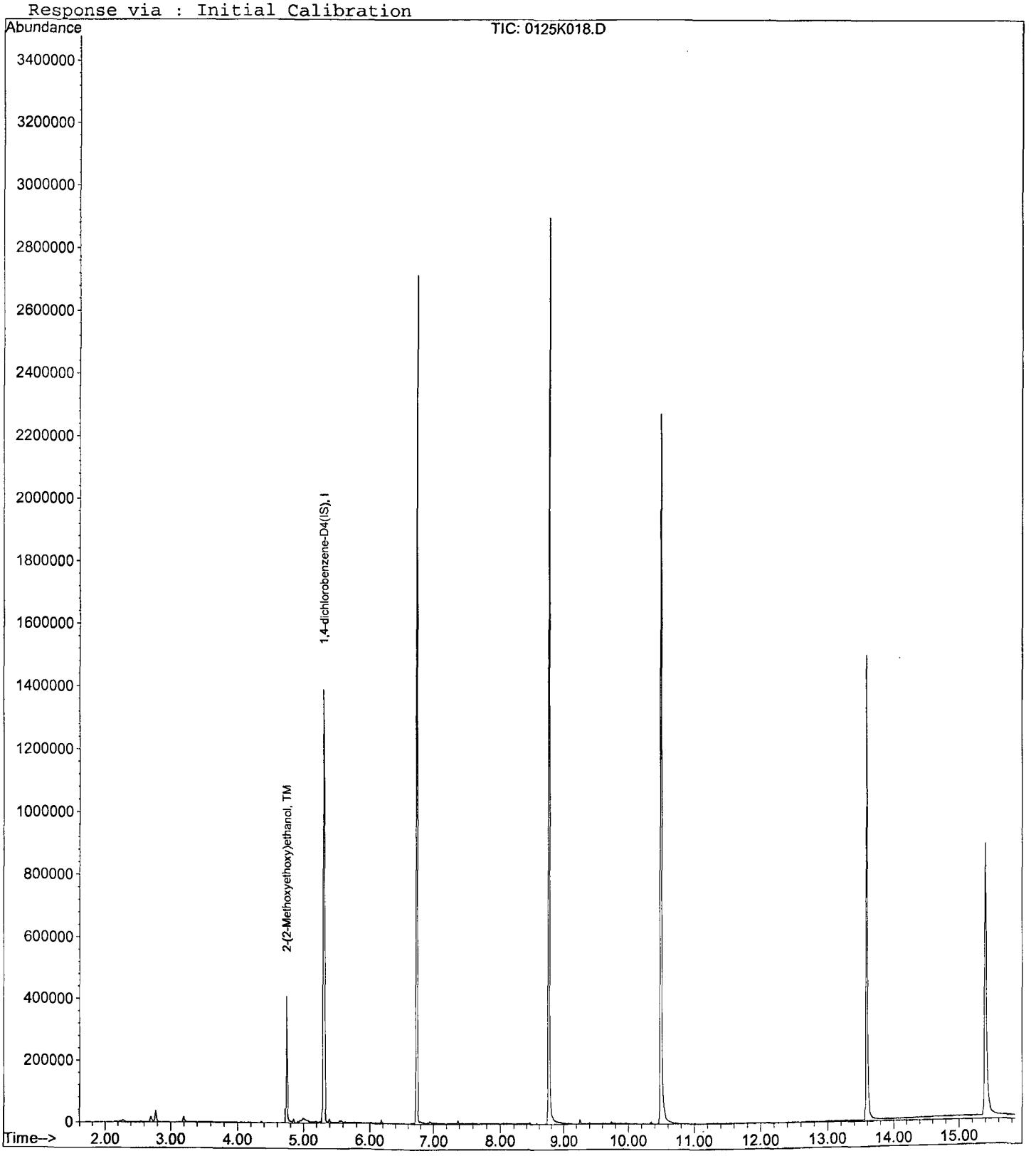
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

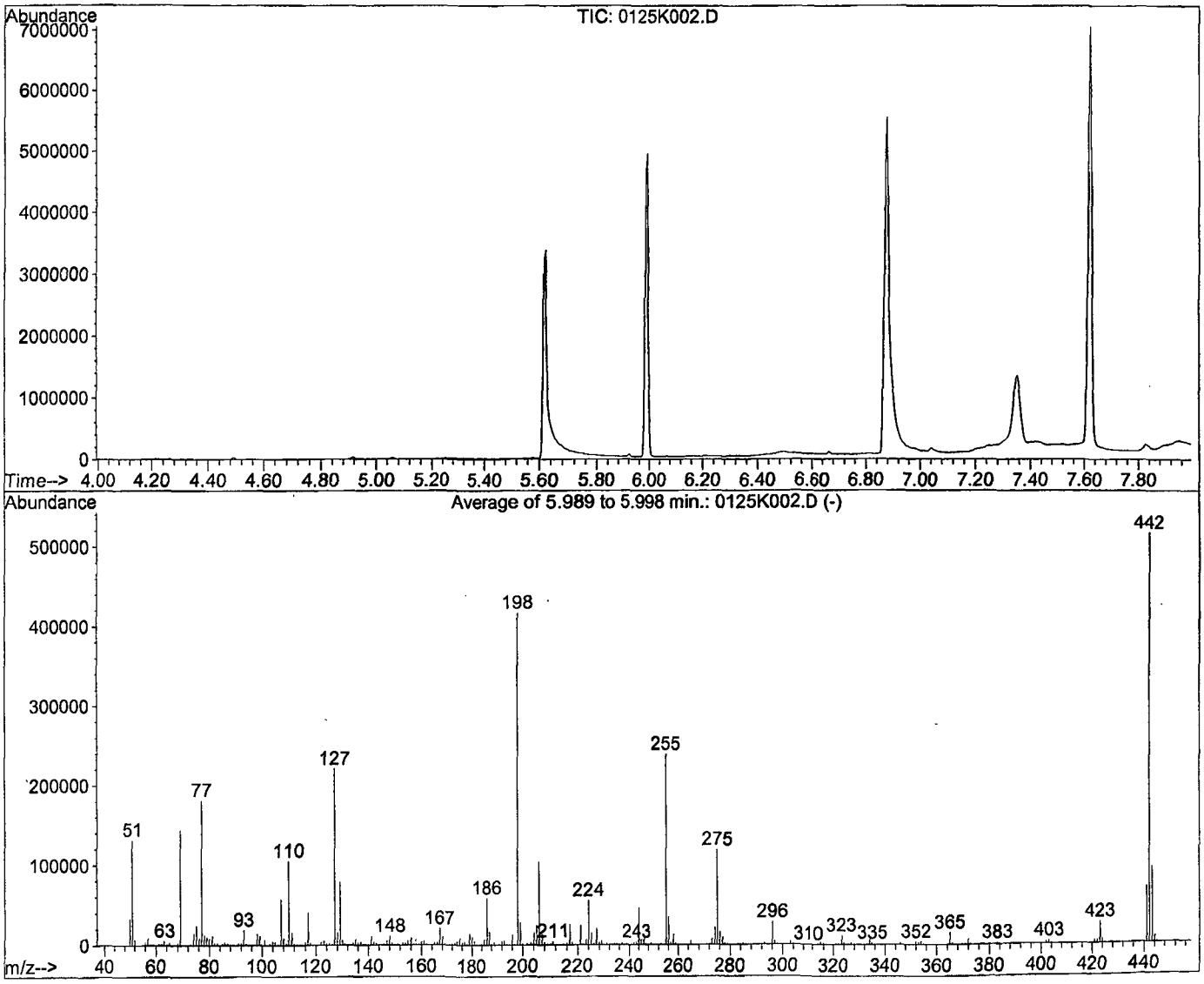
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



DFTPP

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

0125K002.D KMEE0125.M Mon Jan 25 12:51:25 2021

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

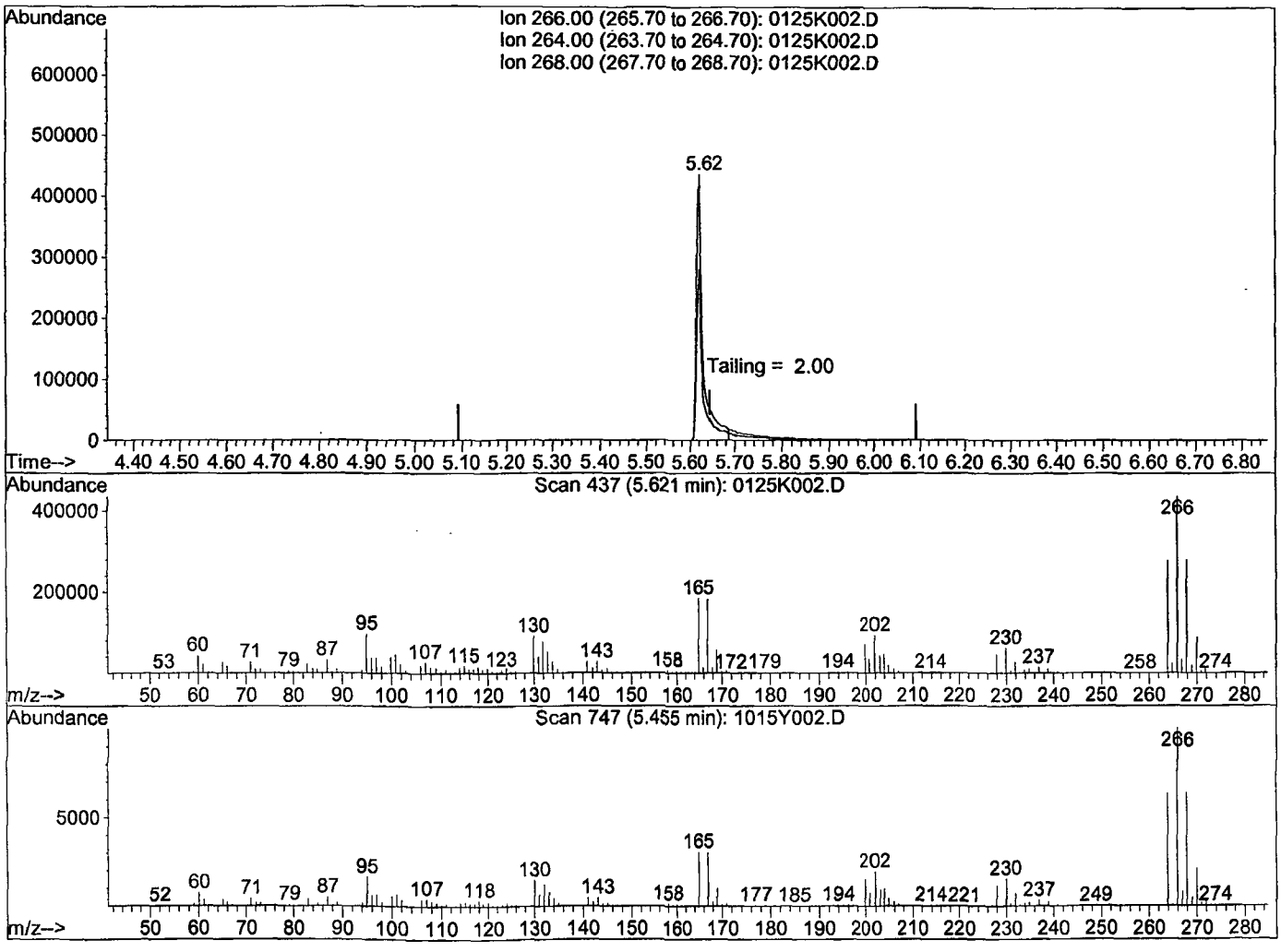
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

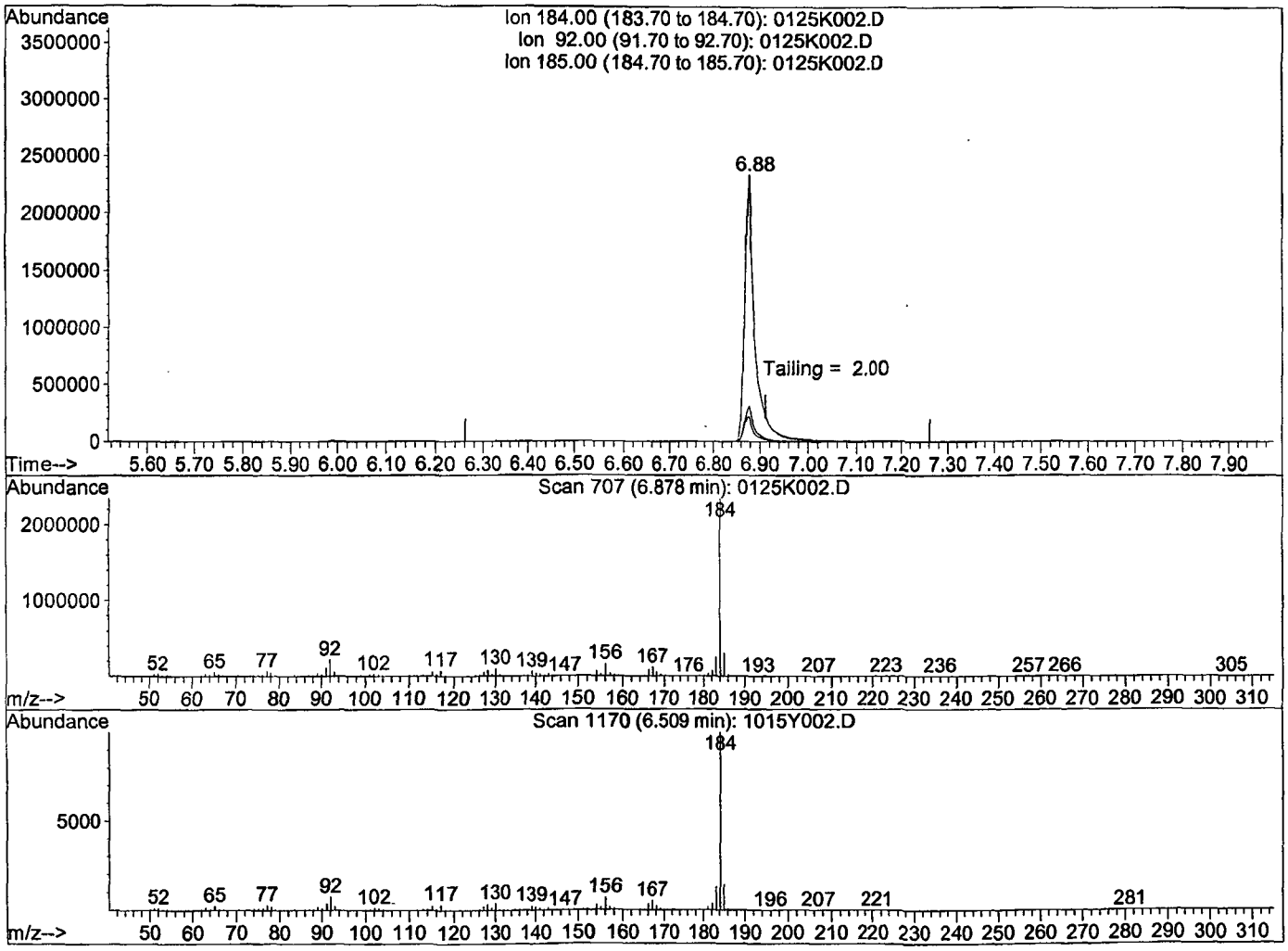
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

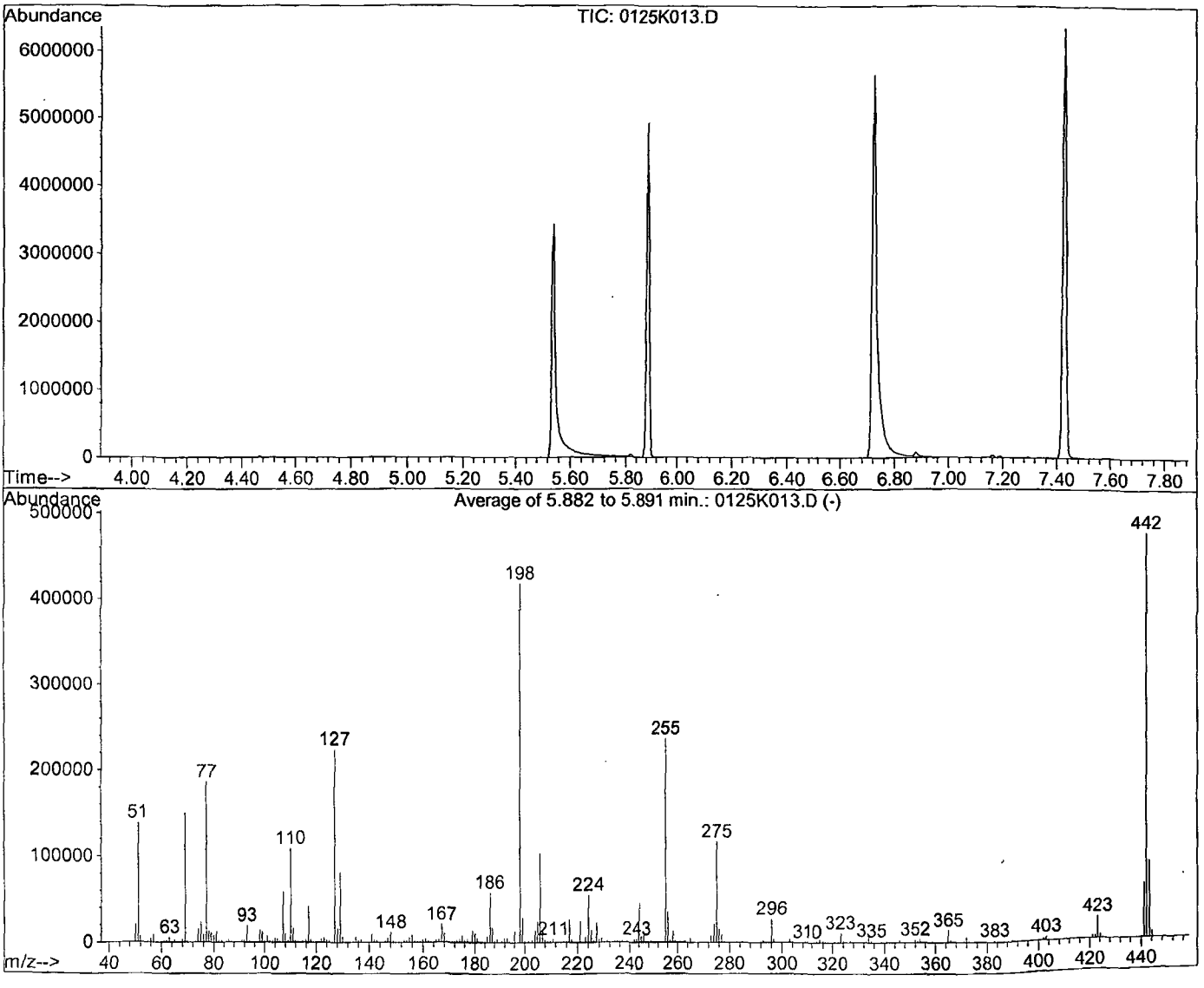
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 493, 494, 495; Background Corrected with Scan 487

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.2	138565	PASS
68	69	0.00	2	1.9	2813	PASS
70	69	0.00	2	0.6	828	PASS
127	198	10	80	53.5	223723	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	417856	PASS
199	198	5	9	6.8	28451	PASS
275	198	10	60	27.9	116741	PASS
365	198	1	100	3.3	13916	PASS
441	442	0.01	24	13.7	65373	PASS
442	198	50	500	114.6	478805	PASS
443	442	15	24	18.8	90181	PASS

Data File Name:	**0125K013.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**26 Jan 2021 10:06**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**13**
Instrument Name:	**KYLO**

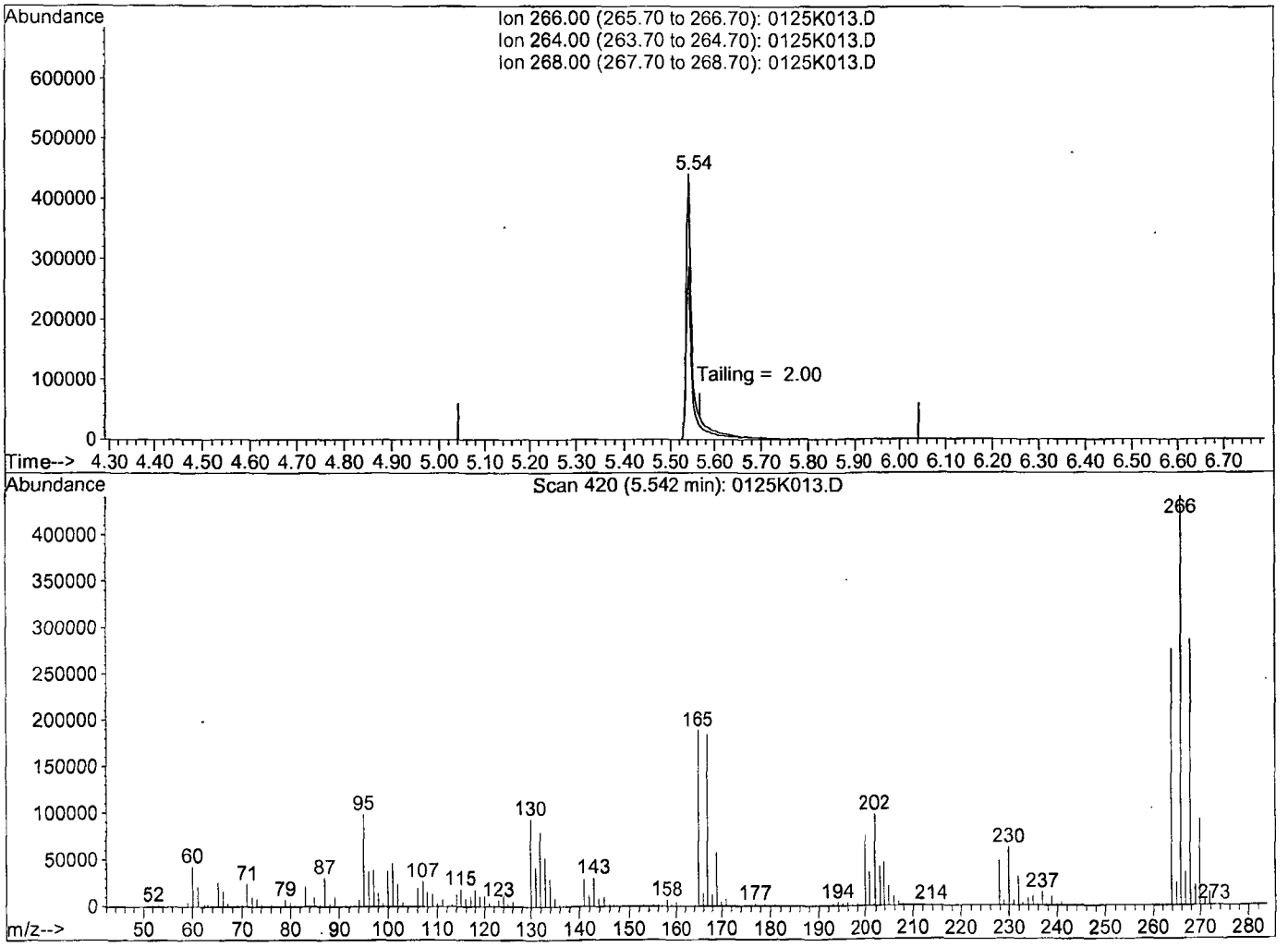
#	Name	Ret Time	Target Response
1)	DDT	7.43	56946000
2)	DDD	7.19	223290
3)	DDE	6.09	0

Breakdown **0.39**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration



TIC: 0125K013.D

(5) Pentachlorophenol

5.54min 0.0000

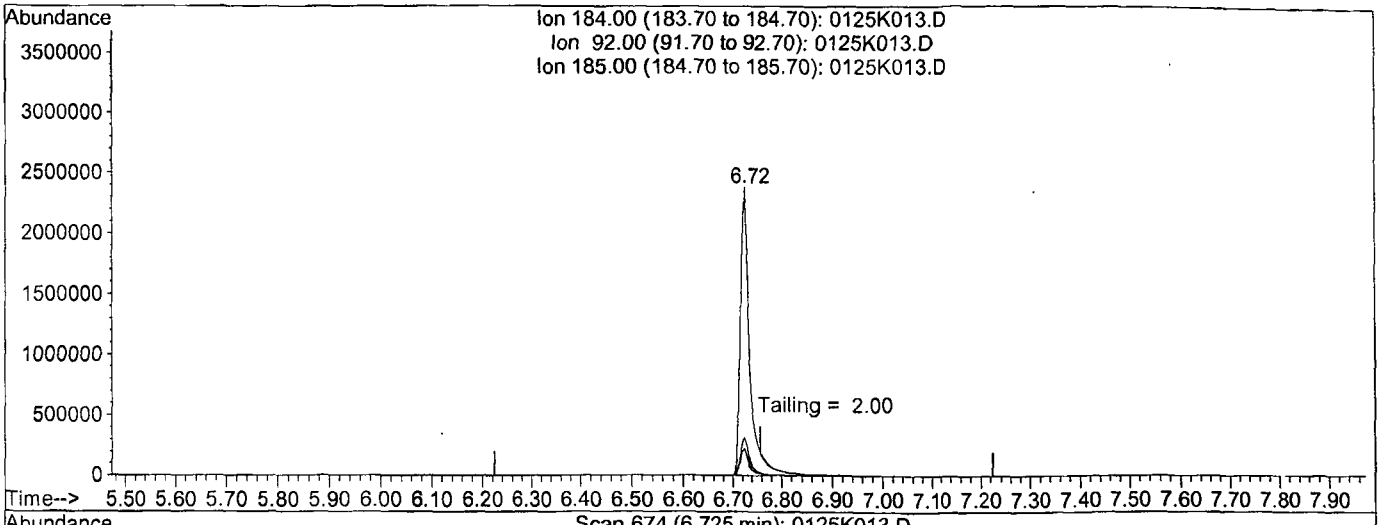
response 4229552

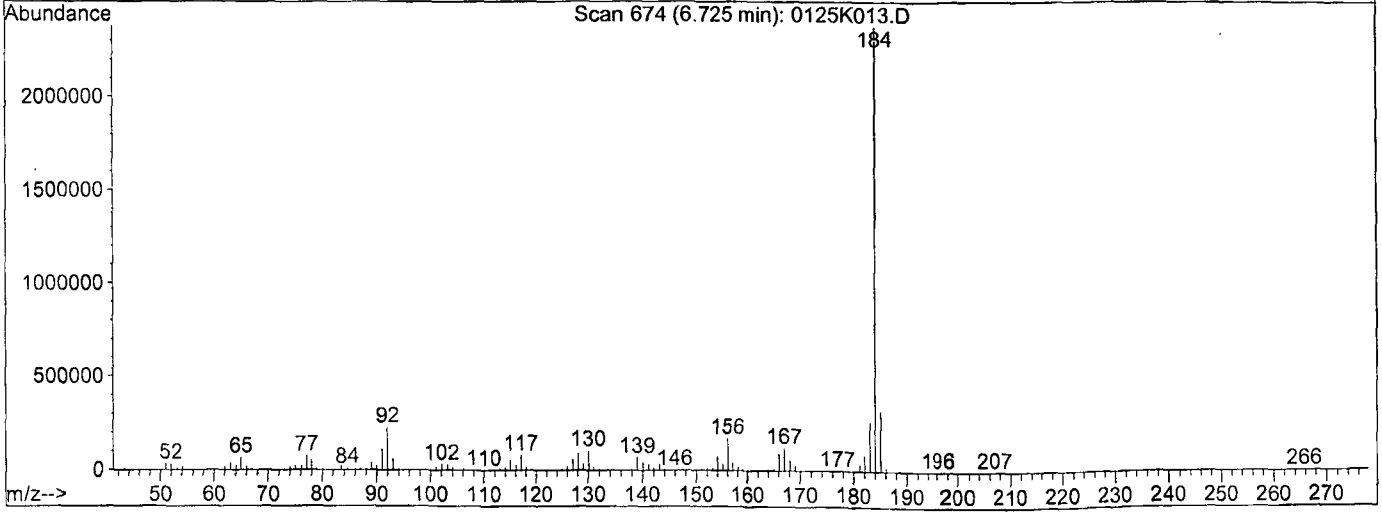
Ion	Exp%	Act%
266.00	100	100
264.00	62.70	66.06
268.00	65.00	68.63
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K013.D

(6) Benzidine

6.73min 0.0000

response 32216964

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	9.36
185.00	13.40	13.61
0.00	0.00	0.00

Name of Final Standard **2MEE Second Source Stock**

Prep'd By (Initials) **JP**

Prep Date **10/28/19**

Exp Date **10/28/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)

0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**04/25/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol *methyl ether*	AccuStand *ard*	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of Final Standard MEE Curve **Prep'd By (Initials)** CD

Prep Date 05/01/20

Exp Date 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*

Name of Final Standard MEE Second Source **Prep'd By (Initials)** MA

Prep Date 05/01/20

Exp Date 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	11/06/19	10/28/21	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	MA
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49871,872,873**	**07/31/25**	3mL	3 mL	**NA**	2000ug/mL

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210125A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01/20/21 ex 01/20/22		Surrogate ID 1		
Spiked ID 2	2MEE SS 1630ug/mL 01/20/21 ex 01/20/22		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/25/21 9:00	
Spiked ID 8			Ext. End Time:	01/26/21 7:55	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/25/21 **Witnessed By:** CFM **Date** 01/25/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210125A Blk				NA	NA equip	500	2	7	01/25/21 9:00	
2	210125A LCS-1		0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	80ug/L
3	BA25434	BA25434W14			NA	NA equip	500	2	7	01/25/21 9:00	94808
4	BA25526 MS-1	BA25526W13	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
5	BA25526 MSD-1	BA25526W14	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
6	BA25526	BA25526W12			NA	NA equip	500	2	7	01/25/21 9:00	94825
7	BA25529	BA25529W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
8	BA25532	BA25532W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
9	BA25535	BA25535W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
10	BA25538	BA25538W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
11	M STD		1	3	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L
12	SS		0.613	2	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	047266-EY
PH Strip	HC025486
Di Water	1-25-21
MeOH:DCM MIX	8-4-20

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	1/26/20
Time	9:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	YL
Sample Preparation	YL,KY
Extraction	YL,KY
Concentration	KY

Modified	01/25/21 8:17:11 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
13	0125K013.D	1	SV TUNE 10/02/20		26 Jan 21 10:06
14	0125K014.D	1	2MEE 500 5/1/20		26 Jan 21 10:19
17	0125K017.D	1	210125A BLK 1/500		26 Jan 21 11:46
18	0125K018.D	1	210125A LCS-1 1/500		26 Jan 21 12:07
19	0125K019.D	1	BA25434W14 2/500		26 Jan 21 12:28
28	0125K028.D	1	2MEE 500 1/26/21 (2)		26 Jan 21 15:58

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/19/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0119Z22.D	0119Z23.D	0119Z24.D	0119Z25.D	0119Z26.D	0119Z27.D	0119Z28.D	0119Z29.D	0119Z30.D		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.1235	0.1437	0.1186	0.1019	0.1171	0.1410	0.1469	0.1310		0.13	12	TM			
4	TML	Freon 114		0.0496	0.0780	0.0588	0.0748	0.0593	0.0705	0.0798			0.07	17	TM	0.994		
5	TM**L	Chloromethane		0.0832	0.0552	0.0516	0.0481	0.0545	0.0542	0.0539	0.0506		0.10	20	TM**	0.999		
6	TM*	Vinyl chloride		0.1531	0.1513	0.1413	0.1146	0.1349	0.1303	0.1286	0.1225		0.13	10.0	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0874	0.0489	0.0464	0.0382	0.0410	0.0359	0.0343	0.0313		0.05	40	TM	0.998		
10	TML	Chloroethane		0.0572	0.0489	0.0333	0.0268	0.0289	0.0284	0.0265	0.0217		0.03	37	TM	0.992		
11	TM	Dichlorofluoromethane		0.2316	0.2513	0.2430	0.2341	0.2310	0.1829	0.1752			0.22	13	TM			
12	TM	Trichlorofluoromethane		0.2394	0.2274	0.2220	0.1785	0.2198	0.2173	0.2072			0.22	8.9	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein	0.0052	0.0050	0.0049	0.0055	0.0051	0.0051	0.0056	0.0052	0.0048		0.01	5.3	TM			
17	TM	Acetone	0.0341	0.0346	0.0339	0.0341	0.0329	0.0320	0.0330	0.0312	0.0298		0.03	4.8	TM			
18	TM	Freon-113	0.0380	0.0472	0.0524	0.0462	0.0536	0.0462	0.0512	0.0570	0.0483		0.05	11	TM			
19	TM*	1,1-DCE	0.1486	0.1639	0.1660	0.1612	0.1561	0.1630	0.1610	0.1594	0.1545		0.16	3.4	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile	0.0032	0.0030	0.0029	0.0028	0.0029	0.0027	0.0026	0.0023			0.00	9.7	TM			
22	TM	t-Butanol	0.0038	0.0040	0.0035	0.0038	0.0038	0.0037	0.0035	0.0032			0.00	6.7	TM			
23	TM	Methyl Acetate		0.1116	0.0909	0.0857	0.0784	0.0816	0.0767	0.0781	0.0746		0.08	14	TM			
24	TM	Iodomethane		0.2304	0.1780	0.1590	0.1425	0.1638	0.1690	0.1828	0.1898		0.18	15	TM			
25	TM	Acrylonitrile		0.0432	0.0346	0.0377	0.0372	0.0357	0.0353	0.0353	0.0338		0.04	8.1	TM			
26	TML	Methylene chloride		0.1611	0.1162	0.0960	0.0811	0.0760	0.0749	0.0692	0.0582		0.09	36	TM	0.994		
27	TML	Carbon disulfide	0.1636	0.1594	0.1563	0.1425	0.1461	0.1576	0.1537	0.1610	0.1556		0.16	4.4	TM	1.000		
28	TM	Methyl t-butyl ether (MtBE)	0.2967	0.2926	0.2845	0.2916	0.2888	0.3091	0.2992	0.3107	0.2960		0.30	2.9	TM			
29	TM	Trans-1,2-DCE	0.1568	0.1693	0.1592	0.1578	0.1556	0.1591	0.1570	0.1553	0.1494		0.16	3.3	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether	0.2670	0.2748	0.2805	0.2770	0.2813	0.2990	0.2859	0.3024	0.2923		0.28	4.1	TM			
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
33	TM**	1,1-DCA	0.1882	0.1948	0.1923	0.1958	0.1929	0.1985	0.1975	0.1943	0.1862		0.19	2.1	TM**			
34	TM	Vinyl Acetate	0.1205	0.1141	0.1143	0.0963	0.1114	0.1194	0.1076	0.1216	0.1123		0.11	6.9	TM			
35	TM	Ethyl tert Butyl Ether	0.2656	0.2551	0.2661	0.2735	0.2769	0.2957	0.2885	0.3048	0.2968		0.28	6.0	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/19/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0398	0.0437	0.0449	0.0462	0.0452	0.0454	0.0470	0.0455	0.0435		0.04	4.7	TM			
37	TM	Cis-1,2-DCE	0.1678	0.1718	0.1726	0.1720	0.1709	0.1744	0.1758	0.1727	0.1642		0.17	2.0	TM			
38	TM	2,2-Dichloropropane	0.1554	0.1791	0.1601	0.1684	0.1620	0.1704	0.1737	0.1753	0.1685		0.17	4.6	TM			
39	TML	2-Methylpentane													TM			
40	TM	3-Methylpentane													TM			
41	TM*	Chloroform	0.1794	0.1905	0.2074	0.2039	0.2059	0.2169	0.2162	0.2186	0.2099		0.21	6.3	TM*			
42	TM	Bromochloromethane	0.0654	0.0737	0.0778	0.0770	0.0789	0.0813	0.0791	0.0789	0.0734		0.08	6.3	TM			
43	SL	Dibromofluoromethane(S)	0.2038	0.2053	0.2411	0.2446	0.2837	0.2870	0.3052	0.3052	0.3001		0.26	16	S	1.000		
44	TM	1,1,1-TCA	0.1697	0.1853	0.1924	0.1932	0.1987	0.2029	0.2062	0.2091	0.2036		0.20	6.3	TM			
45	TML	Cyclohexane	0.1188	0.1421	0.1547	0.1381	0.1508	0.1420	0.1514	0.1647	0.1489		0.15	8.8	TM	0.998		
46	TM	1,1-Dichloropropene	0.1427	0.1521	0.1541	0.1458	0.1484	0.1517	0.1513	0.1532	0.1490		0.15	2.5	TM			
47	TML	2,2,4-Trimethylpentane	0.1651	0.1840	0.2686	0.2083	0.2953	0.2294	0.2978	0.3465	0.3000		0.26	24	TM	0.996		
48	S	1,2-DCA-D4(S)	0.1879	0.1896	0.2239	0.2197	0.2514	0.2545	0.2689	0.2662	0.2649		0.24	14	S			
49	TM	Carbon Tetrachloride	0.1569	0.1568	0.1608	0.1630	0.1630	0.1740	0.1781	0.1876	0.1913		0.17	7.7	TM			
50	TM	Tert Amyl Methyl Ether	0.2355	0.2518	0.2600	0.2503	0.2617	0.2776	0.2715	0.2907	0.2945		0.27	7.3	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA	0.1362	0.1345	0.1482	0.1393	0.1393	0.1427	0.1397	0.1404	0.1356		0.14	3.0	TM			
53	TM	Benzene	0.4629	0.4743	0.4777	0.4779	0.4690	0.4802	0.4680	0.4665	0.4488		0.47	2.1	TM			
54	TM	TCE	0.1620	0.1594	0.1647	0.1688	0.1660	0.1698	0.1684	0.1633	0.1598		0.16	2.3	TM			
55	TM	2-Pentanone	0.0588	0.0601	0.0622	0.0675	0.0685	0.0691	0.0727	0.0718	0.0723		0.07	8.0	TM			
56	TM*	1,2-Dichloropropane	0.0977	0.1098	0.1076	0.1069	0.1055	0.1078	0.1050	0.1056	0.1028		0.11	3.3	TM*			
57	TM	Bromodichloromethane	0.1000	0.1125	0.1063	0.1144	0.1189	0.1285	0.1335	0.1400	0.1436		0.12	12	TM			
58	TM	Methyl Cyclohexane	0.1282	0.1475	0.1764	0.1490	0.1811	0.1599	0.1814	0.2006	0.1819		0.17	14	TM			
59	TM	Dibromomethane	0.1162	0.1214	0.1171	0.1161	0.1209	0.1255	0.1247	0.1257	0.1215		0.12	3.2	TM			
60	TM	MIBK (methyl isobutyl ketone	0.0597	0.0688	0.0737	0.0781	0.0781	0.0787	0.0831	0.0819	0.0834		0.08	10	TM			
61	TM	1-Bromo-2-chloroethane	0.0235	0.0281	0.0260	0.0271	0.0249	0.0268	0.0250	0.0243	0.0233		0.03	6.5	TM			
62	TM	2-Chloroethyl vinyl ether													TM			
63	TM	Cis-1,3-Dichloropropene	0.1150	0.1341	0.1355	0.1403	0.1501	0.1605	0.1649	0.1694	0.1693		0.15	13	TM			
64	TM*	Toluene	0.4797	0.5338	0.5345	0.5407	0.5364	0.5408	0.5245	0.5170	0.5038		0.52	3.9	TM*			
65	TM	Trans-1,3-Dichloropropene	0.1020	0.1115	0.1148	0.1177	0.1272	0.1394	0.1425	0.1497	0.1530		0.13	14	TM			
66	TM	1,1,2-TCA	0.0857	0.0971	0.1008	0.0972	0.1067	0.1093	0.1069	0.1076	0.1032		0.10	7.3	TM			
67	TM	2-Hexanone	0.0210	0.0276	0.0299	0.0319	0.0333	0.0323	0.0334	0.0317	0.0327		0.03	13	TM			
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	0.8877	0.9015	1.078	1.093	1.212	1.210	1.255	1.260	1.154		1.1	13	S			
70	TM	1,2-EDB	0.1042	0.1224	0.1170	0.1265	0.1306	0.1376	0.1398	0.1435	0.1386		0.13	9.9	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/19/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene	0.2768	0.2628	0.2751	0.2705	0.2658	0.2705	0.2612	0.2583	0.2488		0.27	3.3	TM			
72	TM	1-Chlorohexane	0.1979	0.2044	0.2051	0.2022	0.1971	0.2064	0.1941	0.2023	0.1990		0.20	2.1	TM			
73	TM	1,1,1,2-Tetrachloroethane		0.1273	0.1323	0.1268	0.1400	0.1534	0.1574	0.1647	0.1637		0.15	11	TM			
74	TM	m&p-Xylene	0.4497	0.4929	0.5017	0.5173	0.5162	0.5299	0.5175	0.5190	0.4948		0.50	4.7	TM			
75	TM	o-Xylene	0.4249	0.4682	0.4955	0.4942	0.5054	0.5293	0.5204	0.5293	0.5332		0.50	7.1	TM			
76	TM	Styrene	0.3038	0.3543	0.3540	0.3679	0.4069	0.4395	0.4429	0.4558	0.4661		0.40	14	TM			
77	SL	4-Bromofluorobenzene(S)	0.3049	0.3070	0.3618	0.3712	0.4254	0.4257	0.4458	0.4501	0.4724		0.40	16	S	1.000		
78	TM	1,3-Dichloropropane	0.1633	0.1705	0.1880	0.1892	0.1899	0.1959	0.1920	0.1966	0.1876		0.19	6.1	TM			
79	TML	Dibromochloromethane	0.0986	0.0962	0.1017	0.1082	0.1159	0.1323	0.1409	0.1562	0.1619		0.12	20	TM	0.999		
80	TM**	Chlorobenzene	0.4222	0.4548	0.4663	0.4623	0.4645	0.4705	0.4574	0.4550	0.4388		0.45	3.4	TM**			
81	TM*	Ethylbenzene	0.5872	0.6510	0.6454	0.6724	0.6816	0.6998	0.6878	0.6872	0.6588		0.66	5.1	TM*			
82	TM**L	Bromoform	0.0801	0.0750	0.0793	0.0858	0.0944	0.1089	0.1205	0.1371	0.1517		0.10	27	TM**	0.998		
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene	1.621	1.672	1.810	1.809	1.879	2.002	2.008	2.031	1.938		1.9	7.9	TM			
85	TM**	1,1,2,2-Tetrachloroethane	0.2894	0.3305	0.3497	0.3561	0.3808	0.4146	0.4136	0.4302	0.4124		0.38	13	TM**			
86	TM	1,2,3-Trichloropropane	0.1496	0.1419	0.1666	0.1452	0.1516	0.1582	0.1606	0.1620	0.1528		0.15	5.3	TM			
87	TM	t-1,4-Dichloro-2-Butene		0.0691	0.0678	0.0621	0.0681	0.0781	0.0793	0.0862	0.0861		0.07	12	TM			
88	TM	Bromobenzene	0.5392	0.5280	0.5456	0.6451	0.5573	0.5996	0.6027	0.6168	0.6048		0.58	7.0	TM			
89	TM	n-Propylbenzene	1.723	1.797	1.984	1.950	2.051	2.170	2.181	2.191	2.062		2.0	8.3	TM			
90	TM	4-Ethyltoluene	1.568	1.660	1.839	1.771	1.852	1.958	1.882	1.957	1.871		1.8	7.2	TM			
91	TM	2-Chlorotoluene	1.232	1.153	1.353	1.336	1.359	1.437	1.437	1.456	1.443		1.4	7.7	TM			
92	TM	1,3,5-Trimethylbenzene	1.187	1.310	1.439	1.454	1.527	1.614	1.607	1.620	1.595		1.5	10	TM			
93	TM	4-Chlorotoluene	1.232	1.153	1.353	1.336	1.359	1.437	1.437	1.456	1.443		1.4	7.7	TM			
94	TM	Tert-Butylbenzene	1.436	1.335	1.428	1.432	1.458	1.559	1.574	1.583	1.534		1.5	5.7	TM			
95	TM	1,2,4-Trimethylbenzene	1.180	1.236	1.410	1.395	1.505	1.630	1.618	1.653	1.617		1.5	12	TM			
96	TM	Sec-Butylbenzene	1.597	1.753	1.990	1.955	2.040	2.170	2.206	2.222	2.125		2.0	11	TM			
97	TM	p-Isopropyltoluene	1.436	1.335	1.428	1.432	1.458	1.559	1.574	1.583	1.534		1.5	5.7	TM			
98	TML	Benzyl Chloride		0.5564	0.5289	0.5056	0.5356	0.7051	0.7803	0.8413	0.8613		0.66	23	TM	1.000		
99	TM	1,3-DCB	1.049	1.082	1.155	1.153	1.171	1.237	1.216	1.223	1.173		1.2	5.4	TM			
100	TM	1,4-DCB	1.137	1.153	1.246	1.171	1.197	1.246	1.214	1.227	1.171		1.2	3.4	TM			
101	TM	n-Butylbenzene	1.156	1.262	1.323	1.346	1.442	1.555	1.590	1.606	1.598		1.4	12	TM			
102	TM	1,2-DCB	0.9292	1.020	1.088	1.021	1.078	1.139	1.134	1.136	1.084		1.1	6.5	TM			
103	TML	Hexachloroethane	0.4932	0.2707	0.2477	0.2548	0.2463	0.3355	0.3764	0.4248	0.4660		0.35	28	TM	0.998		
104	TML	1,2-Dibromo-3-chloropropane	0.0732	0.0752	0.0830	0.0945	0.1017	0.1182	0.1310	0.1434	0.1450		0.11	26	TM	1.000		
105	TM	1,2,4-Trichlorobenzene	0.9042	0.9197	1.038	0.9740	0.9981	1.076	1.030	1.095	1.021		1.0	6.4	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/19/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene	0.4648	0.5106	0.4686	0.4794	0.5116	0.5339	0.5402	0.5503	0.5067		0.51	6.1	TM			
107	TM	Naphthalene	1.285	1.223	1.315	1.354	1.501	1.690	1.724	1.755	1.585		1.5	14	TM			
108	TM	1,2,3-Trichlorobenzene	0.7562	0.6624	0.7230	0.7304	0.7377	0.8016	0.8029	0.8091	0.7399		0.75	6.3	TM			
109																		
110																		
111																		
112																		
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138																		
139																		
140																		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z22.D
Acq On : 19 Jan 21 16:05
Sample : 0.3ug/L VOC STD 1/19/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4242397	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3610407	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1360384	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	172957	4.96	ppb		0.00
Spiked Amount 25.000			Recovery = 19.856%				
48) 1,2-DCA-D4(S)	5.71	65	159447	3.98	ppb		0.00
Spiked Amount 25.000			Recovery = 15.904%				
69) Toluene-D8(S)	8.03	98	640968	3.97	ppb		0.00
Spiked Amount 25.000			Recovery = 15.896%				
77) 4-Bromofluorobenzene(S)	10.92	95	220144	5.63	ppb		0.00
Spiked Amount 25.000			Recovery = 22.524%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	9570	0.44	ppb	#	88
4) Freon 114	1.16	85	2297	0.95	ppb		93
5) Chloromethane	1.20	50	7778	0.36	ppb		100
6) Vinyl chloride	1.28	62	12352	0.54	ppb		99
9) Bromomethane	1.53	94	6293	-0.63	ppb		97
10) Chloroethane	1.61	64	4461	-1.58	ppb		98
11) Dichlorofluoromethane	1.79	67	11603	0.31	ppb	#	71
12) Trichlorofluoromethane	1.83	101	19805	0.54	ppb		94
16) Acrolein	2.21	55	8763	10.05	ppb		94
17) Acetone	2.37	43	28923	5.19	ppb		91
18) Freon-113	2.33	101	1932	0.23	ppb		93
19) 1,1-DCE	2.31	61	7563	0.28	ppb		93
21) Acetonitrile	2.64	40	5433	11.37	ppb		92
22) t-Butanol	3.04	59	6415	10.31	ppb	#	78
23) Methyl Acetate	2.73	43	5988	0.42	ppb	#	79
24) Iodomethane	2.43	142	17959	0.60	ppb	#	91
25) Acrylonitrile	3.11	52	2361	0.38	ppb	#	77
26) Methylene chloride	2.81	49	20376	-0.67	ppb		92
27) Carbon disulfide	2.49	76	8327	0.30	ppb	#	91
28) Methyl t-butyl ether (MtBE	3.20	73	15107	0.30	ppb		98
29) Trans-1,2-DCE	3.15	61	7983	0.30	ppb		91
31) Diisopropyl Ether	3.93	45	13594	0.28	ppb		94
33) 1,1-DCA	3.72	63	9581	0.29	ppb		99
34) Vinyl Acetate	3.86	43	6137	0.32	ppb	#	69
35) Ethyl tert Butyl Ether	4.50	59	13521	0.28	ppb		87
36) MEK (2-Butanone)	4.68	43	33752	4.46	ppb		97
37) Cis-1,2-DCE	4.61	61	8540	0.29	ppb		98
38) 2,2-Dichloropropane	4.60	77	7910	0.28	ppb	#	82
41) Chloroform	5.09	83	9135	0.26	ppb		94
42) Bromochloromethane	4.94	49	3331	0.26	ppb		87
44) 1,1,1-TCA	5.31	97	8639	0.26	ppb		96
45) Cyclohexane	5.37	56	6048	0.01	ppb	#	95
46) 1,1-Dichloropropene	5.54	75	7267	0.29	ppb		99
47) 2,2,4-Trimethylpentane	5.96	57	8407	0.26	ppb		94
49) Carbon Tetrachloride	5.52	117	7986	0.28	ppb		100
50) Tert Amyl Methyl Ether	6.02	73	11990	0.27	ppb		91
52) 1,2-DCA	5.81	62	6935	0.29	ppb	#	89
53) Benzene	5.79	78	23568	0.30	ppb		100
54) TCE	6.61	130	8247	0.30	ppb		89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z22.D
Acq On : 19 Jan 21 16:05
Sample : 0.3ug/L VOC STD 1/19/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	99716	8.77	ppb		94
56)	1,2-Dichloropropane	6.86	63	4976	0.28	ppb		99
57)	Bromodichloromethane	7.20	83	5092	0.25	ppb	#	80
58)	Methyl Cyclohexane	6.84	83	6525	0.23	ppb	#	76
59)	Dibromomethane	6.99	174	5915	0.29	ppb	#	83
60)	MIBK (methyl isobutyl ket	7.95	43	50619	3.92	ppb		91
61)	1-Bromo-2-chloroethane	7.54	144	1195	0.28	ppb		96
63)	Cis-1,3-Dichloropropene	7.74	75	5852	0.23	ppb	#	79
64)	Toluene	8.11	91	24422	0.27	ppb		94
65)	Trans-1,3-Dichloropropene	8.37	75	5194	0.24	ppb		92
66)	1,1,2-TCA	8.57	97	4364	0.25	ppb	#	84
67)	2-Hexanone	8.88	43	17824	3.45	ppb	#	93
70)	1,2-EDB	9.09	107	4514	0.24	ppb	#	96
71)	Tetrachloroethene	8.72	166	11992	0.31	ppb		89
72)	1-Chlorohexane	9.67	91	8576	0.30	ppb	#	91
73)	1,1,1,2-Tetrachloroethane	9.76	131	5290	0.25	ppb	#	80
74)	m&p-Xylene	9.93	91	38967	0.54	ppb		95
75)	o-Xylene	10.35	91	18409	0.25	ppb		95
76)	Styrene	10.37	104	13163	0.23	ppb		90
78)	1,3-Dichloropropane	8.75	76	7075	0.26	ppb		94
79)	Dibromochloromethane	8.98	129	4270	1.22	ppb		96
80)	Chlorobenzene	9.65	112	18291	0.28	ppb	#	87
81)	Ethylbenzene	9.79	91	25439	0.27	ppb		97
82)	Bromoform	10.54	173	3469	1.78	ppb	#	68
84)	Isopropylbenzene	10.77	105	26457	0.26	ppb	#	89
85)	1,1,2,2-Tetrachloroethane	11.07	83	4724	0.23	ppb		92
86)	1,2,3-Trichloropropane	11.11	110	2442	0.29	ppb	#	82
87)	t-1,4-Dichloro-2-Butene	11.14	53	768	0.19	ppb	#	76
88)	Bromobenzene	11.06	77	8802	0.28	ppb		94
89)	n-Propylbenzene	11.21	91	28132	0.26	ppb		97
90)	4-Ethyltoluene	11.34	105	25602	0.26	ppb		92
91)	2-Chlorotoluene	11.41	91	20109	0.27	ppb		95
92)	1,3,5-Trimethylbenzene	11.41	105	19381	0.24	ppb		90
93)	4-Chlorotoluene	11.41	91	20109	0.27	ppb		95
94)	Tert-Butylbenzene	11.77	119	23441	0.29	ppb	#	85
95)	1,2,4-Trimethylbenzene	11.81	105	19260	0.24	ppb		88
96)	Sec-Butylbenzene	12.01	105	26064	0.24	ppb		95
97)	p-Isopropyltoluene	11.77	119	23441	0.29	ppb		98
98)	Benzyl Chloride	12.35	91	15946	1.51	ppb		96
99)	1,3-DCB	12.10	146	17125	0.27	ppb		89
100)	1,4-DCB	12.20	146	18556	0.29	ppb	#	89
101)	n-Butylbenzene	12.61	91	18874	0.24	ppb		96
102)	1,2-DCB	12.60	146	15169	0.26	ppb		97
103)	Hexachloroethane	12.89	201	8051	1.93	ppb	#	79
104)	1,2-Dibromo-3-chloropropan	13.44	157	1195	1.08	ppb	#	78
105)	1,2,4-Trichlorobenzene	13.69	180	14760	0.27	ppb		92
106)	Hexachlorobutadiene	14.56	225	7588	0.27	ppb	#	88
107)	Naphthalene	14.62	128	20981	0.26	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	12345	0.30	ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

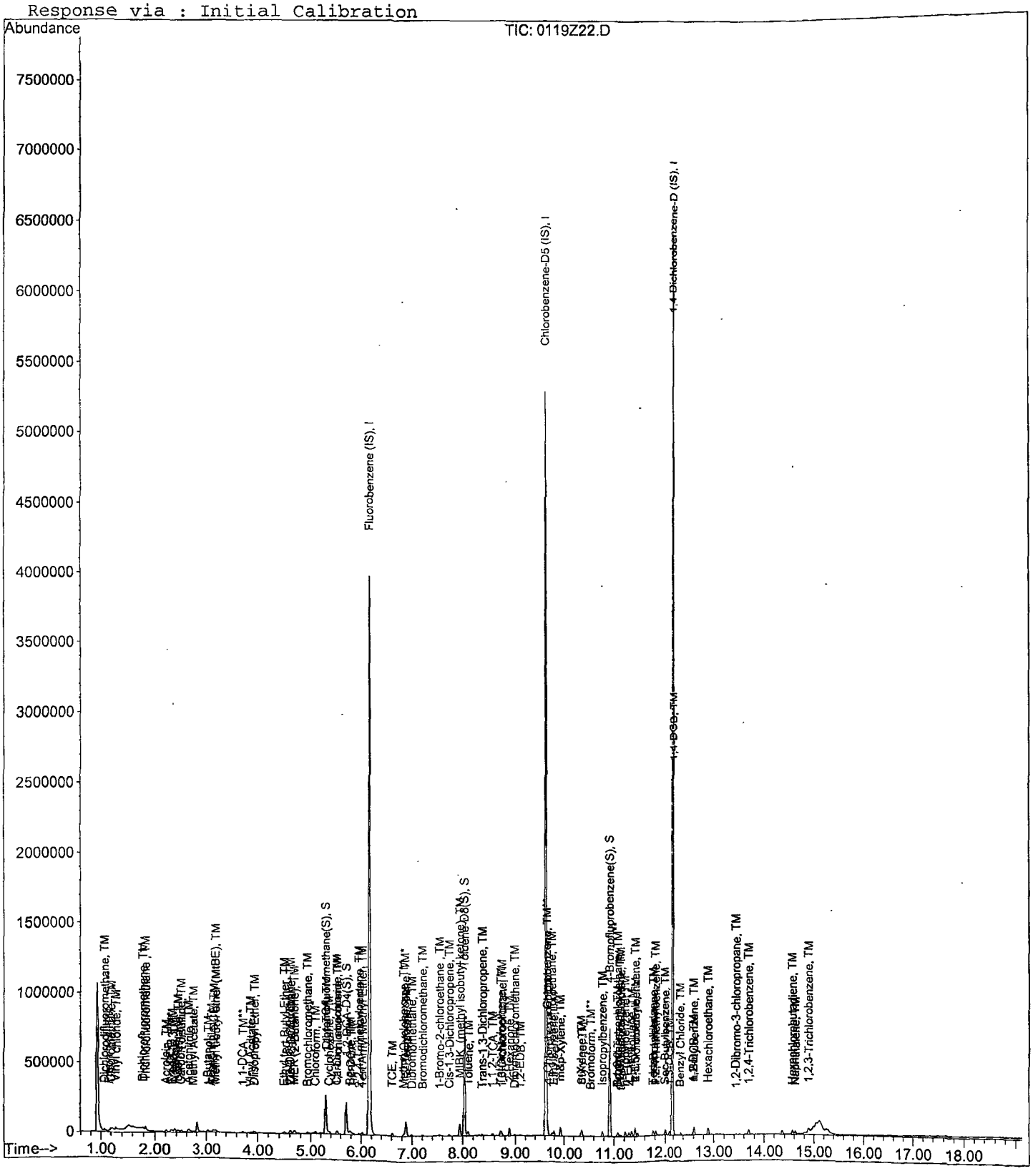
Data File : M:\ZEUS\DATA\210119\0119Z22.D
Acq On : 19 Jan 21 16:05
Sample : 0.3ug/L VOC STD 1/19/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 20 10:15 2021

Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z23.D Vial: 3
Acq On : 19 Jan 21 16:28 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4240471	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3577057	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1396736	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	174133	4.99	ppb		0.00
Spiked Amount 25.000			Recovery =	19.952%			
48) 1,2-DCA-D4(S)	5.71	65	160833	4.01	ppb		0.00
Spiked Amount 25.000			Recovery =	16.048%			
69) Toluene-D8(S)	8.03	98	644936	4.04	ppb		0.00
Spiked Amount 25.000			Recovery =	16.144%			
77) 4-Bromofluorobenzene(S)	10.92	95	219641	5.65	ppb		0.00
Spiked Amount 25.000			Recovery =	22.612%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	10473	0.48	ppb	#	88
4) Freon 114	1.16	85	4205	1.09	ppb	#	79
5) Chloromethane	1.20	50	7055	0.28	ppb		99
6) Vinyl chloride	1.28	62	12987	0.57	ppb		99
9) Bromomethane	1.53	94	7409	-0.42	ppb		99
10) Chloroethane	1.61	64	4847	-1.47	ppb	#	78
11) Dichlorofluoromethane	1.79	67	19640	0.52	ppb	#	79
12) Trichlorofluoromethane	1.83	101	20301	0.55	ppb	#	80
16) Acrolein	2.21	55	21093	24.21	ppb		99
17) Acetone	2.36	43	58622	10.52	ppb		100
18) Freon-113	2.32	101	4002	0.48	ppb		84
19) 1,1-DCE	2.30	61	13899	0.51	ppb	#	85
21) Acetonitrile	2.64	40	12769	26.73	ppb		99
22) t-Butanol	3.04	59	16840	27.07	ppb		96
23) Methyl Acetate	2.73	43	9468	0.66	ppb		95
24) Iodomethane	2.43	142	19542	0.65	ppb		91
25) Acrylonitrile	3.12	52	3667	0.59	ppb	#	69
26) Methylene chloride	2.82	49	13662	-1.36	ppb		93
27) Carbon disulfide	2.50	76	13520	0.50	ppb		99
28) Methyl t-butyl ether (MtBE	3.19	73	24811	0.49	ppb	#	90
29) Trans-1,2-DCE	3.15	61	14360	0.54	ppb		85
31) Diisopropyl Ether	3.94	45	23303	0.48	ppb		98
33) 1,1-DCA	3.72	63	16521	0.50	ppb	#	89
34) Vinyl Acetate	3.86	43	9680	0.50	ppb		95
35) Ethyl tert Butyl Ether	4.49	59	21631	0.45	ppb		94
36) MEK (2-Butanone)	4.68	43	74062	9.80	ppb		94
37) Cis-1,2-DCE	4.61	61	14568	0.50	ppb		99
38) 2,2-Dichloropropane	4.60	77	15191	0.53	ppb		96
41) Chloroform	5.10	83	16160	0.46	ppb		94
42) Bromochloromethane	4.93	49	6251	0.48	ppb	#	84
44) 1,1,1-TCA	5.30	97	15711	0.47	ppb		95
45) Cyclohexane	5.37	56	12048	0.25	ppb		89
46) 1,1-Dichloropropene	5.53	75	12902	0.51	ppb		97
47) 2,2,4-Trimethylpentane	5.95	57	15604	0.40	ppb		99
49) Carbon Tetrachloride	5.52	117	13300	0.46	ppb		98
50) Tert Amyl Methyl Ether	6.01	73	21357	0.47	ppb	#	88
52) 1,2-DCA	5.81	62	11409	0.48	ppb	#	91
53) Benzene	5.79	78	40226	0.51	ppb		99
54) TCE	6.61	130	13518	0.48	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z23.D Vial: 3
Acq On : 19 Jan 21 16:28 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	254666	22.41	ppb		96
56)	1,2-Dichloropropane	6.86	63	9315	0.52	ppb		97
57)	Bromodichloromethane	7.20	83	9537	0.46	ppb		95
58)	Methyl Cyclohexane	6.84	83	12507	0.44	ppb		89
59)	Dibromomethane	6.99	174	10294	0.50	ppb		98
60)	MIBK (methyl isobutyl ket	7.95	43	116748	9.04	ppb		96
61)	1-Bromo-2-chloroethane	7.54	144	2383	0.55	ppb		87
63)	Cis-1,3-Dichloropropene	7.73	75	11375	0.45	ppb		98
64)	Toluene	8.11	91	45269	0.51	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	9460	0.43	ppb		99
66)	1,1,2-TCA	8.57	97	8237	0.48	ppb		92
67)	2-Hexanone	8.88	43	46760	9.06	ppb		99
70)	1,2-EDB	9.09	107	8757	0.47	ppb	#	92
71)	Tetrachloroethene	8.72	166	18799	0.49	ppb		95
72)	1-Chlorohexane	9.67	91	14621	0.51	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.76	131	9107	0.44	ppb		93
74)	m&p-Xylene	9.93	91	70524	0.98	ppb		98
75)	o-Xylene	10.36	91	33498	0.47	ppb		99
76)	Styrene	10.37	104	25347	0.44	ppb		100
78)	1,3-Dichloropropane	8.75	76	12195	0.46	ppb	#	88
79)	Dibromochloromethane	8.98	129	6881	1.33	ppb	#	79
80)	Chlorobenzene	9.66	112	32539	0.50	ppb		94
81)	Ethylbenzene	9.80	91	46573	0.49	ppb		96
82)	Bromoform	10.54	173	5367	1.87	ppb	#	80
84)	Isopropylbenzene	10.76	105	46720	0.45	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	9232	0.44	ppb	#	91
86)	1,2,3-Trichloropropane	11.12	110	3965	0.46	ppb	#	83
87)	t-1,4-Dichloro-2-Butene	11.15	53	1929	0.46	ppb	#	63
88)	Bromobenzene	11.07	77	14750	0.45	ppb		91
89)	n-Propylbenzene	11.21	91	50193	0.45	ppb		99
90)	4-Ethyltoluene	11.34	105	46380	0.46	ppb		97
91)	2-Chlorotoluene	11.41	91	32217	0.43	ppb		100
92)	1,3,5-Trimethylbenzene	11.41	105	36590	0.44	ppb		97
93)	4-Chlorotoluene	11.41	91	32217	0.43	ppb		100
94)	Tert-Butylbenzene	11.77	119	37305	0.45	ppb		98
95)	1,2,4-Trimethylbenzene	11.82	105	34539	0.42	ppb		99
96)	Sec-Butylbenzene	12.01	105	48960	0.44	ppb		98
97)	p-Isopropyltoluene	11.77	119	37305	0.45	ppb		98
98)	Benzyl Chloride	12.35	91	15542	1.49	ppb		95
99)	1,3-DCB	12.11	146	30220	0.47	ppb		94
100)	1,4-DCB	12.20	146	32219	0.48	ppb		93
101)	n-Butylbenzene	12.61	91	35240	0.44	ppb		97
102)	1,2-DCB	12.60	146	28505	0.48	ppb		94
103)	Hexachloroethane	12.90	201	7561	1.90	ppb		85
104)	1,2-Dibromo-3-chloropropan	13.44	157	2102	1.19	ppb	#	92
105)	1,2,4-Trichlorobenzene	13.69	180	25692	0.46	ppb		95
106)	Hexachlorobutadiene	14.57	225	14264	0.50	ppb	#	85
107)	Naphthalene	14.62	128	34161	0.41	ppb		97
108)	1,2,3-Trichlorobenzene	14.89	180	18503	0.44	ppb		84

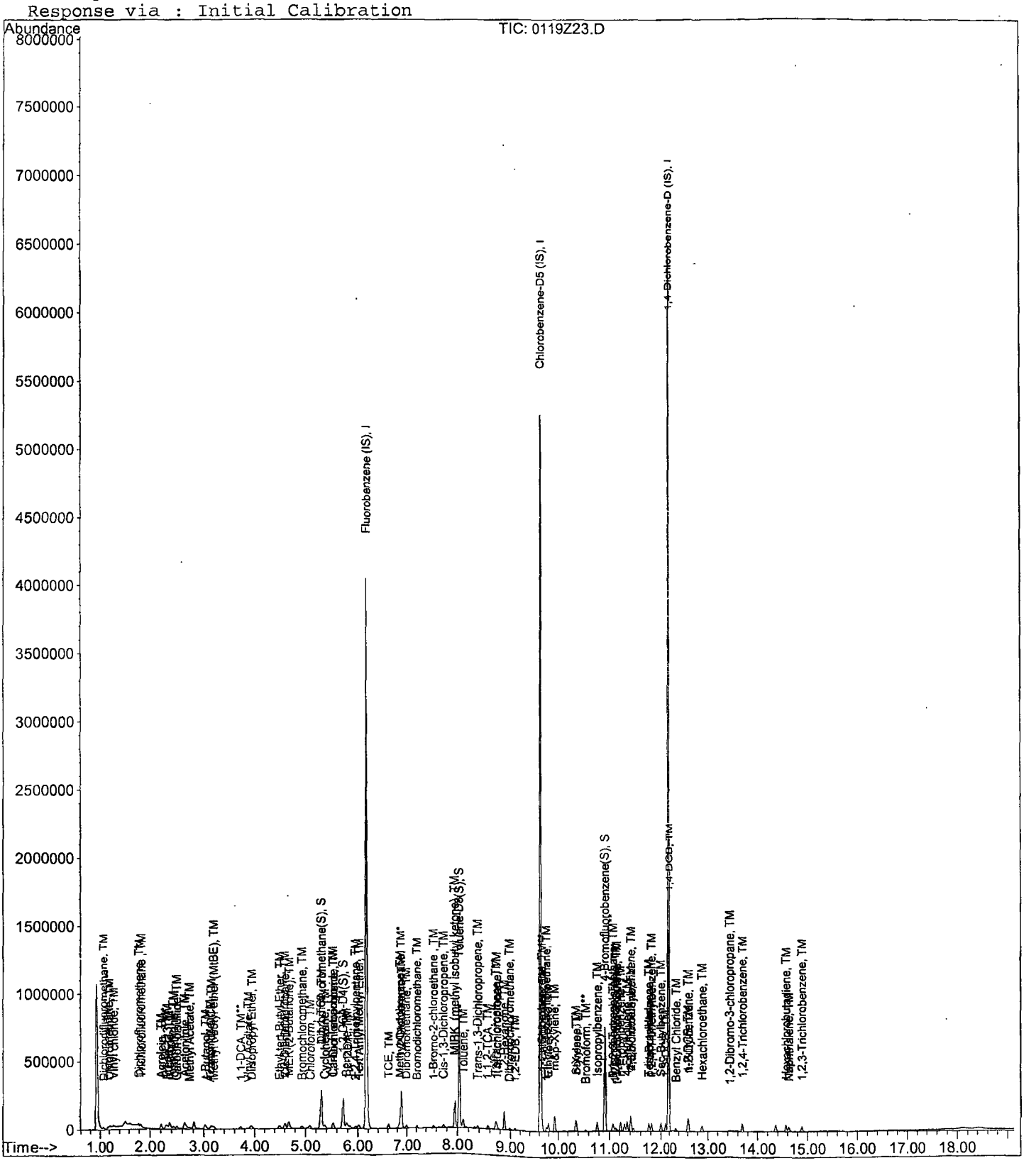
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z23.D Vial: 3
Acq On : 19 Jan 21 16:28 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z24.D Vial: 4
Acq On : 19 Jan 21 16:52 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4154827	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3516830	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1315328	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	400685	9.48	ppb		0.00
Spiked Amount 25.000			Recovery =	37.920%			
48) 1,2-DCA-D4(S)	5.71	65	372077	9.47	ppb		0.00
Spiked Amount 25.000			Recovery =	37.892%			
69) Toluene-D8(S)	8.03	98	1516129	9.65	ppb		0.00
Spiked Amount 25.000			Recovery =	38.604%			
77) 4-Bromofluorobenzene(S)	10.92	95	508926	10.00	ppb		0.00
Spiked Amount 25.000			Recovery =	39.984%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	23883	1.12	ppb		95
4) Freon 114	1.16	85	12968	1.76	ppb		90
5) Chloromethane	1.23	50	9175	0.54	ppb		96
6) Vinyl chloride	1.28	62	25143	1.12	ppb		95
9) Bromomethane	1.53	94	8133	-0.25	ppb		90
10) Chloroethane	1.61	64	8123	-0.54	ppb		93
11) Dichlorofluoromethane	1.79	67	41762	1.14	ppb		97
12) Trichlorofluoromethane	1.83	101	37794	1.05	ppb		91
16) Acrolein	2.21	55	40452	47.38	ppb		98
17) Acetone	2.37	43	112834	20.67	ppb		96
18) Freon-113	2.33	101	8704	1.07	ppb		96
19) 1,1-DCE	2.30	61	27588	1.04	ppb		91
21) Acetonitrile	2.64	40	24223	51.76	ppb		93
22) t-Butanol	3.03	59	29320	48.09	ppb		97
23) Methyl Acetate	2.73	43	15111	1.07	ppb		99
24) Iodomethane	2.43	142	29587	1.01	ppb		90
25) Acrylonitrile	3.10	52	5750	0.95	ppb	#	64
26) Methylene chloride	2.81	49	19312	-0.74	ppb		97
27) Carbon disulfide	2.49	76	25968	0.99	ppb		97
28) Methyl t-butyl ether (MtBE	3.19	73	47280	0.96	ppb		93
29) Trans-1,2-DCE	3.15	61	26465	1.01	ppb		86
31) Diisopropyl Ether	3.93	45	46617	0.99	ppb		89
33) 1,1-DCA	3.72	63	31965	0.99	ppb		97
34) Vinyl Acetate	3.87	43	18988	1.01	ppb	#	92
35) Ethyl tert Butyl Ether	4.50	59	44220	0.95	ppb		89
36) MEK (2-Butanone)	4.68	43	149159	20.14	ppb		98
37) Cis-1,2-DCE	4.61	61	28677	1.01	ppb		96
38) 2,2-Dichloropropane	4.60	77	26601	0.95	ppb		94
41) Chloroform	5.09	83	34475	1.01	ppb		97
42) Bromochloromethane	4.93	49	12925	1.02	ppb		98
44) 1,1,1-TCA	5.30	97	31968	0.98	ppb		93
45) Cyclohexane	5.37	56	25709	0.80	ppb	#	90
46) 1,1-Dichloropropene	5.53	75	25612	1.03	ppb		91
47) 2,2,4-Trimethylpentane	5.96	57	44642	0.98	ppb		92
49) Carbon Tetrachloride	5.52	117	26718	0.94	ppb		92
50) Tert Amyl Methyl Ether	6.02	73	43214	0.98	ppb		97
52) 1,2-DCA	5.81	62	24638	1.06	ppb	#	87
53) Benzene	5.78	78	79387	1.02	ppb		98
54) TCE	6.61	130	27371	1.00	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z24.D Vial: 4
Acq On : 19 Jan 21 16:52 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	517192	46.45	ppb		99
56)	1,2-Dichloropropane	6.87	63	17880	1.02	ppb		99
57)	Bromodichloromethane	7.21	83	17665	0.87	ppb		98
58)	Methyl Cyclohexane	6.84	83	29322	1.05	ppb		98
59)	Dibromomethane	6.99	174	19453	0.97	ppb		97
60)	MIBK (methyl isobutyl ket	7.95	43	244834	19.34	ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	4327	1.02	ppb	#	82
63)	Cis-1,3-Dichloropropene	7.74	75	22513	0.91	ppb		89
64)	Toluene	8.11	91	88836	1.02	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	19072	0.89	ppb		95
66)	1,1,2-TCA	8.57	97	16757	0.99	ppb		93
67)	2-Hexanone	8.88	43	99264	19.63	ppb		96
70)	1,2-EDB	9.09	107	16459	0.91	ppb	#	99
71)	Tetrachloroethene	8.72	166	38694	1.04	ppb		92
72)	1-Chlorohexane	9.67	91	28851	1.02	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.76	131	18607	0.91	ppb	#	88
74)	m&p-Xylene	9.93	91	141142	1.99	ppb		98
75)	o-Xylene	10.35	91	69700	0.99	ppb		97
76)	Styrene	10.37	104	49795	0.89	ppb		95
78)	1,3-Dichloropropane	8.75	76	26445	1.01	ppb		94
79)	Dibromochloromethane	8.99	129	14303	1.66	ppb		92
80)	Chlorobenzene	9.65	112	65602	1.03	ppb		93
81)	Ethylbenzene	9.79	91	90796	0.97	ppb		96
82)	Bromoform	10.54	173	11153	2.15	ppb		96
84)	Isopropylbenzene	10.77	105	95210	0.97	ppb		94
85)	1,1,2,2-Tetrachloroethane	11.08	83	18398	0.93	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	8764	1.08	ppb	#	75
87)	t-1,4-Dichloro-2-Butene	11.15	53	3565	0.91	ppb		89
88)	Bromobenzene	11.06	77	28705	0.94	ppb		97
89)	n-Propylbenzene	11.21	91	104366	0.99	ppb		99
90)	4-Ethyltoluene	11.34	105	96731	1.01	ppb		94
91)	2-Chlorotoluene	11.41	91	71169	1.00	ppb		93
92)	1,3,5-Trimethylbenzene	11.41	105	75707	0.97	ppb		100
93)	4-Chlorotoluene	11.41	91	71169	1.00	ppb		93
94)	Tert-Butylbenzene	11.77	119	75156	0.96	ppb		92
95)	1,2,4-Trimethylbenzene	11.81	105	74165	0.96	ppb		99
96)	Sec-Butylbenzene	12.00	105	104689	0.99	ppb		98
97)	p-Isopropyltoluene	11.77	119	75156	0.96	ppb		96
98)	Benzyl Chloride	12.35	91	27829	1.78	ppb		92
99)	1,3-DCB	12.10	146	60794	0.99	ppb		99
100)	1,4-DCB	12.20	146	65552	1.04	ppb		100
101)	n-Butylbenzene	12.61	91	69592	0.92	ppb		95
102)	1,2-DCB	12.60	146	57265	1.02	ppb		94
103)	Hexachloroethane	12.89	201	13032	2.14	ppb		85
104)	1,2-Dibromo-3-chloropropan	13.44	157	4369	1.50	ppb	#	82
105)	1,2,4-Trichlorobenzene	13.69	180	54631	1.03	ppb		94
106)	Hexachlorobutadiene	14.57	225	24654	0.92	ppb		95
107)	Naphthalene	14.62	128	69210	0.88	ppb	#	91
108)	1,2,3-Trichlorobenzene	14.88	180	38037	0.96	ppb		94

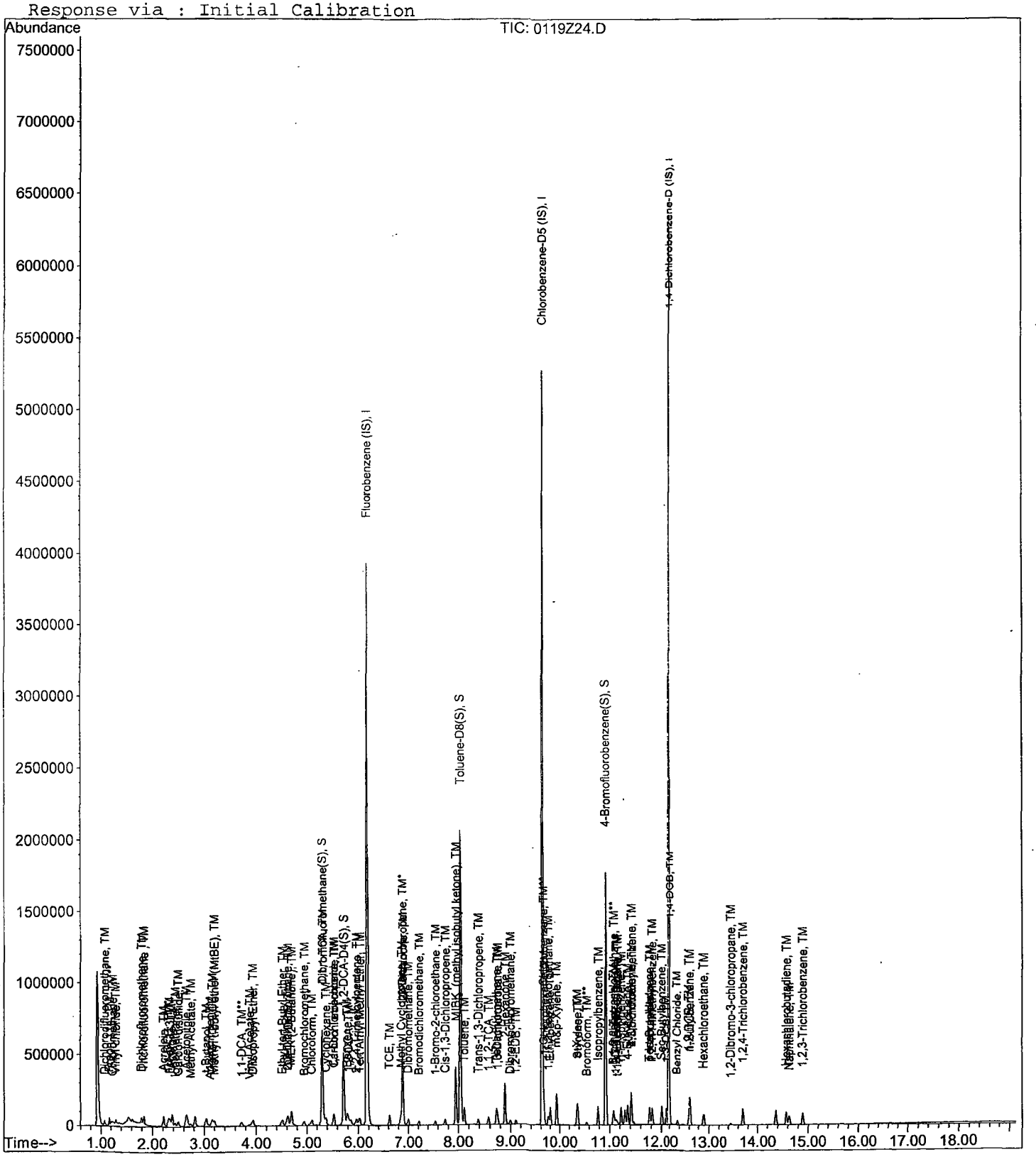
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z24.D Vial: 4
Acq On : 19 Jan 21 16:52 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z25.D Vial: 5
Acq On : 19 Jan 21 17:15 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4087894	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.63	117	3444985	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1345536	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	399952	9.59	ppb		0.00
Spiked Amount 25.000			Recovery = 38.376%				
48) 1,2-DCA-D4(S)	5.71	65	359185	9.29	ppb		0.00
Spiked Amount 25.000			Recovery = 37.176%				
69) Toluene-D8(S)	8.03	98	1506514	9.79	ppb		0.00
Spiked Amount 25.000			Recovery = 39.156%				
77) 4-Bromofluorobenzene(S)	10.92	95	511454	10.19	ppb		0.00
Spiked Amount 25.000			Recovery = 40.768%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	38784	1.85	ppb		94
4) Freon 114	1.16	85	19216	2.26	ppb		95
5) Chloromethane	1.24	50	16872	1.49	ppb		100
6) Vinyl chloride	1.28	62	46209	2.10	ppb		96
9) Bromomethane	1.53	94	15170	1.16	ppb		83
10) Chloroethane	1.60	64	10901	0.28	ppb		93
11) Dichlorofluoromethane	1.79	67	79475	2.20	ppb		93
12) Trichlorofluoromethane	1.83	101	72600	2.06	ppb		99
16) Acrolein	2.21	55	66911	79.66	ppb		92
17) Acetone	2.37	43	167286	31.15	ppb		99
18) Freon-113	2.33	101	15110	1.89	ppb		96
19) 1,1-DCE	2.30	61	52711	2.02	ppb		98
21) Acetonitrile	2.64	40	34945	75.89	ppb		94
22) t-Butanol	3.04	59	46920	78.23	ppb		98
23) Methyl Acetate	2.73	43	28041	2.02	ppb		97
24) Iodomethane	2.43	142	52001	1.80	ppb		99
25) Acrylonitrile	3.11	52	12315	2.06	ppb	#	89
26) Methylene chloride	2.81	49	31408	0.57	ppb		96
27) Carbon disulfide	2.49	76	46608	1.81	ppb	#	95
28) Methyl t-butyl ether (MtBE	3.19	73	95375	1.97	ppb	#	90
29) Trans-1,2-DCE	3.15	61	51612	2.00	ppb		94
31) Diisopropyl Ether	3.94	45	90600	1.95	ppb		96
33) 1,1-DCA	3.71	63	64028	2.02	ppb		93
34) Vinyl Acetate	3.87	43	31482	1.70	ppb		95
35) Ethyl tert Butyl Ether	4.50	59	89453	1.95	ppb		98
36) MEK (2-Butanone)	4.68	43	226811	31.12	ppb		98
37) Cis-1,2-DCE	4.61	61	56246	2.01	ppb		96
38) 2,2-Dichloropropane	4.60	77	55057	2.00	ppb		93
41) Chloroform	5.09	83	66684	1.99	ppb		99
42) Bromochloromethane	4.93	49	25194	2.02	ppb		96
44) 1,1,1-TCA	5.31	97	63175	1.97	ppb		90
45) Cyclohexane	5.37	56	45158	1.61	ppb		96
46) 1,1-Dichloropropene	5.53	75	47669	1.95	ppb		99
47) 2,2,4-Trimethylpentane	5.96	57	68124	1.46	ppb		97
49) Carbon Tetrachloride	5.52	117	53299	1.92	ppb		98
50) Tert Amyl Methyl Ether	6.01	73	81861	1.88	ppb		97
52) 1,2-DCA	5.81	62	45556	2.00	ppb		95
53) Benzene	5.78	78	156298	2.04	ppb		99
54) TCE	6.61	130	55213	2.05	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z25.D Vial: 5
Acq On : 19 Jan 21 17:15 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	828268	75.61	ppb		96
56)	1,2-Dichloropropane	6.86	63	34955	2.03	ppb		100
57)	Bromodichloromethane	7.21	83	37398	1.88	ppb		85
58)	Methyl Cyclohexane	6.84	83	48743	1.78	ppb		97
59)	Dibromomethane	6.99	174	37972	1.92	ppb		98
60)	MIBK (methyl isobutyl ket	7.95	43	382967	30.75	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	8852	2.13	ppb		90
63)	Cis-1,3-Dichloropropene	7.74	75	45879	1.89	ppb		93
64)	Toluene	8.11	91	176824	2.07	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	38487	1.83	ppb		98
66)	1,1,2-TCA	8.56	97	31791	1.91	ppb		99
67)	2-Hexanone	8.88	43	156660	31.48	ppb		98
70)	1,2-EDB	9.09	107	34851	1.96	ppb	#	81
71)	Tetrachloroethene	8.72	166	74550	2.04	ppb		96
72)	1-Chlorohexane	9.67	91	55730	2.01	ppb		97
73)	1,1,1,2-Tetrachloroethane	9.76	131	34945	1.74	ppb		95
74)	m&p-Xylene	9.93	91	285110	4.10	ppb		97
75)	o-Xylene	10.35	91	136199	1.98	ppb		96
76)	Styrene	10.37	104	101392	1.84	ppb		97
78)	1,3-Dichloropropane	8.74	76	52134	2.04	ppb		97
79)	Dibromochloromethane	8.99	129	29808	2.37	ppb		95
80)	Chlorobenzene	9.65	112	127415	2.03	ppb		97
81)	Ethylbenzene	9.79	91	185313	2.03	ppb		99
82)	Bromoform	10.54	173	23642	2.75	ppb		100
84)	Isopropylbenzene	10.77	105	194761	1.94	ppb		97
85)	1,1,2,2-Tetrachloroethane	11.08	83	38333	1.90	ppb		92
86)	1,2,3-Trichloropropane	11.12	110	15629	1.88	ppb	#	87
87)	t-1,4-Dichloro-2-Butene	11.14	53	6681	1.66	ppb	#	77
88)	Bromobenzene	11.06	77	69438	2.22	ppb		97
89)	n-Propylbenzene	11.21	91	209945	1.94	ppb		95
90)	4-Ethyltoluene	11.34	105	190584	1.95	ppb		93
91)	2-Chlorotoluene	11.41	91	143850	1.97	ppb		100
92)	1,3,5-Trimethylbenzene	11.41	105	156558	1.96	ppb		100
93)	4-Chlorotoluene	11.41	91	143850	1.97	ppb		100
94)	Tert-Butylbenzene	11.77	119	154191	1.93	ppb		98
95)	1,2,4-Trimethylbenzene	11.81	105	150174	1.90	ppb		99
96)	Sec-Butylbenzene	12.01	105	210425	1.95	ppb		96
97)	p-Isopropyltoluene	11.77	119	154191	1.93	ppb		99
98)	Benzyl Chloride	12.35	91	54429	2.34	ppb		99
99)	1,3-DCB	12.10	146	124141	1.98	ppb		98
100)	1,4-DCB	12.20	146	126011	1.96	ppb		97
101)	n-Butylbenzene	12.61	91	144901	1.88	ppb		97
102)	1,2-DCB	12.60	146	109882	1.91	ppb		97
103)	Hexachloroethane	12.89	201	27427	2.70	ppb		87
104)	1,2-Dibromo-3-chloropropan	13.44	157	10171	2.23	ppb		87
105)	1,2,4-Trichlorobenzene	13.69	180	104848	1.94	ppb		97
106)	Hexachlorobutadiene	14.57	225	51606	1.89	ppb		95
107)	Naphthalene	14.62	128	145778	1.81	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	78622	1.94	ppb		89

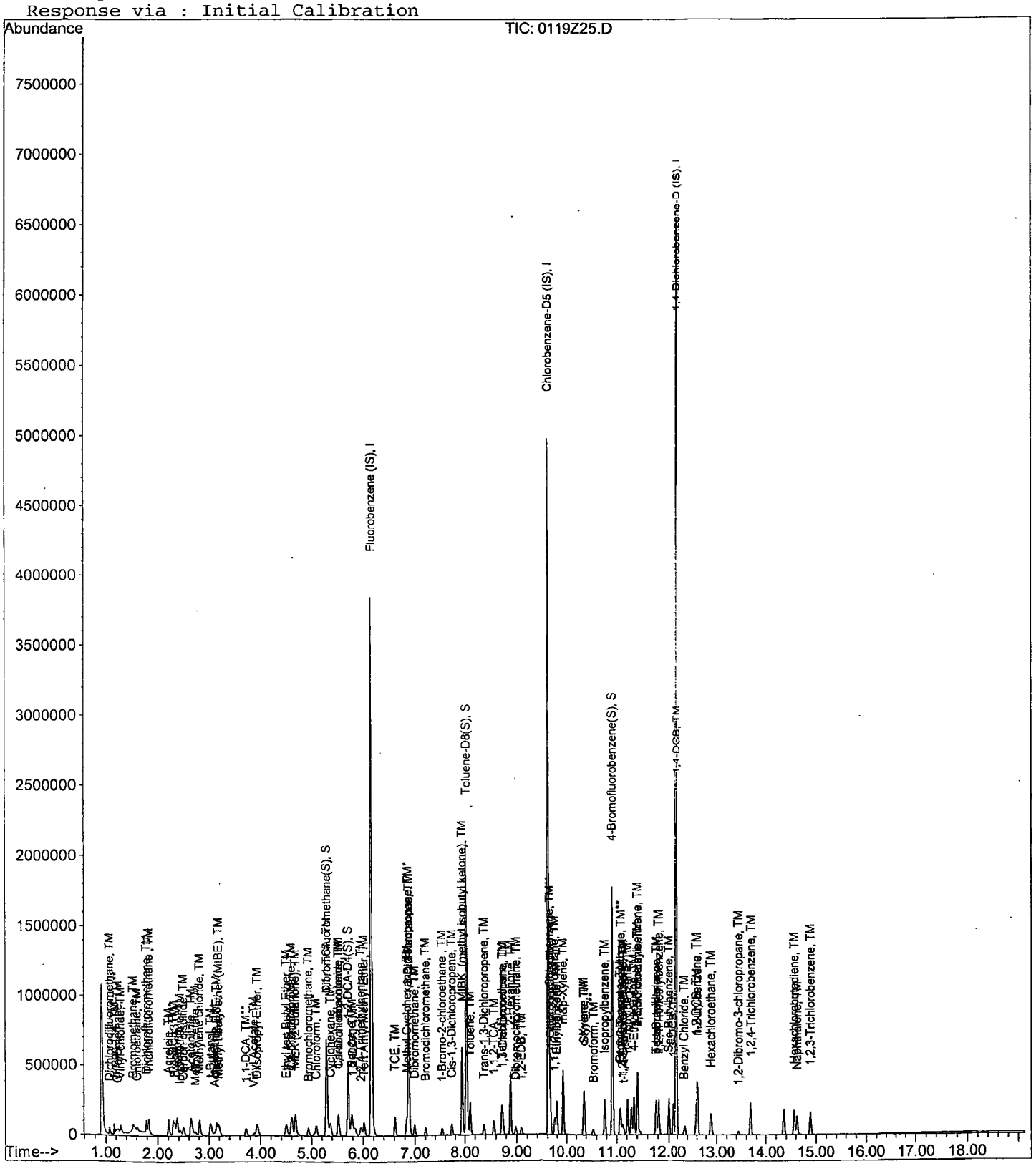
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z25.D Vial: 5
Acq On : 19 Jan 21 17:15 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z26.D Vial: 6
Acq On : 19 Jan 21 17:38 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4066255	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3432380	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1314816	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1153680	24.67	ppb		0.00
Spiked Amount 25.000			Recovery = 98.692%				
48) 1,2-DCA-D4(S)	5.71	65	1022083	26.59	ppb		0.00
Spiked Amount 25.000			Recovery = 106.356%				
69) Toluene-D8(S)	8.03	98	4159218	27.13	ppb		0.00
Spiked Amount 25.000			Recovery = 108.504%				
77) 4-Bromofluorobenzene(S)	10.92	95	1460279	24.63	ppb		0.00
Spiked Amount 25.000			Recovery = 98.520%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	82904	3.98	ppb		96
4) Freon 114	1.16	85	60792	5.50	ppb		92
5) Chloromethane	1.23	50	39133	4.19	ppb		96
6) Vinyl chloride	1.28	62	93229	4.26	ppb		99
9) Bromomethane	1.53	94	31088	4.33	ppb		96
10) Chloroethane	1.60	64	21760	3.37	ppb	#	87
11) Dichlorofluoromethane	1.78	67	190365	5.29	ppb		98
12) Trichlorofluoromethane	1.82	101	145190	4.13	ppb		96
16) Acrolein	2.21	55	82401	98.62	ppb		97
17) Acetone	2.37	43	214124	40.08	ppb		99
18) Freon-113	2.32	101	43584	5.48	ppb		91
19) 1,1-DCE	2.30	61	126953	4.90	ppb		99
21) Acetonitrile	2.64	40	47504	103.71	ppb		94
22) t-Butanol	3.04	59	61936	103.81	ppb		97
23) Methyl Acetate	2.73	43	63726	4.62	ppb		98
24) Iodomethane	2.43	142	115851	4.03	ppb		96
25) Acrylonitrile	3.11	52	30213	5.08	ppb		85
26) Methylene chloride	2.81	49	65928	4.24	ppb		97
27) Carbon disulfide	2.49	76	118848	4.66	ppb		98
28) Methyl t-butyl ether (MtBE	3.19	73	234892	4.87	ppb		99
29) Trans-1,2-DCE	3.15	61	126515	4.93	ppb		98
31) Diisopropyl Ether	3.93	45	228798	4.94	ppb		99
33) 1,1-DCA	3.71	63	156840	4.99	ppb		99
34) Vinyl Acetate	3.86	43	90623	4.93	ppb	#	91
35) Ethyl tert Butyl Ether	4.50	59	225203	4.94	ppb		97
36) MEK (2-Butanone)	4.68	43	293952	40.55	ppb		99
37) Cis-1,2-DCE	4.61	61	138972	4.99	ppb		93
38) 2,2-Dichloropropane	4.60	77	131760	4.82	ppb		97
41) Chloroform	5.09	83	167412	5.01	ppb		99
42) Bromochloromethane	4.93	49	64152	5.18	ppb		96
44) 1,1,1-TCA	5.30	97	161604	5.08	ppb		96
45) Cyclohexane	5.37	56	122615	4.78	ppb		98
46) 1,1-Dichloropropene	5.53	75	120679	4.95	ppb		98
47) 2,2,4-Trimethylpentane	5.96	57	240133	4.93	ppb		98
49) Carbon Tetrachloride	5.52	117	132569	4.79	ppb		95
50) Tert Amyl Methyl Ether	6.01	73	212804	4.92	ppb		97
52) 1,2-DCA	5.81	62	113308	4.99	ppb		97
53) Benzene	5.78	78	381430	5.00	ppb		96
54) TCE	6.61	130	134960	5.04	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z26.D Vial: 6
Acq On : 19 Jan 21 17:38 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	1114434	102.28	ppb		95
56)	1,2-Dichloropropane	6.86	63	85766	5.00	ppb		97
57)	Bromodichloromethane	7.21	83	96678	4.87	ppb		94
58)	Methyl Cyclohexane	6.84	83	147248	5.41	ppb		96
59)	Dibromomethane	6.99	174	98337	5.00	ppb		98
60)	MIBK (methyl isobutyl ket	7.95	43	508167	41.02	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	20223	4.89	ppb		98
63)	Cis-1,3-Dichloropropene	7.74	75	122083	5.04	ppb		94
64)	Toluene	8.11	91	436218	5.12	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	103448	4.94	ppb		99
66)	1,1,2-TCA	8.56	97	86767	5.25	ppb		96
67)	2-Hexanone	8.88	43	216576	43.76	ppb		97
70)	1,2-EDB	9.09	107	89663	5.07	ppb		99
71)	Tetrachloroethene	8.72	166	182481	5.01	ppb		95
72)	1-Chlorohexane	9.67	91	135307	4.90	ppb		97
73)	1,1,1,2-Tetrachloroethane	9.75	131	96125	4.81	ppb		95
74)	m&p-Xylene	9.93	91	708689	10.24	ppb		100
75)	o-Xylene	10.35	91	346949	5.05	ppb		97
76)	Styrene	10.37	104	279337	5.10	ppb		94
78)	1,3-Dichloropropane	8.74	76	130377	5.11	ppb		94
79)	Dibromochloromethane	8.99	129	79564	4.60	ppb		95
80)	Chlorobenzene	9.65	112	318873	5.11	ppb		98
81)	Ethylbenzene	9.79	91	467871	5.14	ppb		100
82)	Bromoform	10.54	173	64803	4.73	ppb		96
84)	Isopropylbenzene	10.77	105	494224	5.04	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	100146	5.07	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	39871	4.91	ppb		97
87)	t-1,4-Dichloro-2-Butene	11.15	53	17901	4.56	ppb		94
88)	Bromobenzene	11.06	77	146540	4.79	ppb		92
89)	n-Propylbenzene	11.21	91	539381	5.10	ppb		98
90)	4-Ethyltoluene	11.34	105	486958	5.09	ppb		98
91)	2-Chlorotoluene	11.41	91	357340	5.01	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	401613	5.15	ppb		99
93)	4-Chlorotoluene	11.41	91	357340	5.01	ppb		98
94)	Tert-Butylbenzene	11.77	119	383462	4.92	ppb		97
95)	1,2,4-Trimethylbenzene	11.81	105	395873	5.12	ppb		98
96)	Sec-Butylbenzene	12.00	105	536564	5.08	ppb		99
97)	p-Isopropyltoluene	11.77	119	383462	4.92	ppb		99
98)	Benzyl Chloride	12.35	91	140849	4.26	ppb		100
99)	1,3-DCB	12.10	146	308020	5.04	ppb		94
100)	1,4-DCB	12.20	146	314892	5.01	ppb		95
101)	n-Butylbenzene	12.61	91	379196	5.04	ppb		100
102)	1,2-DCB	12.60	146	283391	5.04	ppb		98
103)	Hexachloroethane	12.89	201	64777	4.25	ppb	#	87
104)	1,2-Dibromo-3-chloropropan	13.44	157	26746	4.42	ppb		96
105)	1,2,4-Trichlorobenzene	13.69	180	262454	4.96	ppb		99
106)	Hexachlorobutadiene	14.57	225	134530	5.04	ppb		95
107)	Naphthalene	14.62	128	394792	5.03	ppb		97
108)	1,2,3-Trichlorobenzene	14.89	180	193996	4.91	ppb		94

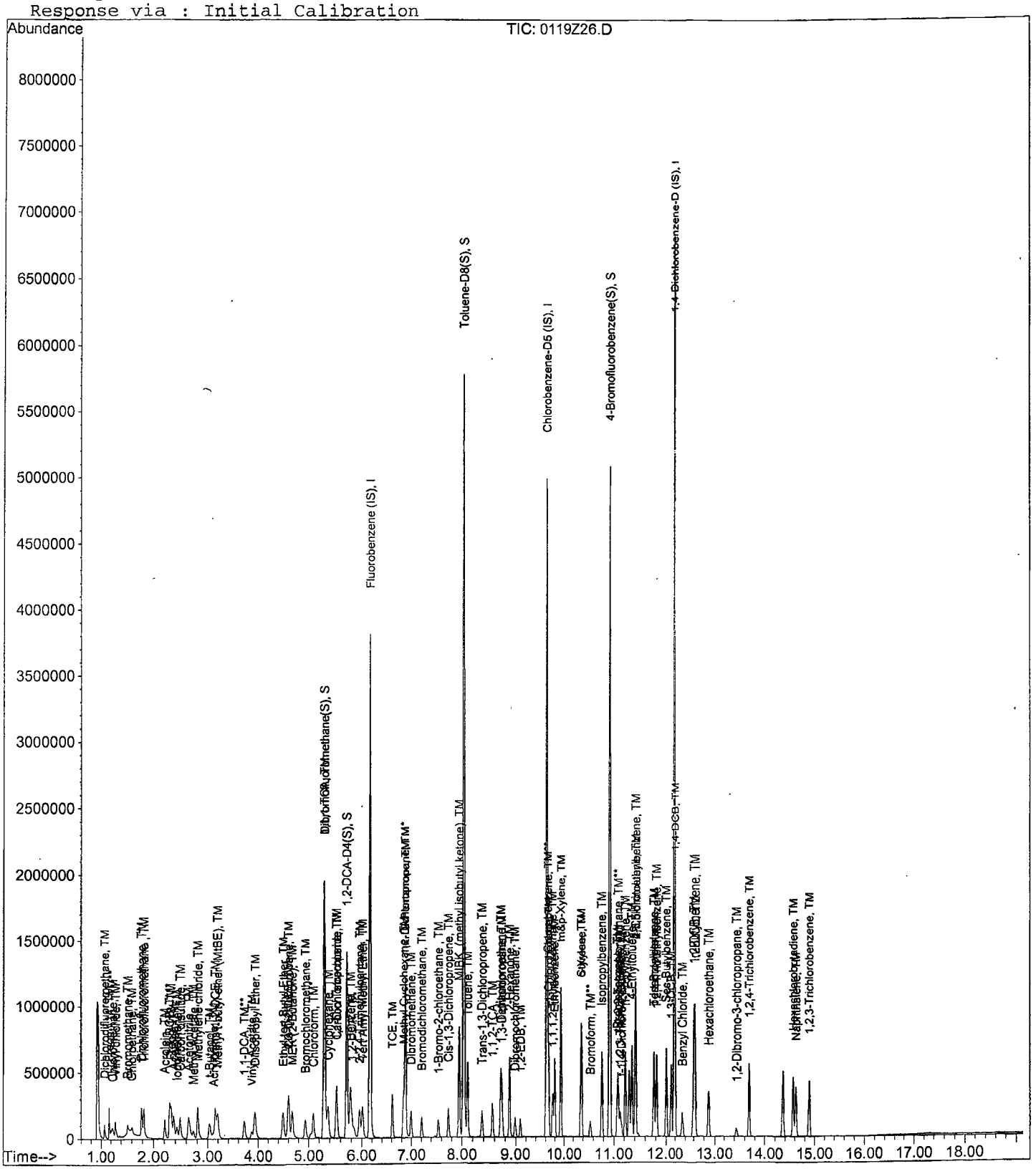
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z26.D Vial: 6
Acq On : 19 Jan 21 17:38 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z27.D Vial: 7
Acq On : 19 Jan 21 18:01 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4112053	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3453426	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1288192	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1180133	24.94	ppb	0.00
Spiked Amount 25.000			Recovery =	99.752%		
48) 1,2-DCA-D4(S)	5.71	65	1046664	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.700%		
69) Toluene-D8(S)	8.03	98	4178504	27.09	ppb	0.00
Spiked Amount 25.000			Recovery =	108.344%		
77) 4-Bromofluorobenzene(S)	10.92	95	1470062	24.64	ppb	0.00
Spiked Amount 25.000			Recovery =	98.568%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	192574	9.15	ppb	100
4) Freon 114	1.16	85	97512	8.26	ppb	100
5) Chloromethane	1.23	50	89723	10.19	ppb	100
6) Vinyl chloride	1.28	62	221911	10.03	ppb	100
9) Bromomethane	1.53	94	67356	11.35	ppb	100
10) Chloroethane	1.60	64	47473	10.50	ppb	100
11) Dichlorofluoromethane	1.78	67	379937	10.44	ppb	100
12) Trichlorofluoromethane	1.82	101	361459	10.18	ppb	100
16) Acrolein	2.21	55	103869	122.93	ppb	100
17) Acetone	2.37	43	263230	48.73	ppb	100
18) Freon-113	2.32	101	75928	9.44	ppb	100
19) 1,1-DCE	2.30	61	268024	10.23	ppb	100
21) Acetonitrile	2.64	40	56488	121.95	ppb	100
22) t-Butanol	3.04	59	76736	127.18	ppb	100
23) Methyl Acetate	2.73	43	134240	9.63	ppb	100
24) Iodomethane	2.43	142	269396	9.26	ppb	100
25) Acrylonitrile	3.11	52	58687	9.75	ppb	100
26) Methylene chloride	2.81	49	124952	10.34	ppb	100
27) Carbon disulfide	2.49	76	259200	10.07	ppb	100
28) Methyl t-butyl ether (MtBE	3.19	73	508394	10.42	ppb	100
29) Trans-1,2-DCE	3.15	61	261644	10.09	ppb	100
31) Diisopropyl Ether	3.93	45	491778	10.51	ppb	100
33) 1,1-DCA	3.72	63	326444	10.26	ppb	100
34) Vinyl Acetate	3.87	43	196468	10.56	ppb	100
35) Ethyl tert Butyl Ether	4.50	59	486394	10.55	ppb	100
36) MEK (2-Butanone)	4.68	43	373648	50.97	ppb	100
37) Cis-1,2-DCE	4.60	61	286841	10.18	ppb	100
38) 2,2-Dichloropropane	4.60	77	280204	10.13	ppb	100
41) Chloroform	5.09	83	356703	10.56	ppb	100
42) Bromochloromethane	4.93	49	133698	10.67	ppb	100
44) 1,1,1-TCA	5.30	97	333782	10.37	ppb	100
45) Cyclohexane	5.37	56	233486	9.20	ppb	100
46) 1,1-Dichloropropene	5.53	75	249511	10.13	ppb	100
47) 2,2,4-Trimethylpentane	5.96	57	377393	7.60	ppb	100
49) Carbon Tetrachloride	5.52	117	286167	10.22	ppb	100
50) Tert Amyl Methyl Ether	6.01	73	456634	10.44	ppb	100
52) 1,2-DCA	5.81	62	234667	10.22	ppb	100
53) Benzene	5.78	78	789823	10.23	ppb	100
54) TCE	6.61	130	279298	10.31	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z27.D Vial: 7
Acq On : 19 Jan 21 18:01 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.88	43	1420007	128.87	ppb	100
56)	1,2-Dichloropropane	6.86	63	177250	10.22	ppb	100
57)	Bromodichloromethane	7.21	83	211398	10.54	ppb	100
58)	Methyl Cyclohexane	6.84	83	263063	9.56	ppb	100
59)	Dibromomethane	6.99	174	206430	10.37	ppb	100
60)	MIBK (methyl isobutyl ket	7.95	43	647532	51.69	ppb	100
61)	1-Bromo-2-chloroethane	7.54	144	44070	10.53	ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	263928	10.78	ppb	100
64)	Toluene	8.11	91	889537	10.33	ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	229278	10.84	ppb	100
66)	1,1,2-TCA	8.56	97	179852	10.76	ppb	100
67)	2-Hexanone	8.88	43	265408	53.03	ppb	100
70)	1,2-EDB	9.09	107	190096	10.68	ppb	100
71)	Tetrachloroethene	8.72	166	373601	10.19	ppb	100
72)	1-Chlorohexane	9.67	91	285097	10.27	ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	211903	10.53	ppb	100
74)	m&p-Xylene	9.93	91	1464058	21.02	ppb	100
75)	o-Xylene	10.36	91	731144	10.58	ppb	100
76)	Styrene	10.37	104	607155	11.02	ppb	100
78)	1,3-Dichloropropane	8.74	76	270594	10.54	ppb	100
79)	Dibromochloromethane	8.99	129	182796	9.17	ppb	100
80)	Chlorobenzene	9.65	112	649994	10.35	ppb	100
81)	Ethylbenzene	9.79	91	966628	10.55	ppb	100
82)	Bromoform	10.54	173	150368	8.79	ppb	100
84)	Isopropylbenzene	10.77	105	1031603	10.74	ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	213618	11.05	ppb	100
86)	1,2,3-Trichloropropane	11.12	110	81501	10.25	ppb	100
87)	t-1,4-Dichloro-2-Butene	11.15	53	40219	10.46	ppb	100
88)	Bromobenzene	11.07	77	308946	10.30	ppb	100
89)	n-Propylbenzene	11.21	91	1118291	10.79	ppb	100
90)	4-Ethyltoluene	11.34	105	1008709	10.77	ppb	100
91)	2-Chlorotoluene	11.41	91	740505	10.60	ppb	100
92)	1,3,5-Trimethylbenzene	11.41	105	831520	10.88	ppb	100
93)	4-Chlorotoluene	11.41	91	740505	10.60	ppb	100
94)	Tert-Butylbenzene	11.77	119	803469	10.52	ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	839862	11.08	ppb	100
96)	Sec-Butylbenzene	12.01	105	1118254	10.82	ppb	100
97)	p-Isopropyltoluene	11.77	119	803469	10.52	ppb	100
98)	Benzyl Chloride	12.35	91	363299	9.29	ppb	100
99)	1,3-DCB	12.11	146	637332	10.64	ppb	97
100)	1,4-DCB	12.20	146	642032	10.42	ppb	100
101)	n-Butylbenzene	12.61	91	801145	10.87	ppb	100
102)	1,2-DCB	12.60	146	586718	10.64	ppb	100
103)	Hexachloroethane	12.89	201	172854	8.79	ppb	100
104)	1,2-Dibromo-3-chloropropan	13.44	157	60922	9.03	ppb	100
105)	1,2,4-Trichlorobenzene	13.69	180	554189	10.69	ppb	100
106)	Hexachlorobutadiene	14.57	225	275115	10.52	ppb	100
107)	Naphthalene	14.62	128	870907	11.32	ppb	100
108)	1,2,3-Trichlorobenzene	14.89	180	413065	10.67	ppb	100

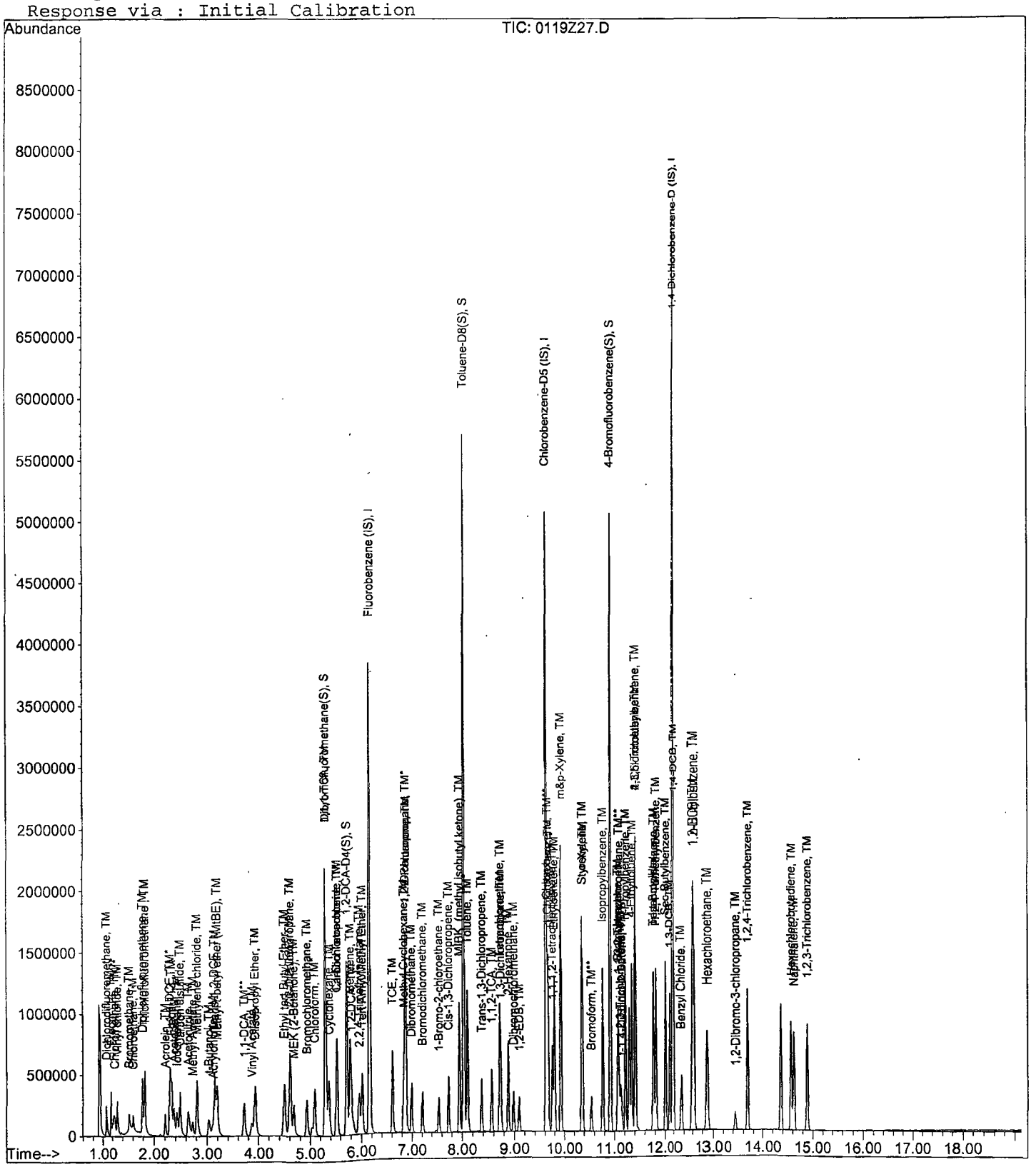
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z27.D Vial: 7
Acq On : 19 Jan 21 18:01 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z28.D Vial: 8
Acq On : 19 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4136302	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3469752	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1273344	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	2524705	51.17	ppb	0.00
Spiked Amount 25.000			Recovery =	204.684%		
48) 1,2-DCA-D4(S)	5.71	65	2224780	56.90	ppb	0.00
Spiked Amount 25.000			Recovery =	227.584%		
69) Toluene-D8(S)	8.03	98	8708017	56.18	ppb	0.00
Spiked Amount 25.000			Recovery =	224.724%		
77) 4-Bromofluorobenzene(S)	10.92	95	3093923	48.93	ppb	0.00
Spiked Amount 25.000			Recovery =	195.732%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	466580	22.04	ppb	100
4) Freon 114	1.16	85	233419	18.58	ppb	91
5) Chloromethane	1.23	50	179271	20.78	ppb	96
6) Vinyl chloride	1.28	62	431059	19.36	ppb	99
9) Bromomethane	1.53	94	118929	21.30	ppb	96
10) Chloroethane	1.60	64	93913	23.33	ppb	97
11) Dichlorofluoromethane	1.78	67	605195	16.53	ppb	99
12) Trichlorofluoromethane	1.82	101	719094	20.13	ppb	99
16) Acrolein	2.21	55	139939	164.65	ppb	97
17) Acetone	2.37	43	327335	60.24	ppb	98
18) Freon-113	2.32	101	169472	20.95	ppb	97
19) 1,1-DCE	2.29	61	532654	20.21	ppb	99
21) Acetonitrile	2.65	40	63778	136.88	ppb	97
22) t-Butanol	3.05	59	86848	143.10	ppb	94
23) Methyl Acetate	2.73	43	253933	18.12	ppb	97
24) Iodomethane	2.43	142	559211	19.10	ppb	98
25) Acrylonitrile	3.10	52	116679	19.27	ppb	90
26) Methylene chloride	2.80	49	247808	23.05	ppb	97
27) Carbon disulfide	2.49	76	508608	19.66	ppb	97
28) Methyl t-butyl ether (MtBE	3.19	73	989977	20.17	ppb	94
29) Trans-1,2-DCE	3.15	61	519601	19.91	ppb	99
31) Diisopropyl Ether	3.93	45	946029	20.10	ppb	99
33) 1,1-DCA	3.71	63	653386	20.42	ppb	98
34) Vinyl Acetate	3.86	43	355900	19.03	ppb	96
35) Ethyl tert Butyl Ether	4.50	59	954769	20.58	ppb	99
36) MEK (2-Butanone)	4.68	43	466565	63.27	ppb	100
37) Cis-1,2-DCE	4.60	61	581856	20.52	ppb	96
38) 2,2-Dichloropropane	4.60	77	574739	20.67	ppb	97
41) Chloroform	5.09	83	715484	21.05	ppb	98
42) Bromochloromethane	4.93	49	261855	20.78	ppb	98
44) 1,1,1-TCA	5.30	97	682345	21.08	ppb	97
45) Cyclohexane	5.36	56	501049	19.89	ppb	97
46) 1,1-Dichloropropene	5.53	75	500722	20.20	ppb	99
47) 2,2,4-Trimethylpentane	5.96	57	985561	19.57	ppb	99
49) Carbon Tetrachloride	5.52	117	589213	20.93	ppb	99
50) Tert Amyl Methyl Ether	6.01	73	898362	20.42	ppb	97
52) 1,2-DCA	5.81	62	462405	20.03	ppb	98
53) Benzene	5.78	78	1548480	19.94	ppb	99
54) TCE	6.61	130	557183	20.45	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z28.D Vial: 8
Acq On : 19 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.88	43	1803484	162.71	ppb	99
56)	1,2-Dichloropropane	6.86	63	347564	19.93	ppb	98
57)	Bromodichloromethane	7.21	83	441828	21.90	ppb	95
58)	Methyl Cyclohexane	6.84	83	600202	21.68	ppb	99
59)	Dibromomethane	6.99	174	412640	20.61	ppb	99
60)	MIBK (methyl isobutyl ket	7.95	43	825211	65.48	ppb	97
61)	1-Bromo-2-chloroethane	7.54	144	82741	19.66	ppb	98
63)	Cis-1,3-Dichloropropene	7.73	75	545755	22.17	ppb	99
64)	Toluene	8.11	91	1735432	20.04	ppb	97
65)	Trans-1,3-Dichloropropene	8.37	75	471654	22.16	ppb	100
66)	1,1,2-TCA	8.56	97	353867	21.05	ppb	97
67)	2-Hexanone	8.88	43	332028	65.95	ppb	97
70)	1,2-EDB	9.09	107	388153	21.69	ppb	99
71)	Tetrachloroethene	8.72	166	725129	19.68	ppb	98
72)	1-Chlorohexane	9.67	91	538643	19.31	ppb	97
73)	1,1,1,2-Tetrachloroethane	9.75	131	437034	21.61	ppb	99
74)	m&p-Xylene	9.93	91	2873159	41.05	ppb	100
75)	o-Xylene	10.35	91	1444518	20.81	ppb	97
76)	Styrene	10.37	104	1229358	22.20	ppb	93
78)	1,3-Dichloropropane	8.74	76	532964	20.66	ppb	97
79)	Dibromochloromethane	8.99	129	391112	18.37	ppb	99
80)	Chlorobenzene	9.65	112	1269669	20.12	ppb	99
81)	Ethylbenzene	9.79	91	1909077	20.73	ppb	100
82)	Bromoform	10.54	173	334361	17.49	ppb	96
84)	Isopropylbenzene	10.76	105	2045285	21.55	ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	421322	22.04	ppb	97
86)	1,2,3-Trichloropropane	11.12	110	163589	20.82	ppb	93
87)	t-1,4-Dichloro-2-Butene	11.14	53	80811	21.27	ppb	97
88)	Bromobenzene	11.07	77	613923	20.71	ppb	98
89)	n-Propylbenzene	11.21	91	2221852	21.68	ppb	100
90)	4-Ethyltoluene	11.34	105	1916698	20.71	ppb	98
91)	2-Chlorotoluene	11.41	91	1463408	21.19	ppb	97
92)	1,3,5-Trimethylbenzene	11.41	105	1636530	21.66	ppb	97
93)	4-Chlorotoluene	11.41	91	1463408	21.19	ppb	97
94)	Tert-Butylbenzene	11.77	119	1603032	21.23	ppb	97
95)	1,2,4-Trimethylbenzene	11.81	105	1647778	21.99	ppb	98
96)	Sec-Butylbenzene	12.01	105	2247298	21.99	ppb	100
97)	p-Isopropyltoluene	11.77	119	1603032	21.23	ppb	99
98)	Benzyl Chloride	12.35	91	794910	19.14	ppb	99
99)	1,3-DCB	12.10	146	1238851	20.93	ppb	96
100)	1,4-DCB	12.20	146	1236748	20.31	ppb	97
101)	n-Butylbenzene	12.61	91	1619557	22.22	ppb	100
102)	1,2-DCB	12.60	146	1155274	21.20	ppb	100
103)	Hexachloroethane	12.89	201	383431	17.73	ppb	91
104)	1,2-Dibromo-3-chloropropan	13.44	157	133475	18.88	ppb	96
105)	1,2,4-Trichlorobenzene	13.69	180	1049343	20.48	ppb	99
106)	Hexachlorobutadiene	14.57	225	550294	21.30	ppb	97
107)	Naphthalene	14.62	128	1755828	23.10	ppb	99
108)	1,2,3-Trichlorobenzene	14.89	180	817862	21.37	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

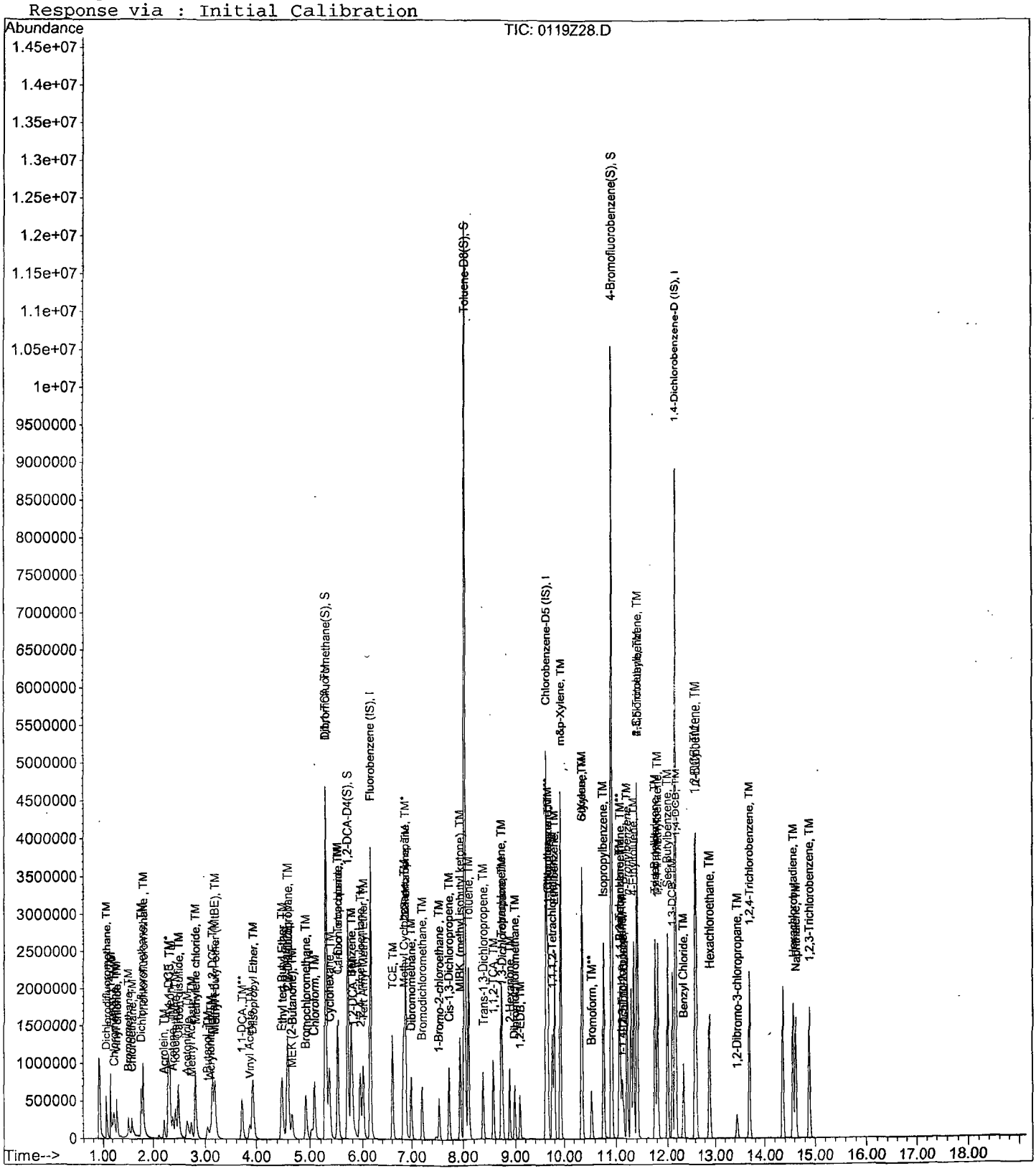
Data File : M:\ZEUS\DATA\210119\0119Z28.D
Acq On : 19 Jan 21 18:25
Sample : 20ug/L VOC STD 1/19/21
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 20 10:15 2021

Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z29.D Vial: 9
Acq On : 19 Jan 21 18:48 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4296103	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3520210	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1288192	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	2622152	51.17	ppb	0.00
Spiked Amount 25.000			Recovery = 204.676%			
48) 1,2-DCA-D4(S)	5.71	65	2287239	56.32	ppb	0.00
Spiked Amount 25.000			Recovery = 225.268%			
69) Toluene-D8(S)	8.03	98	8872337	56.42	ppb	0.00
Spiked Amount 25.000			Recovery = 225.684%			
77) 4-Bromofluorobenzene(S)	10.92	95	3169106	49.38	ppb	0.00
Spiked Amount 25.000			Recovery = 197.520%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	1009452	45.91	ppb	99
4) Freon 114	1.16	85	548214	41.04	ppb	92
5) Chloromethane	1.23	50	370513	41.90	ppb	97
6) Vinyl chloride	1.28	62	883831	38.22	ppb	98
9) Bromomethane	1.53	94	235476	42.26	ppb	97
10) Chloroethane	1.60	64	182196	46.00	ppb	95
11) Dichlorofluoromethane	1.78	67	1204144	31.67	ppb	98
12) Trichlorofluoromethane	1.82	101	1424243	38.38	ppb	99
16) Acrolein	2.21	55	157285	178.17	ppb	97
17) Acetone	2.38	43	428931	76.00	ppb	97
18) Freon-113	2.32	101	392064	46.67	ppb	95
19) 1,1-DCE	2.29	61	1095354	40.02	ppb	99
21) Acetonitrile	2.65	40	69591	143.80	ppb	99
22) t-Butanol	3.05	59	96232	152.66	ppb	99
23) Methyl Acetate	2.73	43	537007	36.89	ppb	99
24) Iodomethane	2.43	142	1256384	41.33	ppb	97
25) Acrylonitrile	3.11	52	242794	38.61	ppb	97
26) Methylene chloride	2.81	49	475520	44.92	ppb	98
27) Carbon disulfide	2.49	76	1106432	41.20	ppb	99
28) Methyl t-butyl ether (MtBE	3.19	73	2135853	41.91	ppb	95
29) Trans-1,2-DCE	3.14	61	1067265	39.38	ppb	100
31) Diisopropyl Ether	3.93	45	2078924	42.53	ppb	100
33) 1,1-DCA	3.71	63	1335292	40.18	ppb	99
34) Vinyl Acetate	3.86	43	836044	43.03	ppb	94
35) Ethyl tert Butyl Ether	4.49	59	2094992	43.49	ppb	96
36) MEK (2-Butanone)	4.68	43	624962	81.59	ppb	98
37) Cis-1,2-DCE	4.60	61	1187118	40.32	ppb	94
38) 2,2-Dichloropropane	4.60	77	1204775	41.71	ppb	98
41) Chloroform	5.09	83	1502913	42.57	ppb	98
42) Bromochloromethane	4.93	49	542411	41.44	ppb	97
44) 1,1,1-TCA	5.30	97	1437466	42.75	ppb	99
45) Cyclohexane	5.37	56	1132216	43.54	ppb	99
46) 1,1-Dichloropropene	5.53	75	1052829	40.89	ppb	97
47) 2,2,4-Trimethylpentane	5.96	57	2381812	45.41	ppb	99
49) Carbon Tetrachloride	5.52	117	1289841	44.11	ppb	96
50) Tert Amyl Methyl Ether	6.01	73	1997972	43.72	ppb	93
52) 1,2-DCA	5.81	62	964975	40.24	ppb	99
53) Benzene	5.78	78	3206425	39.74	ppb	98
54) TCE	6.61	130	1122622	39.67	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z29.D Vial: 9
Acq On : 19 Jan 21 18:48 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
55)	2-Pentanone	6.88	43	2159883	187.62 ppb		99
56)	1,2-Dichloropropane	6.86	63	725722	40.06 ppb		100
57)	Bromodichloromethane	7.21	83	962424	45.92 ppb		98
58)	Methyl Cyclohexane	6.84	83	1378715	47.95 ppb		99
59)	Dibromomethane	6.99	174	864121	41.56 ppb		99
60)	MIBK (methyl isobutyl ket	7.95	43	1126279	86.05 ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	167019	38.20 ppb		96
63)	Cis-1,3-Dichloropropene	7.73	75	1164666	45.55 ppb		99
64)	Toluene	8.11	91	3553856	39.51 ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	1029147	46.55 ppb		99
66)	1,1,2-TCA	8.56	97	739429	42.34 ppb		99
67)	2-Hexanone	8.88	43	436471	83.47 ppb		99
70)	1,2-EDB	9.09	107	808174	44.52 ppb		97
71)	Tetrachloroethene	8.72	166	1454562	38.90 ppb		98
72)	1-Chlorohexane	9.67	91	1139277	40.27 ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	927423	45.20 ppb		97
74)	m&p-Xylene	9.93	91	5846299	82.33 ppb		99
75)	o-Xylene	10.36	91	2981093	42.34 ppb		97
76)	Styrene	10.37	104	2567192	45.69 ppb		97
78)	1,3-Dichloropropane	8.74	76	1107191	42.30 ppb		94
79)	Dibromochloromethane	8.99	129	879633	39.46 ppb		98
80)	Chlorobenzene	9.65	112	2562552	40.03 ppb		98
81)	Ethylbenzene	9.79	91	3870318	41.43 ppb		100
82)	Bromoform	10.54	173	772078	37.73 ppb		98
84)	Isopropylbenzene	10.77	105	4185844	43.60 ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	886620	45.85 ppb		97
86)	1,2,3-Trichloropropane	11.12	110	333851	42.00 ppb		95
87)	t-1,4-Dichloro-2-Butene	11.15	53	177751	46.25 ppb		87
88)	Bromobenzene	11.06	77	1271212	42.38 ppb		90
89)	n-Propylbenzene	11.21	91	4515358	43.55 ppb		100
90)	4-Ethyltoluene	11.34	105	4033665	43.07 ppb		99
91)	2-Chlorotoluene	11.41	91	3000082	42.93 ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	3338950	43.68 ppb		100
93)	4-Chlorotoluene	11.41	91	3000082	42.93 ppb		96
94)	Tert-Butylbenzene	11.77	119	3263098	42.72 ppb		97
95)	1,2,4-Trimethylbenzene	11.81	105	3406349	44.92 ppb		97
96)	Sec-Butylbenzene	12.01	105	4580103	44.30 ppb		99
97)	p-Isopropyltoluene	11.77	119	3263098	42.72 ppb		98
98)	Benzyl Chloride	12.35	91	1733917	39.90 ppb		100
99)	1,3-DCB	12.10	146	2520332	42.08 ppb		96
100)	1,4-DCB	12.20	146	2528758	41.04 ppb		95
101)	n-Butylbenzene	12.61	91	3311006	44.91 ppb		100
102)	1,2-DCB	12.60	146	2342359	42.49 ppb		99
103)	Hexachloroethane	12.89	201	875595	37.99 ppb	#	82
104)	1,2-Dibromo-3-chloropropan	13.44	157	295474	40.21 ppb		98
105)	1,2,4-Trichlorobenzene	13.69	180	2256441	43.52 ppb		99
106)	Hexachlorobutadiene	14.57	225	1134197	43.39 ppb		99
107)	Naphthalene	14.62	128	3618142	47.04 ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	1667637	43.07 ppb		99

(#) = qualifier out of range (m) = manual integration

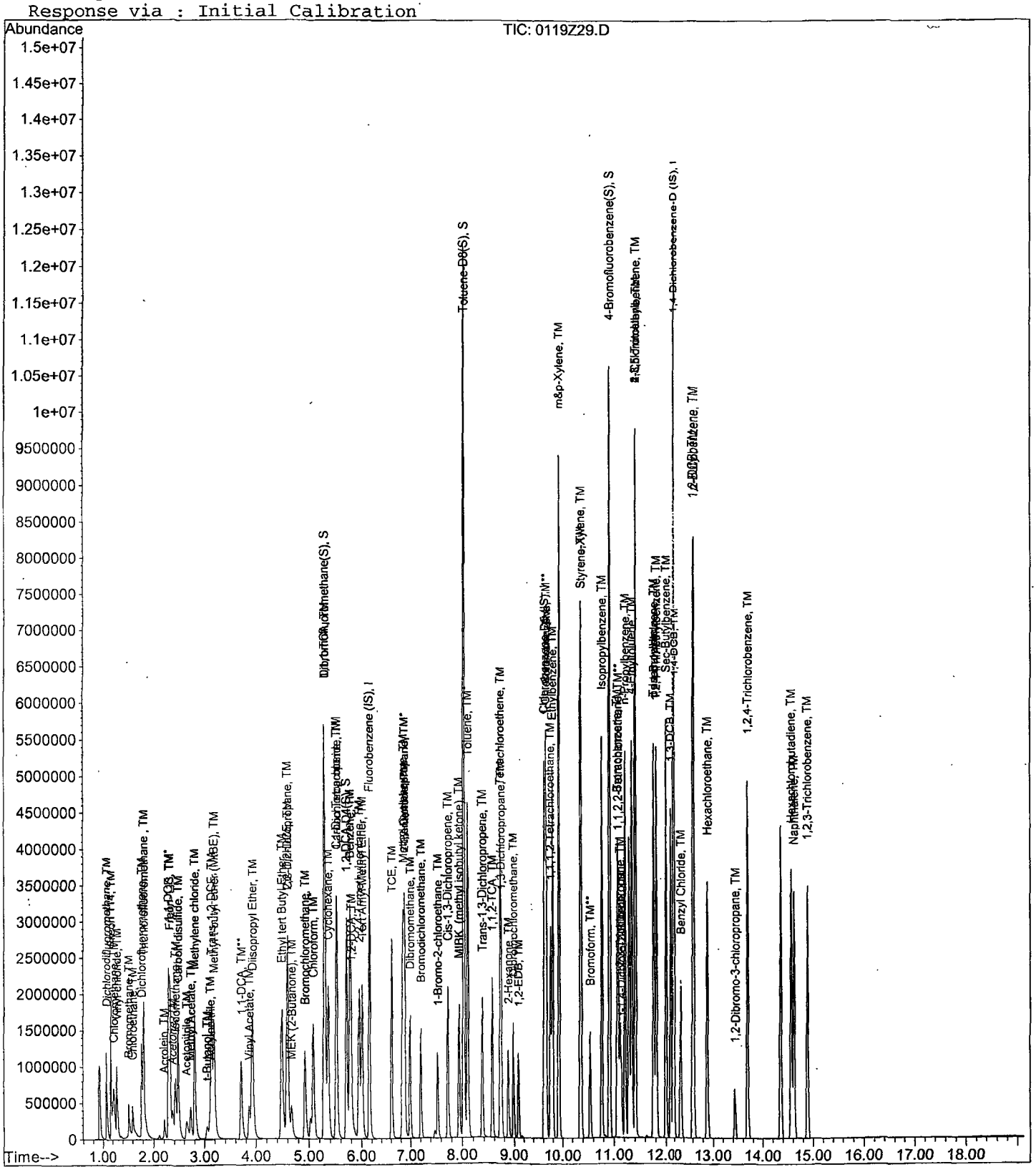
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z29.D
Acq On : 19 Jan 21 18:48
Sample : 40ug/L VOC STD 1/19/21
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z30.D Vial: 10
Acq On : 19 Jan 21 19:11 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4564151	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3733825	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1397248	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	5478203	99.02	ppb	0.00
Spiked Amount 25.000			Recovery =	396.088%		
48) 1,2-DCA-D4(S)	5.71	65	4836475	112.09	ppb	0.00
Spiked Amount 25.000			Recovery =	448.368%		
69) Toluene-D8(S)	8.03	98	17237310	103.34	ppb	0.00
Spiked Amount 25.000			Recovery =	413.376%		
77) 4-Bromofluorobenzene(S)	10.92	95	7054802	100.94	ppb	0.00
Spiked Amount 25.000			Recovery =	403.768%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	2392444	102.41	ppb	100
4) Freon 114	1.16	85	1090458	76.16	ppb	91
5) Chloromethane	1.23	50	924436	99.12	ppb	100
6) Vinyl chloride	1.28	62	2236164	91.02	ppb	100
9) Bromomethane	1.53	94	570784	98.77	ppb	95
10) Chloroethane	1.60	64	395977	97.02	ppb	95
11) Dichlorofluoromethane	1.77	67	1657232	41.02	ppb	98
12) Trichlorofluoromethane	1.80	101	2365769	60.01	ppb	98
16) Acrolein	2.21	55	174676	186.25	ppb	95
17) Acetone	2.39	43	544137	90.75	ppb	99
18) Freon-113	2.31	101	881344	98.75	ppb	95
19) 1,1-DCE	2.29	61	2820085	96.98	ppb	97
21) Acetonitrile	2.66	40	61578	119.77	ppb	98
22) t-Butanol	3.08	59	84429	126.07	ppb	100
23) Methyl Acetate	2.74	43	1361657	88.04	ppb	100
24) Iodomethane	2.42	142	3465907	107.31	ppb	97
25) Acrylonitrile	3.11	52	617808	92.48	ppb	97
26) Methylene chloride	2.80	49	1062400	97.48	ppb	97
27) Carbon disulfide	2.47	76	2841088	99.60	ppb	97
28) Methyl t-butyl ether (MtBE	3.20	73	5404039	99.81	ppb	96
29) Trans-1,2-DCE	3.14	61	2728394	94.75	ppb	99
31) Diisopropyl Ether	3.94	45	5337166	102.76	ppb	99
33) 1,1-DCA	3.71	63	3399787	96.30	ppb	99
34) Vinyl Acetate	3.86	43	2050216	99.33	ppb	96
35) Ethyl tert Butyl Ether	4.50	59	5419321	105.89	ppb	96
36) MEK (2-Butanone)	4.68	43	794623	97.65	ppb	100
37) Cis-1,2-DCE	4.60	61	2998520	95.85	ppb	96
38) 2,2-Dichloropropane	4.59	77	3077055	100.27	ppb	97
41) Chloroform	5.09	83	3832164	102.18	ppb	96
42) Bromochloromethane	4.93	49	1339775	96.34	ppb	98
44) 1,1,1-TCA	5.30	97	3716790	104.05	ppb	100
45) Cyclohexane	5.36	56	2718770	98.71	ppb	100
46) 1,1-Dichloropropene	5.53	75	2720601	99.47	ppb	97
47) 2,2,4-Trimethylpentane	5.95	57	5477668	98.18	ppb	98
49) Carbon Tetrachloride	5.52	117	3492362	112.42	ppb	95
50) Tert Amyl Methyl Ether	6.01	73	5375884	110.72	ppb	92
52) 1,2-DCA	5.81	62	2474804	97.14	ppb	98
53) Benzene	5.78	78	8192977	95.59	ppb	99
54) TCE	6.61	130	2917522	97.04	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z30.D Vial: 10
Acq On : 19 Jan 21 19:11 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.88	43	2638310	215.72	ppb		98
56)	1,2-Dichloropropane	6.86	63	1877305	97.55	ppb		99
57)	Bromodichloromethane	7.21	83	2620939	117.71	ppb		97
58)	Methyl Cyclohexane	6.84	83	3321089	108.71	ppb		99
59)	Dibromomethane	6.99	174	2218058	100.40	ppb		99
60)	MIBK (methyl isobutyl ket	7.95	43	1522379	109.48	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	425752	91.67	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	3091251	113.80	ppb		99
64)	Toluene	8.11	91	9196766	96.23	ppb		96
65)	Trans-1,3-Dichloropropene	8.37	75	2793085	118.92	ppb		98
66)	1,1,2-TCA	8.56	97	1883272	101.51	ppb		99
67)	2-Hexanone	8.88	43	597853	107.61	ppb		99
70)	1,2-EDB	9.09	107	2070175	107.52	ppb		98
71)	Tetrachloroethene	8.72	166	3715848	93.70	ppb		99
72)	1-Chlorohexane	9.67	91	2971965	99.03	ppb		97
73)	1,1,1,2-Tetrachloroethane	9.75	131	2445336	112.37	ppb		97
74)	m&p-Xylene	9.93	91	14779543	196.22	ppb		97
75)	o-Xylene	10.36	91	7963142	106.63	ppb		96
76)	Styrene	10.37	104	6961527	116.81	ppb	#	88
78)	1,3-Dichloropropane	8.74	76	2802260	100.94	ppb		96
79)	Dibromochloromethane	8.99	129	2418098	100.62	ppb		99
80)	Chlorobenzene	9.65	112	6553406	96.51	ppb		96
81)	Ethylbenzene	9.79	91	9839286	99.30	ppb		100
82)	Bromoform	10.54	173	2265811	101.51	ppb		99
84)	Isopropylbenzene	10.77	105	10833082	104.02	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	2304727	109.89	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	853879	99.03	ppb		96
87)	t-1,4-Dichloro-2-Butene	11.15	53	481317	115.46	ppb		85
88)	Bromobenzene	11.07	77	3380291	103.90	ppb		94
89)	n-Propylbenzene	11.21	91	11522702	102.46	ppb		99
90)	4-Ethyltoluene	11.35	105	10458354	102.96	ppb		96
91)	2-Chlorotoluene	11.41	91	8067120	106.43	ppb		95
92)	1,3,5-Trimethylbenzene	11.41	105	8914416	107.50	ppb		99
93)	4-Chlorotoluene	11.41	91	8067120	106.43	ppb		95
94)	Tert-Butylbenzene	11.77	119	8575851	103.51	ppb		92
95)	1,2,4-Trimethylbenzene	11.81	105	9037029	109.88	ppb		97
96)	Sec-Butylbenzene	12.01	105	11877718	105.92	ppb		99
97)	p-Isopropyltoluene	11.77	119	8575851	103.51	ppb		99
98)	Benzyl Chloride	12.35	91	4813736	100.30	ppb		100
99)	1,3-DCB	12.10	146	6558109	100.96	ppb		96
100)	1,4-DCB	12.20	146	6546095	97.95	ppb		96
101)	n-Butylbenzene	12.61	91	8931202	111.68	ppb		98
102)	1,2-DCB	12.60	146	6058076	101.31	ppb		99
103)	Hexachloroethane	12.89	201	2604342	101.38	ppb	#	76
104)	1,2-Dibromo-3-chloropropan	13.44	157	810419	100.25	ppb		98
105)	1,2,4-Trichlorobenzene	13.69	180	5705771	101.46	ppb		98
106)	Hexachlorobutadiene	14.57	225	2831976	99.87	ppb		98
107)	Naphthalene	14.62	128	8858420	106.19	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	4135497	98.47	ppb		98

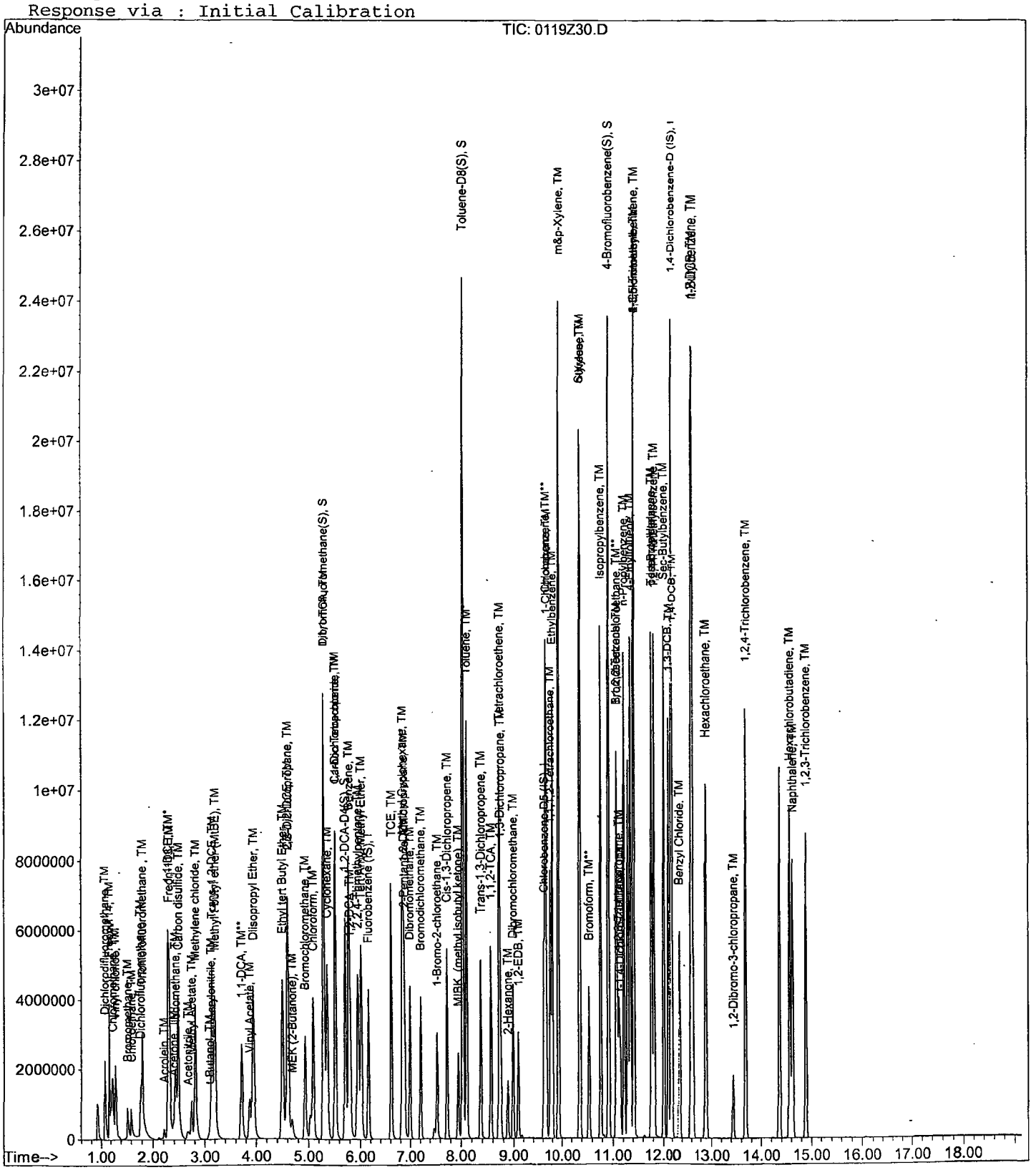
(#) = qualifier out of range (m) = manual integration

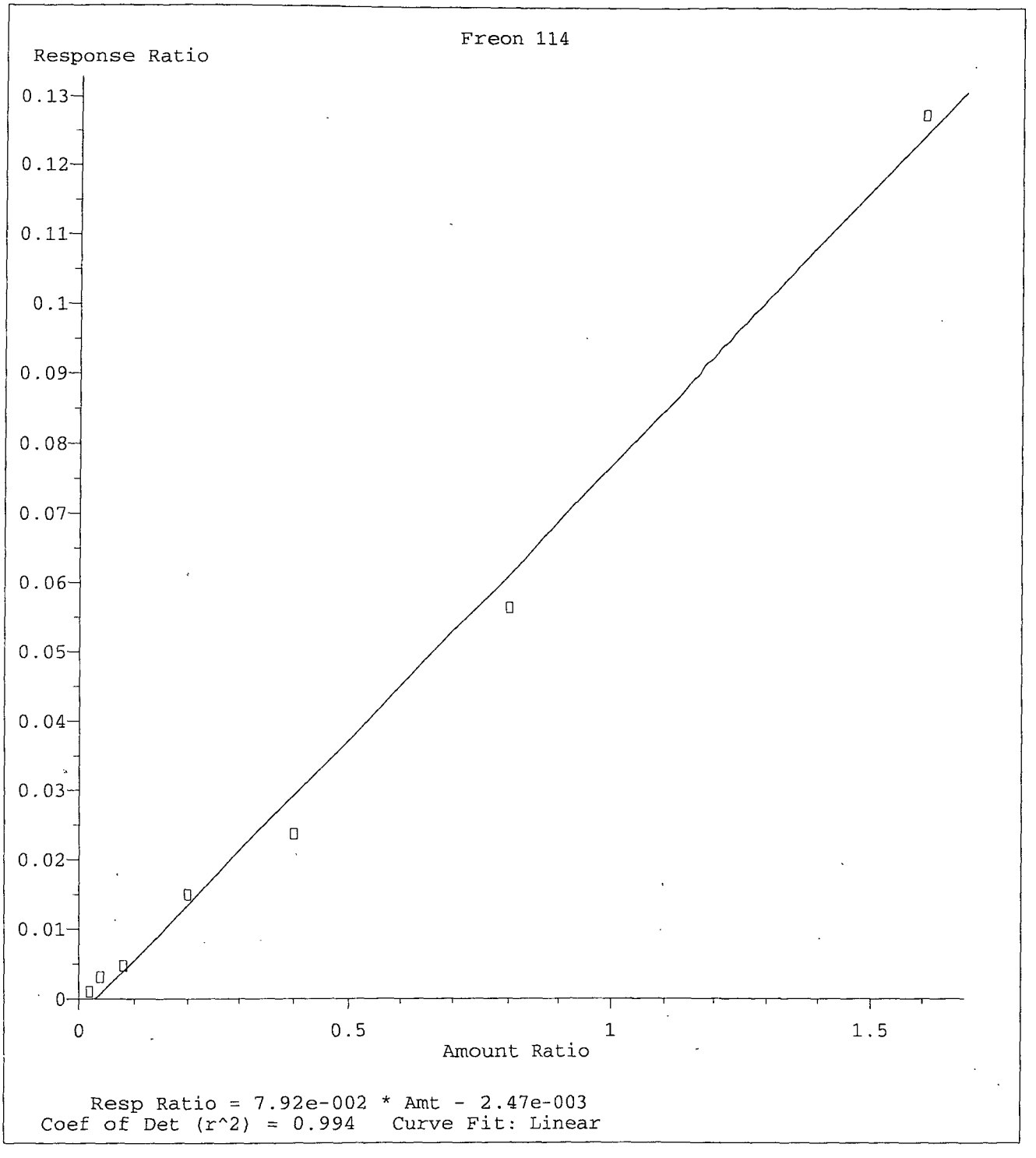
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z30.D Vial: 10
Acq On : 19 Jan 21 19:11 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

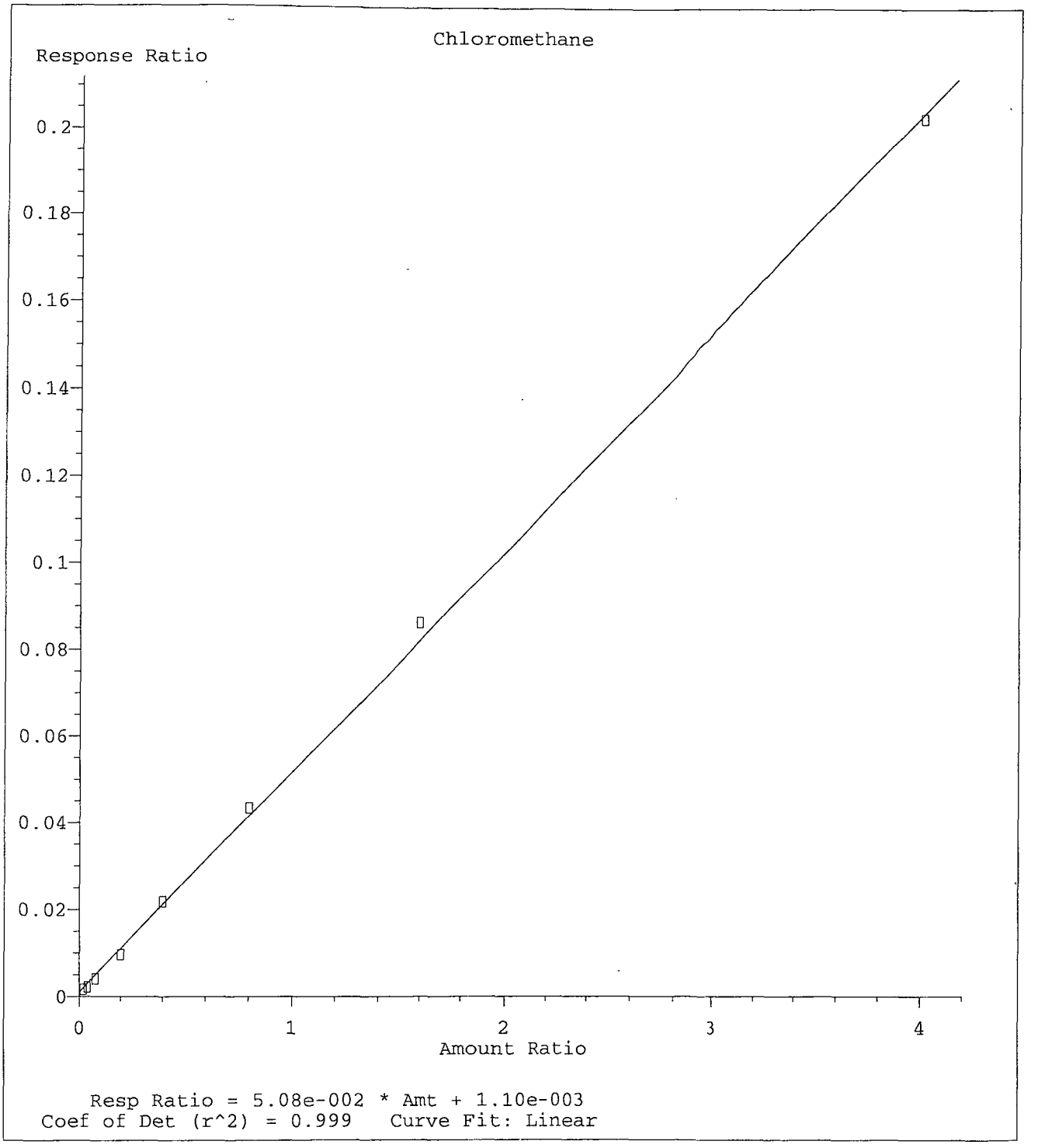
Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration

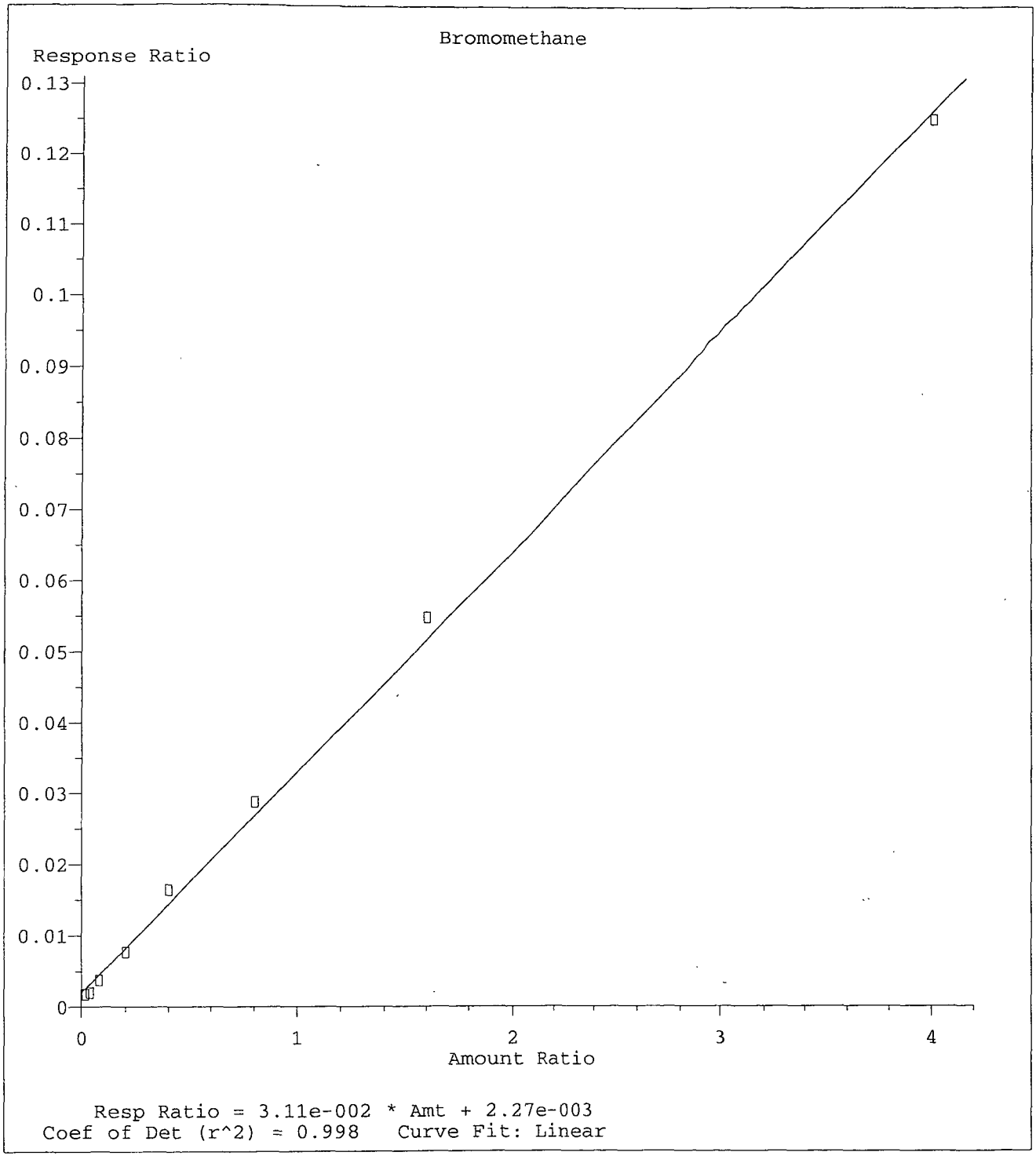




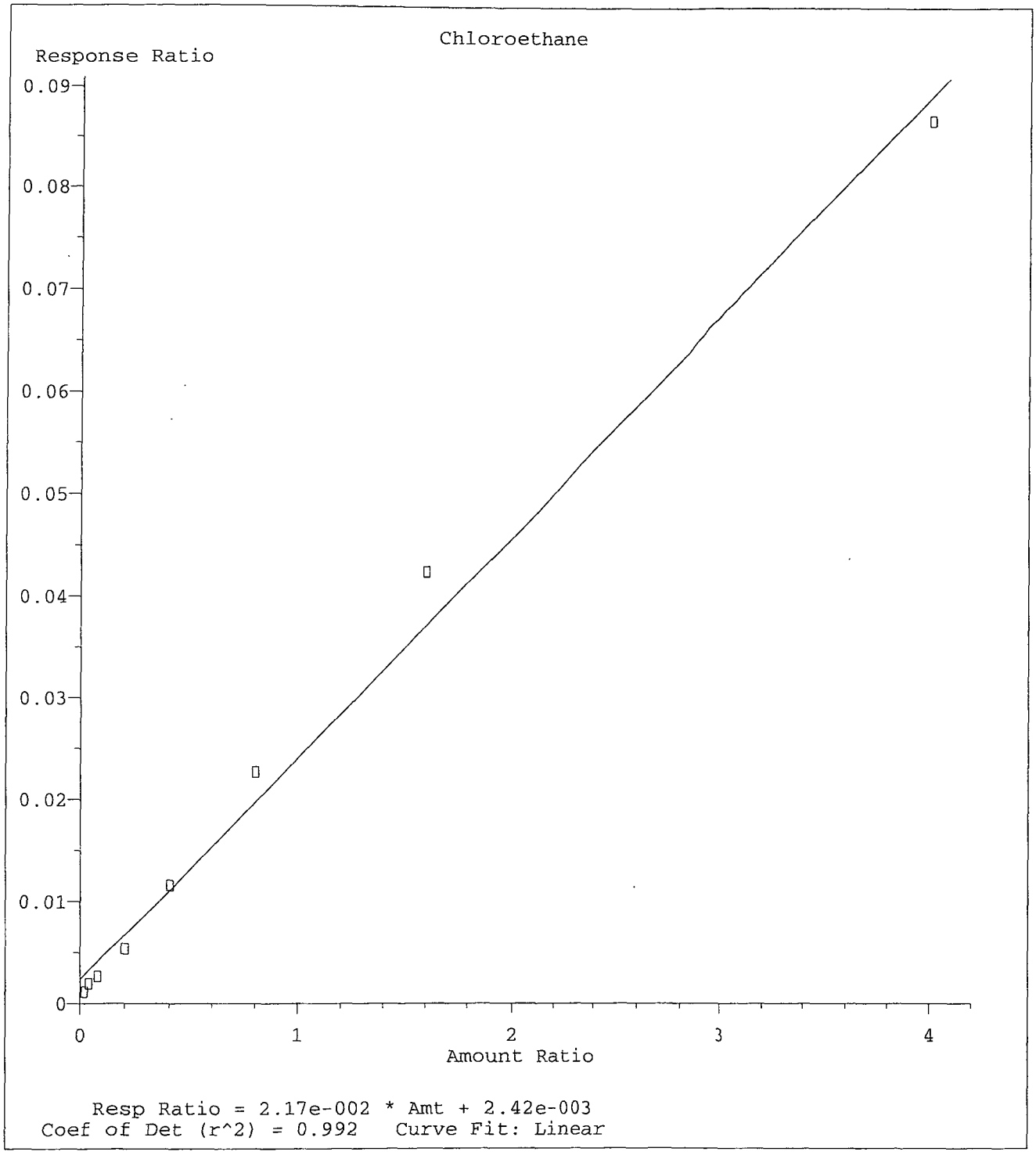
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



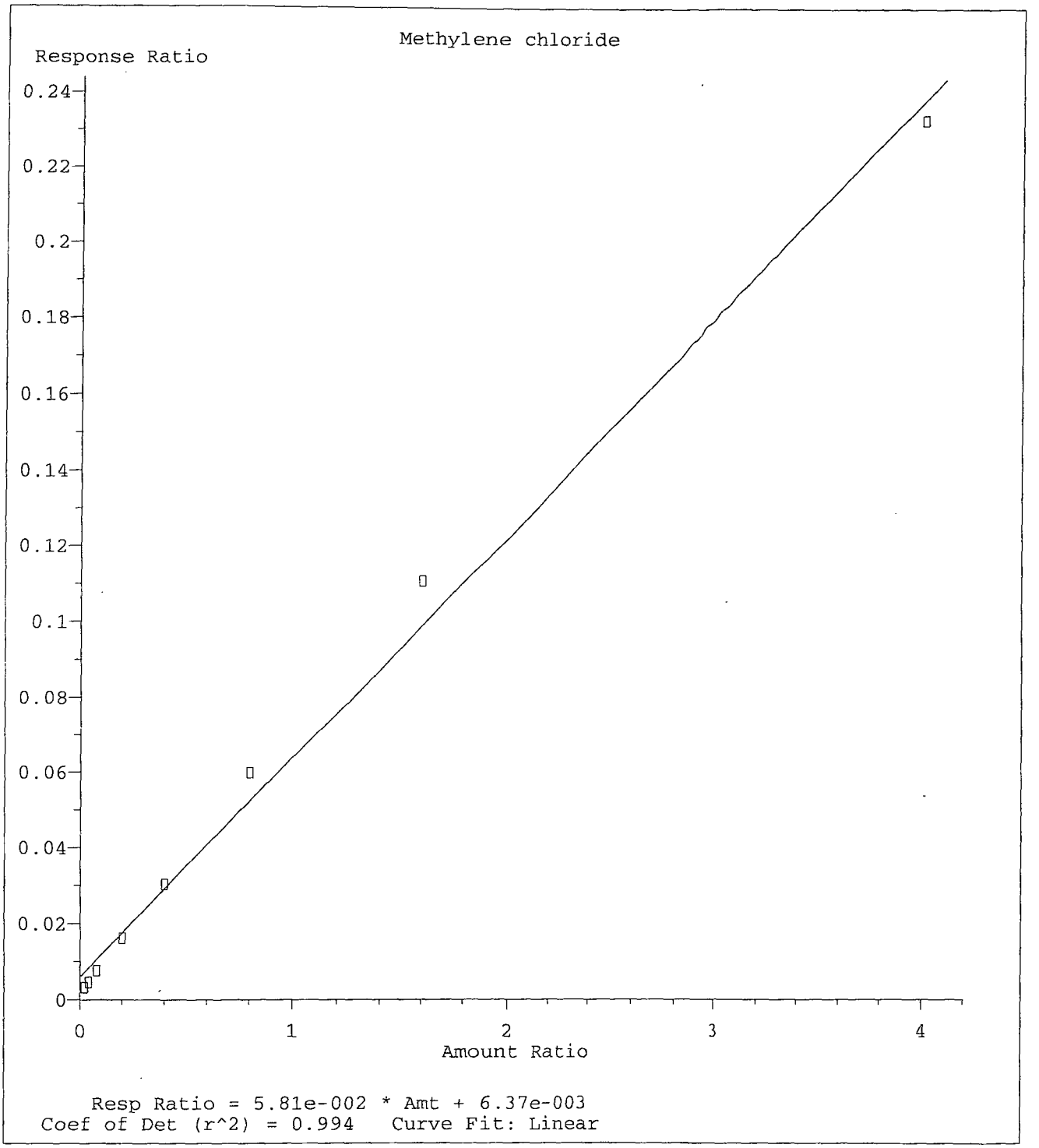
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



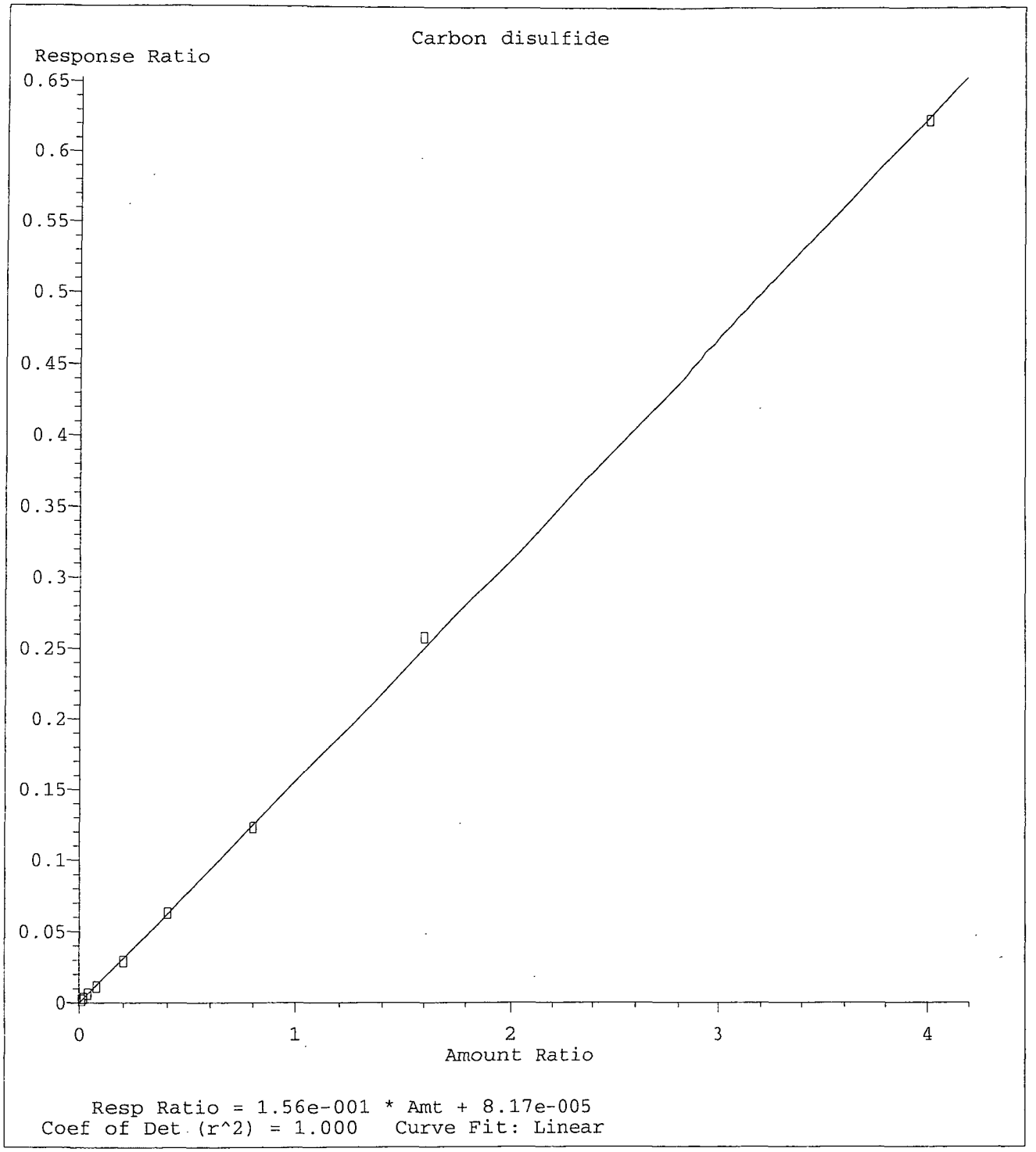
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



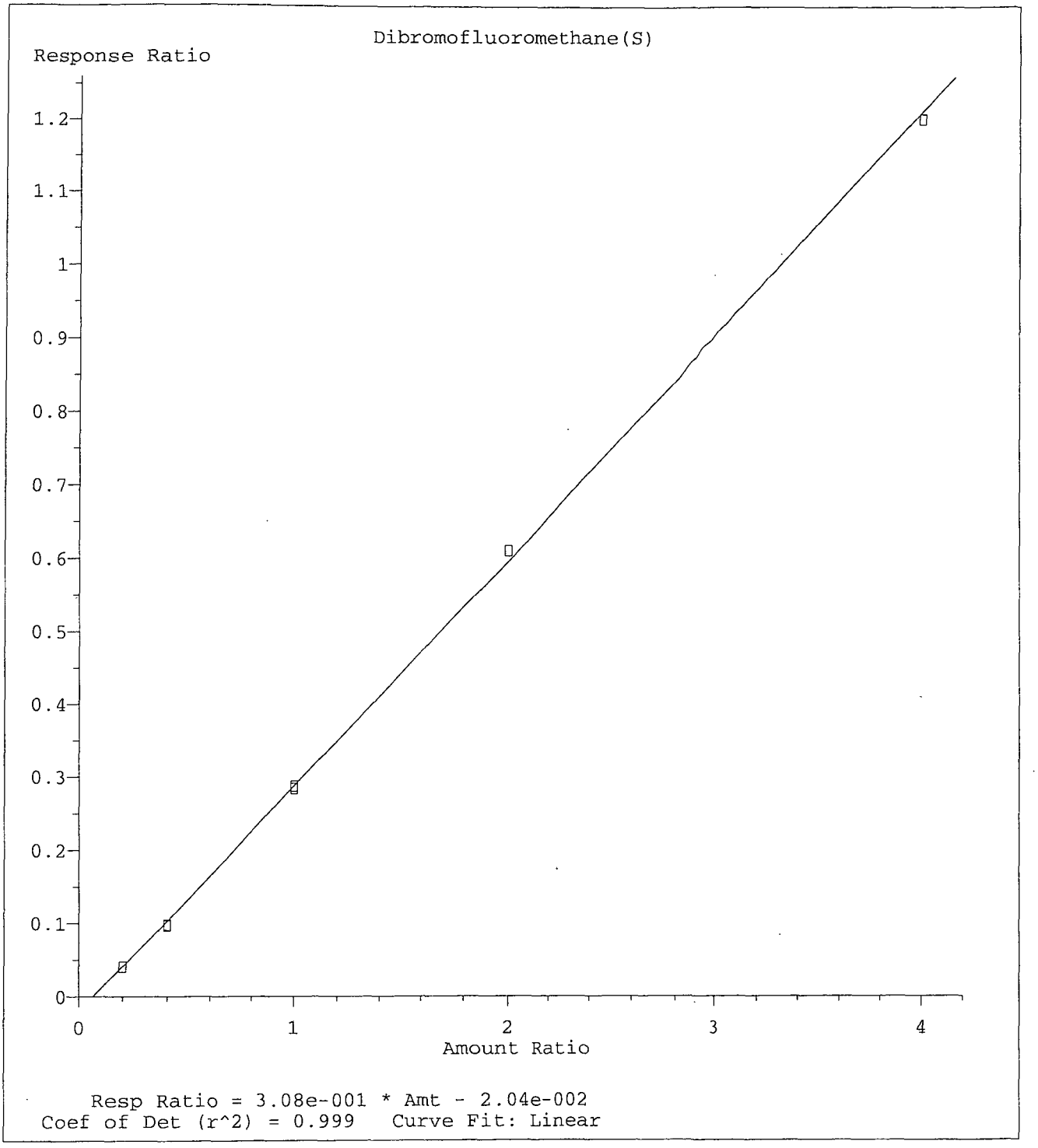
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



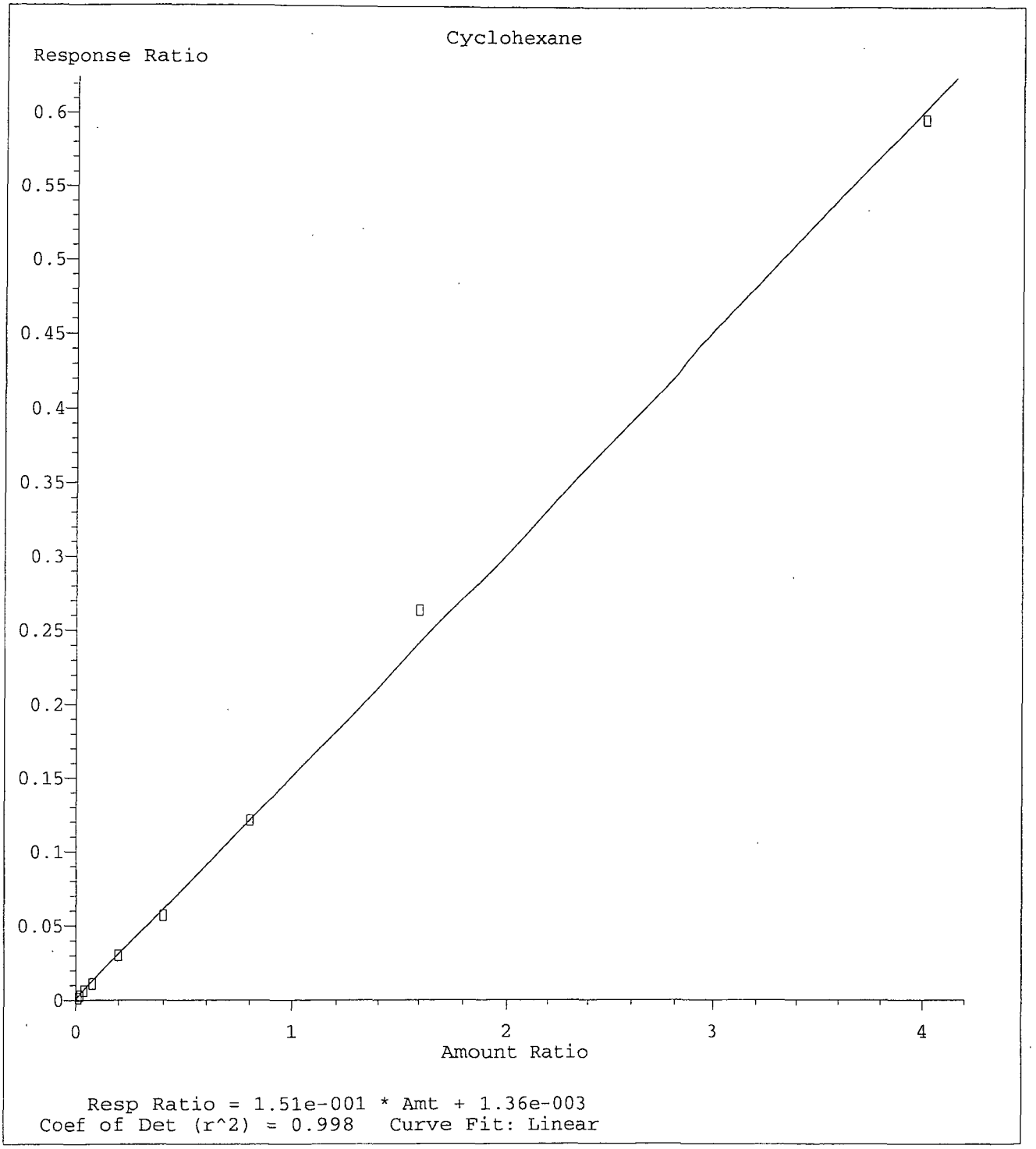
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



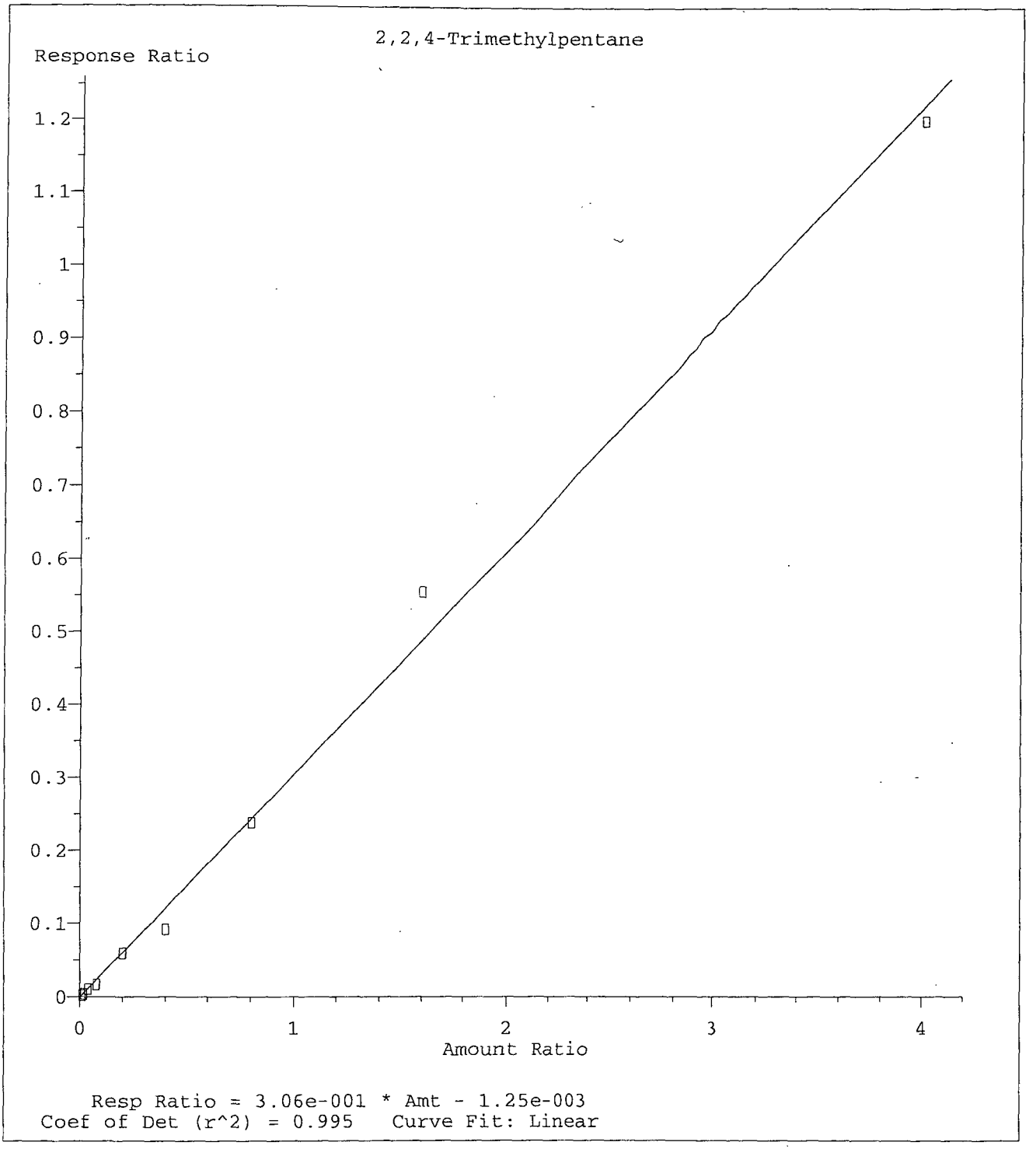
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



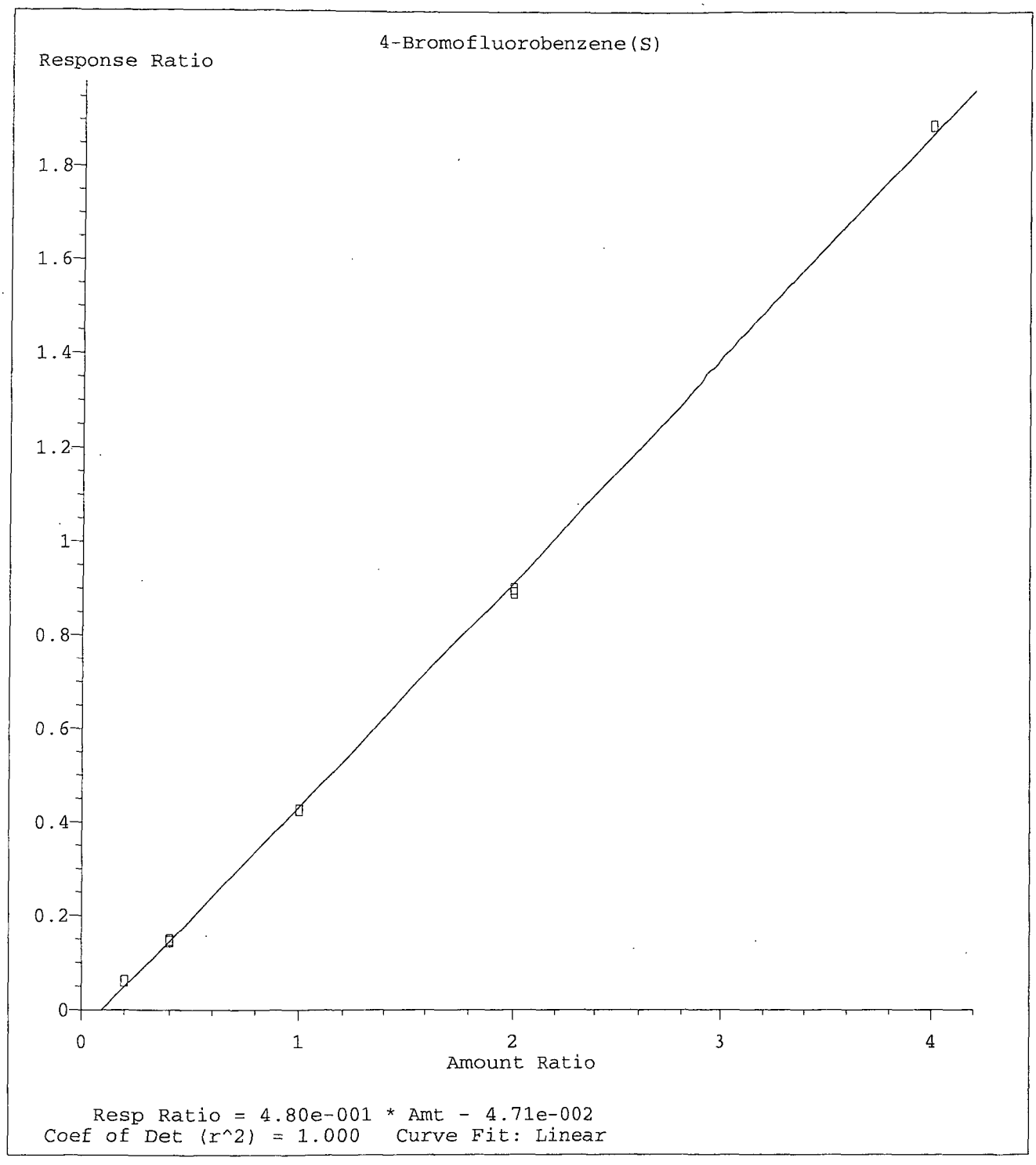
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



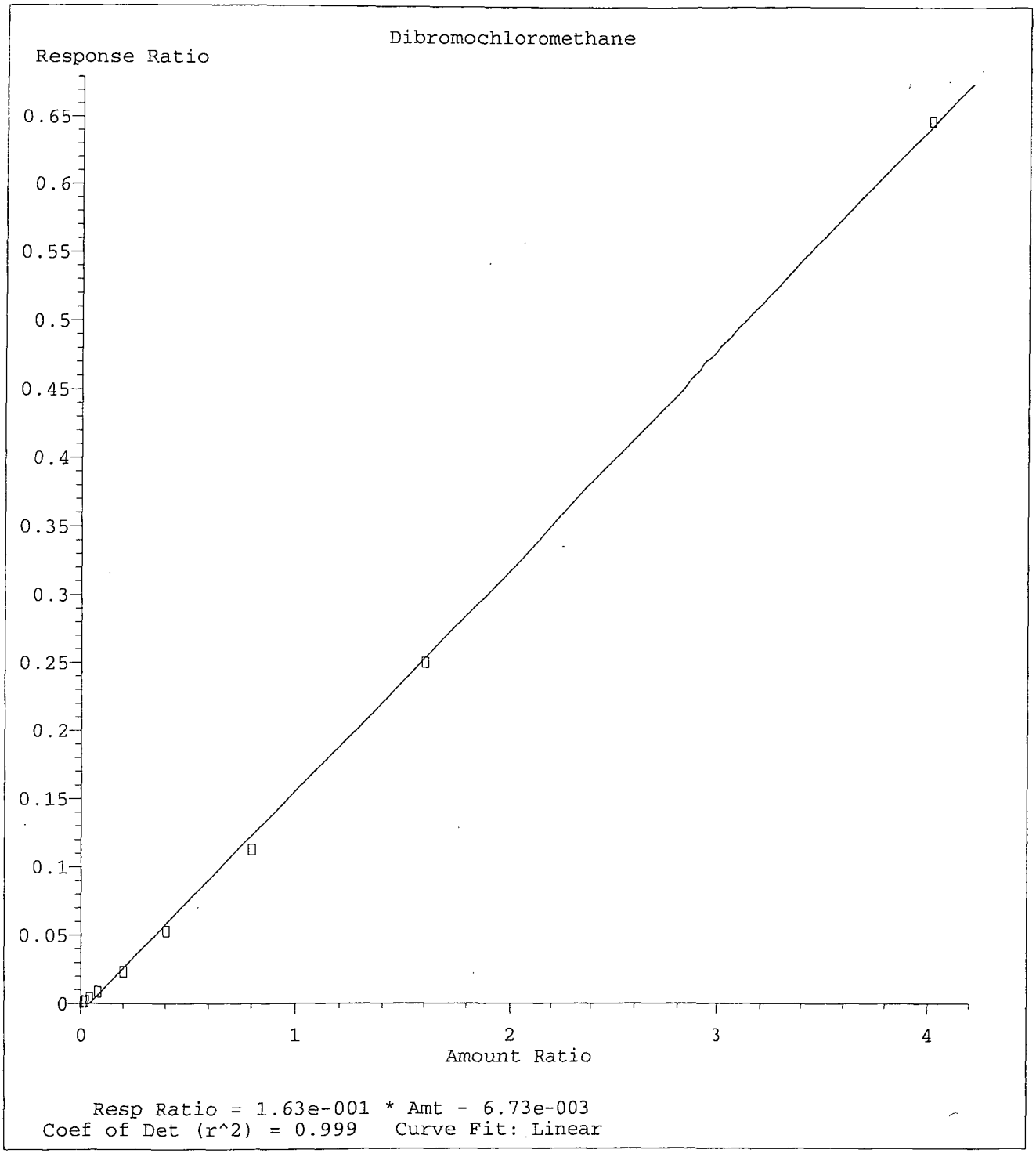
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



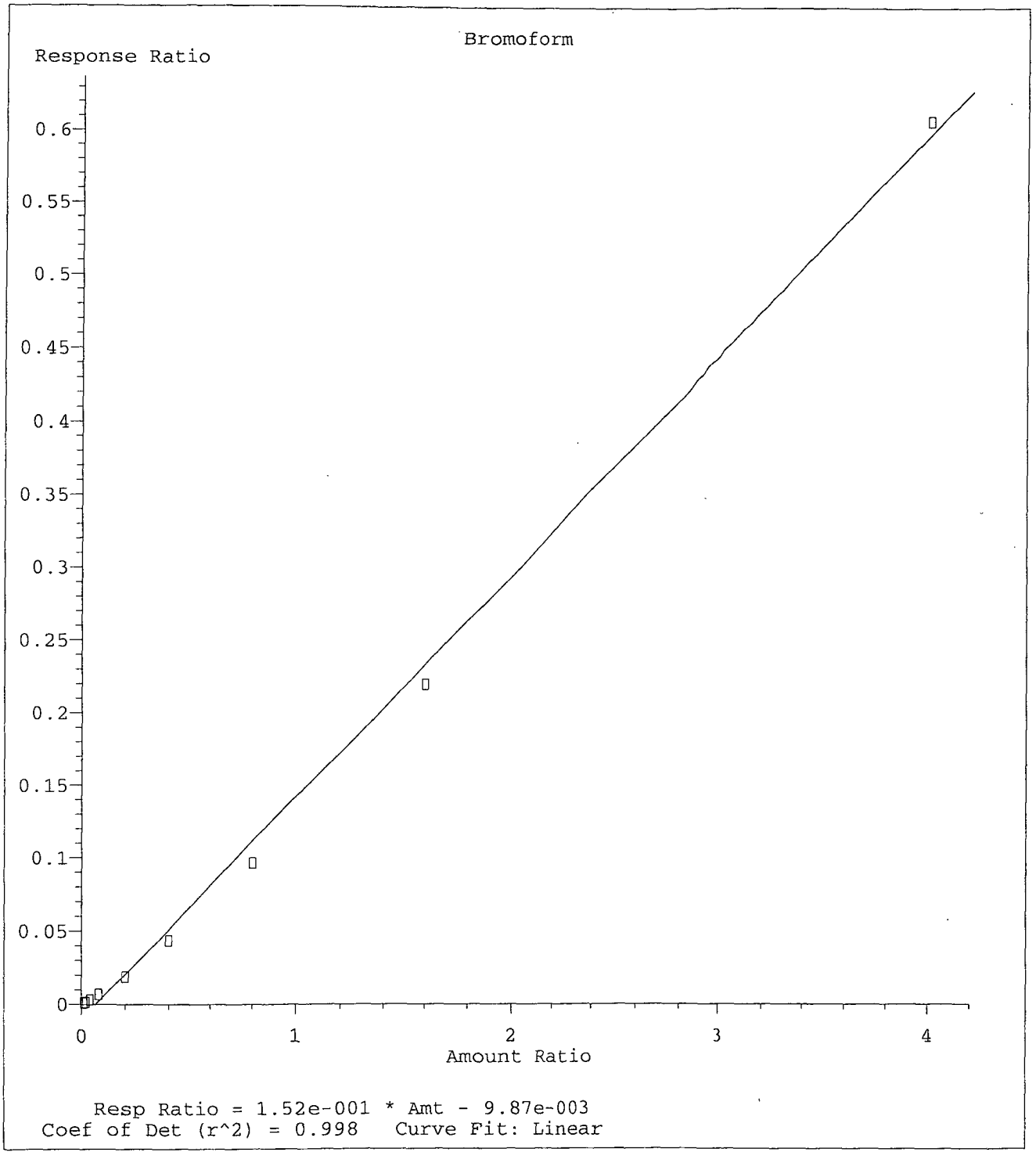
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



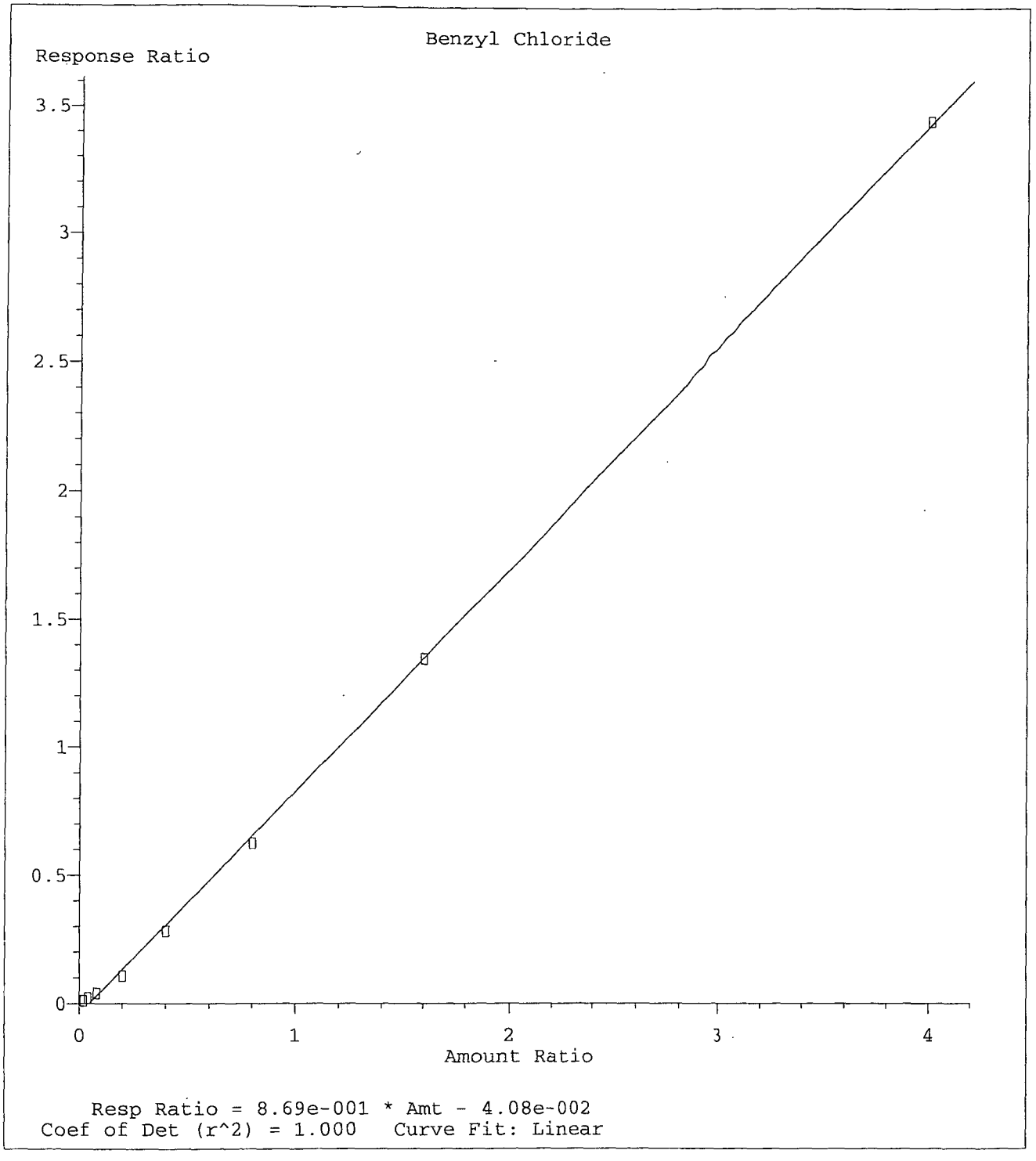
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



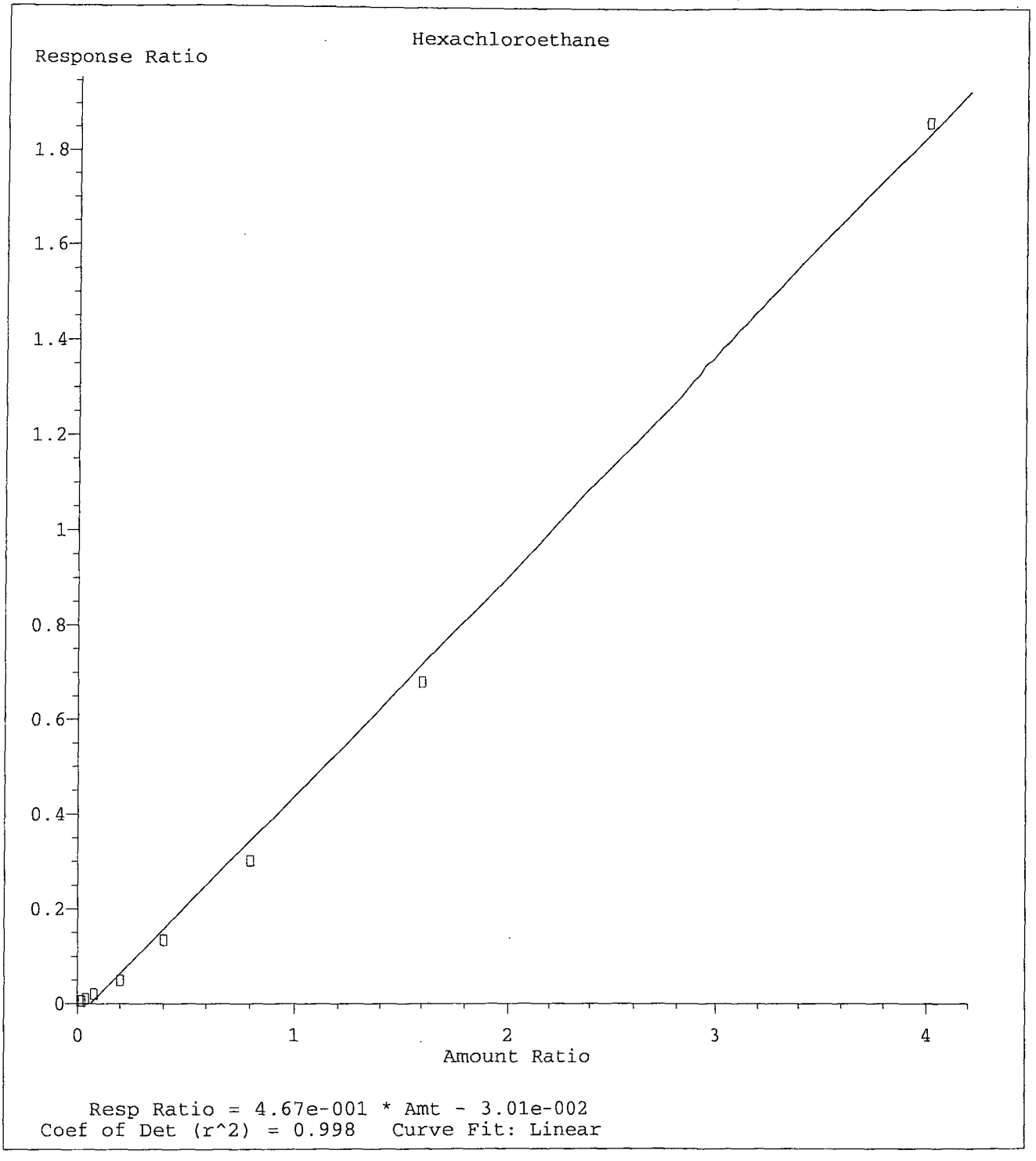
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



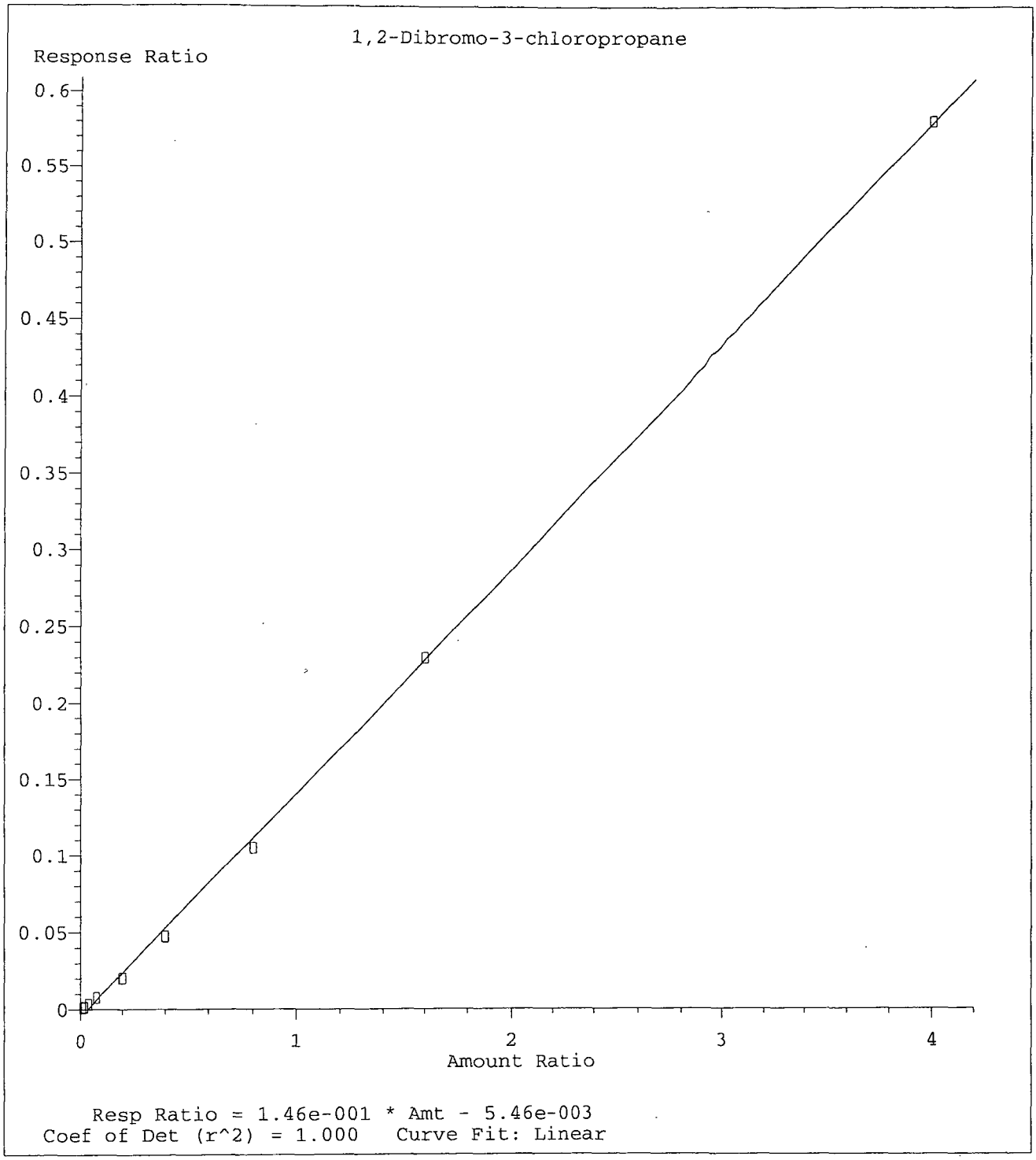
Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021



Method Name: M:\ZEUS\DATA\210119\Z0119W.M
Calibration Table Last Updated: Wed Jan 20 09:23:54 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/19/21
Matrix: Water Instrument: ZEUS
Initial Cal. Date: 01/19/21
Data File: 0119Z32.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM		
2	TM	Dichlorodifluoromethane	0.1280	0.1319	3.1	TM		
3	TML	Freon 114	0.0672	0.0761	13	TML	3.8	
4	TM**L	Chloromethane	0.0564	0.0526	6.7	TM**L	1.9	
5	TM*	Vinyl chloride	0.1346	0.1270	5.6	TM*		
6		Butane	0.0000	0.0004	0.00			
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
8	TML	Bromomethane	0.0454	0.0408	10	TML	13	
9	TML	Chloroethane	0.0339	0.0283	17	TML	2.5	
10	TM	Dichlorofluoromethane	0.2213	0.2451	11	TM		
11	TM	Trichlorofluoromethane	0.2159	0.2142	0.80	TM		
12	TM	Pentane	0.0000	0.0001	0.00	TM		
13	TM	Diethyl ether	0.0000	0.0001	0.00	TM		
14	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM		
15	TM	Acrolein	0.0051	0.0047	9.0	TM		
16	TM	Acetone	0.0328	0.0318	3.2	TM		
17	TM	Freon-113	0.0489	0.0580	19	TM		
18	TM*	1,1-DCE	0.1593	0.1628	2.2	TM*		
19	TM	2-Propanol	0.0000	0.0002	0.00	TM		
20	TM	Acetonitrile	0.0028	0.0026	9.3	TM		
21	TM	t-Butanol	0.0037	0.0034	8.2	TM		
22	TM	Methyl Acetate	0.0847	0.0850	0.30	TM		
23	TM	Iodomethane	0.1769	0.1894	7.1	TM		
24	TM	Acrylonitrile	0.0366	0.0394	7.8	TM		
25	TML	Methylene chloride	0.0916	0.0967	5.6	TML	39	*High
26	TML	Carbon disulfide	0.1551	0.1877	21	TML	20	
27	TM	Methyl t-butyl ether (MtBE)	0.2966	0.3359	13	TM		
28	TM	Trans-1,2-DCE	0.1577	0.1559	1.2	TM		
29	TM	Hexane	0.0000	0.0000	0.00	TM		
30	TM	Diisopropyl Ether	0.2845	0.3227	13	TM		
31	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**		
32	TM**	1,1-DCA	0.1934	0.2007	3.8	TM**		
33	TM	Vinyl Acetate	0.1131	0.1235	9.3	TM		
34	TM	Ethyl tert Butyl Ether	0.2803	0.3275	17	TM		
35	TM	MEK (2-Butanone)	0.0446	0.0419	6.1	TM		
36	TM	Cis-1,2-DCE	0.1713	0.1754	2.4	TM		
37	TM	2,2-Dichloropropane	0.1681	0.1697	0.95	TM		
38	TML	2-Methylpentane	0.0000	0.0004	0.00	TML		
39	TM	3-Methylpentane	0.0000	0.0676	0.00	TM		
40	TM*	Chloroform	0.2054	0.2219	8.0	TM*		
		Average			5.9			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/19/21
Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0119Z32.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Bromochloromethane	0.0762	0.0798	4.7	TM	
42	TM	1,1,1-TCA	0.1957	0.2097	7.1	TM	
43	TML	Cyclohexane	0.1457	0.1759	21	TML	15
44	TM	1,1-Dichloropropene	0.1498	0.1583	5.7	TM	
45	TML	2,2,4-Trimethylpentane	0.2550	0.3186	25	TML	5.2
46	TM	Carbon Tetrachloride	0.1702	0.1800	5.8	TM	
47	TM	Tert Amyl Methyl Ether	0.2660	0.3075	16	TM	
48	TM	Methylcyclopentane	0.0000	0.0165	0.00	TM	
49	TM	1,2-DCA	0.1396	0.1474	5.6	TM	
50	TM	Benzene	0.4695	0.4764	1.5	TM	
51	TM	TCE	0.1647	0.1671	1.5	TM	
52	TM	2-Pentanone	0.0670	0.0662	1.2	TM	
53	TM*	1,2-Dichloropropane	0.1054	0.1038	1.6	TM*	
54	TM	Bromodichloromethane	0.1220	0.1297	6.3	TM	
55	TM	Methyl Cyclohexane	0.1673	0.1940	16	TM	
56	TM	Dibromomethane	0.1210	0.1222	0.97	TM	
57	TM	MIBK (methyl isobutyl ketone)	0.0762	0.0726	4.6	TM	
58	TM	1-Bromo-2-chloroethane	0.0254	0.0284	12	TM	
59	TM	2-Chloroethyl vinyl ether	0.0000	0.0001	0.00	TM	
60	TM	Cis-1,3-Dichloropropene	0.1488	0.1599	7.5	TM	
61	TM*	Toluene	0.5235	0.5257	0.42	TM*	
62	TM	Trans-1,3-Dichloropropene	0.1287	0.1322	2.8	TM	
63	TM	1,1,2-TCA	0.1016	0.1017	0.13	TM	
64	TM	2-Hexanone	0.0304	0.0289	4.9	TM	
65	TM	1,2-EDB	0.1289	0.1368	6.1	TM	
66	TM	Tetrachloroethene	0.2655	0.2581	2.8	TM	
67	TM	1-Chlorohexane	0.2009	0.2285	14	TM	
68	TM	1,1,1,2-Tetrachloroethane	0.1457	0.1550	6.4	TM	
69	TM	m&p-Xylene	0.5043	0.5222	3.5	TM	
70	TM	o-Xylene	0.5000	0.5175	3.5	TM	
71	TM	Styrene	0.3990	0.4342	8.8	TM	
72	TM	1,3-Dichloropropane	0.1859	0.1947	4.8	TM	
73	TML	Dibromochloromethane	0.1235	0.1318	6.7	TML	8.6
74	TM**	Chlorobenzene	0.4547	0.4513	0.73	TM**	
75	TM*	Ethylbenzene	0.6634	0.6935	4.5	TM*	
76	TM**L	Bromoform	0.1036	0.1049	1.3	TM**L	15
77	TM	Isopropylbenzene	1.863	1.966	5.5	TM	
78	TM**	1,1,2,2-Tetrachloroethane	0.3752	0.3789	0.96	TM**	
79	TM	1,2,3-Trichloropropane	0.1543	0.1466	5.0	TM	
80	TM	t-1,4-Dichloro-2-Butene	0.0746	0.0816	9.5	TM	
		Average			5.9		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/19/21
Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0119Z32.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Bromobenzene	0.5821	0.5849	0.48	TM	
82	TM	n-Propylbenzene	2.012	2.144	6.6	TM	
83	TM	4-Ethyltoluene	1.817	2.155	19	TM	
84	TM	2-Chlorotoluene	1.356	1.413	4.2	TM	
85	TM	1,3,5-Trimethylbenzene	1.484	1.574	6.1	TM	
86	TM	4-Chlorotoluene	1.356	1.413	4.2	TM	
87	TM	Tert-Butylbenzene	1.482	1.543	4.1	TM	
88	TM	1,2,4-Trimethylbenzene	1.472	1.585	7.7	TM	
89	TM	Sec-Butylbenzene	2.006	2.155	7.4	TM	
90	TM	p-Isopropyltoluene	1.482	1.543	4.1	TM	
91	TML	Benzyl Chloride	0.6643	0.5972	10	TML	20
92	TM	1,3-DCB	1.162	1.177	1.3	TM	
93	TM	1,4-DCB	1.196	1.187	0.76	TM	
94	TM	n-Butylbenzene	1.431	1.516	6.0	TM	
95	TM	1,2-DCB	1.070	1.084	1.3	TM	
96	TML	Hexachloroethane	0.3461	0.3405	1.6	TML	11
97	TML	1,2-Dibromo-3-chloropropane	0.1073	0.1096	2.2	TML	16
98	TM	1,2,4-Trichlorobenzene	1.006	1.171	16	TM	
99	TM	Hexachlorobutadiene	0.5073	0.5124	1.0	TM	
100	TM	Naphthalene	1.493	1.581	6.0	TM	
101	TM	1,2,3-Trichlorobenzene	0.7515	0.7609	1.3	TM	
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.3		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z32.D Vial: 12
Acq On : 19 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4373542	25.00 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.63	117	3531667	25.00 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1349120	25.00 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1268688	25.19 ppb	0.00
Spiked Amount 25.000			Recovery =	100.756%	
48) 1,2-DCA-D4(S)	5.71	65	1141560	27.61 ppb	0.00
Spiked Amount 25.000			Recovery =	110.440%	
69) Toluene-D8(S)	8.03	98	4287775	27.18 ppb	0.00
Spiked Amount 25.000			Recovery =	108.712%	
77) 4-Bromofluorobenzene(S)	10.92	95	1523343	24.94 ppb	0.00
Spiked Amount 25.000			Recovery =	99.748%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.07	85	230754	10.31 ppb	99
4) Freon 114	1.16	85	133045	10.38 ppb	90
5) Chloromethane	1.23	50	92049	9.81 ppb	96
6) Vinyl chloride	1.29	62	222131	9.44 ppb	98
9) Bromomethane	1.53	94	71347	11.30 ppb	91
10) Chloroethane	1.61	64	49570	10.25 ppb	94
11) Dichlorofluoromethane	1.79	67	428739	11.07 ppb	96
12) Trichlorofluoromethane	1.83	101	374737	9.92 ppb	98
16) Acrolein	2.21	55	102225	113.75 ppb	87
17) Acetone	2.37	43	278189	48.42 ppb	97
18) Freon-113	2.33	101	101440	11.86 ppb	92
19) 1,1-DCE	2.30	61	284752	10.22 ppb	97
21) Acetonitrile	2.64	40	55828	113.32 ppb	93
22) t-Butanol	3.04	59	73640	114.75 ppb	96
23) Methyl Acetate	2.73	43	148652	10.03 ppb	99
24) Iodomethane	2.43	142	331420	10.71 ppb	95
25) Acrylonitrile	3.11	52	69012	10.78 ppb	88
26) Methylene chloride	2.82	49	169152	13.91 ppb	98
27) Carbon disulfide	2.49	76	328320	12.00 ppb	99
28) Methyl t-butyl ether (MtBE	3.19	73	587560	11.32 ppb	95
29) Trans-1,2-DCE	3.15	61	272648	9.88 ppb	99
31) Diisopropyl Ether	3.93	45	564466	11.34 ppb	95
33) 1,1-DCA	3.72	63	351114	10.38 ppb	97
34) Vinyl Acetate	3.86	43	216133	10.93 ppb	97
35) Ethyl tert Butyl Ether	4.49	59	572974	11.68 ppb	98
36) MEK (2-Butanone)	4.68	43	366258	46.97 ppb	98
37) Cis-1,2-DCE	4.60	61	306839	10.24 ppb	96
38) 2,2-Dichloropropane	4.60	77	296850	10.10 ppb	100
41) Chloroform	5.09	83	388124	10.80 ppb	100
42) Bromochloromethane	4.93	49	139537	10.47 ppb	91
44) 1,1,1-TCA	5.30	97	366784	10.71 ppb	94
45) Cyclohexane	5.37	56	307774	11.46 ppb	96
46) 1,1-Dichloropropene	5.53	75	276977	10.57 ppb	99
47) 2,2,4-Trimethylpentane	5.96	57	557385	10.52 ppb	99
49) Carbon Tetrachloride	5.52	117	314933	10.58 ppb	96
50) Tert Amyl Methyl Ether	6.01	73	537894	11.56 ppb	97
52) 1,2-DCA	5.81	62	257871	10.56 ppb	94
53) Benzene	5.78	78	833422	10.15 ppb	98
54) TCE	6.61	130	292358	10.15 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z32.D Vial: 12
Acq On : 19 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.88	43	1447026	123.47	ppb	98
56)	1,2-Dichloropropane	6.86	63	181520	9.84	ppb	99
57)	Bromodichloromethane	7.21	83	226844	10.63	ppb	94
58)	Methyl Cyclohexane	6.84	83	339323	11.59	ppb	100
59)	Dibromomethane	6.99	174	213750	10.10	ppb	98
60)	MIBK (methyl isobutyl ket	7.94	43	635363	47.68	ppb	98
61)	1-Bromo-2-chloroethane	7.54	144	49657	11.16	ppb	89
63)	Cis-1,3-Dichloropropene	7.74	75	279738	10.75	ppb	98
64)	Toluene	8.11	91	919606	10.04	ppb	97
65)	Trans-1,3-Dichloropropene	8.37	75	231281	10.28	ppb	98
66)	1,1,2-TCA	8.56	97	178002	10.01	ppb	98
67)	2-Hexanone	8.88	43	253056	47.53	ppb	100
70)	1,2-EDB	9.09	107	193189	10.61	ppb	94
71)	Tetrachloroethene	8.72	166	364677	9.72	ppb	97
72)	1-Chlorohexane	9.67	91	322861	11.37	ppb	99
73)	1,1,1,2-Tetrachloroethane	9.75	131	218910	10.64	ppb	97
74)	m&p-Xylene	9.92	91	1475380	20.71	ppb	99
75)	o-Xylene	10.35	91	731029	10.35	ppb	99
76)	Styrene	10.37	104	613352	10.88	ppb	95
78)	1,3-Dichloropropane	8.75	76	275112	10.48	ppb	98
79)	Dibromochloromethane	8.99	129	186146	9.14	ppb	100
80)	Chlorobenzene	9.65	112	637570	9.93	ppb	98
81)	Ethylbenzene	9.79	91	979659	10.45	ppb	99
82)	Bromoform	10.55	173	148224	8.53	ppb	99
84)	Isopropylbenzene	10.77	105	1061143	10.55	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	204451	10.10	ppb	96
86)	1,2,3-Trichloropropane	11.12	110	79125	9.50	ppb	96
87)	t-1,4-Dichloro-2-Butene	11.15	53	44061	10.95	ppb	84
88)	Bromobenzene	11.06	77	315651	10.05	ppb	93
89)	n-Propylbenzene	11.21	91	1157069	10.66	ppb	100
90)	4-Ethyltoluene	11.34	105	1162911	11.86	ppb	98
91)	2-Chlorotoluene	11.41	91	762284	10.42	ppb	96
92)	1,3,5-Trimethylbenzene	11.41	105	849326	10.61	ppb	98
93)	4-Chlorotoluene	11.41	91	762284	10.42	ppb	96
94)	Tert-Butylbenzene	11.77	119	832867	10.41	ppb	97
95)	1,2,4-Trimethylbenzene	11.82	105	855232	10.77	ppb	98
96)	Sec-Butylbenzene	12.00	105	1162757	10.74	ppb	99
97)	p-Isopropyltoluene	11.77	119	832867	10.41	ppb	99
98)	Benzyl Chloride	12.35	91	322291	8.05	ppb	99
99)	1,3-DCB	12.10	146	635399	10.13	ppb	95
100)	1,4-DCB	12.20	146	640428	9.92	ppb	95
101)	n-Butylbenzene	12.61	91	818222	10.60	ppb	99
102)	1,2-DCB	12.60	146	585173	10.13	ppb	100
103)	Hexachloroethane	12.89	201	183770	8.90	ppb	98
104)	1,2-Dibromo-3-chloropropan	13.44	157	59171	8.44	ppb	98
105)	1,2,4-Trichlorobenzene	13.69	180	632109	11.64	ppb	99
106)	Hexachlorobutadiene	14.58	225	276540	10.10	ppb	95
107)	Naphthalene	14.62	128	853448	10.60	ppb	99
108)	1,2,3-Trichlorobenzene	14.90	180	410603	10.13	ppb	95

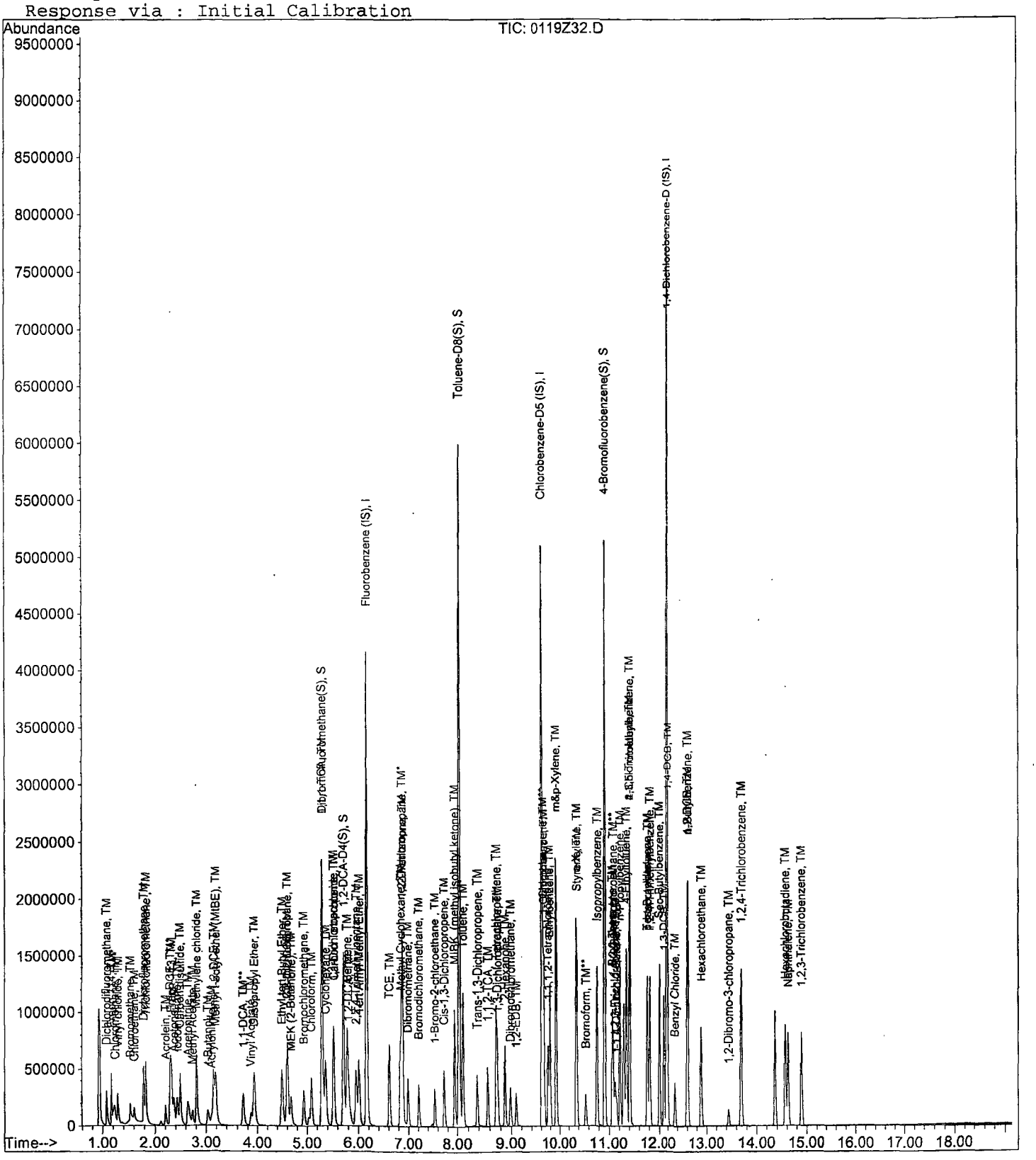
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z32.D Vial: 12
Acq On : 19 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 20 10:15 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

			0125Z24.D	0125Z25.D	0125Z26.D	0125Z27.D	0125Z29.D	0125Z30 D	0125Z31.D	0125Z32.D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane	0.0934	0.1172	0.1363	0.1304	0.1350	0.1383	0.1381	0.1343			0.13	12	TM			
4	TM	Freon 114	0.0532	0.0810	0.0910	0.0871	0.0722	0.0743	0.0765	0.0709			0.08	15	TM			
5	TM**L	Chloromethane	0.2273	0.1390	0.0989	0.0615	0.0541	0.0501	0.0503	0.0487			0.09	70	TM**	1.000		
6	TM*	Vinyl chloride	0.0967	0.1157	0.1262	0.1253	0.1225	0.1213	0.1175	0.1136			0.12	8.1	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0819	0.0432	0.0412	0.0314	0.0310	0.0293	0.0266			0.04	47	TM	0.998		
10	TML	Chloroethane	0.0559	0.0565	0.0553	0.0377	0.0335	0.0284	0.0261				0.04	32	TM	0.996		
11	TM	Dichlorofluoromethane	0.2011	0.2277	0.2422	0.2409	0.2329	0.2184	0.1979				0.22	8.1	TM			
12	TM	Trichlorofluoromethane	0.1621	0.2106	0.2320	0.2287	0.2313	0.2288	0.2186	0.1682			0.21	14	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein													TM			
17	TM	Acetone	0.0404	0.0337	0.0331	0.0322	0.0293	0.0285	0.0278	0.0277			0.03	14	TM			
18	TM	Freon-113	0.0582	0.0640	0.0656	0.0608	0.0571	0.0586	0.0556	0.0538			0.06	6.8	TM			
19	TM*	1,1-DCE	0.1228	0.1466	0.1584	0.1534	0.1564	0.1521	0.1519	0.1465			0.15	7.5	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile													TM			
22	TM	t-Butanol													TM			
23	TM	Methyl Acetate	0.0863	0.0799	0.0840	0.0815	0.0685	0.0686	0.0671	0.0692			0.08	11	TM			
24	TML	Iodomethane	0.2418	0.1698	0.1371	0.1105	0.0944	0.1103	0.1304	0.1529			0.14	33	TM	0.994		
25	TM	Acrylonitrile		0.0299	0.0362	0.0373	0.0316	0.0316	0.0309	0.0306			0.03	8.9	TM			
26	TML	Methylene chloride	0.1848	0.1332	0.1028	0.0847	0.0691	0.0651	0.0642	0.0547			0.09	47	TM	0.996		
27	TM	Carbon disulfide	0.1528	0.1493	0.1471	0.1478	0.1436	0.1454	0.1459	0.1408			0.15	2.5	TM			
28	TM	Methyl t-butyl ether (MtBE)	0.2059	0.2474	0.2628	0.2628	0.2686	0.2722	0.2762	0.2720			0.26	8.9	TM			
29	TM	Trans-1,2-DCE	0.1305	0.1393	0.1552	0.1495	0.1517	0.1500	0.1466	0.1392			0.15	5.7	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether	0.2257	0.2534	0.2638	0.2745	0.2845	0.2856	0.2867	0.2786			0.27	7.8	TM			
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
33	TM**	1,1-DCA	0.1539	0.1918	0.1925	0.1962	0.1998	0.1895	0.1848	0.1785			0.19	7.8	TM**			
34	TM	Vinyl Acetate	0.0834	0.0698	0.0908	0.0910	0.0820	0.0927	0.1170	0.0860			0.09	15	TM			
35	TM	Ethyl tert Butyl Ether	0.1680	0.2258	0.2423	0.2489	0.2621	0.2701	0.2780	0.2786			0.25	15	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0368	0.0339	0.0379	0.0383	0.0375	0.0389	0.0395	0.0401			0.04	5.1	TM			
37	TM	Cis-1,2-DCE	0.1672	0.1736	0.1773	0.1752	0.1762	0.1687	0.1647	0.1585			0.17	3.9	TM			
38	TM	2,2-Dichloropropane	0.1358	0.1442	0.1516	0.1529	0.1629	0.1614	0.1629	0.1592			0.15	6.4	TM			
39	TML	2-Methylpentane													TM		*	
40	TM	3-Methylpentane													TM			
41	TM*	Chloroform	0.1896	0.2023	0.2108	0.2120	0.2215	0.2125	0.2069	0.2010			0.21	4.6	TM*			
42	TM	Bromochloromethane	0.0651	0.0756	0.0813	0.0832	0.0811	0.0764	0.0736	0.0707			0.08	8.0	TM			
43	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
44	TM	1,1,1-TCA	0.1549	0.1796	0.1968	0.1926	0.2014	0.2025	0.2004	0.1961			0.19	8.5	TM			
45	TM	Cyclohexane	0.1215	0.1607	0.1720	0.1689	0.1581	0.1622	0.1615	0.1560			0.16	9.8	TM			
46	TM	1,1-Dichloropropene	0.1145	0.1388	0.1483	0.1451	0.1483	0.1464	0.1471	0.1406			0.14	8.0	TM			
47	TM	2,2,4-Trimethylpentane	0.2351	0.2899	0.3348	0.3217	0.3055	0.3276	0.3324	0.3225			0.31	11	TM			
48	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
49	TM	Carbon Tetrachloride	0.1359	0.1498	0.1618	0.1706	0.1770	0.1804	0.1830	0.1827			0.17	10	TM			
50	TM	Tert Amyl Methyl Ether	0.1907	0.1989	0.2163	0.2216	0.2401	0.2531	0.2602	0.2646			0.23	12	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA	0.1256	0.1346	0.1555	0.1458	0.1427	0.1347	0.1329	0.1275			0.14	7.3	TM			
53	TM	Benzene	0.4050	0.4452	0.4584	0.4683	0.4612	0.4500	0.4383	0.4165			0.44	5.0	TM			
54	TM	TCE	0.1521	0.1536	0.1587	0.1545	0.1544	0.1551	0.1523	0.1520			0.15	1.4	TM			
55	TM	2-Pentanone													TM			
56	TM*	1,2-Dichloropropane	0.0786	0.0924	0.0996	0.0992	0.1038	0.1000	0.0999	0.0974			0.10	8.2	TM*			
57	TM	Bromodichloromethane	0.0921	0.1001	0.1069	0.1069	0.1253	0.1299	0.1349	0.1410			0.12	15	TM			
58	TM	Methyl Cyclohexane	0.1472	0.1682	0.1750	0.1929	0.1811	0.1958	0.1974	0.1910			0.18	9.5	TM			
59	TM	Dibromomethane	0.0834	0.0965	0.1047	0.1068	0.1098	0.1077	0.1071	0.1079			0.10	8.6	TM			
60	TM	MIBK (methyl isobutyl ketone	0.0538	0.0559	0.0644	0.0670	0.0662	0.0703	0.0738	0.0769			0.07	12	TM			
61	TM	1-Bromo-2-chloroethane		0.0224	0.0233	0.0204	0.0215	0.0217	0.0220	0.0221			0.02	4.0	TM			
62	TM	2-Chloroethyl vinyl ether													TM			
63	TM	Cis-1,3-Dichloropropene		0.1068	0.1260	0.1315	0.1476	0.1533	0.1583	0.1628			0.14	14	TM			
64	TM*	Toluene	0.3986	0.4732	0.4990	0.4994	0.4972	0.4969	0.4938	0.4746			0.48	7.1	TM*			
65	TML	Trans-1,3-Dichloropropene	0.0887	0.0991	0.1020	0.1055	0.1243	0.1313	0.1408	0.1457			0.12	18	TM	1.000		
66	TM	1,1,2-TCA	0.0691	0.0848	0.0938	0.0932	0.0952	0.0953	0.0971	0.0987			0.09	11	TM			
67	TML	2-Hexanone	0.0189	0.0205	0.0259	0.0258	0.0267	0.0279	0.0302	0.0297			0.03	16	TM	0.997		
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
70	TM	1,2-EDB	0.0953	0.1014	0.1163	0.1177	0.1337	0.1374	0.1364	0.1338			0.12	14	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Initial Cal. Date: 01/25/21
Instrument: ZEUS

Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene	0.2337	0.2557	0.2628	0.2638	0.2598	0.2595	0.2507	0.2377			0.25	4.5	TM			
72	TM	1-Chlorohexane	0.1472	0.1816	0.2084	0.2077	0.2052	0.2153	0.2112	0.2022			0.20	11	TM			
73	TM	1,1,1,2-Tetrachloroethane		0.1295	0.1223	0.1289	0.1512	0.1599	0.1635	0.1628			0.15	12	TM			
74	TM	m&p-Xylene	0.3960	0.4739	0.5151	0.5266	0.5423	0.5475	0.5381	0.4974			0.50	10.0	TM			
75	TM	o-Xylene	0.4077	0.4600	0.4915	0.5051	0.5399	0.5515	0.5496	0.5283			0.50	9.9	TM			
76	TML	Styrene	0.2661	0.3028	0.3287	0.3693	0.4365	0.4565	0.4661	0.4573			0.39	21	TM	1.000		
77	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
78	TM	1,3-Dichloropropane	0.1585	0.1708	0.1902	0.1836	0.1942	0.1988	0.1951	0.1889			0.19	7.4	TM			
79	TML	Dibromochloromethane	0.0793	0.0932	0.1092	0.1120	0.1314	0.1413	0.1535	0.1596			0.12	23	TM	0.999		
80	TM**	Chlorobenzene	0.4055	0.4428	0.4648	0.4825	0.4630	0.4663	0.4564	0.4376			0.45	5.2	TM**			
81	TM*	Ethylbenzene	0.5485	0.6267	0.7022	0.6913	0.7137	0.7201	0.7006	0.6647			0.67	8.6	TM*			
82	TM**L	Bromoform	0.0644	0.0729	0.0762	0.0759	0.1013	0.1117	0.1270	0.1404			0.10	29	TM**	0.998		
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene		1.621	1.785	1.954	1.973	2.035	2.107	2.014			1.9	8.7	TM			
85	TM**	1,1,2,2-Tetrachloroethane		0.2940	0.3345	0.3733	0.3576	0.3795	0.4156	0.3987			0.36	11	TM**			
86	TM	1,2,3-Trichloropropane		0.1404	0.1430	0.1489	0.1403	0.1484	0.1537	0.1493			0.15	3.5	TM			
87	TML	t-1,4-Dichloro-2-Butene		0.0537	0.0479	0.0572	0.0564	0.0696	0.0786	0.0829			0.06	21	TM	0.999		
88	TM	Bromobenzene	0.5915	0.5664	0.6039	0.6289	0.6008	0.6148	0.6413	0.6279			0.61	3.9	TM			
89	TML	n-Propylbenzene		1.790	1.997	2.091	2.149	2.239	2.289	2.149			2.1	7.9	TM	0.999		
90	TM	4-Ethyltoluene		1.645	1.778	1.965	1.902	1.994	2.020	1.924			1.9	7.1	TM			
91	TML	2-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
92	TML	1,3,5-Trimethylbenzene		1.299	1.394	1.593	1.597	1.650	1.700	1.613			1.5	9.4	TM	1.000		
93	TML	4-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
94	TM	Tert-Butylbenzene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
95	TM	1,2,4-Trimethylbenzene		1.205	1.465	1.558	1.595	1.673	1.725	1.679			1.6	11	TM			
96	TM	Sec-Butylbenzene		1.743	1.926	2.124	2.120	2.242	2.332	2.217			2.1	9.6	TM			
97	TM	p-Isopropyltoluene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
98	TML	Benzyl Chloride	0.3605	0.4063	0.4316	0.4673	0.5414	0.6613	0.7649	0.8335			0.56	31	TM	0.998		
99	TM	1,3-DCB	1.003	1.115	1.191	1.246	1.167	1.182	1.202	1.164			1.2	6.3	TM			
100	TM	1,4-DCB	1.067	1.188	1.231	1.250	1.174	1.192	1.207	1.158			1.2	4.7	TM			
101	TML	n-Butylbenzene	1.097	1.139	1.334	1.439	1.506	1.635	1.702	1.635			1.4	16	TM	1.000		
102	TM	1,2-DCB	1.013	1.033	1.084	1.106	1.083	1.088	1.111	1.062			1.1	3.2	TM			
103	TML	Hexachloroethane	0.1598	0.2028	0.2300	0.2455	0.2962	0.3496	0.3993	0.4447			0.29	34	TM	0.997		
104	TML	1,2-Dibromo-3-chloropropane	0.0694	0.0657	0.0808	0.0809	0.0991	0.1090	0.1210	0.1269			0.09	25	TM	0.999		
105	TM	1,2,4-Trichlorobenzene	0.8552	0.9091	0.9500	0.9954	0.9570	1.019	1.019	0.9545			0.96	5.8	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene	0.4433	0.4384	0.4934	0.4968	0.4817	0.5229	0.5205	0.4686			0.48	6.6	TM			
107	TML	Naphthalene		1.069	1.179	1.273	1.416	1.571	1.590	1.459			1.4	15	TM	0.999		
108	TM	1,2,3-Trichlorobenzene	0.6814	0.6455	0.6688	0.7212	0.6765	0.7277	0.7196	0.6632			0.69	4.5	TM			
109																		
110																		
111																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb		0.00
Spiked Amount 25.000			Recovery =	15.912%			
48) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb		0.00
Spiked Amount 25.000			Recovery =	16.508%			
69) Toluene-D8(S)	8.03	98	555650	4.08	ppb		0.00
Spiked Amount 25.000			Recovery =	16.312%			
77) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb		0.00
Spiked Amount 25.000			Recovery =	21.764%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	4219	0.22	ppb	#	81
4) Freon 114	1.16	85	2401	0.21	ppb		82
5) Chloromethane	1.20	50	10265	0.40	ppb		97
6) Vinyl chloride	1.28	62	4365	0.25	ppb		93
9) Bromomethane	1.53	94	5445	-0.48	ppb		92
10) Chloroethane	1.61	64	2525	-0.54	ppb		99
11) Dichlorofluoromethane	1.78	67	9079	0.27	ppb		97
12) Trichlorofluoromethane	1.83	101	7319	0.23	ppb		96
17) Acetone	2.36	43	30418	6.40	ppb		99
18) Freon-113	2.32	101	2626	0.29	ppb	#	68
19) 1,1-DCE	2.29	61	5546	0.25	ppb	#	80
23) Methyl Acetate	2.73	43	3897	0.34	ppb		91
24) Iodomethane	2.43	142	10919	2.34	ppb		98
25) Acrylonitrile	3.10	52	1320	0.27	ppb	#	51
26) Methylene chloride	2.81	49	8344	-1.03	ppb		94
27) Carbon disulfide	2.49	76	6898	0.31	ppb		96
28) Methyl t-butyl ether (MtBE	3.19	73	9296	0.24	ppb		92
29) Trans-1,2-DCE	3.15	61	5892	0.27	ppb	#	66
31) Diisopropyl Ether	3.93	45	10193	0.25	ppb		90
33) 1,1-DCA	3.71	63	6947	0.25	ppb		91
34) Vinyl Acetate	3.85	43	3767	0.28	ppb	#	70
35) Ethyl tert Butyl Ether	4.49	59	7584	0.20	ppb	#	85
36) MEK (2-Butanone)	4.67	43	27696	4.86	ppb		97
37) Cis-1,2-DCE	4.60	61	7551	0.29	ppb	#	82
38) 2,2-Dichloropropane	4.60	77	6132	0.26	ppb		95
41) Chloroform	5.09	83	8563	0.27	ppb	#	83
42) Bromochloromethane	4.93	49	2939	0.26	ppb	#	86
44) 1,1,1-TCA	5.30	97	6993	0.24	ppb	#	80
45) Cyclohexane	5.36	56	5488	0.23	ppb	#	75
46) 1,1-Dichloropropene	5.53	75	5171	0.24	ppb	#	78
47) 2,2,4-Trimethylpentane	5.95	57	10616	0.23	ppb		93
49) Carbon Tetrachloride	5.52	117	6138	0.24	ppb	#	80
50) Tert Amyl Methyl Ether	6.01	73	8610	0.25	ppb		93
52) 1,2-DCA	5.81	62	5673	0.27	ppb	#	90
53) Benzene	5.78	78	18288	0.27	ppb		99
54) TCE	6.61	130	6869	0.30	ppb		97
56) 1,2-Dichloropropane	6.87	63	3548	0.24	ppb	#	83
57) Bromodichloromethane	7.21	83	4157	0.24	ppb	#	65
58) Methyl Cyclohexane	6.84	83	6645	0.24	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
59)	Dibromomethane	6.99	174	3765	0.24 ppb		94
60)	MIBK (methyl isobutyl ket	7.95	43	40492	4.07 ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	499	0.15 ppb	#	71
63)	Cis-1,3-Dichloropropene	7.73	75	4639	0.22 ppb	#	88
64)	Toluene	8.11	91	17996	0.25 ppb		92
65)	Trans-1,3-Dichloropropene	8.36	75	4006	0.97 ppb		92
66)	1,1,2-TCA	8.56	97	3119	0.23 ppb	#	88
67)	2-Hexanone	8.88	43	14256	6.74 ppb		98
70)	1,2-EDB	9.09	107	3239	0.24 ppb	#	77
71)	Tetrachloroethene	8.72	166	7938	0.28 ppb	#	85
72)	1-Chlorohexane	9.67	91	4999	0.22 ppb	#	88
73)	1,1,1,2-Tetrachloroethane	9.75	131	3428	0.21 ppb	#	92
74)	m&p-Xylene	9.92	91	26904	0.47 ppb		95
75)	o-Xylene	10.36	91	13852	0.24 ppb		98
76)	Styrene	10.37	104	9040	0.36 ppb		93
78)	1,3-Dichloropropane	8.73	76	5384	0.26 ppb		92
79)	Dibromochloromethane	8.98	129	2694	1.06 ppb		89
80)	Chlorobenzene	9.65	112	13774	0.27 ppb		89
81)	Ethylbenzene	9.79	91	18635	0.25 ppb		94
82)	Bromoform	10.54	173	2187	1.71 ppb	#	81
84)	Isopropylbenzene	10.76	105	17650	0.22 ppb		95
85)	1,1,2,2-Tetrachloroethane	11.08	83	3333	0.22 ppb	#	87
86)	1,2,3-Trichloropropane	11.12	110	1427	0.23 ppb	#	83
87)	t-1,4-Dichloro-2-Butene	11.14	53	447	1.69 ppb		97
88)	Bromobenzene	11.06	77	7468	0.29 ppb		88
89)	n-Propylbenzene	11.21	91	19115	-0.12 ppb		97
90)	4-Ethyltoluene	11.34	105	17200	0.22 ppb		90
91)	2-Chlorotoluene	11.40	91	13451	-0.09 ppb		89
92)	1,3,5-Trimethylbenzene	11.41	105	13468	-0.00 ppb		90
93)	4-Chlorotoluene	11.40	91	13451	-0.09 ppb		89
94)	Tert-Butylbenzene	11.77	119	13648	0.21 ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	14255	0.22 ppb		100
96)	Sec-Butylbenzene	12.00	105	19282	0.22 ppb		93
97)	p-Isopropyltoluene	11.77	119	13648	0.21 ppb		93
98)	Benzyl Chloride	12.35	91	4552	1.78 ppb	#	88
99)	1,3-DCB	12.10	146	12662	0.26 ppb		100
100)	1,4-DCB	12.20	146	13466	0.27 ppb	#	95
101)	n-Butylbenzene	12.61	91	13852	0.32 ppb		100
102)	1,2-DCB	12.59	146	12794	0.28 ppb	#	85
103)	Hexachloroethane	12.89	201	2018	1.82 ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.43	157	876	1.27 ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	10798	0.27 ppb		90
106)	Hexachlorobutadiene	14.57	225	5597	0.28 ppb	#	81
107)	Naphthalene	14.62	128	15281	-0.15 ppb		97
108)	1,2,3-Trichlorobenzene	14.88	180	8603	0.30 ppb		96

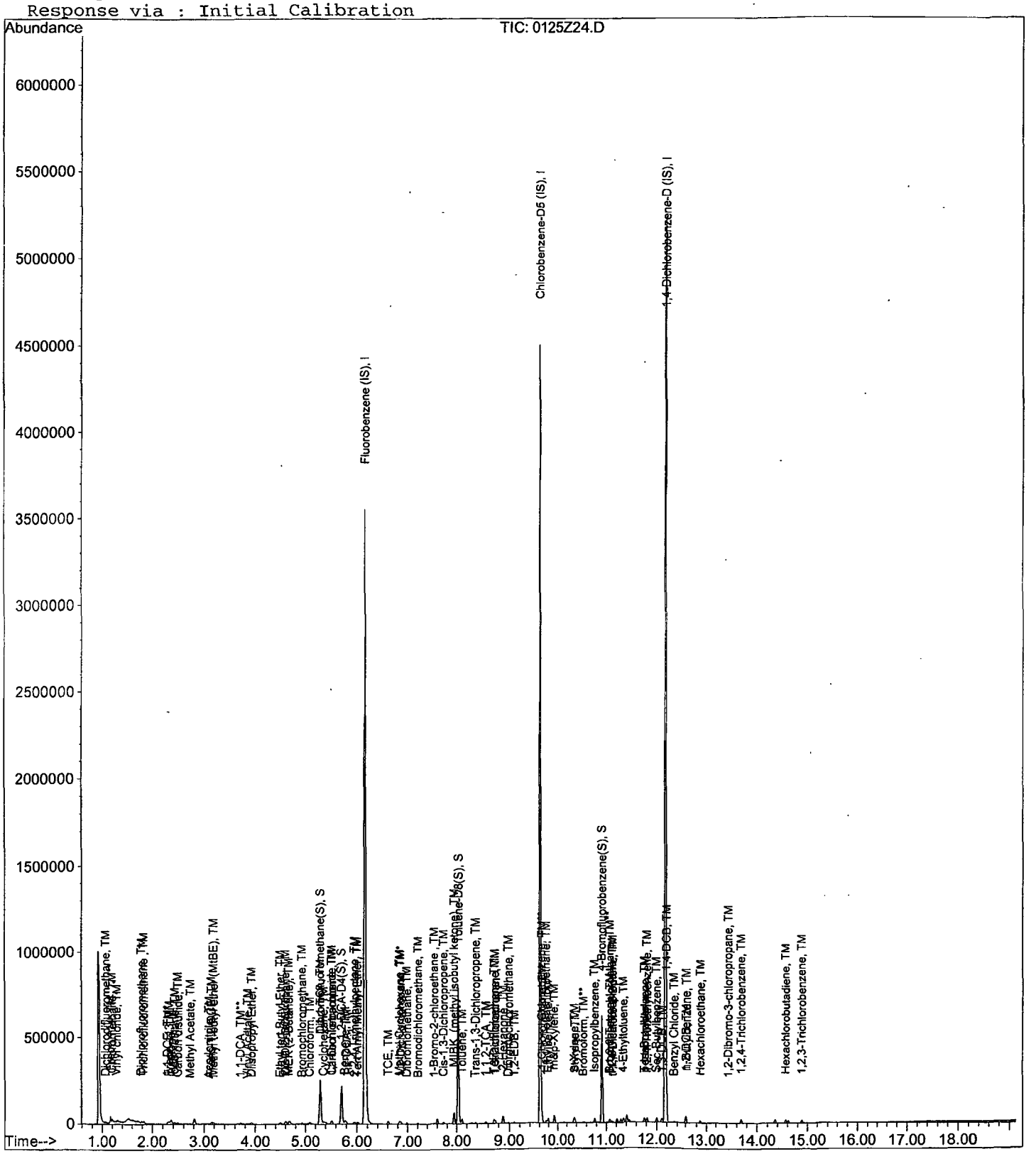
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb		0.00
Spiked Amount 25.000			Recovery =	15.912%			
48) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb		0.00
Spiked Amount 25.000			Recovery =	16.660%			
69) Toluene-D8(S)	8.03	98	538877	4.10	ppb		0.00
Spiked Amount 25.000			Recovery =	16.400%			
77) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb		0.00
Spiked Amount 25.000			Recovery =	21.484%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	8457	0.46	ppb		91
4) Freon 114	1.16	85	5848	0.53	ppb	#	74
5) Chloromethane	1.20	50	10032	0.43	ppb		90
6) Vinyl chloride	1.28	62	8352	0.49	ppb	#	86
9) Bromomethane	1.53	94	5908	-0.30	ppb		96
10) Chloroethane	1.61	64	4081	-0.09	ppb	#	86
11) Dichlorofluoromethane	1.79	67	16432	0.51	ppb		99
12) Trichlorofluoromethane	1.83	101	15200	0.50	ppb		91
17) Acetone	2.36	43	48606	10.66	ppb		98
18) Freon-113	2.32	101	4621	0.54	ppb		86
19) 1,1-DCE	2.30	61	10579	0.49	ppb		90
23) Methyl Acetate	2.73	43	5765	0.53	ppb	#	87
24) Iodomethane	2.43	142	12255	2.42	ppb		98
25) Acrylonitrile	3.09	52	2158	0.46	ppb	#	53
26) Methylene chloride	2.80	49	9612	-0.83	ppb		94
27) Carbon disulfide	2.49	76	10775	0.51	ppb	#	95
28) Methyl t-butyl ether (MtBE	3.18	73	17855	0.48	ppb	#	88
29) Trans-1,2-DCE	3.15	61	10050	0.48	ppb		95
31) Diisopropyl Ether	3.92	45	18284	0.47	ppb		93
33) 1,1-DCA	3.72	63	13841	0.52	ppb		92
34) Vinyl Acetate	3.86	43	5035	0.39	ppb	#	90
35) Ethyl tert Butyl Ether	4.49	59	16296	0.46	ppb		99
36) MEK (2-Butanone)	4.68	43	48887	8.95	ppb		99
37) Cis-1,2-DCE	4.60	61	12525	0.51	ppb		90
38) 2,2-Dichloropropane	4.60	77	10409	0.47	ppb	#	89
41) Chloroform	5.08	83	14596	0.49	ppb		96
42) Bromochloromethane	4.92	49	5456	0.50	ppb	#	68
44) 1,1,1-TCA	5.30	97	12958	0.47	ppb		92
45) Cyclohexane	5.37	56	11599	0.51	ppb		94
46) 1,1-Dichloropropene	5.53	75	10016	0.49	ppb		96
47) 2,2,4-Trimethylpentane	5.96	57	20920	0.47	ppb		90
49) Carbon Tetrachloride	5.52	117	10809	0.45	ppb		91
50) Tert Amyl Methyl Ether	6.00	73	14351	0.43	ppb		96
52) 1,2-DCA	5.81	62	9715	0.49	ppb		99
53) Benzene	5.78	78	32131	0.50	ppb		97
54) TCE	6.61	130	11087	0.50	ppb		92
56) 1,2-Dichloropropane	6.86	63	6671	0.48	ppb		98
57) Bromodichloromethane	7.20	83	7225	0.43	ppb		93
58) Methyl Cyclohexane	6.84	83	12136	0.46	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

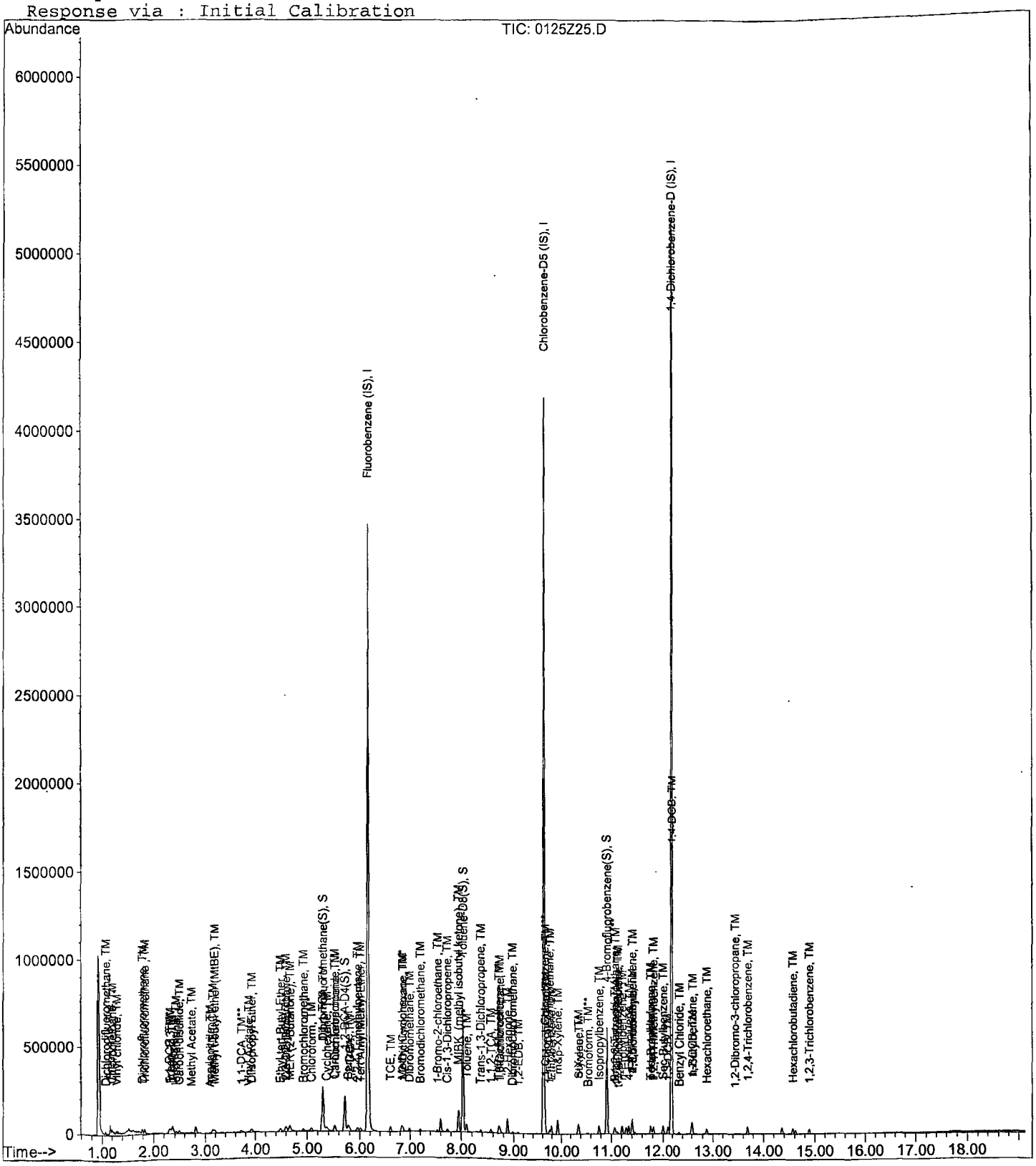
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	6964	0.47	ppb		86
60)	MIBK (methyl isobutyl ket	7.94	43	80700	8.47	ppb		96
61)	1-Bromo-2-chloroethane	7.53	144	1613	0.51	ppb	#	69
63)	Cis-1,3-Dichloropropene	7.73	75	7705	0.38	ppb		89
64)	Toluene	8.11	91	34146	0.49	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	7150	1.13	ppb		97
66)	1,1,2-TCA	8.56	97	6121	0.47	ppb		87
67)	2-Hexanone	8.88	43	29576	10.33	ppb		98
70)	1,2-EDB	9.09	107	5536	0.42	ppb	#	87
71)	Tetrachloroethene	8.71	166	13968	0.51	ppb		95
72)	1-Chlorohexane	9.67	91	9920	0.46	ppb	#	85
73)	1,1,1,2-Tetrachloroethane	9.75	131	7074	0.45	ppb		88
74)	m&p-Xylene	9.93	91	51763	0.94	ppb		85
75)	o-Xylene	10.35	91	25126	0.46	ppb		94
76)	Styrene	10.37	104	16538	0.51	ppb		94
78)	1,3-Dichloropropane	8.73	76	9326	0.46	ppb		92
79)	Dibromochloromethane	8.98	129	5091	1.20	ppb		100
80)	Chlorobenzene	9.65	112	24182	0.49	ppb		99
81)	Ethylbenzene	9.79	91	34227	0.47	ppb		89
82)	Bromoform	10.54	173	3982	1.83	ppb		88
84)	Isopropylbenzene	10.76	105	33705	0.42	ppb		92
85)	1,1,2,2-Tetrachloroethane	11.08	83	6114	0.40	ppb		93
86)	1,2,3-Trichloropropane	11.11	110	2920	0.48	ppb	#	78
87)	t-1,4-Dichloro-2-Butene	11.14	53	1117	1.88	ppb	#	59
88)	Bromobenzene	11.07	77	11779	0.46	ppb		94
89)	n-Propylbenzene	11.21	91	37232	0.08	ppb		99
90)	4-Ethyltoluene	11.34	105	34212	0.44	ppb		96
91)	2-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
92)	1,3,5-Trimethylbenzene	11.41	105	27021	0.20	ppb		95
93)	4-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
94)	Tert-Butylbenzene	11.76	119	27057	0.43	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	25063	0.39	ppb		96
96)	Sec-Butylbenzene	12.00	105	36250	0.41	ppb		96
97)	p-Isopropyltoluene	11.76	119	27057	0.43	ppb		92
98)	Benzyl Chloride	12.34	91	8450	1.89	ppb	#	87
99)	1,3-DCB	12.10	146	23181	0.48	ppb		95
100)	1,4-DCB	12.20	146	24714	0.50	ppb	#	88
101)	n-Butylbenzene	12.61	91	23698	0.46	ppb		93
102)	1,2-DCB	12.59	146	21490	0.48	ppb		97
103)	Hexachloroethane	12.88	201	4217	1.94	ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.44	157	1366	1.36	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.68	180	18907	0.47	ppb		96
106)	Hexachlorobutadiene	14.57	225	9118	0.45	ppb		94
107)	Naphthalene	14.62	128	22225	-0.03	ppb		95
108)	1,2,3-Trichlorobenzene	14.89	180	13425	0.47	ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb		0.00
Spiked Amount 25.000			Recovery =	38.496%			
48) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb		0.00
Spiked Amount 25.000			Recovery =	39.380%			
69) Toluene-D8(S)	8.03	98	1268990	9.81	ppb		0.00
Spiked Amount 25.000			Recovery =	39.236%			
77) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb		0.00
Spiked Amount 25.000			Recovery =	40.312%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	19541	1.07	ppb		95
4) Freon 114	1.16	85	13046	1.20	ppb		81
5) Chloromethane	1.20	50	14183	1.04	ppb		92
6) Vinyl chloride	1.28	62	18100	1.08	ppb		95
9) Bromomethane	1.53	94	6189	-0.22	ppb		94
10) Chloroethane	1.61	64	7923	0.95	ppb		96
11) Dichlorofluoromethane	1.79	67	34720	1.09	ppb		95
12) Trichlorofluoromethane	1.83	101	33260	1.10	ppb		98
17) Acetone	2.36	43	95048	20.98	ppb		96
18) Freon-113	2.33	101	9398	1.11	ppb		95
19) 1,1-DCE	2.30	61	22712	1.07	ppb		99
23) Methyl Acetate	2.73	43	12050	1.11	ppb		96
24) Iodomethane	2.43	142	19655	2.76	ppb		98
25) Acrylonitrile	3.10	52	5186	1.11	ppb	#	63
26) Methylene chloride	2.81	49	14737	-0.17	ppb		97
27) Carbon disulfide	2.49	76	21088	1.00	ppb	#	90
28) Methyl t-butyl ether (MtBE	3.18	73	37683	1.02	ppb	#	88
29) Trans-1,2-DCE	3.15	61	22254	1.07	ppb		91
31) Diisopropyl Ether	3.93	45	37818	0.98	ppb		92
33) 1,1-DCA	3.71	63	27596	1.04	ppb		96
34) Vinyl Acetate	3.85	43	13019	1.02	ppb		95
35) Ethyl tert Butyl Ether	4.49	59	34738	0.98	ppb		91
36) MEK (2-Butanone)	4.67	43	108684	20.02	ppb		91
37) Cis-1,2-DCE	4.60	61	25416	1.04	ppb	#	90
38) 2,2-Dichloropropane	4.59	77	21737	0.99	ppb	#	82
41) Chloroform	5.09	83	30221	1.02	ppb		96
42) Bromochloromethane	4.92	49	11662	1.07	ppb	#	75
44) 1,1,1-TCA	5.31	97	28214	1.03	ppb		96
45) Cyclohexane	5.36	56	24662	1.09	ppb		91
46) 1,1-Dichloropropene	5.53	75	21263	1.05	ppb		94
47) 2,2,4-Trimethylpentane	5.96	57	47997	1.08	ppb		99
49) Carbon Tetrachloride	5.52	117	23201	0.97	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	31015	0.94	ppb	#	87
52) 1,2-DCA	5.80	62	22291	1.13	ppb		95
53) Benzene	5.78	78	65727	1.04	ppb		97
54) TCE	6.61	130	22755	1.03	ppb		94
56) 1,2-Dichloropropane	6.86	63	14276	1.03	ppb	#	93
57) Bromodichloromethane	7.21	83	15324	0.91	ppb		100
58) Methyl Cyclohexane	6.83	83	25092	0.97	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	15013	1.02	ppb		99
60)	MIBK (methyl isobutyl ket	7.94	43	184584	19.50	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	3334	1.06	ppb		86
63)	Cis-1,3-Dichloropropene	7.73	75	18063	0.89	ppb		93
64)	Toluene	8.11	91	71543	1.04	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	14617	1.49	ppb	#	93
66)	1,1,2-TCA	8.56	97	13453	1.03	ppb		83
67)	2-Hexanone	8.88	43	74264	20.54	ppb		99
70)	1,2-EDB	9.09	107	12507	0.96	ppb	#	98
71)	Tetrachloroethene	8.72	166	28259	1.04	ppb		97
72)	1-Chlorohexane	9.67	91	22408	1.06	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	13148	0.84	ppb		90
74)	m&p-Xylene	9.92	91	110759	2.04	ppb		94
75)	o-Xylene	10.35	91	52847	0.97	ppb		94
76)	Styrene	10.37	104	35341	0.90	ppb		96
78)	1,3-Dichloropropane	8.74	76	20446	1.03	ppb		99
79)	Dibromochloromethane	8.98	129	11746	1.60	ppb		86
80)	Chlorobenzene	9.65	112	49975	1.03	ppb		99
81)	Ethylbenzene	9.79	91	75493	1.05	ppb		98
82)	Bromoform	10.54	173	8190	2.12	ppb		89
84)	Isopropylbenzene	10.77	105	73117	0.93	ppb		95
85)	1,1,2,2-Tetrachloroethane	11.07	83	13703	0.92	ppb		96
86)	1,2,3-Trichloropropane	11.11	110	5857	0.98	ppb	#	85
87)	t-1,4-Dichloro-2-Butene	11.15	53	1962	2.13	ppb		98
88)	Bromobenzene	11.06	77	24739	0.99	ppb		91
89)	n-Propylbenzene	11.21	91	81815	0.59	ppb		99
90)	4-Ethyltoluene	11.34	105	72842	0.94	ppb		92
91)	2-Chlorotoluene	11.41	91	56407	0.63	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	57122	0.66	ppb		99
93)	4-Chlorotoluene	11.41	91	56407	0.63	ppb		98
94)	Tert-Butylbenzene	11.76	119	59300	0.95	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	60013	0.94	ppb		94
96)	Sec-Butylbenzene	12.00	105	78921	0.92	ppb		99
97)	p-Isopropyltoluene	11.76	119	59300	0.95	ppb		91
98)	Benzyl Chloride	12.35	91	17683	2.16	ppb		93
99)	1,3-DCB	12.10	146	48784	1.03	ppb		95
100)	1,4-DCB	12.20	146	50417	1.04	ppb		93
101)	n-Butylbenzene	12.61	91	54640	0.93	ppb		92
102)	1,2-DCB	12.60	146	44398	1.01	ppb		95
103)	Hexachloroethane	12.89	201	9422	2.23	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	3312	1.74	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	38921	0.99	ppb		88
106)	Hexachlorobutadiene	14.57	225	20215	1.02	ppb		86
107)	Naphthalene	14.62	128	48314	0.41	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	27400	0.97	ppb		91

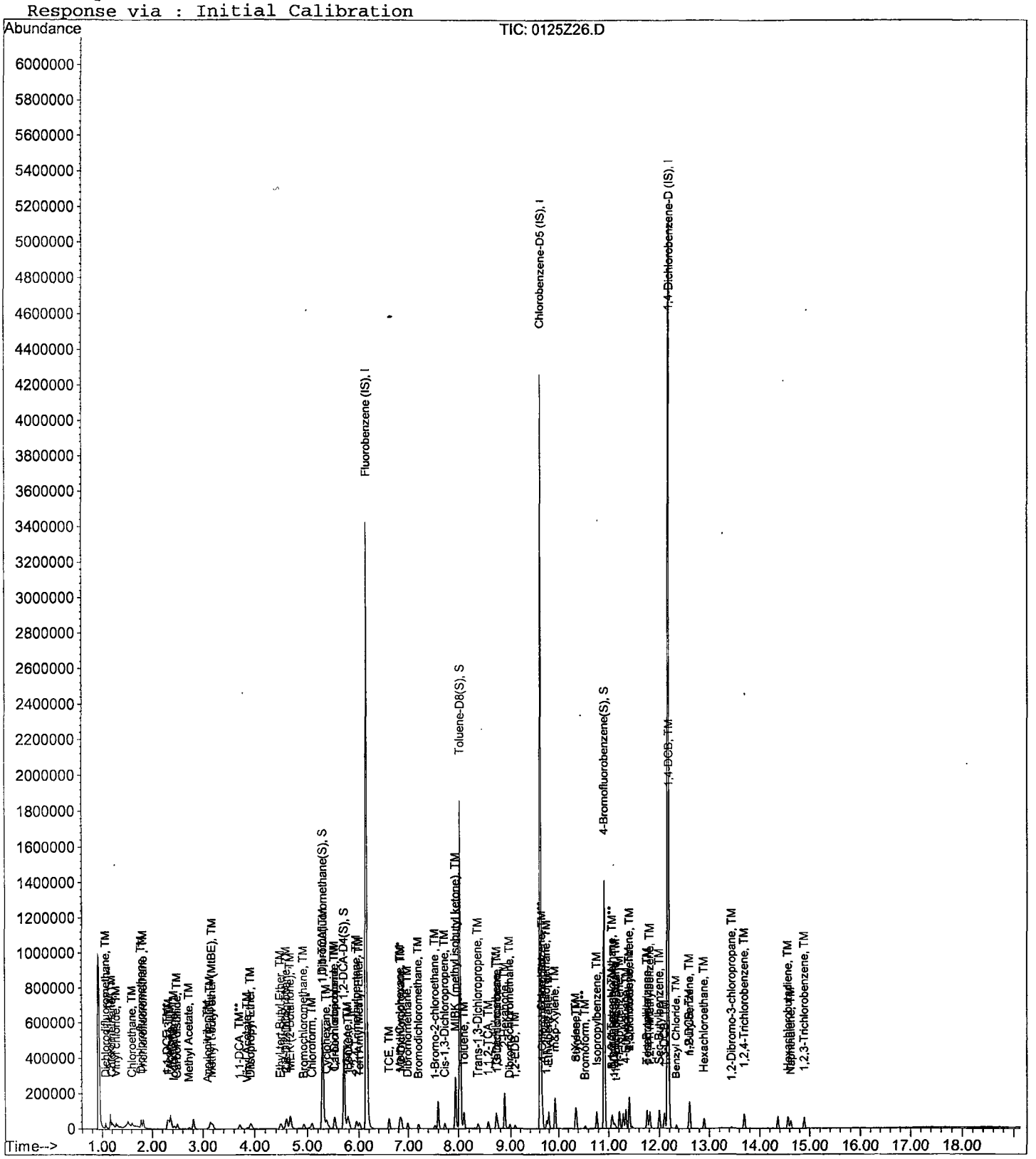
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb		0.00
Spiked Amount 25.000			Recovery = 38.824%				
48) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb		0.00
Spiked Amount 25.000			Recovery = 39.864%				
69) Toluene-D8(S)	8.03	98	1265740	9.83	ppb		0.00
Spiked Amount 25.000			Recovery = 39.308%				
77) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb		0.00
Spiked Amount 25.000			Recovery = 40.020%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	36856	2.04	ppb		95
4) Freon 114	1.16	85	24600	2.30	ppb		91
5) Chloromethane	1.20	50	17391	1.54	ppb		93
6) Vinyl chloride	1.28	62	35409	2.14	ppb		97
9) Bromomethane	1.53	94	11643	1.27	ppb		86
10) Chloroethane	1.61	64	10665	1.73	ppb		93
11) Dichlorofluoromethane	1.78	67	68079	2.16	ppb		97
12) Trichlorofluoromethane	1.83	101	64626	2.18	ppb		96
17) Acetone	2.36	43	136629	30.60	ppb		96
18) Freon-113	2.32	101	17184	2.05	ppb		94
19) 1,1-DCE	2.30	61	43344	2.07	ppb		97
23) Methyl Acetate	2.73	43	23021	2.15	ppb		91
24) Iodomethane	2.43	142	31228	3.31	ppb	#	96
25) Acrylonitrile	3.10	52	10530	2.29	ppb		92
26) Methylene chloride	2.81	49	23936	1.05	ppb		98
27) Carbon disulfide	2.49	76	41776	2.02	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	74273	2.03	ppb		95
29) Trans-1,2-DCE	3.14	61	42236	2.06	ppb		97
31) Diisopropyl Ether	3.93	45	77564	2.04	ppb		98
33) 1,1-DCA	3.71	63	55456	2.11	ppb		98
34) Vinyl Acetate	3.86	43	25718	2.04	ppb		97
35) Ethyl tert Butyl Ether	4.49	59	70337	2.02	ppb		97
36) MEK (2-Butanone)	4.67	43	162442	30.36	ppb		96
37) Cis-1,2-DCE	4.60	61	49511	2.06	ppb		99
38) 2,2-Dichloropropane	4.59	77	43199	1.99	ppb		94
41) Chloroform	5.09	83	59915	2.05	ppb		99
42) Bromochloromethane	4.93	49	23507	2.19	ppb		93
44) 1,1,1-TCA	5.30	97	54440	2.02	ppb		98
45) Cyclohexane	5.37	56	47720	2.14	ppb		92
46) 1,1-Dichloropropene	5.53	75	41012	2.06	ppb		98
47) 2,2,4-Trimethylpentane	5.95	57	90903	2.08	ppb		96
49) Carbon Tetrachloride	5.52	117	48204	2.03	ppb		99
50) Tert Amyl Methyl Ether	6.01	73	62631	1.92	ppb		94
52) 1,2-DCA	5.81	62	41209	2.12	ppb		97
53) Benzene	5.78	78	132344	2.11	ppb		99
54) TCE	6.61	130	43674	2.01	ppb		92
56) 1,2-Dichloropropane	6.86	63	28025	2.06	ppb	#	95
57) Bromodichloromethane	7.20	83	30218	1.83	ppb		90
58) Methyl Cyclohexane	6.84	83	54522	2.13	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

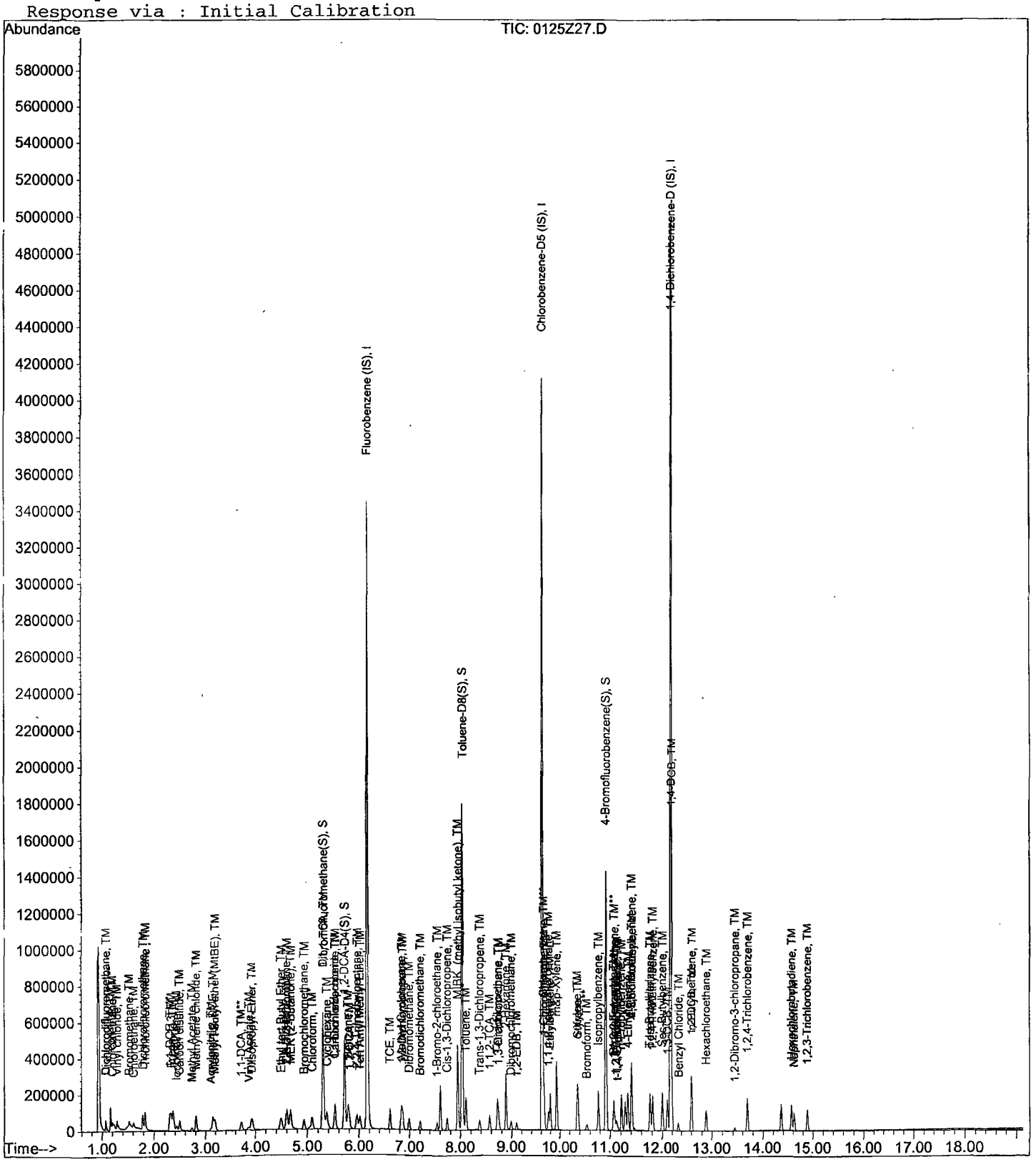
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	30181	2.07	ppb		96
60)	MIBK (methyl isobutyl ket	7.94	43	283847	30.42	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	5763	1.86	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	37163	1.87	ppb		97
64)	Toluene	8.10	91	141133	2.08	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	29817	2.23	ppb		97
66)	1,1,2-TCA	8.56	97	26352	2.05	ppb		95
67)	2-Hexanone	8.88	43	109344	28.89	ppb		97
70)	1,2-EDB	9.09	107	25207	1.94	ppb	#	96
71)	Tetrachloroethene	8.71	166	56473	2.09	ppb		95
72)	1-Chlorohexane	9.66	91	44462	2.10	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	27607	1.77	ppb		99
74)	m&p-Xylene	9.92	91	225502	4.17	ppb		98
75)	o-Xylene	10.35	91	108150	2.00	ppb		97
76)	Styrene	10.37	104	79072	1.79	ppb		97
78)	1,3-Dichloropropane	8.74	76	39314	1.99	ppb		96
79)	Dibromochloromethane	8.98	129	23970	2.31	ppb		93
80)	Chlorobenzene	9.65	112	103295	2.13	ppb		98
81)	Ethylbenzene	9.79	91	148005	2.06	ppb		99
82)	Bromoform	10.54	173	16247	2.66	ppb		94
84)	Isopropylbenzene	10.76	105	152914	2.03	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	29210	2.05	ppb		92
86)	1,2,3-Trichloropropane	11.11	110	11654	2.04	ppb	#	80
87)	t-1,4-Dichloro-2-Butene	11.14	53	4474	2.93	ppb		87
88)	Bromobenzene	11.06	77	49216	2.06	ppb		99
89)	n-Propylbenzene	11.21	91	163657	1.60	ppb		99
90)	4-Ethyltoluene	11.34	105	153756	2.08	ppb		97
91)	2-Chlorotoluene	11.41	91	115840	1.72	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	124685	1.77	ppb		100
93)	4-Chlorotoluene	11.41	91	115840	1.72	ppb		96
94)	Tert-Butylbenzene	11.76	119	121141	2.03	ppb		91
95)	1,2,4-Trimethylbenzene	11.81	105	121921	2.00	ppb		94
96)	Sec-Butylbenzene	12.00	105	166223	2.02	ppb		94
97)	p-Isopropyltoluene	11.76	119	121141	2.03	ppb		99
98)	Benzyl Chloride	12.35	91	36569	2.77	ppb	#	90
99)	1,3-DCB	12.10	146	97482	2.15	ppb		96
100)	1,4-DCB	12.20	146	97787	2.11	ppb		98
101)	n-Butylbenzene	12.61	91	112607	1.87	ppb		94
102)	1,2-DCB	12.59	146	86543	2.06	ppb		97
103)	Hexachloroethane	12.89	201	19210	2.82	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	6332	2.38	ppb	#	76
105)	1,2,4-Trichlorobenzene	13.69	180	77892	2.08	ppb		99
106)	Hexachlorobutadiene	14.57	225	38879	2.06	ppb		94
107)	Naphthalene	14.62	128	99609	1.33	ppb		100
108)	1,2,3-Trichlorobenzene	14.88	180	56436	2.10	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery =	111.184%		
48) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery =	109.020%		
69) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery =	108.292%		
77) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery =	97.020%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	188844	10.55	ppb	100
4) Freon 114	1.16	85	100960	9.52	ppb	100
5) Chloromethane	1.22	50	75630	10.19	ppb	100
6) Vinyl chloride	1.28	62	171421	10.44	ppb	100
9) Bromomethane	1.53	94	43928	10.02	ppb	100
10) Chloroethane	1.60	64	46832	11.77	ppb	100
11) Dichlorofluoromethane	1.78	67	325860	10.44	ppb	100
12) Trichlorofluoromethane	1.82	101	323634	11.01	ppb	100
17) Acetone	2.36	43	205136	46.40	ppb	100
18) Freon-113	2.32	101	79840	9.64	ppb	100
19) 1,1-DCE	2.29	61	218867	10.53	ppb	100
23) Methyl Acetate	2.72	43	95883	9.06	ppb	100
24) Iodomethane	2.43	142	132052	8.06	ppb	100
25) Acrylonitrile	3.10	52	44170	9.69	ppb	100
26) Methylene chloride	2.81	49	96624	10.56	ppb	100
27) Carbon disulfide	2.49	76	200896	9.79	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	375809	10.39	ppb	100
29) Trans-1,2-DCE	3.14	61	212306	10.45	ppb	100
31) Diisopropyl Ether	3.92	45	398013	10.57	ppb	99
33) 1,1-DCA	3.71	63	279601	10.75	ppb	100
34) Vinyl Acetate	3.86	43	114693	9.20	ppb	100
35) Ethyl tert Butyl Ether	4.49	59	366723	10.62	ppb	100
36) MEK (2-Butanone)	4.67	43	262379	49.53	ppb	100
37) Cis-1,2-DCE	4.60	61	246510	10.35	ppb	100
38) 2,2-Dichloropropane	4.59	77	227889	10.59	ppb	100
41) Chloroform	5.09	83	309936	10.70	ppb	100
42) Bromochloromethane	4.93	49	113489	10.69	ppb	100
44) 1,1,1-TCA	5.29	97	281821	10.57	ppb	100
45) Cyclohexane	5.36	56	221224	10.03	ppb	100
46) 1,1-Dichloropropene	5.53	75	207546	10.51	ppb	100
47) 2,2,4-Trimethylpentane	5.95	57	427514	9.90	ppb	100
49) Carbon Tetrachloride	5.52	117	247631	10.56	ppb	100
50) Tert Amyl Methyl Ether	6.01	73	335933	10.41	ppb	100
52) 1,2-DCA	5.80	62	199683	10.39	ppb	100
53) Benzene	5.78	78	645239	10.41	ppb	100
54) TCE	6.61	130	215997	10.02	ppb	100
56) 1,2-Dichloropropane	6.86	63	145288	10.77	ppb	100
57) Bromodichloromethane	7.20	83	175253	10.69	ppb	100
58) Methyl Cyclohexane	6.83	83	253329	10.00	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
59)	Dibromomethane	6.99	174	153666	10.66 ppb	100
60)	MIBK (methyl isobutyl ket	7.94	43	463362	50.15 ppb	100
61)	1-Bromo-2-chloroethane	7.53	144	30133	9.83 ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	206482	10.47 ppb	100
64)	Toluene	8.11	91	695620	10.38 ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	173878	9.30 ppb	100
66)	1,1,2-TCA	8.56	97	133142	10.47 ppb	100
67)	2-Hexanone	8.88	43	187008	47.24 ppb	100
70)	1,2-EDB	9.09	107	142101	11.01 ppb	100
71)	Tetrachloroethene	8.71	166	276097	10.27 ppb	100
72)	1-Chlorohexane	9.67	91	218100	10.40 ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	160706	10.40 ppb	100
74)	m&p-Xylene	9.93	91	1152497	21.49 ppb	100
75)	o-Xylene	10.35	91	573719	10.71 ppb	100
76)	Styrene	10.37	104	463875	9.69 ppb	100
78)	1,3-Dichloropropane	8.74	76	206374	10.50 ppb	100
79)	Dibromochloromethane	8.98	129	139654	9.13 ppb	100
80)	Chlorobenzene	9.65	112	492038	10.24 ppb	100
81)	Ethylbenzene	9.79	91	758435	10.64 ppb	100
82)	Bromoform	10.54	173	107625	8.78 ppb	100
84)	Isopropylbenzene	10.76	105	802990	10.24 ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	145533	9.80 ppb	100
86)	1,2,3-Trichloropropane	11.12	110	57107	9.59 ppb	100
87)	t-1,4-Dichloro-2-Butene	11.14	53	22934	8.31 ppb	100
88)	Bromobenzene	11.06	77	244492	9.86 ppb	100
89)	n-Propylbenzene	11.21	91	874499	9.62 ppb	100
90)	4-Ethyltoluene	11.34	105	774025	10.07 ppb	100
91)	2-Chlorotoluene	11.41	91	587362	9.59 ppb	100
92)	1,3,5-Trimethylbenzene	11.41	105	649801	9.65 ppb	100
93)	4-Chlorotoluene	11.41	91	587362	9.59 ppb	100
94)	Tert-Butylbenzene	11.76	119	623925	10.07 ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	649191	10.24 ppb	100
96)	Sec-Butylbenzene	12.00	105	862906	10.09 ppb	100
97)	p-Isopropyltoluene	11.76	119	623925	10.07 ppb	100
98)	Benzyl Chloride	12.35	91	220322	8.12 ppb	100
99)	1,3-DCB	12.10	146	475041	10.08 ppb	100
100)	1,4-DCB	12.20	146	477849	9.92 ppb	100
101)	n-Butylbenzene	12.61	91	612725	9.27 ppb	100
102)	1,2-DCB	12.60	146	440645	10.10 ppb	100
103)	Hexachloroethane	12.89	201	120536	8.37 ppb	100
104)	1,2-Dibromo-3-chloropropan	13.44	157	40342	8.89 ppb	100
105)	1,2,4-Trichlorobenzene	13.69	180	389459	10.00 ppb	100
106)	Hexachlorobutadiene	14.57	225	196053	9.97 ppb	100
107)	Naphthalene	14.62	128	576261	9.23 ppb	100
108)	1,2,3-Trichlorobenzene	14.89	180	275293	9.83 ppb	100

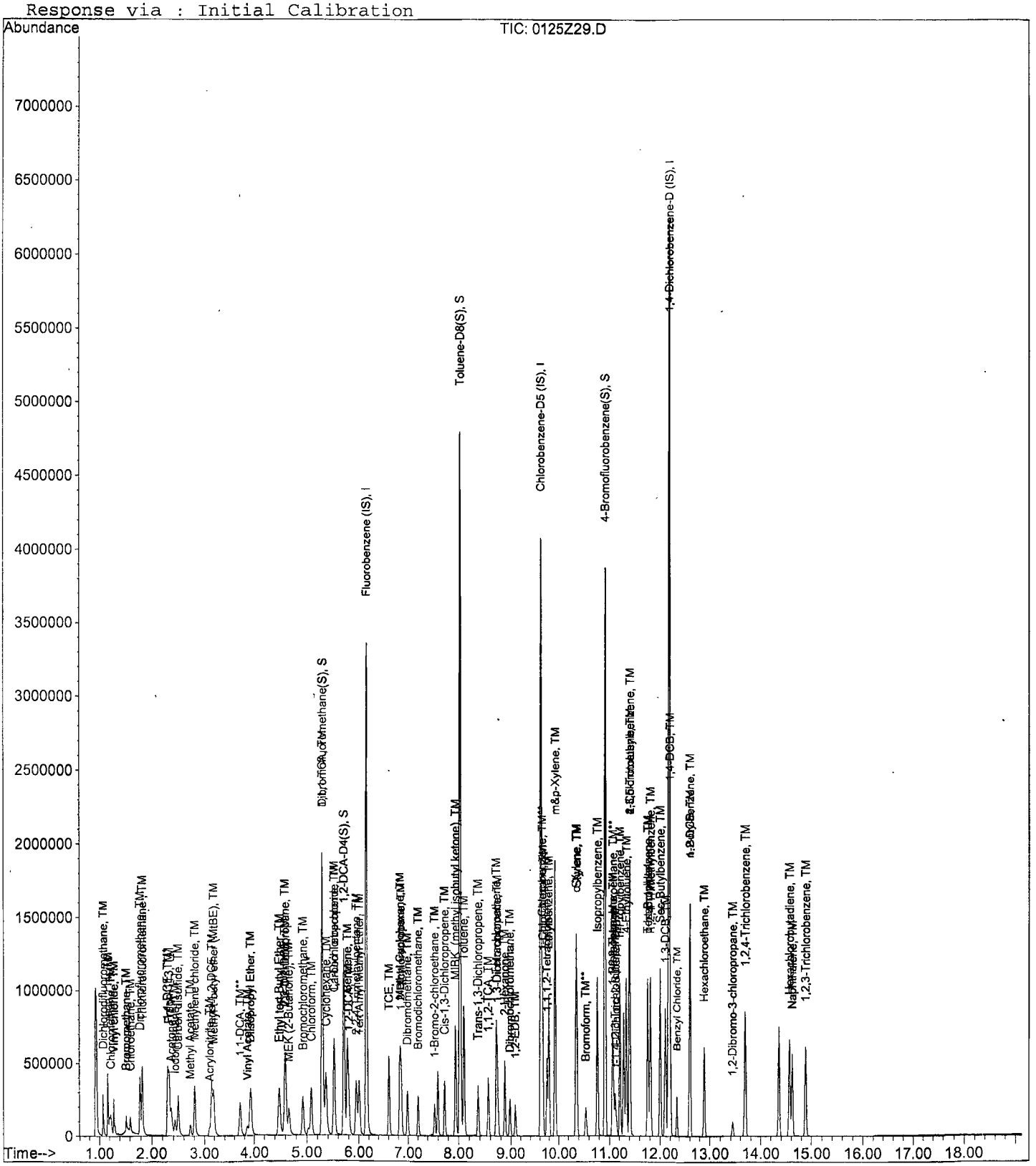
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	2246563	56.58	ppb		0.00
Spiked Amount 25.000			Recovery = 226.332%				
48) 1,2-DCA-D4(S)	5.71	65	2038786	55.19	ppb		0.00
Spiked Amount 25.000			Recovery = 220.772%				
69) Toluene-D8(S)	8.03	98	7511750	57.76	ppb		0.00
Spiked Amount 25.000			Recovery = 231.032%				
77) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07	ppb		0.00
Spiked Amount 25.000			Recovery = 200.300%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	403319	21.64	ppb		100
4) Freon 114	1.16	85	216564	19.61	ppb		91
5) Chloromethane	1.23	50	145979	19.74	ppb		100
6) Vinyl chloride	1.28	62	353729	20.68	ppb		98
9) Bromomethane	1.53	94	90475	21.61	ppb		89
10) Chloroethane	1.60	64	82768	20.79	ppb		99
11) Dichlorofluoromethane	1.78	67	636786	19.59	ppb		100
12) Trichlorofluoromethane	1.82	101	667147	21.79	ppb		100
17) Acetone	2.36	43	249467	54.16	ppb		97
18) Freon-113	2.32	101	170880	19.80	ppb		98
19) 1,1-DCE	2.29	61	443423	20.48	ppb		98
23) Methyl Acetate	2.73	43	199882	18.13	ppb		98
24) Iodomethane	2.43	142	321433	16.36	ppb		98
25) Acrylonitrile	3.11	52	92069	19.39	ppb		94
26) Methylene chloride	2.81	49	189760	21.71	ppb		98
27) Carbon disulfide	2.49	76	423936	19.84	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	793461	21.06	ppb		97
29) Trans-1,2-DCE	3.14	61	437329	20.66	ppb		96
31) Diisopropyl Ether	3.92	45	832520	21.23	ppb		97
33) 1,1-DCA	3.71	63	552522	20.39	ppb		99
34) Vinyl Acetate	3.86	43	270340	20.82	ppb	#	94
35) Ethyl tert Butyl Ether	4.49	59	787540	21.90	ppb		97
36) MEK (2-Butanone)	4.67	43	340311	61.66	ppb		97
37) Cis-1,2-DCE	4.60	61	491718	19.82	ppb		98
38) 2,2-Dichloropropane	4.59	77	470434	20.98	ppb		96
41) Chloroform	5.09	83	619520	20.52	ppb		99
42) Bromochloromethane	4.93	49	222768	20.14	ppb		97
44) 1,1,1-TCA	5.30	97	590280	21.25	ppb		99
45) Cyclohexane	5.36	56	472969	20.59	ppb		98
46) 1,1-Dichloropropene	5.53	75	426675	20.74	ppb		96
47) 2,2,4-Trimethylpentane	5.95	57	955162	21.23	ppb		99
49) Carbon Tetrachloride	5.52	117	526007	21.52	ppb		96
50) Tert Amyl Methyl Ether	6.01	73	737920	21.94	ppb		99
52) 1,2-DCA	5.81	62	392634	19.60	ppb		98
53) Benzene	5.78	78	1311861	20.32	ppb		98
54) TCE	6.61	130	452077	20.13	ppb		95
56) 1,2-Dichloropropane	6.86	63	291674	20.76	ppb		99
57) Bromodichloromethane	7.20	83	378829	22.19	ppb		96
58) Methyl Cyclohexane	6.84	83	570742	21.62	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	313910	20.91	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	615187	63.91	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	63294	19.82	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	446949	21.76	ppb		97
64)	Toluene	8.11	91	1448580	20.74	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	382640	18.76	ppb		98
66)	1,1,2-TCA	8.56	97	277693	20.96	ppb		98
67)	2-Hexanone	8.88	43	243904	58.22	ppb		99
70)	1,2-EDB	9.09	107	296985	22.61	ppb		99
71)	Tetrachloroethene	8.72	166	560903	20.51	ppb		97
72)	1-Chlorohexane	9.67	91	465339	21.82	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	345743	21.99	ppb		99
74)	m&p-Xylene	9.92	91	2367189	43.40	ppb		99
75)	o-Xylene	10.35	91	1192190	21.88	ppb		100
76)	Styrene	10.37	104	986898	20.06	ppb		99
78)	1,3-Dichloropropane	8.74	76	429822	21.49	ppb		99
79)	Dibromochloromethane	8.99	129	305498	18.57	ppb		96
80)	Chlorobenzene	9.65	112	1008069	20.62	ppb		98
81)	Ethylbenzene	9.79	91	1556685	21.46	ppb		97
82)	Bromoform	10.54	173	241387	17.46	ppb		94
84)	Isopropylbenzene	10.76	105	1667013	21.12	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	310985	20.81	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	121580	20.29	ppb		96
87)	t-1,4-Dichloro-2-Butene	11.15	53	56998	18.22	ppb		85
88)	Bromobenzene	11.06	77	503742	20.18	ppb		99
89)	n-Propylbenzene	11.21	91	1834559	20.40	ppb		99
90)	4-Ethyltoluene	11.34	105	1633935	21.11	ppb		97
91)	2-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	1352312	20.16	ppb		96
93)	4-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
94)	Tert-Butylbenzene	11.76	119	1307807	20.96	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	1370905	21.49	ppb		98
96)	Sec-Butylbenzene	12.00	105	1837210	21.35	ppb		98
97)	p-Isopropyltoluene	11.76	119	1307807	20.96	ppb		100
98)	Benzyl Chloride	12.35	91	541868	17.47	ppb		98
99)	1,3-DCB	12.10	146	968244	20.40	ppb		99
100)	1,4-DCB	12.20	146	976761	20.15	ppb		99
101)	n-Butylbenzene	12.61	91	1339630	19.99	ppb		98
102)	1,2-DCB	12.60	146	891700	20.29	ppb		99
103)	Hexachloroethane	12.89	201	286470	17.42	ppb		90
104)	1,2-Dibromo-3-chloropropan	13.44	157	89321	18.24	ppb	#	82
105)	1,2,4-Trichlorobenzene	13.69	180	834868	21.28	ppb		97
106)	Hexachlorobutadiene	14.57	225	428476	21.64	ppb		98
107)	Naphthalene	14.62	128	1287449	20.96	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	596215	21.15	ppb		100

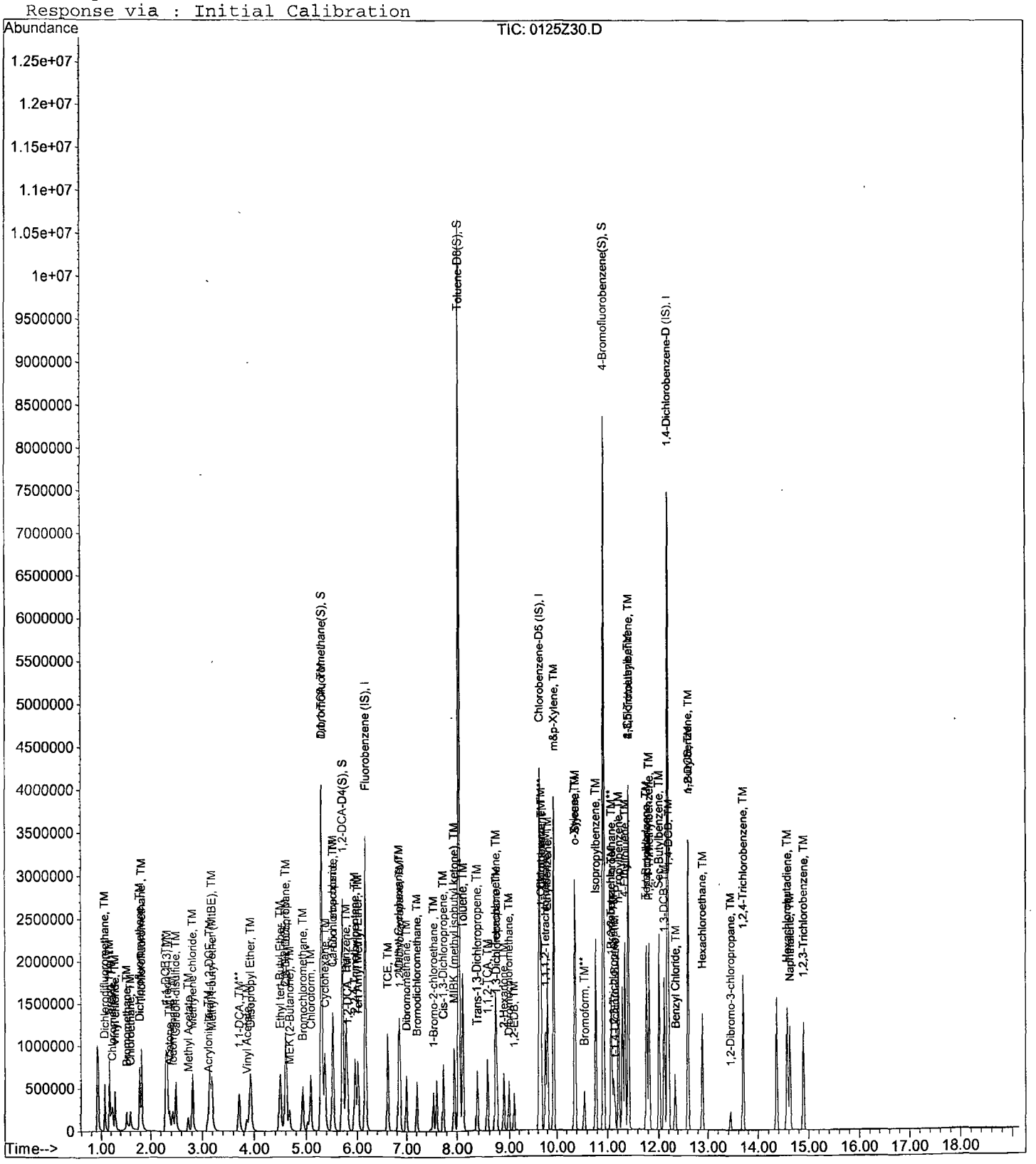
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery =	220.264%		
48) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery =	212.784%		
69) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery =	223.732%		
77) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery =	197.396%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	850845	43.18	ppb	100
4) Freon 114	1.16	85	471713	40.41	ppb	81
5) Chloromethane	1.22	50	310138	40.69	ppb	99
6) Vinyl chloride	1.28	62	723959	40.04	ppb	99
9) Bromomethane	1.53	94	180281	42.36	ppb	92
10) Chloroethane	1.60	64	160723	39.19	ppb	96
11) Dichlorofluoromethane	1.78	67	1219590	35.49	ppb	100
12) Trichlorofluoromethane	1.82	101	1347327	41.63	ppb	99
17) Acetone	2.36	43	342775	70.40	ppb	97
18) Freon-113	2.32	101	342720	37.57	ppb	93
19) 1,1-DCE	2.29	61	935892	40.90	ppb	98
23) Methyl Acetate	2.73	43	413425	35.47	ppb	96
24) Iodomethane	2.42	142	803511	36.15	ppb	97
25) Acrylonitrile	3.10	52	190471	37.95	ppb	97
26) Methylene chloride	2.81	49	395456	44.78	ppb	96
27) Carbon disulfide	2.48	76	899456	39.82	ppb	99
28) Methyl t-butyl ether (MtBE	3.18	73	1702458	42.74	ppb	98
29) Trans-1,2-DCE	3.14	61	903425	40.37	ppb	99
31) Diisopropyl Ether	3.93	45	1766714	42.61	ppb	99
33) 1,1-DCA	3.71	63	1139247	39.78	ppb	98
34) Vinyl Acetate	3.86	43	721227	52.54	ppb	97
35) Ethyl tert Butyl Ether	4.49	59	1713648	45.08	ppb	100
36) MEK (2-Butanone)	4.67	43	487302	83.53	ppb	97
37) Cis-1,2-DCE	4.60	61	1014813	38.71	ppb	95
38) 2,2-Dichloropropane	4.59	77	1003777	42.34	ppb	97
41) Chloroform	5.09	83	1275162	39.97	ppb	100
42) Bromochloromethane	4.93	49	453439	38.79	ppb	98
44) 1,1,1-TCA	5.30	97	1235018	42.07	ppb	97
45) Cyclohexane	5.36	56	995524	40.99	ppb	97
46) 1,1-Dichloropropene	5.53	75	906680	41.69	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	2048913	43.08	ppb	99
49) Carbon Tetrachloride	5.52	117	1127652	43.66	ppb	95
50) Tert Amyl Methyl Ether	6.01	73	1603763	45.12	ppb	96
52) 1,2-DCA	5.81	62	819042	38.68	ppb	99
53) Benzene	5.78	78	2701347	39.59	ppb	99
54) TCE	6.61	130	938486	39.53	ppb	97
56) 1,2-Dichloropropane	6.86	63	616004	41.49	ppb	97
57) Bromodichloromethane	7.20	83	831516	46.07	ppb	99
58) Methyl Cyclohexane	6.84	83	1216748	43.61	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	660236	41.60	ppb		95
60)	MIBK (methyl isobutyl ket	7.94	43	909331	89.37	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	135518	40.16	ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	975719	44.95	ppb		96
64)	Toluene	8.11	91	3043083	41.23	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	868044	39.37	ppb		97
66)	1,1,2-TCA	8.56	97	598299	42.72	ppb		95
67)	2-Hexanone	8.88	43	372224	82.44	ppb		99
70)	1,2-EDB	9.09	107	632935	44.90	ppb		99
71)	Tetrachloroethene	8.71	166	1163392	39.64	ppb		100
72)	1-Chlorohexane	9.67	91	979964	42.80	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	758668	44.96	ppb		97
74)	m&p-Xylene	9.93	91	4994604	85.31	ppb		97
75)	o-Xylene	10.35	91	2550600	43.60	ppb		97
76)	Styrene	10.37	104	2163300	40.77	ppb		96
78)	1,3-Dichloropropane	8.74	76	905531	42.18	ppb		99
79)	Dibromochloromethane	8.98	129	712541	39.28	ppb		94
80)	Chlorobenzene	9.65	112	2118380	40.36	ppb		97
81)	Ethylbenzene	9.79	91	3251491	41.77	ppb		97
82)	Bromoform	10.54	173	589640	37.73	ppb		96
84)	Isopropylbenzene	10.76	105	3577162	43.75	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	705505	45.58	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	260822	42.02	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	133478	39.23	ppb	#	80
88)	Bromobenzene	11.06	77	1088521	42.09	ppb		98
89)	n-Propylbenzene	11.22	91	3884703	42.06	ppb		99
90)	4-Ethyltoluene	11.34	105	3428735	42.76	ppb		98
91)	2-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	2886286	41.75	ppb		97
93)	4-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
94)	Tert-Butylbenzene	11.76	119	2785413	43.10	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	2928711	44.32	ppb		99
96)	Sec-Butylbenzene	12.00	105	3958318	44.40	ppb		99
97)	p-Isopropyltoluene	11.76	119	2785413	43.10	ppb		98
98)	Benzyl Chloride	12.35	91	1298244	38.25	ppb		99
99)	1,3-DCB	12.10	146	2039819	41.49	ppb		99
100)	1,4-DCB	12.20	146	2048086	40.79	ppb		98
101)	n-Butylbenzene	12.61	91	2888608	41.49	ppb		98
102)	1,2-DCB	12.60	146	1886399	41.45	ppb		99
103)	Hexachloroethane	12.89	201	677839	37.60	ppb	#	85
104)	1,2-Dibromo-3-chloropropan	13.44	157	205371	39.13	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	1730023	42.58	ppb		97
106)	Hexachlorobutadiene	14.57	225	883426	43.08	ppb		99
107)	Naphthalene	14.62	128	2698564	42.82	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	1221506	41.84	ppb		99

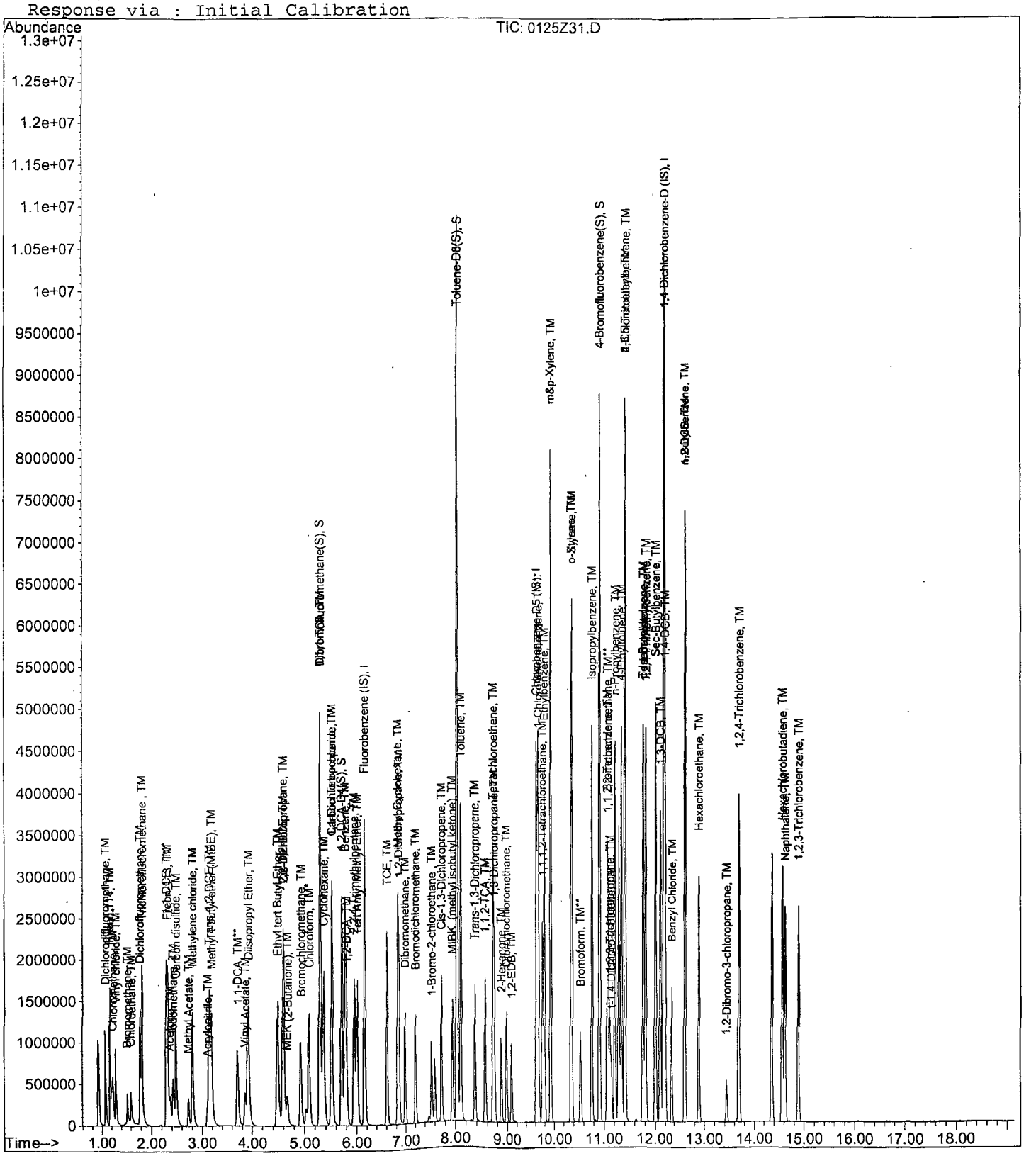
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery =	452.384%		
48) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery =	441.048%		
69) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery =	417.644%		
77) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery =	401.700%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	2142477	105.02	ppb	99
4) Freon 114	1.16	85	1130573	93.54	ppb	86
5) Chloromethane	1.22	50	776119	99.77	ppb	100
6) Vinyl chloride	1.28	62	1812047	96.79	ppb	97
9) Bromomethane	1.52	94	424790	98.76	ppb	93
10) Chloroethane	1.60	64	329613	78.79	ppb	99
11) Dichlorofluoromethane	1.77	67	1768543	49.71	ppb	100
12) Trichlorofluoromethane	1.80	101	2682800	80.07	ppb	99
17) Acetone	2.38	43	441385	87.56	ppb	96
18) Freon-113	2.31	101	858240	90.87	ppb	94
19) 1,1-DCE	2.28	61	2337639	98.67	ppb	99
23) Methyl Acetate	2.73	43	1104464	91.53	ppb	95
24) Iodomethane	2.42	142	2439219	102.40	ppb	95
25) Acrylonitrile	3.11	52	488871	94.07	ppb	96
26) Methylene chloride	2.80	49	872512	97.73	ppb	97
27) Carbon disulfide	2.47	76	2246656	96.07	ppb	100
28) Methyl t-butyl ether (MtBE	3.19	73	4339324	105.23	ppb	98
29) Trans-1,2-DCE	3.14	61	2220503	95.83	ppb	97
31) Diisopropyl Ether	3.93	45	4444765	103.54	ppb	99
33) 1,1-DCA	3.71	63	2847490	96.03	ppb	99
34) Vinyl Acetate	3.86	43	1372264	96.55	ppb	96
35) Ethyl tert Butyl Ether	4.49	59	4444937	112.93	ppb	99
36) MEK (2-Butanone)	4.68	43	638941	105.78	ppb	99
37) Cis-1,2-DCE	4.60	61	2528790	93.16	ppb	96
38) 2,2-Dichloropropane	4.59	77	2539577	103.47	ppb	100
41) Chloroform	5.09	83	3206108	97.05	ppb	99
42) Bromochloromethane	4.93	49	1127669	93.16	ppb	95
44) 1,1,1-TCA	5.30	97	3128191	102.92	ppb	98
45) Cyclohexane	5.36	56	2487897	98.94	ppb	100
46) 1,1-Dichloropropene	5.53	75	2242635	99.60	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	5144591	104.47	ppb	99
49) Carbon Tetrachloride	5.52	117	2914383	108.97	ppb	97
50) Tert Amyl Methyl Ether	6.01	73	4221488	114.71	ppb	94
52) 1,2-DCA	5.81	62	2034029	92.78	ppb	99
53) Benzene	5.78	78	6643693	94.04	ppb	100
54) TCE	6.61	130	2425073	98.65	ppb	96
56) 1,2-Dichloropropane	6.86	63	1553226	101.03	ppb	99
57) Bromodichloromethane	7.20	83	2249058	120.36	ppb	97
58) Methyl Cyclohexane	6.83	83	3046967	105.49	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
59)	Dibromomethane	6.99	174	1721933	104.80 ppb		96
60)	MIBK (methyl isobutyl ket	7.95	43	1227198	116.48 ppb		100
61)	1-Bromo-2-chloroethane	7.54	144	352361	100.84 ppb		95
63)	Cis-1,3-Dichloropropene	7.73	75	2596344	115.52 ppb		97
64)	Toluene	8.11	91	7571955	99.08 ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	2323946	100.55 ppb		97
66)	1,1,2-TCA	8.56	97	1574254	108.57 ppb		94
67)	2-Hexanone	8.88	43	474176	100.60 ppb		98
70)	1,2-EDB	9.09	107	1667762	110.13 ppb		99
71)	Tetrachloroethene	8.71	166	2962882	93.98 ppb		99
72)	1-Chlorohexane	9.67	91	2520576	102.48 ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	2028613	111.90 ppb		99
74)	m&p-Xylene	9.93	91	12398749	197.14 ppb		99
75)	o-Xylene	10.35	91	6584991	104.78 ppb		98
76)	Styrene	10.37	104	5699111	99.72 ppb		96
78)	1,3-Dichloropropane	8.74	76	2354438	102.10 ppb		99
79)	Dibromochloromethane	8.98	129	1989350	100.64 ppb		96
80)	Chlorobenzene	9.65	112	5454562	96.74 ppb		96
81)	Ethylbenzene	9.79	91	8285082	99.07 ppb		98
82)	Bromoform	10.54	173	1750422	101.50 ppb		97
84)	Isopropylbenzene	10.76	105	9290802	104.50 ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	1839648	109.31 ppb		100
86)	1,2,3-Trichloropropane	11.12	110	688681	102.04 ppb		97
87)	t-1,4-Dichloro-2-Butene	11.14	53	382334	100.80 ppb	#	80
88)	Bromobenzene	11.06	77	2897158	103.03 ppb		93
89)	n-Propylbenzene	11.21	91	9913611	99.15 ppb		99
90)	4-Ethyltoluene	11.34	105	8875825	101.80 ppb		99
91)	2-Chlorotoluene	11.41	91	6692118	99.21 ppb		95
92)	1,3,5-Trimethylbenzene	11.41	105	7444513	99.31 ppb		96
93)	4-Chlorotoluene	11.41	91	6692118	99.21 ppb		95
94)	Tert-Butylbenzene	11.76	119	7359947	104.72 ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	7745661	107.80 ppb		100
96)	Sec-Butylbenzene	12.00	105	10228163	105.52 ppb		98
97)	p-Isopropyltoluene	11.76	119	7359947	104.72 ppb		98
98)	Benzyl Chloride	12.35	91	3845812	101.36 ppb		99
99)	1,3-DCB	12.10	146	5368951	100.44 ppb		98
100)	1,4-DCB	12.20	146	5342198	97.85 ppb		98
101)	n-Butylbenzene	12.61	91	7543645	99.48 ppb		100
102)	1,2-DCB	12.59	146	4898650	98.99 ppb		99
103)	Hexachloroethane	12.89	201	2051749	101.60 ppb	#	79
104)	1,2-Dibromo-3-chloropropan	13.44	157	585335	100.79 ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	4404077	99.69 ppb		97
106)	Hexachlorobutadiene	14.57	225	2162031	96.97 ppb		98
107)	Naphthalene	14.62	128	6732995	98.78 ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	3060243	96.40 ppb		96

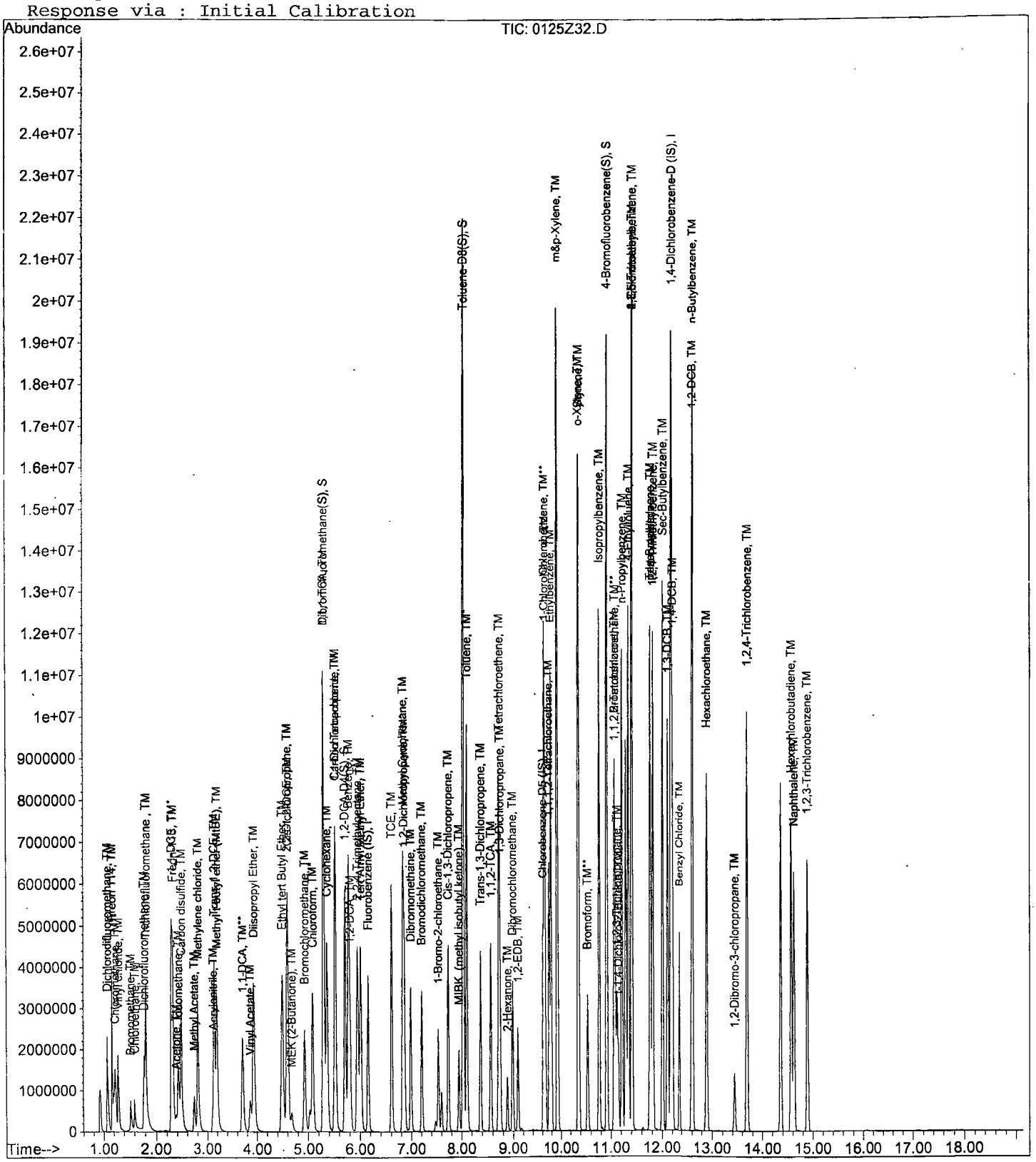
(#) = qualifier out of range (m) = manual integration

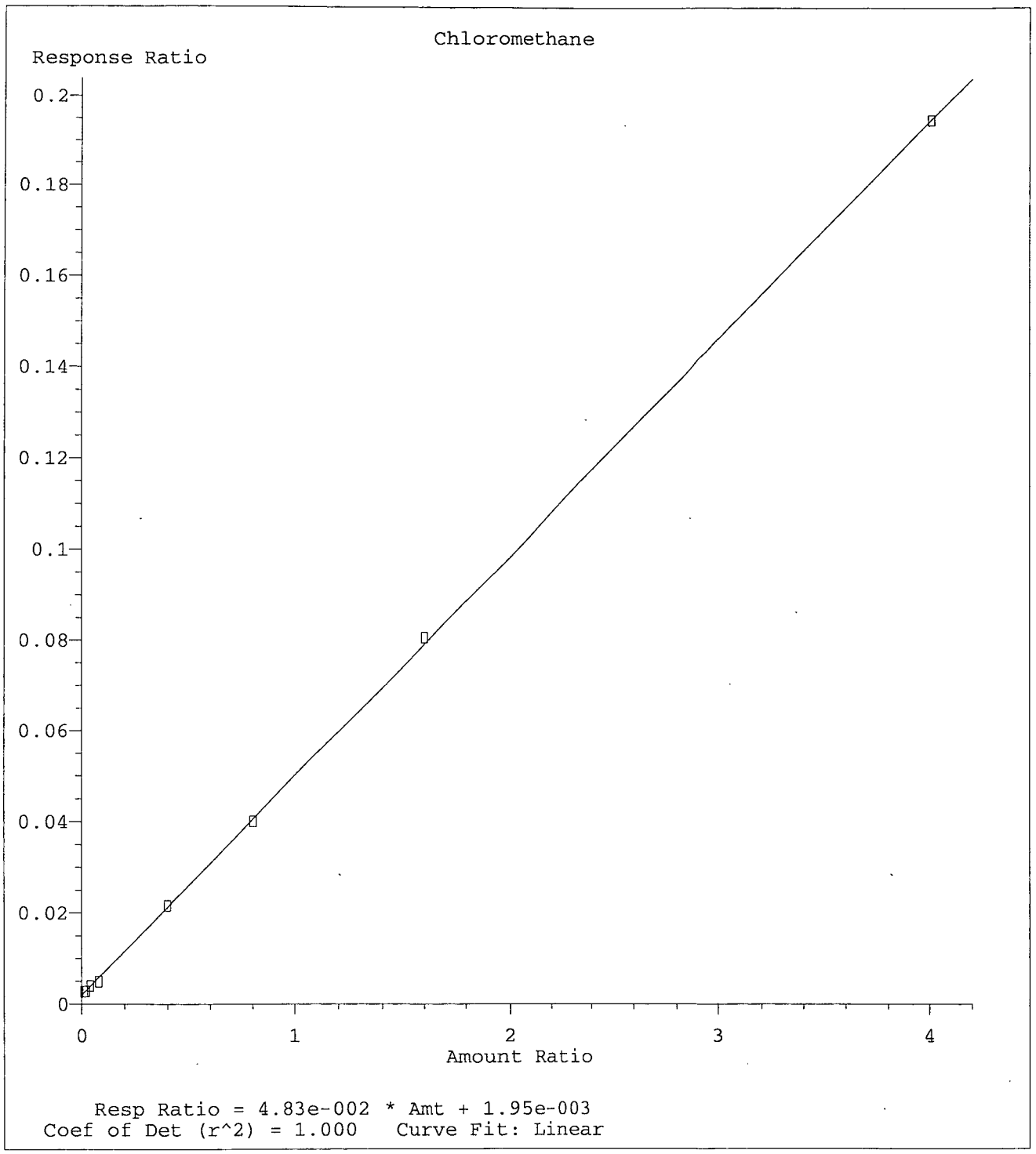
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

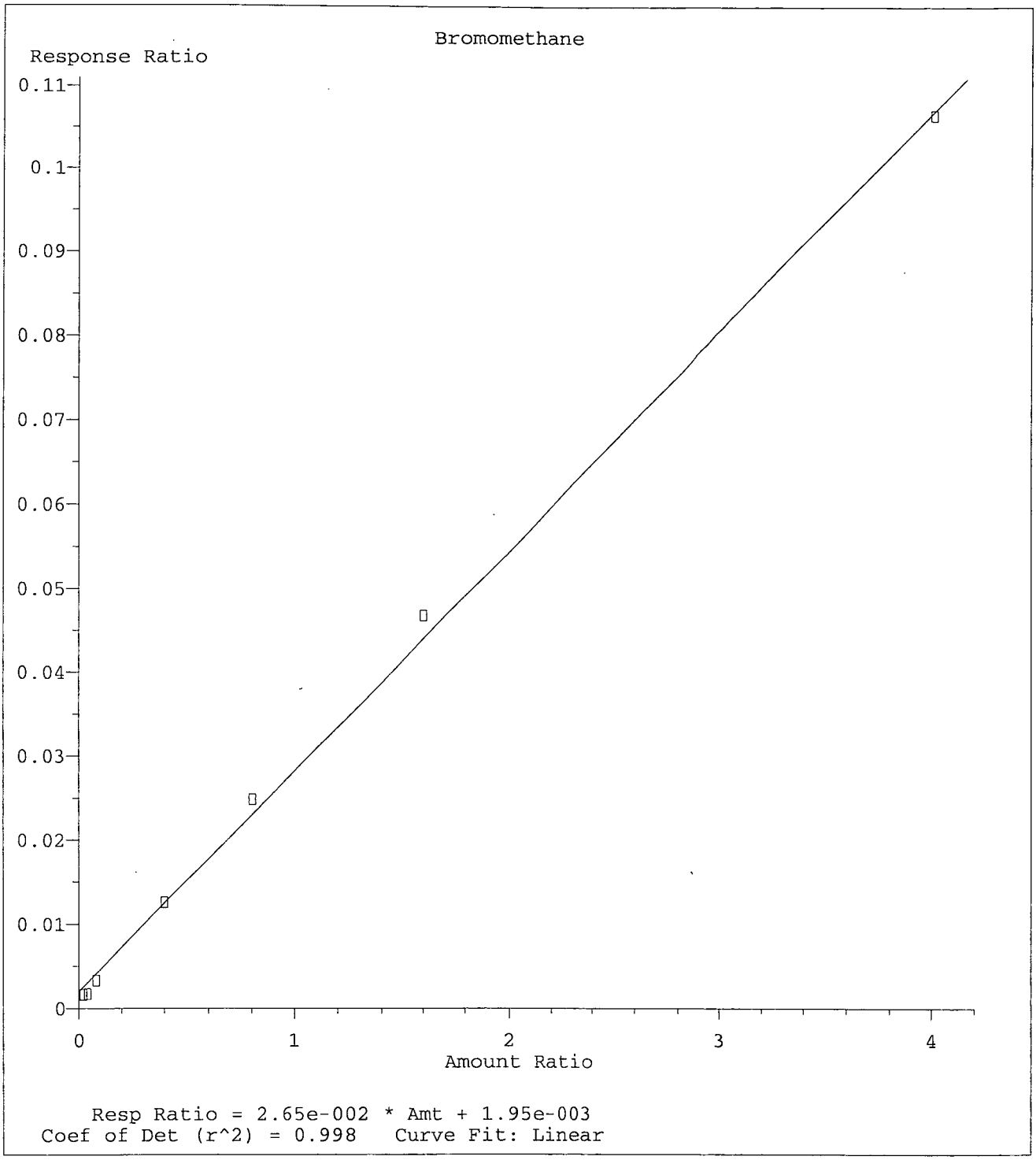
Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration

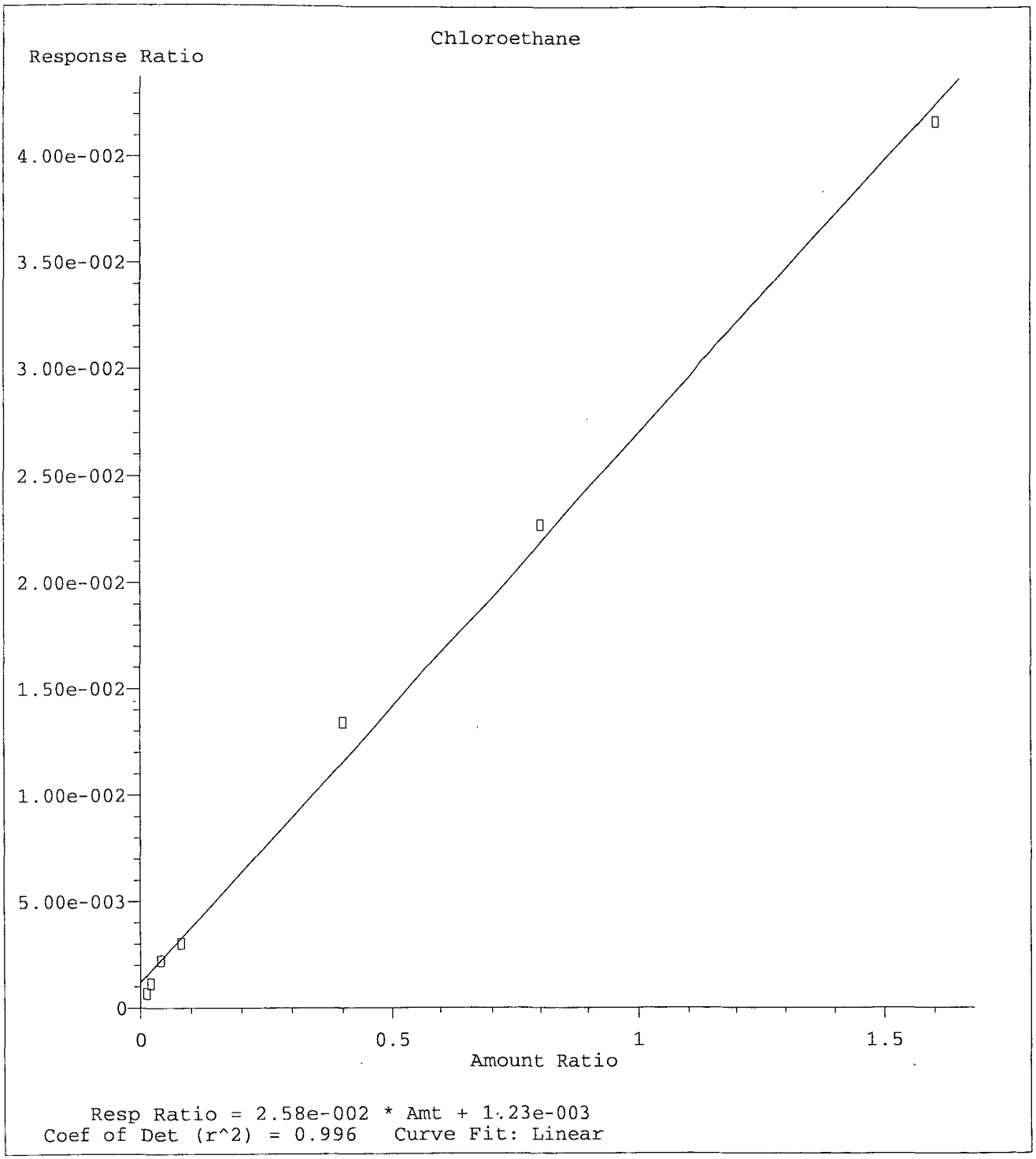




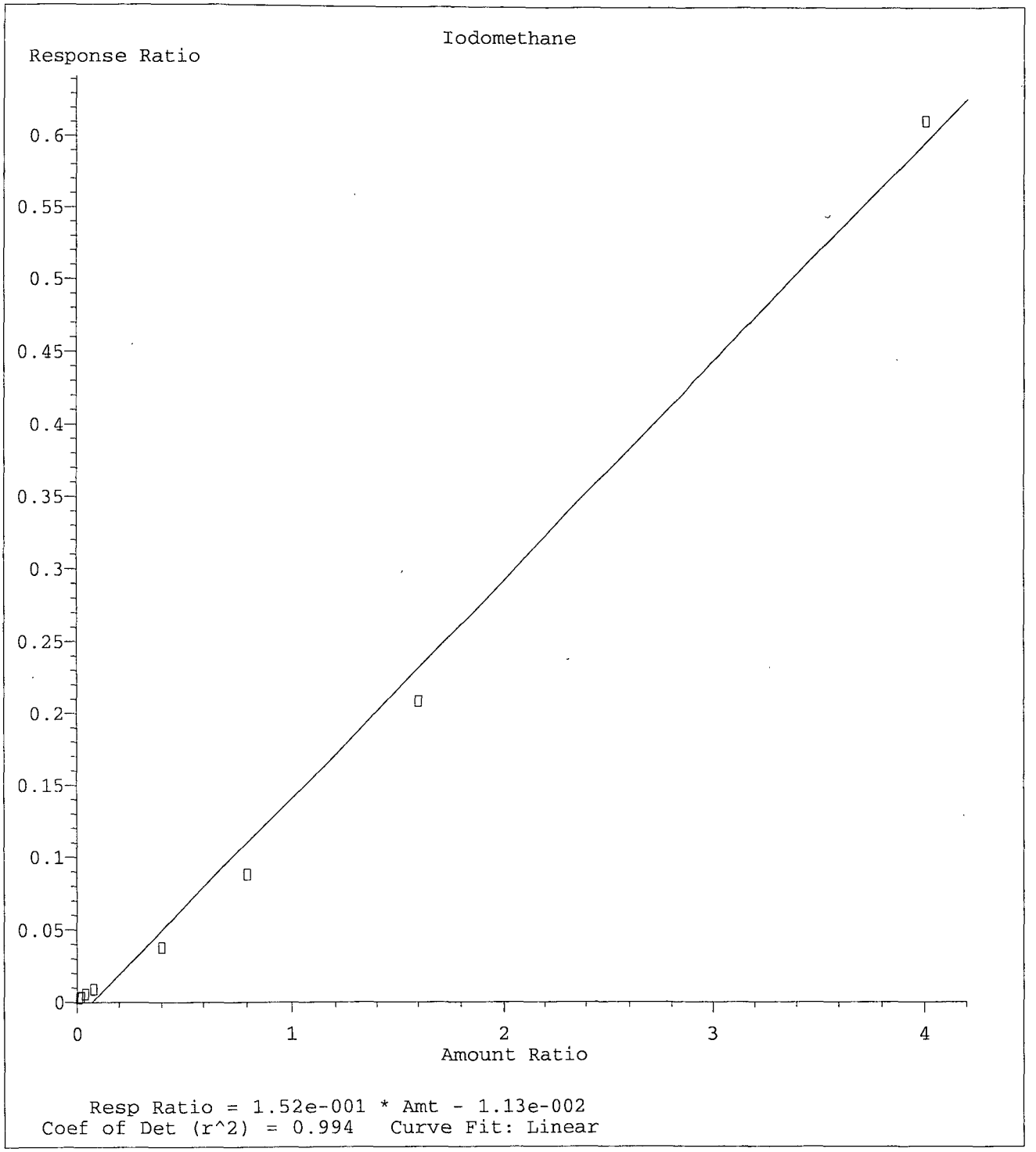
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



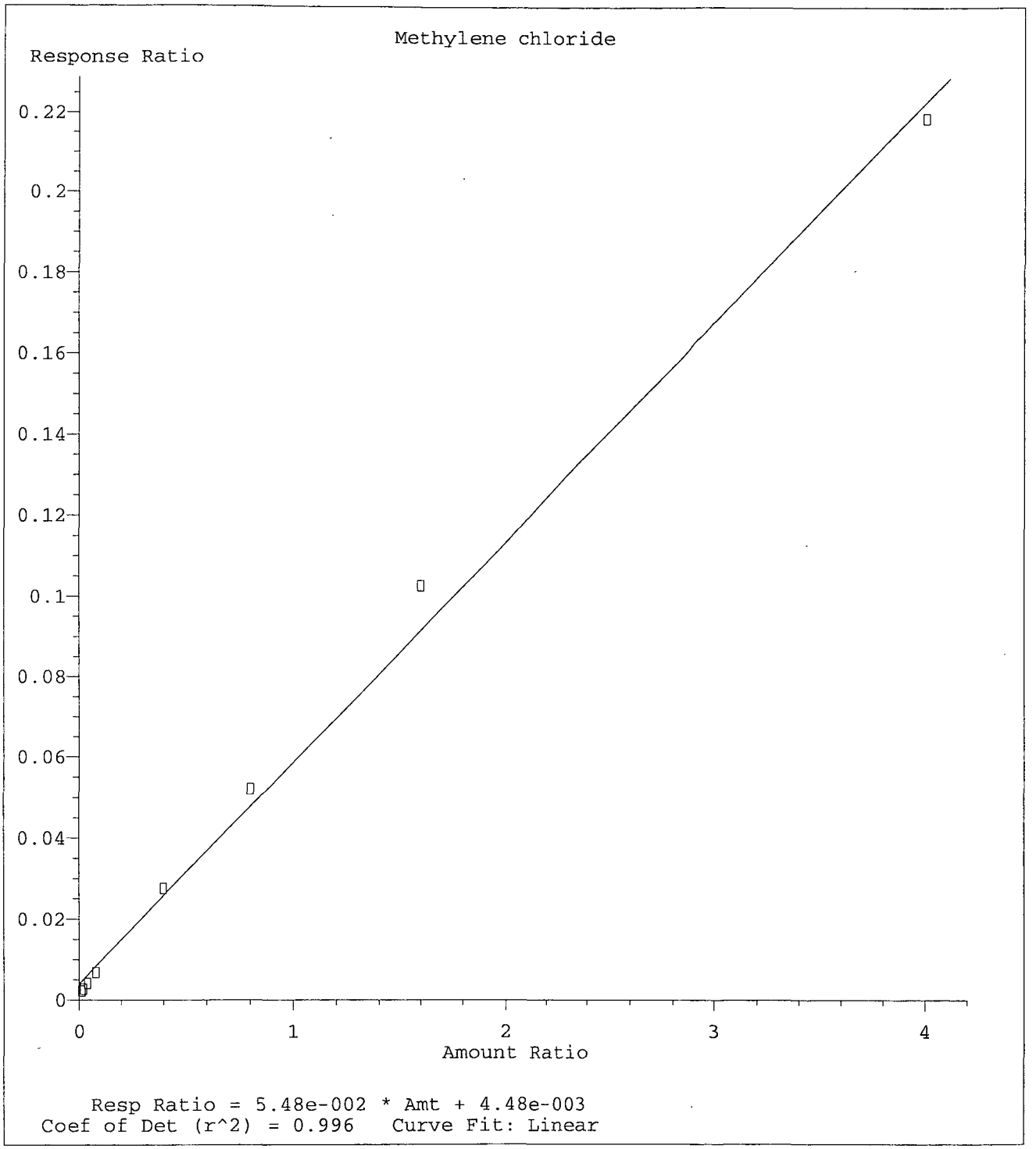
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



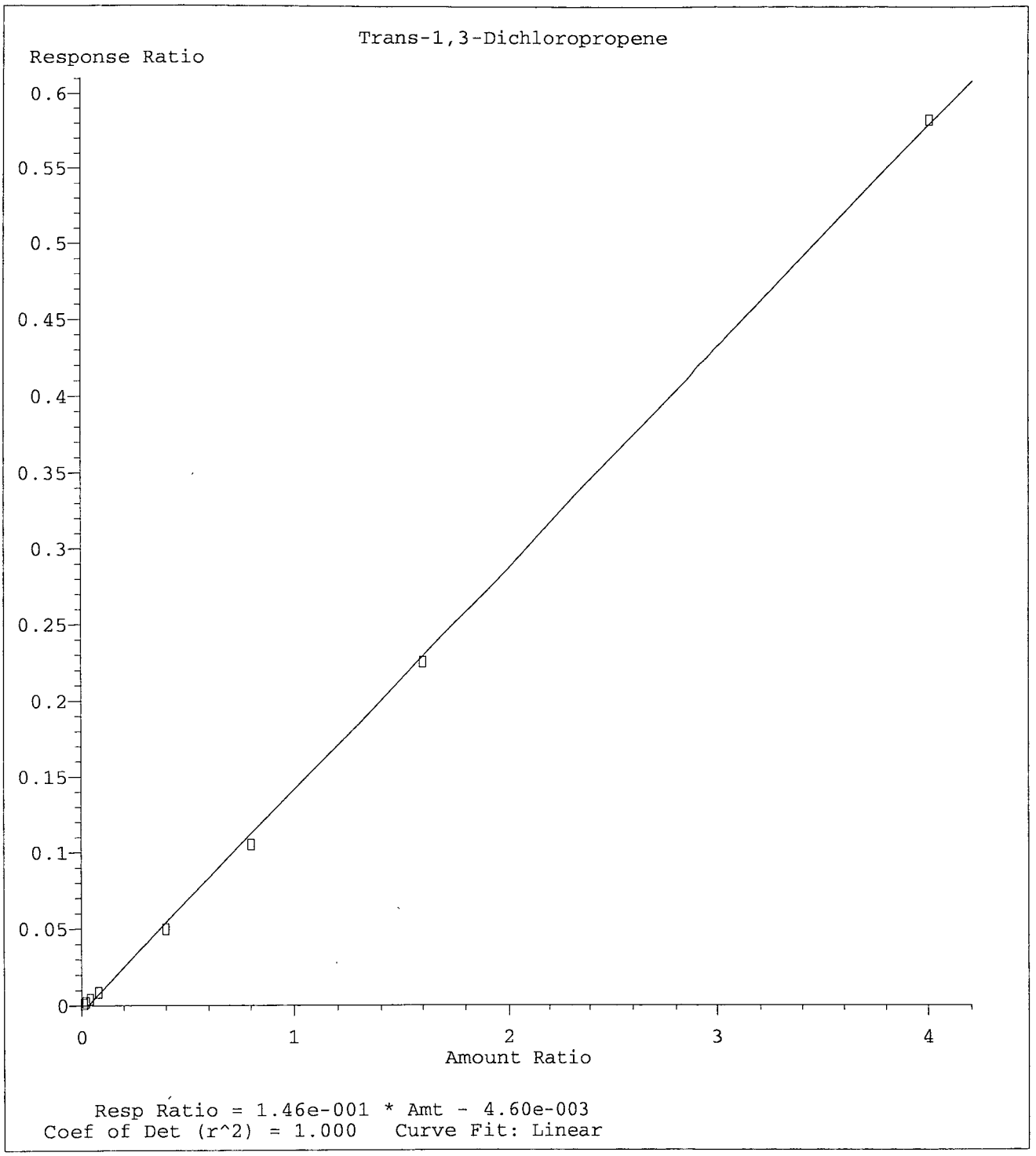
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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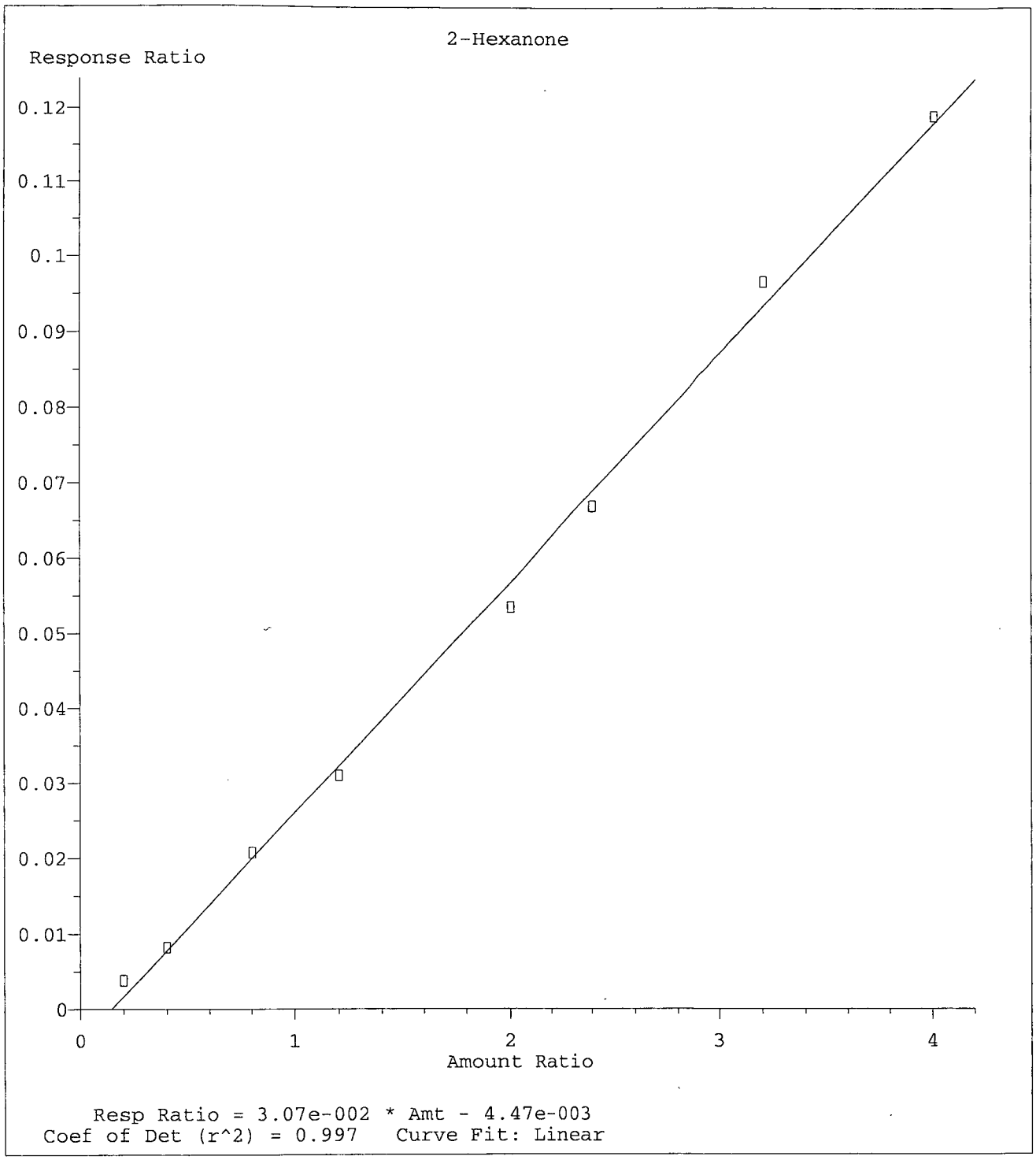
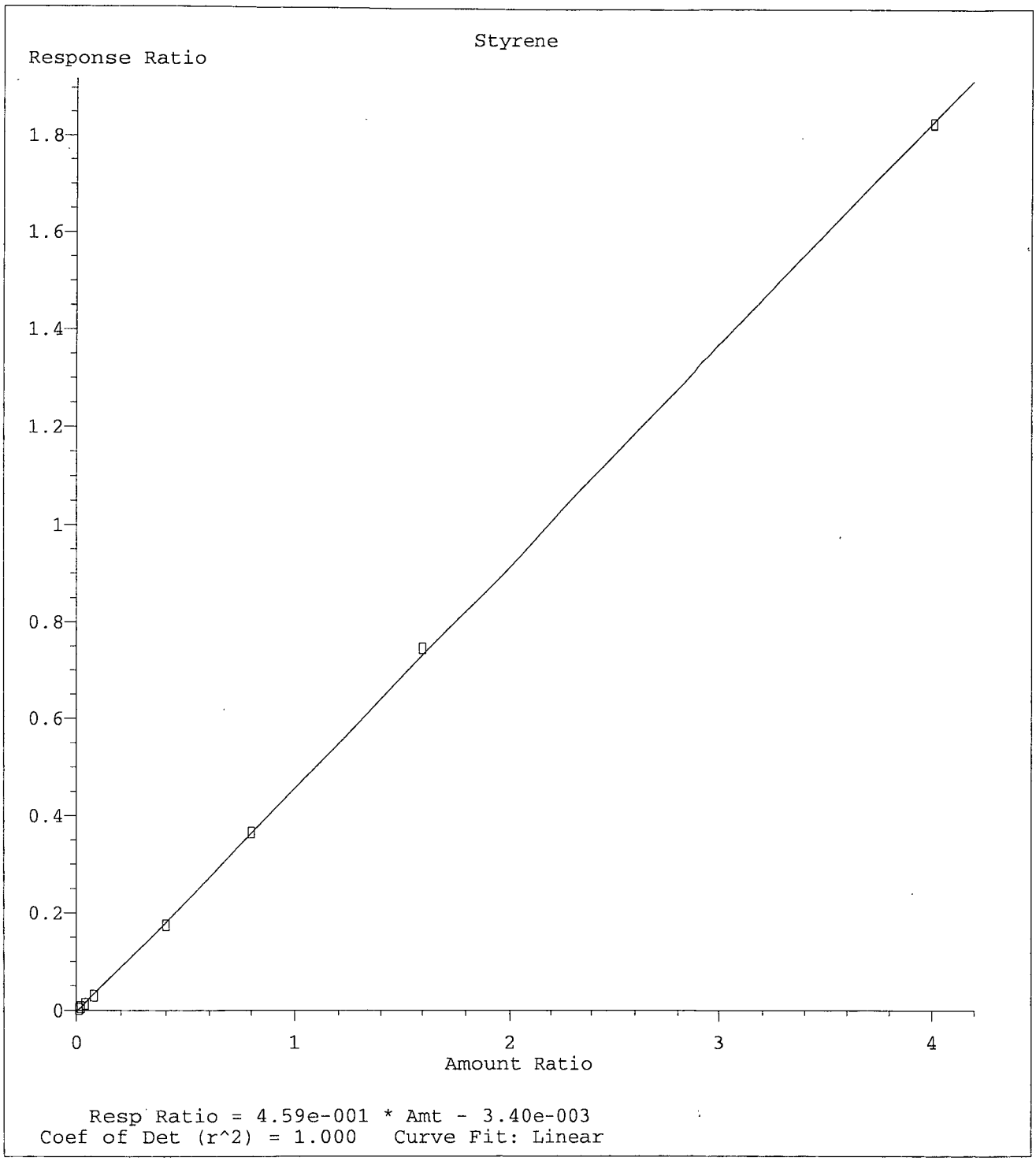
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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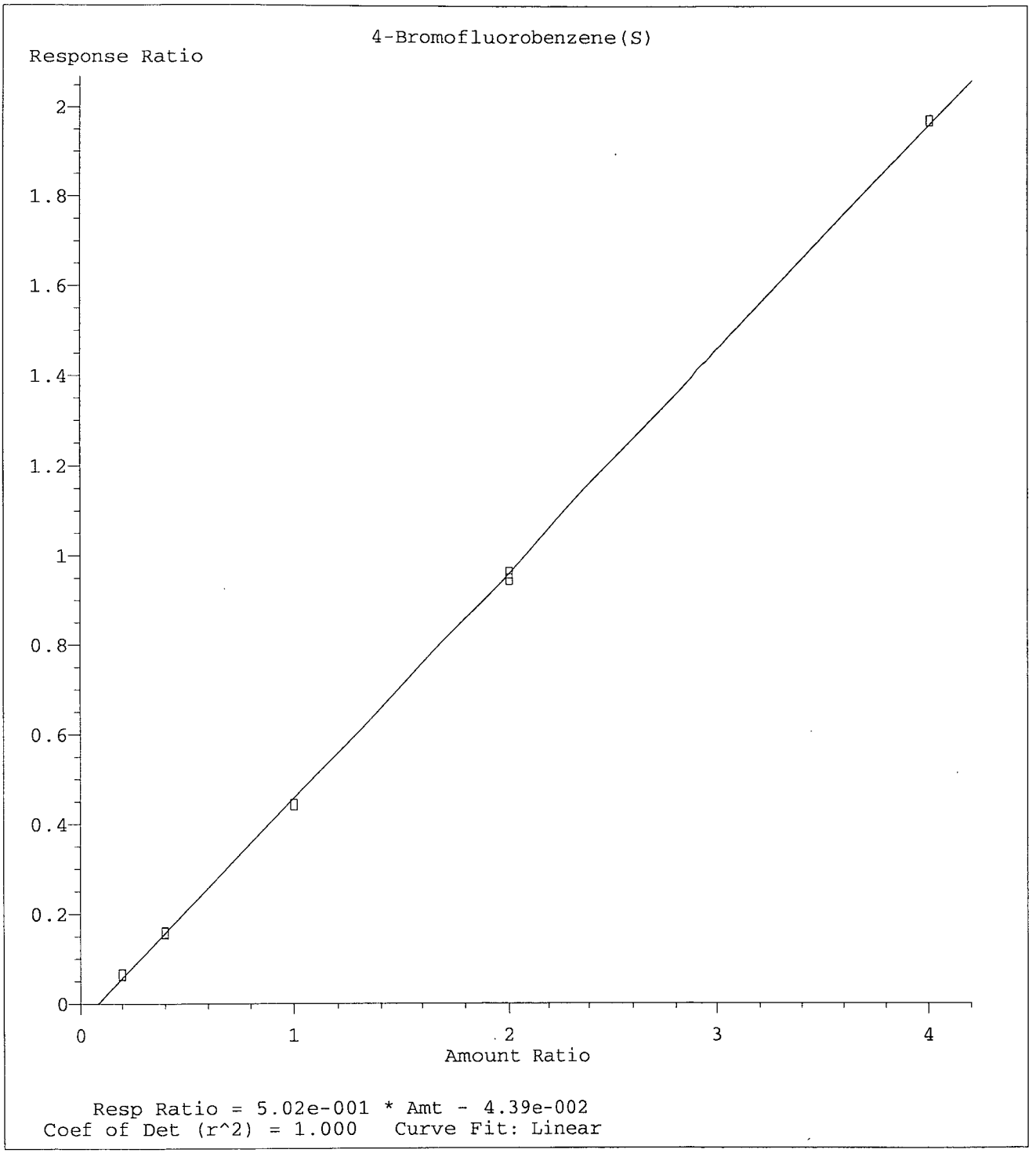
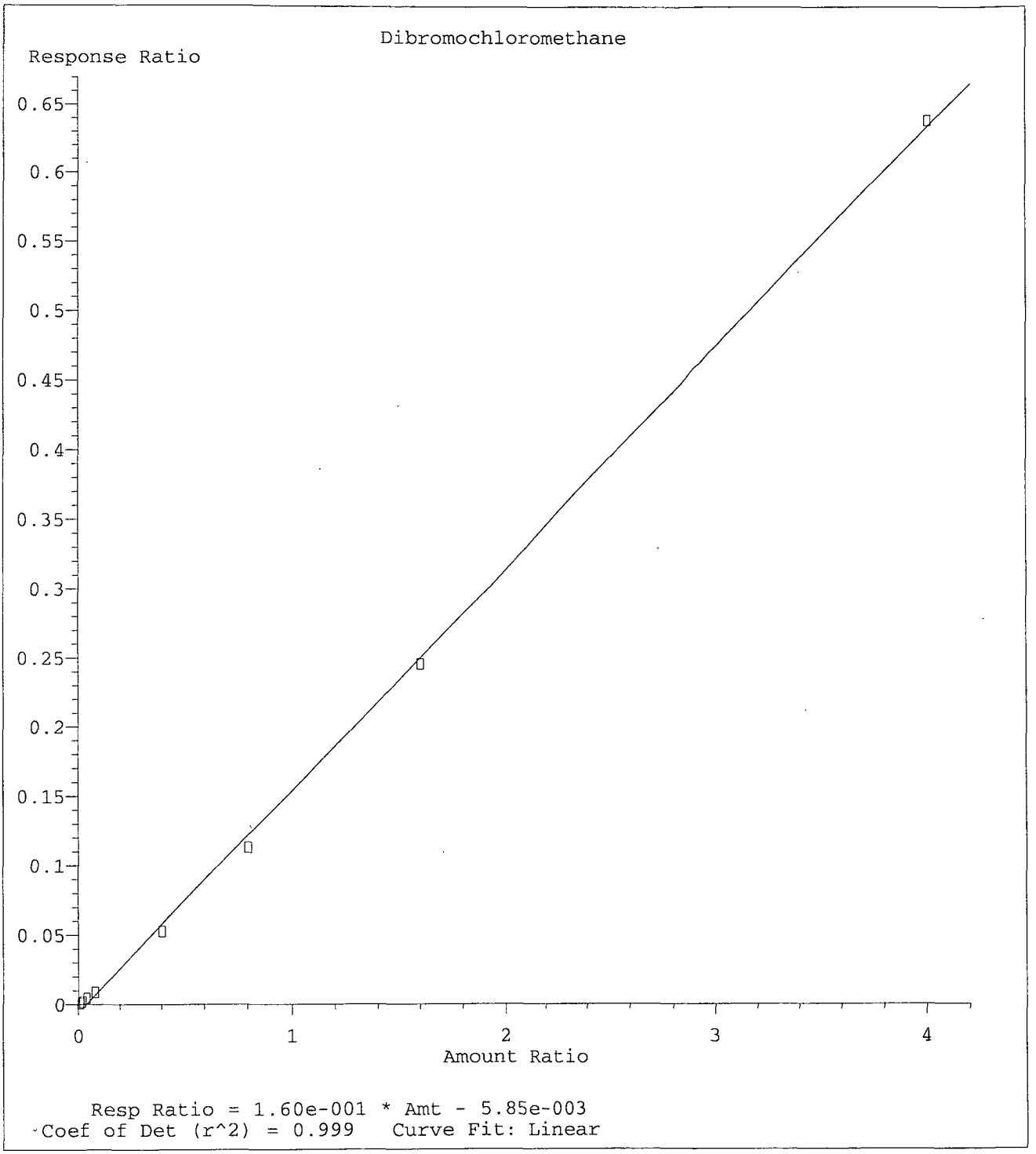
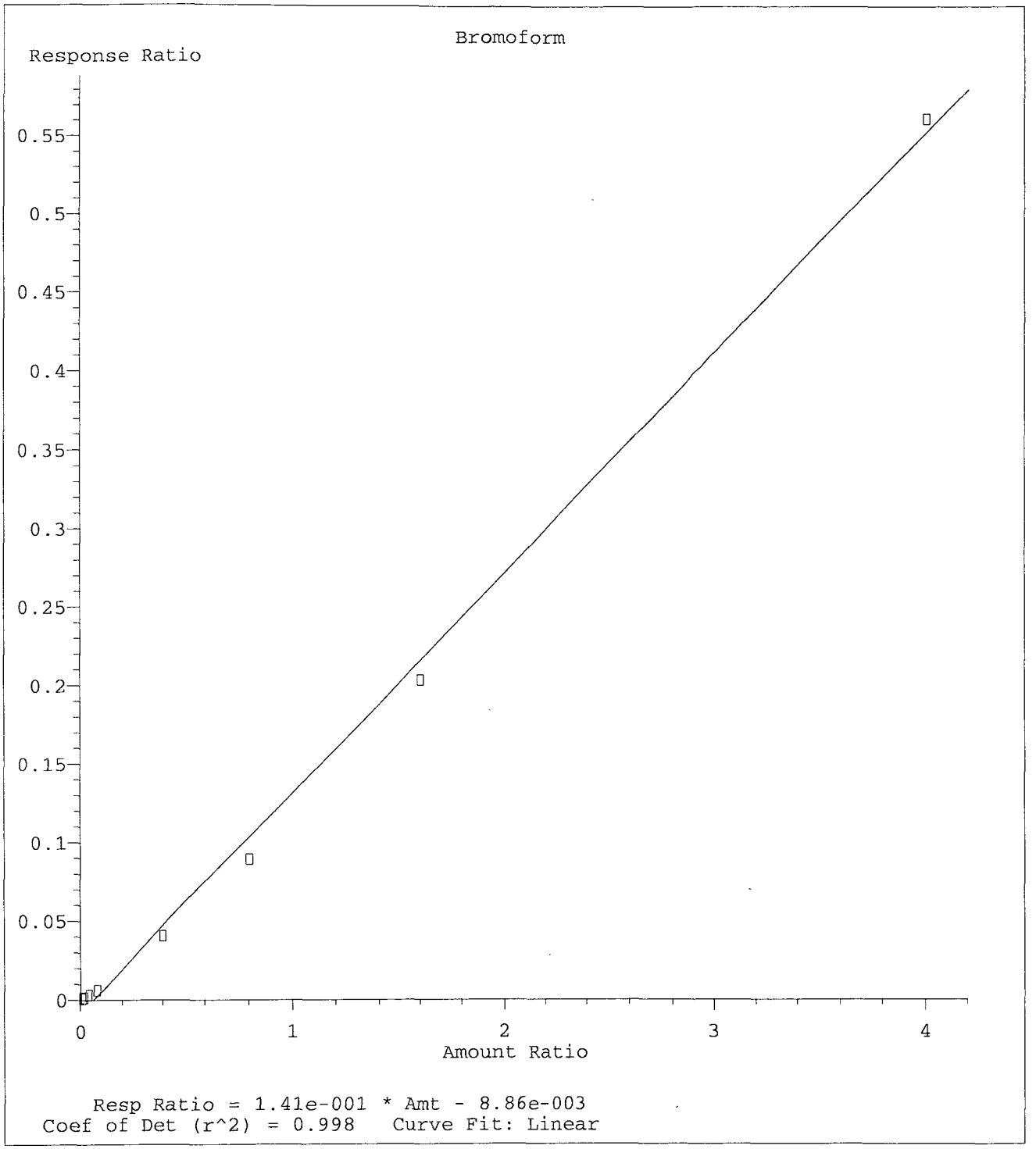
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



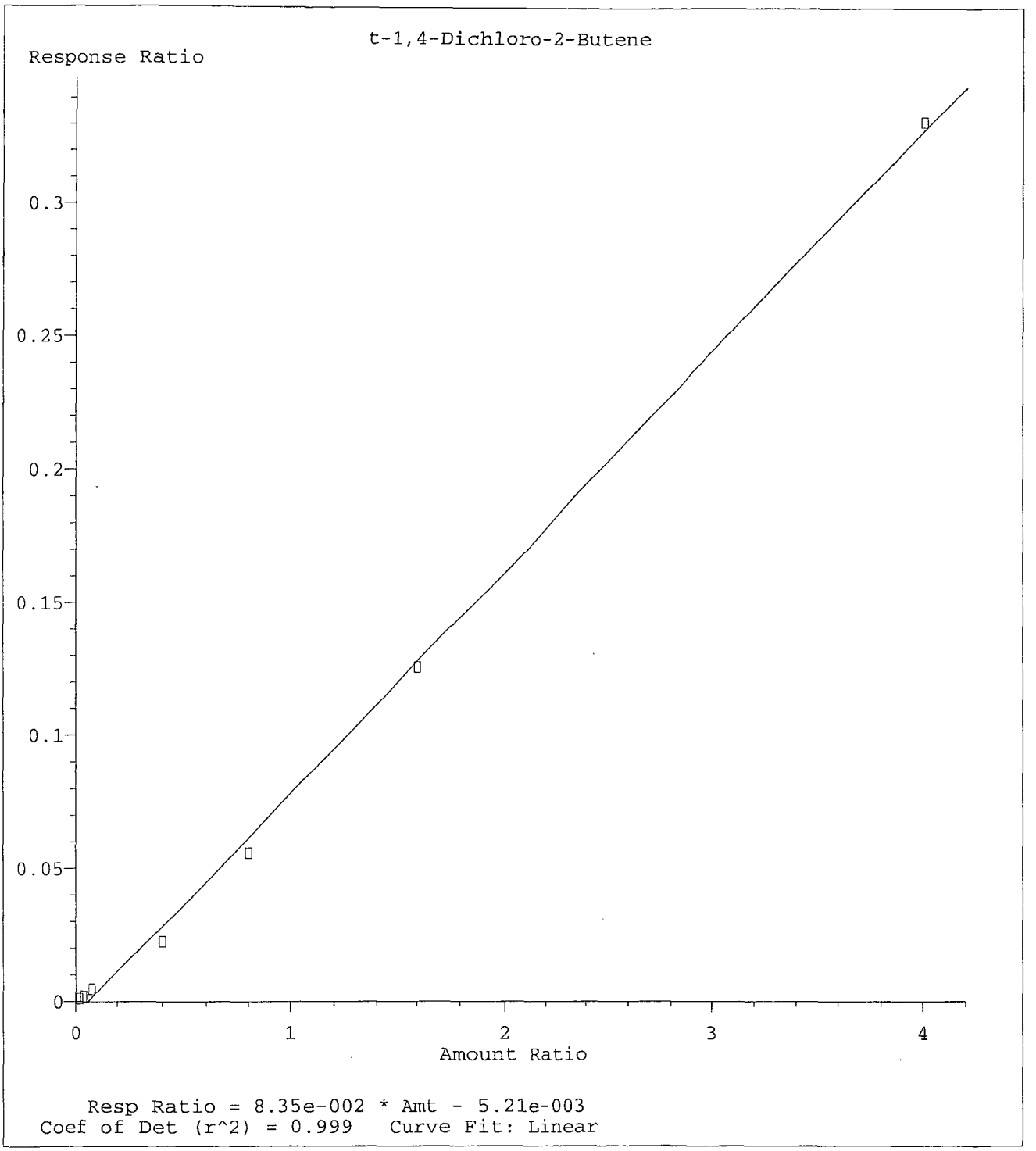
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



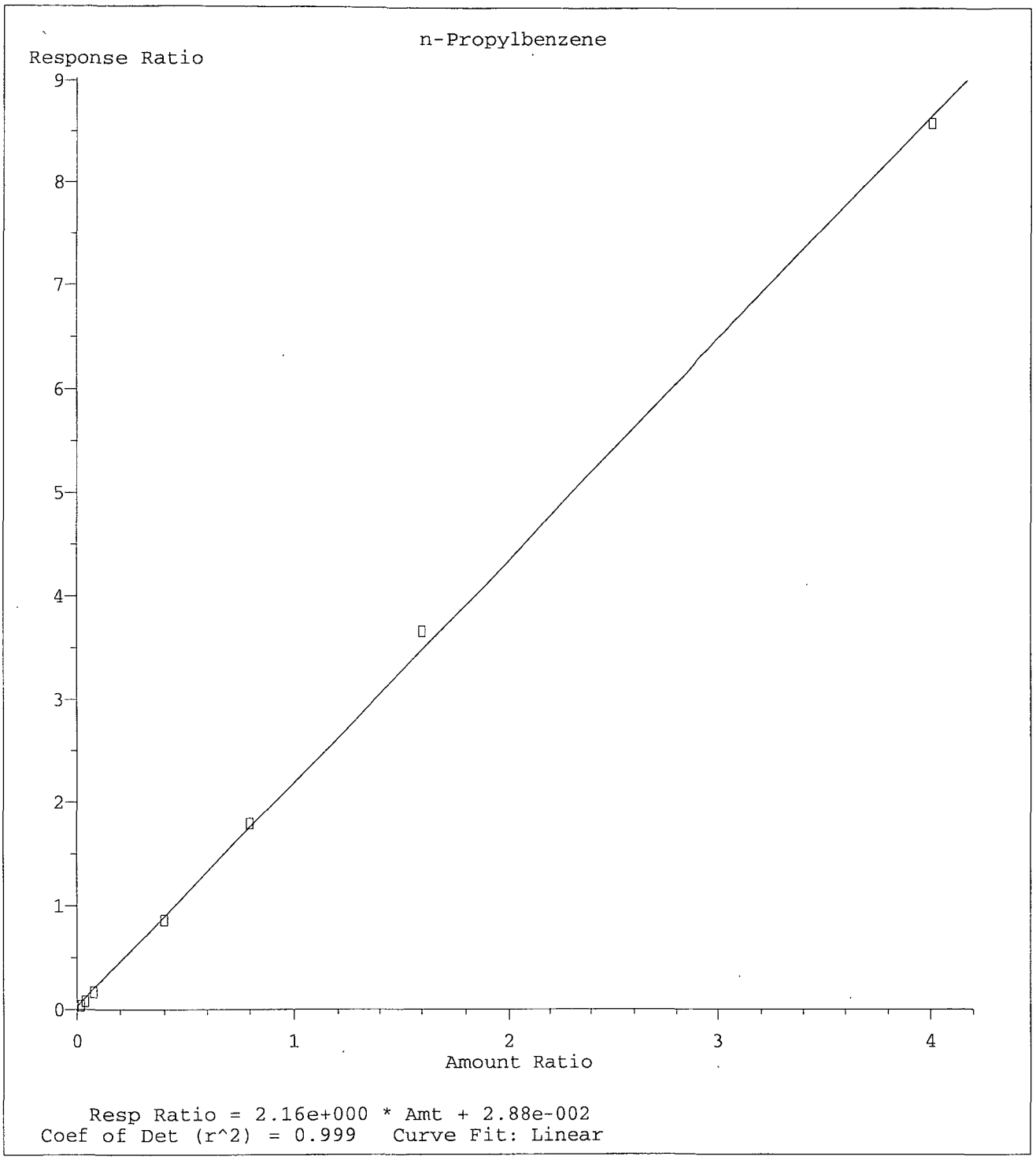
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



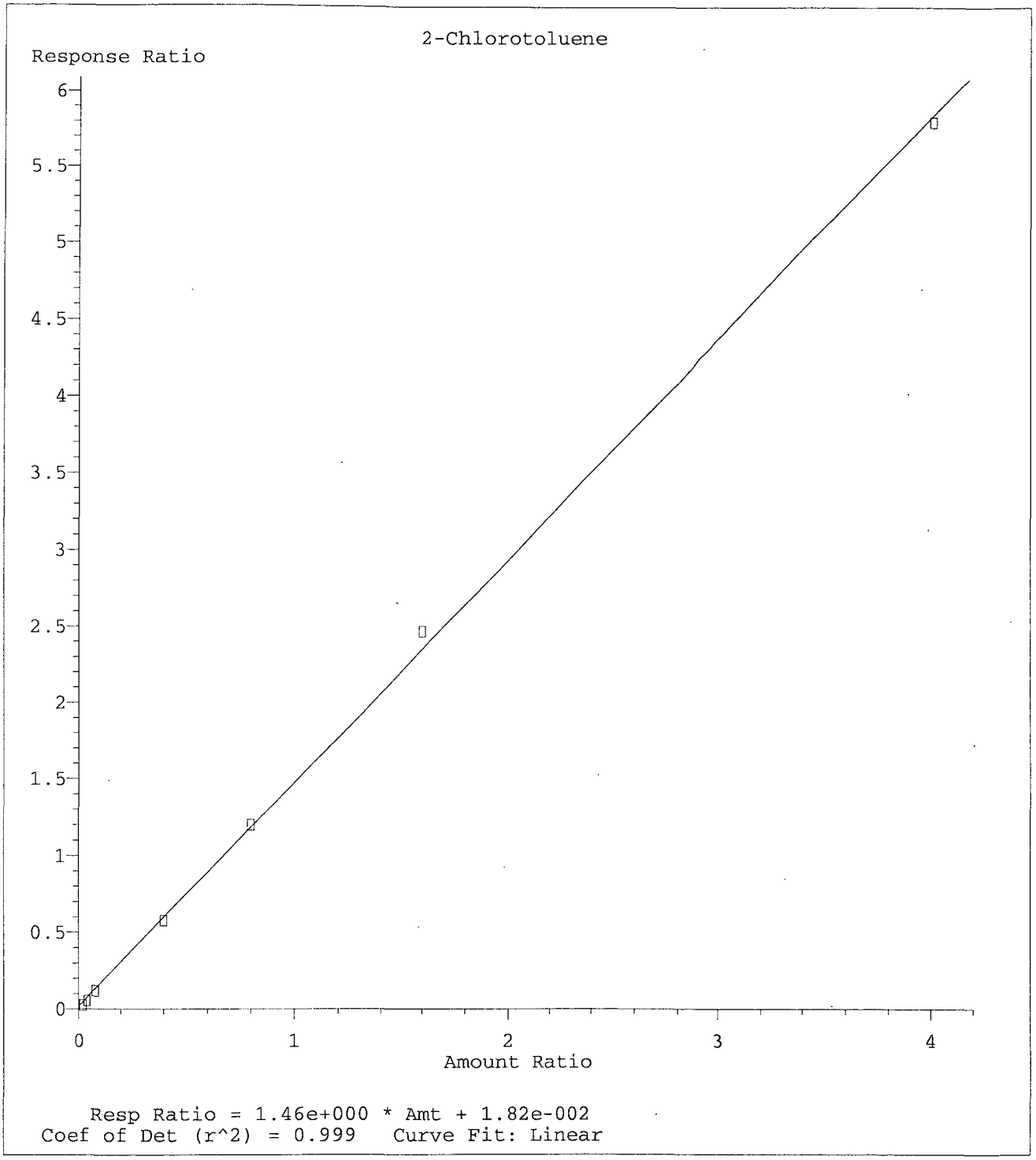
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



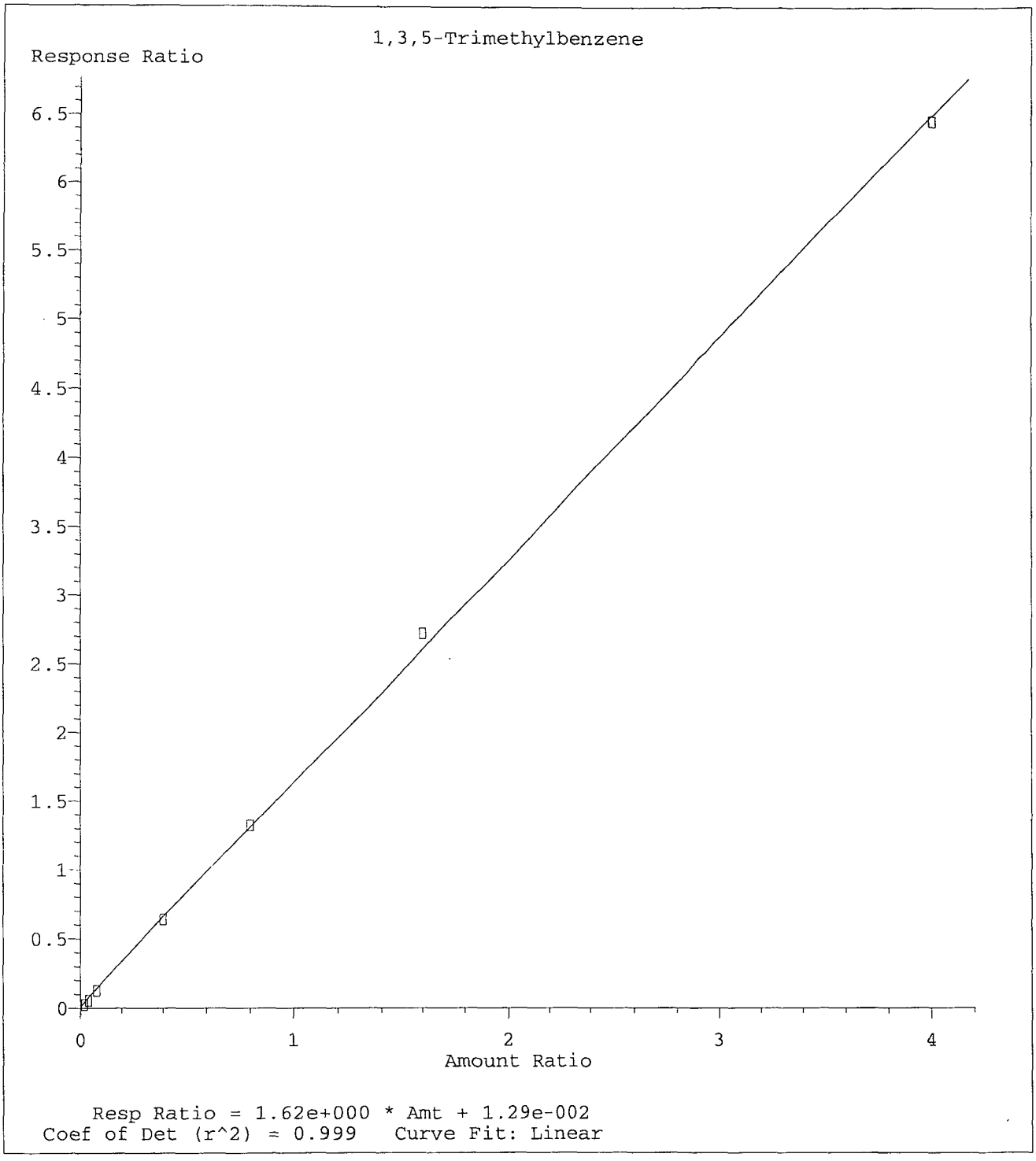
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



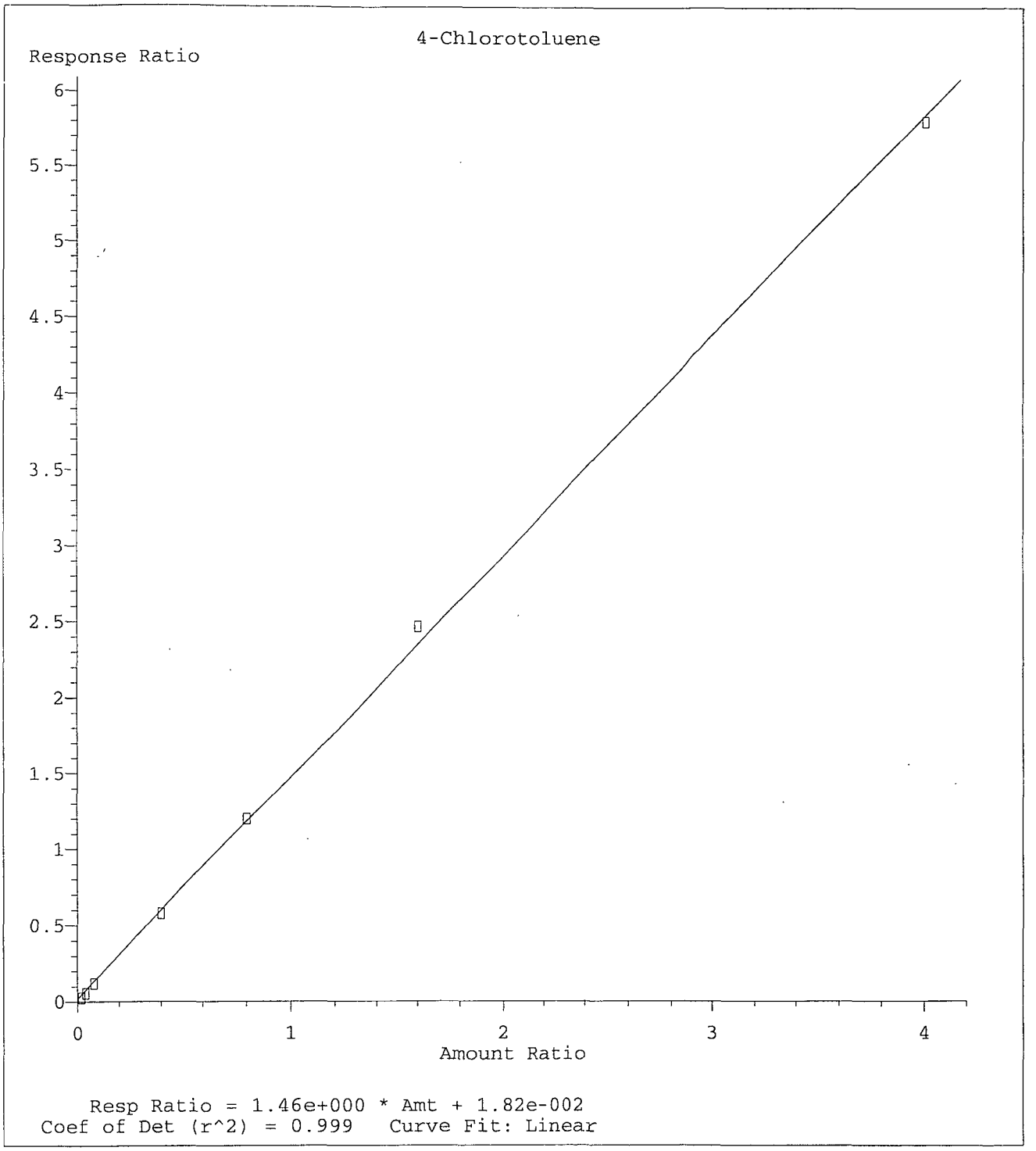
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



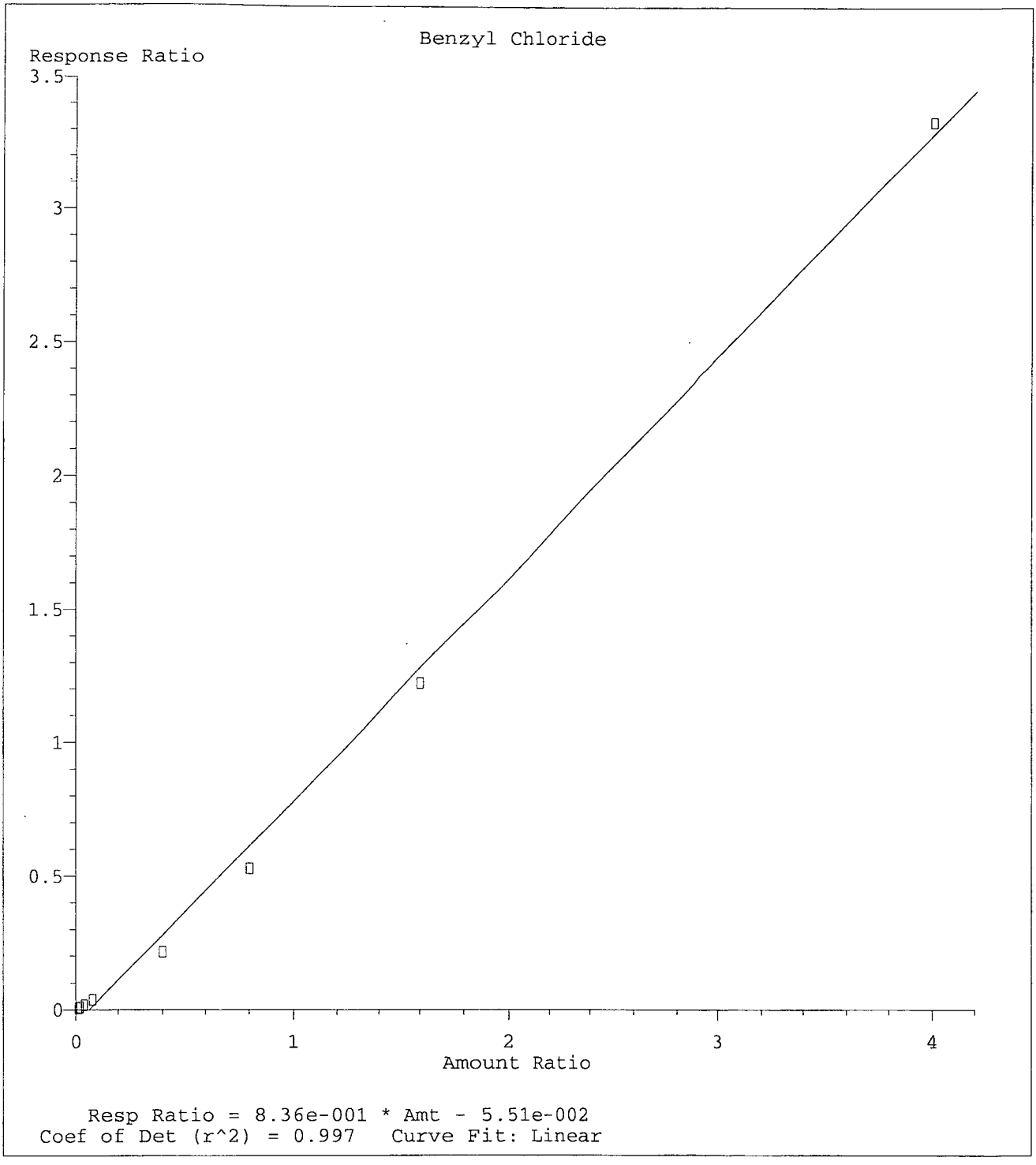
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



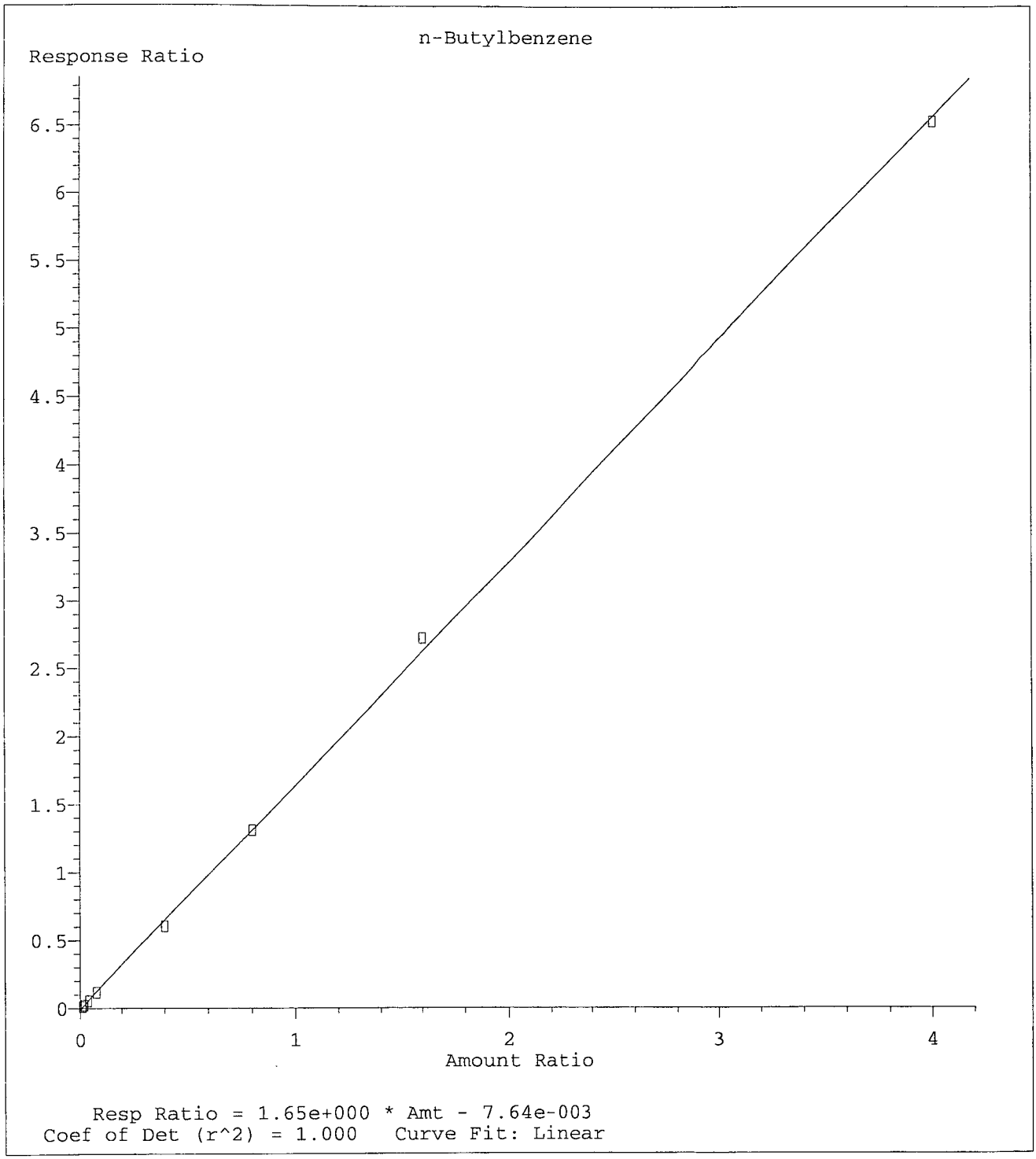
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



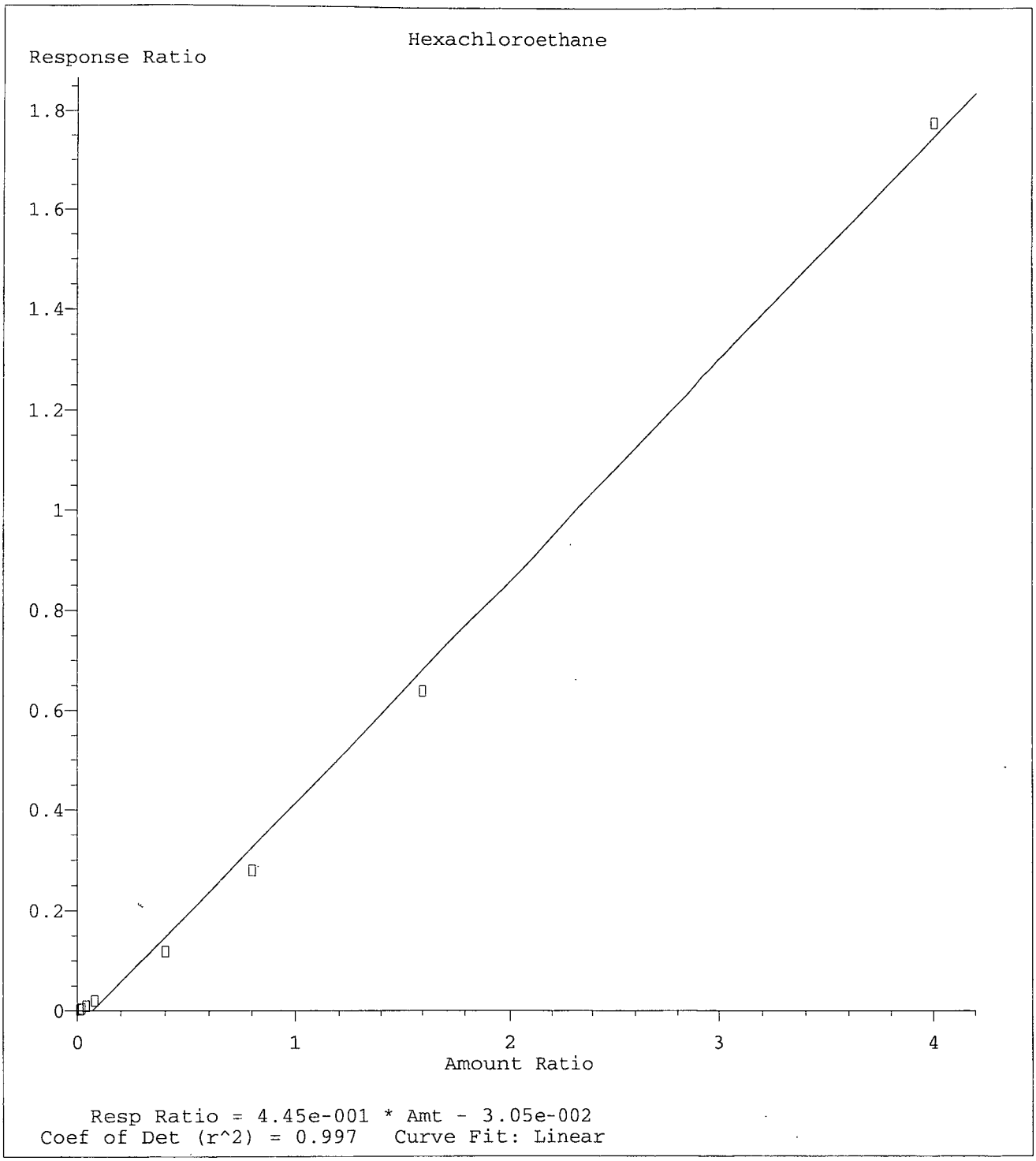
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



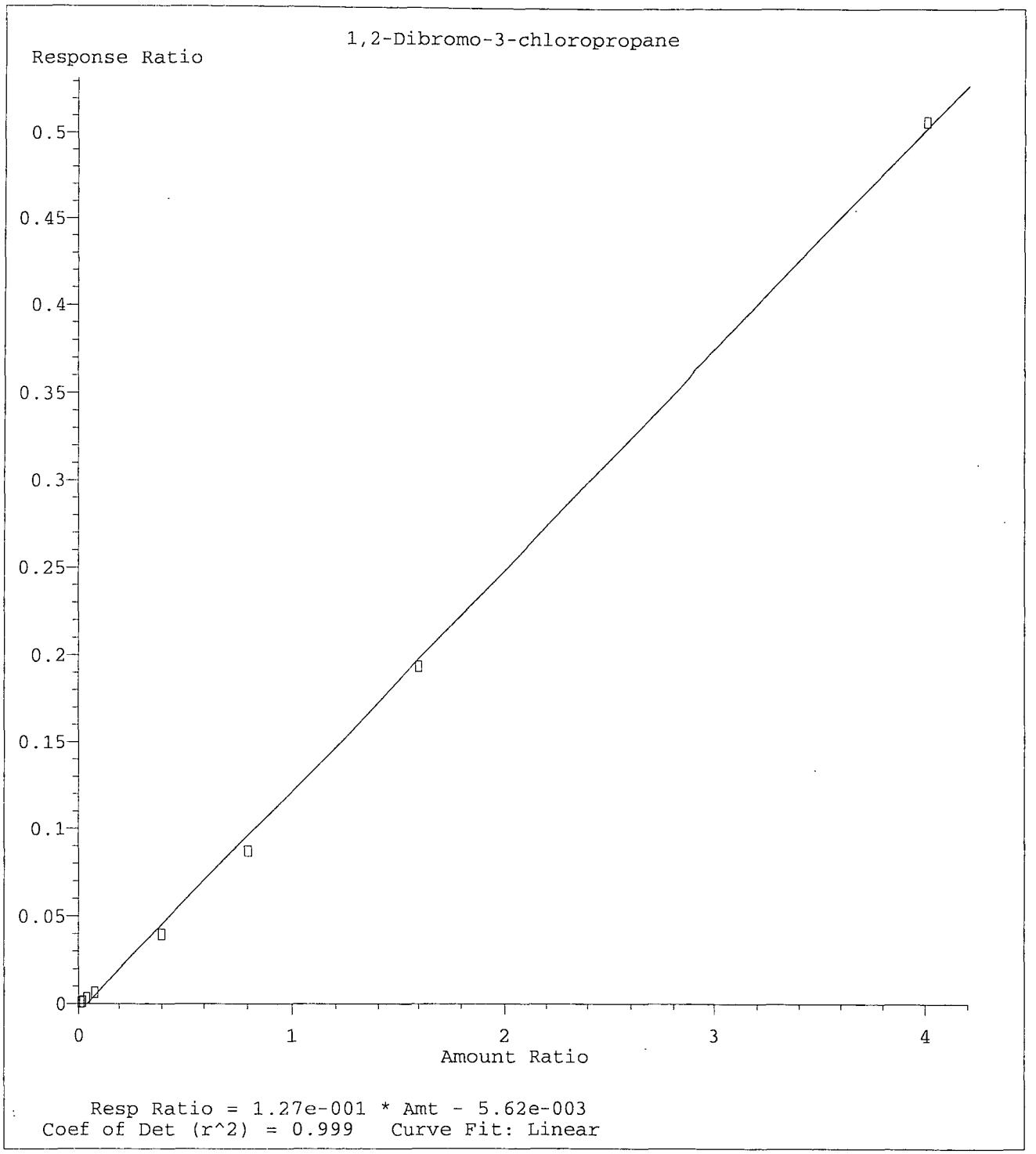
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



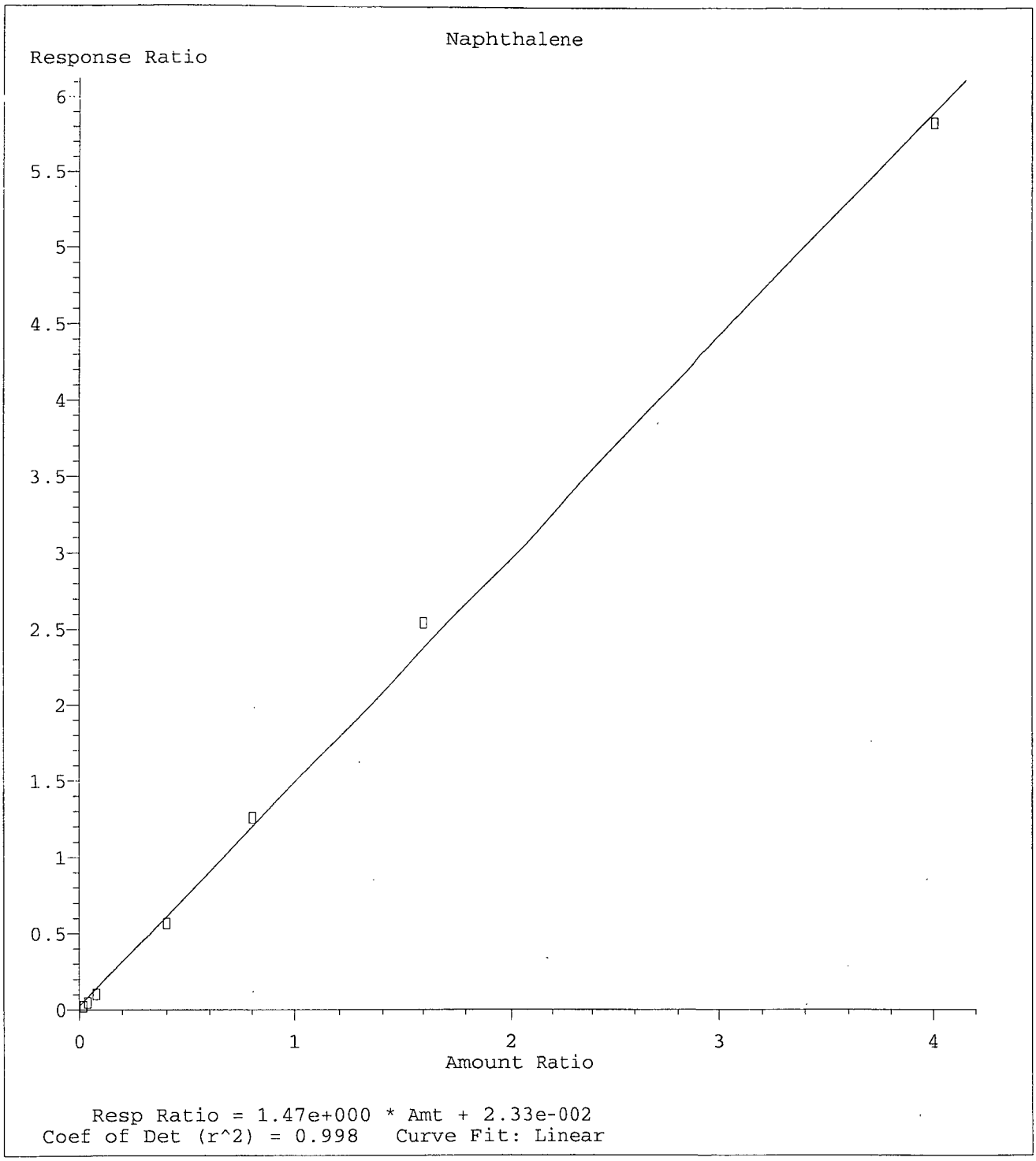
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM	
2	TM	Dichlorodifluoromethane	0.1279	0.1279	0.06	TM	
3	TM	Freon 114	0.0758	0.0778	2.7	TM	
4	TM**L	Chloromethane	0.0912	0.0534	42	TM**L	0.43
5	TM*	Vinyl chloride	0.1174	0.1204	2.6	TM*	
6		Butane	0.0000	0.0006	0.00		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0406	0.0338	17	TML	9.4
9	TML	Chloroethane	0.0419	0.0273	35	TML	6.2
10	TM	Dichlorofluoromethane	0.2230	0.2281	2.3	TM	
11	TM	Trichlorofluoromethane	0.2100	0.2261	7.6	TM	
12	TM	Pentane	0.0000	0.0006	0.00	TM	
13	TM	Acrolein	0.0000	0.0510	0.00	TM	
14	TM	Acetone	0.0316	0.0320	1.1	TM	
15	TM	Freon-113	0.0592	0.0570	3.6	TM	
16	TM*	1,1-DCE	0.1485	0.1725	16	TM*	
17	TM	2-Propanol	0.0000	0.0012	0.00	TM	
18	TM	Acetonitrile	0.0000	0.0326	0.00	TM	
19	TM	t-Butanol	0.0000	0.0031	0.00	TM	
20	TM	Methyl Acetate	0.0756	0.0766	1.3	TM	
21	TML	Iodomethane	0.1434	0.1481	3.3	TML	16
22	TM	Acrylonitrile	0.0326	0.0343	5.2	TM	
23	TML	Methylene chloride	0.0948	0.0761	20	TML	18
24	TM	Carbon disulfide	0.1466	0.1559	6.3	TM	
25	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2928	13	TM	
26	TM	Trans-1,2-DCE	0.1452	0.1622	12	TM	
27	TM	Hexane	0.0000	0.0001	0.00	TM	
28	TM	Diisopropyl Ether	0.2691	0.2970	10	TM	
29	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**	
30	TM**	1,1-DCA	0.1859	0.2141	15	TM**	
31	TM	Vinyl Acetate	0.0891	0.1003	13	TM	
32	TM	Ethyl tert Butyl Ether	0.2467	0.2811	14	TM	
33	TM	MEK (2-Butanone)	0.0379	0.0409	8.0	TM	
34	TM	Cis-1,2-DCE	0.1702	0.1855	9.0	TM	
35	TM	2,2-Dichloropropane	0.1539	0.1715	11	TM	
36	TM	3-Methylpentane	0.0000	0.0600	0.00	TM	
37	TM*	Chloroform	0.2071	0.2323	12	TM*	
38	TM	Bromochloromethane	0.0759	0.0865	14	TM	
39	TM	1,1,1-TCA	0.1905	0.2172	14	TM	
40	TM	Cyclohexane	0.1576	0.1706	8.3	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1-Dichloropropene	0.1411	0.1671	18	TM	
42	TM	2,2,4-Trimethylpentane	0.3087	0.3314	7.4	TM	
43	TM	Carbon Tetrachloride	0.1676	0.1914	14	TM	
44	TM	Tert Amyl Methyl Ether	0.2307	0.2630	14	TM	
45	TM	Methylcyclopentane	0.0000	0.0161	0.00	TM	
46	TM	1,2-DCA	0.1374	0.1548	13	TM	
47	TM	Benzene	0.4429	0.4954	12	TM	
48	TM	TCE	0.1541	0.1740	13	TM	
49	TM	2-Pentanone	0.0000	0.7081	0.00	TM	
50	TM*	1,2-Dichloropropane	0.0964	0.1084	12	TM*	
51	TM	Bromodichloromethane	0.1171	0.1406	20	TM	
52	TM	Methyl Cyclohexane	0.1811	0.2033	12	TM	
53	TM	Dibromomethane	0.1030	0.1223	19	TM	
54	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0728	10	TM	
55	TM	1-Bromo-2-chloroethane	0.0219	0.0229	4.6	TM	
56	TM	2-Chloroethyl vinyl ether	0.0000	0.0013	0.00	TM	
57	TM	Cis-1,3-Dichloropropene	0.1409	0.1684	20	TM	
58	TM*	Toluene	0.4791	0.5593	17	TM*	
59	TML	Trans-1,3-Dichloropropene	0.1172	0.1432	22	TML	6.0
60	TM	1,1,2-TCA	0.0909	0.1069	18	TM	
61	TML	2-Hexanone	0.0257	0.0293	14	TML	2.7
62	TM	1,2-EDB	0.1215	0.1447	19	TM	
63	TM	Tetrachloroethene	0.2530	0.2758	9.0	TM	
64	TM	1-Chlorohexane	0.1973	0.2190	11	TM	
65	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1664	14	TM	
66	TM	m&p-Xylene	0.5046	0.5928	17	TM	
67	TM	o-Xylene	0.5042	0.5874	16	TM	
68	TML	Styrene	0.3854	0.4794	24	TML	6.2
69	TM	1,3-Dichloropropane	0.1850	0.2189	18	TM	
70	TML	Dibromochloromethane	0.1225	0.1457	19	TML	0.16
71	TM**	Chlorobenzene	0.4524	0.4971	9.9	TM**	
72	TM*	Ethylbenzene	0.6710	0.7745	15	TM*	
73	TM**L	Bromoform	0.0962	0.1080	12	TM**L	7.4
74	TM	Isopropylbenzene	1.927	2.311	20	TM	
75	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.4234	16	TM**	
76	TM	1,2,3-Trichloropropane	0.1463	0.1724	18	TM	
77	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0738	16	TML	4.0
78	TM	Bromobenzene	0.6094	0.7153	17	TM	
79	TML	n-Propylbenzene	2.101	2.545	21	TML	15
80	TM	4-Ethyltoluene	1.890	2.143	13	TM	
		Average			14.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
81	TML	2-Chlorotoluene	1.428	1.724	21	TML	15
82	TML	1,3,5-Trimethylbenzene	1.550	1.879	21	TML	14
83	TML	4-Chlorotoluene	1.428	1.724	21	TML	15
84	TM	Tert-Butylbenzene	1.523	1.804	18	TM	
85	TM	1,2,4-Trimethylbenzene	1.557	1.875	20	TM	
86	TM	Sec-Butylbenzene	2.101	2.526	20	TM	
87	TM	p-Isopropyltoluene	1.523	1.804	18	TM	
88	TML	Benzyl Chloride	0.5584	0.5984	7.2	TML	12
89	TM	1,3-DCB	1.159	1.319	14	TM	
90	TM	1,4-DCB	1.183	1.359	15	TM	
91	TML	n-Butylbenzene	1.436	1.802	25	TML	11
92	TM	1,2-DCB	1.073	1.230	15	TM	
93	TML	Hexachloroethane	0.2910	0.3519	21	TML	3.8
94	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1142	21	TML	0.77
95	TM	1,2,4-Trichlorobenzene	0.9574	1.069	12	TM	
96	TM	Hexachlorobutadiene	0.4832	0.5569	15	TM	
97	TML	Naphthalene	1.365	1.741	28	TML	14
98	TM	1,2,3-Trichlorobenzene	0.6880	0.8166	19	TM	
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			18.4		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3871104	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2965491	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1056256	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1152891	27.34	ppb	0.00
Spiked Amount 25.000			Recovery = 109.340%			
48) 1,2-DCA-D4(S)	5.71	65	1055709	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.616%			
69) Toluene-D8(S)	8.03	98	3905223	27.36	ppb	0.00
Spiked Amount 25.000			Recovery = 109.444%			
77) 4-Bromofluorobenzene(S)	10.91	95	1355508	24.96	ppb	0.00
Spiked Amount 25.000			Recovery = 99.844%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	198117	10.01	ppb	100
4) Freon 114	1.16	85	120488	10.27	ppb	91
5) Chloromethane	1.22	50	82611	10.04	ppb	98
6) Vinyl chloride	1.28	62	186480	10.26	ppb	97
9) Bromomethane	1.53	94	52396	10.94	ppb	94
10) Chloroethane	1.60	64	42256	9.38	ppb	89
11) Dichlorofluoromethane	1.78	67	353273	10.23	ppb	100
12) Trichlorofluoromethane	1.82	101	350072	10.76	ppb	100
17) Acetone	2.36	43	247370	50.56	ppb	97
18) Freon-113	2.32	101	88336	9.64	ppb	92
19) 1,1-DCE	2.30	61	267131	11.62	ppb	100
23) Methyl Acetate	2.73	43	118586	10.13	ppb	95
24) Iodomethane	2.43	142	229292	11.60	ppb	97
25) Acrylonitrile	3.10	52	53066	10.52	ppb	92
26) Methylene chloride	2.81	49	117888	11.85	ppb	96
27) Carbon disulfide	2.49	76	241344	10.63	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	453360	11.33	ppb	99
29) Trans-1,2-DCE	3.14	61	251156	11.17	ppb	91
31) Diisopropyl Ether	3.93	45	459917	11.04	ppb	98
33) 1,1-DCA	3.71	63	331517	11.52	ppb	97
34) Vinyl Acetate	3.86	43	155326	11.26	ppb	95
35) Ethyl tert Butyl Ether	4.49	59	435304	11.39	ppb	100
36) MEK (2-Butanone)	4.67	43	316666	54.01	ppb	98
37) Cis-1,2-DCE	4.60	61	287220	10.90	ppb	97
38) 2,2-Dichloropropane	4.59	77	265506	11.14	ppb	98
41) Chloroform	5.09	83	359662	11.22	ppb	100
42) Bromochloromethane	4.93	49	133919	11.40	ppb	95
44) 1,1,1-TCA	5.30	97	336361	11.40	ppb	99
45) Cyclohexane	5.36	56	264235	10.83	ppb	97
46) 1,1-Dichloropropene	5.53	75	258683	11.84	ppb	98
47) 2,2,4-Trimethylpentane	5.96	57	513141	10.74	ppb	99
49) Carbon Tetrachloride	5.52	117	296343	11.42	ppb	94
50) Tert Amyl Methyl Ether	6.01	73	407189	11.40	ppb	99
52) 1,2-DCA	5.81	62	239643	11.26	ppb	98
53) Benzene	5.78	78	767099	11.19	ppb	98
54) TCE	6.61	130	269410	11.29	ppb	98
56) 1,2-Dichloropropane	6.86	63	167798	11.24	ppb	100
57) Bromodichloromethane	7.21	83	217643	12.00	ppb	97
58) Methyl Cyclohexane	6.84	83	314861	11.23	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	189308	11.87	ppb		94
60)	MIBK (methyl isobutyl ket	7.94	43	563958	55.15	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	35490	10.46	ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	260806	11.96	ppb		96
64)	Toluene	8.11	91	865968	11.67	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	221786	10.60	ppb		98
66)	1,1,2-TCA	8.56	97	165499	11.76	ppb		96
67)	2-Hexanone	8.88	43	226496	51.36	ppb		98
70)	1,2-EDB	9.09	107	171702	11.91	ppb		97
71)	Tetrachloroethene	8.71	166	327108	10.90	ppb		98
72)	1-Chlorohexane	9.67	91	259736	11.10	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	197406	11.44	ppb		97
74)	m&p-Xylene	9.93	91	1406440	23.50	ppb		97
75)	o-Xylene	10.35	91	696726	11.65	ppb		97
76)	Styrene	10.37	104	568717	10.62	ppb		100
78)	1,3-Dichloropropane	8.74	76	259709	11.83	ppb		99
79)	Dibromochloromethane	8.98	129	172809	10.02	ppb		100
80)	Chlorobenzene	9.65	112	589695	10.99	ppb		98
81)	Ethylbenzene	9.79	91	918755	11.54	ppb		96
82)	Bromoform	10.54	173	128063	9.26	ppb		96
84)	Isopropylbenzene	10.76	105	976539	12.00	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	178876	11.61	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	72831	11.78	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	31181	10.40	ppb		98
88)	Bromobenzene	11.06	77	302201	11.74	ppb		94
89)	n-Propylbenzene	11.21	91	1075385	11.45	ppb		97
90)	4-Ethyltoluene	11.34	105	905253	11.34	ppb		98
91)	2-Chlorotoluene	11.41	91	728223	11.51	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	794090	11.39	ppb		97
93)	4-Chlorotoluene	11.41	91	728223	11.51	ppb		98
94)	Tert-Butylbenzene	11.76	119	762257	11.85	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	792106	12.04	ppb		100
96)	Sec-Butylbenzene	12.00	105	1067296	12.03	ppb		99
97)	p-Isopropyltoluene	11.76	119	762257	11.85	ppb		96
98)	Benzyl Chloride	12.34	91	252842	8.81	ppb		98
99)	1,3-DCB	12.10	146	557233	11.38	ppb		98
100)	1,4-DCB	12.20	146	574213	11.49	ppb		99
101)	n-Butylbenzene	12.61	91	761329	11.07	ppb		99
102)	1,2-DCB	12.60	146	519577	11.47	ppb		99
103)	Hexachloroethane	12.89	201	148685	9.62	ppb		98
104)	1,2-Dibromo-3-chloropropan	13.44	157	48244	10.08	ppb	#	83
105)	1,2,4-Trichlorobenzene	13.69	180	451521	11.16	ppb		98
106)	Hexachlorobutadiene	14.57	225	235297	11.53	ppb		93
107)	Naphthalene	14.62	128	735691	11.44	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	345018	11.87	ppb		100

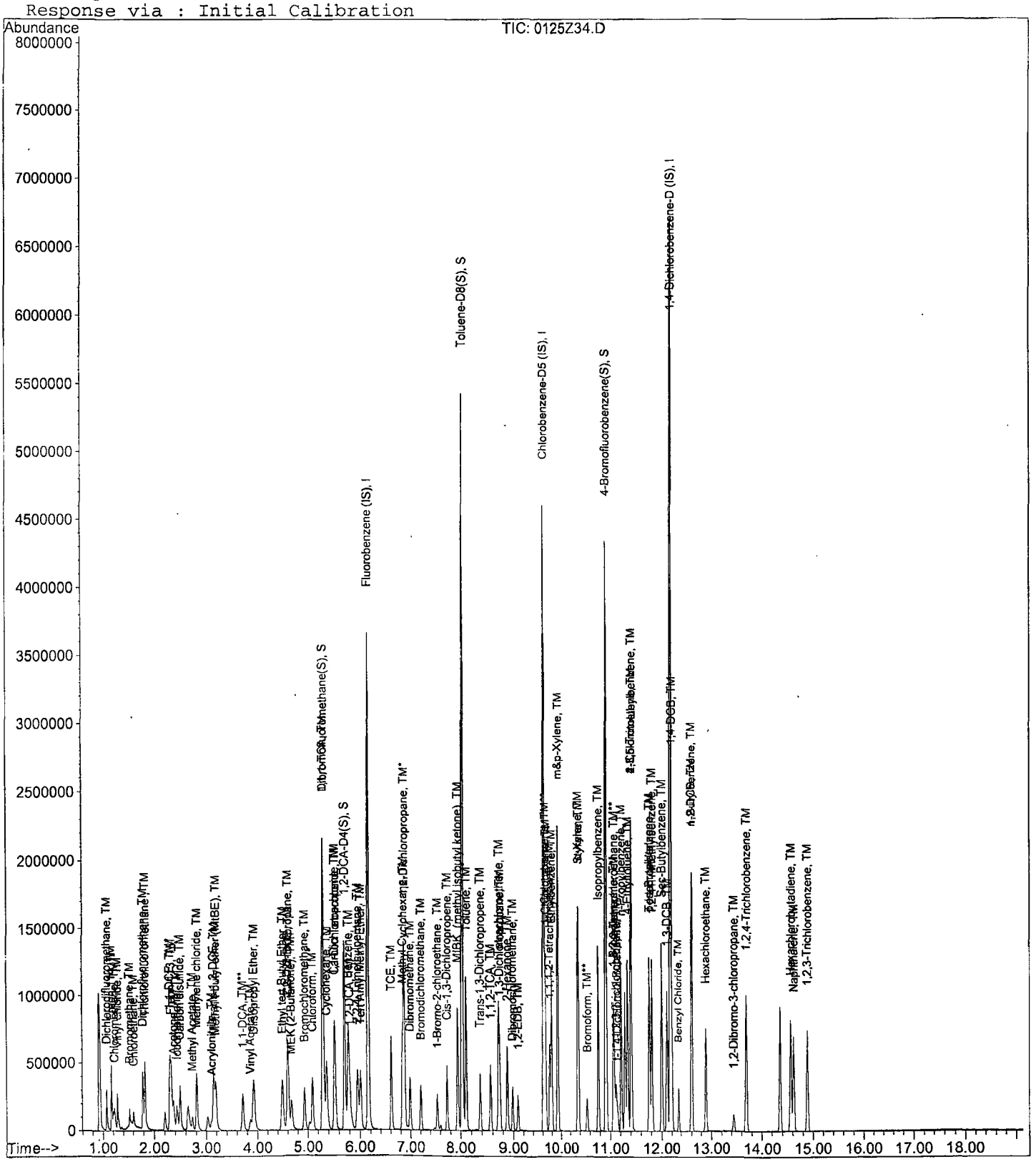
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Initial Cal. Date: 01/19/21
Data File: 0121Z17.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1280	0.1463	14	TM		
4	TML	Freon 114	0.0672	0.0857	27	TML	16	
5	TM**L	Chloromethane	0.0564	0.0505	11	TM**L	6.1	
6	TM*	Vinyl chloride	0.1346	0.1326	1.5	TM*		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
8	TML	Bromomethane	0.0454	0.0392	14	TML	8.0	
9	TML	Chloroethane	0.0339	0.0295	13	TML	7.7	
10	TM	Dichlorofluoromethane	0.2213	0.2288	3.4	TM		
11	TM	Trichlorofluoromethane	0.2159	0.2358	9.2	TM		
12	TM	Pentane	0.0000	0.0007	0.00	TM		
13	TM	Diethyl ether	0.0000	0.0000	0.00	TM		
14	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0001	0.00	TM		
15	TM	Acrolein	0.0051	0.0047	8.9	TM		
16	TM	Acetone	0.0328	0.0333	1.4	TM		
17	TM	Freon-113	0.0489	0.0591	21	TM		*High
18	TM*	1,1-DCE	0.1593	0.1577	0.98	TM*		
19	TM	2-Propanol	0.0000	0.0001	0.00	TM		
20	TM	Acetonitrile	0.0028	0.0028	0.97	TM		
21	TM	t-Butanol	0.0037	0.0038	3.1	TM		
22	TM	Methyl Acetate	0.0847	0.0799	5.6	TM		
23	TM	Iodomethane	0.1769	0.1349	24	TM		*NT
24	TM	Acrylonitrile	0.0366	0.0361	1.4	TM		
25	TML	Methylene chloride	0.0916	0.0625	32	TML	20	
26	TML	Carbon disulfide	0.1551	0.1534	1.1	TML	1.9	
27	TM	Methyl t-butyl ether (MtBE)	0.2966	0.2957	0.31	TM		
28	TM	Trans-1,2-DCE	0.1577	0.1510	4.3	TM		
29	TM	Diisopropyl Ether	0.2845	0.2861	0.55	TM		
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**		
31	TM**	1,1-DCA	0.1934	0.1891	2.2	TM**		
32	TM	Vinyl Acetate	0.1131	0.1203	6.4	TM		
33	TM	Ethyl tert Butyl Ether	0.2803	0.2829	0.92	TM		
34	TM	MEK (2-Butanone)	0.0446	0.0473	6.2	TM		
35	TM	Cis-1,2-DCE	0.1713	0.1694	1.1	TM		
36	TM	2,2-Dichloropropane	0.1681	0.1698	1.0	TM		
37	TML	2-Methylpentane	0.0000	0.0001	0.00	TML		
38	TM	3-Methylpentane	0.0000	0.0584	0.00	TM		
39	TM*	Chloroform	0.2054	0.2078	1.2	TM*		
40	TM	Bromochloromethane	0.0762	0.0776	1.8	TM		
		Average			5.6			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0121Z17.D

		Compound	MEAN	CCRF	%D	%Drift	
41	SL	Dibromofluoromethane(S)	0.2640	0.2850	8.0	SL	0.89
42	TM	1,1,1-TCA	0.1957	0.1922	1.8	TM	
43	TML	Cyclohexane	0.1457	0.1673	15	TML	8.9
44	TM	1,1-Dichloropropene	0.1498	0.1480	1.2	TM	
45	TML	2,2,4-Trimethylpentane	0.2550	0.3625	42	TML	20
46	S	1,2-DCA-D4(S)	0.2363	0.2557	8.2	S	
47	TM	Carbon Tetrachloride	0.1702	0.1686	0.91	TM	
48	TM	Tert Amyl Methyl Ether	0.2660	0.2676	0.62	TM	
49	TM	Methylcyclopentane	0.0000	0.0165	0.00	TM	
50	TM	1,2-DCA	0.1396	0.1378	1.3	TM	
51	TM	Benzene	0.4695	0.4557	2.9	TM	
52	TM	TCE	0.1647	0.1598	3.0	TM	
53	TM	2-Pentanone	0.0670	0.0699	4.3	TM	
54	TM*	1,2-Dichloropropane	0.1054	0.1026	2.7	TM*	
55	TM	Bromodichloromethane	0.1220	0.1241	1.7	TM	
56	TM	Methyl Cyclohexane	0.1673	0.2052	23	TM	*NT
57	TM	Dibromomethane	0.1210	0.1191	1.6	TM	
58	TM	MIBK (methyl isobutyl ketone)	0.0762	0.0813	6.8	TM	
59	TM	1-Bromo-2-chloroethane	0.0254	0.0244	4.1	TM	
60	TM	2-Chloroethyl vinyl ether	0.0000	0.0001	0.00	TM	
61	TM	Cis-1,3-Dichloropropene	0.1488	0.1525	2.5	TM	
62	TM*	Toluene	0.5235	0.5056	3.4	TM*	
63	TM	Trans-1,3-Dichloropropene	0.1287	0.1323	2.8	TM	
64	TM	1,1,2-TCA	0.1016	0.1026	0.99	TM	
65	TM	2-Hexanone	0.0304	0.0325	7.0	TM	
66	I	Chlorobenzene-D5 (IS)	ISTD			I	
67	S	Toluene-D8(S)	1.117	1.199	7.4	S	
68	TM	1,2-EDB	0.1289	0.1323	2.6	TM	
69	TM	Tetrachloroethene	0.2655	0.2594	2.3	TM	
70	TM	1-Chlorohexane	0.2009	0.2005	0.23	TM	
71	TM	1,1,1,2-Tetrachloroethane	0.1457	0.1439	1.2	TM	
72	TM	m&p-Xylene	0.5043	0.5024	0.39	TM	
73	TM	o-Xylene	0.5000	0.5032	0.63	TM	
74	TM	Styrene	0.3990	0.4126	3.4	TM	
75	SL	4-Bromofluorobenzene(S)	0.3960	0.4257	7.5	SL	1.4
76	TM	1,3-Dichloropropane	0.1859	0.1866	0.41	TM	
77	TML	Dibromochloromethane	0.1235	0.1253	1.5	TML	13
78	TM**	Chlorobenzene	0.4547	0.4417	2.9	TM**	
79	TM*	Ethylbenzene	0.6634	0.6668	0.51	TM*	
80	TM**L	Bromoform	0.1036	0.0989	4.6	TM**L	19
		Average			4.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/21/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0121Z17.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
82	TM	Isopropylbenzene	1.863	1.888	1.3	TM	
83	TM**	1,1,2,2-Tetrachloroethane	0.3752	0.3985	6.2	TM**	
84	TM	1,2,3-Trichloropropane	0.1543	0.1544	0.11	TM	
85	TM	t-1,4-Dichloro-2-Butene	0.0746	0.0636	15	TM	
86	TM	Bromobenzene	0.5821	0.5695	2.2	TM	
87	TM	n-Propylbenzene	2.012	2.074	3.1	TM	
88	TM	4-Ethyltoluene	1.817	1.864	2.6	TM	
89	TM	2-Chlorotoluene	1.356	1.380	1.8	TM	
90	TM	1,3,5-Trimethylbenzene	1.484	1.516	2.2	TM	
91	TM	4-Chlorotoluene	1.356	1.380	1.8	TM	
92	TM	Tert-Butylbenzene	1.482	1.492	0.66	TM	
93	TM	1,2,4-Trimethylbenzene	1.472	1.532	4.1	TM	
94	TM	Sec-Butylbenzene	2.006	2.085	3.9	TM	
95	TM	p-Isopropyltoluene	1.482	1.492	0.66	TM	
96	TML	Benzyl Chloride	0.6643	0.6795	2.3	TML	10
97	TM	1,3-DCB	1.162	1.184	1.9	TM	
98	TM	1,4-DCB	1.196	1.176	1.6	TM	
99	TM	n-Butylbenzene	1.431	1.494	4.4	TM	
100	TM	1,2-DCB	1.070	1.065	0.47	TM	
101	TML	Hexachloroethane	0.3461	0.3035	12	TML	19
102	TML	1,2-Dibromo-3-chloropropane	0.1073	0.1151	7.3	TML	12
103	TM	1,2,4-Trichlorobenzene	1.006	0.9962	1.00	TM	
104	TM	Hexachlorobutadiene	0.5073	0.5145	1.4	TM	
105	TM	Naphthalene	1.493	1.620	8.6	TM	
106	TM	1,2,3-Trichlorobenzene	0.7515	0.7638	1.6	TM	
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.5		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z17.D Vial: 2
Acq On : 21 Jan 21 13:42 Operator: LP,DG,CH
Sample : 210121B CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 14:02 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3881499	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3242629	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1208320	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1106237	24.78	ppb	0.00
Spiked Amount 25.000			Recovery =	99.108%		
48) 1,2-DCA-D4(S)	5.71	65	992581	27.05	ppb	0.00
Spiked Amount 25.000			Recovery =	108.200%		
69) Toluene-D8(S)	8.03	98	3887577	26.84	ppb	0.00
Spiked Amount 25.000			Recovery =	107.352%		
77) 4-Bromofluorobenzene(S)	10.92	95	1380409	24.64	ppb	0.00
Spiked Amount 25.000			Recovery =	98.572%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	227084	11.43	ppb	99
4) Freon 114	1.16	85	133085	11.60	ppb	92
5) Chloromethane	1.23	50	78331	9.39	ppb	99
6) Vinyl chloride	1.28	62	205884	9.85	ppb	98
9) Bromomethane	1.53	94	60921	10.80	ppb	99
10) Chloroethane	1.60	64	45736	10.77	ppb	100
11) Dichlorofluoromethane	1.78	67	355303	10.34	ppb	99
12) Trichlorofluoromethane	1.82	101	366127	10.92	ppb	98
16) Acrolein	2.21	55	90827	113.88	ppb	98
17) Acetone	2.37	43	258631	50.72	ppb	93
18) Freon-113	2.32	101	91712	12.08	ppb	95
19) 1,1-DCE	2.29	61	244869	9.90	ppb	94
21) Acetonitrile	2.64	40	54126	123.79	ppb	96
22) t-Butanol	3.04	59	73408	128.89	ppb	95
23) Methyl Acetate	2.73	43	124111	9.44	ppb	97
24) Iodomethane	2.43	142	209448	7.63	ppb	95
25) Acrylonitrile	3.10	52	56031	9.86	ppb	89
26) Methylene chloride	2.81	49	97096	8.03	ppb	95
27) Carbon disulfide	2.49	76	238208	9.81	ppb	98
28) Methyl t-butyl ether (MtBE	3.19	73	459030	9.97	ppb	95
29) Trans-1,2-DCE	3.15	61	234441	9.57	ppb	97
31) Diisopropyl Ether	3.93	45	444136	10.06	ppb	99
33) 1,1-DCA	3.72	63	293555	9.78	ppb	99
34) Vinyl Acetate	3.86	43	186811	10.64	ppb	98
35) Ethyl tert Butyl Ether	4.50	59	439240	10.09	ppb	94
36) MEK (2-Butanone)	4.68	43	367387	53.09	ppb	98
37) Cis-1,2-DCE	4.60	61	263013	9.89	ppb	90
38) 2,2-Dichloropropane	4.59	77	263628	10.10	ppb	97
41) Chloroform	5.09	83	322616	10.12	ppb	96
42) Bromochloromethane	4.93	49	120435	10.18	ppb	98
44) 1,1,1-TCA	5.30	97	298346	9.82	ppb	97
45) Cyclohexane	5.37	56	259742	10.89	ppb	99
46) 1,1-Dichloropropene	5.53	75	229764	9.88	ppb	99
47) 2,2,4-Trimethylpentane	5.96	57	562872	11.95	ppb	98
49) Carbon Tetrachloride	5.52	117	261792	9.91	ppb	94
50) Tert Amyl Methyl Ether	6.01	73	415474	10.06	ppb	98
52) 1,2-DCA	5.81	62	213889	9.87	ppb	97
53) Benzene	5.78	78	707569	9.71	ppb	98
54) TCE	6.61	130	248036	9.70	ppb	98

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210119\0121Z17.D
Acq On : 21 Jan 21 13:42
Sample : 210121B CCV/LCS 10ug/L
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 21 14:02 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

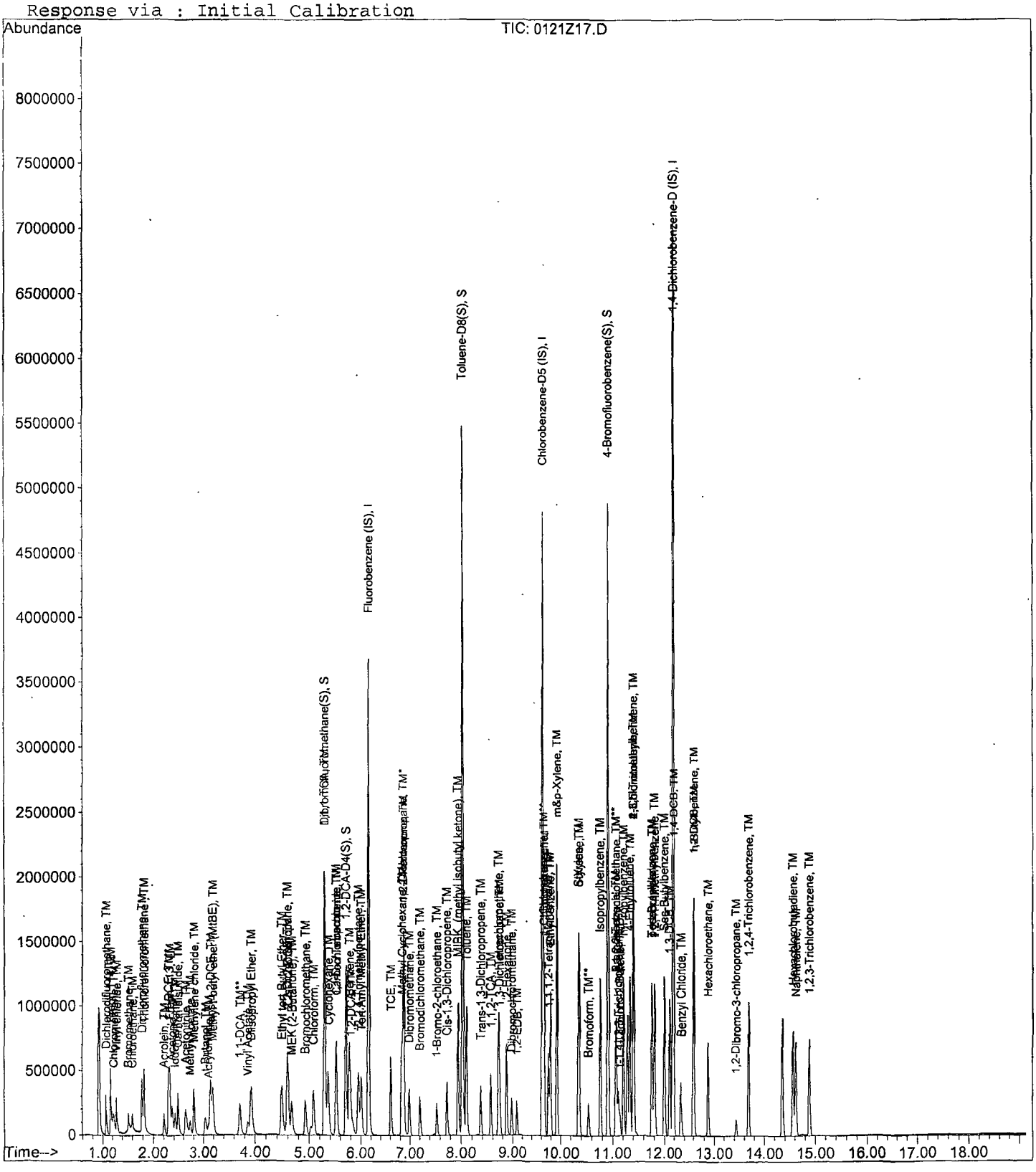
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.88	43	1356360	130.40	ppb	98
56)	1,2-Dichloropropane	6.86	63	159274	9.73	ppb	98
57)	Bromodichloromethane	7.21	83	192627	10.17	ppb	93
58)	Methyl Cyclohexane	6.84	83	318606	12.26	ppb	99
59)	Dibromomethane	6.99	174	184956	9.84	ppb	95
60)	MIBK (methyl isobutyl ket	7.95	43	631426	53.39	ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	37882	9.59	ppb	97
63)	Cis-1,3-Dichloropropene	7.73	75	236833	10.25	ppb	99
64)	Toluene	8.11	91	784987	9.66	ppb	98
65)	Trans-1,3-Dichloropropene	8.37	75	205341	10.28	ppb	96
66)	1,1,2-TCA	8.56	97	159345	10.10	ppb	98
67)	2-Hexanone	8.88	43	252674	53.48	ppb	100
70)	1,2-EDB	9.09	107	171584	10.26	ppb	95
71)	Tetrachloroethene	8.72	166	336491	9.77	ppb	97
72)	1-Chlorohexane	9.67	91	260037	9.98	ppb	98
73)	1,1,1,2-Tetrachloroethane	9.75	131	186636	9.88	ppb	94
74)	m&p-Xylene	9.93	91	1303202	19.92	ppb	100
75)	o-Xylene	10.36	91	652664	10.06	ppb	97
76)	Styrene	10.37	104	535115	10.34	ppb	96
78)	1,3-Dichloropropane	8.74	76	242092	10.04	ppb	95
79)	Dibromochloromethane	8.99	129	162582	8.75	ppb	99
80)	Chlorobenzene	9.65	112	572861	9.71	ppb	100
81)	Ethylbenzene	9.79	91	864929	10.05	ppb	99
82)	Bromoform	10.54	173	128235	8.13	ppb	100
84)	Isopropylbenzene	10.76	105	912631	10.13	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	192597	10.62	ppb	97
86)	1,2,3-Trichloropropane	11.12	110	74646	10.01	ppb	92
87)	t-1,4-Dichloro-2-Butene	11.15	53	30754	8.53	ppb	93
88)	Bromobenzene	11.07	77	275233	9.78	ppb	99
89)	n-Propylbenzene	11.21	91	1002552	10.31	ppb	99
90)	4-Ethyltoluene	11.34	105	900830	10.26	ppb	99
91)	2-Chlorotoluene	11.41	91	667044	10.18	ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	732631	10.22	ppb	94
93)	4-Chlorotoluene	11.41	91	667044	10.18	ppb	98
94)	Tert-Butylbenzene	11.77	119	721187	10.07	ppb	98
95)	1,2,4-Trimethylbenzene	11.81	105	740231	10.41	ppb	98
96)	Sec-Butylbenzene	12.00	105	1007641	10.39	ppb	99
97)	p-Isopropyltoluene	11.77	119	721187	10.07	ppb	99
98)	Benzyl Chloride	12.35	91	328408	8.99	ppb	98
99)	1,3-DCB	12.10	146	572216	10.19	ppb	95
100)	1,4-DCB	12.20	146	568561	9.84	ppb	96
101)	n-Butylbenzene	12.61	91	721943	10.44	ppb	99
102)	1,2-DCB	12.60	146	514734	9.95	ppb	100
103)	Hexachloroethane	12.89	201	146693	8.11	ppb	89
104)	1,2-Dibromo-3-chloropropan	13.44	157	55611	8.81	ppb	97
105)	1,2,4-Trichlorobenzene	13.69	180	481475	9.90	ppb	100
106)	Hexachlorobutadiene	14.57	225	248650	10.14	ppb	96
107)	Naphthalene	14.62	128	783118	10.86	ppb	99
108)	1,2,3-Trichlorobenzene	14.89	180	369147	10.16	ppb	99

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210119\0121Z17.D Vial: 2
Acq On : 21 Jan 21 13:42 Operator: LP,DG,CH
Sample : 210121B CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 14:02 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Initial Cal. Date: 01/19/21
Data File: 0121Z46.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1280	0.1528	19	TM		
4	TML	Freon 114	0.0672	0.0585	13	TML	18	
5	TM**L	Chloromethane	0.0564	0.0591	4.8	TM**L	11	
6	TM*	Vinyl chloride	0.1346	0.1386	3.0	TM*		
7		Butane	0.0000	0.0005	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
9	TML	Bromomethane	0.0454	0.0405	11	TML	12	
10	TML	Chloroethane	0.0339	0.0348	2.6	TML	32	
11	TM	Dichlorofluoromethane	0.2213	0.2185	1.2	TM		
12	TM	Trichlorofluoromethane	0.2159	0.2462	14	TM		
13	TM	Diethyl ether	0.0000	0.0000	0.00	TM		
14	TM	Acrolein	0.0051	0.0047	9.2	TM		
15	TM	Acetone	0.0328	0.0295	10	TM		
16	TM	Freon-113	0.0489	0.0461	5.8	TM		
17	TM*	1,1-DCE	0.1593	0.1365	14	TM*		
18	TM	2-Propanol	0.0000	0.0001	0.00	TM		
19	TM	Acetonitrile	0.0028	0.0029	1.9	TM		
20	TM	t-Butanol	0.0037	0.0027	26	TM		
21	TM	Methyl Acetate	0.0847	0.0678	20	TM		
22	TM	Iodomethane	0.1769	0.0896	49	TM		
23	TM	Acrylonitrile	0.0366	0.0308	16	TM		
24	TML	Methylene chloride	0.0916	0.0643	30	TML	17	
25	TML	Carbon disulfide	0.1551	0.1290	17	TML	18	
26	TM	Methyl t-butyl ether (MtBE)	0.2966	0.2488	16	TM		
27	TM	Trans-1,2-DCE	0.1577	0.1373	13	TM		
28	TM	Hexane	0.0000	0.0000	0.00	TM		
29	TM	Diisopropyl Ether	0.2845	0.2599	8.6	TM		
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
31	TM**	1,1-DCA	0.1934	0.1774	8.2	TM**		
32	TM	Vinyl Acetate	0.1131	0.0523	54	TM		*NT
33	TM	Ethyl tert Butyl Ether	0.2803	0.2390	15	TM		
34	TM	MEK (2-Butanone)	0.0446	0.0385	14	TM		
35	TM	Cis-1,2-DCE	0.1713	0.1561	8.9	TM		
36	TM	2,2-Dichloropropane	0.1681	0.1205	28	TM		
37	TML	2-Methylpentane	0.0000	0.0003	0.00	TML		
38	TM	3-Methylpentane	0.0000	0.0499	0.00	TM		
39	TM*	Chloroform	0.2054	0.1943	5.4	TM*		
40	TM	Bromochloromethane	0.0762	0.0765	0.45	TM		
		Average			11.3			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0121Z46.D

		Compound	MEAN	CCRF	%D		%Drift
41	SL	Dibromofluoromethane(S)	0.2640	0.2750	4.2	SL	4.1
42	TM	1,1,1-TCA	0.1957	0.1669	15	TM	
43	TML	Cyclohexane	0.1457	0.1307	10	TML	15
44	TM	1,1-Dichloropropene	0.1498	0.1247	17	TM	
45	TML	2,2,4-Trimethylpentane	0.2550	0.2278	11	TML	25
46	S	1,2-DCA-D4(S)	0.2363	0.2506	6.0	S	
47	TM	Carbon Tetrachloride	0.1702	0.1392	18	TM	
48	TM	Tert Amyl Methyl Ether	0.2660	0.2233	16	TM	
49	TM	Methylcyclopentane	0.0000	0.0163	0.00	TM	
50	TM	1,2-DCA	0.1396	0.1288	7.7	TM	
51	TM	Benzene	0.4695	0.4241	9.7	TM	
52	TM	TCE	0.1647	0.1557	5.5	TM	
53	TM	2-Pentanone	0.0670	0.0560	16	TM	
54	TM*	1,2-Dichloropropane	0.1054	0.0933	11	TM*	
55	TM	Bromodichloromethane	0.1220	0.1115	8.5	TM	
56	TM	Methyl Cyclohexane	0.1673	0.1513	9.6	TM	
57	TM	Dibromomethane	0.1210	0.1090	9.9	TM	
58	TM	MIBK (methyl isobutyl ketone)	0.0762	0.0658	14	TM	
59	TM	1-Bromo-2-chloroethane	0.0254	0.0208	18	TM	
60	TM	2-Chloroethyl vinyl ether	0.0000	0.0000	0.00	TM	
61	TM	Cis-1,3-Dichloropropene	0.1488	0.1310	12	TM	
62	TM*	Toluene	0.5235	0.4648	11	TM*	
63	TM	Trans-1,3-Dichloropropene	0.1287	0.1130	12	TM	
64	TM	1,1,2-TCA	0.1016	0.0932	8.3	TM	
65	TM	2-Hexanone	0.0304	0.0258	15	TM	
66	I	Chlorobenzene-D5 (IS)	ISTD			I	
67	S	Toluene-D8(S)	1.117	1.205	7.9	S	
68	TM	1,2-EDB	0.1289	0.1173	9.0	TM	
69	TM	Tetrachloroethene	0.2655	0.2294	14	TM	
70	TM	1-Chlorohexane	0.2009	0.1647	18	TM	
71	TM	1,1,1,2-Tetrachloroethane	0.1457	0.1302	11	TM	
72	TM	m&p-Xylene	0.5043	0.4679	7.2	TM	
73	TM	o-Xylene	0.5000	0.4698	6.1	TM	
74	TM	Styrene	0.3990	0.3779	5.3	TM	
75	SL	4-Bromofluorobenzene(S)	0.3960	0.4278	8.0	SL	0.99
76	TM	1,3-Dichloropropane	0.1859	0.1688	9.2	TM	
77	TML	Dibromochloromethane	0.1235	0.1095	11	TML	22
78	TM**	Chlorobenzene	0.4547	0.4144	8.9	TM**	
79	TM*	Ethylbenzene	0.6634	0.6075	8.4	TM*	
80	TM**L	Bromoform	0.1036	0.0841	19	TM**L	28
		Average			10.5		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/19/21
Data File: 0121Z46.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
82	TM	Isopropylbenzene	1.863	1.707	8.4	TM	
83	TM**	1,1,2,2-Tetrachloroethane	0.3752	0.3201	15	TM**	
84	TM	1,2,3-Trichloropropane	0.1543	0.1329	14	TM	
85	TM	t-1,4-Dichloro-2-Butene	0.0746	0.0539	28	TM	
86	TM	Bromobenzene	0.5821	0.5253	9.8	TM	
87	TM	n-Propylbenzene	2.012	1.875	6.8	TM	
88	TM	4-Ethyltoluene	1.817	1.680	7.6	TM	
89	TM	2-Chlorotoluene	1.356	1.295	4.5	TM	
90	TM	1,3,5-Trimethylbenzene	1.484	1.404	5.4	TM	
91	TM	4-Chlorotoluene	1.356	1.295	4.5	TM	
92	TM	Tert-Butylbenzene	1.482	1.326	11	TM	
93	TM	1,2,4-Trimethylbenzene	1.472	1.428	3.0	TM	
94	TM	Sec-Butylbenzene	2.006	1.818	9.4	TM	
95	TM	p-Isopropyltoluene	1.482	1.326	11	TM	
96	TML	Benzyl Chloride	0.6643	0.4422	33	TML	37
97	TM	1,3-DCB	1.162	1.074	7.6	TM	
98	TM	1,4-DCB	1.196	1.078	9.9	TM	
99	TM	n-Butylbenzene	1.431	1.275	11	TM	
100	TM	1,2-DCB	1.070	0.9902	7.5	TM	
101	TML	Hexachloroethane	0.3461	0.2849	18	TML	23
102	TML	1,2-Dibromo-3-chloropropane	0.1073	0.0902	16	TML	29
103	TM	1,2,4-Trichlorobenzene	1.006	0.8792	13	TM	
104	TM	Hexachlorobutadiene	0.5073	0.4138	18	TM	
105	TM	Naphthalene	1.493	1.336	10	TM	
106	TM	1,2,3-Trichlorobenzene	0.7515	0.6442	14	TM	
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			11.9		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z46.D Vial: 31
Acq On : 22 Jan 21 00:51 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 7:35 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3365132	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2762346	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1023808	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	925448	23.97	ppb		0.00
Spiked Amount 25.000			Recovery = 95.864%				
48) 1,2-DCA-D4(S)	5.71	65	843426	26.51	ppb		0.00
Spiked Amount 25.000			Recovery = 106.048%				
69) Toluene-D8(S)	8.03	98	3329014	26.98	ppb		0.00
Spiked Amount 25.000			Recovery = 107.912%				
77) 4-Bromofluorobenzene(S)	10.91	95	1181763	24.75	ppb		0.00
Spiked Amount 25.000			Recovery = 99.012%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	205674	11.94	ppb		99
4) Freon 114	1.16	85	78760	8.16	ppb		99
5) Chloromethane	1.22	50	79555	11.09	ppb		97
6) Vinyl chloride	1.28	62	186532	10.30	ppb		98
9) Bromomethane	1.53	94	54497	11.20	ppb		90
10) Chloroethane	1.60	64	46882	13.24	ppb		95
11) Dichlorofluoromethane	1.78	67	294147	9.88	ppb		100
12) Trichlorofluoromethane	1.82	101	331342	11.40	ppb		98
16) Acrolein	2.20	55	78484	113.50	ppb		89
17) Acetone	2.36	43	198655	44.93	ppb		99
18) Freon-113	2.32	101	62008	9.42	ppb		88
19) 1,1-DCE	2.30	61	183727	8.57	ppb		97
21) Acetonitrile	2.64	40	48307	127.44	ppb		94
22) t-Butanol	3.03	59	45576	92.30	ppb	#	90
23) Methyl Acetate	2.73	43	91235	8.00	ppb		100
24) Iodomethane	2.43	142	120597	5.06	ppb		96
25) Acrylonitrile	3.10	52	41522	8.43	ppb		91
26) Methylene chloride	2.81	49	86512	8.33	ppb		93
27) Carbon disulfide	2.49	76	173632	8.24	ppb		98
28) Methyl t-butyl ether (MtBE	3.18	73	334962	8.39	ppb		99
29) Trans-1,2-DCE	3.15	61	184771	8.70	ppb		96
31) Diisopropyl Ether	3.93	45	349902	9.14	ppb		100
33) 1,1-DCA	3.72	63	238829	9.18	ppb		93
34) Vinyl Acetate	3.86	43	70450	4.63	ppb	#	91
35) Ethyl tert Butyl Ether	4.49	59	321770	8.53	ppb		98
36) MEK (2-Butanone)	4.67	43	259357	43.23	ppb		94
37) Cis-1,2-DCE	4.60	61	210114	9.11	ppb		95
38) 2,2-Dichloropropane	4.59	77	162158	7.17	ppb		99
41) Chloroform	5.09	83	261548	9.46	ppb		97
42) Bromochloromethane	4.93	49	102996	10.05	ppb		96
44) 1,1,1-TCA	5.30	97	224704	8.53	ppb		97
45) Cyclohexane	5.36	56	175924	8.46	ppb		96
46) 1,1-Dichloropropene	5.53	75	167836	8.32	ppb		98
47) 2,2,4-Trimethylpentane	5.96	57	306653	7.55	ppb		100
49) Carbon Tetrachloride	5.52	117	187425	8.18	ppb		96
50) Tert Amyl Methyl Ether	6.01	73	300526	8.39	ppb		99
52) 1,2-DCA	5.81	62	173431	9.23	ppb		98
53) Benzene	5.78	78	570841	9.03	ppb		95
54) TCE	6.61	130	209578	9.45	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z46.D Vial: 31
Acq On : 22 Jan 21 00:51 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 7:35 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	2-Pentanone	6.87	43	942111	104.48 ppb	100
56)	1,2-Dichloropropane	6.86	63	125647	8.86 ppb	98
57)	Bromodichloromethane	7.20	83	150136	9.15 ppb	95
58)	Methyl Cyclohexane	6.84	83	203605	9.04 ppb	97
59)	Dibromomethane	6.99	174	146703	9.01 ppb	94
60)	MIBK (methyl isobutyl ket	7.94	43	442835	43.19 ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	28036	8.19 ppb	97
63)	Cis-1,3-Dichloropropene	7.73	75	176398	8.81 ppb	98
64)	Toluene	8.11	91	625665	8.88 ppb	97
65)	Trans-1,3-Dichloropropene	8.37	75	152065	8.78 ppb	97
66)	1,1,2-TCA	8.56	97	125403	9.17 ppb	96
67)	2-Hexanone	8.88	43	173312	42.31 ppb	99
70)	1,2-EDB	9.09	107	129575	9.10 ppb	95
71)	Tetrachloroethene	8.71	166	253432	8.64 ppb	99
72)	1-Chlorohexane	9.67	91	181972	8.20 ppb	98
73)	1,1,1,2-Tetrachloroethane	9.75	131	143850	8.94 ppb	96
74)	m&p-Xylene	9.93	91	1033957	18.55 ppb	99
75)	o-Xylene	10.35	91	519069	9.39 ppb	98
76)	Styrene	10.37	104	417558	9.47 ppb	92
78)	1,3-Dichloropropane	8.74	76	186487	9.08 ppb	98
79)	Dibromochloromethane	8.98	129	121006	7.77 ppb	99
80)	Chlorobenzene	9.65	112	457870	9.11 ppb	98
81)	Ethylbenzene	9.79	91	671261	9.16 ppb	100
82)	Bromoform	10.54	173	92919	7.16 ppb	95
84)	Isopropylbenzene	10.76	105	698862	9.16 ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	131100	8.53 ppb	97
86)	1,2,3-Trichloropropane	11.12	110	54415	8.61 ppb	97
87)	t-1,4-Dichloro-2-Butene	11.14	53	22067	7.22 ppb	90
88)	Bromobenzene	11.06	77	215132	9.02 ppb	99
89)	n-Propylbenzene	11.21	91	767903	9.32 ppb	99
90)	4-Ethyltoluene	11.34	105	688041	9.24 ppb	97
91)	2-Chlorotoluene	11.41	91	530126	9.55 ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	574945	9.46 ppb	94
93)	4-Chlorotoluene	11.41	91	530126	9.55 ppb	98
94)	Tert-Butylbenzene	11.76	119	543177	8.95 ppb	97
95)	1,2,4-Trimethylbenzene	11.81	105	584654	9.70 ppb	95
96)	Sec-Butylbenzene	12.00	105	744397	9.06 ppb	98
97)	p-Isopropyltoluene	11.76	119	543177	8.95 ppb	97
98)	Benzyl Chloride	12.35	91	181109	6.26 ppb	95
99)	1,3-DCB	12.10	146	439737	9.24 ppb	95
100)	1,4-DCB	12.20	146	441303	9.01 ppb	95
101)	n-Butylbenzene	12.61	91	522212	8.91 ppb	99
102)	1,2-DCB	12.60	146	405518	9.25 ppb	99
103)	Hexachloroethane	12.89	201	116661	7.71 ppb	98
104)	1,2-Dibromo-3-chloropropan	13.44	157	36950	7.11 ppb	95
105)	1,2,4-Trichlorobenzene	13.69	180	360060	8.74 ppb	100
106)	Hexachlorobutadiene	14.57	225	169475	8.16 ppb	96
107)	Naphthalene	14.62	128	547253	8.95 ppb	97
108)	1,2,3-Trichlorobenzene	14.89	180	263795	8.57 ppb	93

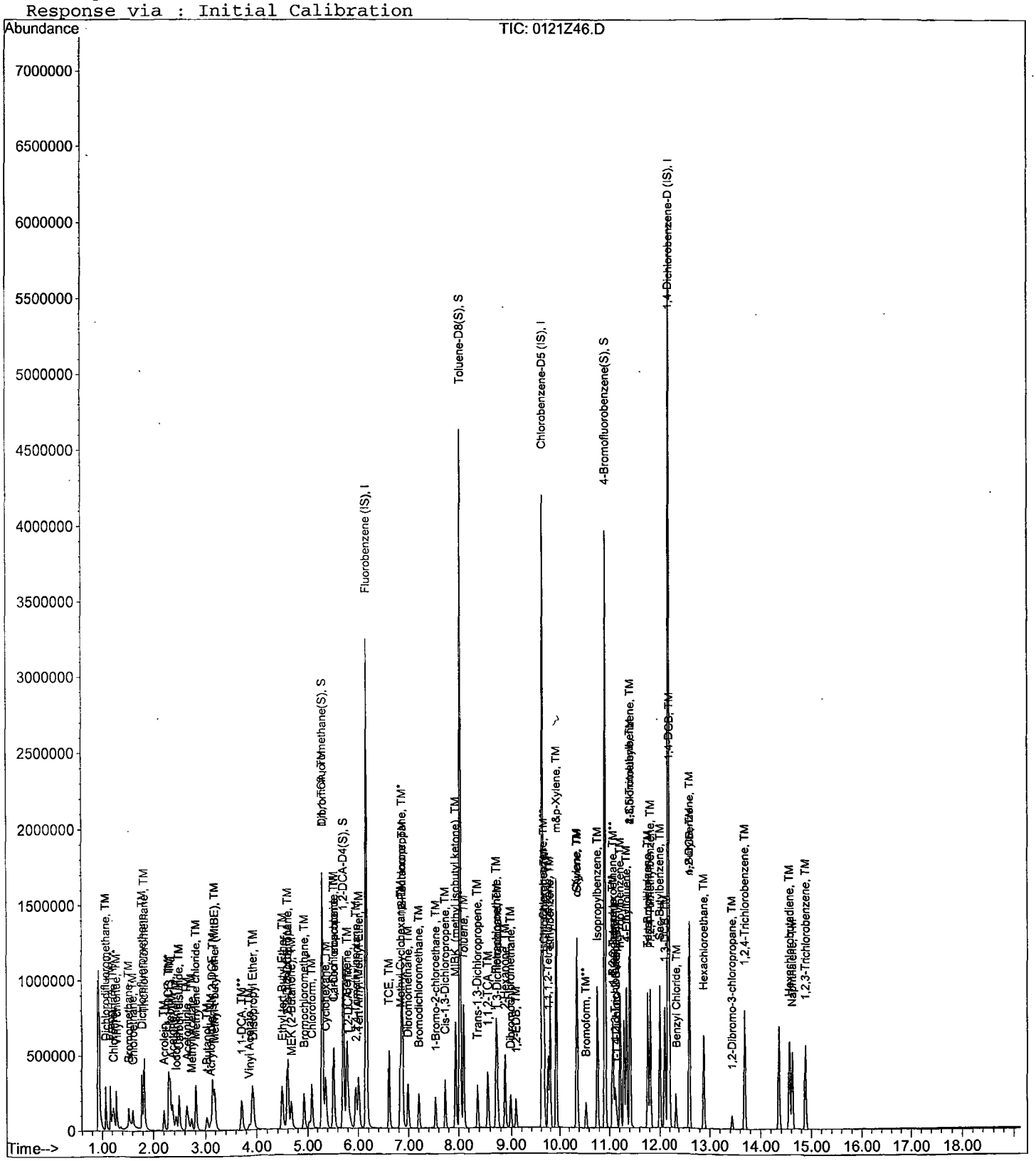
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z46.D Vial: 31
Acq On : 22 Jan 21 00:51 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 7:35 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1279	0.1305	2.0	TM		
4	TM	Freon 114	0.0758	0.0742	2.1	TM		
5	TM**L	Chloromethane	0.0912	0.0524	43	TM**L	1.6	
6	TM*	Vinyl chloride	0.1174	0.1184	0.89	TM*		
7		Butane	0.0000	0.0002	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
9	TML	Bromomethane	0.0406	0.0313	23	TML	0.17	
10	TML	Chloroethane	0.0419	0.0290	31	TML	0.23	
11	TM	Dichlorofluoromethane	0.2230	0.2300	3.1	TM		
12	TM	Trichlorofluoromethane	0.2100	0.2133	1.6	TM		
13	TM	Pentane	0.0000	0.0002	0.00	TM		
14	TM	Diethyl ether	0.0000	0.0001	0.00	TM		
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM		
16	TM	Acrolein	0.0000	0.0010	0.00	TM		
17	TM	Acetone	0.0316	0.0300	5.1	TM		
18	TM	Freon-113	0.0592	0.0581	1.8	TM		
19	TM*	1,1-DCE	0.1485	0.1556	4.8	TM*		
20	TM	2-Propanol	0.0000	0.0010	0.00	TM		
21	TM	Acetonitrile	0.0000	0.0006	0.00	TM		
22	TM	t-Butanol	0.0000	0.0028	0.00	TM		
23	TM	Methyl Acetate	0.0756	0.0704	6.9	TM		
24	TML	Iodomethane	0.1434	0.1343	6.4	TML	6.9	
25	TM	Acrylonitrile	0.0326	0.0315	3.3	TM		
26	TML	Methylene chloride	0.0948	0.0686	28	TML	4.7	
27	TM	Carbon disulfide	0.1466	0.1426	2.7	TM		
28	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2718	5.1	TM		
29	TM	Trans-1,2-DCE	0.1452	0.1532	5.5	TM		
30	TM	Hexane	0.0000	0.0001	0.00	TM		
31	TM	Diisopropyl Ether	0.2691	0.2860	6.3	TM		
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
33	TM**	1,1-DCA	0.1859	0.1937	4.2	TM**		
34	TM	Vinyl Acetate	0.0891	0.0612	31	TM		*NT
35	TM	Ethyl tert Butyl Ether	0.2467	0.2690	9.0	TM		
36	TM	MEK (2-Butanone)	0.0379	0.0384	1.5	TM		
37	TM	Cis-1,2-DCE	0.1702	0.1738	2.1	TM		
38	TM	2,2-Dichloropropane	0.1539	0.1491	3.1	TM		
39	TML	2-Methylpentane	0.0000	0.0009	0.00	TML		
40	TM	3-Methylpentane	0.0000	0.0551	0.00	TM		
		Average			6.0			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	Chloroform	0.2071	0.2193	5.9	TM*	
42	TM	Bromochloromethane	0.0759	0.0815	7.4	TM	
43	S	Dibromofluoromethane(S)	0.2724	0.3006	10	S	
44	TM	1,1,1-TCA	0.1905	0.2032	6.6	TM	
45	TM	Cyclohexane	0.1576	0.1647	4.5	TM	
46	TM	1,1-Dichloropropene	0.1411	0.1474	4.5	TM	
47	TM	2,2,4-Trimethylpentane	0.3087	0.3012	2.4	TM	
48	S	1,2-DCA-D4(S)	0.2534	0.2755	8.7	S	
49	TM	Carbon Tetrachloride	0.1676	0.1765	5.3	TM	
50	TM	Tert Amyl Methyl Ether	0.2307	0.2464	6.8	TM	
51	TM	Methylcyclopentane	0.0000	0.0160	0.00	TM	
52	TM	1,2-DCA	0.1374	0.1443	5.0	TM	
53	TM	Benzene	0.4429	0.4621	4.4	TM	
54	TM	TCE	0.1541	0.1647	6.9	TM	
55	TM	2-Pentanone	0.0000	0.0086	0.00	TM	
56	TM*	1,2-Dichloropropane	0.0964	0.1017	5.5	TM*	
57	TM	Bromodichloromethane	0.1171	0.1295	11	TM	
58	TM	Methyl Cyclohexane	0.1811	0.1912	5.6	TM	
59	TM	Dibromomethane	0.1030	0.1103	7.1	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0682	3.3	TM	
61	TM	1-Bromo-2-chloroethane	0.0219	0.0212	3.3	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0161	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.1409	0.1494	6.0	TM	
64	TM*	Toluene	0.4791	0.5068	5.8	TM*	
65	TML	Trans-1,3-Dichloropropene	0.1172	0.1272	8.6	TML	5.0
66	TM	1,1,2-TCA	0.0909	0.0979	7.8	TM	
67	TML	2-Hexanone	0.0257	0.0283	10	TML	0.26
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.203	1.344	12	S	
70	TM	1,2-EDB	0.1215	0.1346	11	TM	
71	TM	Tetrachloroethene	0.2530	0.2575	1.8	TM	
72	TM	1-Chlorohexane	0.1973	0.2066	4.7	TM	
73	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1521	4.6	TM	
74	TM	m&p-Xylene	0.5046	0.5544	9.9	TM	
75	TM	o-Xylene	0.5042	0.5517	9.4	TM	
76	TML	Styrene	0.3854	0.4348	13	TML	3.5
77	SL	4-Bromofluorobenzene(S)	0.4155	0.4600	11	SL	0.43
78	TM	1,3-Dichloropropane	0.1850	0.2004	8.3	TM	
79	TML	Dibromochloromethane	0.1225	0.1301	6.2	TML	9.6
80	TM**	Chlorobenzene	0.4524	0.4732	4.6	TM**	
		Average			6.4		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/26/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM*	Ethylbenzene	0.6710	0.7193	7.2	TM*		
82	TM**L	Bromoform	0.0962	0.0983	2.2	TM**L	14	
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
84	TM	Isopropylbenzene	1.927	2.078	7.9	TM		
85	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3624	0.65	TM**		
86	TM	1,2,3-Trichloropropane	0.1463	0.1553	6.1	TM		
87	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0667	4.7	TML	4.5	
88	TM	Bromobenzene	0.6094	0.6501	6.7	TM		
89	TML	n-Propylbenzene	2.101	2.254	7.3	TML	1.0	
90	TM	4-Ethyltoluene	1.890	2.018	6.8	TM		
91	TML	2-Chlorotoluene	1.428	1.558	9.1	TML	3.8	
92	TML	1,3,5-Trimethylbenzene	1.550	1.692	9.2	TML	2.3	
93	TML	4-Chlorotoluene	1.428	1.558	9.1	TML	3.8	
94	TM	Tert-Butylbenzene	1.523	1.635	7.4	TM		
95	TM	1,2,4-Trimethylbenzene	1.557	1.710	9.8	TM		
96	TM	Sec-Butylbenzene	2.101	2.273	8.2	TM		
97	TM	p-Isopropyltoluene	1.523	1.635	7.4	TM		
98	TML	Benzyl Chloride	0.5584	0.5041	9.7	TML	23	*NT
99	TM	1,3-DCB	1.159	1.217	5.0	TM		
100	TM	1,4-DCB	1.183	1.236	4.4	TM		
101	TML	n-Butylbenzene	1.436	1.585	10	TML	2.5	
102	TM	1,2-DCB	1.073	1.137	6.0	TM		
103	TML	Hexachloroethane	0.2910	0.3068	5.4	TML	14	
104	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1011	7.4	TML	9.5	
105	TM	1,2,4-Trichlorobenzene	0.9574	0.9962	4.1	TM		
106	TM	Hexachlorobutadiene	0.4832	0.4989	3.3	TM		
107	TML	Naphthalene	1.365	1.556	14	TML	1.8	
108	TM	1,2,3-Trichlorobenzene	0.6880	0.7293	6.0	TM		
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			6.9			

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3756224	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831709	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1036736	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1129298	27.59	ppb		0.00
Spiked Amount 25.000			Recovery = 110.380%				
48) 1,2-DCA-D4(S)	5.71	65	1034987	27.18	ppb		0.00
Spiked Amount 25.000			Recovery = 108.732%				
69) Toluene-D8(S)	8.03	98	3807191	27.93	ppb		0.00
Spiked Amount 25.000			Recovery = 111.740%				
77) 4-Bromofluorobenzene(S)	10.91	95	1302656	25.11	ppb		0.00
Spiked Amount 25.000			Recovery = 100.428%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	196039	10.20	ppb		100
4) Freon 114	1.16	85	111416	9.79	ppb		96
5) Chloromethane	1.22	50	78690	9.84	ppb		99
6) Vinyl chloride	1.28	62	177898	10.09	ppb		98
9) Bromomethane	1.53	94	47041	9.98	ppb		93
10) Chloroethane	1.60	64	43516	10.02	ppb	#	89
11) Dichlorofluoromethane	1.78	67	345501	10.31	ppb		99
12) Trichlorofluoromethane	1.82	101	320522	10.16	ppb		99
17) Acetone	2.36	43	225373	47.47	ppb		98
18) Freon-113	2.32	101	87352	9.82	ppb		96
19) 1,1-DCE	2.30	61	233754	10.48	ppb		97
23) Methyl Acetate	2.73	43	105825	9.31	ppb		96
24) Iodomethane	2.43	142	201746	10.69	ppb		97
25) Acrylonitrile	3.10	52	47310	9.67	ppb		95
26) Methylene chloride	2.80	49	103088	10.47	ppb		95
27) Carbon disulfide	2.48	76	214208	9.73	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	408363	10.51	ppb		96
29) Trans-1,2-DCE	3.15	61	230145	10.55	ppb		98
31) Diisopropyl Ether	3.92	45	429684	10.63	ppb		98
33) 1,1-DCA	3.71	63	291085	10.42	ppb		97
34) Vinyl Acetate	3.86	43	91981	6.87	ppb		100
35) Ethyl tert Butyl Ether	4.49	59	404126	10.90	ppb		100
36) MEK (2-Butanone)	4.67	43	288610	50.73	ppb		97
37) Cis-1,2-DCE	4.60	61	261085	10.21	ppb		97
38) 2,2-Dichloropropane	4.60	77	224031	9.69	ppb		94
41) Chloroform	5.09	83	329568	10.59	ppb		97
42) Bromochloromethane	4.93	49	122428	10.74	ppb		93
44) 1,1,1-TCA	5.30	97	305268	10.66	ppb		98
45) Cyclohexane	5.36	56	247420	10.45	ppb		95
46) 1,1-Dichloropropene	5.53	75	221541	10.45	ppb		97
47) 2,2,4-Trimethylpentane	5.96	57	452521	9.76	ppb		98
49) Carbon Tetrachloride	5.52	117	265246	10.53	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	370274	10.68	ppb		97
52) 1,2-DCA	5.81	62	216851	10.50	ppb		97
53) Benzene	5.78	78	694361	10.44	ppb		99
54) TCE	6.61	130	247508	10.69	ppb		97
56) 1,2-Dichloropropane	6.86	63	152791	10.55	ppb		99
57) Bromodichloromethane	7.20	83	194546	11.05	ppb		97
58) Methyl Cyclohexane	6.84	83	287227	10.56	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	165682	10.71	ppb		98
60)	MIBK (methyl isobutyl ket	7.94	43	512369	51.64	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	31813	9.67	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	224423	10.60	ppb		97
64)	Toluene	8.11	91	761446	10.58	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	191168	9.50	ppb		98
66)	1,1,2-TCA	8.56	97	147157	10.78	ppb		90
67)	2-Hexanone	8.88	43	212928	49.87	ppb		97
70)	1,2-EDB	9.09	107	152425	11.07	ppb		97
71)	Tetrachloroethene	8.72	166	291688	10.18	ppb		100
72)	1-Chlorohexane	9.66	91	234017	10.47	ppb		100
73)	1,1,1,2-Tetrachloroethane	9.75	131	172298	10.46	ppb		97
74)	m&p-Xylene	9.92	91	1255992	21.97	ppb		98
75)	o-Xylene	10.35	91	624956	10.94	ppb		100
76)	Styrene	10.37	104	492521	9.65	ppb		96
78)	1,3-Dichloropropane	8.74	76	227002	10.83	ppb		97
79)	Dibromochloromethane	8.98	129	147310	9.04	ppb		94
80)	Chlorobenzene	9.65	112	535936	10.46	ppb		96
81)	Ethylbenzene	9.79	91	814713	10.72	ppb		97
82)	Bromoform	10.54	173	111372	8.57	ppb		96
84)	Isopropylbenzene	10.76	105	861792	10.79	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	150275	9.93	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	64387	10.61	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.14	53	27666	9.55	ppb		97
88)	Bromobenzene	11.06	77	269608	10.67	ppb		97
89)	n-Propylbenzene	11.21	91	934604	10.10	ppb		98
90)	4-Ethyltoluene	11.34	105	836726	10.68	ppb		97
91)	2-Chlorotoluene	11.41	91	646243	10.38	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	701553	10.23	ppb		97
93)	4-Chlorotoluene	11.41	91	646243	10.38	ppb		97
94)	Tert-Butylbenzene	11.76	119	678226	10.74	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	709150	10.98	ppb		99
96)	Sec-Butylbenzene	12.00	105	942569	10.82	ppb		98
97)	p-Isopropyltoluene	11.76	119	678226	10.74	ppb		98
98)	Benzyl Chloride	12.35	91	209042	7.68	ppb		98
99)	1,3-DCB	12.10	146	504629	10.50	ppb		97
100)	1,4-DCB	12.20	146	512479	10.44	ppb		99
101)	n-Butylbenzene	12.61	91	657462	9.75	ppb		97
102)	1,2-DCB	12.60	146	471664	10.60	ppb		99
103)	Hexachloroethane	12.89	201	127238	8.61	ppb		94
104)	1,2-Dibromo-3-chloropropan	13.44	157	41917	9.05	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	413130	10.41	ppb		98
106)	Hexachlorobutadiene	14.57	225	206905	10.33	ppb		98
107)	Naphthalene	14.62	128	645090	10.18	ppb		99
108)	1,2,3-Trichlorobenzene	14.88	180	302422	10.60	ppb		100

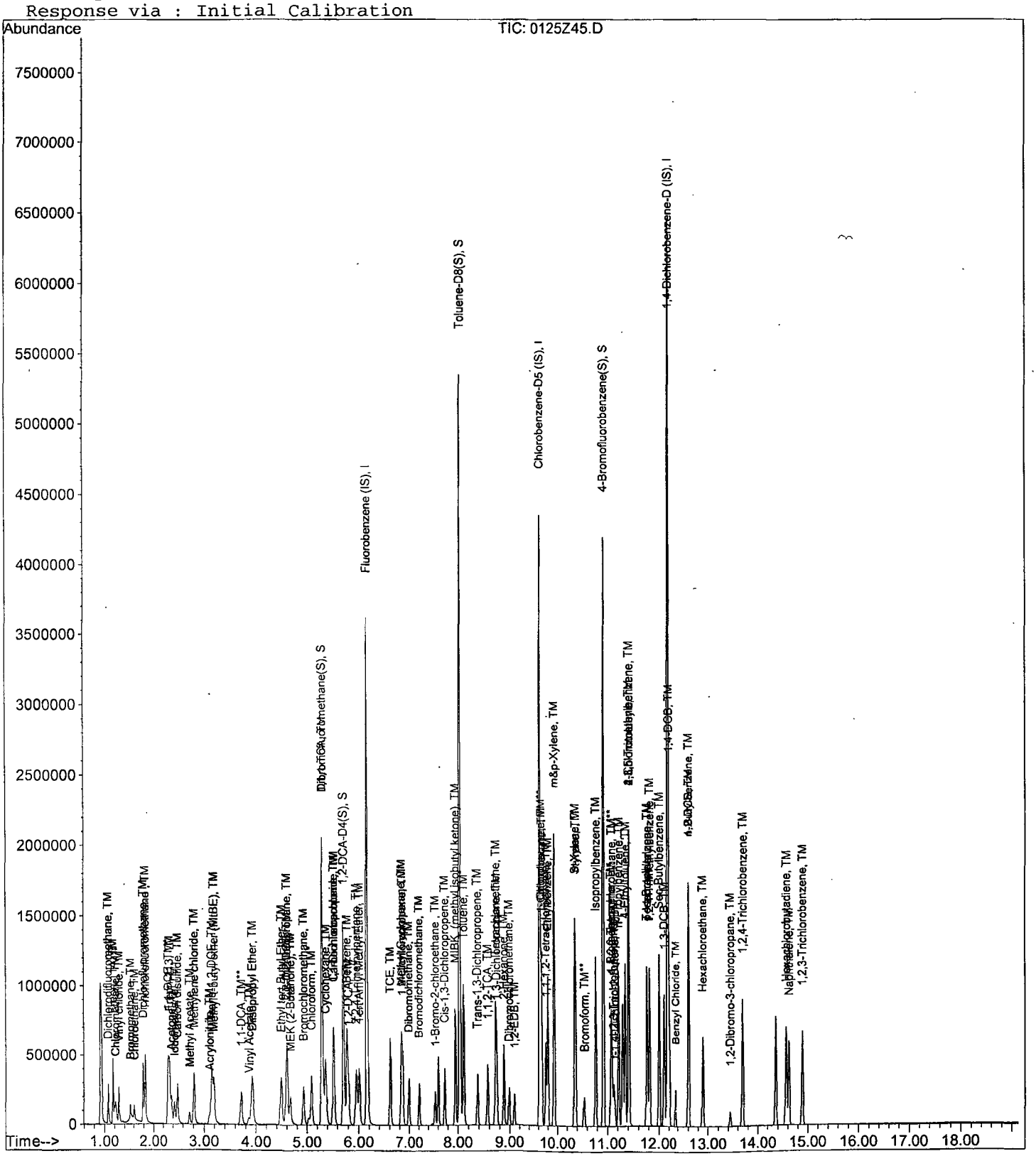
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/26/21
Matrix: Water Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1279	0.1395	9.1	TM		
4	TM	Freon 114	0.0758	0.0697	8.0	TM		
5	TM**L	Chloromethane	0.0912	0.0569	38	TM**L	7.8	
6	TM*	Vinyl chloride	0.1174	0.1274	8.5	TM*		
7		Butane	0.0000	0.0002	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
9	TML	Bromomethane	0.0406	0.0352	13	TML	15	
10	TML	Chloroethane	0.0419	0.0344	18	TML	21	
11	TM	Dichlorofluoromethane	0.2230	0.2334	4.7	TM		
12	TM	Trichlorofluoromethane	0.2100	0.2340	11	TM		
13	TM	Pentane	0.0000	0.0002	0.00	TM		
14	TM	Diethyl ether	0.0000	0.0005	0.00	TM		
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM		
16	TM	Acrolein	0.0000	0.0010	0.00	TM		
17	TM	Acetone	0.0316	0.0272	14	TM		
18	TM	Freon-113	0.0592	0.0542	8.5	TM		
19	TM*	1,1-DCE	0.1485	0.1524	2.6	TM*		
20	TM	2-Propanol	0.0000	0.0012	0.00	TM		
21	TM	Acetonitrile	0.0000	0.0004	0.00	TM		
22	TM	t-Butanol	0.0000	0.0028	0.00	TM		
23	TM	Methyl Acetate	0.0756	0.0681	10.0	TM		
24	TML	Iodomethane	0.1434	0.1242	13	TML	0.26	
25	TM	Acrylonitrile	0.0326	0.0316	2.9	TM		
26	TML	Methylene chloride	0.0948	0.0707	25	TML	8.6	
27	TM	Carbon disulfide	0.1466	0.1367	6.7	TM		
28	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2608	0.87	TM		
29	TM	Trans-1,2-DCE	0.1452	0.1499	3.2	TM		
30	TM	Hexane	0.0000	0.0001	0.00	TM		
31	TM	Diisopropyl Ether	0.2691	0.2725	1.3	TM		
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
33	TM**	1,1-DCA	0.1859	0.1951	5.0	TM**		
34	TM	Vinyl Acetate	0.0891	0.0391	56	TM		*NT
35	TM	Ethyl tert Butyl Ether	0.2467	0.2505	1.5	TM		
36	TM	MEK (2-Butanone)	0.0379	0.0347	8.5	TM		
37	TM	Cis-1,2-DCE	0.1702	0.1672	1.7	TM		
38	TM	2,2-Dichloropropane	0.1539	0.1258	18	TM		
39	TML	2-Methylpentane	0.0000	0.0003	0.00	TML		
40	TM	3-Methylpentane	0.0000	0.0535	0.00	TM		
		Average			7.4			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM*	Chloroform	0.2071	0.2133	3.0	TM*	
42	TM	Bromochloromethane	0.0759	0.0810	6.8	TM	
43	S	Dibromofluoromethane(S)	0.2724	0.3020	11	S	
44	TM	1,1,1-TCA	0.1905	0.1919	0.73	TM	
45	TM	Cyclohexane	0.1576	0.1578	0.13	TM	
46	TM	1,1-Dichloropropene	0.1411	0.1421	0.68	TM	
47	TM	2,2,4-Trimethylpentane	0.3087	0.2662	14	TM	
48	S	1,2-DCA-D4(S)	0.2534	0.2777	9.6	S	
49	TM	Carbon Tetrachloride	0.1676	0.1671	0.33	TM	
50	TM	Tert Amyl Methyl Ether	0.2307	0.2273	1.5	TM	
51	TM	Methylcyclopentane	0.0000	0.0180	0.00	TM	
52	TM	1,2-DCA	0.1374	0.1384	0.72	TM	
53	TM	Benzene	0.4429	0.4522	2.1	TM	
54	TM	TCE	0.1541	0.1592	3.3	TM	
55	TM	2-Pentanone	0.0000	0.0087	0.00	TM	
56	TM*	1,2-Dichloropropane	0.0964	0.0990	2.7	TM*	
57	TM	Bromodichloromethane	0.1171	0.1191	1.7	TM	
58	TM	Methyl Cyclohexane	0.1811	0.1692	6.6	TM	
59	TM	Dibromomethane	0.1030	0.1051	2.1	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0615	6.8	TM	
61	TM	1-Bromo-2-chloroethane	0.0219	0.0212	3.3	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0152	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.1409	0.1342	4.7	TM	
64	TM*	Toluene	0.4791	0.4811	0.42	TM*	
65	TML	Trans-1,3-Dichloropropene	0.1172	0.1123	4.1	TML	15
66	TM	1,1,2-TCA	0.0909	0.0942	3.6	TM	
67	TML	2-Hexanone	0.0257	0.0239	7.2	TML	15
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.203	1.309	8.8	S	
70	TM	1,2-EDB	0.1215	0.1271	4.6	TM	
71	TM	Tetrachloroethene	0.2530	0.2487	1.7	TM	
72	TM	1-Chlorohexane	0.1973	0.1885	4.5	TM	
73	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1440	1.0	TM	
74	TM	m&p-Xylene	0.5046	0.5252	4.1	TM	
75	TM	o-Xylene	0.5042	0.5171	2.6	TM	
76	TML	Styrene	0.3854	0.4167	8.1	TML	7.4
77	SL	4-Bromofluorobenzene(S)	0.4155	0.4443	6.9	SL	2.7
78	TM	1,3-Dichloropropane	0.1850	0.1889	2.1	TM	
79	TML	Dibromochloromethane	0.1225	0.1213	0.96	TML	15
80	TM**	Chlorobenzene	0.4524	0.4523	0.01	TM**	
		Average			3.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM*	Ethylbenzene	0.6710	0.6843	2.0	TM*	
82	TM**L	Bromoform	0.0962	0.0894	7.1	TM**L	21
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
84	TM	Isopropylbenzene	1.927	1.953	1.4	TM	
85	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3390	7.1	TM**	
86	TM	1,2,3-Trichloropropane	0.1463	0.1441	1.5	TM	
87	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0426	33	TML	33
88	TM	Bromobenzene	0.6094	0.6096	0.03	TM	
89	TML	n-Propylbenzene	2.101	2.150	2.4	TML	3.8
90	TM	4-Ethyltoluene	1.890	1.897	0.37	TM	
91	TML	2-Chlorotoluene	1.428	1.427	0.05	TML	5.2
92	TML	1,3,5-Trimethylbenzene	1.550	1.573	1.5	TML	5.0
93	TML	4-Chlorotoluene	1.428	1.427	0.05	TML	5.2
94	TM	Tert-Butylbenzene	1.523	1.521	0.14	TM	
95	TM	1,2,4-Trimethylbenzene	1.557	1.591	2.2	TM	
96	TM	Sec-Butylbenzene	2.101	2.138	1.8	TM	
97	TM	p-Isopropyltoluene	1.523	1.521	0.14	TM	
98	TML	Benzyl Chloride	0.5584	0.3705	34	TML	39
99	TM	1,3-DCB	1.159	1.157	0.16	TM	
100	TM	1,4-DCB	1.183	1.154	2.5	TM	
101	TML	n-Butylbenzene	1.436	1.454	1.3	TML	10
102	TM	1,2-DCB	1.073	1.074	0.10	TM	
103	TML	Hexachloroethane	0.2910	0.2932	0.75	TML	17
104	TML	1,2-Dibromo-3-chloropropane	0.0941	0.0932	0.99	TML	16
105	TM	1,2,4-Trichlorobenzene	0.9574	0.9120	4.7	TM	
106	TM	Hexachlorobutadiene	0.4832	0.4591	5.0	TM	
107	TML	Naphthalene	1.365	1.419	3.9	TML	7.5
108	TM	1,2,3-Trichlorobenzene	0.6880	0.6856	0.34	TM	
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.2		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z70.D Vial: 65
Acq On : 26 Jan 21 09:45 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3363515	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2555062	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	940096	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1015643	27.72	ppb		0.00
Spiked Amount 25.000			Recovery =	110.860%			
48) 1,2-DCA-D4(S)	5.71	65	933945	27.39	ppb		0.00
Spiked Amount 25.000			Recovery =	109.572%			
69) Toluene-D8(S)	8.03	98	3344038	27.19	ppb		0.00
Spiked Amount 25.000			Recovery =	108.772%			
77) 4-Bromofluorobenzene(S)	10.91	95	1135178	24.32	ppb		0.00
Spiked Amount 25.000			Recovery =	97.292%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	187702	10.91	ppb		99
4) Freon 114	1.16	85	93800	9.20	ppb		90
5) Chloromethane	1.22	50	76570	10.78	ppb		100
6) Vinyl chloride	1.28	62	171389	10.85	ppb		99
9) Bromomethane	1.52	94	47368	11.46	ppb		88
10) Chloroethane	1.60	64	46307	12.13	ppb		99
11) Dichlorofluoromethane	1.78	67	314068	10.47	ppb		99
12) Trichlorofluoromethane	1.82	101	314798	11.14	ppb		99
17) Acetone	2.36	43	183232	43.10	ppb		99
18) Freon-113	2.32	101	72912	9.15	ppb		95
19) 1,1-DCE	2.29	61	205026	10.26	ppb		97
23) Methyl Acetate	2.73	43	91619	9.00	ppb		90
24) Iodomethane	2.43	142	167116	10.03	ppb		95
25) Acrylonitrile	3.10	52	42553	9.71	ppb		94
26) Methylene chloride	2.80	49	95184	10.86	ppb		96
27) Carbon disulfide	2.49	76	183936	9.33	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	350817	10.09	ppb		99
29) Trans-1,2-DCE	3.14	61	201733	10.32	ppb		96
31) Diisopropyl Ether	3.92	45	366635	10.13	ppb		97
33) 1,1-DCA	3.71	63	262535	10.50	ppb		97
34) Vinyl Acetate	3.85	43	52621	4.39	ppb	#	91
35) Ethyl tert Butyl Ether	4.49	59	337026	10.15	ppb		96
36) MEK (2-Butanone)	4.67	43	233162	45.77	ppb		99
37) Cis-1,2-DCE	4.60	61	224982	9.83	ppb		95
38) 2,2-Dichloropropane	4.59	77	169279	8.18	ppb		96
41) Chloroform	5.09	83	286932	10.30	ppb		93
42) Bromochloromethane	4.92	49	108986	10.68	ppb		95
44) 1,1,1-TCA	5.30	97	258214	10.07	ppb		96
45) Cyclohexane	5.37	56	212345	10.01	ppb		100
46) 1,1-Dichloropropene	5.53	75	191187	10.07	ppb		94
47) 2,2,4-Trimethylpentane	5.95	57	358129	8.62	ppb		97
49) Carbon Tetrachloride	5.52	117	224820	9.97	ppb		97
50) Tert Amyl Methyl Ether	6.01	73	305767	9.85	ppb		94
52) 1,2-DCA	5.81	62	186206	10.07	ppb		94
53) Benzene	5.78	78	608454	10.21	ppb		98
54) TCE	6.61	130	214218	10.33	ppb		97
56) 1,2-Dichloropropane	6.86	63	133205	10.27	ppb		97
57) Bromodichloromethane	7.21	83	160247	10.17	ppb		99
58) Methyl Cyclohexane	6.84	83	227642	9.34	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z70.D Vial: 65
Acq On : 26 Jan 21 09:45 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
59)	Dibromomethane	6.99	174	141413	10.21	ppb	88
60)	MIBK (methyl isobutyl ket	7.94	43	413888	46.58	ppb	98
61)	1-Bromo-2-chloroethane	7.53	144	28493	9.67	ppb	97
63)	Cis-1,3-Dichloropropene	7.73	75	180555	9.53	ppb	95
64)	Toluene	8.11	91	647258	10.04	ppb	99
65)	Trans-1,3-Dichloropropene	8.37	75	151119	8.48	ppb	98
66)	1,1,2-TCA	8.56	97	126684	10.36	ppb	96
67)	2-Hexanone	8.88	43	160576	42.58	ppb	99
70)	1,2-EDB	9.09	107	129854	10.46	ppb	92
71)	Tetrachloroethene	8.71	166	254142	9.83	ppb	99
72)	1-Chlorohexane	9.67	91	192674	9.55	ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	147140	9.90	ppb	97
74)	m&p-Xylene	9.93	91	1073461	20.81	ppb	100
75)	o-Xylene	10.35	91	528526	10.26	ppb	100
76)	Styrene	10.37	104	425862	9.26	ppb	99
78)	1,3-Dichloropropane	8.74	76	193039	10.21	ppb	99
79)	Dibromochloromethane	8.98	129	123941	8.49	ppb	98
80)	Chlorobenzene	9.65	112	462281	10.00	ppb	100
81)	Ethylbenzene	9.79	91	699378	10.20	ppb	98
82)	Bromoform	10.54	173	91382	7.94	ppb	99
84)	Isopropylbenzene	10.76	105	734574	10.14	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	127488	9.29	ppb	96
86)	1,2,3-Trichloropropane	11.12	110	54198	9.85	ppb	97
87)	t-1,4-Dichloro-2-Butene	11.14	53	16013	6.66	ppb	97
88)	Bromobenzene	11.06	77	229226	10.00	ppb	96
89)	n-Propylbenzene	11.21	91	808445	9.62	ppb	97
90)	4-Ethyltoluene	11.34	105	713233	10.04	ppb	97
91)	2-Chlorotoluene	11.41	91	536756	9.48	ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	591635	9.50	ppb	100
93)	4-Chlorotoluene	11.41	91	536756	9.48	ppb	98
94)	Tert-Butylbenzene	11.76	119	571973	9.99	ppb	97
95)	1,2,4-Trimethylbenzene	11.81	105	598326	10.22	ppb	99
96)	Sec-Butylbenzene	12.00	105	803925	10.18	ppb	99
97)	p-Isopropyltoluene	11.76	119	571973	9.99	ppb	99
98)	Benzyl Chloride	12.35	91	139333	6.08	ppb	98
99)	1,3-DCB	12.10	146	434956	9.98	ppb	95
100)	1,4-DCB	12.20	146	433990	9.75	ppb	99
101)	n-Butylbenzene	12.61	91	546726	8.95	ppb	100
102)	1,2-DCB	12.60	146	403712	10.01	ppb	99
103)	Hexachloroethane	12.89	201	110247	8.30	ppb	92
104)	1,2-Dibromo-3-chloropropan	13.44	157	35034	8.43	ppb	91
105)	1,2,4-Trichlorobenzene	13.69	180	342933	9.53	ppb	99
106)	Hexachlorobutadiene	14.57	225	172654	9.50	ppb	95
107)	Naphthalene	14.62	128	533689	9.25	ppb	98
108)	1,2,3-Trichlorobenzene	14.89	180	257830	9.97	ppb	97

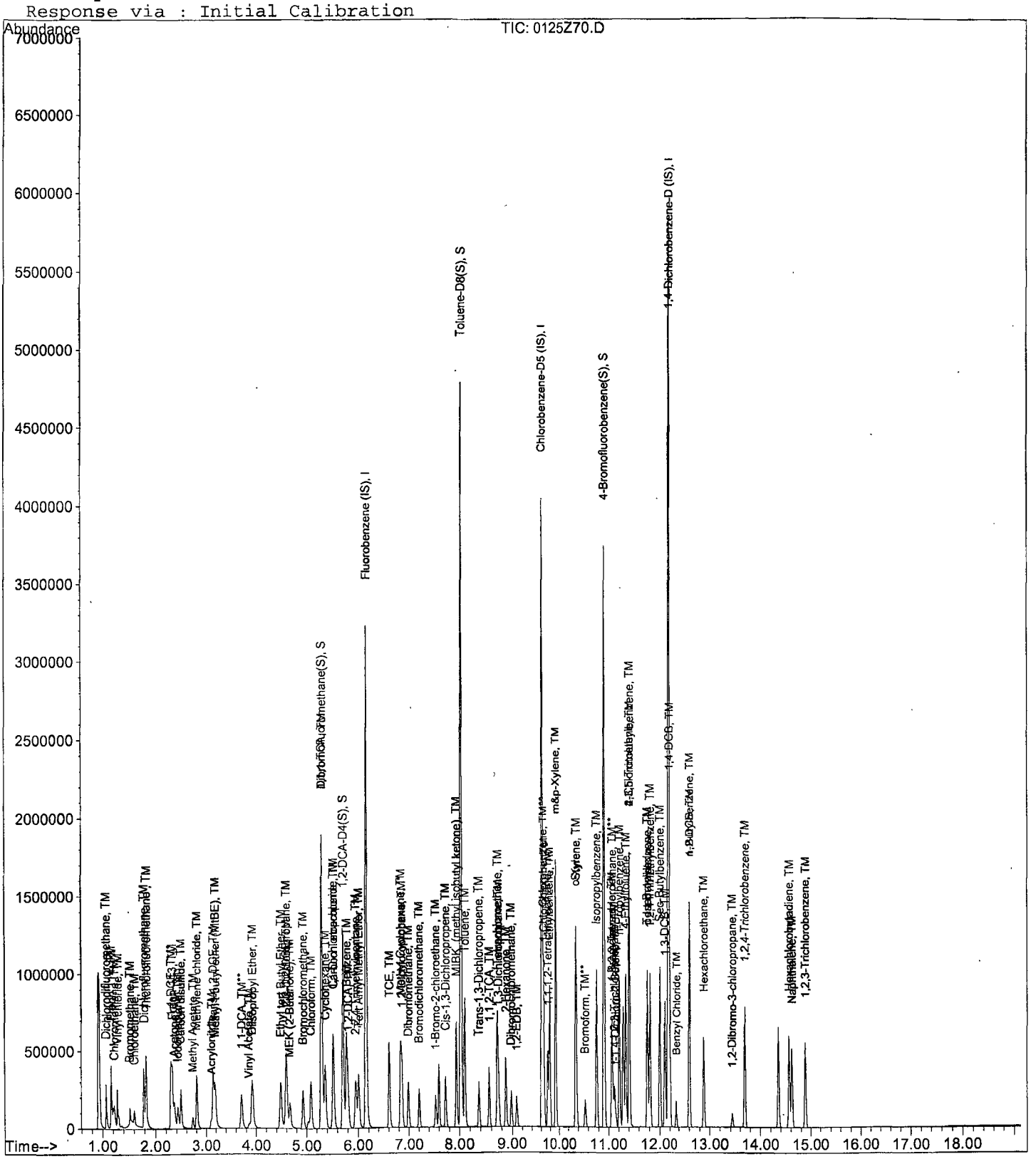
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z70.D
Acq On : 26 Jan 21 09:45
Sample : Ending CCV 10ug/L 1/25/21
Misc :

Vial: 65
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z11.D Vial: 9
Acq On : 21 Jan 21 11:27 Operator: LP,DG,CH
Sample : BA25433W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:00 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3792044	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3167357	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1201664	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1080704	24.78	ppb	0.00
Spiked Amount 25.000			Recovery =	99.104%		
48) 1,2-DCA-D4(S)	5.71	65	973379	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.612%		
69) Toluene-D8(S)	8.03	98	3770734	26.65	ppb	0.00
Spiked Amount 25.000			Recovery =	106.600%		
77) 4-Bromofluorobenzene(S)	10.92	95	1325722	24.27	ppb	0.00
Spiked Amount 25.000			Recovery =	97.084%		

Target Compounds Qvalue

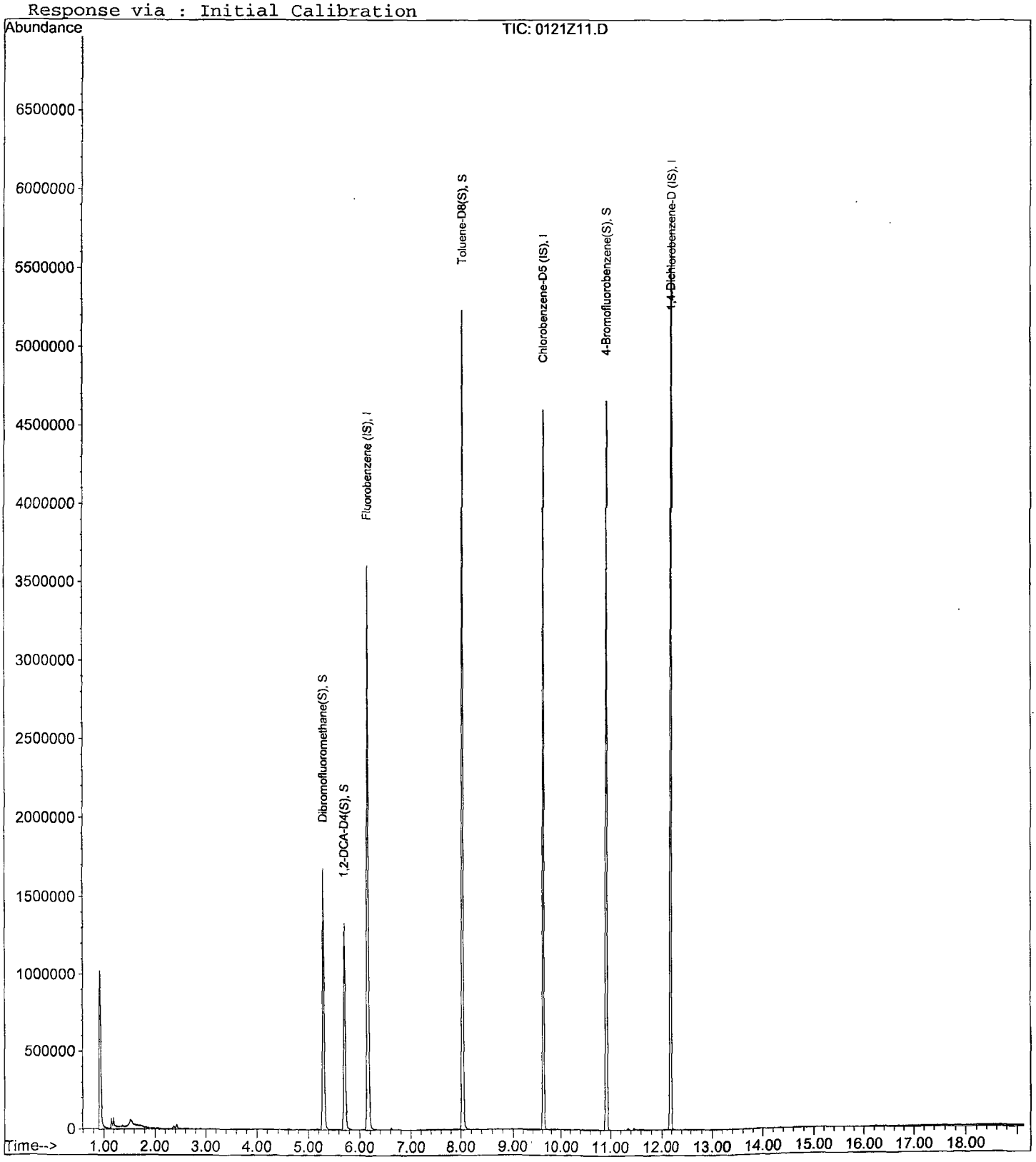
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z11.D Vial: 9
Acq On : 21 Jan 21 11:27 Operator: LP,DG,CH
Sample : BA25433W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:00 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z12.D Vial: 10
Acq On : 21 Jan 21 11:50 Operator: LP,DG,CH
Sample : BA25434W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:41 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3761567	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3127966	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1226752	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1049373	24.29	ppb	0.00
Spiked Amount 25.000			Recovery = 97.148%			
48) 1,2-DCA-D4(S)	5.71	65	971291	27.31	ppb	0.00
Spiked Amount 25.000			Recovery = 109.256%			
69) Toluene-D8(S)	8.03	98	3757575	26.89	ppb	0.00
Spiked Amount 25.000			Recovery = 107.568%			
77) 4-Bromofluorobenzene(S)	10.92	95	1322784	24.50	ppb	0.00
Spiked Amount 25.000			Recovery = 97.988%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

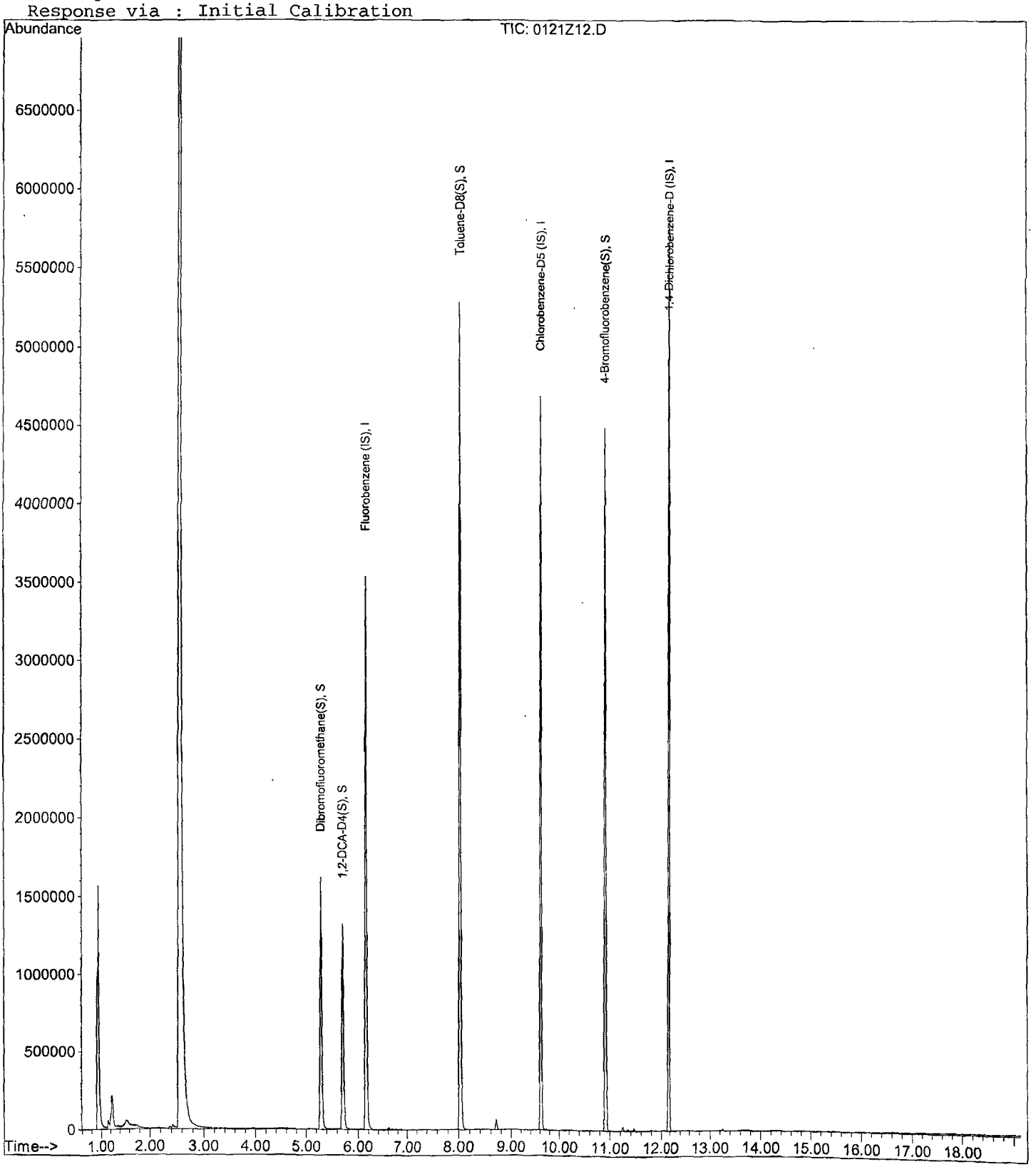
Data File : M:\ZEUS\DATA\210119\0121Z12.D
Acq On : 21 Jan 21 11:50
Sample : BA25434W01
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 8:41 2021

Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z26.D Vial: 11
Acq On : 21 Jan 21 17:11 Operator: LP,DG,CH
Sample : 210121B BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 7:36 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3920226	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3249974	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1206784	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1106435	24.55	ppb	0.00
Spiked Amount 25.000			Recovery =	98.208%		
48) 1,2-DCA-D4(S)	5.71	65	1029334	27.77	ppb	0.00
Spiked Amount 25.000			Recovery =	111.100%		
69) Toluene-D8(S)	8.03	98	3944804	27.17	ppb	0.00
Spiked Amount 25.000			Recovery =	108.688%		
77) 4-Bromofluorobenzene(S)	10.92	95	1396096	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.380%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

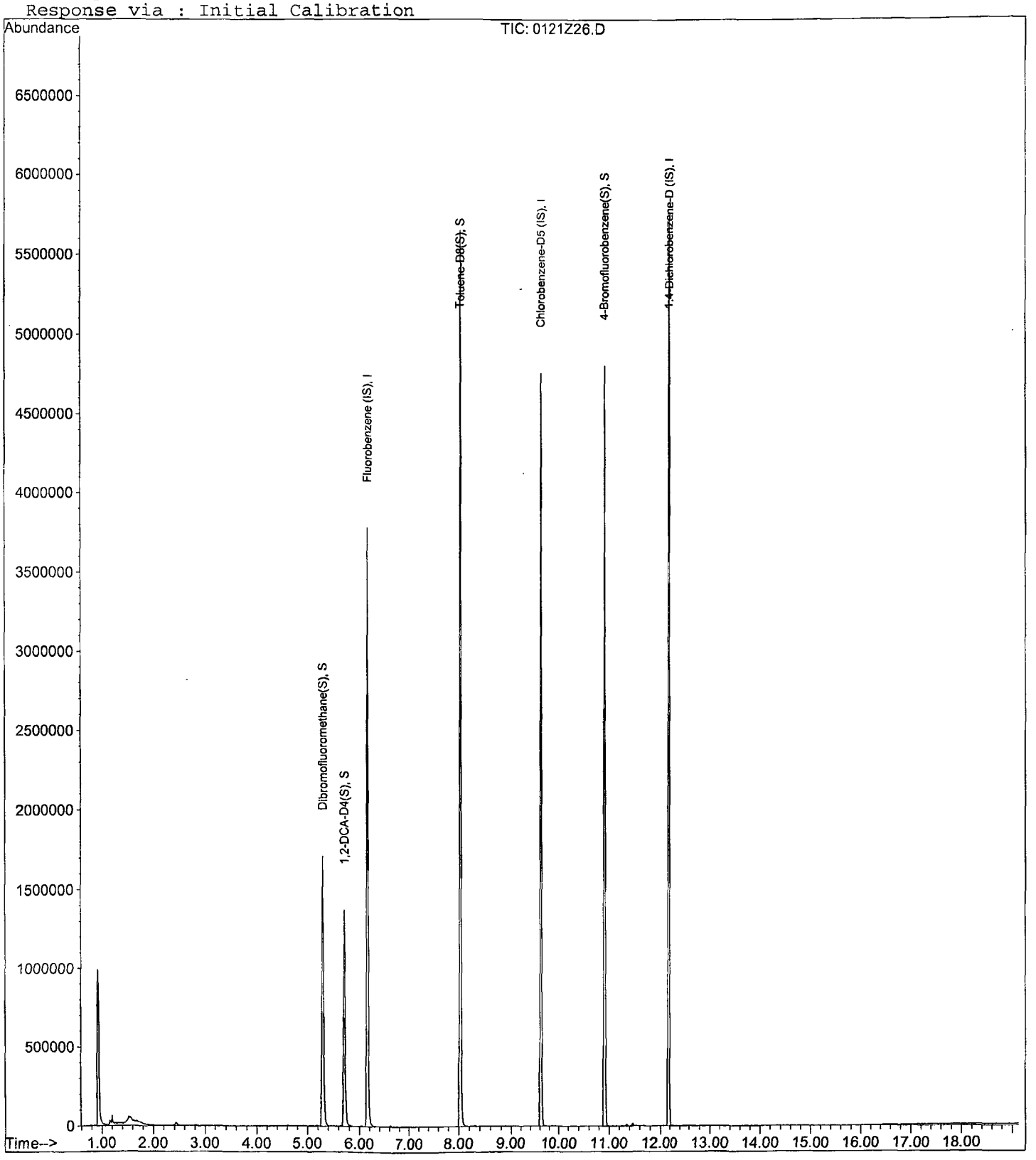
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z26.D
Acq On : 21 Jan 21 17:11
Sample : 210121B BLK
Misc :

Vial: 11
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 7:36 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D
Acq On : 26 Jan 21 01:42
Sample : 210125A BLK
Misc :

Vial: 44
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:35 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3705409	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2791950	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1050112	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1111099	27.52	ppb	0.00
Spiked Amount 25.000			Recovery =	110.088%		
48) 1,2-DCA-D4(S)	5.71	65	1057353	28.15	ppb	0.00
Spiked Amount 25.000			Recovery =	112.604%		
69) Toluene-D8(S)	8.03	98	3648886	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.616%		
77) 4-Bromofluorobenzene(S)	10.91	95	1244558	24.40	ppb	0.00
Spiked Amount 25.000			Recovery =	97.588%		

Target Compounds Qvalue

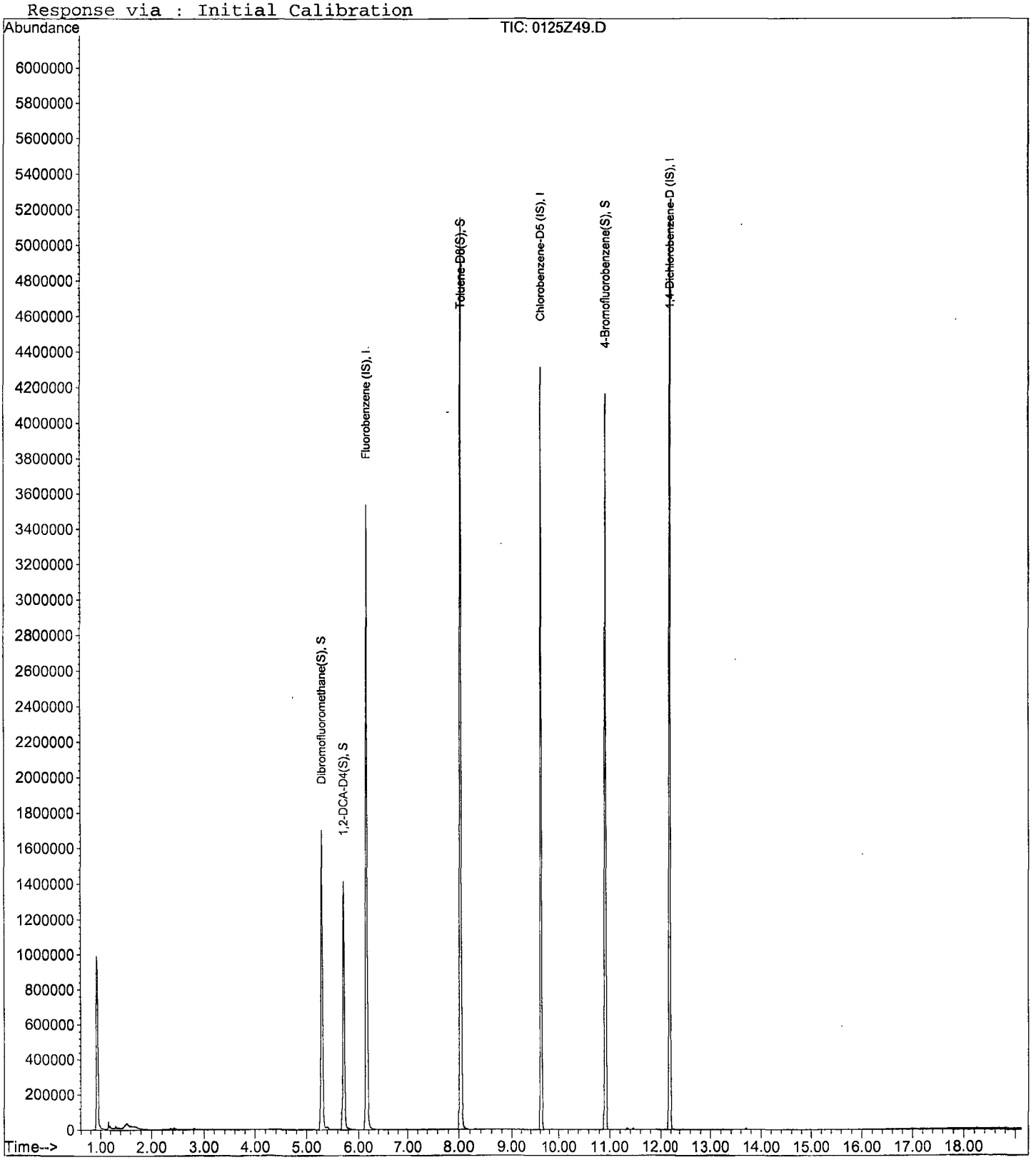
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:35 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z18.D Vial: 3
Acq On : 21 Jan 21 14:05 Operator: LP,DG,CH
Sample : 210121B LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 14:26 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3897426	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.63	117	3236770	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1196032	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1111171	24.78	ppb		0.00
Spiked Amount 25.000			Recovery = 99.140%				
48) 1,2-DCA-D4(S)	5.71	65	994655	27.00	ppb		0.00
Spiked Amount 25.000			Recovery = 107.984%				
69) Toluene-D8(S)	8.03	98	3876425	26.81	ppb		0.00
Spiked Amount 25.000			Recovery = 107.240%				
77) 4-Bromofluorobenzene(S)	10.92	95	1379257	24.67	ppb		0.00
Spiked Amount 25.000			Recovery = 98.660%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	235849	11.82	ppb		97
4) Freon 114	1.16	85	131614	11.43	ppb		88
5) Chloromethane	1.23	50	80757	9.65	ppb		98
6) Vinyl chloride	1.28	62	204002	9.72	ppb		99
9) Bromomethane	1.53	94	62519	11.08	ppb		98
10) Chloroethane	1.60	64	45195	10.55	ppb		98
11) Dichlorofluoromethane	1.78	67	354665	10.28	ppb		96
12) Trichlorofluoromethane	1.82	101	368401	10.94	ppb		99
16) Acrolein	2.21	55	92688	115.74	ppb		95
17) Acetone	2.37	43	259261	50.63	ppb		99
18) Freon-113	2.32	101	96624	12.68	ppb		89
19) 1,1-DCE	2.29	61	250743	10.10	ppb		95
21) Acetonitrile	2.64	40	55363	126.10	ppb		97
22) t-Butanol	3.04	59	73656	128.80	ppb		97
23) Methyl Acetate	2.73	43	124780	9.45	ppb		94
24) Iodomethane	2.43	142	223903	8.12	ppb		99
25) Acrylonitrile	3.11	52	55628	9.75	ppb		96
26) Methylene chloride	2.81	49	98680	8.16	ppb		100
27) Carbon disulfide	2.49	76	244992	10.05	ppb		98
28) Methyl t-butyl ether (MtBE	3.19	73	463787	10.03	ppb		93
29) Trans-1,2-DCE	3.15	61	239739	9.75	ppb		98
31) Diisopropyl Ether	3.93	45	449640	10.14	ppb		97
33) 1,1-DCA	3.71	63	299358	9.93	ppb		98
34) Vinyl Acetate	3.86	43	187536	10.64	ppb	#	93
35) Ethyl tert Butyl Ether	4.49	59	444684	10.17	ppb		100
36) MEK (2-Butanone)	4.68	43	370117	53.26	ppb		99
37) Cis-1,2-DCE	4.60	61	270609	10.13	ppb		98
38) 2,2-Dichloropropane	4.60	77	269497	10.28	ppb		100
41) Chloroform	5.09	83	330549	10.32	ppb		98
42) Bromochloromethane	4.93	49	120665	10.16	ppb		95
44) 1,1,1-TCA	5.30	97	311771	10.22	ppb		99
45) Cyclohexane	5.37	56	269803	11.27	ppb		98
46) 1,1-Dichloropropene	5.53	75	236186	10.11	ppb		98
47) 2,2,4-Trimethylpentane	5.96	57	567365	12.00	ppb		98
49) Carbon Tetrachloride	5.52	117	264781	9.98	ppb		95
50) Tert Amyl Methyl Ether	6.01	73	414883	10.01	ppb		97
52) 1,2-DCA	5.81	62	216034	9.93	ppb		96
53) Benzene	5.78	78	720986	9.85	ppb		97
54) TCE	6.61	130	251810	9.81	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z18.D Vial: 3
Acq On : 21 Jan 21 14:05 Operator: LP,DG,CH
Sample : 210121B LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 14:26 2021 Quant Results File: Z0119W.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.88	43	1382937	132.42	ppb	100
56)	1,2-Dichloropropane	6.86	63	161663	9.84	ppb	96
57)	Bromodichloromethane	7.21	83	191891	10.09	ppb	95
58)	Methyl Cyclohexane	6.84	83	322823	12.38	ppb	98
59)	Dibromomethane	6.99	174	186167	9.87	ppb	97
60)	MIBK (methyl isobutyl ket	7.95	43	640407	53.93	ppb	98
61)	1-Bromo-2-chloroethane	7.54	144	37632	9.49	ppb	89
63)	Cis-1,3-Dichloropropene	7.73	75	234574	10.11	ppb	100
64)	Toluene	8.11	91	801342	9.82	ppb	98
65)	Trans-1,3-Dichloropropene	8.37	75	206247	10.28	ppb	98
66)	1,1,2-TCA	8.56	97	162550	10.26	ppb	96
67)	2-Hexanone	8.88	43	263542	55.55	ppb	100
70)	1,2-EDB	9.09	107	172558	10.34	ppb	97
71)	Tetrachloroethene	8.72	166	339383	9.87	ppb	97
72)	1-Chlorohexane	9.67	91	262776	10.10	ppb	97
73)	1,1,1,2-Tetrachloroethane	9.75	131	184207	9.76	ppb	98
74)	m&p-Xylene	9.93	91	1327578	20.33	ppb	99
75)	o-Xylene	10.35	91	658484	10.17	ppb	97
76)	Styrene	10.37	104	539278	10.44	ppb	94
78)	1,3-Dichloropropane	8.74	76	240279	9.98	ppb	97
79)	Dibromochloromethane	8.99	129	157900	8.54	ppb	95
80)	Chlorobenzene	9.65	112	572488	9.73	ppb	97
81)	Ethylbenzene	9.79	91	868025	10.11	ppb	100
82)	Bromoform	10.54	173	128959	8.18	ppb	95
84)	Isopropylbenzene	10.77	105	938295	10.53	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	190690	10.62	ppb	98
86)	1,2,3-Trichloropropane	11.12	110	73212	9.92	ppb	98
87)	t-1,4-Dichloro-2-Butene	11.14	53	32063	8.99	ppb	98
88)	Bromobenzene	11.06	77	273277	9.81	ppb	95
89)	n-Propylbenzene	11.21	91	1014079	10.53	ppb	99
90)	4-Ethyltoluene	11.34	105	910775	10.47	ppb	96
91)	2-Chlorotoluene	11.41	91	667476	10.29	ppb	96
92)	1,3,5-Trimethylbenzene	11.41	105	741903	10.45	ppb	96
93)	4-Chlorotoluene	11.41	91	667476	10.29	ppb	96
94)	Tert-Butylbenzene	11.77	119	720328	10.16	ppb	98
95)	1,2,4-Trimethylbenzene	11.81	105	751630	10.68	ppb	98
96)	Sec-Butylbenzene	12.00	105	1020708	10.63	ppb	99
97)	p-Isopropyltoluene	11.77	119	720328	10.16	ppb	98
98)	Benzyl Chloride	12.35	91	335872	9.25	ppb	98
99)	1,3-DCB	12.10	146	570685	10.26	ppb	96
100)	1,4-DCB	12.20	146	560736	9.80	ppb	97
101)	n-Butylbenzene	12.61	91	731781	10.69	ppb	99
102)	1,2-DCB	12.60	146	518402	10.13	ppb	99
103)	Hexachloroethane	12.89	201	147316	8.20	ppb	99
104)	1,2-Dibromo-3-chloropropan	13.44	157	54802	8.78	ppb	97
105)	1,2,4-Trichlorobenzene	13.69	180	486250	10.10	ppb	96
106)	Hexachlorobutadiene	14.57	225	246309	10.15	ppb	95
107)	Naphthalene	14.62	128	785334	11.00	ppb	100
108)	1,2,3-Trichlorobenzene	14.88	180	367365	10.22	ppb	98

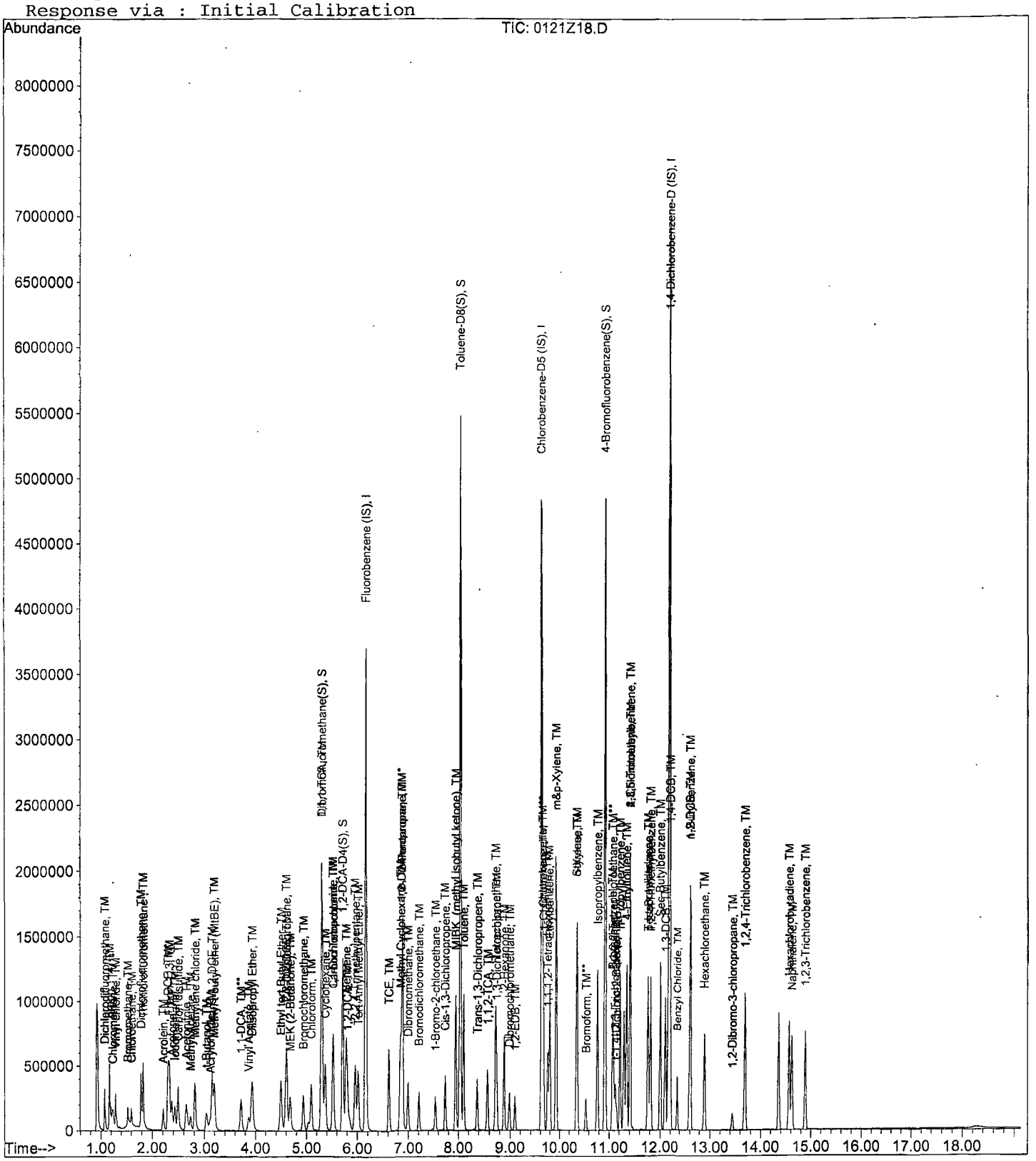
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z18.D Vial: 3
Acq On : 21 Jan 21 14:05 Operator: LP,DG,CH
Sample : 210121B LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 14:26 2021 Quant Results File: Z0119W.RES

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3779071	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2854072	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1061376	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1116776	27.12	ppb		0.00
Spiked Amount 25.000			Recovery = 108.496%				
48) 1,2-DCA-D4(S)	5.71	65	1028500	26.85	ppb		0.00
Spiked Amount 25.000			Recovery = 107.396%				
69) Toluene-D8(S)	8.03	98	3770706	27.45	ppb		0.00
Spiked Amount 25.000			Recovery = 109.800%				
77) 4-Bromofluorobenzene(S)	10.91	95	1290497	24.72	ppb		0.00
Spiked Amount 25.000			Recovery = 98.860%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	201869	10.44	ppb		98
4) Freon 114	1.16	85	111840	9.77	ppb		93
5) Chloromethane	1.22	50	78579	9.76	ppb		97
6) Vinyl chloride	1.28	62	178414	10.06	ppb		98
9) Bromomethane	1.53	94	49204	10.45	ppb		93
10) Chloroethane	1.60	64	45288	10.41	ppb		97
11) Dichlorofluoromethane	1.78	67	336577	9.98	ppb		99
12) Trichlorofluoromethane	1.82	101	326807	10.29	ppb		100
17) Acetone	2.36	43	228910	47.92	ppb		99
18) Freon-113	2.32	101	82280	9.19	ppb		96
19) 1,1-DCE	2.30	61	217778	9.70	ppb		99
23) Methyl Acetate	2.72	43	111140	9.72	ppb	#	88
24) Iodomethane	2.43	142	214127	11.17	ppb		98
25) Acrylonitrile	3.10	52	50563	10.27	ppb		94
26) Methylene chloride	2.81	49	101208	10.17	ppb		97
27) Carbon disulfide	2.49	76	215360	9.72	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	419168	10.73	ppb		100
29) Trans-1,2-DCE	3.14	61	213459	9.72	ppb		89
31) Diisopropyl Ether	3.92	45	437483	10.76	ppb		99
33) 1,1-DCA	3.71	63	276515	9.84	ppb		100
34) Vinyl Acetate	3.86	43	93800	6.96	ppb		98
35) Ethyl tert Butyl Ether	4.49	59	409605	10.98	ppb		99
36) MEK (2-Butanone)	4.67	43	298189	52.10	ppb		98
37) Cis-1,2-DCE	4.60	61	246740	9.59	ppb		92
38) 2,2-Dichloropropane	4.59	77	210178	9.04	ppb		98
41) Chloroform	5.09	83	306115	9.78	ppb		100
42) Bromochloromethane	4.93	49	114781	10.01	ppb		98
44) 1,1,1-TCA	5.30	97	282065	9.79	ppb		96
45) Cyclohexane	5.36	56	248347	10.42	ppb		97
46) 1,1-Dichloropropene	5.53	75	211480	9.91	ppb		99
47) 2,2,4-Trimethylpentane	5.95	57	459589	9.85	ppb		99
49) Carbon Tetrachloride	5.52	117	245856	9.70	ppb		95
50) Tert Amyl Methyl Ether	6.01	73	378362	10.85	ppb		100
52) 1,2-DCA	5.81	62	203368	9.79	ppb		98
53) Benzene	5.78	78	653215	9.76	ppb		98
54) TCE	6.61	130	227305	9.76	ppb		94
56) 1,2-Dichloropropane	6.86	63	149022	10.23	ppb		98
57) Bromodichloromethane	7.20	83	182273	10.29	ppb		95
58) Methyl Cyclohexane	6.84	83	284070	10.38	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

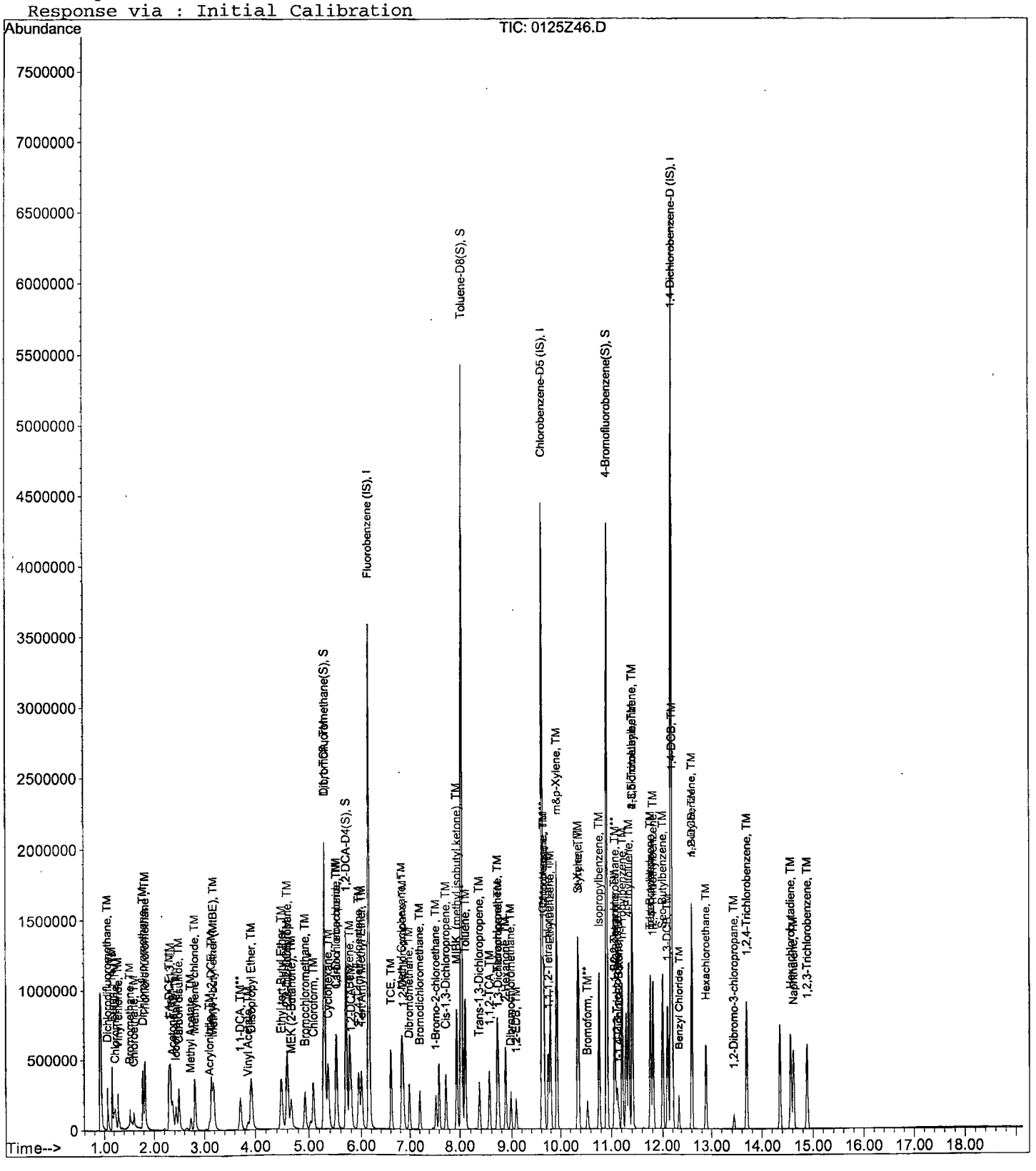
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	153534	9.86	ppb		92
60)	MIBK (methyl isobutyl ket	7.94	43	526580	52.75	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	34655	10.47	ppb		90
63)	Cis-1,3-Dichloropropene	7.73	75	211741	9.94	ppb		98
64)	Toluene	8.11	91	726129	10.03	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	179656	8.93	ppb		98
66)	1,1,2-TCA	8.56	97	139317	10.14	ppb		95
67)	2-Hexanone	8.88	43	213568	49.73	ppb		99
70)	1,2-EDB	9.09	107	144176	10.39	ppb		95
71)	Tetrachloroethene	8.72	166	270622	9.37	ppb		96
72)	1-Chlorohexane	9.66	91	236087	10.48	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	161181	9.71	ppb		97
74)	m&p-Xylene	9.93	91	1174916	20.40	ppb		98
75)	o-Xylene	10.35	91	587055	10.20	ppb		97
76)	Styrene	10.37	104	461101	8.98	ppb		96
78)	1,3-Dichloropropane	8.74	76	215399	10.20	ppb		97
79)	Dibromochloromethane	8.98	129	141354	8.65	ppb		93
80)	Chlorobenzene	9.65	112	501995	9.72	ppb		96
81)	Ethylbenzene	9.79	91	768241	10.03	ppb		100
82)	Bromoform	10.54	173	103376	8.02	ppb		99
84)	Isopropylbenzene	10.76	105	814669	9.96	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	148195	9.57	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	59182	9.53	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.15	53	28305	9.54	ppb		89
88)	Bromobenzene	11.06	77	252979	9.78	ppb		95
89)	n-Propylbenzene	11.21	91	882144	9.29	ppb		99
90)	4-Ethyltoluene	11.34	105	843255	10.51	ppb		96
91)	2-Chlorotoluene	11.41	91	607319	9.50	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	657322	9.35	ppb		96
93)	4-Chlorotoluene	11.41	91	607319	9.50	ppb		97
94)	Tert-Butylbenzene	11.76	119	626295	9.69	ppb		98
95)	1,2,4-Trimethylbenzene	11.81	105	653226	9.88	ppb		99
96)	Sec-Butylbenzene	12.00	105	873578	9.80	ppb		98
97)	p-Isopropyltoluene	11.76	119	626295	9.69	ppb		99
98)	Benzyl Chloride	12.35	91	194595	7.13	ppb		99
99)	1,3-DCB	12.10	146	474189	9.64	ppb		98
100)	1,4-DCB	12.20	146	480348	9.56	ppb		97
101)	n-Butylbenzene	12.61	91	619846	8.99	ppb		99
102)	1,2-DCB	12.60	146	444772	9.77	ppb		98
103)	Hexachloroethane	12.89	201	119451	8.03	ppb		95
104)	1,2-Dibromo-3-chloropropan	13.44	157	39438	8.40	ppb	#	79
105)	1,2,4-Trichlorobenzene	13.69	180	411234	10.12	ppb		98
106)	Hexachlorobutadiene	14.57	225	192291	9.37	ppb		97
107)	Naphthalene	14.62	128	602249	9.25	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	277075	9.49	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z52.D
Acq On : 26 Jan 21 02:50
Sample : BA25434W02,3,6 MS 10ug/L
Misc :

Vial: 47
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3843291	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2892398	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1054208	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1116194	26.66	ppb	0.00
Spiked Amount 25.000			Recovery = 106.628%			
48) 1,2-DCA-D4(S)	5.71	65	1031220	26.47	ppb	0.00
Spiked Amount 25.000			Recovery = 105.884%			
69) Toluene-D8(S)	8.03	98	3767095	27.06	ppb	0.00
Spiked Amount 25.000			Recovery = 108.240%			
77) 4-Bromofluorobenzene(S)	10.91	95	1294592	24.49	ppb	0.00
Spiked Amount 25.000			Recovery = 97.948%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	226029	11.50	ppb	97
4) Freon 114	1.16	85	123269	10.58	ppb	94
5) Chloromethane	1.22	50	286724	37.63	ppb	99
6) Vinyl chloride	1.28	62	192510	10.67	ppb	97
9) Bromomethane	1.53	94	40751	8.17	ppb	85
10) Chloroethane	1.60	64	46517	10.52	ppb	97
11) Dichlorofluoromethane	1.78	67	344229	10.04	ppb	99
12) Trichlorofluoromethane	1.82	101	363974	11.27	ppb	97
17) Acetone	2.36	43	229068	47.15	ppb	100
18) Freon-113	2.32	101	87344	9.60	ppb	96
19) 1,1-DCE	2.30	61	240833	10.55	ppb	99
23) Methyl Acetate	2.73	43	119762	10.30	ppb	94
24) Iodomethane	2.43	142	260030	12.98	ppb	94
25) Acrylonitrile	3.10	52	44818	8.95	ppb	97
26) Methylene chloride	2.81	49	98144	9.60	ppb	95
27) Carbon disulfide	2.49	76	216128	9.59	ppb	100
28) Methyl t-butyl ether (MtBE	3.19	73	395849	9.96	ppb	99
29) Trans-1,2-DCE	3.14	61	231009	10.35	ppb	94
31) Diisopropyl Ether	3.92	45	416059	10.06	ppb	97
33) 1,1-DCA	3.71	63	295339	10.34	ppb	98
34) Vinyl Acetate	3.86	43	140753	10.28	ppb	99
35) Ethyl tert Butyl Ether	4.49	59	386509	10.19	ppb	98
36) MEK (2-Butanone)	4.67	43	290980	49.99	ppb	99
37) Cis-1,2-DCE	4.60	61	259328	9.91	ppb	96
38) 2,2-Dichloropropane	4.59	77	232374	9.82	ppb	100
41) Chloroform	5.09	83	330348	10.38	ppb	99
42) Bromochloromethane	4.93	49	116300	9.97	ppb	98
44) 1,1,1-TCA	5.30	97	314504	10.74	ppb	99
45) Cyclohexane	5.36	56	257001	10.61	ppb	98
46) 1,1-Dichloropropene	5.53	75	228572	10.53	ppb	97
47) 2,2,4-Trimethylpentane	5.95	57	483031	10.18	ppb	100
49) Carbon Tetrachloride	5.52	117	277209	10.76	ppb	96
50) Tert Amyl Methyl Ether	6.01	73	355172	10.01	ppb	98
52) 1,2-DCA	5.81	62	203381	9.63	ppb	98
53) Benzene	5.78	78	698249	10.26	ppb	98
54) TCE	6.61	130	235416	9.94	ppb	99
56) 1,2-Dichloropropane	6.86	63	153482	10.36	ppb	98
57) Bromodichloromethane	7.20	83	183487	10.19	ppb	99
58) Methyl Cyclohexane	6.83	83	297058	10.67	ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z52.D Vial: 47
Acq On : 26 Jan 21 02:50 Operator: LP,DG,CH
Sample : BA25434W02,3,6 MS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	158777	10.03	ppb	#	89
60)	MIBK (methyl isobutyl ket	7.94	43	532529	52.45	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	30262	8.99	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	214567	9.91	ppb		99
64)	Toluene	8.11	91	779921	10.59	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	180456	8.83	ppb		99
66)	1,1,2-TCA	8.56	97	140184	10.03	ppb		96
67)	2-Hexanone	8.88	43	221952	50.74	ppb		98
70)	1,2-EDB	9.09	107	143690	10.22	ppb		98
71)	Tetrachloroethene	8.72	166	297459	10.16	ppb		98
72)	1-Chlorohexane	9.67	91	240137	10.52	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	171638	10.20	ppb		97
74)	m&p-Xylene	9.92	91	1271192	21.77	ppb		97
75)	o-Xylene	10.35	91	625037	10.71	ppb		97
76)	Styrene	10.37	104	475313	9.13	ppb		99
78)	1,3-Dichloropropane	8.74	76	216121	10.10	ppb		98
79)	Dibromochloromethane	8.98	129	140606	8.51	ppb		100
80)	Chlorobenzene	9.65	112	525388	10.04	ppb		98
81)	Ethylbenzene	9.79	91	832677	10.73	ppb		98
82)	Bromoform	10.54	173	104348	7.99	ppb		97
84)	Isopropylbenzene	10.76	105	868238	10.69	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	158809	10.33	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	60911	9.88	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	18038	6.68	ppb		99
88)	Bromobenzene	11.06	77	261661	10.18	ppb		96
89)	n-Propylbenzene	11.21	91	958553	10.19	ppb		98
90)	4-Ethyltoluene	11.34	105	838315	10.52	ppb		99
91)	2-Chlorotoluene	11.41	91	645787	10.20	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	701477	10.06	ppb		99
93)	4-Chlorotoluene	11.41	91	645787	10.20	ppb		96
94)	Tert-Butylbenzene	11.76	119	681076	10.60	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	708150	10.78	ppb		99
96)	Sec-Butylbenzene	12.00	105	961521	10.85	ppb		99
97)	p-Isopropyltoluene	11.76	119	681076	10.60	ppb		98
98)	Benzyl Chloride	12.34	91	204346	7.45	ppb		97
99)	1,3-DCB	12.10	146	494070	10.11	ppb		98
100)	1,4-DCB	12.20	146	494502	9.91	ppb		98
101)	n-Butylbenzene	12.61	91	666535	9.72	ppb		98
102)	1,2-DCB	12.60	146	451864	9.99	ppb		97
103)	Hexachloroethane	12.89	201	130353	8.66	ppb		98
104)	1,2-Dibromo-3-chloropropan	13.44	157	40477	8.65	ppb	#	83
105)	1,2,4-Trichlorobenzene	13.69	180	405760	10.05	ppb		95
106)	Hexachlorobutadiene	14.57	225	209549	10.28	ppb		97
107)	Naphthalene	14.62	128	616144	9.53	ppb		100
108)	1,2,3-Trichlorobenzene	14.88	180	287571	9.91	ppb		98

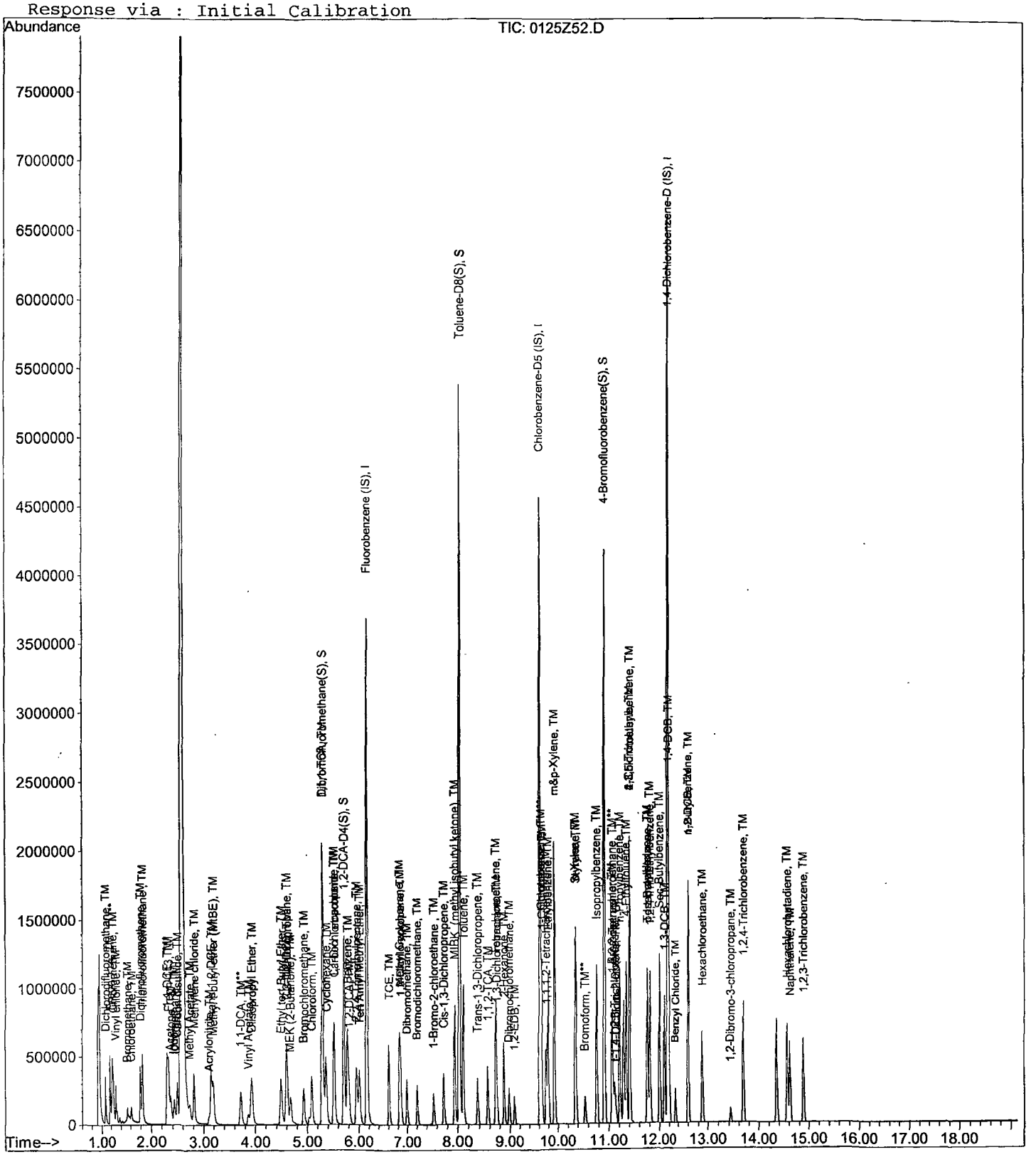
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z52.D Vial: 47
Acq On : 26 Jan 21 02:50 Operator: LP,DG,CH
Sample : BA25434W02,3,6 MS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z53.D Vial: 48
Acq On : 26 Jan 21 03:14 Operator: LP,DG,CH
Sample : BA25434W03,2,6 MSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3843864	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2910475	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1050624	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1133292	27.06	ppb	0.00
Spiked Amount 25.000			Recovery =	108.244%		
48) 1,2-DCA-D4(S)	5.71	65	1045825	26.84	ppb	0.00
Spiked Amount 25.000			Recovery =	107.364%		
69) Toluene-D8(S)	8.03	98	3826413	27.32	ppb	0.00
Spiked Amount 25.000			Recovery =	109.264%		
77) 4-Bromofluorobenzene(S)	10.91	95	1317907	24.75	ppb	0.00
Spiked Amount 25.000			Recovery =	98.992%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	213697	10.87	ppb	99
4) Freon 114	1.16	85	118000	10.13	ppb	91
5) Chloromethane	1.22	50	266402	34.88	ppb	99
6) Vinyl chloride	1.28	62	181153	10.04	ppb	100
9) Bromomethane	1.53	94	44460	9.08	ppb	95
10) Chloroethane	1.60	64	46354	10.48	ppb	98
11) Dichlorofluoromethane	1.78	67	330259	9.63	ppb	95
12) Trichlorofluoromethane	1.82	101	354324	10.97	ppb	100
17) Acetone	2.36	43	238170	49.02	ppb	97
18) Freon-113	2.32	101	87096	9.57	ppb	96
19) 1,1-DCE	2.30	61	235280	10.30	ppb	99
23) Methyl Acetate	2.73	43	120656	10.37	ppb	89
24) Iodomethane	2.43	142	283903	14.00	ppb	99
25) Acrylonitrile	3.10	52	48424	9.67	ppb	97
26) Methylene chloride	2.81	49	94128	9.13	ppb	93
27) Carbon disulfide	2.49	76	213760	9.48	ppb	98
28) Methyl t-butyl ether (MtBE	3.18	73	406768	10.23	ppb	99
29) Trans-1,2-DCE	3.15	61	221800	9.93	ppb	97
31) Diisopropyl Ether	3.92	45	422254	10.21	ppb	99
33) 1,1-DCA	3.71	63	290930	10.18	ppb	94
34) Vinyl Acetate	3.86	43	148369	10.83	ppb	96
35) Ethyl tert Butyl Ether	4.49	59	395135	10.42	ppb	99
36) MEK (2-Butanone)	4.67	43	297928	51.18	ppb	99
37) Cis-1,2-DCE	4.60	61	254884	9.74	ppb	95
38) 2,2-Dichloropropane	4.59	77	224392	9.49	ppb	99
41) Chloroform	5.09	83	326220	10.25	ppb	98
42) Bromochloromethane	4.93	49	115720	9.92	ppb	96
44) 1,1,1-TCA	5.30	97	306652	10.47	ppb	100
45) Cyclohexane	5.37	56	248229	10.24	ppb	97
46) 1,1-Dichloropropene	5.53	75	225124	10.37	ppb	98
47) 2,2,4-Trimethylpentane	5.95	57	461551	9.72	ppb	98
49) Carbon Tetrachloride	5.52	117	266791	10.35	ppb	96
50) Tert Amyl Methyl Ether	6.01	73	374097	10.55	ppb	100
52) 1,2-DCA	5.81	62	208417	9.86	ppb	97
53) Benzene	5.78	78	687273	10.09	ppb	96
54) TCE	6.61	130	228595	9.65	ppb	97
56) 1,2-Dichloropropane	6.86	63	150903	10.18	ppb	97
57) Bromodichloromethane	7.21	83	188767	10.48	ppb	95
58) Methyl Cyclohexane	6.83	83	287992	10.34	ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z53.D Vial: 48
Acq On : 26 Jan 21 03:14 Operator: LP,DG,CH
Sample : BA25434W03,2,6 MSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	162509	10.26	ppb		95
60)	MIBK (methyl isobutyl ket	7.94	43	544272	53.60	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	31217	9.27	ppb		92
63)	Cis-1,3-Dichloropropene	7.73	75	214183	9.89	ppb		97
64)	Toluene	8.11	91	765943	10.40	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	187872	9.16	ppb		99
66)	1,1,2-TCA	8.56	97	146246	10.46	ppb		98
67)	2-Hexanone	8.88	43	232640	53.00	ppb		96
70)	1,2-EDB	9.09	107	147341	10.42	ppb		98
71)	Tetrachloroethene	8.71	166	287842	9.77	ppb		99
72)	1-Chlorohexane	9.66	91	241307	10.50	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	171789	10.15	ppb		96
74)	m&p-Xylene	9.92	91	1257666	21.41	ppb		98
75)	o-Xylene	10.35	91	618861	10.54	ppb		100
76)	Styrene	10.37	104	472979	9.03	ppb		100
78)	1,3-Dichloropropane	8.74	76	221702	10.29	ppb		97
79)	Dibromochloromethane	8.98	129	146389	8.77	ppb		94
80)	Chlorobenzene	9.65	112	528556	10.04	ppb		99
81)	Ethylbenzene	9.79	91	814528	10.43	ppb		97
82)	Bromoform	10.54	173	109893	8.29	ppb		94
84)	Isopropylbenzene	10.76	105	864062	10.67	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	165053	10.77	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	64241	10.45	ppb		99
87)	t-1,4-Dichloro-2-Butene	11.14	53	19374	7.08	ppb		97
88)	Bromobenzene	11.06	77	265099	10.35	ppb		97
89)	n-Propylbenzene	11.21	91	934715	9.97	ppb		99
90)	4-Ethyltoluene	11.34	105	829180	10.44	ppb		98
91)	2-Chlorotoluene	11.41	91	637852	10.10	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	696663	10.03	ppb		98
93)	4-Chlorotoluene	11.41	91	637852	10.10	ppb		98
94)	Tert-Butylbenzene	11.76	119	678944	10.61	ppb		97
95)	1,2,4-Trimethylbenzene	11.81	105	695050	10.62	ppb		99
96)	Sec-Butylbenzene	12.00	105	951086	10.77	ppb		100
97)	p-Isopropyltoluene	11.76	119	678944	10.61	ppb		98
98)	Benzyl Chloride	12.35	91	207434	7.55	ppb		99
99)	1,3-DCB	12.10	146	493049	10.13	ppb		98
100)	1,4-DCB	12.20	146	502237	10.10	ppb		97
101)	n-Butylbenzene	12.61	91	655425	9.60	ppb		97
102)	1,2-DCB	12.60	146	455917	10.11	ppb		99
103)	Hexachloroethane	12.89	201	129472	8.64	ppb		96
104)	1,2-Dibromo-3-chloropropan	13.44	157	40580	8.69	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	402256	10.00	ppb		97
106)	Hexachlorobutadiene	14.57	225	201752	9.94	ppb		100
107)	Naphthalene	14.62	128	637653	9.92	ppb		98
108)	1,2,3-Trichlorobenzene	14.88	180	296469	10.25	ppb		98

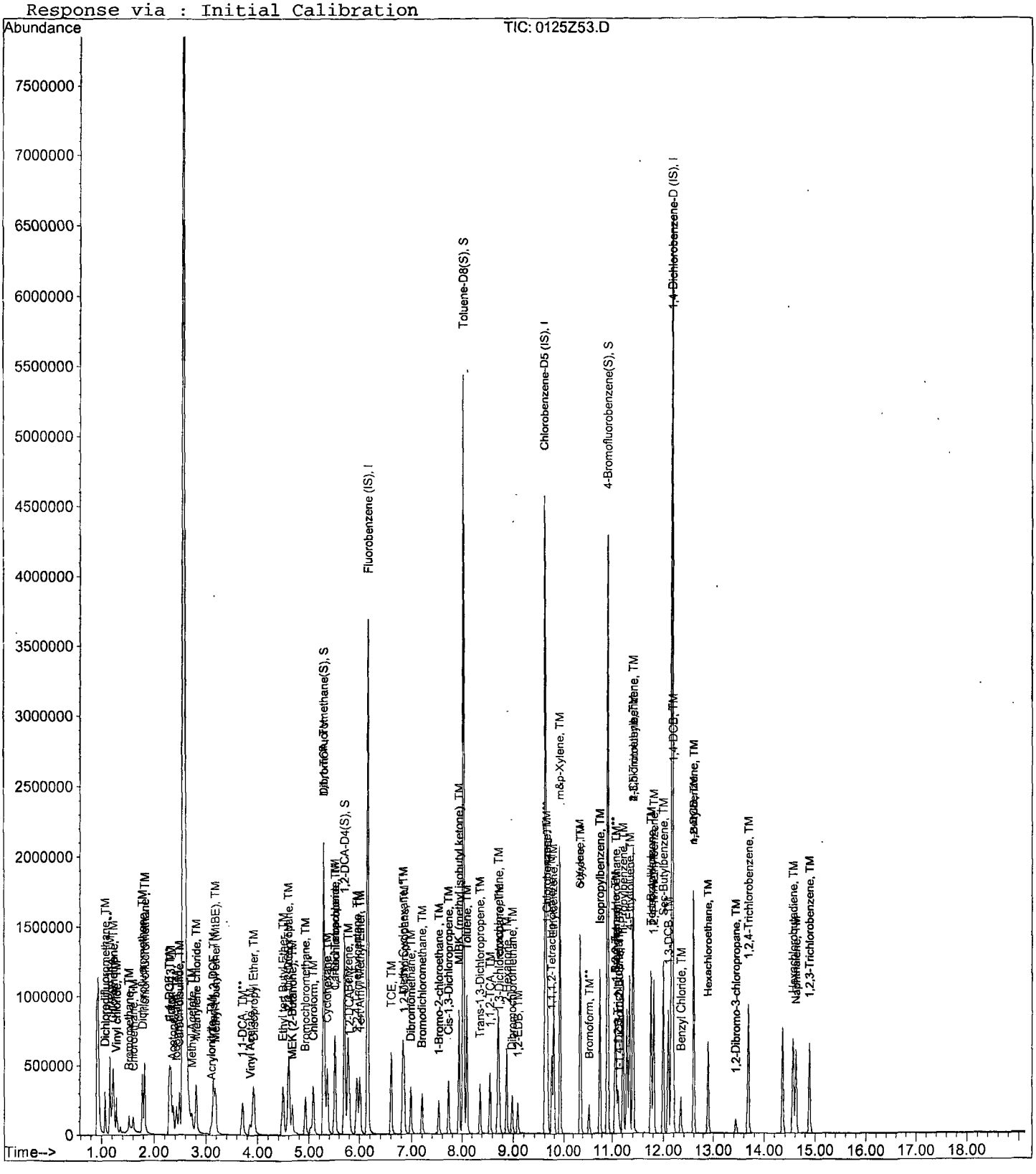
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z53.D Vial: 48
Acq On : 26 Jan 21 03:14 Operator: LP,DG,CH
Sample : BA25434W03,2,6 MSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration

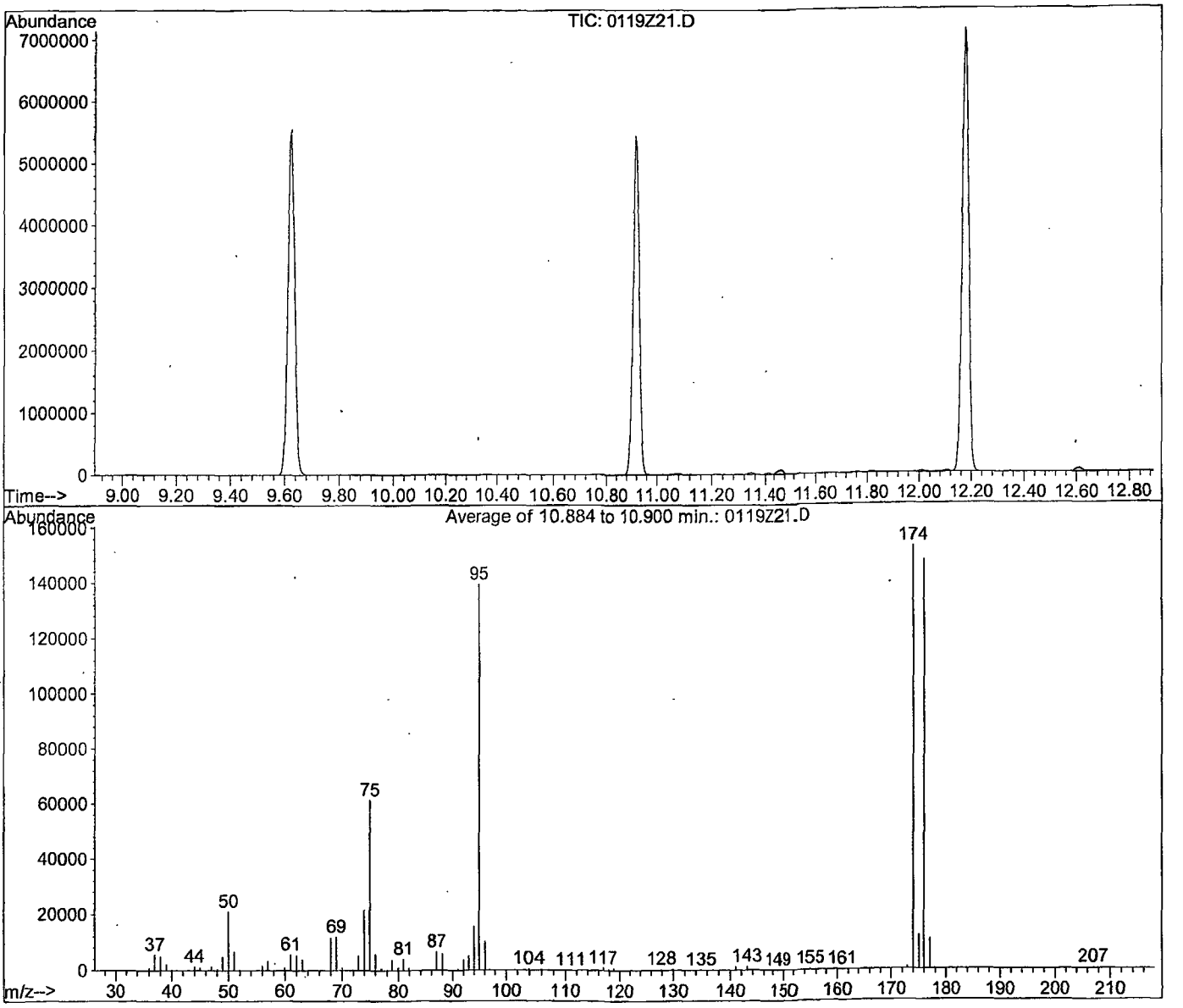


BFB

Data File : M:\ZEUS\DATA\210119\0119Z21.D
Acq On : 19 Jan 21 15:42
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 1
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B



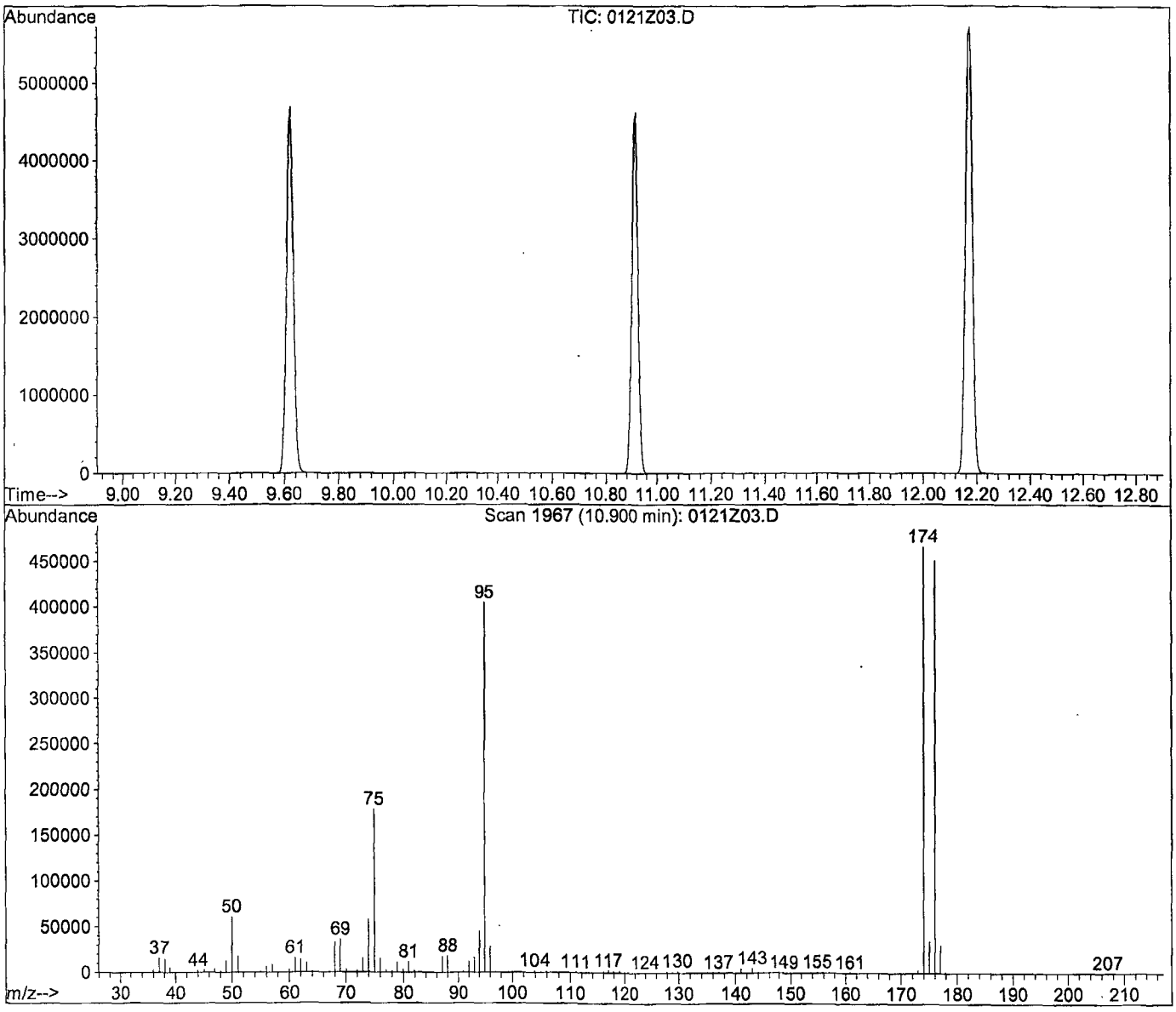
Spectrum Information: Average of 10.884 to 10.900 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	21107	PASS
75	95	30	60	44.0	61449	PASS
95	95	100	100	100.0	139610	PASS
96	95	5	9	7.4	10359	PASS
173	174	0.00	2	0.6	927	PASS
174	95	50	200	109.4	152743	PASS
175	174	5	9	8.0	12187	PASS
176	174	95	101	96.7	147743	PASS
177	176	5	9	7.3	10844	PASS

Data File : M:\ZEUS\DATA\210119\0121Z03.D
Acq On : 21 Jan 21 08:22
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 1
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210119\Z0119W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Scan 1967

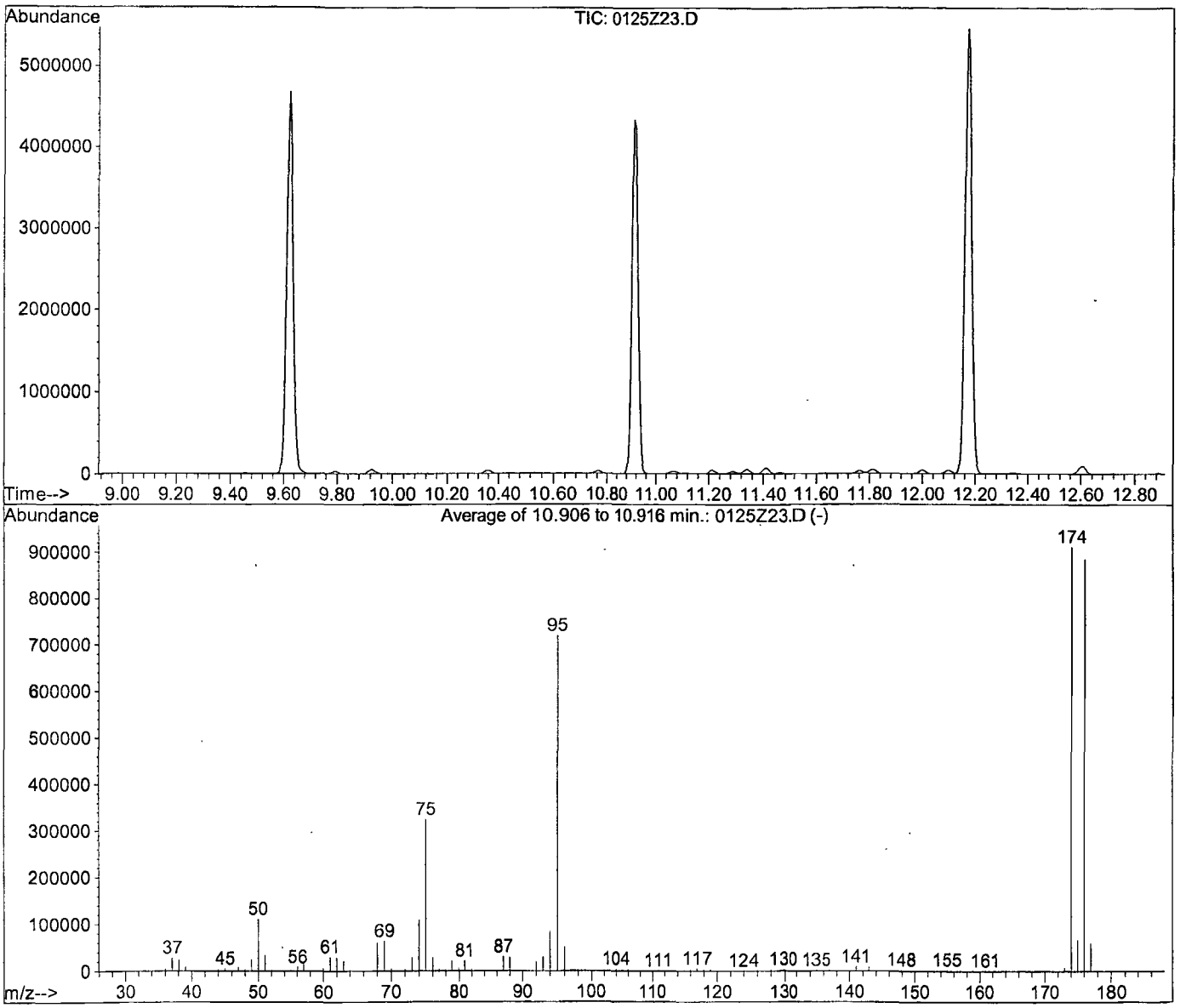
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.0	60824	PASS
75	95	30	60	44.0	177856	PASS
95	95	100	100	100.0	404608	PASS
96	95	5	9	7.0	28472	PASS
173	174	0.00	2	0.7	3297	PASS
174	95	50	200	115.1	465600	PASS
175	174	5	9	7.5	34736	PASS
176	174	95	101	96.6	449984	PASS
177	176	5	9	6.8	30432	PASS

0121Z03.D Z0119W.M Tue Jan 26 13:42:30 2021

Data File : M:\ZEUS\DATA\210125\0125Z23.D
Acq On : 25 Jan 21 15:44
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125S.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1958

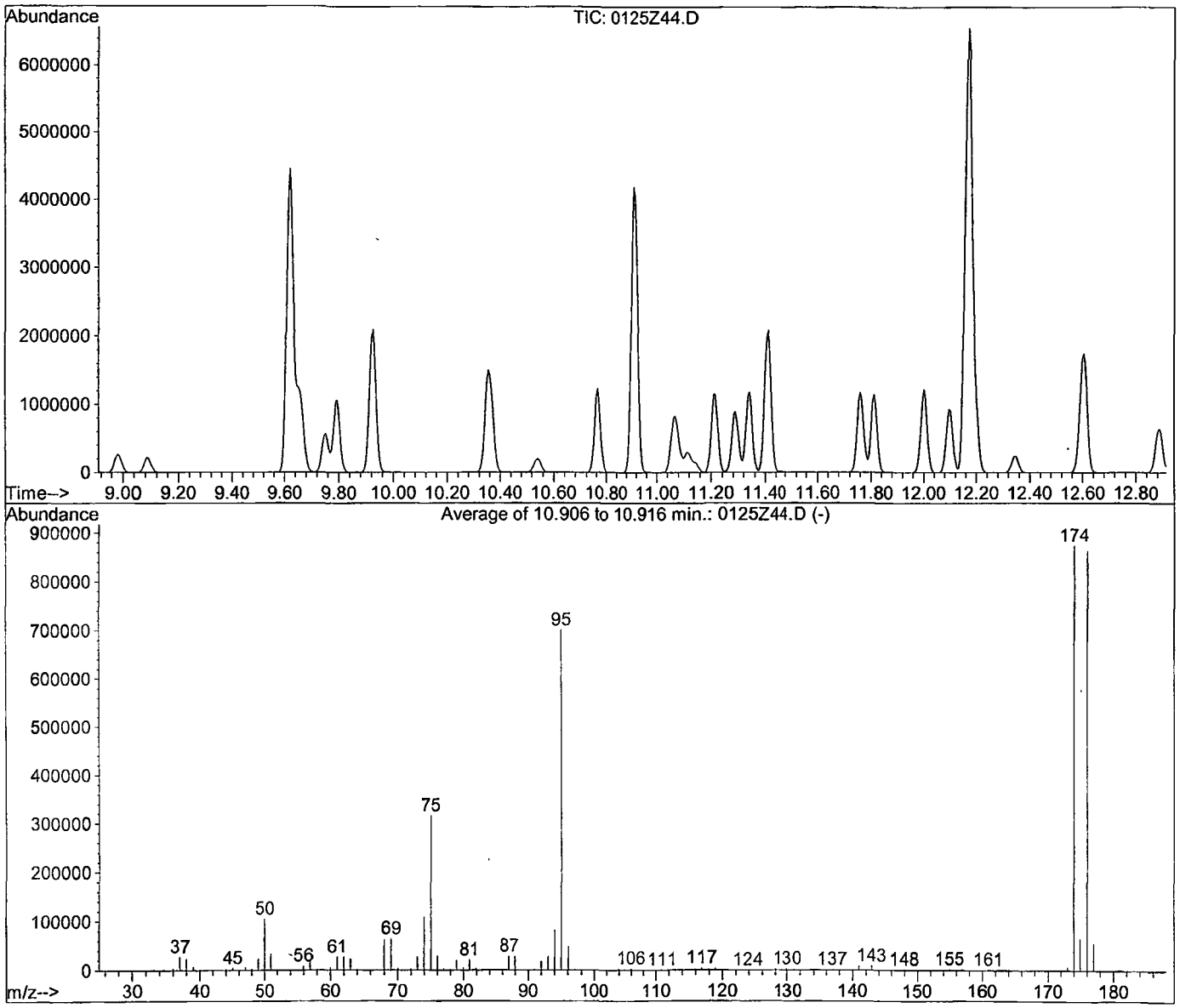
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	110717	PASS
75	95	30	60	45.0	324181	PASS
95	95	100	100	100.0	719808	PASS
96	95	5	9	6.9	49611	PASS
173	174	0.00	2	0.7	6674	PASS
174	95	50	200	126.6	911531	PASS
175	174	5	9	7.2	65973	PASS
176	174	95	100	97.2	885717	PASS
177	176	5	9	6.7	58992	PASS

0125Z23.D Z0125S.M Tue Jan 26 10:36:29 2021

Data File : M:\ZEUS\DATA\210125\0125Z44.D
Acq On : 25 Jan 21 23:47
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 39
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1957

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	105629	PASS
75	95	30	60	45.1	316020	PASS
95	95	100	100	100.0	700949	PASS
96	95	5	9	6.9	48413	PASS
173	174	0.00	2	0.7	6246	PASS
174	95	50	200	124.7	873813	PASS
175	174	5	9	7.4	64259	PASS
176	174	95	101	98.8	863125	PASS
177	176	5	9	6.4	55253	PASS

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 01/18/21 A
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	219061767-50972	01/18/22	06/28/29	200uL			50
Benzyl Chloride	Absolute	70037	1,000	082720-51148	01/04/22	08/27/21	200uL			50

VOA STD 8

Prepared: 01/18/21 B
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-51043	01/04/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16071-51542	01/04/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16248-51598	01/04/22	01/27/21	100uL			50

VOA STD TBA

Prepared: 01/18/21 C
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL15725-51578	01/04/22	09/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16253-51600	01/04/22	01/27/21	100uL			250

VOA STD 1

Prepared: 01/18/21 D
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-51156	01/04/22	11/14/22	50	2mL	Methanol	50

VOA STD 2

Prepared: 01/18/21 E
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16074-51593	01/04/22	11/30/30	100	4mL	Methanol	50

VOA STD 9

Prepared: 01/18/21 F
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 01/18/21	01/04/22	N/A	200uL			5

VOA STD. 10

Prepared: 01/18/21 G
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 01/18/21 H
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 01/18/21 I
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16067-51588	01/04/22	11/30/30	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 01/18/21 J
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 01/18/21 K
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14381-51056	01/04/22	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16187-51524	01/04/22	01/13/22	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	091818-51617	1/18//2022	09/18/23	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-51625	12/22/21	12/25/21	500uL			50

VOA STD. TBA

Prepared: 01/18/21 L
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL16012-51128	01/04/22	11/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16193-51526	01/04/22	01/13/22	50uL			250

VOA STD. 0

Prepared: 01/18/21 M
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-51568	01/04/22	09/30/22	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 01/18/21 N
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-51151	01/04/22	12/11/22	50uL	2mL	Methanol	50

ZEUS 8260 Standard Prep

ZEUS 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/18/21	03/19/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	5uL			10
VOA STD TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	2
VOA STD 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/18/21	03/19/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/18/21	03/19/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	40uL			200

ZEUS 8260 Water Second Source (SS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/18/21	03/19/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/18/21	01/18/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/18/21	03/19/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/18/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\ZEUS\DATA\210119\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0119Z21.D	1	25ug/L BFB STD 12/22/20		19 Jan 21 15:42
2	2	0119Z22.D	1	0.3ug/L VOC STD 1/19/21		19 Jan 21 16:05
3	3	0119Z23.D	1	0.5ug/L VOC STD 1/19/21		19 Jan 21 16:28
4	4	0119Z24.D	1	1ug/L VOC STD 1/19/21		19 Jan 21 16:52
5	5	0119Z25.D	1	2ug/L VOC STD 1/19/21		19 Jan 21 17:15
6	6	0119Z26.D	1	5ug/L VOC STD 1/19/21		19 Jan 21 17:38
7	7	0119Z27.D	1	10ug/L VOC STD 1/19/21		19 Jan 21 18:01
8	8	0119Z28.D	1	20ug/L VOC STD 1/19/21		19 Jan 21 18:25
9	9	0119Z29.D	1	40ug/L VOC STD 1/19/21		19 Jan 21 18:48
10	10	0119Z30.D	1	100ug/L VOC STD 1/19/21		19 Jan 21 19:11
11	12	0119Z32.D	1	(SS) 10ug/L VOC STD 1/19/21		19 Jan 21 19:57
12	1	0121Z02.D	1	25ug/L BFB STD 12/22/20		21 Jan 21 08:05
13	3	0121Z05.D	1	210121A CCV 10ug/L		21 Jan 21 09:08
14	4	0121Z06.D	1	210121A LCS 10ug/L		21 Jan 21 09:31
15	5	0121Z07.D	1	210121A LCSD 10ug/L		21 Jan 21 09:54
16	8	0121Z10.D	1	210121A BLK		21 Jan 21 11:03
17	9	0121Z11.D	1	BA25433W01		21 Jan 21 11:27
18	10	0121Z12.D	1	BA25434W01		21 Jan 21 11:50
19	11	0121Z13.D	1	Ending CCV 10ug/L 1/21/21		21 Jan 21 12:13

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0125Z23.D	1	25ug/L BFB STD 12/22/20		25 Jan 21 15:44
2	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
3	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
4	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
5	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
6	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
7	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
8	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
9	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
10	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
11	29	0125Z34.D	1	(SS) 10ug/L VOC STD 1/25/21		25 Jan 21 19:57
12	39	0125Z44.D	1	25ug/L BFB STD 12/22/20		25 Jan 21 23:47
13	40	0125Z45.D	1	210125A CCV/LCS 10ug/L		26 Jan 21 00:10
16	47	0125Z52.D	1	BA25434W02,3,6 MS 10ug/L		26 Jan 21 02:50
17	48	0125Z53.D	1	BA25434W03,2,6 MSD 10ug/L		26 Jan 21 03:14
18	65	0125Z70.D	1	Ending CCV 10ug/L 1/25/21		26 Jan 21 09:45

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/04/21
Matrix: Water Instrument: ZEUS Initials: CH

			0104Z13.D	0104Z14.D	0104Z15.D	0104Z16.D	0104Z17.D	0104Z18.D	0104Z19.D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.4	6.186	3.316	1.365	1.082	0.9536	0.8954				4.0	123	TMHB	0.994		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
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Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z13.D Vial: 13
Acq On : 04 Jan 21 20:33 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:24 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4211284	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6827319	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5332452	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	48590209m	57.38	ppb	100

(#) = qualifier out of range (m) = manual integration
0104Z13.D ZGAS0104.M Thu Jan 07 11:05:47 2021 Page 1

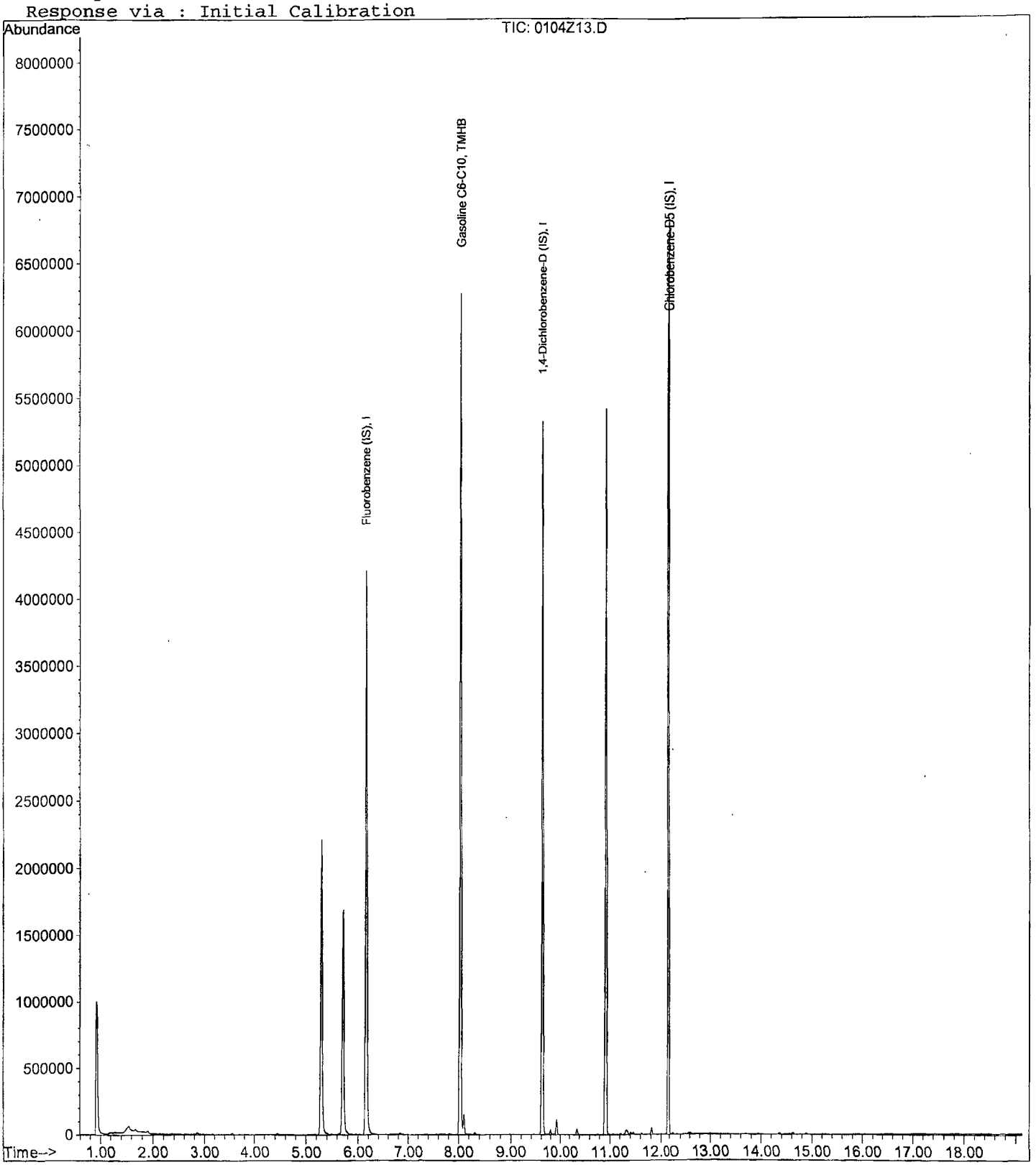
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z13.D
Acq On : 04 Jan 21 20:33
Sample : 20ug/L GAS STD 1/4/20
Misc :

Vial: 13
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:24 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z14.D Vial: 14
Acq On : 04 Jan 21 20:56 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4078655	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6899405	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5237060	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	50462587m	108.01	ppb	100

(#) = qualifier out of range (m) = manual integration
0104Z14.D ZGAS0104.M Thu Jan 07 11:05:49 2021 Page 1

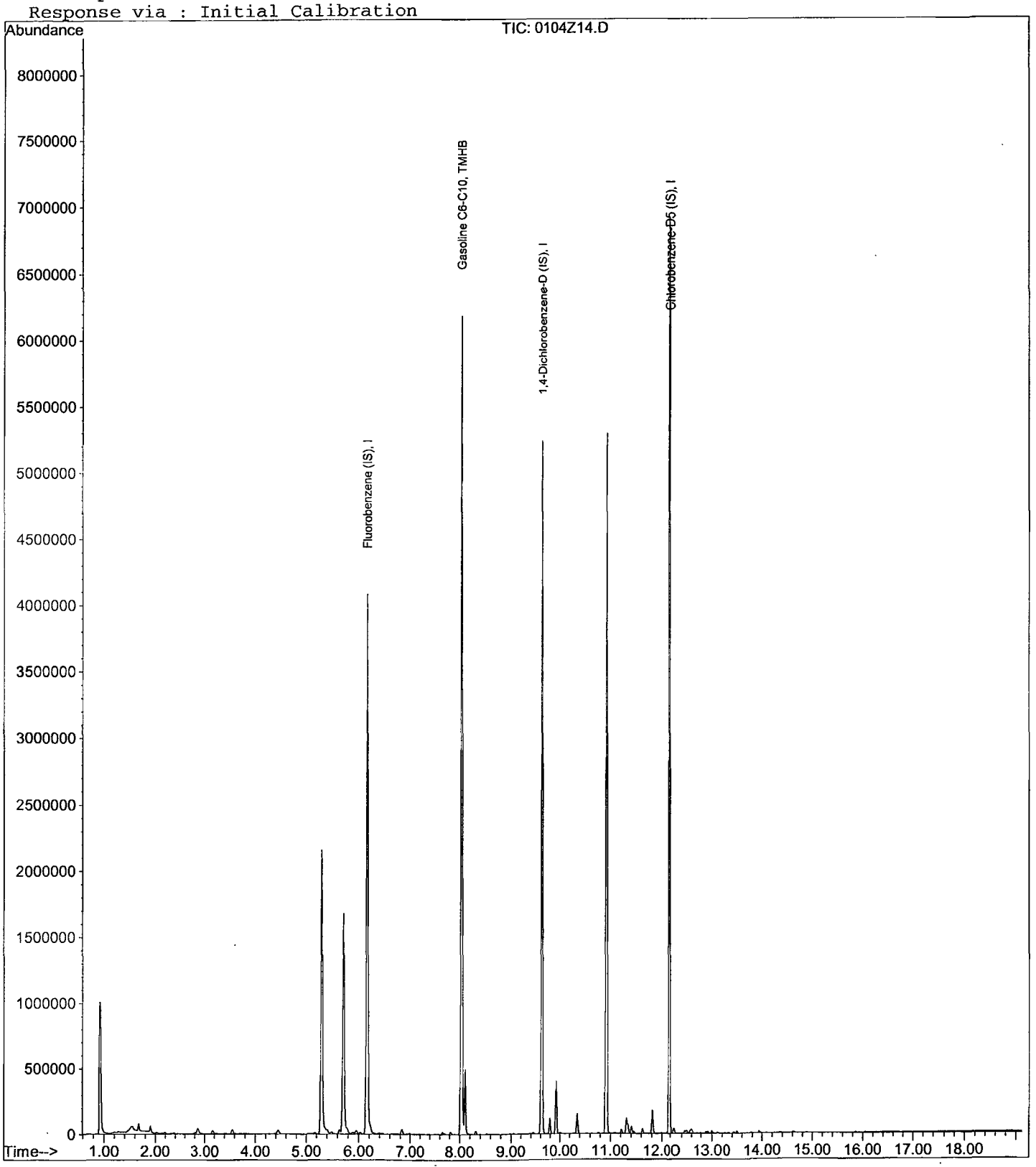
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z14.D
Acq On : 04 Jan 21 20:56
Sample : 50ug/L GAS STD 1/4/20
Misc :

Vial: 14
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z15.D Vial: 15
Acq On : 04 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4186849	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7055503	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5266421	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	55526796m	162.02	ppb	100

(#) = qualifier out of range (m) = manual integration

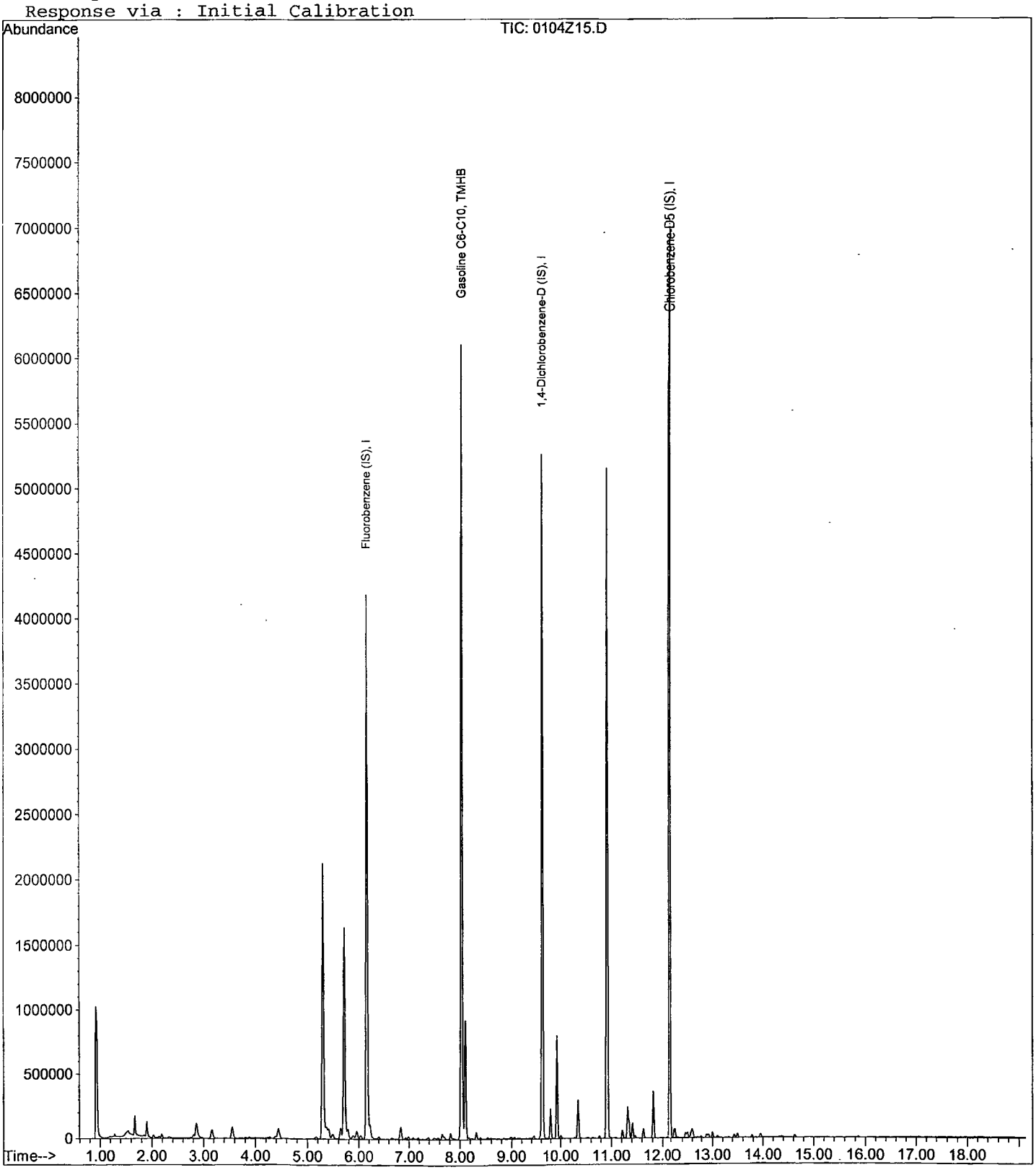
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z15.D
Acq On : 04 Jan 21 21:19
Sample : 100ug/L GAS STD 1/4/20
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z16.D Vial: 16
Acq On : 04 Jan 21 21:42 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4233137	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7141314	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316746	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	69360645m	351.55	ppb	100

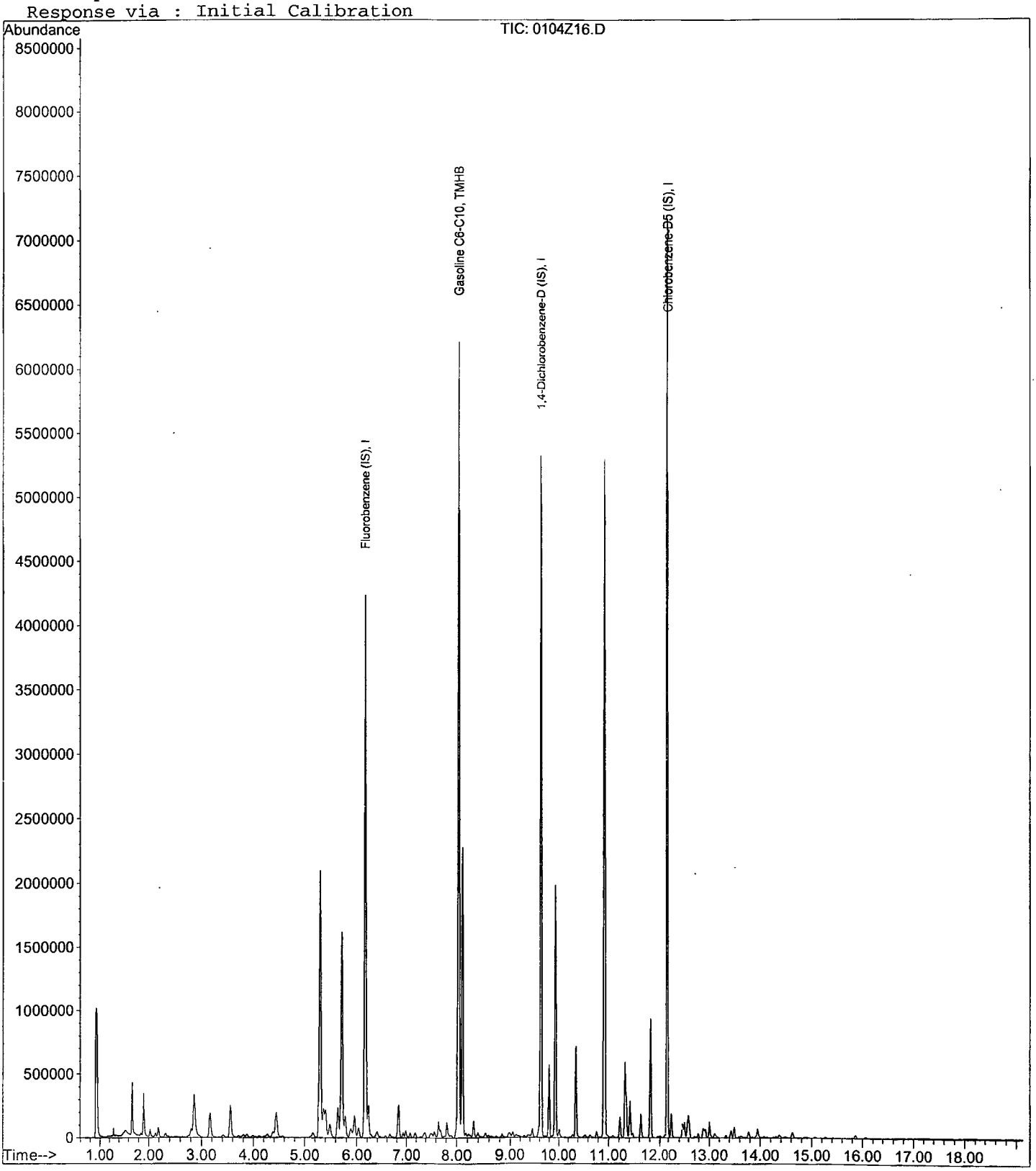
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z16.D Vial: 16
Acq On : 04 Jan 21 21:42 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z17.D Vial: 17
Acq On : 04 Jan 21 22:04 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4262471	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6861206	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5336374	25.00 ppb	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	110715882m	933.52 ppb	100

(#) = qualifier out of range (m) = manual integration

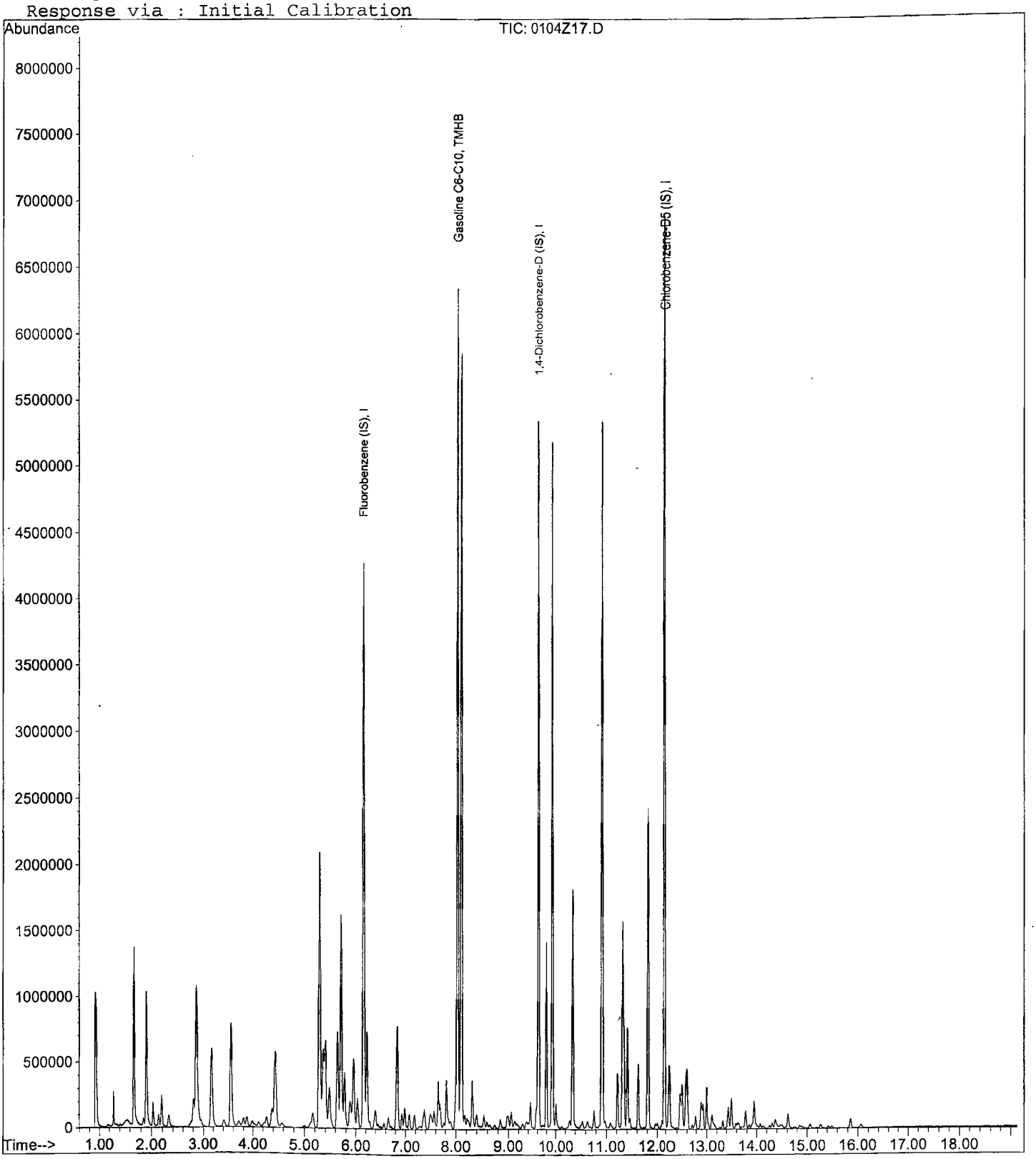
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z17.D
Acq On : 04 Jan 21 22:04
Sample : 600ug/L GAS STD 1/4/20
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z18.D Vial: 18
Acq On : 04 Jan 21 22:27 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4519136	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7160046	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316063	25.00 ppb	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.11	TIC	137907122m	1209.15 ppb	100

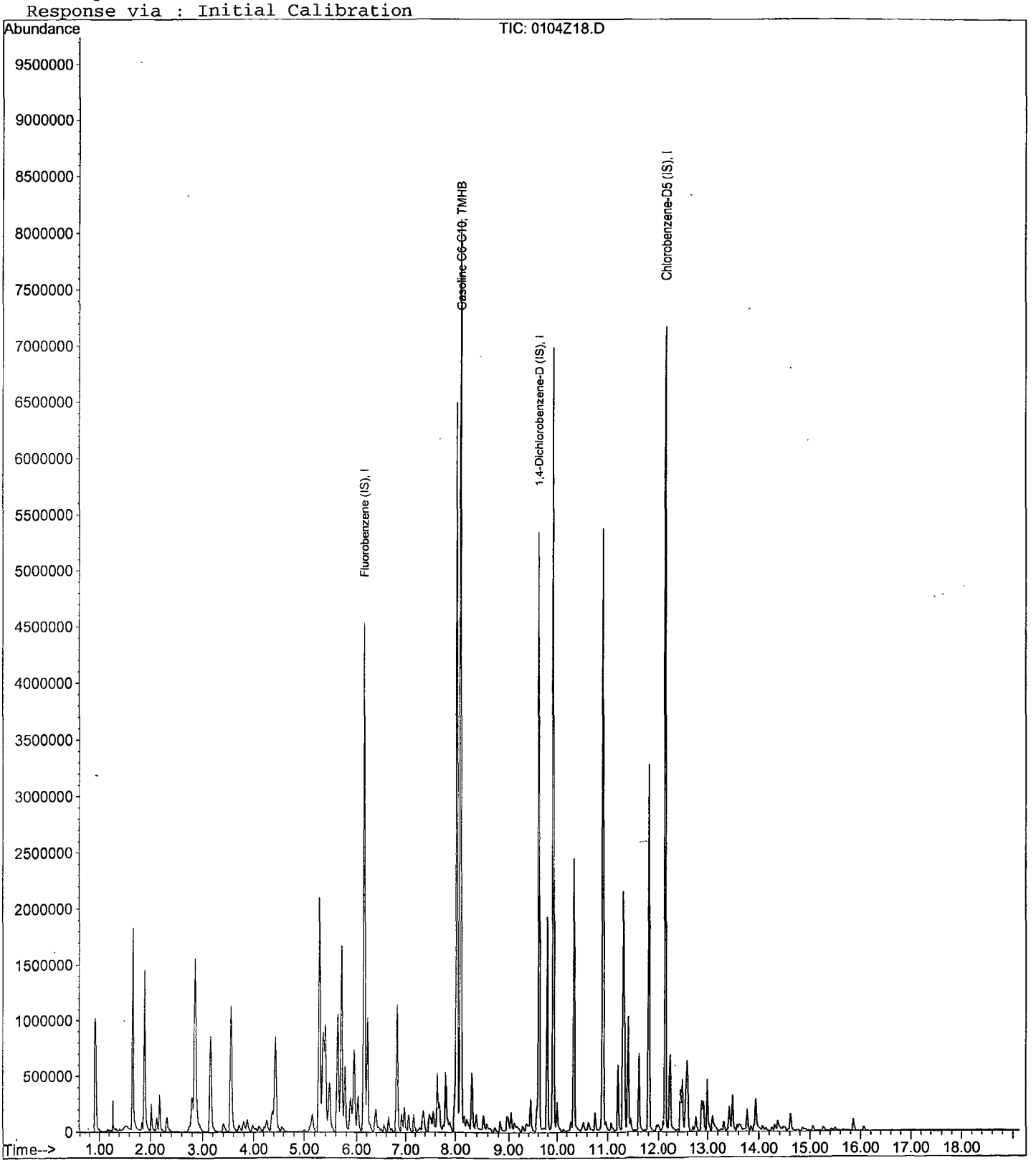
(#) = qualifier out of range (m) = manual integration
0104Z18.D ZGAS0104.M Thu Jan 07 11:05:56 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z18.D Vial: 18
Acq On : 04 Jan 21 22:27 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z19.D Vial: 19
Acq On : 04 Jan 21 22:50 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:45 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4357256	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6940368	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5466243	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	156056392m	1530.74	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

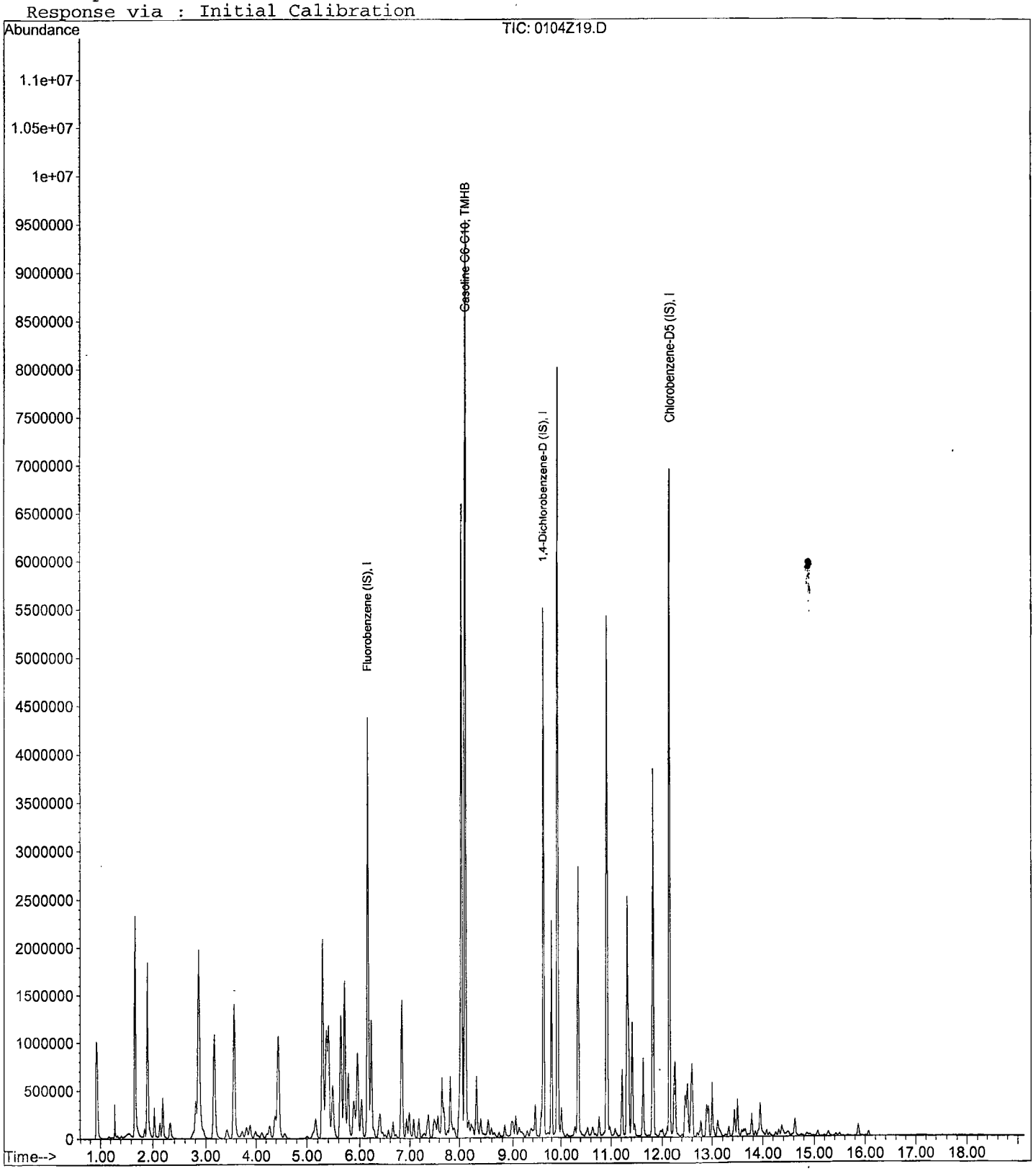
Data File : M:\ZEUS\DATA\210104\0104Z19.D
Acq On : 04 Jan 21 22:50
Sample : 1000ug/L GAS STD 1/4/20
Misc :

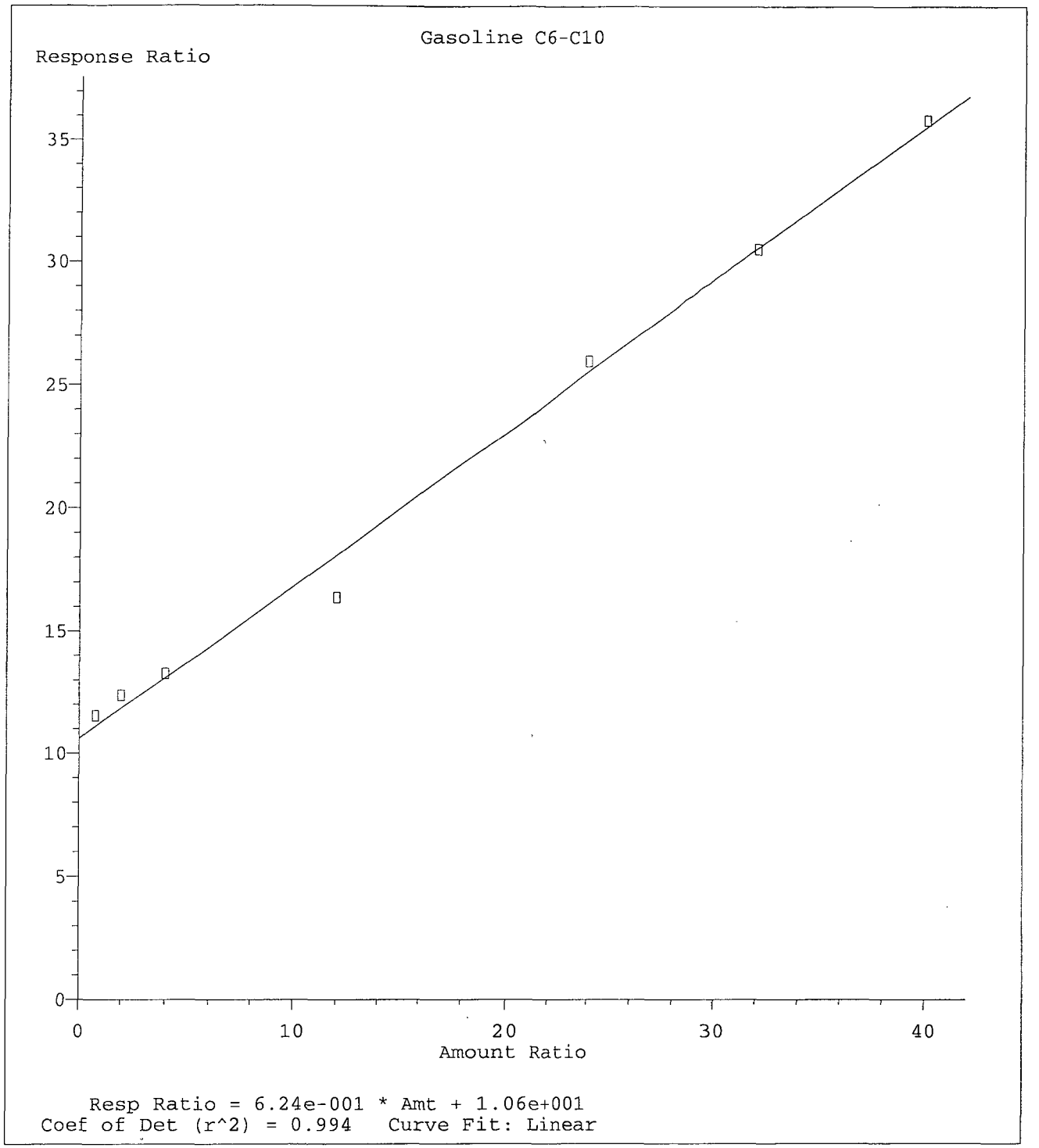
Vial: 19
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:45 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210104\ZGAS0104.M
Calibration Table Last Updated: Thu Jan 07 09:32:25 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/04/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0104Z21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.032	1.457	64	TMHBL	8.1
2							
3							
4							
5							
6							
7							
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37							
38							
39							
40							
		Average			64.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4193018	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6786780	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5176749	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	73335098m	275.77 ppb	100

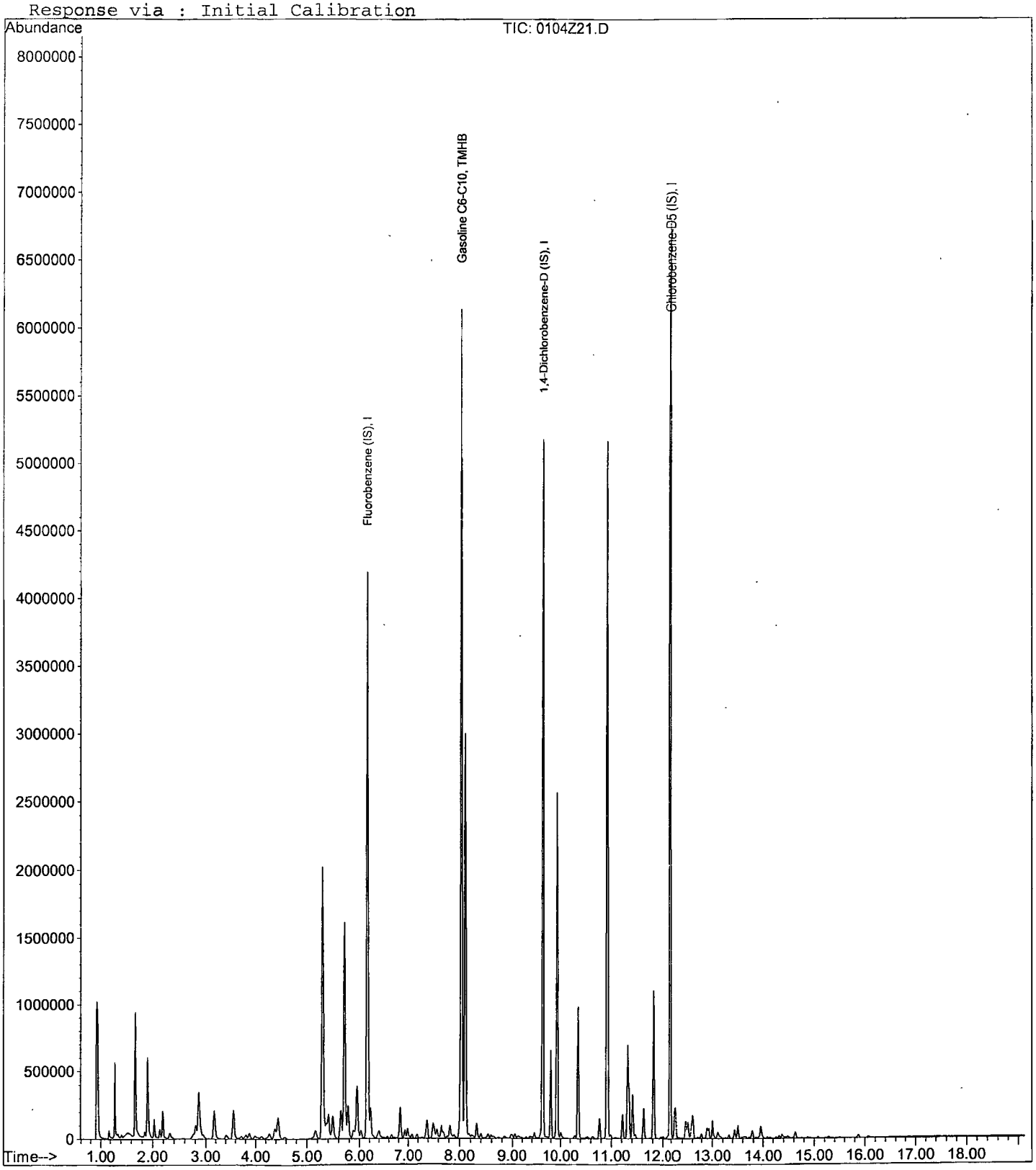
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/19/21
Matrix: Water Instrument: ZEUS Initials: CH

			0119Z22.D	0119Z23 D	0119Z24.D	0119Z25 D	0119Z26.D	0119Z27 D	0119Z28 D	0119Z29 D	0119Z30 D							
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	SL	Dibromofluoromethane(S)	0.2038	0.2053	0.2411	0.2446	0.2837	0.2870	0.3052	0.3052	0.3001		0.26	16	S	1.000		
3	S	1,2-DCA-D4(S)	0.1879	0.1896	0.2239	0.2197	0.2514	0.2545	0.2689	0.2662	0.2649		0.24	14	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.8877	0.9015	1.078	1.093	1.212	1.210	1.255	1.260	1.154		1.1	13	S			
6	SL	4-Bromofluorobenzene(S)	0.3049	0.3070	0.3618	0.3712	0.4254	0.4257	0.4458	0.4501	0.4724		0.40	16	S	1.000		
7	I	1,4-Dichlorobenzene-D (IS)																
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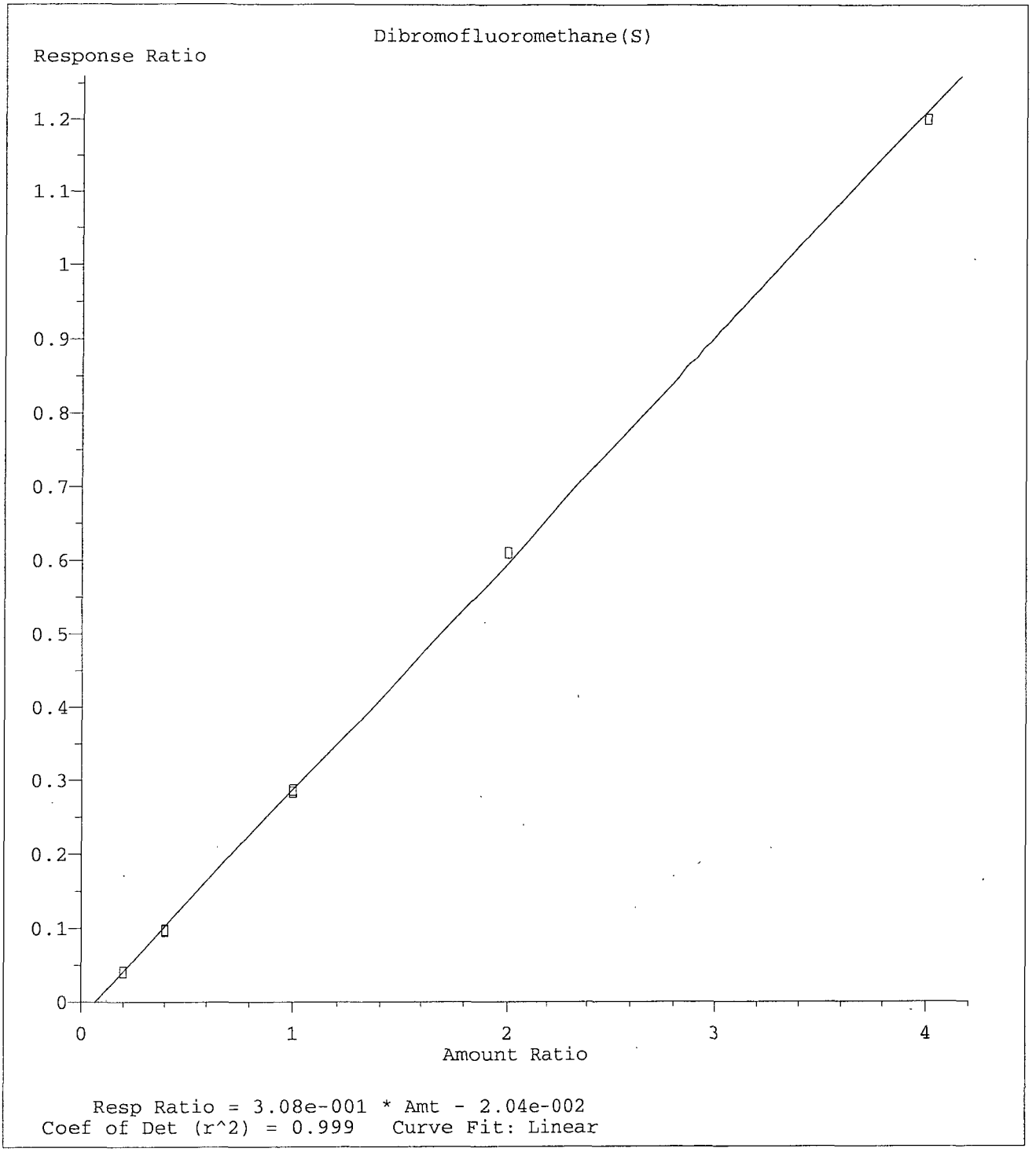
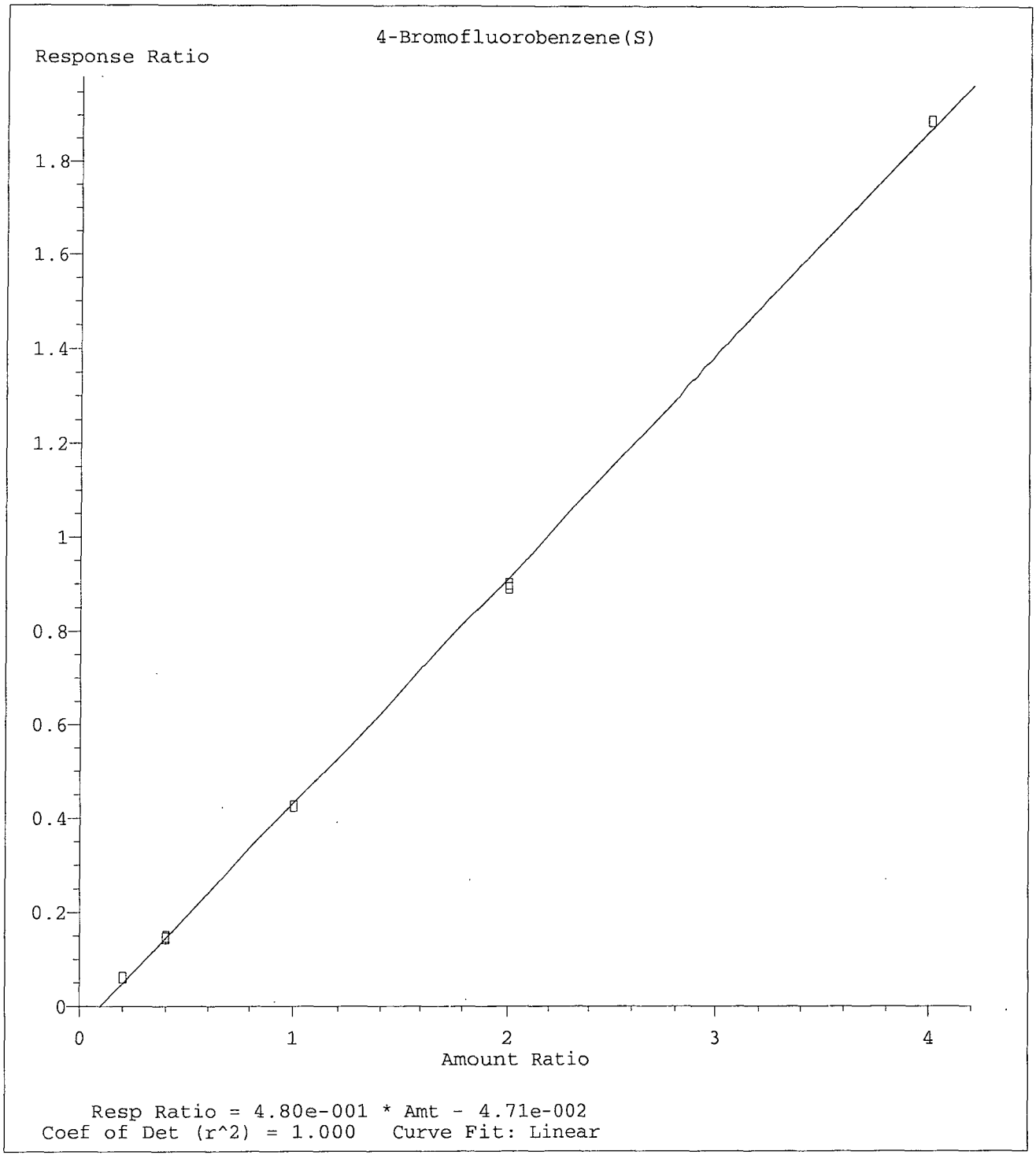


Method Name: M:\ZEUS\DATA\210119\Z0119SUR.M
Calibration Table Last Updated: Wed Jan 20 10:14:38 2021



Method Name: M:\ZEUS\DATA\210119\Z0119SUR.M
Calibration Table Last Updated: Wed Jan 20 10:14:38 2021

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z22.D Vial: 2
Acq On : 19 Jan 21 16:05 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4242397	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3610407	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1360384	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	172957	4.96 ppb	0.00
Spiked Amount 25.000			Recovery =	19.856%	
3) 1,2-DCA-D4(S)	5.71	65	159447	3.98 ppb	0.00
Spiked Amount 25.000			Recovery =	15.904%	
5) Toluene-D8(S)	8.03	98	640968	3.97 ppb	0.00
Spiked Amount 25.000			Recovery =	15.896%	
6) 4-Bromofluorobenzene(S)	10.92	95	220144	5.63 ppb	0.00
Spiked Amount 25.000			Recovery =	22.524%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0119Z22.D Z0119SUR.M Fri Jan 22 12:38:33 2021 Page 1

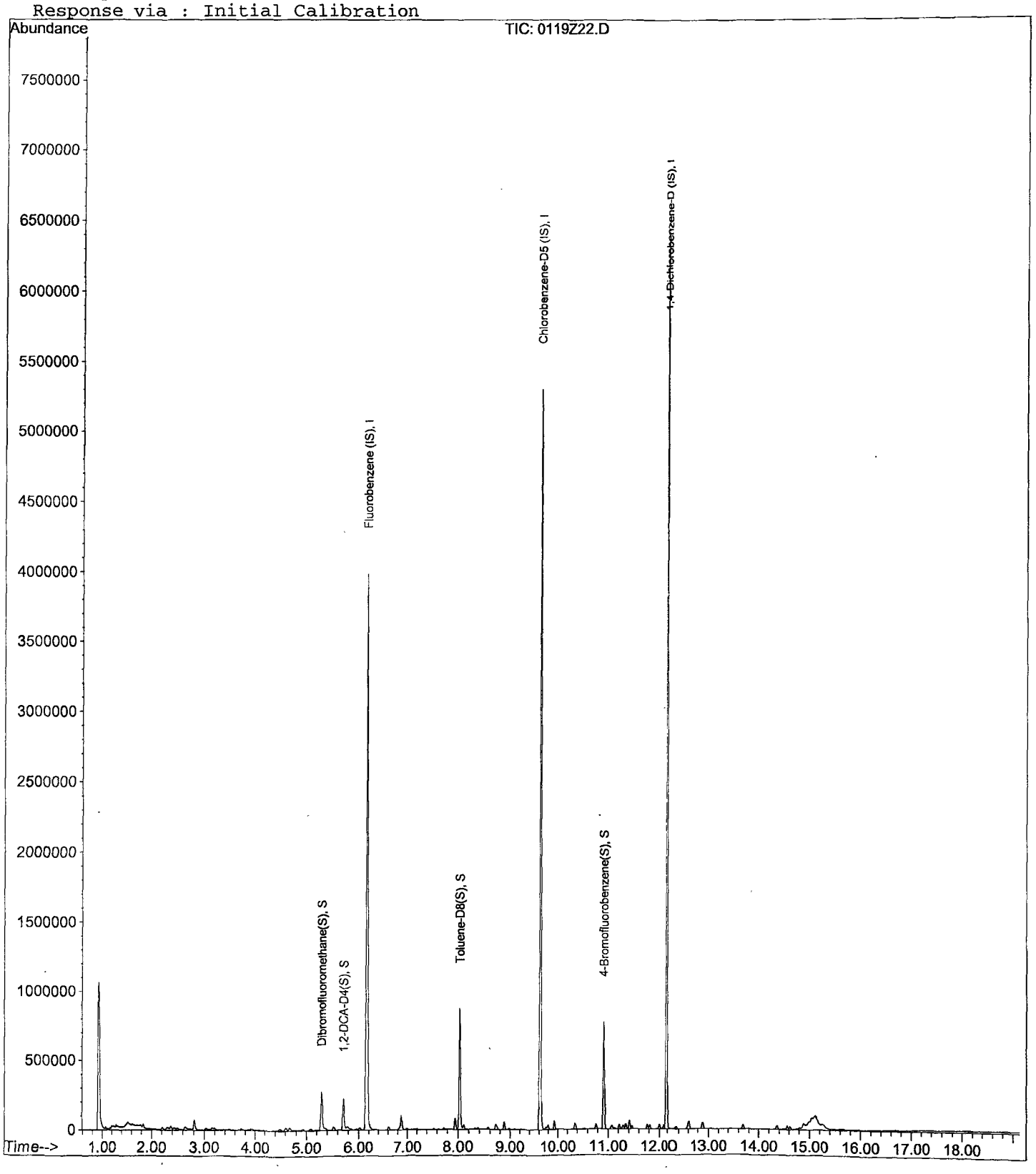
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z22.D
Acq On : 19 Jan 21 16:05
Sample : 0.3ug/L VOC STD 1/19/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z23.D Vial: 3
Acq On : 19 Jan 21 16:28 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4240471	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3577057	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1396736	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	174133	4.99	ppb	0.00
Spiked Amount 25.000			Recovery =	19.952%		
3) 1,2-DCA-D4(S)	5.71	65	160833	4.01	ppb	0.00
Spiked Amount 25.000			Recovery =	16.048%		
5) Toluene-D8(S)	8.03	98	644936	4.04	ppb	0.00
Spiked Amount 25.000			Recovery =	16.144%		
6) 4-Bromofluorobenzene(S)	10.92	95	219641	5.65	ppb	0.00
Spiked Amount 25.000			Recovery =	22.612%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

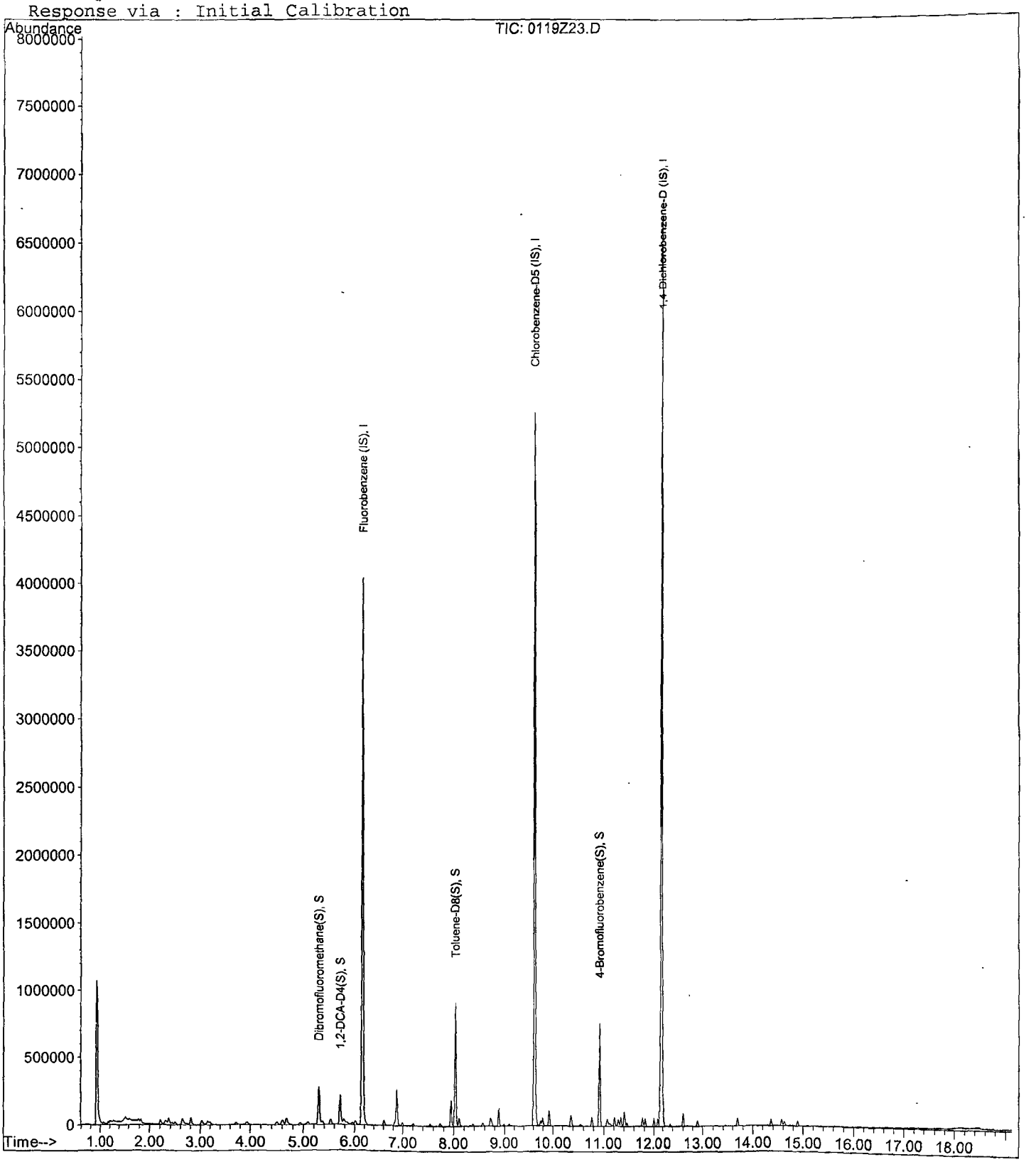
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z23.D
Acq On : 19 Jan 21 16:28
Sample : 0.5ug/L VOC STD 1/19/21
Misc :

Vial: 3
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z24.D Vial: 4
Acq On : 19 Jan 21 16:52 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4154827	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3516830	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1315328	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	400685	9.48	ppb	0.00
Spiked Amount 25.000			Recovery =	37.920%		
3) 1,2-DCA-D4(S)	5.71	65	372077	9.47	ppb	0.00
Spiked Amount 25.000			Recovery =	37.892%		
5) Toluene-D8(S)	8.03	98	1516129	9.65	ppb	0.00
Spiked Amount 25.000			Recovery =	38.604%		
6) 4-Bromofluorobenzene(S)	10.92	95	508926	10.00	ppb	0.00
Spiked Amount 25.000			Recovery =	39.984%		

Target Compounds Qvalue

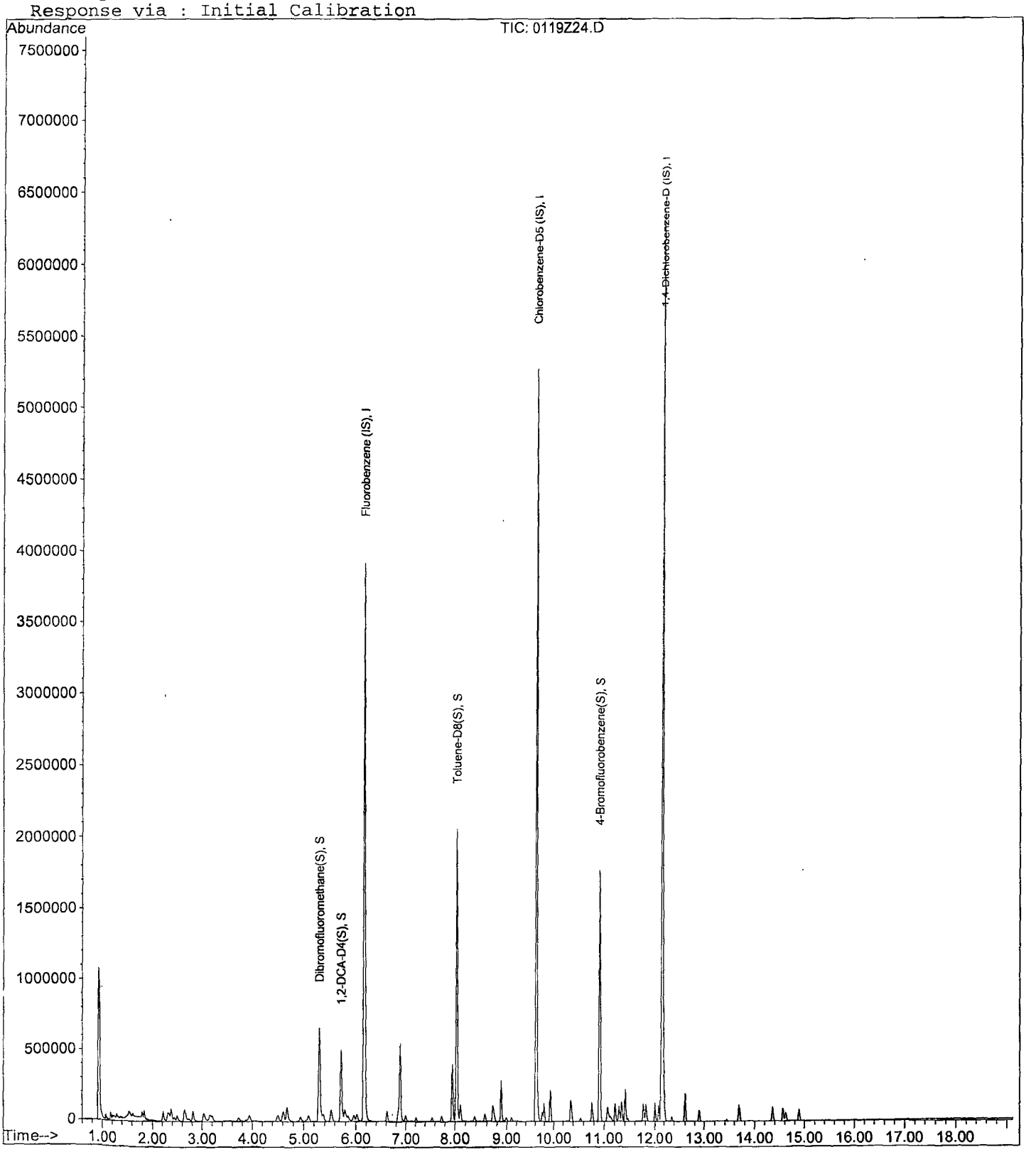
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210119\0119Z24.D
Acq On : 19 Jan 21 16:52
Sample : 1ug/L VOC STD 1/19/21
Misc :

Vial: 4
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z25.D Vial: 5
Acq On : 19 Jan 21 17:15 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4087894	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.63	117	3444985	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1345536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	399952	9.59	ppb	0.00
Spiked Amount 25.000			Recovery =	38.376%		
3) 1,2-DCA-D4(S)	5.71	65	359185	9.29	ppb	0.00
Spiked Amount 25.000			Recovery =	37.176%		
5) Toluene-D8(S)	8.03	98	1506514	9.79	ppb	0.00
Spiked Amount 25.000			Recovery =	39.156%		
6) 4-Bromofluorobenzene(S)	10.92	95	511454	10.19	ppb	0.00
Spiked Amount 25.000			Recovery =	40.768%		

Target Compounds Qvalue

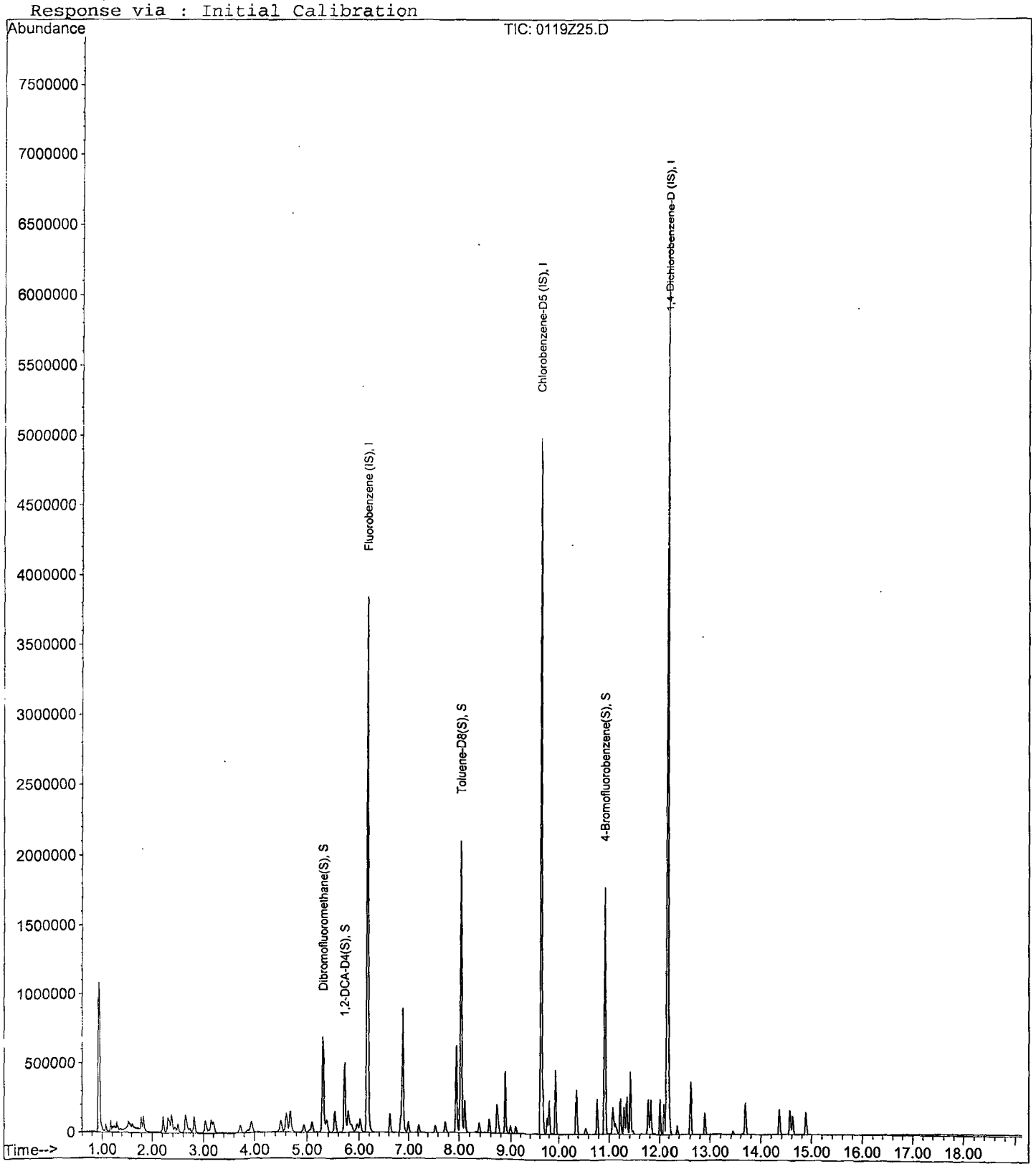
(#) = qualifier out of range (m) = manual integration
0119Z25.D Z0119SUR.M Fri Jan 22 12:38:39 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z25.D Vial: 5
Acq On : 19 Jan 21 17:15 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z26.D Vial: 6
Acq On : 19 Jan 21 17:38 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4066255	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3432380	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1314816	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1153680	24.67	ppb	0.00
Spiked Amount 25.000			Recovery =	98.692%		
3) 1,2-DCA-D4(S)	5.71	65	1022083	26.59	ppb	0.00
Spiked Amount 25.000			Recovery =	106.356%		
5) Toluene-D8(S)	8.03	98	4159218	27.13	ppb	0.00
Spiked Amount 25.000			Recovery =	108.504%		
6) 4-Bromofluorobenzene(S)	10.92	95	1460279	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.520%		

Target Compounds Qvalue

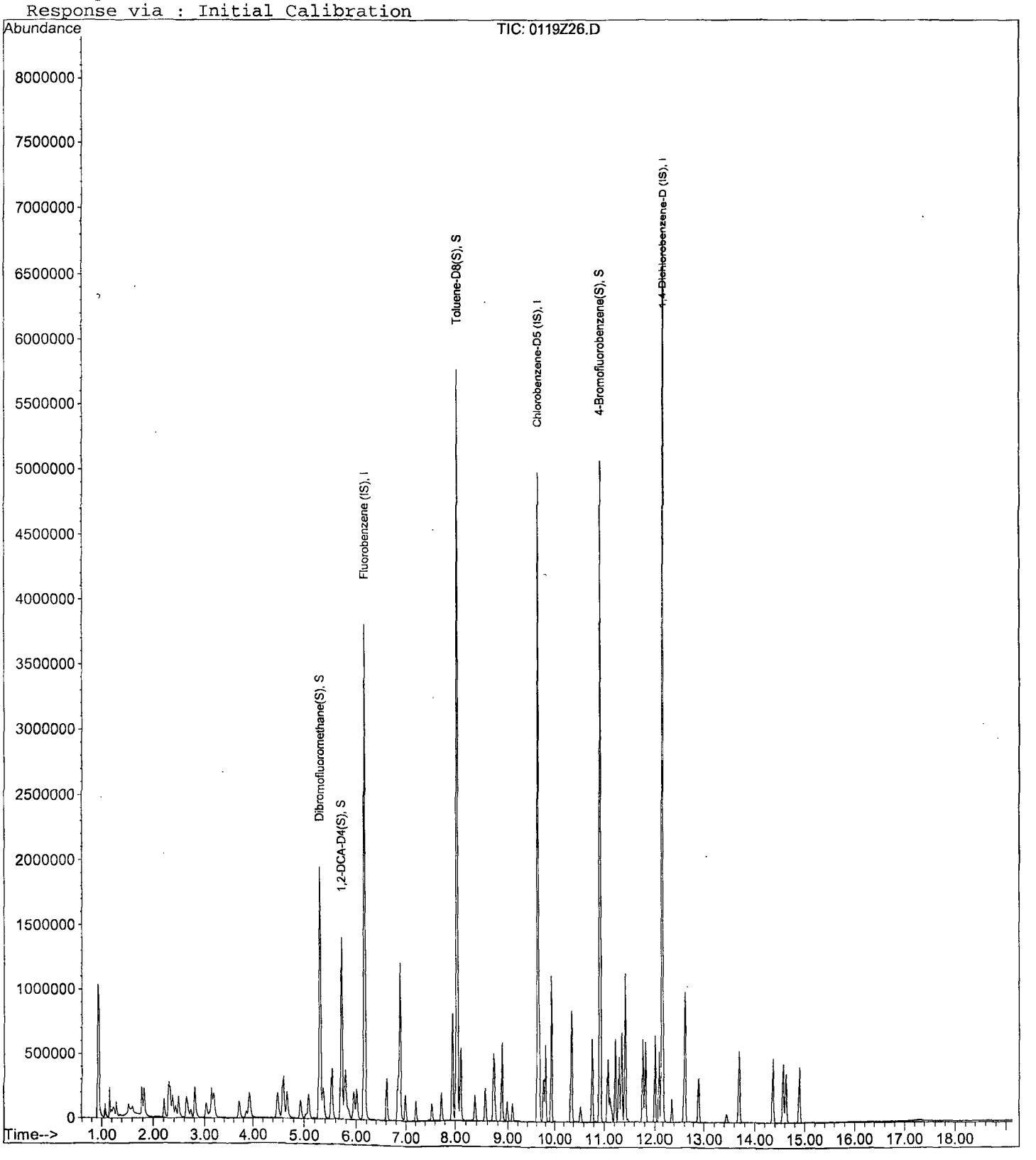
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z26.D Vial: 6
Acq On : 19 Jan 21 17:38 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z27.D Vial: 7
Acq On : 19 Jan 21 18:01 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4112053	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3453426	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1288192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1180133	24.94	ppb	0.00
Spiked Amount 25.000			Recovery =	99.752%		
3) 1,2-DCA-D4(S)	5.71	65	1046664	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.700%		
5) Toluene-D8(S)	8.03	98	4178504	27.09	ppb	0.00
Spiked Amount 25.000			Recovery =	108.344%		
6) 4-Bromofluorobenzene(S)	10.92	95	1470062	24.64	ppb	0.00
Spiked Amount 25.000			Recovery =	98.568%		

Target Compounds Qvalue

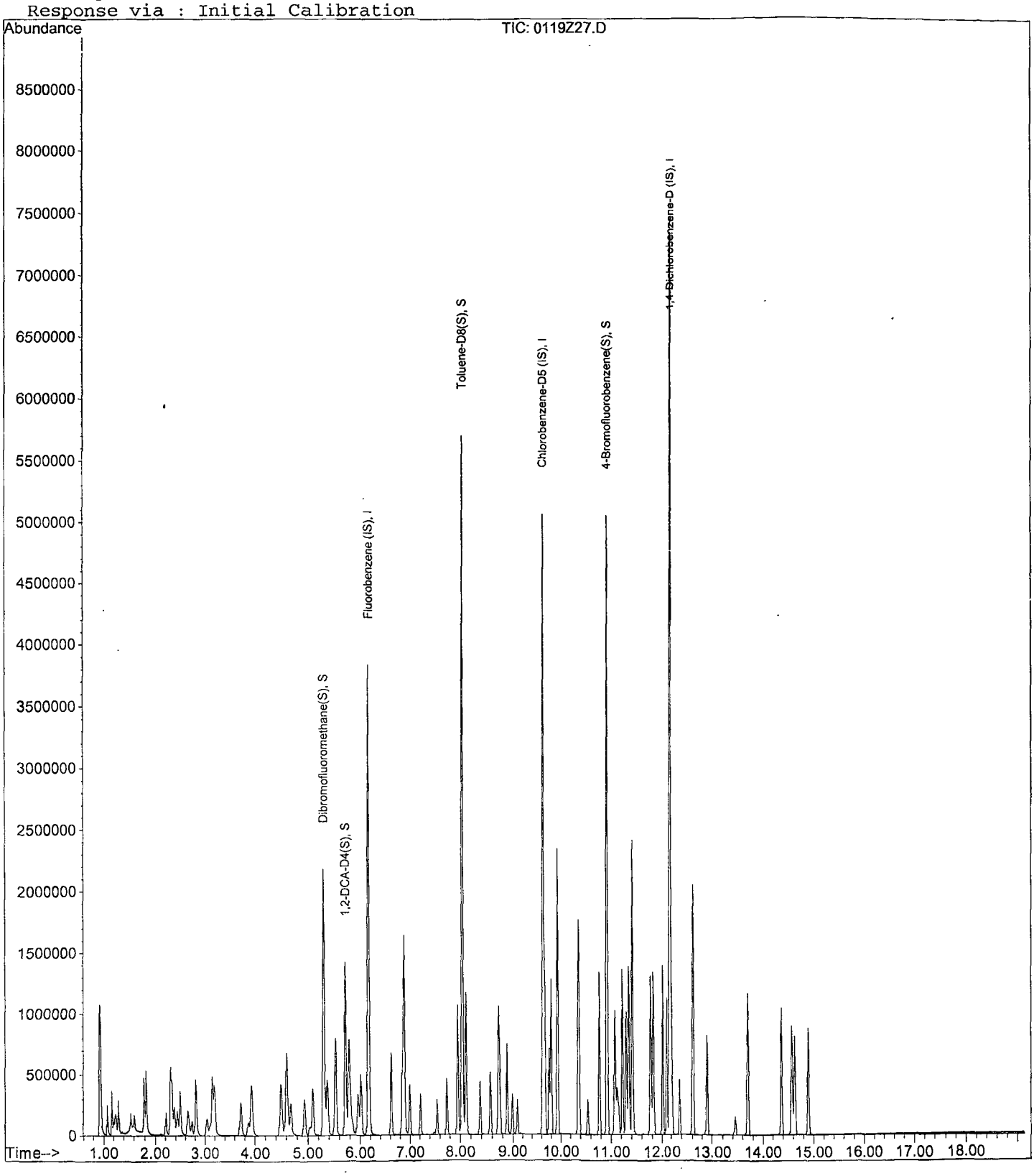
(#) = qualifier out of range (m) = manual integration
0119Z27.D Z0119SUR.M Fri Jan 22 12:38:42 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z27.D Vial: 7
Acq On : 19 Jan 21 18:01 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z28.D Vial: 8
Acq On : 19 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4136302	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3469752	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1273344	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2524705	51.17	ppb	0.00
Spiked Amount 25.000			Recovery = 204.684%			
3) 1,2-DCA-D4(S)	5.71	65	2224780	56.90	ppb	0.00
Spiked Amount 25.000			Recovery = 227.584%			
5) Toluene-D8(S)	8.03	98	8708017	56.18	ppb	0.00
Spiked Amount 25.000			Recovery = 224.724%			
6) 4-Bromofluorobenzene(S)	10.92	95	3093923	48.93	ppb	0.00
Spiked Amount 25.000			Recovery = 195.732%			

Target Compounds Qvalue

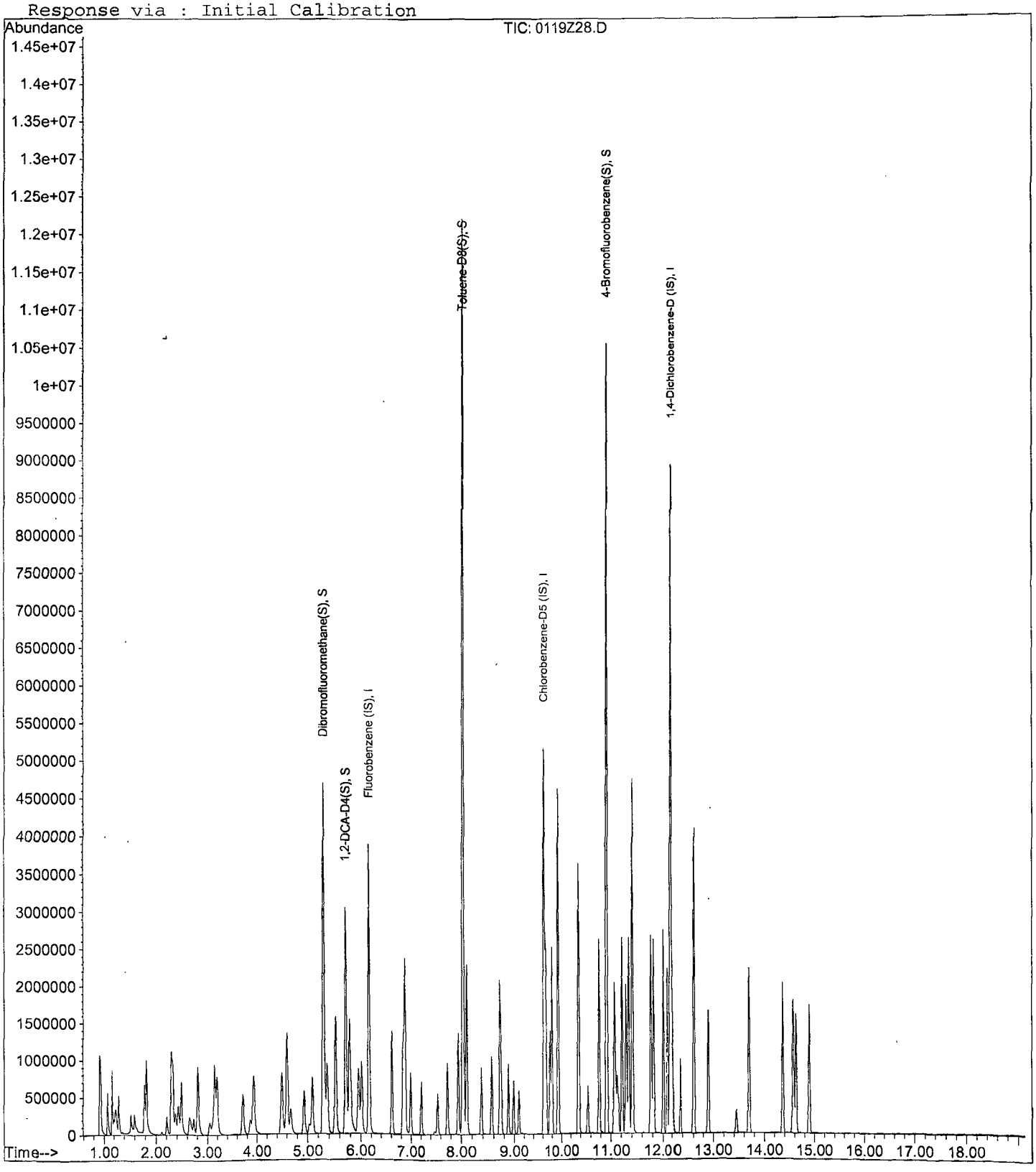
(#) = qualifier out of range (m) = manual integration
0119Z28.D Z0119SUR.M Fri Jan 22 12:38:44 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z28.D Vial: 8
Acq On : 19 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z29.D Vial: 9
Acq On : 19 Jan 21 18:48 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4296103	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3520210	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1288192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2622152	51.17	ppb	0.00
Spiked Amount 25.000			Recovery =	204.676%		
3) 1,2-DCA-D4(S)	5.71	65	2287239	56.32	ppb	0.00
Spiked Amount 25.000			Recovery =	225.268%		
5) Toluene-D8(S)	8.03	98	8872337	56.42	ppb	0.00
Spiked Amount 25.000			Recovery =	225.684%		
6) 4-Bromofluorobenzene(S)	10.92	95	3169106	49.38	ppb	0.00
Spiked Amount 25.000			Recovery =	197.520%		

Target Compounds Qvalue

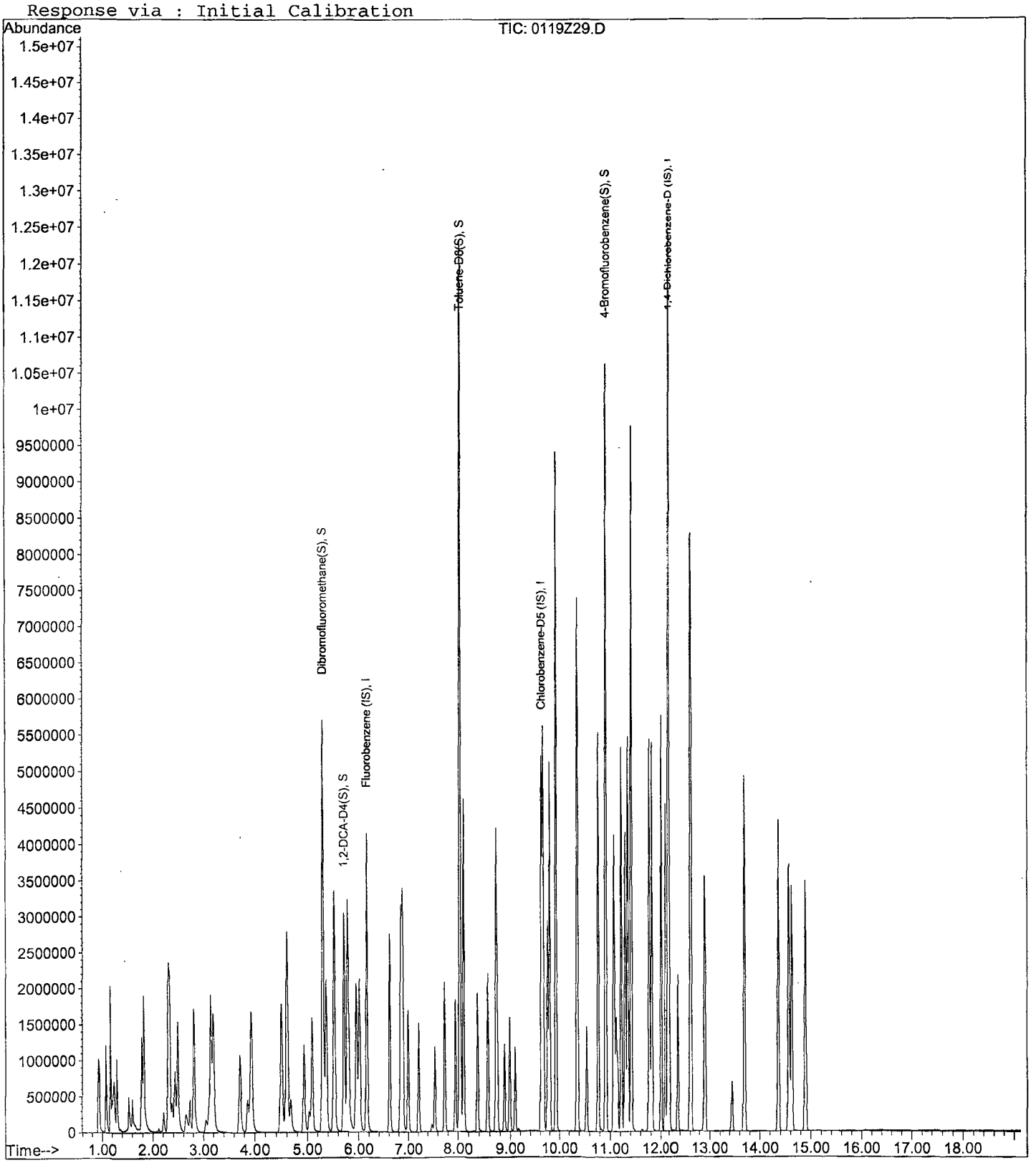
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z29.D Vial: 9
Acq On : 19 Jan 21 18:48 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0119Z30.D Vial: 10
Acq On : 19 Jan 21 19:11 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/19/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4564151	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3733825	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1397248	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	5478203	99.02	ppb	0.00
Spiked Amount 25.000			Recovery =	396.088%		
3) 1,2-DCA-D4(S)	5.71	65	4836475	112.09	ppb	0.00
Spiked Amount 25.000			Recovery =	448.368%		
5) Toluene-D8(S)	8.03	98	17237310	103.34	ppb	0.00
Spiked Amount 25.000			Recovery =	413.376%		
6) 4-Bromofluorobenzene(S)	10.92	95	7054802	100.94	ppb	0.00
Spiked Amount 25.000			Recovery =	403.768%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

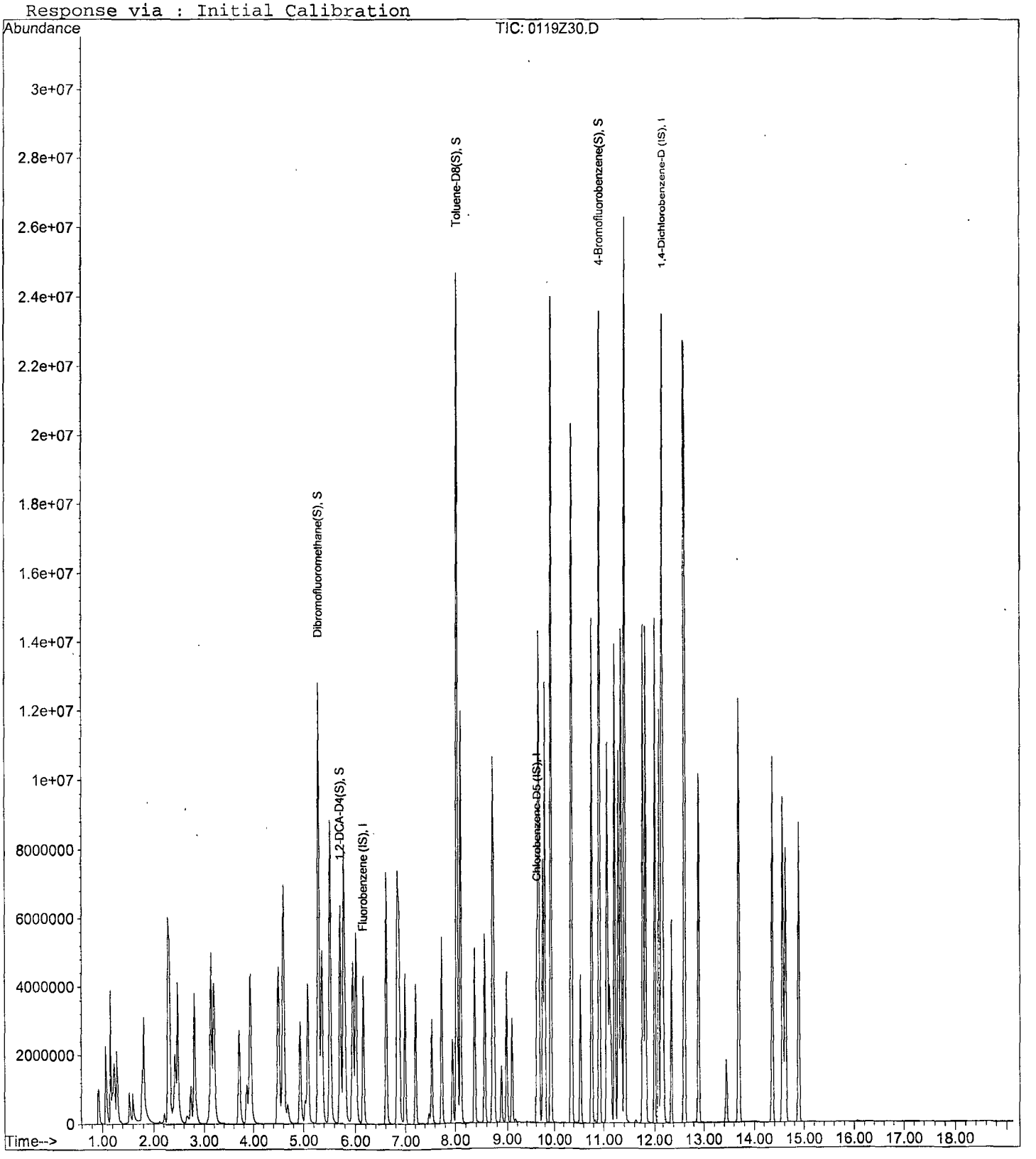
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0119Z30.D
Acq On : 19 Jan 21 19:11
Sample : 100ug/L VOC STD 1/19/21
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

			0125Z36.D	0125Z37.D	0125Z38.D	0125Z39.D	0125Z40.D	0125Z41.D	0125Z42.D										
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.0	5.943	3.222	1.423	1.019	0.9015	0.8455				3.9	123	TMHB	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
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Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z36.D Vial: 31
Acq On : 25 Jan 21 20:43 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3473573	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5054482	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4196316	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	38845899m	17.67	ppb	100

(#) = qualifier out of range (m) = manual integration

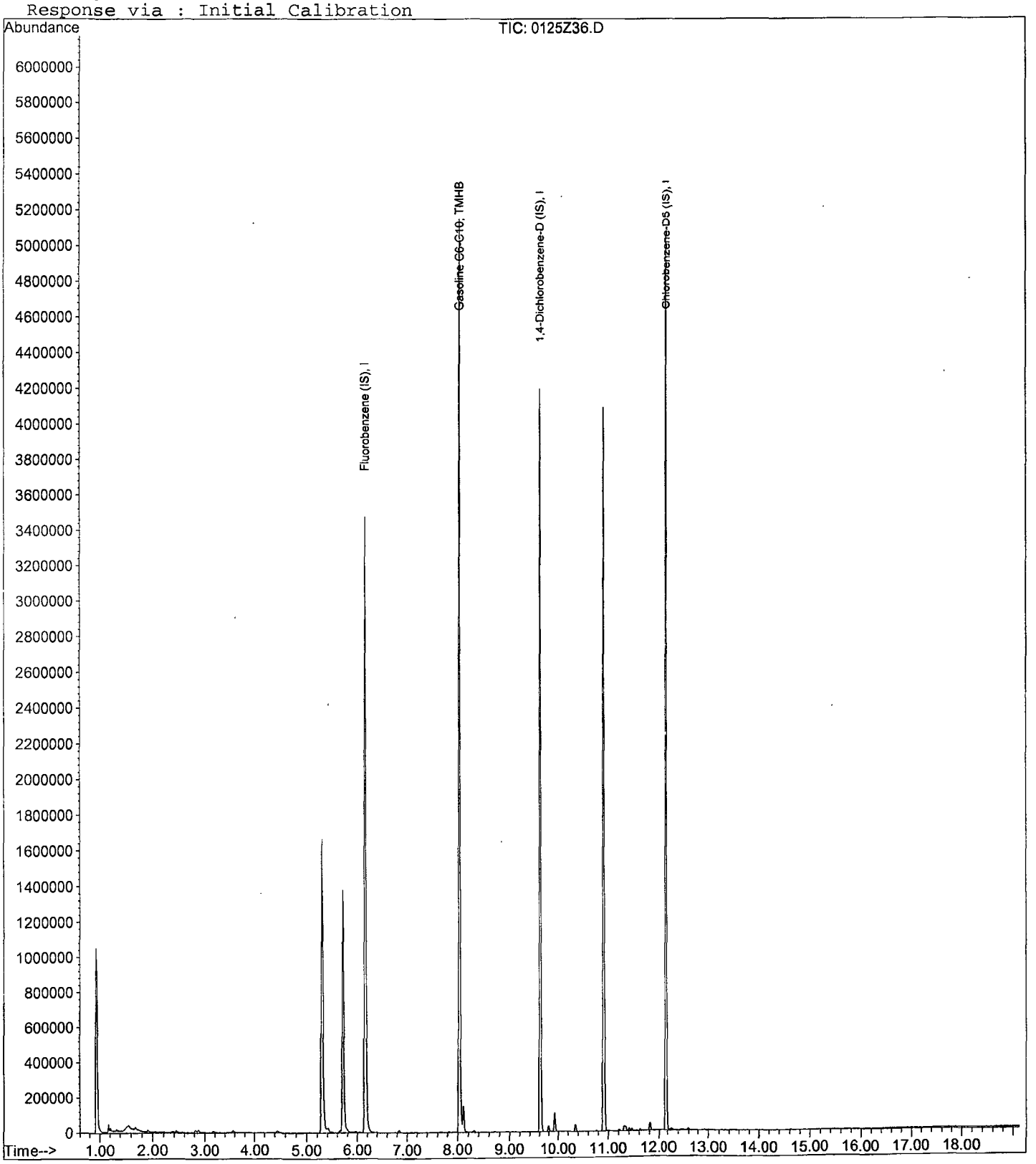
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z36.D
Acq On : 25 Jan 21 20:43
Sample : 20ug/L GAS STD 1/25/21
Misc :

Vial: 31
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z37.D Vial: 32
Acq On : 25 Jan 21 21:06 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3453271	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5130542	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4275409	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	41043942m	45.92	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

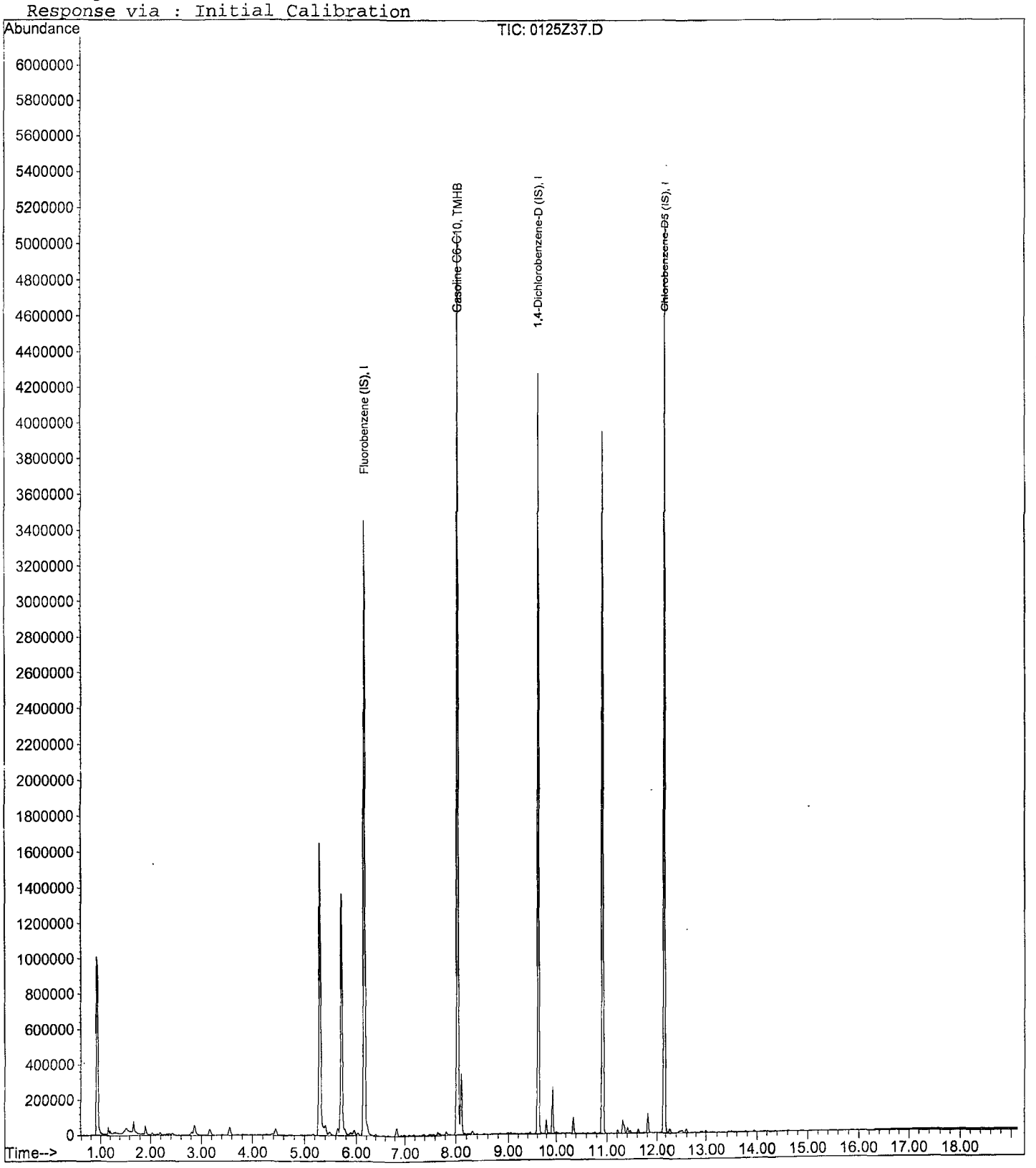
Data File : M:\ZEUS\DATA\210125\0125Z37.D
Acq On : 25 Jan 21 21:06
Sample : 50ug/L GAS STD 1/25/21
Misc :

Vial: 32
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z38.D Vial: 33
Acq On : 25 Jan 21 21:29 Operator: LP,DG,CH
Sample : 100ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3372890	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4802768	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4140552	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	43466644m	86.21	ppb	100

(#) = qualifier out of range (m) = manual integration

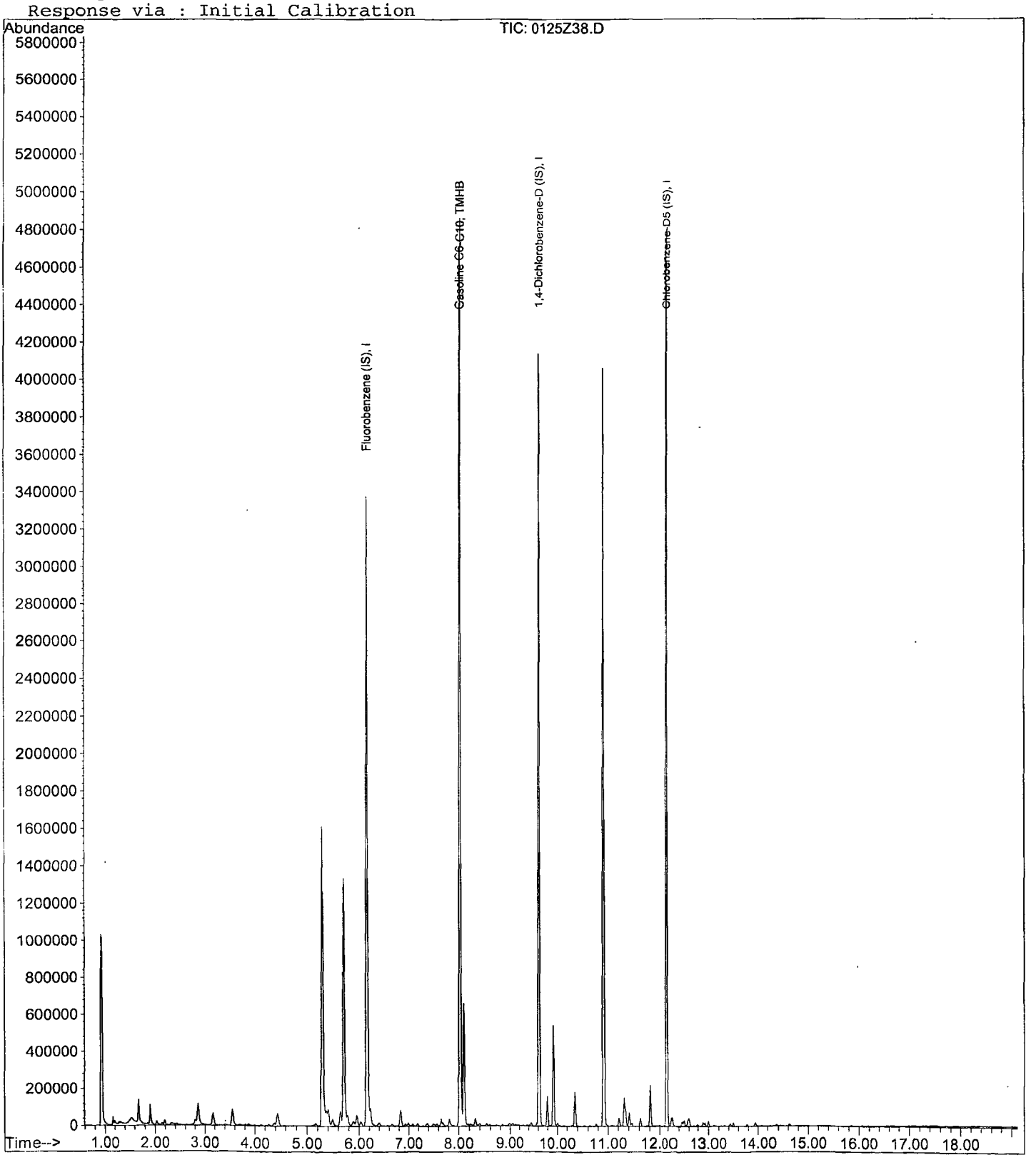
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z38.D
Acq On : 25 Jan 21 21:29
Sample : 100ug/L GAS STD 1/25/21
Misc :

Vial: 33
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z39.D Vial: 34
Acq On : 25 Jan 21 21:52 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:14 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3429087	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4818669	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4159957	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	58556434m	254.73	ppb	100

(#) = qualifier out of range (m) = manual integration

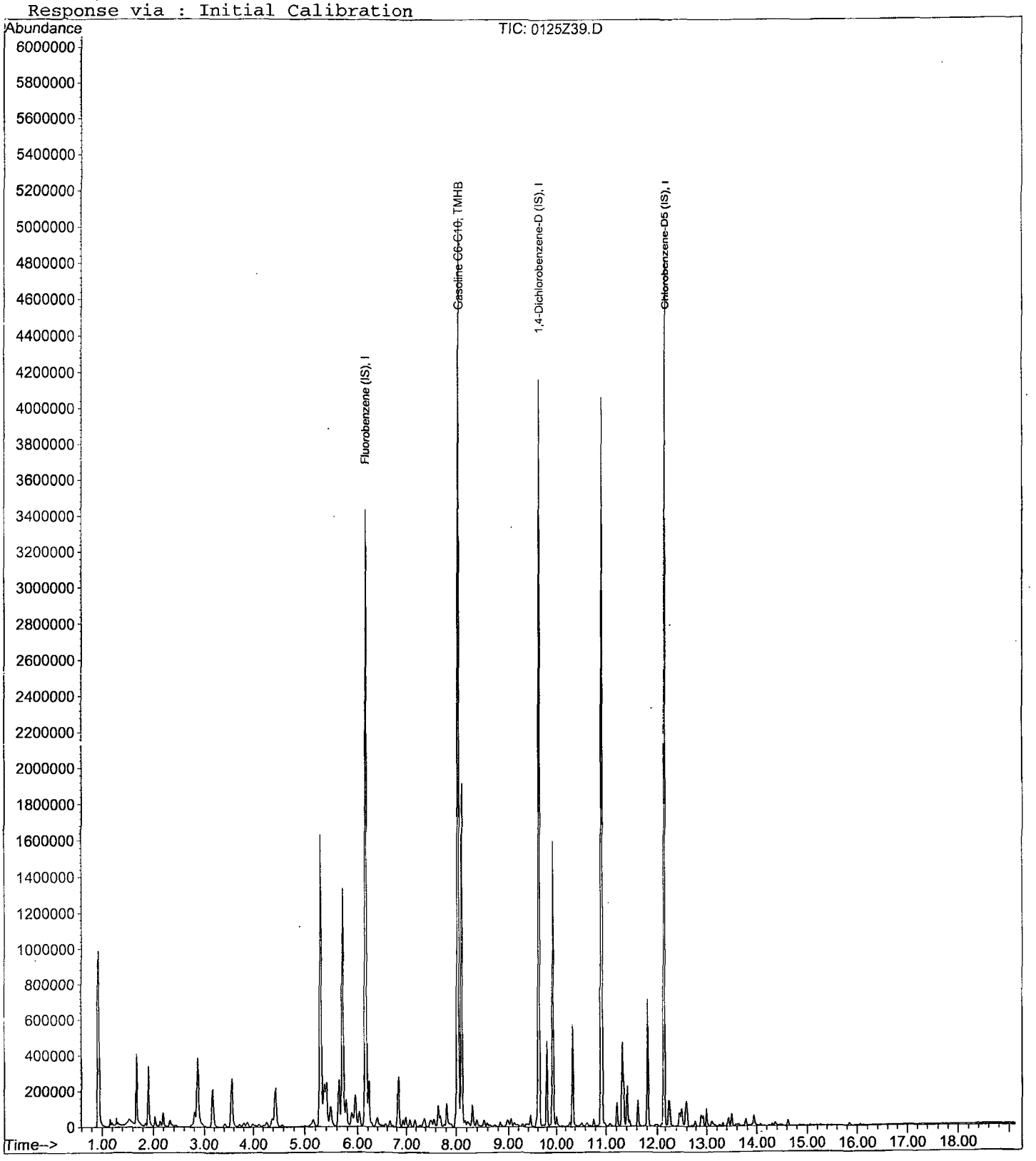
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z39.D
Acq On : 25 Jan 21 21:52
Sample : 300ug/L GAS STD 1/25/21
Misc :

Vial: 34
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:14 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z40.D Vial: 35
Acq On : 25 Jan 21 22:15 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3512382	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5118079	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4192540	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	85903188m	551.65 ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z40.D ZGAS0125.M Tue Jan 26 11:50:12 2021 Page 1

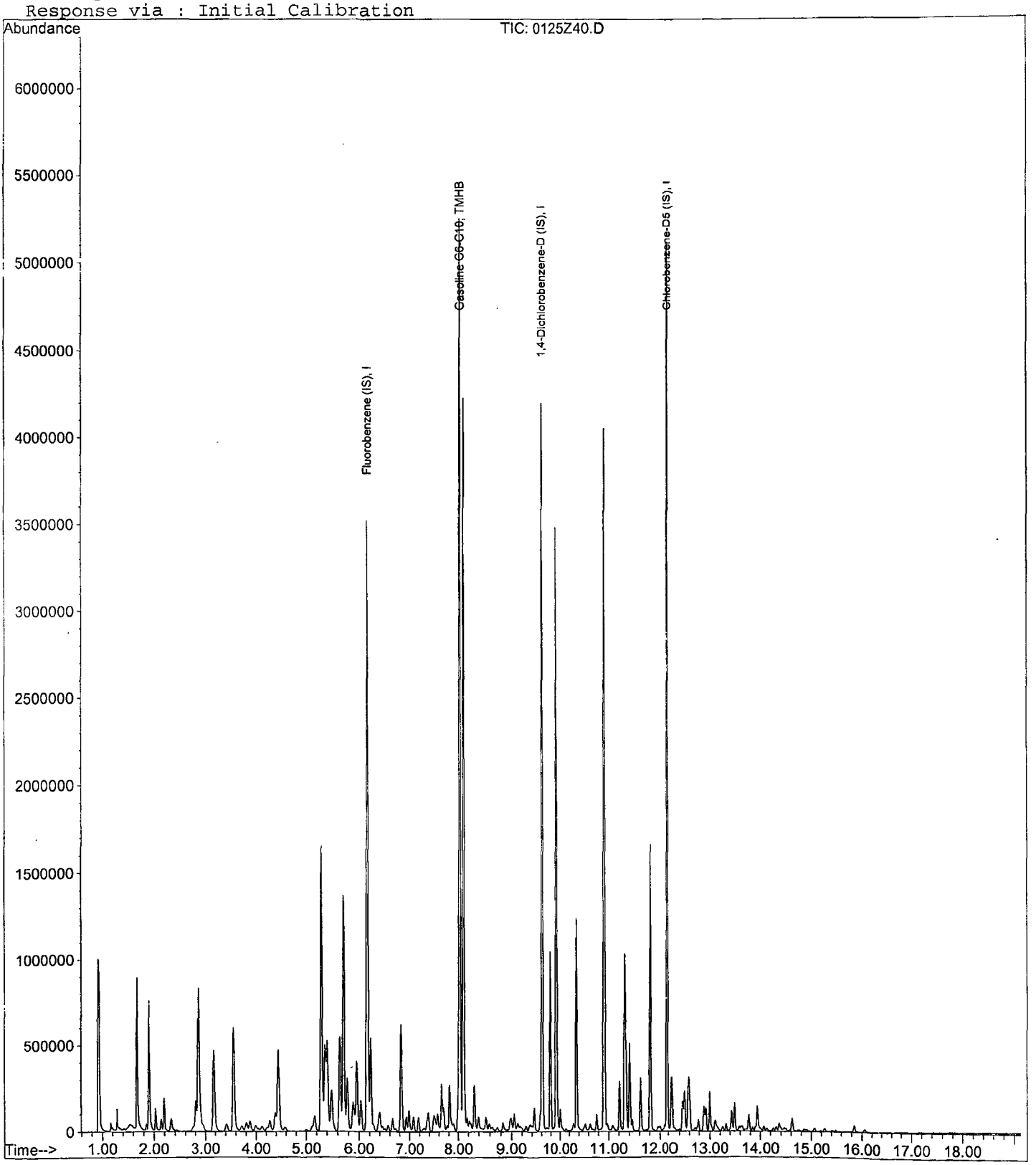
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z40.D
Acq On : 25 Jan 21 22:15
Sample : 600ug/L GAS STD 1/25/21
Misc :

Vial: 35
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z41.D Vial: 36
Acq On : 25 Jan 21 22:38 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3620807	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5252263	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4492752	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.11	TIC	104457487m	728.32 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

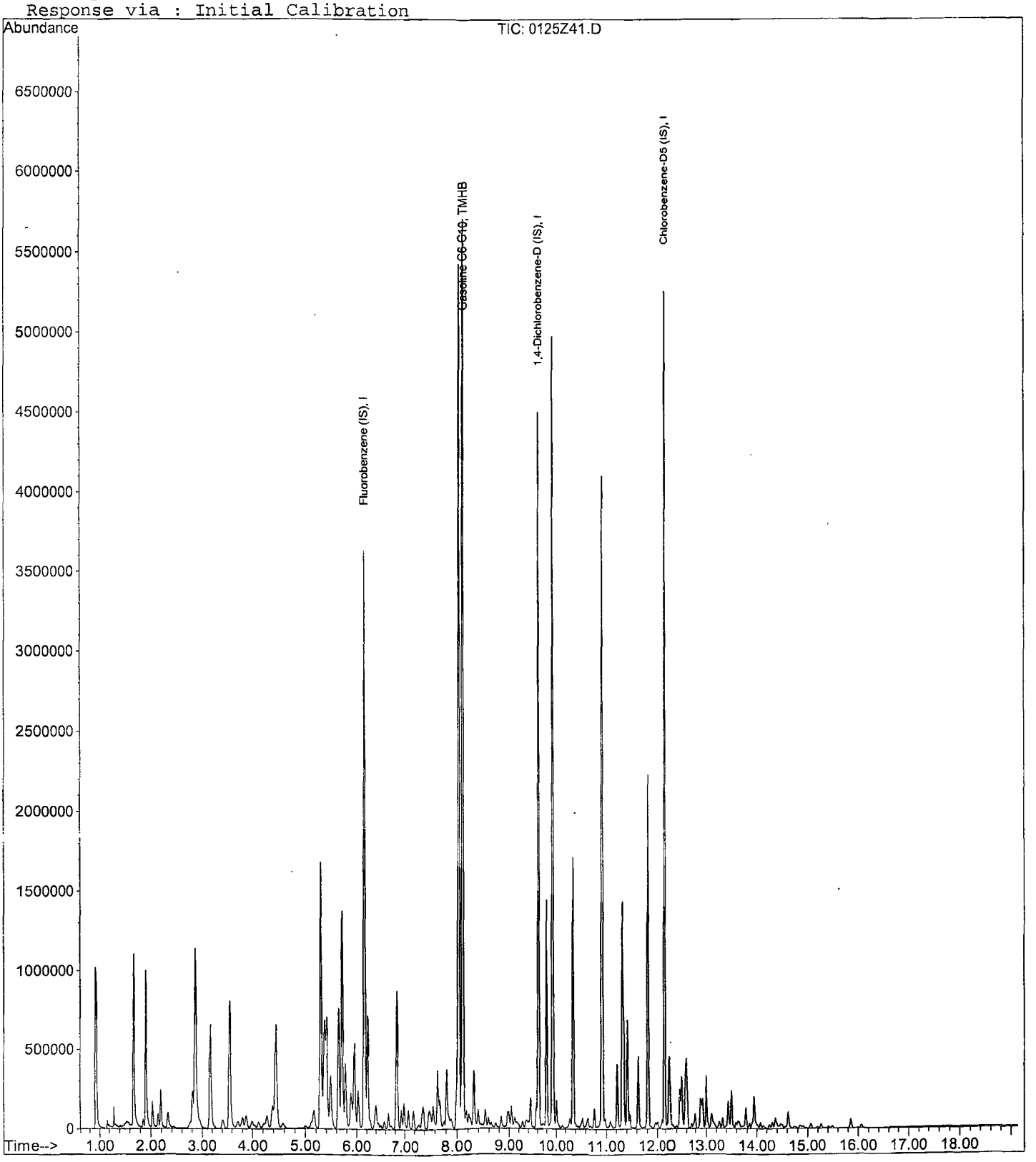
Data File : M:\ZEUS\DATA\210125\0125Z41.D
Acq On : 25 Jan 21 22:38
Sample : 800ug/L GAS STD 1/25/21
Misc :

Vial: 36
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z42.D
Acq On : 25 Jan 21 23:01
Sample : 1000ug/L GAS STD 1/25/21
Misc :

Vial: 37
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3619634	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5399873	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4370383	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.11	TIC	122414748m	928.27 ppb	100

(#) = qualifier out of range (m) = manual integration

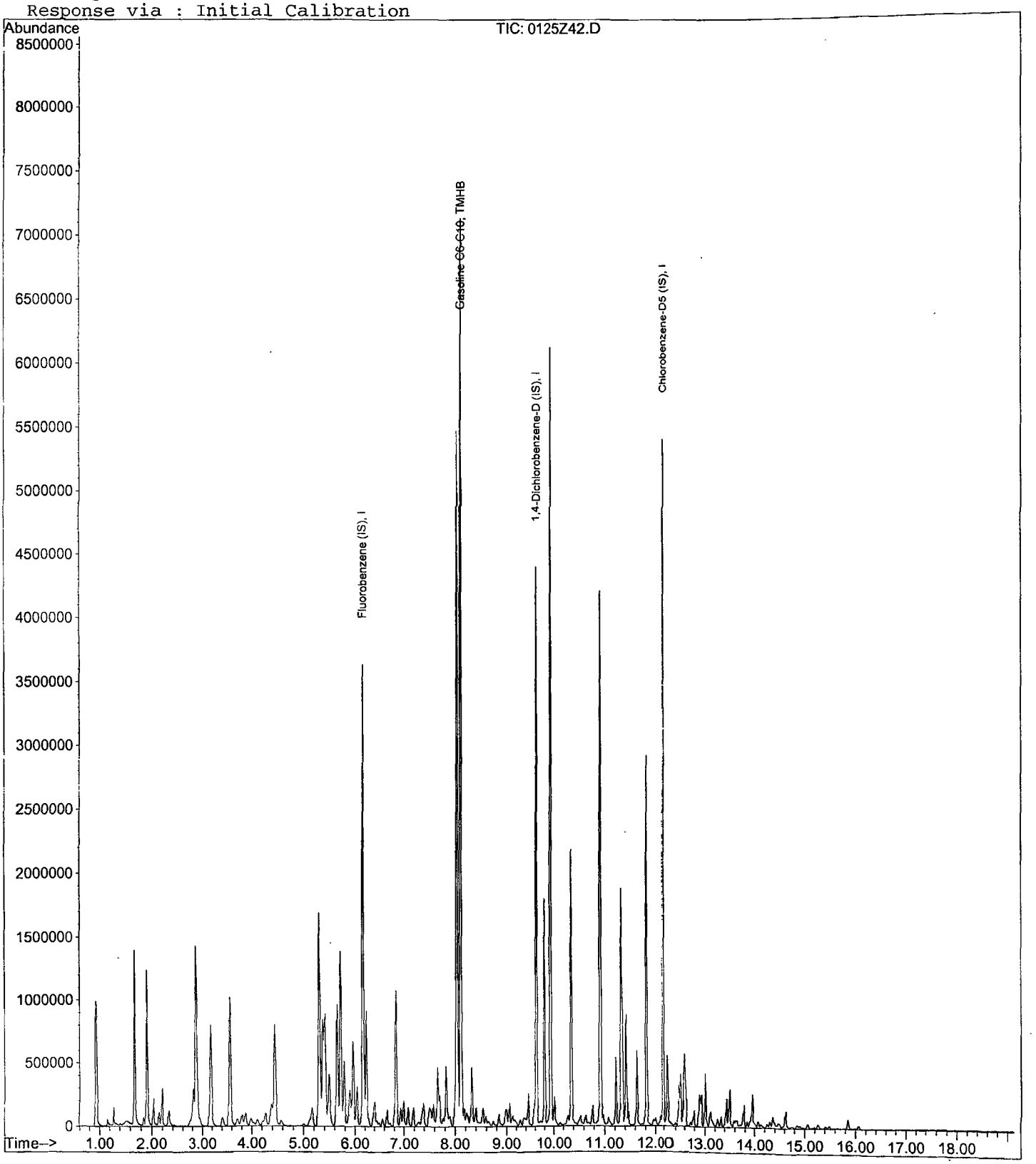
Quantitation Report

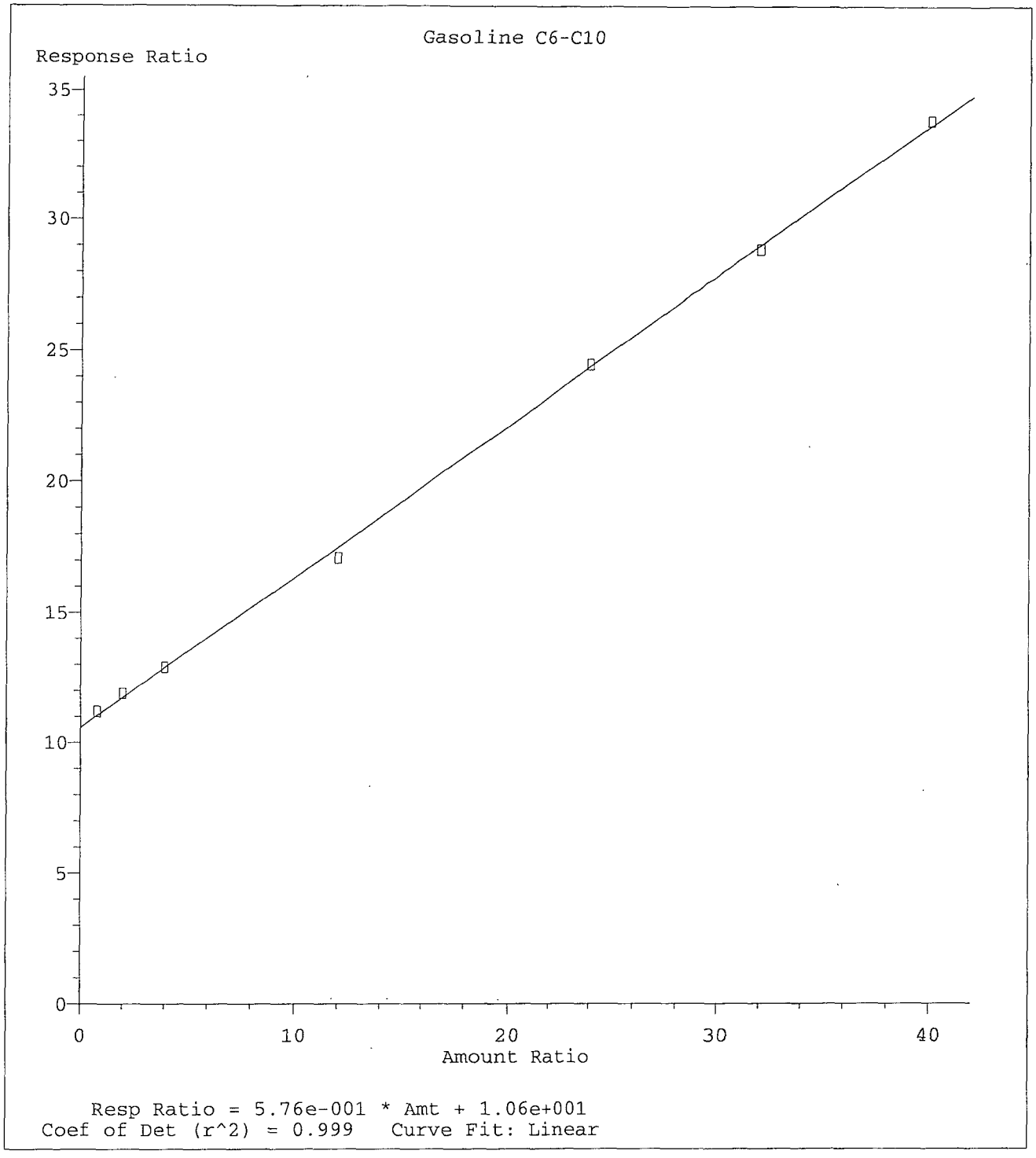
Data File : M:\ZEUS\DATA\210125\0125Z42.D
Acq On : 25 Jan 21 23:01
Sample : 1000ug/L GAS STD 1/25/21
Misc :

Vial: 37
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\ZGAS0125.M
Calibration Table Last Updated: Tue Jan 26 10:16:41 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z43.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.905	1.468	62	TMHBL	1.8
2							
3							
4							
5							
6							
7							
8							
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36							
37							
38							
39							
40							
		Average			62.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z43.D
Acq On : 25 Jan 21 23:24
Sample : (SS) 300ug/L GAS STD 1/25/21
Misc :

Vial: 38
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3601969	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5185513	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4579228	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63434795m	305.33	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z43.D ZGAS0125.M Tue Jan 26 11:50:17 2021

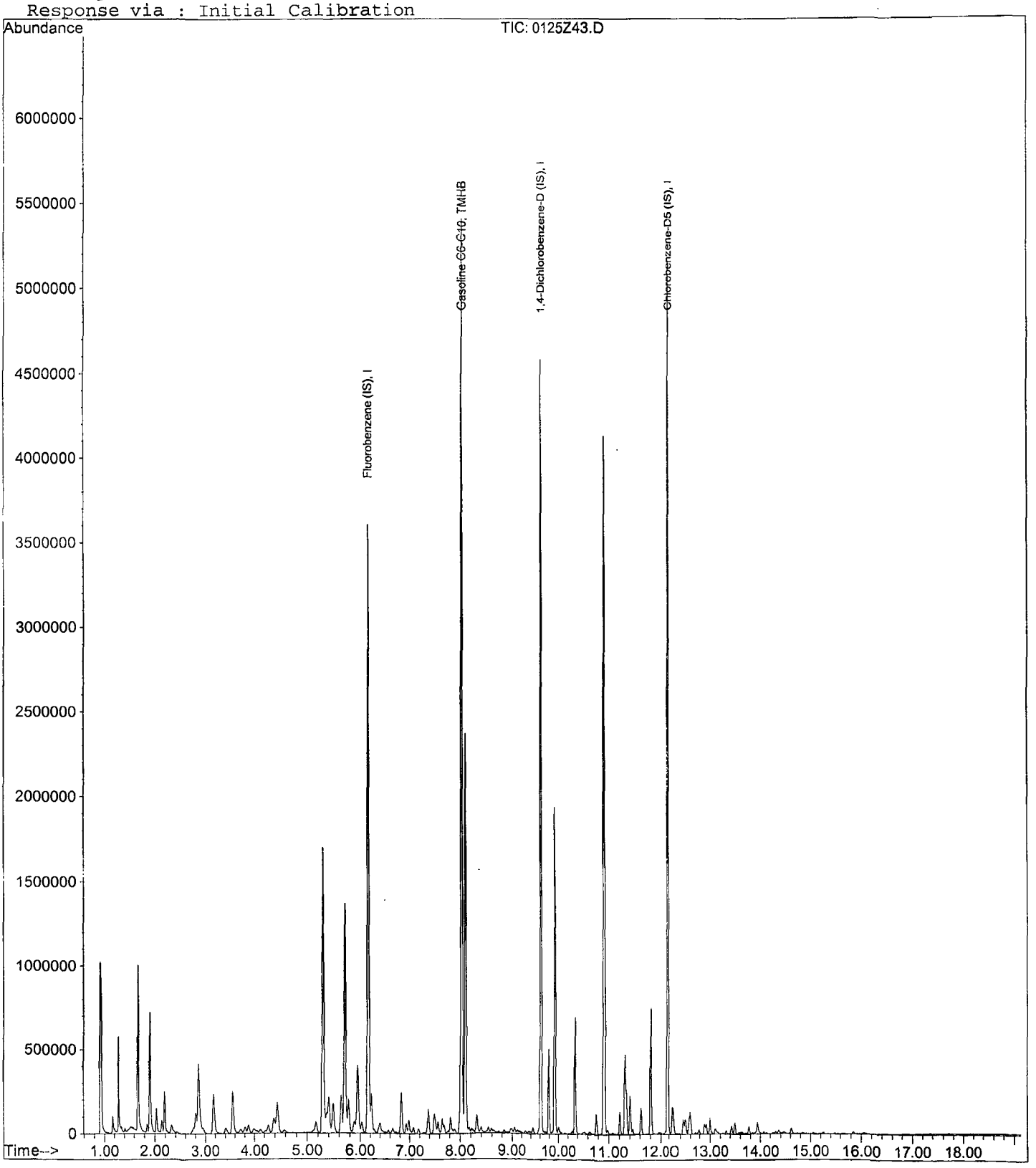
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z43.D
Acq On : 25 Jan 21 23:24
Sample : (SS) 300ug/L GAS STD 1/25/21
Misc :

Vial: 38
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

			0125Z24 D	0125Z25.D	0125Z26.D	0125Z27 D	0125Z29.D	0125Z30 D	0125Z31.D	0125Z32.D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
3	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
6	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb	0.00
Spiked Amount 25.000			Recovery =	16.508%		
5) Toluene-D8(S)	8.03	98	555650	4.08	ppb	0.00
Spiked Amount 25.000			Recovery =	16.312%		
6) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb	0.00
Spiked Amount 25.000			Recovery =	21.764%		

Target Compounds Qvalue

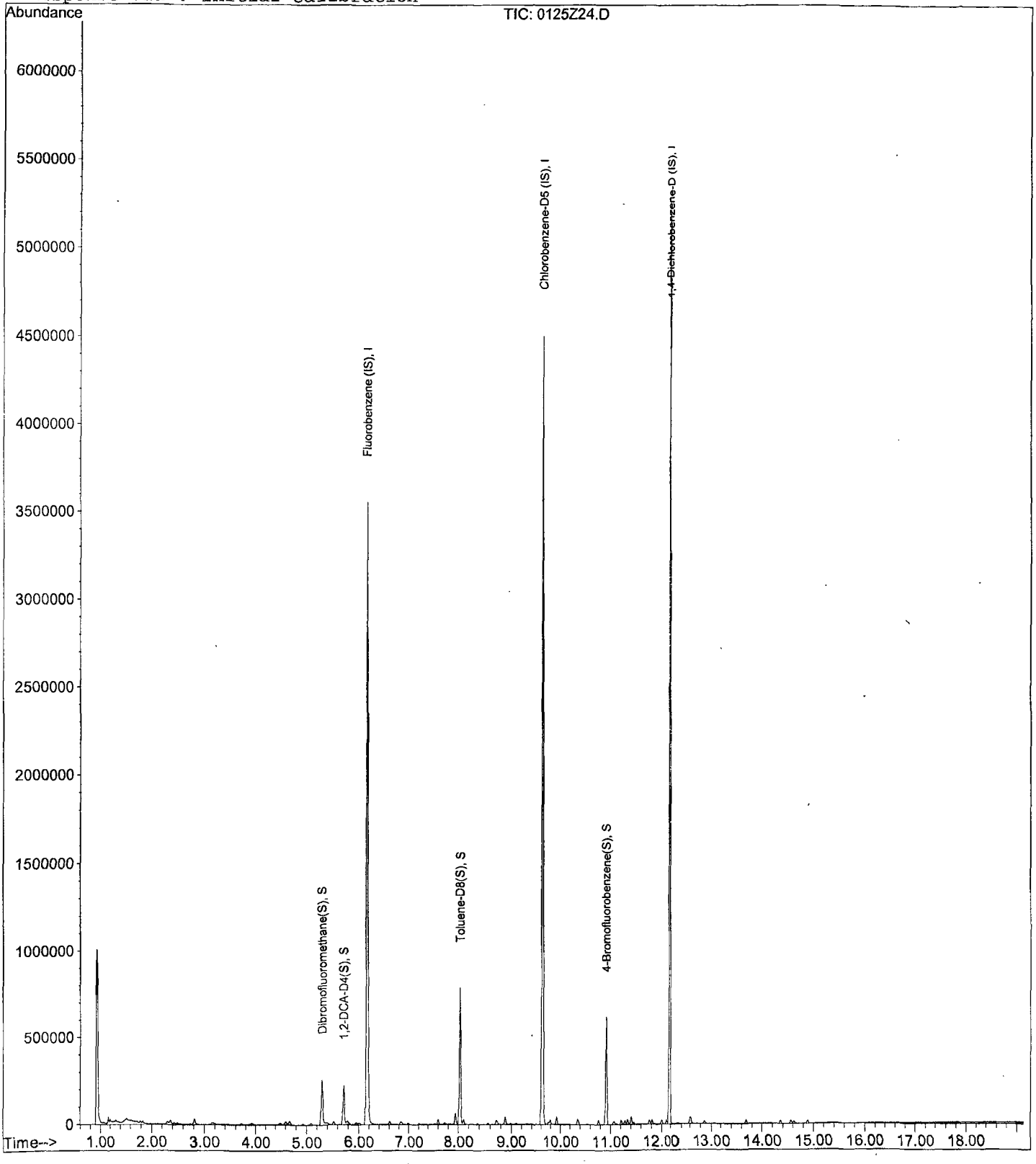
(#) = qualifier out of range (m) = manual integration
0125Z24.D Z0125SUR.M Tue Jan 26 12:05:56 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb	0.00
Spiked Amount 25.000			Recovery =	16.660%		
5) Toluene-D8(S)	8.03	98	538877	4.10	ppb	0.00
Spiked Amount 25.000			Recovery =	16.400%		
6) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb	0.00
Spiked Amount 25.000			Recovery =	21.484%		

Target Compounds Qvalue

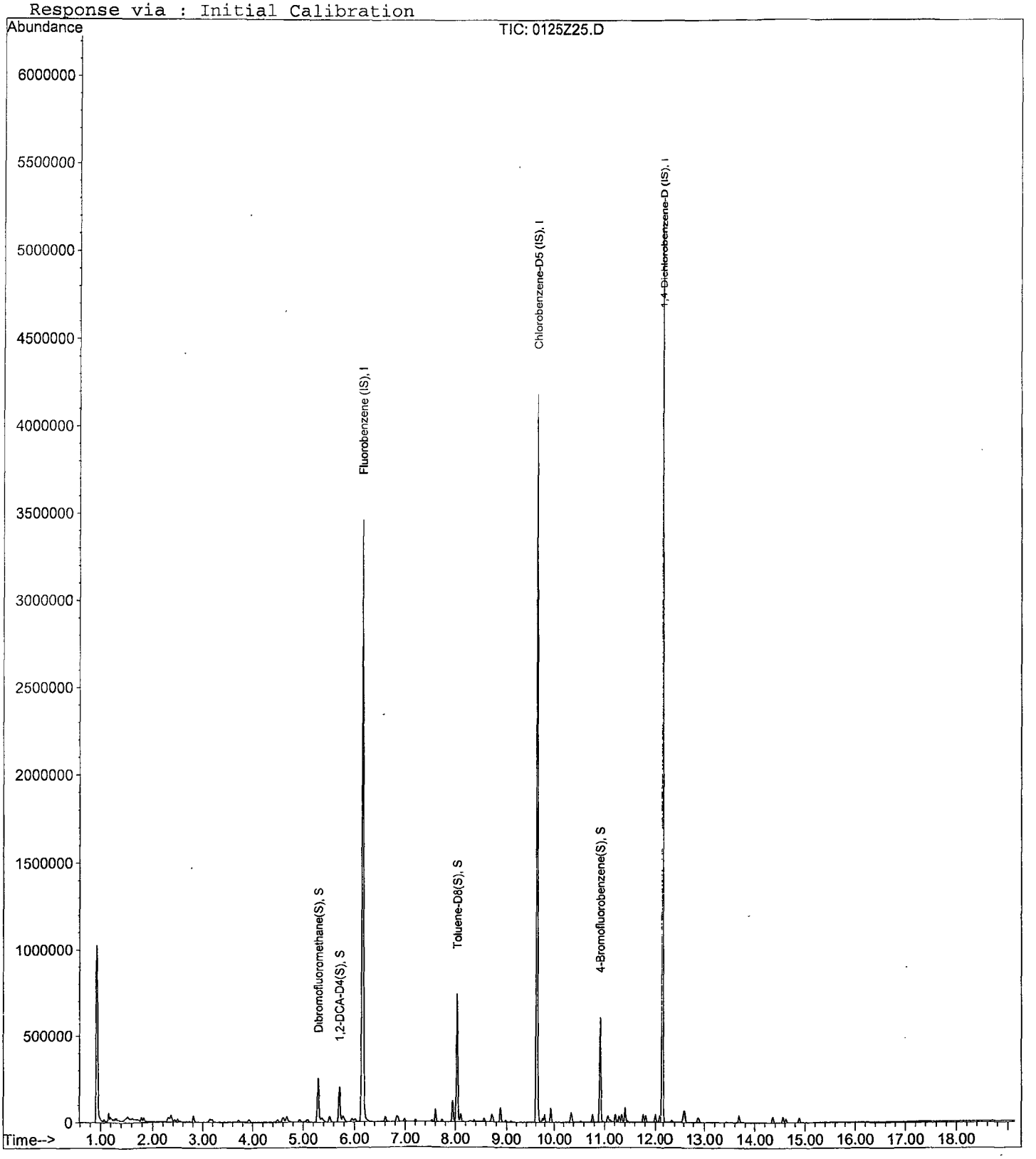
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z25.D
Acq On : 25 Jan 21 16:30
Sample : 0.5ug/L VOC STD 1/25/21
Misc :

Vial: 20
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb	0.00
Spiked Amount 25.000			Recovery =	38.496%		
3) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb	0.00
Spiked Amount 25.000			Recovery =	39.380%		
5) Toluene-D8(S)	8.03	98	1268990	9.81	ppb	0.00
Spiked Amount 25.000			Recovery =	39.236%		
6) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb	0.00
Spiked Amount 25.000			Recovery =	40.312%		

Target Compounds Qvalue

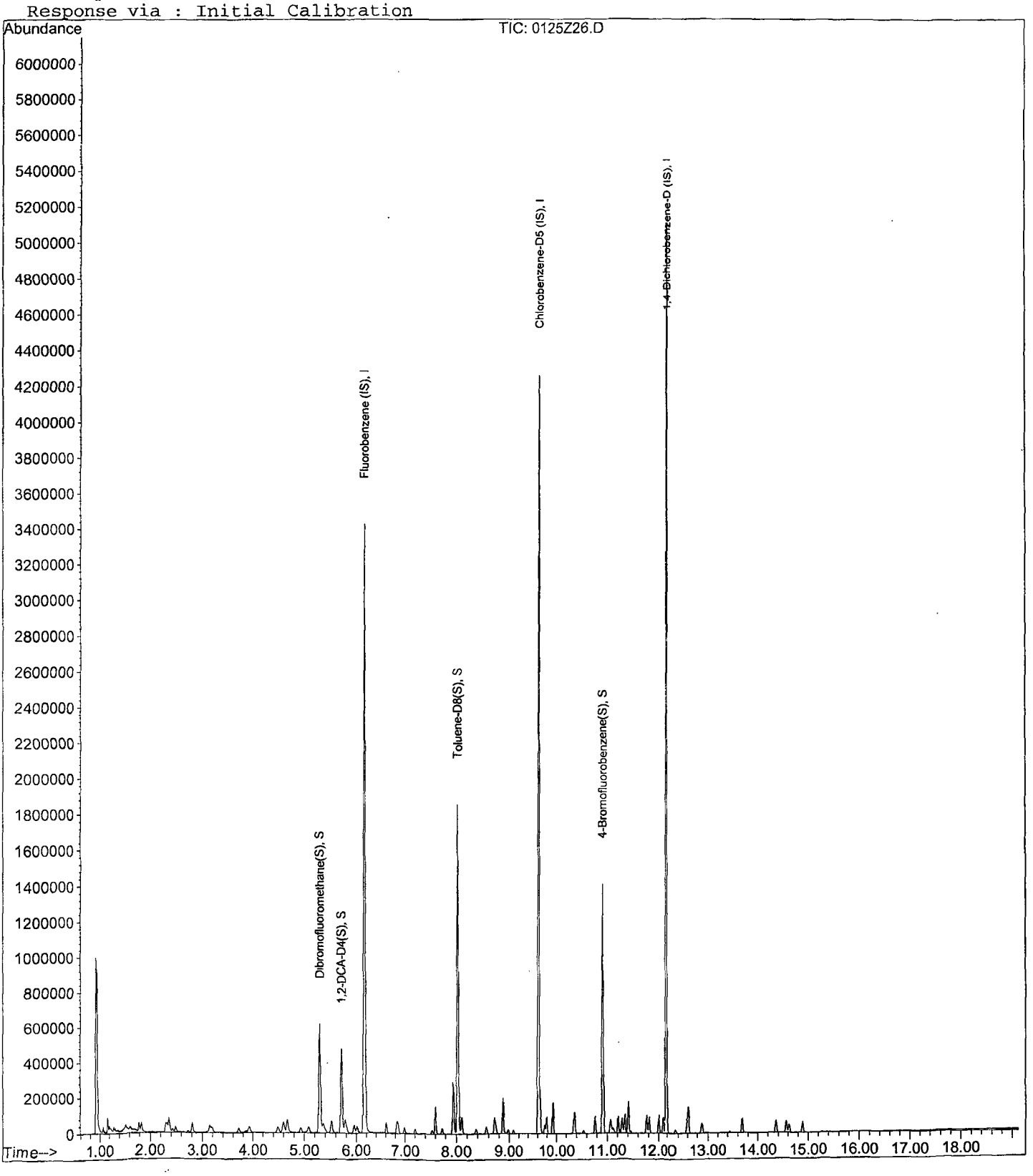
(#) = qualifier out of range (m) = manual integration
0125Z26.D Z0125SUR.M Tue Jan 26 12:05:59 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb	0.00
Spiked Amount 25.000			Recovery =	38.824%		
3) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb	0.00
Spiked Amount 25.000			Recovery =	39.864%		
5) Toluene-D8(S)	8.03	98	1265740	9.83	ppb	0.00
Spiked Amount 25.000			Recovery =	39.308%		
6) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb	0.00
Spiked Amount 25.000			Recovery =	40.020%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

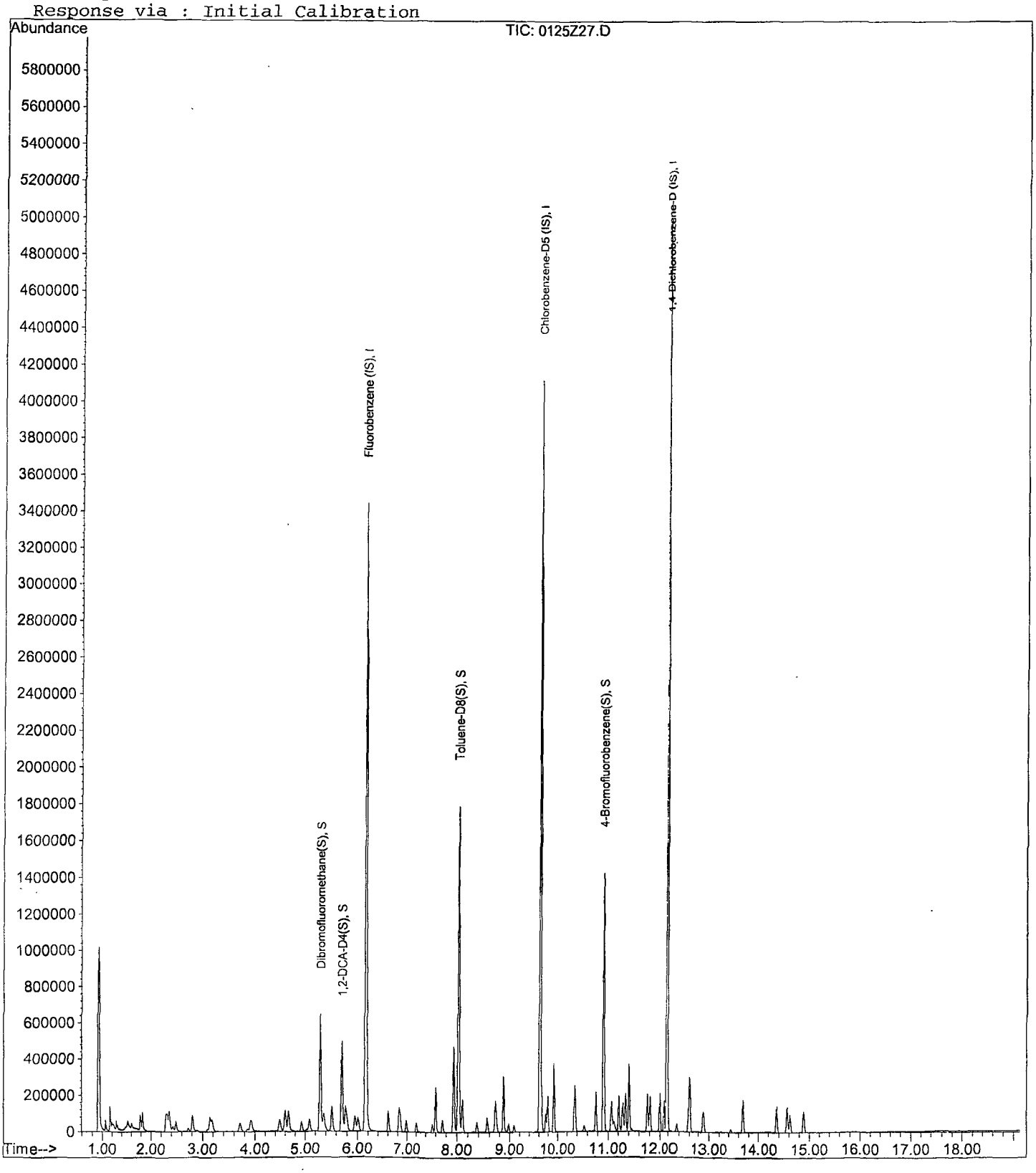
Data File : M:\ZEUS\DATA\210125\0125Z27.D
Acq On : 25 Jan 21 17:16
Sample : 2ug/L VOC STD 1/25/21
Misc :

Vial: 22
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021

Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery =	111.184%		
3) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery =	109.020%		
5) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery =	108.292%		
6) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery =	97.020%		

Target Compounds Qvalue

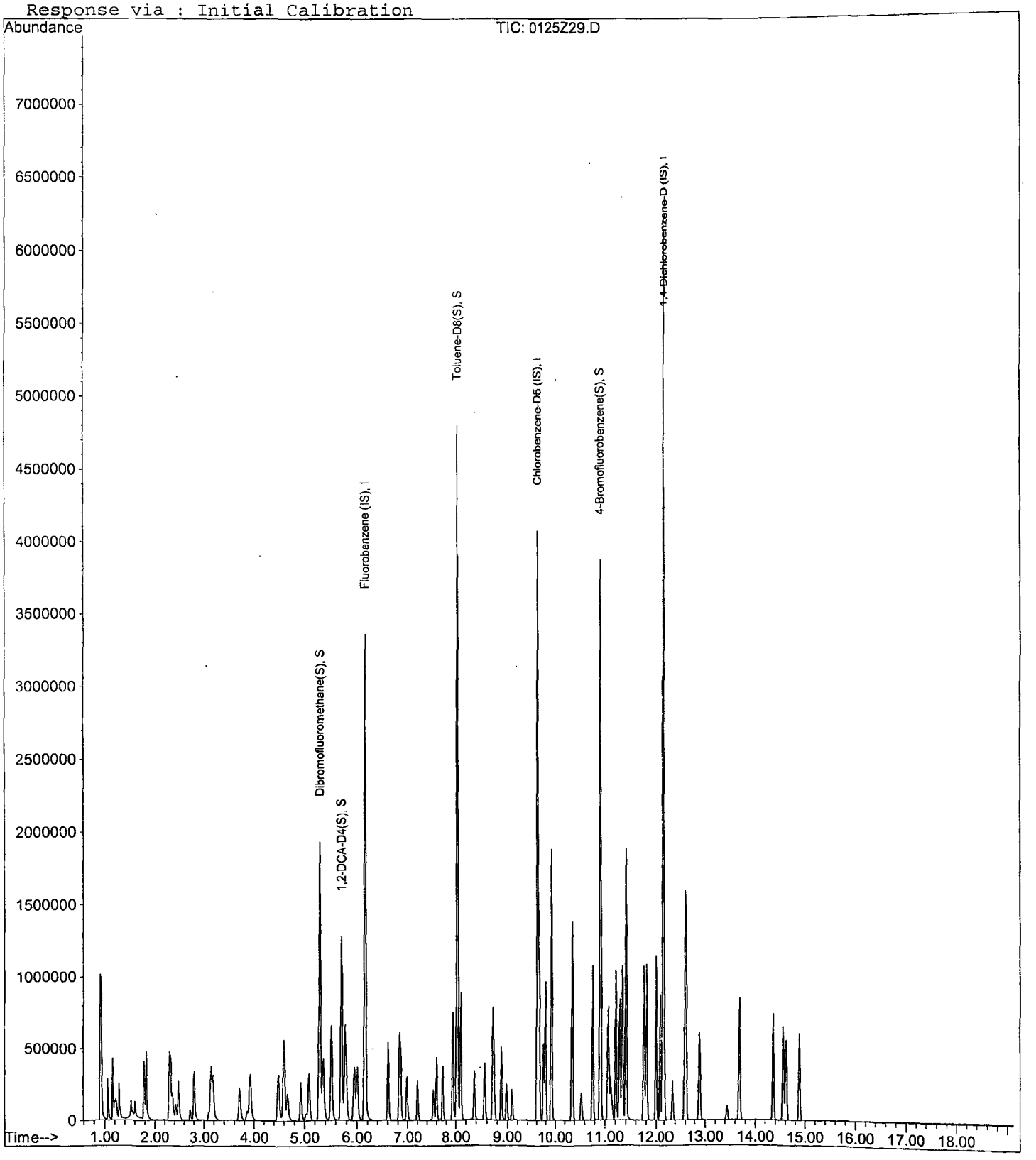
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2246563	56.58	ppb	0.00
Spiked Amount 25.000			Recovery = 226.332%			
3) 1,2-DCA-D4(S)	5.71	65	2038786	55.19	ppb	0.00
Spiked Amount 25.000			Recovery = 220.772%			
5) Toluene-D8(S)	8.03	98	7511750	57.76	ppb	0.00
Spiked Amount 25.000			Recovery = 231.032%			
6) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07	ppb	0.00
Spiked Amount 25.000			Recovery = 200.300%			

Target Compounds Qvalue

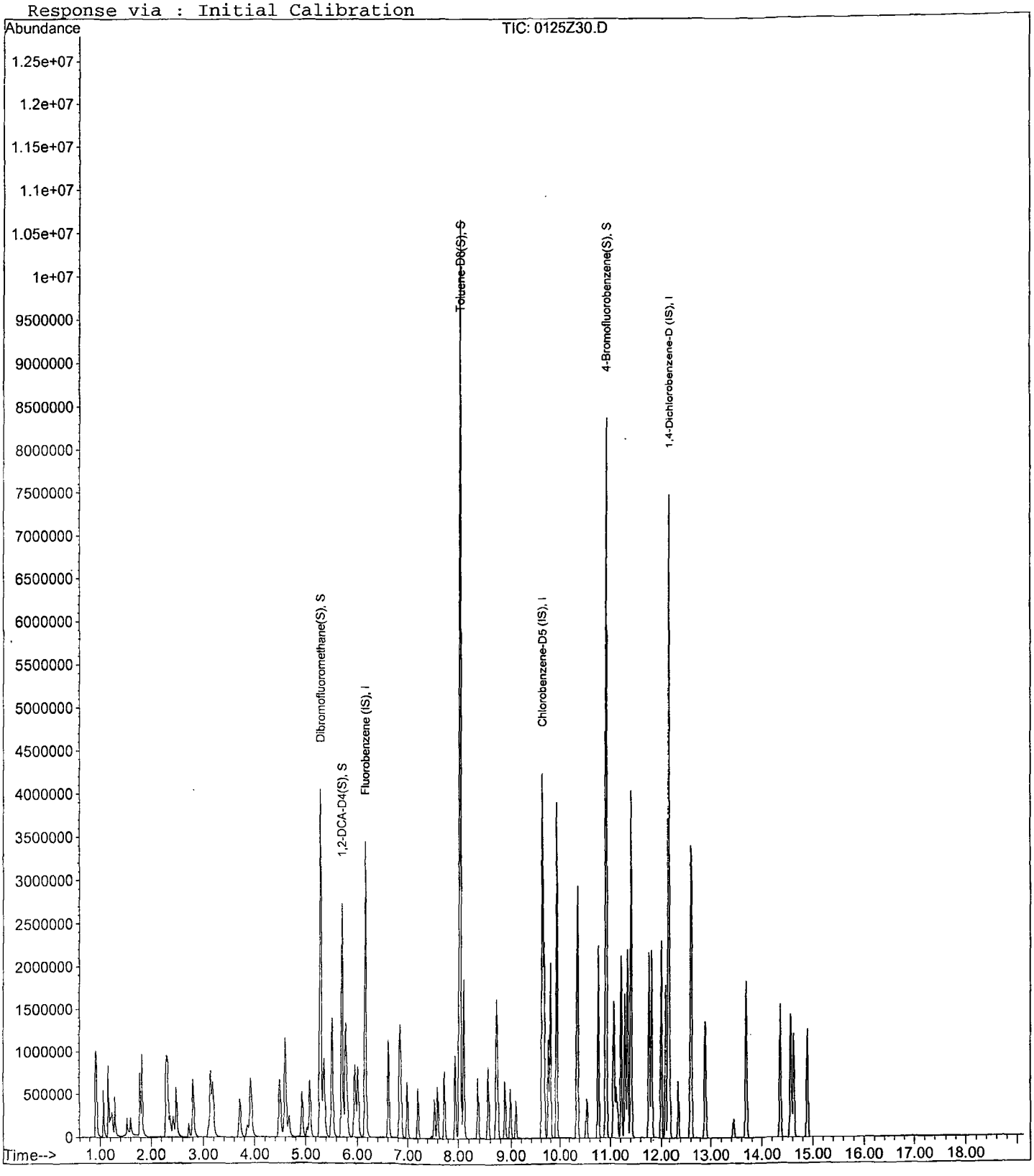
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z30.D
Acq On : 25 Jan 21 18:25
Sample : 20ug/L VOC STD 1/25/21
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery =	220.264%		
3) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery =	212.784%		
5) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery =	223.732%		
6) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery =	197.396%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

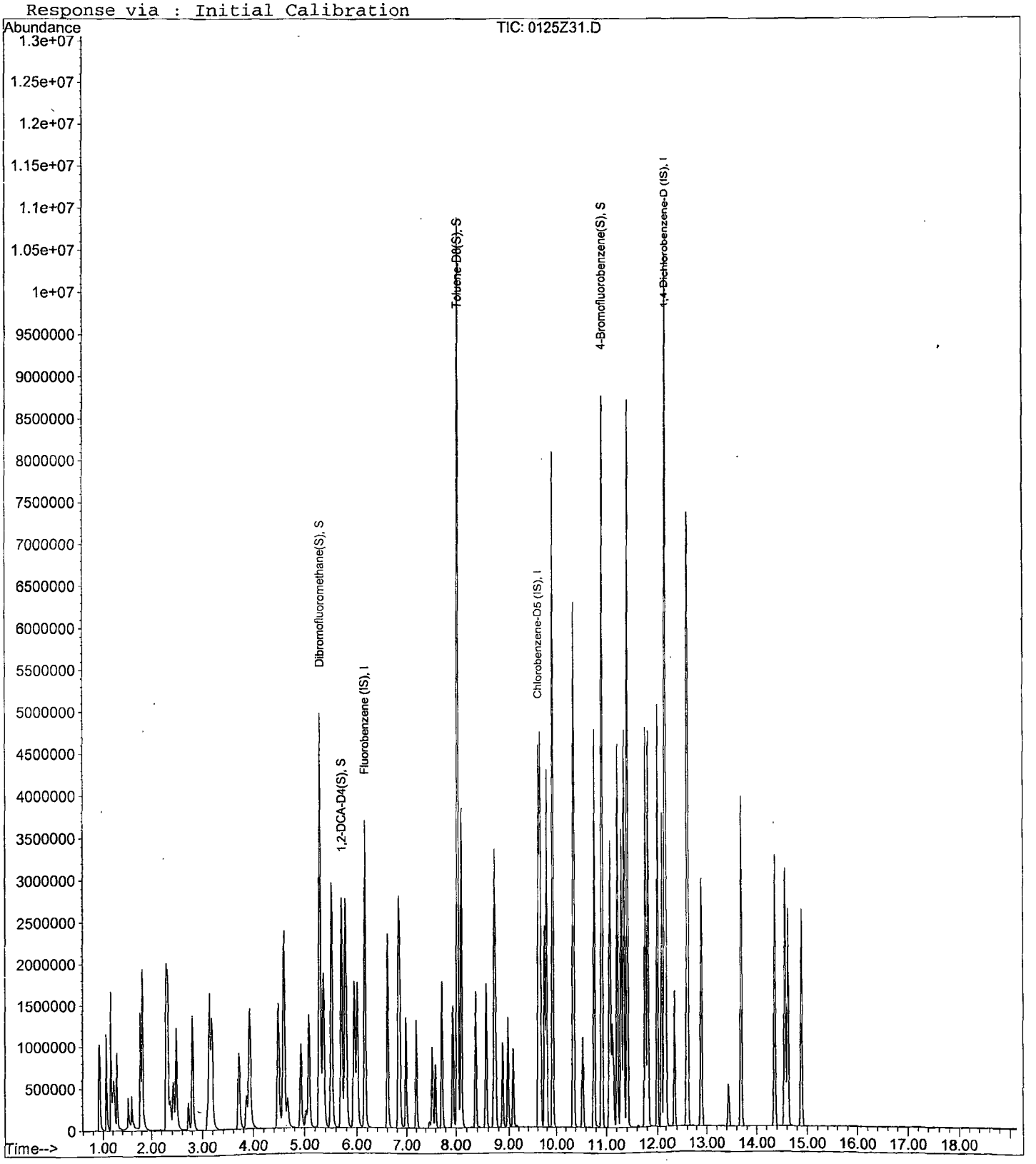
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z31.D
Acq On : 25 Jan 21 18:47
Sample : 40ug/L VOC STD 1/25/21
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery = 452.384%			
3) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery = 441.048%			
5) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery = 417.644%			
6) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery = 401.700%			

Target Compounds Qvalue

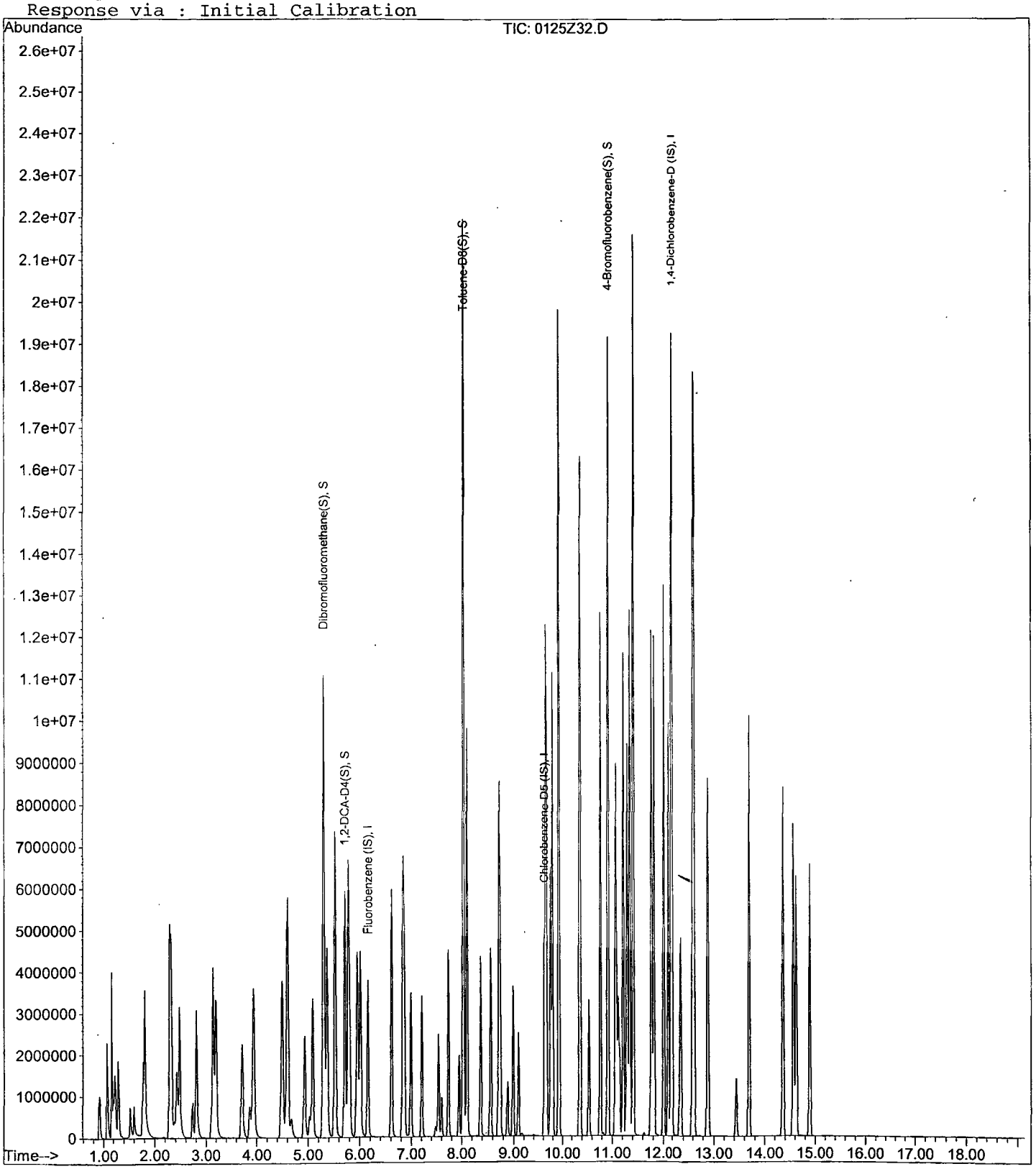
(#) = qualifier out of range (m) = manual integration

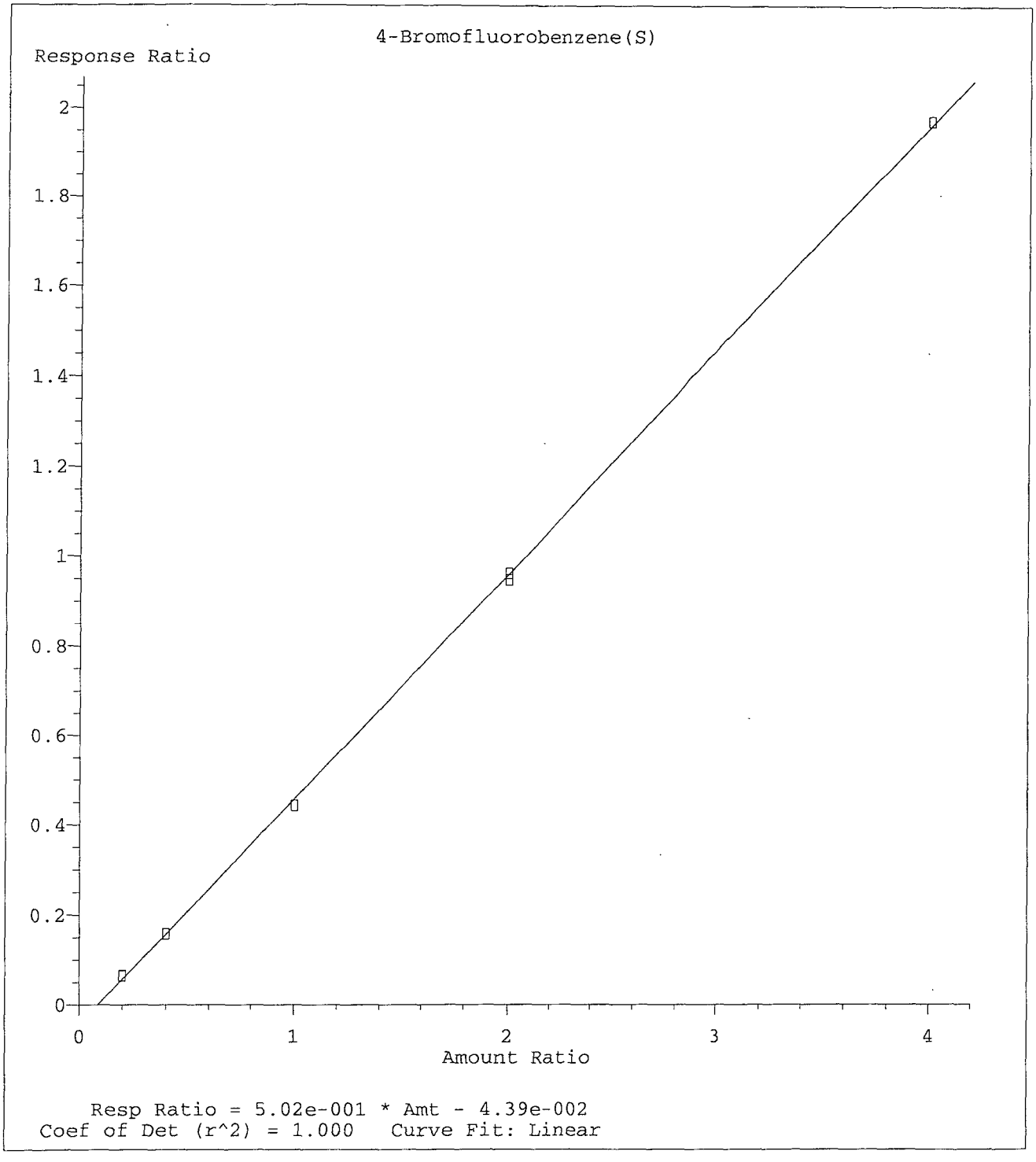
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\Z0125SUR.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0121Z04.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.485	63	TMHBL	3.7
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Initial Cal. Date: 01/19/21
Data File: 0121Z04.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2640	0.2826	7.0	SL	1.7
3	S	1,2-DCA-D4(S)	0.2363	0.2508	6.1	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.117	1.197	7.2	S	
6	SL	4-Bromofluorobenzene(S)	0.3960	0.4205	6.2	SL	2.5
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			6.6		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z04.D Vial: 2
Acq On : 21 Jan 21 08:45 Operator: LP,DG,CH
Sample : 210121A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 21 9:07 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210111\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3547523	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5706497	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4558140	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63209837m	288.92	ppb	100

(#) = qualifier out of range (m) = manual integration
0121Z04.D ZGAS0104.M Fri Jan 22 08:49:14 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z04.D Vial: 2
Acq On : 21 Jan 21 08:45 Operator: LP,DG,CH
Sample : 210121A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3758038	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3136025	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1193984	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1061860	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.312%		
3) 1,2-DCA-D4(S)	5.71	65	942483	26.53	ppb	0.00
Spiked Amount 25.000			Recovery =	106.116%		
5) Toluene-D8(S)	8.03	98	3752689	26.79	ppb	0.00
Spiked Amount 25.000			Recovery =	107.152%		
6) 4-Bromofluorobenzene(S)	10.91	95	1318638	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.484%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

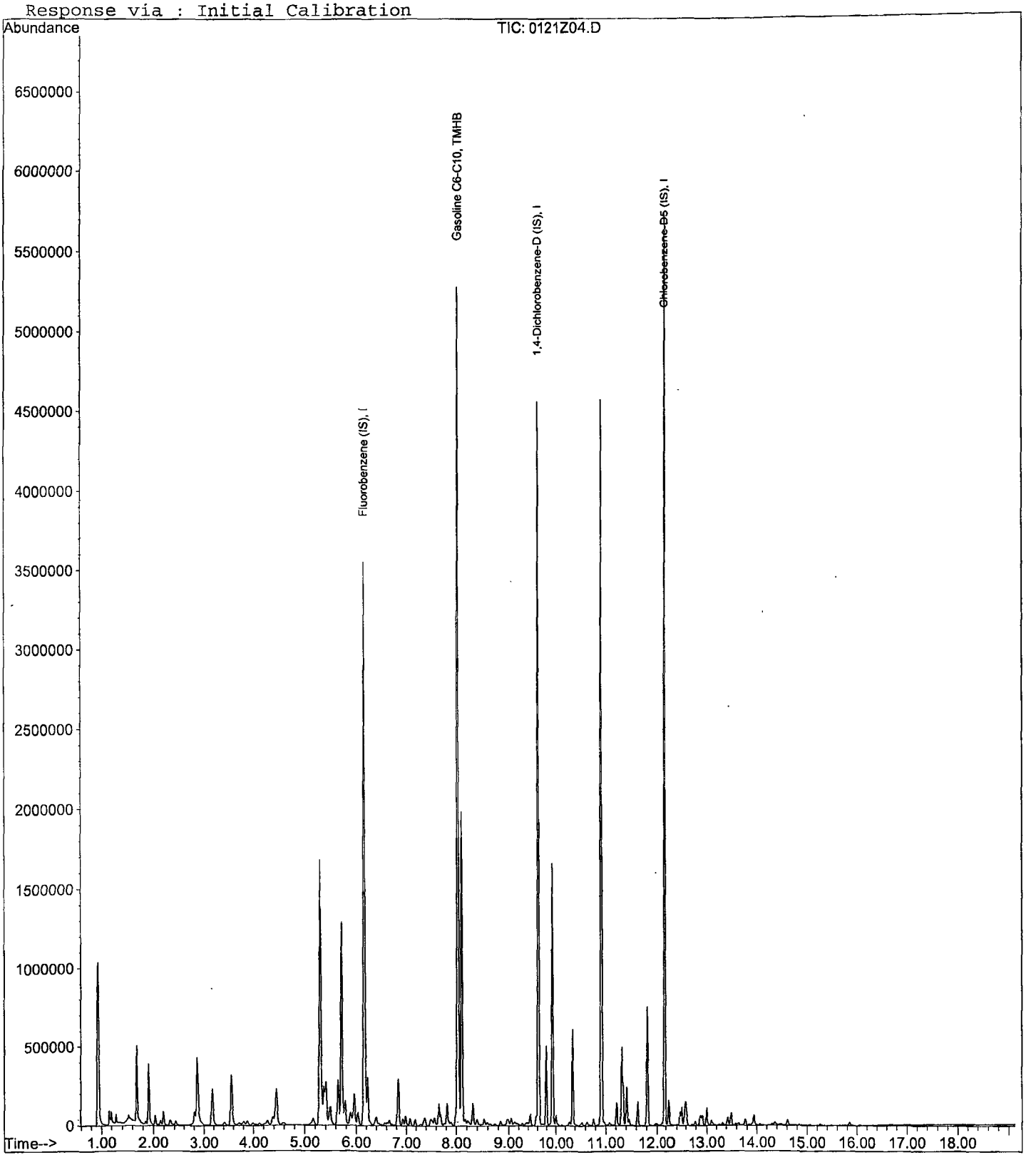
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z04.D
Acq On : 21 Jan 21 08:45
Sample : 210121A CCV 300ug/L
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 21 9:07 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0121Z14.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.499	63	TMHBL	1.4
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/21/21
Instrument: ZEUS
Initial Cal. Date: 01/19/21
Data File: 0121Z14.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2640	0.2790	5.7	SL	2.8
3	S	1,2-DCA-D4(S)	0.2363	0.2545	7.7	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.117	1.208	8.2	S	
6	SL	4-Bromofluorobenzene(S)	0.3960	0.4208	6.3	SL	2.4
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			7.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z14.D Vial: 12
Acq On : 21 Jan 21 12:36 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:48 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3589205	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5646752	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4646503	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	64577091m	295.90	ppb	100

(#) = qualifier out of range (m) = manual integration
0121Z14.D ZGAS0104.M Fri Jan 22 08:49:22 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z14.D Vial: 12
Acq On : 21 Jan 21 12:36 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : *122820_EST_TEST.M*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3792935	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3150616	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1192448	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1058261	24.29	ppb	0.00
Spiked Amount 25.000			Recovery =	97.160%		
3) 1,2-DCA-D4(S)	5.71	65	965346	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.688%		
5) Toluene-D8(S)	8.03	98	3805853	27.04	ppb	0.00
Spiked Amount 25.000			Recovery =	108.164%		
6) 4-Bromofluorobenzene(S)	10.92	95	1325777	24.39	ppb	0.00
Spiked Amount 25.000			Recovery =	97.552%		

Target Compounds Qvalue

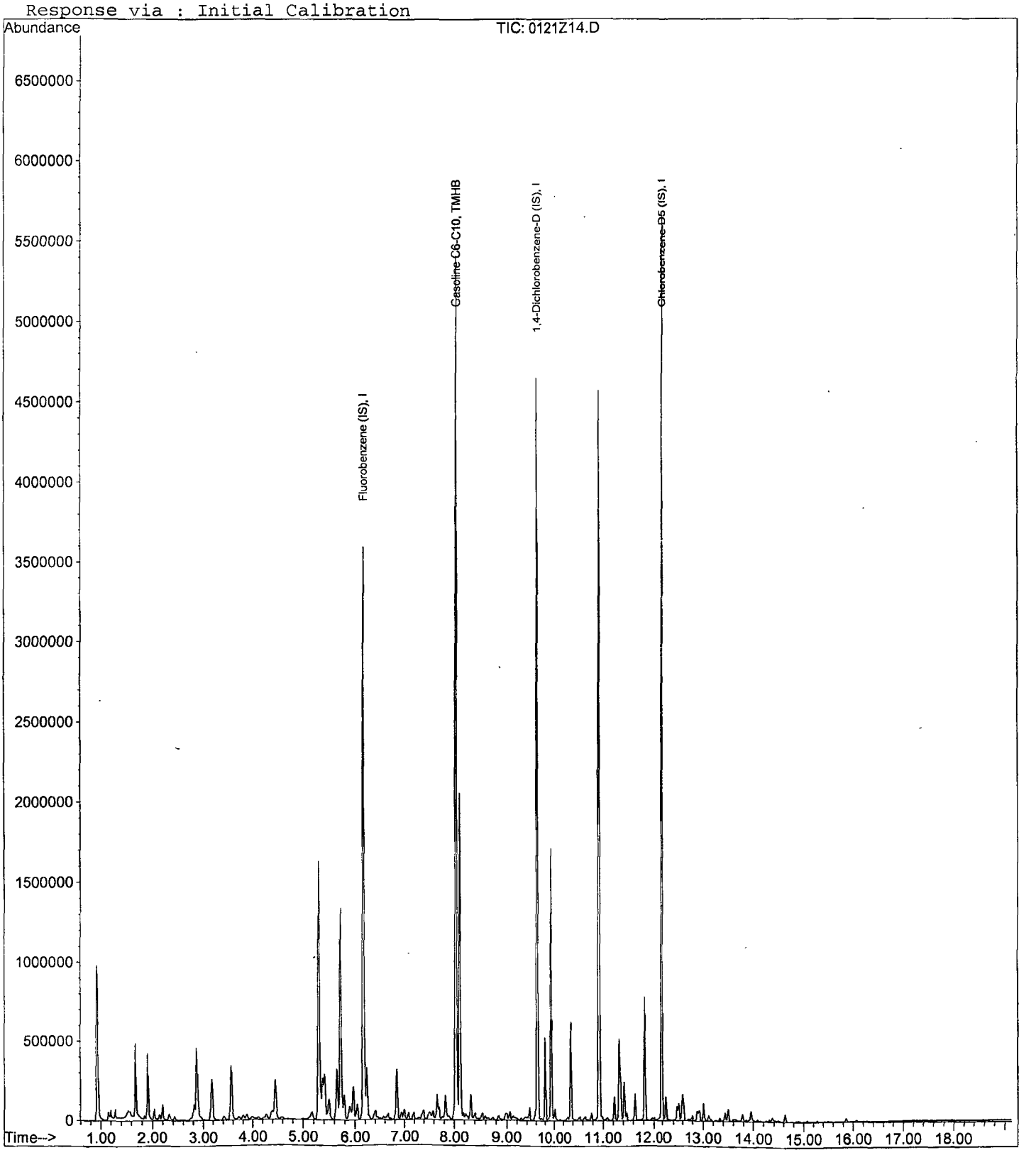
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z14.D Vial: 12
Acq On : 21 Jan 21 12:36 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:48 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z47.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.458	63	TMHBL	0.06
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z47.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2916	7.1	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2736	8.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.317	9.5	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4482	7.8	SL	1.9
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.1		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D
Acq On : 26 Jan 21 00:56
Sample : 210125A CCV/LCS 300ug/L
Misc :

Vial: 42
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3586677	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5267318	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4271466	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	62741336m	300.19	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z47.D ZGAS0125.M Tue Jan 26 11:50:19 2021

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D Vial: 42
Acq On : 26 Jan 21 00:56 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3764447	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2821076	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1054720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1097732	26.76	ppb	0.00
Spiked Amount 25.000			Recovery = 107.060%			
3) 1,2-DCA-D4(S)	5.71	65	1029931	26.99	ppb	0.00
Spiked Amount 25.000			Recovery = 107.964%			
5) Toluene-D8(S)	8.03	98	3716281	27.37	ppb	0.00
Spiked Amount 25.000			Recovery = 109.480%			
6) 4-Bromofluorobenzene(S)	10.91	95	1264305	24.52	ppb	0.00
Spiked Amount 25.000			Recovery = 98.064%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

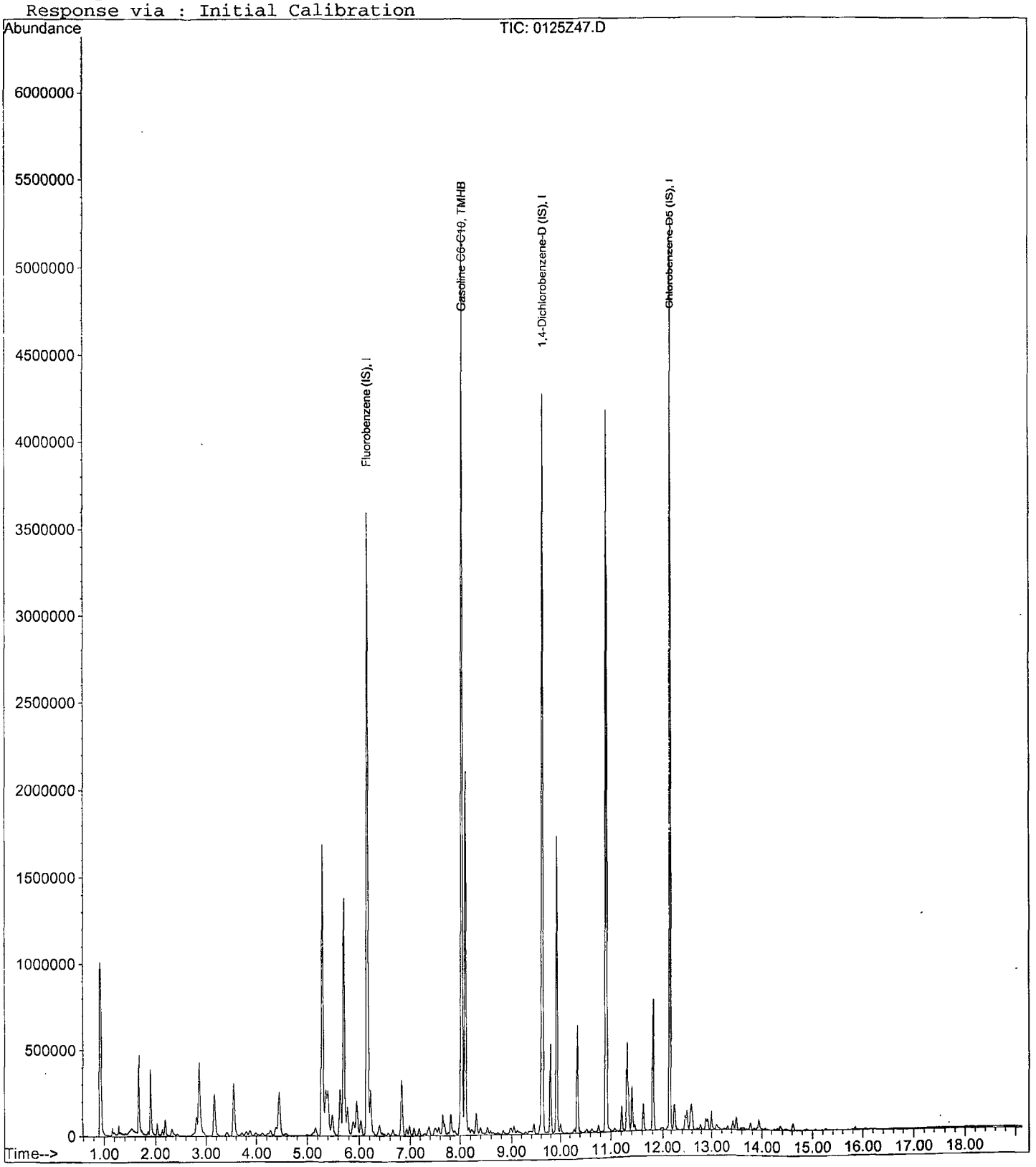
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z47.D
Acq On : 26 Jan 21 00:56
Sample : 210125A CCV/LCS 300ug/L
Misc :

Vial: 42
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z71.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.416	64	TMHBL	7.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
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11							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z71.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2900	6.5	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2763	9.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.308	8.7	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4395	5.8	SL	3.7
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.5		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z71.D Vial: 66
Acq On : 26 Jan 21 10:08 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:49 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3269671	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4787693	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3988304	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	55570023m	278.61 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z71.D Vial: 66
Acq On : 26 Jan 21 10:08 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3428865	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2568953	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	960128	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	994338	26.62	ppb	0.00
Spiked Amount 25.000			Recovery =	106.468%		
3) 1,2-DCA-D4(S)	5.71	65	947534	27.26	ppb	0.00
Spiked Amount 25.000			Recovery =	109.048%		
5) Toluene-D8(S)	8.03	98	3360201	27.18	ppb	0.00
Spiked Amount 25.000			Recovery =	108.708%		
6) 4-Bromofluorobenzene(S)	10.92	95	1129043	24.08	ppb	0.00
Spiked Amount 25.000			Recovery =	96.336%		

Target Compounds Qvalue

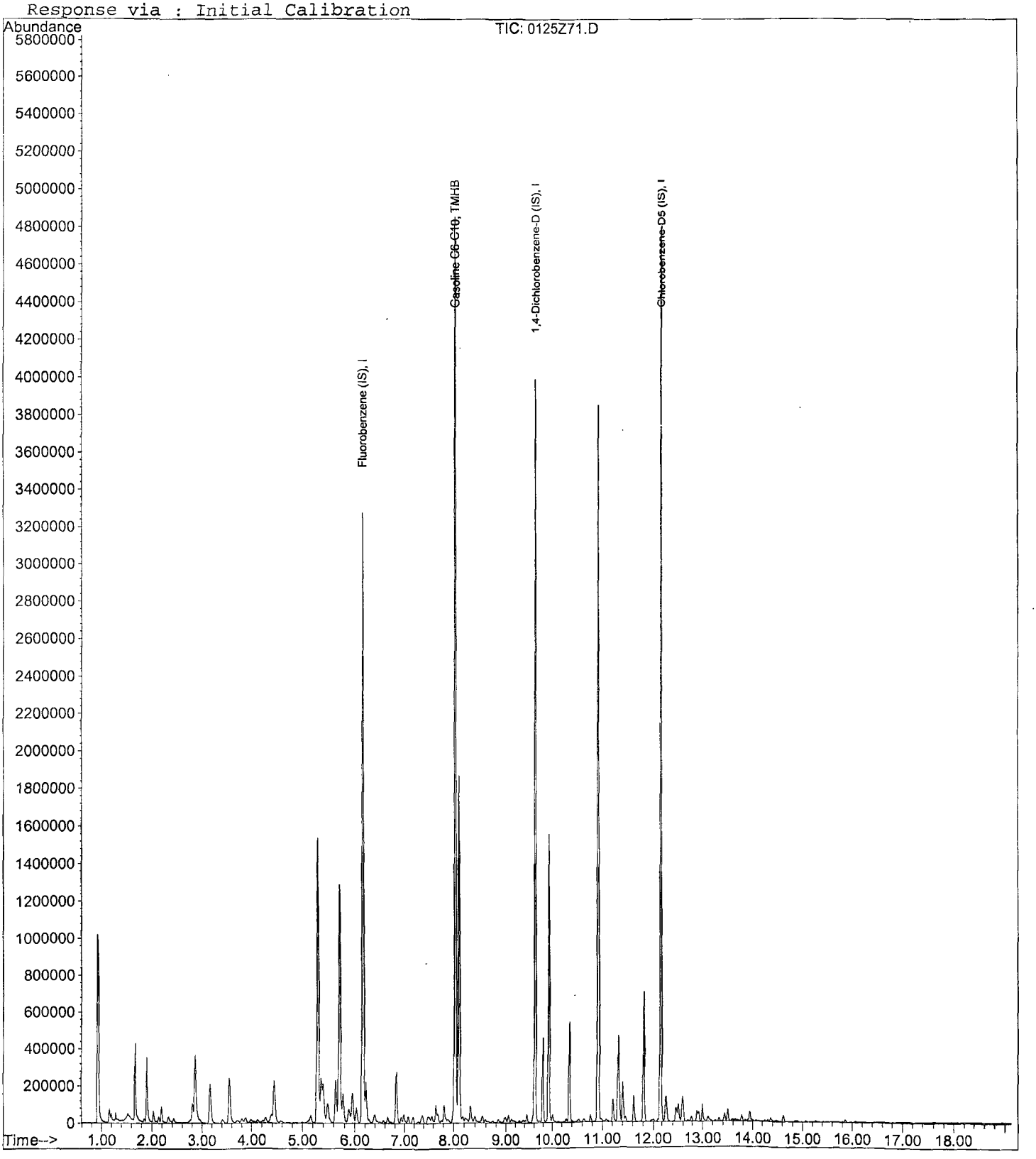
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z71.D Vial: 66
Acq On : 26 Jan 21 10:08 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:49 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z11.D Vial: 9
Acq On : 21 Jan 21 11:27 Operator: LP,DG,CH
Sample : BA25433W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3604871	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5811434	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4602620	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z11.D Vial: 9
Acq On : 21 Jan 21 11:27 Operator: LP,DG,CH
Sample : BA25433W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3792044	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3167357	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1201664	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1080704	24.78	ppb	0.00
Spiked Amount 25.000			Recovery =	99.104%		
3) 1,2-DCA-D4(S)	5.71	65	973379	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.612%		
5) Toluene-D8(S)	8.03	98	3770734	26.65	ppb	0.00
Spiked Amount 25.000			Recovery =	106.600%		
6) 4-Bromofluorobenzene(S)	10.92	95	1325722	24.27	ppb	0.00
Spiked Amount 25.000			Recovery =	97.084%		

Target Compounds Qvalue

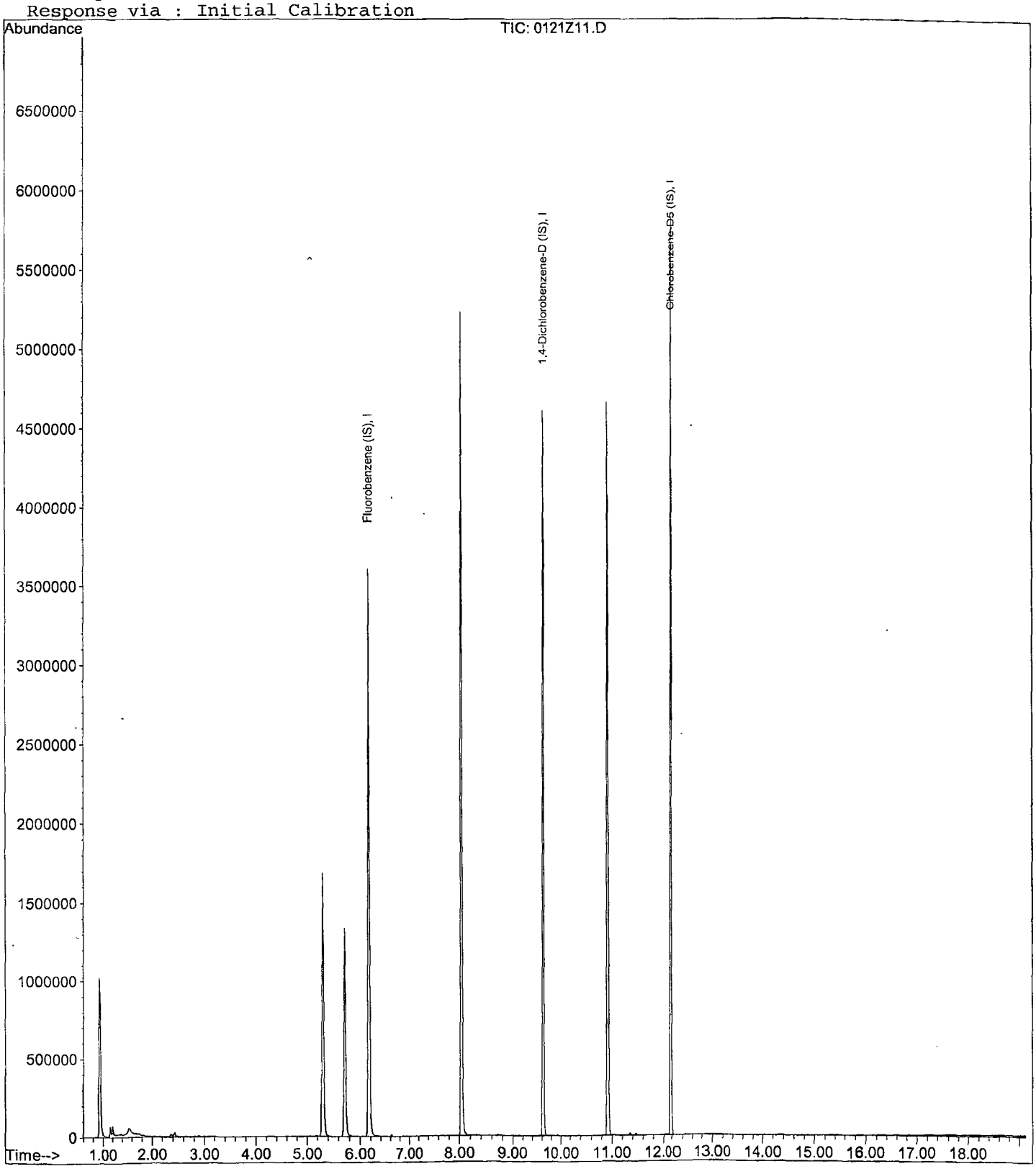
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z11.D Vial: 9
Acq On : 21 Jan 21 11:27 Operator: LP,DG,CH
Sample : BA25433W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z12.D Vial: 10
Acq On : 21 Jan 21 11:50 Operator: LP,DG,CH
Sample : BA25434W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:48 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3528514	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5806117	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4679881	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z12.D Vial: 10
Acq On : 21 Jan 21 11:50 Operator: LP,DG,CH
Sample : BA25434W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3761567	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3127966	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1226752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1049373	24.29	ppb	0.00
Spiked Amount 25.000			Recovery =	97.148%		
3) 1,2-DCA-D4(S)	5.71	65	971291	27.31	ppb	0.00
Spiked Amount 25.000			Recovery =	109.256%		
5) Toluene-D8(S)	8.03	98	3757575	26.89	ppb	0.00
Spiked Amount 25.000			Recovery =	107.568%		
6) 4-Bromofluorobenzene(S)	10.92	95	1322784	24.50	ppb	0.00
Spiked Amount 25.000			Recovery =	97.988%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

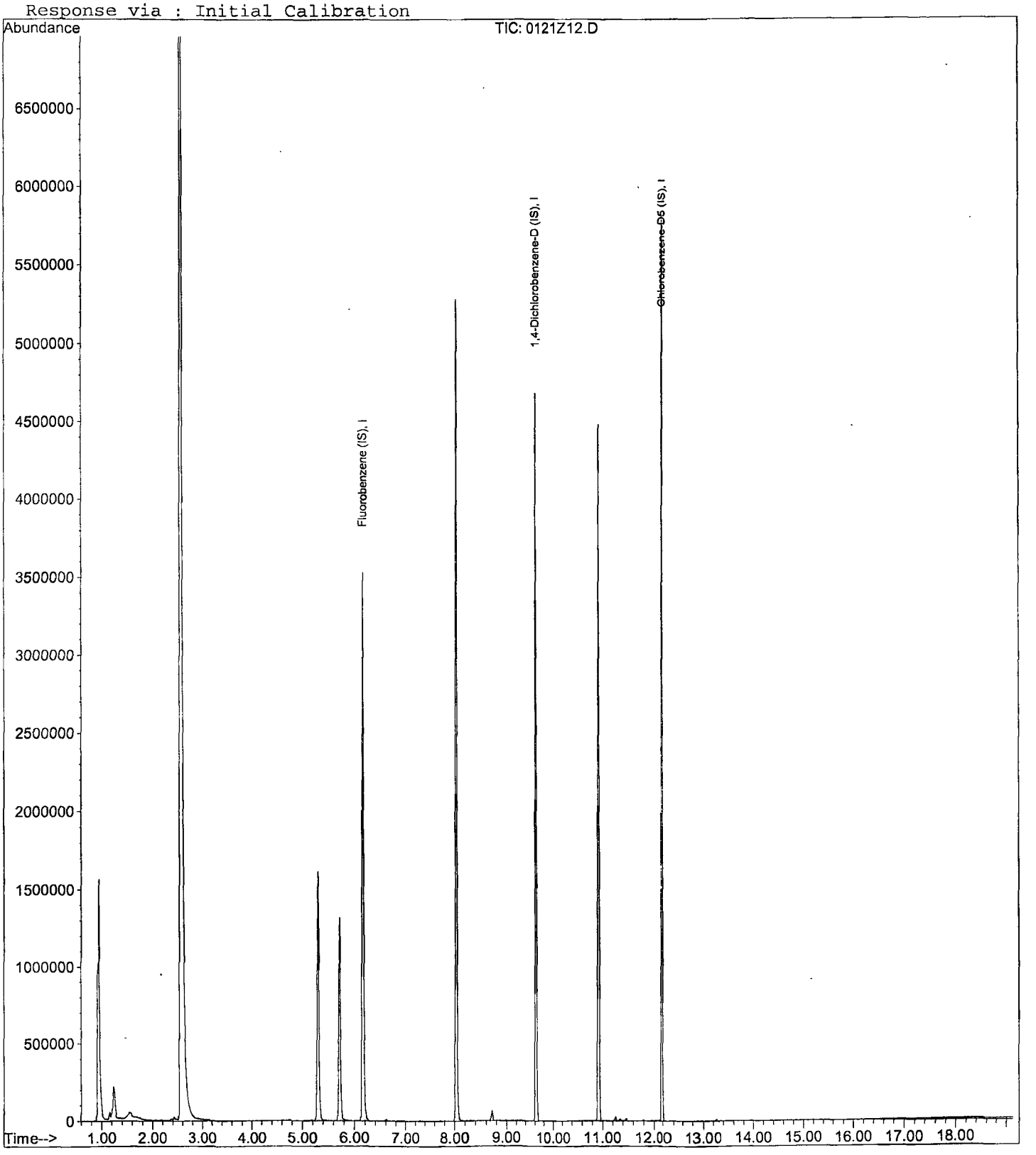
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z12.D
Acq On : 21 Jan 21 11:50
Sample : BA25434W01
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 8:48 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z10.D Vial: 8
Acq On : 21 Jan 21 11:03 Operator: LP,DG,CH
Sample : 210121A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3606469	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5885929	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4771902	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z10.D Vial: 8
Acq On : 21 Jan 21 11:03 Operator: LP,DG,CH
Sample : 210121A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3793834	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3187103	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1244672	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1078958	24.73	ppb	0.00
Spiked Amount 25.000			Recovery =	98.912%		
3) 1,2-DCA-D4(S)	5.71	65	989031	27.58	ppb	0.00
Spiked Amount 25.000			Recovery =	110.304%		
5) Toluene-D8(S)	8.03	98	3762650	26.43	ppb	0.00
Spiked Amount 25.000			Recovery =	105.712%		
6) 4-Bromofluorobenzene(S)	10.92	95	1333143	24.26	ppb	0.00
Spiked Amount 25.000			Recovery =	97.028%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

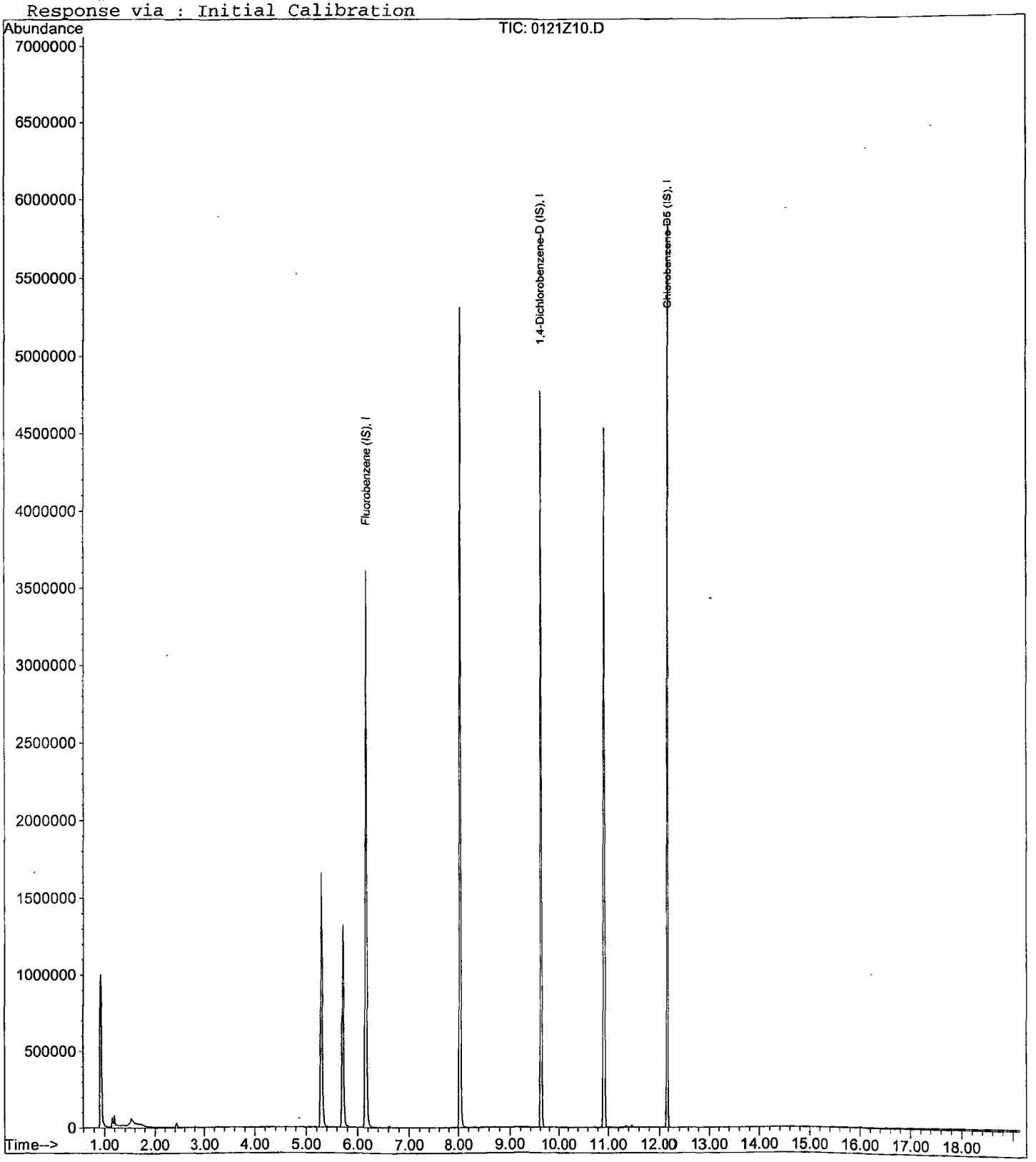
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z10.D
Acq On : 21 Jan 21 11:03
Sample : 210121A BLK
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:46 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3535456	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5143233	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4310097	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3705409	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2791950	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1050112	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1111099	27.52	ppb	0.00
Spiked Amount 25.000			Recovery = 110.088%			
3) 1,2-DCA-D4(S)	5.71	65	1057353	28.15	ppb	0.00
Spiked Amount 25.000			Recovery = 112.604%			
5) Toluene-D8(S)	8.03	98	3648886	27.15	ppb	0.00
Spiked Amount 25.000			Recovery = 108.616%			
6) 4-Bromofluorobenzene(S)	10.91	95	1244558	24.40	ppb	0.00
Spiked Amount 25.000			Recovery = 97.588%			

Target Compounds Qvalue

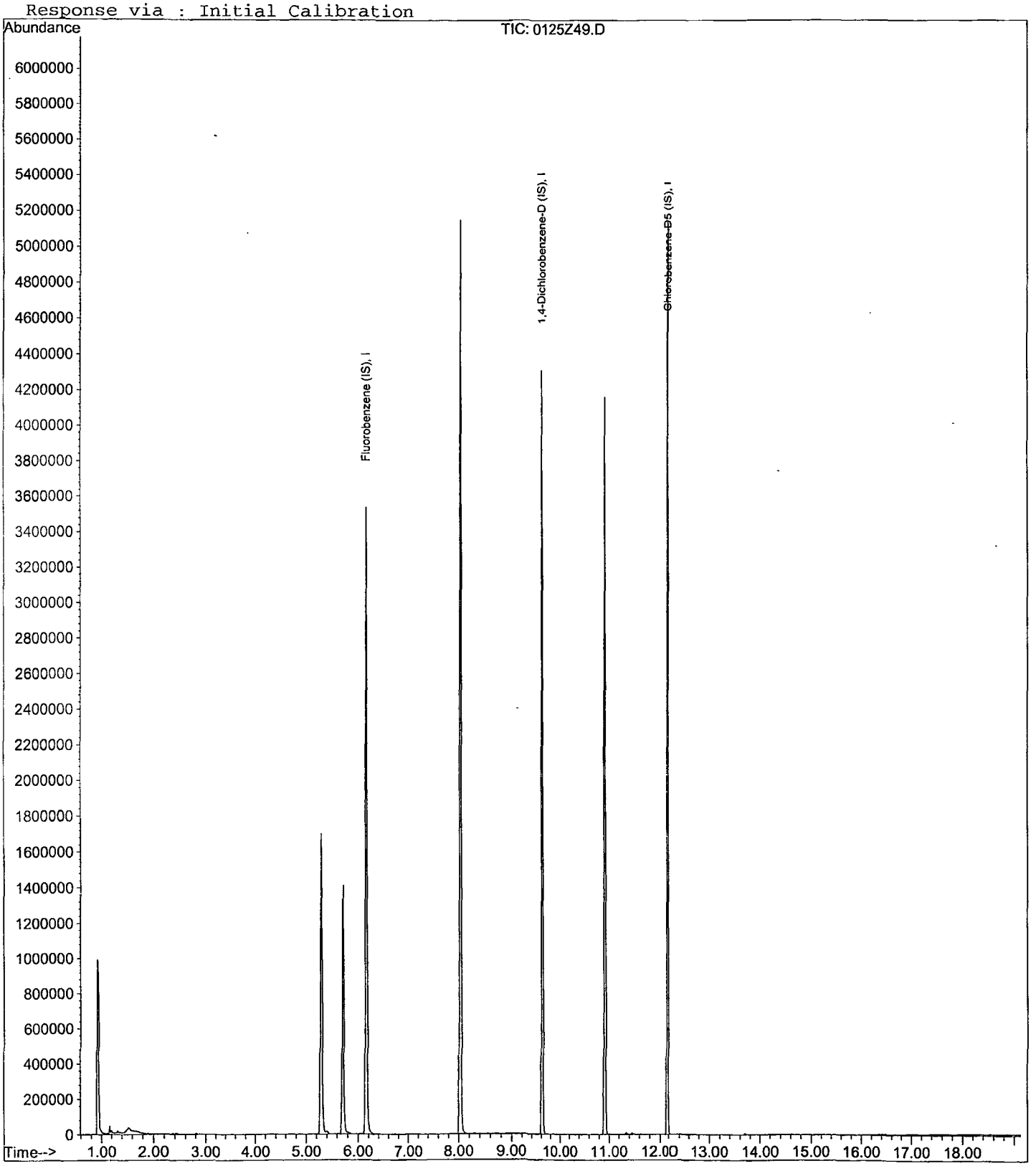
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:46 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z08.D Vial: 6
Acq On : 21 Jan 21 10:17 Operator: LP,DG,CH
Sample : 210121A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:46 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3645814	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5528894	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4687153	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	63994708m	278.30 ppb	100

(#) = qualifier out of range (m) = manual integration
0121Z08.D ZGAS0104.M Fri Jan 22 08:49:16 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z08.D Vial: 6
Acq On : 21 Jan 21 10:17 Operator: LP,DG,CH
Sample : 210121A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3834853	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3117382	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1159168	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1072429	24.34	ppb	0.00
Spiked Amount 25.000			Recovery =	97.372%		
3) 1,2-DCA-D4(S)	5.71	65	977451	26.96	ppb	0.00
Spiked Amount 25.000			Recovery =	107.848%		
5) Toluene-D8(S)	8.03	98	3758979	26.99	ppb	0.00
Spiked Amount 25.000			Recovery =	107.972%		
6) 4-Bromofluorobenzene(S)	10.92	95	1325678	24.62	ppb	0.00
Spiked Amount 25.000			Recovery =	98.480%		

Target Compounds Qvalue

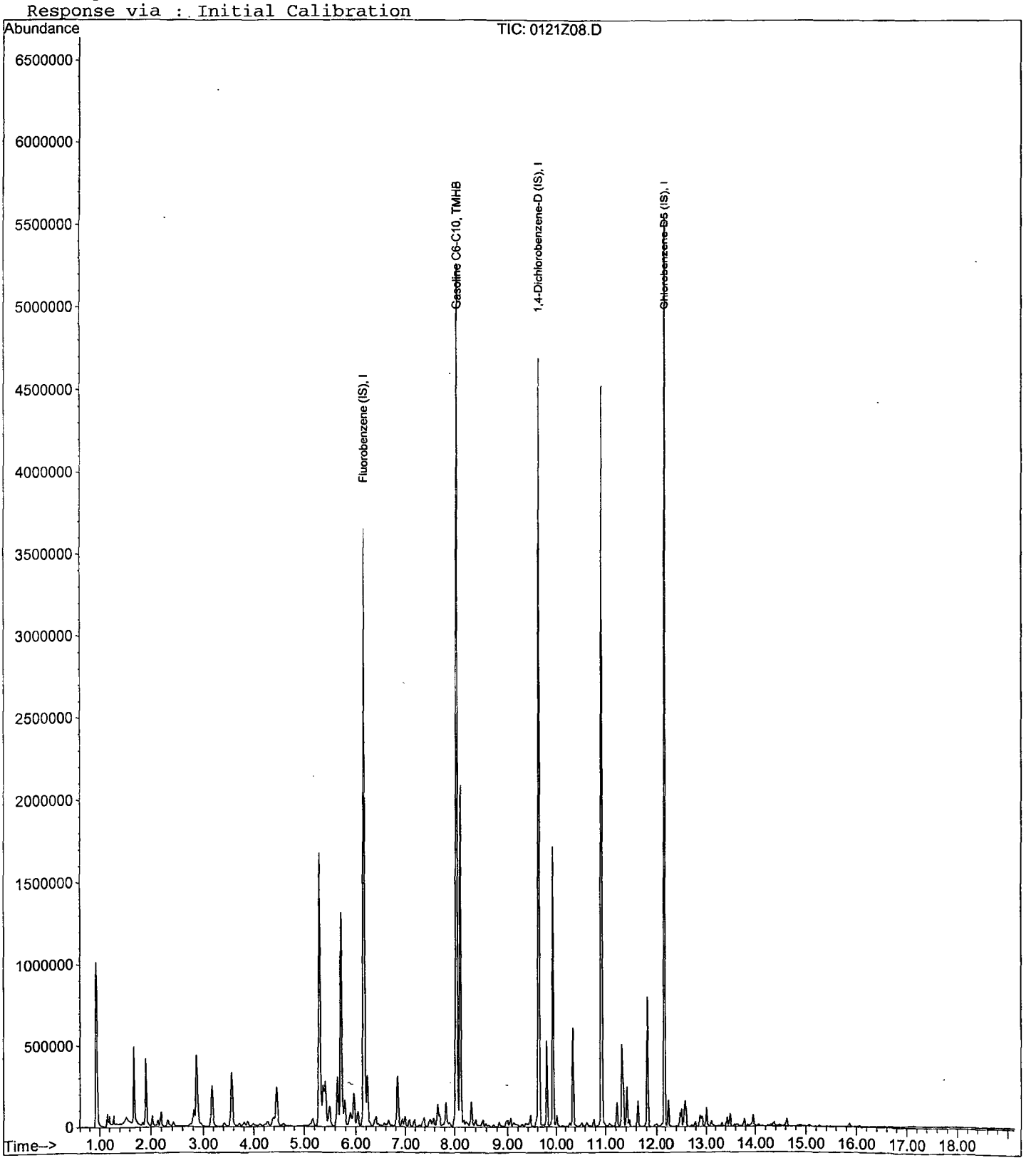
(#) = qualifier out of range (m) = manual integration
0121Z08.D Z0119SUR.M Fri Jan 22 12:40:42 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z08.D Vial: 6
Acq On : 21 Jan 21 10:17 Operator: LP,DG,CH
Sample : 210121A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:46 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z09.D Vial: 7
Acq On : 21 Jan 21 10:40 Operator: LP,DG,CH
Sample : 210121A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3706972	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5771725	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4643058	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	65449717m	282.42	ppb	100

(#) = qualifier out of range (m) = manual integration
0121Z09.D ZGAS0104.M Fri Jan 22 08:49:18 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210119\0121Z09.D Vial: 7
Acq On : 21 Jan 21 10:40 Operator: LP,DG,CH
Sample : 210121A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 22 12:36 2021 Quant Results File: Z0119SUR.RES

Quant Method : M:\ZEUS\DATA\210119\Z0119SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 20 10:14:38 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3845860	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3160301	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1191424	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1086004	24.56	ppb	0.00
Spiked Amount 25.000			Recovery =	98.256%		
3) 1,2-DCA-D4(S)	5.71	65	988230	27.18	ppb	0.00
Spiked Amount 25.000			Recovery =	108.724%		
5) Toluene-D8(S)	8.03	98	3801704	26.93	ppb	0.00
Spiked Amount 25.000			Recovery =	107.716%		
6) 4-Bromofluorobenzene(S)	10.92	95	1341110	24.57	ppb	0.00
Spiked Amount 25.000			Recovery =	98.292%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

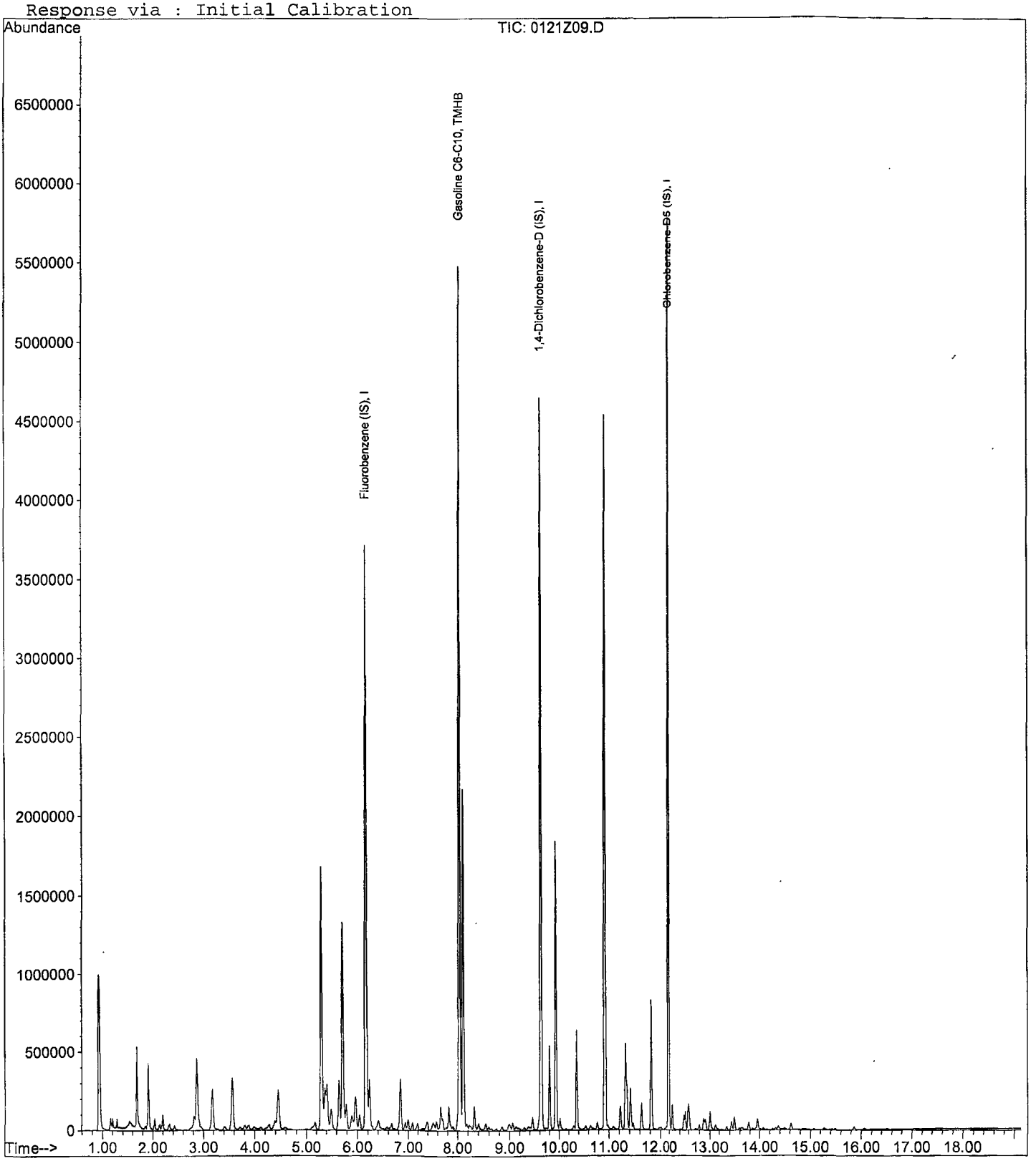
Quantitation Report

Data File : M:\ZEUS\DATA\210119\0121Z09.D
Acq On : 21 Jan 21 10:40
Sample : 210121A LCSD 300ug/L
Misc :

Vial: 7
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 22 8:47 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210119\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z48.D Vial: 43
Acq On : 26 Jan 21 01:19 Operator: LP,DG,CH
Sample : 210125A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3481513	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5053729	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4312374	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	60868944m	299.79	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z48.D Vial: 43
Acq On : 26 Jan 21 01:19 Operator: LP,DG,CH
Sample : 210125A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3677445	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2775968	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1084678	27.07	ppb	0.00
Spiked Amount 25.000			Recovery =	108.288%		
3) 1,2-DCA-D4(S)	5.71	65	1015296	27.24	ppb	0.00
Spiked Amount 25.000			Recovery =	108.948%		
5) Toluene-D8(S)	8.03	98	3655942	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.452%		
6) 4-Bromofluorobenzene(S)	10.92	95	1250767	24.64	ppb	0.00
Spiked Amount 25.000			Recovery =	98.544%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

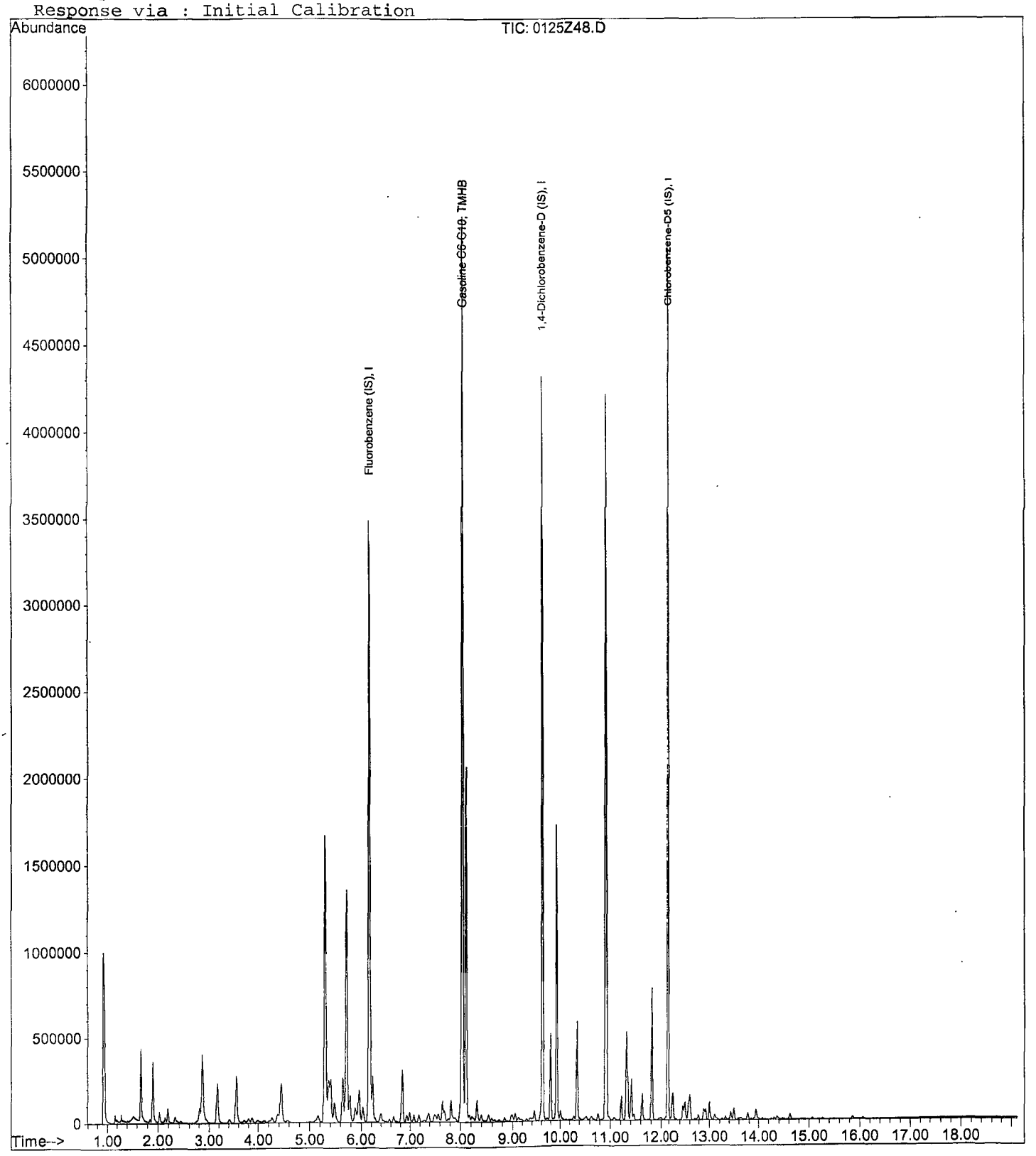
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z48.D
Acq On : 26 Jan 21 01:19
Sample : 210125A LCSD 300ug/L
Misc :

Vial: 43
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z54.D Vial: 49
Acq On : 26 Jan 21 03:37 Operator: LP,DG,CH
Sample : BA25434W04,5,6 MS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:48 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3578468	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5209553	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4399219	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	61991296m	292.84	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z54.D Vial: 49
Acq On : 26 Jan 21 03:37 Operator: LP,DG,CH
Sample : BA25434W04,5,6 MS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3806933	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2870029	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1046784	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1126226	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.612%		
3) 1,2-DCA-D4(S)	5.71	65	1056041	27.37	ppb	0.00
Spiked Amount 25.000			Recovery =	109.468%		
5) Toluene-D8(S)	8.03	98	3820274	27.66	ppb	0.00
Spiked Amount 25.000			Recovery =	110.624%		
6) 4-Bromofluorobenzene(S)	10.91	95	1295814	24.68	ppb	0.00
Spiked Amount 25.000			Recovery =	98.732%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

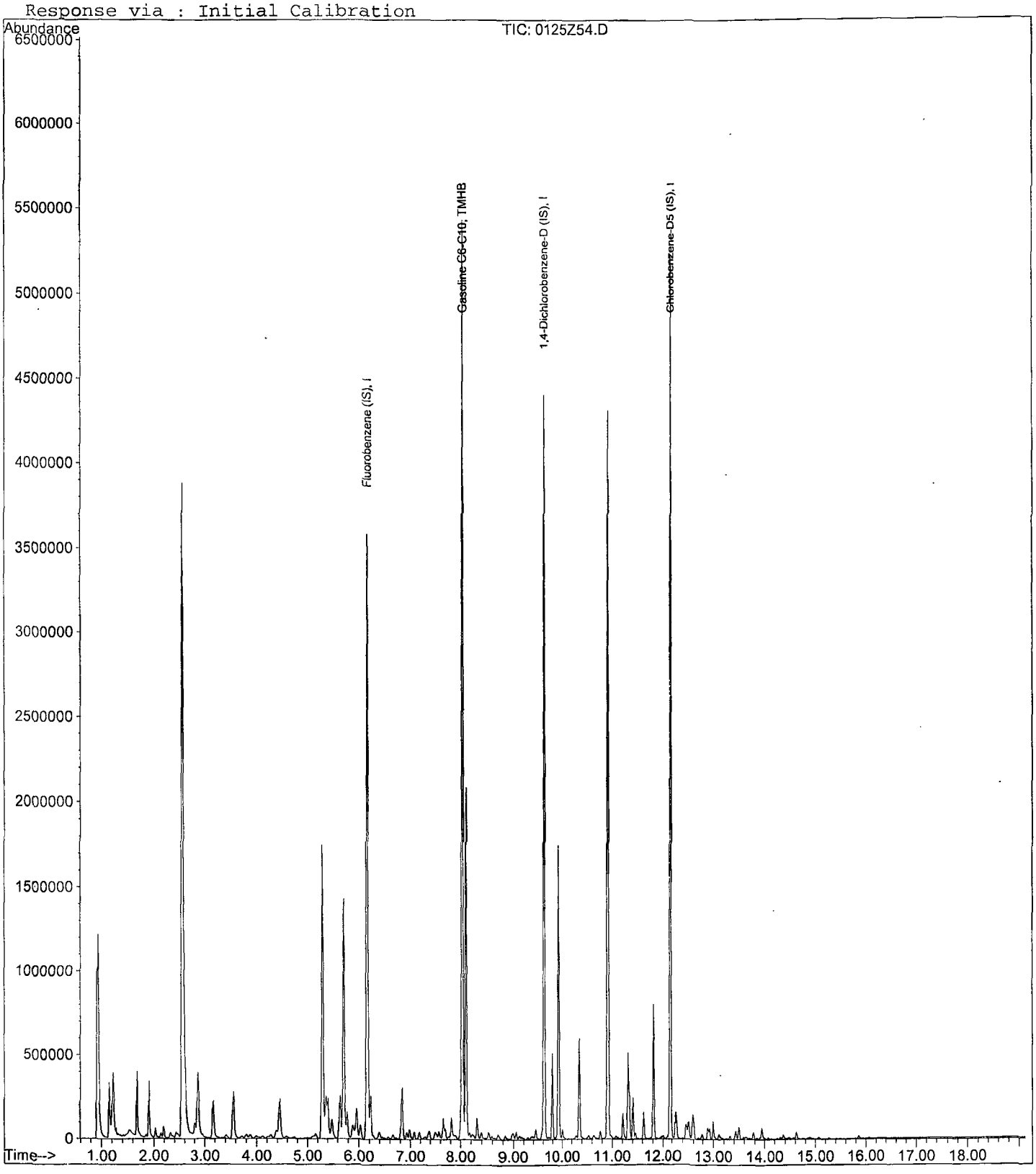
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z54.D
Acq On : 26 Jan 21 03:37
Sample : BA25434W04,5,6 MS 300ug/L
Misc :

Vial: 49
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:48 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z55.D Vial: 50
Acq On : 26 Jan 21 04:00 Operator: LP,DG,CH
Sample : BA25434W05,4,6 MSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:48 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3619423	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5207847	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4455675	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	60777422m	269.77	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z55.D ZGAS0125.M Tue Jan 26 11:50:26 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z55.D
Acq On : 26 Jan 21 04:00
Sample : BA25434W05,4,6 MSD 300ug/L
Misc :

Vial: 50
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3744146	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2801058	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1038528	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1101003	26.99	ppb	0.00
Spiked Amount 25.000			Recovery = 107.960%			
3) 1,2-DCA-D4(S)	5.71	65	1022199	26.93	ppb	0.00
Spiked Amount 25.000			Recovery = 107.736%			
5) Toluene-D8(S)	8.03	98	3733819	27.70	ppb	0.00
Spiked Amount 25.000			Recovery = 110.784%			
6) 4-Bromofluorobenzene(S)	10.91	95	1252773	24.47	ppb	0.00
Spiked Amount 25.000			Recovery = 97.884%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

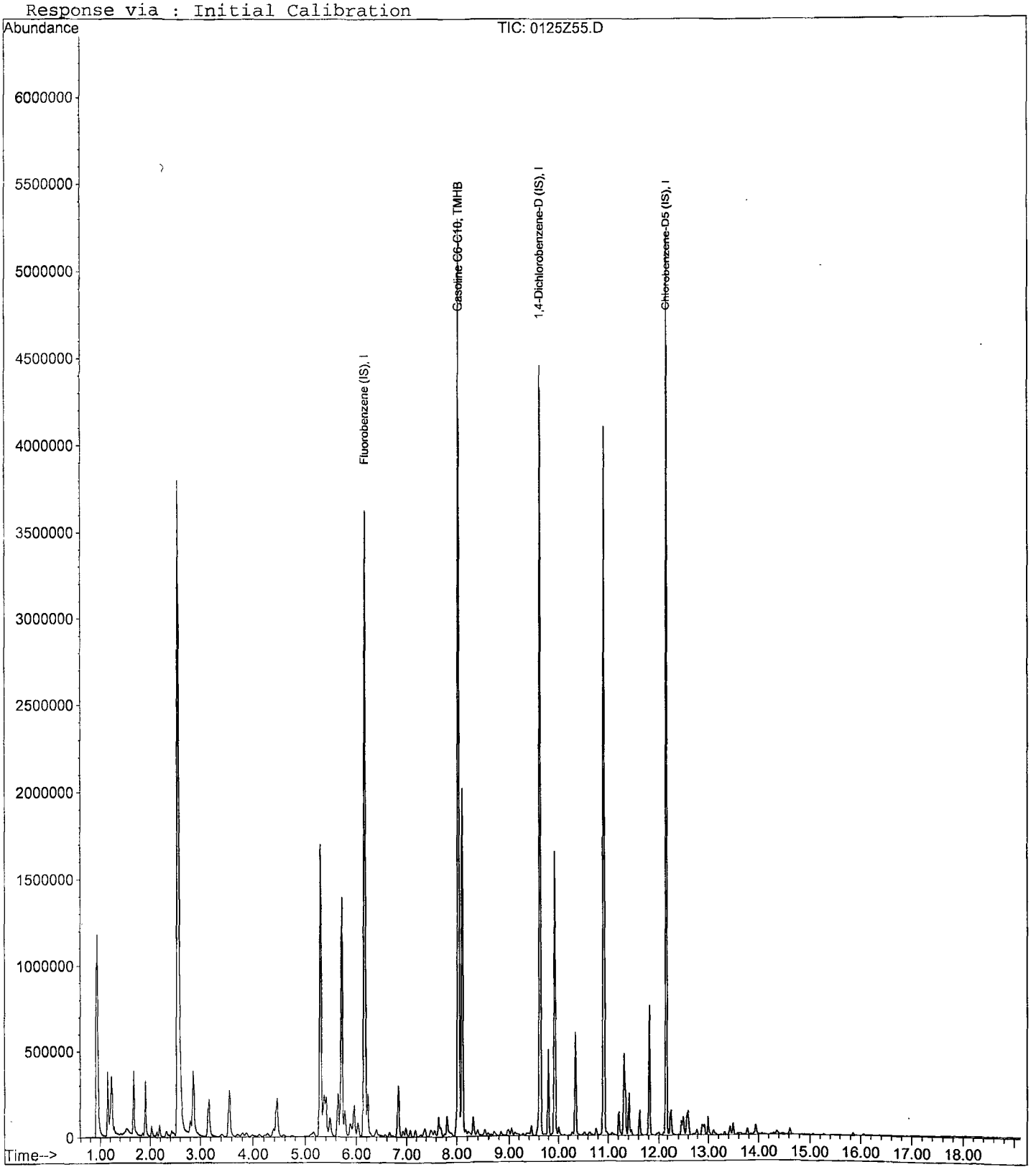
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z55.D
Acq On : 26 Jan 21 04:00
Sample : BA25434W05,4,6 MSD 300ug/L
Misc :

Vial: 50
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:48 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Zeus Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 — Prepared By (Initials): CH

Expires: 01/04/22

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 — Prepared By (Initials): CH

Expires: 01/31/30

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

Zeus Gas Calibration Curve

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30*	N/A	15uL	100mL	P&T Water	300

Zeus Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\ZEUS\DATA\210104\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	13	0104Z13.D	1	20ug/L GAS STD 1/4/20		04 Jan 21 20:33
2	14	0104Z14.D	1	50ug/L GAS STD 1/4/20		04 Jan 21 20:56
3	15	0104Z15.D	1	100ug/L GAS STD 1/4/20		04 Jan 21 21:19
4	16	0104Z16.D	1	300ug/L GAS STD 1/4/20		04 Jan 21 21:42
5	17	0104Z17.D	1	600ug/L GAS STD 1/4/20		04 Jan 21 22:04
6	18	0104Z18.D	1	800ug/L GAS STD 1/4/20		04 Jan 21 22:27
7	19	0104Z19.D	1	1000ug/L GAS STD 1/4/20		04 Jan 21 22:50
8	21	0104Z21.D	1	(SS) 300ug/L GAS STD 1/4/20		04 Jan 21 23:36
9	2	0119Z22.D	1	0.3ug/L VOC STD 1/19/21		19 Jan 21 16:05
10	3	0119Z23.D	1	0.5ug/L VOC STD 1/19/21		19 Jan 21 16:28
11	4	0119Z24.D	1	1ug/L VOC STD 1/19/21		19 Jan 21 16:52
12	5	0119Z25.D	1	2ug/L VOC STD 1/19/21		19 Jan 21 17:15
13	6	0119Z26.D	1	5ug/L VOC STD 1/19/21		19 Jan 21 17:38
14	7	0119Z27.D	1	10ug/L VOC STD 1/19/21		19 Jan 21 18:01
15	8	0119Z28.D	1	20ug/L VOC STD 1/19/21		19 Jan 21 18:25
16	9	0119Z29.D	1	40ug/L VOC STD 1/19/21		19 Jan 21 18:48
17	10	0119Z30.D	1	100ug/L VOC STD 1/19/21		19 Jan 21 19:11
18	2	0121Z04.D	1	210121A CCV 300ug/L		21 Jan 21 08:45
19	6	0121Z08.D	1	210121A LCS 300ug/L		21 Jan 21 10:17
20	7	0121Z09.D	1	210121A LCSD 300ug/L		21 Jan 21 10:40
21	8	0121Z10.D	1	210121A BLK		21 Jan 21 11:03
22	9	0121Z11.D	1	BA25433W01		21 Jan 21 11:27
23	10	0121Z12.D	1	BA25434W01		21 Jan 21 11:50
24	12	0121Z14.D	1	Ending CCV 300ug/L 1/21/21		21 Jan 21 12:36

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
2	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
3	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
4	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
5	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
6	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
7	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
8	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
9	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
10	31	0125Z36.D	1	20ug/L GAS STD 1/25/21		25 Jan 21 20:43
11	32	0125Z37.D	1	50ug/L GAS STD 1/25/21		25 Jan 21 21:06
12	33	0125Z38.D	1	100ug/L GAS STD 1/25/21		25 Jan 21 21:29
13	34	0125Z39.D	1	300ug/L GAS STD 1/25/21		25 Jan 21 21:52
14	35	0125Z40.D	1	600ug/L GAS STD 1/25/21		25 Jan 21 22:15
15	36	0125Z41.D	1	800ug/L GAS STD 1/25/21		25 Jan 21 22:38
16	37	0125Z42.D	1	1000ug/L GAS STD 1/25/21		25 Jan 21 23:01
17	38	0125Z43.D	1	(SS) 300ug/L GAS STD 1/25/21		25 Jan 21 23:24
18	42	0125Z47.D	1	210125A CCV/LCS 300ug/L		26 Jan 21 00:56
19	49	0125Z54.D	1	BA25434W04,5,6 MS 300ug/L		26 Jan 21 03:37
20	50	0125Z55.D	1	BA25434W05,4,6 MSD 300ug/L		26 Jan 21 04:00
21	66	0125Z71.D	1	Ending CCV 300ug/L 1/25/21		26 Jan 21 10:08

ORGANICS

Calibration Data

RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/14/20
Instrument: 7890
Initials: CD

			0914R07.D	0914R08.D	0914R09.D	0914R10.D	0914R11.D	0914R12.D	0914R13.D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
4																	
5																	
6																	
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35																	

0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

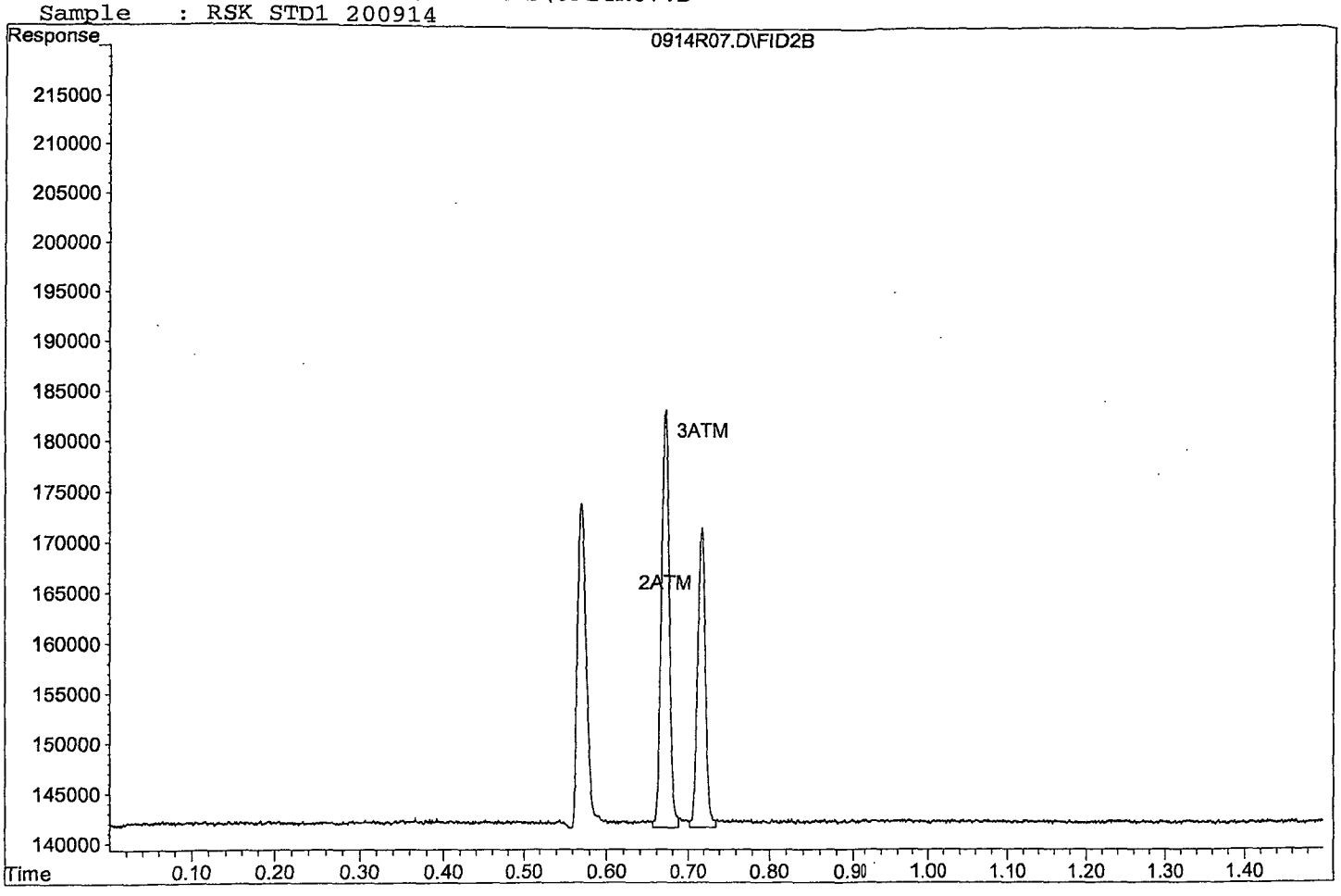
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	41762	102628.492	ppb
3) ATM Ethene	0.72	29966	4.139	ppb
Target Compounds				
1) ATM Methane	0.57	32423	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

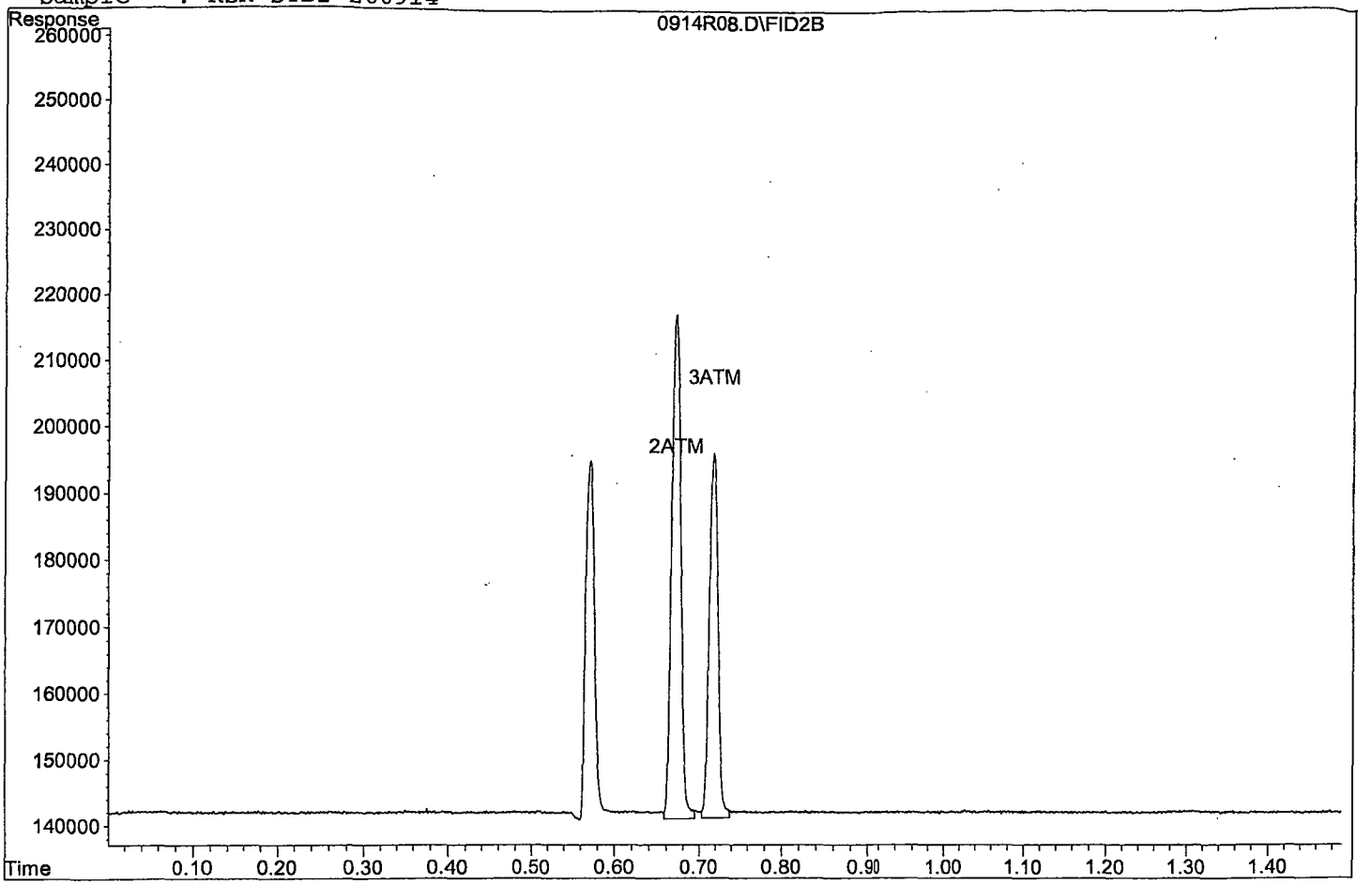
Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	76271	190289.144 ppb
3) ATM Ethene	0.72	54983	7.686 ppb
Target Compounds			
1) ATM Methane	0.57	54196	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

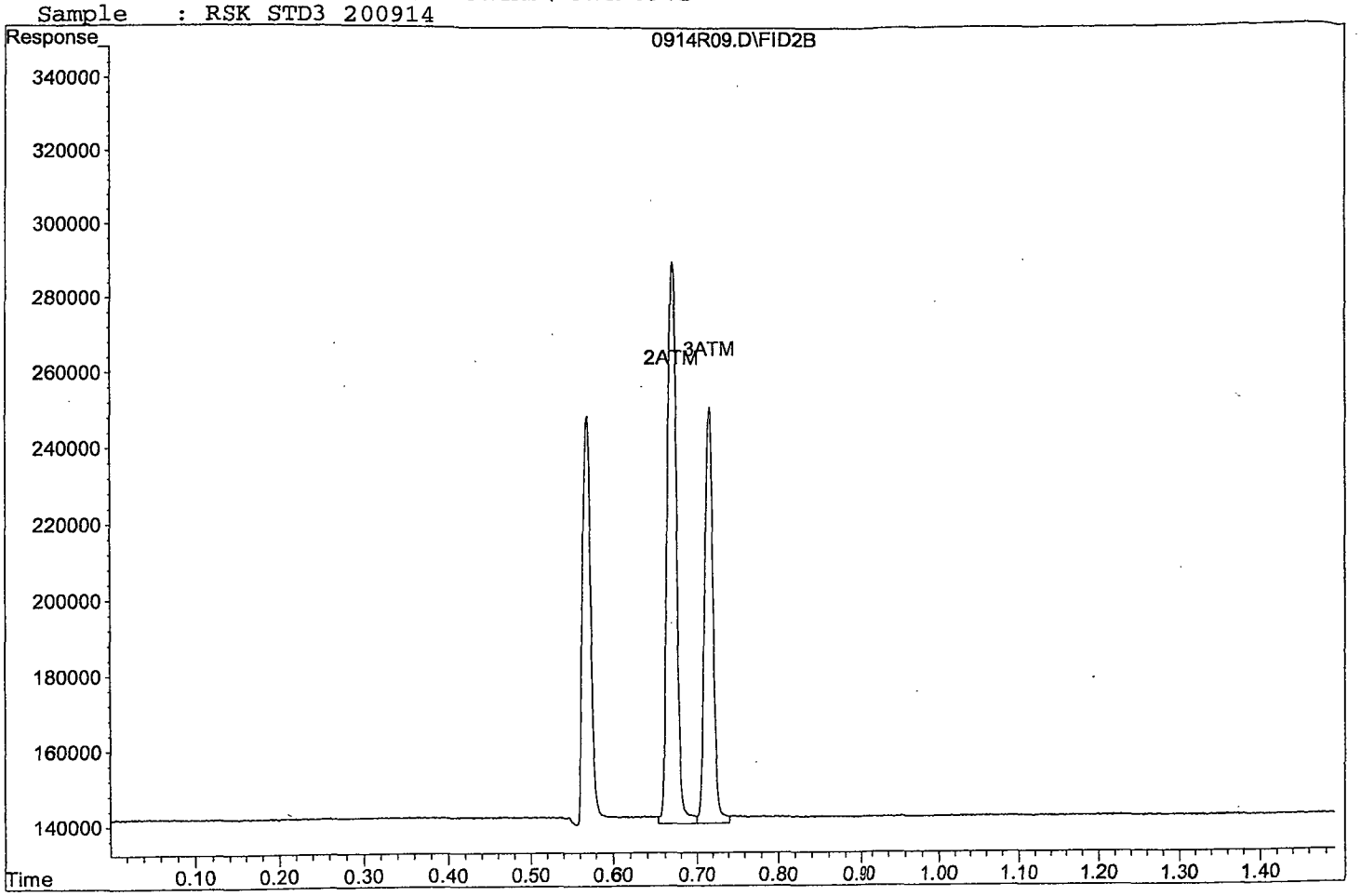
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

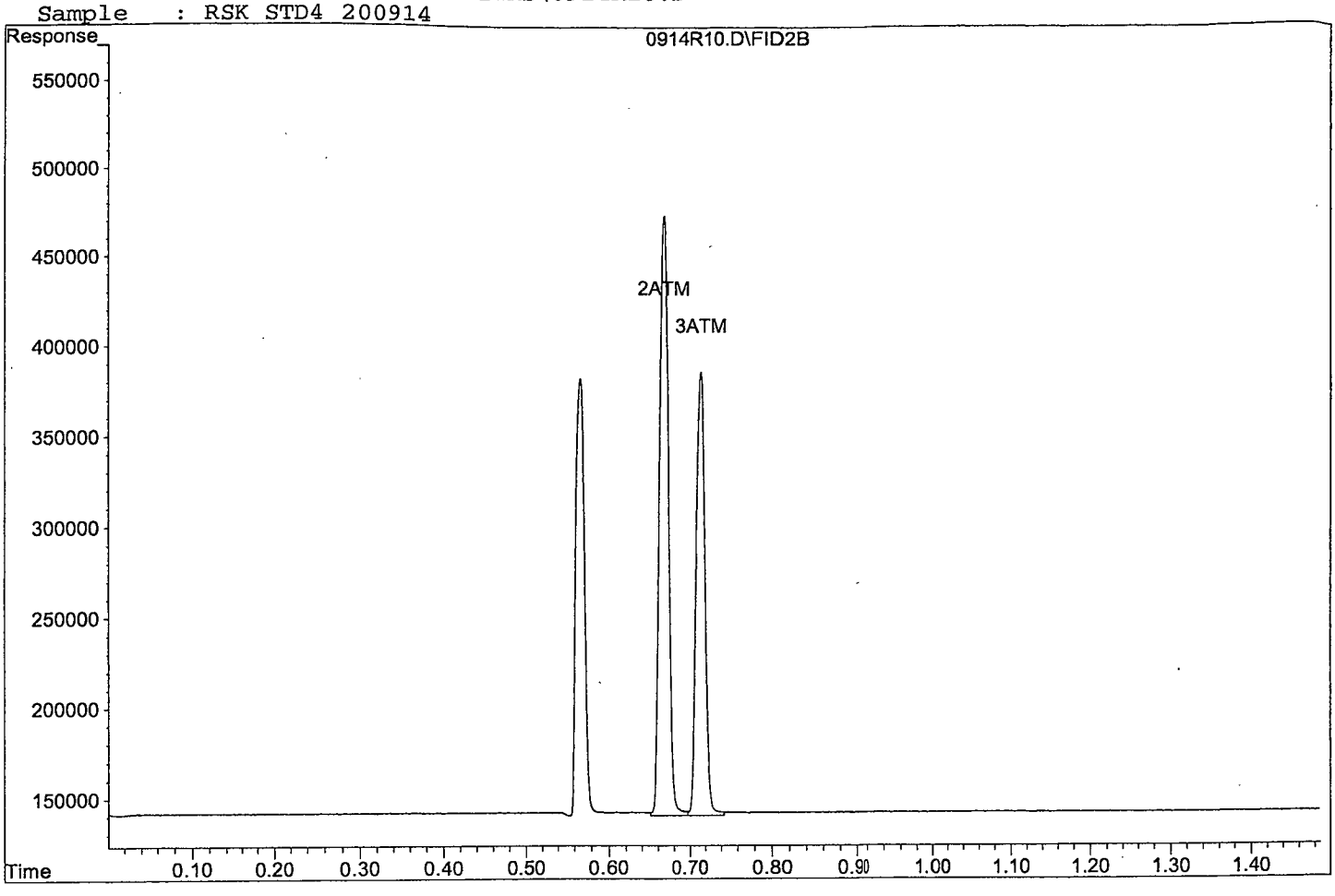
Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	333873	844667.853 ppb
3) ATM Ethene	0.71	246286	34.810 ppb
Target Compounds			
1) ATM Methane	0.57	242197	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

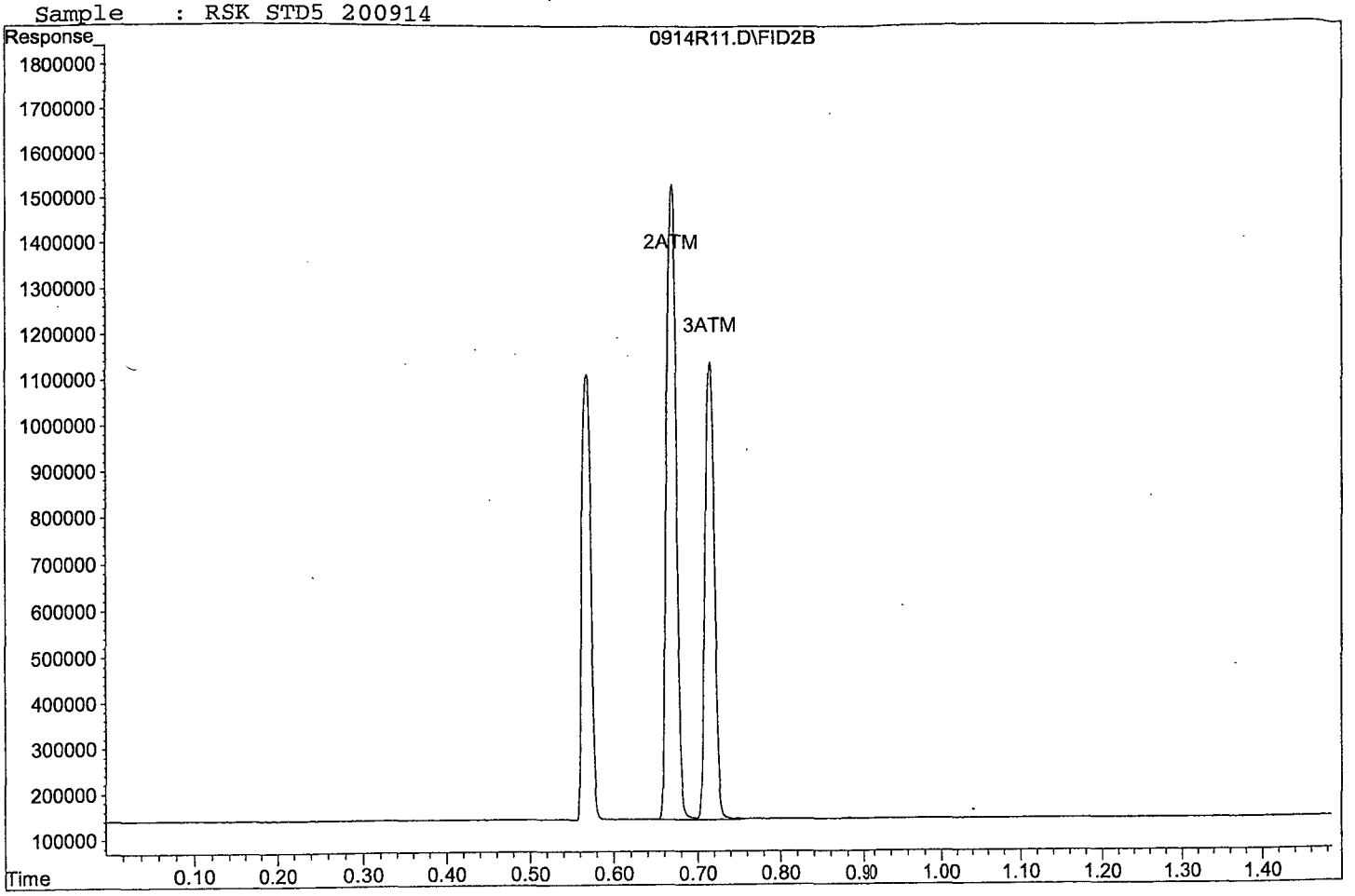
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	1392673	3534302.847	ppb
3) ATM Ethene	0.71	999836	141.654	ppb
Target Compounds				
1) ATM Methane	0.57	973152	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

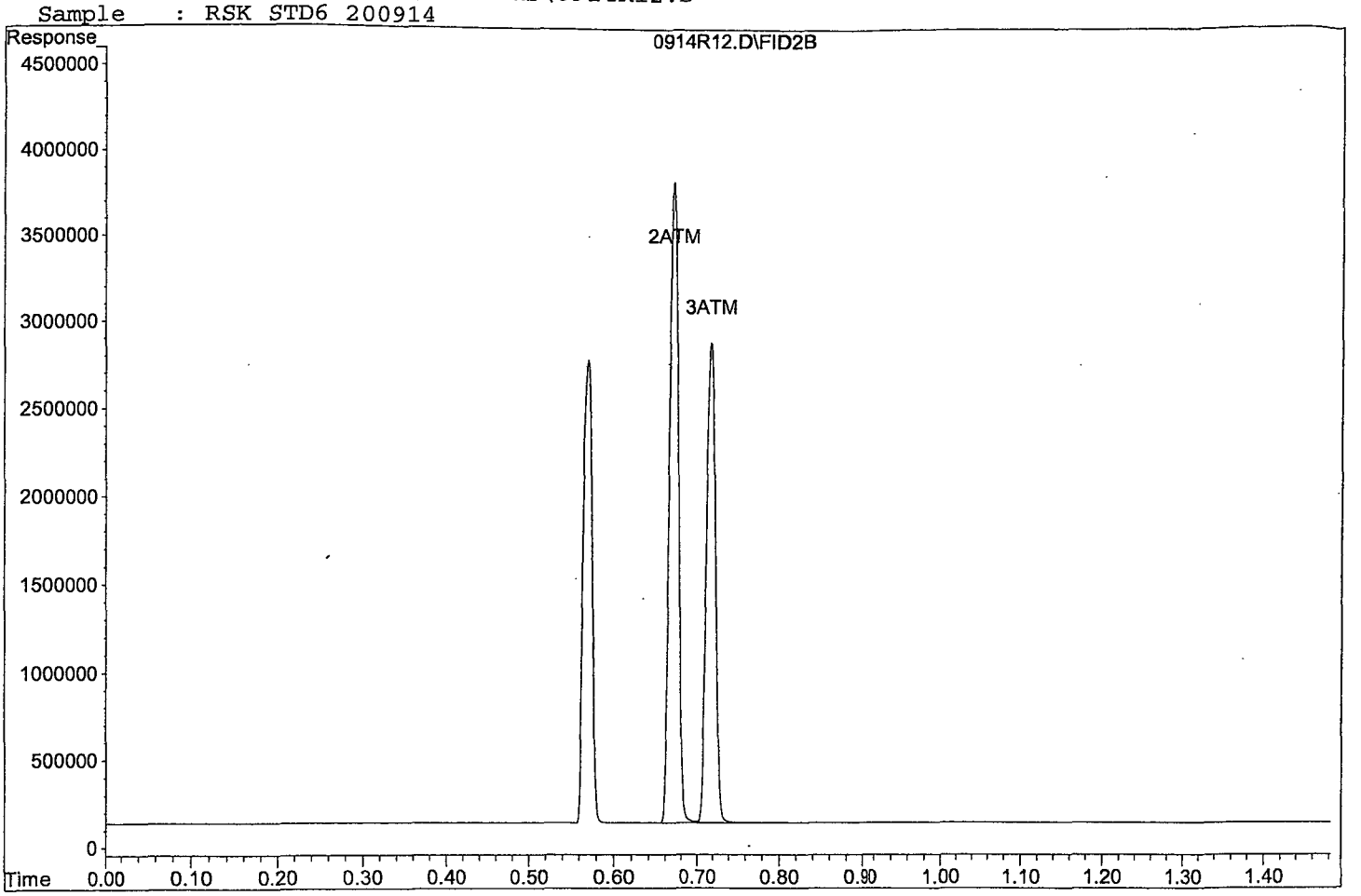
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

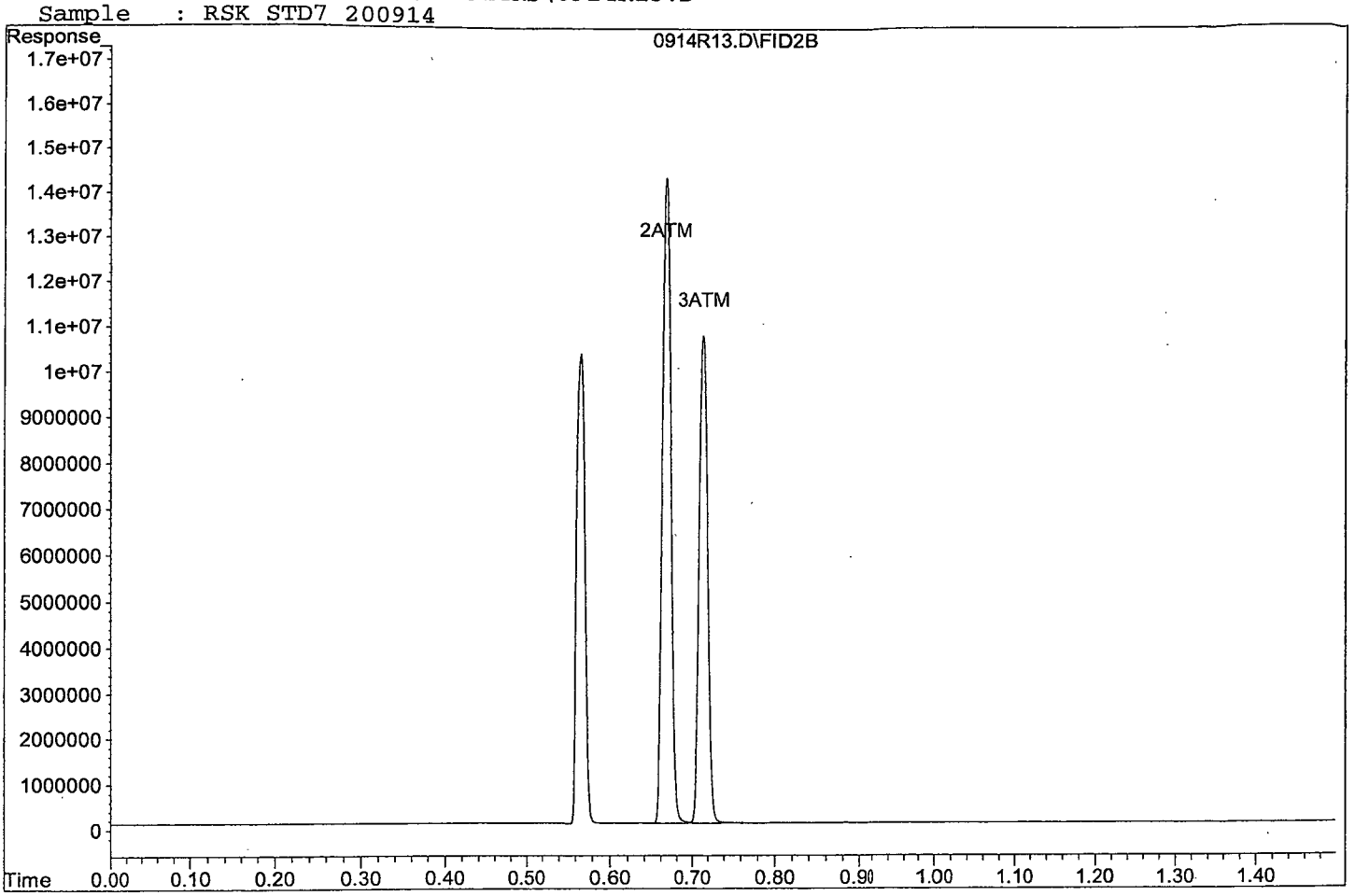
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

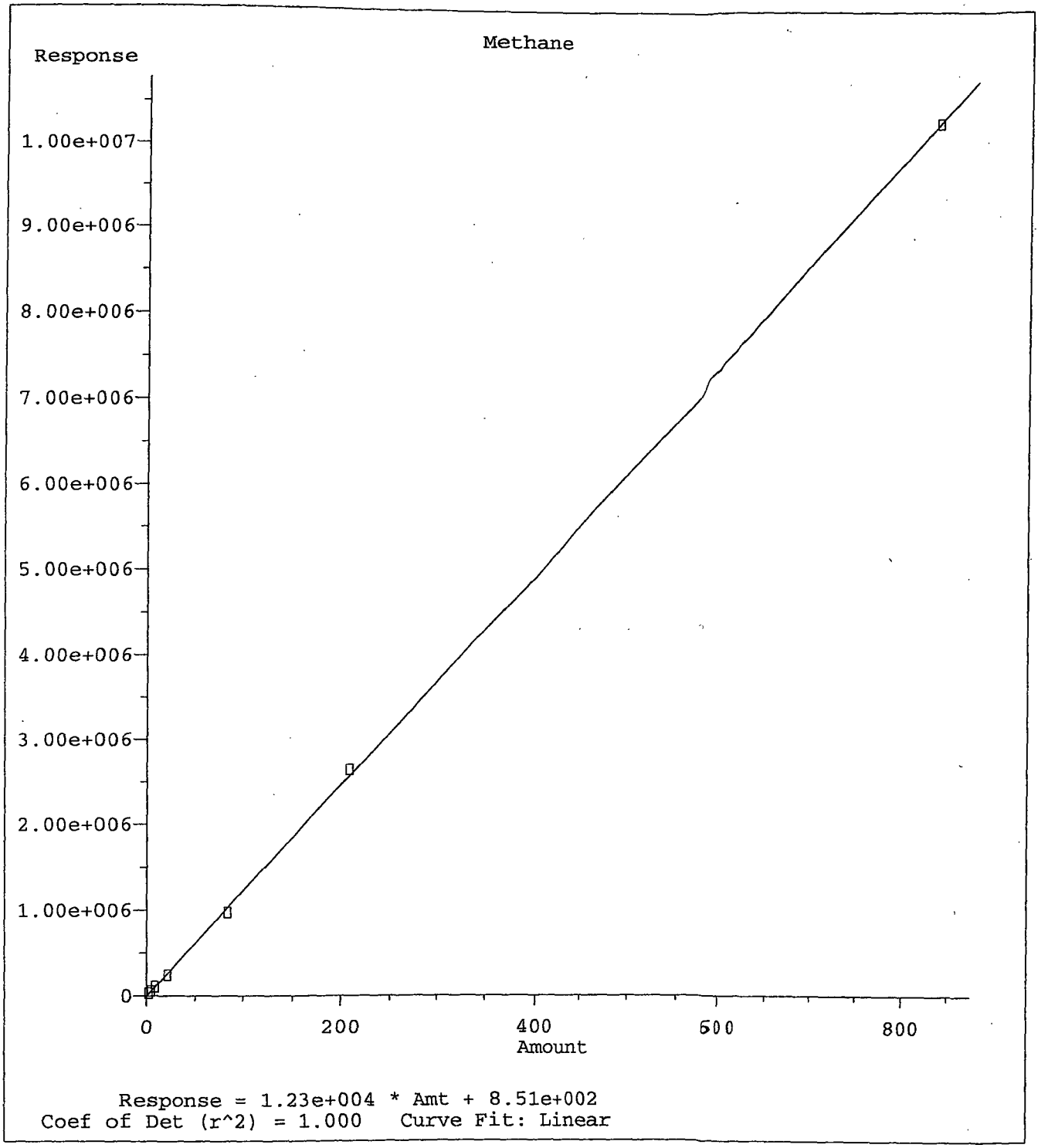
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	36168407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

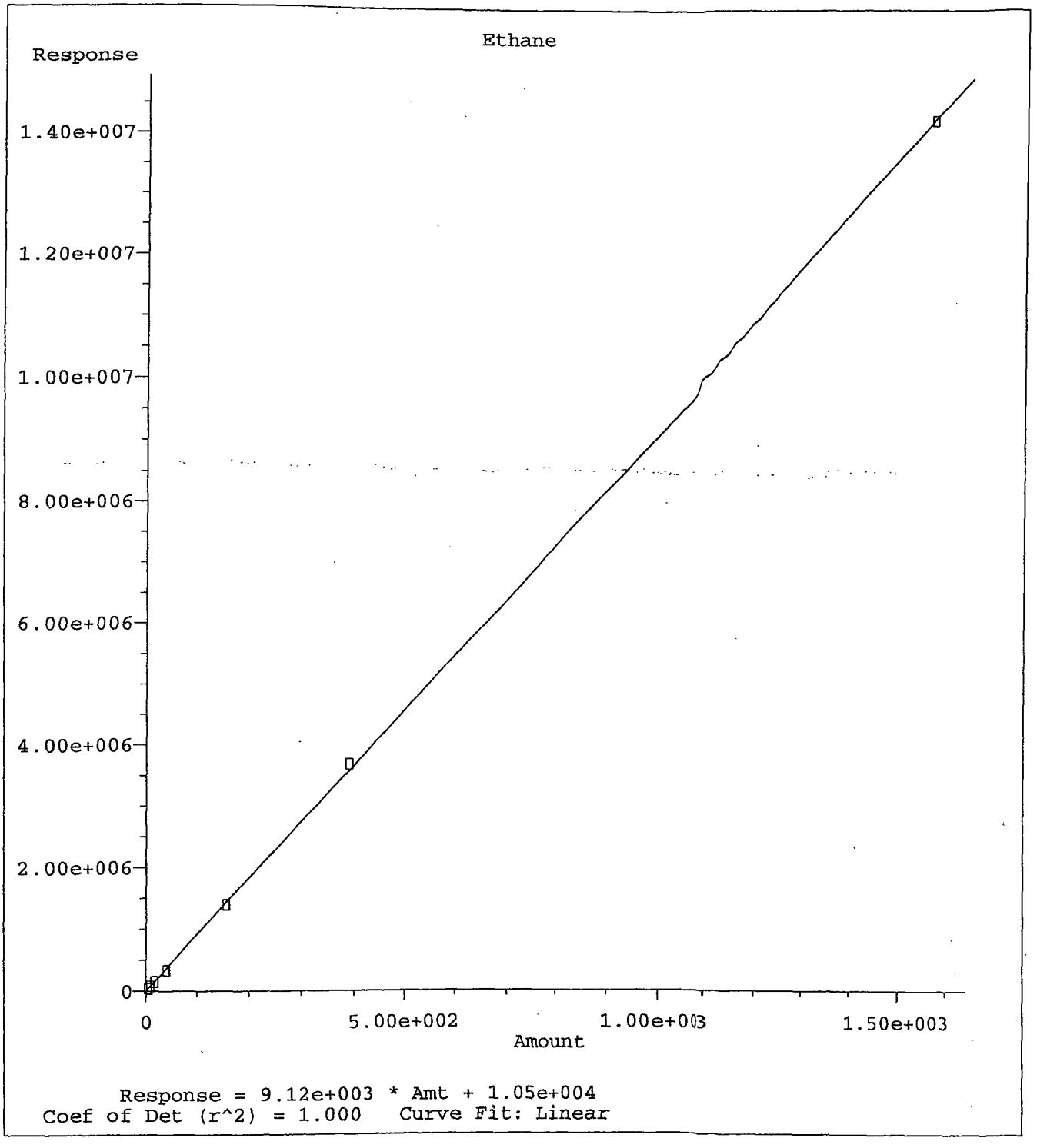
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

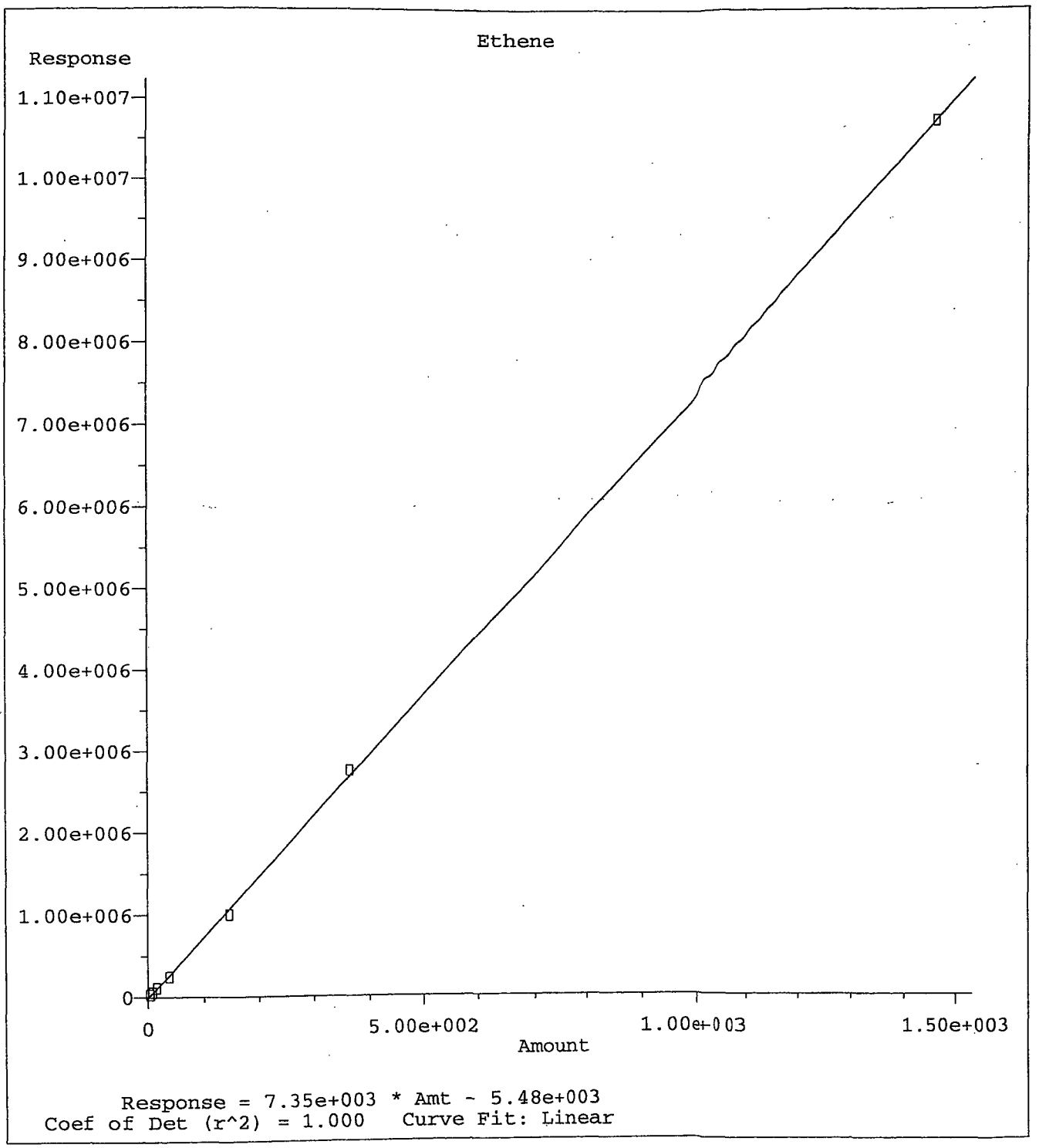




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

RSK 175
RSK 175

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
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36							
37							
38							
39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

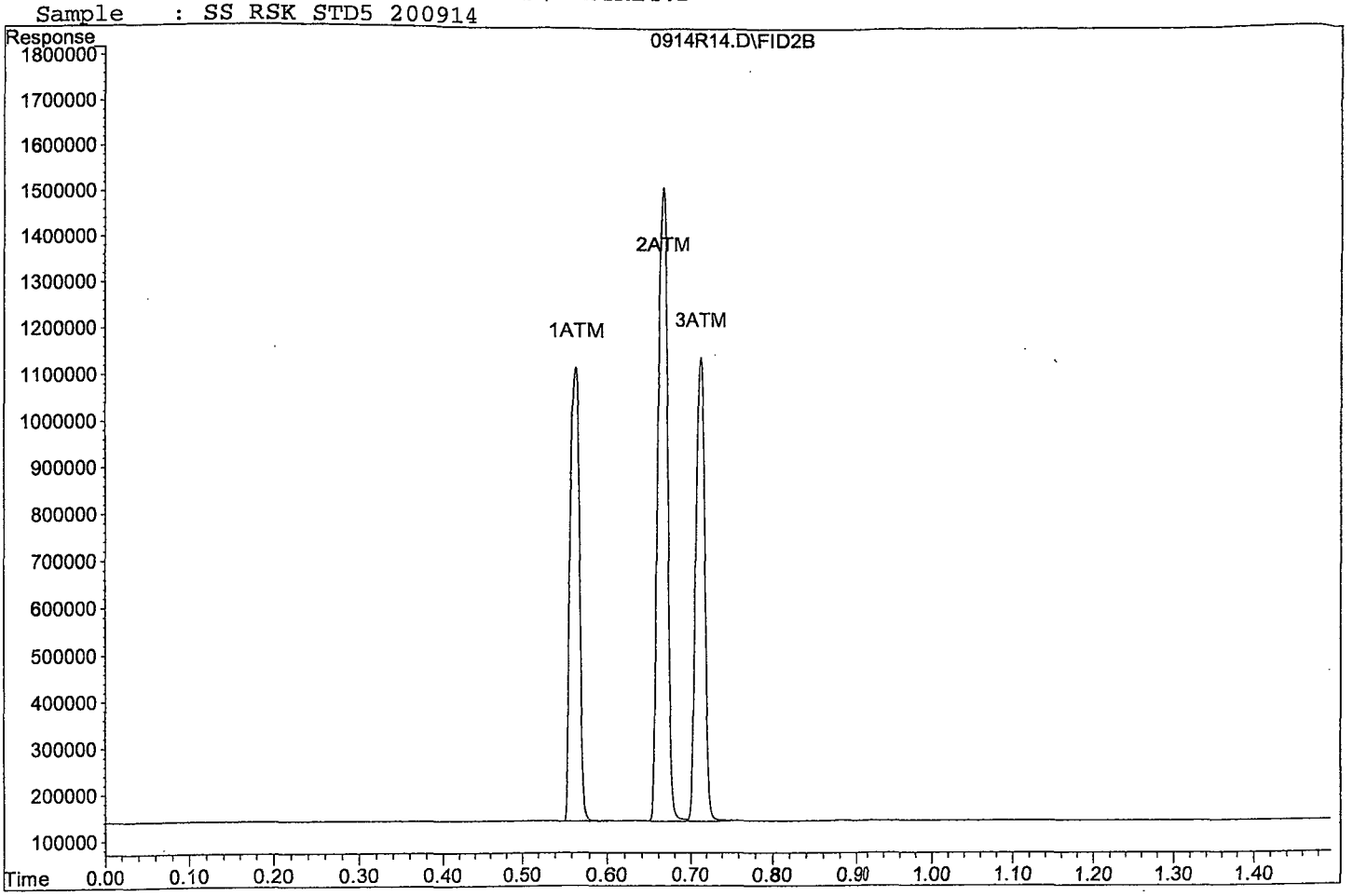
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R02.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	21901	15	ATML	11
2	ATML	Ethane	18863	17262	8.5	ATML	6.0
3	ATML	Ethene	14798	14487	2.1	ATML	0.99
4							
5							
6							
7							
8							
9							
10							
11							
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35							
36							
37							
38							
39							
40							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

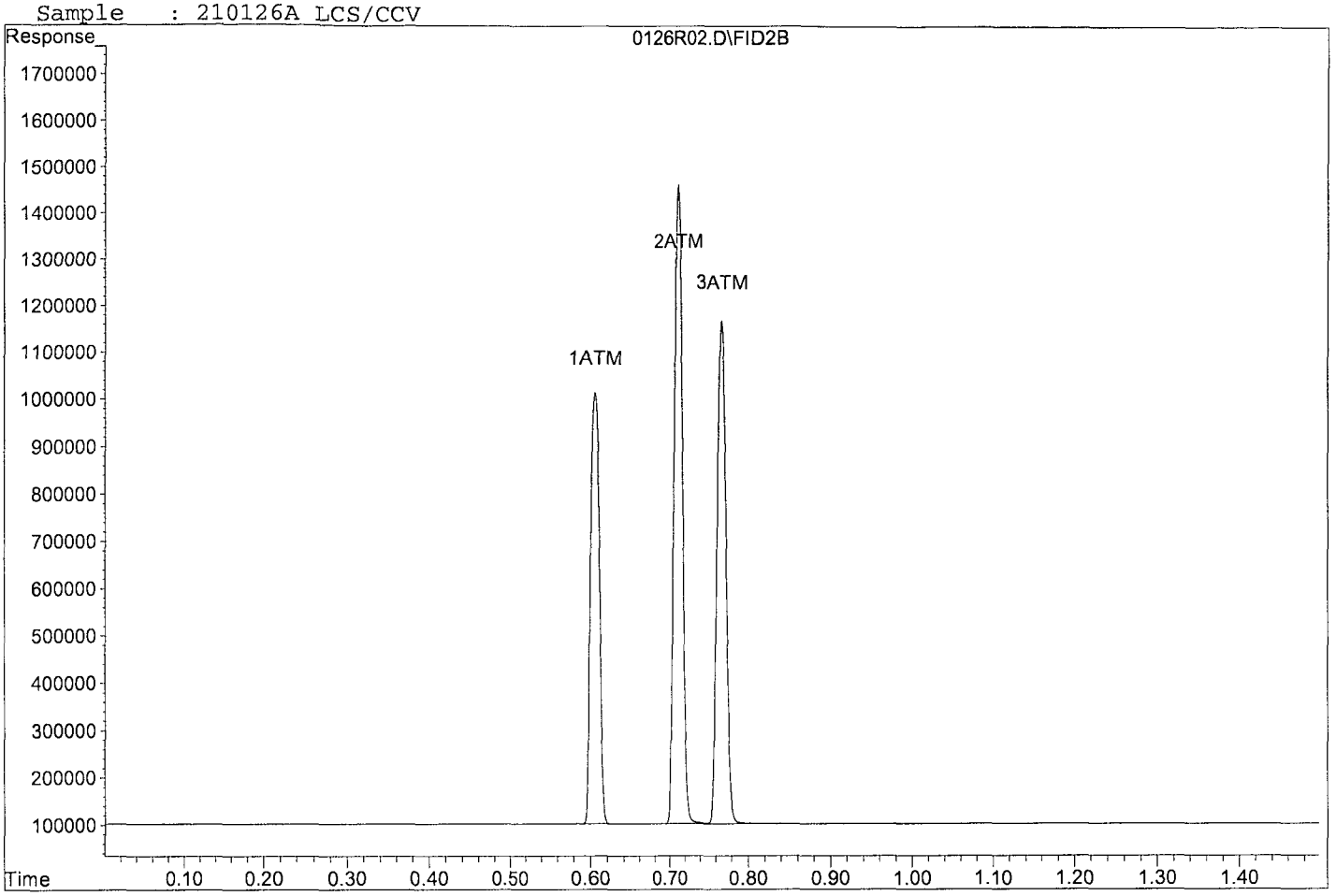
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	913253	73.981	ppb
2) ATM Ethane	0.71	1349471	146.899	ppb
3) ATM Ethene	0.77	1056358	144.398	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R23.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24003	6.5	ATML	2.8
2	ATML	Ethane	18863	19959	5.8	ATML	8.7
3	ATML	Ethene	14798	16308	10	ATML	11
4							
5							
6							
7							
8							
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36							
37							
38							
39							
40							
		Average			7.4		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R23.D Vial: 23
Acq On : 26 Jan 21 14:38 Operator: LS
Sample : 210126A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:40 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

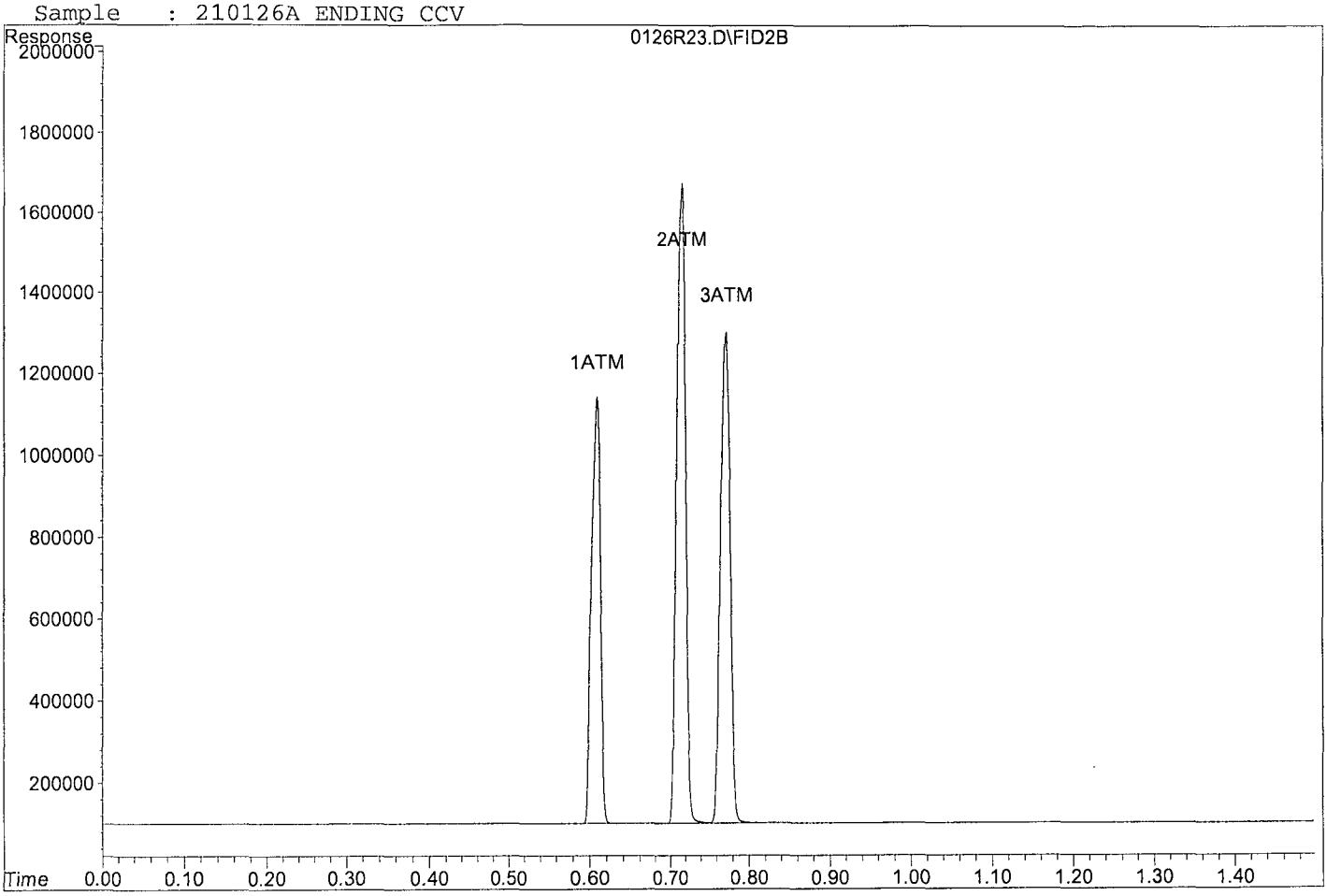
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1000941	81.091	ppb
2) ATM Ethane	0.71	1560302	170.028	ppb
3) ATM Ethene	0.77	1189206	162.464	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R23.D
Sample : 210126A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R06.D Vial: 6
Acq On : 26 Jan 21 13:34 Operator: LS
Sample : BA25433W03 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:37 2021 Quant Results File: RSK0914A.RES

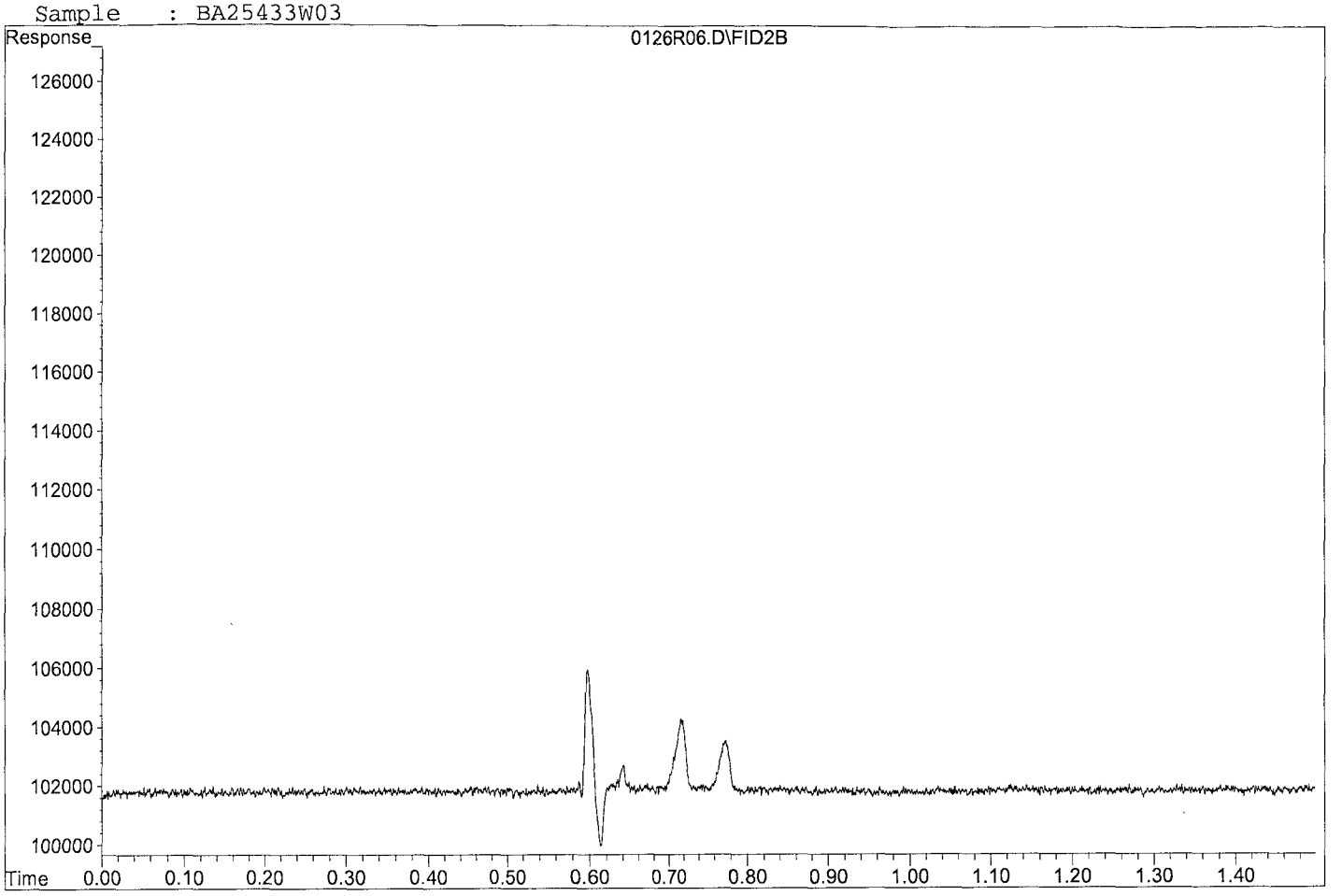
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R06.D
Sample : BA25433W03



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R07.D Vial: 7
Acq On : 26 Jan 21 13:38 Operator: LS
Sample : BA25434W07 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:41 2021 Quant Results File: RSK0914A.RES

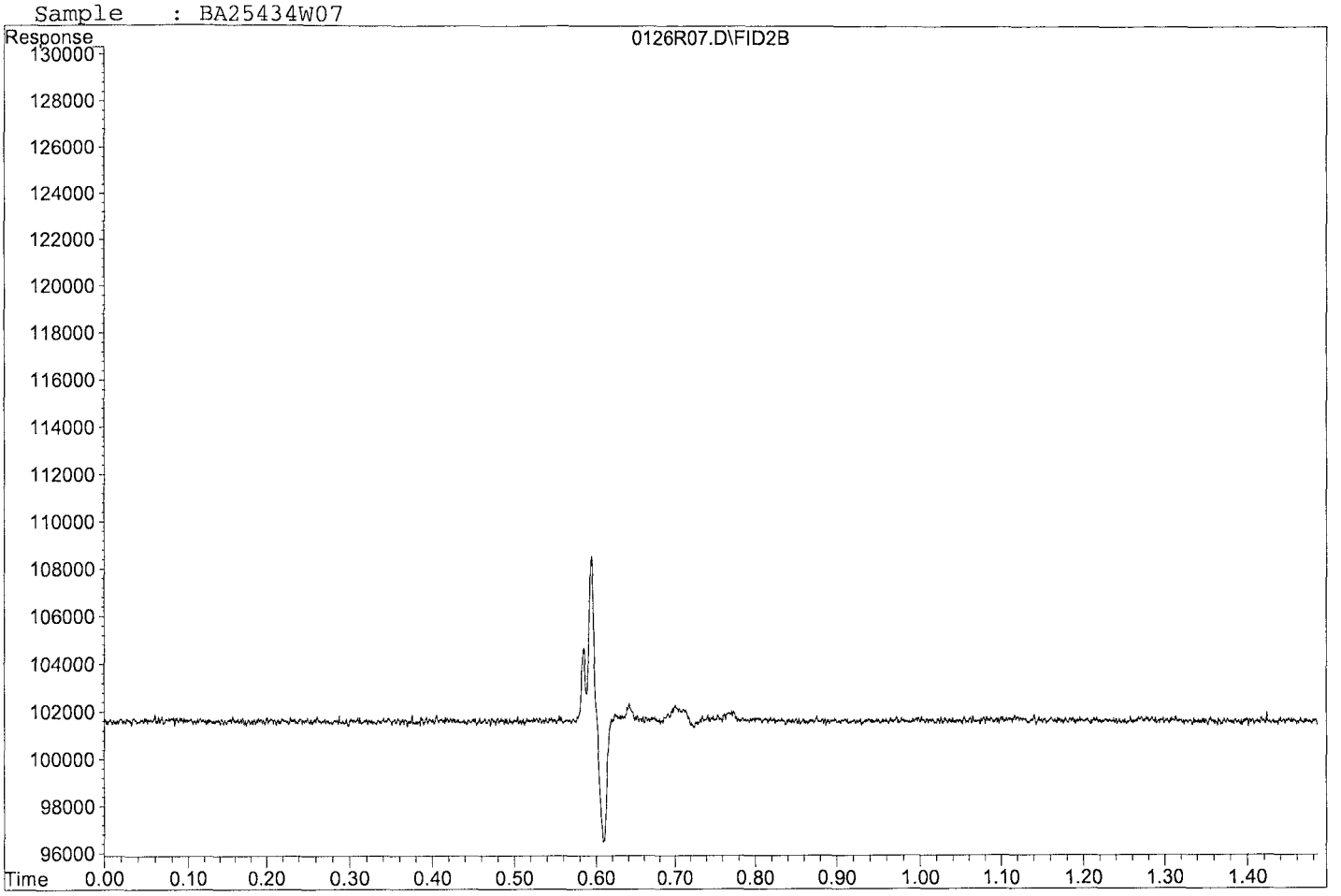
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R07.D
Sample : BA25434W07



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R05.D Vial: 5
Acq On : 26 Jan 21 13:30 Operator: LS
Sample : 210126A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:33 2021 Quant Results File: RSK0914A.RES

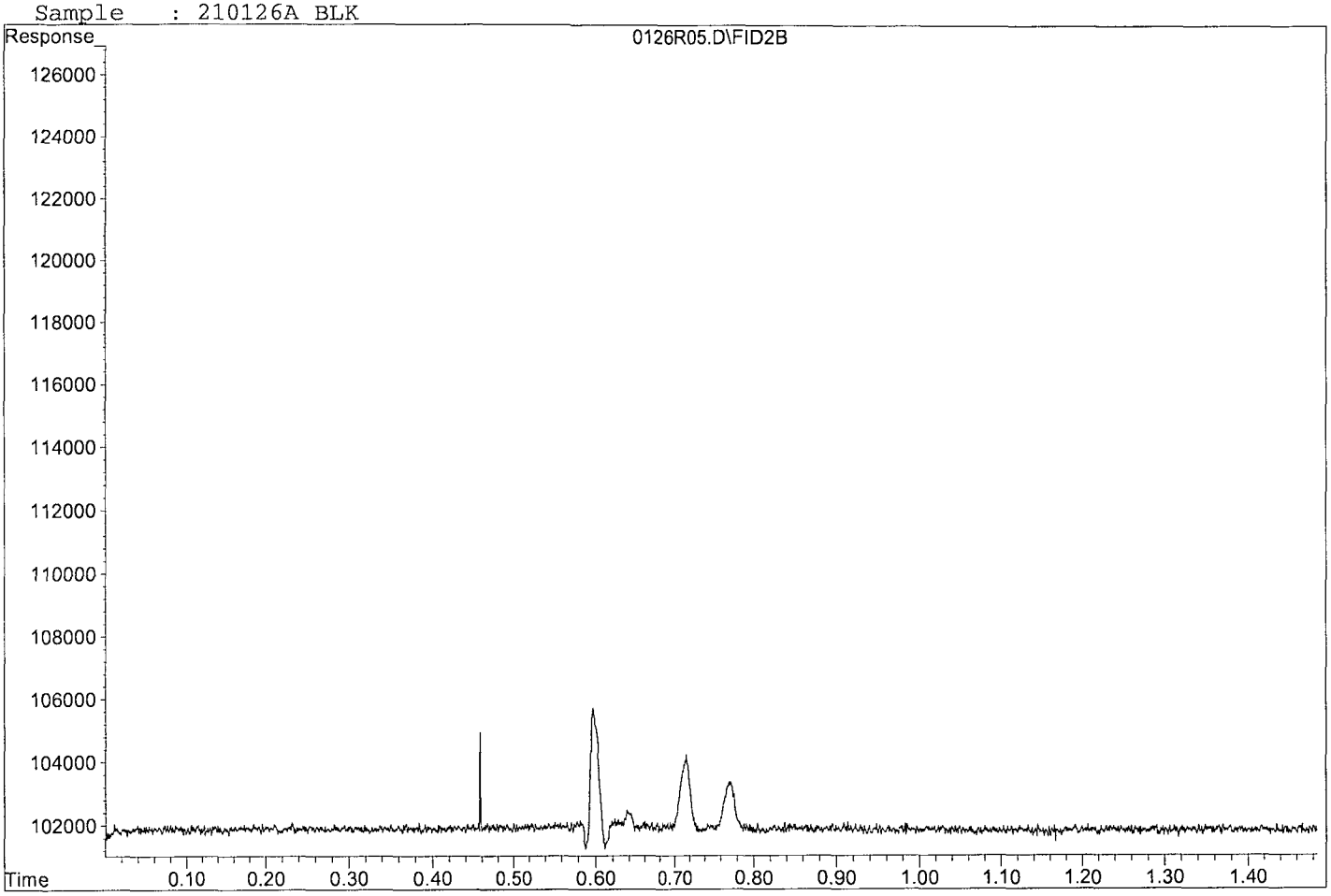
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R05.D
Sample : 210126A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

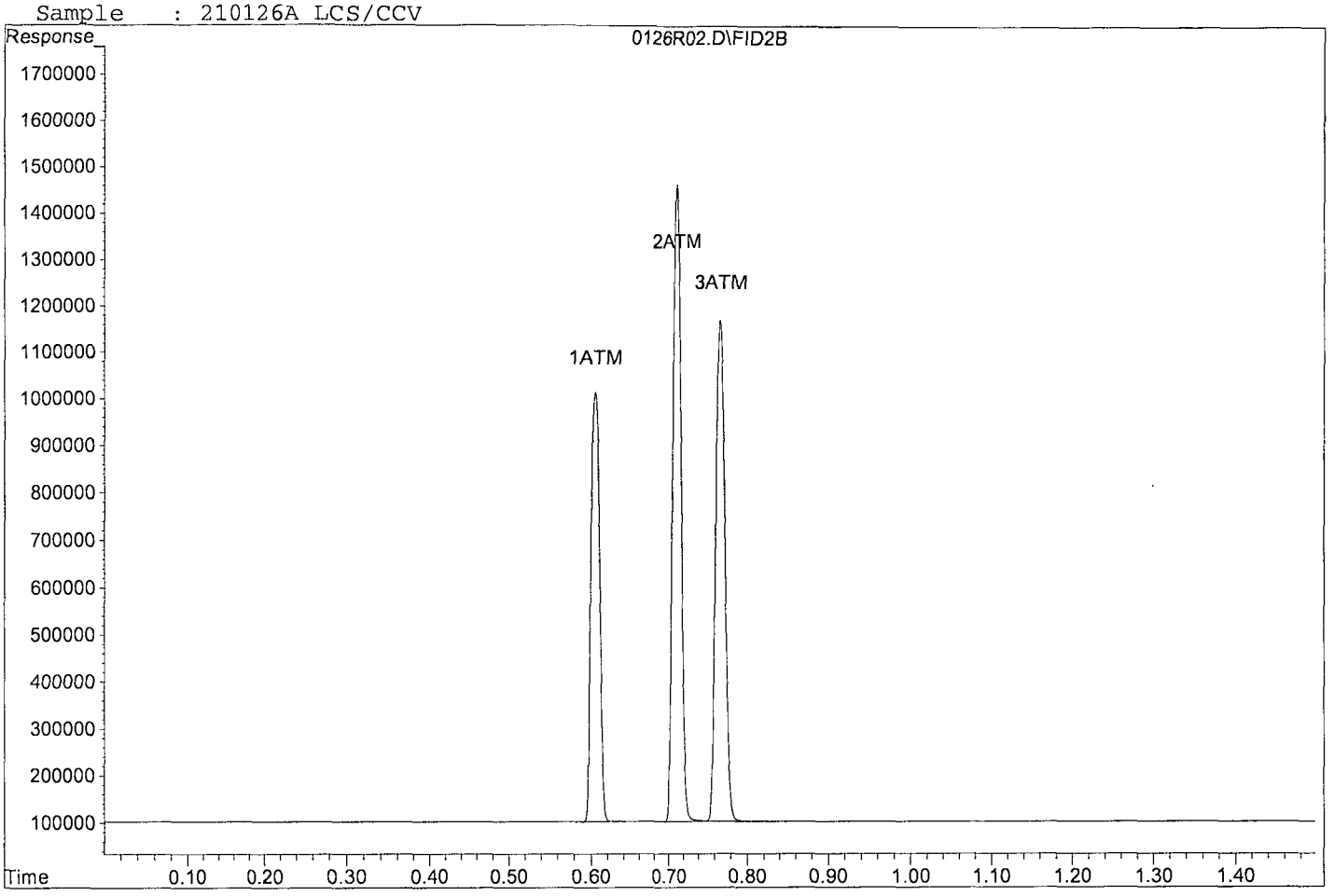
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	913253	73.981	ppb
2) ATM Ethane	0.71	1349471	146.899	ppb
3) ATM Ethene	0.77	1056358	144.398	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R04.D Vial: 4
Acq On : 26 Jan 21 13:26 Operator: LS
Sample : 210126A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:29 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

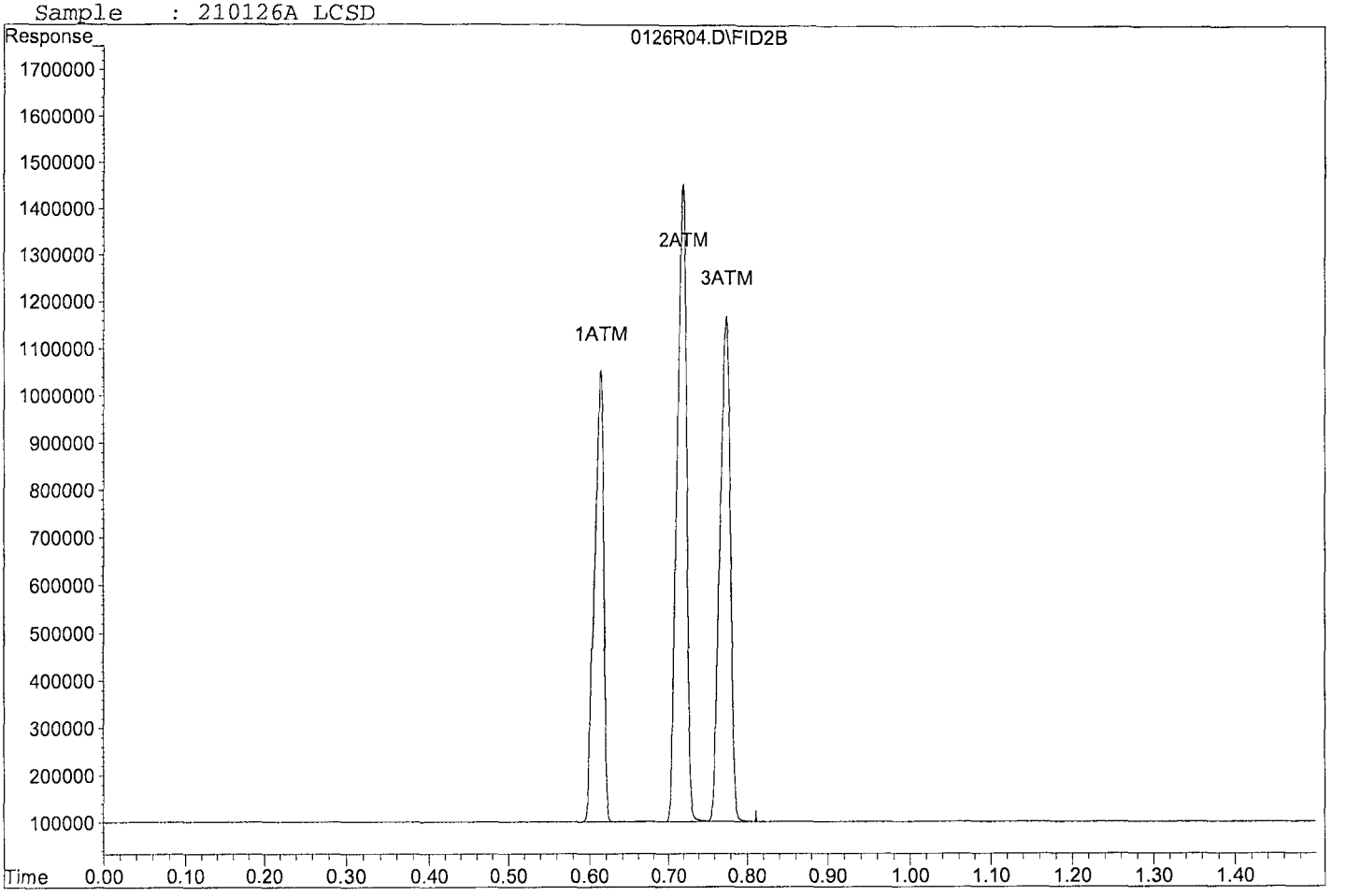
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	899840	72.893 ppb
2) ATM Ethane	0.72	1340838	145.952 ppb
3) ATM Ethene	0.77	1069151	146.137 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R04.D
Sample : 210126A LCSD



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R08.D Vial: 8
Acq On : 26 Jan 21 13:42 Operator: LS
Sample : BA25434W08 MS Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:45 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

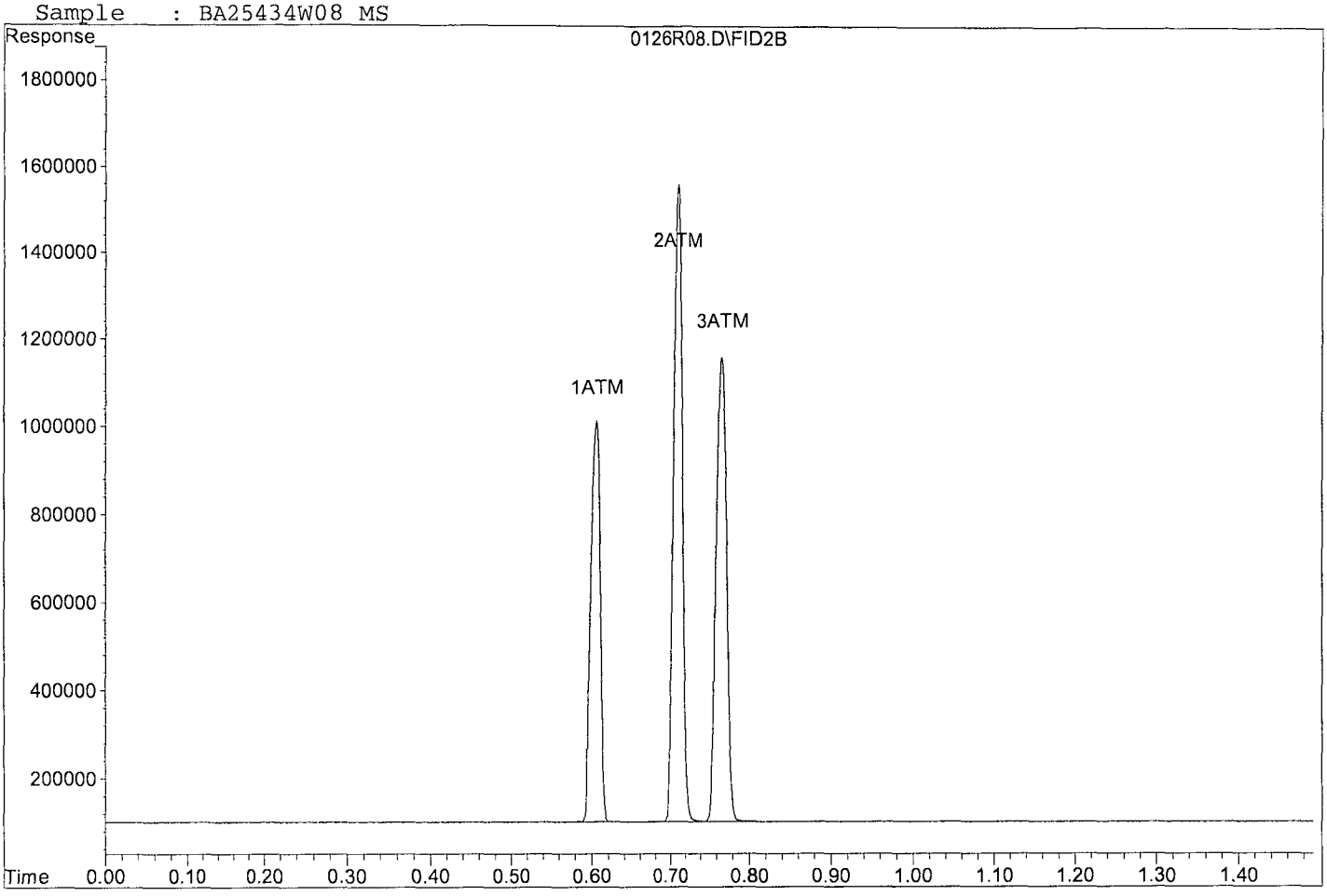
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	902766	73.130 ppb
2) ATM Ethane	0.71	1462336	159.281 ppb
3) ATM Ethene	0.77	1065883	145.693 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R08.D
Sample : BA25434W08 MS



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R13.D Vial: 13
Acq On : 26 Jan 21 14:03 Operator: LS
Sample : BA25434W08 MSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:06 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

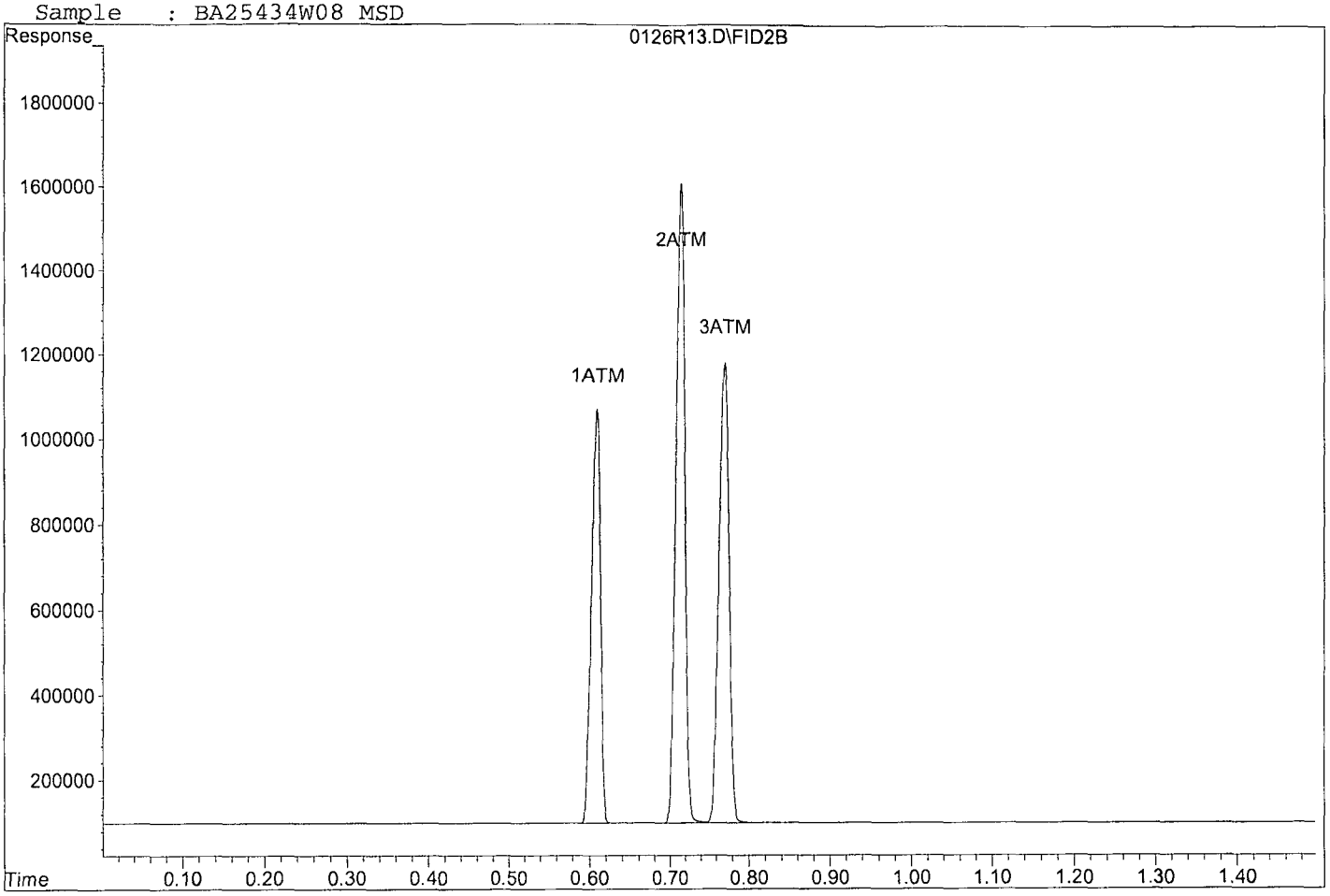
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	941447	76.267 ppb
2) ATM Ethane	0.71	1520050	165.612 ppb
3) ATM Ethene	0.77	1090674	149.064 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R13.D
Sample : BA25434W08 MSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25434W08 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25526W04 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0126R02.D	1	210126A LCS/CCV		26 Jan 21 13:12
2	4	0126R04.D	1	210126A LCSD		26 Jan 21 13:26
3	5	0126R05.D	1	210126A BLK		26 Jan 21 13:30
4	6	0126R06.D	1	BA25433W03		26 Jan 21 13:34
5	7	0126R07.D	1	BA25434W07		26 Jan 21 13:38
6	8	0126R08.D	1	BA25434W08 MS		26 Jan 21 13:42
7	13	0126R13.D	1	BA25434W08 MSD		26 Jan 21 14:03
8	23	0126R23.D	1	210126A ENDING CCV		26 Jan 21 14:38
9	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
10	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
11	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
12	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
13	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
14	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
15	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
16	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

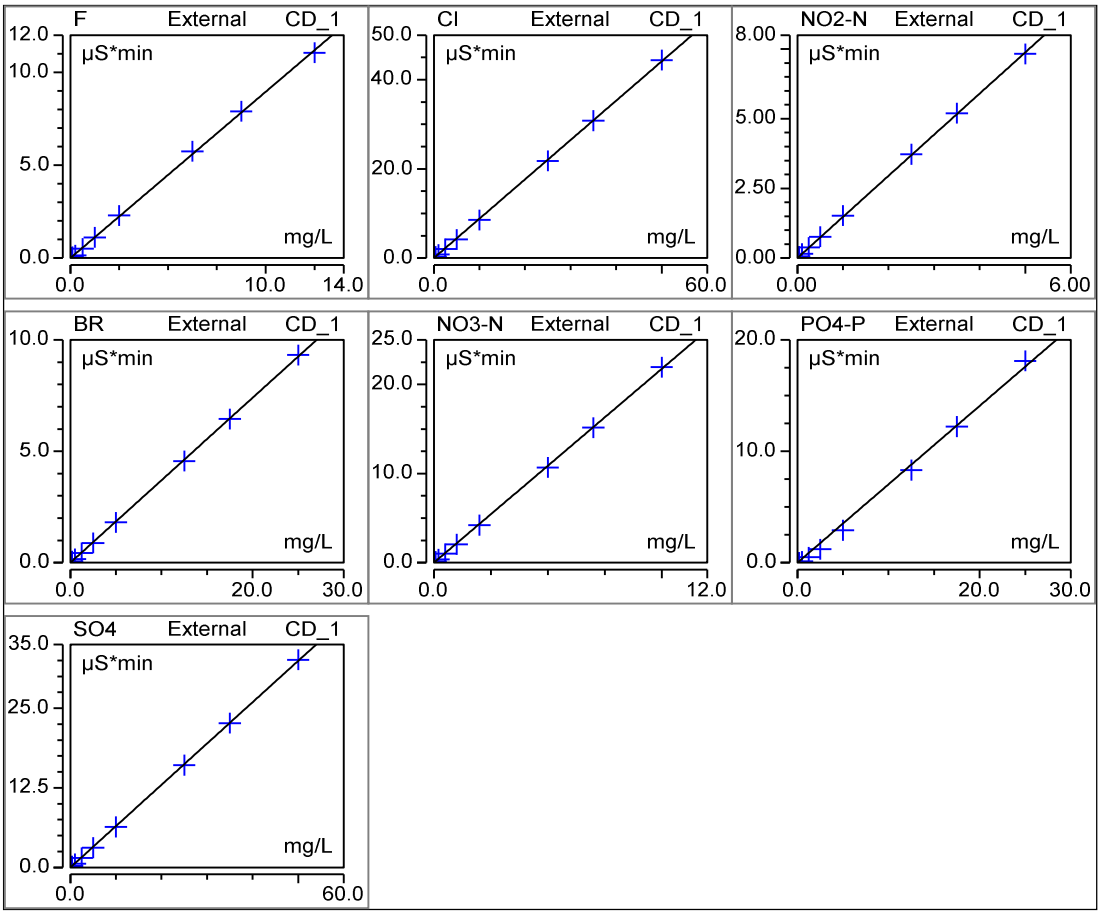
Calibration Batch Report

Sequence:	**201229**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.895	0.000	99.9560
Cl	Area	Lin	9.000	0.000	0.883	0.000	99.9833
NO2-N	Area	Lin	9.000	0.000	1.476	0.000	99.9867
BR	Area	Lin	9.000	0.000	0.370	0.000	99.9857
NO3-N	Area	Lin	9.000	0.000	2.175	0.000	99.9776
PO4-P	Area	Lin	8.000	0.000	0.704	0.000	99.5670
SO4	Area	Lin	9.000	0.000	0.649	0.000	99.9894

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.12.29	0.030	0.1952	0.0206	0.0879	0.0399	n.a.	0.2546
Cal 2 2020.12.29	0.065	0.3660	0.0382	0.1779	0.0685	0.0484	0.3350
Cal 3 2020.12.29	0.165	0.8899	0.1058	0.4441	0.1794	0.1725	0.8705
Cal 4 2020.12.29	0.569	2.3118	0.2547	1.1840	0.4620	0.7043	2.2914
Cal 5 2020.12.29	1.241	4.7003	0.5172	2.3974	0.9491	1.7211	4.7702
Cal 6 2020.12.29	2.562	9.6722	1.0305	4.8975	1.9393	4.1390	9.8124
Cal 7 2020.12.29	6.421	24.6930	2.5228	12.3317	4.9143	11.8093	24.7570
Cal 8 2020.12.29	8.827	34.9228	3.5216	17.4201	6.9681	17.3586	34.9246
Cal 9 2020.12.29	12.354	50.3149	4.9653	25.1755	10.0848	25.7294	50.2481

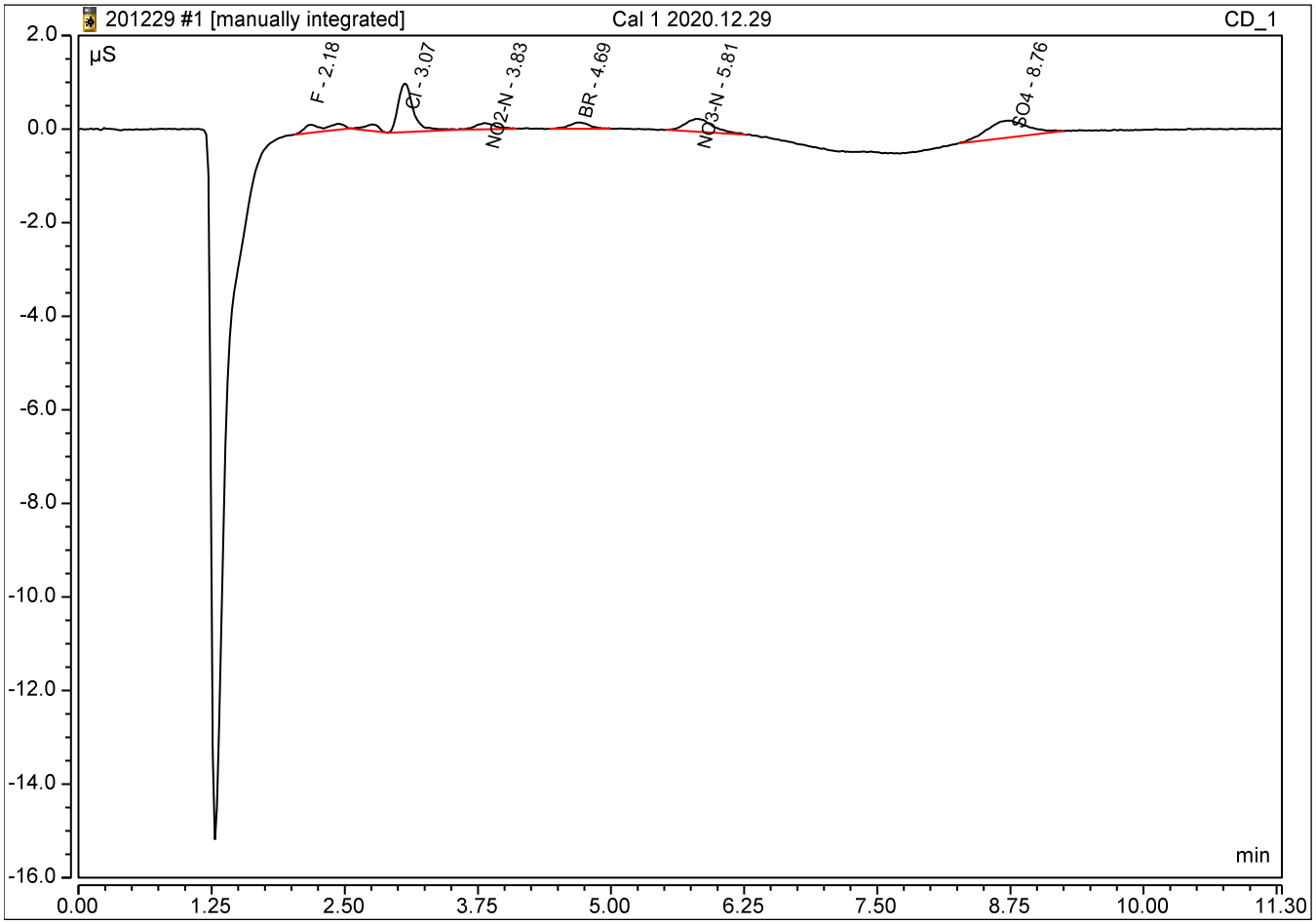


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.027	0.170	0.03	0.05	60.9%
4	3.07	**Cl**	BMB	0.172	1.041	0.20	0.2	97.6%
5	3.83	**NO2-N**	BMB	0.030	0.136	0.02	0.02	103.2%
6	4.69	**BR**	BMB*	0.033	0.142	0.09	0.1	87.9%
7	5.81	**NO3-N**	BMB	0.087	0.279	0.04	0.04	99.6%
8	8.76	**SO4**	BMB*	0.165	0.356	0.25	0.2	127.3%

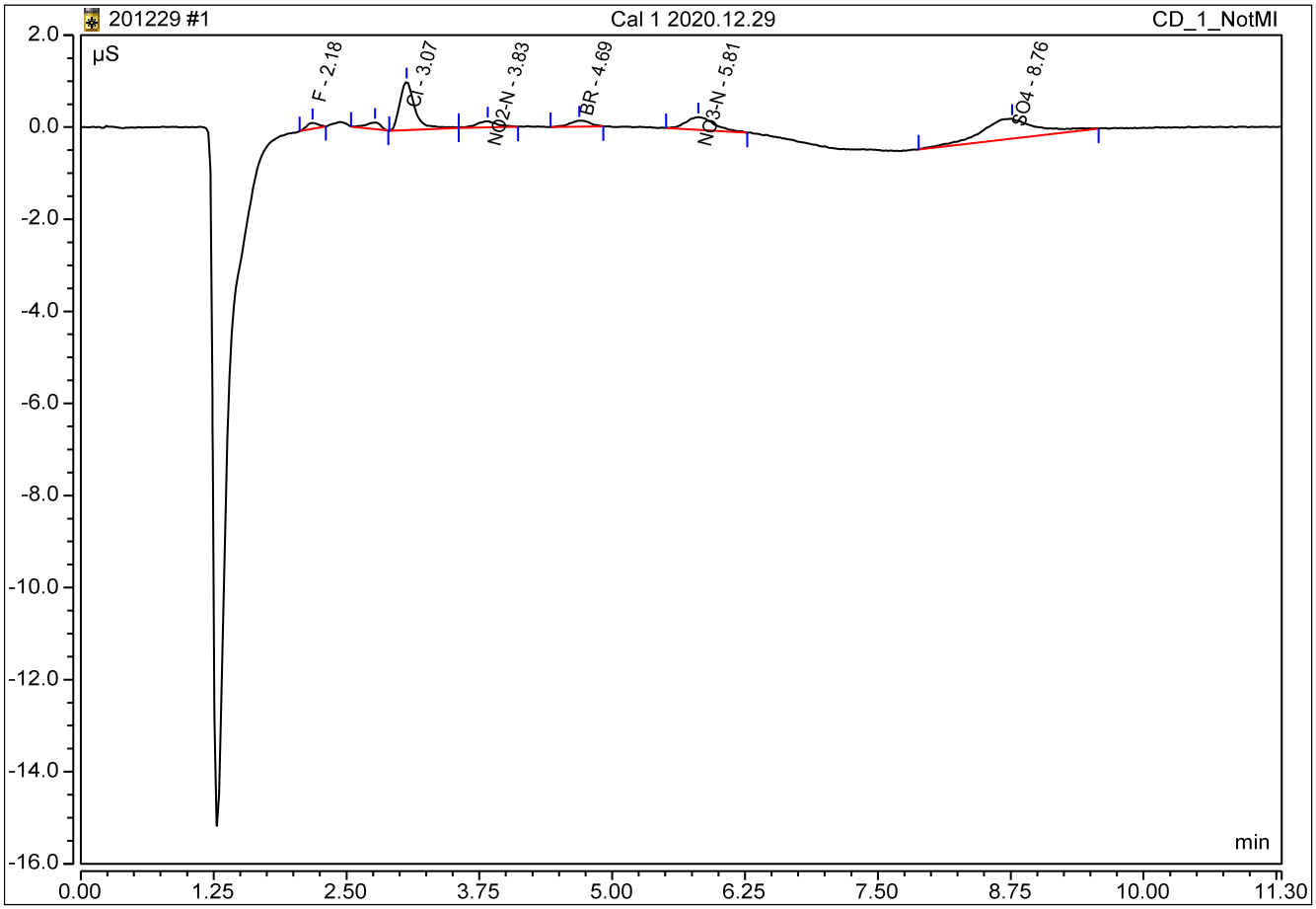


MI 5 F Br SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.017	0.127	0.0188
4	3.07	**Cl**	BMB	0.172	1.041	0.1952
5	3.83	**NO2-N**	BMB	0.030	0.136	0.0206
6	4.69	**BR**	BMB*	0.029	0.136	0.0777
7	5.81	**NO3-N**	BMB	0.087	0.279	0.0399
8	8.76	**SO4**	BMB*	0.271	0.433	0.4316

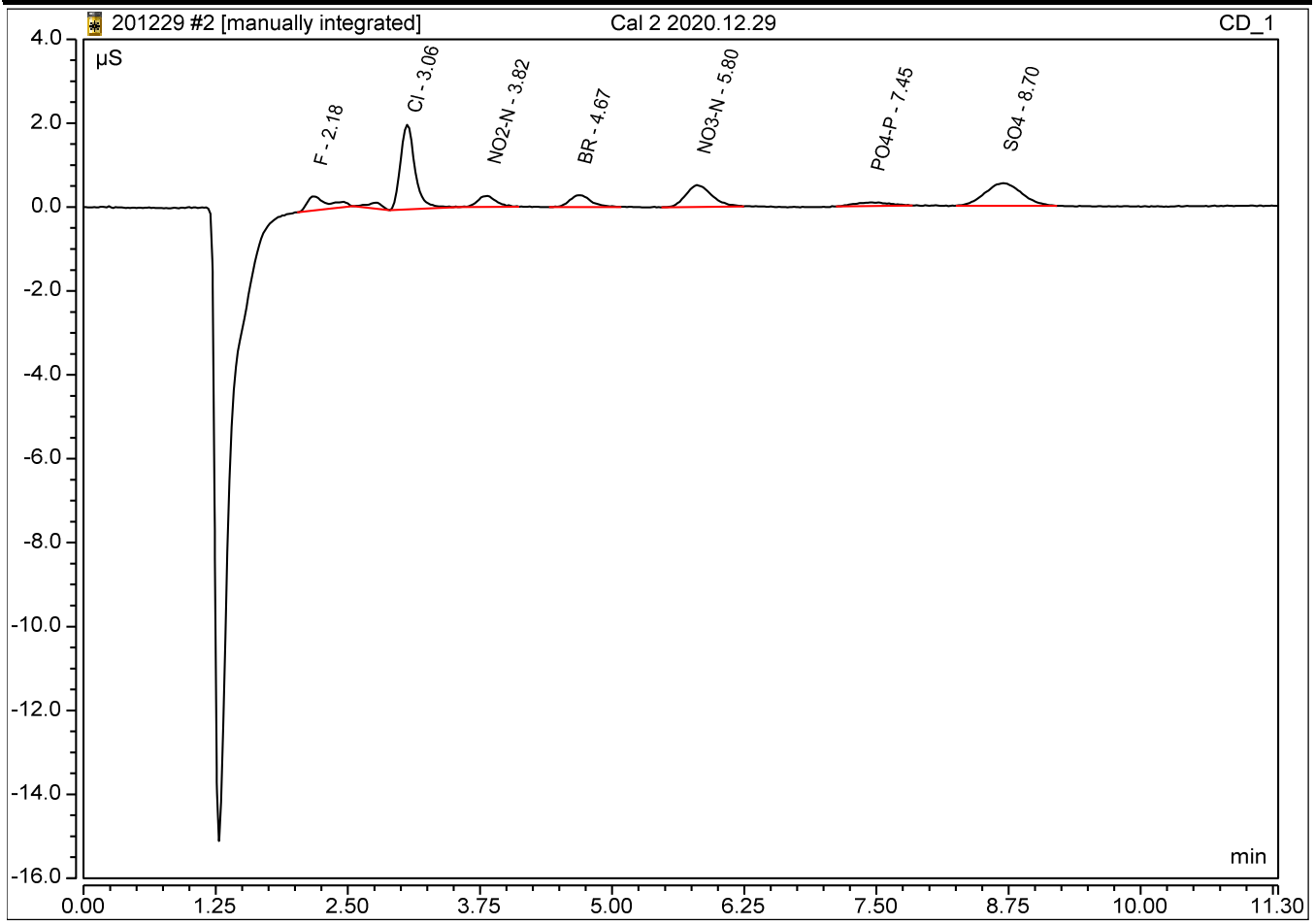


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.058	0.338	0.06	0.1	64.6%
4	3.06	**Cl**	BMB	0.323	2.016	0.37	0.4	91.5%
5	3.82	**NO2-N**	BMB	0.056	0.268	0.04	0.04	95.6%
6	4.67	**BR**	BMB	0.066	0.282	0.18	0.2	89.0%
7	5.80	**NO3-N**	BMB	0.149	0.521	0.07	0.08	85.6%
8	7.45	**PO4-P**	BMB	0.034	0.096	0.05	0.2	24.2%
9	8.70	**SO4**	BMB	0.217	0.542	0.33	0.4	83.7%

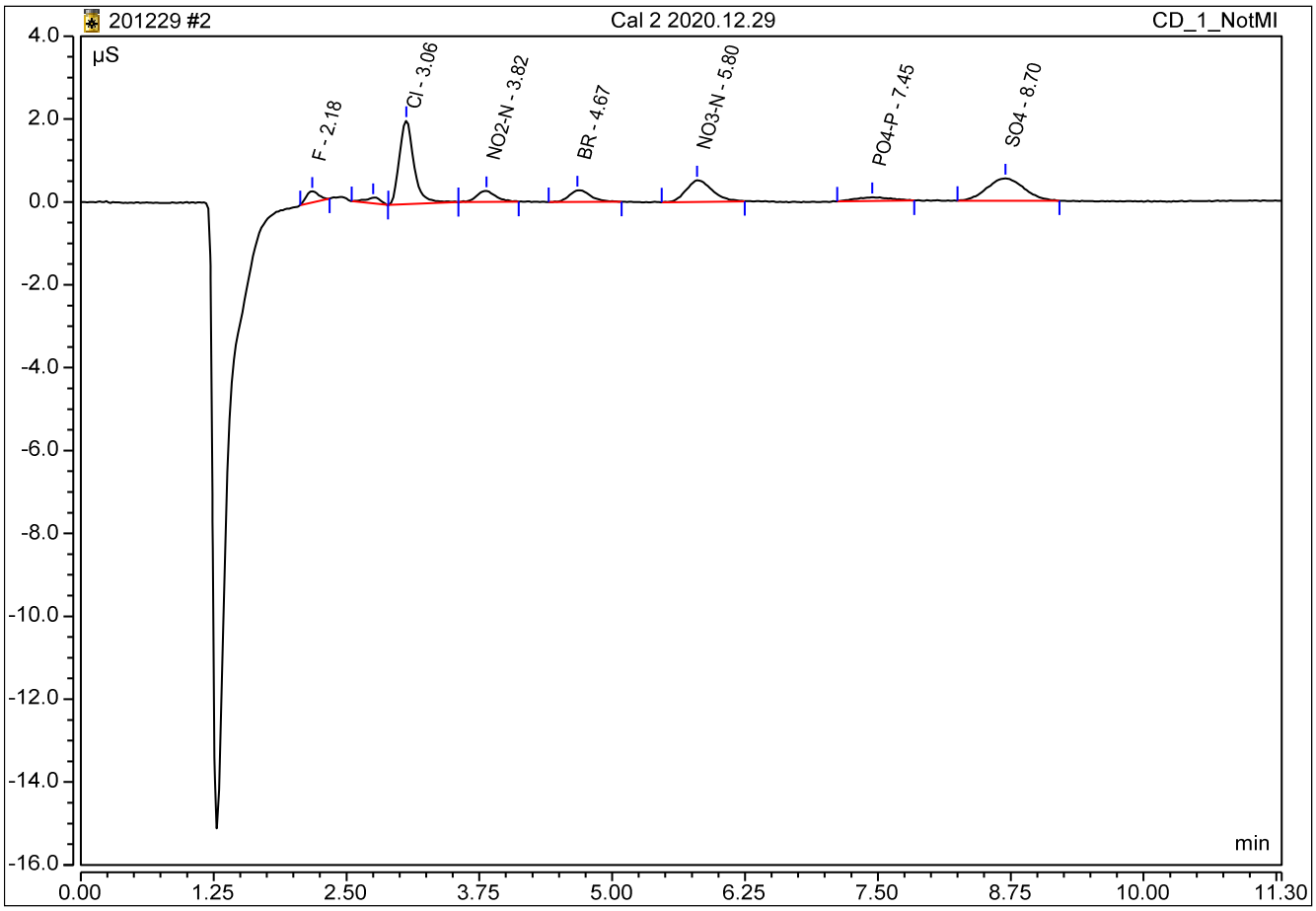


MI 5 F GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.037	0.268	0.0419
4	3.06	**Cl**	BMB	0.323	2.016	0.3660
5	3.82	**NO2-N**	BMB	0.056	0.268	0.0382
6	4.67	**BR**	BMB	0.066	0.282	0.1779
7	5.80	**NO3-N**	BMB	0.149	0.521	0.0685
8	7.45	**PO4-P**	BMB	0.034	0.096	0.0504
9	8.70	**SO4**	BMB	0.217	0.542	0.3465

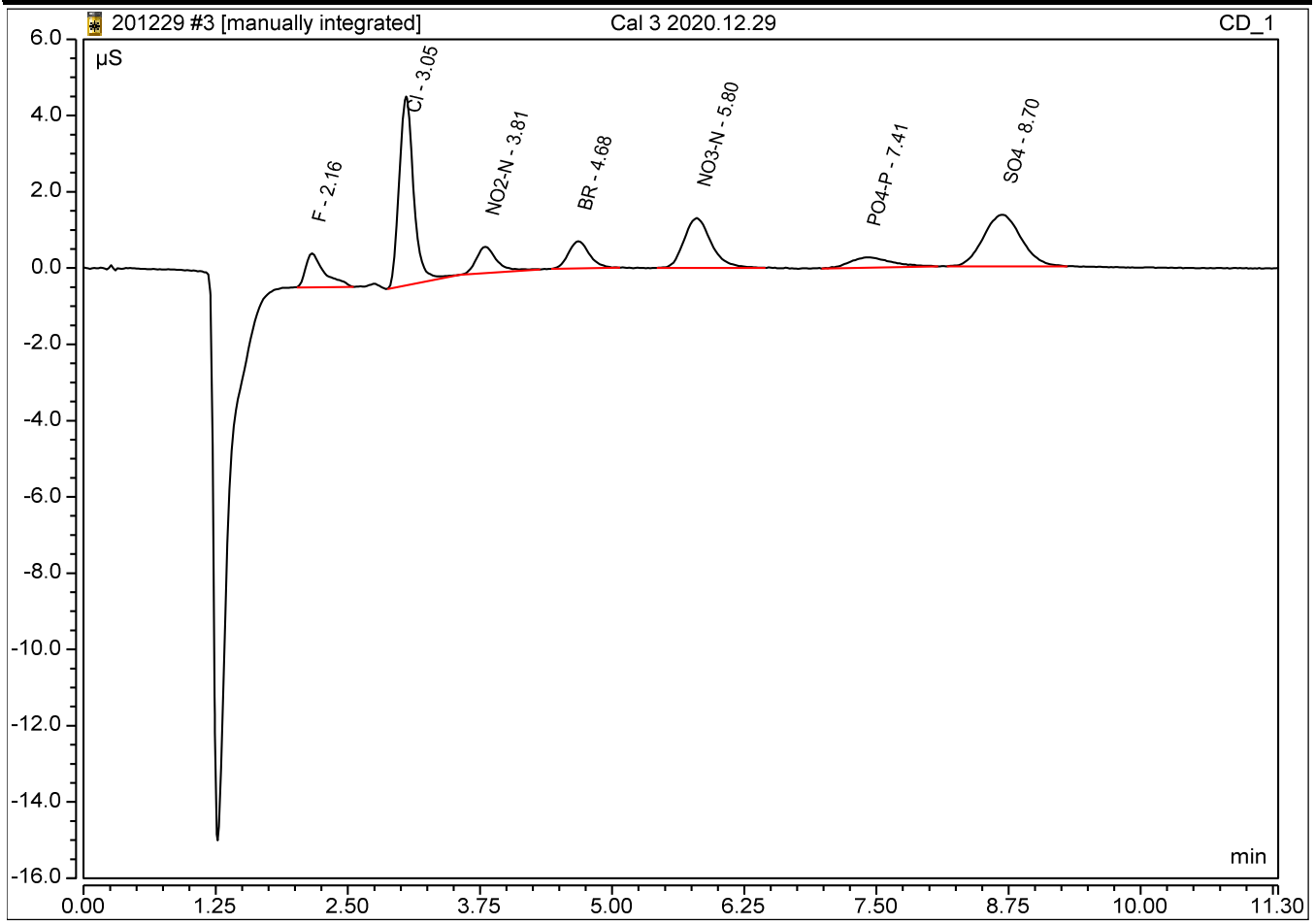


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BM *	0.147	0.890	0.16	0.25	65.8%
3	3.05	**Cl**	BMB	0.785	4.952	0.89	1	89.0%
4	3.81	**NO2-N**	BMB	0.156	0.689	0.11	0.1	105.8%
5	4.68	**BR**	BMB	0.164	0.714	0.44	0.5	88.8%
6	5.80	**NO3-N**	BMB	0.390	1.313	0.18	0.2	89.7%
7	7.41	**PO4-P**	BMB*	0.121	0.273	0.17	0.5	34.5%
8	8.70	**SO4**	BMB	0.565	1.354	0.87	1	87.1%



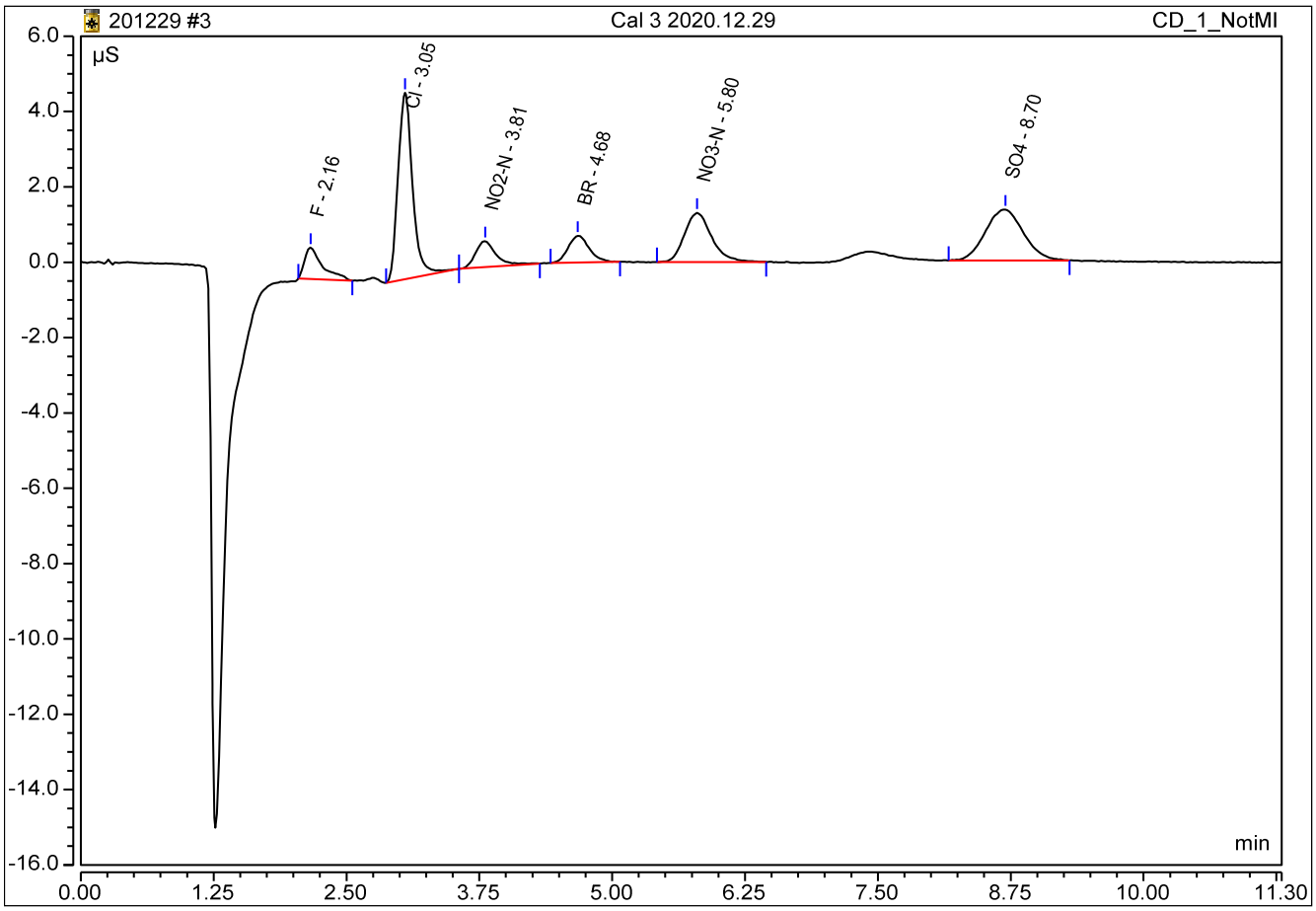
MI 5 F PO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BM *	0.163	0.830	0.1851
3	3.05	**Cl**	BMB	0.785	4.952	0.8899
4	3.81	**NO2-N**	BMB	0.156	0.689	0.1058
5	4.68	**BR**	BMB	0.164	0.714	0.4441
6	5.80	**NO3-N**	BMB	0.390	1.313	0.1794
7	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
8	8.70	**SO4**	BMB	0.565	1.354	0.9004

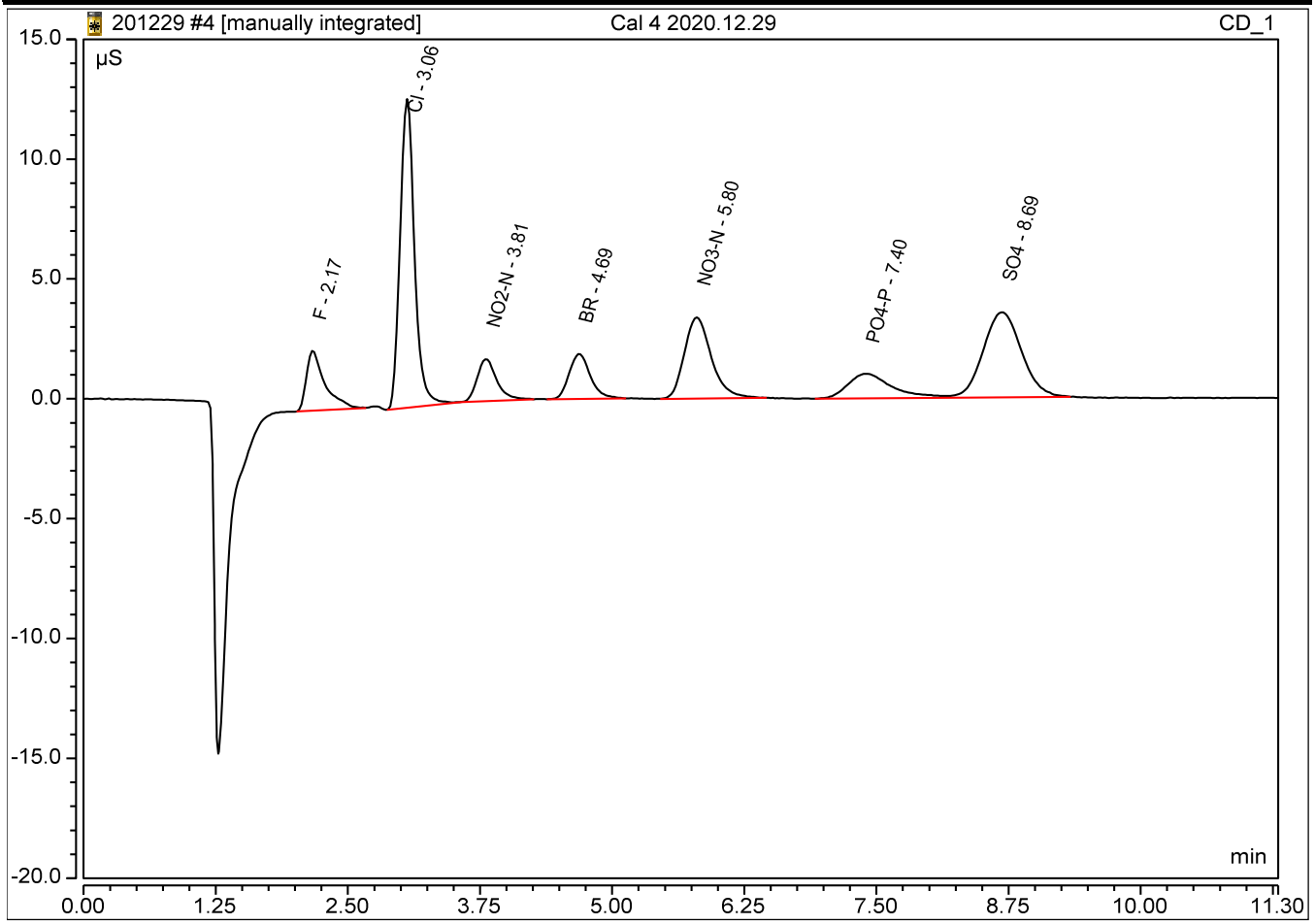


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB*	0.510	2.511	0.57	0.625	91.1%
2	3.06	**Cl**	BMB	2.040	12.880	2.31	2.5	92.5%
3	3.81	**NO2-N**	BMB	0.376	1.749	0.25	0.25	101.9%
4	4.69	**BR**	BMB	0.438	1.879	1.18	1.25	94.7%
5	5.80	**NO3-N**	BMB	1.005	3.393	0.46	0.5	92.4%
6	7.40	**PO4-P**	BM *	0.496	1.023	0.70	1.25	56.3%
7	8.69	**SO4**	MB*	1.487	3.545	2.29	2.5	91.7%

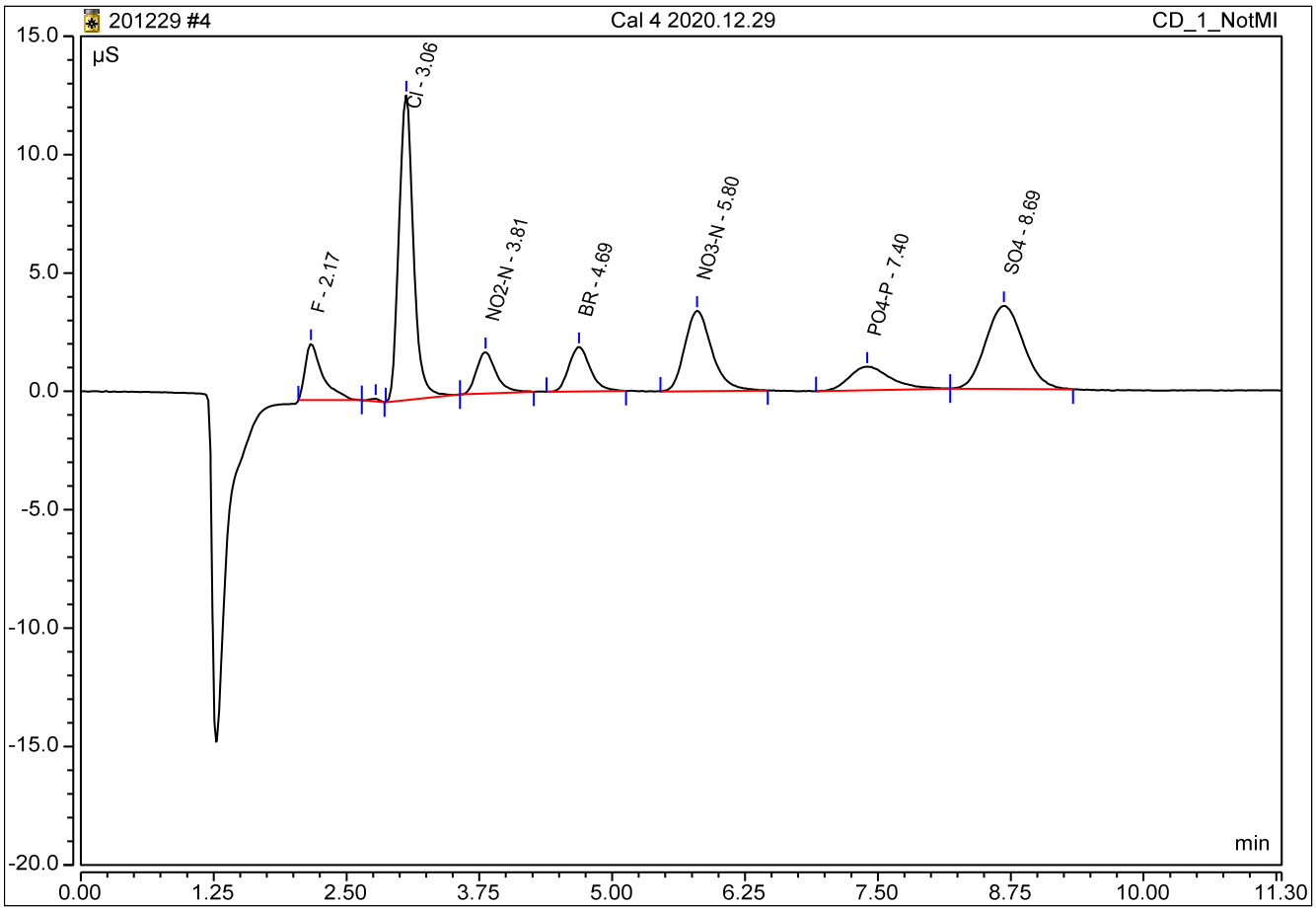


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB*	0.454	2.383	0.5138
2	3.06	**Cl**	BMB	2.040	12.880	2.3118
3	3.81	**NO2-N**	BMB	0.376	1.749	0.2547
4	4.69	**BR**	BMB	0.438	1.879	1.1840
5	5.80	**NO3-N**	BMB	1.005	3.393	0.4620
6	7.40	**PO4-P**	BM *	0.451	0.996	0.6677
7	8.69	**SO4**	MB*	1.446	3.505	2.3045

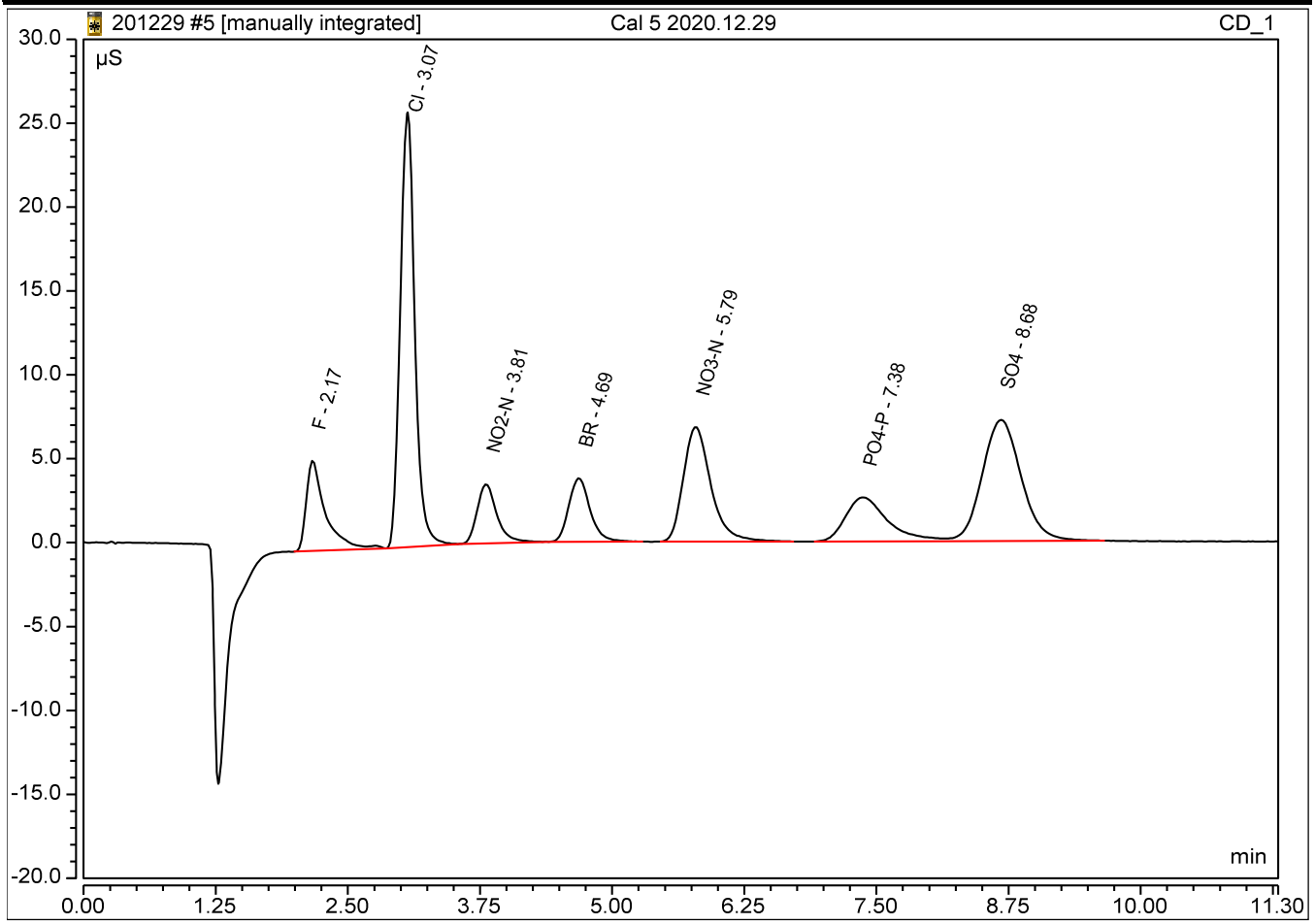


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	1.110	5.384	1.24	1.25	99.3%
3	3.07	**Cl**	bMB*	4.148	25.916	4.70	5	94.0%
4	3.81	**NO2-N**	BMB	0.763	3.513	0.52	0.5	103.4%
5	4.69	**BR**	BMB	0.887	3.786	2.40	2.5	95.9%
6	5.79	**NO3-N**	BMB	2.064	6.848	0.95	1	94.9%
7	7.38	**PO4-P**	BM *	1.211	2.626	1.72	2.5	68.8%
8	8.68	**SO4**	MB*	3.095	7.217	4.77	5	95.4%



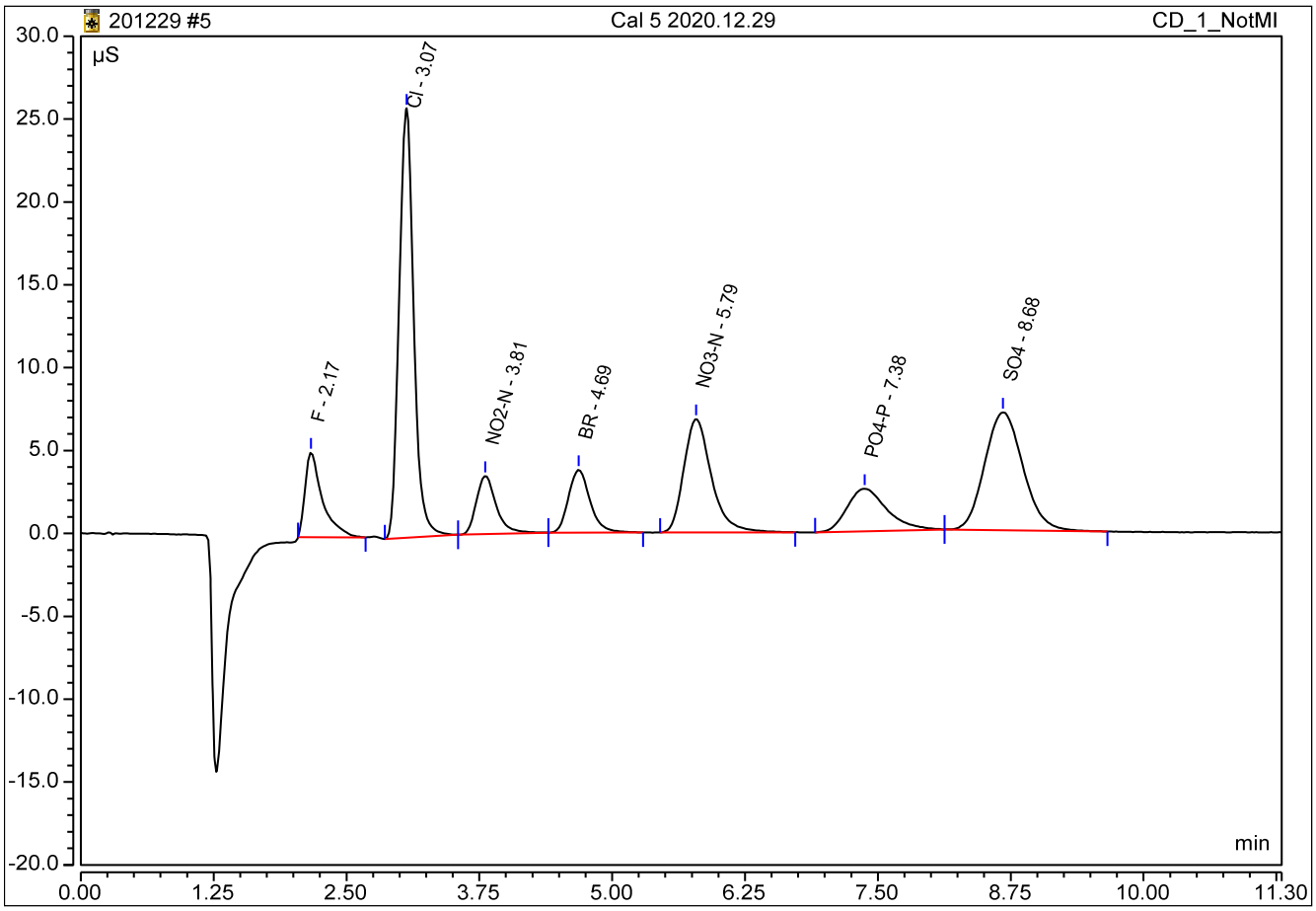
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	0.966	5.118	1.0941
3	3.07	**Cl**	bMB*	4.148	25.916	4.7003
4	3.81	**NO2-N**	BMB	0.763	3.513	0.5172
5	4.69	**BR**	BMB	0.887	3.786	2.3974
6	5.79	**NO3-N**	BMB	2.064	6.848	0.9491
7	7.38	**PO4-P**	BM *	1.118	2.567	1.6557
8	8.68	**SO4**	MB*	2.978	7.119	4.7469

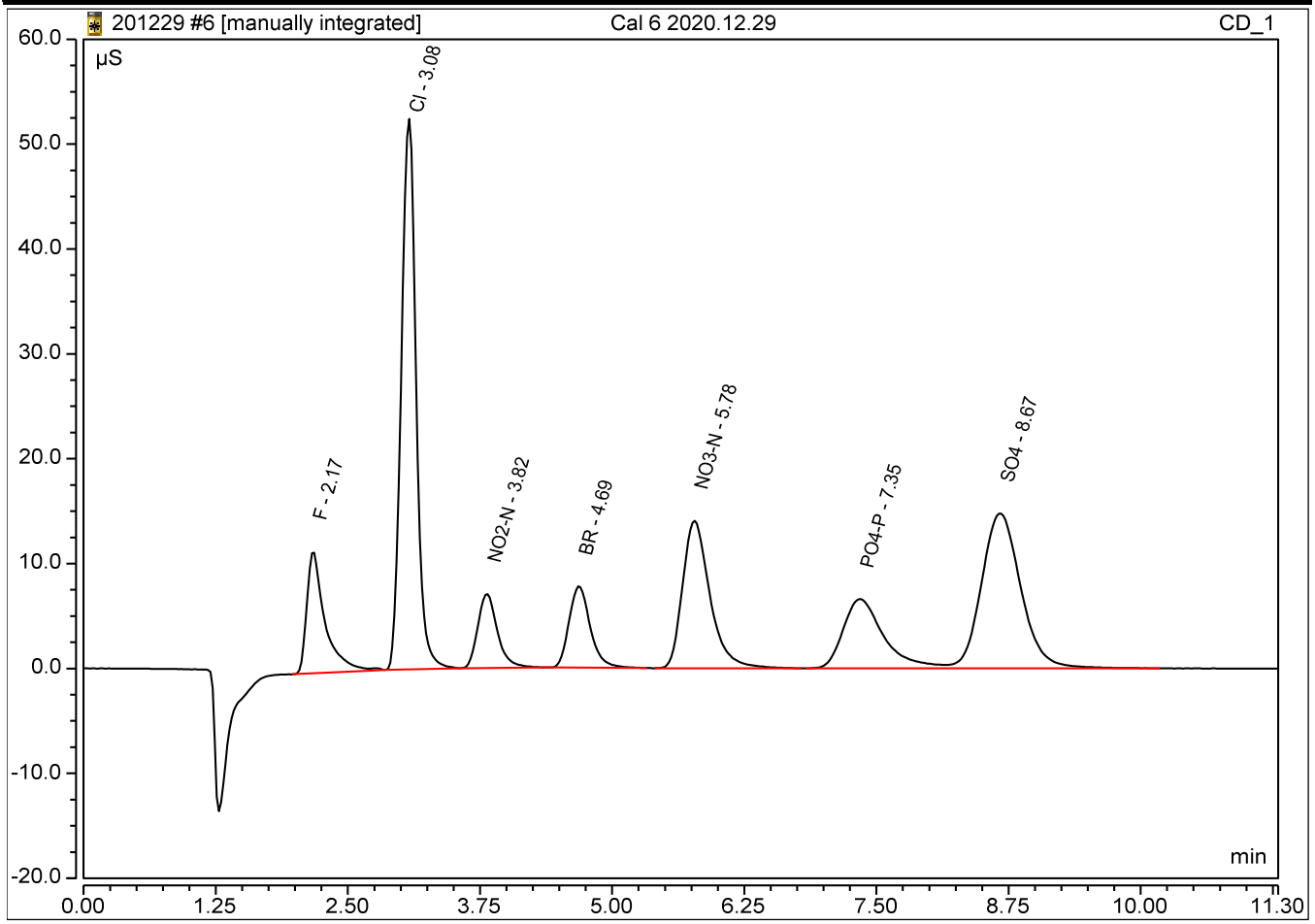


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	2.292	11.657	2.56	2.5	102.5%
3	3.08	**Cl**	bMB*	8.536	52.533	9.67	10	96.7%
4	3.82	**NO2-N**	BMB	1.521	7.071	1.03	1	103.1%
5	4.69	**BR**	BMB	1.813	7.778	4.90	5	98.0%
6	5.78	**NO3-N**	BMB	4.218	14.063	1.94	2	97.0%
7	7.35	**PO4-P**	BM *	2.913	6.594	4.14	5	82.8%
8	8.67	**SO4**	MB*	6.367	14.783	9.81	10	98.1%

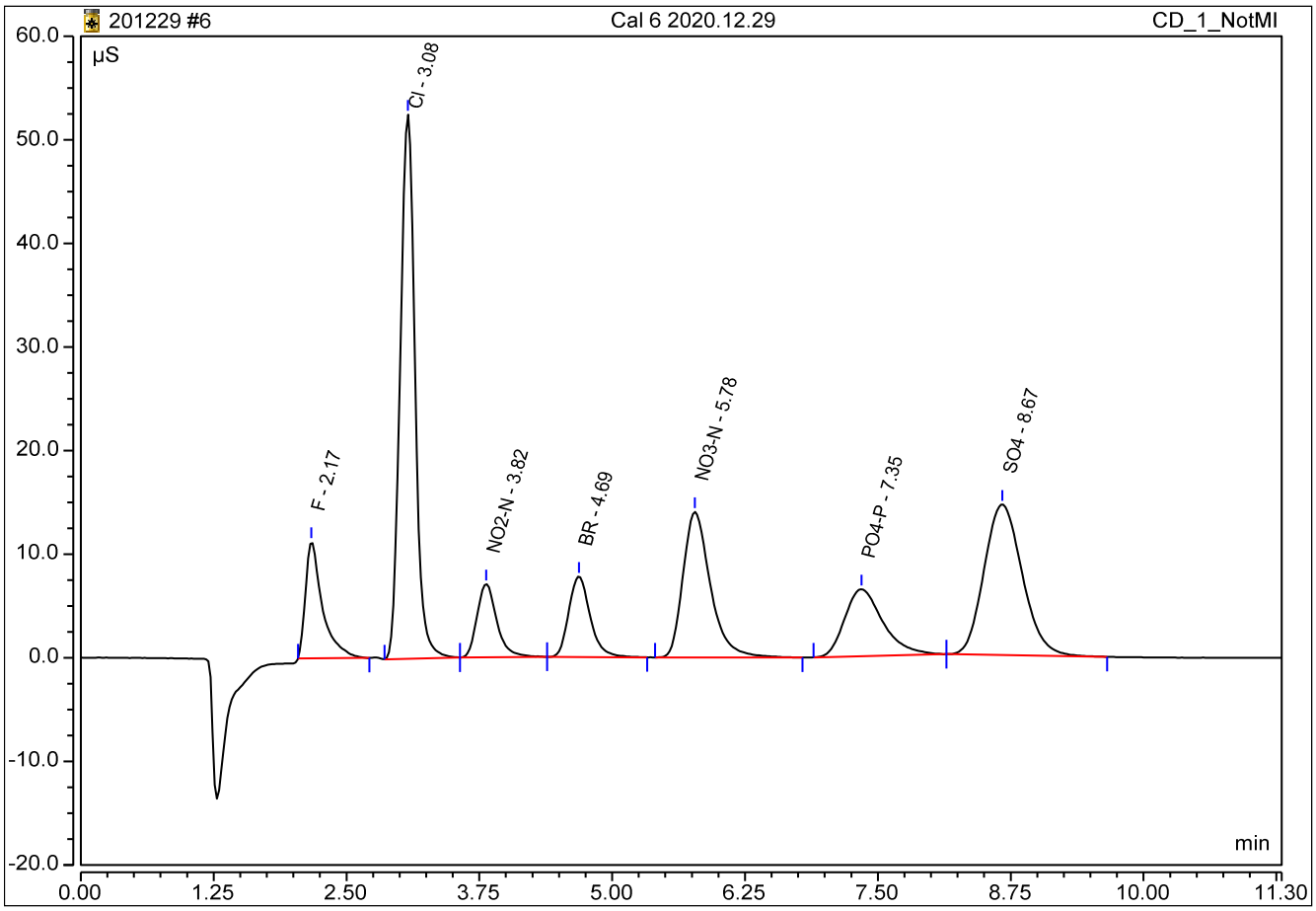


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	2.075	11.256	2.3510
3	3.08	**Cl**	bMB*	8.536	52.533	9.6722
4	3.82	**NO2-N**	BMB	1.521	7.071	1.0305
5	4.69	**BR**	BMB	1.813	7.778	4.8975
6	5.78	**NO3-N**	BMB	4.218	14.063	1.9393
7	7.35	**PO4-P**	BM *	2.699	6.468	3.9983
8	8.67	**SO4**	MB*	6.057	14.547	9.6546

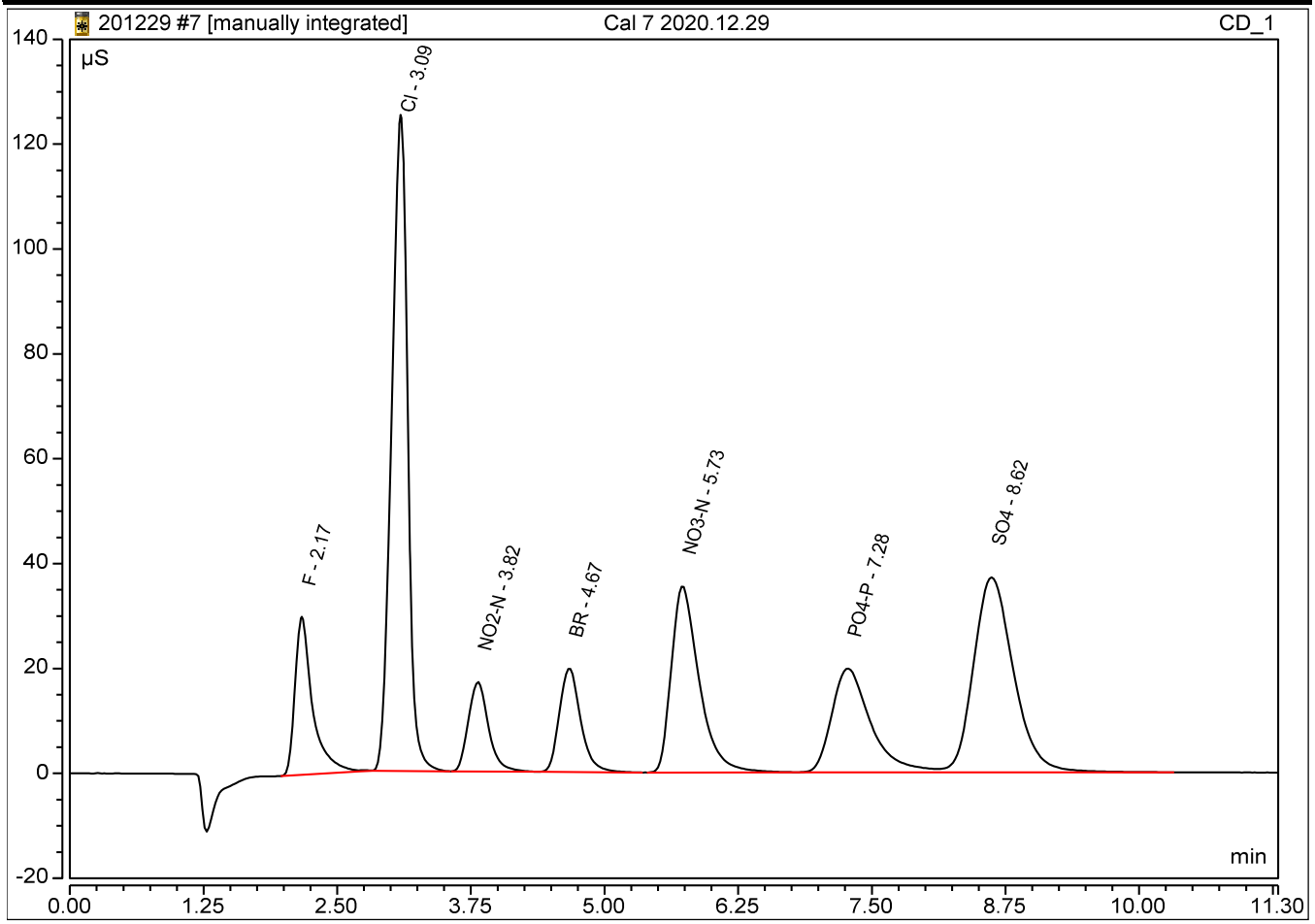


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	5.745	30.169	6.42	6.25	102.7%
3	3.09	**Cl**	BMB	21.792	125.137	24.69	25	98.8%
4	3.82	**NO2-N**	BMB	3.723	17.070	2.52	2.5	100.9%
5	4.67	**BR**	BMB	4.564	19.790	12.33	12.5	98.7%
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.91	5	98.3%
7	7.28	**PO4-P**	bM *	8.312	19.803	11.81	12.5	94.5%
8	8.62	**SO4**	MB*	16.064	37.197	24.76	25	99.0%

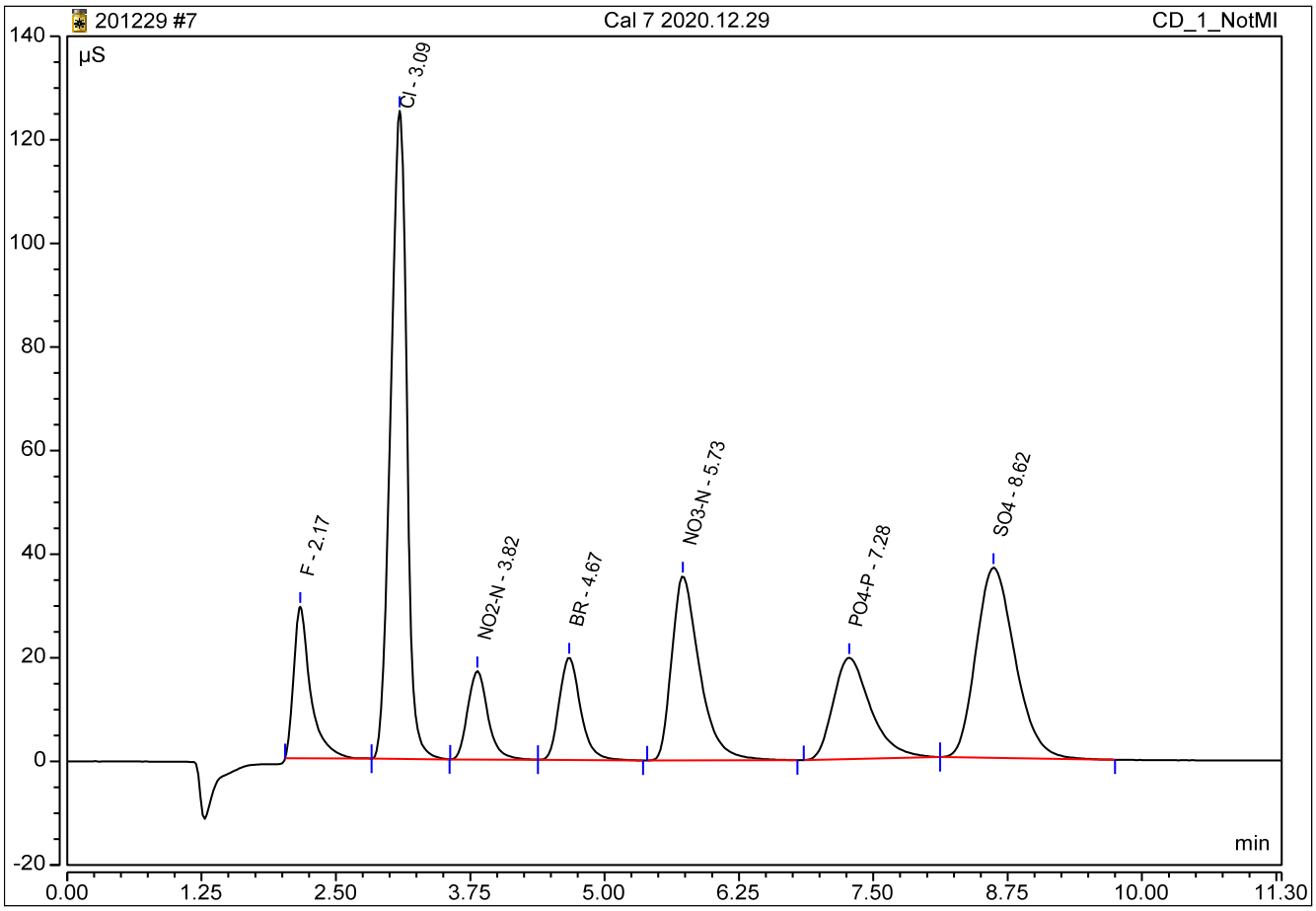


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	5.326	29.299	6.0342
3	3.09	**Cl**	BMB	21.792	125.137	24.6930
4	3.82	**NO2-N**	BMB	3.723	17.070	2.5228
5	4.67	**BR**	BMB	4.564	19.790	12.3317
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.9143
7	7.28	**PO4-P**	bM *	7.897	19.579	11.6959
8	8.62	**SO4**	MB*	15.439	36.724	24.6109

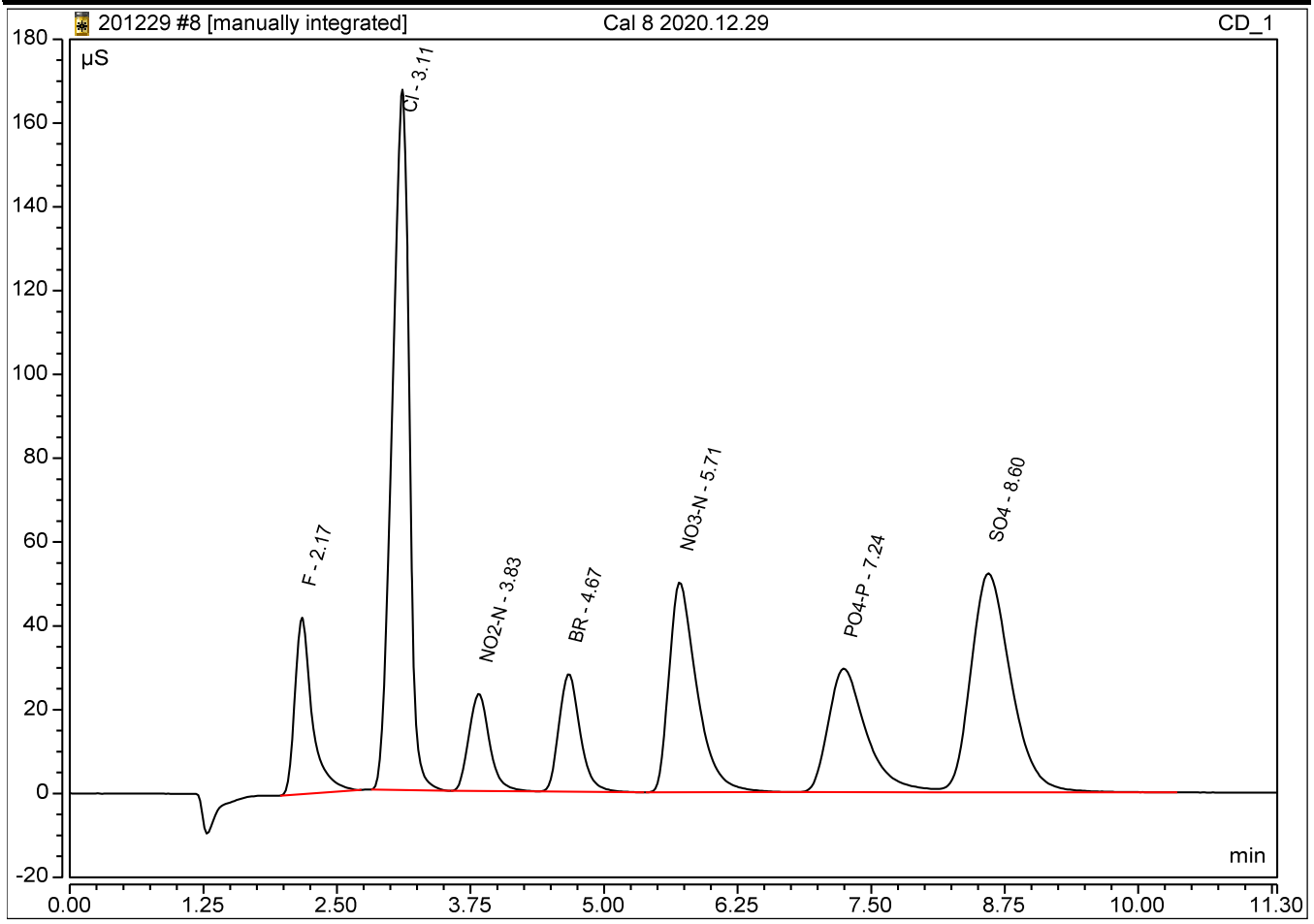


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	7.898	42.129	8.83	8.75	100.9%
2	3.11	**Cl**	BMB	30.820	167.162	34.92	35	99.8%
3	3.83	**NO2-N**	BMB	5.198	23.244	3.52	3.5	100.6%
4	4.67	**BR**	BMB	6.447	28.118	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.97	7	99.5%
6	7.24	**PO4-P**	bM *	12.218	29.486	17.36	17.5	99.2%
7	8.60	**SO4**	MB*	22.662	52.231	34.92	35	99.8%



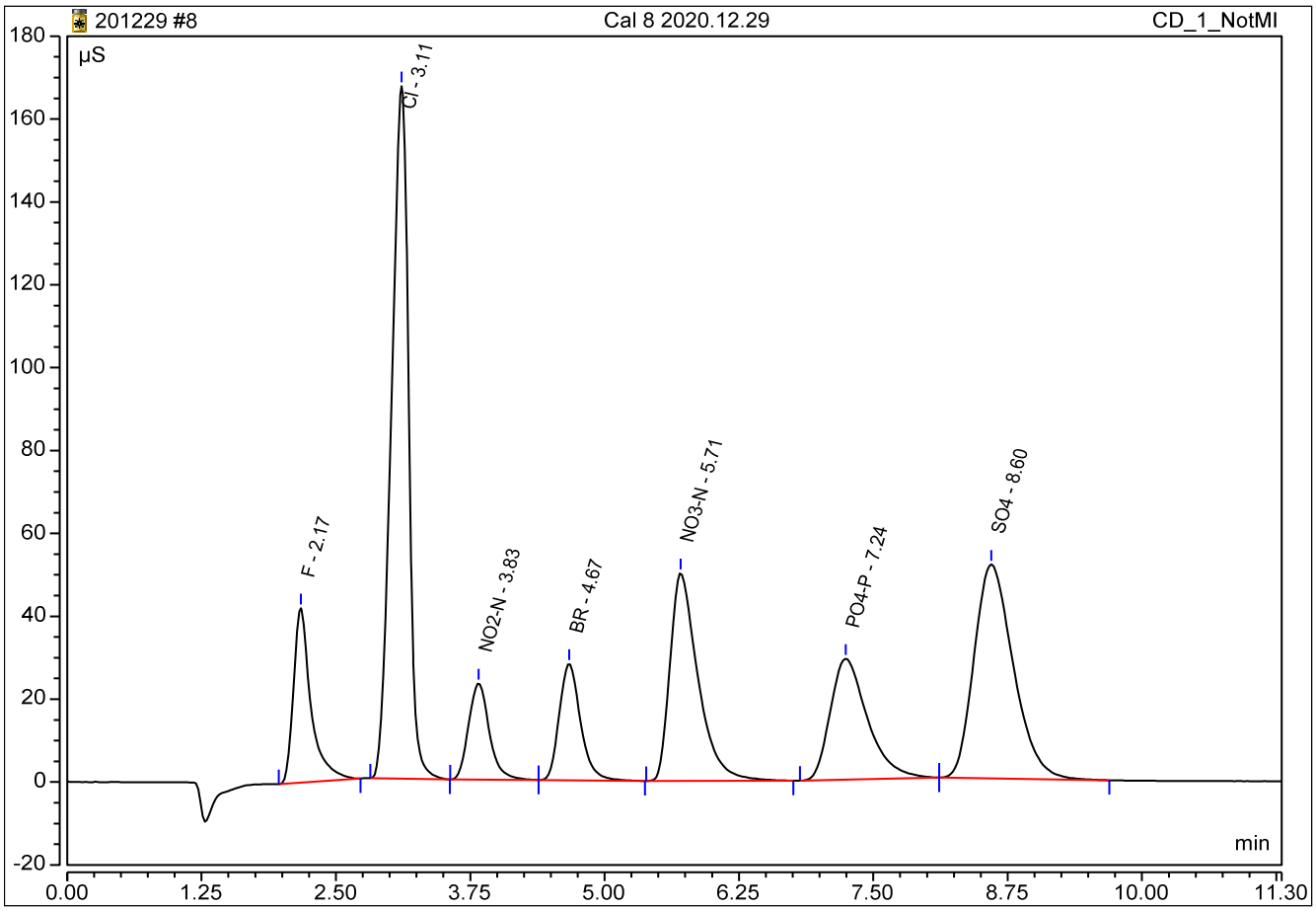
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB	7.898	42.129	8.9476
2	3.11	**Cl**	BMB	30.820	167.162	34.9228
3	3.83	**NO2-N**	BMB	5.198	23.244	3.5216
4	4.67	**BR**	BMB	6.447	28.118	17.4201
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.9681
6	7.24	**PO4-P**	bM *	11.697	29.216	17.3256
7	8.60	**SO4**	MB*	21.877	51.638	34.8732

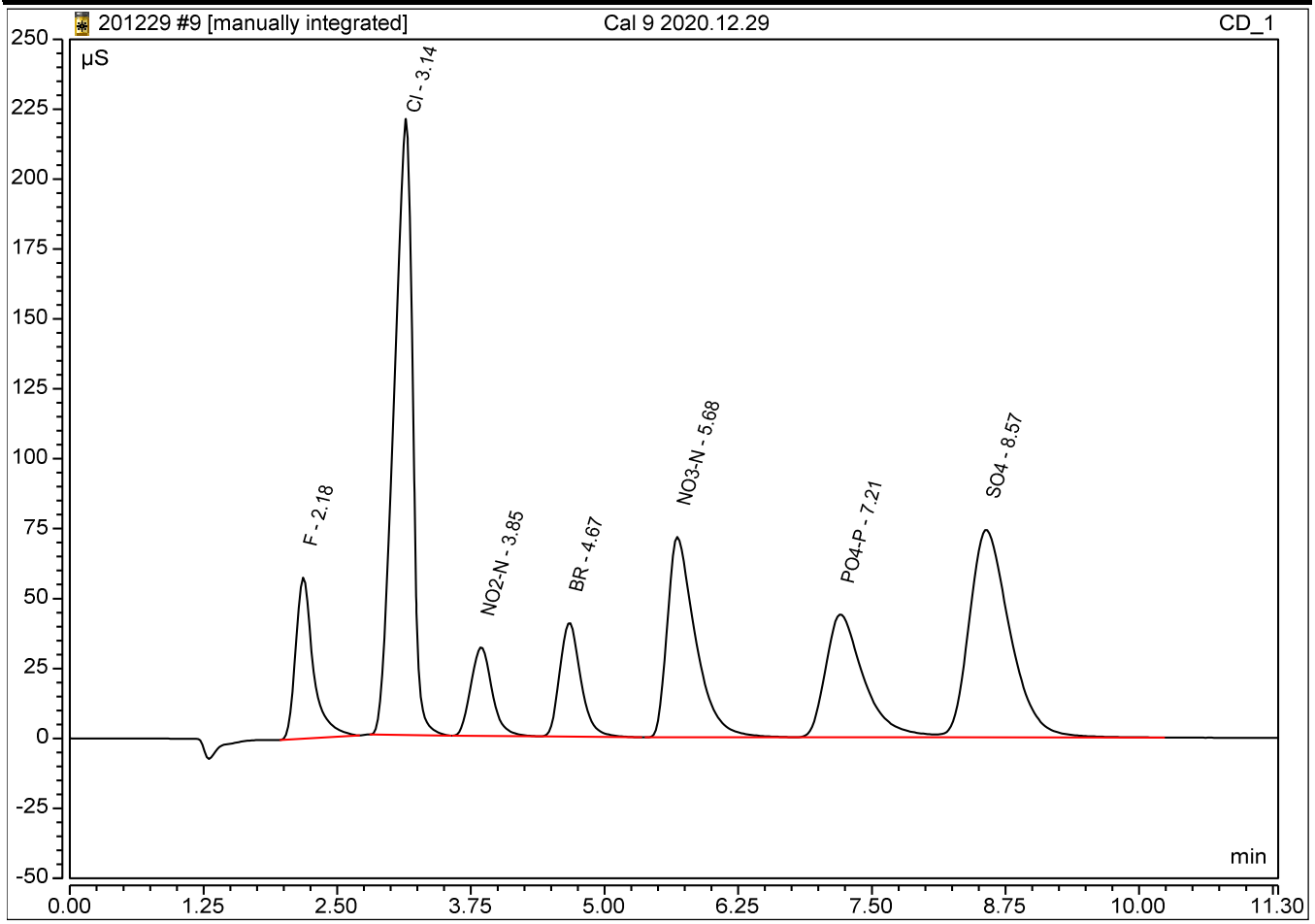


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	11.054	57.647	12.35	12.5	98.8%
2	3.14	**Cl**	BMB	44.404	220.347	50.31	50	100.6%
3	3.85	**NO2-N**	BMB	7.328	31.750	4.97	5	99.3%
4	4.67	**BR**	BMB	9.318	40.765	25.18	25	100.7%
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.08	10	100.8%
6	7.21	**PO4-P**	bM *	18.109	43.974	25.73	25	102.9%
7	8.57	**SO4**	MB*	32.605	74.256	50.25	50	100.5%



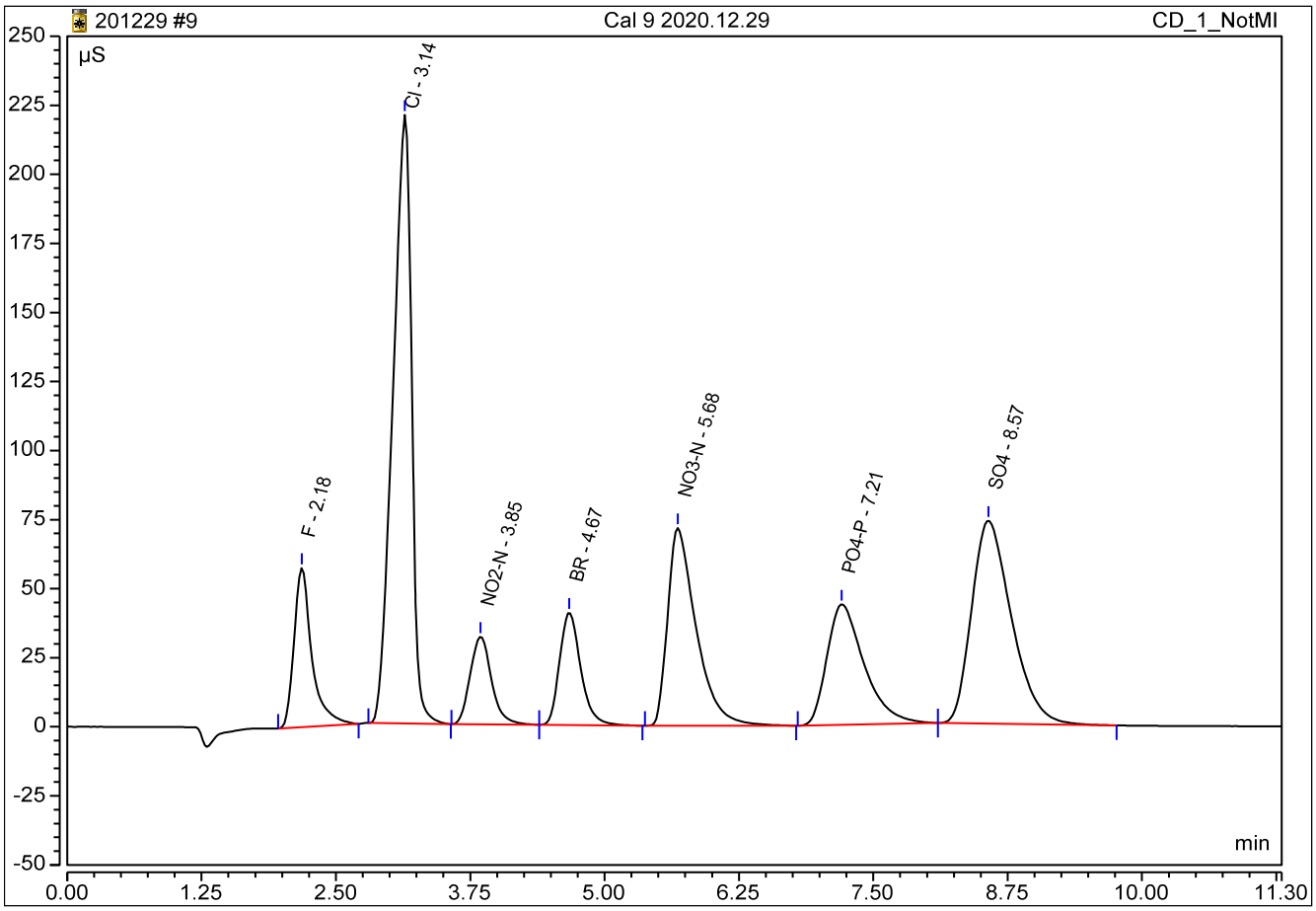
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BMB	11.054	57.647	12.5224
2	3.14	**Cl**	BMB	44.404	220.347	50.3149
3	3.85	**NO2-N**	BMB	7.328	31.750	4.9653
4	4.67	**BR**	BMB	9.318	40.765	25.1755
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.0848
6	7.21	**PO4-P**	bM *	17.446	43.647	25.8392
7	8.57	**SO4**	MB*	31.610	73.494	50.3889

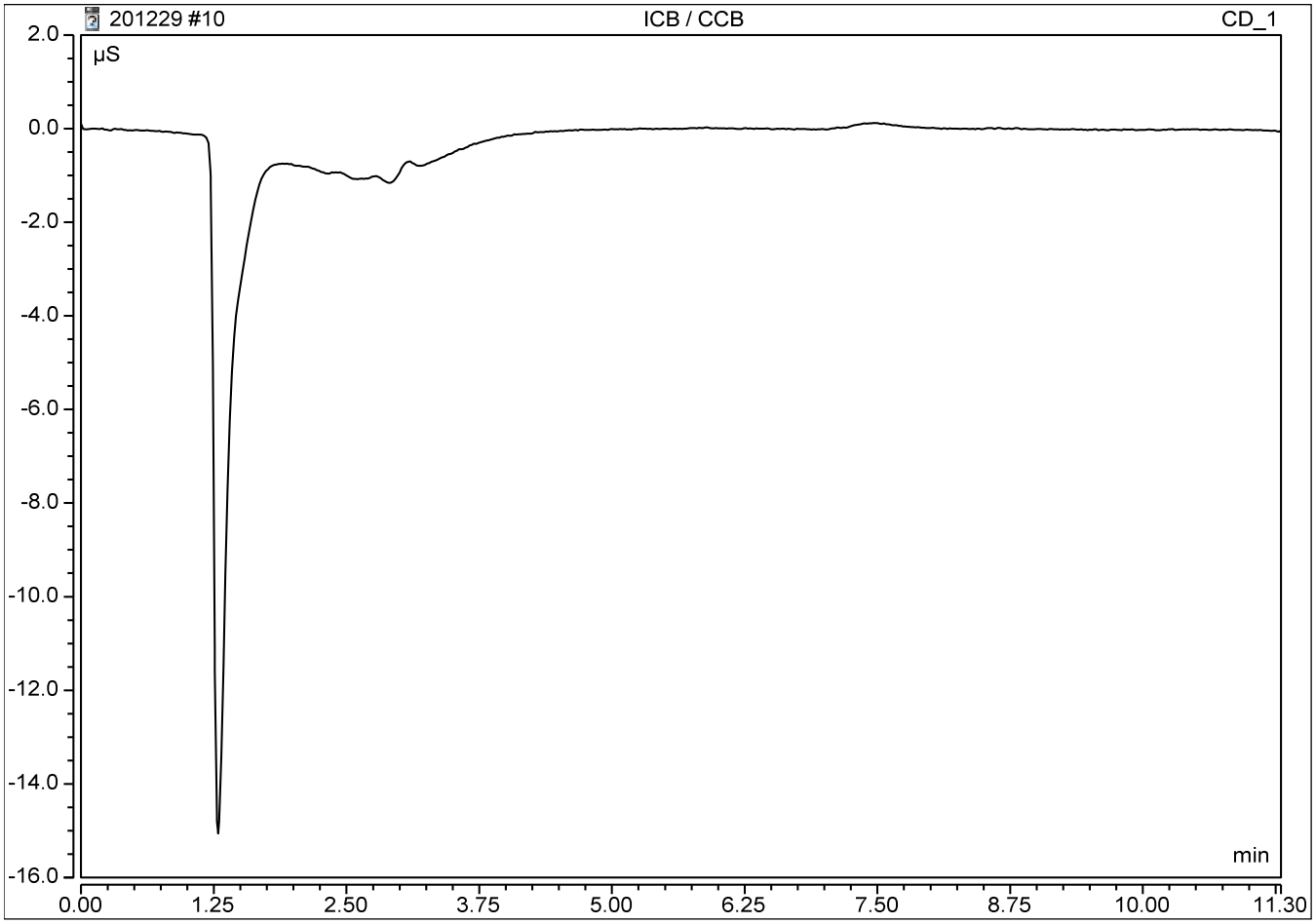


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



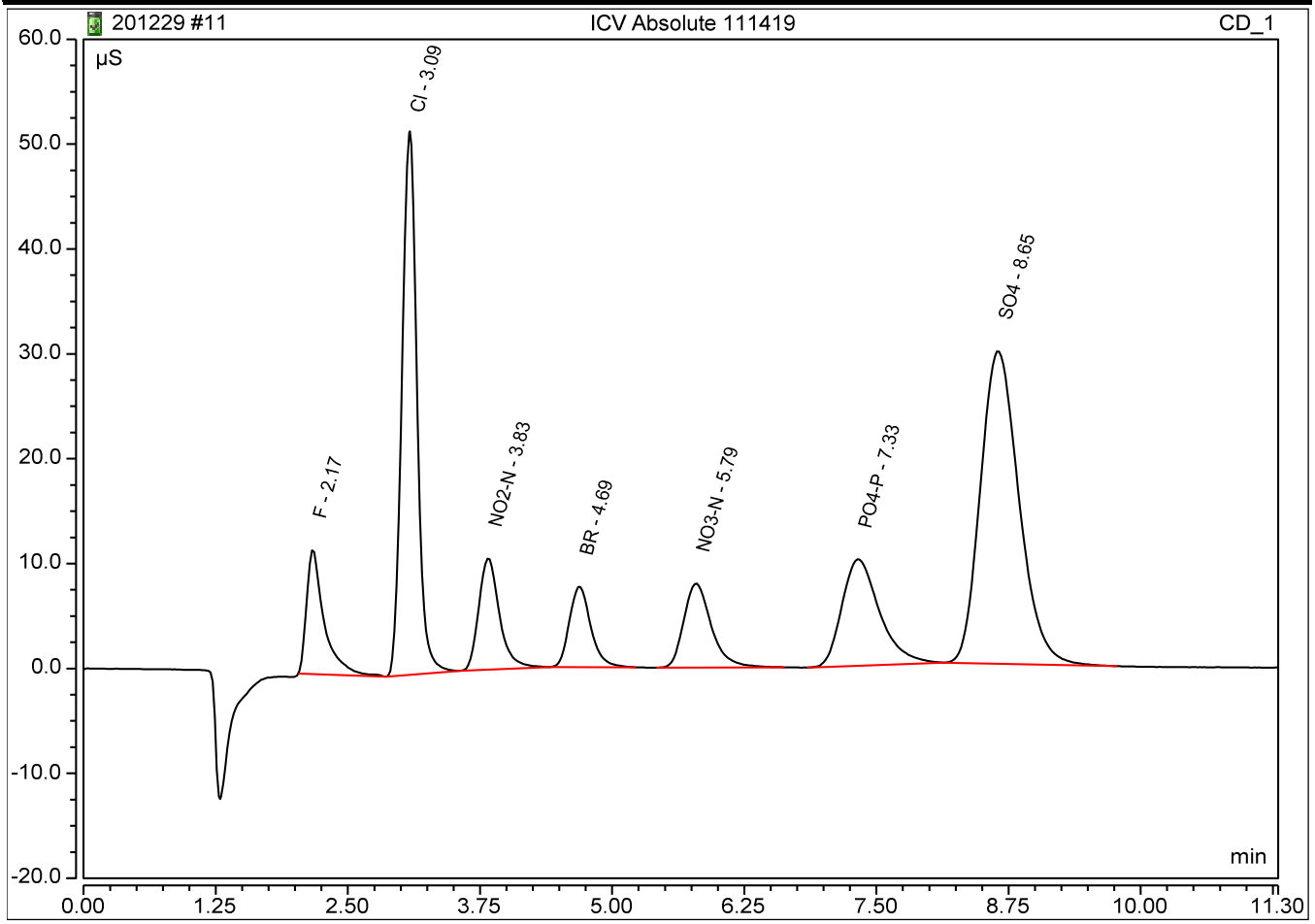
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	2.283	11.892	2.55	2.5	102.0%
2	3.09	**Cl**	BMB	8.560	51.822	9.70	10	97.0%
3	3.83	**NO2-N**	BMB	2.410	10.631	1.63	1.522334	107.3%
4	4.69	**BR**	BMB	1.802	7.686	4.87	5	97.4%
5	5.79	**NO3-N**	BMB	2.430	8.038	1.12	1.129525	98.9%
6	7.33	**PO4-P**	BMB	4.179	10.161	5.94	6.522	91.0%
7	8.65	**SO4**	BMB	12.629	29.844	19.46	20	97.3%



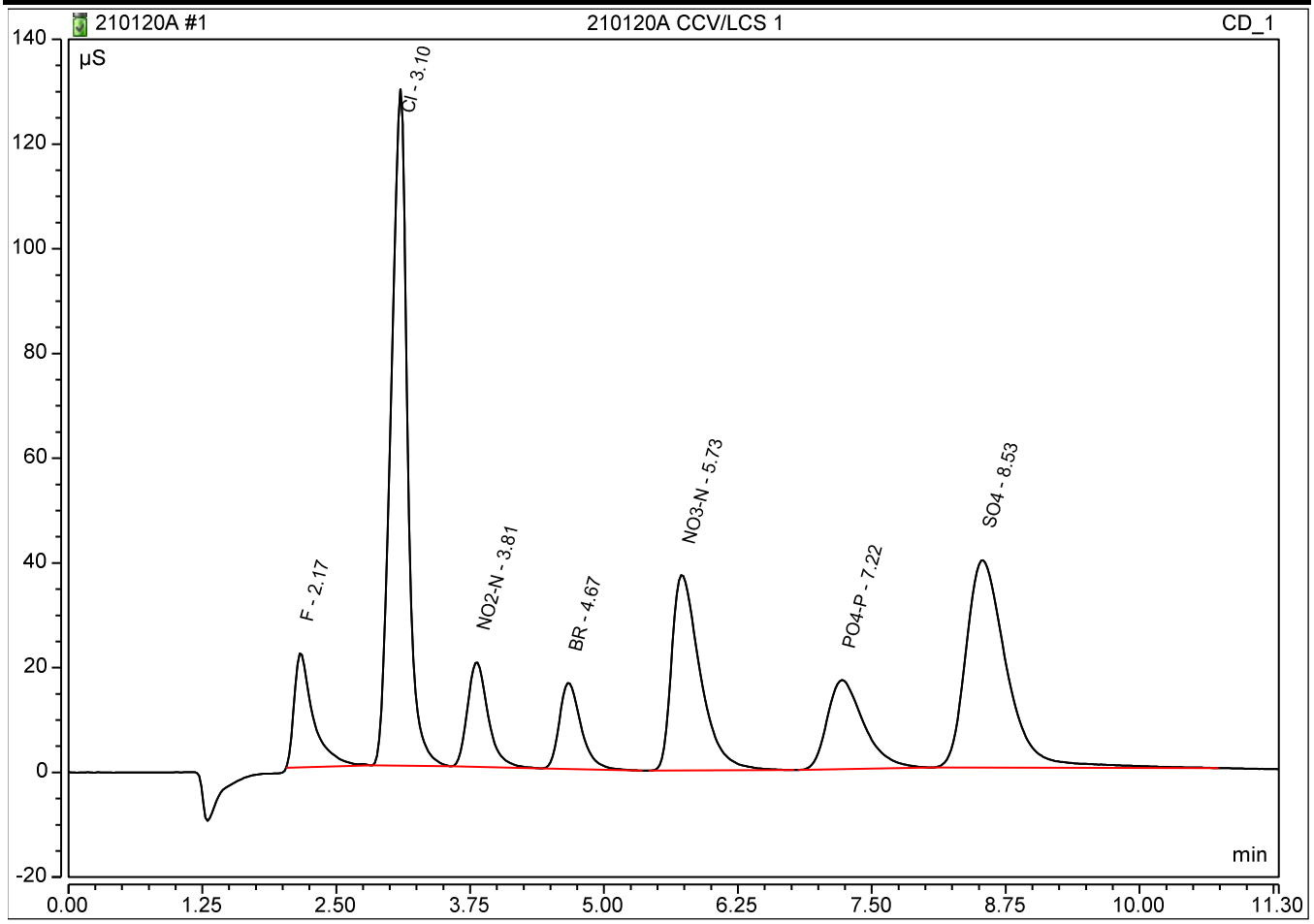
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**210120A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 09:18**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	4.519	21.951	5.05	5	101.0%
2	3.10	**Cl**	BMB	23.073	129.205	26.14	25	104.6%
3	3.81	**NO2-N**	BMB	4.471	20.030	3.03	3.04	99.6%
4	4.67	**BR**	BMB	3.867	16.494	10.45	10	104.5%
5	5.73	**NO3-N**	BMB	11.577	37.363	5.32	5	106.5%
6	7.22	**PO4-P**	BMB	6.729	17.020	9.56	10	95.6%
7	8.53	**SO4**	BMB	17.431	39.642	26.86	25	107.5%



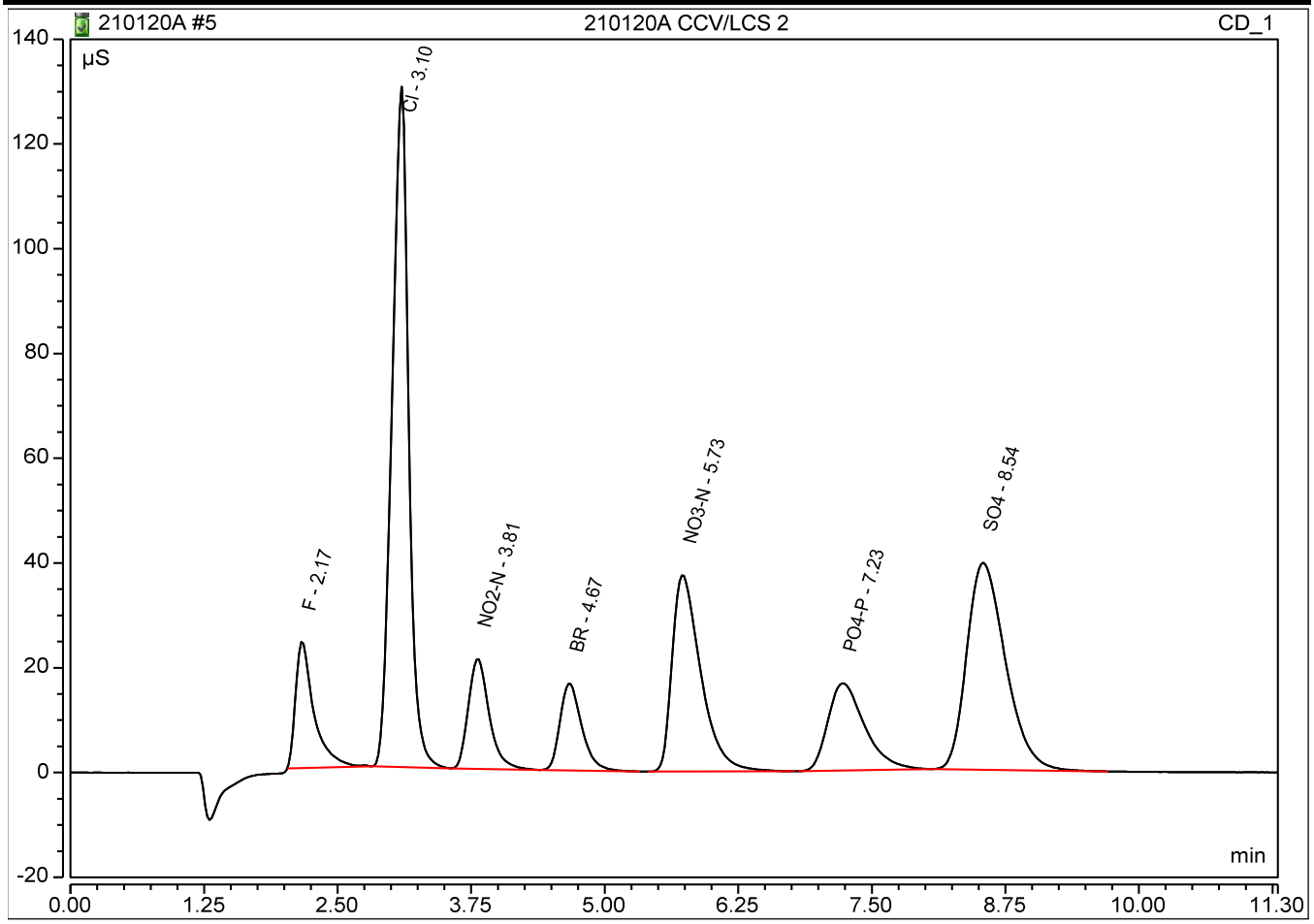
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**210120A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 14:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	4.811	24.218	5.38	5	107.5%
2	3.10	**Cl**	BMB	23.400	129.881	26.52	25	106.1%
3	3.81	**NO2-N**	BMB	4.743	21.042	3.21	3.04	105.7%
4	4.67	**BR**	BMB	3.910	16.607	10.56	10	105.6%
5	5.73	**NO3-N**	BMB	11.650	37.548	5.36	5	107.1%
6	7.23	**PO4-P**	BMB	6.658	16.668	9.46	10	94.6%
7	8.54	**SO4**	BMB	16.588	39.522	25.56	25	102.3%



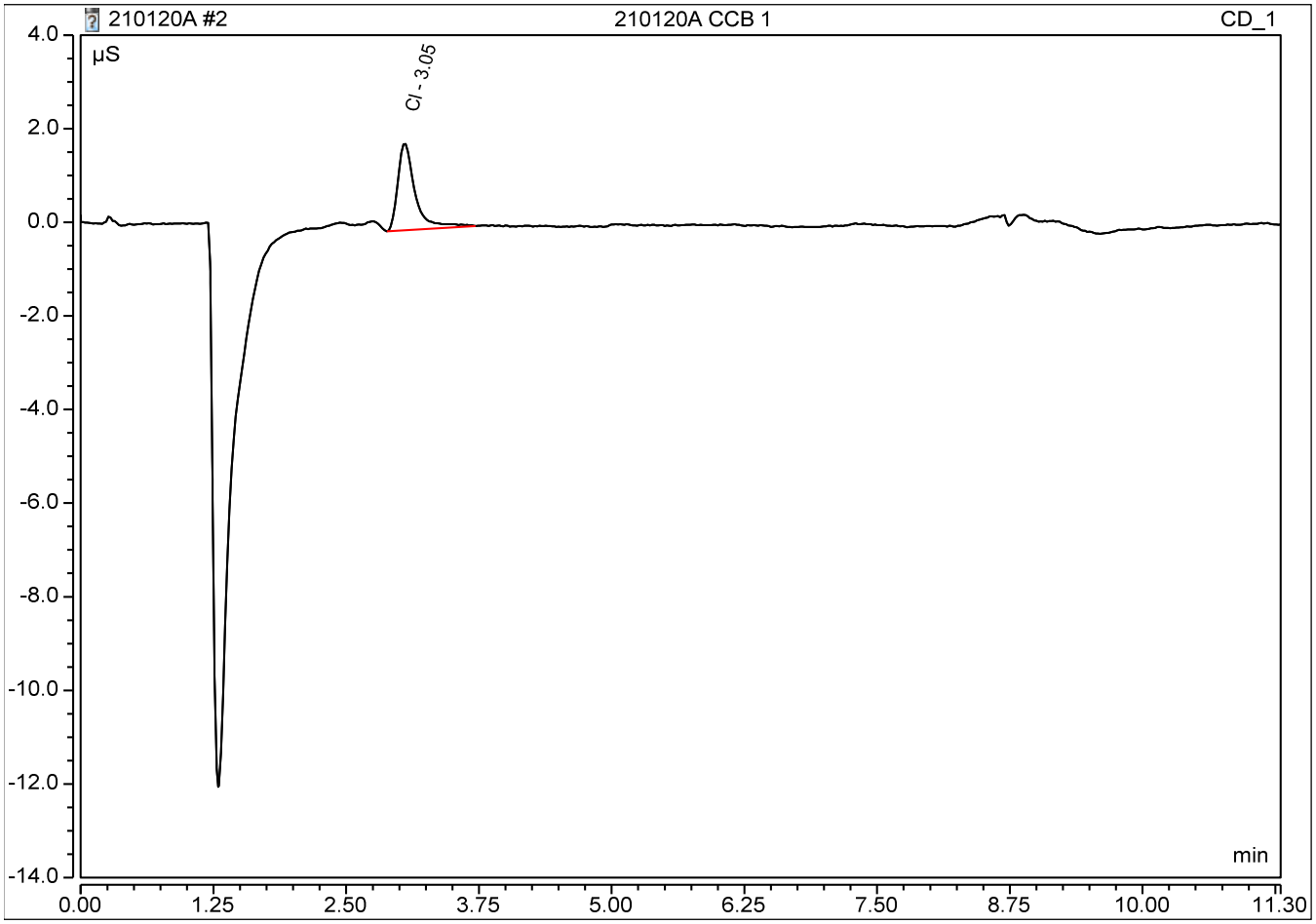
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**210120A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 09:33**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.05	**Cl**	BMB	0.351	1.861	0.40		

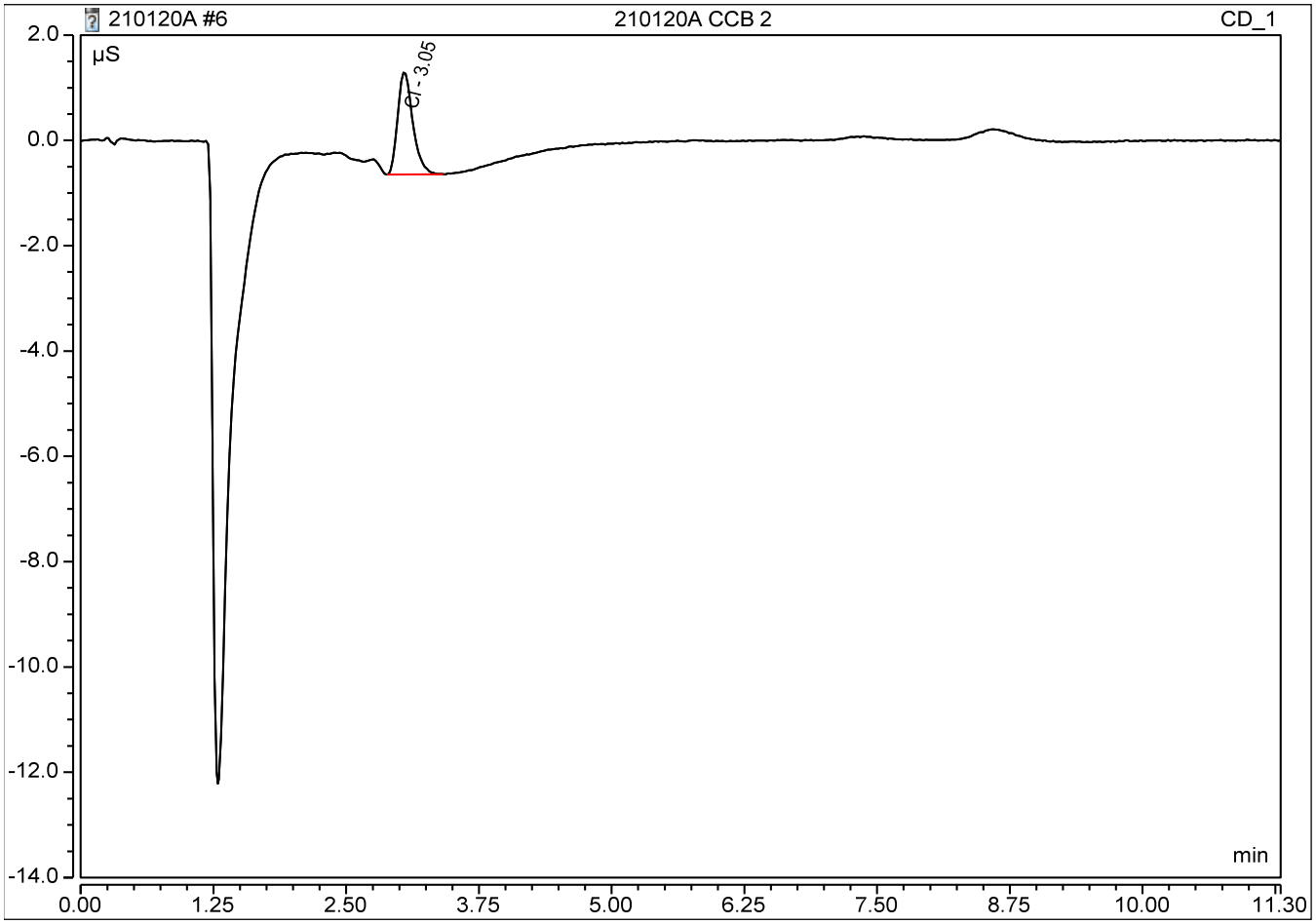


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**210120A CCB 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 14:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.05	**Cl**	BMB	0.322	1.948	0.36		



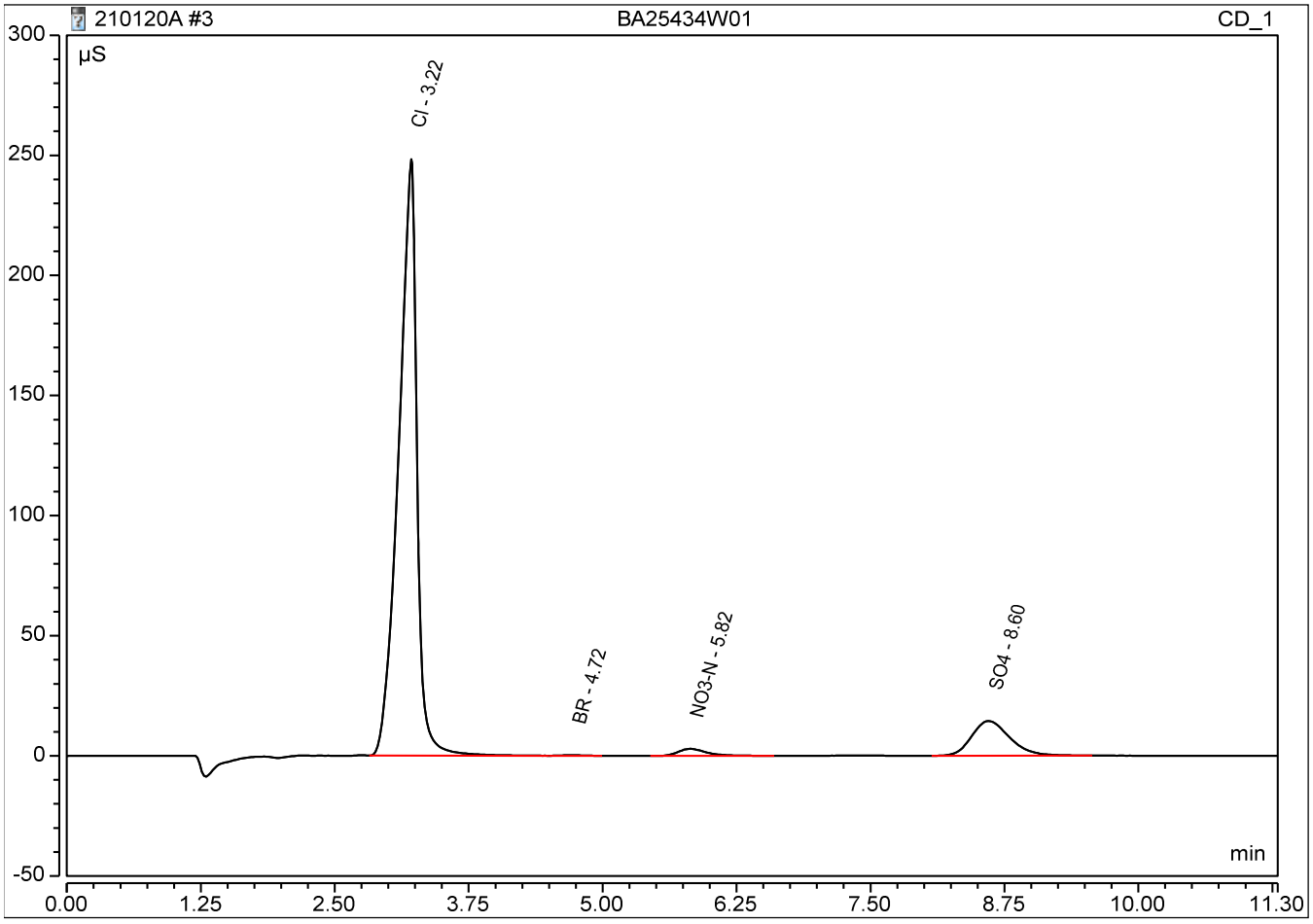
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**BA25434W01**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 11:30**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.22	**Cl**	BMB	49.076	248.324	55.61		
2	4.72	**BR**	BMB	0.060	0.290	0.16		
3	5.82	**NO3-N**	BMB	0.881	2.927	0.41		
4	8.60	**SO4**	BMB	5.940	14.418	9.15		



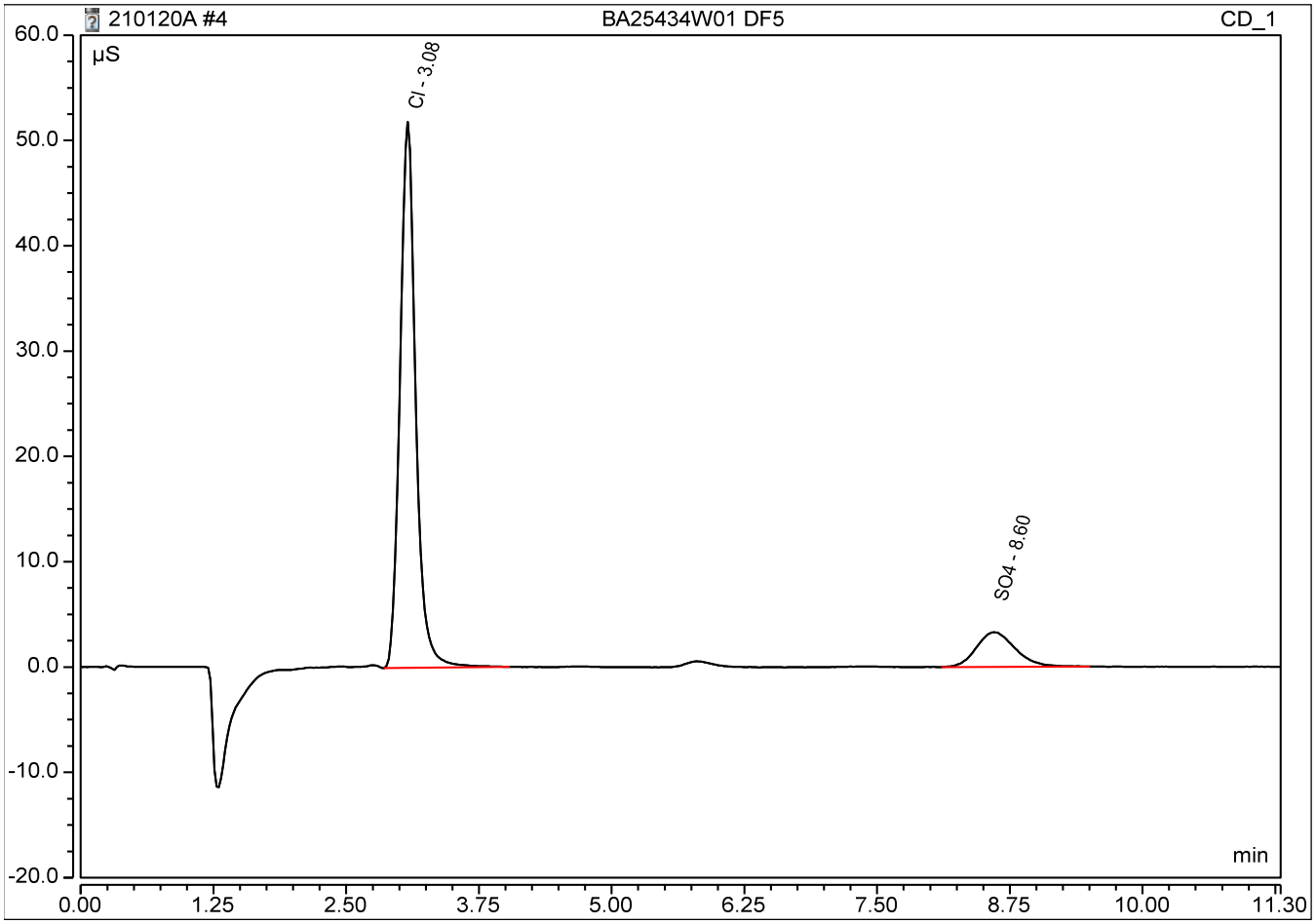
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210120A

Peak Integration Report

Sample Name:	**BA25434W01 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**20-Jan-2021 / 14:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.08	**Cl**	BMB	8.920	51.829	50.53		
2	8.60	**SO4**	BMB	1.400	3.293	10.79		



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Anion Chromatography Working Standard

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 12/29/20	12/30/20	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 12/29/20	12/30/20	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 12/29/20	12/30/20	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 12/29/20	12/30/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 12/29/20	12/30/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 12/29/20	12/30/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 12/29/20	12/30/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 12/29/20	12/30/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 12/29/20	12/30/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	RC6	Cal 1 2020.12.29	29/Dec/2020	11:24	Calibration Standard	
2	RC7	Cal 2 2020.12.29	29/Dec/2020	11:39	Calibration Standard	
3	RC8	Cal 3 2020.12.29	29/Dec/2020	11:53	Calibration Standard	
4	RD1	Cal 4 2020.12.29	29/Dec/2020	12:08	Calibration Standard	
5	RD2	Cal 5 2020.12.29	29/Dec/2020	12:23	Calibration Standard	
6	RD3	Cal 6 2020.12.29	29/Dec/2020	12:37	Calibration Standard	
7	RD4	Cal 7 2020.12.29	29/Dec/2020	12:52	Calibration Standard	
8	RD5	Cal 8 2020.12.29	29/Dec/2020	13:07	Calibration Standard	
9	RD6	Cal 9 2020.12.29	29/Dec/2020	13:21	Calibration Standard	
10	R1	ICB / CCB	29/Dec/2020	13:36	Unknown	
11	RD7	ICV Absolute 111419	29/Dec/2020	13:51	Check Standard	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210120A CCV/LCS 1	20/Jan/2021	09:18	Check Standard	
2	R1	210120A CCB 1	20/Jan/2021	09:33	Unknown	
3	RB6	BA25434W01	20/Jan/2021	11:30	Unknown	
4	RB7	BA25434W01 DF5	20/Jan/2021	14:07	Unknown	
5	R2	210120A CCV/LCS 2	20/Jan/2021	14:21	Check Standard	
6	R1	210120A CCB 2	20/Jan/2021	14:36	Unknown	
7	RB8	BA25214W01 PT	20/Jan/2021	16:47	Unknown	
8	RC1	BA25215W01 PT	20/Jan/2021	17:02	Unknown	
9	RC2	BA25216W01 PT	20/Jan/2021	17:17	Unknown	
10	RC3	BA25322W08 DF20	20/Jan/2021	17:31	Unknown	
11	RC4	BA25323W08 DF20	20/Jan/2021	17:46	Unknown	
12	RC5	BA25324W08 DF20	20/Jan/2021	18:01	Unknown	
13	RC6	BA25325W08 DF20	20/Jan/2021	18:15	Unknown	
14	RC7	BA25326W08 DF20	20/Jan/2021	18:30	Unknown	
15	RC8	BA25327W08 DF20	20/Jan/2021	18:44	Unknown	
16	RD1	BA25328W08 DF20	20/Jan/2021	18:59	Unknown	
17	R2	210120A CCV/LCS 3	20/Jan/2021	19:14	Check Standard	
18	R1	210120A CCB 3	20/Jan/2021	19:28	Unknown	
19	RD2	BA25329W08 DF20	20/Jan/2021	19:43	Unknown	
20	RD3	BA25344W08 DF20	20/Jan/2021	19:58	Unknown	
21	RD4	BA25345W08 DF20	20/Jan/2021	20:12	Unknown	
22	RD5	BA25346W08 DF20	20/Jan/2021	20:27	Unknown	
23	RD6	BA25347W08 DF20	20/Jan/2021	20:42	Unknown	
24	RD7	BA25348W22 DF20	20/Jan/2021	20:56	Unknown	
25	RD8	BA25349W08 DF20	20/Jan/2021	21:11	Unknown	
26	RE1	BA25350W08 DF20	20/Jan/2021	21:26	Unknown	
27	RE2	BA25351W08 DF20	20/Jan/2021	21:40	Unknown	
28	R2	210120A CCV/LCS 4	20/Jan/2021	21:55	Check Standard	
29	R1	210120A CCB 4	20/Jan/2021	22:09	Unknown	
30	R2	STOP	20/Jan/2021	22:21	Unknown	

INORGANIC ANALYSIS
Calibration and Raw Data

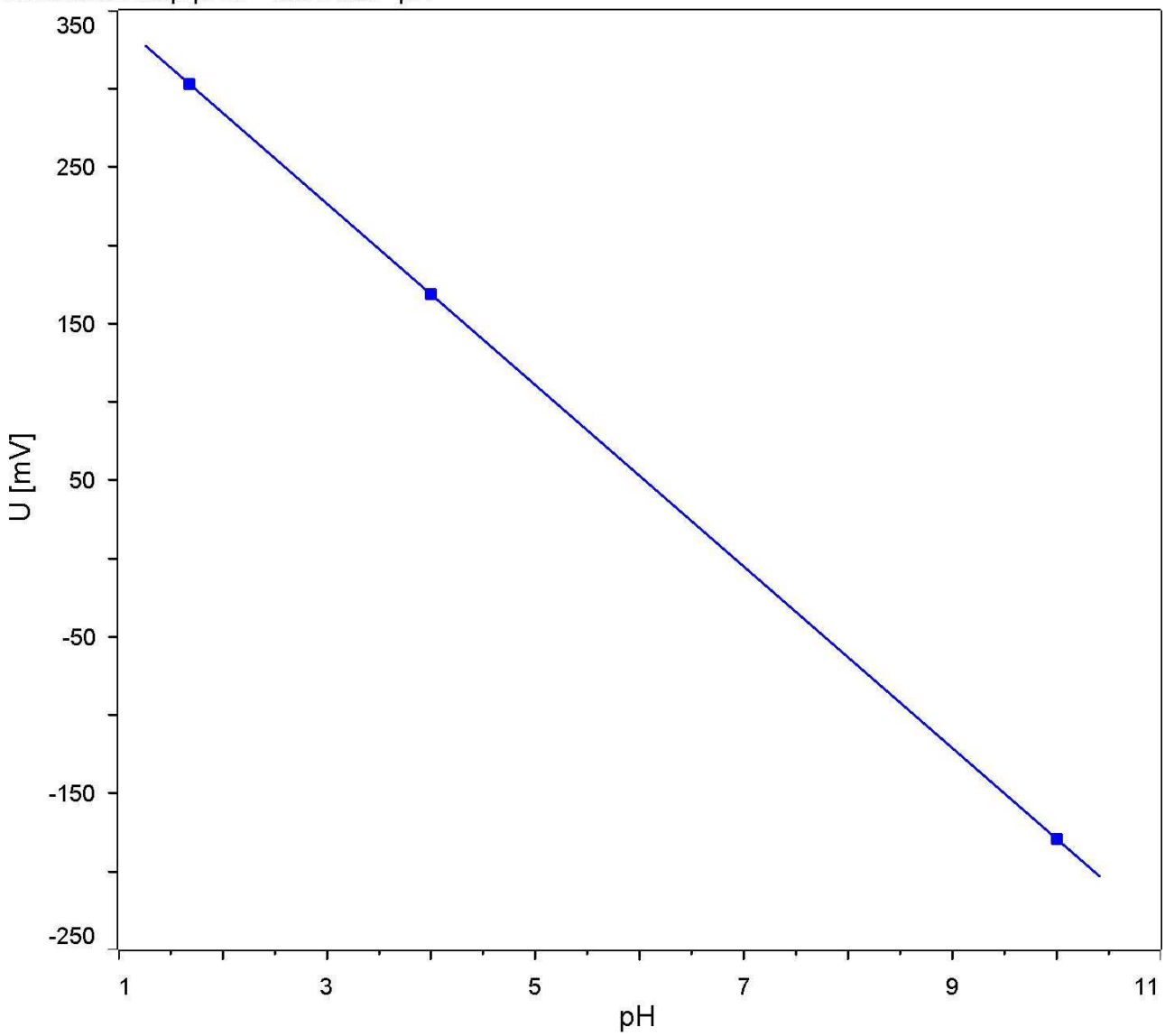
Timao Calibration Curve

2021-01-22 12:27:40

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0407	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.91	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.908	
Res19	20.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	20.4806	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA25434W11	2021-01-22 17:01:53 UTC-8	Alkalinity	0.000	1.578	0.00	0.00	65.64	65.64	mg/L	25 mL	0.0208	210122A	AR
210122A LCSD	2021-01-22 13:43:58 UTC-8	Alkalinity	0.180	6.234	0.00	14.26	232.61	246.87	mg/L	25 mL	0.0198	210122A	AR
210122A LCS	2021-01-22 12:56:32 UTC-8	Alkalinity	0.180	6.190	0.00	14.26	230.87	245.12	mg/L	25 mL	0.0198	210122A	AR
210122A BLK	2021-01-22 12:53:58 UTC-8	Alkalinity	0.000	0.022	0.00	0.00	0.87	0.87	mg/L	25 mL	0.0198	210122A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94808 SDG: 94808
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/21/21

Analyte	Calibration Verification									M
	True CCV1	Found 14:25	%R(1)	True ICV	Found 14:29	%R(1)	True CCV1	Found 14:52	%R(1)	
TOXN	3	2.9941	99.8	3	3.0266	101	3	2.9776	99.3	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94808 SDG: 94808

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/21/21 14:27	C	ICB 01/21/21 14:31	C	CCB 01/21/21 14:55	C		C		C	
TOXN	.100	U	.100	U	.100	U					

AQ2 Tray Report

Serial Number: 190170
Software Version: 2.1.0
Report Requested By: Eric RR
Date & Time: 2021-01-25 07:17:46
Tray Number: 1
Tray Name: 210121A NO2 NO3 TOXN PT Q1 LOD LOQ

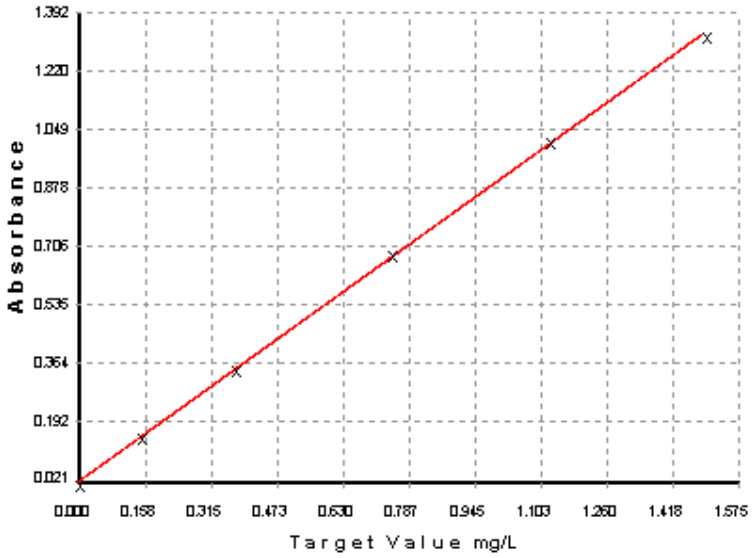
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0211	-0.0061	0.0000	
S90	0.1561	0.1486	0.1500	-0.96
S91	0.3548	0.3760	0.3750	0.28
S92	0.6879	0.7575	0.7500	1.00
S93	1.0188	1.1365	1.1250	1.02
S94	1.3253	1.4875	1.5000	-0.83
S0	0.0314	0.0058	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	0.8
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-3.025676E-002
b =:	1.145240E+000
Date & Time:	2021-01-21 11:43:58

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0211			0.021079			ERR	2021-01-21 11:36:13
	S90	Standard 90	0.1561			0.156142			ERR	2021-01-21 11:37:30
	S91	Standard 91	0.3548			0.354767			ERR	2021-01-21 11:38:48
	S92	Standard 92	0.6879			0.687879			ERR	2021-01-21 11:40:05
	S93	Standard 93	1.0188			1.018760			ERR	2021-01-21 11:41:23
	S94	Standard 94	1.3253			1.325290			ERR	2021-01-21 11:42:40
	S0	Standard 0	0.0314			0.031444			ERR	2021-01-21 11:43:58
	CCV	CCV .75	0.7258	mg/L		0.660132			ERR	2021-01-21 11:45:16
	CCB	CCB	0.0010	mg/L		0.027280			ERR	2021-01-21 11:46:34
3	U1	ICV NO2	0.7355	mg/L		0.668685			ERR	2021-01-21 11:47:52
4	U2	ICV NO3 TOXN	0.0018	mg/L		0.027995			ERR	2021-01-21 11:49:10
5	U3	ICB NO2 NO3 TOXN	-0.0046	mg/L		0.022377			ERR	2021-01-21 11:50:27
6	U4	210121A Blk NO2 NO3 TOXN	-0.0046	mg/L		0.022391			ERR	2021-01-21 11:51:47
7	U5	210121A LCS NO2	0.7360	mg/L		0.669123			ERR	2021-01-21 11:53:05
8	U6	210121A LCS NO3 TOXN	0.0023	mg/L		0.028410			ERR	2021-01-21 11:54:23
9	U7	210121A LCSD NO2	0.7320	mg/L		0.665629			ERR	2021-01-21 11:55:41
10	U8	210121A LCSD NO3 TOXN	0.0022	mg/L		0.028338			ERR	2021-01-21 11:57:00
11	U9	1 ppm NO2	1.0103	mg/L		0.908574			ERR	2021-01-21 11:58:18
12	U10	1 ppm NO3	0.0037	mg/L		0.029630			ERR	2021-01-21 11:59:37
	CCV	CCV .75	0.7497	mg/L		0.681000			ERR	2021-01-21 12:00:55
	CCB	CCB	0.0012	mg/L		0.027465			ERR	2021-01-21 12:02:14
13	U11	BA25434W12 MS	0.7536	mg/L		0.684426			ERR	2021-01-21 12:03:33
14	U12	BA25434W12 MSD	0.7508	mg/L		0.681967			ERR	2021-01-21 12:04:51
15	U13	BA25434W12 Thing 1 pH 6.74	0.0012	mg/L		0.027451			ERR	2021-01-21 12:06:08

16	U14	BA25449W06	-0.0044	mg/L	0.022589	ERR	2021-01-21 12:07:27
17	U15	BA25450W06	-0.0042	mg/L	0.022730	ERR	2021-01-21 12:08:45
18	U16	BA25451W06	-0.0044	mg/L	0.022546	ERR	2021-01-21 12:10:04
19	U17	BA25452W06	-0.0024	mg/L	0.024331	ERR	2021-01-21 12:11:21
20	U18	BA25214W01	-0.0056	mg/L	0.021487	ERR	2021-01-21 12:12:39
21	U19	BA25215W01	1.0820	mg/L	0.971157	ERR	2021-01-21 12:13:56
22	U20	210121A LCS NO2 (LOQ)	0.2091	mg/L	0.209017	ERR	2021-01-21 12:15:14
	CCV	CCV .75	0.7463	mg/L	0.678112	ERR	2021-01-21 12:16:33
	CCB	CCB	-0.0001	mg/L	0.026309	ERR	2021-01-21 12:17:13
23	U21	BA25293W01 (LOD NO2)	0.0242	mg/L	0.047509	ERR	2021-01-21 12:19:29
24	U22	210121A LCS NO3 (LOQ)	-0.0053	mg/L	0.021798	ERR	2021-01-21 12:21:49
25	U23	BA25293W01 (LOD NO3)	-0.0060	mg/L	0.021191	ERR	2021-01-21 12:24:13
26	U24	210121A LCS TOXN (LOQ)	-0.0056	mg/L	0.021558	ERR	2021-01-21 12:26:37
27	U25	BA25293W01 (LOD TOXN)	-0.0056	mg/L	0.021516	ERR	2021-01-21 12:29:01
	CCV	CCV .75	0.7442	mg/L	0.676261	ERR	2021-01-21 12:31:26
	CCB	CCB	0.0010	mg/L	0.027308	ERR	2021-01-21 12:33:45

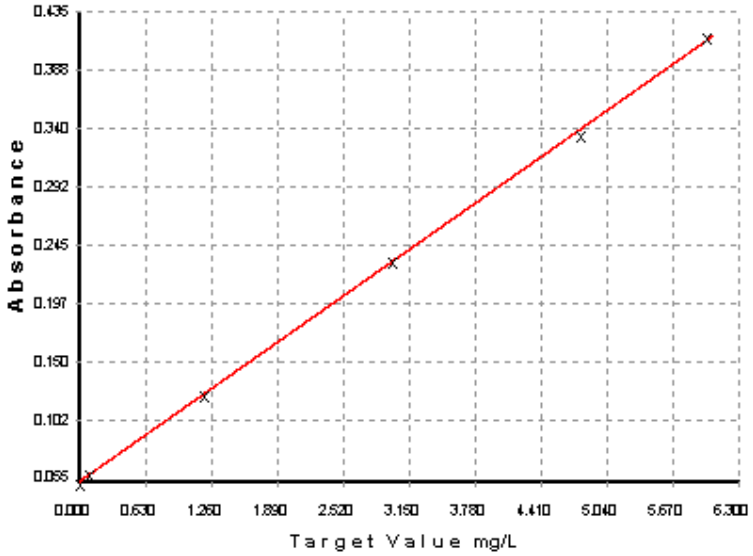
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0545	-0.0040	0.0000	
S90	0.0619	0.1191	0.1000	19.10
S91	0.1256	1.1914	1.2000	-0.72
S92	0.2338	3.0111	3.0000	0.37
S93	0.3362	4.7326	4.8000	-1.40
S94	0.4145	6.0497	6.0000	0.83
S0	0.0548	0.0006	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	0.1
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-9.212089E-001
b =:	1.681631E+001
Date & Time:	2021-01-21 14:22:42

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0545			0.054543			ERR	2021-01-21 14:09:11
	S1	Standard 1	0.0550			0.055045			ERR	2021-01-21 12:42:56
	S90	Standard 90	0.0619			0.061863			ERR	2021-01-21 14:11:25
	S90	Standard 90	0.0612			0.061229			ERR	2021-01-21 12:45:13
	S91	Standard 91	0.1256			0.125628			ERR	2021-01-21 14:13:36
	S91	Standard 91	0.1272			0.127172			ERR	2021-01-21 12:47:31
	S92	Standard 92	0.2338			0.233842			ERR	2021-01-21 14:15:48
	S92	Standard 92	0.2314			0.231388			ERR	2021-01-21 12:49:49
	S93	Standard 93	0.3362			0.336213			ERR	2021-01-21 14:18:05
	S93	Standard 93	0.3369			0.336912			ERR	2021-01-21 12:52:06
	S94	Standard 94	0.4145			0.414533			ERR	2021-01-21 14:20:24
	S94	Standard 94	0.3733			0.373325			ERR	2021-01-21 12:54:23
	S0	Standard 0	0.0548			0.054817			ERR	2021-01-21 14:22:42
	S0	Standard 0	0.0556			0.055564			ERR	2021-01-21 12:56:41
	CCV	CCV	2.9941	mg/L		0.232831			ERR	2021-01-21 14:25:00
	CCV	CCV	3.1504	mg/L		0.232281			ERR	2021-01-21 12:58:58
	CCB	CCB	0.0052	mg/L		0.055091			ERR	2021-01-21 14:27:19
	CCB	CCB	-0.0925	mg/L		0.054360			ERR	2021-01-21 13:01:16
4	U2	ICV NO3 TOXN	3.0266	mg/L		0.234762			ERR	2021-01-21 14:29:37
4	U2	ICV NO3 TOXN	3.1885	mg/L		0.234371			ERR	2021-01-21 13:03:34
5	U3	ICB NO2 NO3 TOXN	-0.0186ELL	mg/L		0.053676			ERR	2021-01-21 14:31:55
5	U3	ICB NO2 NO3 TOXN	-0.1238	mg/L		0.052645			ERR	2021-01-21 13:05:53
6	U4	210121A Blk NO2 NO3 TOXN	0.0096AVF	mg/L		0.055350			ERR	2021-01-21 14:34:15
6	U4	210121A Blk NO2 NO3 TOXN	-0.1147	mg/L		0.053145			ERR	2021-01-21 13:08:12
8	U6	210121A LCS NO3 TOXN	2.9895	mg/L		0.232556			ERR	2021-01-21 14:36:33
8	U6	210121A LCS NO3 TOXN	3.2500	mg/L		0.237745			ERR	2021-01-21 13:10:29
10	U8	210121A LCSD NO3 TOXN	3.0259	mg/L		0.234716			ERR	2021-01-21 14:38:52
10	U8	210121A LCSD NO3 TOXN	3.2057	mg/L		0.235316			ERR	2021-01-21 13:12:47
12	U10	1 ppm NO3	0.9913AVF	mg/L		0.113730			ERR	2021-01-21 14:41:10
12	U10	1 ppm NO3	1.2507	mg/L		0.128055			ERR	2021-01-21 13:15:05
13	U11	BA25434W12 MS	3.9371	mg/L		0.288907			ERR	2021-01-21 14:43:29
13	U11	BA25434W12 MS	3.9550	mg/L		0.276427			ERR	2021-01-21 13:17:23
14	U12	BA25434W12 MSD	3.9812	mg/L		0.291525			ERR	2021-01-21 14:45:48
14	U12	BA25434W12 MSD	4.1644	mg/L		0.287916			ERR	2021-01-21 13:19:41
15	U13	BA25434W12 Thing 1 pH 6.74	0.4347AVF	mg/L		0.080633			ERR	2021-01-21 14:48:07
15	U13	BA25434W12 Thing 1 pH 6.74	0.3558	mg/L		0.078956			ERR	2021-01-21 13:21:59
16	U14	BA25449W06	0.0096AVF	mg/L		0.055350			ERR	2021-01-21 14:50:25
16	U14	BA25449W06	-0.0906	mg/L		0.054467			ERR	2021-01-21 13:24:17
	CCV	CCV	2.9776	mg/L		0.231846			ERR	2021-01-21 14:52:44
	CCV	CCV	3.0430	mg/L		0.226386			ERR	2021-01-21 13:26:35

	CCB	CCB	0.0129	mg/L	0.055548		ERR	2021-01-21 14:55:03
17	U15	BA25450W06	23.2654	mg/L	0.193131	x10.0000	ERR	2021-01-21 15:53:00
17	U15	BA25450W06	21.1629	mg/L	1.313253		ERR	2021-01-21 14:57:22
18	U16	BA25451W06	105.5433	mg/L	0.159385	x60.0000	ERR	2021-01-21 16:15:50
18	U16	BA25451W06	89.6737	mg/L	0.588035	x10.0000	ERR	2021-01-21 15:53:56
18	U16	BA25451W06	55.1425	mg/L	3.333890		ERR	2021-01-21 14:59:40
19	U17	BA25452W06	0.6751	mg/L	0.094925		ERR	2021-01-21 15:01:59
20	U18	BA25214W01	4.4095	mg/L	0.316996		ERR	2021-01-21 15:04:18
21	U19	BA25215W01	1.2754	mg/L	0.130622		ERR	2021-01-21 15:06:36
22	U20	210121A LCS NO2 (LOQ)	0.2919	mg/L	0.072136		ERR	2021-01-21 15:08:56
23	U21	BA25293W01 (LOD NO2)	0.0381	mg/L	0.057046		ERR	2021-01-21 15:11:14
24	U22	210121A LCS NO3 (LOQ)	0.2462	mg/L	0.069419		ERR	2021-01-21 15:13:33
25	U23	BA25293W01 (LOD NO3)	0.0903	mg/L	0.060149		ERR	2021-01-21 15:15:52
26	U24	210121A LCS TOXN (LOQ)	0.2361	mg/L	0.068821		ERR	2021-01-21 15:18:11
	CCV	CCV	3.0135	mg/L	0.233980		ERR	2021-01-21 15:20:30
	CCB	CCB	-0.0186	mg/L	0.053676		ERR	2021-01-21 15:22:50
27	U25	BA25293W01 (LOD TOXN)	0.1058	mg/L	0.061074		ERR	2021-01-21 15:23:59
	CCV	CCV	3.0991	mg/L	0.239070		ERR	2021-01-21 15:24:56
	CCB	CCB	0.0281	mg/L	0.056449		ERR	2021-01-21 15:25:53
	CCV	CCV	3.0336	mg/L	0.235177			2021-01-21 15:26:51
	CCB	CCB	0.0242	mg/L	0.056220			2021-01-21 15:27:48
	CCV	CCV	3.0647	mg/L	0.237027			2021-01-21 15:28:45
	CCB	CCB	-0.0145	mg/L	0.053919			2021-01-21 15:29:43
	CCV	CCV	3.1258	mg/L	0.230931			2021-01-21 14:04:43
	CCB	CCB	-0.0728	mg/L	0.055442			2021-01-21 14:06:58
	CCV	CCV	2.9178	mg/L	0.228289			2021-01-21 15:30:40
	CCB	CCB	0.0412	mg/L	0.057230			2021-01-21 15:31:37
	CCV	CCV	3.0495	mg/L	0.236124			2021-01-21 15:51:07
	CCB	CCB	0.0487	mg/L	0.057674			2021-01-21 15:52:03
	CCV	CCV	3.1108	mg/L	0.239769			2021-01-21 15:54:53
	CCB	CCB	0.0830	mg/L	0.059717			2021-01-21 15:55:49
	CCV	CCV	3.1482	mg/L	0.241989			2021-01-21 16:13:56
	CCB	CCB	0.0926	mg/L	0.060287			2021-01-21 16:14:53
	CCV	CCV	2.9446	mg/L	0.229882			2021-01-21 16:16:46
	CCB	CCB	0.0688	mg/L	0.058871			2021-01-21 16:17:43

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.0248	mg/L		0.000000			ERR	2021-01-21 18:21:25
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-21 18:21:25
5	U3	ICB NO2 NO3 TOXN	-0.0139	mg/L		0.000000			ERR	2021-01-21 18:21:25
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-21 18:21:25
6	U4	210121A Blk NO2 NO3 TOXN	0.0142	mg/L		0.000000			ERR	2021-01-21 18:21:25
6	U4	210121A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-21 18:21:25
8	U6	210121A LCS NO3 TOXN	2.9872	mg/L		0.000000			ERR	2021-01-21 18:21:25
8	U6	210121A LCS NO3 TOXN				0.000000			ERR	2021-01-21 18:21:25
10	U8	210121A LCSD NO3 TOXN	3.0237	mg/L		0.000000			ERR	2021-01-21 18:21:25
10	U8	210121A LCSD NO3 TOXN				0.000000			ERR	2021-01-21 18:21:25
12	U10	1 ppm NO3	0.9876	mg/L		0.000000			ERR	2021-01-21 18:21:25
12	U10	1 ppm NO3				0.000000			ERR	2021-01-21 18:21:25
13	U11	BA25434W12 MS	3.1836	mg/L		0.000000			ERR	2021-01-21 18:21:25
13	U11	BA25434W12 MS				0.000000			ERR	2021-01-21 18:21:25
14	U12	BA25434W12 MSD	3.2304	mg/L		0.000000			ERR	2021-01-21 18:21:25
14	U12	BA25434W12 MSD				0.000000			ERR	2021-01-21 18:21:25
15	U13	BA25434W12 Thing 1 pH 6.74	0.4336	mg/L		0.000000			ERR	2021-01-21 18:21:25
15	U13	BA25434W12 Thing 1 pH 6.74				0.000000			ERR	2021-01-21 18:21:25
16	U14	BA25449W06	0.0140	mg/L		0.000000			ERR	2021-01-21 18:21:25
16	U14	BA25449W06				0.000000			ERR	2021-01-21 18:21:25
17	U15	BA25450W06	23.2696	mg/L		0.000000			ERR	2021-01-21 18:21:25
17	U15	BA25450W06				0.000000			ERR	2021-01-21 18:21:25
18	U16	BA25451W06	105.5477	mg/L		0.000000			ERR	2021-01-21 18:21:25
18	U16	BA25451W06				0.000000			ERR	2021-01-21 18:21:25
19	U17	BA25452W06	0.6775	mg/L		0.000000			ERR	2021-01-21 18:21:25
19	U17	BA25452W06				0.000000			ERR	2021-01-21 18:21:25
20	U18	BA25214W01	4.4151	mg/L		0.000000			ERR	2021-01-21 18:21:25
20	U18	BA25214W01				0.000000			ERR	2021-01-21 18:21:25
21	U19	BA25215W01	0.1934	mg/L		0.000000			ERR	2021-01-21 18:21:25
21	U19	BA25215W01				0.000000			ERR	2021-01-21 18:21:25
22	U20	210121A LCS NO2 (LOQ)	0.0827	mg/L		0.000000			ERR	2021-01-21 18:21:25
22	U20	210121A LCS NO2 (LOQ)				0.000000			ERR	2021-01-21 18:21:25
23	U21	BA25293W01 (LOD NO2)	0.0139	mg/L		0.000000			ERR	2021-01-21 18:21:25
23	U21	BA25293W01 (LOD NO2)				0.000000			ERR	2021-01-21 18:21:25
24	U22	210121A LCS NO3 (LOQ)	0.2515	mg/L		0.000000			ERR	2021-01-21 18:21:25
24	U22	210121A LCS NO3 (LOQ)				0.000000			ERR	2021-01-21 18:21:25
25	U23	BA25293W01 (LOD NO3)	0.0963	mg/L		0.000000			ERR	2021-01-21 18:21:25
25	U23	BA25293W01 (LOD NO3)				0.000000			ERR	2021-01-21 18:21:25
26	U24	210121A LCS TOXN (LOQ)	0.2417	mg/L		0.000000			ERR	2021-01-21 18:21:25
26	U24	210121A LCS TOXN (LOQ)				0.000000			ERR	2021-01-21 18:21:25
27	U25	BA25293W01 (LOD TOXN)	0.1115	mg/L		0.000000			ERR	2021-01-21 18:21:25
27	U25	BA25293W01 (LOD TOXN)				0.000000			ERR	2021-01-21 18:21:25

Nitrite

High Point @ 1.5 mg/L
123.2 uL NO2 Inorganic Ventures lot N2-NOX672889-40759 exp: 01/15/23
25 mL DI Water

CCV @ 0.75 mg/L
61.6 uL NO2 Inorganic Ventures lot N2-NOX672889-40759 exp: 01/15/23
25 mL DI Water

ICV/LCS @ 0.73 mg/L
60 uL NO2 Inorganic Ventures lot M2-NOX660562-40468 exp: 08/25/21
25 mL DI Water

1 mg/L NO2
400 uL of High point and 200 uL of DI made directly into a sample cup

Prep 01/21/21
Exp 01/28/21
ERR

Nitrate/TOXN

High Point @ 6 mg/L
150 uL NO3 O2Si lot R2-NOX688298 exp: 2/6/24
25 mL DI Water

CCV @ 3.0 mg/L
75 uL NO3 O2Si lot R2-NOX688298 exp: 2/6/24
25 mL DI Water

ICV/LCS @ 3.0 mg/L
75 uL NO3 Inorganic Ventures lot P2-NOX675324-49391 exp: 02/14/23
25 mL DI Water

1 mg/L NO3
100 uL of High point and 500 uLof DI made directly into a sample cup

MS @ 0.73 mg/L NO2 and 2.5 mg/L NO3
60 uL NO2 Inorganic Ventures lot M2-NOX660562-40468 exp: 08/25/21and
62.5 uL NO3 Inorganic Ventures lot P2-NOX675324-49391 exp: 02/14/23
Final volume 25 mL of sample

Prep 01/21/21
Exp 01/28/21
ERR

NO3 HP Cadmium Coil
2 mL CCV
38 mL DI Water

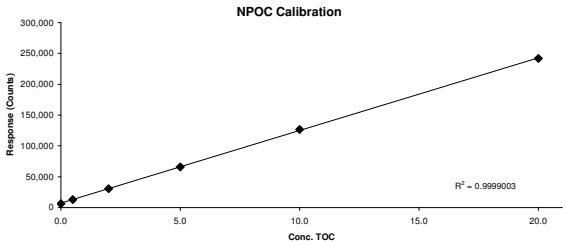
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210120A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-20	06:45 PM	QCB	1	3615	40mL	0.000	0	0.00	0.00		
2021-01-20	07:25 PM	CCV	1	63474	40mL	0.000	5.081	5.08	0.04	5.00	101.6%
2021-01-20	08:05 PM	CCB	1	3227	40mL	0.000	0	0.00	0.00		
2021-01-20	08:45 PM	210120A LCS	1	63337	40mL	0.000	5.069	5.07	0.02	5.00	101.4%
2021-01-20	09:26 PM	210120A LCSD	1	63292	40mL	0.000	5.066	5.07	0.07	5.00	101.3%
2021-01-20	10:07 PM	BA25344W06	1	18141	40mL	0.000	1.396	1.40	0.06		
2021-01-20	10:46 PM	BA25345W07	1	18369	40mL	0.000	1.416	1.42	0.15		
2021-01-20	11:25 PM	BA25346W06	1	32072	40mL	0.000	2.579	2.58	0.13		
2021-01-21	12:04 AM	BA25347W07	1	34390	40mL	0.000	2.776	2.78	1.25		
2021-01-21	12:43 AM	BA25348W16	1	39750	40mL	0.000	3.231	3.23	2.44		
2021-01-21	01:22 AM	BA25348W16 DUP	1	49375	40mL	0.000	4.048	4.05	1.09		
2021-01-21	02:01 AM	BA25348W18 MS	1	93574	40mL	0.000	7.799	7.80	1.32		
2021-01-21	02:40 AM	BA25348W18 MSD	1	82079	40mL	0.000	6.824	6.82	2.65		
2021-01-21	03:19 AM	BA25349W07	1	24011	40mL	0.000	1.894	1.89	0.67		
2021-01-21	03:59 AM	BA25350W06	1	102113	40mL	0.000	8.524	8.52	0.53		
2021-01-21	04:37 AM	BA25351W06	1	5147	40mL	0.000	0.293	0.29	0.09		
2021-01-21	05:15 AM	BA25434W10	1	16483	40mL	0.000	1.256	1.26	0.06		
2021-01-21	05:52 AM	BA25306W01	1	16300	40mL	0.000	1.077	1.08	0.04	1.00	107.7%
2021-01-21	06:33 AM	210120A LOQ LCS	1	26849	40mL	0.000	1.972	1.97	0.04	2.00	98.6%
2021-01-21	07:14 AM	CCV	1	60795	40mL	0.000	4.854	4.85	0.05	5.00	97.1%
2021-01-21	07:54 AM	CCB	1	3272	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**6465171-49409**	**06/30/21**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_MS/MSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**sample**	5 ppm

Corrective Action

CA Tracking No.: 496

Section I : Initiation of Corrective Action Request (CAR)

Date of occurrence: 01/27/21

CAR initiated by: Paula McCartney

Description of problem:

The analyst for EPA method 3500FeB, Ferrous Iron, inadvertently overwrote the raw data for SDG's 94807 AECOM CTO19F0135 and 94808 AECOM Red Hill.

Section II : Root Cause Analysis: (Investigate the problem)

It is unknown if the analyst was aware the raw data had been overwritten. The analyst did not follow the protocol outlined in section 12.0 Procedure, SOP # ANA3500FeBc, rev. 6 09/11/20 which states "Open the Ferrous Iron spectrometer sheet template located in I:\TEMPLATES. Rename and save the file under your QCG (Quality Control Group identification) date and method in I:\Spec Sheets\Ferrous Iron (Fe2). For instance: 110409A-3500FeBc. This is where the results, that are read from the spectrometer, will be entered."

Due to this incident and additional oversights, the analyst was terminated from employment. The report for 94807 was signed off by the analyst and reviewed by the supervisor. See the attached multilevel review forms. At this time it was observed by the reviewer for 94807 that the raw data was missing. We immediately attempted to retrieve the information from the backup server but too much time had elapsed and the file could not be found. The samples were reanalyzed outside of holding time and both sets of results were included in the report. The client was notified.

It was unknown at the time that 94808 had also been grouped in this batch since the analyst was not available to inquire as to what other samples had been analyzed together with 94807. For SDG 94808 the report was assembled by the supervisor and reviewed by another employee. Neither one made note of the missing raw data. It was brought to our attention by Stella Cuenco at LDC. The only available pieces of raw data were sent to LDC and the client.

Section III: Corrective Action Plan (CAP):

The employee who made the initial error was dismissed from employment. The supervisor and the reviewer of the SDG 97808 were retrained to properly review the data as noted by the signatures below.

Section IV : Assessment of CA (Monitoring of Corrective actions)

Was the CA implemented effective?:

Yes, the data reviewer and the supervisor were retrained and a copy of this corrective action has been placed in their training files.

Section V : Closure of CA (To be completed by QAU and responsible Manager)

Are additional audits needed?:

A notation was made in the QA calendar to verify that the replacement analyst for ferrous iron is properly trained as per SOP# ANA3500FeBc.

Does CAR require client notification?:

Yes. A copy of this corrective action was sent to the client.

This CAR is valid, complete and does not require any further action.

Analyst / Technician: [signature] **Date:** 03/12/21

Wetlab Supervisor: [signature] **Date:** 3-12-21

QAU: Paula McCartney **Date:** 03/12/21

Rev 2, 11/04/20

Wetlab - Standard MultiLevel Review

ARF number(s)

Analytical Method / APPL SOP: 300
Comments / Cover Letter Data Qualifiers:

MS/MSD failure

Name of analyst(s) / Date: GA 02/01/21

Analytical Method / APPL SOP: 232, TOC
Comments / Cover Letter Data Qualifiers:

MS/MSD failure for both
Name of analyst(s) / Date: AR 02/02/21

Analytical Method / APPL SOP: Ferrous iron
Comments / Cover Letter Data Qualifiers:
ms/msd failure Raw data from in hold time analysis was saved over by the analyst, so samples were reanalyzed 3 weeks out of hold time
Name of analyst(s) / Date: FJR/KS 02/02/21

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

The analyst's initials indicate: The results meet all lab-specific QC (including blanks, LCS, all calibration criteria, etc.), the results were checked to determine consistency with project-specific performance criteria, the appropriate sample prep, SOPs and methods were followed and COC requirements and holding times were met, the complete and accurate explanation of anomalous results, corrections, and use of data qualifiers in the cover letter.

Manual Integrations Reviewed? (Initial / Date)	KS 02/10/21	**Algorithm Checks** Performed? (mark Y or N in next cell)	Y

Name of technical reviewer / Date: KS 02/10/21

Wetlab - Standard MultiLevel Review

ARF number(s)

Analytical Method / APPL SOP: 232, TOC
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date: AR 01/27/21

Analytical Method / APPL SOP: Ferrous Iron
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date: FJR 01/27/21

Analytical Method / APPL SOP: 353
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date: ERR 01/27/21

Analytical Method / APPL SOP: 300
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date: GA 01/27/21

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

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Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

Analytical Method / APPL SOP:
Comments / Cover Letter Data Qualifiers:

Name of analyst(s) / Date:

The analyst's initials indicate: The results meet all lab-specific QC (including blanks, LCS, all calibration criteria, etc.), the results were checked to determine consistency with project-specific performance criteria, the appropriate sample prep, SOPs and methods were followed and COC requirements and holding times were met, the complete and accurate explanation of anomalous results, corrections, and use of data qualifiers in the cover letter.

Manual Integrations Reviewed? (Initial / Date)	KS 01/27/21	**Algorithm Checks** Performed? (mark Y or N in next cell)	Y

Name of technical reviewer / Date: KS 01/27/21

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 17, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94825

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Two water samples were received January 21, 2021. Written results for the requested analyses are being provided on this February 17, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94825
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	7
Sample Results	13
QC Forms	26
Method 8015B Calibration Data	95
Method 8015B Raw Data	121
Method 8270D Calibration Data	140
Method 8270D Raw Data	188
Method 8270D SIM Calibration Data	218
Method 8270D SIM Raw Data	245
APPL SOP 2-MEE Calibration Data	266
APPL SOP 2-MEE Raw Data	293
Method 8260B Calibration Data	318
Method 8260B Raw Data	366
Method 8260B GRO Calibration Data	396
Method 8260B GRO Raw Data	446
Method RSK-175 Calibration Data	464
Method RSK-175 Raw Data	492
Method 300 Calibration Data	509
Method 300 Raw Data	535
Inorganic Analyses and Calibration Raw Data	541

CASE NARRATIVE

Case Narrative

ARF: 94825

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Two water samples were received January 21, 2021 at 1.1°C and 4.0°C. The sample group was assigned Analytical Request Form (ARF) number 94825.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

SOP ANA2MEE: The RPD exceeded the 20% control limit.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94825	01/21/21	ERH1246	BA25525	01/19/21 8:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94825	01/21/21	ERH1246	BA25525	01/19/21 8:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94825	01/21/21	ERH1246	BA25525	01/19/21 8:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	SM3500FeB	Ferrous Iron
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	RSK 175	METHANE BY RSK 175
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94825	01/21/21	ERH1247	BA25526	01/19/21 9:15:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

94825

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Brooke Gottmeier
Phone: 808-954-4536 Fax: 808-523-8950
Job: 60571032 CV18F0126 Red Hill Fuel Storage
PO #: 18S-22209-HI27 PO# 102604
Chain of Custody (Y/N): Y # 202121,202128
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: AAR
Date Received: 01/21/21 Time: 11:20
Delivered by: FEDEX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 1.1,4.0°C
Color: VFRG/B-Red
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 01/28/21

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com

Sample Distribution:
GC: 1-$87DC53W5, 1-$87DMEEW5, 1-$DOC53W5LIQ, 1-$SIM53LIQ51
Extractions: 1-_LIQ003, 1-_LIQ005, 1-_MWE2MEE
VOA: 2-$86BTOTXDOD5W, 2-$GASBL, 2-$GRO86BW, 2-$RSKMETH
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W, 1-$353TOXNW, 1-$35FE, 1-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

Client ID	APPL ID	Sampled	Analyses Requested
1. ERH1246	BA25525W 01/19/21 08:30 LCSD		$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2. ERH1247	BA25526W 01/19/21 09:15 /S/MSD:8015,8270,2-MEE only		$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments

APPL Sample Receipt Form

ARF# **94825**

Sample	Container Type	Count	p
BA25525	[13] VOAs - HCL	4	NA
BA25526	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	8	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	1	1.3
	[39] Amber Liter, HCL prsvd	5	1.6
	[40] 500mL Amber, unprsrvd	6	NA

Sample	Container Type	Count	p

94825

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 20212 1

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): EB, BG, BM
Sampler (Signature):
Date Shipped: 1/20/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1246	Trip Blank	1/19/21	0830	HST	4	X			X							X							* see other cooler
ERH1247	RHMW14-03	1/19/21	0915	HST	17**	X			X		X**	X**	X	X**	X**	X	X	X	X		X		

AM 1/20/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

10 of 556

Shuttle Temperature: IRB 3.0/1.1°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Alexandra Maman (AECOM)	1/20/21	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-21-21	1120	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202128

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): BG, BM, EB
Sampler (Signature):

Date Shipped: 1/20/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1246	Trip Blank	1/19/21	0830	HST	0*	X			X							X							*See other cooler
ERH1247	EHMW14-03	1/19/21	0915	HST	12	X			X		X**	X*	X	X**	X*	X	X	X	X		X		

AM 1/20/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: R1@4.0/4.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Alexandre Maman (AECOM)	1/20/21	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-21-21	1120	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94825**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/21/21

2) Coolers: Number of Coolers: 2

3) YES Were custody seals present and intact?
How many? 4 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: IRB CF:-1.9°C/R1 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 3.0/1.1 2: 4.0/4.0 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: BA25525w02-04

Preservation Hold time:

18) No Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate: ____

Notes/Deficiencies:
Ferrous iron received out of hold time. Nitrate received out of hold time.

CUSTODY SEAL
AECOM (808)521-3051
Initials [signature] Date 1/20/21

Personnel receiving samples: MS Second reviewer: [signature]
Personnel labeling samples: MS
Project manager notified: MS Date/Time of notification 01/21/21
Name of client notified: ____ Date/Time of notification ____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #DOC53-210122A-260639

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.0	60-142			%	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	76.9	56-125			%	01/22/21	01/26/21

Quant Method:	DOC1218.M
Run #:	107117
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/27/21 9:48:39 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	90.0	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	83.3	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	86.5	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	89.9	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	90.1	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	107	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y110
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/27/21 11:37:58 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	99.5	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	107	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L041
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/26/21 3:59:52 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1247

Sample Collection Date: 01/19/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94825

APPL ID: BA25526

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K022
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/27/21 9:59:06 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1246

APPL ID: BA25525

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.8	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	113	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	110	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z29
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

Printed: 01/28/21 1:21:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.5	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	108	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z30
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

Printed: 01/28/21 1:21:36 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1246

APPL ID: BA25525

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.8	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z29
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

Printed: 01/28/21 3:53:37 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.5	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z30
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

Printed: 01/28/21 3:53:37 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1246

APPL ID: BA25525

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R09
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/27/21 3:48:42 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94825

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R10
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/27/21 3:48:42 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

ARF: 94825

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	17.5	1.0	0.20	0.08	mg/L	1	01/21/21	01/21/21
EPA 300.0	NITRATE	0.64	0.5	0.18	0.04	mg/L	1	01/21/21	01/21/21
EPA 300.0	SULFATE	3.0	1.0	0.20	0.09	mg/L	1	01/21/21	01/21/21

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1247

APPL ID: BA25526

Sample Collection Date: 01/19/21

ARF: 94825

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.37	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	62.9	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	62.9	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.16 J	1.0	0.32	0.16	mg/L	1	01/21/21	01/21/21
SW846 9060A	TOTAL ORGANIC CARBON	13.9	0.93	0.350	0.130	mg/L	1	01/22/21	01/22/21

J = Estimated value.

Printed: 01/29/21 11:30:30 AM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	60-142	87.3		56-125	74.0	
210122A-LCS	Lab Control Spike	60-142	86.7		56-125	84.7	
BA25526-MS	Matrix Spike	60-142	90.0		56-125	86.7	
BA25526-MSD	Matrix SpikeD	60-142	88.0		56-125	85.3	
BA25526	ERH1247	60-142	89.0		56-125	76.9	

Comments: Batch: #DOC53-210122A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210122A-BLK	Time Analyzed:	1019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
210122A-MS	Matrix Spike	107115	01/26/21 1143
210122A-MSD	Matrix SpikeD	107116	01/26/21 1211
BA25526	ERH1247	107117	01/26/21 1239

Comments: Batch: #DOC53-210122A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210122W-25526 - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	SURROGATE: OCTACOSANE (S)	87.3	60-142			%	01/22/21	01/26/21
BLANK	SURROGATE: ORTHO-TERPHEN	74.0	56-125			%	01/22/21	01/26/21

Quant Method: DOC1218.M
Run #: 107112
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 9:48:44 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210122A-LCS	Time Analyzed:	1047

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
210122A-MS	Matrix Spike	107115	01/26/21 1143
210122A-MSD	Matrix SpikeD	107116	01/26/21 1211
BA25526	ERH1247	107117	01/26/21 1239

Comments: Batch: #DOC53-210122A

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **210122W-25526 LCS - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1790	89.5	36-132
OIL (C24-C40)	2000	1920	96.0	41-113
SURROGATE: OCTACOSANE (S)	150	130	86.7	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	127	84.7	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	01/22/21
Analysis Date :	01/26/21
Instrument :	Apollo
Run :	107113
Initials :	SSE

Printed: 01/27/21 9:48:32 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210122W-25526 MS - 260639**
Batch ID: #DOC53-210122A
Sample ID: BA25526
Client ID: ERH1247

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	50	1780	1850	86.5	90.0	36-132	3.9	30
OIL (C24-C40)	2000	50	1940	1930	94.5	94.0	41-113	0.52	30
SURROGATE: OCTACOSANE (S)	150	NA	135	132	90.0	88.0	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	130	128	86.7	85.3	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Apollo	Apollo
Run :	107115	107116
Initials :	SSE	

Printed: 01/27/21 9:48:28 AM
APPL MSD SCII

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	43-140	48.6		44-119	50.5	
210122A-LCS	Lab Control Spike	43-140	96.4		44-119	88.8	
BA25526-MS	Matrix Spike	43-140	95.5		44-119	90.4	
BA25526-MSD	Matrix SpikeD	43-140	90.0		44-119	87.6	
BA25526	ERH1247	43-140	90.0		44-119	83.3	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	19-119	52.2		44-120	55.0	
210122A-LCS	Lab Control Spike	19-119	90.8		44-120	92.8	
BA25526-MS	Matrix Spike	19-119	93.0		44-120	95.8	
BA25526-MSD	Matrix SpikeD	19-119	91.0		44-120	92.5	
BA25526	ERH1247	19-119	86.5		44-120	89.9	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	10-115	53.7		50-134	68.9	
210122A-LCS	Lab Control Spike	10-115	92.4		50-134	112	
BA25526-MS	Matrix Spike	10-115	96.0		50-134	112	
BA25526-MSD	Matrix SpikeD	10-115	93.0		50-134	109	
BA25526	ERH1247	10-115	90.1		50-134	107	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
Blank ID:	210122A-BLK	Time Analyzed:	1656

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
210122A-MS	Matrix Spike	0105Y108	01/25/21 1812
210122A-MSD	Matrix SpikeD	0105Y109	01/25/21 1837
BA25526	ERH1247	0105Y110	01/25/21 1903

Comments: Batch: #87DC5-210122A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25526 - 260605**
Batch ID: #87DC5-210122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	48.6	43-140			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUORBIPHENY	50.5	44-119			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUOROPHENO	52.2	19-119			%	01/22/21	01/25/21
BLANK	SURROGATE: NITROBENZENE-	55.0	44-120			%	01/22/21	01/25/21
BLANK	SURROGATE: PHENOL-D6 (S)	53.7	10-115			%	01/22/21	01/25/21
BLANK	SURROGATE: TERPHENYL-D14 (	68.9	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y105
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 11:24:09 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210122A-LCS	Time Analyzed:	1721

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
210122A-MS	Matrix Spike	0105Y108	01/25/21 1812
210122A-MSD	Matrix SpikeD	0105Y109	01/25/21 1837
BA25526	ERH1247	0105Y110	01/25/21 1903

Comments: Batch: #87DC5-210122A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **210122W-25526 LCS - 260605**
Batch ID: #87DC5-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	62.5	57.4	91.8	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	241	96.4	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	125	111	88.8	44-119
SURROGATE: 2-FLUOROPHENOL (S)	250	227	90.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	125	116	92.8	44-120
SURROGATE: PHENOL-D6 (S)	250	231	92.4	10-115
SURROGATE: TERPHENYL-D14 (S)	125	140	112	50-134

Comments:

Primary	SPK
Quant Method :	Y0105.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Yoda
Run :	0105Y106
Initials :	MA

Printed: 01/27/21 11:23:57 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D WATER

APPL ID: **210122W-25526 MS - 260605**
Batch ID: #87DC5-210122A
Sample ID: BA25526
Client ID: ERH1247

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	48.8	48.7	97.6	97.4	10-115	0.21	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	191	180	95.5	90.0	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	90.4	87.6	90.4	87.6	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	186	182	93.0	91.0	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	95.8	92.5	95.8	92.5	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	192	186	96.0	93.0	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	112	109	112	109	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y0105.M	Y0105.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/25/21	01/25/21
Instrument :	Yoda	Yoda
Run :	0105Y108	0105Y109
Initials :	MA	

Printed: 01/27/21 11:37:49 AM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/05/21
Matrix: Water Instrument: Yoda
ID: 0105Y002.D Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94825
Case No: 94825 Date Analyzed: 01/25/21
Matrix: Water Instrument: Yoda
ID: 0105Y099.D Time Analyzed: 12:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y100.D	01/25/21 12:38
2	Blank	210122A BLK 1/800	0105Y105.D	01/25/21 16:56
3	Lab Control Spike	210122A LCS-1 1/0.8	0105Y106.D	01/25/21 17:21
4		BA25526W18 MS-1 1/10	0105Y108.D	01/25/21 18:12
5		BA25526W22 MSD-1 1/1	0105Y109.D	01/25/21 18:37
6	ERH1247	BA25526W17 1/1000	0105Y110.D	01/25/21 19:03
7		50ug/mL 8270 08/12/2	0105Y115.D	01/25/21 21:09
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	46.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	29.9
365	1 - 100% of mass 198	4.2
441	0.01 - 24% of mass 442	17.3
442	50 - 500% of mass 198	97.4
443	15 - 24% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	533085	5.05	2194340	6.47	1385450	8.48
	UPPER LIMIT	1066170	5.22	4388680	6.64	2770900	8.65
	LOWER LIMIT	266543	4.88	1097170	6.30	692725	8.31
	SAMPLE NO.						
01	210122A BLK 1/800	425738	5.05	1634420	6.46	1005650	8.47
02	210122A LCS-1 1/0.8	400800	5.05	1600610	6.46	971879	8.48
03	BA25526W18 MS-1 1/1(	415691	5.05	1618590	6.46	1011040	8.47
04	BA25526W22 MSD-1 1/	412243	5.05	1602250	6.47	1013270	8.48
05	BA25526W17 1/1000	445890	5.05	1729400	6.46	1098450	8.47
06	50ug/mL 8270 08/12/20	565875	5.05	2319310	6.47	1466190	8.48
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2786020	10.21	2774520	13.29	2634210	14.98
	UPPER LIMIT	5572040	10.38	5549040	13.46	5268420	15.15
	LOWER LIMIT	1393010	10.04	1387260	13.12	1317105	14.81
	SAMPLE NO.						
01	210122A BLK 1/800	2061370	10.20	1858840	13.28	1771380	14.97
02	210122A LCS-1 1/0.8	2027580	10.20	1902850	13.28	1802110	14.97
03	BA25526W18 MS-1 1/1(	2085280	10.20	1967340	13.28	1850480	14.97
04	BA25526W22 MSD-1 1/	2042920	10.20	1952730	13.28	1847690	14.97
05	BA25526W17 1/1000	2261030	10.20	2064450	13.28	1941550	14.97
06	50ug/mL 8270 08/12/20	3029920	10.21	2959440	13.29	2751560	14.97
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	39-114	61.5		58-120	66.9	
210122A-LCS	Lab Control Spike	39-114	91.8		58-120	101	
BA25526	ERH1247	39-114	99.5		58-120	107	

Comments: Batch: #SIM53-210122A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Linus
Blank ID:	210122A-BLK	Time Analyzed:	1638

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
BA25526	ERH1247	0118L041	01/25/21 1828

Comments: Batch: #SIM53-210122A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **210122W-25434 - 260603**
Batch ID: #SIM53-210122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2-METHYLNAPHT	61.5	39-114			%	01/22/21	01/25/21
BLANK	SURROGATE: FLUORANTHENE-	66.9	58-120			%	01/22/21	01/25/21

Quant Method:L0118.M
Run #:0118L036
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/26/21 4:00:00 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Linus
LCS ID:	210122A-LCS	Time Analyzed:	1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
BA25526	ERH1247	0118L041	01/25/21 1828

Comments: Batch: #SIM53-210122A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **210122W-25434 LCS - 260603**
Batch ID: #SIM53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	6.25	5.61	89.8	41-115
2-METHYLNAPHTHALENE	6.25	5.64	90.2	39-114
NAPHTHALENE	6.25	5.62	89.9	43-114
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.74	91.8	39-114
SURROGATE: FLUORANTHENE-D10 (S)	6.25	6.31	101	58-120

Comments:

Primary	SPK
Quant Method :	L0118.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Linus
Run :	0118L037
Initials :	MA

Printed: 01/26/21 3:59:46 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 94825
Matrix: Water
ID: 0118L034.D

SDG No: 94825
Date Analyzed: 01/25/21
Instrument: Linus
Time Analyzed: 12:39

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21 (1)	0118L035.D	01/25/21 12:55
2	Blank	210122A BLK 1/800	0118L036.D	01/25/21 16:38
3	Lab Control Spike	210122A LCS-2 1/800	0118L037.D	01/25/21 17:00
4	ERH1247	BA25526W17 1/1000	0118L041.D	01/25/21 18:28
5		5 SIM 08/21/20	0118L046.D	01/25/21 20:18
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.1
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	53.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	24.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	16.5
442	50 - 500% of mass 198	90.5
443	15 - 24% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	64820	4.25	31514	6.25	57372	7.98
	UPPER LIMIT	129640	4.42	63028	6.42	114744	8.15
	LOWER LIMIT	32410	4.08	15757	6.08	28686	7.81
	SAMPLE NO.						
01	210122A BLK 1/800	64715	4.25	29769	6.27	53529	7.99
02	210122A LCS-2 1/800	64477	4.25	30653	6.25	55532	7.98
03	BA25526W17 1/1000	68137	4.25	32545	6.25	60186	7.98
04	5 SIM 08/21/20	71331	4.25	32623	6.25	60248	7.98
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	69725	11.12	64837	13.57		
	UPPER LIMIT	139450	11.29	129674	13.74		
	LOWER LIMIT	34863	10.95	32419	13.40		
	SAMPLE NO.						
01	210122A BLK 1/800	62085	11.13	58308	13.58		
02	210122A LCS-2 1/800	67366	11.12	63014	13.57		
03	BA25526W17 1/1000	72561	11.12	69146	13.56		
04	5 SIM 08/21/20	72741	11.12	71783	13.56		
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/26/21

Matrix: WATER Instrument: KYLO

Blank ID: 210125A-BLK Time Analyzed: 1146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
210125A-MS	Matrix Spike	0125K020	01/26/21 1248
210125A-MSD	Matrix SpikeD	0125K021	01/26/21 1309
BA25526	ERH1247	0125K022	01/26/21 1330

Comments: Batch: #87DME-210125A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **210125W-25526 - 260641**
Batch ID: #87DME-210125A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:KMEE0125.M
Run #:0125K017
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 9:59:14 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210125A-LCS	Time Analyzed:	1207

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
210125A-MS	Matrix Spike	0125K020	01/26/21 1248
210125A-MSD	Matrix SpikeD	0125K021	01/26/21 1309
BA25526	ERH1247	0125K022	01/26/21 1330

Comments: Batch: #87DME-210125A

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **210125W-25526 LCS - 260641**
Batch ID: #87DME-210125A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	69.3	86.6	30-130

Comments:

Primary	SPK
Quant Method :	KMEE0125.M
Extraction Date :	01/25/21
Analysis Date :	01/26/21
Instrument :	KYLO
Run :	0125K018
Initials :	MA

Printed: 01/27/21 9:58:58 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **210125W-25526 MS - 260641**
Batch ID: #87DME-210125A
Sample ID: BA25526
Client ID: ERH1247

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	87.9	64.5	110	80.6	30-130	30.7 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	KMEE0125.M	KMEE0125.M
Extraction Date :	01/25/21	01/25/21
Analysis Date :	01/26/21	01/26/21
Instrument :	KYLO	KYLO
Run :	0125K020	0125K021
Initials :	MA	

Printed: 01/27/21 9:58:54 AM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94825
Case No: 94825 Date Analyzed: 01/26/21
Matrix: Water Instrument: KYLO
ID: 0125K013.D Time Analyzed: 10:06

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	210125A BLK 1/500	0125K017.D	01/26/21 11:46
2	Lab Control Spike	210125A LCS-1 1/500	0125K018.D	01/26/21 12:07
3		BA25526W14 MS-1 2/50	0125K020.D	01/26/21 12:48
4		BA25526W14 MSD-1 2/5	0125K021.D	01/26/21 13:09
5	ERH1247	BA25526W12 2/500	0125K022.D	01/26/21 13:30
6		2MEE 500 1/26/21 (2)	0125K028.D	01/26/21 15:58
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	33.2
68	0 - 2.04% of mass 69	1.9
70	0 - 2.04% of mass 69	0.6
127	10 - 80% of mass 198	53.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	27.9
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	114.6
443	15 - 24% of mass 442	18.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K014.D Date Analyzed: 01/26/21

Instrument ID: KYLO Time Analyzed: 10:19

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	433460	5.33					
	UPPER LIMIT	866920	5.50					
	LOWER LIMIT	216730	5.16					
	SAMPLE NO.							
01	210125A BLK 1/500	370288	5.31					
02	210125A LCS-1 1/500	355190	5.31					
03	BA25526W14 MS-1 2/5(	247999	5.31					
04	BA25526W14 MSD-1 2/	324218	5.31					
05	BA25526W12 2/500	292756	5.32					
06	2MEE 500 1/26/21 (2)	234567	5.32					
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	81-118	109		85-114	99.6	
210122AZ-LCSD	Lab Control SpikeD	81-118	108		85-114	100	
210122AZ-BLK	Blank	81-118	113		85-114	97.1	
BA25525	ERH1246	81-118	115		85-114	98.8	
BA25526	ERH1247	81-118	112		85-114	97.5	

Comments: Batch: #86BTO-210122AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	80-119	109		89-112	110	
210122AZ-LCSD	Lab Control SpikeD	80-119	109		89-112	110	
210122AZ-BLK	Blank	80-119	110		89-112	107	
BA25525	ERH1246	80-119	113		89-112	110	
BA25526	ERH1247	80-119	108		89-112	108	

Comments: Batch: #86BTO-210122AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210122AZ-BLK	Time Analyzed:	1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z13	01/22/21 1406
210122AZ-LCSD	Lab Control SpikeD	0122Z14	01/22/21 1429
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25525	ERH1246	0122Z29	01/22/21 2014
BA25526	ERH1247	0122Z30	01/22/21 2037

Comments: Batch: #86BTO-210122AZ

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210122W-25525 - 260666**
Batch ID: #86BTO-210122AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	SURROGATE: 1,2-DICHLOROET	113	81-118			%	01/22/21	01/22/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.1	85-114			%	01/22/21	01/22/21
BLANK	SURROGATE: DIBROMOFLUOR	110	80-119			%	01/22/21	01/22/21
BLANK	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/22/21	01/22/21

Quant Method:Z0122W.M
Run #:0122Z18
Instrument:ZEUS
Sequence:210122
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 1:21:27 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210122AZ-LCS	Time Analyzed:	1406

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z13	01/22/21 1406
210122AZ-LCSD	Lab Control SpikeD	0122Z14	01/22/21 1429
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25525	ERH1246	0122Z29	01/22/21 2014
BA25526	ERH1247	0122Z30	01/22/21 2037

Comments: Batch: #86BTO-210122AZ

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210122W-25525 LCS - 260666**
Batch ID: #86BTO-210122AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	10.2	10.4	102	104	79-120	1.9	20
ETHYLBENZENE	10.00	10.3	10.7	103	107	79-121	3.8	20
TOLUENE	10.00	9.89	10.2	98.9	102	80-121	3.1	20
XYLENES (TOTAL)	30.0	31.5	32.6	105	109	79-121	3.4	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.2	27.1	109	108	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	25.0	99.6	100	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.2	27.2	109	109	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.4	27.6	110	110	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0122W.M	Z0122W.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/22/21	01/22/21
Instrument :	ZEUS	ZEUS
Run :	0122Z13	0122Z14
Initials :	CHE	

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
ID: 0122Z00.D Time Analyzed: 9:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD1/22/	0122Z02.D	01/22/21 9:53
2		0.5ug/L VOC STD1/22/	0122Z03.D	01/22/21 10:16
3		1ug/L VOC STD1/22/21	0122Z04.D	01/22/21 10:39
4		2ug/L VOC STD1/22/21	0122Z05.D	01/22/21 11:02
5		5ug/L VOC STD1/22/21	0122Z06.D	01/22/21 11:25
6		10ug/L VOC STD1/22/2	0122Z07.D	01/22/21 11:48
7		20ug/L VOC STD1/22/2	0122Z08.D	01/22/21 12:11
8		40ug/L VOC STD1/22/2	0122Z09.D	01/22/21 12:34
9		100ug/L VOC STD1/22/	0122Z10.D	01/22/21 12:57
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 60.0% of mas 95	42.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0
174	50.0 - 200.0% of mass 95	142.3
175	5.0 - 9.0% of mass 174	7.4
176	95.0 - 101.0% of mass 174	97.4
177	5.0 - 9.0% of mass 176	6.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94825
Case No: 94825 Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
ID: 0122Z11.D Time Analyzed: 13:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		(SS) 10ug/L VOC STD1	0122Z12.D	01/22/21 13:43
2	Lab Control Spike	210122A LCS 10ug/L	0122Z13.D	01/22/21 14:06
3	Lab Control SpikeD	210122A LCSD 10ug/L	0122Z14.D	01/22/21 14:29
4	Blank	210122A BLK	0122Z18.D	01/22/21 16:01
5	ERH1246	BA25525W01	0122Z29.D	01/22/21 20:14
6	ERH1247	BA25526W01	0122Z30.D	01/22/21 20:37
7		Ending CCV 10ug/L 1/	0122Z39.D	01/23/21 0:04
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.3
75	30.0 - 60.0% of mas 95	44.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	130.6
175	5.0 - 9.0% of mass 174	7.5
176	95.0 - 101.0% of mass 174	98.5
177	5.0 - 9.0% of mass 176	6.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Z07.D Date Analyzed: 01/22/21

Instrument ID: ZEUS Time Analyzed: 11:48

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3548400	6.16	2918490	9.62	1061380	12.17
	UPPER LIMIT	7096800	6.33	5836980	9.79	2122760	12.34
	LOWER LIMIT	1774200	5.99	1459245	9.45	530690	12.00
	SAMPLE NO.						
01	(SS) 10ug/L VOC STD1,	3829970	6.16	2992920	9.62	1148930	12.17
02	210122A LCS 10ug/L	3840030	6.16	3020190	9.62	1124350	12.17
03	210122A LCSD 10ug/L	3807630	6.16	2979250	9.62	1138180	12.17
04	210122A BLK	3518020	6.16	2841690	9.62	1093120	12.17
05	BA25525W01	3160440	6.16	2615030	9.62	947328	12.17
06	BA25526W01	3253070	6.16	2665460	9.62	1018750	12.17
07	Ending CCV 10ug/L 1/2	3207710	6.16	2626100	9.62	973568	12.17
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	85-114	98.4				
210122AZ-LCSD	Lab Control SpikeD	85-114	98.0				
210122AZ-BLK	Blank	85-114	97.1				
BA25525	ERH1246	85-114	98.8				
BA25526	ERH1247	85-114	97.5				

Comments: Batch: #GRO86-210122AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210122AZ-BLK	Time Analyzed:	1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z16	01/22/21 1515
210122AZ-LCSD	Lab Control SpikeD	0122Z17	01/22/21 1538
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25525	ERH1246	0122Z29	01/22/21 2014
BA25526	ERH1247	0122Z30	01/22/21 2037

Comments: Batch: #GRO86-210122AZ

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25525 - 260680**
Batch ID: #GRO86-210122AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.1	85-114			%	01/22/21	01/22/21

Quant Method:ZGAS0104.M
Run #:0122Z18
Instrument:ZEUS
Sequence:210122
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 3:53:26 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210122AZ-LCS	Time Analyzed:	1515

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z16	01/22/21 1515
210122AZ-LCSD	Lab Control SpikeD	0122Z17	01/22/21 1538
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25525	ERH1246	0122Z29	01/22/21 2014
BA25526	ERH1247	0122Z30	01/22/21 2037

Comments: Batch: #GRO86-210122AZ

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210122W-25525 LCS - 260680**
Batch ID: #GRO86-210122AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	268	283	89.3	94.3	78-122	5.4	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.6	24.5	98.4	98.0	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0104.M	ZGAS0104.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/22/21	01/22/21
Instrument :	ZEUS	ZEUS
Run :	0122Z16	0122Z17
Initials :	CHE	

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

Blank ID: 210126A-BLK Time Analyzed: 1330

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25525	ERH1246	0126R09	01/26/21 1347
BA25526	ERH1247	0126R10	01/26/21 1351
210126A-MS	Matrix Spike	0126R11	01/26/21 1355
210126A-MSD	Matrix SpikeD	0126R12	01/26/21 1359

Comments: Batch: #RSKME-210126A

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

LCS ID: 210126A-LCS Time Analyzed: 1312

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25525	ERH1246	0126R09	01/26/21 1347
BA25526	ERH1247	0126R10	01/26/21 1351
210126A-MS	Matrix Spike	0126R11	01/26/21 1355
210126A-MSD	Matrix SpikeD	0126R12	01/26/21 1359

Comments: Batch: #RSKME-210126A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210126W-25434 - 260649**
Batch ID: #RSKME-210126A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method: RSK0914A.M
Run #: 0126R05
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 3:48:45 PM

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210126W-25434 LCS - 260649**
Batch ID: #RSKME-210126A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	74.0	72.9	88.7	87.4	72-125	1.5	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Rocky	Rocky
Run :	0126R02	0126R04
Initials :	LSI	

Matrix Spike Recoveries
METHANE

APPL ID: **210126W-25526 MS - 260649**
Batch ID: #RSKME-210126A
Sample ID: BA25526
Client ID: ERH1247

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	ND	79.4	68.5	95.2	82.1	72-125	14.7	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Rocky	Rocky
Run :	0126R11	0126R12
Initials :	LSI	

Printed: 01/27/21 3:48:35 PM
APPL MSD SCII

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210121A1-BLK	Time Analyzed:	1333

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A1-LCS	Lab Control Spike	14	01/21/21 1318
210121A1-BLK	Blank	15	01/21/21 1333
BA25526	ERH1247	17	01/21/21 1418
210121A1-LCSD	Lab Control SpikeD	26	01/21/21 1630

Comments: Batch: #300W-210121A1

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/21/21	01/21/21	#300W-210121A1-BA25526
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/21/21	01/21/21	#300W-210121A1-BA25526
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/21/21	01/21/21	#300W-210121A1-BA25526

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210121A1-LCS	Time Analyzed:	1318

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A1-LCS	Lab Control Spike	14	01/21/21 1318
210121A1-BLK	Blank	15	01/21/21 1333
BA25526	ERH1247	17	01/21/21 1418
210121A1-LCSD	Lab Control SpikeD	26	01/21/21 1630

Comments: Batch: #300W-210121A1

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	26.6	26.7	106	107	0.38	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A1-BA2552
EPA 300.0	NITRATE	22.1	23.3	24.4	105	110	4.6	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A1-BA2552
EPA 300.0	SULFATE	25.0	26.6	26.1	106	104	1.9	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A1-BA2552

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/25/21

Matrix: WATER Instrument: EVE

Blank ID: 210125A2-BLK Time Analyzed: 2152

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A2-BLK	Blank	13	01/25/21 2152
210125A2-LCS	Lab Control Spike	14	01/25/21 2155
210125A2-LCSD	Lab Control SpikeD	15	01/25/21 2157
BA25526	ERH1247	36	01/25/21 2245

Comments: Batch: #353TO-210125A2

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/22/21

Matrix: WATER Instrument: Tiamo

Blank ID: 210122A1-BLK Time Analyzed: 1253

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25526	ERH1247	7	01/22/21 1706

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94825

Case No: 94825 Date Analyzed: 01/21/21

Matrix: WATER Instrument: Manual Spec

Blank ID: 210120A-BLK Time Analyzed: 0002

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-BLK	Blank	24	01/21/21 0002
210120A-LCSD	Lab Control SpikeD	27	01/21/21 2332
210120A-LCS	Lab Control Spike	28	01/21/21 2332
BA25526	ERH1247	29	01/21/21 2349

Comments: Batch: #35FE-210120A

SW846 9060A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	TICTOC
Blank ID:	210122A-BLK	Time Analyzed:	1540

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	30	01/22/21 1540
210122A-LCS	Lab Control Spike	31	01/22/21 1619
210122A-LCSD	Lab Control SpikeD	32	01/22/21 1659
BA25526	ERH1247	33	01/22/21 1741

Comments: Batch: #TOCW5-210122A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
SM 2320B	TOTAL ALKALINITY	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/25/21	01/25/21	#353TO-210125A2-BA25526
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/21/21	01/21/21	#35FE-210120A-BA25538
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/22/21	01/22/21	#TOCW5-210122A-BA25526

Wetlab SC-Blank-REG MDLs
Printed: 01/29/21 11:28:43 AM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210125A2-LCS	Time Analyzed:	2155

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A2-BLK	Blank	13	01/25/21 2152
210125A2-LCS	Lab Control Spike	14	01/25/21 2155
210125A2-LCSD	Lab Control SpikeD	15	01/25/21 2157
BA25526	ERH1247	36	01/25/21 2245

Comments: Batch: #353TO-210125A2

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210122A1-LCS	Time Analyzed:	1256

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25526	ERH1247	7	01/22/21 1706

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	210120A-LCS	Time Analyzed:	2332

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-BLK	Blank	24	01/21/21 0002
210120A-LCSD	Lab Control SpikeD	27	01/21/21 2332
210120A-LCS	Lab Control Spike	28	01/21/21 2332
BA25526	ERH1247	29	01/21/21 2349

Comments: Batch: #35FE-210120A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94825
Case No:	94825	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210122A-LCS	Time Analyzed:	1619

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	30	01/22/21 1540
210122A-LCS	Lab Control Spike	31	01/22/21 1619
210122A-LCSD	Lab Control SpikeD	32	01/22/21 1659
BA25526	ERH1247	33	01/22/21 1741

Comments: Batch: #TOCW5-210122A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	2.94	2.90	98.0	96.7	1.4	20	90-110	01/25/21	01/25/21	01/25/21	01/25/21	#353TO-210125A2-BA255
SM 2320B	BICARBONATE AS CACO3	250	231	233	92.4	93.2	0.86	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SM 2320B	TOTAL ALKALINITY AS CA	250	245	247	98.0	98.8	0.81	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SM3500Fe	FERROUS IRON	3.00	2.98	2.98	99.3	99.3	0.0	20	80-120	01/21/21	01/21/21	01/21/21	01/21/21	#35FE-210120A-BA25538
SW846 90	TOTAL ORGANIC CARBO	5.00	4.60	4.43	92.0	88.6	3.8	20	80-120	01/22/21	01/22/21	01/22/21	01/22/21	#TOCW5-210122A-BA255

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/FM

			1218004.D	1218005.D	1218006 D	1218007 D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
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35														1.533186			

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

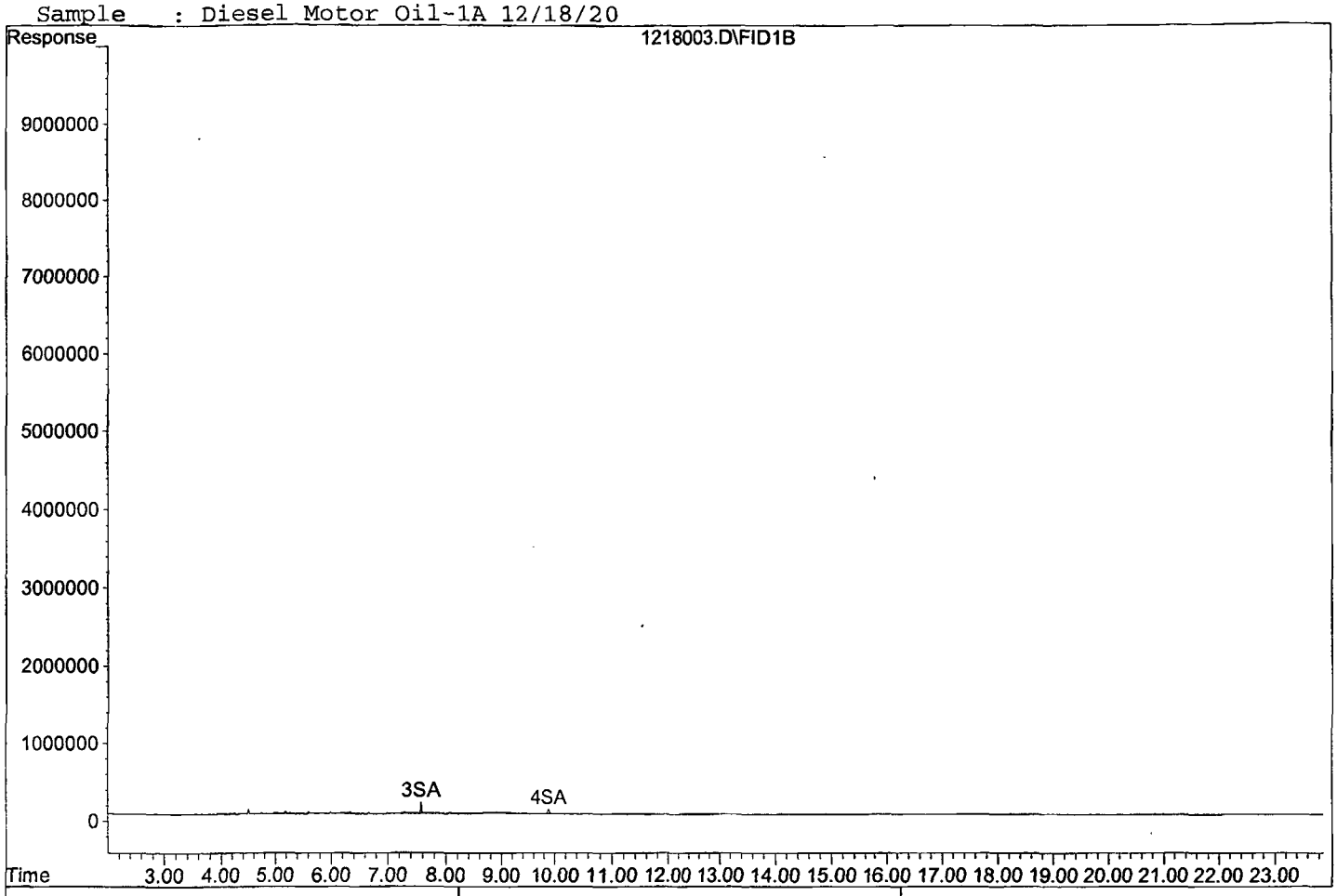
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

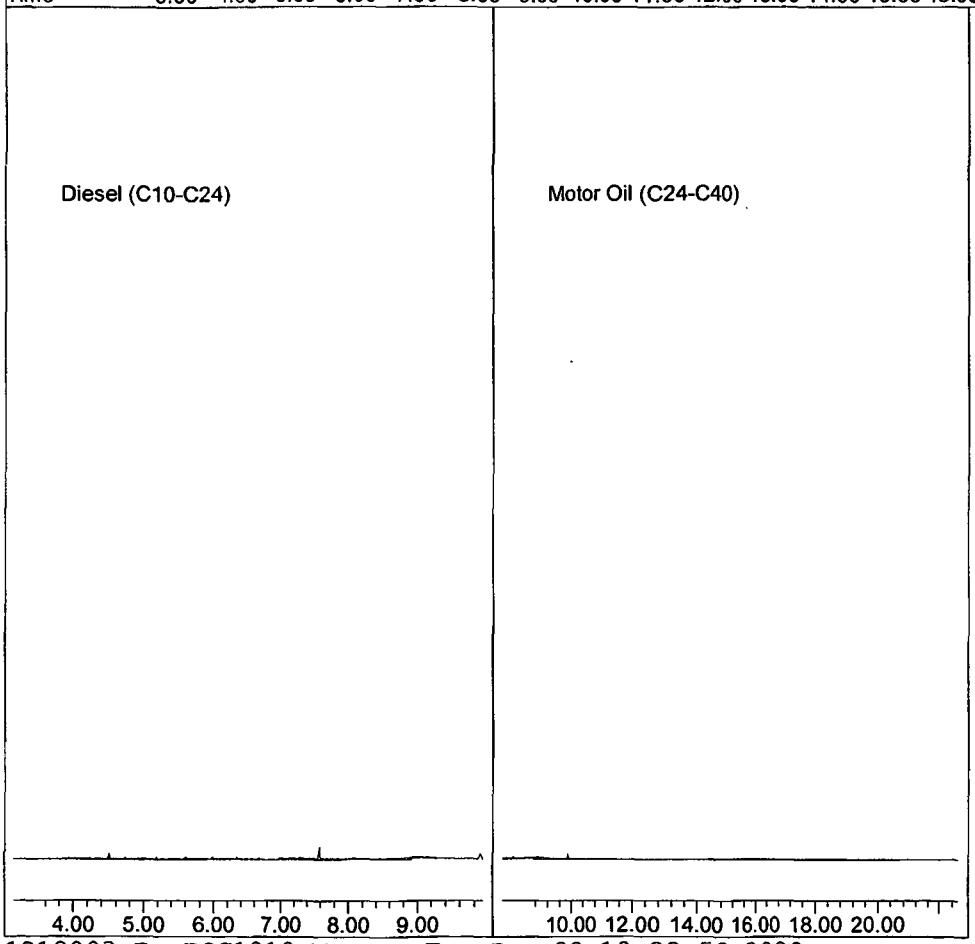
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery	=	0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery	=	0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

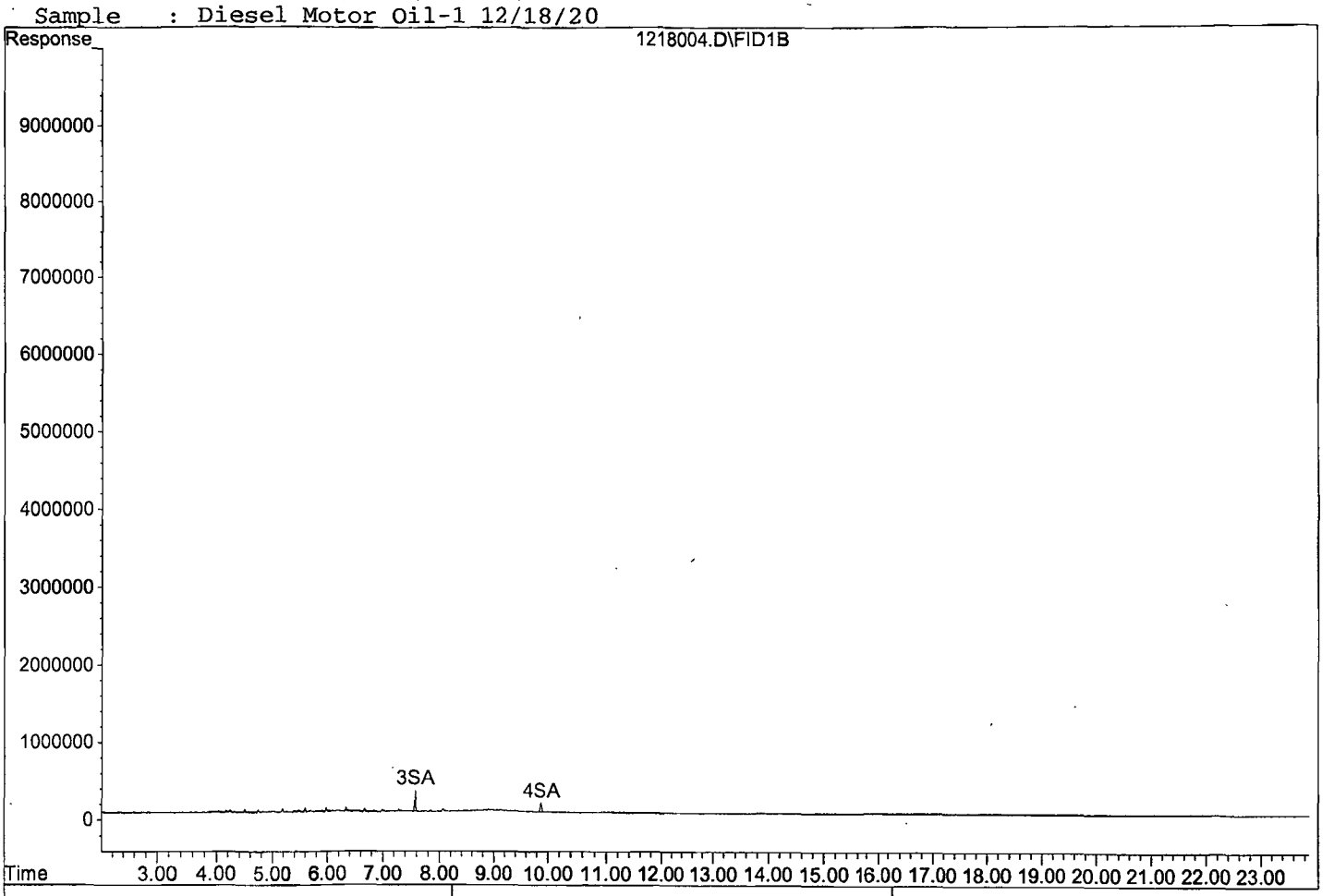
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery =		1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery =		1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb

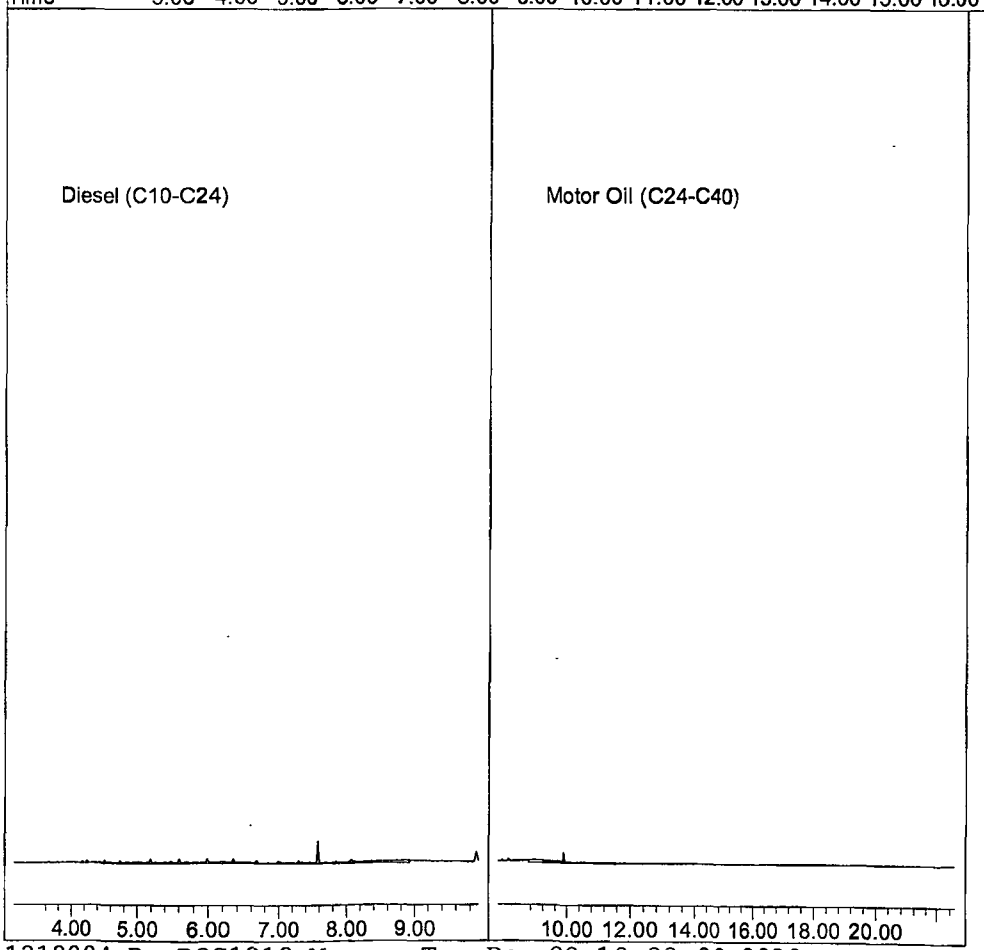
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





1218004.D DOC1218.M Tue Dec 22 10:23:00 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

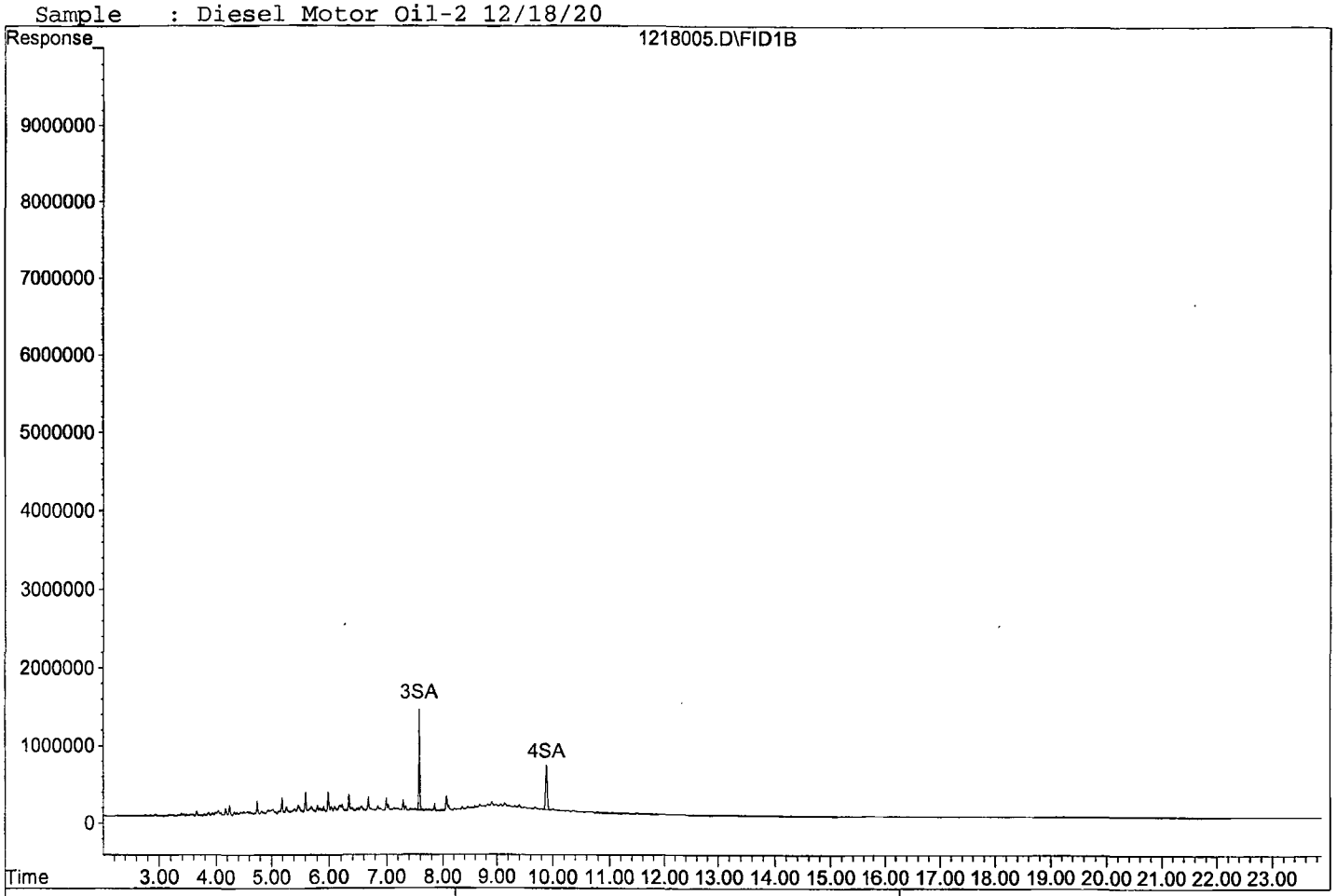
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

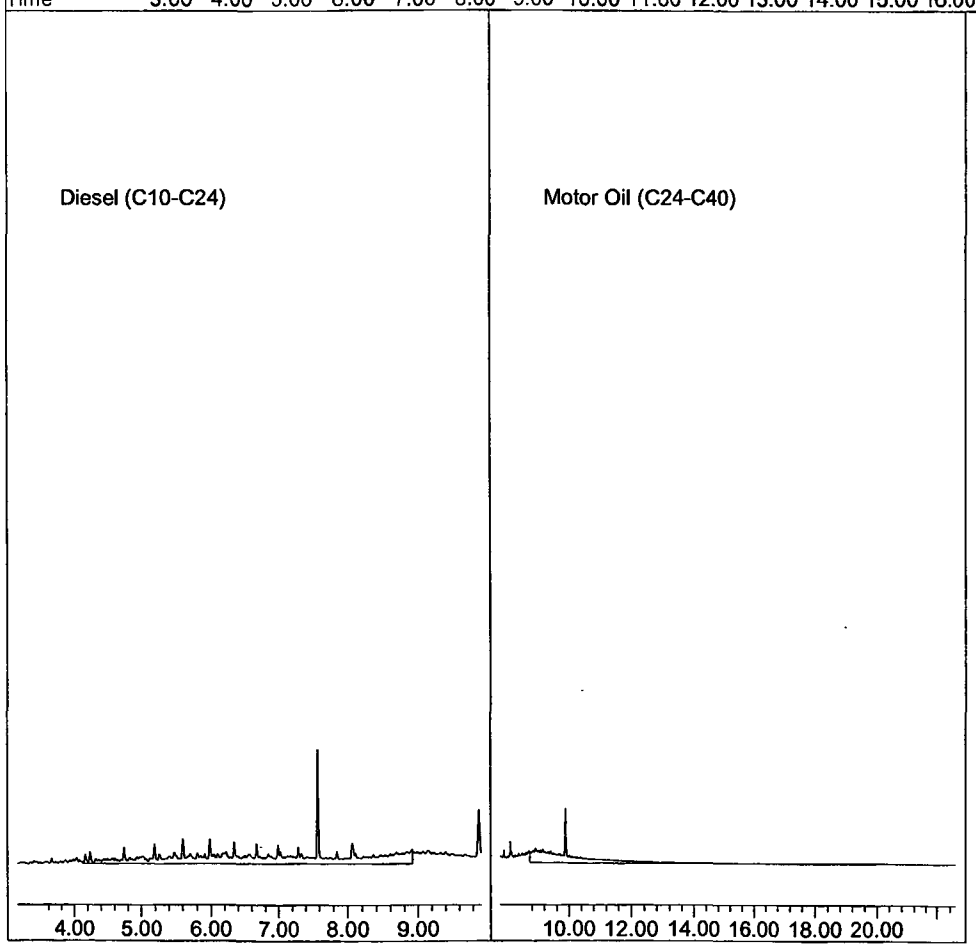
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

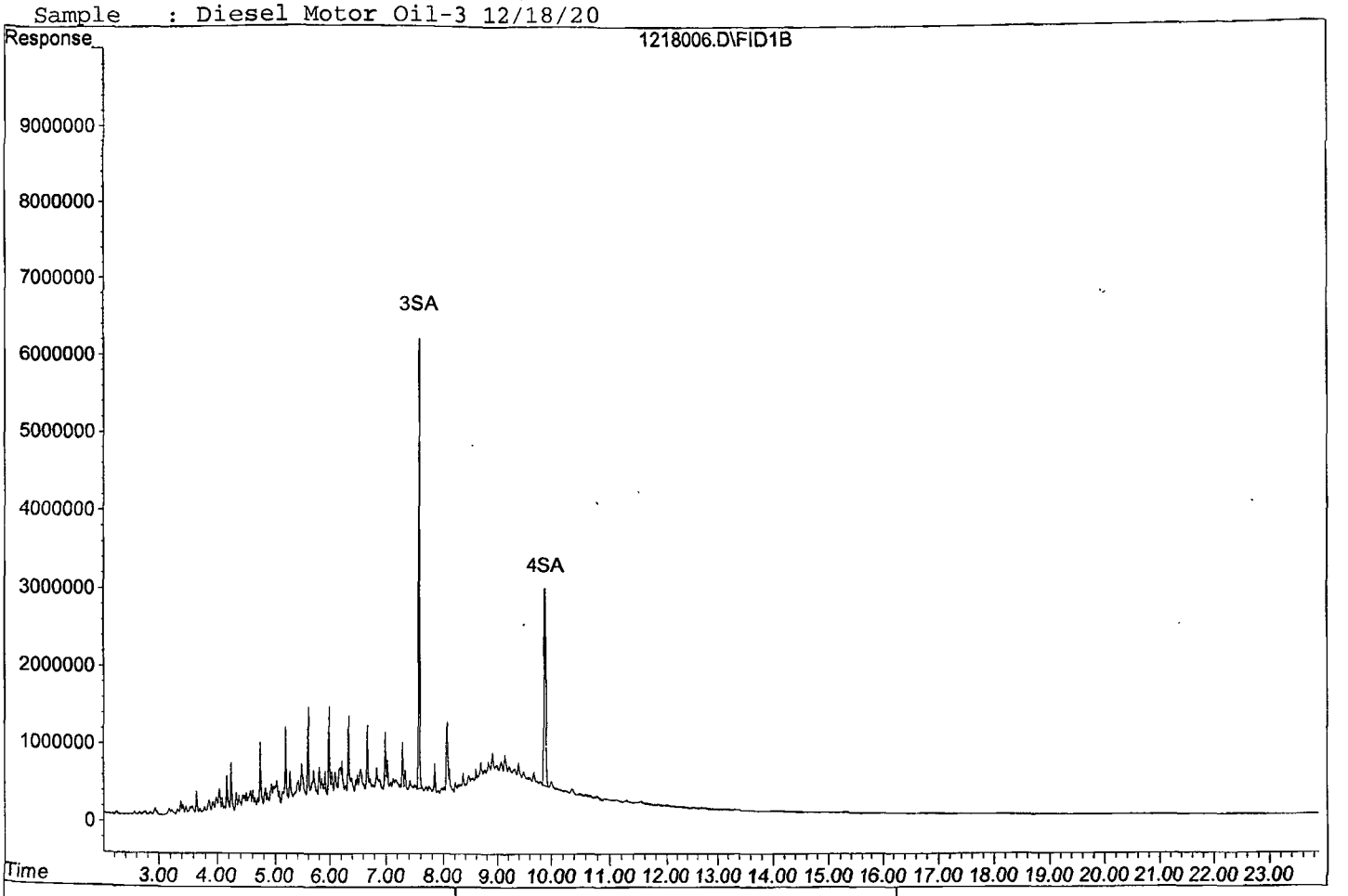
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000		Recovery =	40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000		Recovery =	40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb

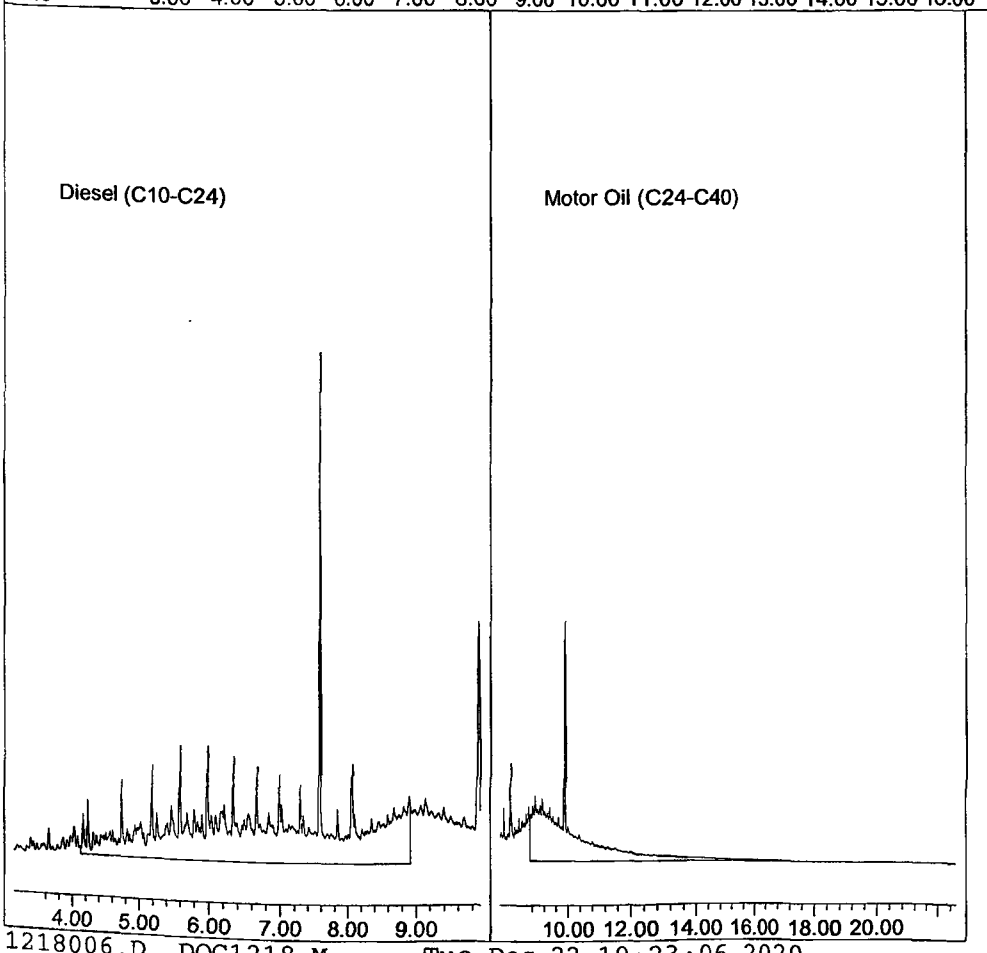
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

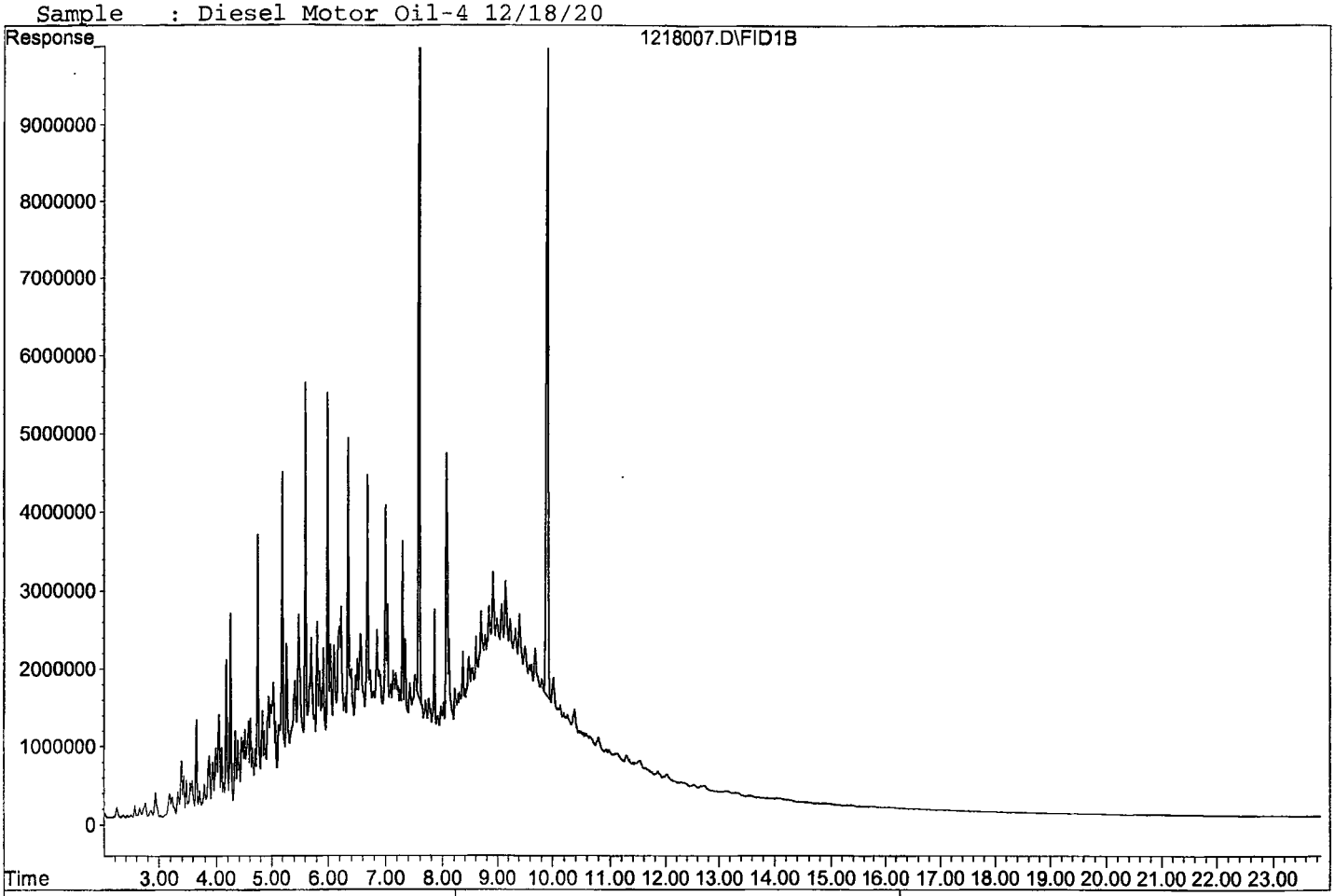
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

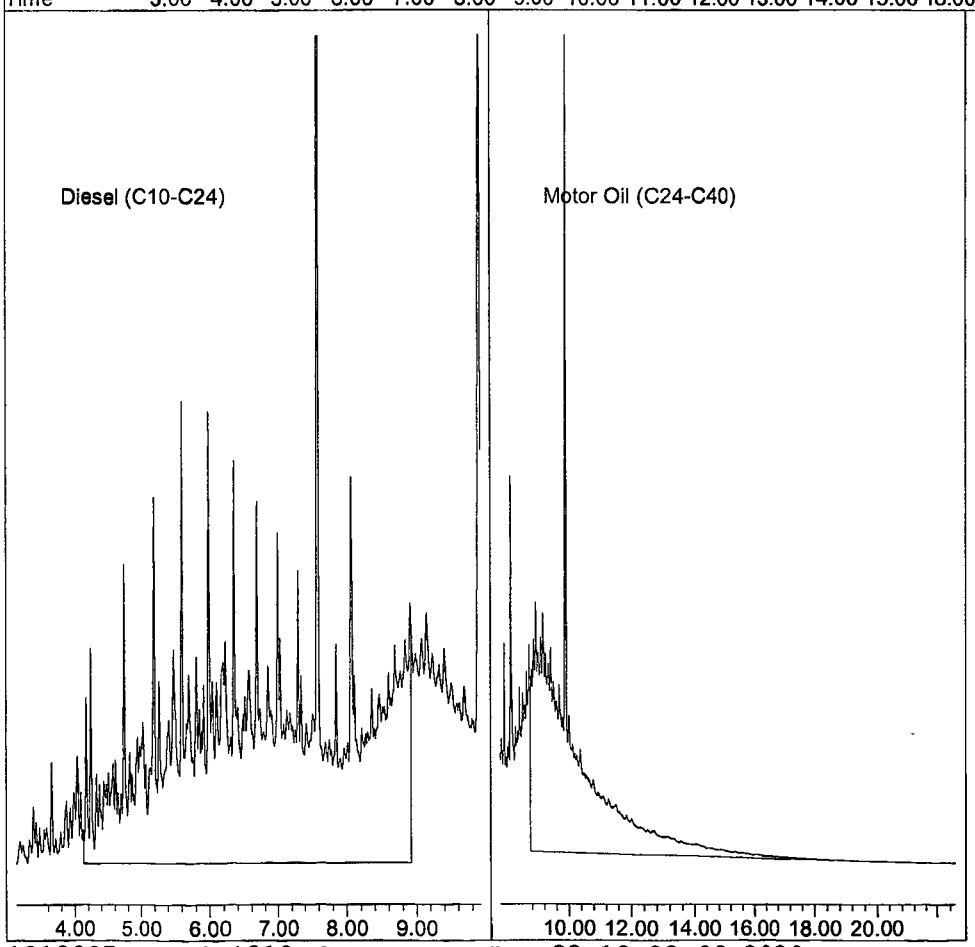
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





1218007.D DOC1218.M Tue Dec 22 10:23:08 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

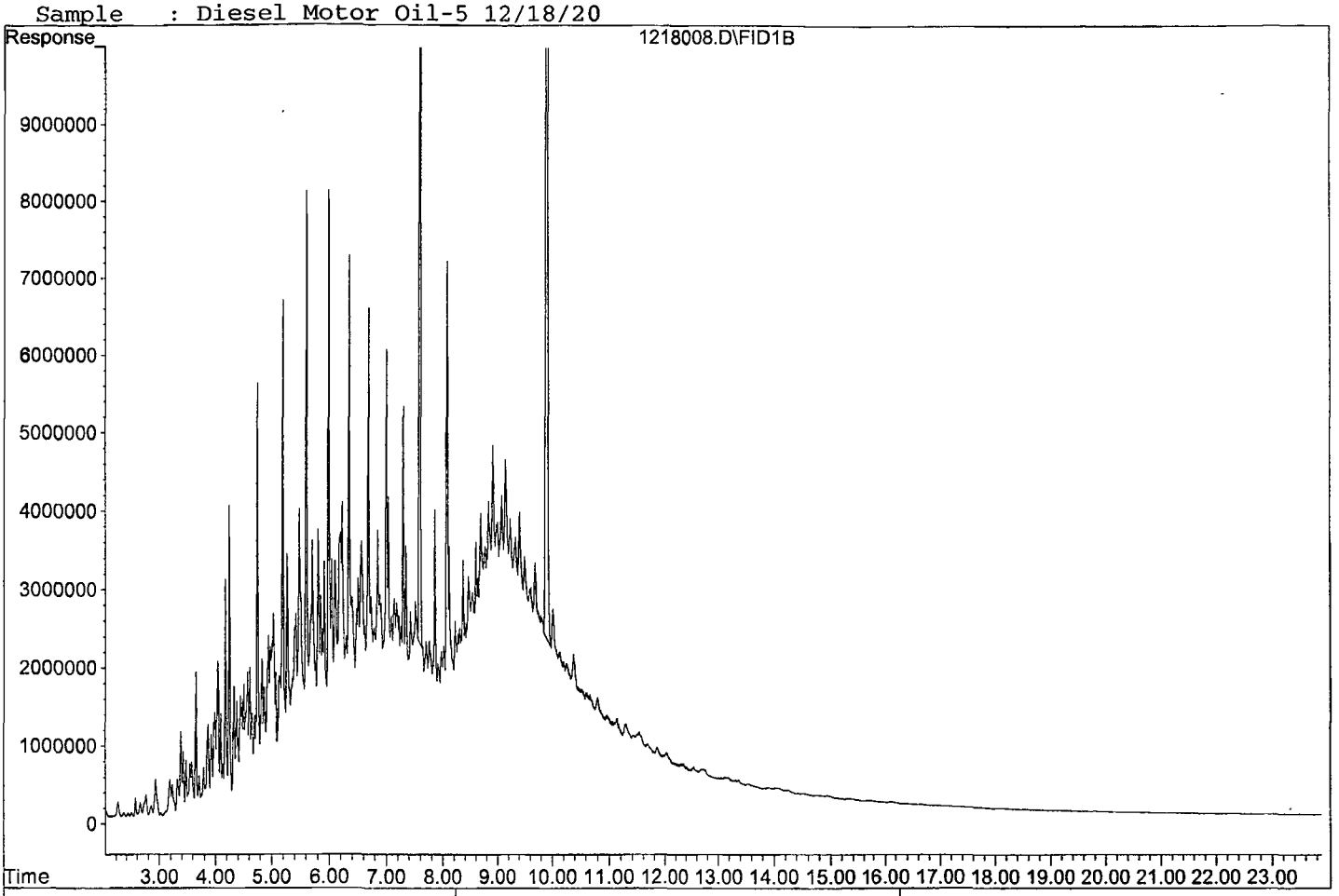
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

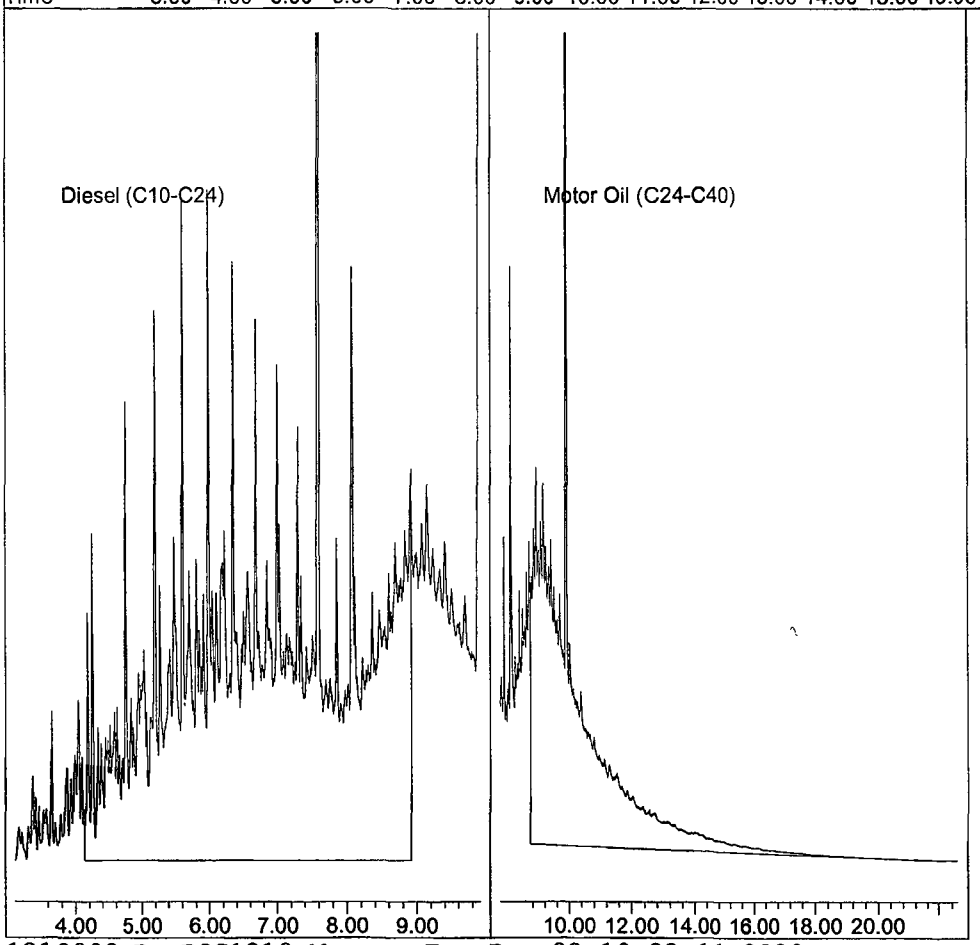
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000		Recovery =	224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000		Recovery =	237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

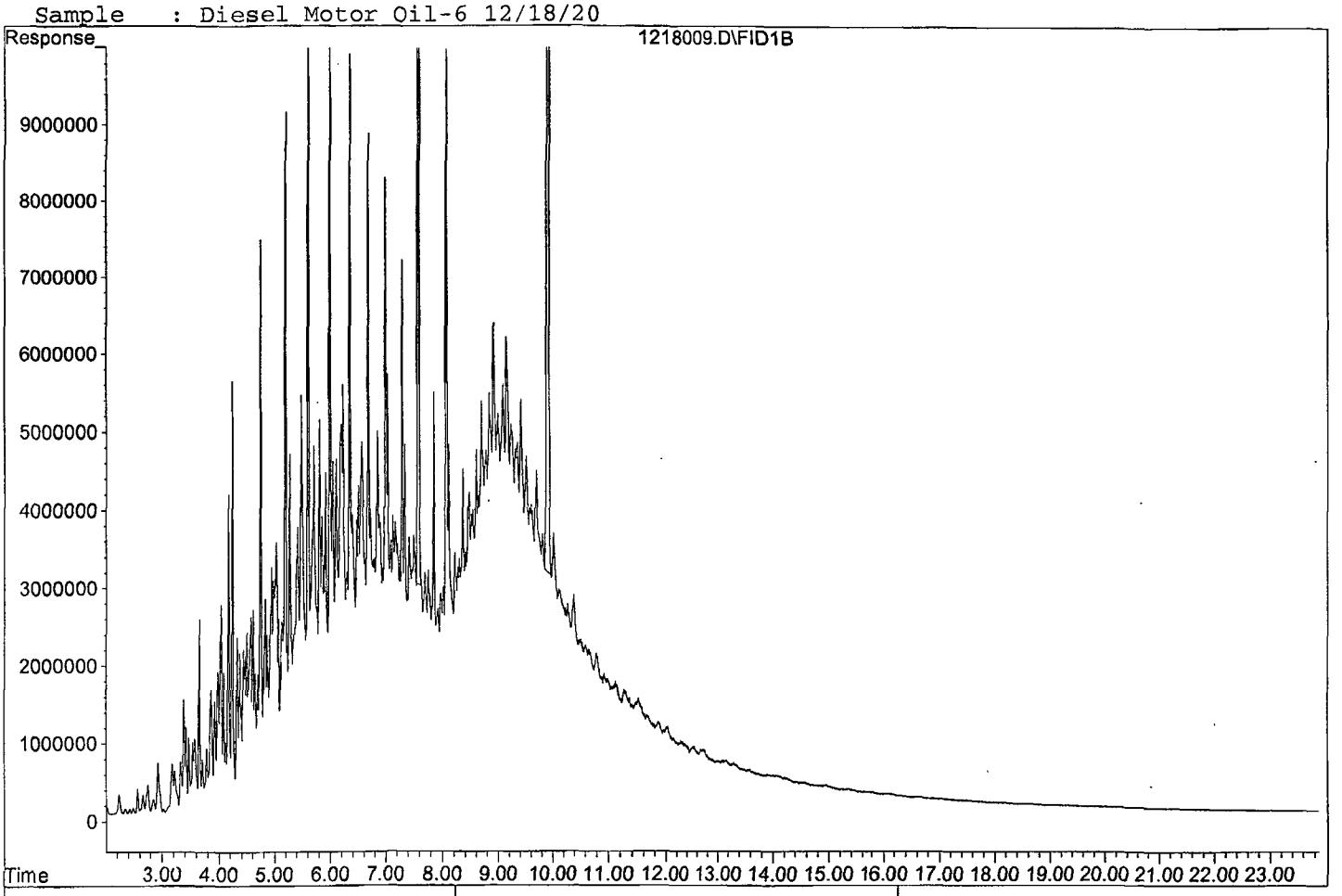
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572 ppb
Surrogate Spike 30.000		Recovery =	311.91%
4) SA Octacosane(S)	9.91	438795924	96.608 ppb
Surrogate Spike 30.000		Recovery =	322.03%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330 ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739 ppb

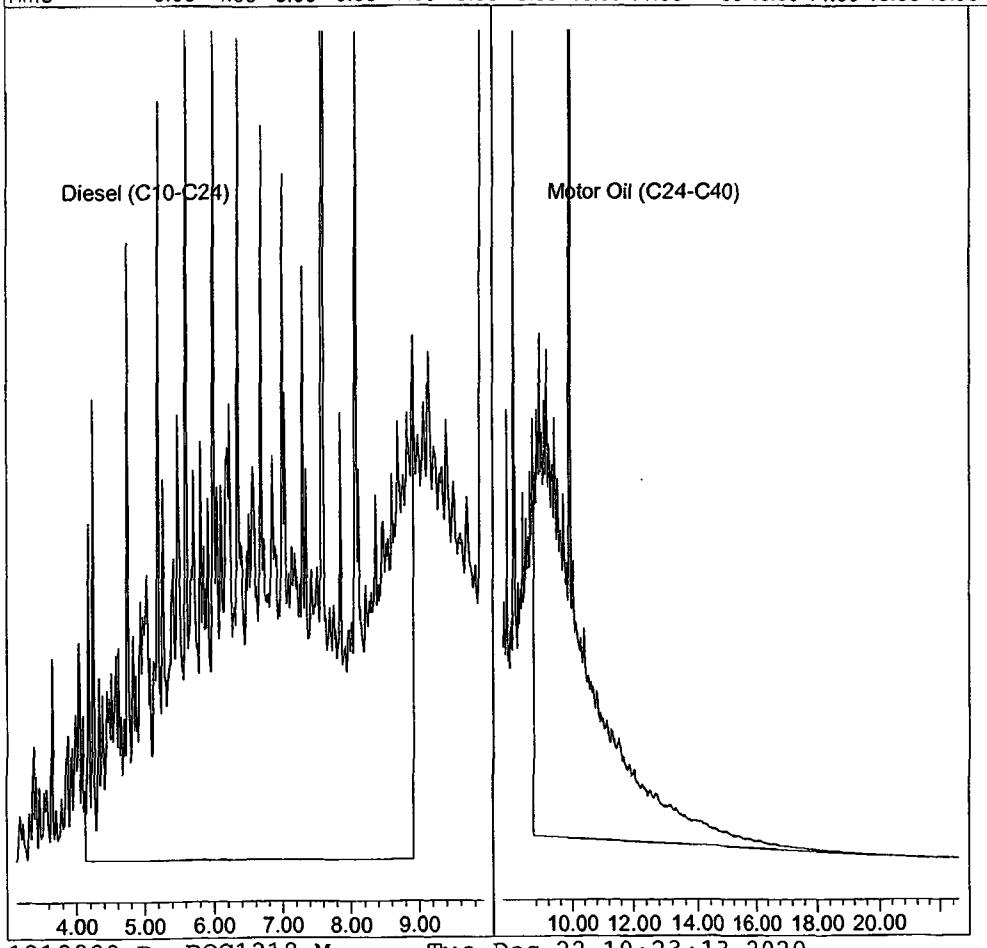
Target Compounds

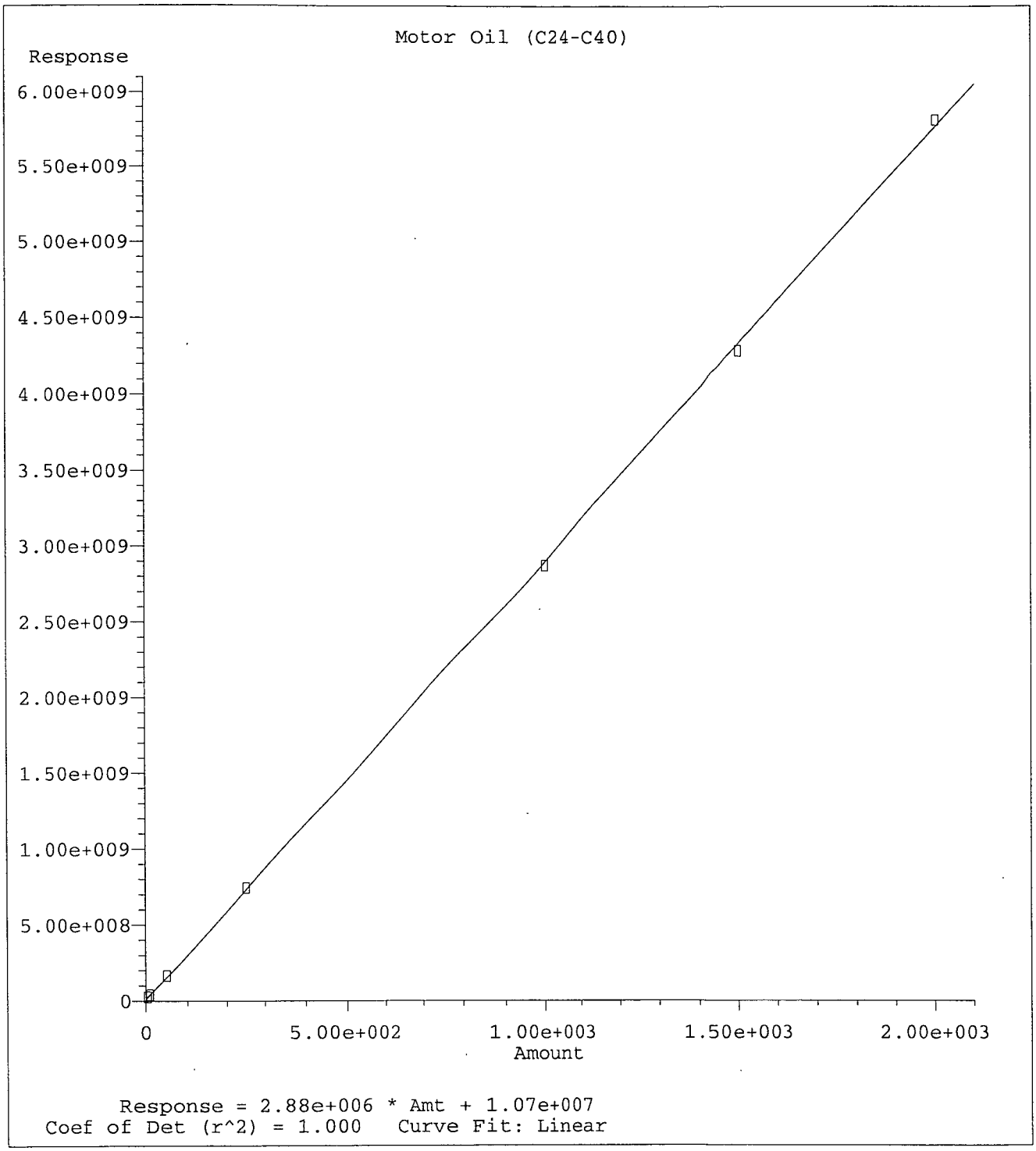
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20







Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

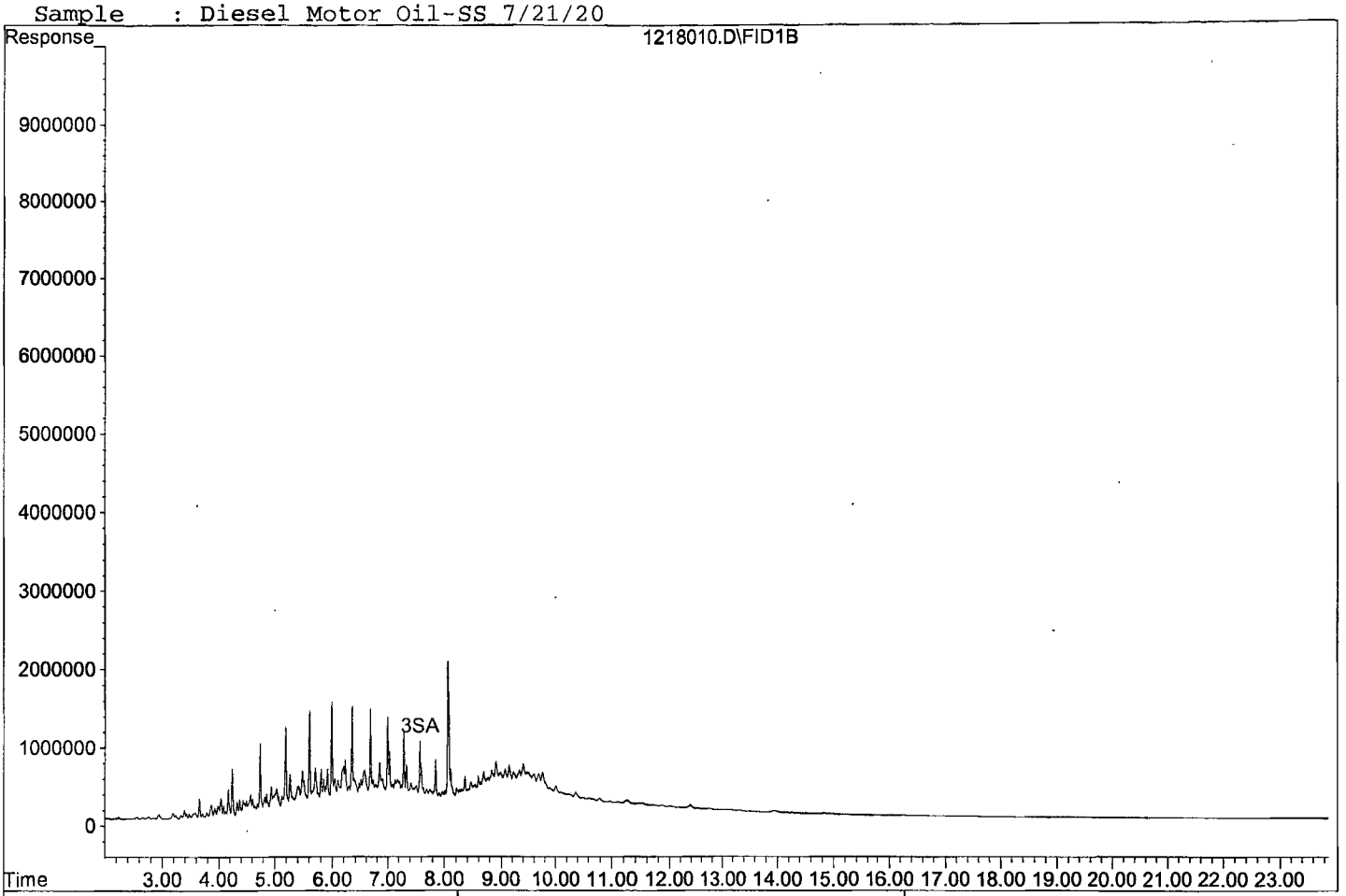
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

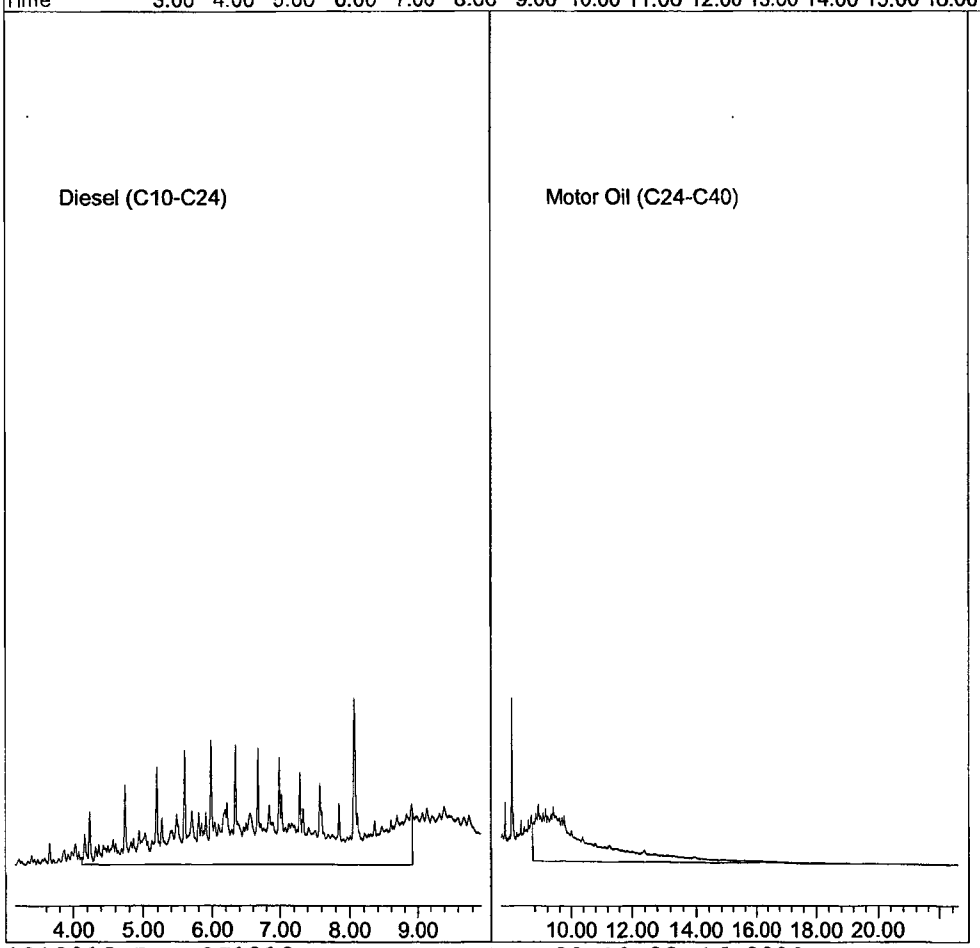
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000		Recovery =	2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000		Recovery =	0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107111.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2415920	1.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1552090	10	HBTML	6.4
3	SA	Ortho-Terphenyl(S)	2953720	2981650	0.95	SA	
4	SA	Octacosane(S)	2271000	2341700	3.1	SA	
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		Average			3.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107111.D Vial: 11
Acq On : 1-26-21 9:51:23 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 27 9:14 2021 Quant Results File: DOC1218.RES

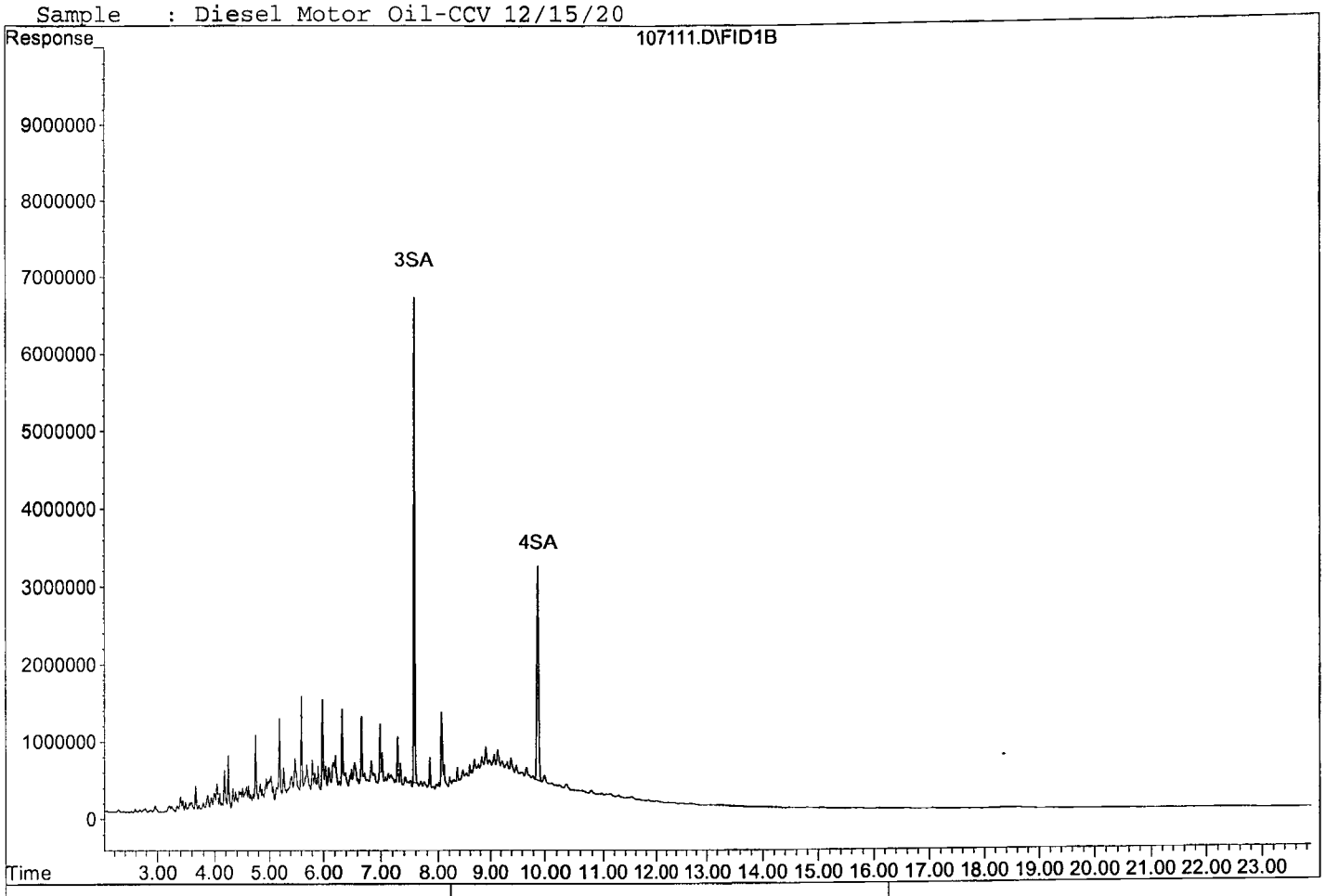
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

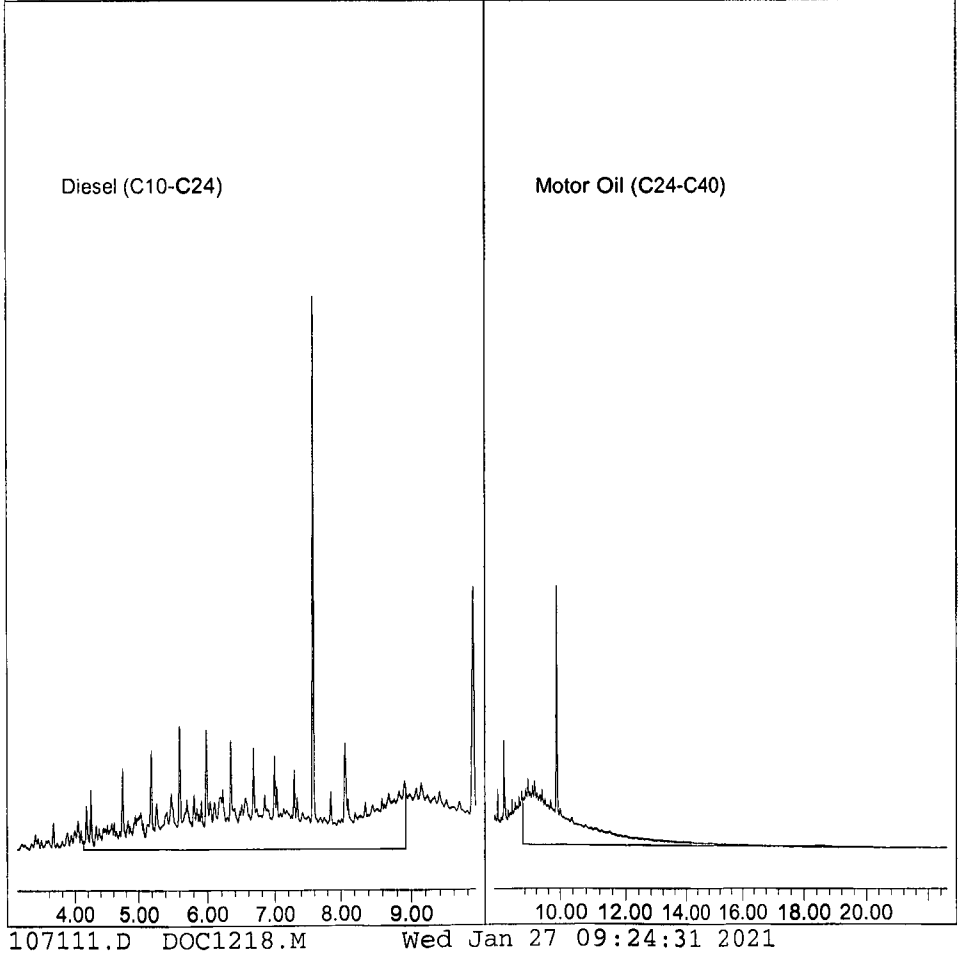
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	74541219	12.618 ppb
Surrogate Spike 30.000	Recovery =		42.06%
4) SA Octacosane(S)	9.88	58542440	12.889 ppb
Surrogate Spike 30.000	Recovery =		42.96%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1207959049	246.324 ppb
2) HBTM Motor Oil (C24-C40)	15.16	776047378	265.908 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107111.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107119.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2522880	2.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1603320	7.2	HBTML	9.9
3	SA	Ortho-Terphenyl(S)	2953720	3185830	7.9	SA	
4	SA	Octacosane(S)	2271000	2460990	8.4	SA	
5							
6							
7							
8							
9							
10							
11							
12							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107119.D Vial: 19
Acq On : 1-26-21 13:35:30 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 26 15:28 2021 Quant Results File: DOC1218.RES

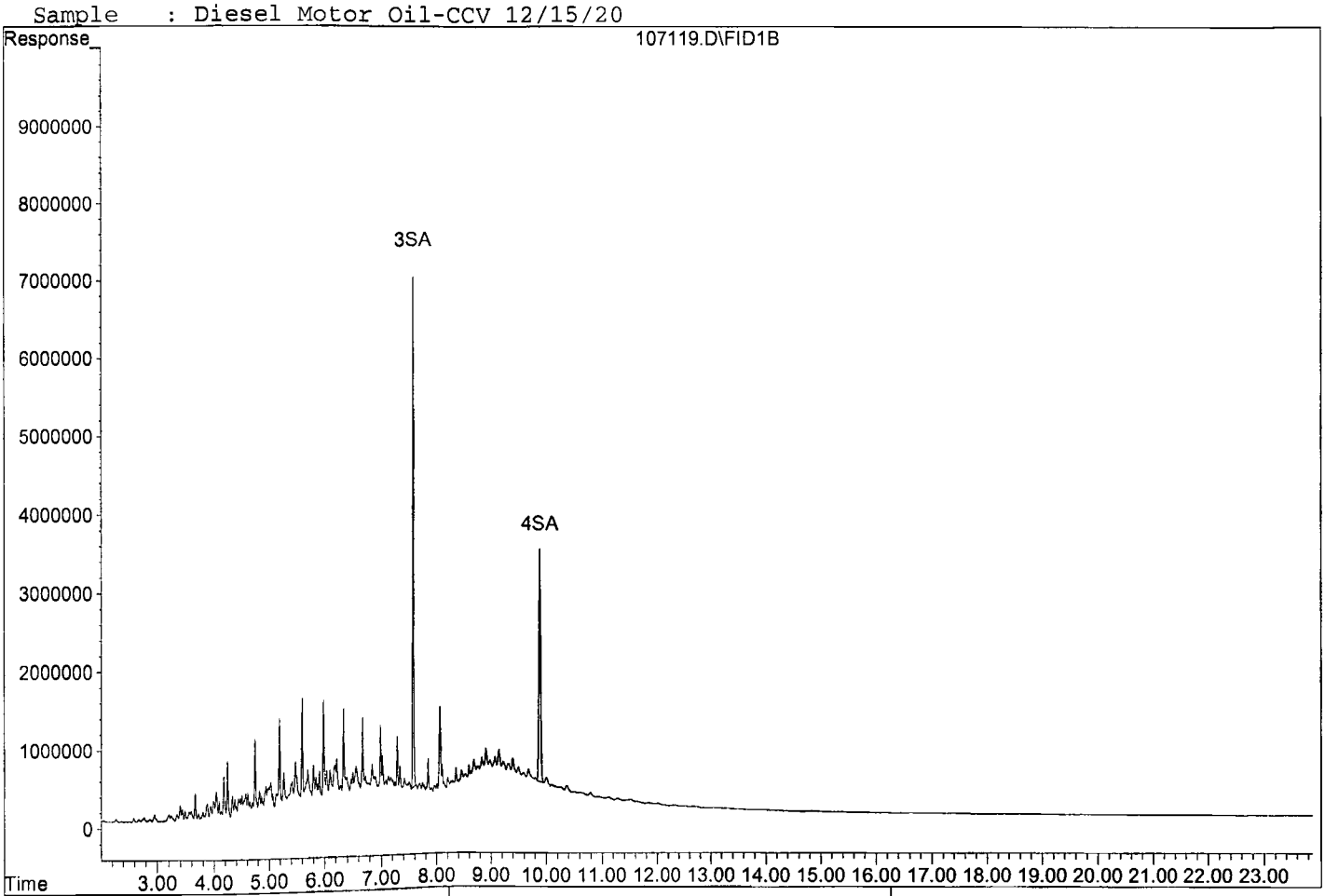
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

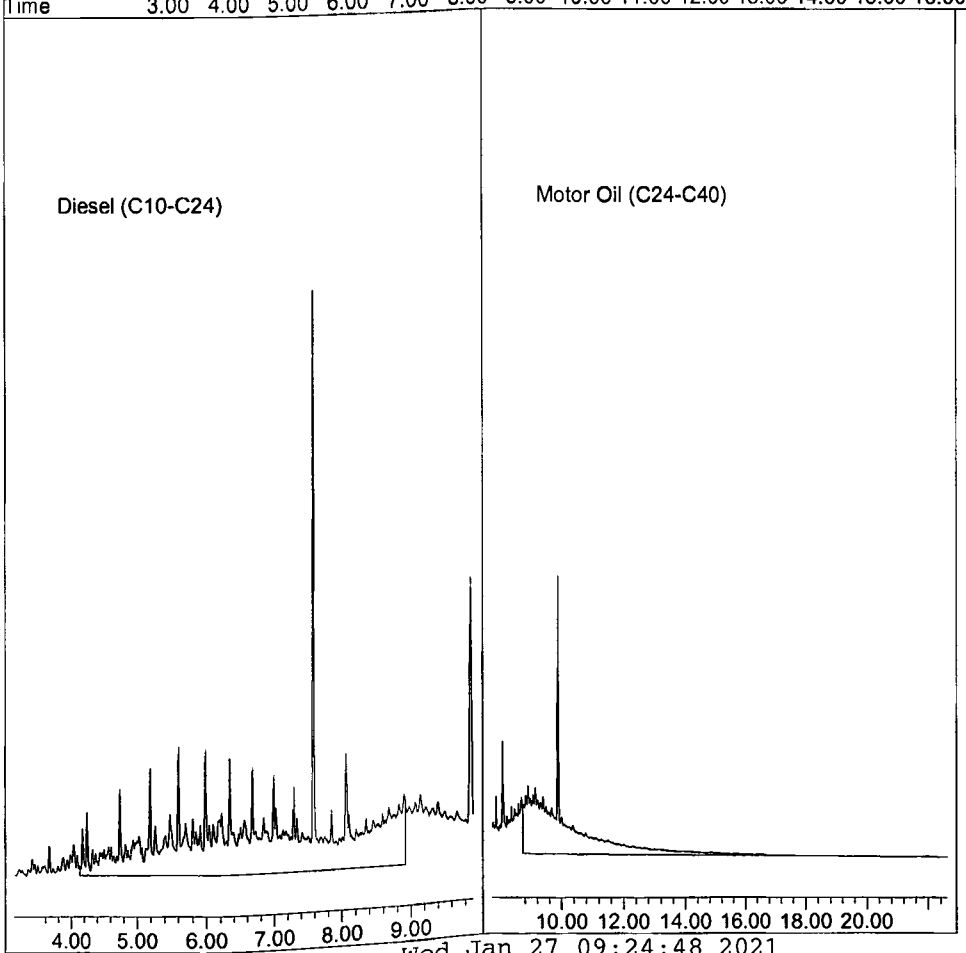
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	79645867	13.482 ppb
Surrogate Spike 30.000	Recovery =		44.94%
4) SA Octacosane(S)	9.88	61524758	13.546 ppb
Surrogate Spike 30.000	Recovery =		45.15%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1261442444	257.230 ppb
2) HBTM Motor Oil (C24-C40)	15.16	801661802	274.807 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107119.D
Sample : Diesel Motor Oil-CCV 12/15/20





107119.D DOC1218.M Wed Jan 27 09:24:48 2021

ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107117.D Vial: 17
Acq On : 1-26-21 12:39:28 Operator:
Sample : BA25526W28 5/1010 Inst : Apollo
Misc : water Multiplr: 4.95
IntFile : events.e
Quant Time: Jan 26 13:57 2021 Quant Results File: DOC1218.RES

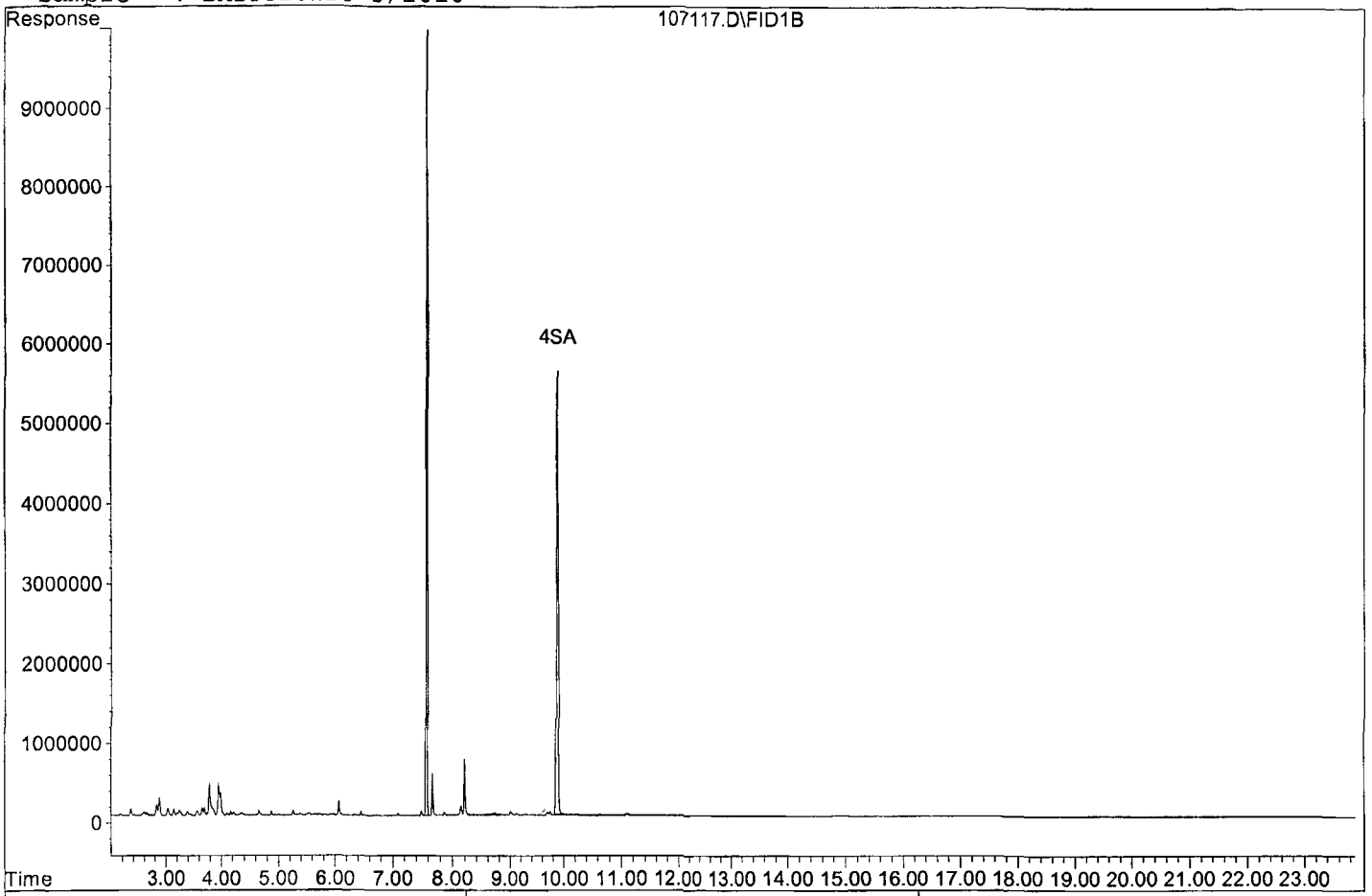
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

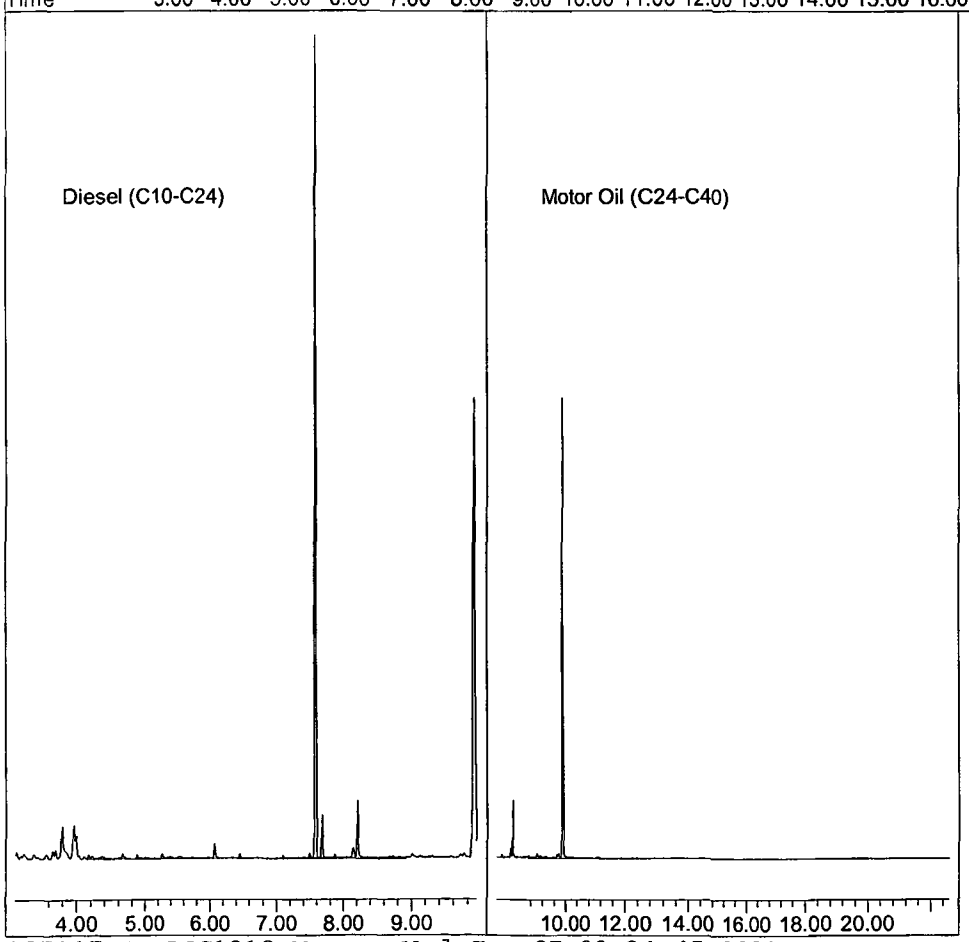
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	136287642	114.210 ppb
Surrogate Spike 148.515		Recovery =	76.90%
4) SA Octacosane(S)	9.88	121241183	132.145 ppb
Surrogate Spike 148.515		Recovery =	88.98%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49041389	49.507 ppb
2) HBTM Motor Oil (C24-C40)	15.16	39513263	49.550 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107117.D
Sample : BA25526W28 5/1010





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107112.D Vial: 12
Acq On : 1-26-21 10:19:24 Operator:
Sample : 210122A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:22 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

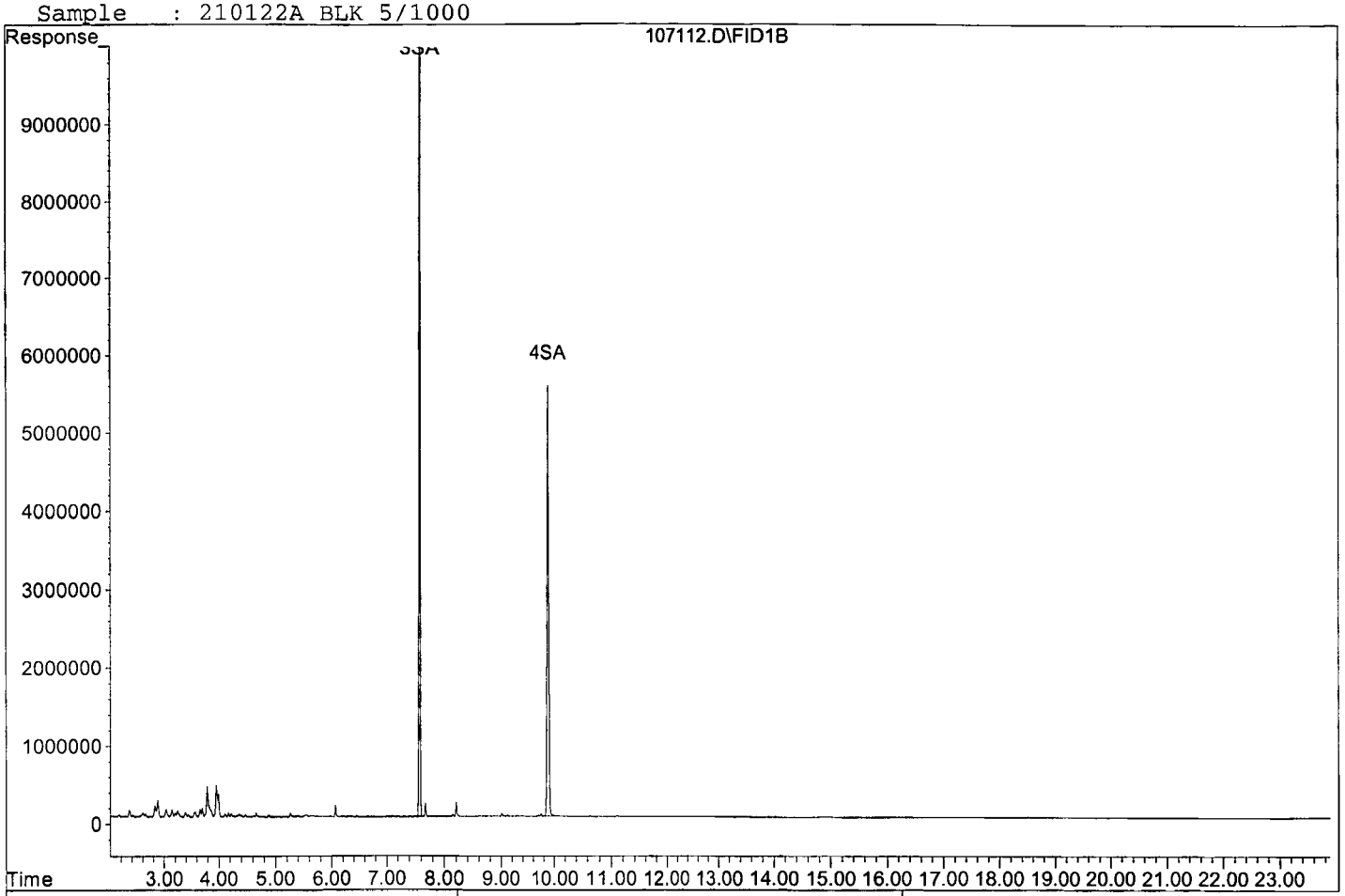
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

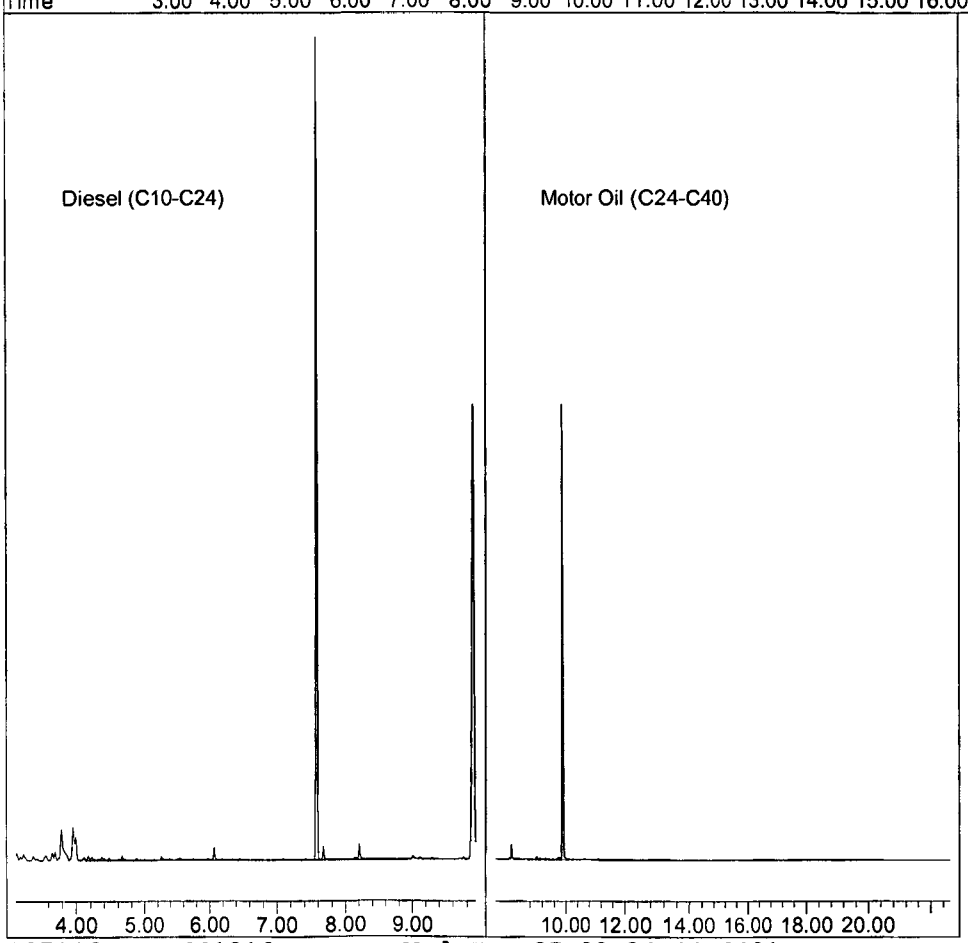
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	131200030	111.046 ppb
Surrogate Spike 150.000		Recovery =	74.03%
4) SA Octacosane(S)	9.88	118928389	130.921 ppb
Surrogate Spike 150.000		Recovery =	87.28%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	26352074	26.868 ppb
2) HBTM Motor Oil (C24-C40)	15.16	27606510	29.361 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107112.D
Sample : 210122A BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107113.D Vial: 13
Acq On : 1-26-21 10:47:24 Operator:
Sample : 210122A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:23 2021 Quant Results File: DOC1218.RES

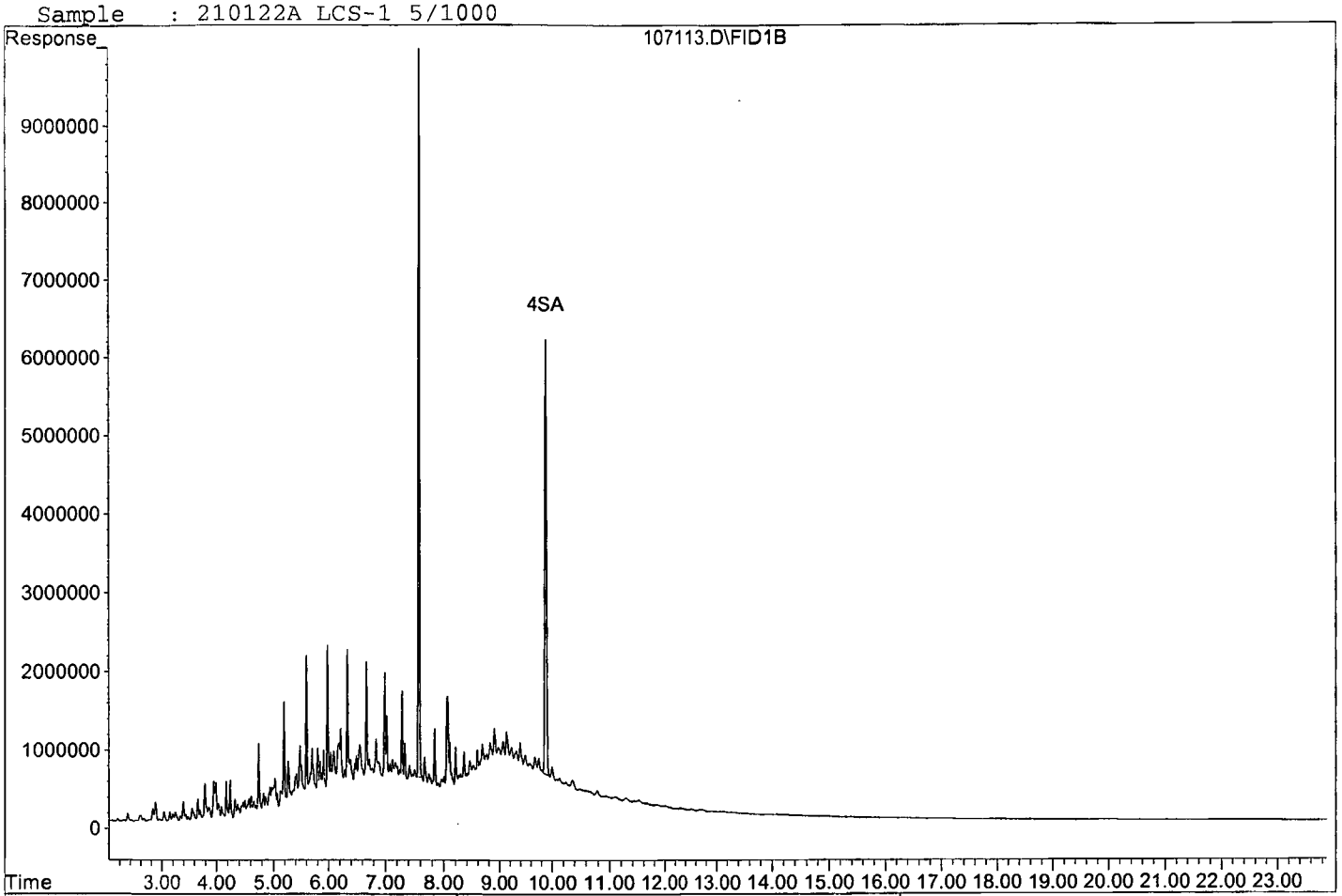
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

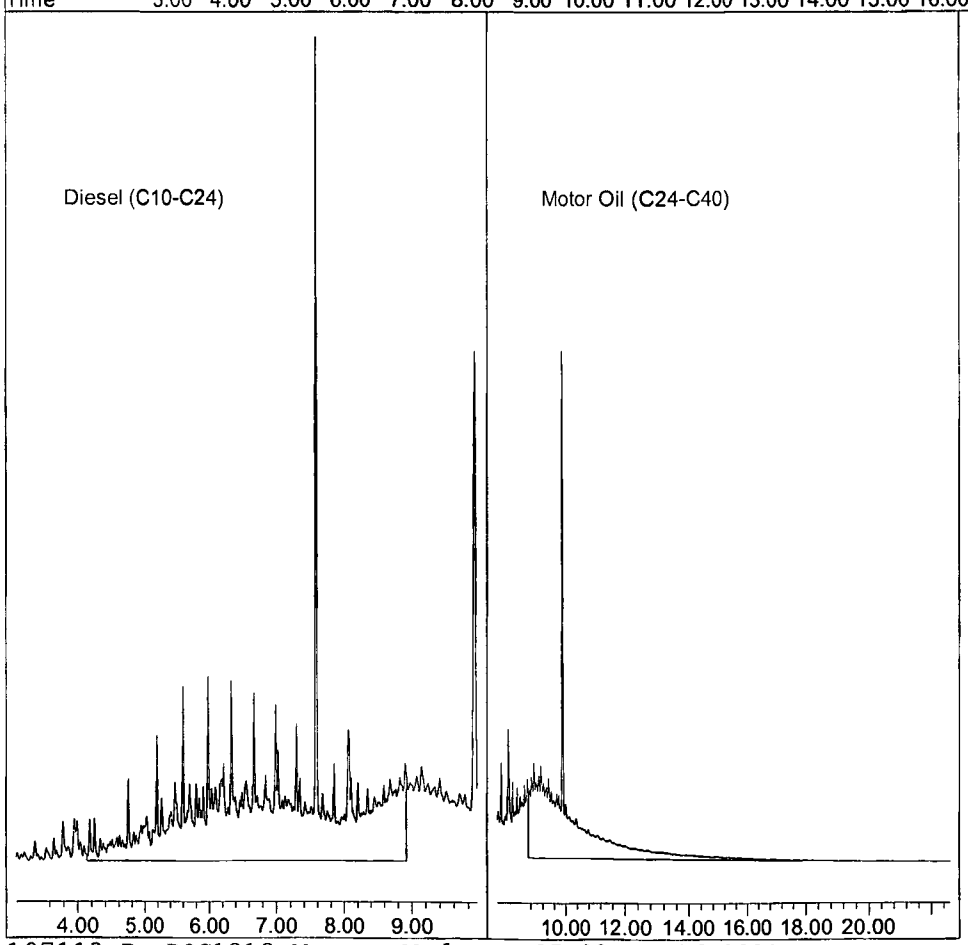
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	149887610	126.863 ppb
Surrogate Spike 150.000		Recovery =	84.58%
4) SA Octacosane(S)	9.89	118201428	130.120 ppb
Surrogate Spike 150.000		Recovery =	86.75%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1751334011	1785.637 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1113164484	1915.171 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107113.D
Sample : 210122A LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107115.D
Acq On : 1-26-21 11:43:27
Sample : BA25526W29 MS-1 5/1000
Misc : water
IntFile : events.e
Quant Time: Jan 26 13:57 2021 Quant Results File: DOC1218.RES

Vial: 15
Operator:
Inst : Apollo
Multiplr: 5.00

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

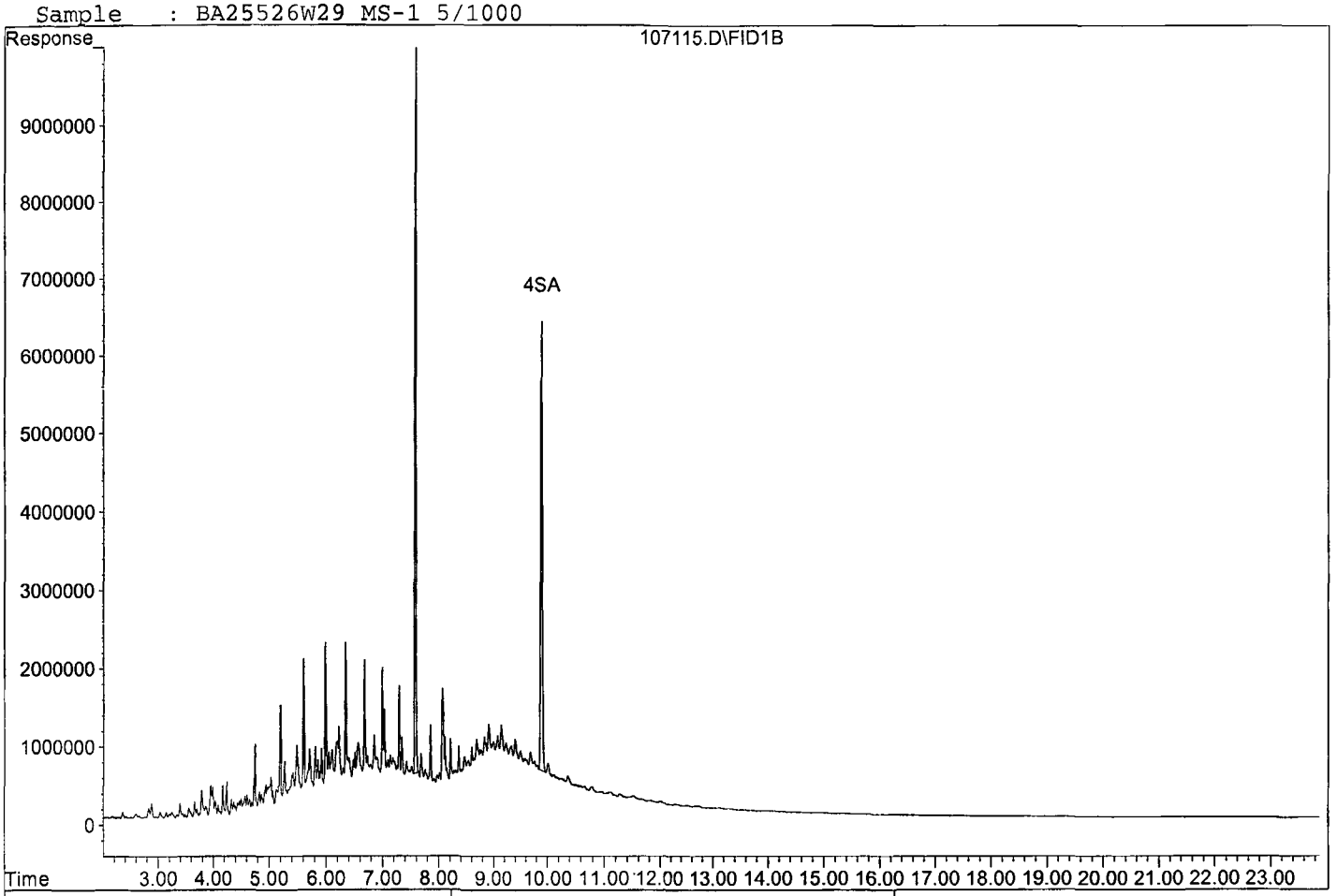
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

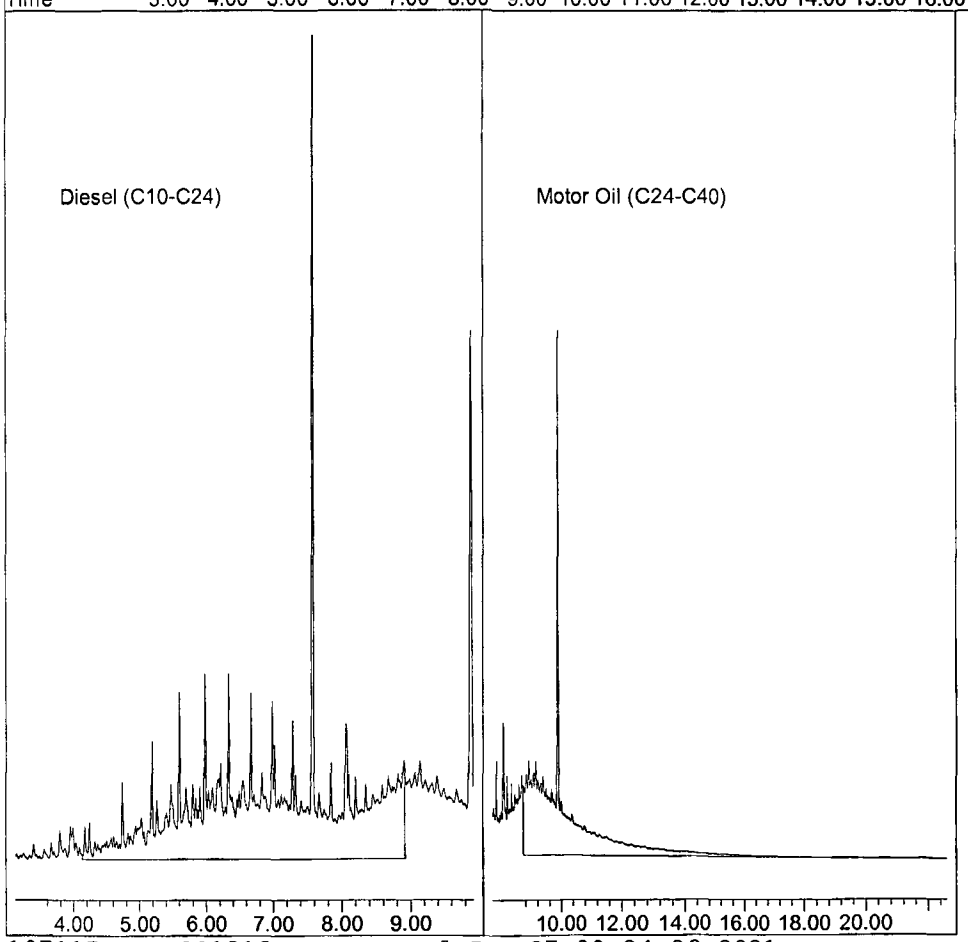
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	153354466	129.798 ppb
Surrogate Spike 150.000		Recovery =	86.53%
4) SA Octacosane(S)	9.89	122202521	134.525 ppb
Surrogate Spike 150.000		Recovery =	89.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1741032792	1775.134 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1127275221	1939.684 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107115.D
Sample : BA25526W29 MS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107116.D Vial: 16
Acq On : 1-26-21 12:11:29 Operator:
Sample : BA25526W24 MSD-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:57 2021 Quant Results File: DOC1218.RES

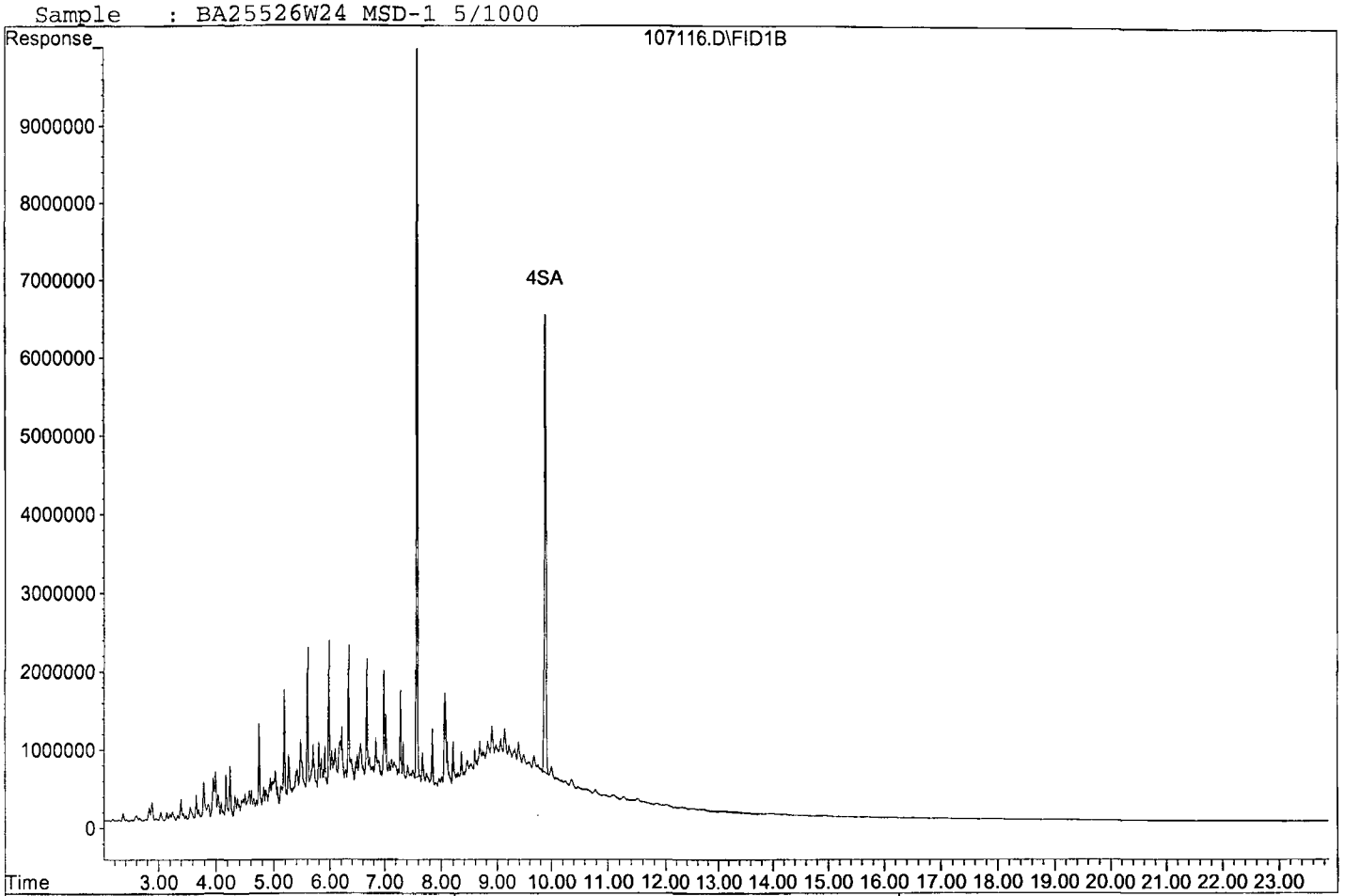
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

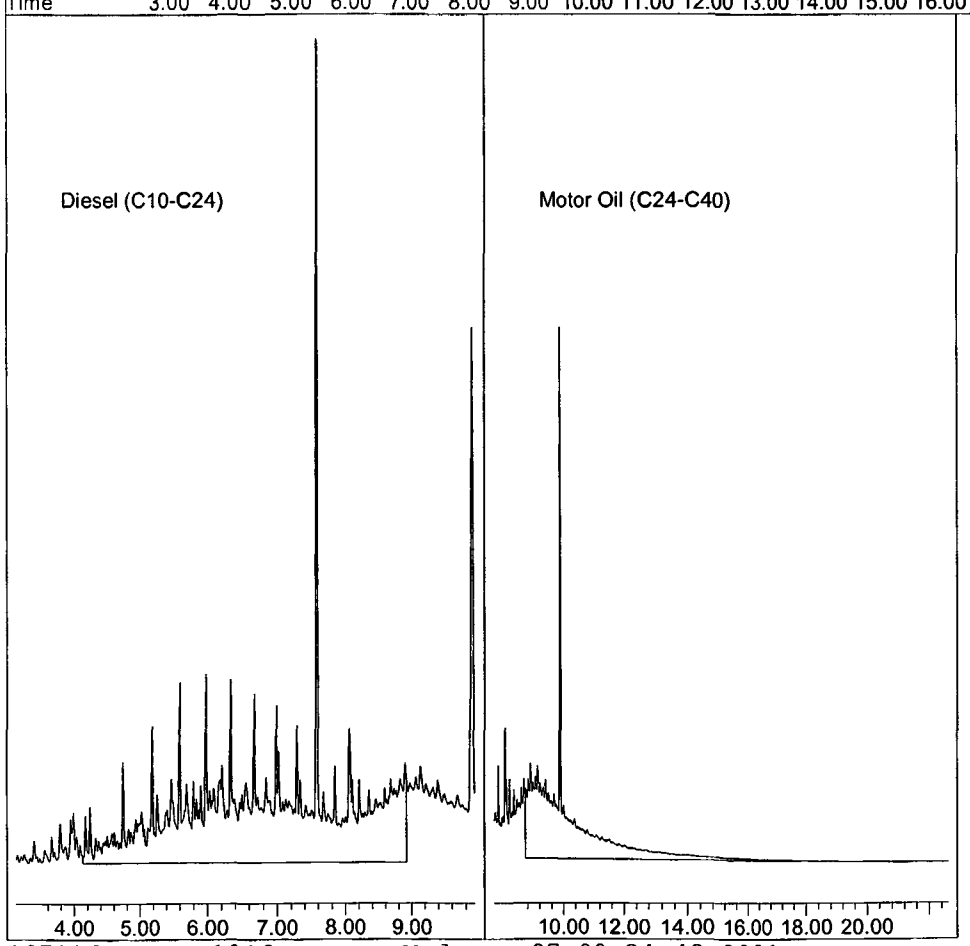
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	151665915	128.368 ppb
Surrogate Spike 150.000		Recovery =	85.58%
4) SA Octacosane(S)	9.89	119519448	131.571 ppb
Surrogate Spike 150.000		Recovery =	87.71%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1812925449	1848.435 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1123063947	1932.368 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107116.D
Sample : BA25526W24 MSD-1 5/1000





107116.D DOC1218.M Wed Jan 27 09:24:42 2021

THC Surrogate

Prepared: 01/11/21 **Prepared By (Initials): SS**

Expires: 01/11/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15902-50967**	**12/14/21**	**10/31/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 11/23/20 **Prepared By (Initials): LS**

Expires: 11/23/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0156490-50988,50989,50993**	**11/23/21**	**02/28/27**	3.84 mL	7.68 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0157842-50995,50996,50997**	**11/23/21**	**03/31/27**	3.84 mL			25,000

Diesel / Motor Oil CCV

Prepared: 12/15/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	**08/05/21**	**06/30/25**	1250uL	10mL	MC	250

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	**08/11/21**	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464 .	50,000	**A0155668-50515,50518,50519**	**08/11/21**	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	08/05/21	**06/30/25**	1666uL			100

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210122A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 11-23-20 11-23-21		Surrogate ID 1	THC Surrogate 1-11-21 1-11-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:45	Water Bath Temp 1 °C	40/38.5 °C
pH2			Water Bath Temp 2 °C	38/41.1
pH3			Water Bath Temp 3 °C	37/36.5 °C

Spiked By: KY **Date** 01/22/21 **Witnessed By:** CFM **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP25 E-WB1				
2	210122A LCS-1		0.080	1	0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP26 E-WB2				
3	BA25434	BA25434W25			0.250	1	1010	5	2	01/22/21 12:48	94808
						equip	E-HP47 E-WB3				
4	BA25526 MS-1	BA25526W29	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP48 E-WB2				
5	BA25526 MSD-1	BA25526W24	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP49 E-WB3				
6	BA25526	BA25526W28			0.250	1	1010	5	2	01/22/21 12:48	94825
						equip	E-HP50 E-WB1				
7	BA25529	BA25529W17			0.250	1	1050	5	2	01/22/21 12:48	94826
						equip	E-HP51 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/26/21
Time	7:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	DL,KY
Concentration	YL,SB

Modified	01/26/21 8:19:48 AM

Reviewed By: SS **Date** 01/27/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	11	107111.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 9:51:23
10	12	107112.D	5	210122A BLK 5/1000	water	1-26-21 10:19:24
11	15	107115.D	5	BA25526W29 MS-1 5/1000	water	1-26-21 11:43:27
12	16	107116.D	5	BA25526W24 MSD-1 5/1000	water	1-26-21 12:11:29
13	17	107117.D	4.9505	BA25526W28 5/1010	water	1-26-21 12:39:28
14	19	107119.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 13:35:30

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006 D	0105Y007.D	0105Y008 D	0105Y009.D	0105Y010.D	0105Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

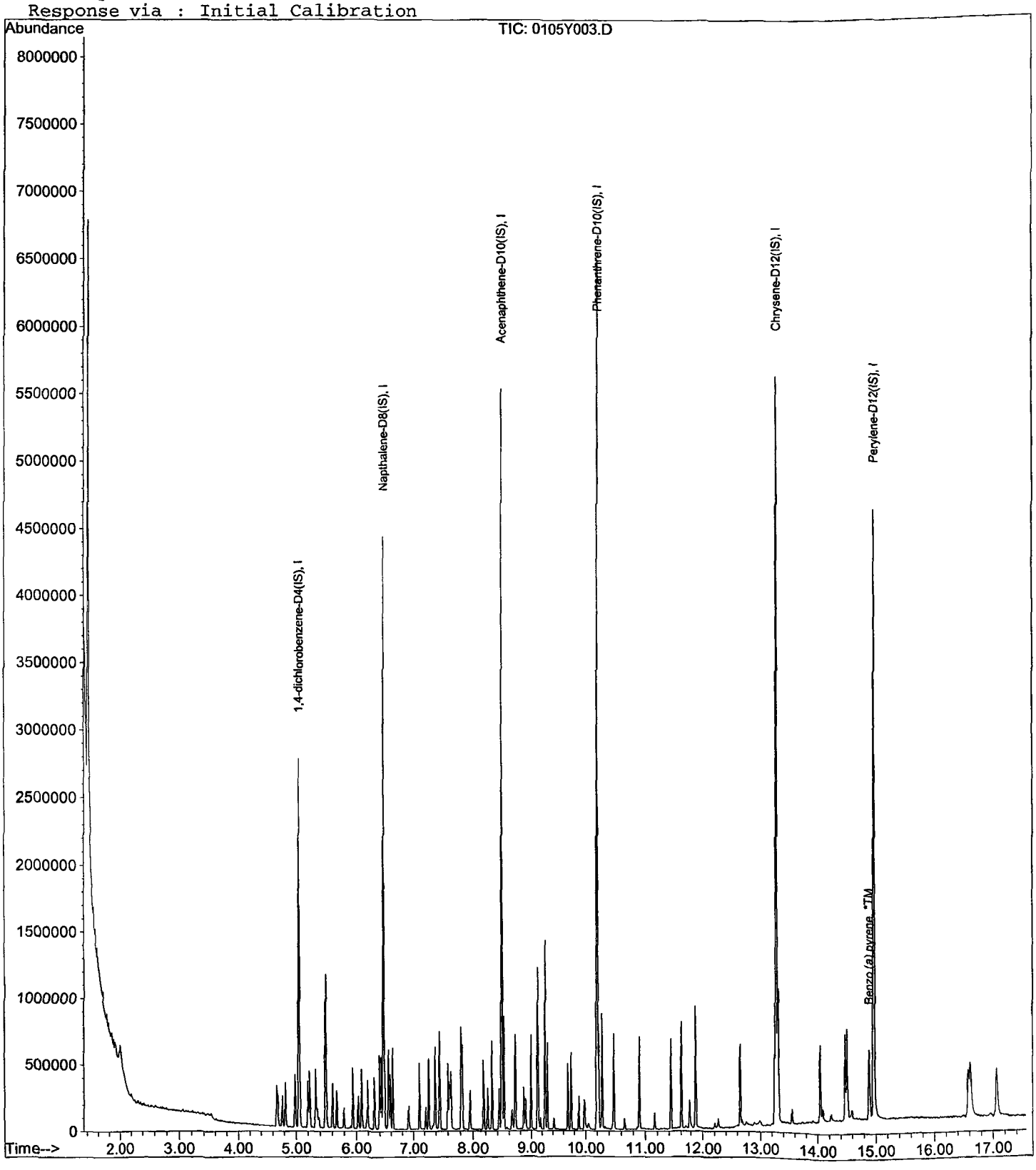
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037	# 1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

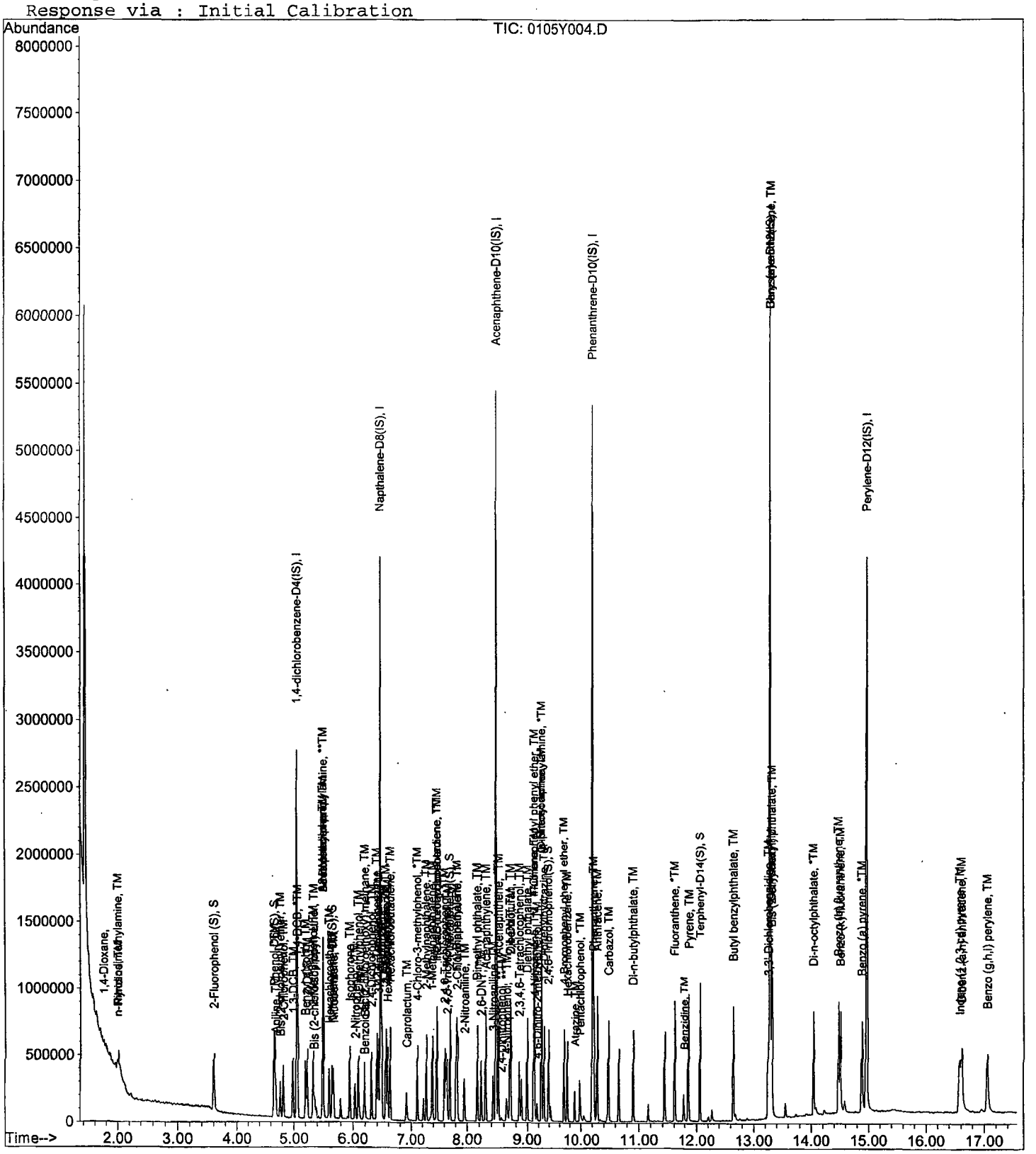
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411	ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%			
6) Phenol-D6 (S)	4.66	99	492275	20.31208	ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%			
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036	ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%			
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840	ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%			
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194	ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%			
82) Terphenyl-D14(S)	12.07	244	719678	9.80130	ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713			91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743	ppb		80
4) Pyridine	2.00	79	159922	10.10773	ppb		95
7) Phenol	4.67	94	284850	9.94852	ppb		94
8) Aniline	4.69	93	215040	10.28244	ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288	ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397	ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890	ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580	ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889	ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913	ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047	ppb		96
17) Acetophenone	5.49	105	301622	9.93857	ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173	ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080	ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192	ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780	ppb		91
24) Isophorone	5.95	82	433948	9.99676	ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219	ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036	ppb		99
27) Benzoic acid	6.19	105	96995	12.03014	ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695	ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390	ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216	ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228	ppb		98
32) Naphthalene	6.49	128	626299	10.16177	ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495	ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280	ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411	ppb		94
37) Caprolactum	6.93	55	62259	10.01107	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

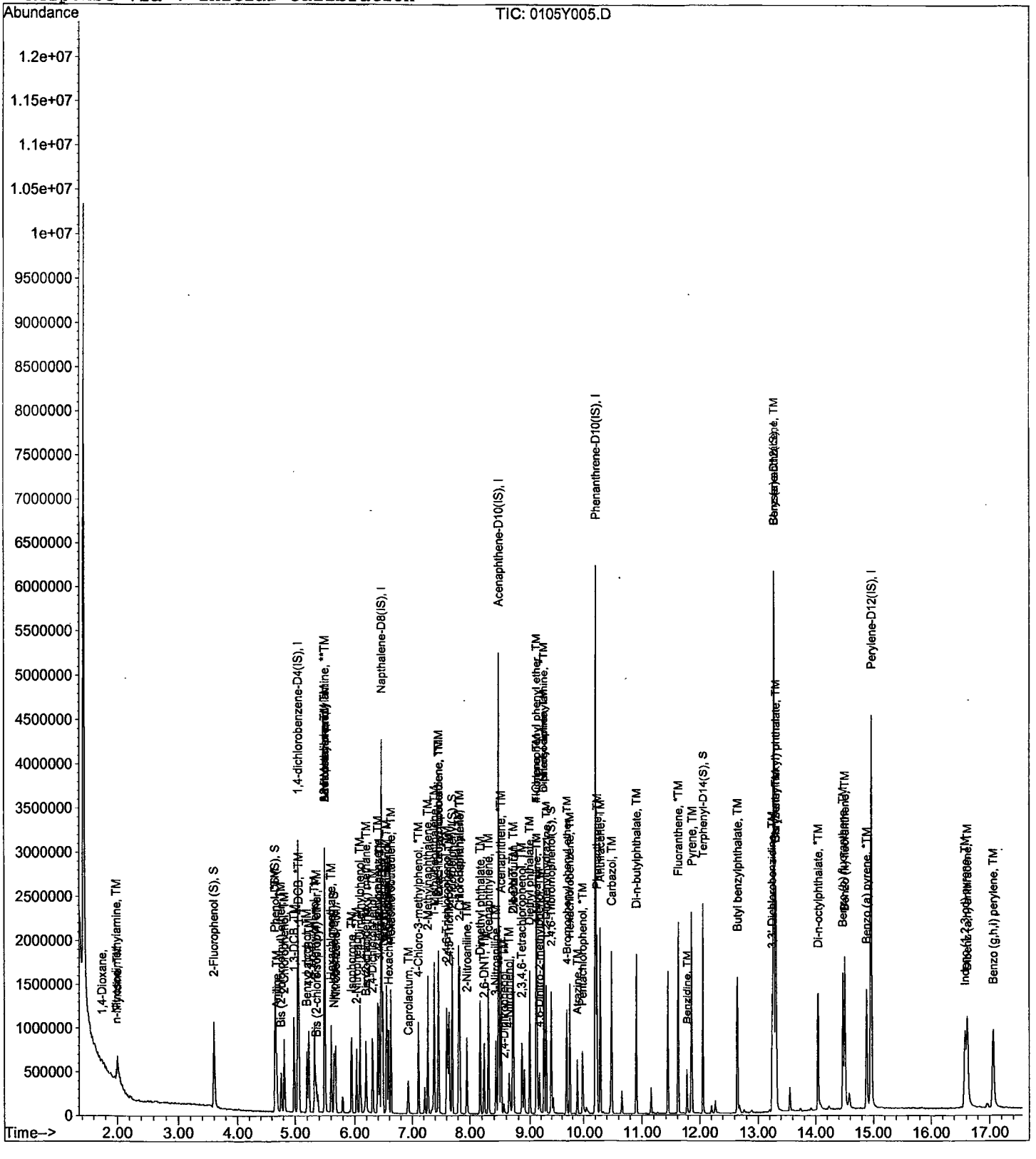
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery	= 19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery	= 19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

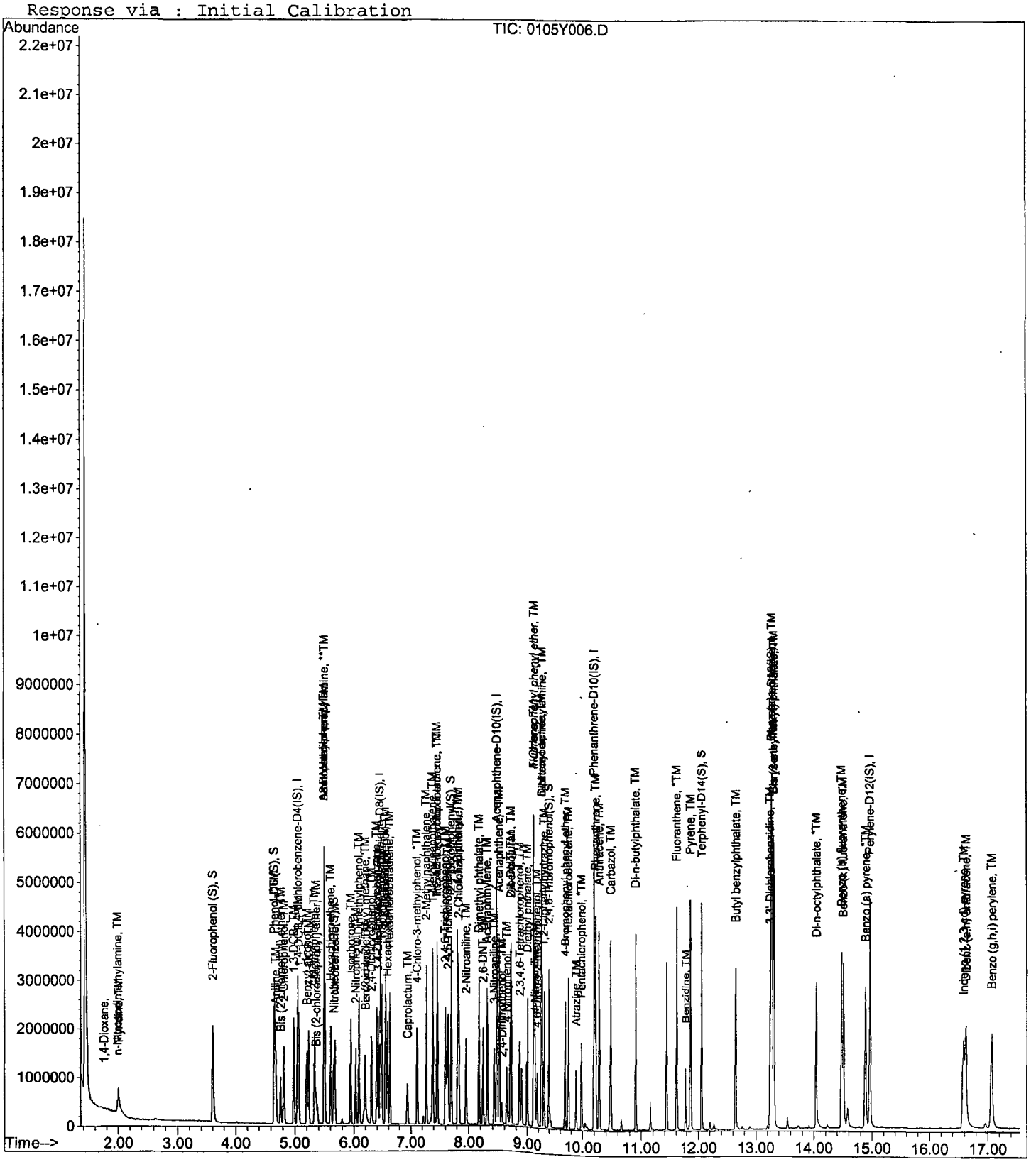
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967	ppb	0.00
Spiked Amount 200.000			Recovery = 40.315%			
6) Phenol-D6 (S)	4.67	99	2073058	80.33420	ppb	0.00
Spiked Amount 200.000			Recovery = 40.167%			
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156	ppb	0.00
Spiked Amount 100.000			Recovery = 39.782%			
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219	ppb	0.00
Spiked Amount 100.000			Recovery = 39.422%			
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158	ppb	0.00
Spiked Amount 200.000			Recovery = 39.906%			
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922	ppb	0.00
Spiked Amount 100.000			Recovery = 40.089%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747		54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850	ppb	93
4) Pyridine	1.99	79	710577	42.17927	ppb	100
7) Phenol	4.68	94	1249780	40.99379	ppb	96
8) Aniline	4.69	93	852672	38.29141	ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360	ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826	ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439	ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338	ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093	ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316	ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142	ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767	ppb	98
17) Acetophenone	5.49	105	1298420	40.18079	ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017	ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972	ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083	ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355	ppb	99
24) Isophorone	5.95	82	1929574	40.57653	ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009	ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262	ppb	95
27) Benzoic acid	6.22	105	694050	39.13552	ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698	ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706	ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464	ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676	ppb	97
32) Naphthalene	6.49	128	2700428	39.99560	ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681	ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710	ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202	ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790	ppb	96
37) Caprolactum	6.96	55	275073	40.37550	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

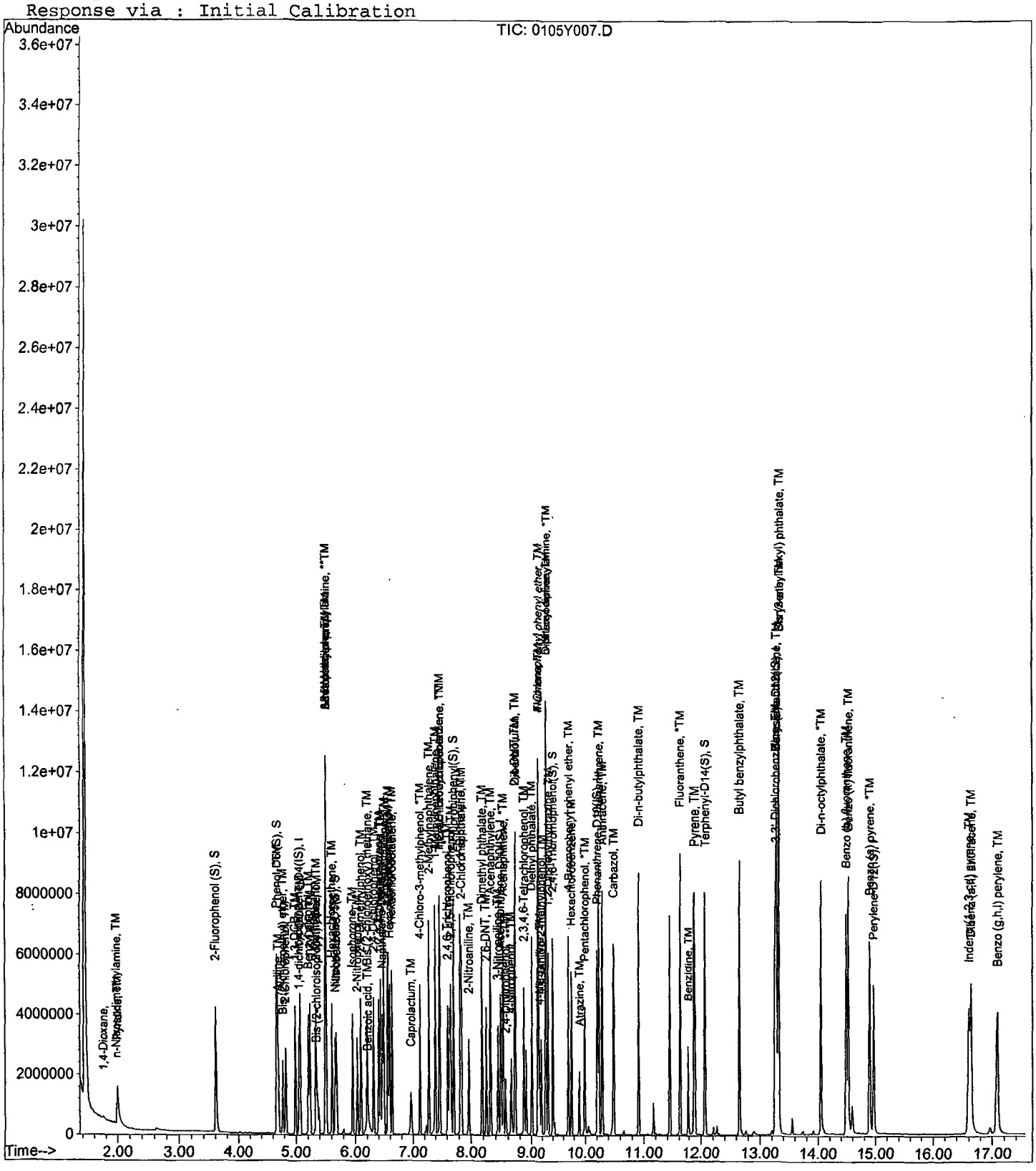
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501 ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827 ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678 ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033 ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973 ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691 ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290 ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584 ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983 ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022 ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174 ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741 ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990 ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046 ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381 ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245 ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395 ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389 ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069 ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506 ppb	100
62)	Fluorene	9.11	166	2868571	49.36863 ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128 ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785 ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785 ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089 ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978 ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367 ppb	100
72)	Atrazine	9.89	200	418889	26.25754 ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356 ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640 ppb	100
75)	Anthracene	10.29	178	4512131	51.82540 ppb	100
76)	Carbazol	10.49	167	4021683	52.16528 ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661 ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724 ppb	100
80)	Benzidine	11.78	184	1334887	54.03870 ppb	100
81)	Pyrene	11.88	202	5487771	52.99187 ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593 ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347 ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761 ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599 ppb	100
87)	Chrysene	13.31	228	5235913	52.38491 ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495 ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338 ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646 ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782 ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159 ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960 ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590 ppb	100

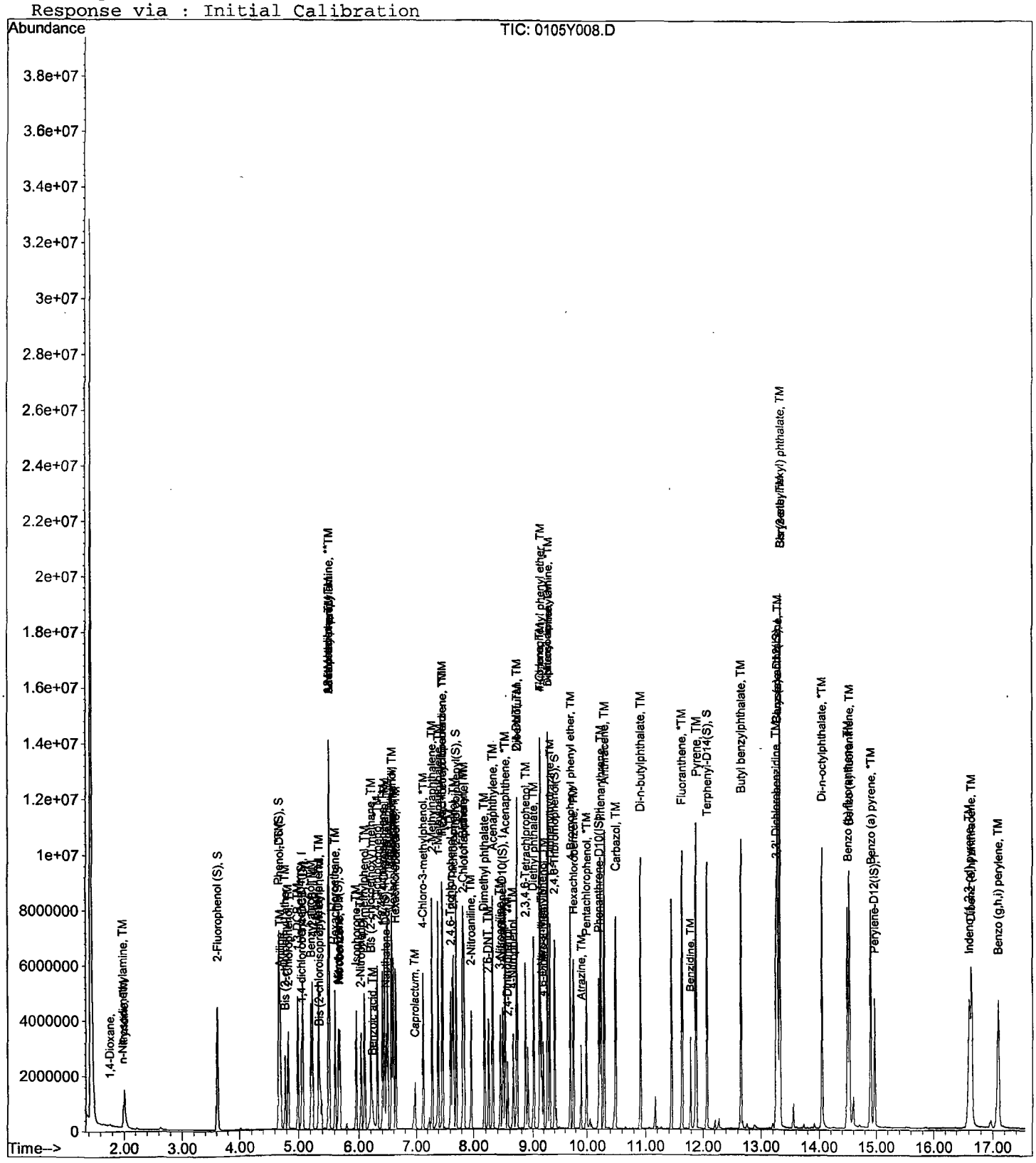
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382	ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%				
6) Phenol-D6 (S)	4.67	99	2714982	119.91052	ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%				
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297	ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%				
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223	ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868	ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%				
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361	ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380			95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310	ppb		92
4) Pyridine	1.99	79	901311	60.97669	ppb		97
7) Phenol	4.68	94	1606167	60.04495	ppb		96
8) Aniline	4.69	93	1200640	61.45164	ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145	ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776	ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182	ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978	ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043	ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365	ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897	ppb		96
17) Acetophenone	5.50	105	1702308	60.04028	ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638	ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425	ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967	ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951	ppb		89
24) Isophorone	5.96	82	2504820	59.55758	ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859	ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930	ppb		99
27) Benzoic acid	6.23	105	965560	57.47534	ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945	ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990	ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563	ppb		100
32) Naphthalene	6.49	128	3532998	59.16571	ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729	ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808	ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347	ppb		98
37) Caprolactum	6.98	55	354905	58.90188	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb		97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb		99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb		95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb		99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb		98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb		91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb		97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb		92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb		100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb		99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb		99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb		93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb		93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb		98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb		98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb		98
62)	Fluorene	9.11	166	3228662	60.22935	ppb		100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb	#	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb		96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb		96
72)	Atrazine	9.89	200	456257	29.70998	ppb		98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb		99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb		99
75)	Anthracene	10.29	178	5016441	59.85415	ppb		100
76)	Carbazol	10.49	167	4476193	60.31428	ppb		98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb		99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb	#	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb		99
81)	Pyrene	11.88	202	6087066	61.51608	ppb		100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb		99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb		99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb		98
87)	Chrysene	13.32	228	5981915	62.63562	ppb		99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb	#	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb		100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb		97

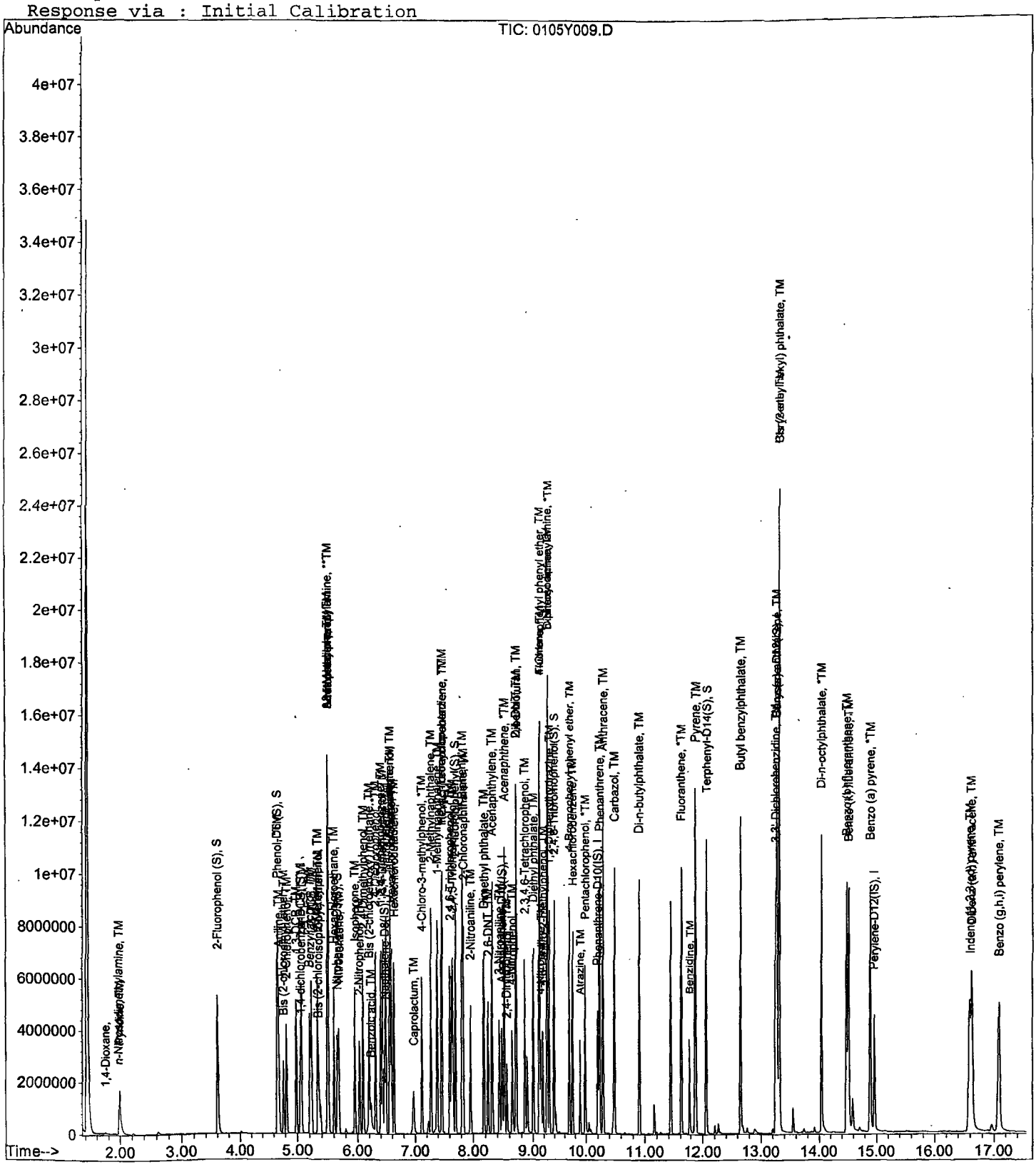
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316	ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%		
6) Phenol-D6 (S)	4.67	99	3959767	160.24162	ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%		
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449	ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%		
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731	ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767	ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%		
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820	ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958		96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452	ppb	75
4) Pyridine	1.99	79	1328390	82.34366	ppb	100
7) Phenol	4.69	94	2365327	81.02002	ppb	89
8) Aniline	4.70	93	1680384	78.80334	ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181	ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740	ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691	ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930	ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462	ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493	ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893	ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275	ppb	95
17) Acetophenone	5.50	105	2517933	81.36996	ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429	ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271	ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869	ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549	ppb	94
24) Isophorone	5.96	82	3656514	81.10344	ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721	ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894	ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663	ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794	ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445	ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735	ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230	ppb	98
32) Naphthalene	6.49	128	5246511	81.96130	ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743	ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164	ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740	ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828	ppb	98
37) Caprolactum	6.99	55	532060	82.37382	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

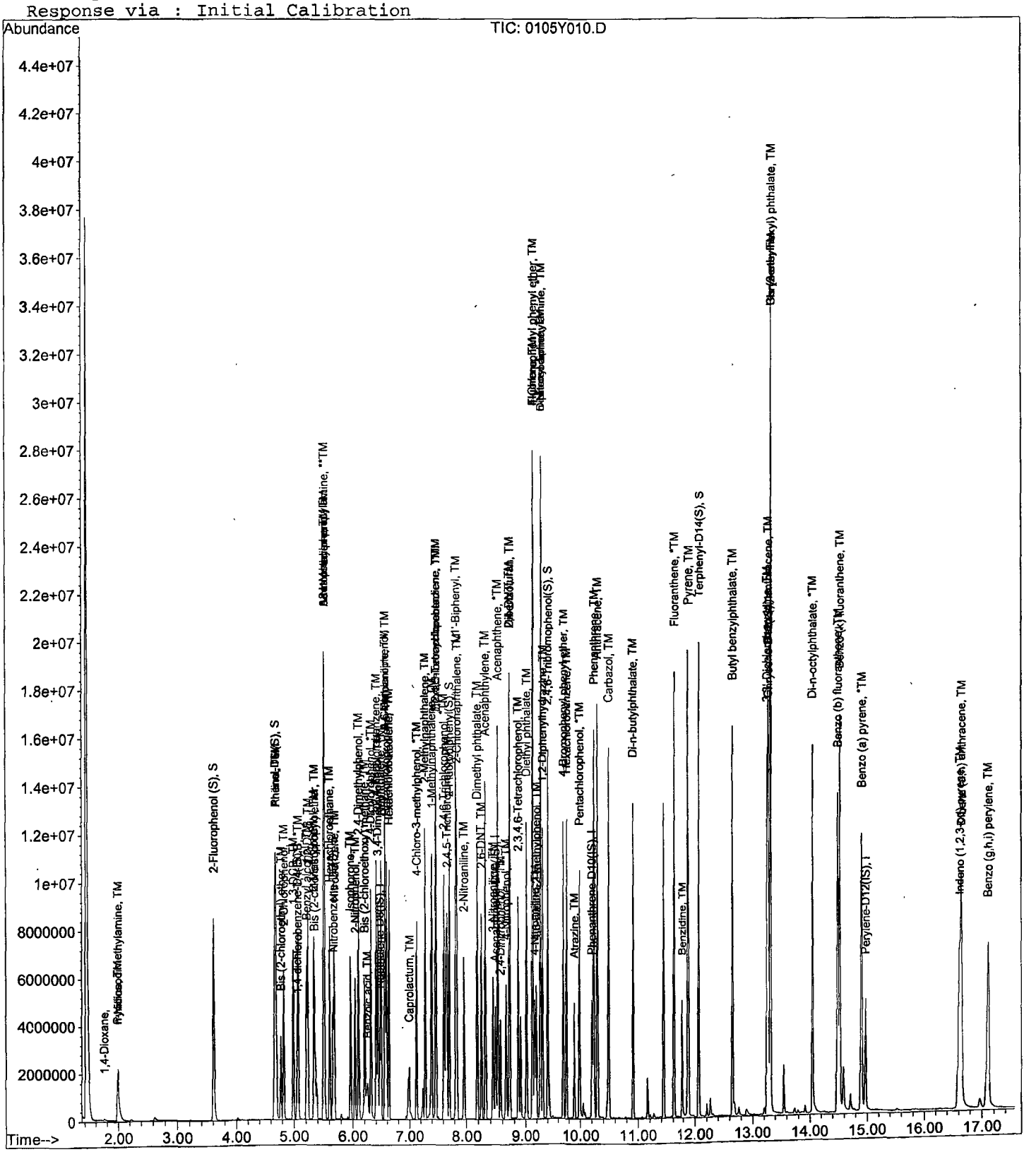
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery	= 98.576%		
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery	= 98.825%		
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery	= 100.359%		
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery	= 102.036%		
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery	= 113.815%		
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery	= 101.251%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

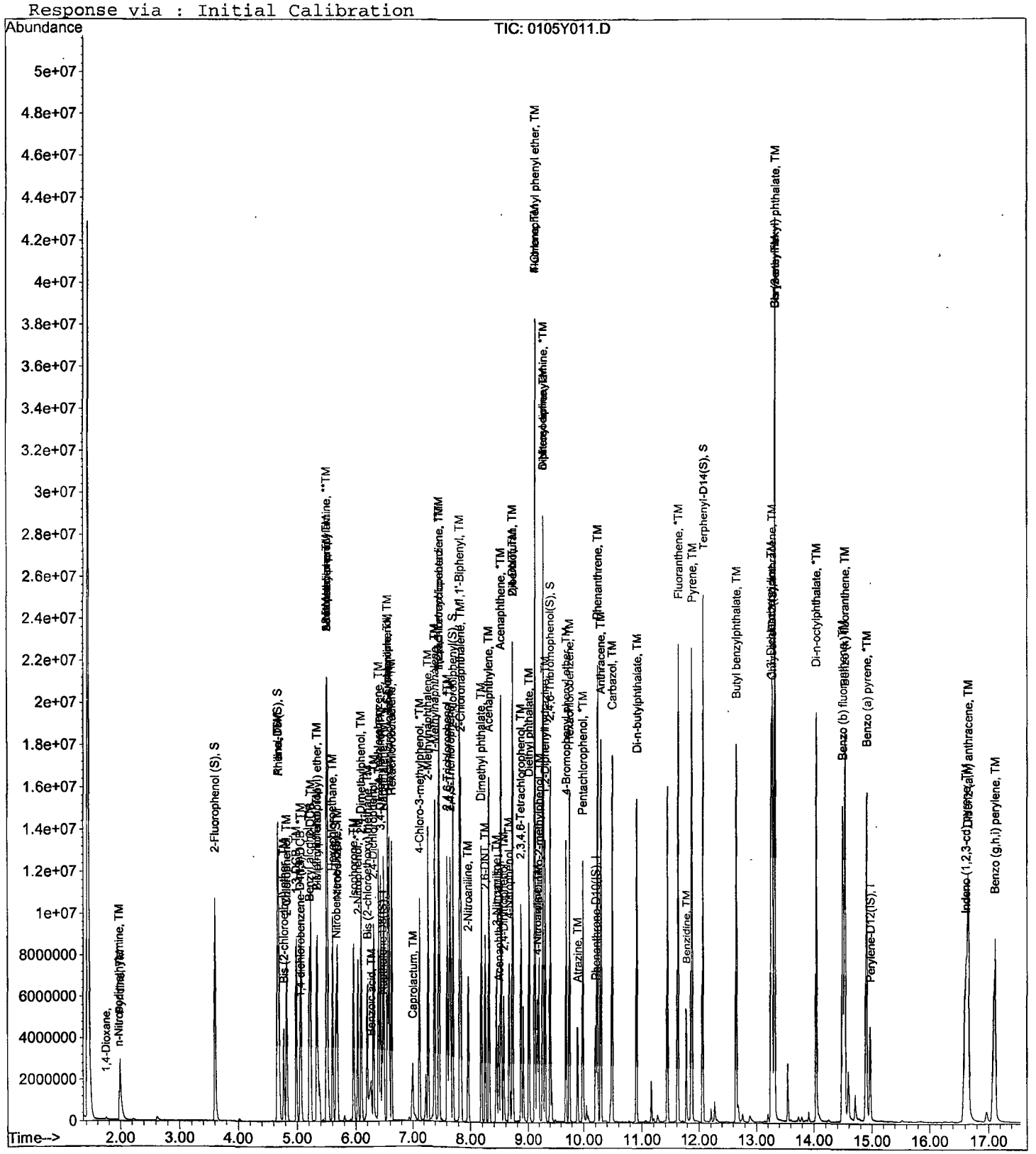
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
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120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery	= 6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery	= 0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery	= 0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery	= 0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

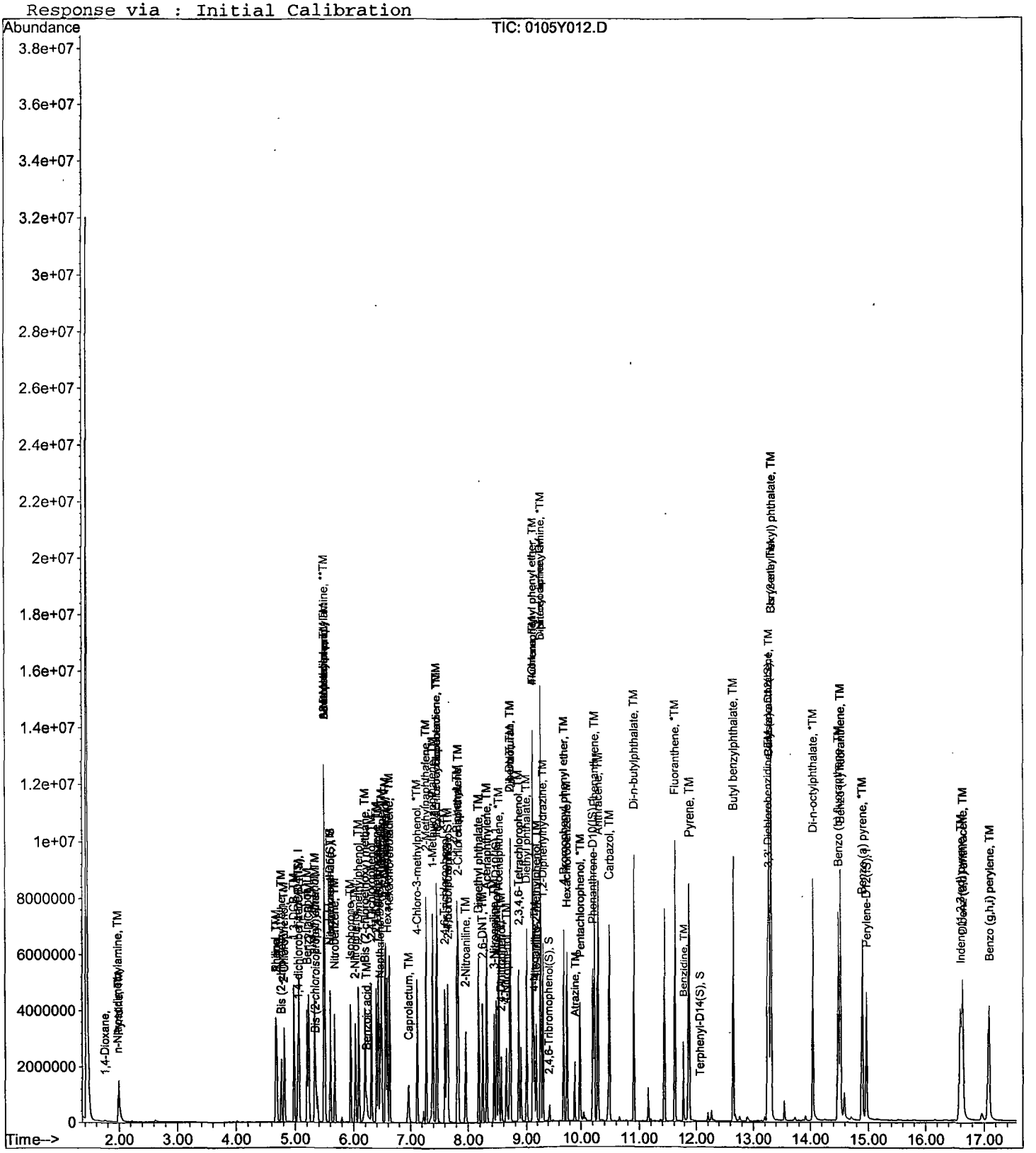
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2598	19			
3	TM	n-Nitrosodimethylamine	0.6105	0.5837	4.4	TM		
4	TM	Pyridine	1.336	1.259	5.8	TM		
5	S	2-Fluorophenol (S)	1.601	1.677	4.8	S		
6	S	Phenol-D6 (S)	2.046	2.237	9.3	S		
7	*TM	Phenol	2.418	2.670	10	*TM		
8	TM	Aniline	1.766	1.993	13	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.149	11	TM		
10	TM	2-Chlorophenol	1.829	1.960	7.2	TM		
11	TM	1,3-DCB	2.107	2.040	3.2	TM		
12	*TM	1,4-DCB	2.122	2.109	0.59	*TM		
13	TM	Benzyl alcohol	1.073	1.152	7.4	TM		
14	TM	1,2-DCB	1.992	2.001	0.46	TM		
15	TM	2-Methylphenol	1.401	1.499	7.0	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.158	19	TM		
17	TM	Acetophenone	2.563	2.781	8.5	TM		
18	TM	3&4-Methylphenol	1.892	2.095	11	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.706	14	**TM		
20	TM	Hexachloroethane	0.8684	0.8855	2.0	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5861	0.64	S		
23	TM	Nitrobenzene	0.6068	0.6171	1.7	TM		
24	TM	Isophorone	0.9746	0.9928	1.9	TM		
25	*TM	2-Nitrophenol	0.2562	0.2568	0.24	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4226	0.25	TM		
27	TML	Benzoic acid	0.3484	0.2255	35	TML	35	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5655	2.6	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4319	1.5	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4999	2.2	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6757	0.08	TM		
32	TM	Naphthalene	1.384	1.404	1.5	TM		
33	TM	4-Chloroaniline	0.5189	0.5719	10	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4310	1.0	TM		
35	TM	Hexachloropropene	0.4576	0.4222	7.7	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3466	4.1	*TM		
37	TM	Caprolactum	0.1396	0.1471	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4653	1.5	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9342	2.7	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9728	3.7	TM		
		Average			6.4			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5506	3.3	**TML	10	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8850	1.7	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5525	1.4	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.6007	1.8	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.852	1.2	S		
47	TM	1,1'-Biphenyl	2.012	2.117	5.2	TM		
48	TM	2-Chloronaphthalene	1.564	1.605	2.6	TM		
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM		
50	TM	Dimethyl phthalate	1.914	1.958	2.3	TM		
51	TM	2,6-DNT	0.4186	0.4214	0.66	TM		
52	TM	Acenaphthylene	2.382	2.404	0.89	TM		
53	TM	3-Nitroaniline	0.3908	0.4159	6.4	TM		
54	*TM	Acenaphthene	1.584	1.592	0.51	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.1597	28	**TML	22	*NT
56	**TM	4-Nitrophenol	0.3856	0.3629	5.9	**TM		
57	TM	Dibenzofuran	2.358	2.370	0.51	TM		
58	TM	2,4-DNT	0.6015	0.6003	0.20	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4473	7.7	TM		
60	TM	Diethyl phthalate	1.956	1.951	0.26	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.107	2.5	TM		
62	TM	Fluorene	1.985	2.067	4.1	TM		
63	TM	4-Nitroaniline	0.4251	0.4277	0.60	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2791	7.4	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1743	9.1	TM		
67	TM	Diphenyl amine	0.7523	0.7707	2.4	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7707	2.4	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9878	3.6	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3037	0.33	TM		
71	TM	Hexachlorobenzene	0.3129	0.3069	1.9	TM		
72	TM	Atrazine	0.2649	0.2618	1.1	TM		
73	*TM	Pentachlorophenol	0.2072	0.1985	4.2	*TM		
74	TM	Phenanthrene	1.386	1.423	2.7	TM		
75	TM	Anthracene	1.445	1.503	4.0	TM		
76	TM	Carbazol	1.280	1.304	1.9	TM		
77	TM	Di-n-butylphthalate	1.570	1.676	6.8	TM		
78	*TM	Fluoranthene	1.617	1.650	2.0	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.4028	1.3	TM		
		Average			3.6			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.767	6.0	TM	
82	S	Terphenyl-D14(S)	1.201	1.214	1.1	S	
83	TM	Butyl benzylphthalate	0.7149	0.7759	8.5	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6314	14	TM	
85	TM	Benz (a) anthracene	1.709	1.764	3.2	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.158	13	TM	
87	TM	Chrysene	1.610	1.788	11	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.792	14	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.522	0.39	TM	
92	*TM	Benzo (a) pyrene	1.467	1.547	5.5	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.673	1.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.456	1.6	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
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119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	533085	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2194335	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1385446	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2786023	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2774517	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.98	264	2634209	40.00000	ppb	0.02
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2235576	104.80889	ppb	0.00
Spiked Amount 200.000			Recovery =	52.405%		
6) Phenol-D6 (S)	4.67	99	2981420	109.31539	ppb	0.00
Spiked Amount 200.000			Recovery =	54.658%		
22) Nitrobenzene-D5(S)	5.66	82	1607512	49.68240	ppb	0.00
Spiked Amount 100.000			Recovery =	49.682%		
46) 2-Fluorobiphenyl(S)	7.71	172	3207255	49.38865	ppb	0.00
Spiked Amount 100.000			Recovery =	49.389%		
64) 2,4,6-Tribromophenol(S)	9.40	330	966848	92.57566	ppb	0.00
Spiked Amount 200.000			Recovery =	46.288%		
82) Terphenyl-D14(S)	12.07	244	4209281	50.54570	ppb	0.00
Spiked Amount 100.000			Recovery =	50.546%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.74	58	17311	4.06981		90
3) n-Nitrosodimethylamine	1.97	42	388923	47.80079	ppb	79
4) Pyridine	1.99	79	838890	47.11531	ppb	94
7) Phenol	4.68	94	1779060	55.21337	ppb	87
8) Aniline	4.69	93	1328128	56.43239	ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	765351	55.65806	ppb	93
10) 2-Chlorophenol	4.82	128	1306315	53.58587	ppb	99
11) 1,3-DCB	4.98	146	1359350	48.42079	ppb	99
12) 1,4-DCB	5.07	146	1405572	49.70368	ppb	99
13) Benzyl alcohol	5.21	108	767506	53.69409	ppb	92
14) 1,2-DCB	5.23	146	1333446	50.23123	ppb	98
15) 2-Methylphenol	5.33	107	998997	53.52128	ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	771502	59.36942	ppb	94
17) Acetophenone	5.50	105	1853156	54.26057	ppb	94
18) 3&4-Methylphenol	5.51	107	2791494	110.72488	ppb	96
19) n-Nitrosodi-n-propylamine	5.51	70	1136514	57.03056	ppb	95
20) Hexachloroethane	5.60	117	590038	50.98156	ppb	94
23) Nitrobenzene	5.69	77	1692605	50.84746	ppb	93
24) Isophorone	5.96	82	2723136	50.93502	ppb	95
25) 2-Nitrophenol	6.04	139	704319	50.12154	ppb	82
26) 2,4-Dimethylphenol	6.10	122	1159148	49.87449	ppb	98
27) Benzoic acid	6.24	105	618468	32.41632	ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1551188	51.30726	ppb	99
29) 2,4-Dichlorophenol	6.31	162	1184651	49.24379	ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1371127	48.89941	ppb	99
31) 3,4-Dimethylphenol	6.43	107	1853438	49.96122	ppb	97
32) Naphthalene	6.49	128	3850481	50.72574	ppb	99
33) 4-Chloroaniline	6.56	127	1568589	55.10632	ppb	94
34) 2,6-Dichlorophenol	6.57	162	1182088	50.52388	ppb	94
35) Hexachloropropene	6.59	213	1158129	46.13169	ppb	100
36) Hexachlorobutadiene	6.63	225	950821	47.92895	ppb	99
37) Caprolactum	6.99	55	403612	52.69480	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1276387	50.74603	ppb		95
39)	2-Methylnaphthalene	7.27	142	2562457	51.35373	ppb		99
40)	1-Methylnaphthalene	7.40	142	2668197	51.86615	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	953472	44.91138	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1532645	49.15476	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	956785	49.31755	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1040231	49.07954	ppb		96
47)	1,1'-Biphenyl	7.82	154	3666052	52.61084	ppb		99
48)	2-Chloronaphthalene	7.84	162	2780318	51.30960	ppb		97
49)	2-Nitroaniline	7.96	65	902779	52.35141	ppb		83
50)	Dimethyl phthalate	8.18	163	3390923	51.16044	ppb		98
51)	2,6-DNT	8.25	165	729759	50.33121	ppb	#	65
52)	Acenaphthylene	8.31	152	4162756	50.44542	ppb		99
53)	3-Nitroaniline	8.44	138	720246	53.20650	ppb		93
54)	Acenaphthene	8.52	154	2757519	50.25560	ppb		99
55)	2,4-Dinitrophenol	8.57	184	276555	38.91683	ppb		90
56)	4-Nitrophenol	8.66	65	628519	47.05521	ppb		90
57)	Dibenzofuran	8.72	168	4103530	50.25269	ppb		92
58)	2,4-DNT	8.71	165	1039556	49.90133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	774684	46.15909	ppb		93
60)	Diethyl phthalate	9.01	149	3378496	49.87084	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1917773	51.24493	ppb		96
62)	Fluorene	9.12	166	3578838	52.06515	ppb		100
63)	4-Nitroaniline	9.16	138	740629	50.29902	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	606978	45.42608	ppb		97
67)	Diphenyl amine	9.27	169	5368202	102.44406	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5368202	102.44406	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3439953	51.78803	ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	1057645	49.83439	ppb	#	84
71)	Hexachlorobenzene	9.75	284	1068870	49.05094	ppb	#	82
72)	Atrazine	9.89	200	455920	24.71478	ppb		94
73)	Pentachlorophenol	9.99	266	691369	47.89642	ppb		98
74)	Phenanthrene	10.24	178	4955670	51.34732	ppb		100
75)	Anthracene	10.29	178	5232849	51.97712	ppb		99
76)	Carbazol	10.49	167	4540661	50.93377	ppb		96
77)	Di-n-butylphthalate	10.91	149	5838223	53.38008	ppb		98
78)	Fluoranthene	11.62	202	5745675	51.01696	ppb		99
80)	Benzidine	11.79	184	1396925	50.62677	ppb		98
81)	Pyrene	11.88	202	6127980	52.97578	ppb		99
83)	Butyl benzylphthalate	12.66	149	2690764	54.26218	ppb		85
84)	3,3'-Dichlorobenzidine	13.26	252	2189624	56.94079	ppb		100
85)	Benz (a) anthracene	13.28	228	6119145	51.61903	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4015164	56.28307	ppb	#	95
87)	Chrysene	13.32	228	6202258	55.55336	ppb		100
88)	Di-n-octylphthalate	14.05	149	6344526	54.24926	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5902044	57.03771	ppb		99
91)	Benzo (k) fluoranthene	14.53	252	5012644	50.19678	ppb		98
92)	Benzo (a) pyrene	14.91	252	5095190	52.74778	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5509560	49.49468	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	4794965	49.21957	ppb		98
95)	Benzo (g,h,i) perylene	17.12	276	4620679	48.55093	ppb		99

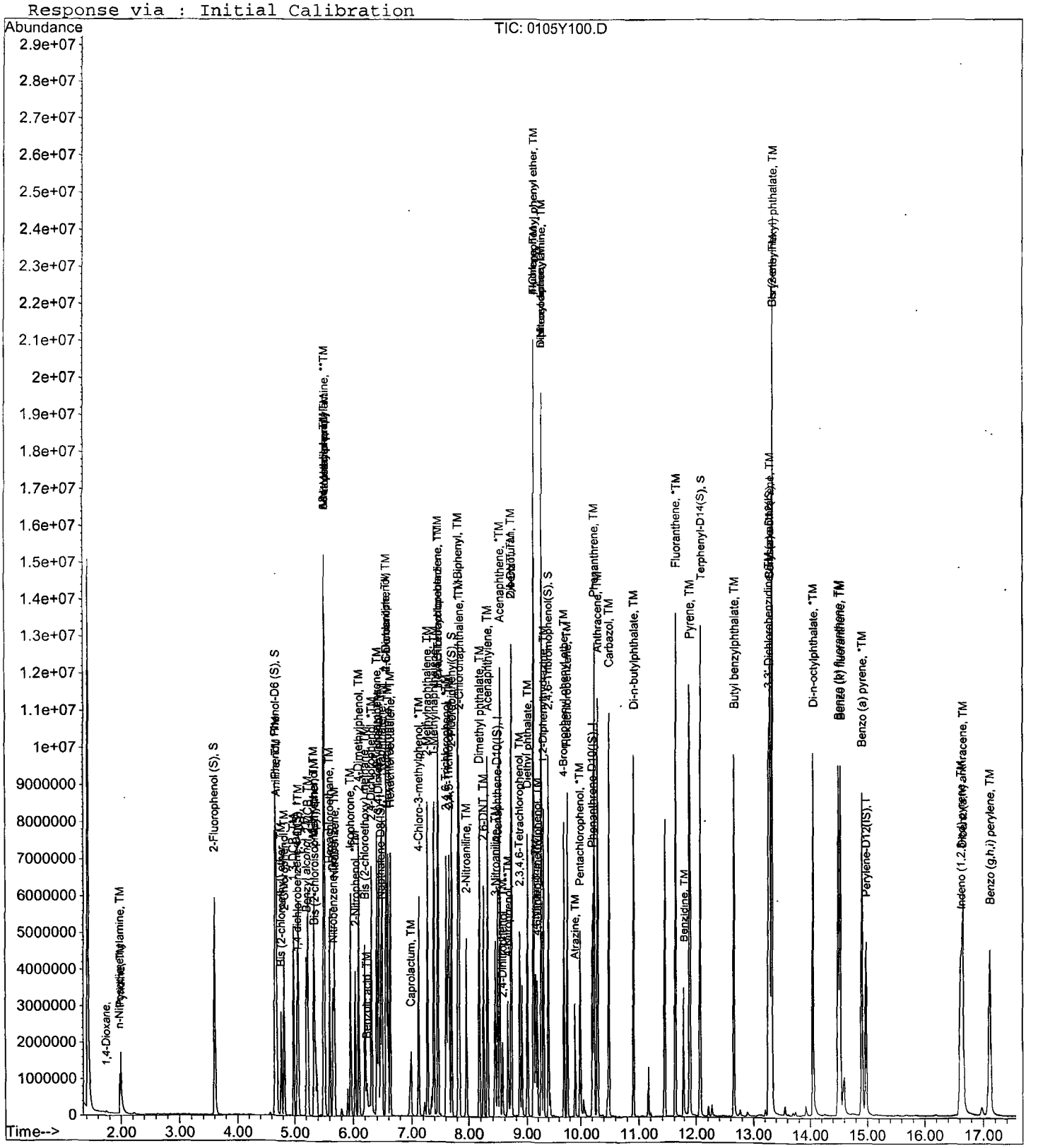
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2514	21		
3	TM	n-Nitrosodimethylamine	0.6105	0.5552	9.1	TM	
4	TM	Pyridine	1.336	1.243	7.0	TM	
5	S	2-Fluorophenol (S)	1.601	1.666	4.1	S	
6	S	Phenol-D6 (S)	2.046	2.251	10.0	S	
7	*TM	Phenol	2.418	2.713	12	*TM	
8	TM	Aniline	1.766	1.951	11	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.138	10	TM	
10	TM	2-Chlorophenol	1.829	1.954	6.8	TM	
11	TM	1,3-DCB	2.107	2.042	3.0	TM	
12	*TM	1,4-DCB	2.122	2.091	1.5	*TM	
13	TM	Benzyl alcohol	1.073	1.165	8.6	TM	
14	TM	1,2-DCB	1.992	2.018	1.3	TM	
15	TM	2-Methylphenol	1.401	1.509	7.7	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.120	15	TM	
17	TM	Acetophenone	2.563	2.815	9.8	TM	
18	TM	3&4-Methylphenol	1.892	2.088	10	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.731	16	**TM	
20	TM	Hexachloroethane	0.8684	0.8775	1.0	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6014	2.0	S	
23	TM	Nitrobenzene	0.6068	0.6264	3.2	TM	
24	TM	Isophorone	0.9746	0.9984	2.4	TM	
25	*TM	2-Nitrophenol	0.2562	0.2652	3.5	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4293	1.3	TM	
27	TML	Benzoic acid	0.3484	0.4027	16	TML	4.7
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5612	1.8	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4359	0.61	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4927	3.6	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6712	0.74	TM	
32	TM	Naphthalene	1.384	1.377	0.52	TM	
33	TM	4-Chloroaniline	0.5189	0.5718	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4359	2.2	TM	
35	TM	Hexachloropropene	0.4576	0.4382	4.2	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3495	3.4	*TM	
37	TM	Caprolactum	0.1396	0.1451	3.9	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4678	2.0	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9299	2.2	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9558	1.9	TM	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5836	2.5	**TML	5.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8826	2.0	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5658	1.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6136	0.27	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.837	2.0	S	
47	TM	1,1'-Biphenyl	2.012	2.076	3.2	TM	
48	TM	2-Chloronaphthalene	1.564	1.609	2.8	TM	
49	TM	2-Nitroaniline	0.4979	0.5253	5.5	TM	
50	TM	Dimethyl phthalate	1.914	1.967	2.8	TM	
51	TM	2,6-DNT	0.4186	0.4369	4.4	TM	
52	TM	Acenaphthylene	2.382	2.425	1.8	TM	
53	TM	3-Nitroaniline	0.3908	0.4202	7.5	TM	
54	*TM	Acenaphthene	1.584	1.599	0.96	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2223	0.38	**TML	2.5
56	**TM	4-Nitrophenol	0.3856	0.3999	3.7	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6278	4.4	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4700	3.0	TM	
60	TM	Diethyl phthalate	1.956	1.964	0.40	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.118	3.4	TM	
62	TM	Fluorene	1.985	2.070	4.3	TM	
63	TM	4-Nitroaniline	0.4251	0.4492	5.7	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2900	3.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1889	1.5	TM	
67	TM	Diphenyl amine	0.7523	0.7904	5.1	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7904	5.1	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9735	2.1	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2950	3.2	TM	
71	TM	Hexachlorobenzene	0.3129	0.3078	1.6	TM	
72	TM	Atrazine	0.2649	0.2565	3.2	TM	
73	*TM	Pentachlorophenol	0.2072	0.1967	5.1	*TM	
74	TM	Phenanthrene	1.386	1.418	2.3	TM	
75	TM	Anthracene	1.445	1.453	0.50	TM	
76	TM	Carbazol	1.280	1.292	0.92	TM	
77	TM	Di-n-butylphthalate	1.570	1.640	4.4	TM	
78	*TM	Fluoranthene	1.617	1.625	0.50	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.4060	2.1	TM	
		Average			2.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.760	5.5	TM	
82	S	Terphenyl-D14(S)	1.201	1.243	3.5	S	
83	TM	Butyl benzylphthalate	0.7149	0.7718	8.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6257	13	TM	
85	TM	Benz (a) anthracene	1.709	1.758	2.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.181	15	TM	
87	TM	Chrysene	1.610	1.742	8.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.838	9.0	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.642	4.5	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.666	9.9	TM	
92	*TM	Benzo (a) pyrene	1.467	1.555	6.0	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.670	1.2	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.478	0.06	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
101							
102							
103							
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105							
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110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	565875	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2319312	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1466187	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3029918	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2959437	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2751561	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2357181	104.10644 ppb	0.00
Spiked Amount 200.000			Recovery =	52.053%	
6) Phenol-D6 (S)	4.67	99	3184619	109.99973 ppb	0.00
Spiked Amount 200.000			Recovery =	55.000%	
22) Nitrobenzene-D5(S)	5.66	82	1743523	50.98234 ppb	0.00
Spiked Amount 100.000			Recovery =	50.982%	
46) 2-Fluorobiphenyl(S)	7.71	172	3367365	48.99865 ppb	0.00
Spiked Amount 100.000			Recovery =	48.999%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1062904	96.16852 ppb	0.00
Spiked Amount 200.000			Recovery =	48.085%	
82) Terphenyl-D14(S)	12.07	244	4598336	51.76727 ppb	0.00
Spiked Amount 100.000			Recovery =	51.767%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17786	3.93918	80
3) n-Nitrosodimethylamine	1.97	42	392741	45.47301 ppb	77
4) Pyridine	1.99	79	879245	46.52034 ppb	92
7) Phenol	4.68	94	1919316	56.11463 ppb	86
8) Aniline	4.69	93	1380352	55.25281 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	804929	55.14434 ppb	94
10) 2-Chlorophenol	4.82	128	1381800	53.39782 ppb	100
11) 1,3-DCB	4.98	146	1444690	48.47873 ppb	99
12) 1,4-DCB	5.07	146	1478994	49.26946 ppb	99
13) Benzyl alcohol	5.20	108	824248	54.32235 ppb	93
14) 1,2-DCB	5.23	146	1427364	50.65346 ppb	99
15) 2-Methylphenol	5.33	107	1067037	53.85397 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	792570	57.45652 ppb	95
17) Acetophenone	5.50	105	1991147	54.92267 ppb	93
18) 3&4-Methylphenol	5.51	107	2953267	110.35377 ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	1224298	57.87566 ppb	99
20) Hexachloroethane	5.60	117	620701	50.52328 ppb	94
23) Nitrobenzene	5.69	77	1816036	51.61570 ppb	94
24) Isophorone	5.96	82	2894471	51.22242 ppb	95
25) 2-Nitrophenol	6.04	139	768818	51.76334 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1244679	50.66881 ppb	99
27) Benzoic acid	6.24	105	1167506	52.35840 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	1627047	50.91647 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1263635	49.69658 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1428366	48.19580 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1946015	49.63007 ppb	98
32) Naphthalene	6.49	128	3990737	49.74051 ppb	100
33) 4-Chloroaniline	6.56	127	1657731	55.09981 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1263732	51.10291 ppb	93
35) Hexachloropropene	6.59	213	1270430	47.87810 ppb	99
36) Hexachlorobutadiene	6.63	225	1013152	48.31895 ppb	98
37) Caprolactum	6.99	55	420722	51.96880 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1356213	51.01424	ppb		93
39)	2-Methylnaphthalene	7.27	142	2695888	51.11649	ppb		98
40)	1-Methylnaphthalene	7.40	142	2770924	50.96059	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1069568	47.26961	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1617520	49.02007	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	1036955	50.50650	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1124538	50.13547	ppb		93
47)	1,1'-Biphenyl	7.82	154	3804968	51.59741	ppb		99
48)	2-Chloronaphthalene	7.84	162	2948560	51.41791	ppb		98
49)	2-Nitroaniline	7.96	65	962801	52.75744	ppb		86
50)	Dimethyl phthalate	8.18	163	3605631	51.40411	ppb		98
51)	2,6-DNT	8.25	165	800748	52.18600	ppb	#	75
52)	Acenaphthylene	8.31	152	4443485	50.88207	ppb		100
53)	3-Nitroaniline	8.44	138	770025	53.75129	ppb		90
54)	Acenaphthene	8.52	154	2931123	50.47777	ppb		99
55)	2,4-Dinitrophenol	8.57	184	407373	48.74129	ppb		88
56)	4-Nitrophenol	8.66	65	732829	51.84324	ppb		94
57)	Dibenzofuran	8.72	168	4408186	51.01076	ppb		91
58)	2,4-DNT	8.71	165	1150680	52.19382	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.87	232	861302	48.49404	ppb		91
60)	Diethyl phthalate	9.01	149	3599071	50.20118	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2048253	51.71750	ppb		96
62)	Fluorene	9.12	166	3793658	52.15110	ppb		99
63)	4-Nitroaniline	9.16	138	823273	52.83271	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	715429	49.23259	ppb	#	58
67)	Diphenyl amine	9.27	169	5986980	105.05568	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5986980	105.05568	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3686983	51.03896	ppb		94
70)	4-Bromophenyl phenyl ether	9.69	248	1117128	48.40007	ppb		90
71)	Hexachlorobenzene	9.75	284	1165833	49.19405	ppb	#	86
72)	Atrazine	9.89	200	485688	24.20914	ppb		95
73)	Pentachlorophenol	9.99	266	745061	47.46121	ppb		99
74)	Phenanthrene	10.24	178	5370053	51.16203	ppb		99
75)	Anthracene	10.29	178	5501731	50.24897	ppb		99
76)	Carbazol	10.49	167	4892232	50.46004	ppb		97
77)	Di-n-butylphthalate	10.90	149	6211786	52.22385	ppb		100
78)	Fluoranthene	11.62	202	6154749	50.25019	ppb		98
80)	Benzidine	11.79	184	1501770	51.02568	ppb		98
81)	Pyrene	11.88	202	6508989	52.75357	ppb		99
83)	Butyl benzylphthalate	12.65	149	2854964	53.97598	ppb		91
84)	3,3'-Dichlorobenzidine	13.25	252	2314715	56.43256	ppb	#	98
85)	Benz (a) anthracene	13.28	228	6504240	51.43917	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4368690	57.41217	ppb	#	93
87)	Chrysene	13.32	228	6444804	54.11884	ppb		100
88)	Di-n-octylphthalate	14.04	149	6799817	54.50924	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5648925	52.26327	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5731800	54.95044	ppb		99
92)	Benzo (a) pyrene	14.91	252	5349714	53.02070	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5745048	49.40904	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5084924	49.96984	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4825721	48.54283	ppb		99

(#) = qualifier out of range (m) = manual integration

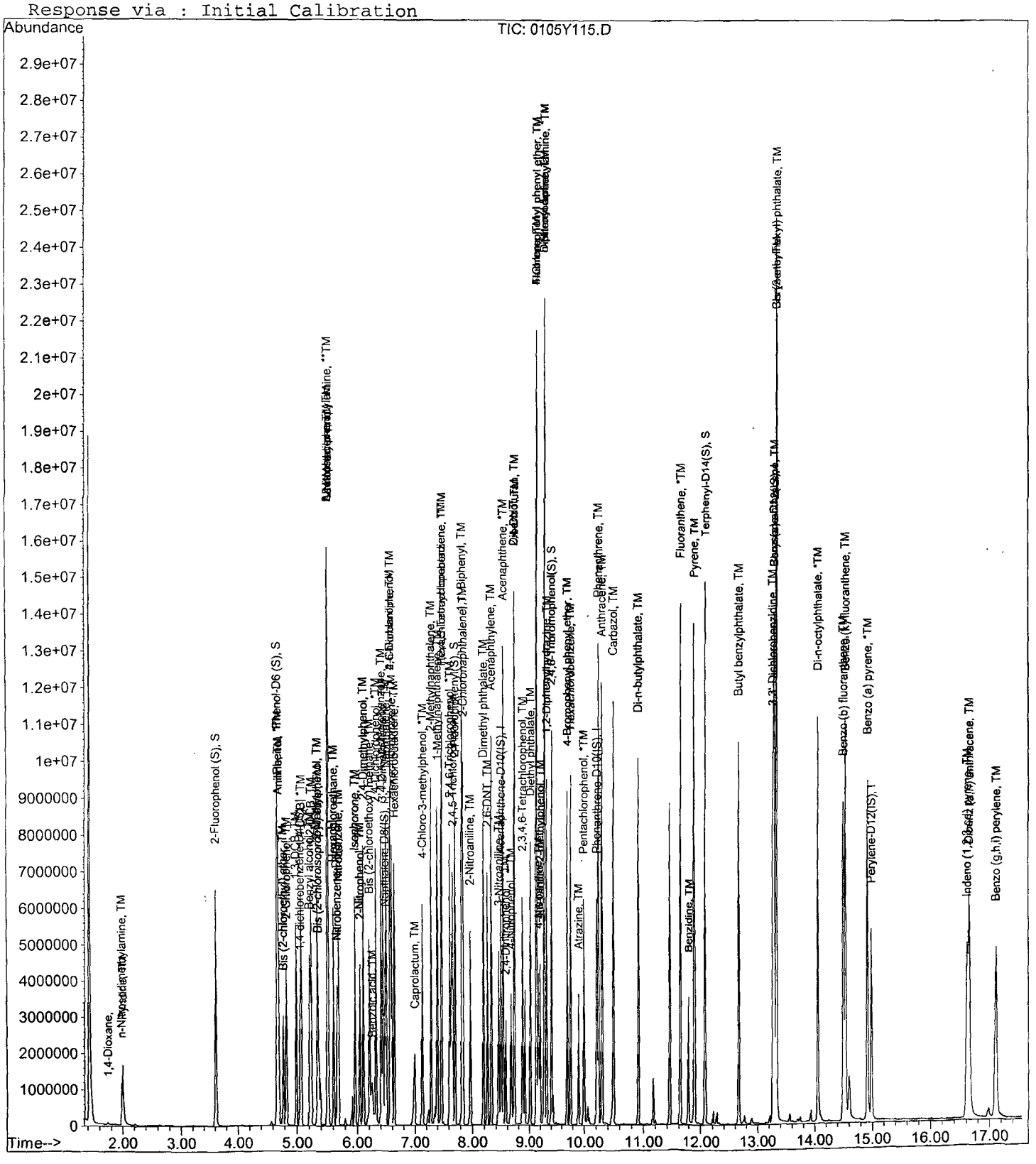
Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y115.D
Acq On : 25 Jan 21 21:09
Sample : 50ug/mL 8270 08/12/20 (5)
Misc :

Vial: 15
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y110.D Vial: 10
Acq On : 25 Jan 21 19:03 Operator: MA
Sample : BA25526W17 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:05 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	445890	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1729403	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1098445	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2261031	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2064453	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1941547	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	3087434	173.05140 ppb	0.00
Spiked Amount 200.000			Recovery =	86.525%	
6) Phenol-D6 (S)	4.67	99	4109439	180.13970 ppb	0.00
Spiked Amount 200.000			Recovery =	90.070%	
22) Nitrobenzene-D5(S)	5.66	82	2293593	89.94384 ppb	0.00
Spiked Amount 100.000			Recovery =	89.944%	
46) 2-Fluorobiphenyl(S)	7.70	172	4288716	83.29755 ppb	0.00
Spiked Amount 100.000			Recovery =	83.298%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1491051	180.07044 ppb	0.00
Spiked Amount 200.000			Recovery =	90.035%	
82) Terphenyl-D14(S)	12.08	244	6610553	106.68331 ppb	0.00
Spiked Amount 100.000			Recovery =	106.683%	

Target Compounds Qvalue

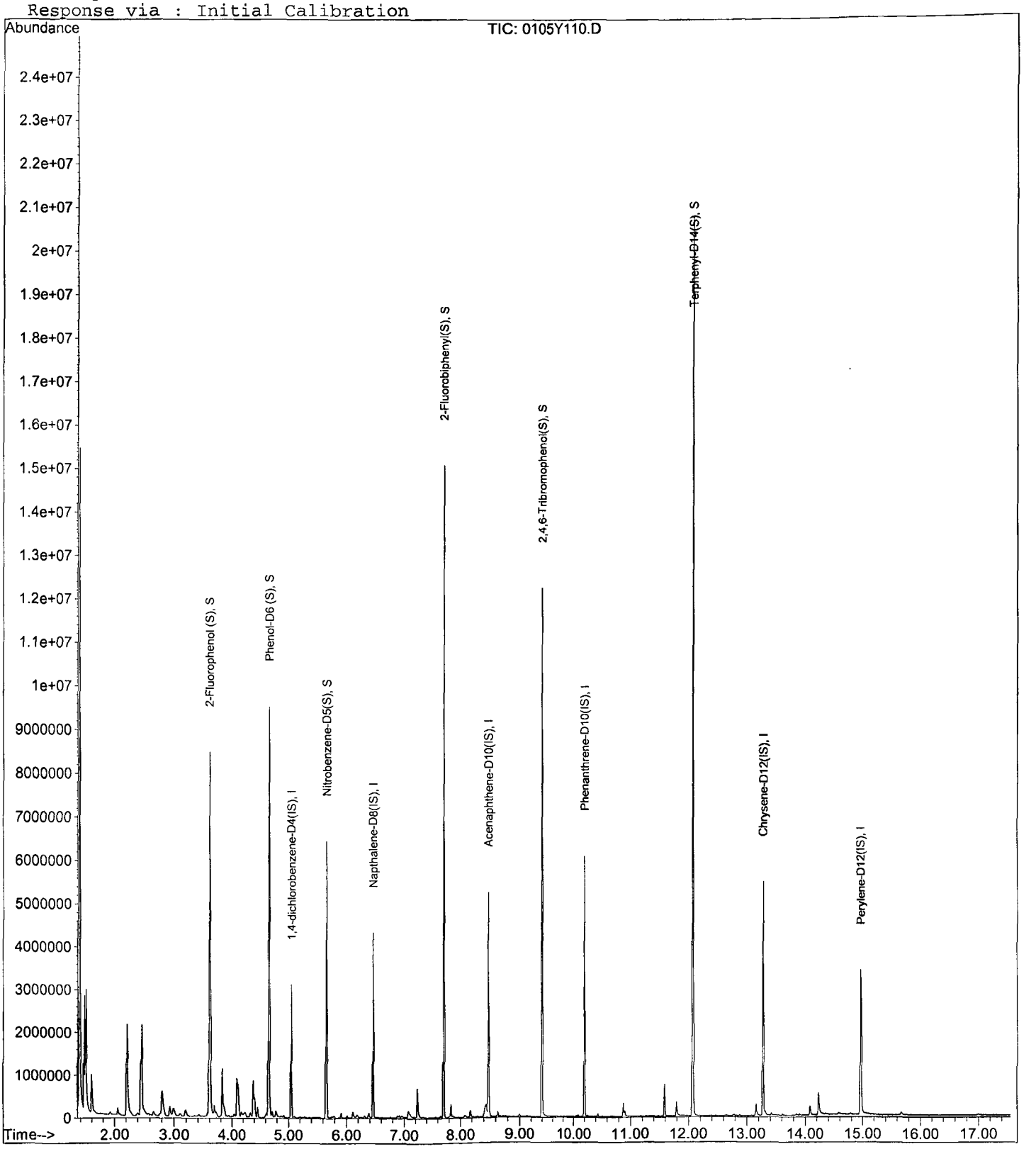
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y110.D Vial: 10
Acq On : 25 Jan 21 19:03 Operator: MA
Sample : BA25526W17 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:05 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	425738	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1634419	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1005652	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2061374	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1858844	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1771379	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1777337	130.41950 ppb	0.00
Spiked Amount 250.000			Recovery =	52.168%	
6) Phenol-D6 (S)	4.66	99	2340174	134.29826 ppb	0.00
Spiked Amount 250.000			Recovery =	53.719%	
22) Nitrobenzene-D5(S)	5.65	82	1324847	68.71691 ppb	0.00
Spiked Amount 125.000			Recovery =	54.974%	
46) 2-Fluorobiphenyl(S)	7.70	172	2379678	63.10500 ppb	0.00
Spiked Amount 125.000			Recovery =	50.484%	
64) 2,4,6-Tribromophenol(S)	9.39	330	736575	121.45279 ppb	0.00
Spiked Amount 250.000			Recovery =	48.581%	
82) Terphenyl-D14(S)	12.08	244	3846067	86.16831 ppb	0.00
Spiked Amount 125.000			Recovery =	68.934%	

Target Compounds Qvalue

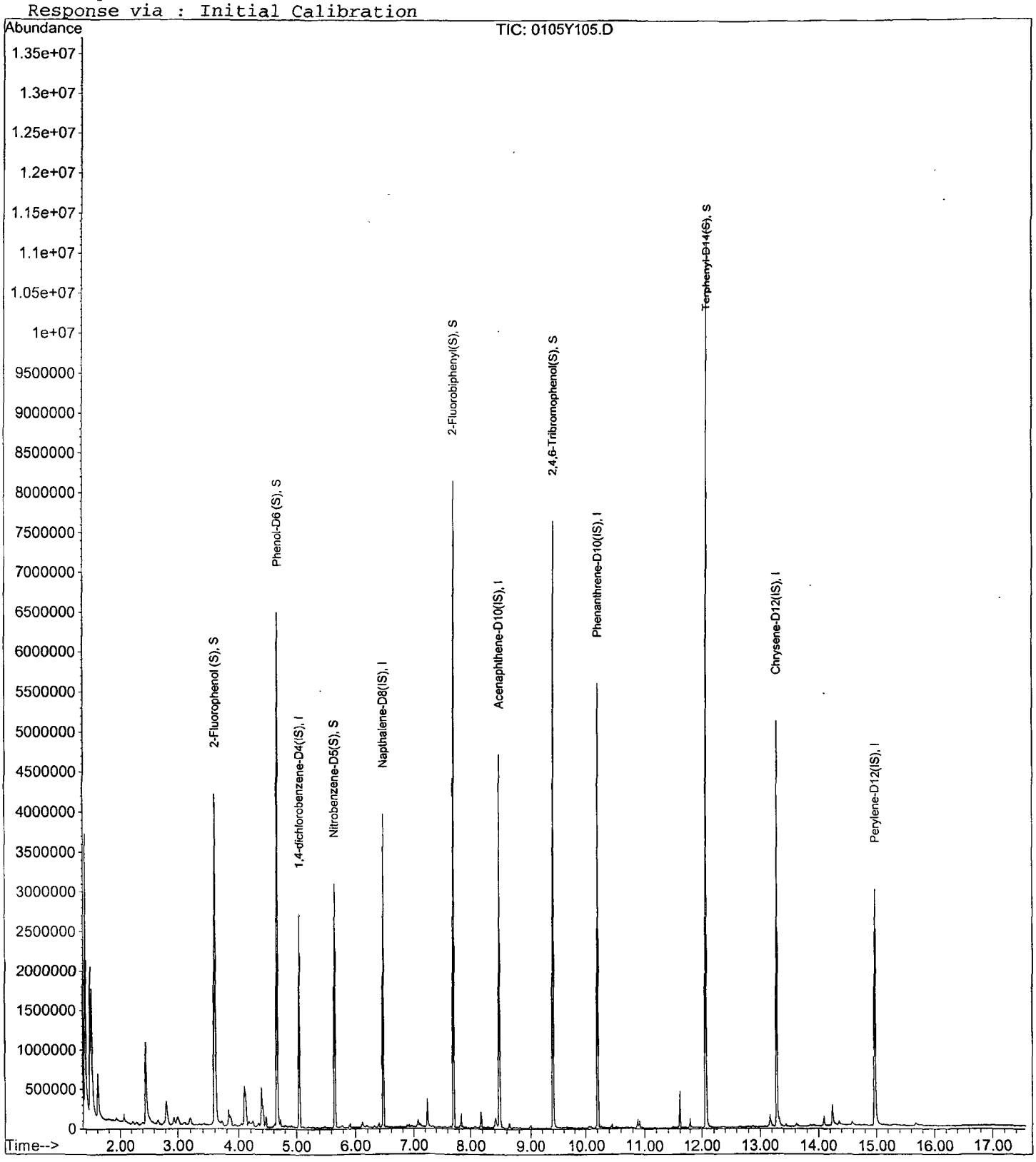
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	400800	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1600610	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	971879	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2027584	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1902852	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1802107	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2913375	227.08259 ppb	0.00
Spiked Amount 250.000			Recovery	= 90.833%	
6) Phenol-D6 (S)	4.67	99	3789371	230.99578 ppb	0.00
Spiked Amount 250.000			Recovery	= 92.398%	
22) Nitrobenzene-D5(S)	5.66	82	2186247	115.79105 ppb	0.00
Spiked Amount 125.000			Recovery	= 92.633%	
46) 2-Fluorobiphenyl(S)	7.71	172	4033199	110.67021 ppb	0.00
Spiked Amount 125.000			Recovery	= 88.536%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1413508	241.17058 ppb	0.00
Spiked Amount 250.000			Recovery	= 96.468%	
82) Terphenyl-D14(S)	12.08	244	6418869	140.48411 ppb	0.00
Spiked Amount 125.000			Recovery	= 112.387%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	9641	3.76836 #	49
3) n-Nitrosodimethylamine	1.98	42	245236	50.11116 ppb	74
4) Pyridine	2.00	79	491006	45.84823 ppb	89
7) Phenol	4.68	94	1112494	57.40240 ppb	88
8) Aniline	4.69	93	797376	56.32880 ppb #	60
9) Bis (2-chloroethyl) ether	4.77	63	523218	63.25995 ppb	98
10) 2-Chlorophenol	4.82	128	839432	57.24884 ppb	91
11) 1,3-DCB	4.98	146	829253	49.10960 ppb	98
12) 1,4-DCB	5.07	146	870236	51.16244 ppb	98
13) Benzyl alcohol	5.21	108	511672	59.51345 ppb	98
14) 1,2-DCB	5.23	146	825556	51.70395 ppb	96
15) 2-Methylphenol	5.34	107	656220	58.45081 ppb	99
16) Bis (2-chloroisopropyl) et	5.36	45	513339	65.67632 ppb	96
17) Acetophenone	5.50	105	1210671	58.93554 ppb	97
18) 3&4-Methylphenol	5.50	107	1753767	115.65361 ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	735717	61.37937 ppb	95
20) Hexachloroethane	5.61	117	317233	45.57118 ppb	86
23) Nitrobenzene	5.68	77	1110166	57.15168 ppb	98
24) Isophorone	5.95	82	1760498	56.43001 ppb	95
25) 2-Nitrophenol	6.03	139	451445	55.05380 ppb	93
26) 2,4-Dimethylphenol	6.09	122	690061	50.88086 ppb	95
27) Benzoic acid	6.22	105	634560	53.41547 ppb	97
28) Bis (2-chloroethoxy) metha	6.20	93	1026931	58.20806 ppb	99
29) 2,4-Dichlorophenol	6.31	162	758478	54.02957 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	780197	47.68235 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1180807	54.54579 ppb	95
32) Naphthalene	6.49	128	2447945	55.26402 ppb	99
33) 4-Chloroaniline	6.55	127	633425	38.13422 ppb	95
34) 2,6-Dichlorophenol	6.56	162	748224	54.80320 ppb	95
35) Hexachloropropene	6.58	213	322148	21.99000 ppb	99
36) Hexachlorobutadiene	6.63	225	447523	38.65823 ppb	98
37) Caprolactum	6.97	55	273017	61.08306 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	821428	55.96502	ppb		99
39)	2-Methylnaphthalene	7.28	142	1592622	54.69600	ppb		100
40)	1-Methylnaphthalene	7.39	142	1578731	52.58982	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	195904	21.39217	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	876192	50.07382	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	614426	56.43443	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	647219	54.41384	ppb		95
47)	1,1'-Biphenyl	7.82	154	2172479	55.55455	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	1702963	56.00113	ppb		96
49)	2-Nitroaniline	7.96	65	580016	59.93415	ppb		78
50)	Dimethyl phthalate	8.18	163	2257065	60.68031	ppb		99
51)	2,6-DNT	8.24	165	486326	59.76856	ppb	#	68
52)	Acenaphthylene	8.31	152	2569259	55.47996	ppb		99
53)	3-Nitroaniline	8.44	138	377668	49.71431	ppb		89
54)	Acenaphthene	8.51	154	1703669	55.32718	ppb		99
55)	2,4-Dinitrophenol	8.56	184	203896	50.24428	ppb		94
56)	4-Nitrophenol	8.65	65	433033	57.76938	ppb		86
57)	Dibenzofuran	8.72	168	2554036	55.73347	ppb		95
58)	2,4-DNT	8.71	165	691192	59.12217	ppb		93
59)	2,3,4,6-Tetrachlorophenol	8.87	232	537426	57.06092	ppb		96
60)	Diethyl phthalate	9.00	149	2258845	59.41514	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.13	204	1210780	57.65093	ppb		93
62)	Fluorene	9.12	166	2201854	57.07961	ppb		100
63)	4-Nitroaniline	9.15	138	465962	56.38930	ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	339890	43.69046	ppb	#	64
67)	Diphenyl amine	9.26	169	3297054	108.06867	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3297054	108.06867	ppb		100
69)	1,2-Diphenylhydrazine	9.30	77	2242370	57.98291	ppb		89
70)	4-Bromophenyl phenyl ether	9.69	248	674732	54.60550	ppb		92
71)	Hexachlorobenzene	9.75	284	681749	53.73569	ppb	#	72
72)	Atrazine	9.90	200	335142	31.20419	ppb		98
73)	Pentachlorophenol	9.99	266	429091	51.05737	ppb		99
74)	Phenanthrene	10.23	178	3205663	57.04914	ppb		99
75)	Anthracene	10.30	178	3275781	55.88621	ppb		99
76)	Carbazol	10.48	167	2905206	55.97312	ppb		95
77)	Di-n-butylphthalate	10.91	149	3888527	61.06601	ppb		99
78)	Fluoranthene	11.61	202	3674770	56.04277	ppb		99
80)	Benzidine	11.78	184	416073	27.48331	ppb		98
81)	Pyrene	11.88	202	3878509	61.11069	ppb		99
83)	Butyl benzylphthalate	12.65	149	1776298	65.28747	ppb		98
84)	3,3'-Dichlorobenzidine	13.26	252	518589	24.57931	ppb		100
85)	Benz (a) anthracene	13.28	228	3619114	55.64341	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2630986	67.21797	ppb		98
87)	Chrysene	13.31	228	3728418	60.86638	ppb		99
88)	Di-n-octylphthalate	14.05	149	4073866	63.48831	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3658811	64.60696	ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3175254	58.09880	ppb		98
92)	Benzo (a) pyrene	14.90	252	3008431	56.90671	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3260499	53.51868	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	2951436	55.35609	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2860270	54.91342	ppb		100

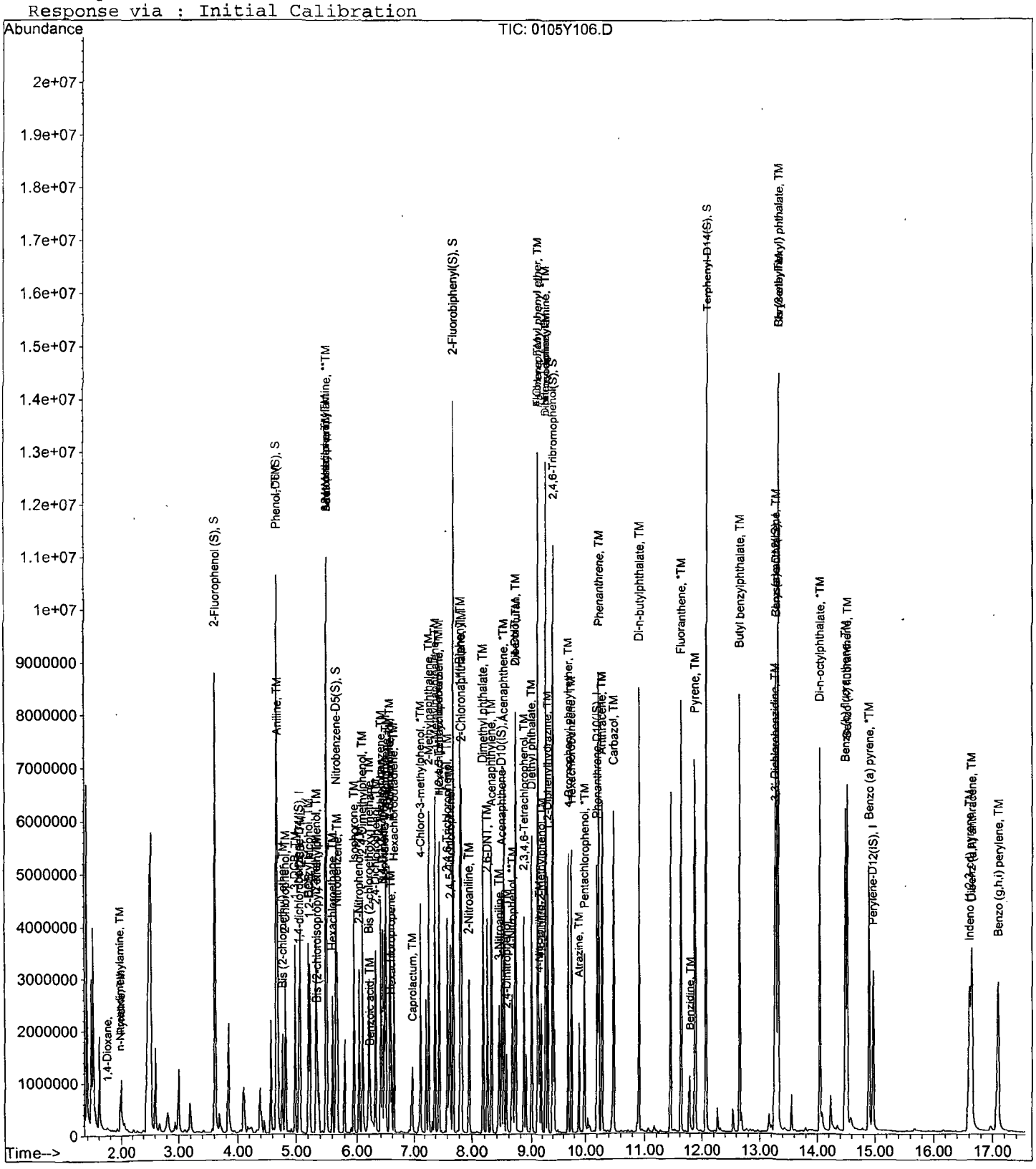
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415691	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1618590	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1011037	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2085277	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1967340	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1850483	40.00000	ppb		0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	3117152	185.55454	ppb		0.00
Spiked Amount 198.020			Recovery = 93.705%				
6) Phenol-D6 (S)	4.67	99	4118909	191.75437	ppb		0.00
Spiked Amount 198.020			Recovery = 96.836%				
22) Nitrobenzene-D5(S)	5.66	82	2310144	95.83685	ppb		0.00
Spiked Amount 99.010			Recovery = 96.795%				
46) 2-Fluorobiphenyl(S)	7.70	172	4329064	90.44598	ppb		0.00
Spiked Amount 99.010			Recovery = 91.350%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1467661	190.66282	ppb		0.00
Spiked Amount 198.020			Recovery = 96.285%				
82) Terphenyl-D14(S)	12.08	244	6657440	111.62734	ppb		0.00
Spiked Amount 99.010			Recovery = 112.743%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.74	58	13469	4.02061			95
3) n-Nitrosodimethylamine	1.98	42	289433	45.16733	ppb		79
4) Pyridine	1.99	79	562969	40.14638	ppb		91
7) Phenol	4.69	94	1237695	48.77218	ppb		84
8) Aniline	4.69	93	900864	48.60184	ppb	#	22
9) Bis (2-chloroethyl) ether	4.77	63	536255	49.51578	ppb		98
10) 2-Chlorophenol	4.83	128	896491	46.69316	ppb		99
11) 1,3-DCB	4.98	146	920166	41.61709	ppb		98
12) 1,4-DCB	5.07	146	947073	42.52299	ppb		99
13) Benzyl alcohol	5.21	108	529313	47.01778	ppb		96
14) 1,2-DCB	5.23	146	902572	43.17031	ppb		99
15) 2-Methylphenol	5.34	107	684387	46.55528	ppb		100
16) Bis (2-chloroisopropyl) et	5.36	45	534043	52.18034	ppb		96
17) Acetophenone	5.49	105	1255892	46.69062	ppb		97
18) 3&4-Methylphenol	5.51	107	1868514	94.10437	ppb		99
19) n-Nitrosodi-n-propylamine	5.50	70	759117	48.36670	ppb		96
20) Hexachloroethane	5.61	117	356947	39.15992	ppb		95
23) Nitrobenzene	5.68	77	1175051	47.38223	ppb		98
24) Isophorone	5.95	82	1859140	46.67716	ppb		94
25) 2-Nitrophenol	6.03	139	477481	45.60960	ppb		97
26) 2,4-Dimethylphenol	6.09	122	705535	40.74772	ppb		94
27) Benzoic acid	6.23	105	718801	46.55545	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1062218	47.15994	ppb		99
29) 2,4-Dichlorophenol	6.31	162	793857	44.29437	ppb		100
30) 1,2,4-Trichlorobenzene	6.40	180	869387	41.61829	ppb		99
31) 3,4-Dimethylphenol	6.43	107	1253596	45.35839	ppb		98
32) Naphthalene	6.49	128	2597406	45.93020	ppb		100
33) 4-Chloroaniline	6.55	127	788265	37.17146	ppb		98
34) 2,6-Dichlorophenol	6.56	162	798576	45.81506	ppb		98
35) Hexachloropropene	6.59	213	460314	24.61171	ppb		99
36) Hexachlorobutadiene	6.63	225	535319	36.22071	ppb		97
37) Caprolactum	6.97	55	289617	50.75431	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	865447	46.18547	ppb		99
39)	2-Methylnaphthalene	7.28	142	1711818	46.04878	ppb		99
40)	1-Methylnaphthalene	7.39	142	1679031	43.80967	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	138688	13.30214	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	983145	42.78024	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	653907	45.73037	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	700265	44.82649	ppb		95
47)	1,1'-Biphenyl	7.82	154	2305306	44.88558	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1815500	45.45713	ppb		95
49)	2-Nitroaniline	7.96	65	609177	47.92830	ppb		97
50)	Dimethyl phthalate	8.18	163	2376466	48.64627	ppb		99
51)	2,6-DNT	8.25	165	504453	47.20416	ppb		92
52)	Acenaphthylene	8.32	152	2746570	45.15783	ppb		99
53)	3-Nitroaniline	8.44	138	440185	44.11850	ppb		96
54)	Acenaphthene	8.52	154	1811406	44.79023	ppb		99
55)	2,4-Dinitrophenol	8.56	184	231667	42.20251	ppb		95
56)	4-Nitrophenol	8.65	65	463344	47.06461	ppb		82
57)	Dibenzofuran	8.72	168	2679739	44.52416	ppb		98
58)	2,4-DNT	8.71	165	728896	47.47133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.86	232	552960	44.70211	ppb		99
60)	Diethyl phthalate	9.00	149	2354828	47.16111	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1297346	47.03391	ppb		96
62)	Fluorene	9.11	166	2281407	45.03078	ppb		99
63)	4-Nitroaniline	9.15	138	491750	45.31112	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	384005	38.01625	ppb	#	93
67)	Diphenyl amine	9.26	169	3379898	85.32209	ppb		99
68)	n-Nitrosodiphenylamine	9.26	169	3379898	85.32209	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	2374607	47.28992	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	707751	44.11332	ppb		97
71)	Hexachlorobenzene	9.76	284	709344	43.06053	ppb		98
72)	Atrazine	9.89	200	337690	24.21511	ppb		98
73)	Pentachlorophenol	9.99	266	461261	42.27075	ppb		98
74)	Phenanthrene	10.23	178	3306370	45.31760	ppb		100
75)	Anthracene	10.29	178	3449964	45.33030	ppb		100
76)	Carbazol	10.49	167	3156982	46.84453	ppb		100
77)	Di-n-butylphthalate	10.91	149	4066600	49.18470	ppb		99
78)	Fluoranthene	11.61	202	3844403	45.15465	ppb		98
80)	Benzidine	11.78	184	429097	21.71449	ppb		97
81)	Pyrene	11.88	202	4094297	49.42269	ppb		100
83)	Butyl benzylphthalate	12.65	149	1833846	51.63825	ppb		99
84)	3,3'-Dichlorobenzidine	13.26	252	150124	5.45119	ppb	#	97
85)	Benz (a) anthracene	13.27	228	3776304	44.48085	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2635739	51.58981	ppb		99
87)	Chrysene	13.32	228	3922410	49.05695	ppb		99
88)	Di-n-octylphthalate	14.04	149	4303956	51.38655	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3759269	51.20440	ppb	#	99
91)	Benzo (k) fluoranthene	14.53	252	3402711	48.02621	ppb		98
92)	Benzo (a) pyrene	14.90	252	3082804	44.98149	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3389223	42.91271	ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	3082712	44.59945	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2990890	44.29314	ppb		100

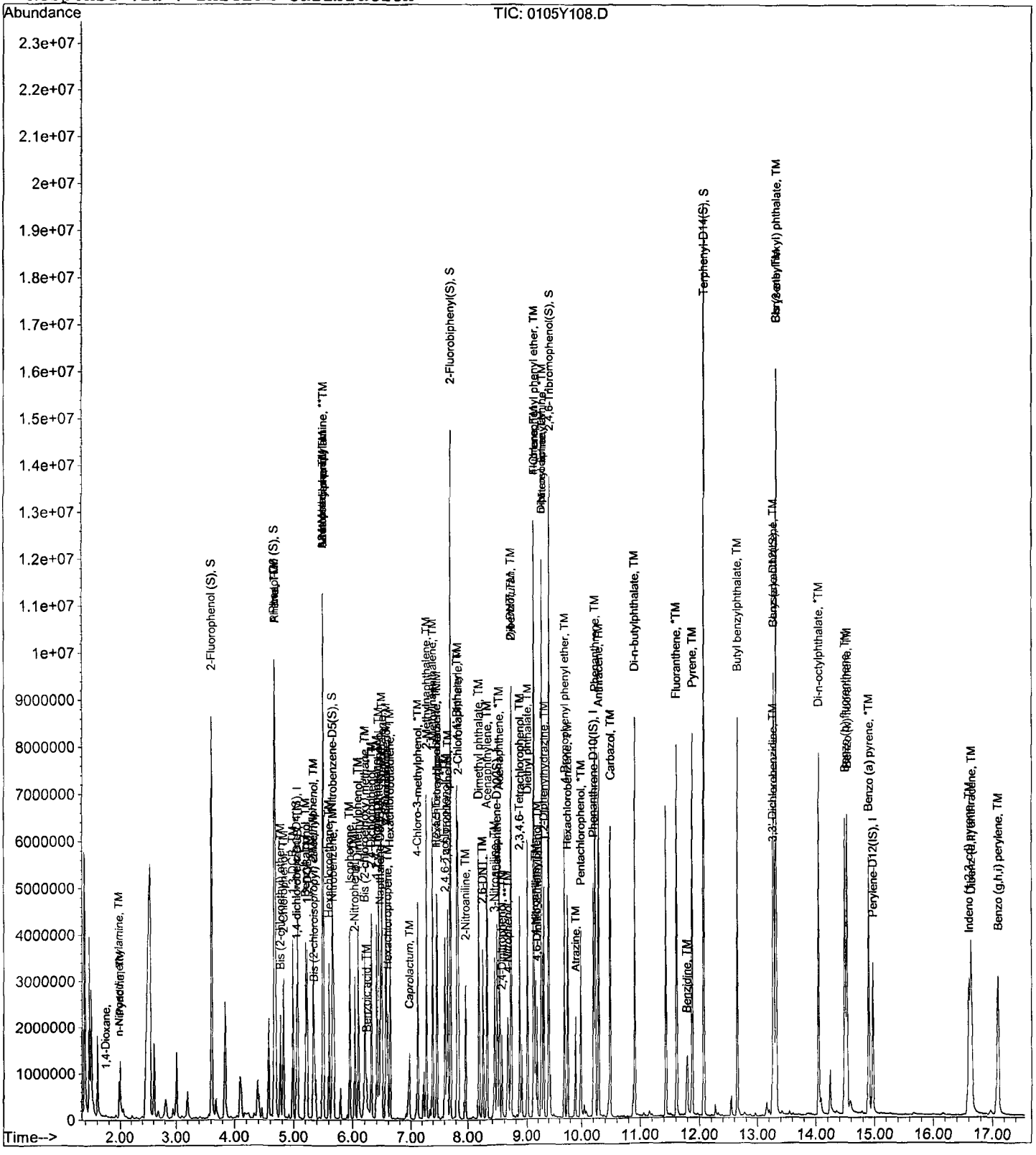
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	412243	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1602246	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1013265	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2042923	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1952727	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	1847694	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.62	112	3033782	182.10224 ppb		0.00
Spiked Amount 198.020			Recovery = 91.962%			
6) Phenol-D6 (S)	4.67	99	3967195	186.23613 ppb		0.00
Spiked Amount 198.020			Recovery = 94.049%			
22) Nitrobenzene-D5(S)	5.66	82	2207385	92.50799 ppb		0.00
Spiked Amount 99.010			Recovery = 93.433%			
46) 2-Fluorobiphenyl(S)	7.70	172	4202200	87.60240 ppb		0.00
Spiked Amount 99.010			Recovery = 88.478%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1390568	180.25050 ppb		0.00
Spiked Amount 198.020			Recovery = 91.027%			
82) Terphenyl-D14(S)	12.07	244	6475871	109.39548 ppb		0.00
Spiked Amount 99.010			Recovery = 110.489%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.74	58	12525	3.77009		87
3) n-Nitrosodimethylamine	1.97	42	293514	46.18729 ppb		89
4) Pyridine	1.99	79	612976	44.07809 ppb		93
7) Phenol	4.68	94	1225025	48.67667 ppb		88
8) Aniline	4.69	93	1001472	54.48157 ppb		95
9) Bis (2-chloroethyl) ether	4.77	63	517749	48.20686 ppb		98
10) 2-Chlorophenol	4.82	128	866247	45.49528 ppb		100
11) 1,3-DCB	4.98	146	887034	40.45415 ppb		99
12) 1,4-DCB	5.07	146	915977	41.47079 ppb		100
13) Benzyl alcohol	5.20	108	515032	46.13188 ppb		95
14) 1,2-DCB	5.23	146	855826	41.27681 ppb		98
15) 2-Methylphenol	5.33	107	665005	45.61518 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	514606	50.70174 ppb		94
17) Acetophenone	5.49	105	1232065	46.18790 ppb		96
18) 3&4-Methylphenol	5.51	107	1820572	92.45675 ppb		99
19) n-Nitrosodi-n-propylamine	5.50	70	744798	47.85128 ppb		98
20) Hexachloroethane	5.60	117	352526	38.99838 ppb		95
23) Nitrobenzene	5.69	77	1145358	46.65602 ppb		88
24) Isophorone	5.95	82	1781497	45.18404 ppb		92
25) 2-Nitrophenol	6.04	139	477409	46.06790 ppb	#	77
26) 2,4-Dimethylphenol	6.10	122	650181	37.93383 ppb		99
27) Benzoic acid	6.23	105	689644	45.33732 ppb		96
28) Bis (2-chloroethoxy) metha	6.20	93	1041054	46.69178 ppb		99
29) 2,4-Dichlorophenol	6.31	162	768617	43.32353 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	846812	40.95112 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1176222	42.99293 ppb		98
32) Naphthalene	6.49	128	2484936	44.38961 ppb		99
33) 4-Chloroaniline	6.55	127	928229	44.21811 ppb		100
34) 2,6-Dichlorophenol	6.56	162	754214	43.71136 ppb		98
35) Hexachloropropene	6.59	213	480014	25.92681 ppb		99
36) Hexachlorobutadiene	6.63	225	526984	36.02047 ppb		97
37) Caprolactum	6.97	55	263621	46.66986 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	831664	44.83534	ppb		96
39)	2-Methylnaphthalene	7.27	142	1638037	44.51352	ppb		99
40)	1-Methylnaphthalene	7.39	142	1625948	42.85737	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	187968	16.03571	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	943259	40.95440	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	640346	44.68353	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	681365	43.52073	ppb		99
47)	1,1'-Biphenyl	7.82	154	2263554	43.97574	ppb		100
48)	2-Chloronaphthalene	7.84	162	1772101	44.27293	ppb		99
49)	2-Nitroaniline	7.96	65	600998	47.18083	ppb		96
50)	Dimethyl phthalate	8.18	163	2292322	46.82066	ppb		100
51)	2,6-DNT	8.25	165	497964	46.49449	ppb		98
52)	Acenaphthylene	8.31	152	2652946	43.52260	ppb		100
53)	3-Nitroaniline	8.44	138	458883	45.89141	ppb		99
54)	Acenaphthene	8.52	154	1791528	44.20131	ppb		100
55)	2,4-Dinitrophenol	8.57	184	235560	42.61758	ppb	#	78
56)	4-Nitrophenol	8.65	65	451655	45.77641	ppb		81
57)	Dibenzofuran	8.71	168	2640602	43.77743	ppb		99
58)	2,4-DNT	8.71	165	707064	45.94821	ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	546614	44.09192	ppb		96
60)	Diethyl phthalate	9.00	149	2290102	45.76397	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	1250447	45.23396	ppb		99
62)	Fluorene	9.11	166	2223815	43.79750	ppb		100
63)	4-Nitroaniline	9.15	138	493838	45.40346	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	371812	37.57228	ppb		95
67)	Diphenyl amine	9.27	169	3260872	84.02401	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	3260872	84.02401	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	2298643	46.72617	ppb		98
70)	4-Bromophenyl phenyl ether	9.69	248	672134	42.76188	ppb		94
71)	Hexachlorobenzene	9.75	284	692692	42.92145	ppb		95
72)	Atrazine	9.89	200	333263	24.39310	ppb		97
73)	Pentachlorophenol	9.99	266	455805	42.63674	ppb		98
74)	Phenanthrene	10.24	178	3273215	45.79327	ppb		99
75)	Anthracene	10.29	178	3354366	44.98795	ppb		100
76)	Carbazol	10.49	167	3041133	46.06106	ppb		99
77)	Di-n-butylphthalate	10.90	149	3911578	48.29057	ppb		100
78)	Fluoranthene	11.62	202	3853503	46.19990	ppb	#	97
80)	Benzidine	11.79	184	680513	34.69513	ppb		98
81)	Pyrene	11.88	202	3991713	48.54497	ppb		99
83)	Butyl benzylphthalate	12.65	149	1792091	50.84012	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	726560	26.57972	ppb		98
85)	Benz (a) anthracene	13.27	228	3710155	44.02872	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	2631185	51.88607	ppb	#	93
87)	Chrysene	13.32	228	3828269	48.23784	ppb		99
88)	Di-n-octylphthalate	14.04	149	4162524	50.06985	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	3602070	49.13727	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	3408123	48.17520	ppb		99
92)	Benzo (a) pyrene	14.90	252	3053180	44.61649	ppb	#	97
93)	Indeno (1,2,3-cd) pyrene	16.60	276	3309169	41.96235	ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	3039795	44.04493	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2944491	43.67182	ppb		99

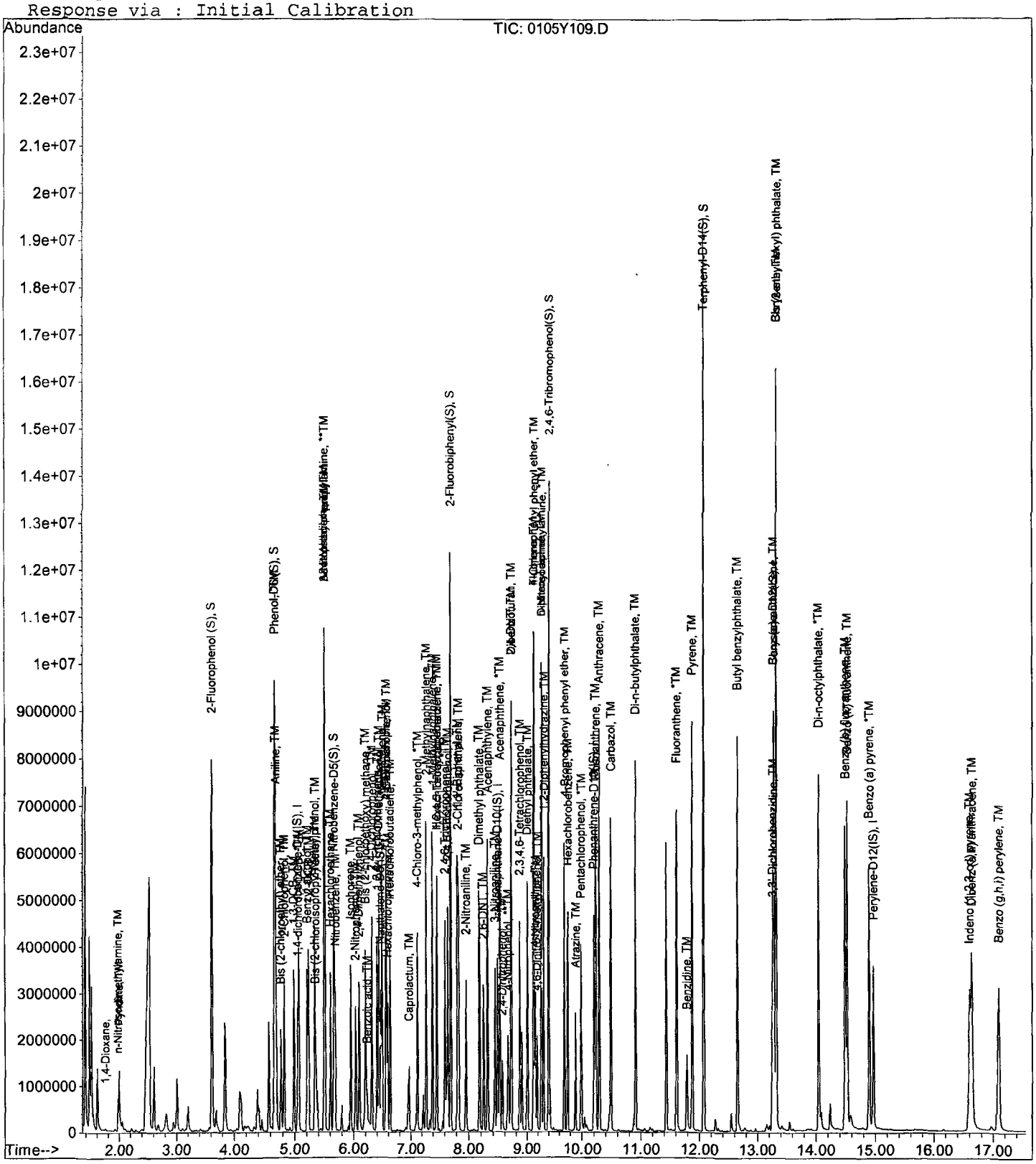
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

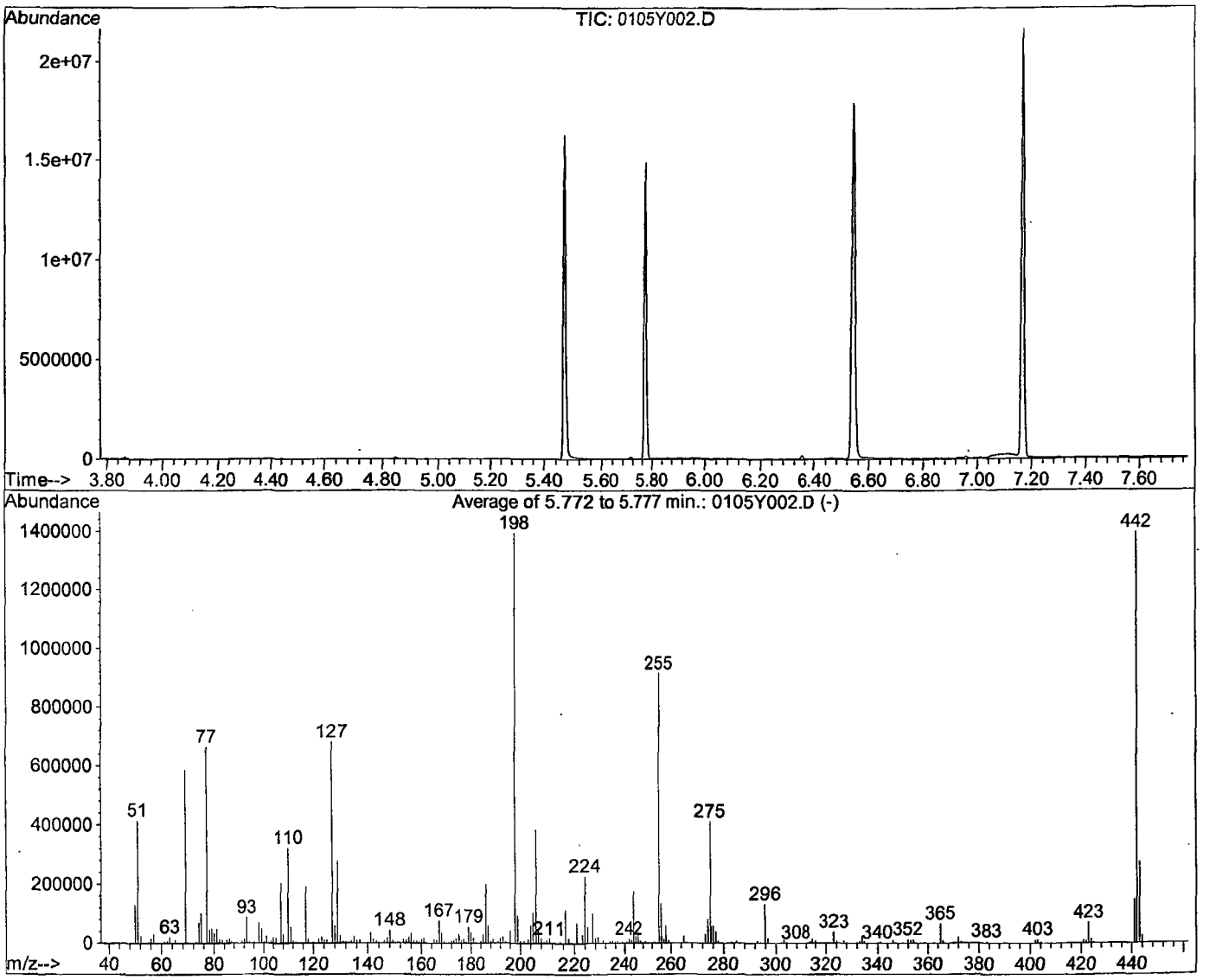
Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

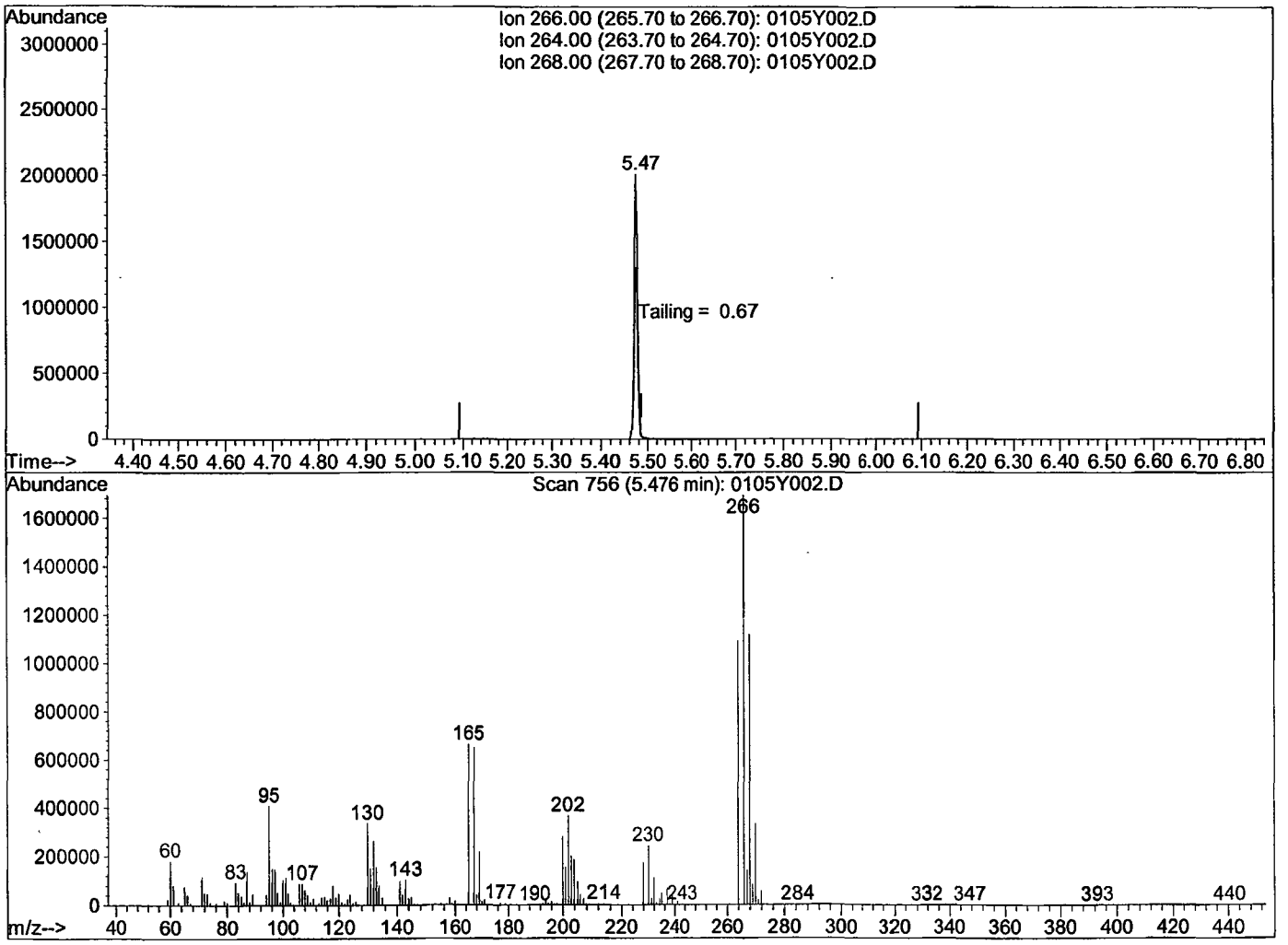
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

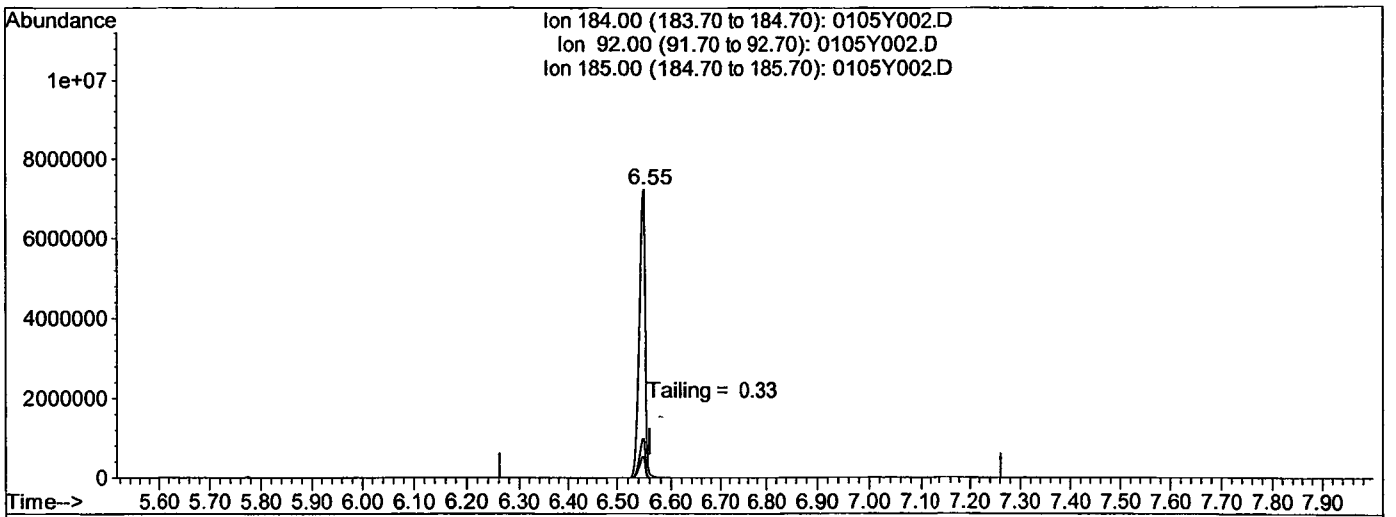
response 10909057

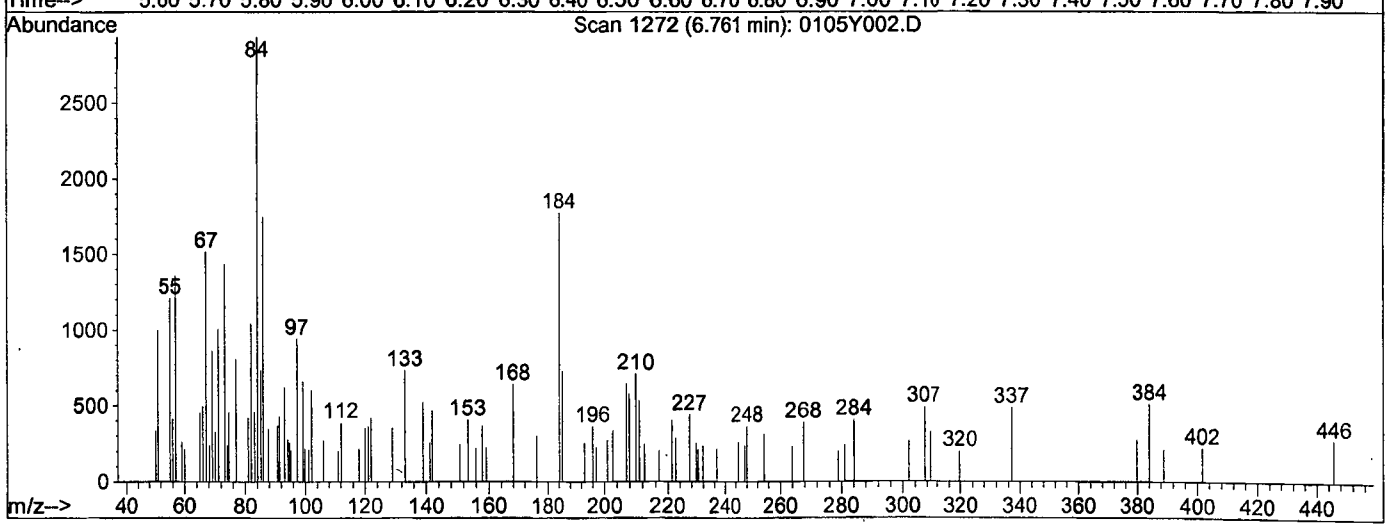
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

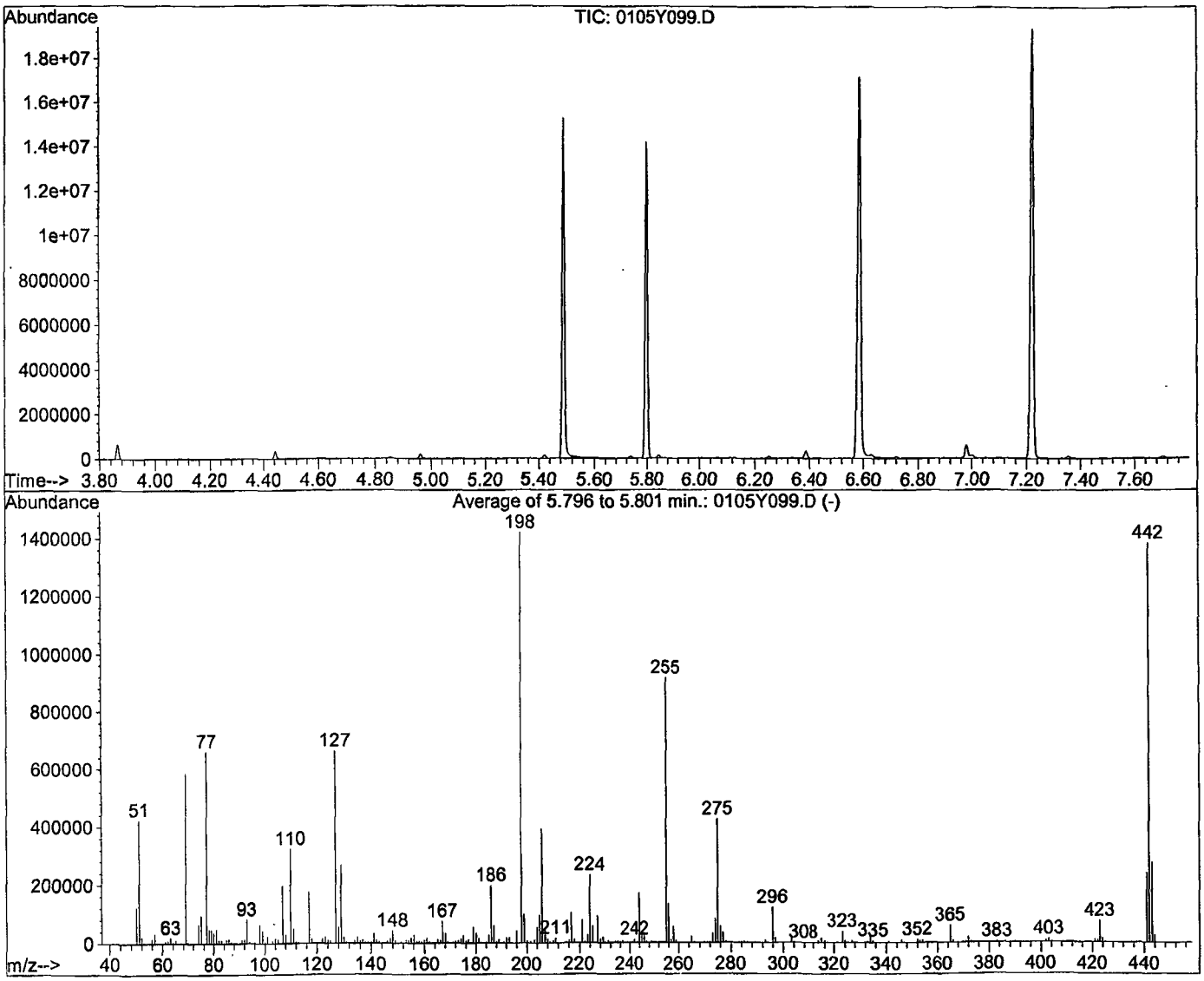
response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 884, 885, 886; Background Corrected with Scan 875

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	423872	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	3612	PASS
127	198	10	80	46.7	662677	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1420459	PASS
199	198	5	9	6.9	98451	PASS
275	198	10	60	29.9	424256	PASS
365	198	1	100	4.2	59421	PASS
441	442	0.01	24	17.3	239381	PASS
442	198	50	500	97.4	1383403	PASS
443	442	15	24	19.9	274965	PASS

Data File Name:	**0105Y099.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:23**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**99**
Instrument Name:	**Yoda**

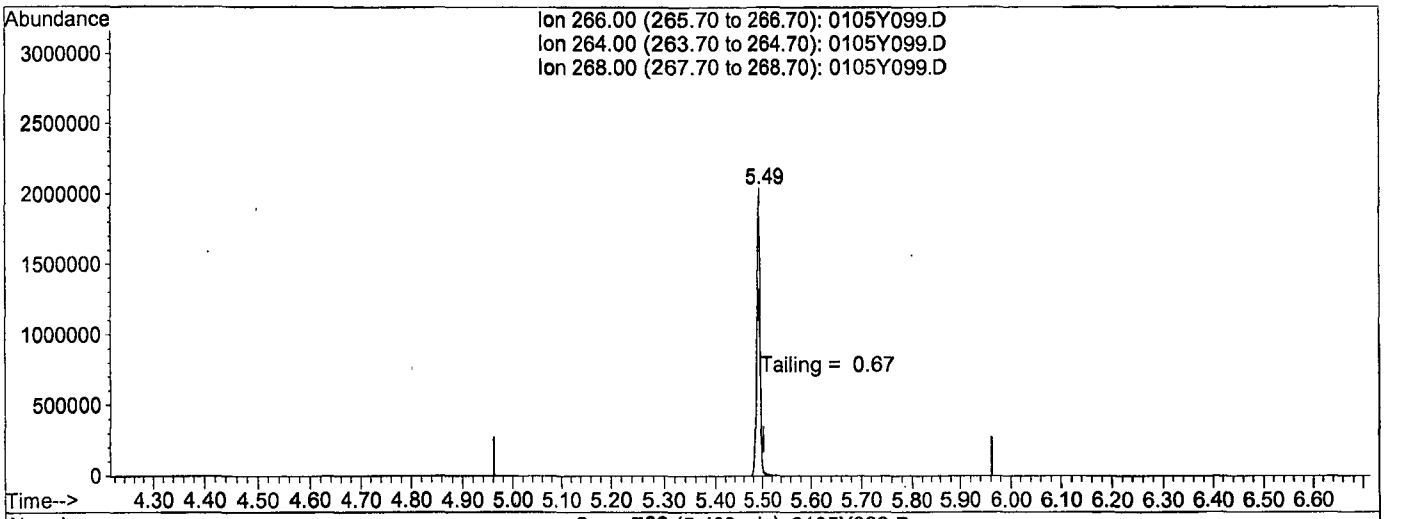
#	Name	Ret Time	Target Response
1)	DDT	7.12	144580000
2)	DDD	6.84	300557
3)	DDE	5.89	127448

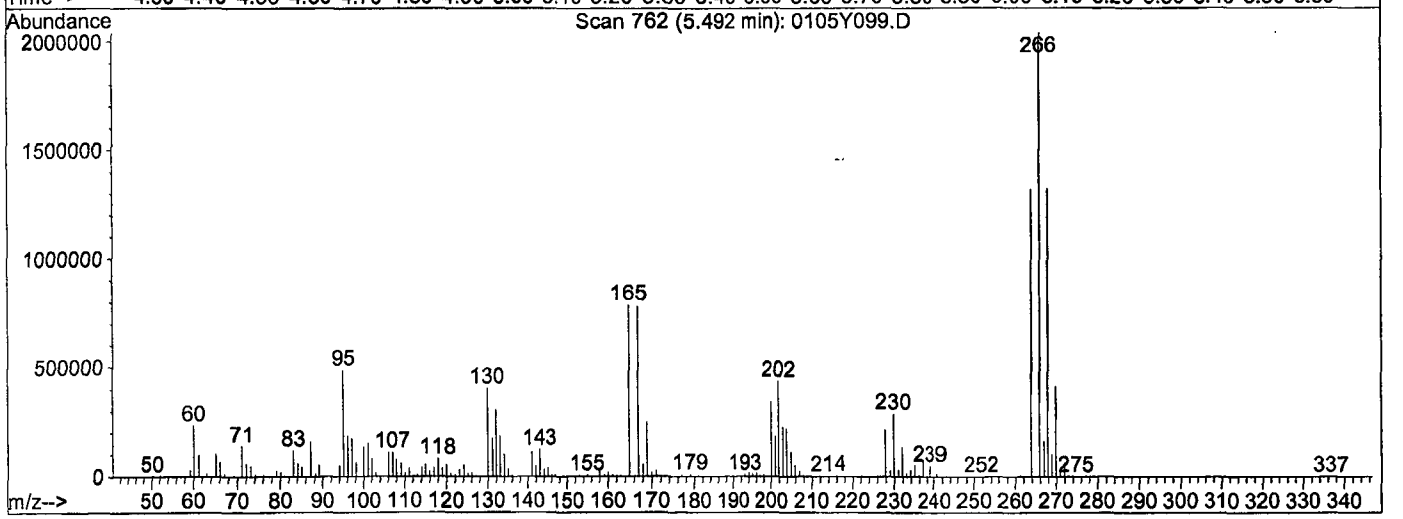
Breakdown **0.30**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(5) Pentachlorophenol

5.49min 0.0000

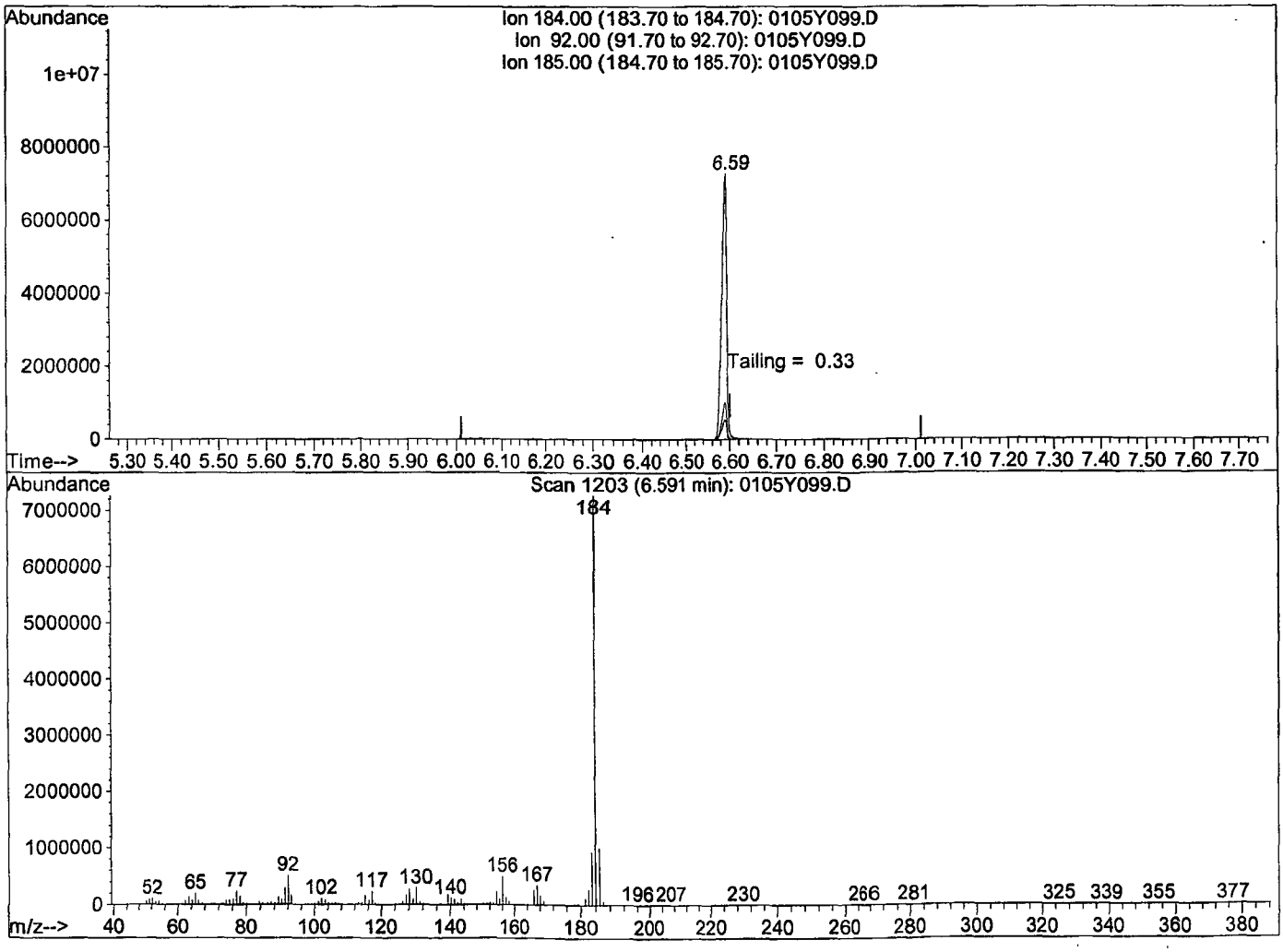
response 10863019

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.81
268.00	64.30	63.53
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y099.D

(6) Benzidine

6.59min 0.0000

response 54196247

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.24
185.00	14.10	13.77
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL			1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	**(4)**
Prep Date	**05/29/20**
Exp Date	**12/31/25**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Name of Final Standard	**8270 Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	**10/06/20**		
Exp Date	**10/06/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	**Restek**	33029	10,000 ug/mL	**A0158618-50006, A0152714-49436**	**09/30/27**	20 mL	200 mL	**Acetone246130/ MC59353 1:1**	1000 ug/mL
8270 B/N Surrogate Mix	**Restek**	31086	5000 ug/mL	**A0158684-50244,5024550248,50004**	**02/28/26**	20 mL	"	"	500 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
99	0105Y099.D	1	SV TUNE 10/02/20		25 Jan 21 12:23
100	0105Y100.D	1	50ug/mL 8270 01/05/21 (1)		25 Jan 21 12:38
5	0105Y105.D	1.25	210122A BLK 1/800		25 Jan 21 16:56
6	0105Y106.D	1.25	210122A LCS-1 1/0.8		25 Jan 21 17:21
8	0105Y108.D	0.9901	BA25526W18 MS-1 1/1010		25 Jan 21 18:12
9	0105Y109.D	0.9901	BA25526W22 MSD-1 1/1010		25 Jan 21 18:37
10	0105Y110.D	1	BA25526W17 1/1000		25 Jan 21 19:03
15	0105Y115.D	1	50ug/mL 8270 08/12/20 (5)		25 Jan 21 21:09

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus
Initials: MA/MM

			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

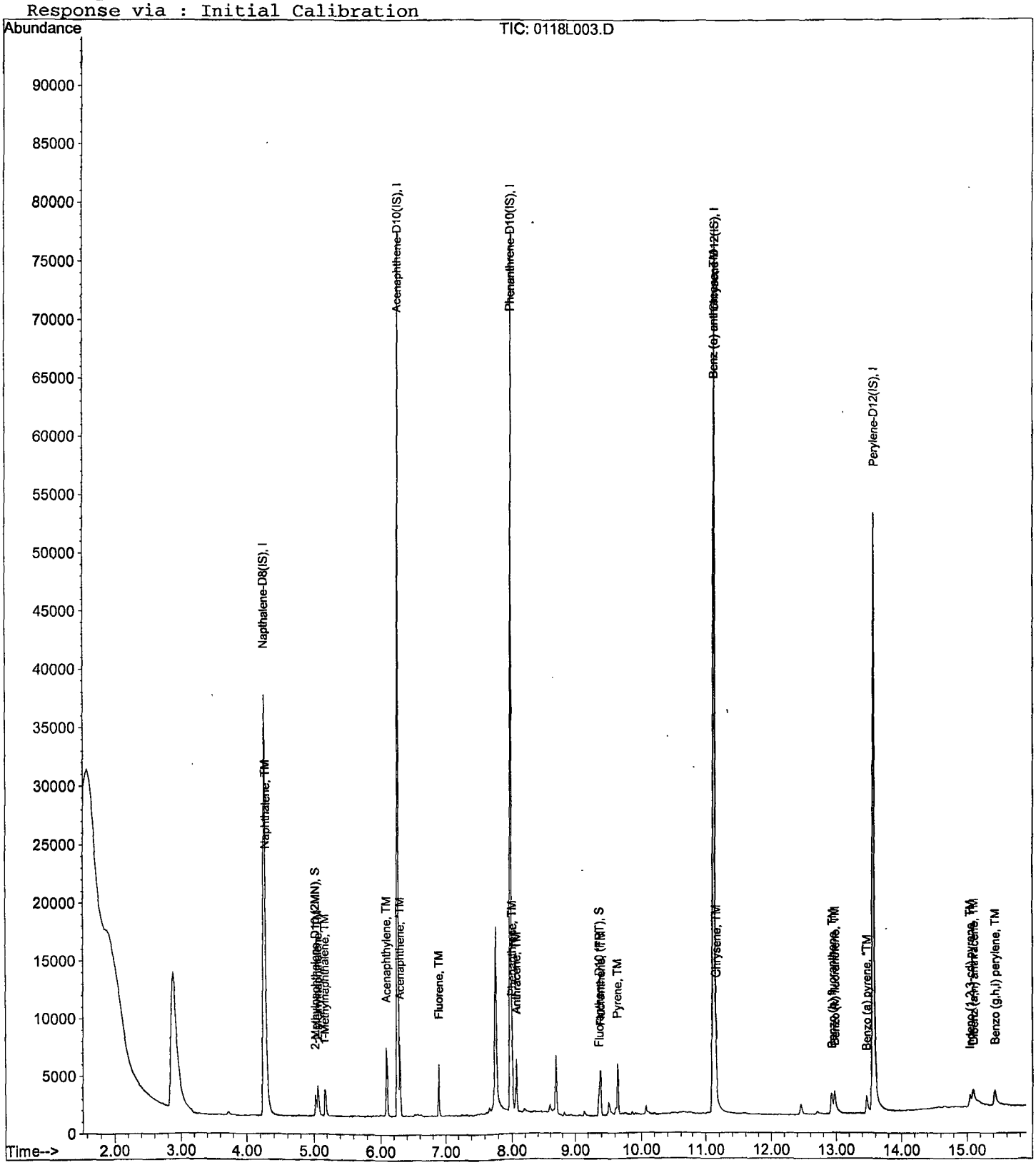
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562 ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%		
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183 ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	6554	0.21427 ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578 ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723 ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472 ppb		99
8) Acenaphthene	6.29	154	3730	0.21987 ppb		98
9) Fluorene	6.89	166	4201	0.21236 ppb		99
11) Phenanthrene	8.00	178	6614	0.21709 ppb		99
12) Anthracene	8.06	178	5555	0.20337 ppb		100
14) Fluoranthene	9.38	202	8388	0.20768 ppb	#	84
16) Pyrene	9.64	202	8654	0.21194 ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097 ppb		96
18) Chrysene	11.15	228	7901	0.21470 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777 ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570 ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787 ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285 ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333 ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832 ppb		97

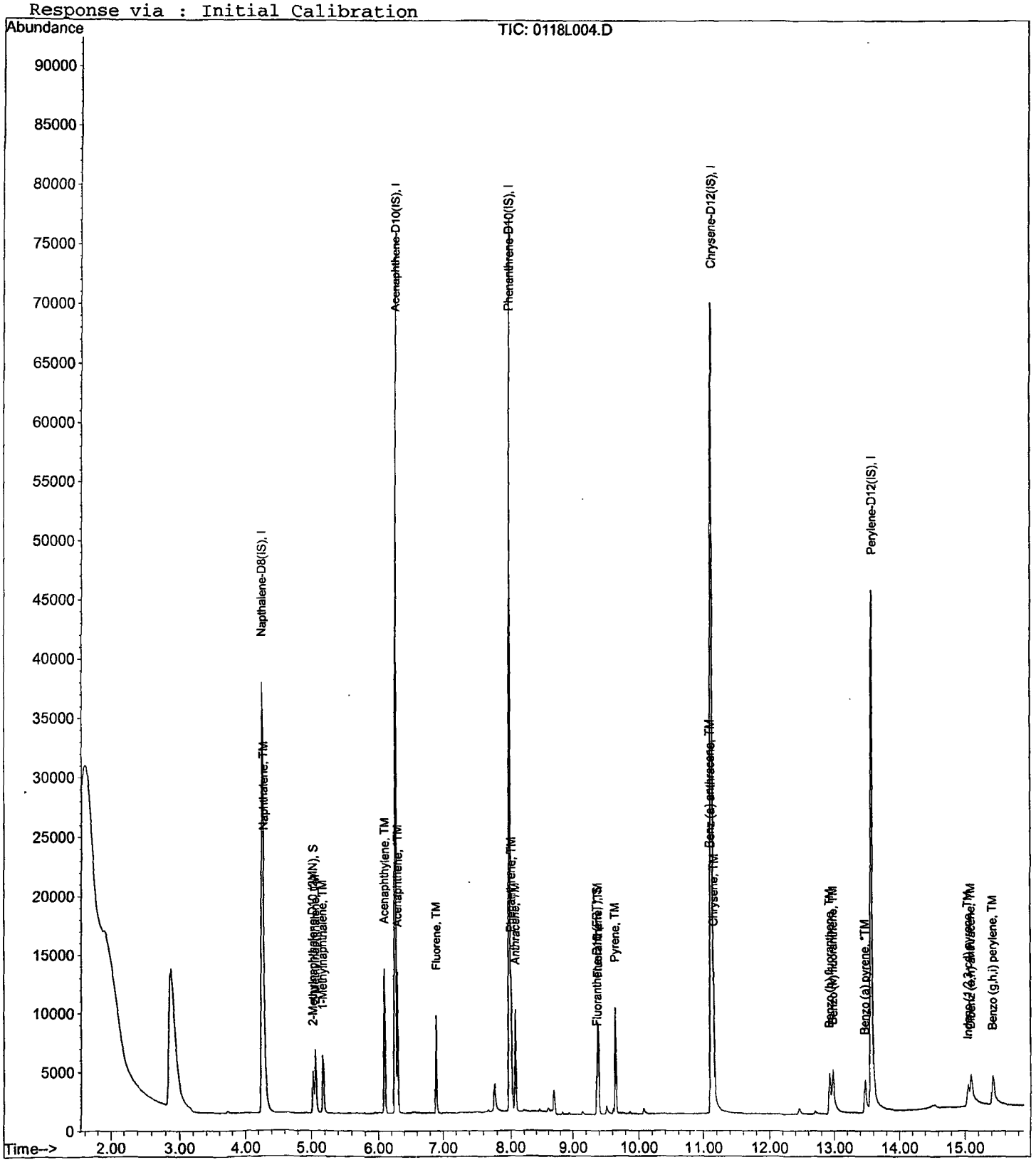
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979	ppb		0.00
Spiked Amount 5.000			Recovery = 5.200%				
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727	ppb		0.00
Spiked Amount 5.000			Recovery = 4.940%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	15152	0.53197	ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641	ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883	ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452	ppb		99
8) Acenaphthene	6.29	154	8507	0.53809	ppb		99
9) Fluorene	6.89	166	9747	0.52871	ppb		100
11) Phenanthrene	8.00	178	15220	0.53650	ppb		99
12) Anthracene	8.06	178	13445	0.52863	ppb		99
14) Fluoranthene	9.39	202	19405	0.51598	ppb		97
16) Pyrene	9.64	202	19829	0.52483	ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713	ppb		97
18) Chrysene	11.15	228	17766	0.52174	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842	ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592	ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124	ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285	ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408	ppb		92

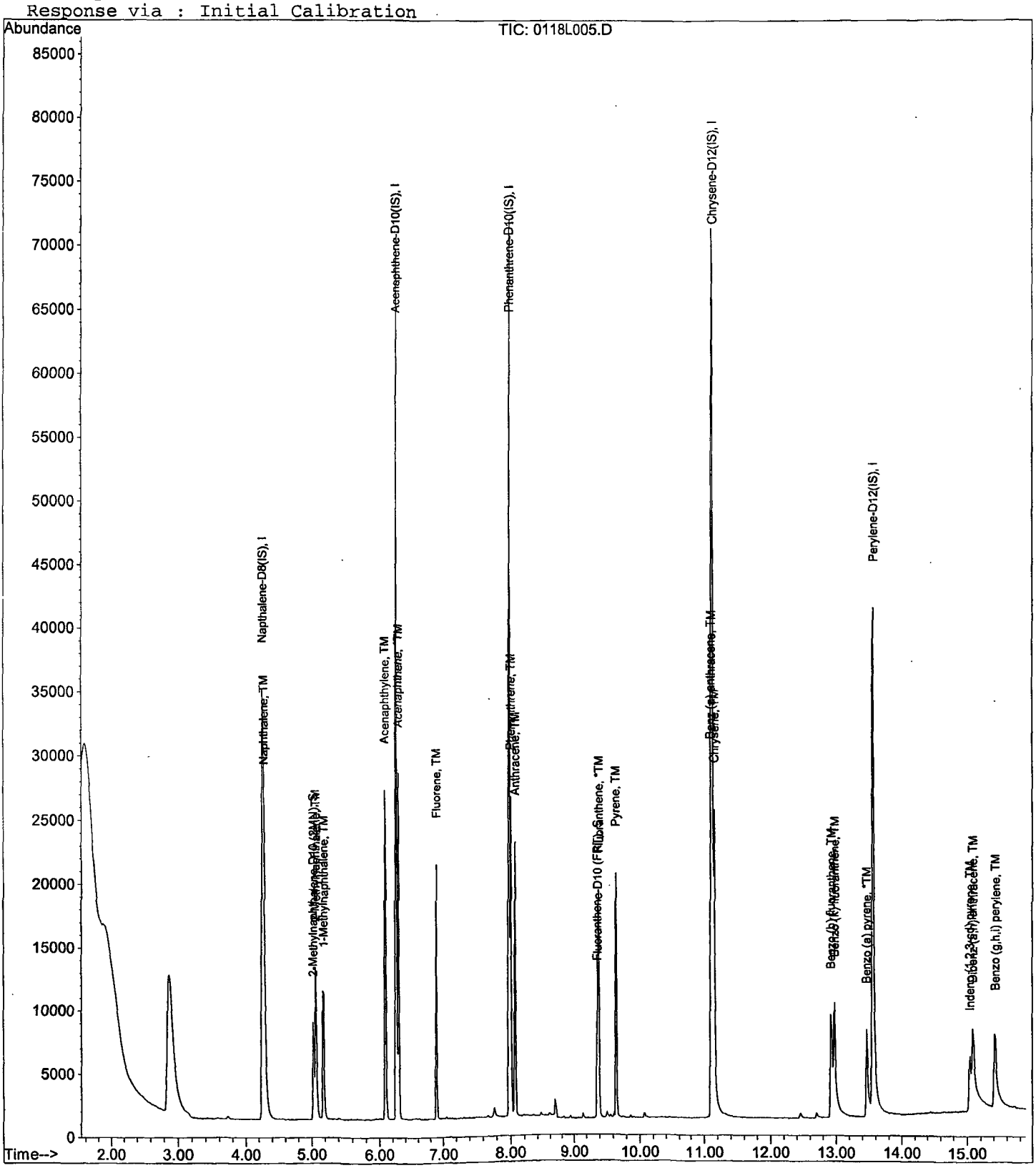
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779	ppb		0.00
Spiked Amount 5.000			Recovery = 10.160%				
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272	ppb		0.00
Spiked Amount 5.000			Recovery = 10.060%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	29158	1.03706	ppb		100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438	ppb		99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359	ppb		99
7) Acenaphthylene	6.08	152	55396	1.05240	ppb		99
8) Acenaphthene	6.29	154	16277	1.05847	ppb		100
9) Fluorene	6.89	166	18901	1.05405	ppb		99
11) Phenanthrene	8.00	178	29034	1.07377	ppb		100
12) Anthracene	8.06	178	25745	1.06201	ppb		100
14) Fluoranthene	9.39	202	38564	1.07584	ppb		98
16) Pyrene	9.65	202	38462	1.03286	ppb		100
17) Benz (a) anthracene	11.11	228	30159	0.95752	ppb		99
18) Chrysene	11.15	228	33925	1.01080	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864	ppb	#	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514	ppb		99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606	ppb		99
23) Benzo (a) pyrene	13.46	252	22522	0.92324	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232	ppb		94

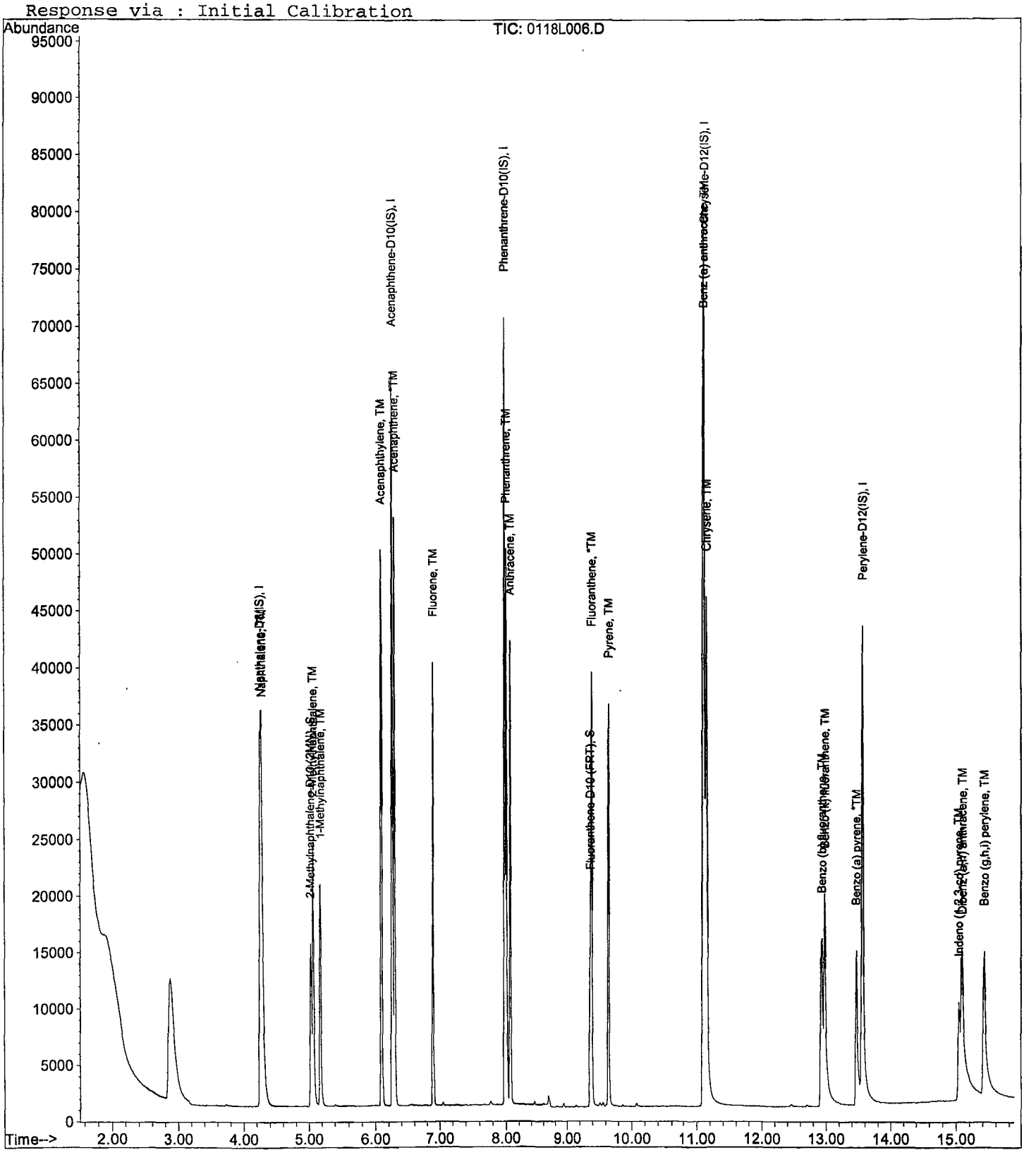
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.300%			
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357	ppb		0.00
Spiked Amount 5.000			Recovery	= 50.280%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	134538	4.98585	ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293	ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401	ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969	ppb		100
8) Acenaphthene	6.29	154	75592	5.12022	ppb		100
9) Fluorene	6.89	166	91323	5.30474	ppb		100
11) Phenanthrene	8.00	178	136722	5.27514	ppb		100
12) Anthracene	8.06	178	124850	5.37298	ppb		100
14) Fluoranthene	9.39	202	188170	5.47654	ppb		100
16) Pyrene	9.65	202	189979	5.19874	ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636	ppb		100
18) Chrysene	11.15	228	168073	5.10305	ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112	ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853	ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449	ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925	ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274	ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602	ppb		100

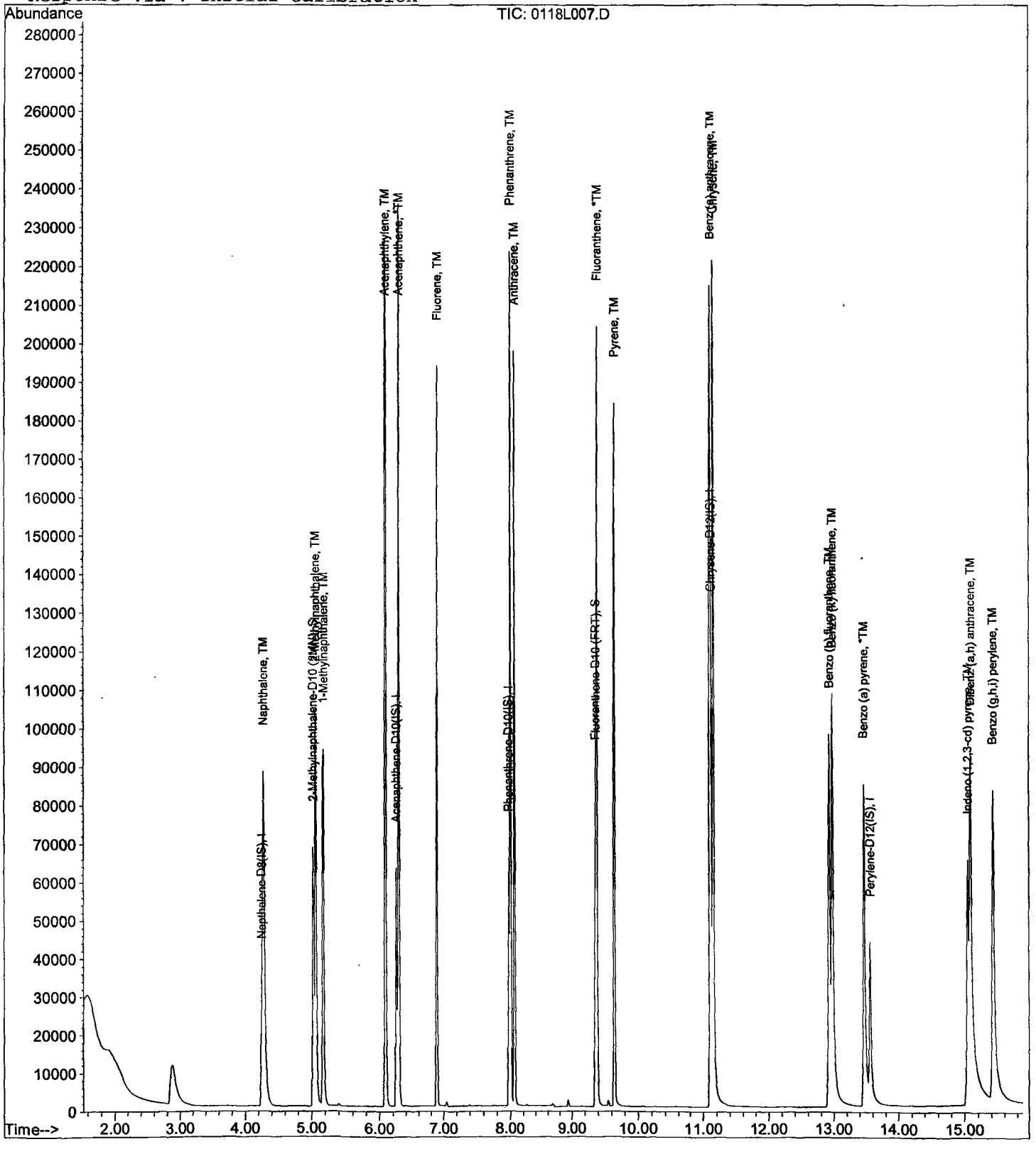
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897	ppb		0.00
Spiked Amount 5.000			Recovery = 98.180%				
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763	ppb		0.00
Spiked Amount 5.000			Recovery = 101.560%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	268559	9.44564	ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736	ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451	ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932	ppb		100
8) Acenaphthene	6.29	154	143677	9.22655	ppb		99
9) Fluorene	6.89	166	175331	9.65565	ppb		99
11) Phenanthrene	8.00	178	252445	9.28323	ppb		99
12) Anthracene	8.06	178	235818	9.67255	ppb		99
14) Fluoranthene	9.39	202	356187	9.88031	ppb		97
16) Pyrene	9.65	202	358384	9.35054	ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203	ppb		99
18) Chrysene	11.16	228	320451	9.27660	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742	ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043	ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132	ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641	ppb	#	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

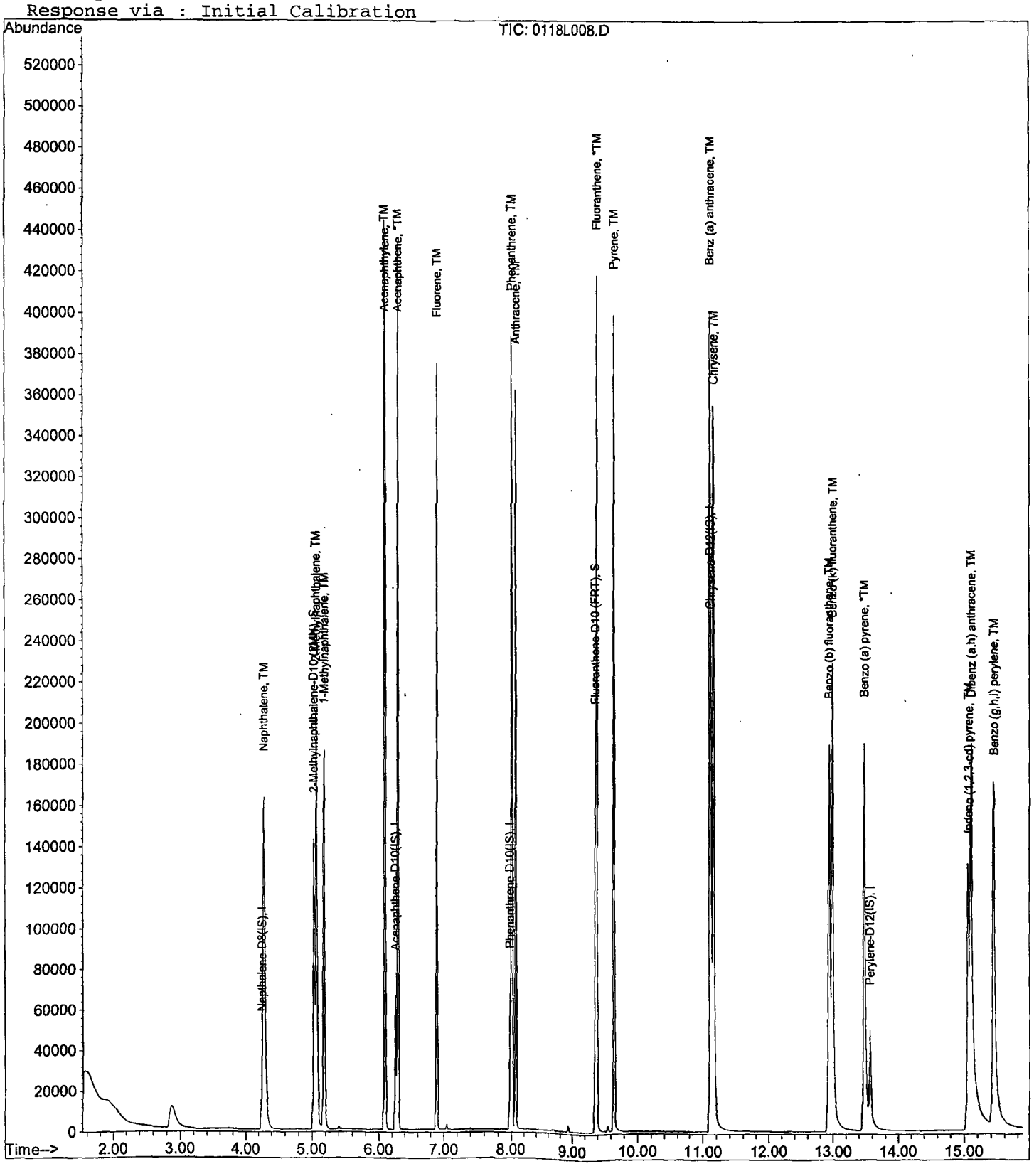
Data File : M:\LINUS\DATA\L210118\0118L008.D
Acq On : 18 Jan 21 13:23
Sample : 10 SIM 01/15/21
Misc :

Vial: 8
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275	ppb		0.00
Spiked Amount 5.000			Recovery = 467.860%				
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323	ppb		0.01
Spiked Amount 5.000			Recovery = 485.860%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	1196891	46.08087	ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476	ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633	ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017	ppb		97
8) Acenaphthene	6.30	154	631316	43.96491	ppb		89
9) Fluorene	6.89	166	764075	45.63163	ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079	ppb		98
12) Anthracene	8.08	178	1010706	44.13554	ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367	ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458	ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809	ppb		97
18) Chrysene	11.17	228	1338368	43.66618	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600	ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049	ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551	ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246	ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934	ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437	ppb		99

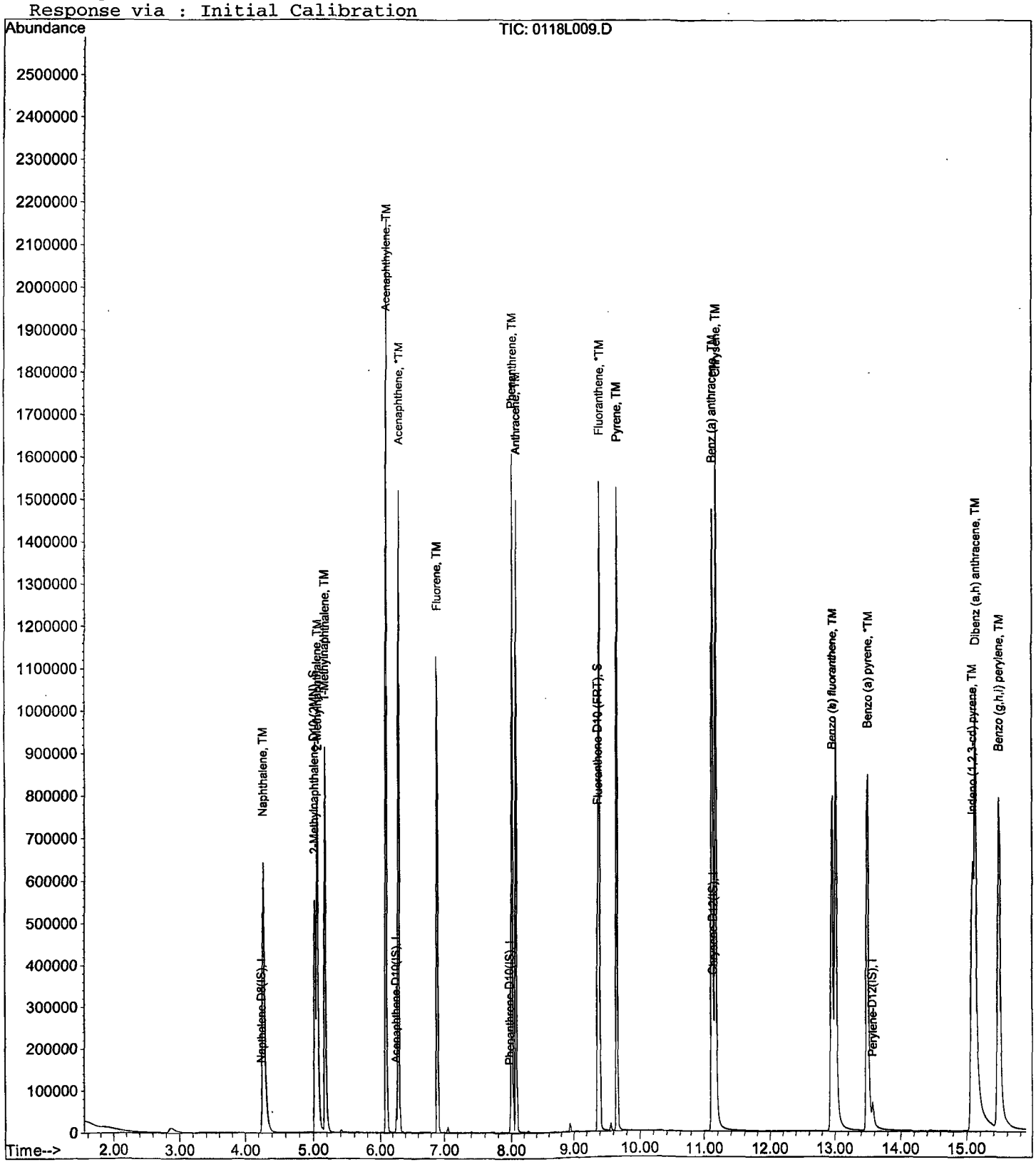
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000 ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000 ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000 ppb		0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210 ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%			
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423 ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	2224048	88.96172 ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956 ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247 ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934 ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300 ppb		96
9) Fluorene	6.90	166	1390953	82.59956 ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367 ppb		97
12) Anthracene	8.09	178	2040467	89.58105 ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099 ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549 ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522 ppb		96
18) Chrysene	11.19	228	2703165	90.38960 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219 ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732 ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829 ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873 ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705 ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621 ppb		99

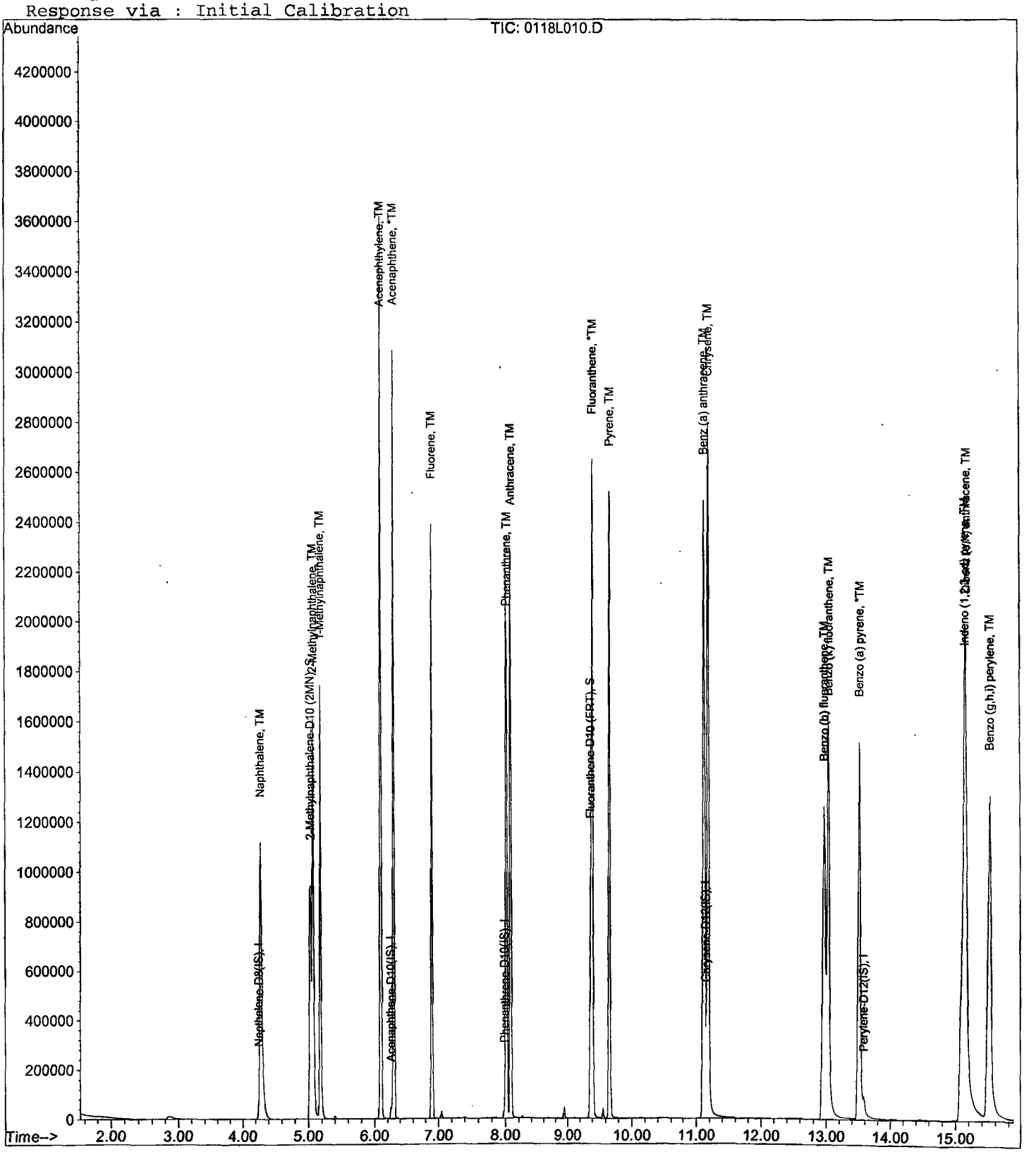
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069 ppb		0.00
Spiked Amount 5.000			Recovery	= 0.020%		
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132 ppb		0.00
Spiked Amount 5.000			Recovery	= 0.220%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	137423	5.27705 ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831 ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437 ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224 ppb		100
8) Acenaphthene	6.29	154	77645	5.22665 ppb		99
9) Fluorene	6.89	166	92294	5.32787 ppb		100
11) Phenanthrene	8.00	178	132877	5.01426 ppb		100
12) Anthracene	8.06	178	132921	5.59477 ppb		99
14) Fluoranthene	9.39	202	184979	5.26550 ppb		100
16) Pyrene	9.65	202	190804	5.11487 ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082 ppb		100
18) Chrysene	11.15	228	165836	4.93766 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773 ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329 ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901 ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275 ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374 ppb		93

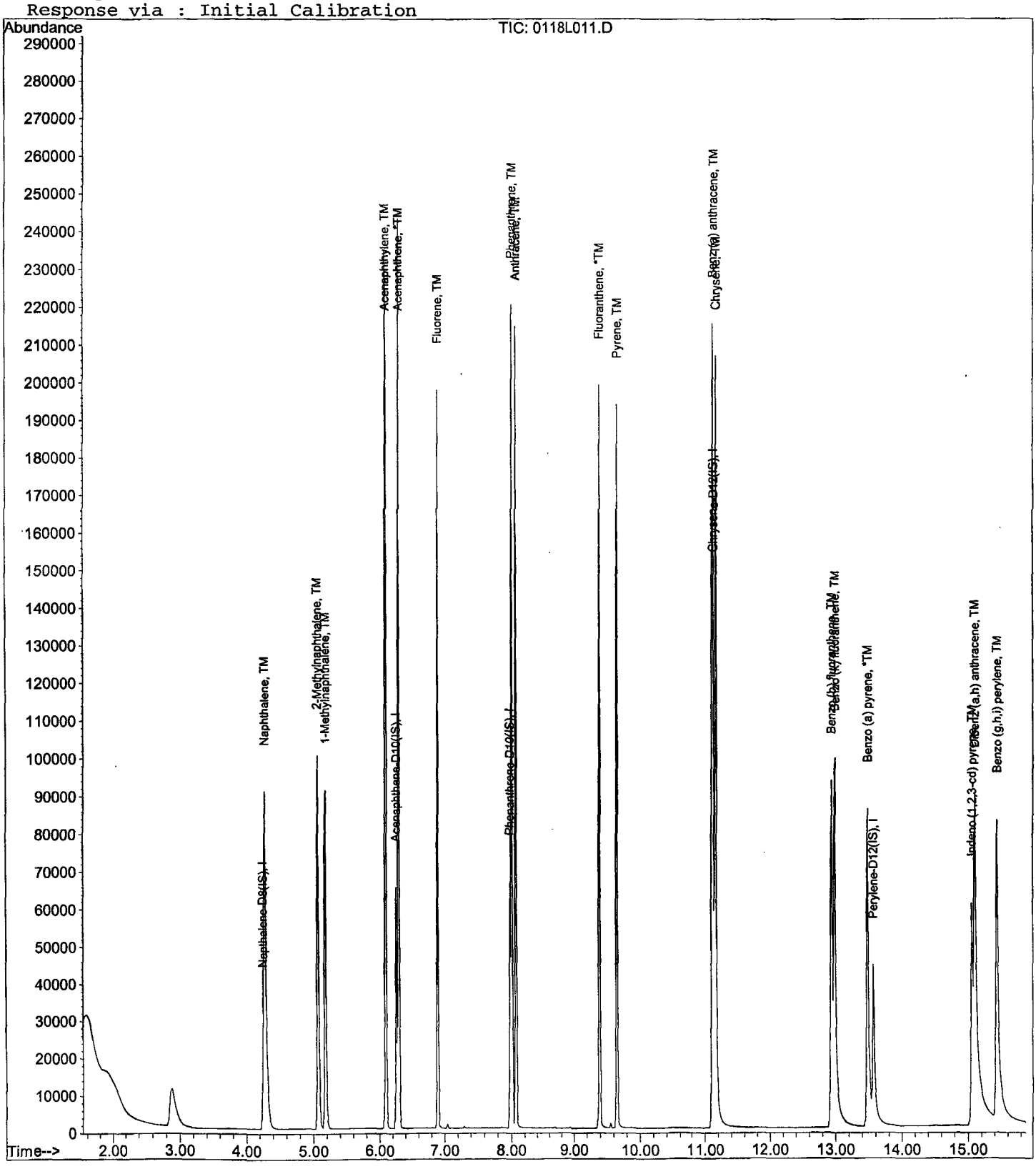
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L035.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.076	5.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.044	2.7	S	
4	TM	2-Methylnaphthalene	0.6368	0.6954	9.2	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6776	6.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.315	6.1	TM	
8	*TM	Acenaphthene	1.188	1.238	4.2	*TM	
9	TM	Fluorene	1.385	1.491	7.6	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.205	4.0	TM	
12	TM	Anthracene	1.039	1.106	6.4	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.348	0.25	S	
14	*TM	Fluoranthene	1.536	1.660	8.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.381	1.4	TM	
17	TM	Benz (a) anthracene	1.150	1.100	4.4	TM	
18	TM	Chrysene	1.226	1.183	3.5	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.107	1.9	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.007	2.8	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.381	9.0	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.059	12	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9671	9.3	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.105	9.5	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.7		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L035.D Vial: 35
Acq On : 25 Jan 21 12:55 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 25 13:41 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64820	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31514	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	57372	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	69725	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.57	264	64837	2.50000 ppb	0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	67696	2.43318 ppb	0.00
Spiked Amount 5.000			Recovery	= 48.660%	
13) Fluoranthene-D10 (FRT)	9.37	212	77334	2.49380 ppb	0.00
Spiked Amount 5.000			Recovery	= 49.880%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	139433	5.28683 ppb	99
4) 2-Methylnaphthalene	5.06	142	90150	5.45995 ppb	97
5) 1-Methylnaphthalene	5.17	142	87838	5.34020 ppb	95
7) Acenaphthylene	6.08	152	271956	5.30591 ppb	99
8) Acenaphthene	6.29	154	78010	5.20973 ppb	98
9) Fluorene	6.89	166	93976	5.38211 ppb	98
11) Phenanthrene	8.00	178	138230	5.19853 ppb	100
12) Anthracene	8.06	178	126870	5.32192 ppb	100
14) Fluoranthene	9.39	202	190513	5.40459 ppb	97
16) Pyrene	9.65	202	192578	5.07172 ppb	96
17) Benz (a) anthracene	11.11	228	153431	4.78237 ppb	97
18) Chrysene	11.16	228	164971	4.82561 ppb	98
19) Indeno (1,2,3-cd) pyrene	15.06	276	154332	5.09446 ppb	93
21) Benzo (b) fluoranthene	12.94	252	130572	5.14154 ppb	100
22) Benzo (k) fluoranthene	12.99	252	179036	5.45143 ppb	100
23) Benzo (a) pyrene	13.49	252	137291	5.60648 ppb #	93
24) Dibenz (a,h) anthracene	15.11	278	125405	5.46307 ppb	98
25) Benzo (g,h,i) perylene	15.44	276	143305	5.47497 ppb	94

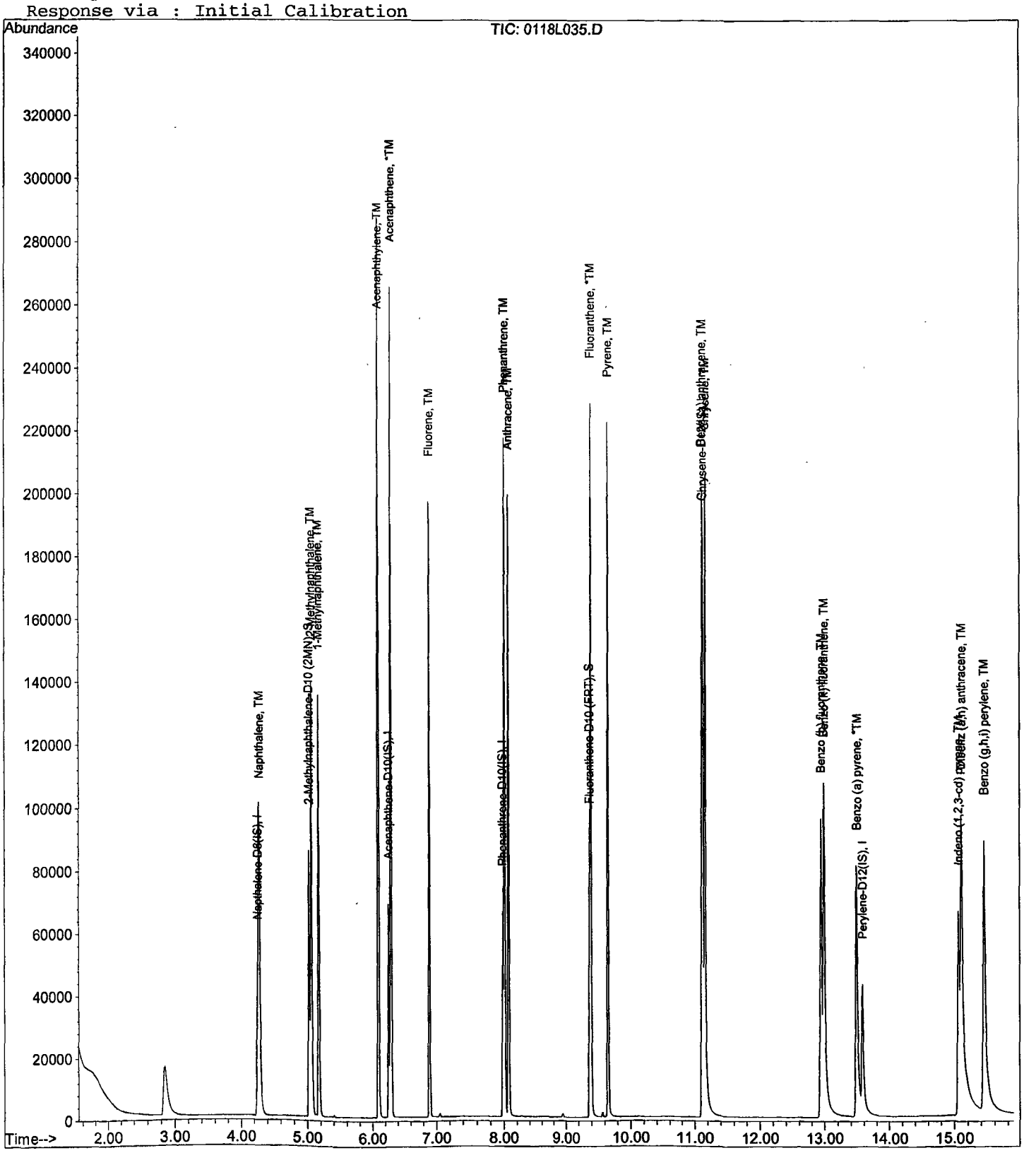
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L035.D Vial: 35
Acq On : 25 Jan 21 12:55 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 25 13:41 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.008	0.86	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.065	0.77	S	
4	TM	2-Methylnaphthalene	0.6368	0.6453	1.3	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6359	0.23	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.302	5.8	TM	
8	*TM	Acenaphthene	1.188	1.210	1.9	*TM	
9	TM	Fluorene	1.385	1.493	7.8	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.191	2.8	TM	
12	TM	Anthracene	1.039	1.103	6.2	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.363	0.90	S	
14	*TM	Fluoranthene	1.536	1.684	9.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.418	4.2	TM	
17	TM	Benz (a) anthracene	1.150	1.150	0.07	TM	
18	TM	Chrysene	1.226	1.252	2.2	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.246	15	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.175	20	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.259	0.59	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.091	16	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.047	18	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.119	11	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71331	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32623	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	60248	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72741	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	71783	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	75956	2.48087 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.620%		
13) Fluoranthene-D10 (FRT)	9.37	212	82143	2.52243 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.440%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	143861	4.95682 ppb		99
4) 2-Methylnaphthalene	5.06	142	92066	5.06702 ppb		98
5) 1-Methylnaphthalene	5.17	142	90713	5.01158 ppb		94
7) Acenaphthylene	6.08	152	280660	5.28958 ppb		99
8) Acenaphthene	6.29	154	78958	5.09378 ppb		99
9) Fluorene	6.89	166	97434	5.39046 ppb		99
11) Phenanthrene	8.00	178	143550	5.14089 ppb		100
12) Anthracene	8.06	178	132876	5.30779 ppb		100
14) Fluoranthene	9.39	202	202912	5.48155 ppb		98
16) Pyrene	9.65	202	206359	5.20932 ppb		97
17) Benz (a) anthracene	11.11	228	167243	4.99674 ppb		99
18) Chrysene	11.15	228	182215	5.10902 ppb	#	97
19) Indeno (1,2,3-cd) pyrene	15.06	276	181207	5.73359 ppb		96
21) Benzo (b) fluoranthene	12.93	252	168697	6.00001 ppb		97
22) Benzo (k) fluoranthene	12.99	252	180733	4.97060 ppb		97
23) Benzo (a) pyrene	13.48	252	156659	5.77836 ppb		95
24) Dibenz (a,h) anthracene	15.11	278	150309	5.91437 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	160638	5.54332 ppb	#	90

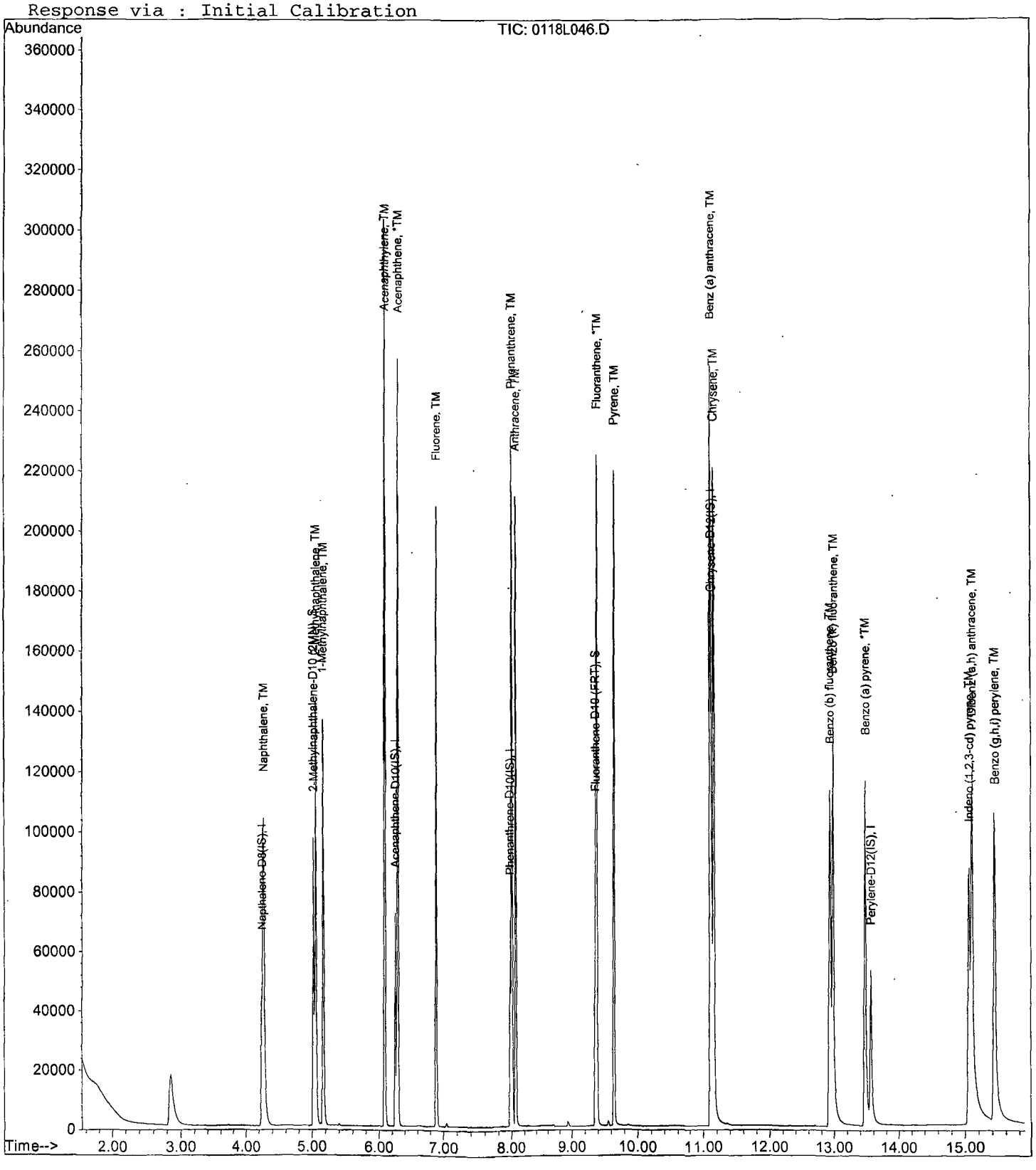
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L041.D Vial: 41
Acq On : 25 Jan 21 18:28 Operator: MA
Sample : BA25526W17 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:48 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	68137	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32545	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	60186	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	72561	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	69146	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	145525	4.97594 ppb	0.00
Spiked Amount 5.000			Recovery	= 99.520%	
13) Fluoranthene-D10 (FRT)	9.37	212	174513	5.36443 ppb	0.00
Spiked Amount 5.000			Recovery	= 107.280%	

Target Compounds Qvalue

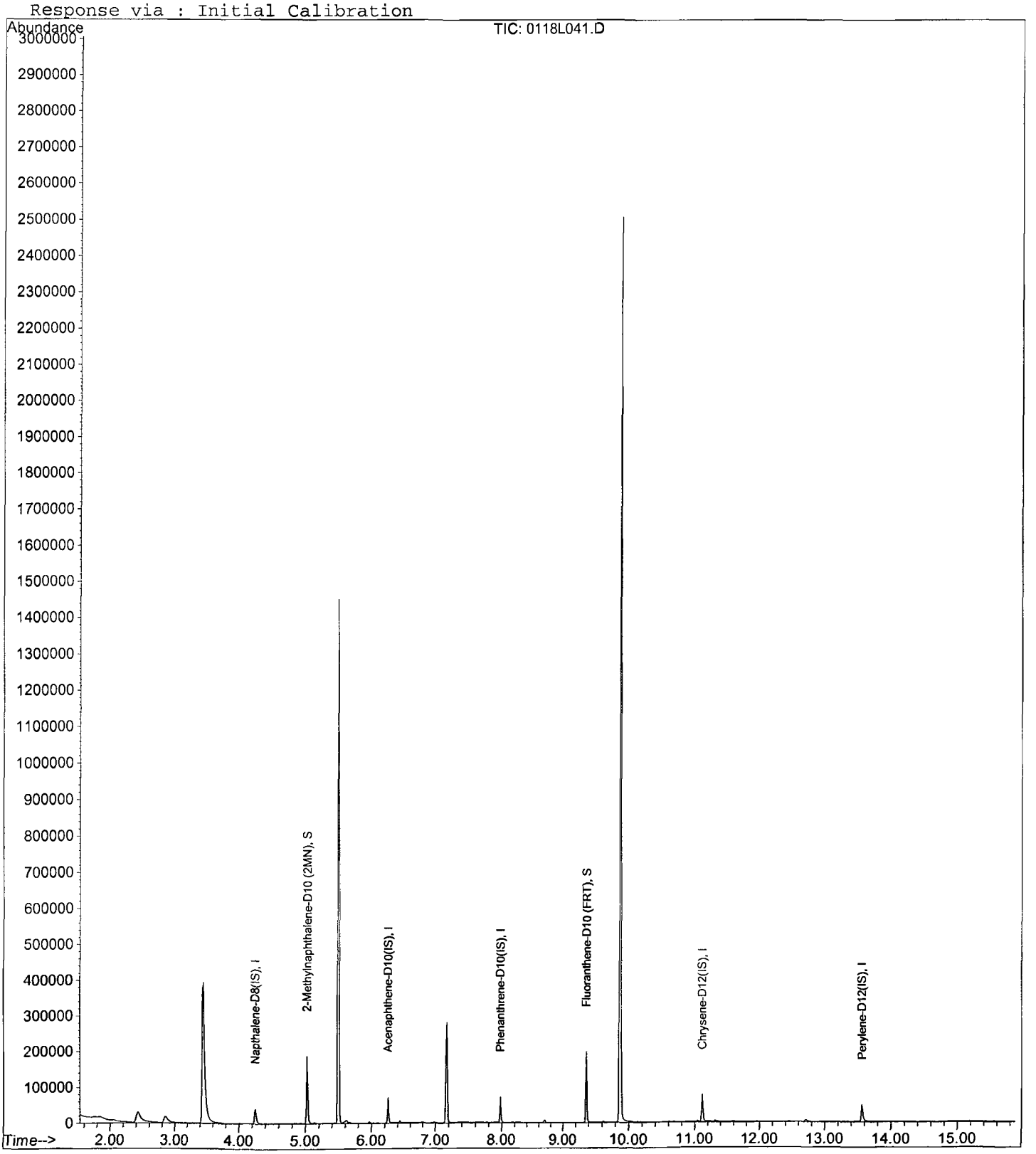
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L041.D Vial: 41
Acq On : 25 Jan 21 18:28 Operator: MA
Sample : BA25526W17 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:48 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64715	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.27	164	29769	2.50000 ppb	0.01
10) Phenanthrene-D10(IS)	7.99	188	53529	2.50000 ppb	0.01
15) Chrysene-D12(IS)	11.13	240	62085	2.50000 ppb	0.01
20) Perylene-D12(IS)	13.58	264	58308	2.50000 ppb	0.02
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	85383	3.84235 ppb	0.00
Spiked Amount 6.250			Recovery = 61.472%		
13) Fluoranthene-D10 (FRT)	9.38	212	96778	4.18109 ppb	0.01
Spiked Amount 6.250			Recovery = 66.896%		

Target Compounds Qvalue

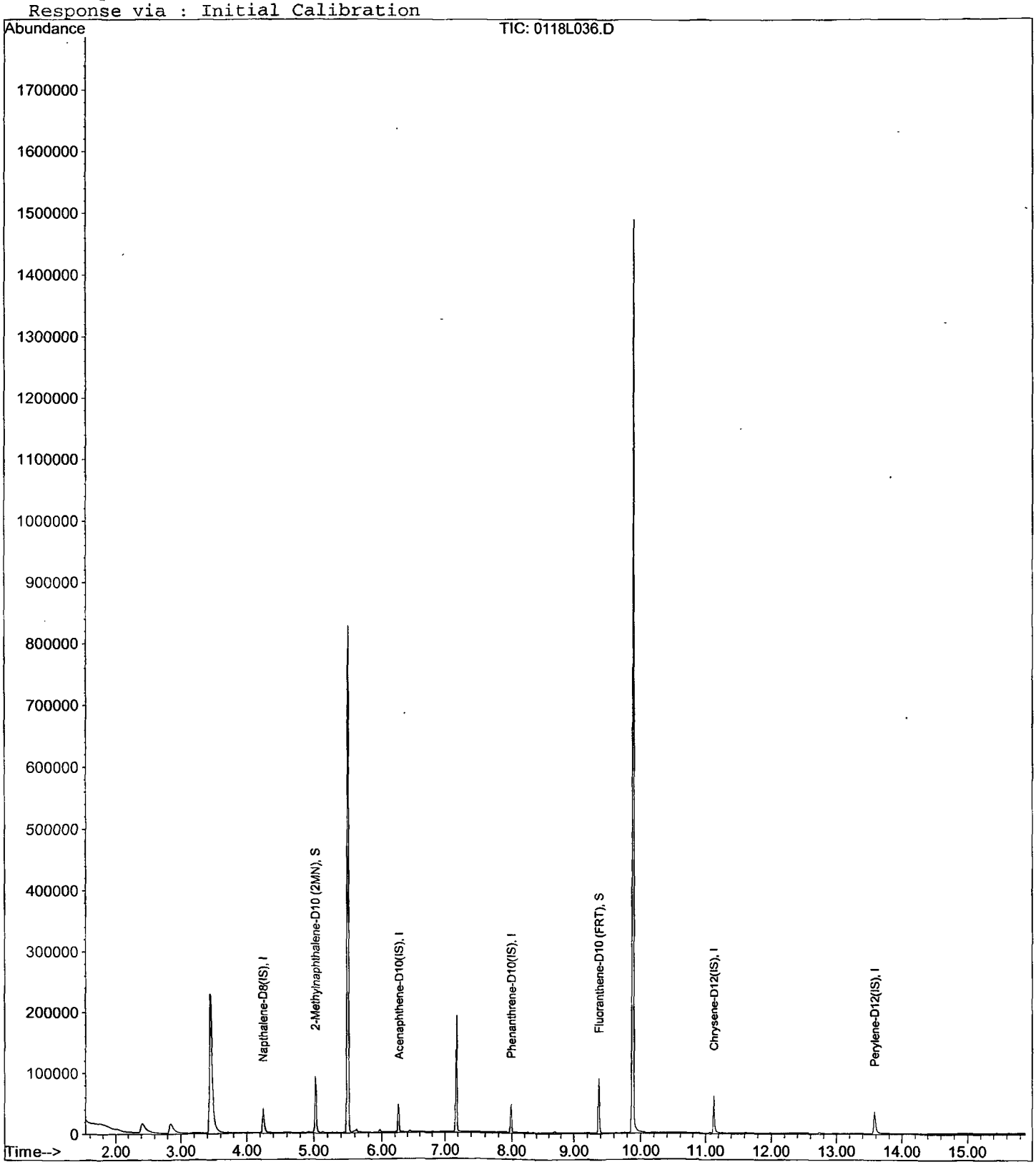
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L037.D Vial: 37
Acq On : 25 Jan 21 17:00 Operator: MA
Sample : 210122A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 25 17:16 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64477	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30653	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55532	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67366	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	63014	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	127177	5.74426 ppb		0.00
Spiked Amount 6.250			Recovery	= 91.904%		
13) Fluoranthene-D10 (FRT)	9.37	212	151551	6.31127 ppb		0.00
Spiked Amount 6.250			Recovery	= 100.976%		
Target Compounds						Qvalue
2) Naphthalene	4.26	128	117943	5.61974 ppb		100
4) 2-Methylnaphthalene	5.06	142	74143	5.64296 ppb		97
5) 1-Methylnaphthalene	5.17	142	73486	5.61427 ppb		96
7) Acenaphthylene	6.08	152	223120	5.59423 ppb		99
8) Acenaphthene	6.29	154	65314	5.60546 ppb		98
9) Fluorene	6.89	166	80637	5.93486 ppb		98
11) Phenanthrene	8.00	178	119939	5.82513 ppb		100
12) Anthracene	8.06	178	98983	5.36213 ppb		100
14) Fluoranthene	9.39	202	169711	6.21749 ppb		97
16) Pyrene	9.65	202	169504	5.77546 ppb		98
17) Benz (a) anthracene	11.11	228	135423	5.46110 ppb		98
18) Chrysene	11.16	228	154553	5.84897 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	141648	6.04938 ppb		99
21) Benzo (b) fluoranthene	12.94	252	134850	6.82951 ppb		99
22) Benzo (k) fluoranthene	12.99	252	155948	6.10725 ppb		98
23) Benzo (a) pyrene	13.48	252	107521	5.64725 ppb		97
24) Dibenz (a,h) anthracene	15.11	278	117295	6.57200 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	126635	6.22257 ppb		91

(#) = qualifier out of range (m) = manual integration

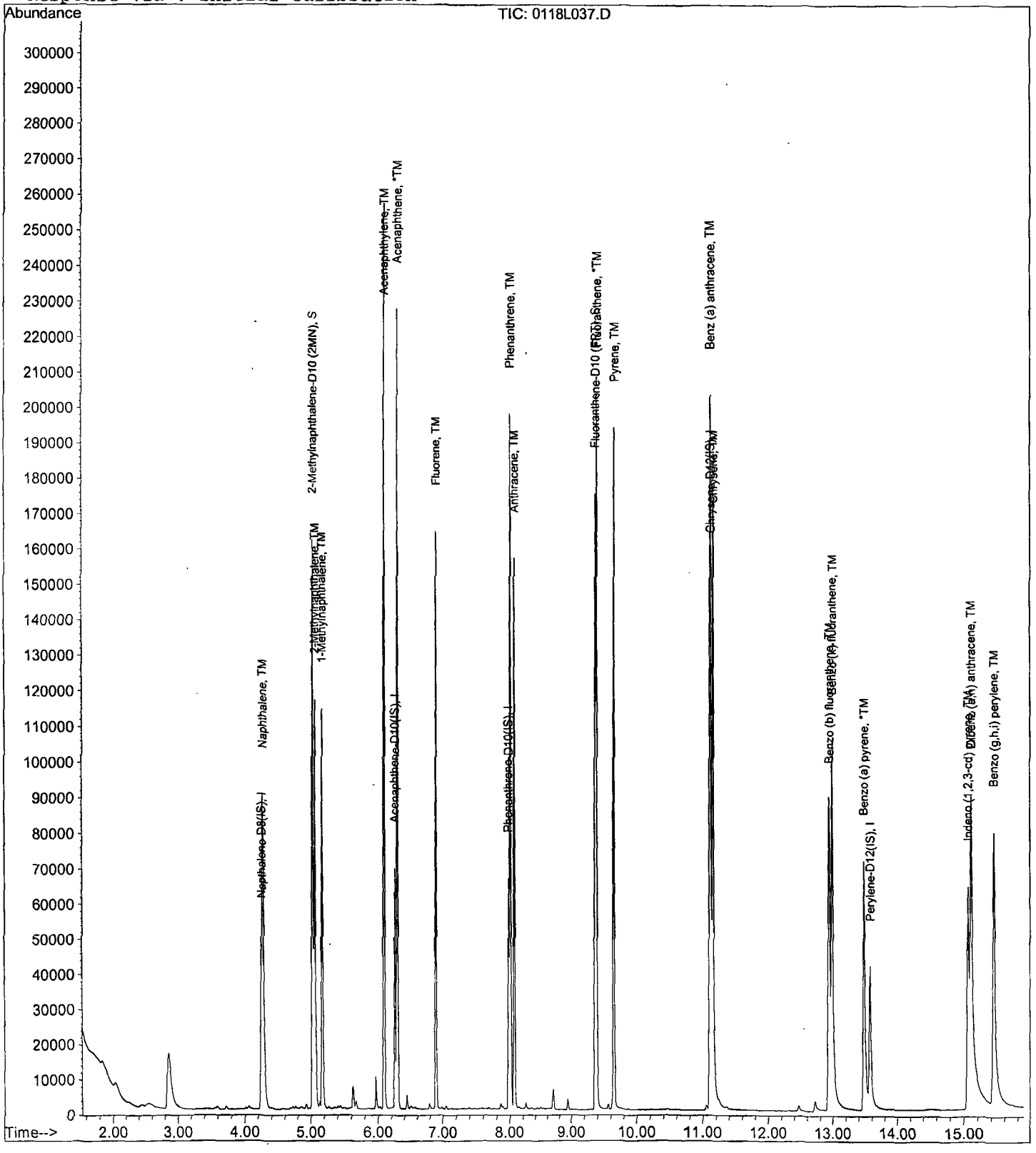
Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L037.D
Acq On : 25 Jan 21 17:00
Sample : 210122A LCS-2 1/800
Misc :

Vial: 37
Operator: MA
Inst : Linus
Multiplr: 1.25

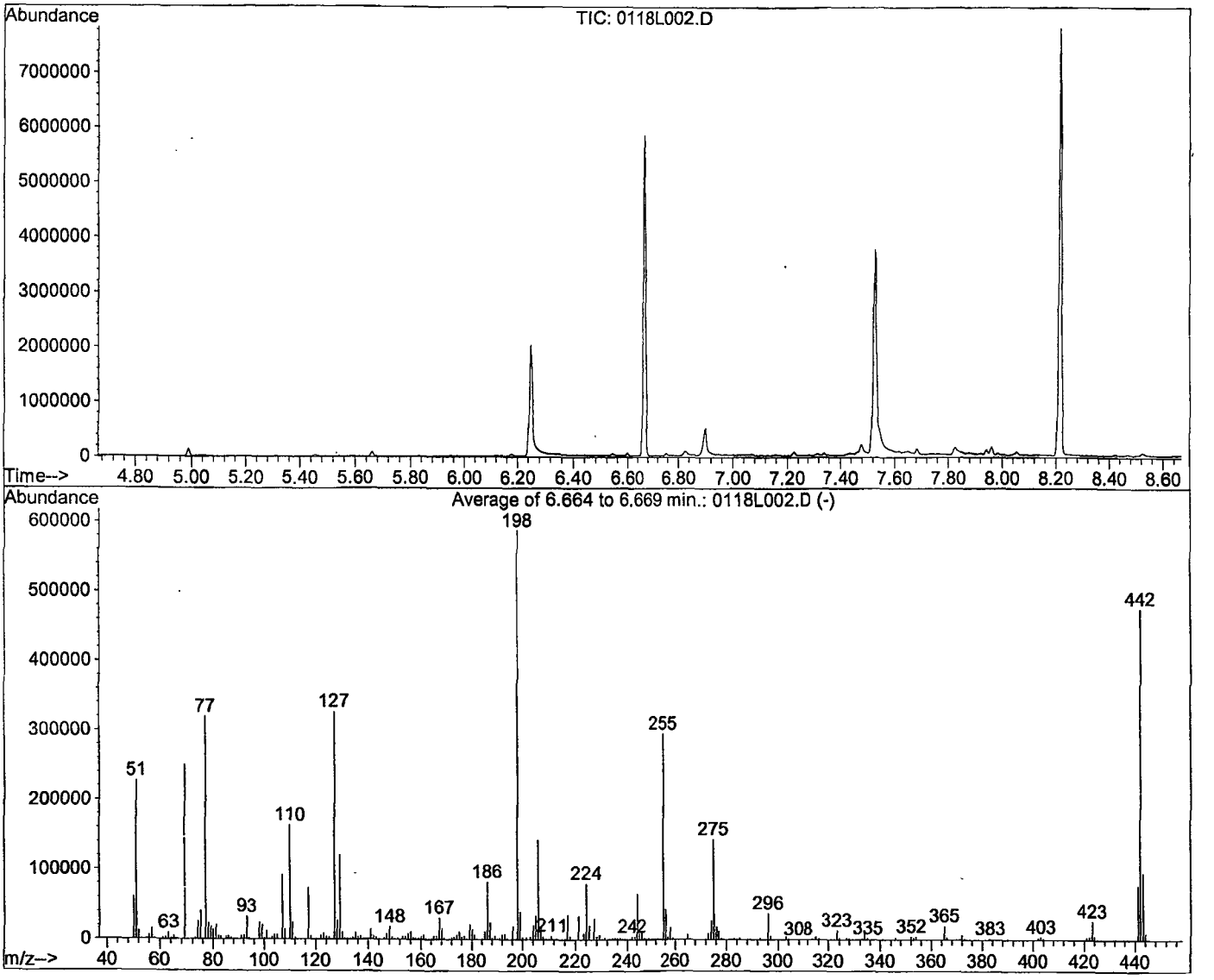
Quant Time: Jan 25 17:16 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L210118\0118L002.D Vial: 2
Acq On : 18 Jan 21 11:17 Operator: MA
Sample : SV Tune 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

0118L002.D L0118.M Mon Jan 18 16:16:32 2021

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

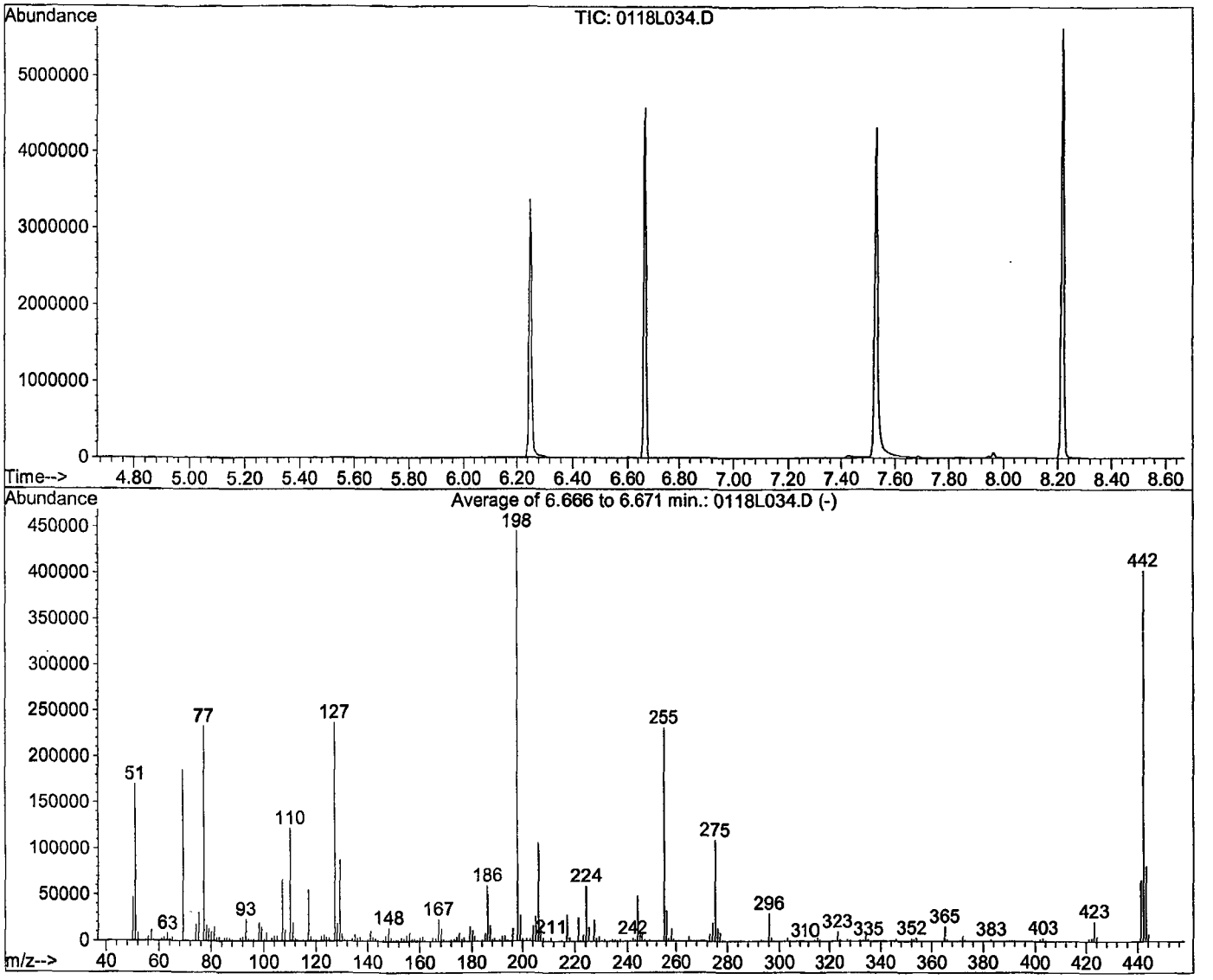
Breakdown **1.63**

DFTPP

Data File : M:\LINUS\DATA\L210118\0118L034.D
Acq On : 25 Jan 21 12:39
Sample : SV TUNE 10/02/20
Misc :

Vial: 34
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1639, 1640, 1641; Background Corrected with Scan 1630

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.1	169813	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1087	PASS
127	198	10	80	53.2	237333	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	445845	PASS
199	198	5	9	6.3	28235	PASS
275	198	10	60	24.5	109365	PASS
365	198	1	100	3.5	15823	PASS
441	442	0.01	24	16.5	66579	PASS
442	198	50	500	90.5	403563	PASS
443	442	15	24	20.2	81613	PASS

Data File Name:	**0118L034.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:39**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**34**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	36454500
2)	DDD	7.98	511535
3)	DDE	7.69	140202

Breakdown **1.76**

Name of Final Standard SIM Curve **Prep'd By (Initials)** MA

Prep Date 01/15/20

Exp Date 06/19/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**
Prep Date	**01/14/21**
Exp Date	**01/14/22**

Prep'd By **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	08/11/20
Exp Date	04/01/21

Prep'd By (Initials) CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**06/19/20**
Exp Date	**06/19/21**

Prep'd By (Initials) **CD**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Name of Final Standard	SIM Spike
Prep Date	09/11/20
Exp Date	09/11/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41545 41546 41547 49548	12/31/22	5 mL	25 mL	Acetone 0246130	40 ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	11/30/20
Exp Date	11/30/21

Prep'd By (Initials) LS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0154854-50257, 50258, 50259 A0161454-50790, 50794**	**10/31/2025 5/31/26**	5mL	100 mL	**Acetone #246130**	100 ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
34	0118L034.D	1	SV TUNE 10/02/20		25 Jan 21 12:39
35	0118L035.D	1	5 SIM 01/15/21 (1)		25 Jan 21 12:55
36	0118L036.D	1.25	210122A BLK 1/800		25 Jan 21 16:38
37	0118L037.D	1.25	210122A LCS-2 1/800		25 Jan 21 17:00
41	0118L041.D	1	BA25526W17 1/1000		25 Jan 21 18:28
46	0118L046.D	1	5 SIM 08/21/20		25 Jan 21 20:18

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO
Initials: HA

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
			0125K004.D	0125K005.D	0125K006.D	0125K007.D	0125K003.D	0125K008.D	0125K009.D	0125K010.D								
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
4																		
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Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

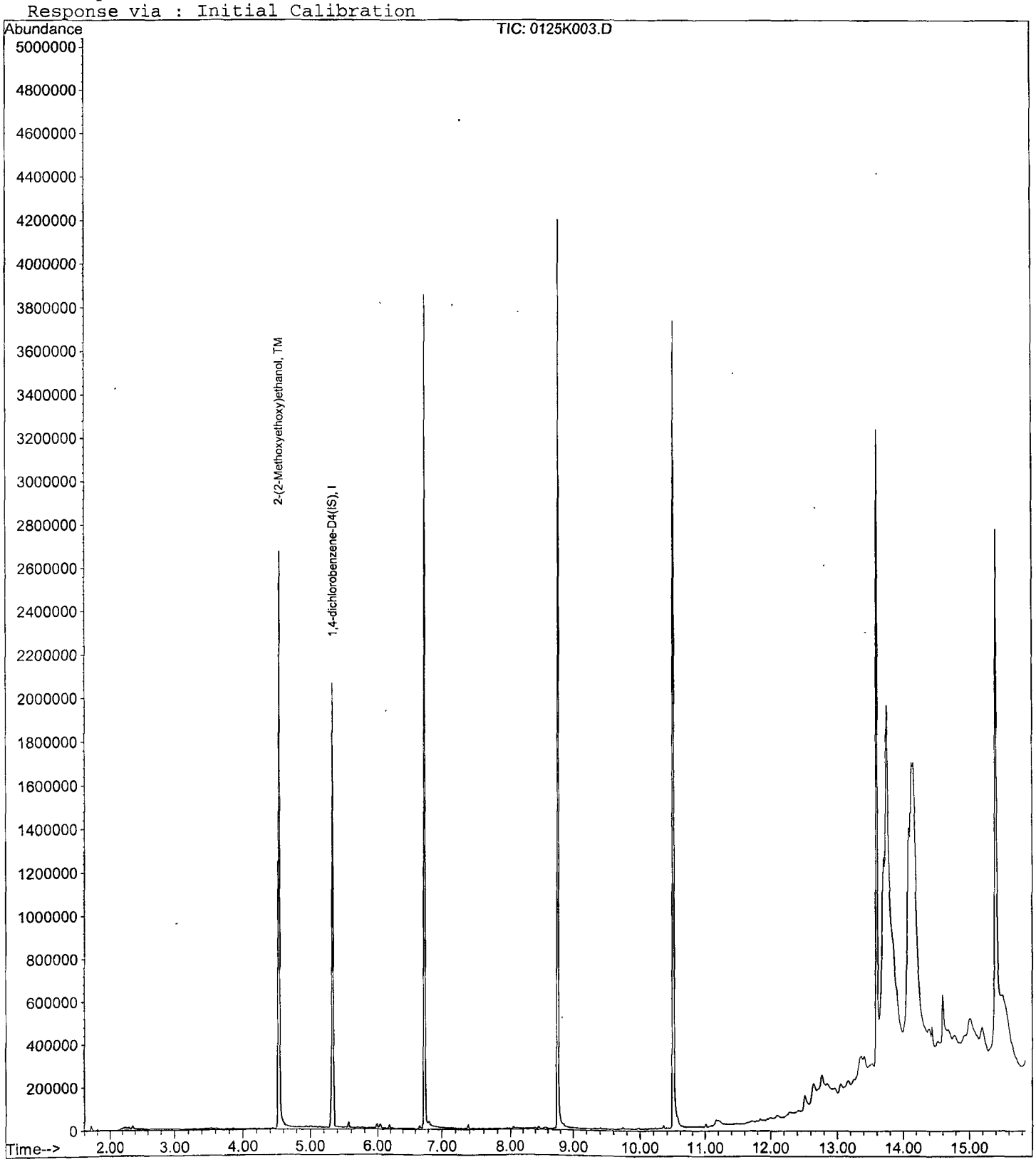
(#) = qualifier out of range (m) = manual integration
0125K003.D KMEE0125.M Tue Jan 26 10:36:22 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

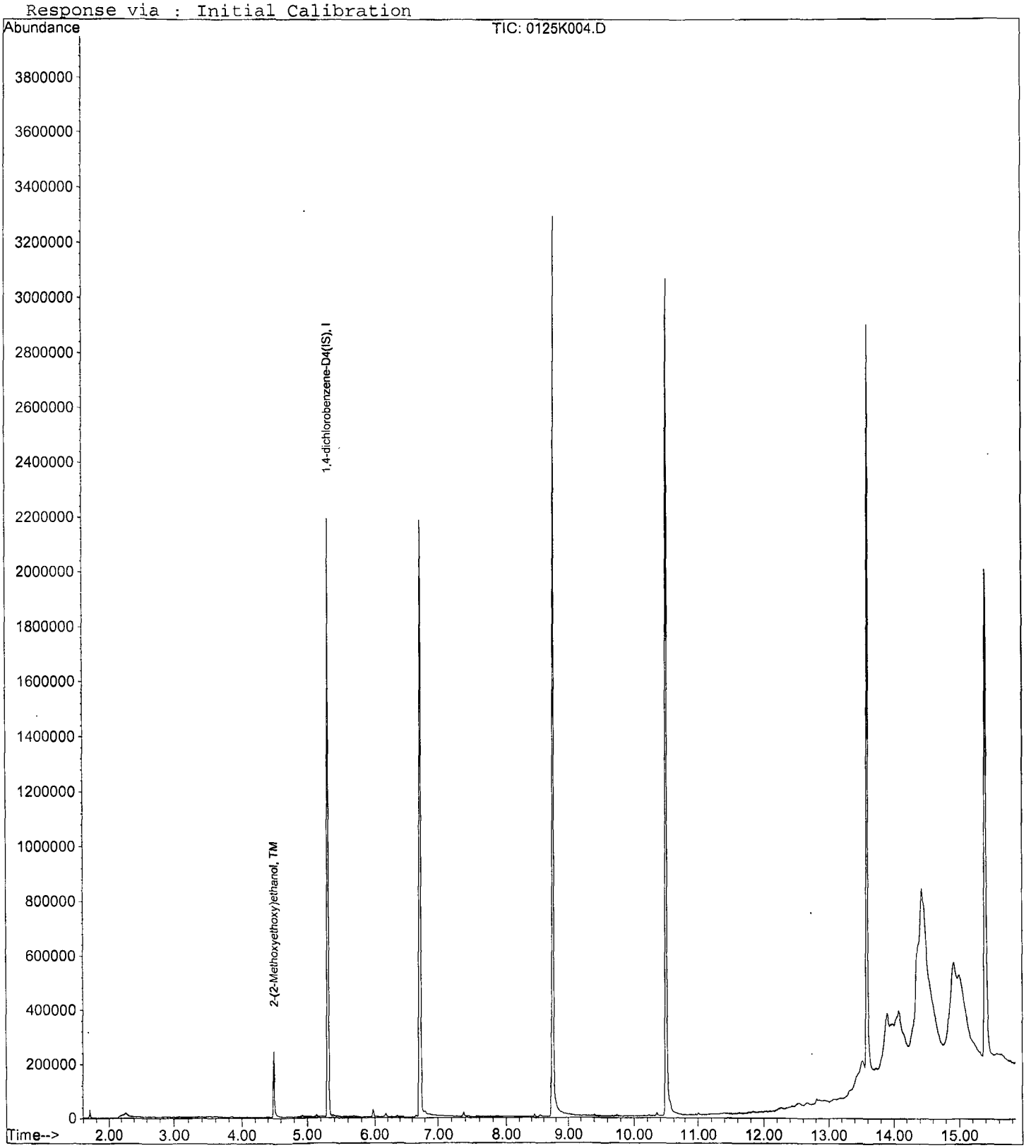
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

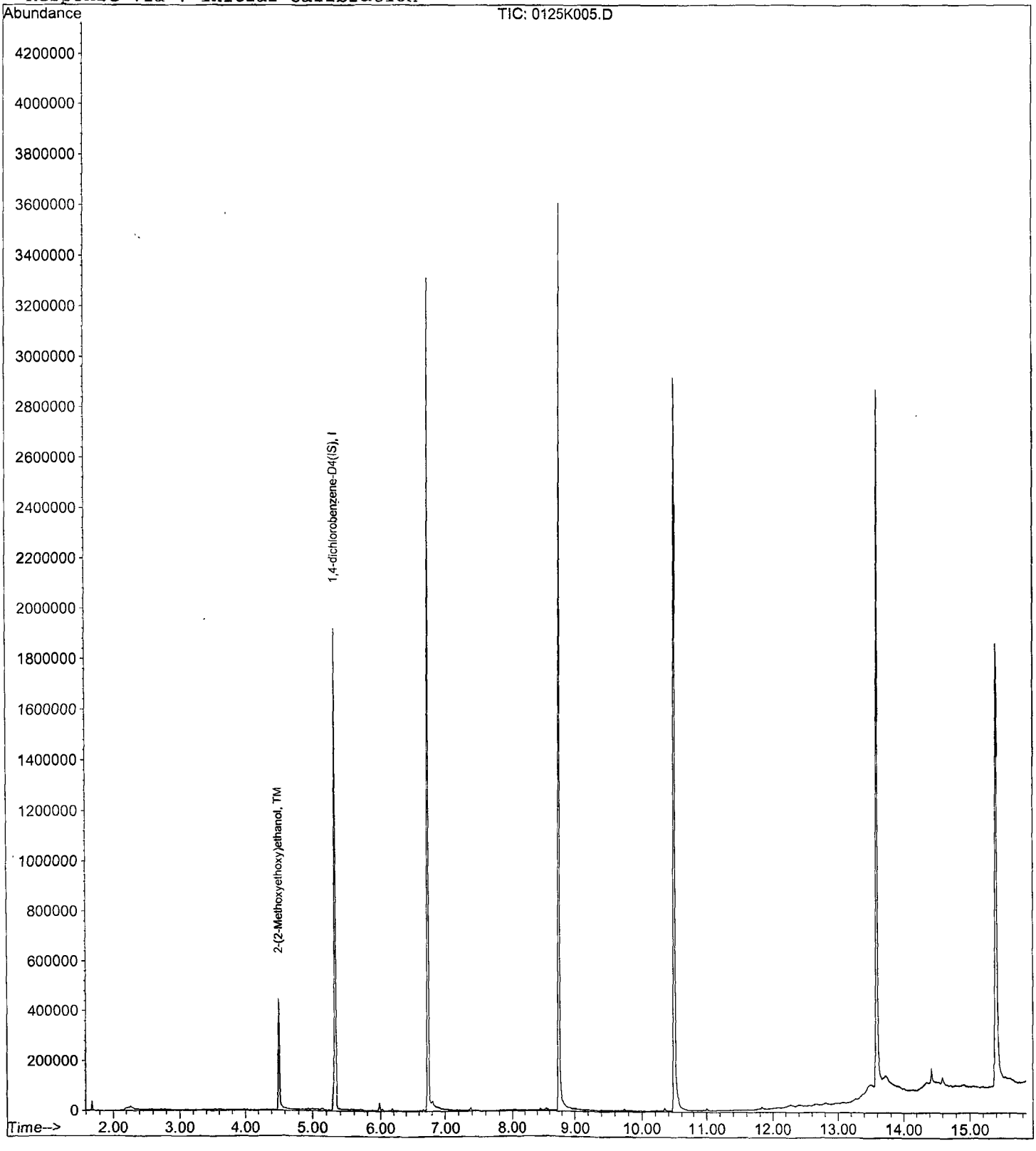
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

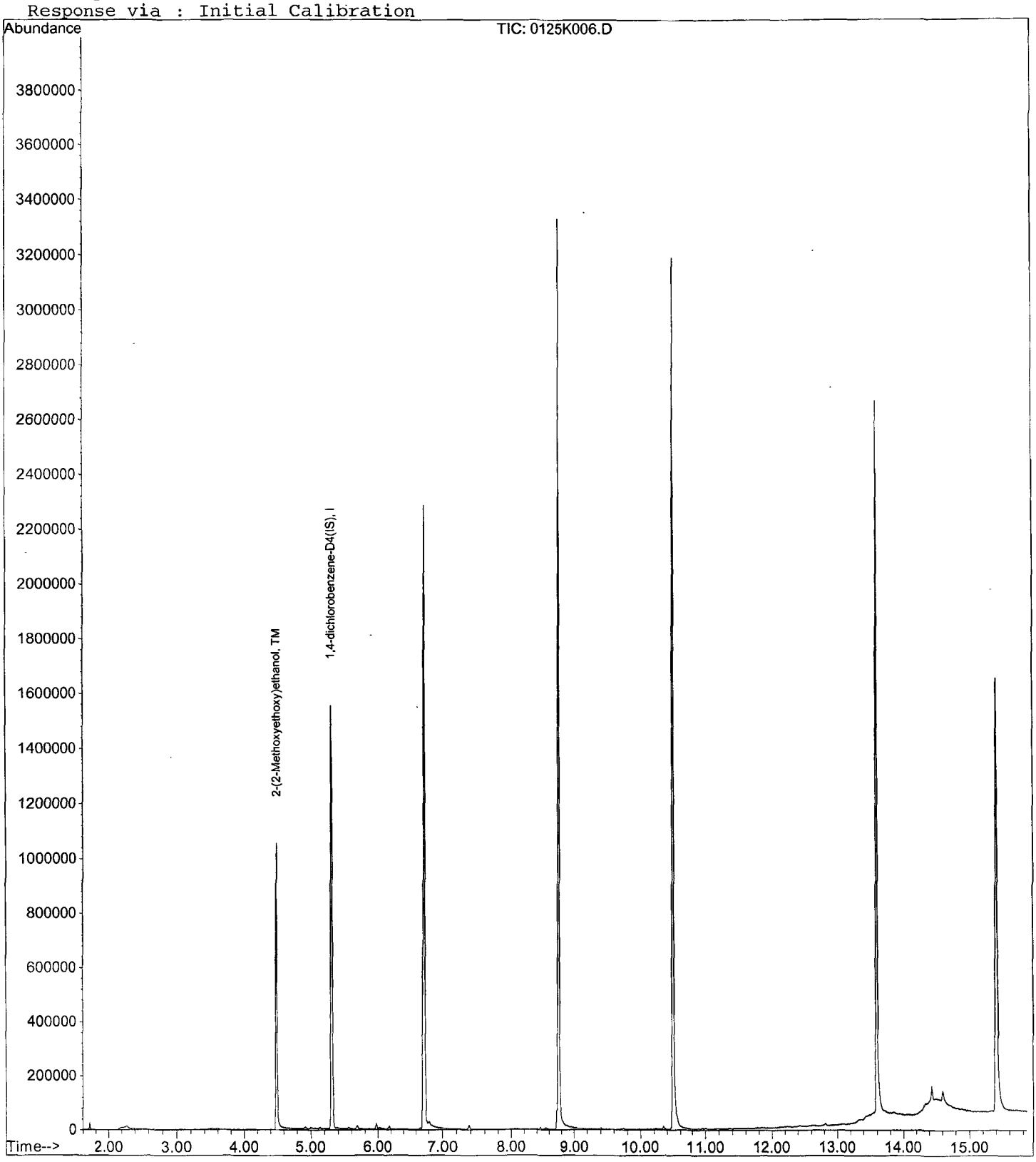
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

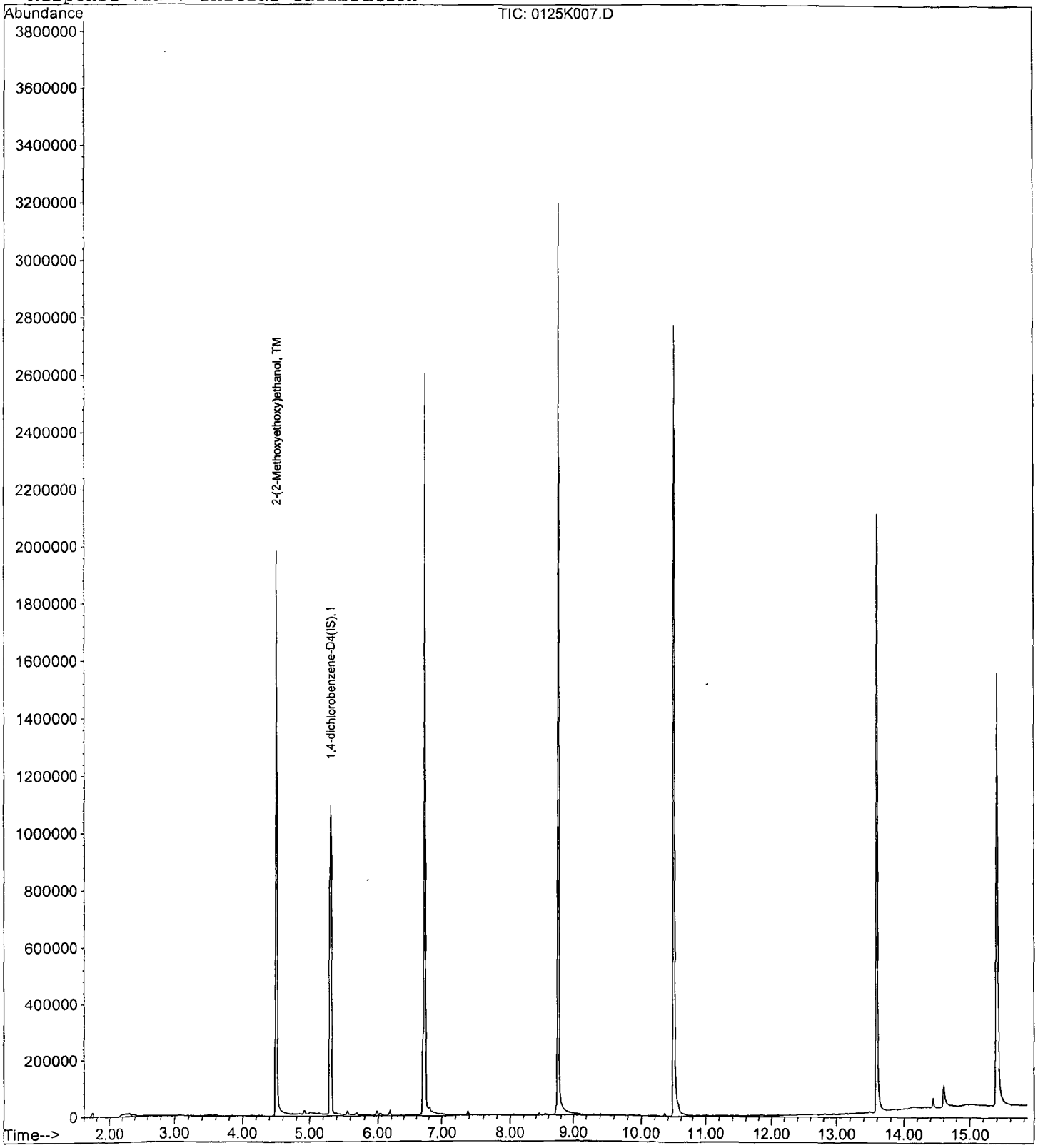
(#) = qualifier out of range (m) = manual integration
0125K007.D KMEE0125.M Tue Jan 26 10:36:40 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

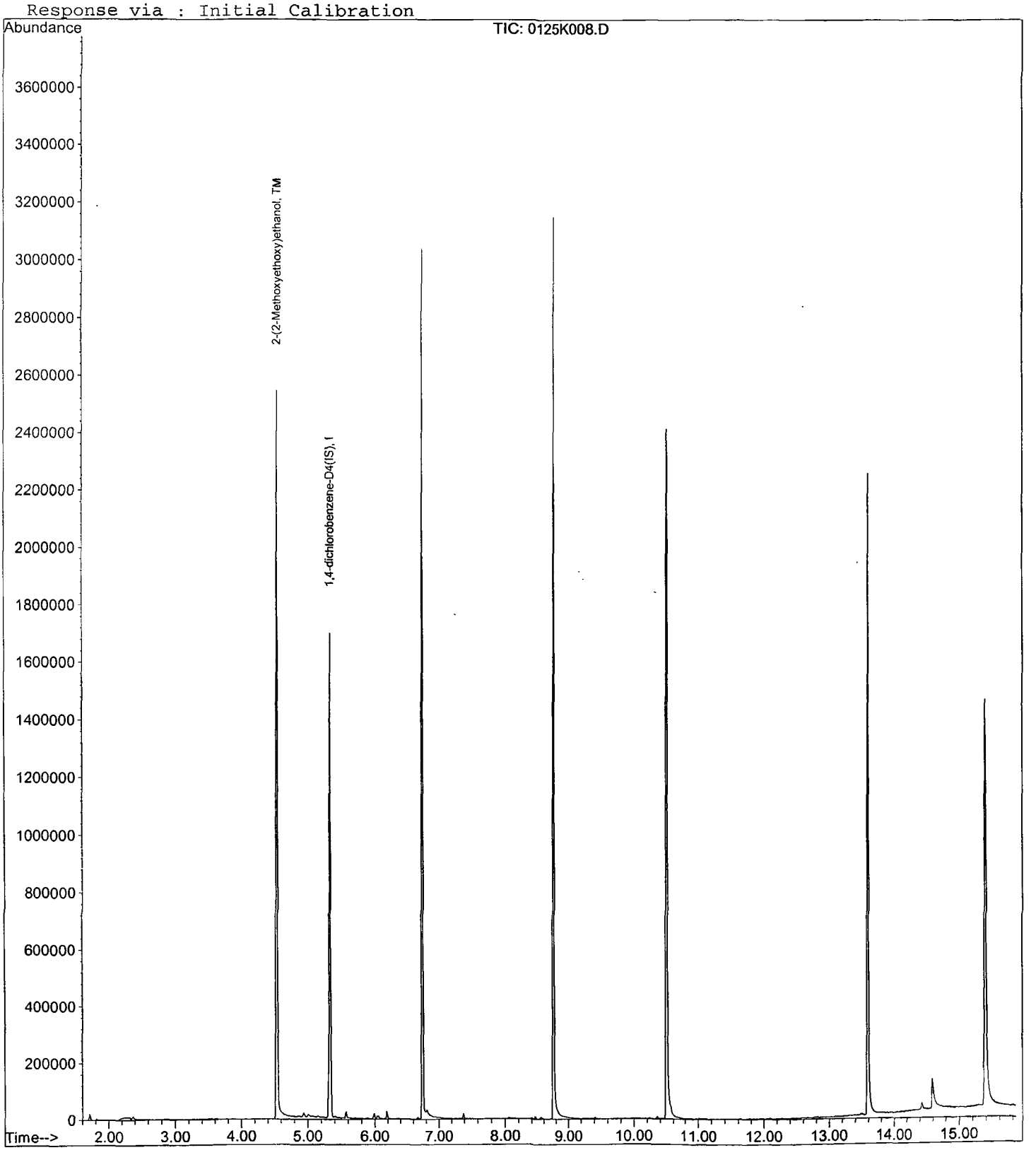
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

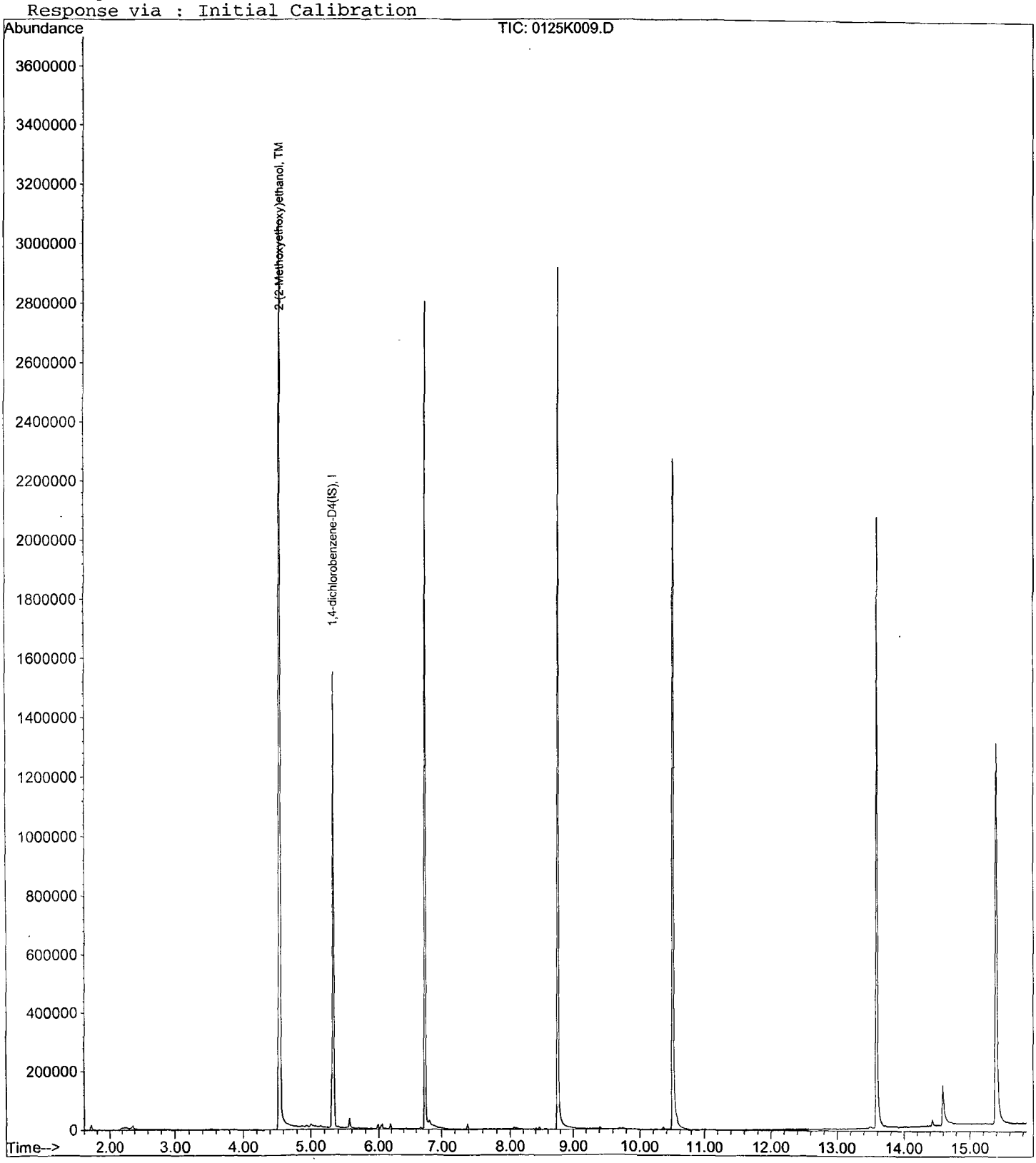
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

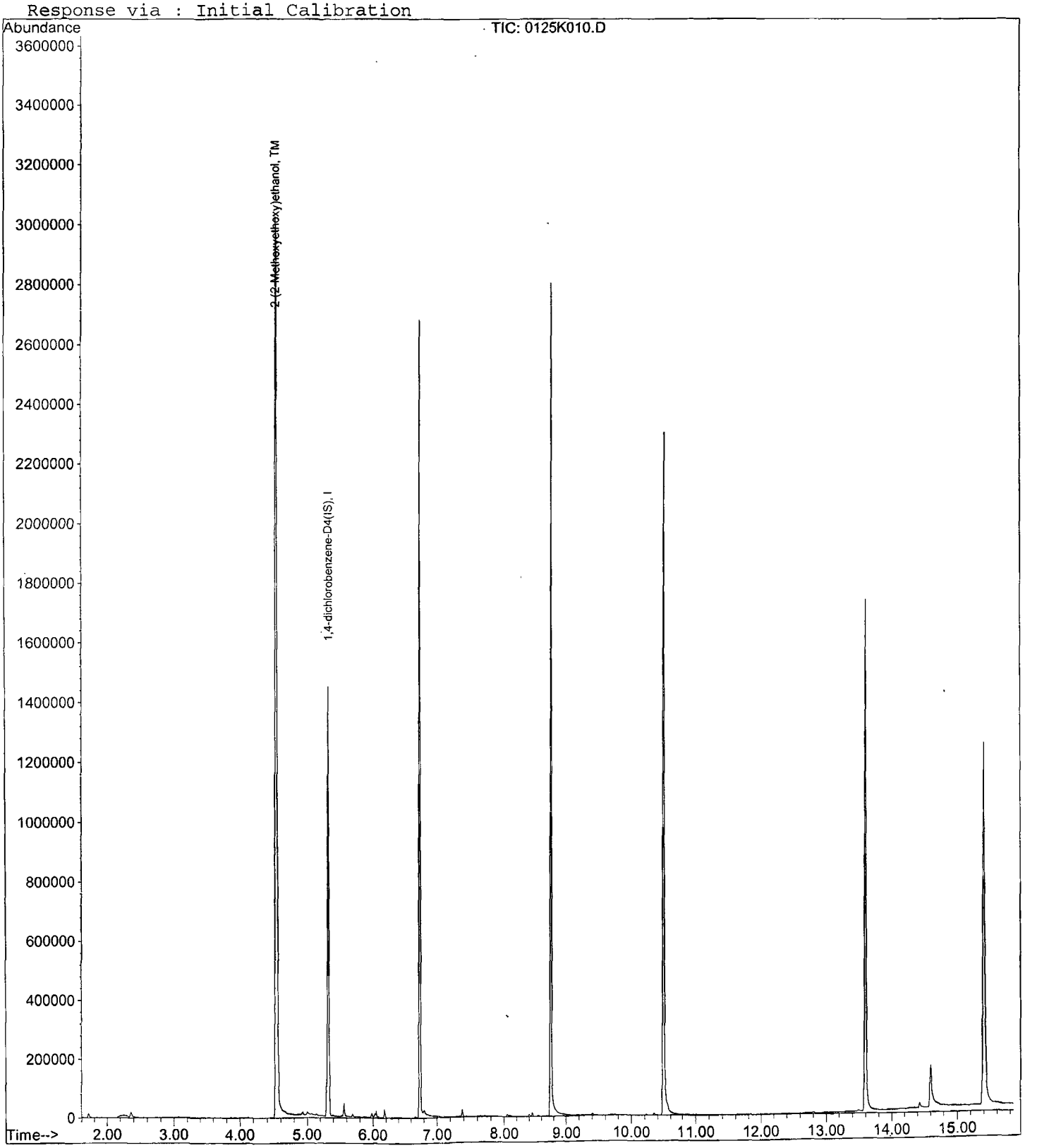
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

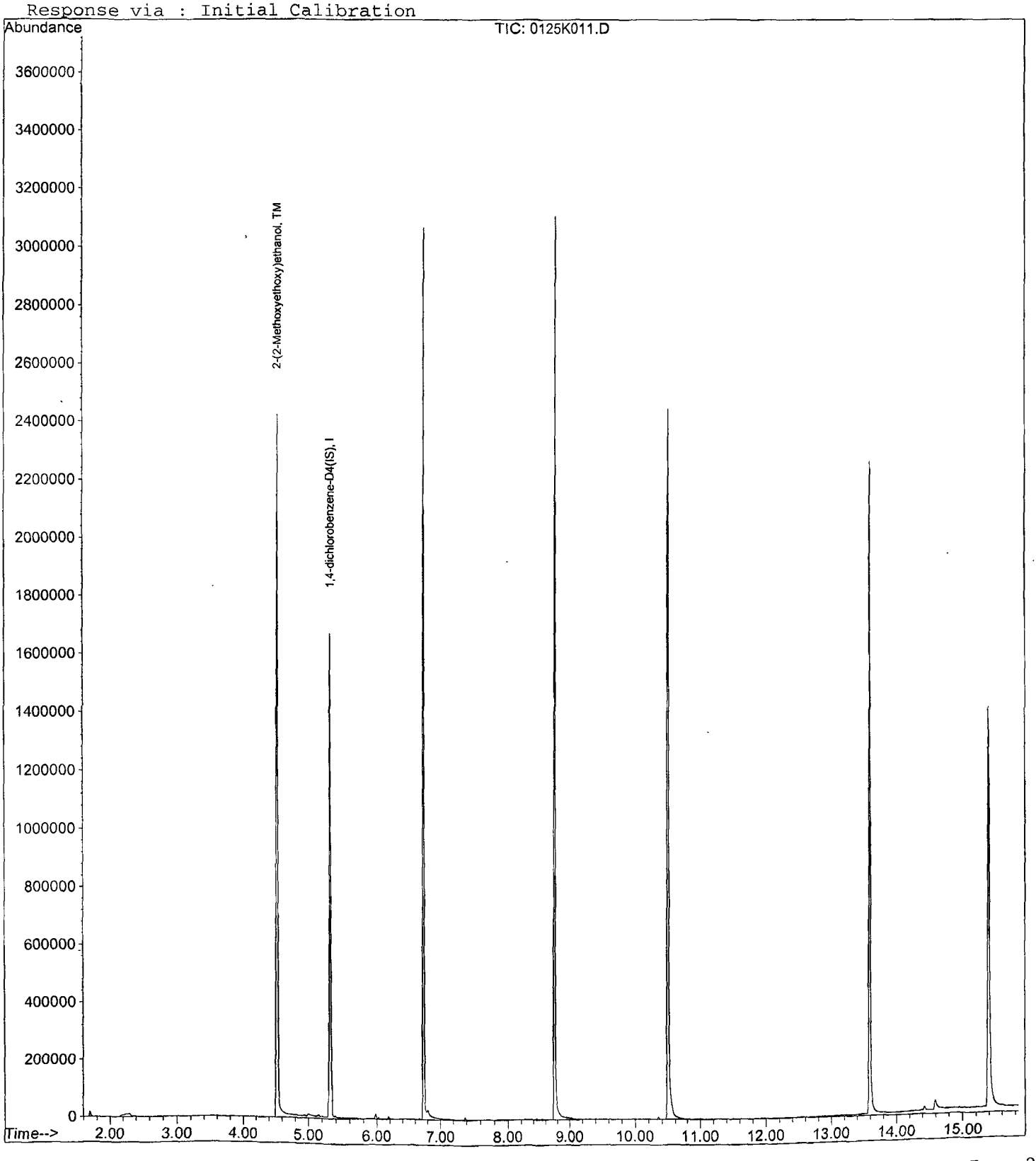
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K014.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2338	9.1	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			9.1		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	433460	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1266566	454.49763	ppb	100

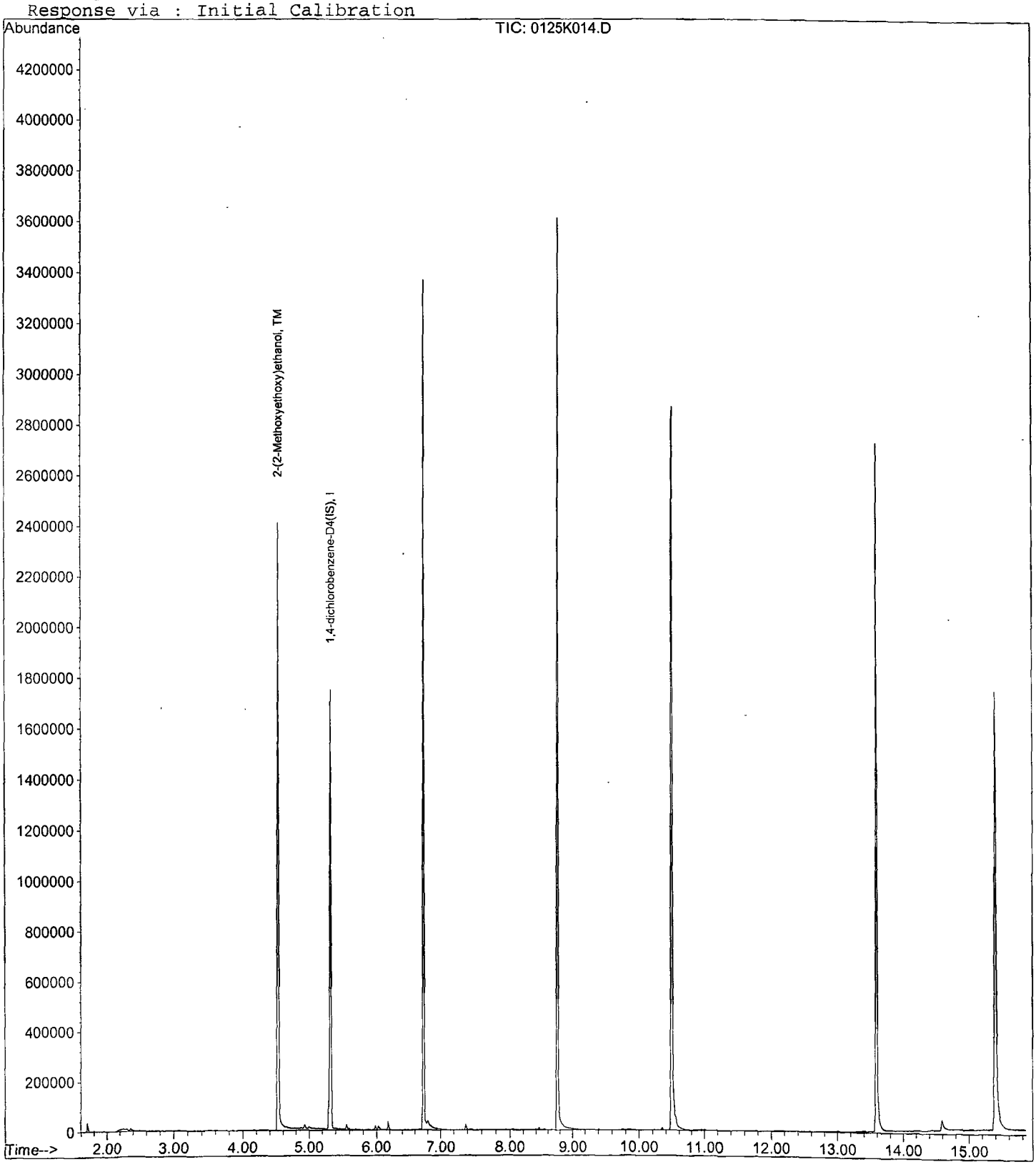
(#) = qualifier out of range (m) = manual integration
0125K014.D KMEE0125.M Tue Jan 26 10:37:01 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K028.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2666	3.7	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.7		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	234567	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	781801	518.42045	ppb	96

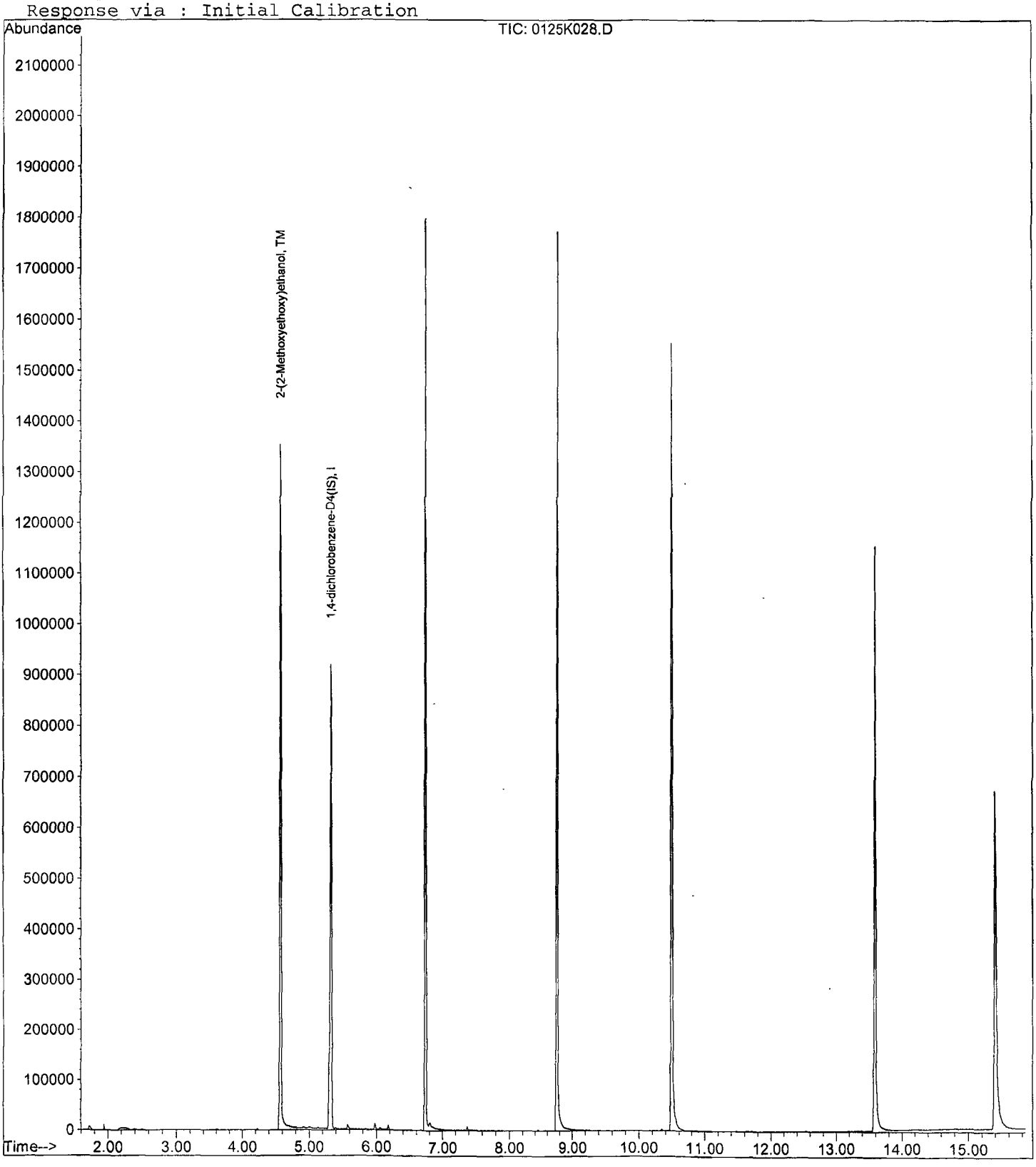
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K022.D Vial: 22
Acq On : 26 Jan 21 13:30 Operator:
Sample : BA25526W12 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:49 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	292756	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

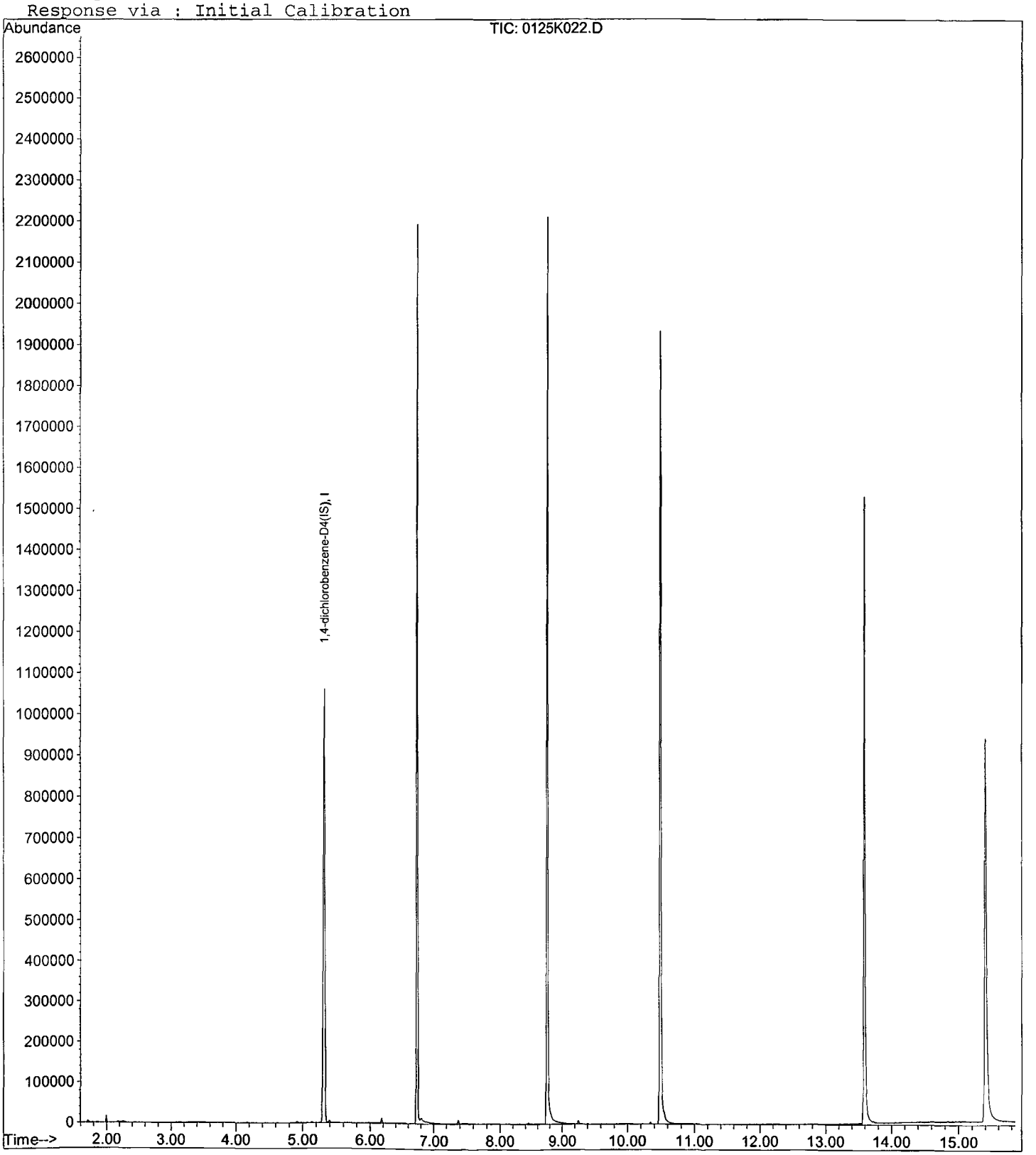
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K022.D Vial: 22
Acq On : 26 Jan 21 13:30 Operator:
Sample : BA25526W12 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:49 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	370288	40.00000 ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

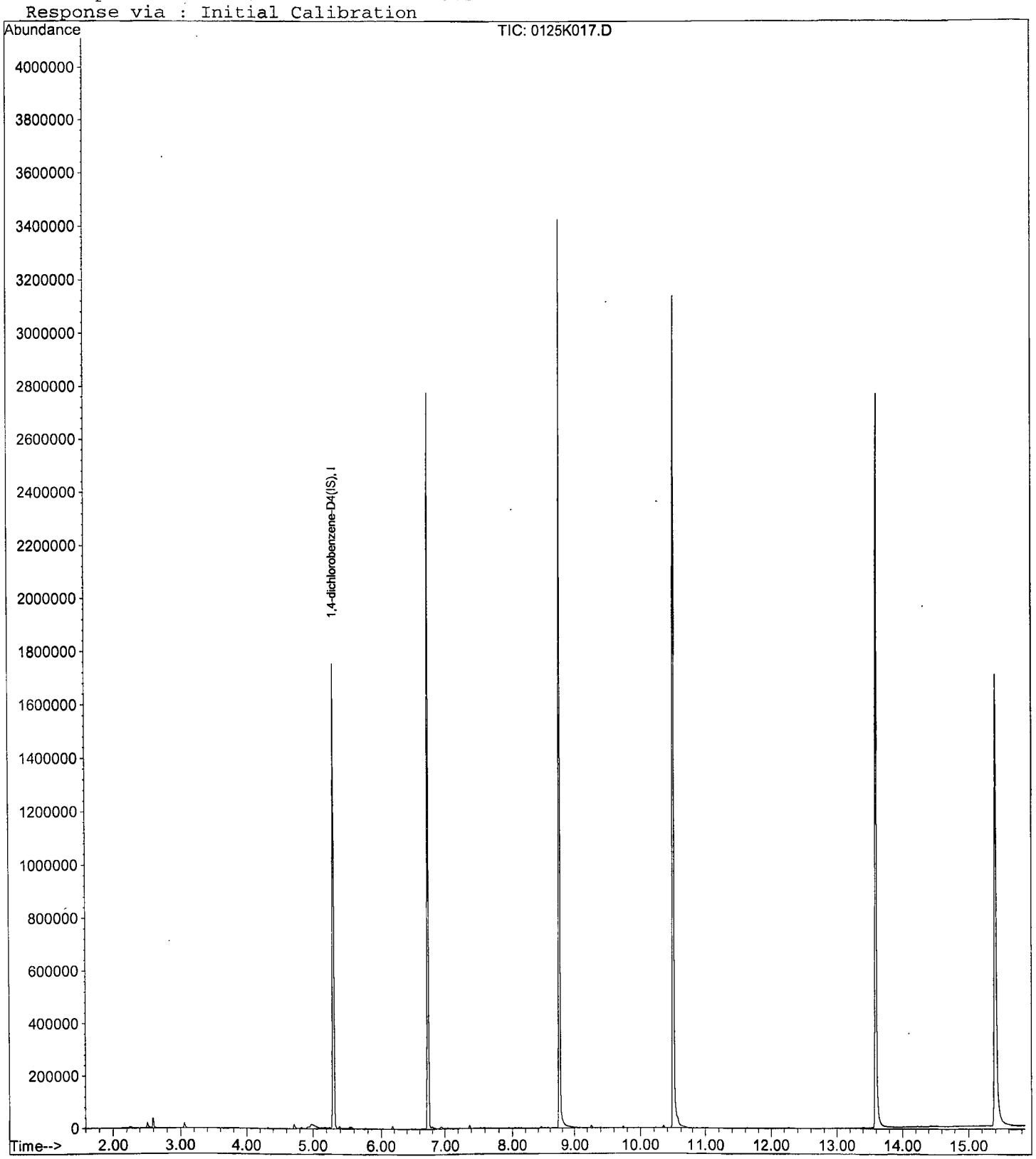
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	355190	40.00000 ppb	-0.03

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.74	45	158285	69.31574 ppb	100

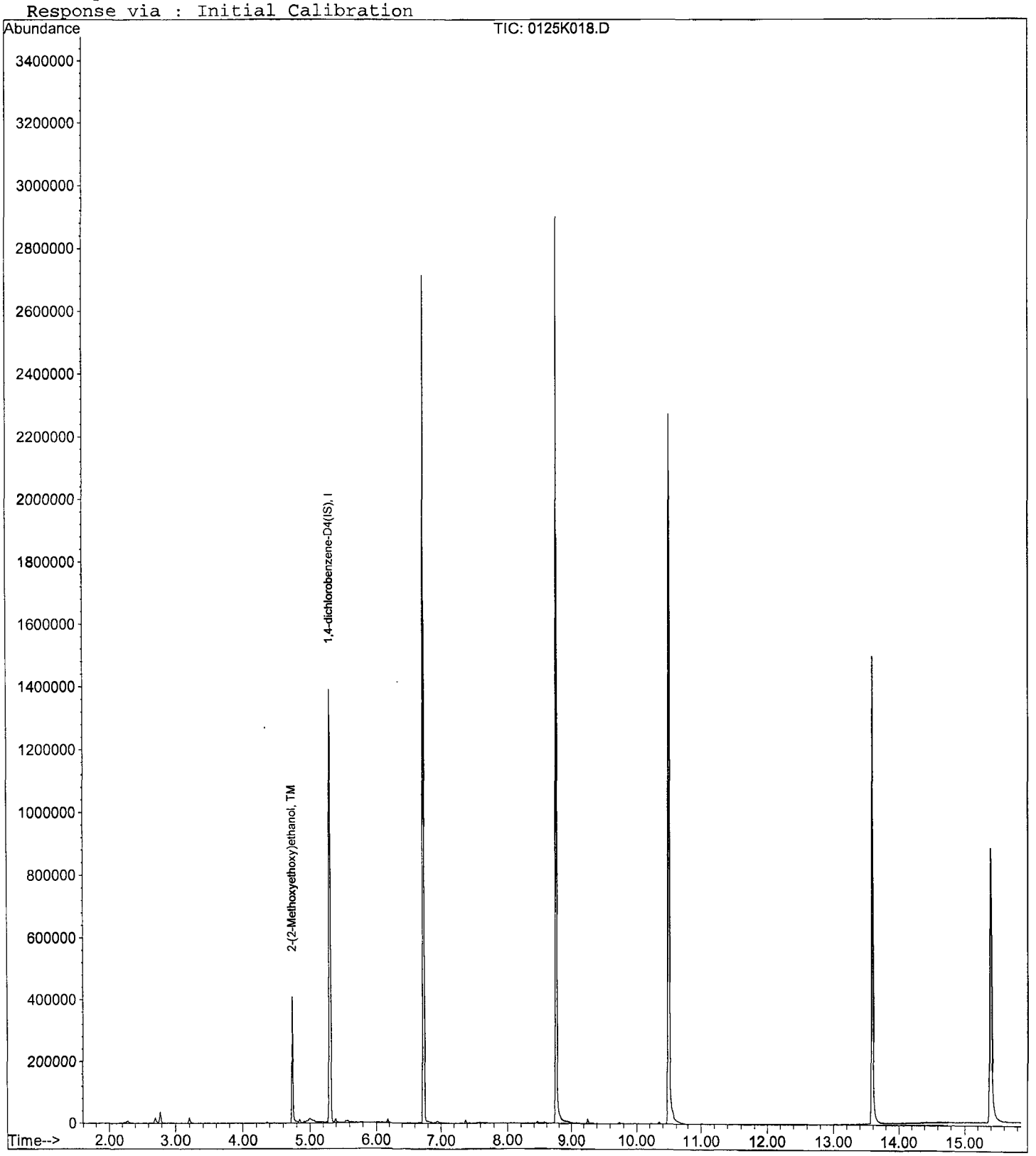
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K020.D Vial: 20
Acq On : 26 Jan 21 12:48 Operator:
Sample : BA25526W14 MS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:32 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	247999	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.71	45	140112	87.87761	ppb	98

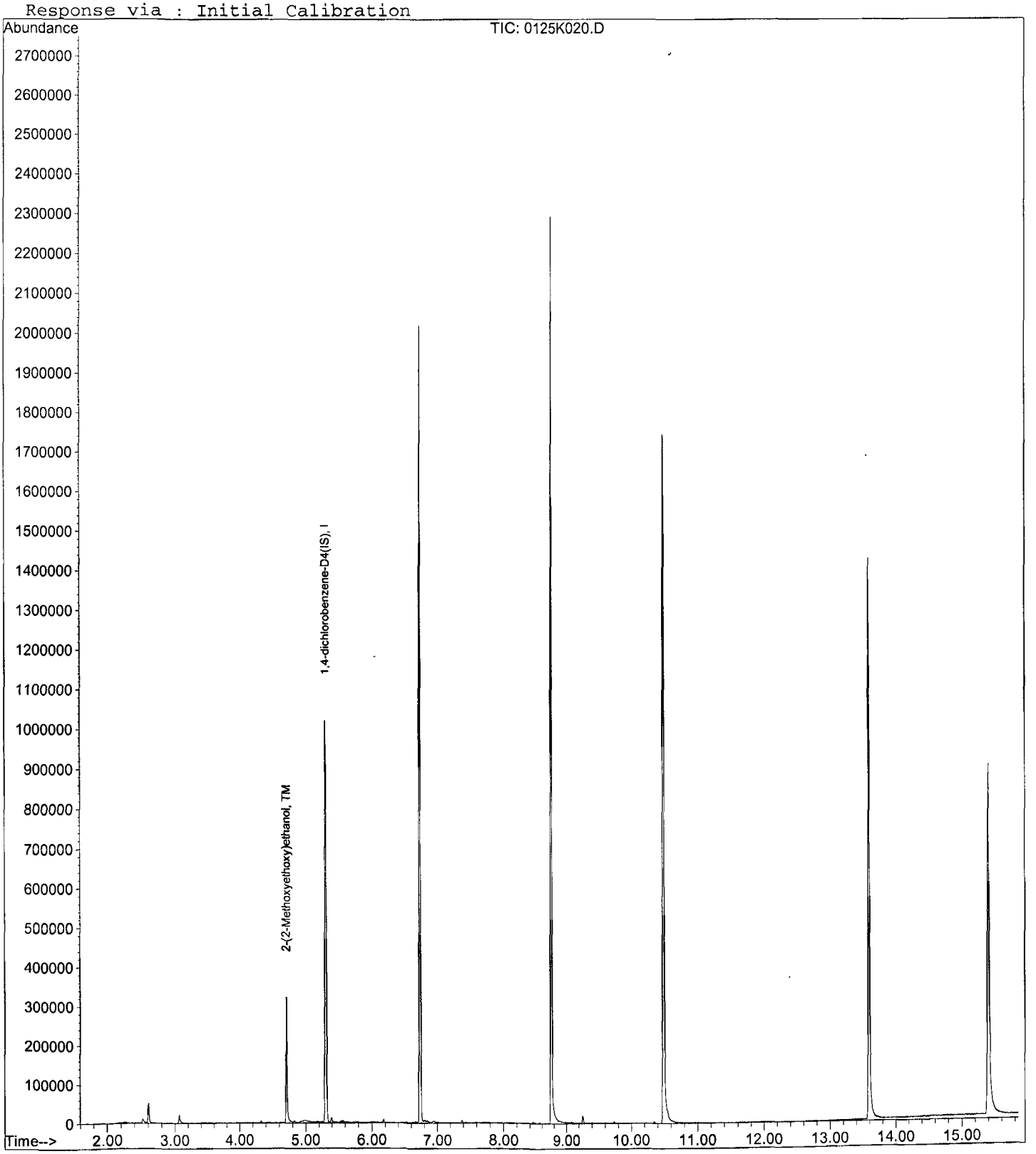
(#) = qualifier out of range (m) = manual integration
0125K020.D KMEE0125.M Wed Jan 27 13:48:42 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K020.D Vial: 20
Acq On : 26 Jan 21 12:48 Operator:
Sample : BA25526W14 MS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:32 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K021.D Vial: 21
Acq On : 26 Jan 21 13:09 Operator:
Sample : BA25526W14 MSD-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:33 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	324218	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.71	45	134504	64.52840	ppb	99

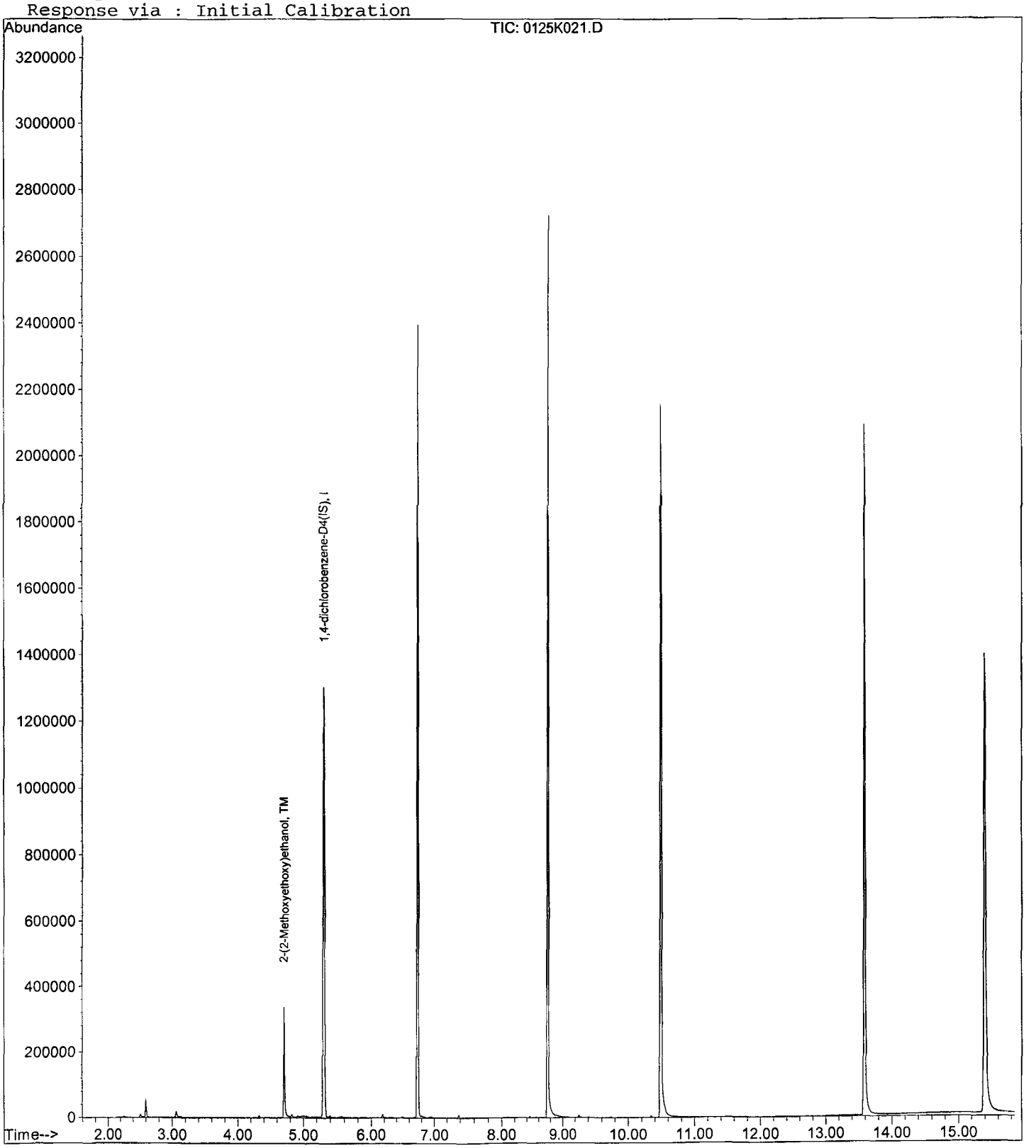
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K021.D Vial: 21
Acq On : 26 Jan 21 13:09 Operator:
Sample : BA25526W14 MSD-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 13:33 2021 Quant Results File: KMEE0125.RES

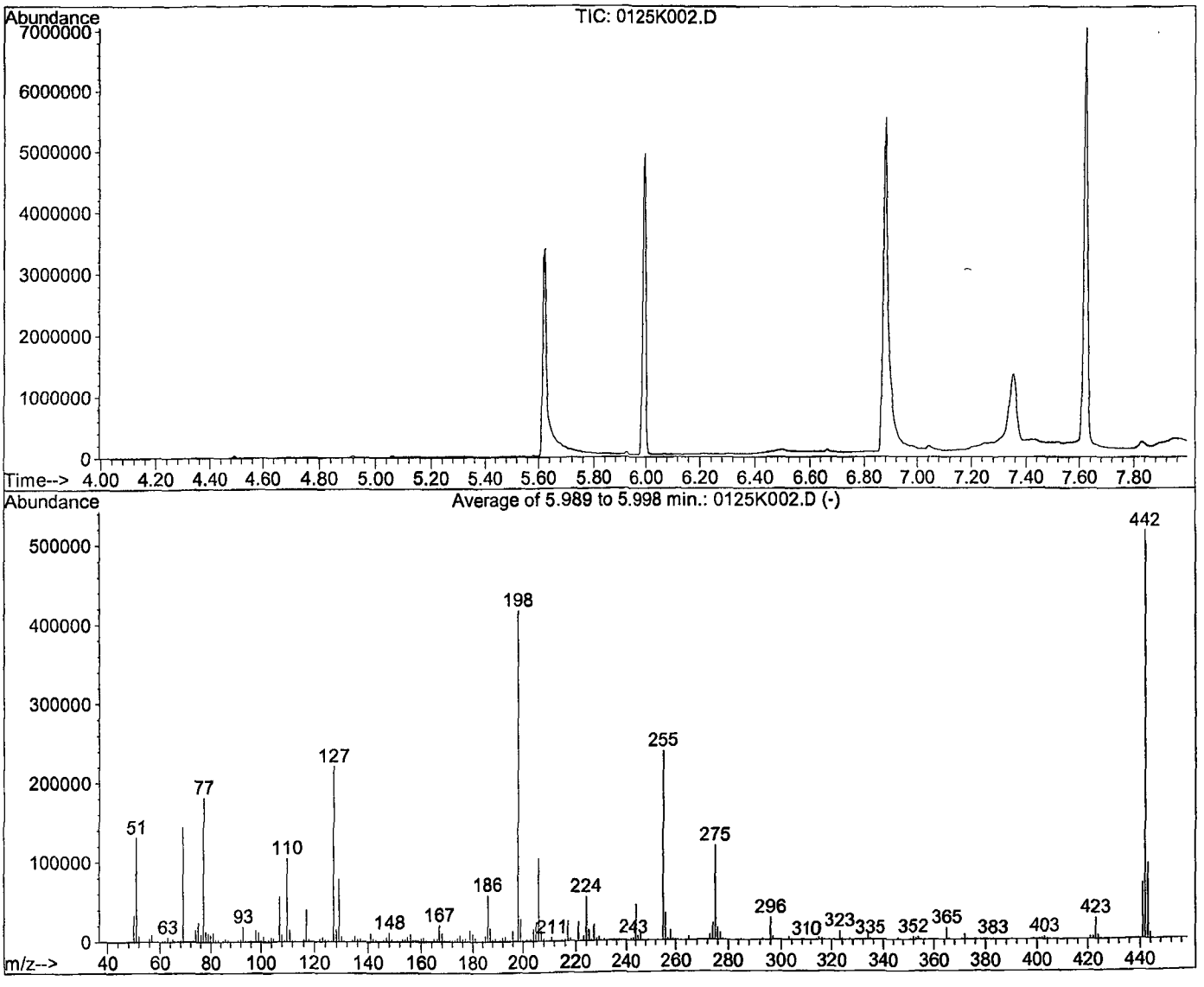
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Data File : M:\KYLO\DATA\210125M\0125K002.D
Acq On : 25 Jan 21 12:32
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator:
Inst : KYLO
Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

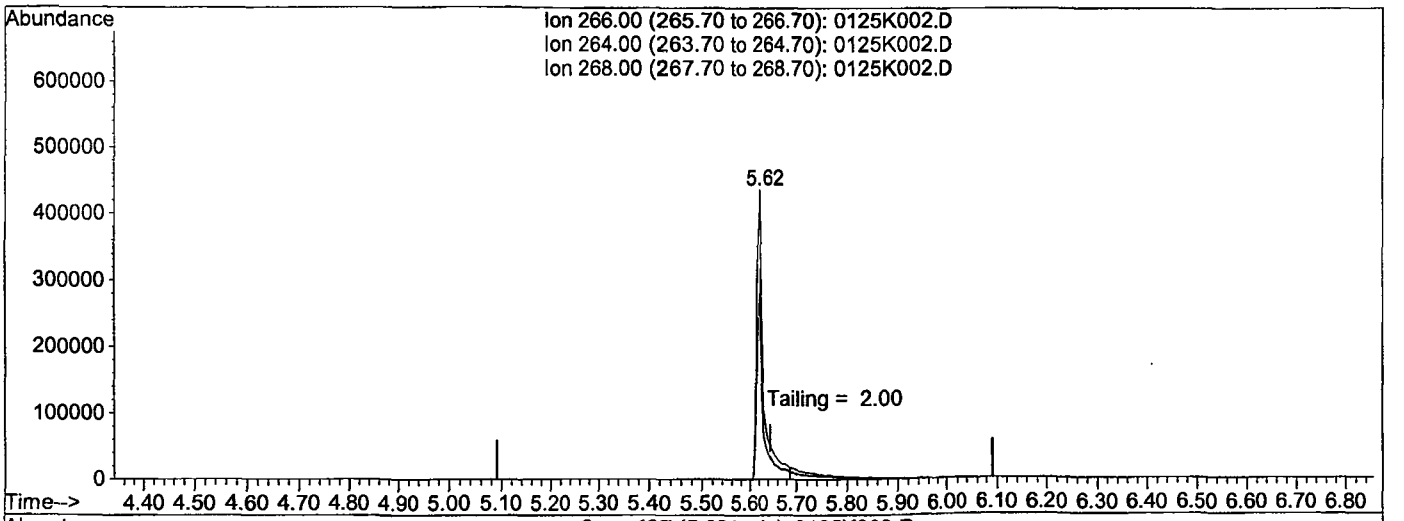
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

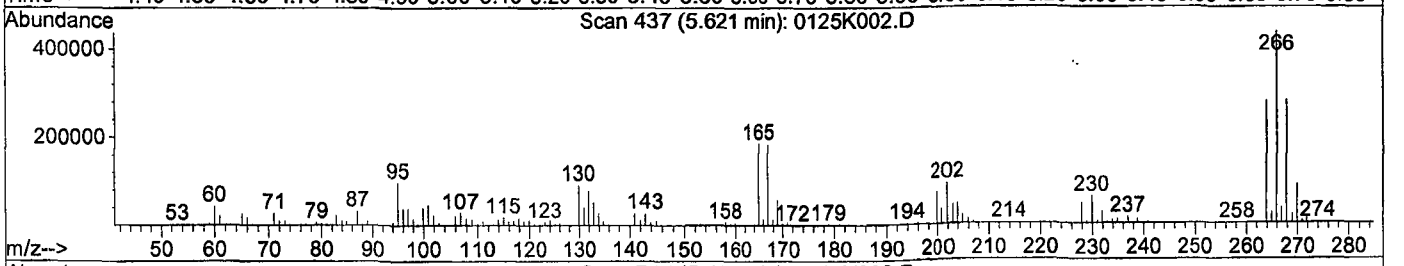
Breakdown **0.00**

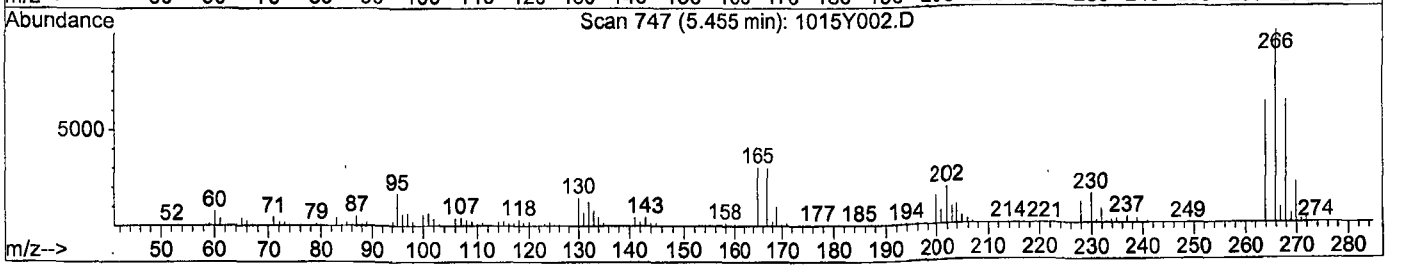
Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration







TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

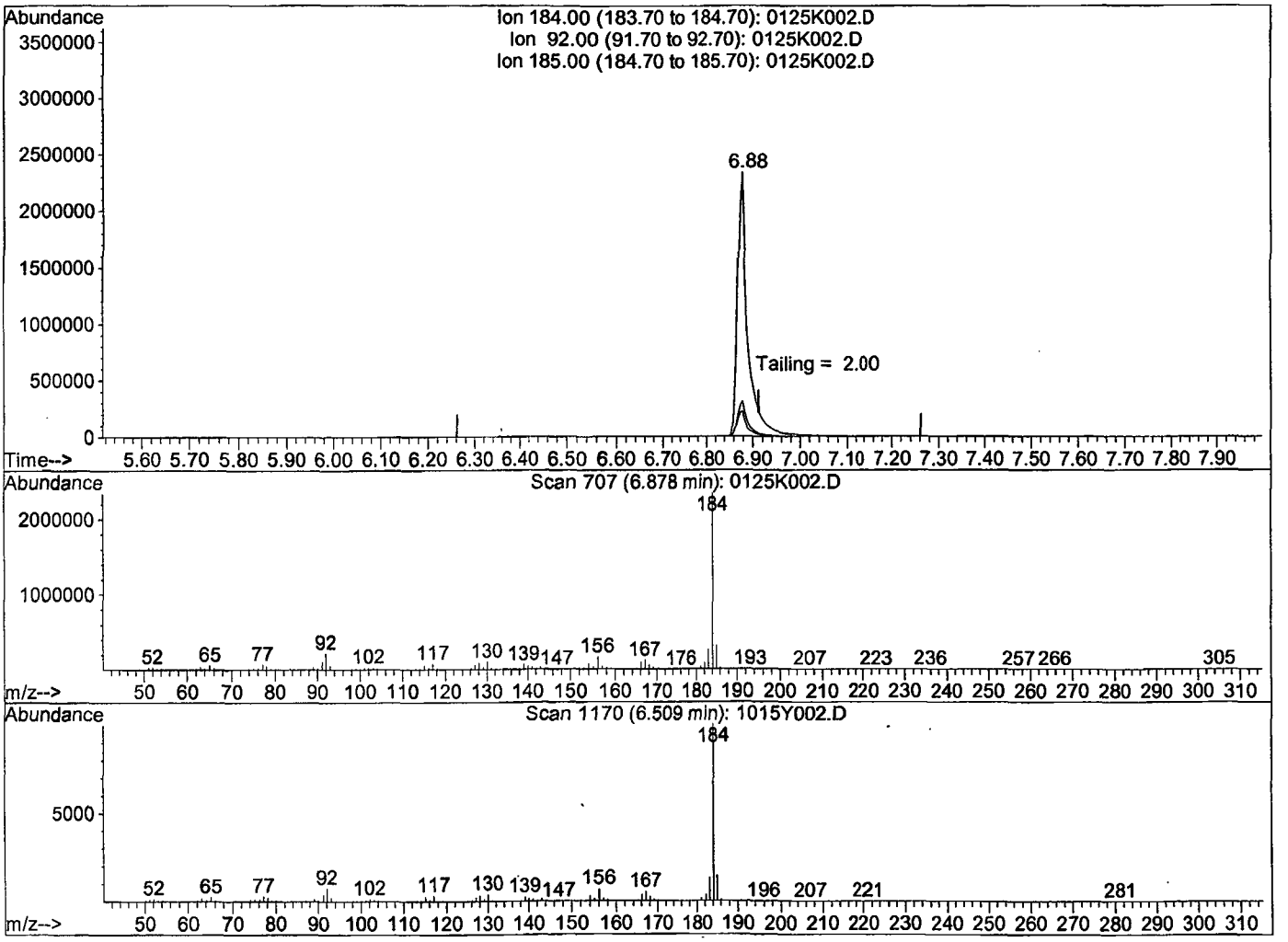
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

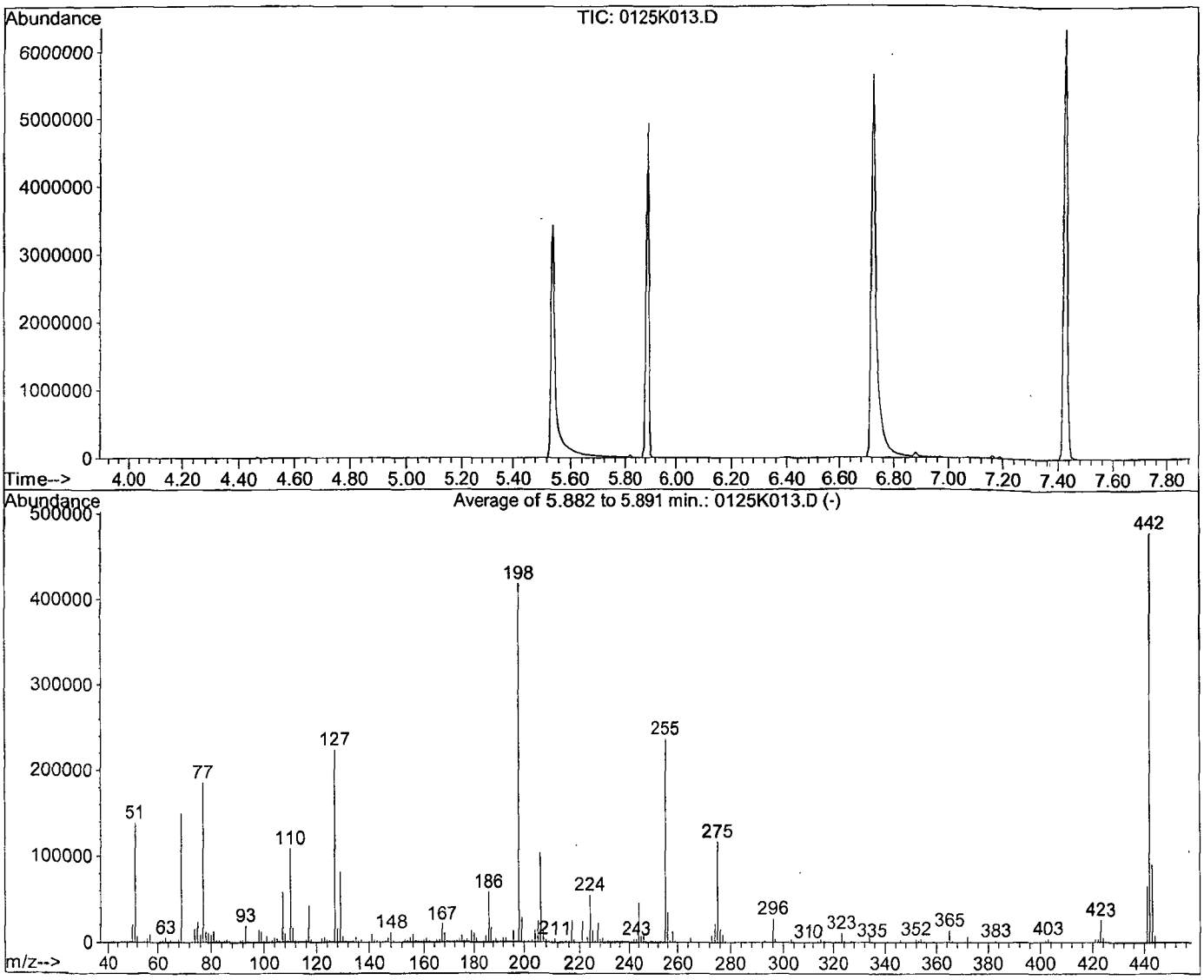
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 493, 494, 495; Background Corrected with Scan 487

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.2	138565	PASS
68	69	0.00	2	1.9	2813	PASS
70	69	0.00	2	0.6	828	PASS
127	198	10	80	53.5	223723	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	417856	PASS
199	198	5	9	6.8	28451	PASS
275	198	10	60	27.9	116741	PASS
365	198	1	100	3.3	13916	PASS
441	442	0.01	24	13.7	65373	PASS
442	198	50	500	114.6	478805	PASS
443	442	15	24	18.8	90181	PASS

Data File Name:	**0125K013.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**26 Jan 2021 10:06**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**13**
Instrument Name:	**KYLO**

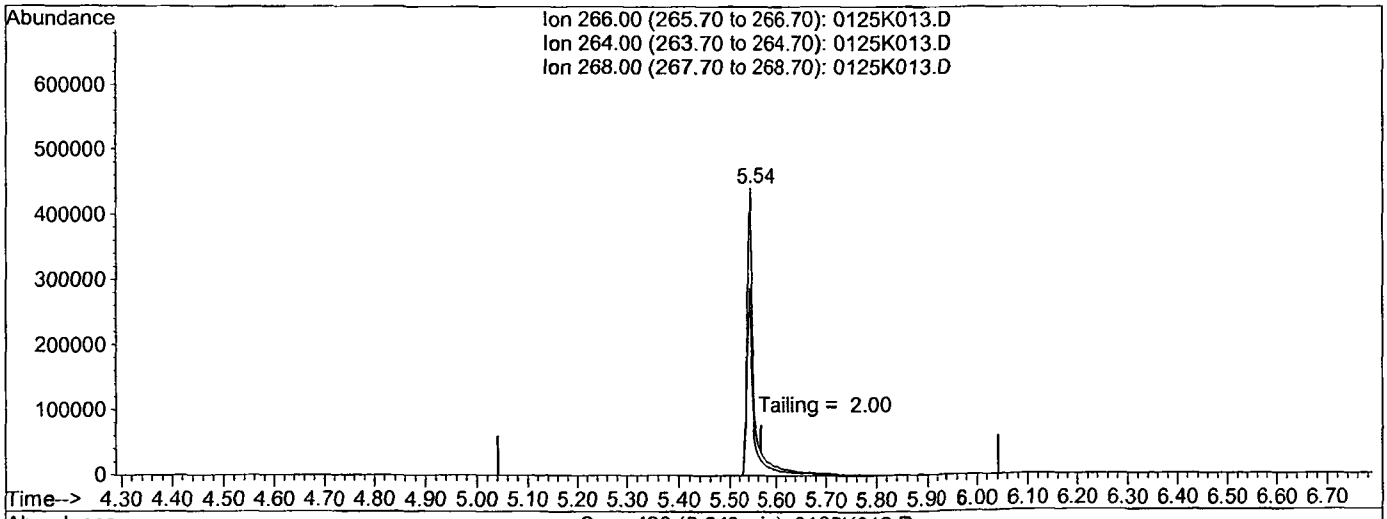
#	Name	Ret Time	Target Response
1)	DDT	7.43	56946000
2)	DDD	7.19	223290
3)	DDE	6.09	0

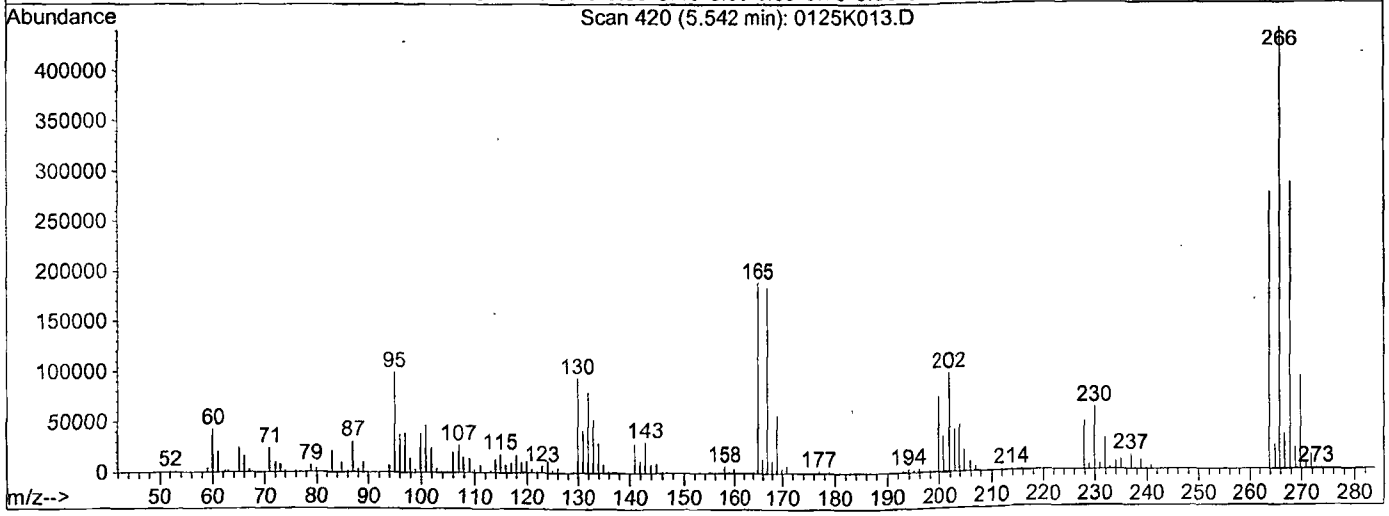
Breakdown **0.39**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K013.D

(5) Pentachlorophenol

5.54min 0.0000

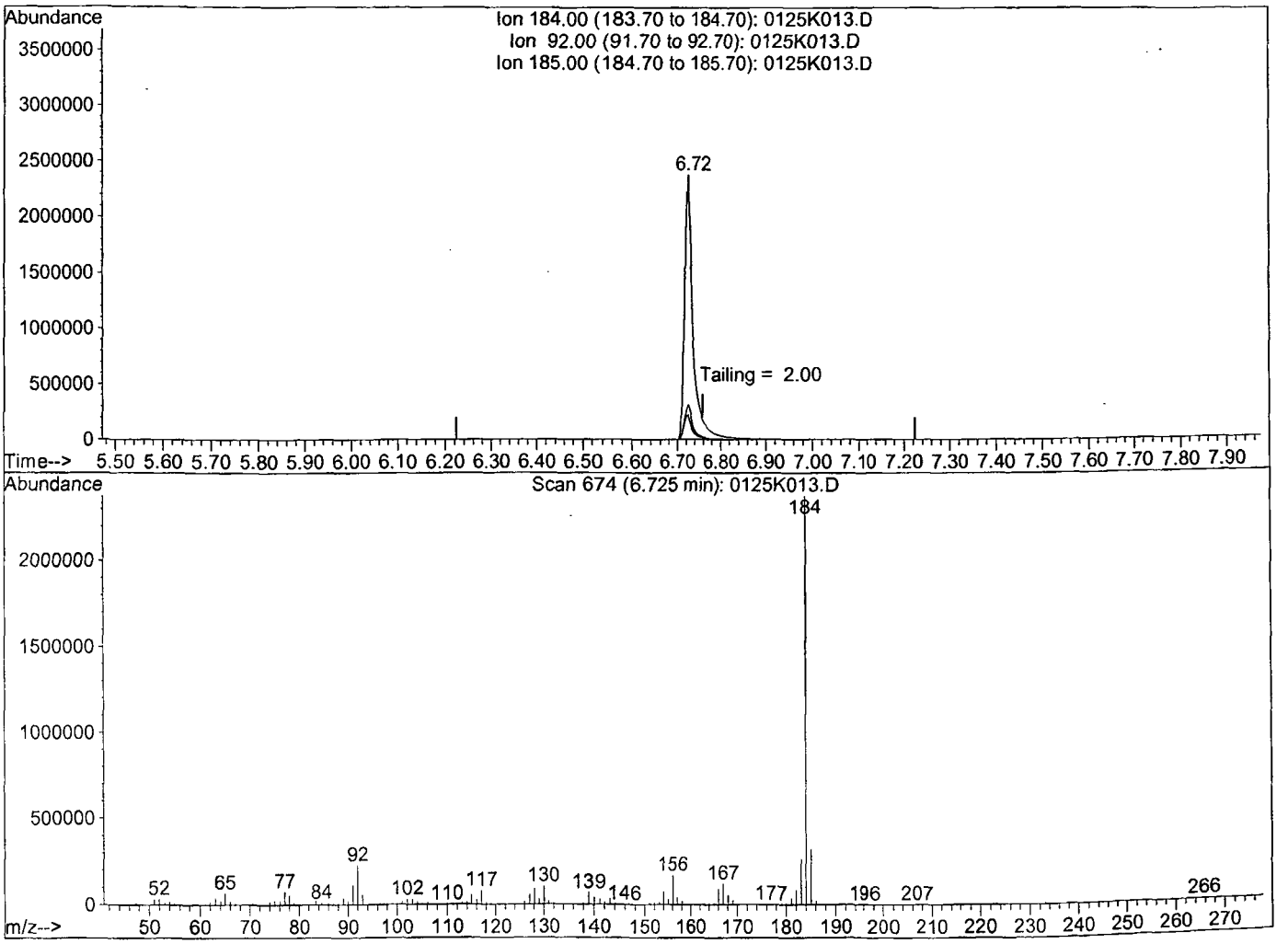
response 4229552

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	66.06
268.00	65.00	68.63
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration



TIC: 0125K013.D

(6) Benzidine

6.73min 0.0000

response 32216964

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	9.36
185.00	13.40	13.61
0.00	0.00	0.00

Name of Final Standard **2MEE Second Source Stock** Prep'd By (Initials) **JP**

Prep Date 10/28/19
Exp Date 10/28/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**04/25/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from. Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of Final Standard: MEE Curve
Prep'd By (Initials): CD
Prep Date: 05/01/20
Exp Date: 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep'd By (Initials): MA
Prep Date: 05/01/20
Exp Date: 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	11/06/19	10/28/21	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	MA
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	AO157142-49871,872,873	07/31/25	3 mL	3 mL	NA	2000ug/mL

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210125A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01/20/21 ex 01/20/22		Surrogate ID 1		
Spiked ID 2	2MEE SS 1630ug/mL 01/20/21 ex 01/20/22		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/25/21 9:00	
Spiked ID 8			Ext. End Time:	01/26/21 7:55	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/25/21 **Witnessed By:** CFM **Date** 01/25/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210125A Blk				NA	NA equip	500	2	7	01/25/21 9:00	
2	210125A LCS-1		0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	80ug/L
3	BA25434	BA25434W14			NA	NA equip	500	2	7	01/25/21 9:00	94808
4	BA25526 MS-1	BA25526W13	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
5	BA25526 MSD-1	BA25526W14	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
6	BA25526	BA25526W12			NA	NA equip	500	2	7	01/25/21 9:00	94825
7	BA25529	BA25529W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
8	BA25532	BA25532W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
9	BA25535	BA25535W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
10	BA25538	BA25538W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
11	M STD		1	3	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L
12	SS		0.613	2	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	.
Reverible Tube Lot:	047266-EY
PH Strip	HC025486
Di Water	1-25-21
MeOH:DCM MIX	8-4-20

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	1/26/20
Time	9:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	YL
Sample Preparation	YL,KY
Extraction	YL,KY
Concentration	KY

Modified	01/25/21 8:17:11 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
13	0125K013.D	1	SV TUNE 10/02/20		26 Jan 21 10:06
14	0125K014.D	1	2MEE 500 5/1/20		26 Jan 21 10:19
17	0125K017.D	1	210125A BLK 1/500		26 Jan 21 11:46
18	0125K018.D	1	210125A LCS-1 1/500		26 Jan 21 12:07
20	0125K020.D	1	BA25526W14 MS-1 2/500		26 Jan 21 12:48
21	0125K021.D	1	BA25526W14 MSD-1 2/500		26 Jan 21 13:09
22	0125K022.D	1	BA25526W12 2/500		26 Jan 21 13:30
28	0125K028.D	1	2MEE 500 1/26/21 (2)		26 Jan 21 15:58

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006 D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

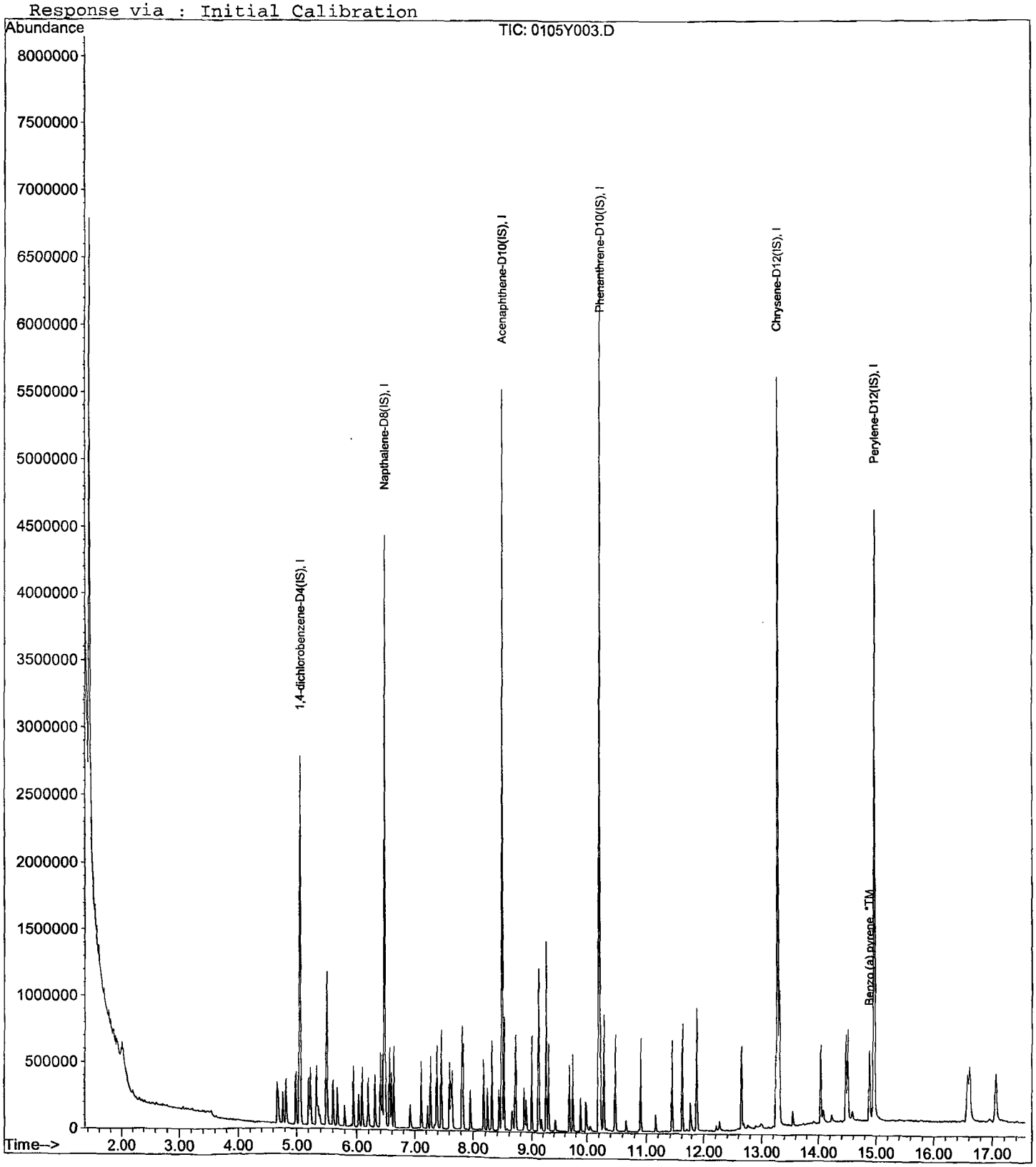
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037 #	1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

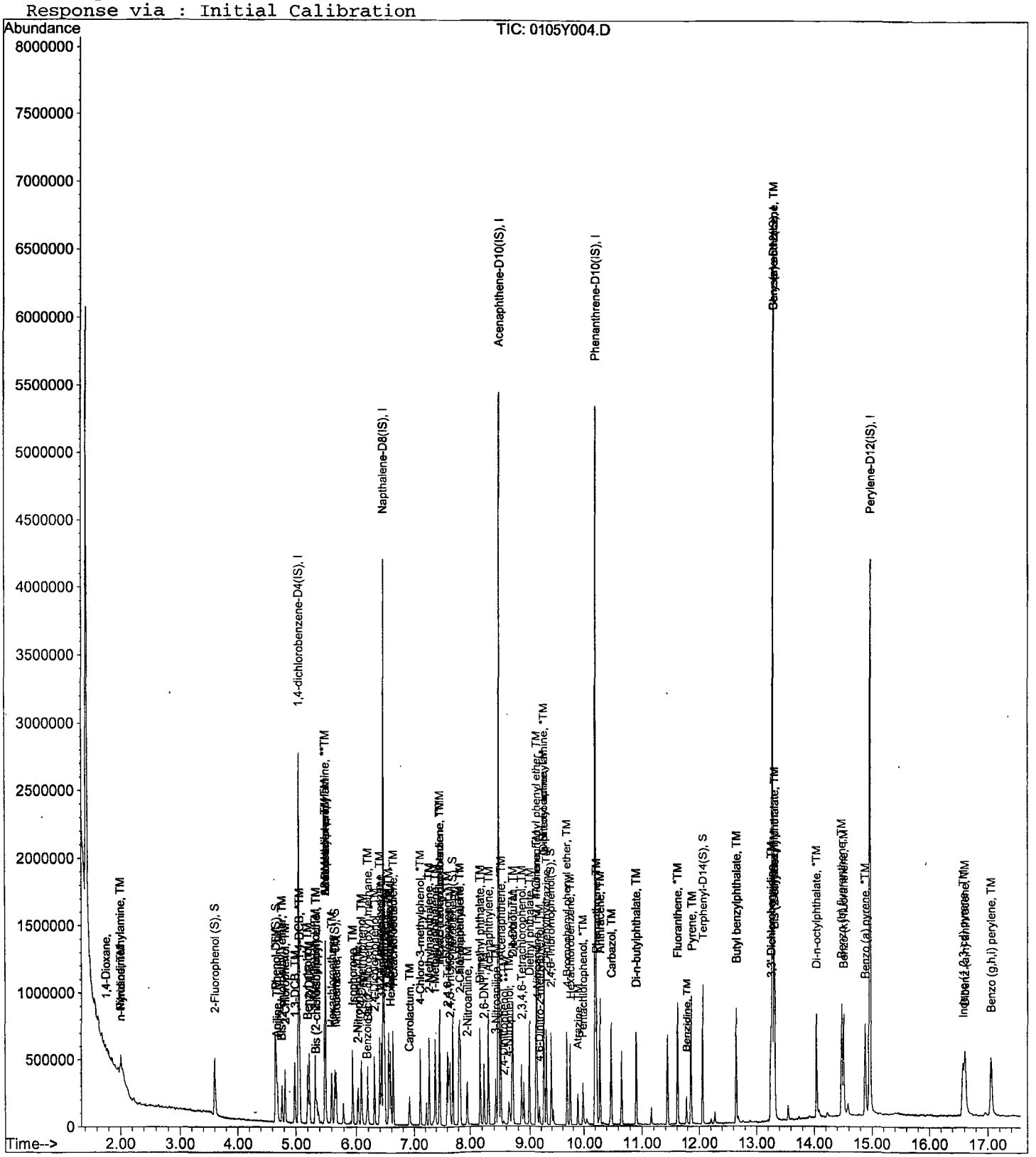
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411 ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%		
6) Phenol-D6 (S)	4.66	99	492275	20.31208 ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%		
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036 ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%		
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840 ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%		
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194 ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%		
82) Terphenyl-D14(S)	12.07	244	719678	9.80130 ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713		91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743 ppb		80
4) Pyridine	2.00	79	159922	10.10773 ppb		95
7) Phenol	4.67	94	284850	9.94852 ppb		94
8) Aniline	4.69	93	215040	10.28244 ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288 ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397 ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890 ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580 ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889 ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913 ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047 ppb		96
17) Acetophenone	5.49	105	301622	9.93857 ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173 ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080 ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192 ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780 ppb		91
24) Isophorone	5.95	82	433948	9.99676 ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219 ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036 ppb		99
27) Benzoic acid	6.19	105	96995	12.03014 ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695 ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390 ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216 ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228 ppb		98
32) Naphthalene	6.49	128	626299	10.16177 ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495 ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280 ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411 ppb		94
37) Caprolactum	6.93	55	62259	10.01107 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

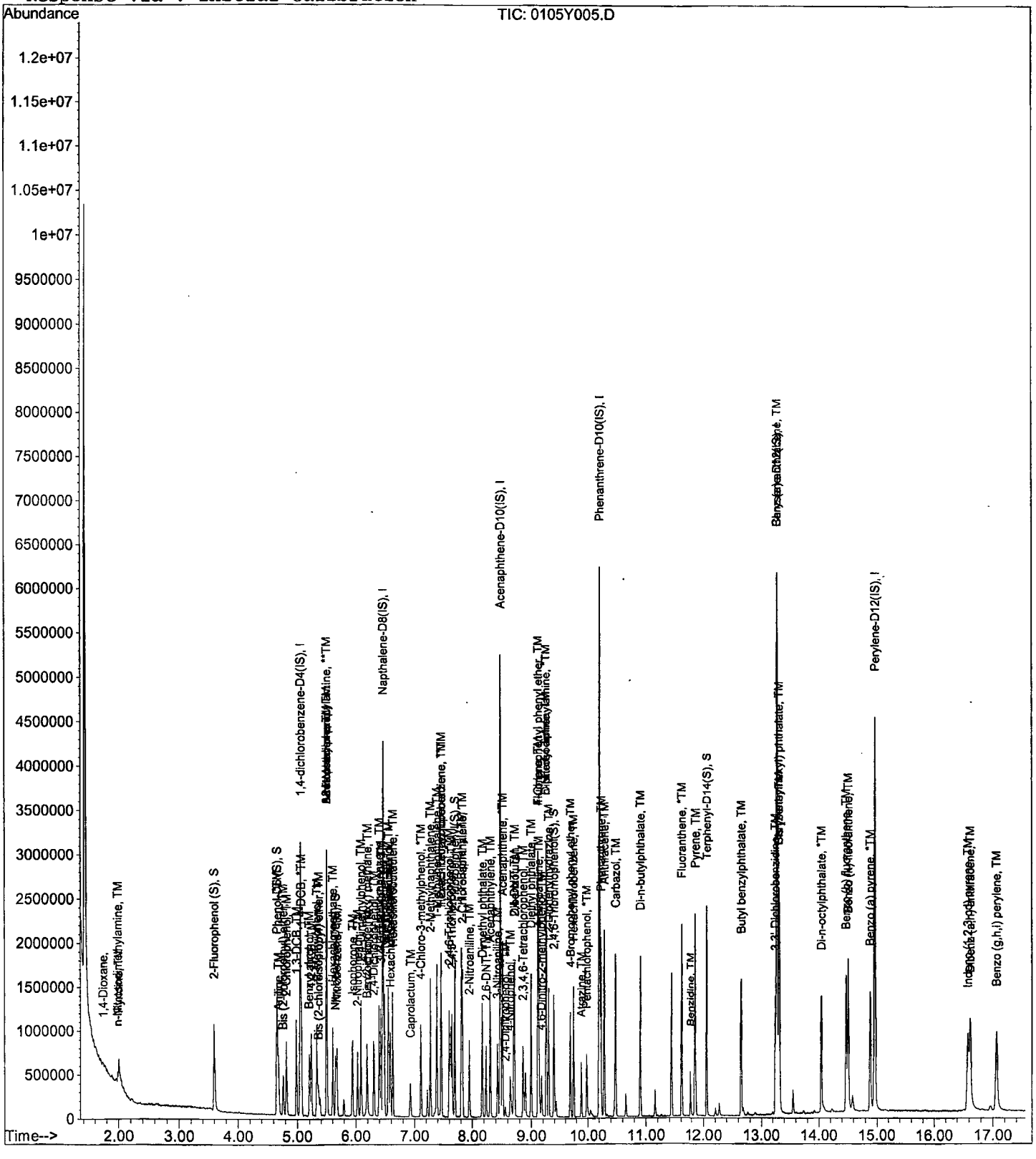
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery	= 19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery	= 19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

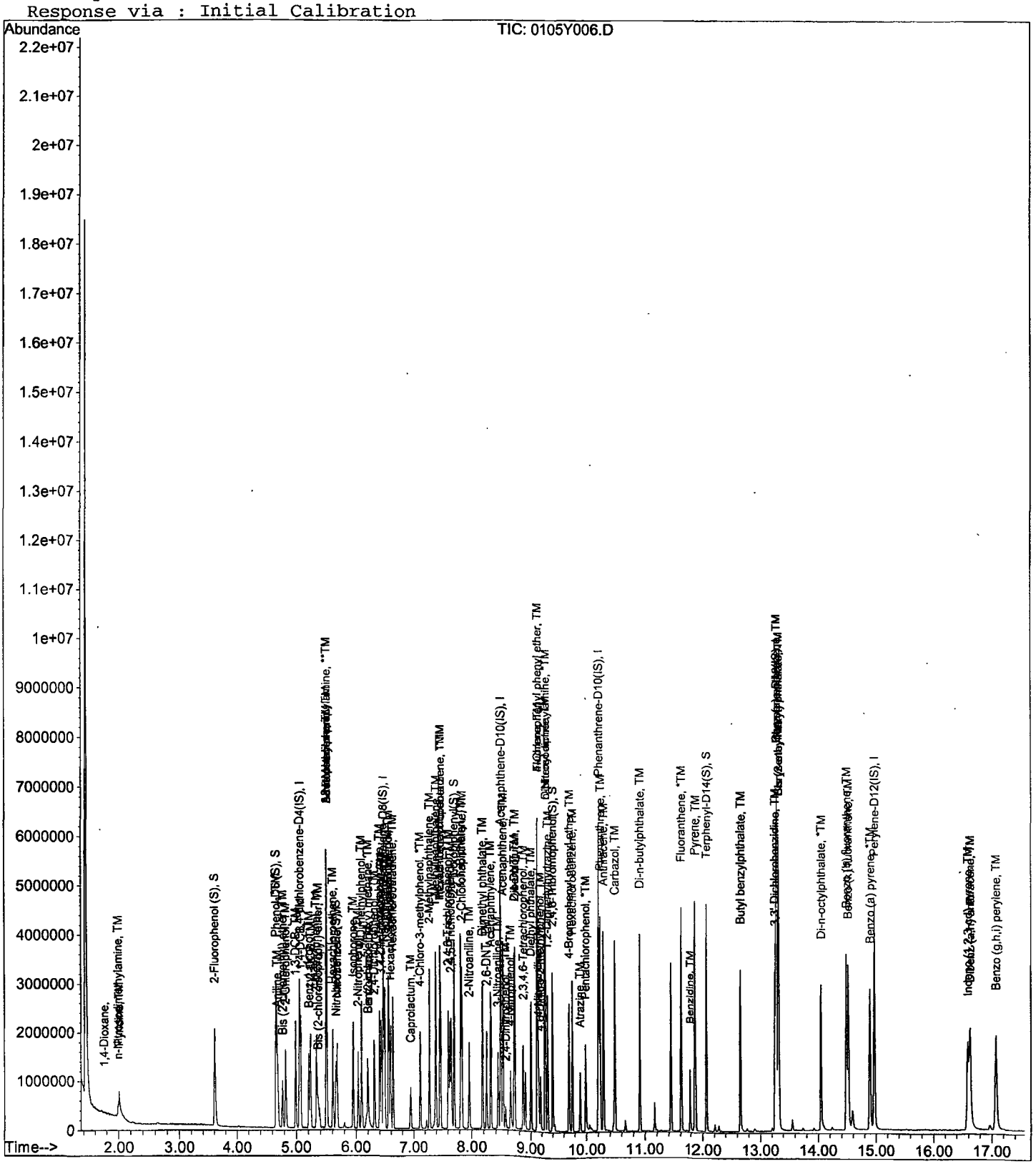
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967	ppb	0.00
Spiked Amount 200.000			Recovery = 40.315%			
6) Phenol-D6 (S)	4.67	99	2073058	80.33420	ppb	0.00
Spiked Amount 200.000			Recovery = 40.167%			
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156	ppb	0.00
Spiked Amount 100.000			Recovery = 39.782%			
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219	ppb	0.00
Spiked Amount 100.000			Recovery = 39.422%			
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158	ppb	0.00
Spiked Amount 200.000			Recovery = 39.906%			
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922	ppb	0.00
Spiked Amount 100.000			Recovery = 40.089%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747		54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850	ppb	93
4) Pyridine	1.99	79	710577	42.17927	ppb	100
7) Phenol	4.68	94	1249780	40.99379	ppb	96
8) Aniline	4.69	93	852672	38.29141	ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360	ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826	ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439	ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338	ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093	ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316	ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142	ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767	ppb	98
17) Acetophenone	5.49	105	1298420	40.18079	ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017	ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972	ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083	ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355	ppb	99
24) Isophorone	5.95	82	1929574	40.57653	ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009	ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262	ppb	95
27) Benzoic acid	6.22	105	694050	39.13552	ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698	ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706	ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464	ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676	ppb	97
32) Naphthalene	6.49	128	2700428	39.99560	ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681	ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710	ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202	ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790	ppb	96
37) Caprolactum	6.96	55	275073	40.37550	ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

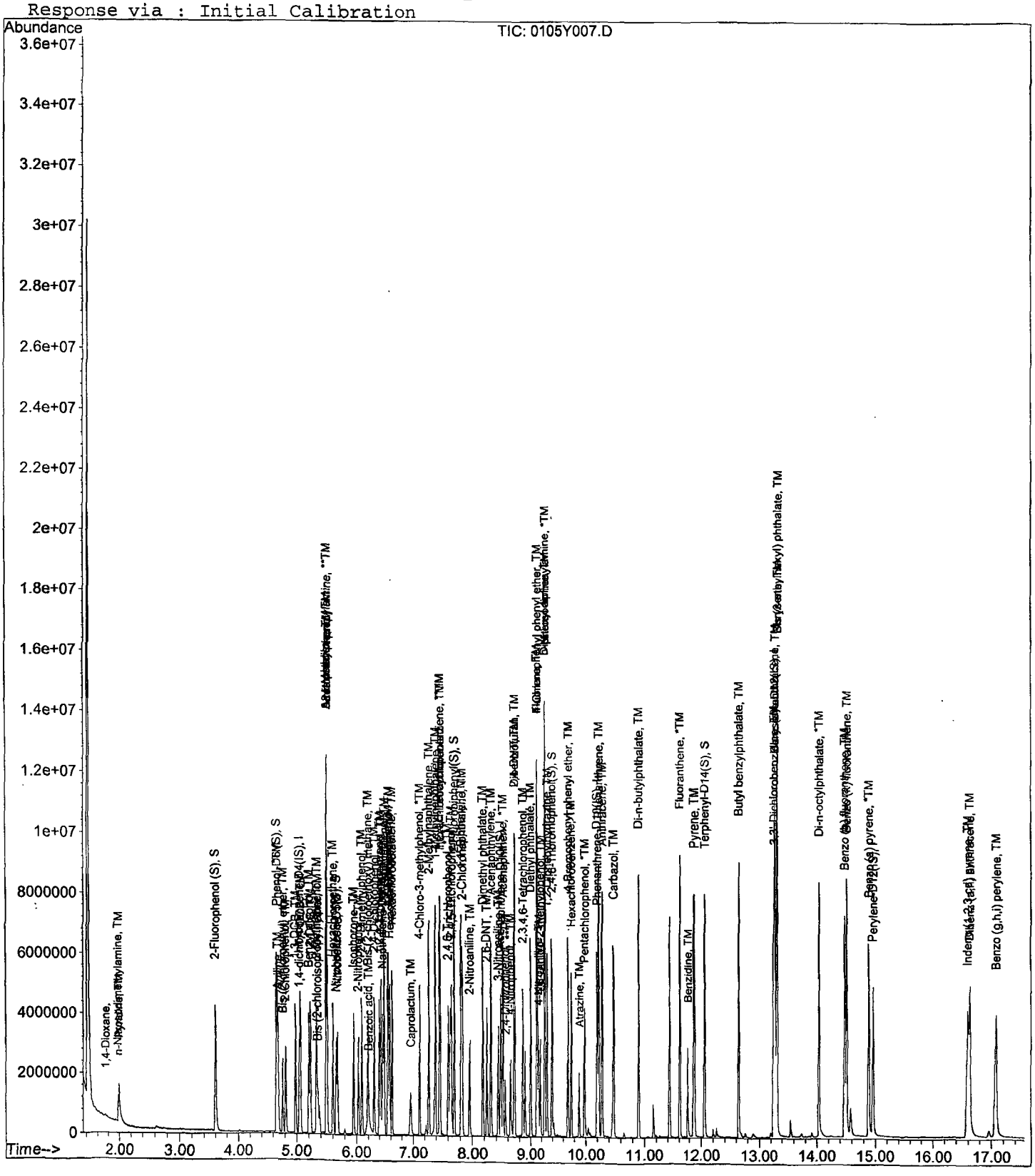
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501	ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827	ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033	ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691	ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290	ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584	ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983	ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022	ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174	ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741	ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990	ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046	ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381	ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245	ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395	ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389	ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069	ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506	ppb	100
62)	Fluorene	9.11	166	2868571	49.36863	ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128	ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089	ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978	ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367	ppb	100
72)	Atrazine	9.89	200	418889	26.25754	ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356	ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640	ppb	100
75)	Anthracene	10.29	178	4512131	51.82540	ppb	100
76)	Carbazol	10.49	167	4021683	52.16528	ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661	ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724	ppb	100
80)	Benzidine	11.78	184	1334887	54.03870	ppb	100
81)	Pyrene	11.88	202	5487771	52.99187	ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593	ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347	ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599	ppb	100
87)	Chrysene	13.31	228	5235913	52.38491	ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495	ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646	ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782	ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159	ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960	ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590	ppb	100

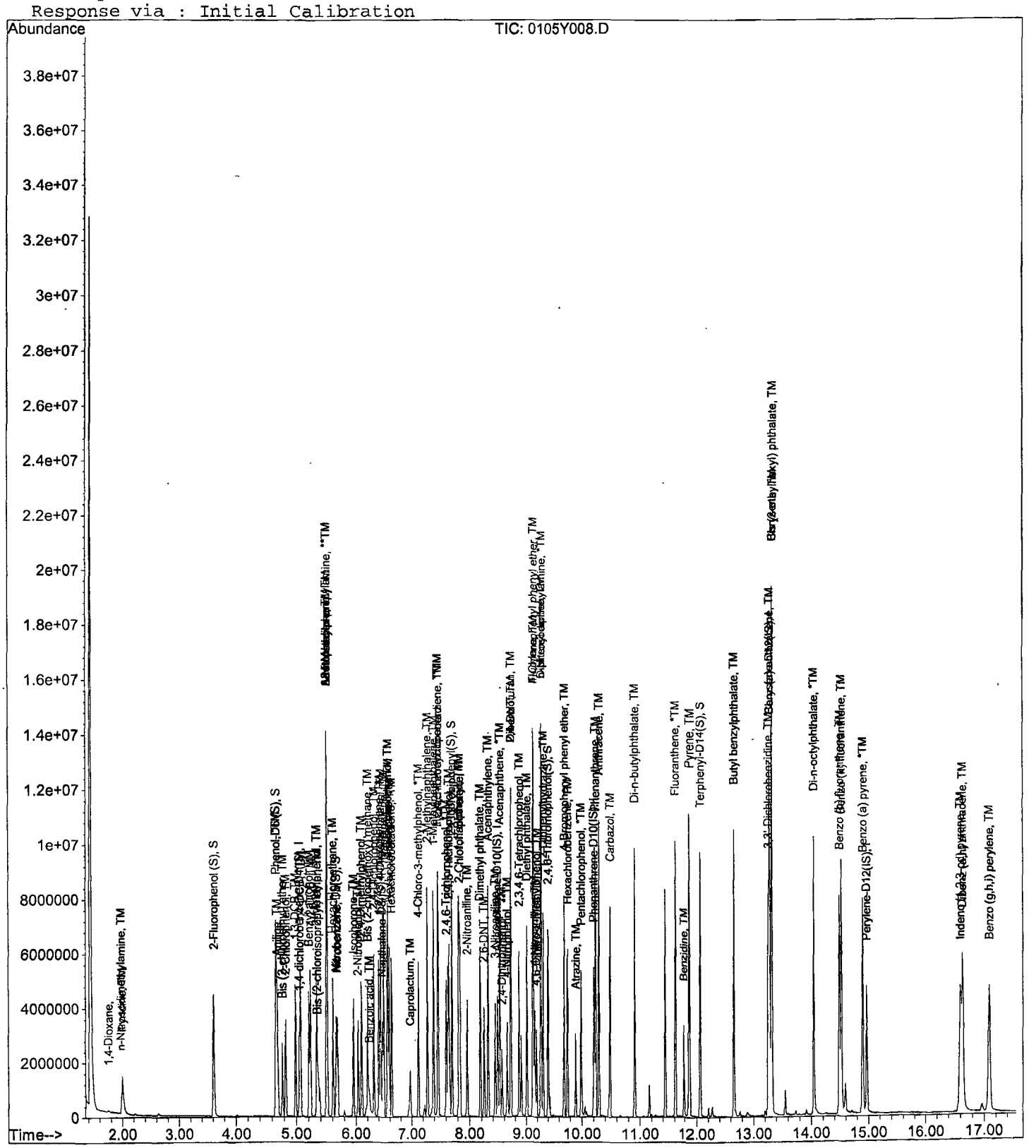
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382 ppb		-0.01
Spiked Amount 200.000			Recovery =	60.067%		
6) Phenol-D6 (S)	4.67	99	2714982	119.91052 ppb		0.00
Spiked Amount 200.000			Recovery =	59.956%		
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297 ppb		0.00
Spiked Amount 100.000			Recovery =	59.053%		
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223 ppb		0.00
Spiked Amount 100.000			Recovery =	60.072%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868 ppb		0.00
Spiked Amount 200.000			Recovery =	62.039%		
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361 ppb		0.00
Spiked Amount 100.000			Recovery =	59.274%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380		95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310 ppb		92
4) Pyridine	1.99	79	901311	60.97669 ppb		97
7) Phenol	4.68	94	1606167	60.04495 ppb		96
8) Aniline	4.69	93	1200640	61.45164 ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145 ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776 ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182 ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978 ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043 ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365 ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897 ppb		96
17) Acetophenone	5.50	105	1702308	60.04028 ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638 ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425 ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967 ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951 ppb		89
24) Isophorone	5.96	82	2504820	59.55758 ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859 ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930 ppb		99
27) Benzoic acid	6.23	105	965560	57.47534 ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945 ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990 ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563 ppb		100
32) Naphthalene	6.49	128	3532998	59.16571 ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729 ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808 ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347 ppb		98
37) Caprolactum	6.98	55	354905	58.90188 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061 ppb		97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696 ppb		99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749 ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107 ppb		95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523 ppb		99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976 ppb		98
49)	2-Nitroaniline	7.96	65	841116	62.54367 ppb		91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917 ppb		97
51)	2,6-DNT	8.25	165	721094	63.77204 ppb		92
52)	Acenaphthylene	8.31	152	3958165	61.50568 ppb		100
53)	3-Nitroaniline	8.44	138	660556	62.57113 ppb		99
54)	Acenaphthene	8.52	154	2630476	61.47248 ppb		99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611 ppb		93
56)	4-Nitrophenol	8.65	65	649860	62.38635 ppb		93
57)	Dibenzofuran	8.71	168	3822801	60.02938 ppb		98
58)	2,4-DNT	8.71	165	1037342	63.85086 ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733 ppb		98
60)	Diethyl phthalate	9.01	149	3210549	60.76914 ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403 ppb		98
62)	Fluorene	9.11	166	3228662	60.22935 ppb		100
63)	4-Nitroaniline	9.15	138	700111	60.96860 ppb		95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375 ppb	#	85
67)	Diphenyl amine	9.27	169	5280666	121.05178 ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828 ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326 ppb		96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631 ppb		96
72)	Atrazine	9.89	200	456257	29.70998 ppb		98
73)	Pentachlorophenol	9.99	266	735018	61.16679 ppb		99
74)	Phenanthrene	10.24	178	4886948	60.82438 ppb		99
75)	Anthracene	10.29	178	5016441	59.85415 ppb		100
76)	Carbazol	10.49	167	4476193	60.31428 ppb		98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735 ppb		99
78)	Fluoranthene	11.62	202	5746073	61.28713 ppb	#	97
80)	Benzidine	11.78	184	1491099	63.17340 ppb		99
81)	Pyrene	11.88	202	6087066	61.51608 ppb		100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385 ppb		99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074 ppb		99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315 ppb		98
87)	Chrysene	13.32	228	5981915	62.63562 ppb		99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910 ppb		100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298 ppb	#	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519 ppb		100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598 ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828 ppb		97

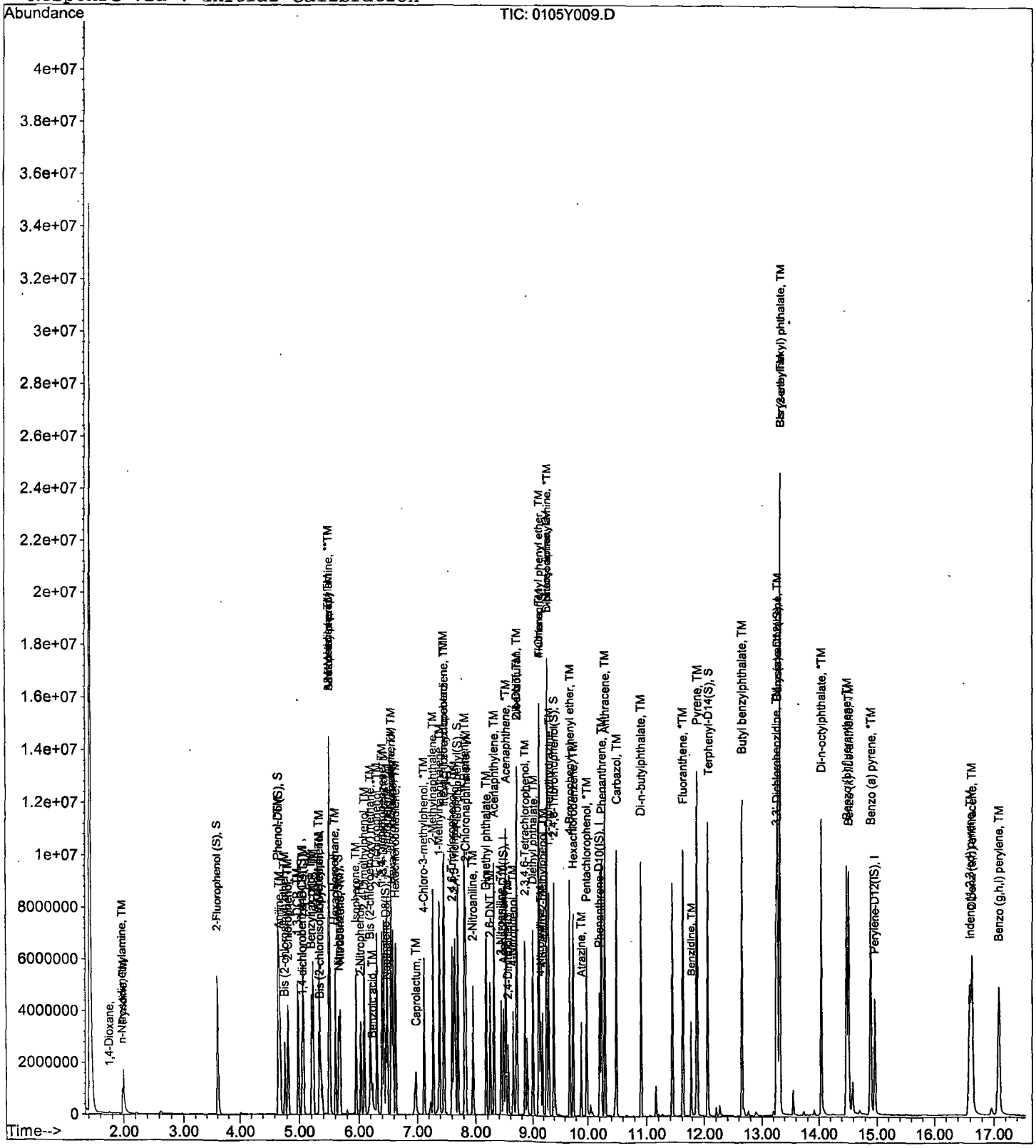
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014 ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655 ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416 ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015 ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611 ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077 ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644 ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172 ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202 ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890 ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896 ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682 ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683 ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516 ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648 ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538 ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107 ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525 ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517 ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100 ppb		98
62)	Fluorene	9.12	166	5047941	86.20009 ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506 ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370 ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254 ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237 ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840 ppb		91
72)	Atrazine	9.89	200	691470	41.73525 ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636 ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693 ppb		100
75)	Anthracene	10.29	178	7347310	81.25757 ppb		99
76)	Carbazol	10.49	167	6600362	82.43582 ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116 ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048 ppb		96
80)	Benzidine	11.78	184	2104059	81.98313 ppb		99
81)	Pyrene	11.88	202	8540731	79.38062 ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628 ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581 ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065 ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264 ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893 ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361 ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885 ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416 ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513 ppb		99

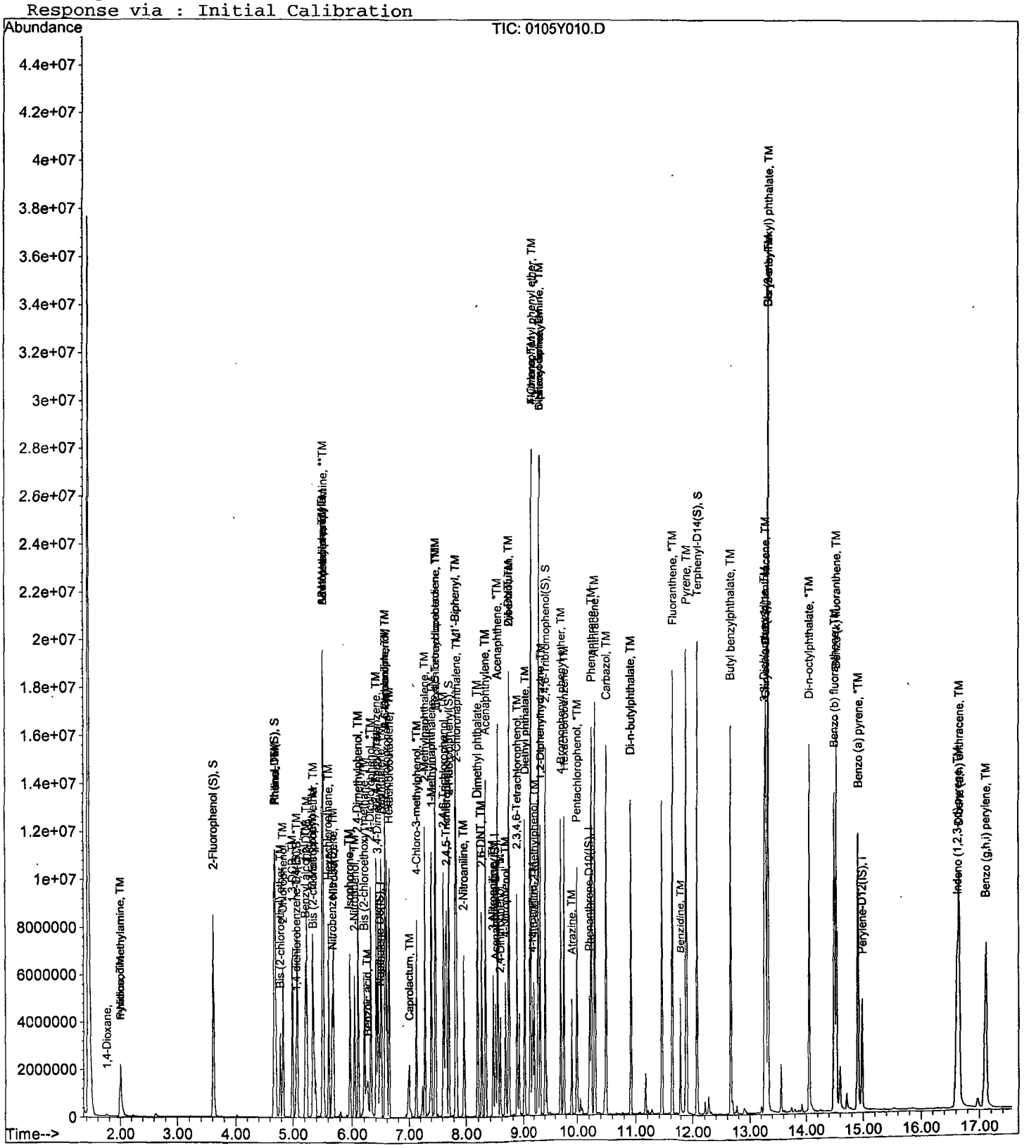
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%			
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%			
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%			
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%			
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%			
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

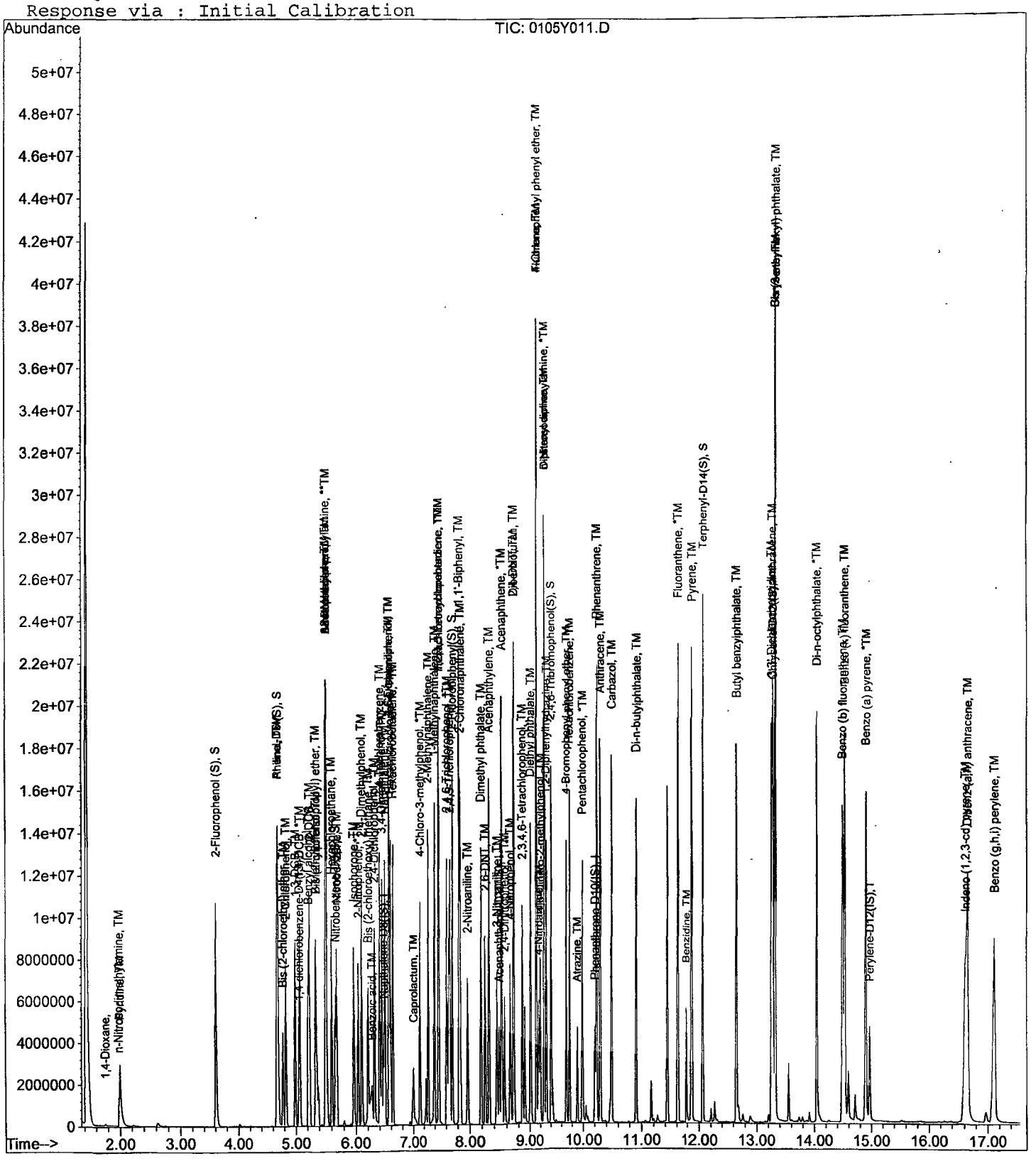
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 5 Jan 21 15:11
Matrix: 0 Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
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117							
118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery	= 6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery	= 0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery	= 0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery	= 0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091 ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468 ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689 ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163 ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145 ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770 ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854 ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887 ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285 ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600 ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497 ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262 ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322 ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054 ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929 ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106 ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975 ppb		97
62)	Fluorene	9.11	166	2532549	47.63871 ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119 ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852 ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020 ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896 ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650 ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338 ppb		95
72)	Atrazine	9.89	200	359433	24.27186 ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124 ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327 ppb		100
75)	Anthracene	10.29	178	3950822	48.88531 ppb		100
76)	Carbazol	10.48	167	3450310	48.21274 ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046 ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019 ppb		99
80)	Benzidine	11.78	184	1084184	46.34613 ppb		98
81)	Pyrene	11.88	202	4791836	48.86133 ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442 ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448 ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052 ppb		99
87)	Chrysene	13.31	228	4533491	47.89571 ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510 ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301 ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717 ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820 ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774 ppb		98

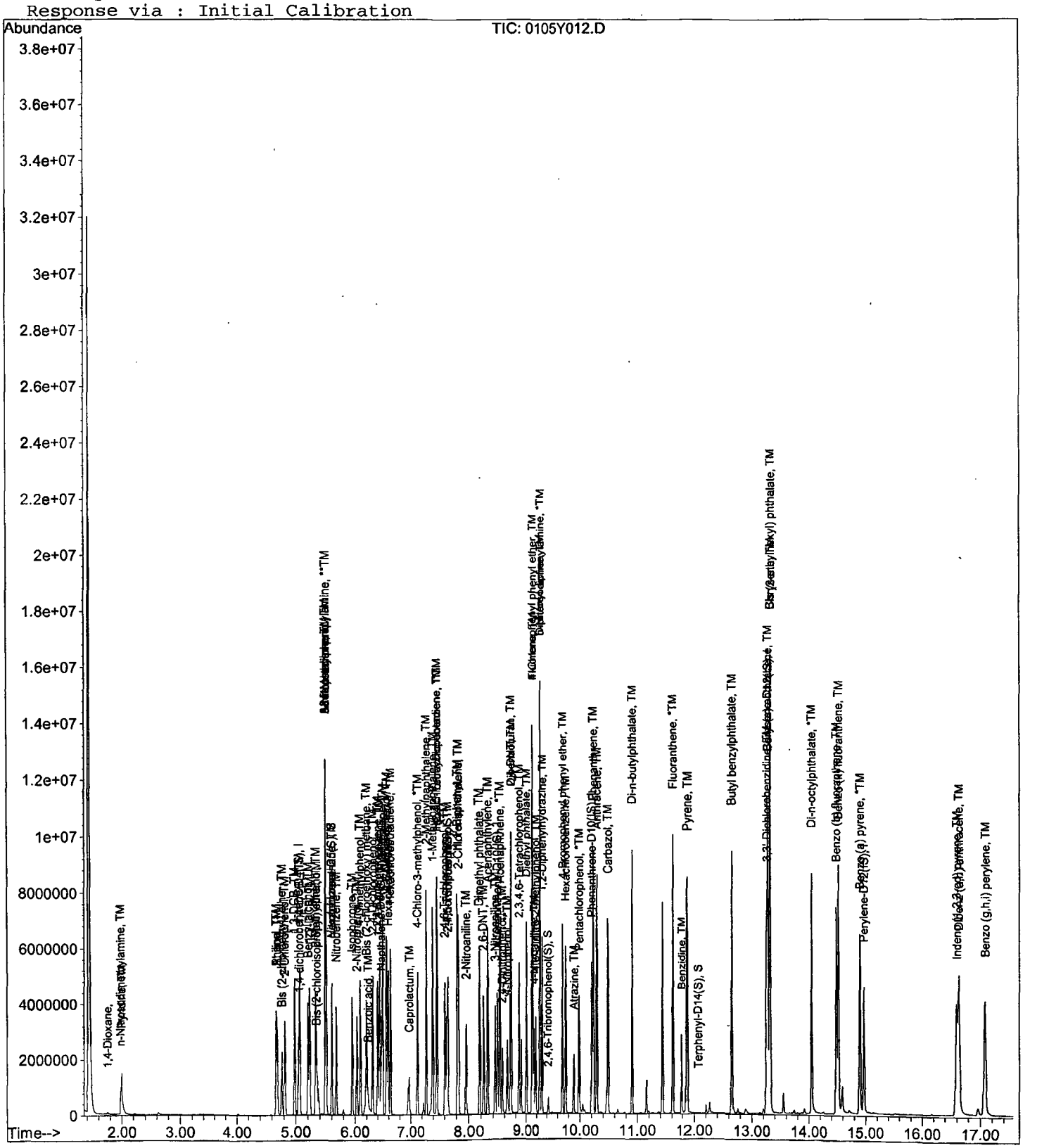
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2598	19			
3	TM	n-Nitrosodimethylamine	0.6105	0.5837	4.4	TM		
4	TM	Pyridine	1.336	1.259	5.8	TM		
5	S	2-Fluorophenol (S)	1.601	1.677	4.8	S		
6	S	Phenol-D6 (S)	2.046	2.237	9.3	S		
7	*TM	Phenol	2.418	2.670	10	*TM		
8	TM	Aniline	1.766	1.993	13	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.149	11	TM		
10	TM	2-Chlorophenol	1.829	1.960	7.2	TM		
11	TM	1,3-DCB	2.107	2.040	3.2	TM		
12	*TM	1,4-DCB	2.122	2.109	0.59	*TM		
13	TM	Benzyl alcohol	1.073	1.152	7.4	TM		
14	TM	1,2-DCB	1.992	2.001	0.46	TM		
15	TM	2-Methylphenol	1.401	1.499	7.0	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.158	19	TM		
17	TM	Acetophenone	2.563	2.781	8.5	TM		
18	TM	3&4-Methylphenol	1.892	2.095	11	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.706	14	**TM		
20	TM	Hexachloroethane	0.8684	0.8855	2.0	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5861	0.64	S		
23	TM	Nitrobenzene	0.6068	0.6171	1.7	TM		
24	TM	Isophorone	0.9746	0.9928	1.9	TM		
25	*TM	2-Nitrophenol	0.2562	0.2568	0.24	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4226	0.25	TM		
27	TML	Benzoic acid	0.3484	0.2255	35	TML	35	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5655	2.6	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4319	1.5	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4999	2.2	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6757	0.08	TM		
32	TM	Naphthalene	1.384	1.404	1.5	TM		
33	TM	4-Chloroaniline	0.5189	0.5719	10	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4310	1.0	TM		
35	TM	Hexachloropropene	0.4576	0.4222	7.7	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3466	4.1	*TM		
37	TM	Caprolactum	0.1396	0.1471	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4653	1.5	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9342	2.7	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9728	3.7	TM		
		Average			6.4			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D	%Drift		
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5506	3.3	**TML	10	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8850	1.7	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5525	1.4	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.6007	1.8	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.852	1.2	S		
47	TM	1,1'-Biphenyl	2.012	2.117	5.2	TM		
48	TM	2-Chloronaphthalene	1.564	1.605	2.6	TM		
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM		
50	TM	Dimethyl phthalate	1.914	1.958	2.3	TM		
51	TM	2,6-DNT	0.4186	0.4214	0.66	TM		
52	TM	Acenaphthylene	2.382	2.404	0.89	TM		
53	TM	3-Nitroaniline	0.3908	0.4159	6.4	TM		
54	*TM	Acenaphthene	1.584	1.592	0.51	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.1597	28	**TML	22	*NT
56	**TM	4-Nitrophenol	0.3856	0.3629	5.9	**TM		
57	TM	Dibenzofuran	2.358	2.370	0.51	TM		
58	TM	2,4-DNT	0.6015	0.6003	0.20	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4473	7.7	TM		
60	TM	Diethyl phthalate	1.956	1.951	0.26	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.107	2.5	TM		
62	TM	Fluorene	1.985	2.067	4.1	TM		
63	TM	4-Nitroaniline	0.4251	0.4277	0.60	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2791	7.4	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1743	9.1	TM		
67	TM	Diphenyl amine	0.7523	0.7707	2.4	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7707	2.4	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9878	3.6	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3037	0.33	TM		
71	TM	Hexachlorobenzene	0.3129	0.3069	1.9	TM		
72	TM	Atrazine	0.2649	0.2618	1.1	TM		
73	*TM	Pentachlorophenol	0.2072	0.1985	4.2	*TM		
74	TM	Phenanthrene	1.386	1.423	2.7	TM		
75	TM	Anthracene	1.445	1.503	4.0	TM		
76	TM	Carbazol	1.280	1.304	1.9	TM		
77	TM	Di-n-butylphthalate	1.570	1.676	6.8	TM		
78	*TM	Fluoranthene	1.617	1.650	2.0	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.4028	1.3	TM		
		Average			3.6			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.767	6.0	TM	
82	S	Terphenyl-D14(S)	1.201	1.214	1.1	S	
83	TM	Butyl benzylphthalate	0.7149	0.7759	8.5	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6314	14	TM	
85	TM	Benz (a) anthracene	1.709	1.764	3.2	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.158	13	TM	
87	TM	Chrysene	1.610	1.788	11	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.792	14	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.522	0.39	TM	
92	*TM	Benzo (a) pyrene	1.467	1.547	5.5	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.673	1.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.456	1.6	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
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111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	533085	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2194335	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1385446	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2786023	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2774517	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.98	264	2634209	40.00000 ppb	0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2235576	104.80889 ppb	0.00
Spiked Amount 200.000			Recovery	= 52.405%	
6) Phenol-D6 (S)	4.67	99	2981420	109.31539 ppb	0.00
Spiked Amount 200.000			Recovery	= 54.658%	
22) Nitrobenzene-D5(S)	5.66	82	1607512	49.68240 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.682%	
46) 2-Fluorobiphenyl(S)	7.71	172	3207255	49.38865 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.389%	
64) 2,4,6-Tribromophenol(S)	9.40	330	966848	92.57566 ppb	0.00
Spiked Amount 200.000			Recovery	= 46.288%	
82) Terphenyl-D14(S)	12.07	244	4209281	50.54570 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.546%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17311	4.06981	90
3) n-Nitrosodimethylamine	1.97	42	388923	47.80079 ppb	79
4) Pyridine	1.99	79	838890	47.11531 ppb	94
7) Phenol	4.68	94	1779060	55.21337 ppb	87
8) Aniline	4.69	93	1328128	56.43239 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	765351	55.65806 ppb	93
10) 2-Chlorophenol	4.82	128	1306315	53.58587 ppb	99
11) 1,3-DCB	4.98	146	1359350	48.42079 ppb	99
12) 1,4-DCB	5.07	146	1405572	49.70368 ppb	99
13) Benzyl alcohol	5.21	108	767506	53.69409 ppb	92
14) 1,2-DCB	5.23	146	1333446	50.23123 ppb	98
15) 2-Methylphenol	5.33	107	998997	53.52128 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	771502	59.36942 ppb	94
17) Acetophenone	5.50	105	1853156	54.26057 ppb	94
18) 3&4-Methylphenol	5.51	107	2791494	110.72488 ppb	96
19) n-Nitrosodi-n-propylamine	5.51	70	1136514	57.03056 ppb	95
20) Hexachloroethane	5.60	117	590038	50.98156 ppb	94
23) Nitrobenzene	5.69	77	1692605	50.84746 ppb	93
24) Isophorone	5.96	82	2723136	50.93502 ppb	95
25) 2-Nitrophenol	6.04	139	704319	50.12154 ppb	82
26) 2,4-Dimethylphenol	6.10	122	1159148	49.87449 ppb	98
27) Benzoic acid	6.24	105	618468	32.41632 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1551188	51.30726 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1184651	49.24379 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1371127	48.89941 ppb	99
31) 3,4-Dimethylphenol	6.43	107	1853438	49.96122 ppb	97
32) Naphthalene	6.49	128	3850481	50.72574 ppb	99
33) 4-Chloroaniline	6.56	127	1568589	55.10632 ppb	94
34) 2,6-Dichlorophenol	6.57	162	1182088	50.52388 ppb	94
35) Hexachloropropene	6.59	213	1158129	46.13169 ppb	100
36) Hexachlorobutadiene	6.63	225	950821	47.92895 ppb	99
37) Caprolactum	6.99	55	403612	52.69480 ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1276387	50.74603	ppb		95
39)	2-Methylnaphthalene	7.27	142	2562457	51.35373	ppb		99
40)	1-Methylnaphthalene	7.40	142	2668197	51.86615	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	953472	44.91138	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1532645	49.15476	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	956785	49.31755	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1040231	49.07954	ppb		96
47)	1,1'-Biphenyl	7.82	154	3666052	52.61084	ppb		99
48)	2-Chloronaphthalene	7.84	162	2780318	51.30960	ppb		97
49)	2-Nitroaniline	7.96	65	902779	52.35141	ppb		83
50)	Dimethyl phthalate	8.18	163	3390923	51.16044	ppb		98
51)	2,6-DNT	8.25	165	729759	50.33121	ppb	#	65
52)	Acenaphthylene	8.31	152	4162756	50.44542	ppb		99
53)	3-Nitroaniline	8.44	138	720246	53.20650	ppb		93
54)	Acenaphthene	8.52	154	2757519	50.25560	ppb		99
55)	2,4-Dinitrophenol	8.57	184	276555	38.91683	ppb		90
56)	4-Nitrophenol	8.66	65	628519	47.05521	ppb		90
57)	Dibenzofuran	8.72	168	4103530	50.25269	ppb		92
58)	2,4-DNT	8.71	165	1039556	49.90133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	774684	46.15909	ppb		93
60)	Diethyl phthalate	9.01	149	3378496	49.87084	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1917773	51.24493	ppb		96
62)	Fluorene	9.12	166	3578838	52.06515	ppb		100
63)	4-Nitroaniline	9.16	138	740629	50.29902	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	606978	45.42608	ppb		97
67)	Diphenyl amine	9.27	169	5368202	102.44406	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5368202	102.44406	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3439953	51.78803	ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	1057645	49.83439	ppb	#	84
71)	Hexachlorobenzene	9.75	284	1068870	49.05094	ppb	#	82
72)	Atrazine	9.89	200	455920	24.71478	ppb		94
73)	Pentachlorophenol	9.99	266	691369	47.89642	ppb		98
74)	Phenanthrene	10.24	178	4955670	51.34732	ppb		100
75)	Anthracene	10.29	178	5232849	51.97712	ppb		99
76)	Carbazol	10.49	167	4540661	50.93377	ppb		96
77)	Di-n-butylphthalate	10.91	149	5838223	53.38008	ppb		98
78)	Fluoranthene	11.62	202	5745675	51.01696	ppb		99
80)	Benzidine	11.79	184	1396925	50.62677	ppb		98
81)	Pyrene	11.88	202	6127980	52.97578	ppb		99
83)	Butyl benzylphthalate	12.66	149	2690764	54.26218	ppb		85
84)	3,3'-Dichlorobenzidine	13.26	252	2189624	56.94079	ppb		100
85)	Benz (a) anthracene	13.28	228	6119145	51.61903	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4015164	56.28307	ppb	#	95
87)	Chrysene	13.32	228	6202258	55.55336	ppb		100
88)	Di-n-octylphthalate	14.05	149	6344526	54.24926	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5902044	57.03771	ppb		99
91)	Benzo (k) fluoranthene	14.53	252	5012644	50.19678	ppb		98
92)	Benzo (a) pyrene	14.91	252	5095190	52.74778	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5509560	49.49468	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	4794965	49.21957	ppb		98
95)	Benzo (g,h,i) perylene	17.12	276	4620679	48.55093	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

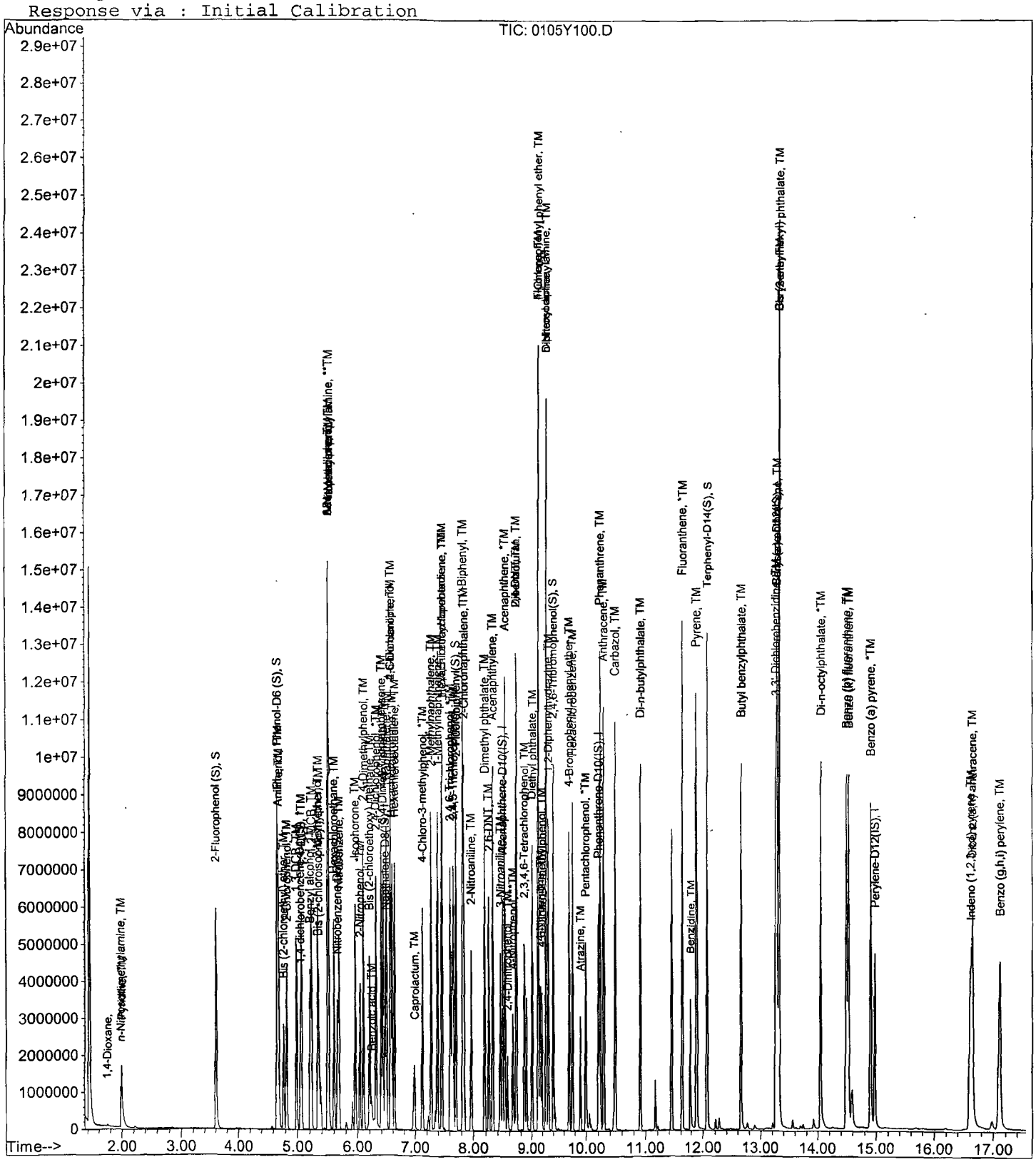
Data File : M:\YODA\DATA\Y210105\0105Y100.D
Acq On : 25 Jan 21 12:38
Sample : 50ug/mL 8270 01/05/21 (1)
Misc :

Vial: 100
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 25 12:38 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2514	21		
3	TM	n-Nitrosodimethylamine	0.6105	0.5552	9.1	TM	
4	TM	Pyridine	1.336	1.243	7.0	TM	
5	S	2-Fluorophenol (S)	1.601	1.666	4.1	S	
6	S	Phenol-D6 (S)	2.046	2.251	10.0	S	
7	*TM	Phenol	2.418	2.713	12	*TM	
8	TM	Aniline	1.766	1.951	11	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.138	10	TM	
10	TM	2-Chlorophenol	1.829	1.954	6.8	TM	
11	TM	1,3-DCB	2.107	2.042	3.0	TM	
12	*TM	1,4-DCB	2.122	2.091	1.5	*TM	
13	TM	Benzyl alcohol	1.073	1.165	8.6	TM	
14	TM	1,2-DCB	1.992	2.018	1.3	TM	
15	TM	2-Methylphenol	1.401	1.509	7.7	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.120	15	TM	
17	TM	Acetophenone	2.563	2.815	9.8	TM	
18	TM	3&4-Methylphenol	1.892	2.088	10	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.731	16	**TM	
20	TM	Hexachloroethane	0.8684	0.8775	1.0	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6014	2.0	S	
23	TM	Nitrobenzene	0.6068	0.6264	3.2	TM	
24	TM	Isophorone	0.9746	0.9984	2.4	TM	
25	*TM	2-Nitrophenol	0.2562	0.2652	3.5	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4293	1.3	TM	
27	TML	Benzoic acid	0.3484	0.4027	16	TML	4.7
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5612	1.8	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4359	0.61	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4927	3.6	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6712	0.74	TM	
32	TM	Naphthalene	1.384	1.377	0.52	TM	
33	TM	4-Chloroaniline	0.5189	0.5718	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4359	2.2	TM	
35	TM	Hexachloropropene	0.4576	0.4382	4.2	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3495	3.4	*TM	
37	TM	Caprolactum	0.1396	0.1451	3.9	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4678	2.0	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9299	2.2	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9558	1.9	TM	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5836	2.5	**TML	5.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8826	2.0	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5658	1.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6136	0.27	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.837	2.0	S	
47	TM	1,1'-Biphenyl	2.012	2.076	3.2	TM	
48	TM	2-Chloronaphthalene	1.564	1.609	2.8	TM	
49	TM	2-Nitroaniline	0.4979	0.5253	5.5	TM	
50	TM	Dimethyl phthalate	1.914	1.967	2.8	TM	
51	TM	2,6-DNT	0.4186	0.4369	4.4	TM	
52	TM	Acenaphthylene	2.382	2.425	1.8	TM	
53	TM	3-Nitroaniline	0.3908	0.4202	7.5	TM	
54	*TM	Acenaphthene	1.584	1.599	0.96	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2223	0.38	**TML	2.5
56	**TM	4-Nitrophenol	0.3856	0.3999	3.7	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6278	4.4	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4700	3.0	TM	
60	TM	Diethyl phthalate	1.956	1.964	0.40	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.118	3.4	TM	
62	TM	Fluorene	1.985	2.070	4.3	TM	
63	TM	4-Nitroaniline	0.4251	0.4492	5.7	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2900	3.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1889	1.5	TM	
67	TM	Diphenyl amine	0.7523	0.7904	5.1	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7904	5.1	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9735	2.1	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2950	3.2	TM	
71	TM	Hexachlorobenzene	0.3129	0.3078	1.6	TM	
72	TM	Atrazine	0.2649	0.2565	3.2	TM	
73	*TM	Pentachlorophenol	0.2072	0.1967	5.1	*TM	
74	TM	Phenanthrene	1.386	1.418	2.3	TM	
75	TM	Anthracene	1.445	1.453	0.50	TM	
76	TM	Carbazol	1.280	1.292	0.92	TM	
77	TM	Di-n-butylphthalate	1.570	1.640	4.4	TM	
78	*TM	Fluoranthene	1.617	1.625	0.50	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.4060	2.1	TM	
		Average			2.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.760	5.5	TM	
82	S	Terphenyl-D14(S)	1.201	1.243	3.5	S	
83	TM	Butyl benzylphthalate	0.7149	0.7718	8.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6257	13	TM	
85	TM	Benz (a) anthracene	1.709	1.758	2.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.181	15	TM	
87	TM	Chrysene	1.610	1.742	8.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.838	9.0	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.642	4.5	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.666	9.9	TM	
92	*TM	Benzo (a) pyrene	1.467	1.555	6.0	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.670	1.2	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.478	0.06	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	565875	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2319312	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1466187	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3029918	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2959437	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.97	264	2751561	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2357181	104.10644	ppb	0.00
Spiked Amount 200.000			Recovery = 52.053%			
6) Phenol-D6 (S)	4.67	99	3184619	109.99973	ppb	0.00
Spiked Amount 200.000			Recovery = 55.000%			
22) Nitrobenzene-D5(S)	5.66	82	1743523	50.98234	ppb	0.00
Spiked Amount 100.000			Recovery = 50.982%			
46) 2-Fluorobiphenyl(S)	7.71	172	3367365	48.99865	ppb	0.00
Spiked Amount 100.000			Recovery = 48.999%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1062904	96.16852	ppb	0.00
Spiked Amount 200.000			Recovery = 48.085%			
82) Terphenyl-D14(S)	12.07	244	4598336	51.76727	ppb	0.00
Spiked Amount 100.000			Recovery = 51.767%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.74	58	17786	3.93918		80
3) n-Nitrosodimethylamine	1.97	42	392741	45.47301	ppb	77
4) Pyridine	1.99	79	879245	46.52034	ppb	92
7) Phenol	4.68	94	1919316	56.11463	ppb	86
8) Aniline	4.69	93	1380352	55.25281	ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	804929	55.14434	ppb	94
10) 2-Chlorophenol	4.82	128	1381800	53.39782	ppb	100
11) 1,3-DCB	4.98	146	1444690	48.47873	ppb	99
12) 1,4-DCB	5.07	146	1478994	49.26946	ppb	99
13) Benzyl alcohol	5.20	108	824248	54.32235	ppb	93
14) 1,2-DCB	5.23	146	1427364	50.65346	ppb	99
15) 2-Methylphenol	5.33	107	1067037	53.85397	ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	792570	57.45652	ppb	95
17) Acetophenone	5.50	105	1991147	54.92267	ppb	93
18) 3&4-Methylphenol	5.51	107	2953267	110.35377	ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	1224298	57.87566	ppb	99
20) Hexachloroethane	5.60	117	620701	50.52328	ppb	94
23) Nitrobenzene	5.69	77	1816036	51.61570	ppb	94
24) Isophorone	5.96	82	2894471	51.22242	ppb	95
25) 2-Nitrophenol	6.04	139	768818	51.76334	ppb	84
26) 2,4-Dimethylphenol	6.10	122	1244679	50.66881	ppb	99
27) Benzoic acid	6.24	105	1167506	52.35840	ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	1627047	50.91647	ppb	99
29) 2,4-Dichlorophenol	6.31	162	1263635	49.69658	ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1428366	48.19580	ppb	98
31) 3,4-Dimethylphenol	6.43	107	1946015	49.63007	ppb	98
32) Naphthalene	6.49	128	3990737	49.74051	ppb	100
33) 4-Chloroaniline	6.56	127	1657731	55.09981	ppb	93
34) 2,6-Dichlorophenol	6.57	162	1263732	51.10291	ppb	93
35) Hexachloropropene	6.59	213	1270430	47.87810	ppb	99
36) Hexachlorobutadiene	6.63	225	1013152	48.31895	ppb	98
37) Caprolactum	6.99	55	420722	51.96880	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

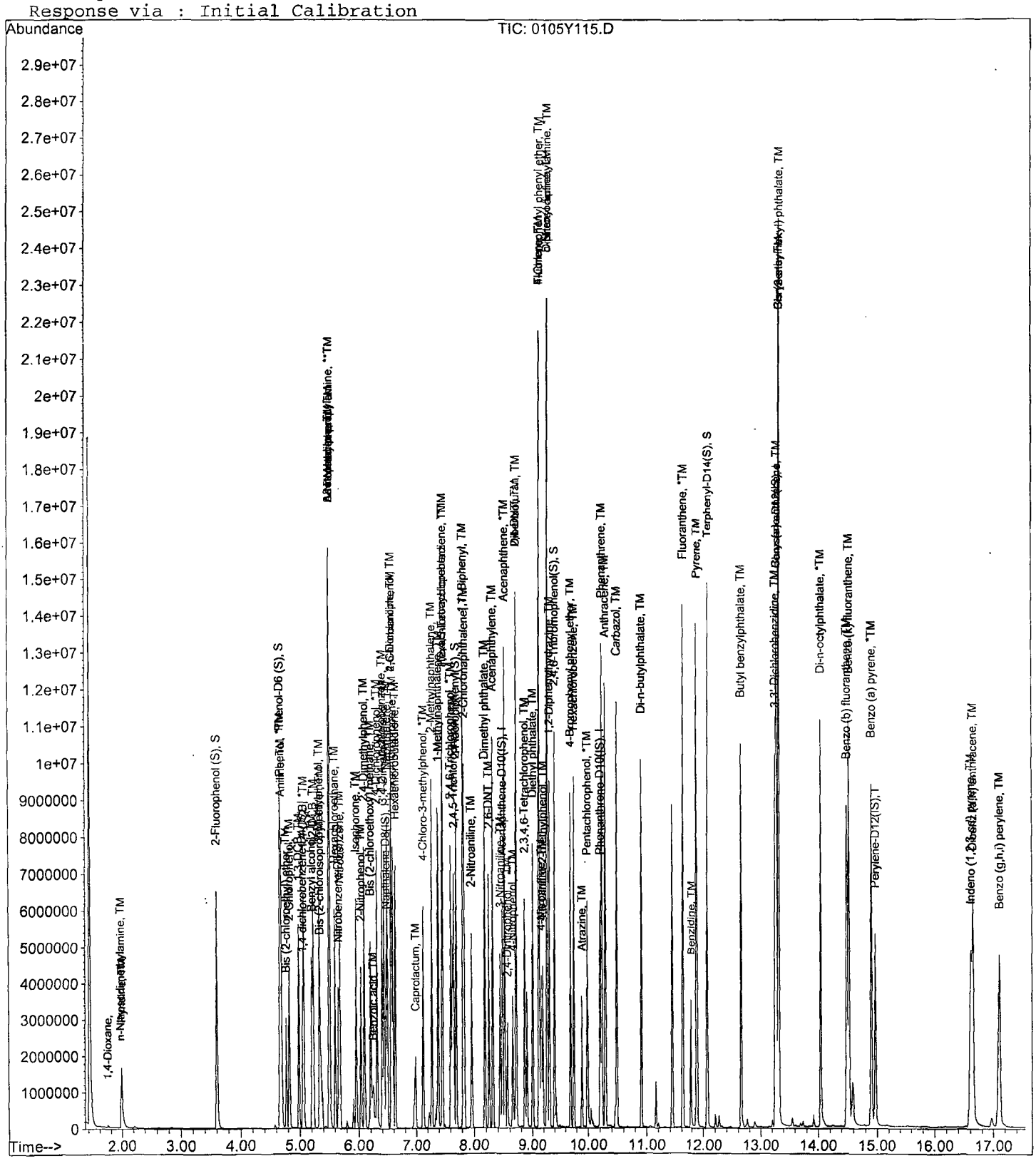
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1356213	51.01424	ppb		93
39)	2-Methylnaphthalene	7.27	142	2695888	51.11649	ppb		98
40)	1-Methylnaphthalene	7.40	142	2770924	50.96059	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1069568	47.26961	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1617520	49.02007	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	1036955	50.50650	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1124538	50.13547	ppb		93
47)	1,1'-Biphenyl	7.82	154	3804968	51.59741	ppb		99
48)	2-Chloronaphthalene	7.84	162	2948560	51.41791	ppb		98
49)	2-Nitroaniline	7.96	65	962801	52.75744	ppb		86
50)	Dimethyl phthalate	8.18	163	3605631	51.40411	ppb		98
51)	2,6-DNT	8.25	165	800748	52.18600	ppb	#	75
52)	Acenaphthylene	8.31	152	4443485	50.88207	ppb		100
53)	3-Nitroaniline	8.44	138	770025	53.75129	ppb		90
54)	Acenaphthene	8.52	154	2931123	50.47777	ppb		99
55)	2,4-Dinitrophenol	8.57	184	407373	48.74129	ppb		88
56)	4-Nitrophenol	8.66	65	732829	51.84324	ppb		94
57)	Dibenzofuran	8.72	168	4408186	51.01076	ppb		91
58)	2,4-DNT	8.71	165	1150680	52.19382	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.87	232	861302	48.49404	ppb		91
60)	Diethyl phthalate	9.01	149	3599071	50.20118	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2048253	51.71750	ppb		96
62)	Fluorene	9.12	166	3793658	52.15110	ppb		99
63)	4-Nitroaniline	9.16	138	823273	52.83271	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	715429	49.23259	ppb	#	58
67)	Diphenyl amine	9.27	169	5986980	105.05568	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5986980	105.05568	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3686983	51.03896	ppb		94
70)	4-Bromophenyl phenyl ether	9.69	248	1117128	48.40007	ppb		90
71)	Hexachlorobenzene	9.75	284	1165833	49.19405	ppb	#	86
72)	Atrazine	9.89	200	485688	24.20914	ppb		95
73)	Pentachlorophenol	9.99	266	745061	47.46121	ppb		99
74)	Phenanthrene	10.24	178	5370053	51.16203	ppb		99
75)	Anthracene	10.29	178	5501731	50.24897	ppb		99
76)	Carbazol	10.49	167	4892232	50.46004	ppb		97
77)	Di-n-butylphthalate	10.90	149	6211786	52.22385	ppb		100
78)	Fluoranthene	11.62	202	6154749	50.25019	ppb		98
80)	Benzidine	11.79	184	1501770	51.02568	ppb		98
81)	Pyrene	11.88	202	6508989	52.75357	ppb		99
83)	Butyl benzylphthalate	12.65	149	2854964	53.97598	ppb		91
84)	3,3'-Dichlorobenzidine	13.25	252	2314715	56.43256	ppb	#	98
85)	Benz (a) anthracene	13.28	228	6504240	51.43917	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4368690	57.41217	ppb	#	93
87)	Chrysene	13.32	228	6444804	54.11884	ppb		100
88)	Di-n-octylphthalate	14.04	149	6799817	54.50924	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5648925	52.26327	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5731800	54.95044	ppb		99
92)	Benzo (a) pyrene	14.91	252	5349714	53.02070	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5745048	49.40904	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5084924	49.96984	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4825721	48.54283	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y110.D Vial: 10
Acq On : 25 Jan 21 19:03 Operator: MA
Sample : BA25526W17 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:05 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	445890	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1729403	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1098445	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2261031	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2064453	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1941547	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	3087434	173.05140 ppb	0.00
Spiked Amount 200.000			Recovery =	86.525%	
6) Phenol-D6 (S)	4.67	99	4109439	180.13970 ppb	0.00
Spiked Amount 200.000			Recovery =	90.070%	
22) Nitrobenzene-D5(S)	5.66	82	2293593	89.94384 ppb	0.00
Spiked Amount 100.000			Recovery =	89.944%	
46) 2-Fluorobiphenyl(S)	7.70	172	4288716	83.29755 ppb	0.00
Spiked Amount 100.000			Recovery =	83.298%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1491051	180.07044 ppb	0.00
Spiked Amount 200.000			Recovery =	90.035%	
82) Terphenyl-D14(S)	12.08	244	6610553	106.68331 ppb	0.00
Spiked Amount 100.000			Recovery =	106.683%	

Target Compounds Qvalue

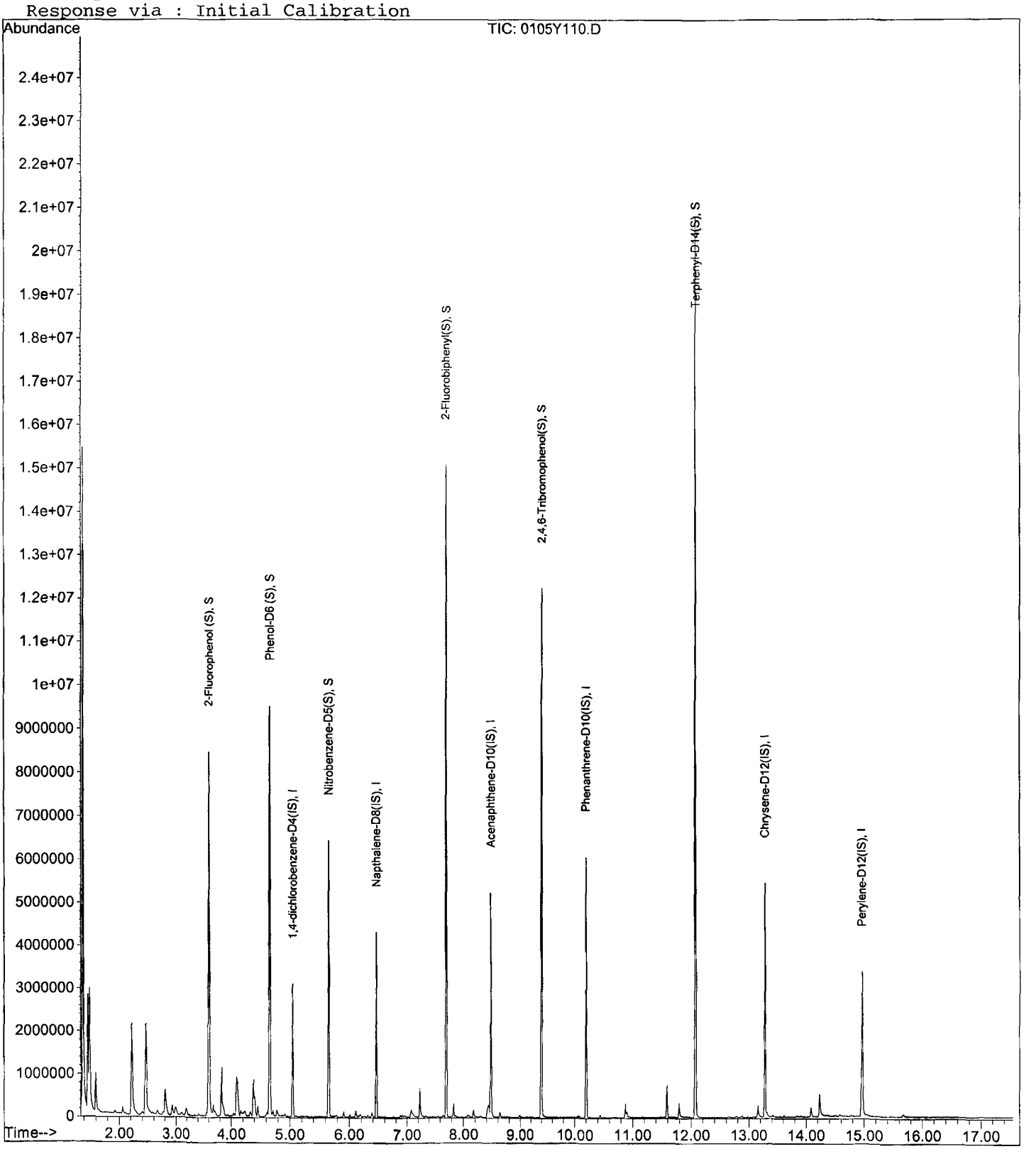
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y110.D Vial: 10
Acq On : 25 Jan 21 19:03 Operator: MA
Sample : BA25526W17 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:05 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	425738	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1634419	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1005652	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2061374	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1858844	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1771379	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1777337	130.41950 ppb	0.00
Spiked Amount 250.000			Recovery = 52.168%		
6) Phenol-D6 (S)	4.66	99	2340174	134.29826 ppb	0.00
Spiked Amount 250.000			Recovery = 53.719%		
22) Nitrobenzene-D5(S)	5.65	82	1324847	68.71691 ppb	0.00
Spiked Amount 125.000			Recovery = 54.974%		
46) 2-Fluorobiphenyl(S)	7.70	172	2379678	63.10500 ppb	0.00
Spiked Amount 125.000			Recovery = 50.484%		
64) 2,4,6-Tribromophenol(S)	9.39	330	736575	121.45279 ppb	0.00
Spiked Amount 250.000			Recovery = 48.581%		
82) Terphenyl-D14(S)	12.08	244	3846067	86.16831 ppb	0.00
Spiked Amount 125.000			Recovery = 68.934%		

Target Compounds Qvalue

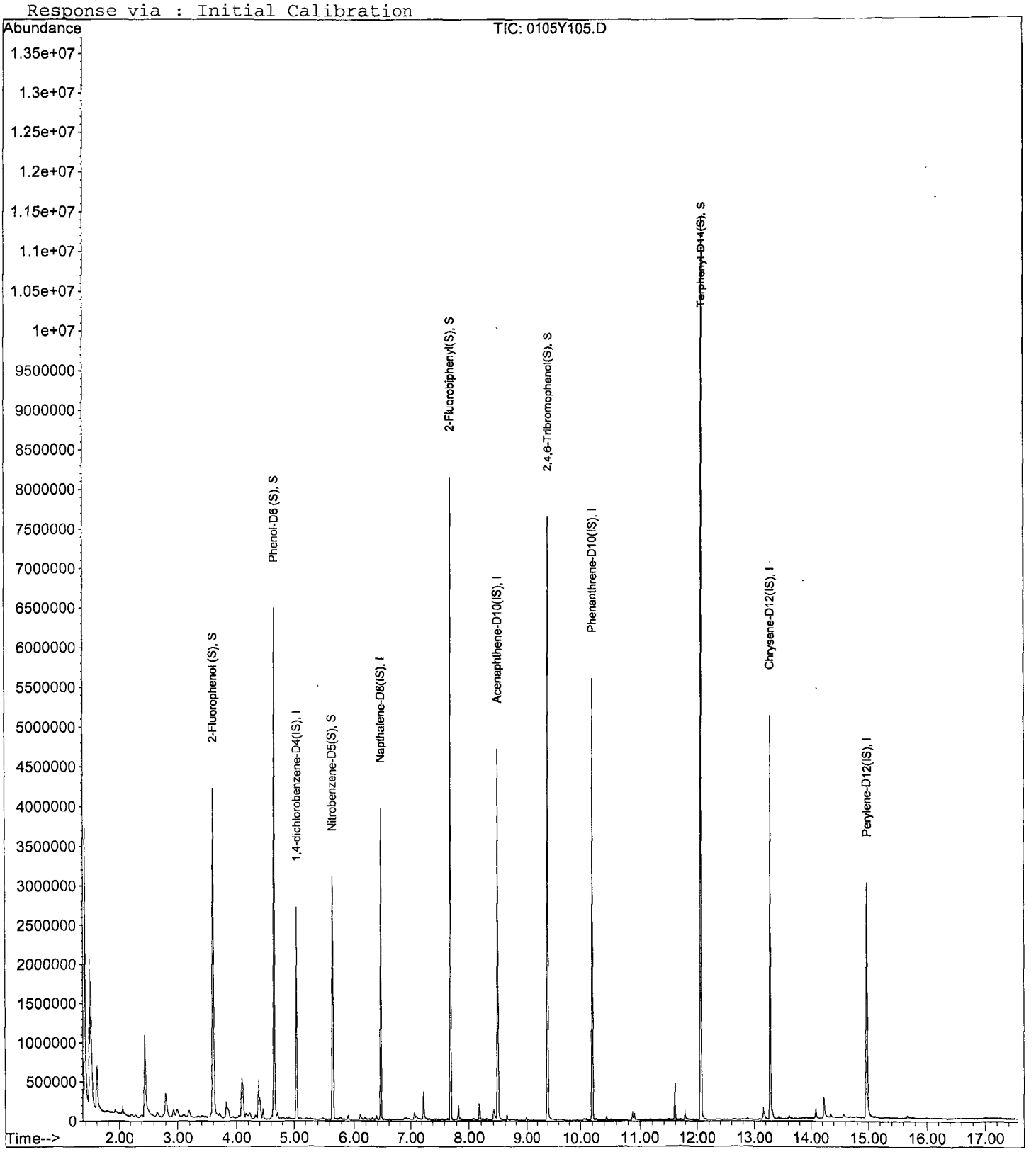
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	400800	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1600610	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	971879	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2027584	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1902852	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1802107	40.00000	ppb		0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	2913375	227.08259	ppb		0.00
Spiked Amount 250.000			Recovery = 90.833%				
6) Phenol-D6 (S)	4.67	99	3789371	230.99578	ppb		0.00
Spiked Amount 250.000			Recovery = 92.398%				
22) Nitrobenzene-D5(S)	5.66	82	2186247	115.79105	ppb		0.00
Spiked Amount 125.000			Recovery = 92.633%				
46) 2-Fluorobiphenyl(S)	7.71	172	4033199	110.67021	ppb		0.00
Spiked Amount 125.000			Recovery = 88.536%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1413508	241.17058	ppb		0.00
Spiked Amount 250.000			Recovery = 96.468%				
82) Terphenyl-D14(S)	12.08	244	6418869	140.48411	ppb		0.00
Spiked Amount 125.000			Recovery = 112.387%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	9641	3.76836		#	49
3) n-Nitrosodimethylamine	1.98	42	245236	50.11116	ppb		74
4) Pyridine	2.00	79	491006	45.84823	ppb		89
7) Phenol	4.68	94	1112494	57.40240	ppb		88
8) Aniline	4.69	93	797376	56.32880	ppb	#	60
9) Bis (2-chloroethyl) ether	4.77	63	523218	63.25995	ppb		98
10) 2-Chlorophenol	4.82	128	839432	57.24884	ppb		91
11) 1,3-DCB	4.98	146	829253	49.10960	ppb		98
12) 1,4-DCB	5.07	146	870236	51.16244	ppb		98
13) Benzyl alcohol	5.21	108	511672	59.51345	ppb		98
14) 1,2-DCB	5.23	146	825556	51.70395	ppb		96
15) 2-Methylphenol	5.34	107	656220	58.45081	ppb		99
16) Bis (2-chloroisopropyl) et	5.36	45	513339	65.67632	ppb		96
17) Acetophenone	5.50	105	1210671	58.93554	ppb		97
18) 3&4-Methylphenol	5.50	107	1753767	115.65361	ppb		96
19) n-Nitrosodi-n-propylamine	5.50	70	735717	61.37937	ppb		95
20) Hexachloroethane	5.61	117	317233	45.57118	ppb		86
23) Nitrobenzene	5.68	77	1110166	57.15168	ppb		98
24) Isophorone	5.95	82	1760498	56.43001	ppb		95
25) 2-Nitrophenol	6.03	139	451445	55.05380	ppb		93
26) 2,4-Dimethylphenol	6.09	122	690061	50.88086	ppb		95
27) Benzoic acid	6.22	105	634560	53.41547	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1026931	58.20806	ppb		99
29) 2,4-Dichlorophenol	6.31	162	758478	54.02957	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	780197	47.68235	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1180807	54.54579	ppb		95
32) Naphthalene	6.49	128	2447945	55.26402	ppb		99
33) 4-Chloroaniline	6.55	127	633425	38.13422	ppb		95
34) 2,6-Dichlorophenol	6.56	162	748224	54.80320	ppb		95
35) Hexachloropropene	6.58	213	322148	21.99000	ppb		99
36) Hexachlorobutadiene	6.63	225	447523	38.65823	ppb		98
37) Caprolactum	6.97	55	273017	61.08306	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	821428	55.96502	ppb		99
39)	2-Methylnaphthalene	7.28	142	1592622	54.69600	ppb		100
40)	1-Methylnaphthalene	7.39	142	1578731	52.58982	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	195904	21.39217	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	876192	50.07382	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	614426	56.43443	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	647219	54.41384	ppb		95
47)	1,1'-Biphenyl	7.82	154	2172479	55.55455	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	1702963	56.00113	ppb		96
49)	2-Nitroaniline	7.96	65	580016	59.93415	ppb		78
50)	Dimethyl phthalate	8.18	163	2257065	60.68031	ppb		99
51)	2,6-DNT	8.24	165	486326	59.76856	ppb	#	68
52)	Acenaphthylene	8.31	152	2569259	55.47996	ppb		99
53)	3-Nitroaniline	8.44	138	377668	49.71431	ppb		89
54)	Acenaphthene	8.51	154	1703669	55.32718	ppb		99
55)	2,4-Dinitrophenol	8.56	184	203896	50.24428	ppb		94
56)	4-Nitrophenol	8.65	65	433033	57.76938	ppb		86
57)	Dibenzofuran	8.72	168	2554036	55.73347	ppb		95
58)	2,4-DNT	8.71	165	691192	59.12217	ppb		93
59)	2,3,4,6-Tetrachlorophenol	8.87	232	537426	57.06092	ppb		96
60)	Diethyl phthalate	9.00	149	2258845	59.41514	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.13	204	1210780	57.65093	ppb		93
62)	Fluorene	9.12	166	2201854	57.07961	ppb		100
63)	4-Nitroaniline	9.15	138	465962	56.38930	ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	339890	43.69046	ppb	#	64
67)	Diphenyl amine	9.26	169	3297054	108.06867	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3297054	108.06867	ppb		100
69)	1,2-Diphenylhydrazine	9.30	77	2242370	57.98291	ppb		89
70)	4-Bromophenyl phenyl ether	9.69	248	674732	54.60550	ppb		92
71)	Hexachlorobenzene	9.75	284	681749	53.73569	ppb	#	72
72)	Atrazine	9.90	200	335142	31.20419	ppb		98
73)	Pentachlorophenol	9.99	266	429091	51.05737	ppb		99
74)	Phenanthrene	10.23	178	3205663	57.04914	ppb		99
75)	Anthracene	10.30	178	3275781	55.88621	ppb		99
76)	Carbazol	10.48	167	2905206	55.97312	ppb		95
77)	Di-n-butylphthalate	10.91	149	3888527	61.06601	ppb		99
78)	Fluoranthene	11.61	202	3674770	56.04277	ppb		99
80)	Benzidine	11.78	184	416073	27.48331	ppb		98
81)	Pyrene	11.88	202	3878509	61.11069	ppb		99
83)	Butyl benzylphthalate	12.65	149	1776298	65.28747	ppb		98
84)	3,3'-Dichlorobenzidine	13.26	252	518589	24.57931	ppb		100
85)	Benz (a) anthracene	13.28	228	3619114	55.64341	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2630986	67.21797	ppb		98
87)	Chrysene	13.31	228	3728418	60.86638	ppb		99
88)	Di-n-octylphthalate	14.05	149	4073866	63.48831	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3658811	64.60696	ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3175254	58.09880	ppb		98
92)	Benzo (a) pyrene	14.90	252	3008431	56.90671	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3260499	53.51868	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	2951436	55.35609	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2860270	54.91342	ppb		100

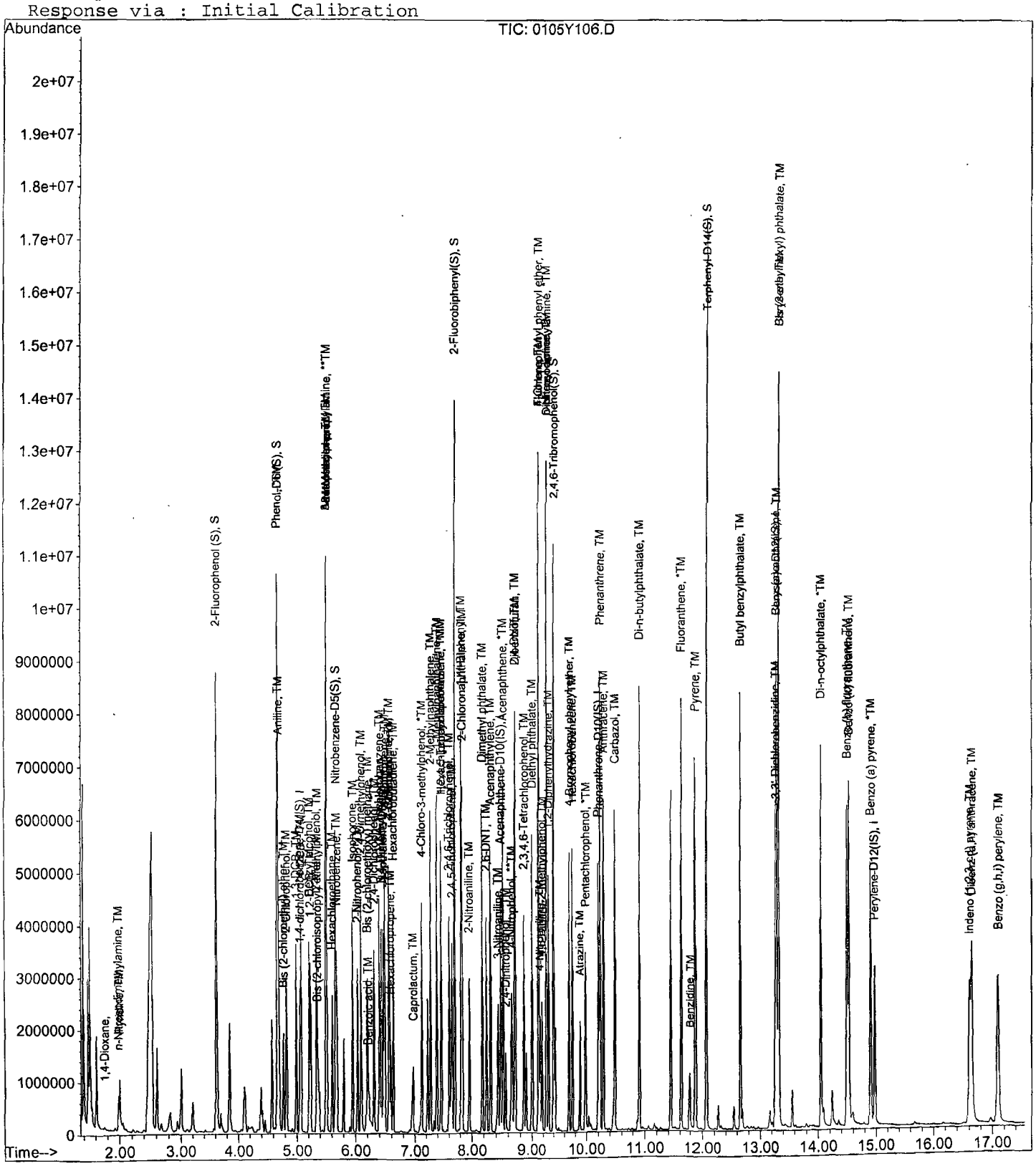
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415691	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1618590	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1011037	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2085277	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1967340	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1850483	40.00000	ppb		0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	3117152	185.55454	ppb		0.00
Spiked Amount 198.020			Recovery = 93.705%				
6) Phenol-D6 (S)	4.67	99	4118909	191.75437	ppb		0.00
Spiked Amount 198.020			Recovery = 96.836%				
22) Nitrobenzene-D5(S)	5.66	82	2310144	95.83685	ppb		0.00
Spiked Amount 99.010			Recovery = 96.795%				
46) 2-Fluorobiphenyl(S)	7.70	172	4329064	90.44598	ppb		0.00
Spiked Amount 99.010			Recovery = 91.350%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1467661	190.66282	ppb		0.00
Spiked Amount 198.020			Recovery = 96.285%				
82) Terphenyl-D14(S)	12.08	244	6657440	111.62734	ppb		0.00
Spiked Amount 99.010			Recovery = 112.743%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.74	58	13469	4.02061			95
3) n-Nitrosodimethylamine	1.98	42	289433	45.16733	ppb		79
4) Pyridine	1.99	79	562969	40.14638	ppb		91
7) Phenol	4.69	94	1237695	48.77218	ppb		84
8) Aniline	4.69	93	900864	48.60184	ppb	#	22
9) Bis (2-chloroethyl) ether	4.77	63	536255	49.51578	ppb		98
10) 2-Chlorophenol	4.83	128	896491	46.69316	ppb		99
11) 1,3-DCB	4.98	146	920166	41.61709	ppb		98
12) 1,4-DCB	5.07	146	947073	42.52299	ppb		99
13) Benzyl alcohol	5.21	108	529313	47.01778	ppb		96
14) 1,2-DCB	5.23	146	902572	43.17031	ppb		99
15) 2-Methylphenol	5.34	107	684387	46.55528	ppb		100
16) Bis (2-chloroisopropyl) et	5.36	45	534043	52.18034	ppb		96
17) Acetophenone	5.49	105	1255892	46.69062	ppb		97
18) 3&4-Methylphenol	5.51	107	1868514	94.10437	ppb		99
19) n-Nitrosodi-n-propylamine	5.50	70	759117	48.36670	ppb		96
20) Hexachloroethane	5.61	117	356947	39.15992	ppb		95
23) Nitrobenzene	5.68	77	1175051	47.38223	ppb		98
24) Isophorone	5.95	82	1859140	46.67716	ppb		94
25) 2-Nitrophenol	6.03	139	477481	45.60960	ppb		97
26) 2,4-Dimethylphenol	6.09	122	705535	40.74772	ppb		94
27) Benzoic acid	6.23	105	718801	46.55545	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1062218	47.15994	ppb		99
29) 2,4-Dichlorophenol	6.31	162	793857	44.29437	ppb		100
30) 1,2,4-Trichlorobenzene	6.40	180	869387	41.61829	ppb		99
31) 3,4-Dimethylphenol	6.43	107	1253596	45.35839	ppb		98
32) Naphthalene	6.49	128	2597406	45.93020	ppb		100
33) 4-Chloroaniline	6.55	127	788265	37.17146	ppb		98
34) 2,6-Dichlorophenol	6.56	162	798576	45.81506	ppb		98
35) Hexachloropropene	6.59	213	460314	24.61171	ppb		99
36) Hexachlorobutadiene	6.63	225	535319	36.22071	ppb		97
37) Caprolactum	6.97	55	289617	50.75431	ppb		95

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	865447	46.18547	ppb		99
39)	2-Methylnaphthalene	7.28	142	1711818	46.04878	ppb		99
40)	1-Methylnaphthalene	7.39	142	1679031	43.80967	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	138688	13.30214	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	983145	42.78024	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	653907	45.73037	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	700265	44.82649	ppb		95
47)	1,1'-Biphenyl	7.82	154	2305306	44.88558	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1815500	45.45713	ppb		95
49)	2-Nitroaniline	7.96	65	609177	47.92830	ppb		97
50)	Dimethyl phthalate	8.18	163	2376466	48.64627	ppb		99
51)	2,6-DNT	8.25	165	504453	47.20416	ppb		92
52)	Acenaphthylene	8.32	152	2746570	45.15783	ppb		99
53)	3-Nitroaniline	8.44	138	440185	44.11850	ppb		96
54)	Acenaphthene	8.52	154	1811406	44.79023	ppb		99
55)	2,4-Dinitrophenol	8.56	184	231667	42.20251	ppb		95
56)	4-Nitrophenol	8.65	65	463344	47.06461	ppb		82
57)	Dibenzofuran	8.72	168	2679739	44.52416	ppb		98
58)	2,4-DNT	8.71	165	728896	47.47133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.86	232	552960	44.70211	ppb		99
60)	Diethyl phthalate	9.00	149	2354828	47.16111	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1297346	47.03391	ppb		96
62)	Fluorene	9.11	166	2281407	45.03078	ppb		99
63)	4-Nitroaniline	9.15	138	491750	45.31112	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	384005	38.01625	ppb	#	93
67)	Diphenyl amine	9.26	169	3379898	85.32209	ppb		99
68)	n-Nitrosodiphenylamine	9.26	169	3379898	85.32209	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	2374607	47.28992	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	707751	44.11332	ppb		97
71)	Hexachlorobenzene	9.76	284	709344	43.06053	ppb		98
72)	Atrazine	9.89	200	337690	24.21511	ppb		98
73)	Pentachlorophenol	9.99	266	461261	42.27075	ppb		98
74)	Phenanthrene	10.23	178	3306370	45.31760	ppb		100
75)	Anthracene	10.29	178	3449964	45.33030	ppb		100
76)	Carbazol	10.49	167	3156982	46.84453	ppb		100
77)	Di-n-butylphthalate	10.91	149	4066600	49.18470	ppb		99
78)	Fluoranthene	11.61	202	3844403	45.15465	ppb		98
80)	Benzidine	11.78	184	429097	21.71449	ppb		97
81)	Pyrene	11.88	202	4094297	49.42269	ppb		100
83)	Butyl benzylphthalate	12.65	149	1833846	51.63825	ppb		99
84)	3,3'-Dichlorobenzidine	13.26	252	150124	5.45119	ppb	#	97
85)	Benz (a) anthracene	13.27	228	3776304	44.48085	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2635739	51.58981	ppb		99
87)	Chrysene	13.32	228	3922410	49.05695	ppb		99
88)	Di-n-octylphthalate	14.04	149	4303956	51.38655	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3759269	51.20440	ppb	#	99
91)	Benzo (k) fluoranthene	14.53	252	3402711	48.02621	ppb		98
92)	Benzo (a) pyrene	14.90	252	3082804	44.98149	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3389223	42.91271	ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	3082712	44.59945	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2990890	44.29314	ppb		100

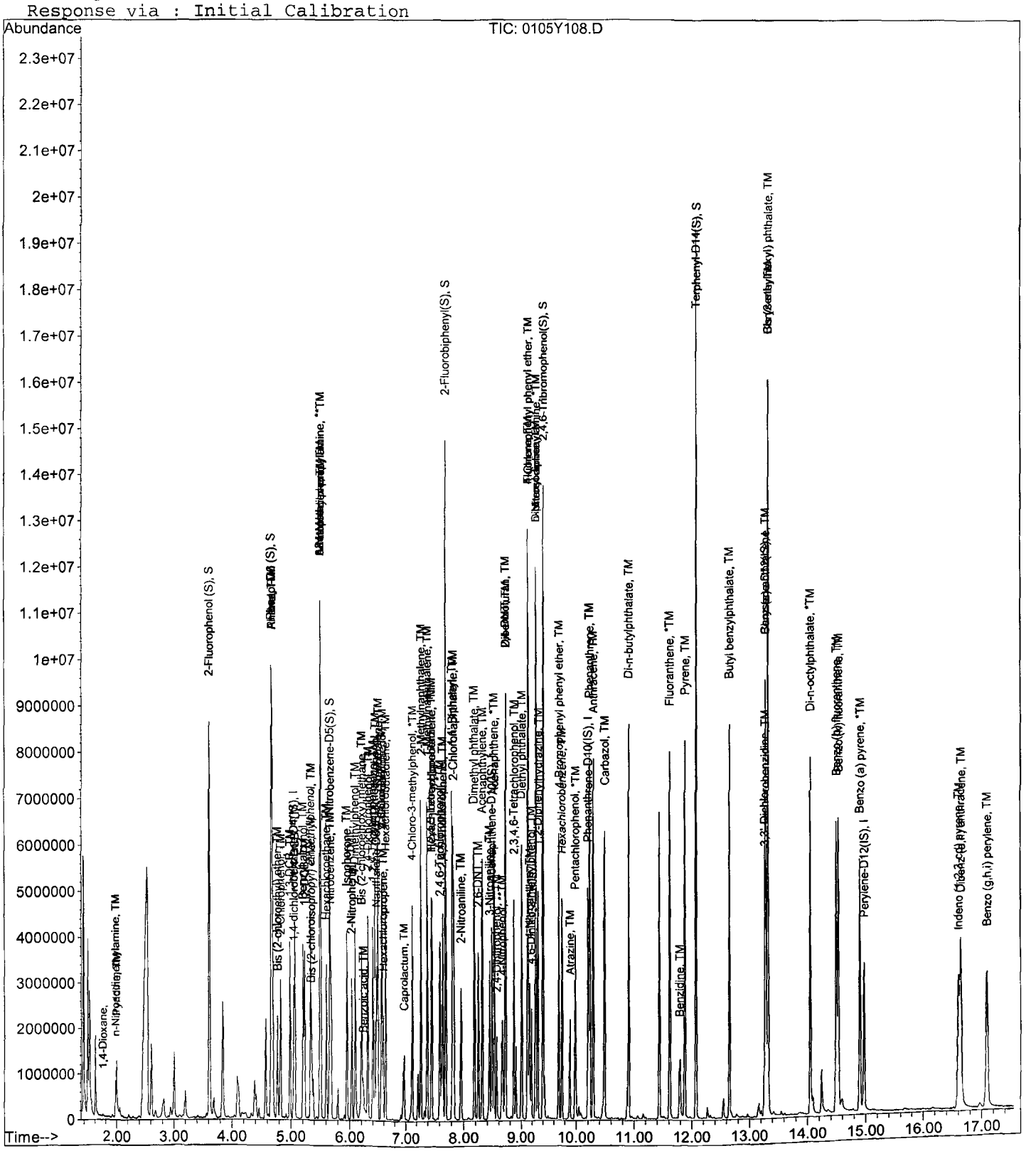
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y108.D Vial: 8
Acq On : 25 Jan 21 18:12 Operator: MA
Sample : BA25526W18 MS-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	412243	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1602246	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1013265	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2042923	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1952727	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1847694	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.62	112	3033782	182.10224	ppb		0.00
Spiked Amount 198.020			Recovery = 91.962%				
6) Phenol-D6 (S)	4.67	99	3967195	186.23613	ppb		0.00
Spiked Amount 198.020			Recovery = 94.049%				
22) Nitrobenzene-D5(S)	5.66	82	2207385	92.50799	ppb		0.00
Spiked Amount 99.010			Recovery = 93.433%				
46) 2-Fluorobiphenyl(S)	7.70	172	4202200	87.60240	ppb		0.00
Spiked Amount 99.010			Recovery = 88.478%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1390568	180.25050	ppb		0.00
Spiked Amount 198.020			Recovery = 91.027%				
82) Terphenyl-D14(S)	12.07	244	6475871	109.39548	ppb		0.00
Spiked Amount 99.010			Recovery = 110.489%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.74	58	12525	3.77009			87
3) n-Nitrosodimethylamine	1.97	42	293514	46.18729	ppb		89
4) Pyridine	1.99	79	612976	44.07809	ppb		93
7) Phenol	4.68	94	1225025	48.67667	ppb		88
8) Aniline	4.69	93	1001472	54.48157	ppb		95
9) Bis (2-chloroethyl) ether	4.77	63	517749	48.20686	ppb		98
10) 2-Chlorophenol	4.82	128	866247	45.49528	ppb		100
11) 1,3-DCB	4.98	146	887034	40.45415	ppb		99
12) 1,4-DCB	5.07	146	915977	41.47079	ppb		100
13) Benzyl alcohol	5.20	108	515032	46.13188	ppb		95
14) 1,2-DCB	5.23	146	855826	41.27681	ppb		98
15) 2-Methylphenol	5.33	107	665005	45.61518	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	514606	50.70174	ppb		94
17) Acetophenone	5.49	105	1232065	46.18790	ppb		96
18) 3&4-Methylphenol	5.51	107	1820572	92.45675	ppb		99
19) n-Nitrosodi-n-propylamine	5.50	70	744798	47.85128	ppb		98
20) Hexachloroethane	5.60	117	352526	38.99838	ppb		95
23) Nitrobenzene	5.69	77	1145358	46.65602	ppb		88
24) Isophorone	5.95	82	1781497	45.18404	ppb		92
25) 2-Nitrophenol	6.04	139	477409	46.06790	ppb	#	77
26) 2,4-Dimethylphenol	6.10	122	650181	37.93383	ppb		99
27) Benzoic acid	6.23	105	689644	45.33732	ppb		96
28) Bis (2-chloroethoxy) metha	6.20	93	1041054	46.69178	ppb		99
29) 2,4-Dichlorophenol	6.31	162	768617	43.32353	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	846812	40.95112	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1176222	42.99293	ppb		98
32) Naphthalene	6.49	128	2484936	44.38961	ppb		99
33) 4-Chloroaniline	6.55	127	928229	44.21811	ppb		100
34) 2,6-Dichlorophenol	6.56	162	754214	43.71136	ppb		98
35) Hexachloropropene	6.59	213	480014	25.92681	ppb		99
36) Hexachlorobutadiene	6.63	225	526984	36.02047	ppb		97
37) Caprolactum	6.97	55	263621	46.66986	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	831664	44.83534	ppb		96
39)	2-Methylnaphthalene	7.27	142	1638037	44.51352	ppb		99
40)	1-Methylnaphthalene	7.39	142	1625948	42.85737	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	187968	16.03571	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	943259	40.95440	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	640346	44.68353	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	681365	43.52073	ppb		99
47)	1,1'-Biphenyl	7.82	154	2263554	43.97574	ppb		100
48)	2-Chloronaphthalene	7.84	162	1772101	44.27293	ppb		99
49)	2-Nitroaniline	7.96	65	600998	47.18083	ppb		96
50)	Dimethyl phthalate	8.18	163	2292322	46.82066	ppb		100
51)	2,6-DNT	8.25	165	497964	46.49449	ppb		98
52)	Acenaphthylene	8.31	152	2652946	43.52260	ppb		100
53)	3-Nitroaniline	8.44	138	458883	45.89141	ppb		99
54)	Acenaphthene	8.52	154	1791528	44.20131	ppb		100
55)	2,4-Dinitrophenol	8.57	184	235560	42.61758	ppb	#	78
56)	4-Nitrophenol	8.65	65	451655	45.77641	ppb		81
57)	Dibenzofuran	8.71	168	2640602	43.77743	ppb		99
58)	2,4-DNT	8.71	165	707064	45.94821	ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	546614	44.09192	ppb		96
60)	Diethyl phthalate	9.00	149	2290102	45.76397	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	1250447	45.23396	ppb		99
62)	Fluorene	9.11	166	2223815	43.79750	ppb		100
63)	4-Nitroaniline	9.15	138	493838	45.40346	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	371812	37.57228	ppb		95
67)	Diphenyl amine	9.27	169	3260872	84.02401	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	3260872	84.02401	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	2298643	46.72617	ppb		98
70)	4-Bromophenyl phenyl ether	9.69	248	672134	42.76188	ppb		94
71)	Hexachlorobenzene	9.75	284	692692	42.92145	ppb		95
72)	Atrazine	9.89	200	333263	24.39310	ppb		97
73)	Pentachlorophenol	9.99	266	455805	42.63674	ppb		98
74)	Phenanthrene	10.24	178	3273215	45.79327	ppb		99
75)	Anthracene	10.29	178	3354366	44.98795	ppb		100
76)	Carbazol	10.49	167	3041133	46.06106	ppb		99
77)	Di-n-butylphthalate	10.90	149	3911578	48.29057	ppb		100
78)	Fluoranthene	11.62	202	3853503	46.19990	ppb	#	97
80)	Benzidine	11.79	184	680513	34.69513	ppb		98
81)	Pyrene	11.88	202	3991713	48.54497	ppb		99
83)	Butyl benzylphthalate	12.65	149	1792091	50.84012	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	726560	26.57972	ppb		98
85)	Benz (a) anthracene	13.27	228	3710155	44.02872	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	2631185	51.88607	ppb	#	93
87)	Chrysene	13.32	228	3828269	48.23784	ppb		99
88)	Di-n-octylphthalate	14.04	149	4162524	50.06985	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	3602070	49.13727	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	3408123	48.17520	ppb		99
92)	Benzo (a) pyrene	14.90	252	3053180	44.61649	ppb	#	97
93)	Indeno (1,2,3-cd) pyrene	16.60	276	3309169	41.96235	ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	3039795	44.04493	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2944491	43.67182	ppb		99

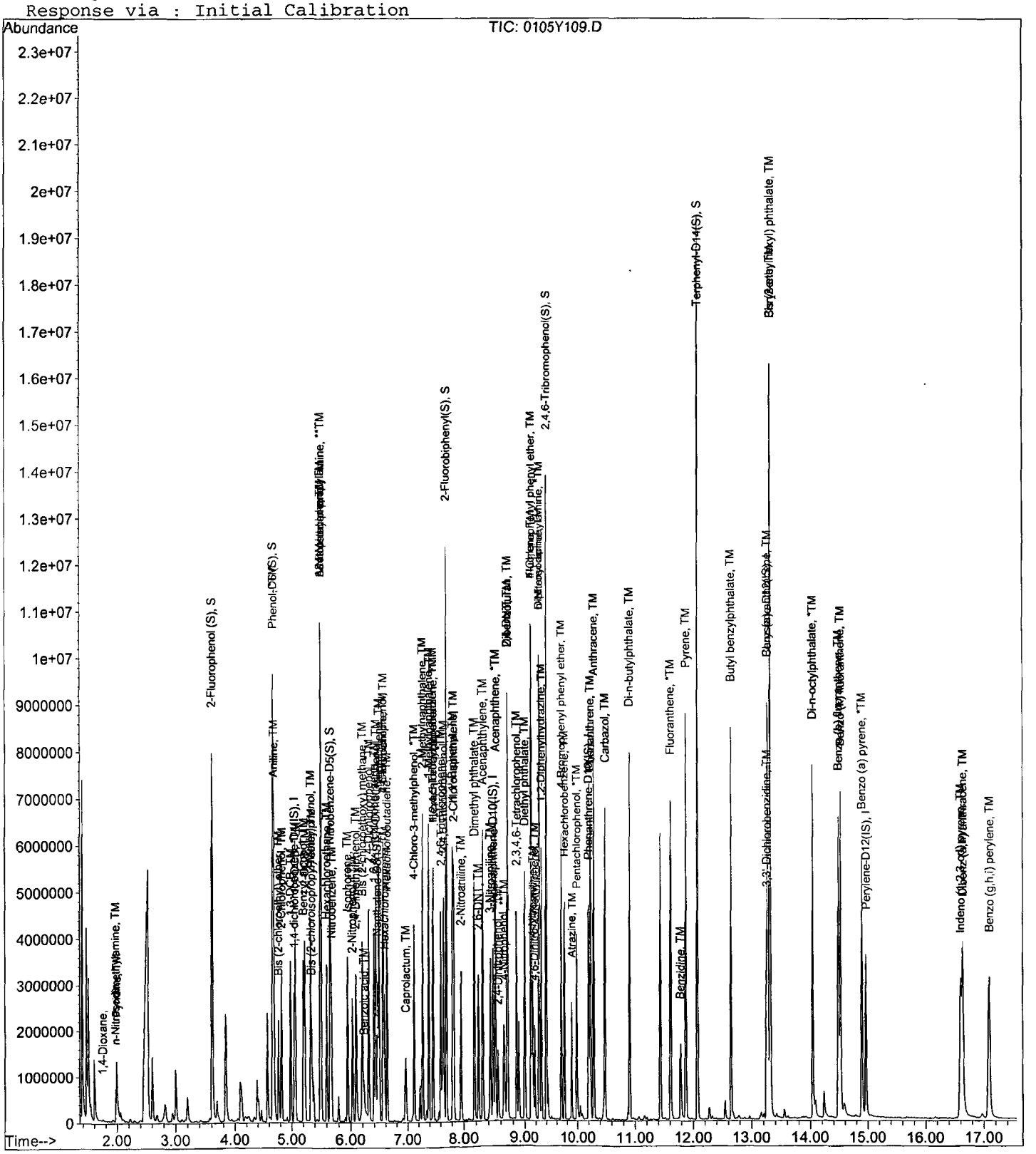
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y109.D Vial: 9
Acq On : 25 Jan 21 18:37 Operator: MA
Sample : BA25526W22 MSD-1 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

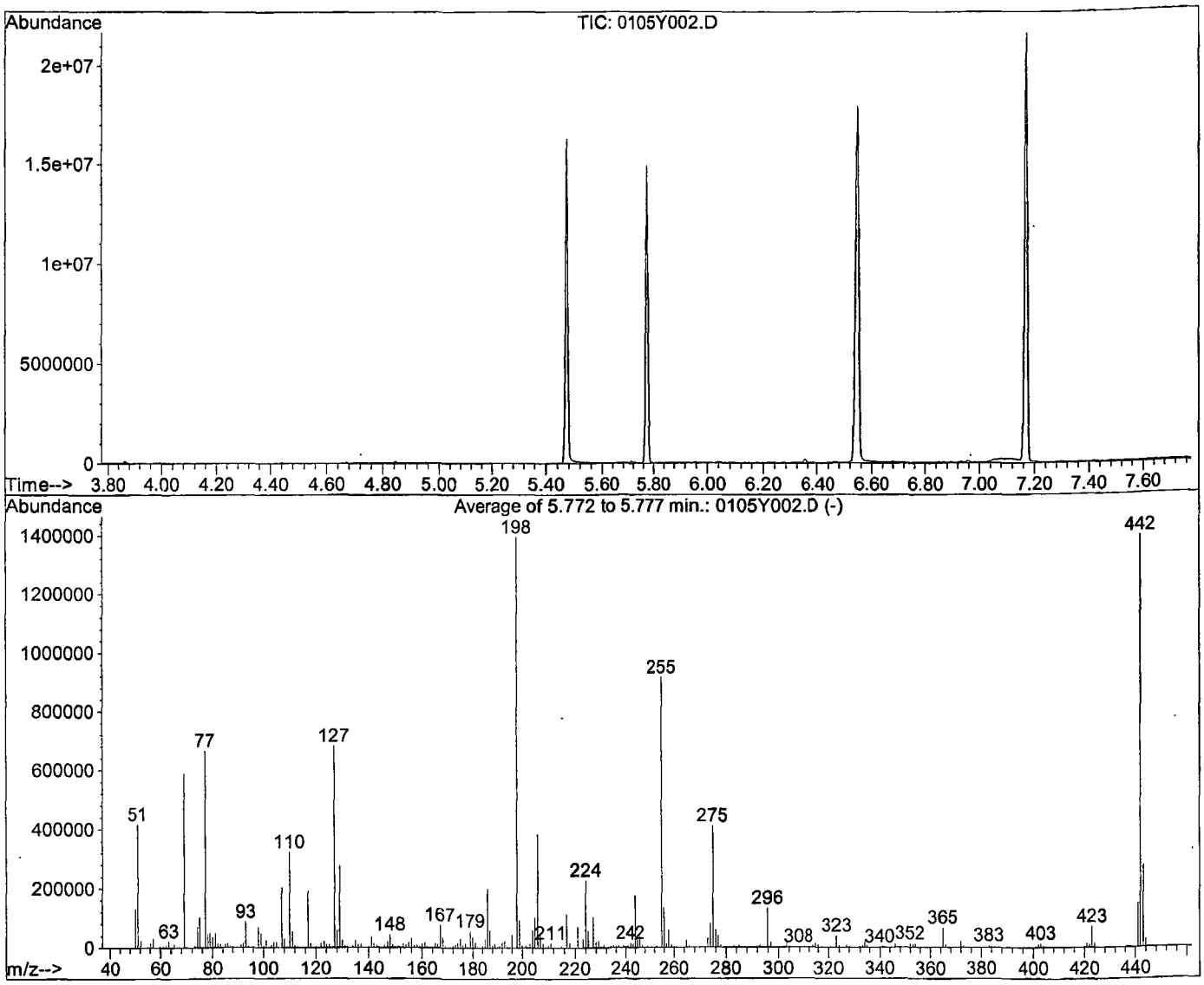
Quant Time: Jan 26 9:53 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

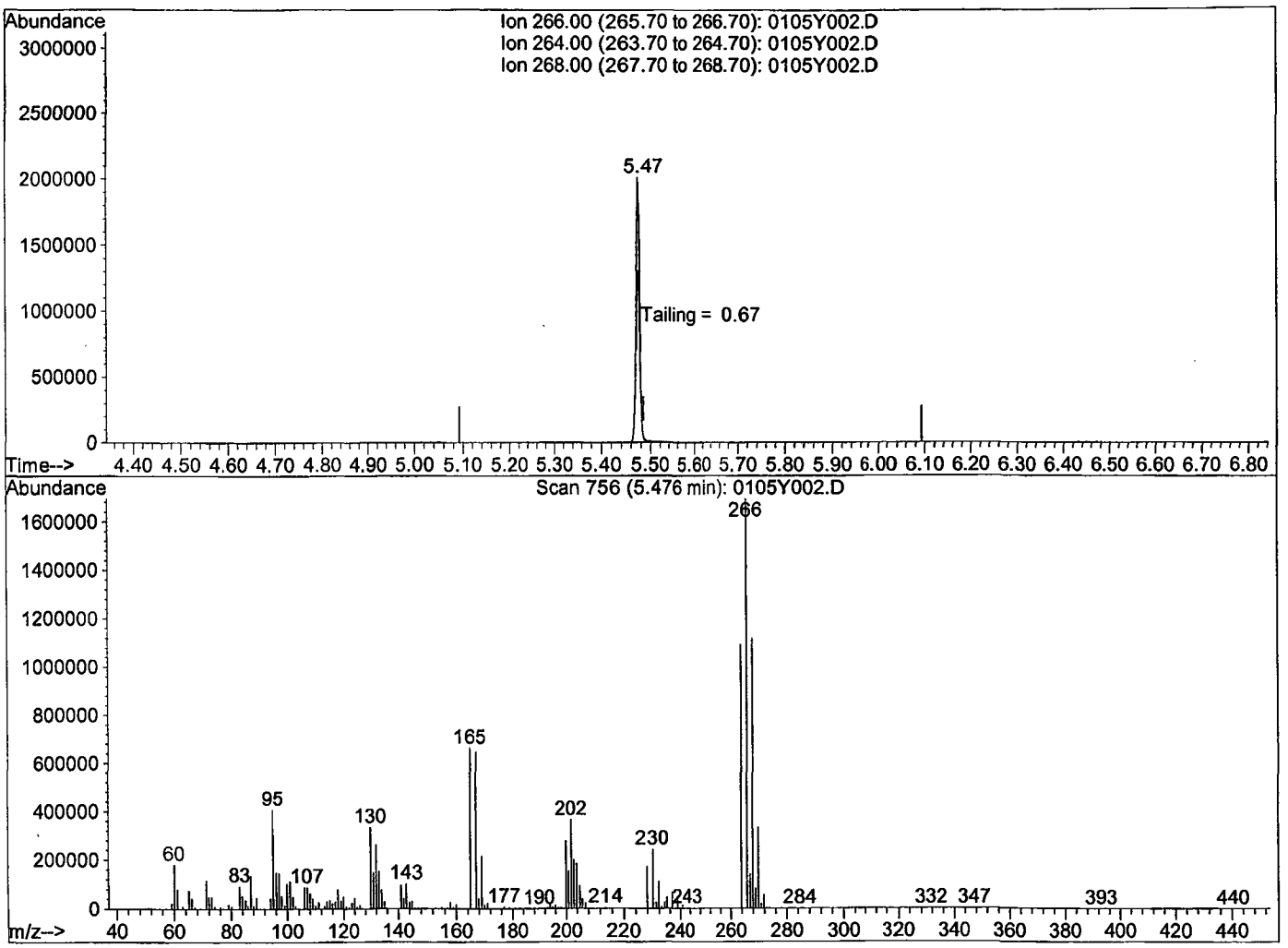
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

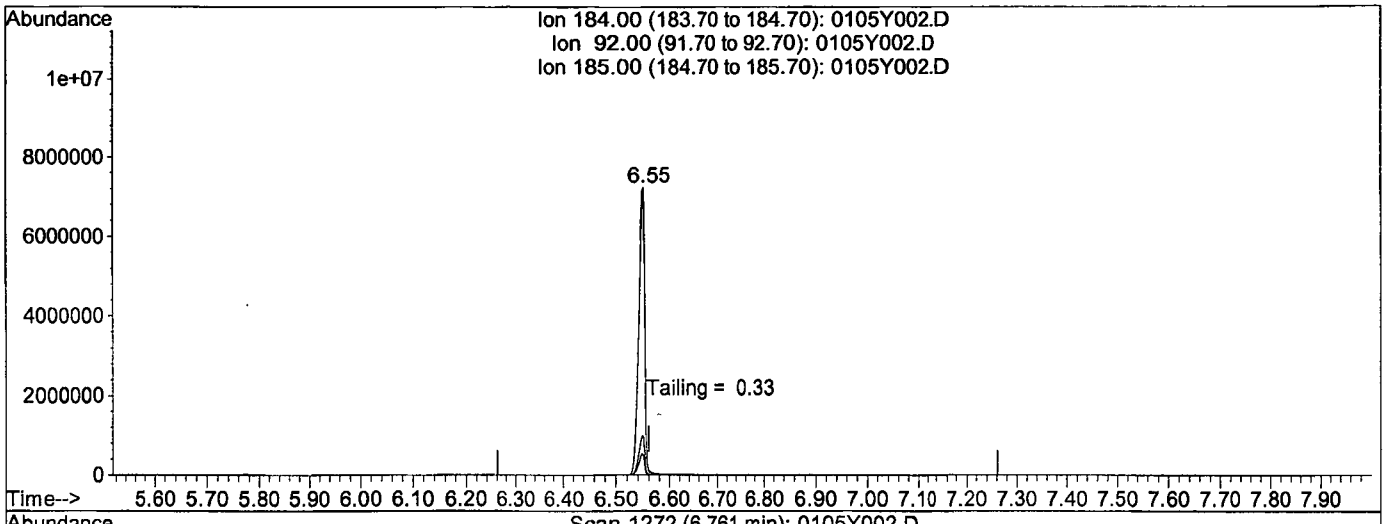
response 10909057

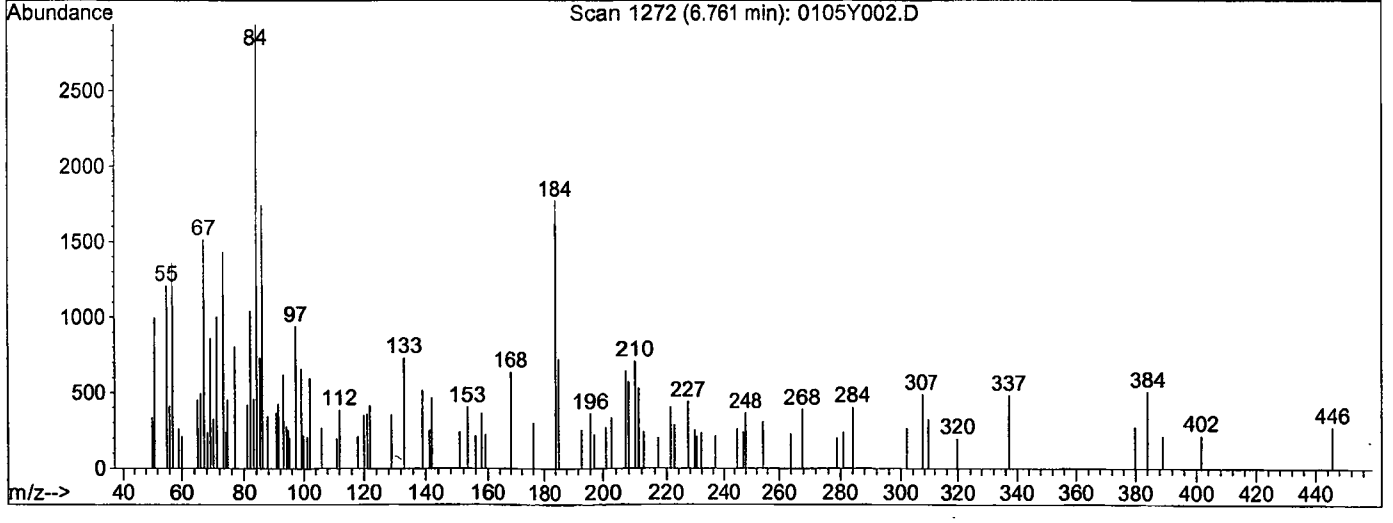
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

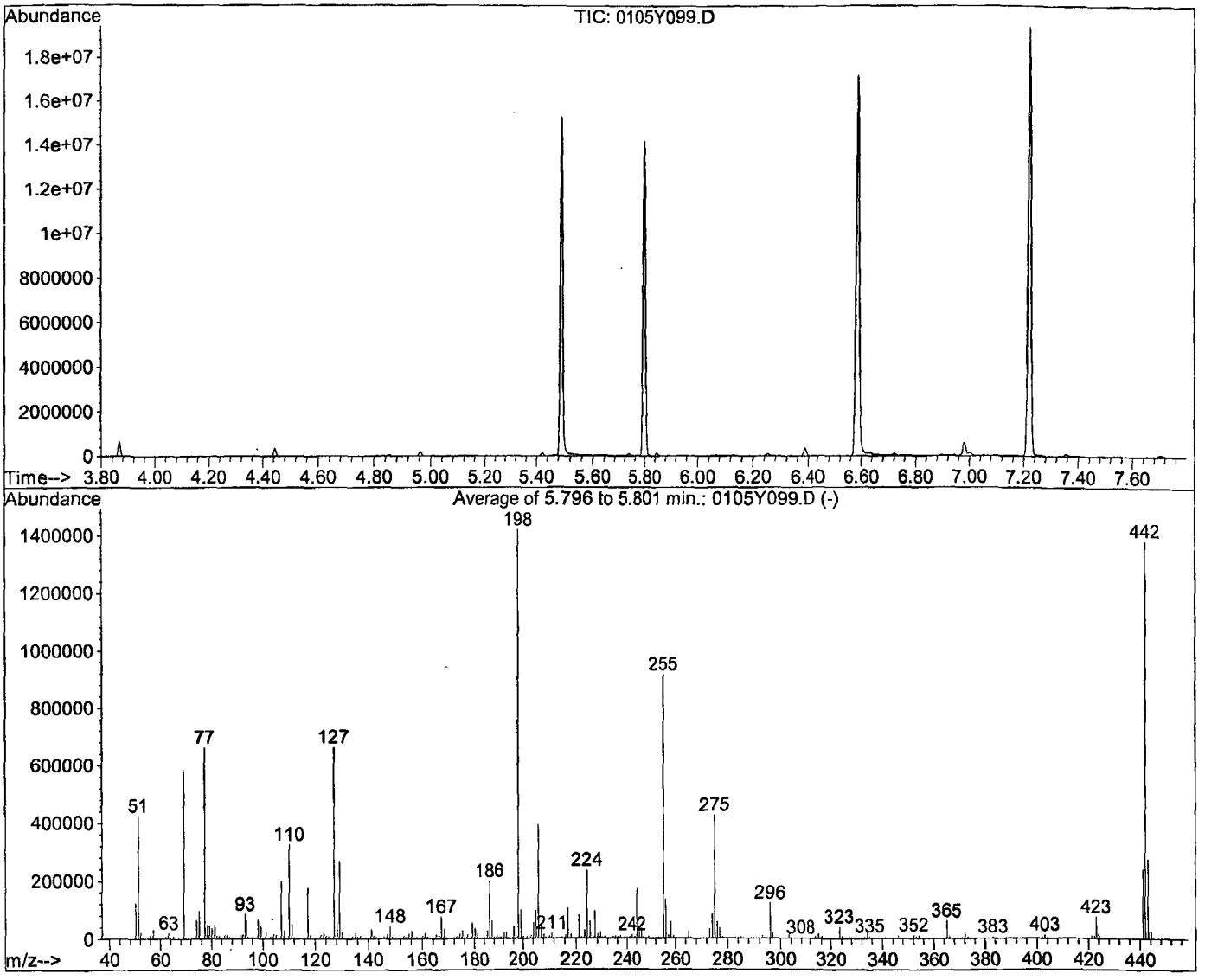
response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 884, 885, 886; Background Corrected with Scan 875

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	423872	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	3612	PASS
127	198	10	80	46.7	662677	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1420459	PASS
199	198	5	9	6.9	98451	PASS
275	198	10	60	29.9	424256	PASS
365	198	1	100	4.2	59421	PASS
441	442	0.01	24	17.3	239381	PASS
442	198	50	500	97.4	1383403	PASS
443	442	15	24	19.9	274965	PASS

Data File Name:	**0105Y099.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:23**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**99**
Instrument Name:	**Yoda**

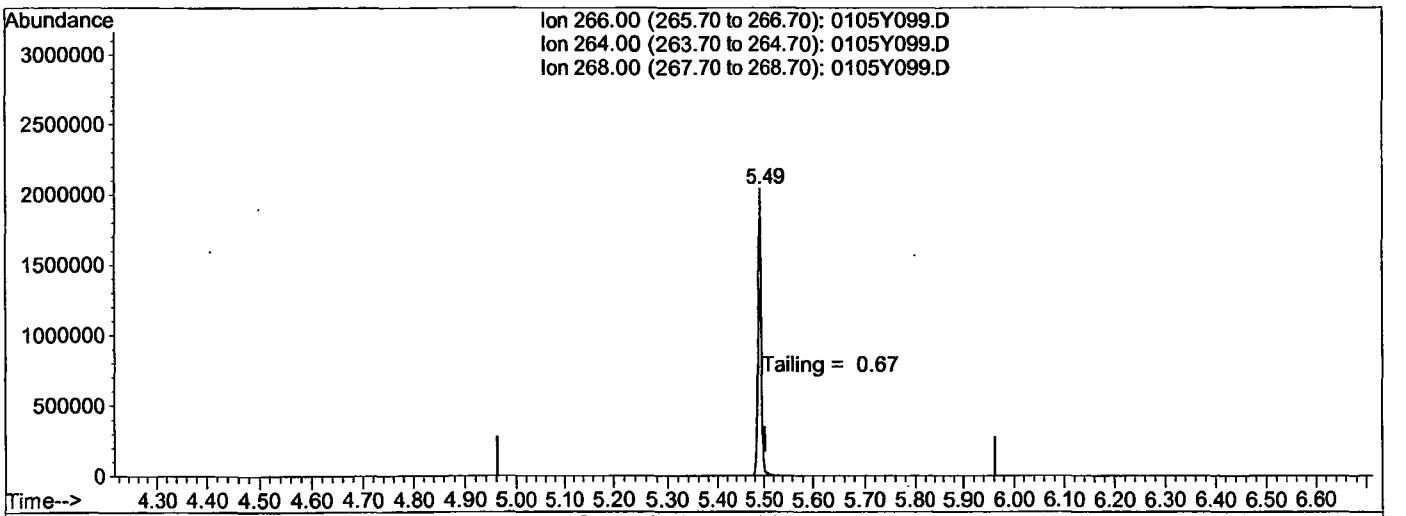
#	Name	Ret Time	Target Response
1)	DDT	7.12	144580000
2)	DDD	6.84	300557
3)	DDE	5.89	127448

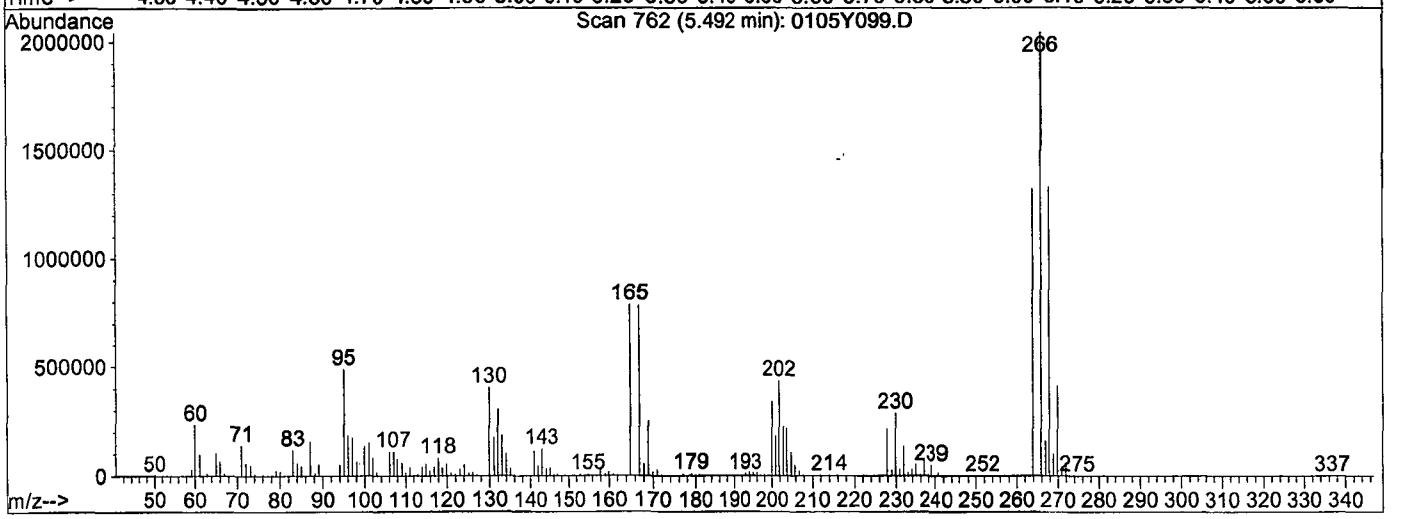
Breakdown **0.30**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(5) Pentachlorophenol

5.49min 0.0000

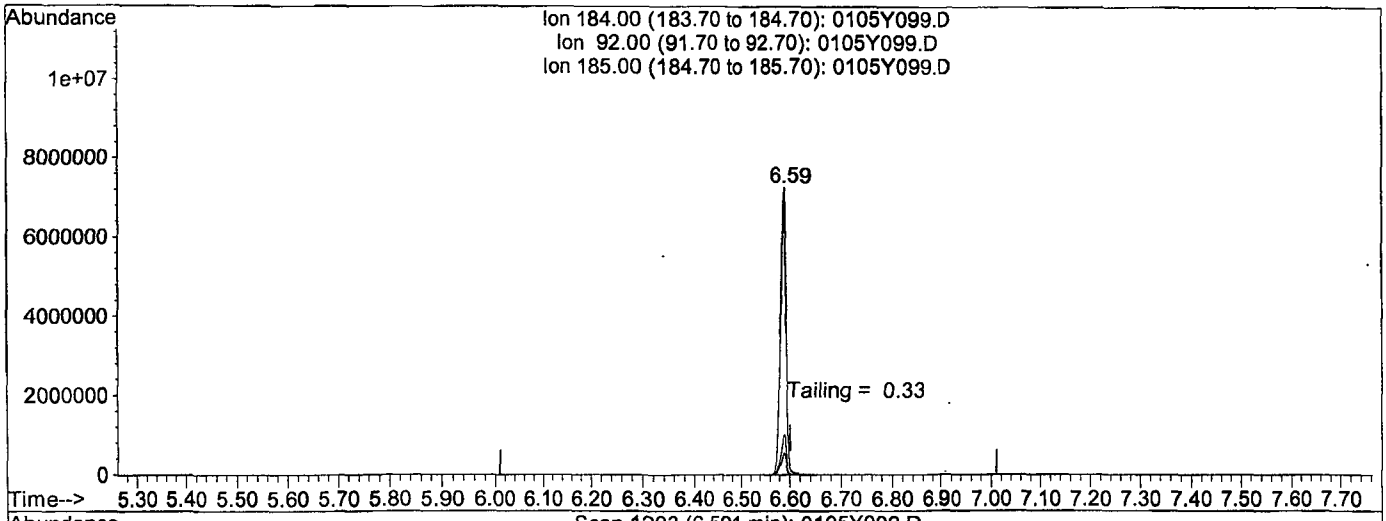
response 10863019

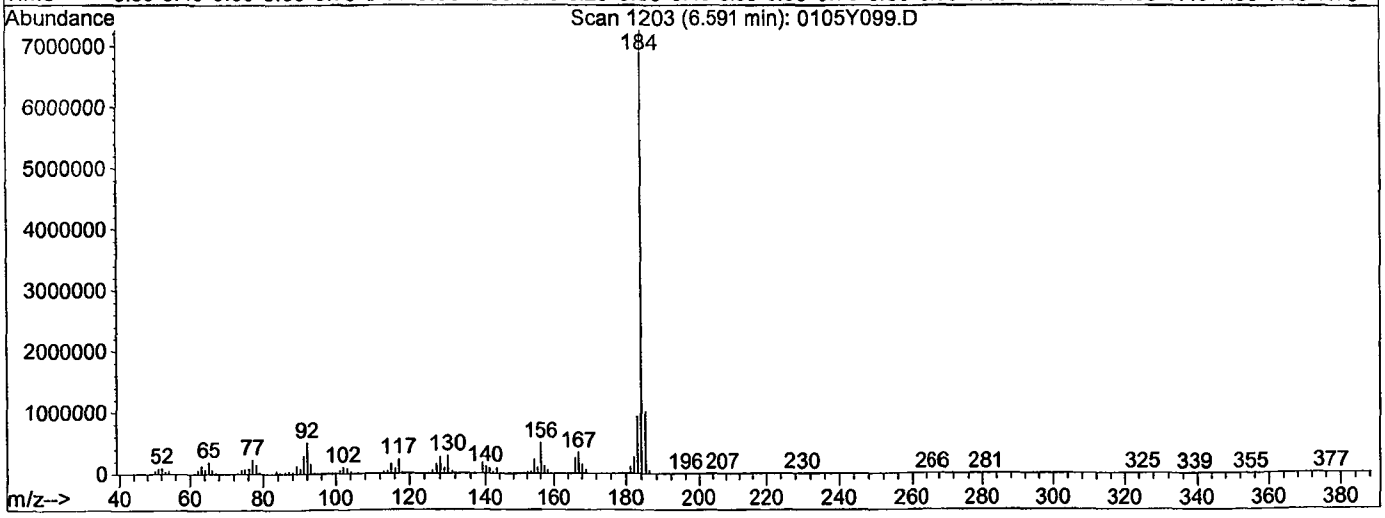
Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.81
268.00	64.30	63.53
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(6) Benzidine

6.59min 0.0000

response 54196247

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.24
185.00	14.10	13.77
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL			1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	(4)
Prep Date	05/29/20
Exp Date	12/31/25

Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	AO157142-49996to49999	12/31/25	3 mL	3 mL	NA	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard *Conc (range)*
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Name of Final Standard	**8270 Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	**10/06/20**		
Exp Date	**10/06/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	**A0158618-50006, A0152714-49436**	**09/30/27**	20 mL	200 mL	**Acetone246130/ MC59353 1:1**	1000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	**A0158684-50244,5024550248,50004**	**02/28/26**	20 mL	"	"	500 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	

GC Requires Extract By:				
pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
99	0105Y099.D	1	SV TUNE 10/02/20		25 Jan 21 12:23
100	0105Y100.D	1	50ug/mL 8270 01/05/21 (1)		25 Jan 21 12:38
5	0105Y105.D	1.25	210122A BLK 1/800		25 Jan 21 16:56
6	0105Y106.D	1.25	210122A LCS-1 1/0.8		25 Jan 21 17:21
8	0105Y108.D	0.9901	BA25526W18 MS-1 1/1010		25 Jan 21 18:12
9	0105Y109.D	0.9901	BA25526W22 MSD-1 1/1010		25 Jan 21 18:37
10	0105Y110.D	1	BA25526W17 1/1000		25 Jan 21 19:03
15	0105Y115.D	1	50ug/mL 8270 08/12/20 (5)		25 Jan 21 21:09

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/04/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
			0104Z13.D	0104Z14.D	0104Z15.D	0104Z16 D	0104Z17.D	0104Z18.D	0104Z19 D									
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.4	6.186	3.316	1.365	1.082	0.9536	0.8954				4.0	123	TMHB	0.994		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
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35																		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z13.D Vial: 13
Acq On : 04 Jan 21 20:33 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:24 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4211284	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6827319	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5332452	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	48590209m	57.38	ppb	100

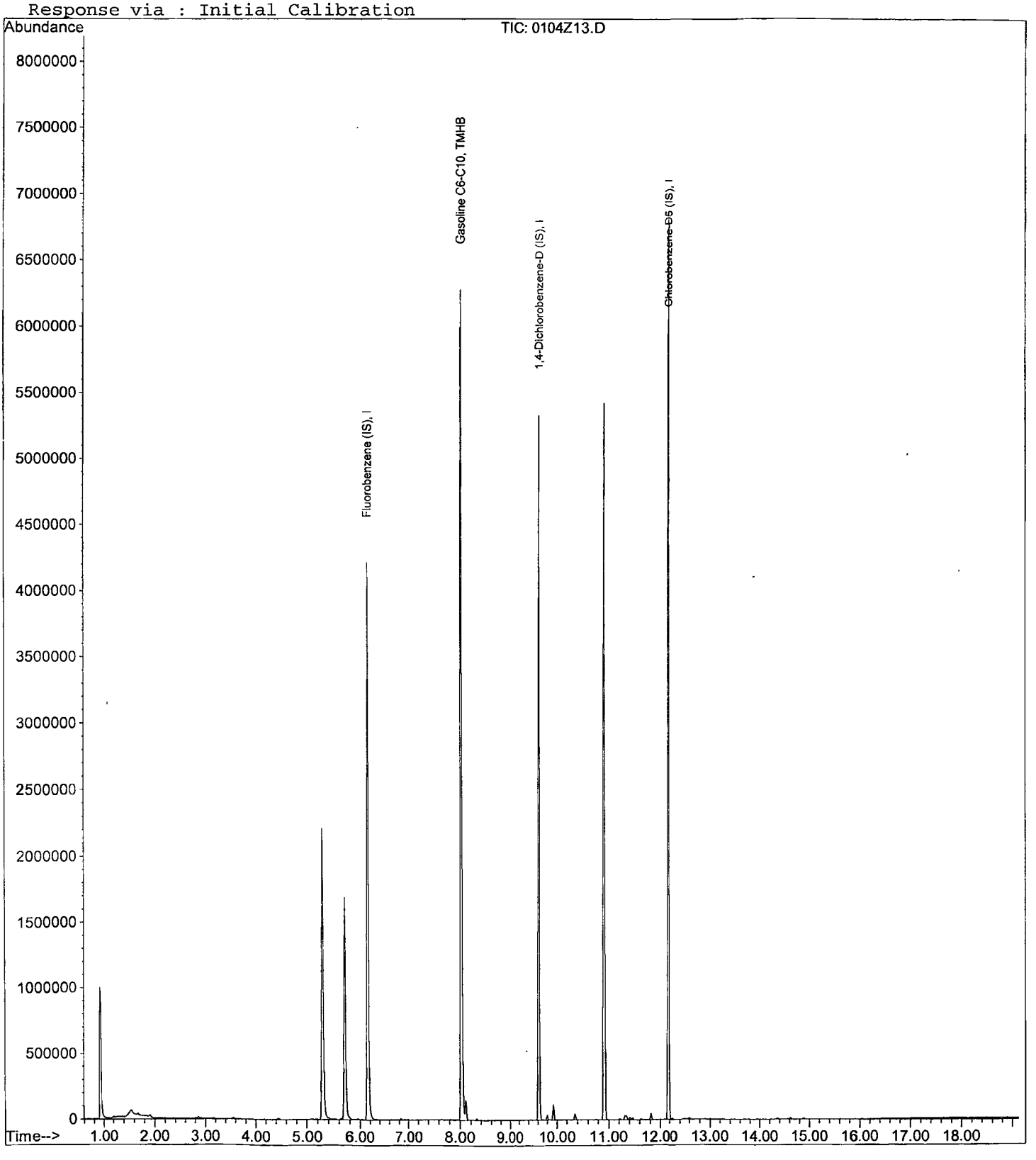
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z13.D Vial: 13
Acq On : 04 Jan 21 20:33 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:24 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z14.D Vial: 14
Acq On : 04 Jan 21 20:56 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4078655	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6899405	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5237060	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	50462587m	108.01	ppb	100

(#) = qualifier out of range (m) = manual integration

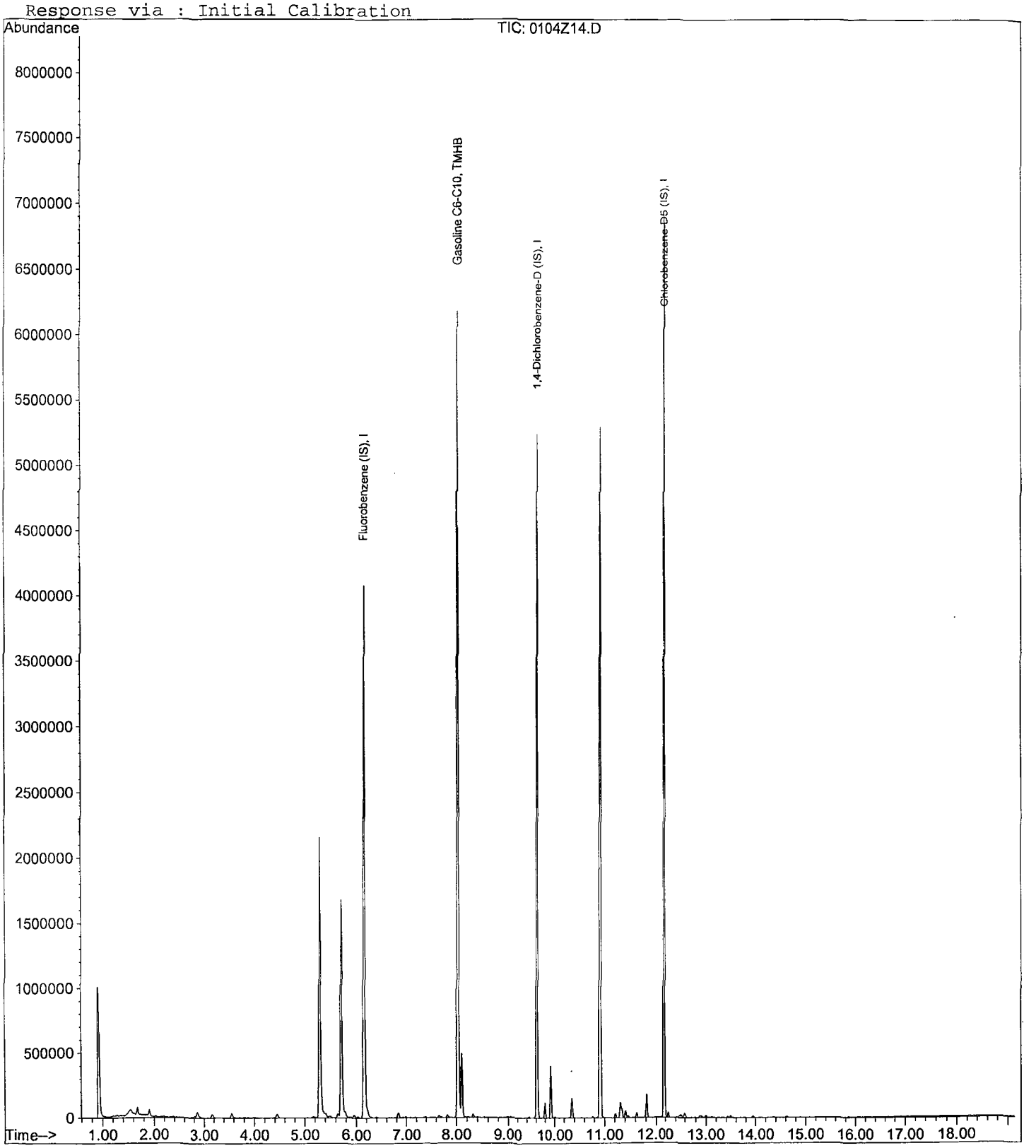
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z14.D
Acq On : 04 Jan 21 20:56
Sample : 50ug/L GAS STD 1/4/20
Misc :

Vial: 14
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z15.D Vial: 15
Acq On : 04 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4186849	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7055503	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5266421	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	55526796m	162.02	ppb	100

(#) = qualifier out of range (m) = manual integration

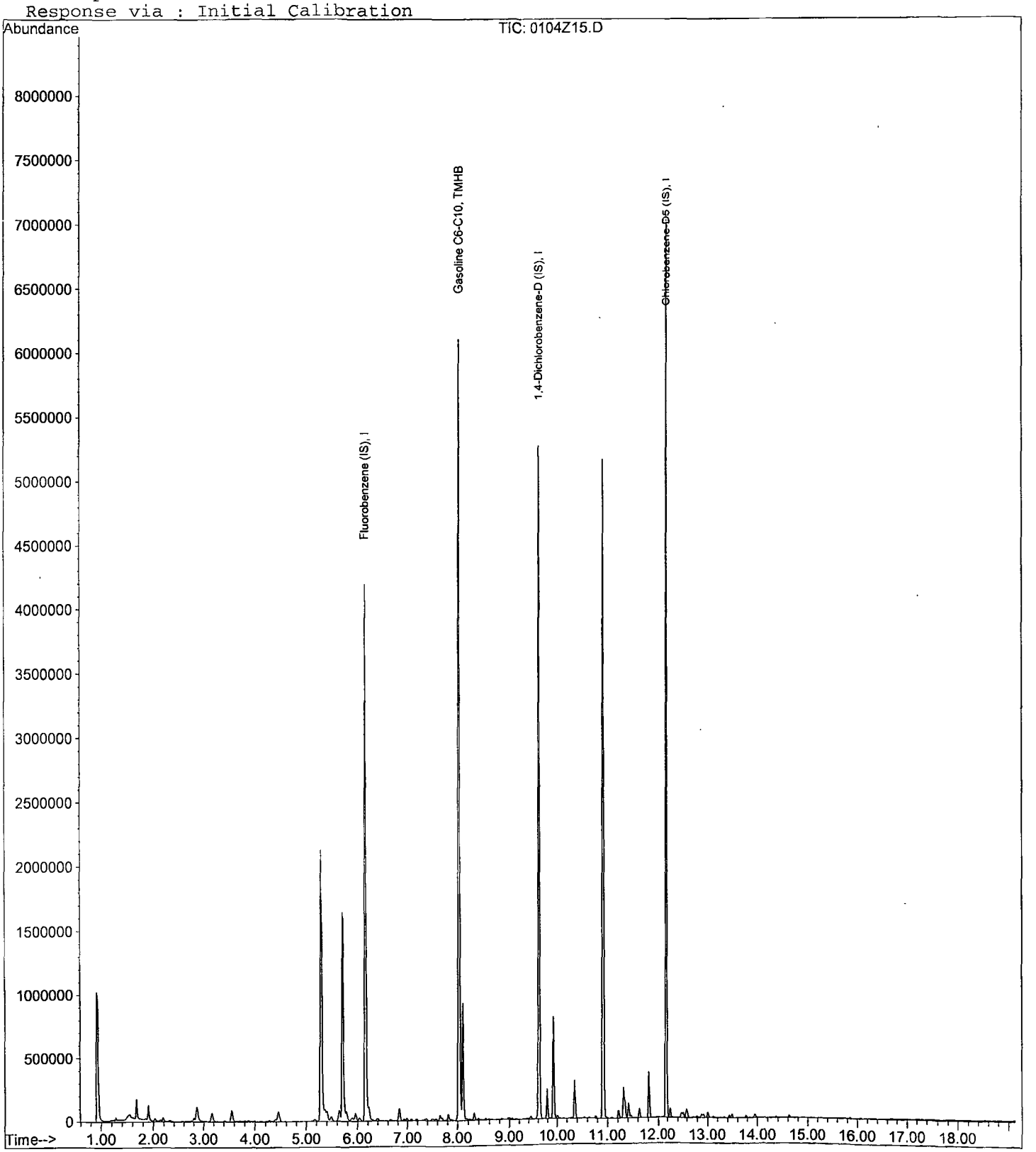
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z15.D
Acq On : 04 Jan 21 21:19
Sample : 100ug/L GAS STD 1/4/20
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z16.D Vial: 16
Acq On : 04 Jan 21 21:42 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4233137	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7141314	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316746	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	69360645m	351.55	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

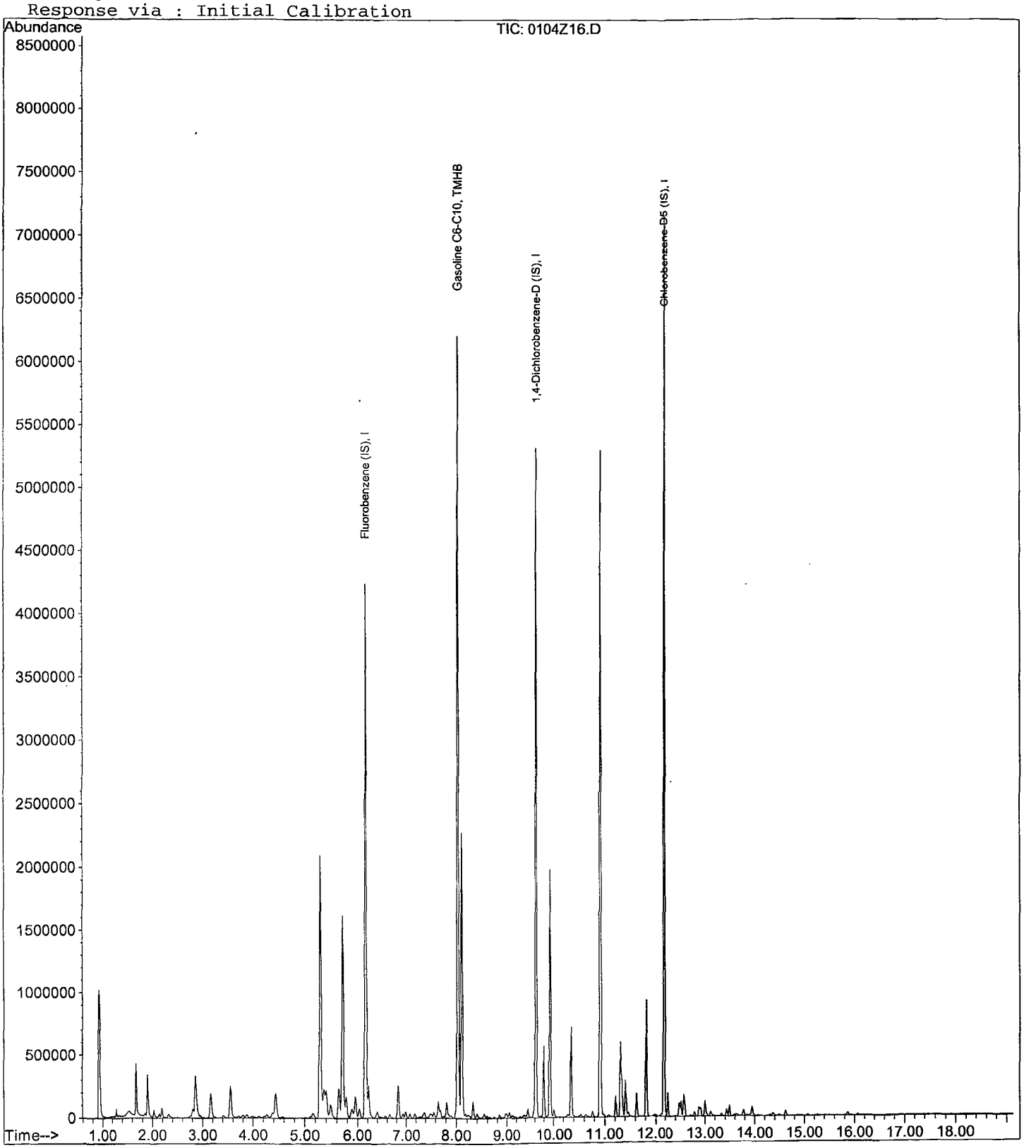
Data File : M:\ZEUS\DATA\210104\0104Z16.D
Acq On : 04 Jan 21 21:42
Sample : 300ug/L GAS STD 1/4/20
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:26 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z17.D
Acq On : 04 Jan 21 22:04
Sample : 600ug/L GAS STD 1/4/20
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4262471	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6861206	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5336374	25.00 ppb	-0.04
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	110715882m	933.52 ppb	100

(#) = qualifier out of range (m) = manual integration
0104Z17.D ZGAS0104.M Thu Jan 07 11:05:54 2021

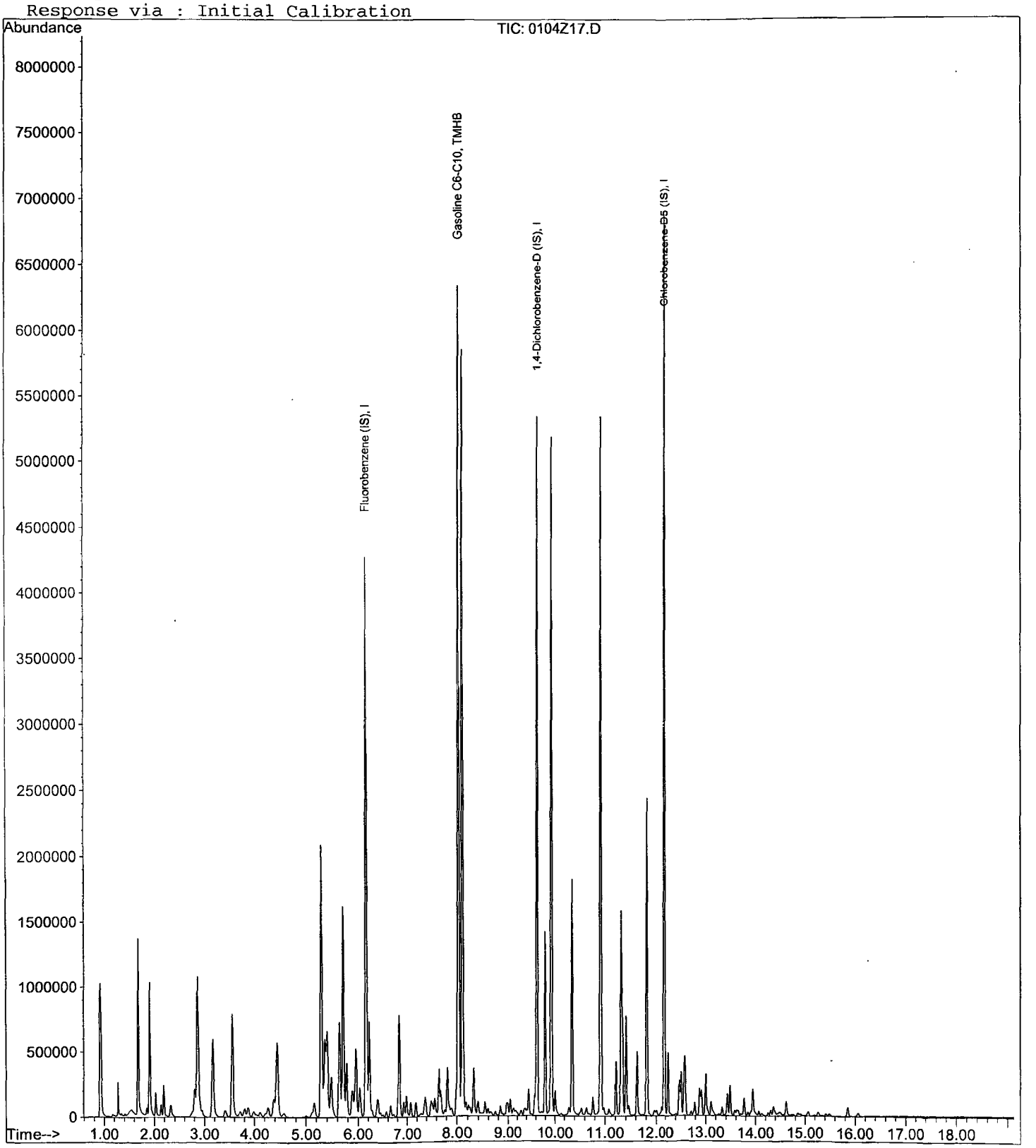
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z17.D
Acq On : 04 Jan 21 22:04
Sample : 600ug/L GAS STD 1/4/20
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z18.D Vial: 18
Acq On : 04 Jan 21 22:27 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4519136	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7160046	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316063	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	137907122m	1209.15	ppb	100

(#) = qualifier out of range (m) = manual integration

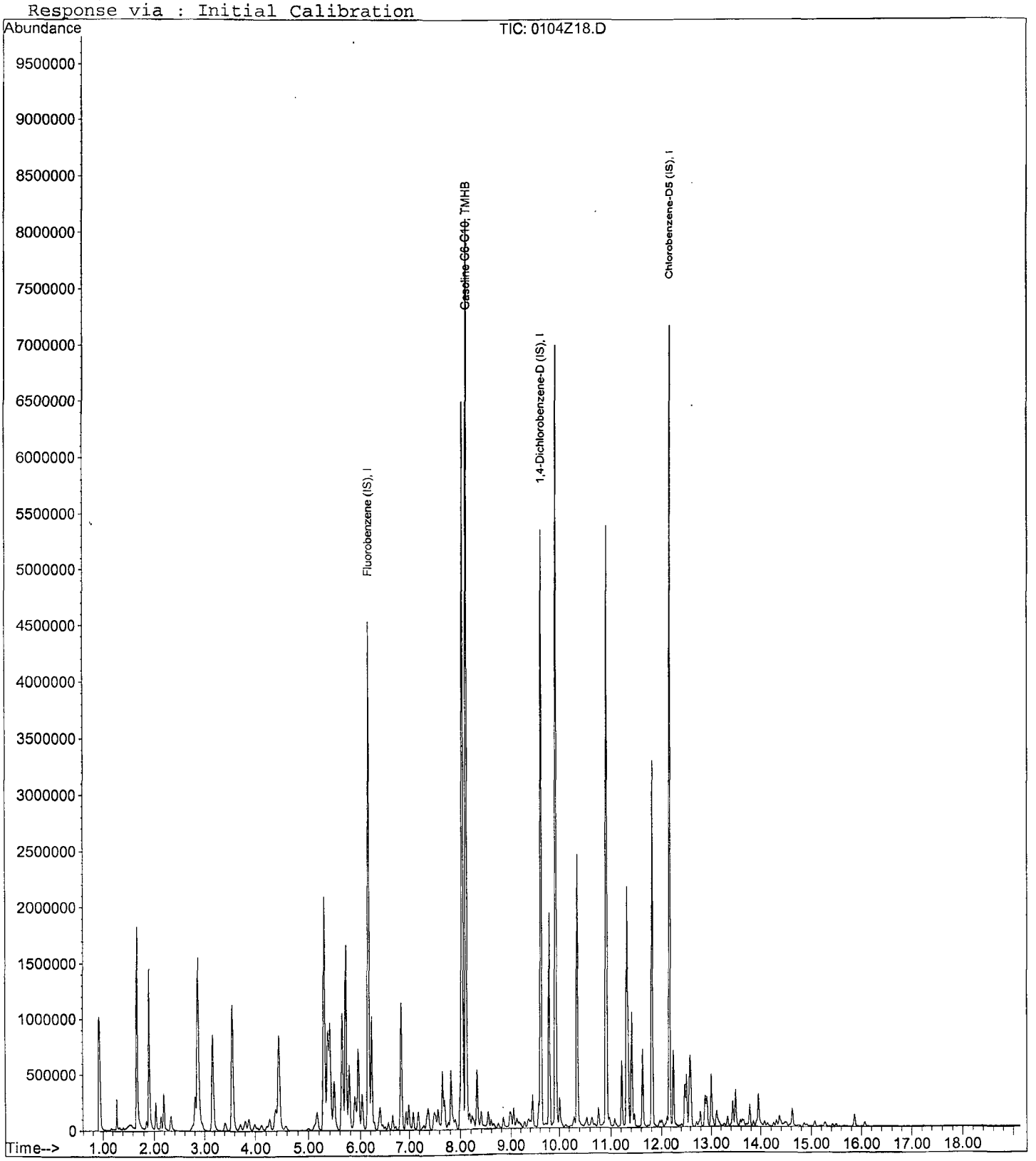
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z18.D
Acq On : 04 Jan 21 22:27
Sample : 800ug/L GAS STD 1/4/20
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z19.D Vial: 19
Acq On : 04 Jan 21 22:50 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:45 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4357256	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6940368	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5466243	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	156056392m	1530.74	ppb	100

(#) = qualifier out of range (m) = manual integration

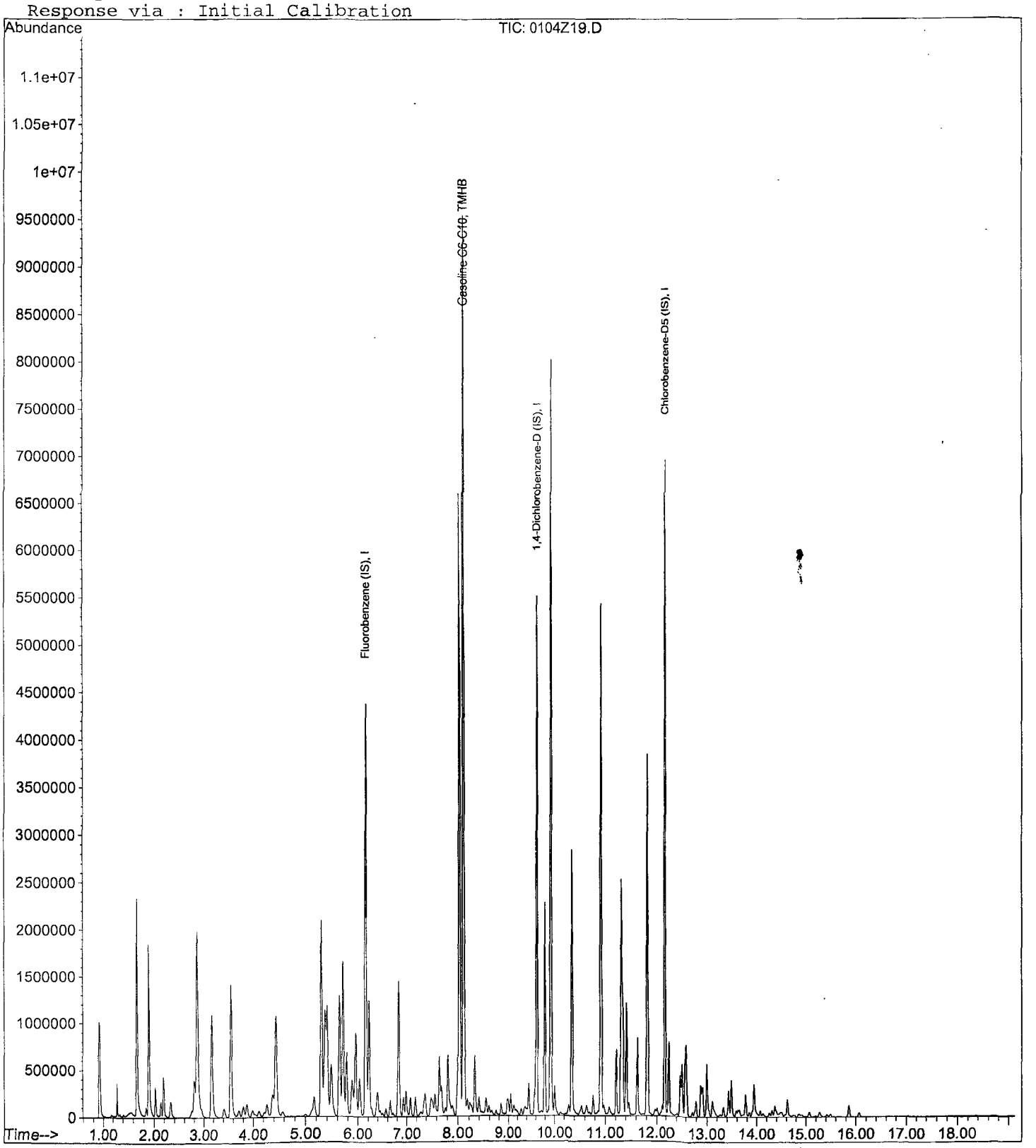
Quantitation Report

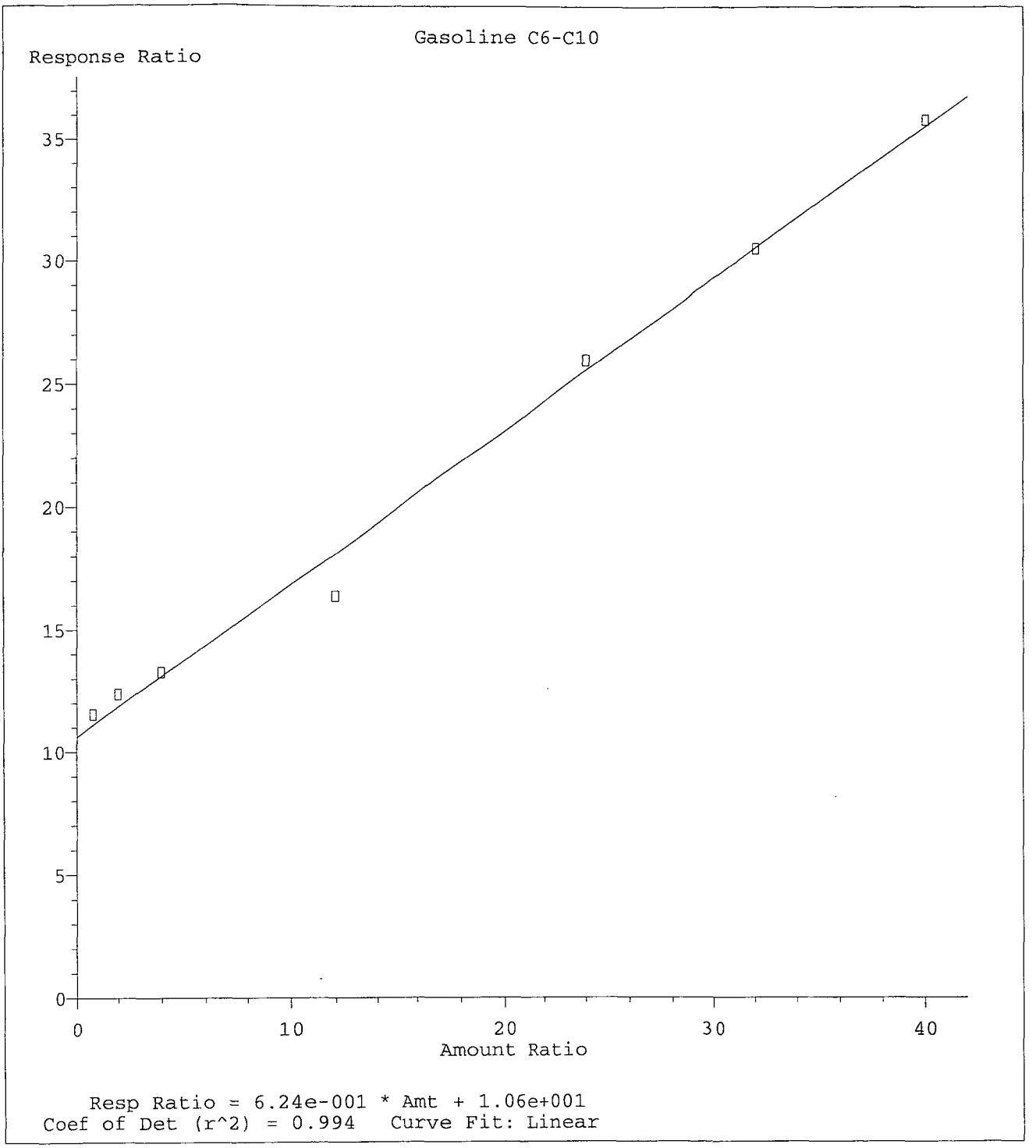
Data File : M:\ZEUS\DATA\210104\0104Z19.D
Acq On : 04 Jan 21 22:50
Sample : 1000ug/L GAS STD 1/4/20
Misc :

Vial: 19
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:45 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210104\ZGAS0104.M
Calibration Table Last Updated: Thu Jan 07 09:32:25 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/04/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0104Z21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.032	1.457	64	TMHBL	8.1
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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34							
35							
36							
37							
38							
39							
40							
		Average			64.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4193018	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6786780	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5176749	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	73335098m	275.77 ppb	100

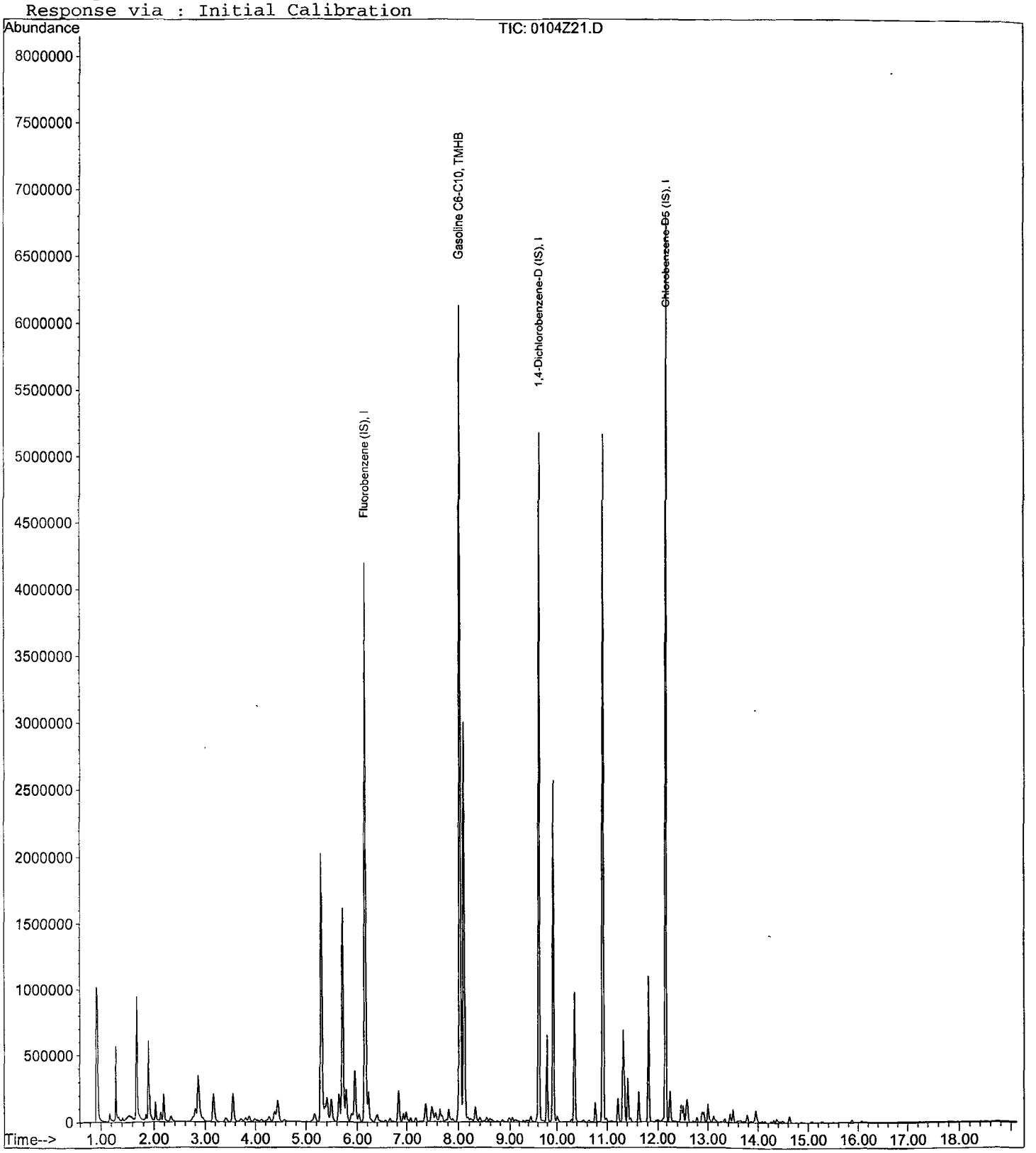
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0122Z02 D	0122Z03.D	0122Z04.D	0122Z05.D	0122Z06.D	0122Z07 D	0122Z08 D	0122Z09.D	0122Z10 D		Avg	%RSD	Type	r^2	Q	MRF
			1	2	3	4	5	6	7	8	9							
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.2042	0.1973	0.2437	0.2443	0.2769	0.2816	0.3016	0.2962	0.2909		0.26	15	TM			
3	S	1,2-DCA-D4(S)	0.1839	0.1845	0.2212	0.2200	0.2521	0.2518	0.2666	0.2602	0.2565		0.23	14	TM			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.8880	0.8878	1.100	1.091	1.216	1.217	1.274	1.279	1.200		1.1	13	TM**			
6	SL	4-Bromofluorobenzene(S)	0.2949	0.2947	0.3733	0.3719	0.4276	0.4297	0.4509	0.4560	0.4845		0.40	17	TM*	0.999		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z02.D Vial: 2
Acq On : 22 Jan 21 09:53 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3432041	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2860621	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1074176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.29	111	140190	3.93	ppb	0.00
Spiked Amount 25.000			Recovery =	15.732%		
3) 1,2-DCA-D4(S)	5.71	65	126233	3.95	ppb	0.00
Spiked Amount 25.000			Recovery =	15.788%		
5) Toluene-D8(S)	8.03	98	508027	3.94	ppb	0.00
Spiked Amount 25.000			Recovery =	15.744%		
6) 4-Bromofluorobenzene(S)	10.91	95	168719	5.71	ppb	0.00
Spiked Amount 25.000			Recovery =	22.860%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

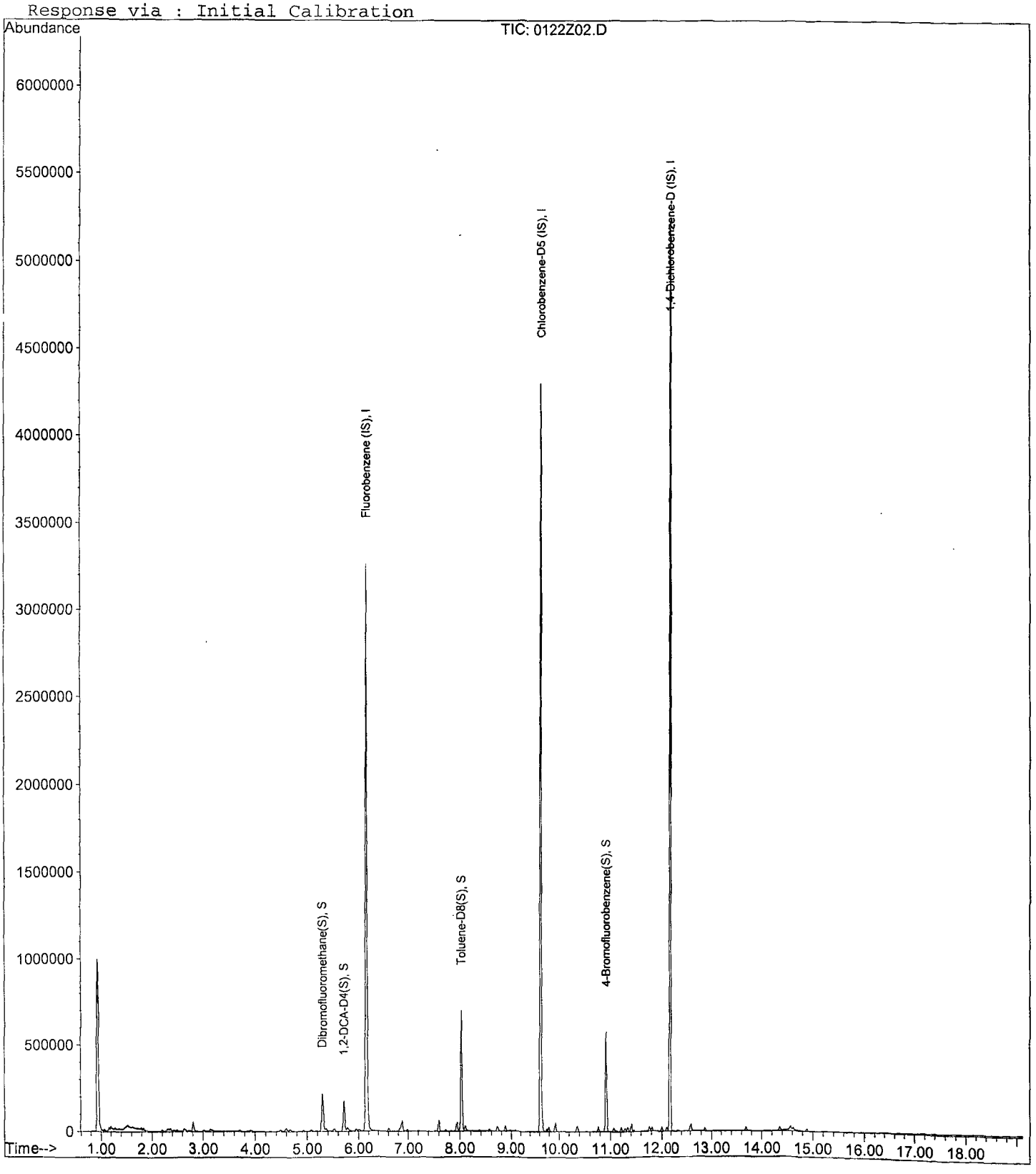
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z02.D
Acq On : 22 Jan 21 09:53
Sample : 0.3ug/L VOC STD1/22/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z03.D Vial: 3
Acq On : 22 Jan 21 10:16 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3468853	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2870932	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1079808	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	136869	3.80	ppb	0.00
Spiked Amount 25.000			Recovery =	15.196%		
3) 1,2-DCA-D4(S)	5.71	65	127981	3.96	ppb	0.00
Spiked Amount 25.000			Recovery =	15.836%		
5) Toluene-D8(S)	8.03	98	509770	3.94	ppb	0.00
Spiked Amount 25.000			Recovery =	15.740%		
6) 4-Bromofluorobenzene(S)	10.91	95	169193	5.71	ppb	0.00
Spiked Amount 25.000			Recovery =	22.848%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

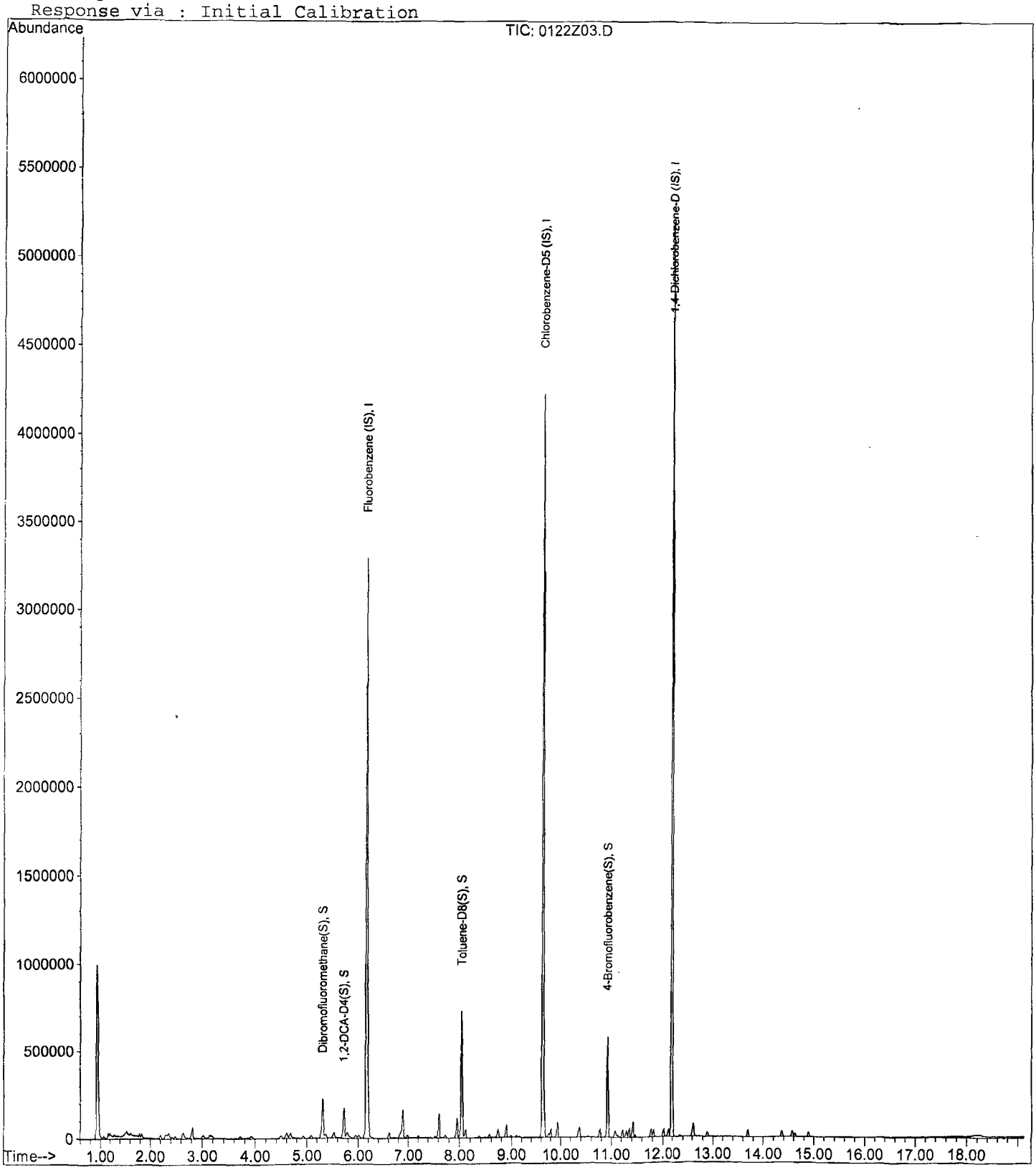
Data File : M:\ZEUS\DATA\210122\0122Z03.D
Acq On : 22 Jan 21 10:16
Sample : 0.5ug/L VOC STD1/22/21
Misc :

Vial: 3
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:22 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z04.D Vial: 4
Acq On : 22 Jan 21 10:39 Operator: LP,DG,CH
Sample : 1ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3441972	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2823876	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1097216	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	335581	9.39	ppb	0.00
Spiked Amount 25.000			Recovery =	37.548%		
3) 1,2-DCA-D4(S)	5.71	65	304572	9.50	ppb	0.00
Spiked Amount 25.000			Recovery =	37.980%		
5) Toluene-D8(S)	8.03	98	1242251	9.75	ppb	0.00
Spiked Amount 25.000			Recovery =	39.000%		
6) 4-Bromofluorobenzene(S)	10.92	95	421693	10.31	ppb	0.00
Spiked Amount 25.000			Recovery =	41.240%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

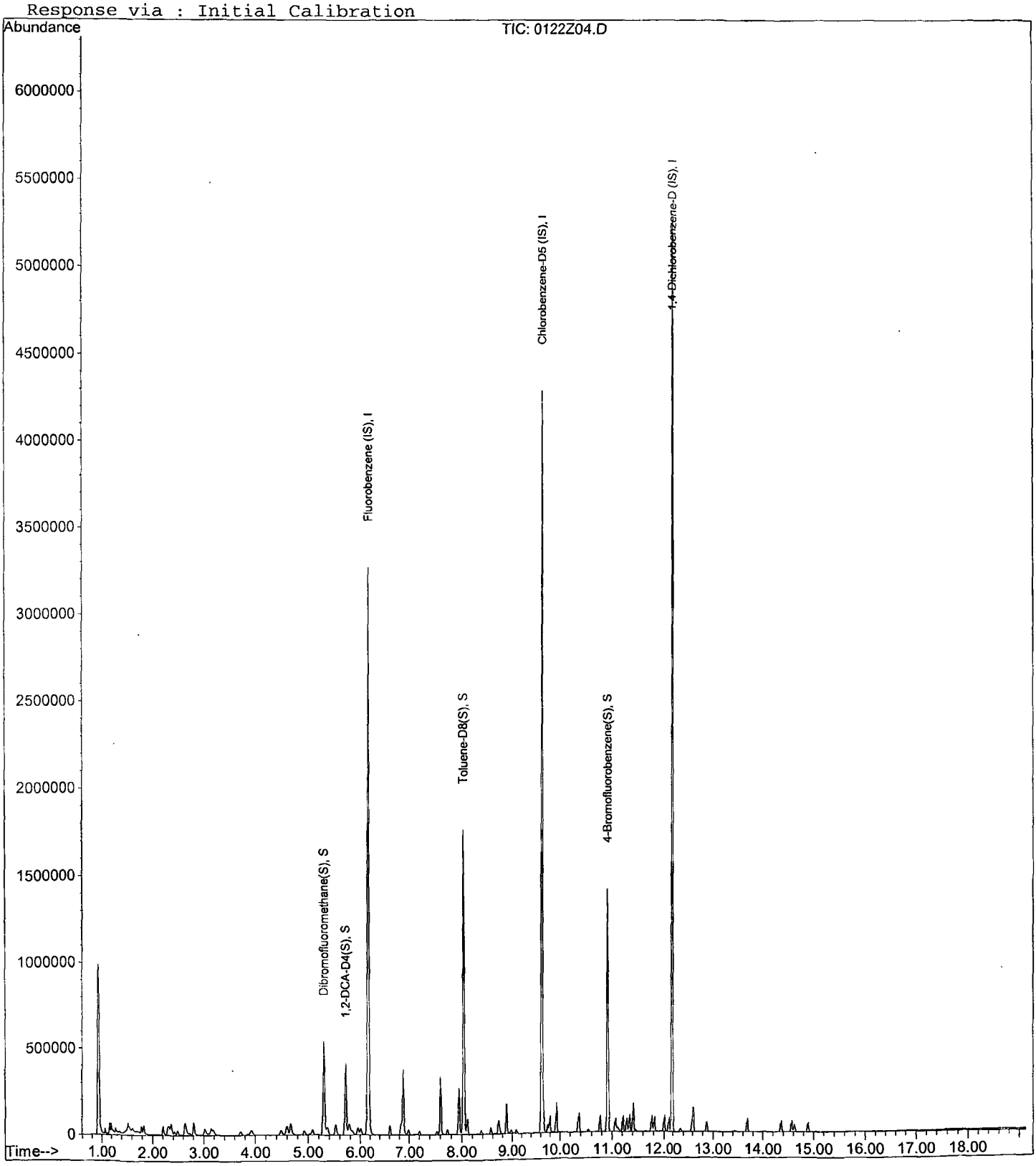
Data File : M:\ZEUS\DATA\210122\0122Z04.D
Acq On : 22 Jan 21 10:39
Sample : 1ug/L VOC STD1/22/21
Misc :

Vial: 4
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3451525	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2841135	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1075200	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	337282	9.41	ppb	0.00
Spiked Amount 25.000			Recovery = 37.636%			
3) 1,2-DCA-D4(S)	5.71	65	303742	9.44	ppb	0.00
Spiked Amount 25.000			Recovery = 37.772%			
5) Toluene-D8(S)	8.03	98	1239876	9.67	ppb	0.00
Spiked Amount 25.000			Recovery = 38.688%			
6) 4-Bromofluorobenzene(S)	10.91	95	422667	10.28	ppb	0.00
Spiked Amount 25.000			Recovery = 41.124%			

Target Compounds Qvalue

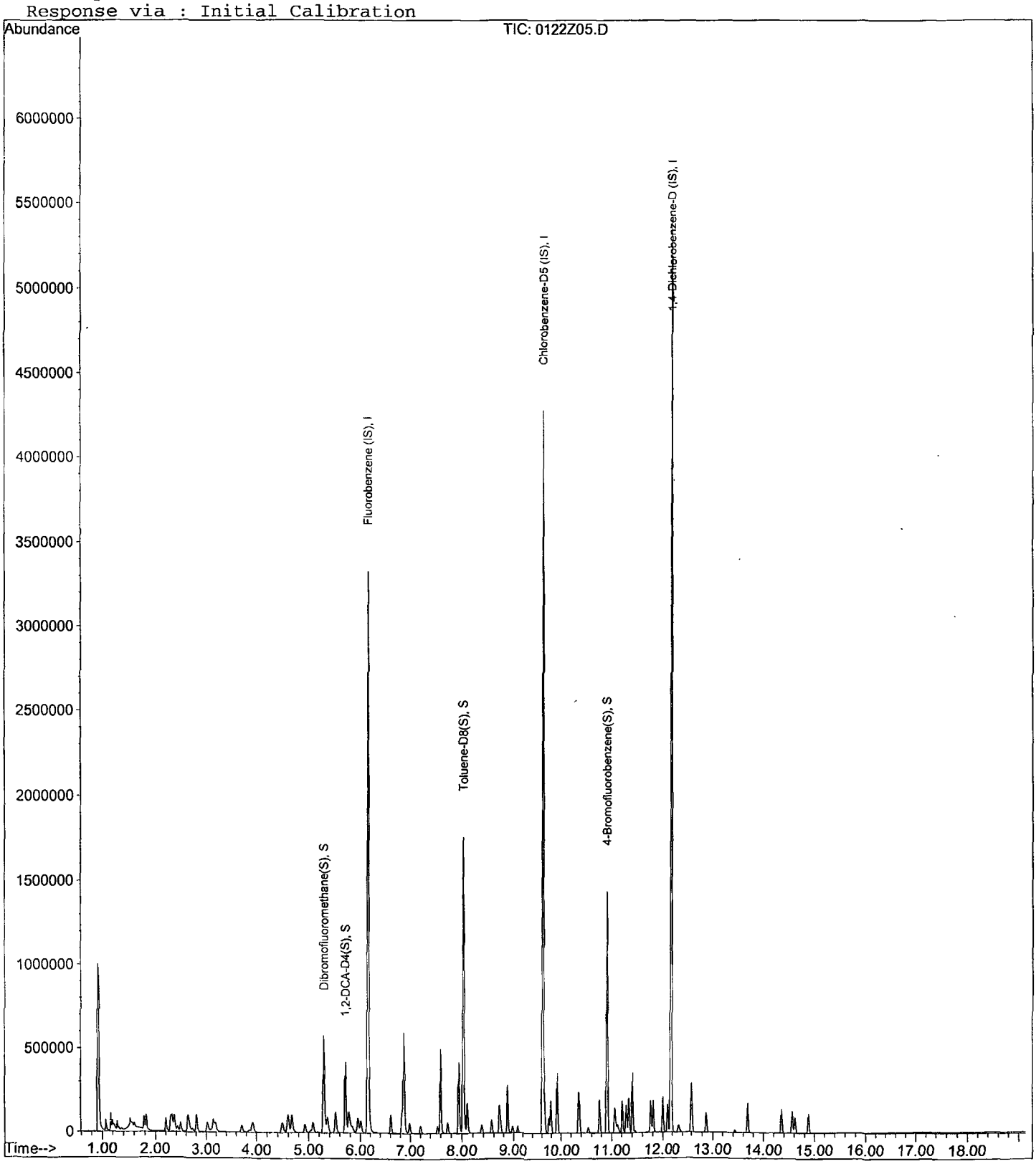
(#) = qualifier out of range (m) = manual integration
0122Z05.D Z0122SUR.M Thu Jan 28 15:25:52 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3550375	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2920207	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1120256	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	983240	26.66	ppb	0.00
Spiked Amount 25.000			Recovery = 106.660%			
3) 1,2-DCA-D4(S)	5.71	65	894975	27.05	ppb	0.00
Spiked Amount 25.000			Recovery = 108.196%			
5) Toluene-D8(S)	8.03	98	3549867	26.94	ppb	0.00
Spiked Amount 25.000			Recovery = 107.768%			
6) 4-Bromofluorobenzene(S)	10.92	95	1248589	24.46	ppb	0.00
Spiked Amount 25.000			Recovery = 97.844%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

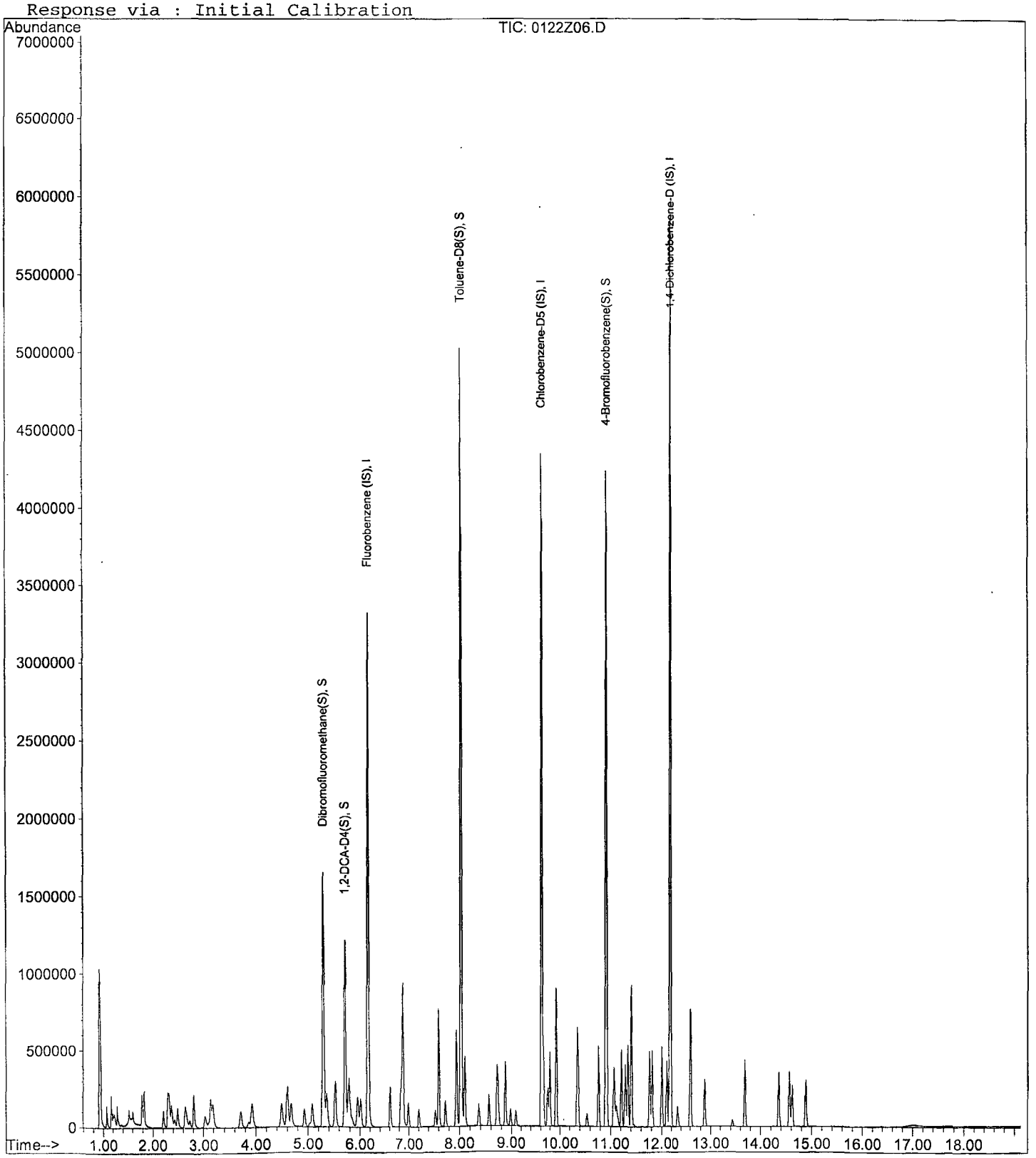
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z06.D
Acq On : 22 Jan 21 11:25
Sample : 5ug/L VOC STD1/22/21
Misc :

Vial: 6
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3548403	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2918486	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1061376	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	999397	27.12	ppb	0.00
Spiked Amount 25.000			Recovery =	108.472%		
3) 1,2-DCA-D4(S)	5.71	65	893634	27.02	ppb	0.00
Spiked Amount 25.000			Recovery =	108.096%		
5) Toluene-D8(S)	8.03	98	3551875	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.892%		
6) 4-Bromofluorobenzene(S)	10.91	95	1254055	24.57	ppb	0.00
Spiked Amount 25.000			Recovery =	98.276%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

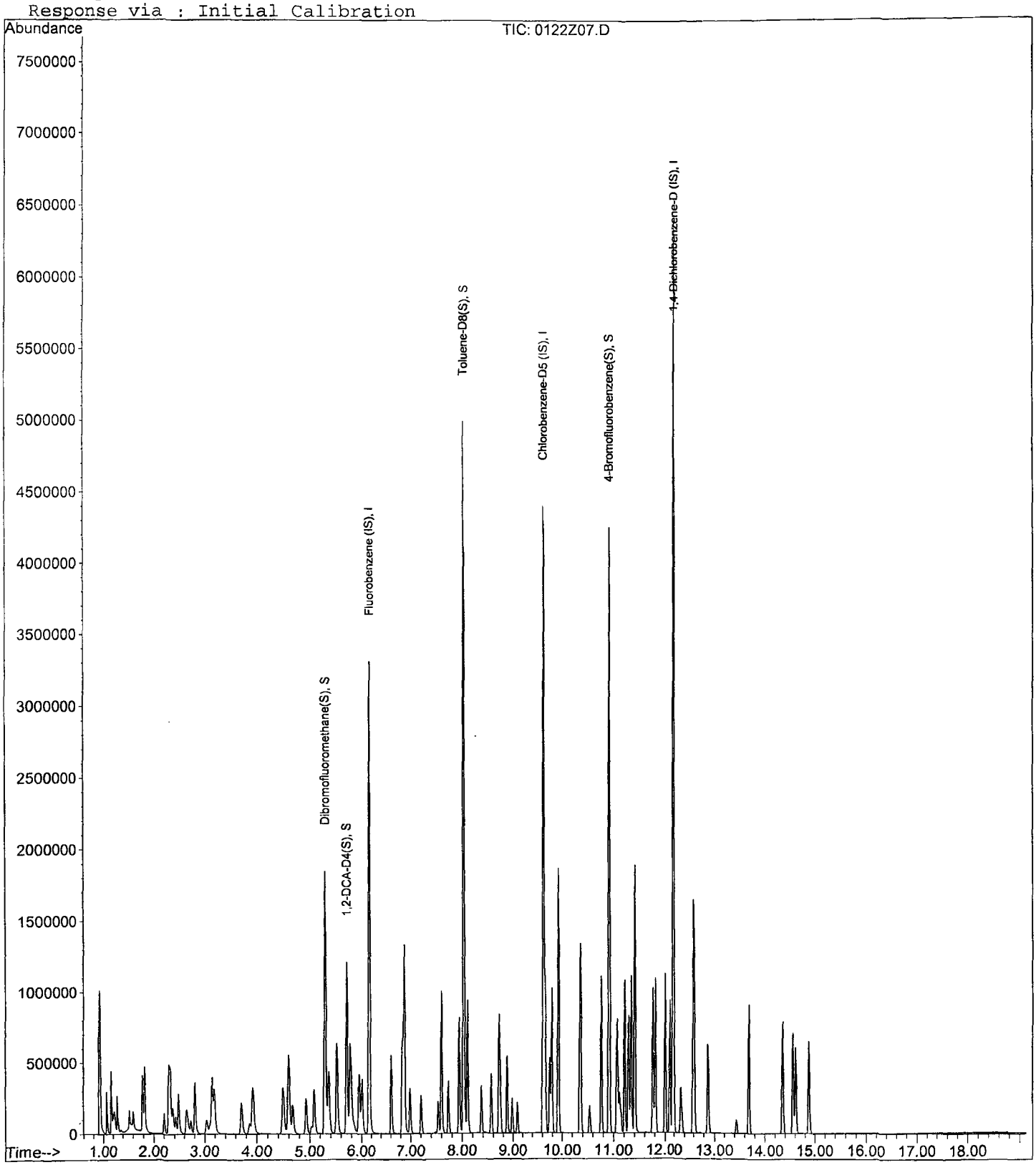
Data File : M:\ZEUS\DATA\210122\0122Z07.D
Acq On : 22 Jan 21 11:48
Sample : 10ug/L VOC STD1/22/21
Misc :

Vial: 7
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3674138	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3010041	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1147904	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2216386	58.08	ppb	0.00
Spiked Amount 25.000			Recovery = 232.328%			
3) 1,2-DCA-D4(S)	5.71	65	1958969	57.21	ppb	0.00
Spiked Amount 25.000			Recovery = 228.852%			
5) Toluene-D8(S)	8.03	98	7667888	56.46	ppb	0.00
Spiked Amount 25.000			Recovery = 225.840%			
6) 4-Bromofluorobenzene(S)	10.92	95	2714572	48.58	ppb	0.00
Spiked Amount 25.000			Recovery = 194.332%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

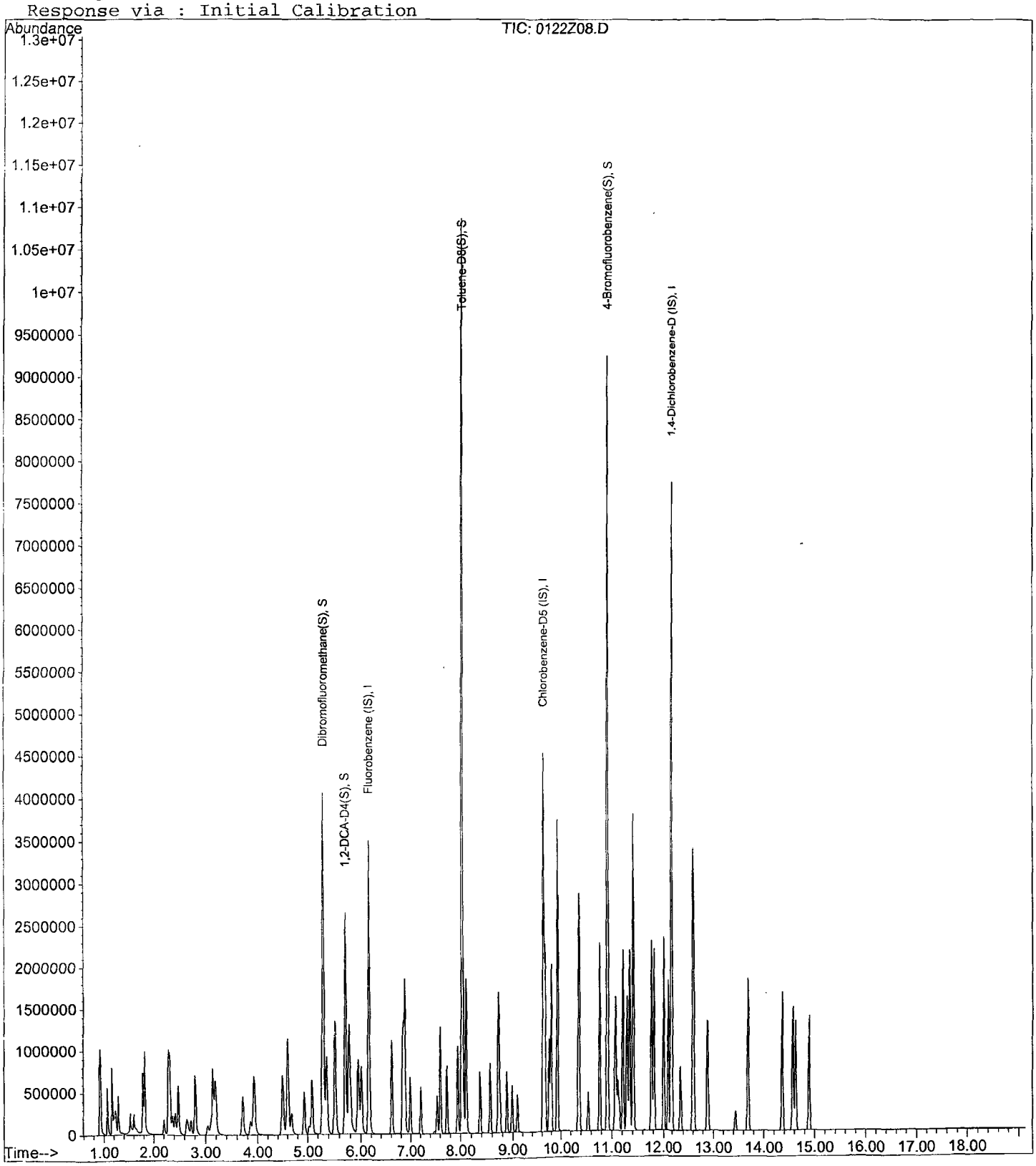
Data File : M:\ZEUS\DATA\210122\0122Z08.D
Acq On : 22 Jan 21 12:11
Sample : 20ug/L VOC STD1/22/21
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z09.D Vial: 9
Acq On : 22 Jan 21 12:34 Operator: LP,DG,CH
Sample : 40ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3879780	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3107472	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1167872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2298360	57.04	ppb	0.00
Spiked Amount 25.000			Recovery =	228.152%		
3) 1,2-DCA-D4(S)	5.71	65	2018939	55.84	ppb	0.00
Spiked Amount 25.000			Recovery =	223.356%		
5) Toluene-D8(S)	8.03	98	7951610	56.71	ppb	0.00
Spiked Amount 25.000			Recovery =	226.852%		
6) 4-Bromofluorobenzene(S)	10.92	95	2833768	49.10	ppb	0.00
Spiked Amount 25.000			Recovery =	196.380%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

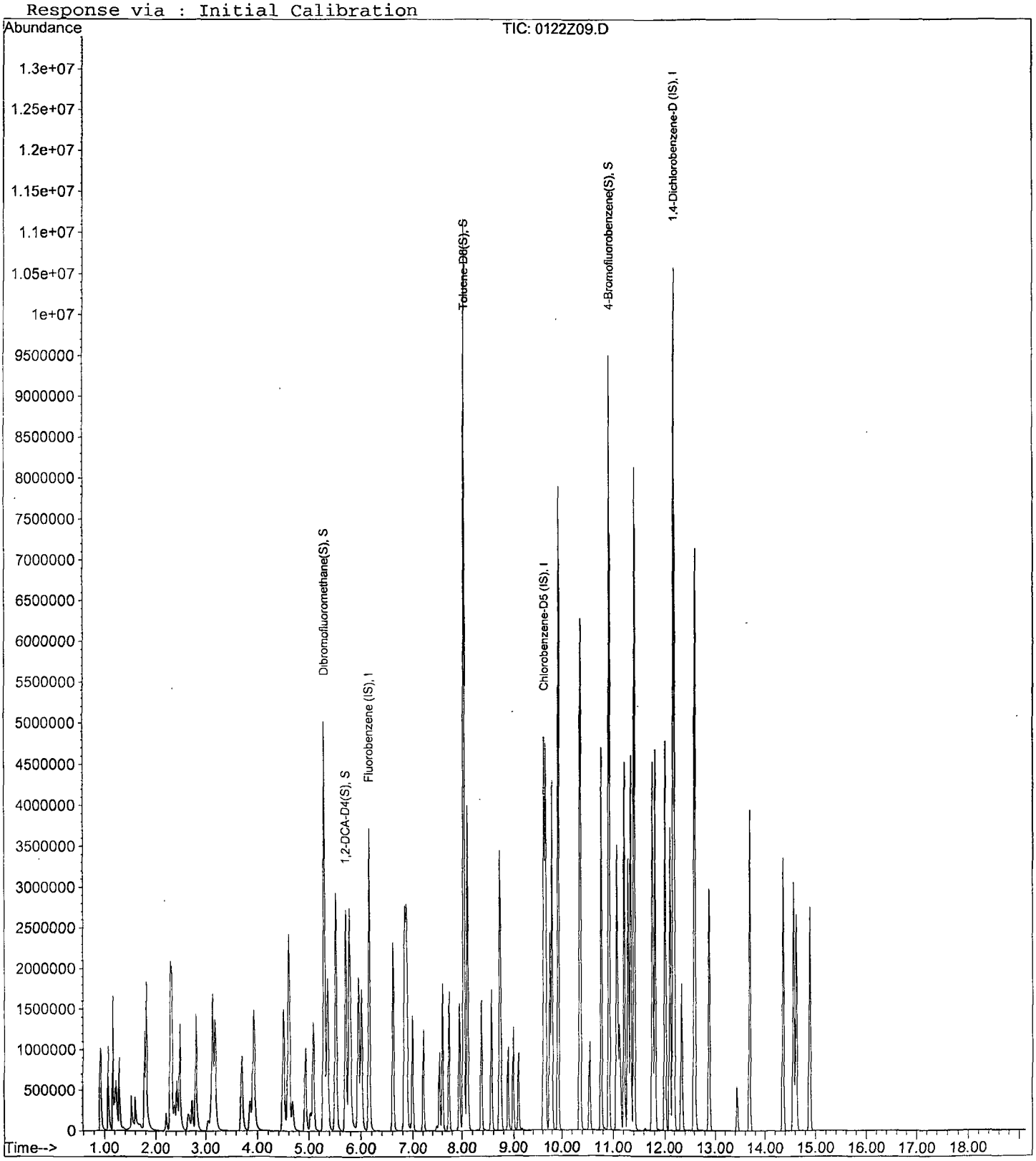
Data File : M:\ZEUS\DATA\210122\0122Z09.D
Acq On : 22 Jan 21 12:34
Sample : 40ug/L VOC STD1/22/21
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4214967	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3349419	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1279488	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	4904364	112.03	ppb	0.00
Spiked Amount 25.000			Recovery = 448.124%			
3) 1,2-DCA-D4(S)	5.71	65	4324969	110.11	ppb	0.00
Spiked Amount 25.000			Recovery = 440.424%			
5) Toluene-D8(S)	8.03	98	16070583	106.34	ppb	0.00
Spiked Amount 25.000			Recovery = 425.364%			
6) 4-Bromofluorobenzene(S)	10.92	95	6490594	101.27	ppb	0.00
Spiked Amount 25.000			Recovery = 405.092%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

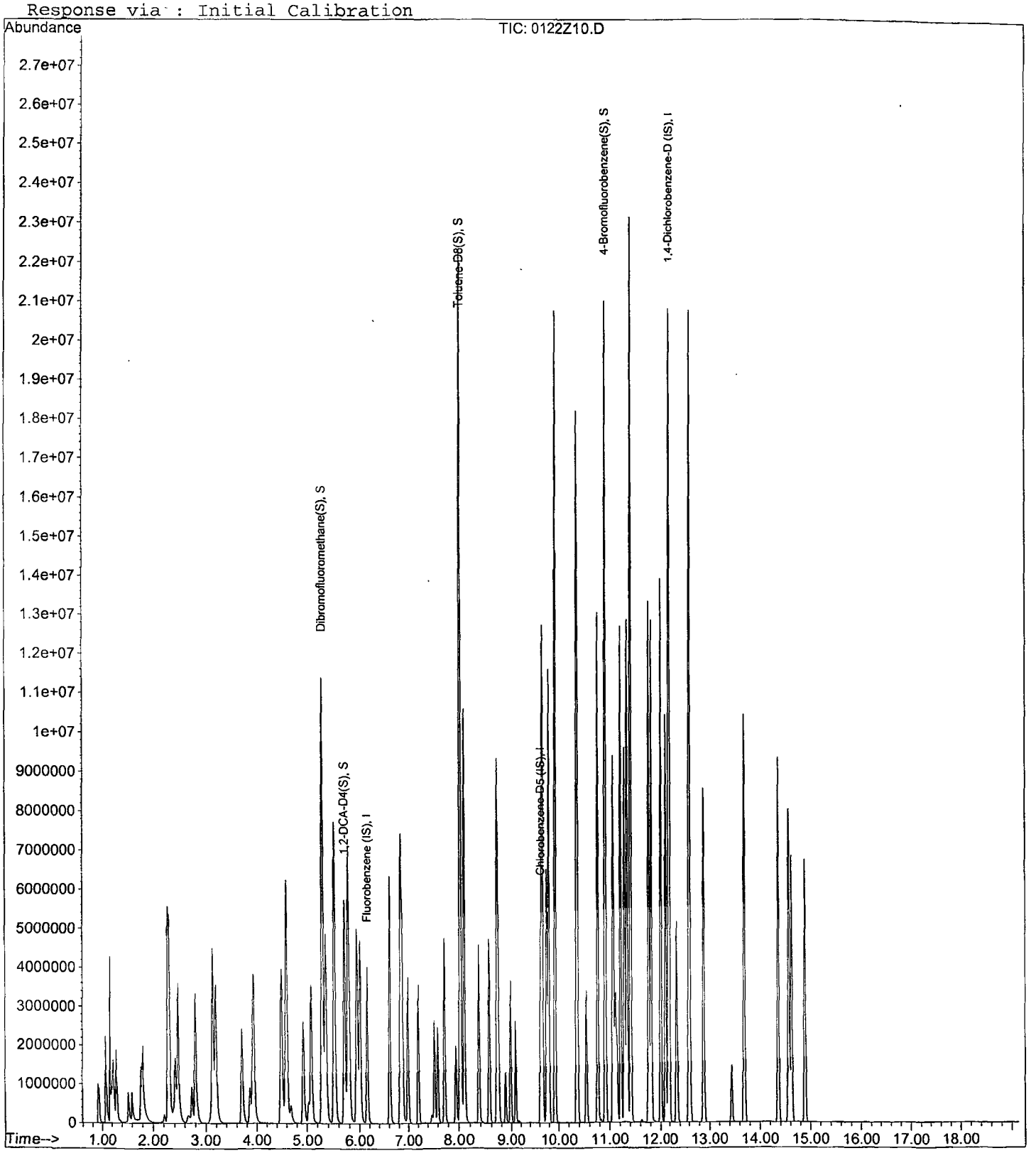
Quantitation Report

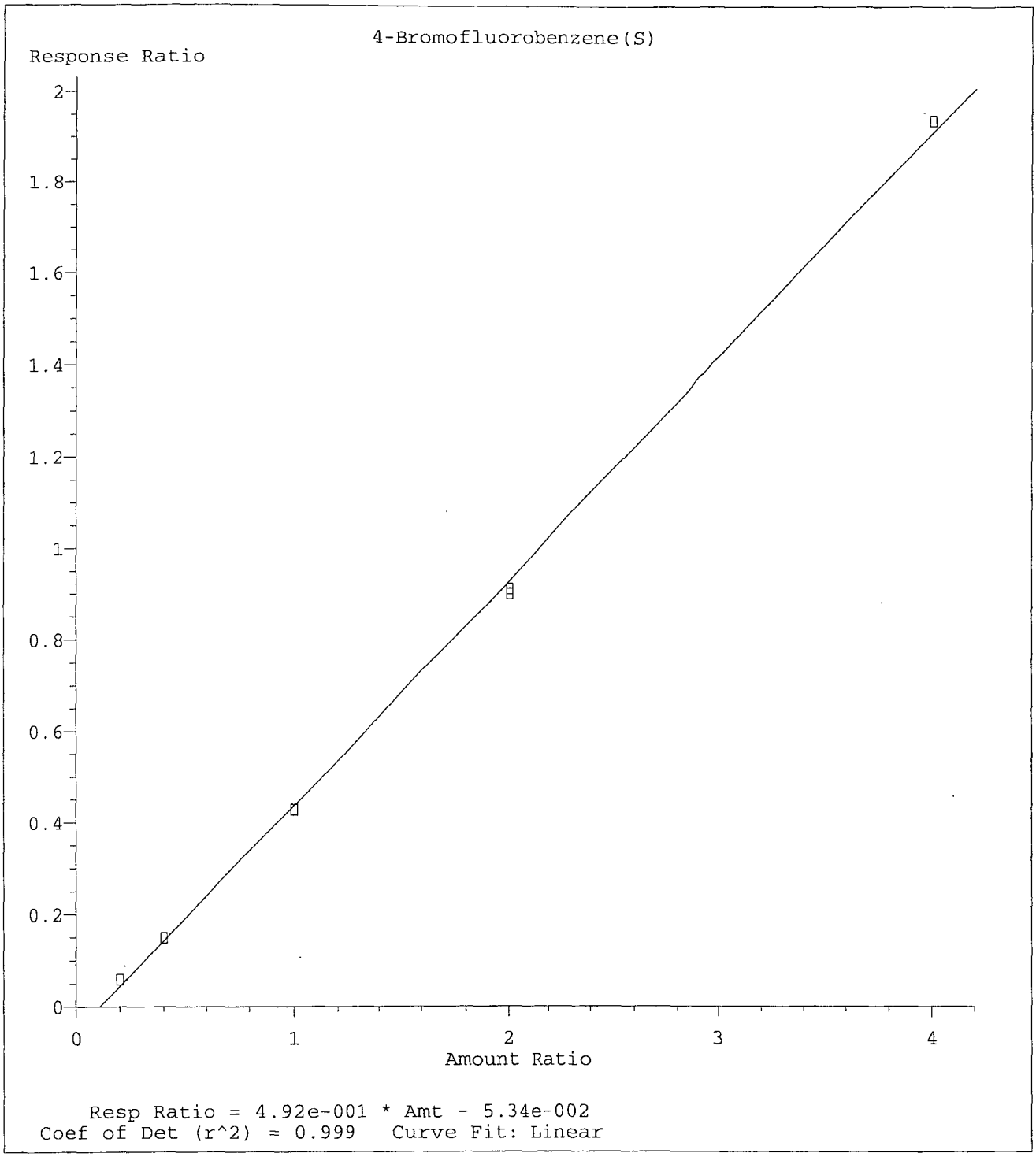
Data File : M:\ZEUS\DATA\210122\0122Z10.D
Acq On : 22 Jan 21 12:57
Sample : 100ug/L VOC STD1/22/21
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210122\Z0122SUR.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0122Z15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.467	64	TMHBL	6.5
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
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34							
35							
36							
37							
38							
39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2597	0.2770	6.7	S	
3	S	1,2-DCA-D4(S)	0.2330	0.2536	8.9	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.128	1.224	8.5	S	
6	SL	4-Bromofluorobenzene(S)	0.3982	0.4295	7.9	SL	1.8
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
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12							
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		Average			8.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z15.D Vial: 15
Acq On : 22 Jan 21 14:52 Operator: LP,DG,CH
Sample : 210122A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3590724	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5456592	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4553260	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63229426m	280.55	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z15.D Vial: 15
Acq On : 22 Jan 21 14:52 Operator: LP,DG,CH
Sample : 210122A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3757887	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2970410	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1123840	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1041055	26.67	ppb	0.00
Spiked Amount 25.000			Recovery =	106.696%		
3) 1,2-DCA-D4(S)	5.71	65	953022	27.21	ppb	0.00
Spiked Amount 25.000			Recovery =	108.852%		
5) Toluene-D8(S)	8.03	98	3634545	27.12	ppb	0.00
Spiked Amount 25.000			Recovery =	108.476%		
6) 4-Bromofluorobenzene(S)	10.92	95	1275909	24.56	ppb	0.00
Spiked Amount 25.000			Recovery =	98.244%		

Target Compounds Qvalue

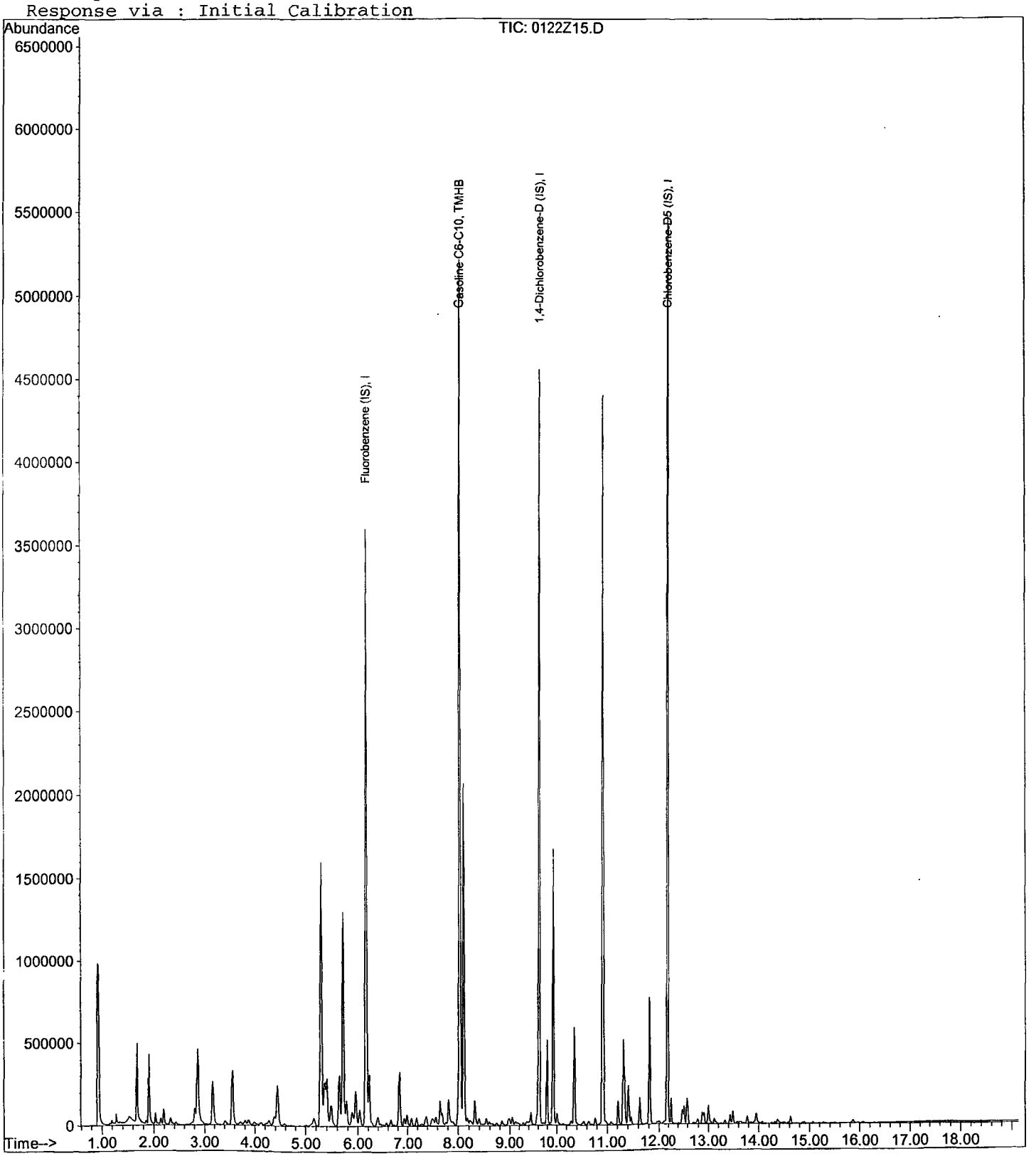
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z15.D Vial: 15
Acq On : 22 Jan 21 14:52 Operator: LP,DG,CH
Sample : 210122A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0122Z40.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.466	64	TMHBL	6.7
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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37							
38							
39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z40.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2597	0.2874	11	S	
3	S	1,2-DCA-D4(S)	0.2330	0.2627	13	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.128	1.266	12	S	
6	SL	4-Bromofluorobenzene(S)	0.3982	0.4473	12	SL	1.9
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
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39							
40							
		Average			12.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z40.D
Acq On : 23 Jan 21 00:27
Sample : Ending CCV 300ug/L 1/21/21
Misc :

Vial: 40
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3088761	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4869110	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3879433	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	54345196m	279.96 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z40.D Vial: 40
Acq On : 23 Jan 21 00:27 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3247021	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2645146	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	997056	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	933042	27.67	ppb	0.00
Spiked Amount 25.000			Recovery = 110.668%			
3) 1,2-DCA-D4(S)	5.71	65	852882	28.19	ppb	0.00
Spiked Amount 25.000			Recovery = 112.740%			
5) Toluene-D8(S)	8.03	98	3350049	28.07	ppb	0.00
Spiked Amount 25.000			Recovery = 112.280%			
6) 4-Bromofluorobenzene(S)	10.92	95	1183253	25.47	ppb	0.00
Spiked Amount 25.000			Recovery = 101.864%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

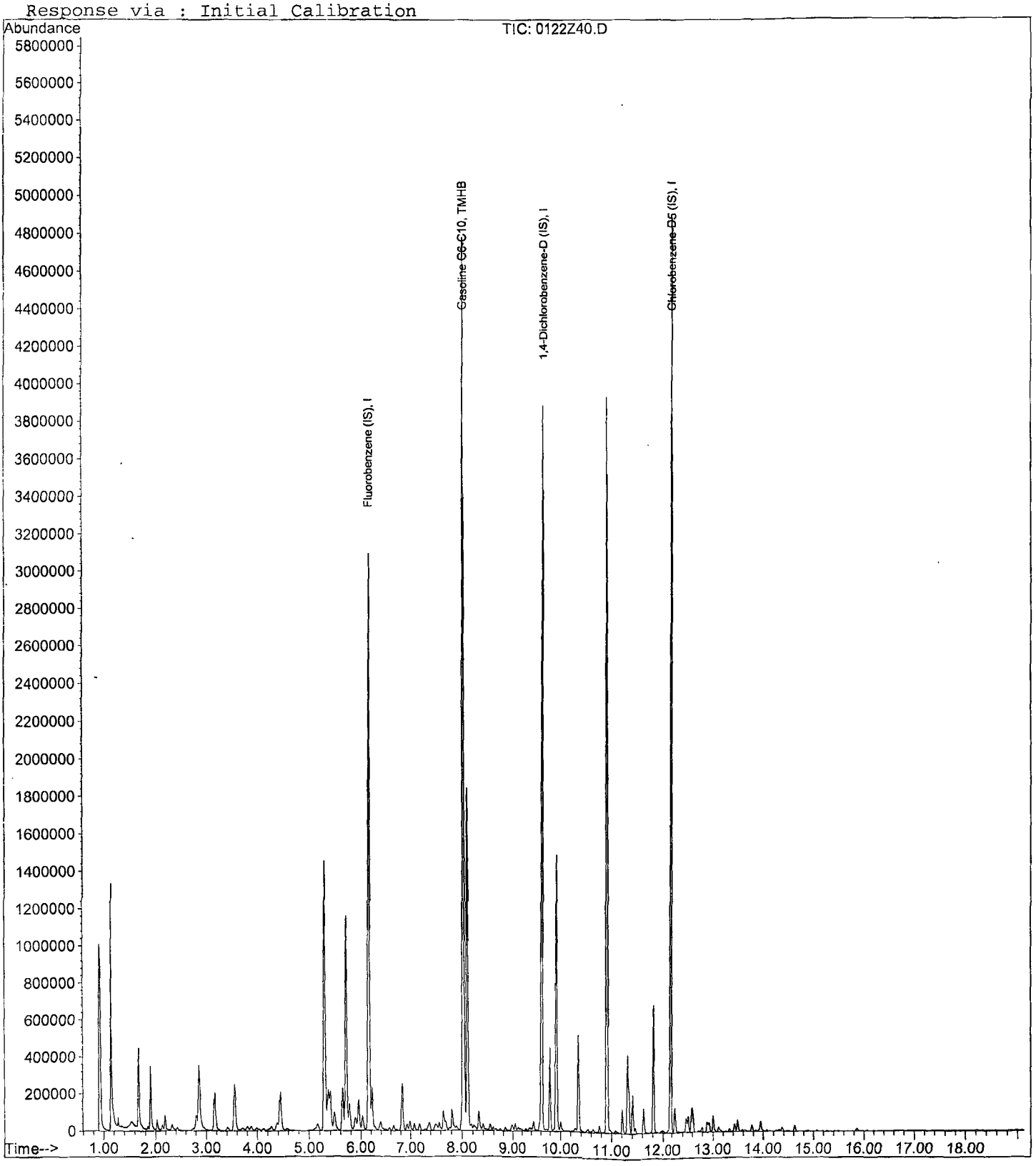
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z40.D
Acq On : 23 Jan 21 00:27
Sample : Ending CCV 300ug/L 1/21/21
Misc :

Vial: 40
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z29.D
Acq On : 22 Jan 21 20:14
Sample : BA25525W01
Misc :

Vial: 29
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3037759	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4606971	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3953151	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z29.D Vial: 29
Acq On : 22 Jan 21 20:14 Operator: LP,DG,CH
Sample : BA25525W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3160440	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2615025	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	947328	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	923446	28.13	ppb	0.00
Spiked Amount 25.000			Recovery =	112.532%		
3) 1,2-DCA-D4(S)	5.71	65	847432	28.77	ppb	0.00
Spiked Amount 25.000			Recovery =	115.092%		
5) Toluene-D8(S)	8.03	98	3238301	27.45	ppb	0.00
Spiked Amount 25.000			Recovery =	109.784%		
6) 4-Bromofluorobenzene(S)	10.91	95	1130551	24.70	ppb	0.00
Spiked Amount 25.000			Recovery =	98.812%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

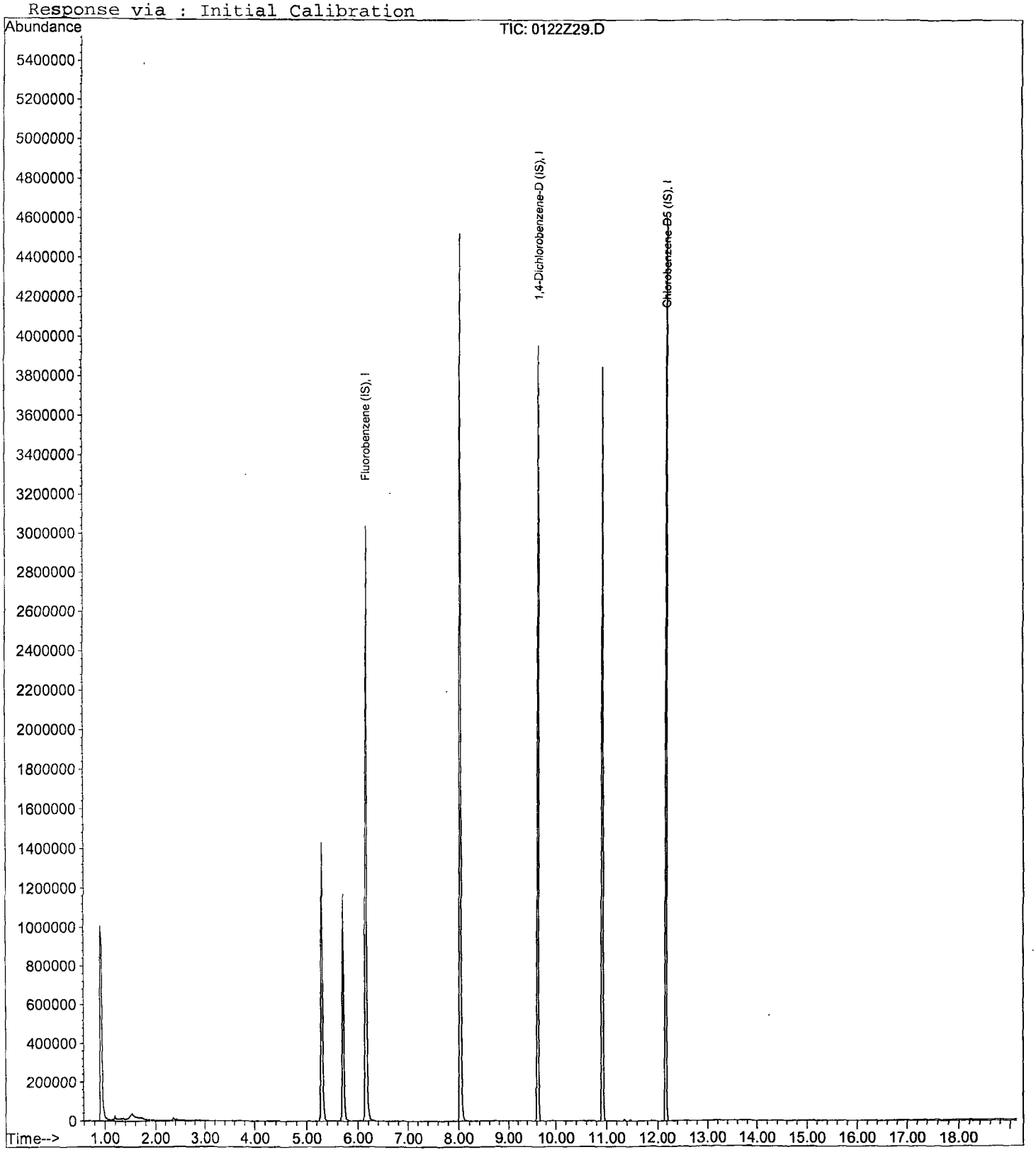
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z29.D
Acq On : 22 Jan 21 20:14
Sample : BA25525W01
Misc :

Vial: 29
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z30.D Vial: 30
Acq On : 22 Jan 21 20:37 Operator: LP,DG,CH
Sample : BA25526W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3090753	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4920307	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3985456	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z30.D Vial: 30
Acq On : 22 Jan 21 20:37 Operator: LP,DG,CH
Sample : BA25526W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3253071	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2665459	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1018752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	911559	26.98	ppb	0.00
Spiked Amount 25.000			Recovery =	107.920%		
3) 1,2-DCA-D4(S)	5.71	65	848826	28.00	ppb	0.00
Spiked Amount 25.000			Recovery =	111.996%		
5) Toluene-D8(S)	8.03	98	3259121	27.10	ppb	0.00
Spiked Amount 25.000			Recovery =	108.400%		
6) 4-Bromofluorobenzene(S)	10.91	95	1134531	24.36	ppb	0.00
Spiked Amount 25.000			Recovery =	97.452%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

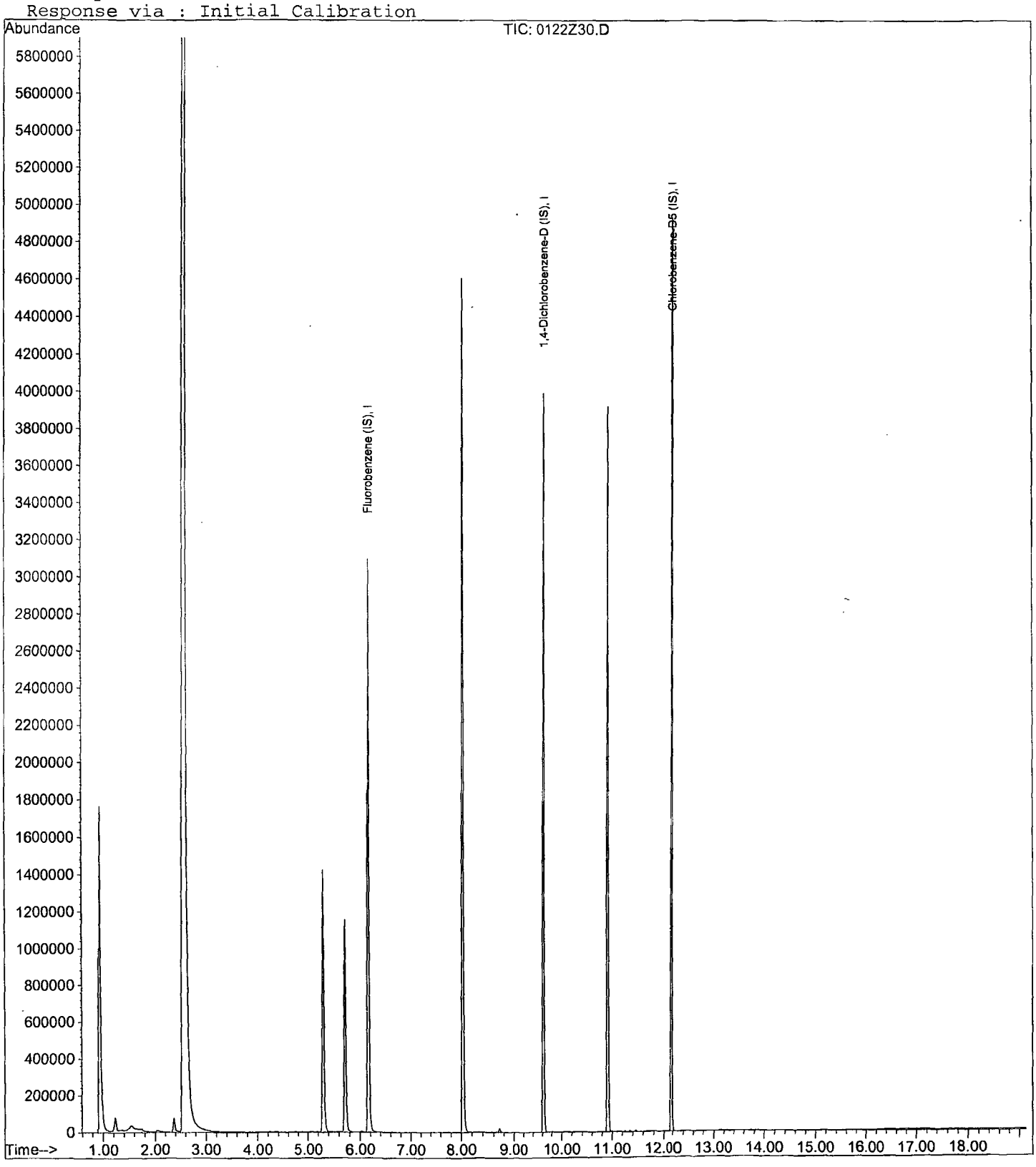
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z30.D
Acq On : 22 Jan 21 20:37
Sample : BA25526W01
Misc :

Vial: 30
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z18.D Vial: 18
Acq On : 22 Jan 21 16:01 Operator: LP,DG,CH
Sample : 210122A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3395936	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5289310	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4303588	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z18.D Vial: 18
Acq On : 22 Jan 21 16:01 Operator: LP,DG,CH
Sample : 210122A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3518019	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2841691	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1093120	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1006633	27.55	ppb	0.00
Spiked Amount 25.000			Recovery =	110.200%		
3) 1,2-DCA-D4(S)	5.71	65	926393	28.26	ppb	0.00
Spiked Amount 25.000			Recovery =	113.024%		
5) Toluene-D8(S)	8.03	98	3421154	26.68	ppb	0.00
Spiked Amount 25.000			Recovery =	106.732%		
6) 4-Bromofluorobenzene(S)	10.91	95	1205013	24.28	ppb	0.00
Spiked Amount 25.000			Recovery =	97.128%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

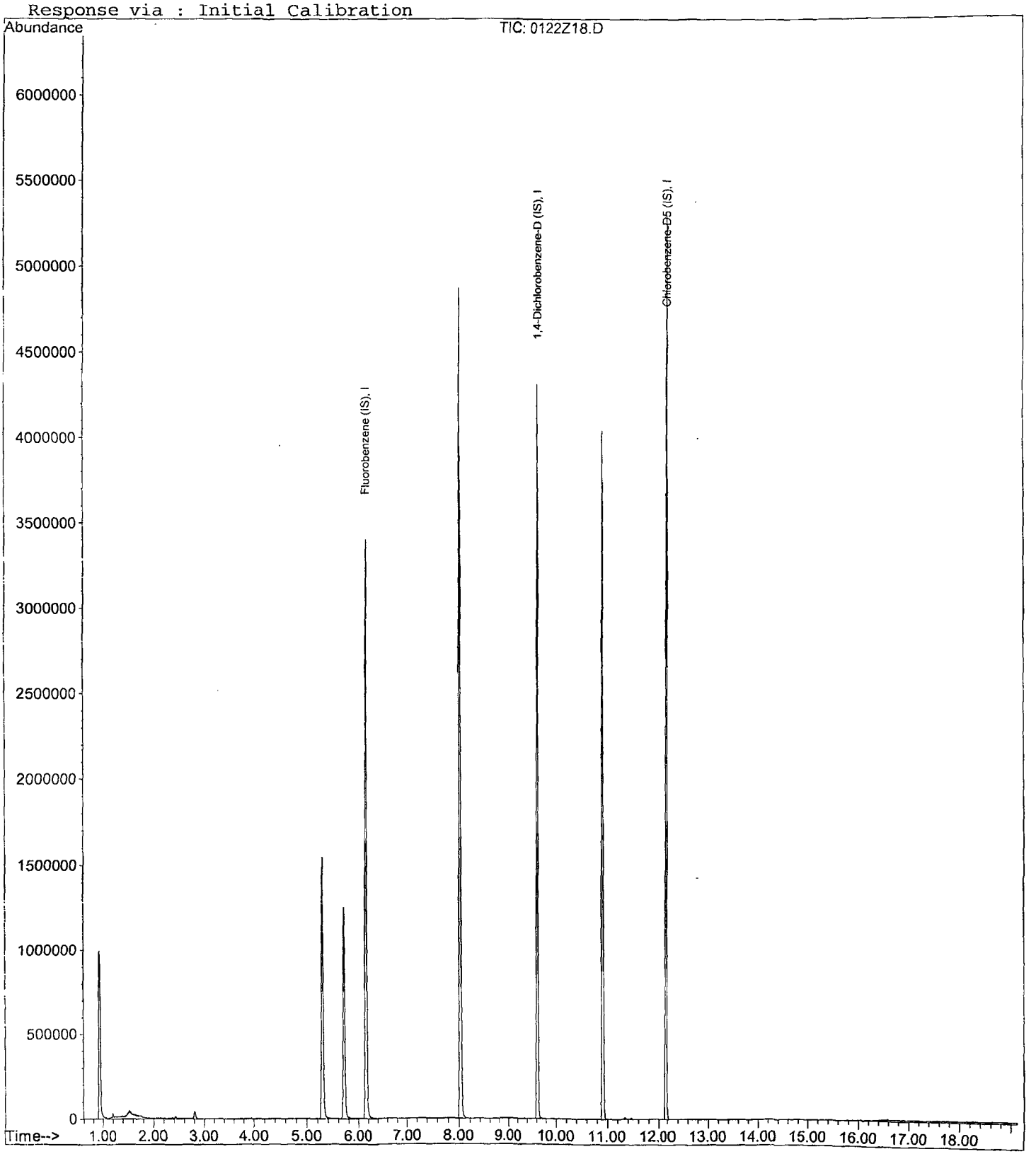
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z18.D
Acq On : 22 Jan 21 16:01
Sample : 210122A BLK
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z16.D
Acq On : 22 Jan 21 15:15
Sample : 210122A LCS 300ug/L
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3564146	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5466822	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4604554	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	61665371m	268.22	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z16.D Vial: 16
Acq On : 22 Jan 21 15:15 Operator: LP,DG,CH
Sample : 210122A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3712051	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2966155	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1121792	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1036658	26.89	ppb	0.00
Spiked Amount 25.000			Recovery = 107.556%			
3) 1,2-DCA-D4(S)	5.71	65	961988	27.81	ppb	0.00
Spiked Amount 25.000			Recovery = 111.232%			
5) Toluene-D8(S)	8.03	98	3607853	26.96	ppb	0.00
Spiked Amount 25.000			Recovery = 107.832%			
6) 4-Bromofluorobenzene(S)	10.91	95	1274755	24.57	ppb	0.00
Spiked Amount 25.000			Recovery = 98.292%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

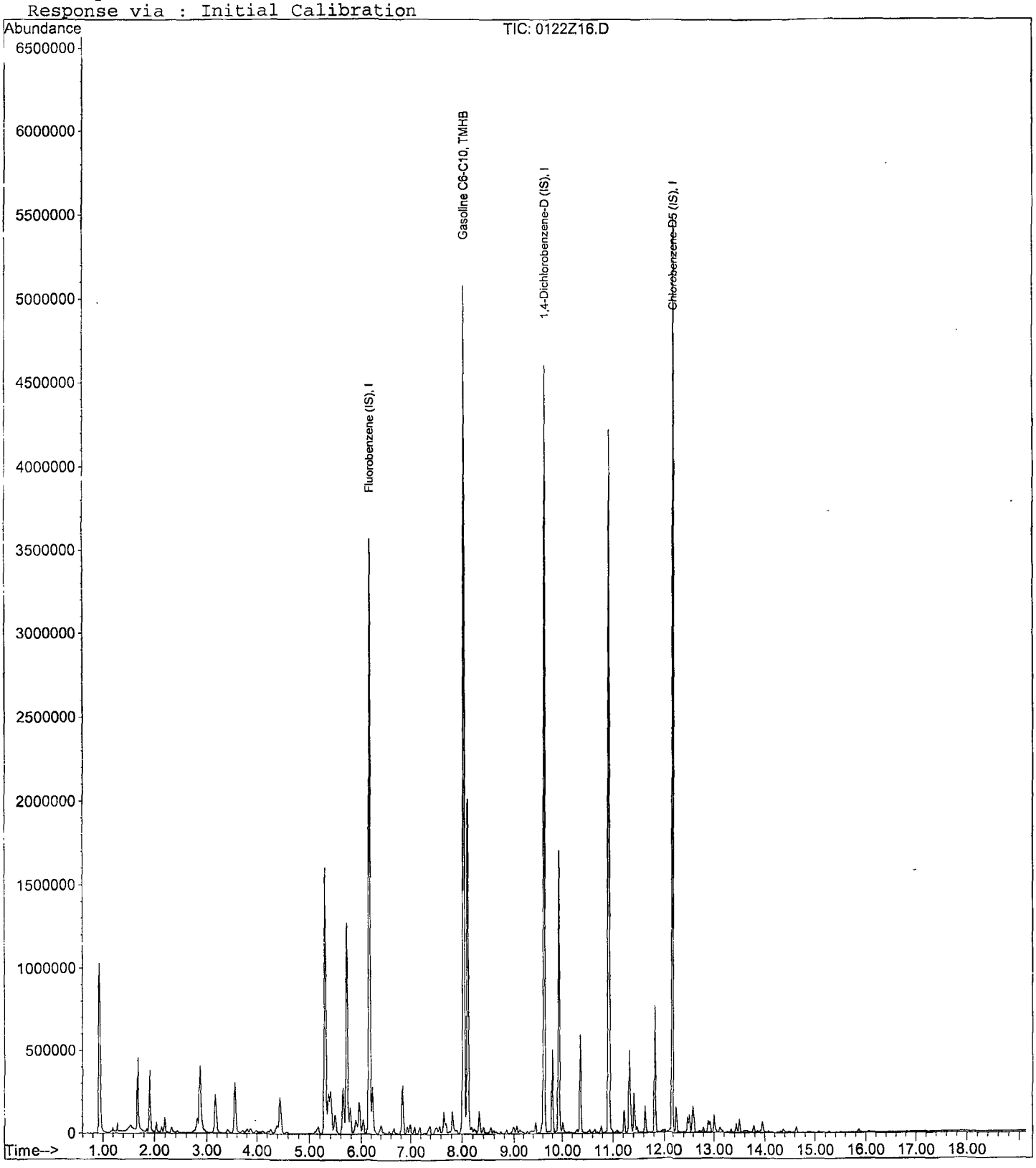
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z16.D
Acq On : 22 Jan 21 15:15
Sample : 210122A LCS 300ug/L
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z17.D Vial: 17
Acq On : 22 Jan 21 15:38 Operator: LP,DG,CH
Sample : 210122A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3543897	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5251076	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4396710	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	62638843m	283.20	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z17.D Vial: 17
Acq On : 22 Jan 21 15:38 Operator: LP,DG,CH
Sample : 210122A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3687656	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2923410	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1098752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1020510	26.65	ppb	0.00
Spiked Amount 25.000			Recovery =	106.580%		
3) 1,2-DCA-D4(S)	5.71	65	944805	27.49	ppb	0.00
Spiked Amount 25.000			Recovery =	109.968%		
5) Toluene-D8(S)	8.03	98	3550564	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.672%		
6) 4-Bromofluorobenzene(S)	10.92	95	1254783	24.55	ppb	0.00
Spiked Amount 25.000			Recovery =	98.180%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

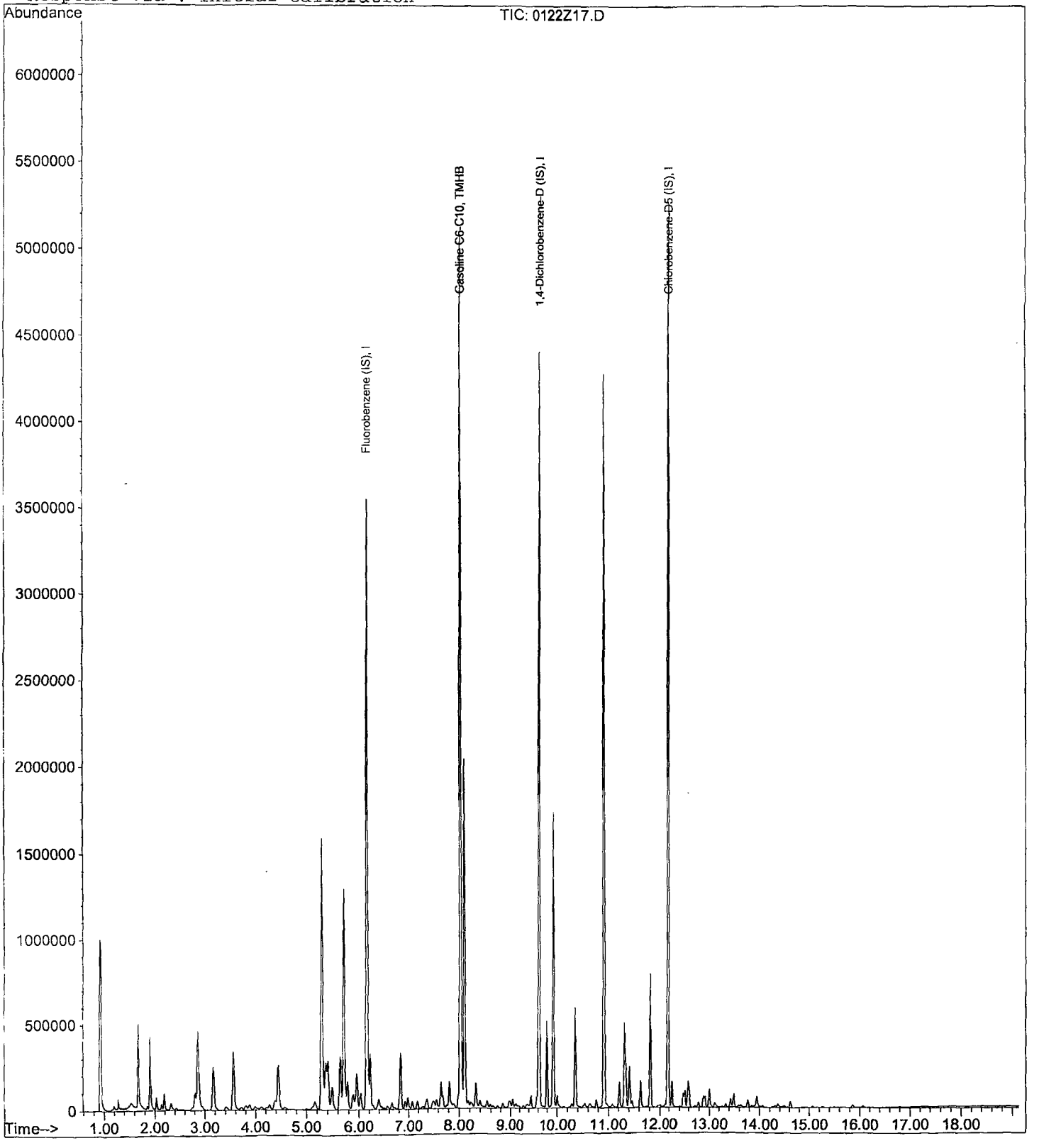
Data File : M:\ZEUS\DATA\210122\0122Z17.D
Acq On : 22 Jan 21 15:38
Sample : 210122A LCSD 300ug/L
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:14 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Zeus Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 — **Prepared By (Initials):** CH

Expires: 01/04/22

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 — **Prepared By (Initials):** CH

Expires: 01/31/30

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

Zeus Gas Calibration Curve

Prepared: 01/04/21 — **Prepared By (Initials):** CH

Expires: 03/05/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/04/21 — **Prepared By (Initials):** CH

Expires: 03/05/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

Zeus Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/04/21 — **Prepared By (Initials):** CH

Expires: 01/05/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\ZEUS\DATA\210104\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	13	0104Z13.D	1	20ug/L GAS STD 1/4/20		04 Jan 21 20:33
2	14	0104Z14.D	1	50ug/L GAS STD 1/4/20		04 Jan 21 20:56
3	15	0104Z15.D	1	100ug/L GAS STD 1/4/20		04 Jan 21 21:19
4	16	0104Z16.D	1	300ug/L GAS STD 1/4/20		04 Jan 21 21:42
5	17	0104Z17.D	1	600ug/L GAS STD 1/4/20		04 Jan 21 22:04
6	18	0104Z18.D	1	800ug/L GAS STD 1/4/20		04 Jan 21 22:27
7	19	0104Z19.D	1	1000ug/L GAS STD 1/4/20		04 Jan 21 22:50
8	21	0104Z21.D	1	(SS) 300ug/L GAS STD 1/4/20		04 Jan 21 23:36
9	2	0122Z02.D	1	0.3ug/L VOC STD1/22/21		22 Jan 21 09:53
10	3	0122Z03.D	1	0.5ug/L VOC STD1/22/21		22 Jan 21 10:16
11	4	0122Z04.D	1	1ug/L VOC STD1/22/21		22 Jan 21 10:39
12	5	0122Z05.D	1	2ug/L VOC STD1/22/21		22 Jan 21 11:02
13	6	0122Z06.D	1	5ug/L VOC STD1/22/21		22 Jan 21 11:25
14	7	0122Z07.D	1	10ug/L VOC STD1/22/21		22 Jan 21 11:48
15	8	0122Z08.D	1	20ug/L VOC STD1/22/21		22 Jan 21 12:11
16	9	0122Z09.D	1	40ug/L VOC STD1/22/21		22 Jan 21 12:34
17	10	0122Z10.D	1	100ug/L VOC STD1/22/21		22 Jan 21 12:57
18	15	0122Z15.D	1	210122A CCV 300ug/L		22 Jan 21 14:52
19	16	0122Z16.D	1	210122A LCS 300ug/L		22 Jan 21 15:15
20	17	0122Z17.D	1	210122A LCSD 300ug/L		22 Jan 21 15:38
21	18	0122Z18.D	1	210122A BLK		22 Jan 21 16:01
22	29	0122Z29.D	1	BA25525W01		22 Jan 21 20:14
23	30	0122Z30.D	1	BA25526W01		22 Jan 21 20:37
24	40	0122Z40.D	1	Ending CCV 300ug/L 1/21/21		23 Jan 21 00:27

ORGANICS

Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/14/20
Matrix: Instrument: 7890

Initials: CD

			0914R07.D	0914R08.D	0914R09.D	0914R10.D	0914R11.D	0914R12.D	0914R13.D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
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0.696467

Quantitation Report (Not Reviewed)

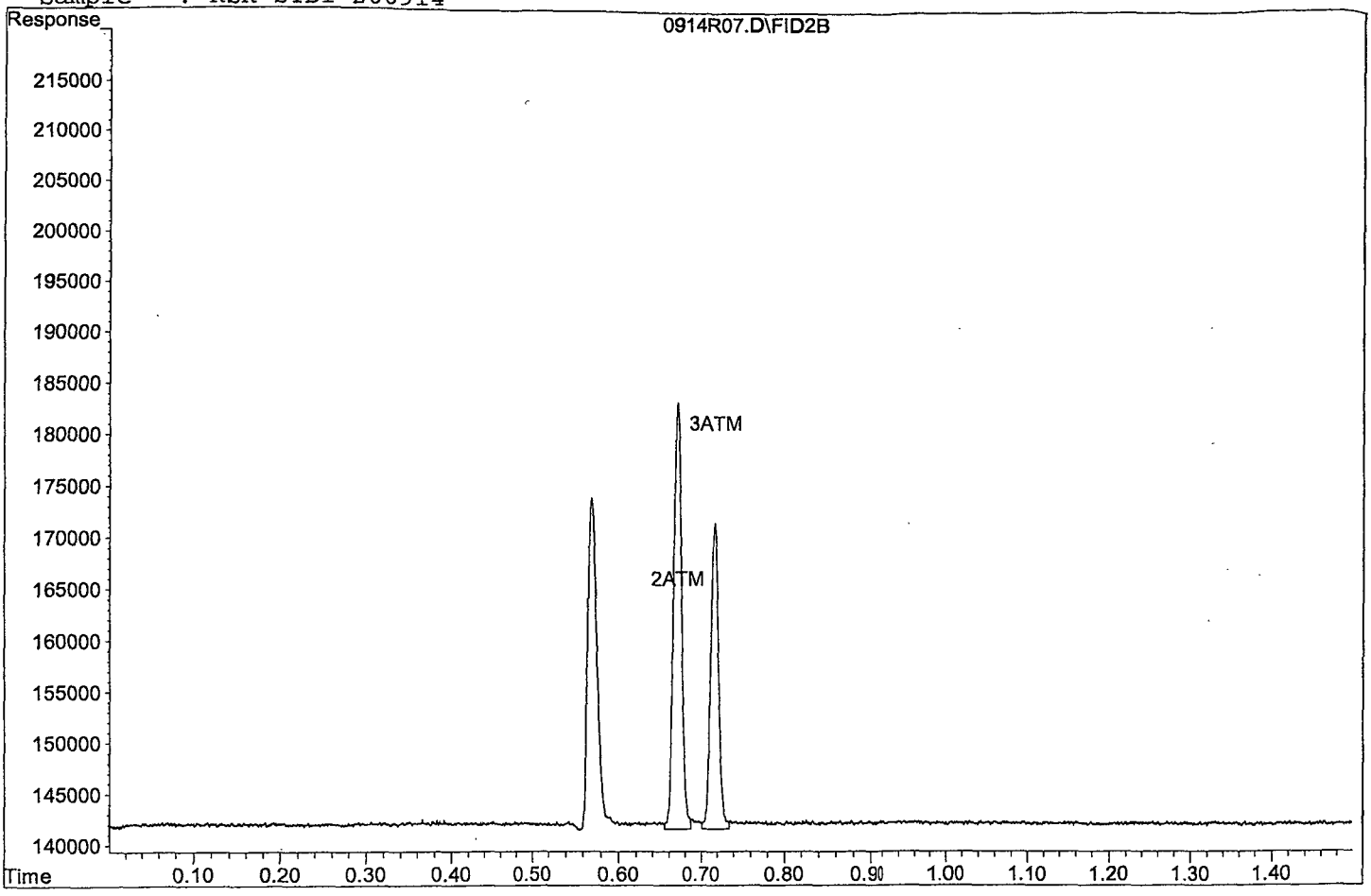
Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	41762	102628.492 ppb
3) ATM Ethene	0.72	29966	4.139 ppb
Target Compounds			
1) ATM Methane	0.57	32423	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

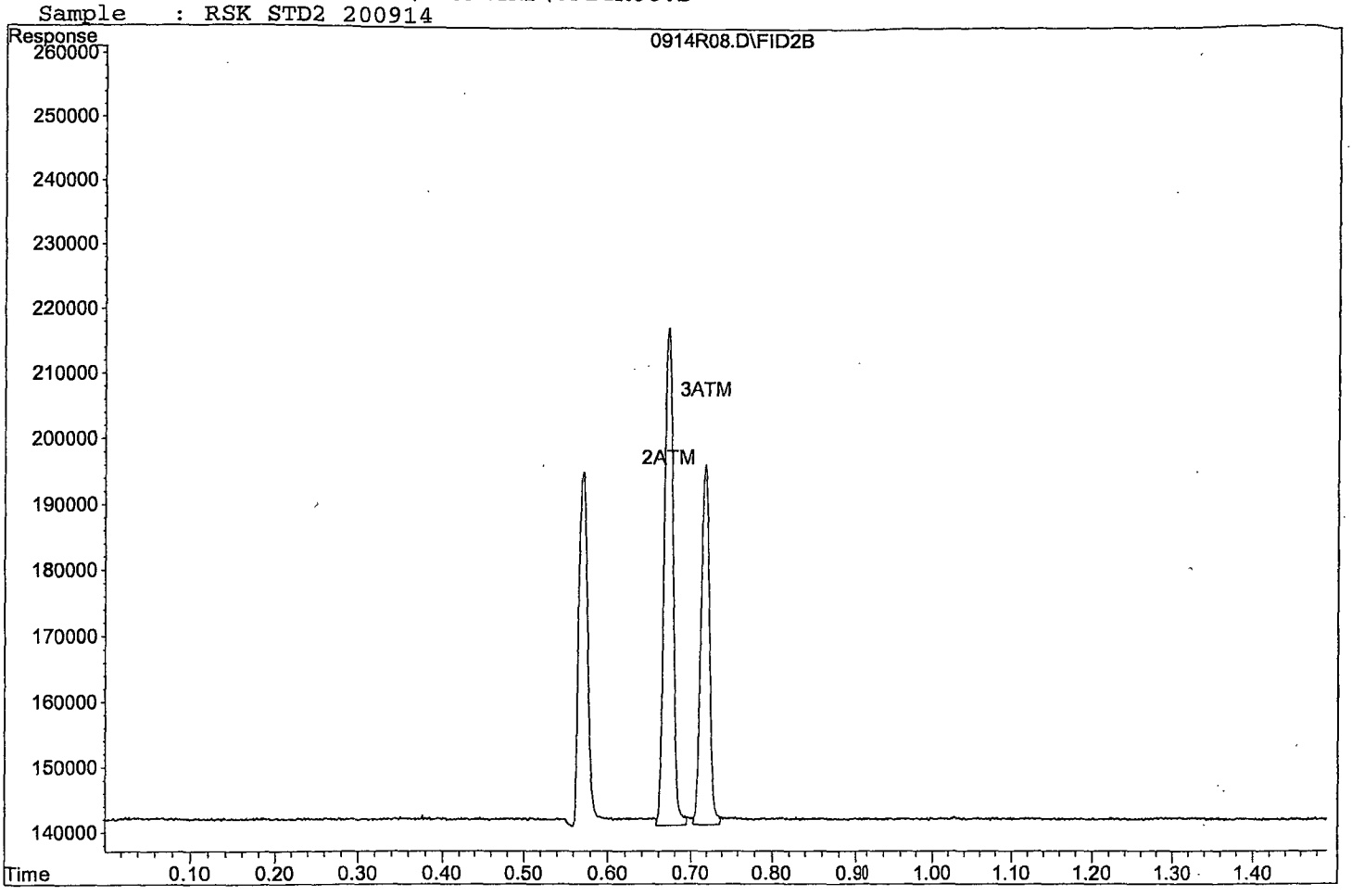
Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	76271	190289.144 ppb
3) ATM Ethene	0.72	54983	7.686 ppb
Target Compounds			
1) ATM Methane	0.57	54196	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

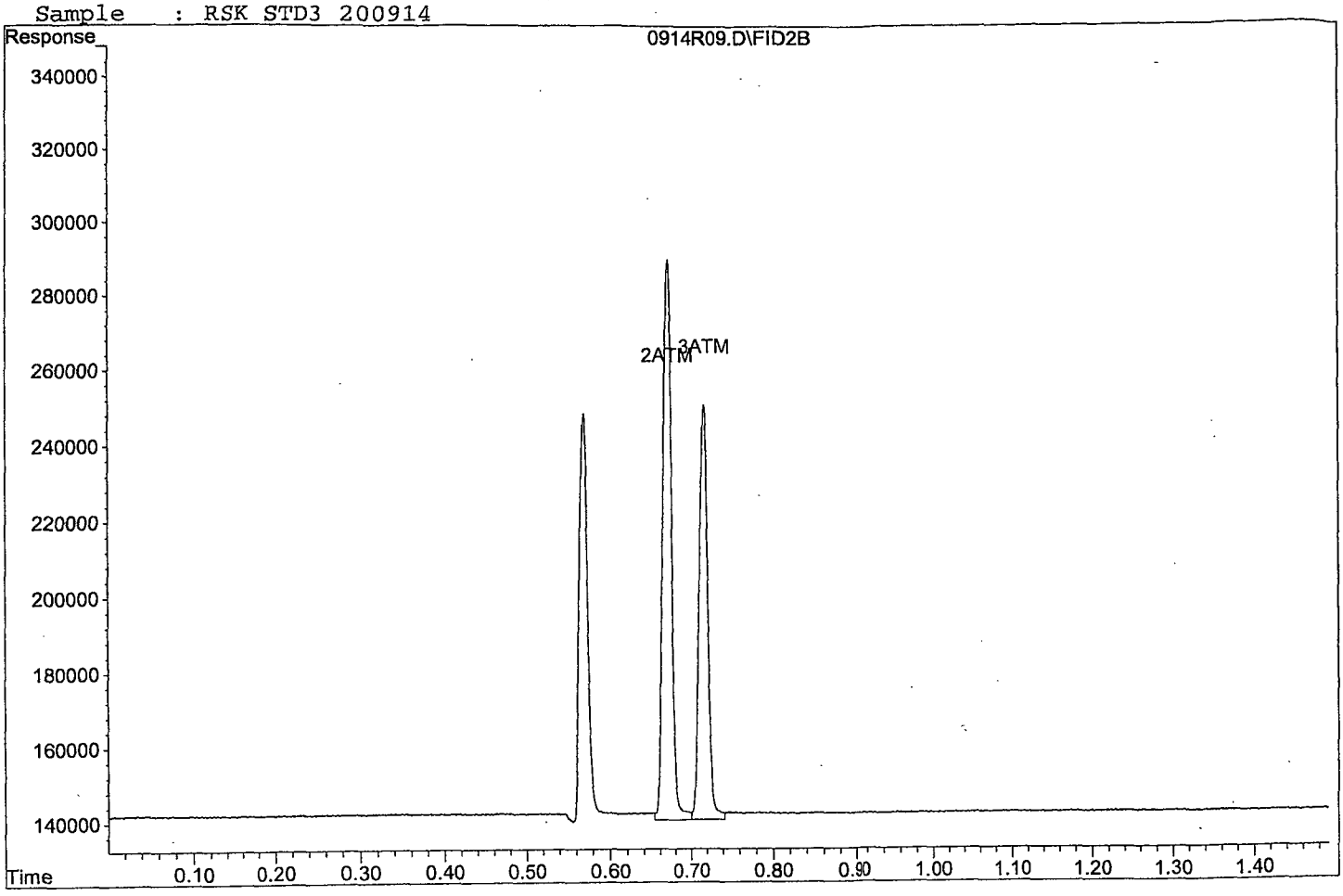
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

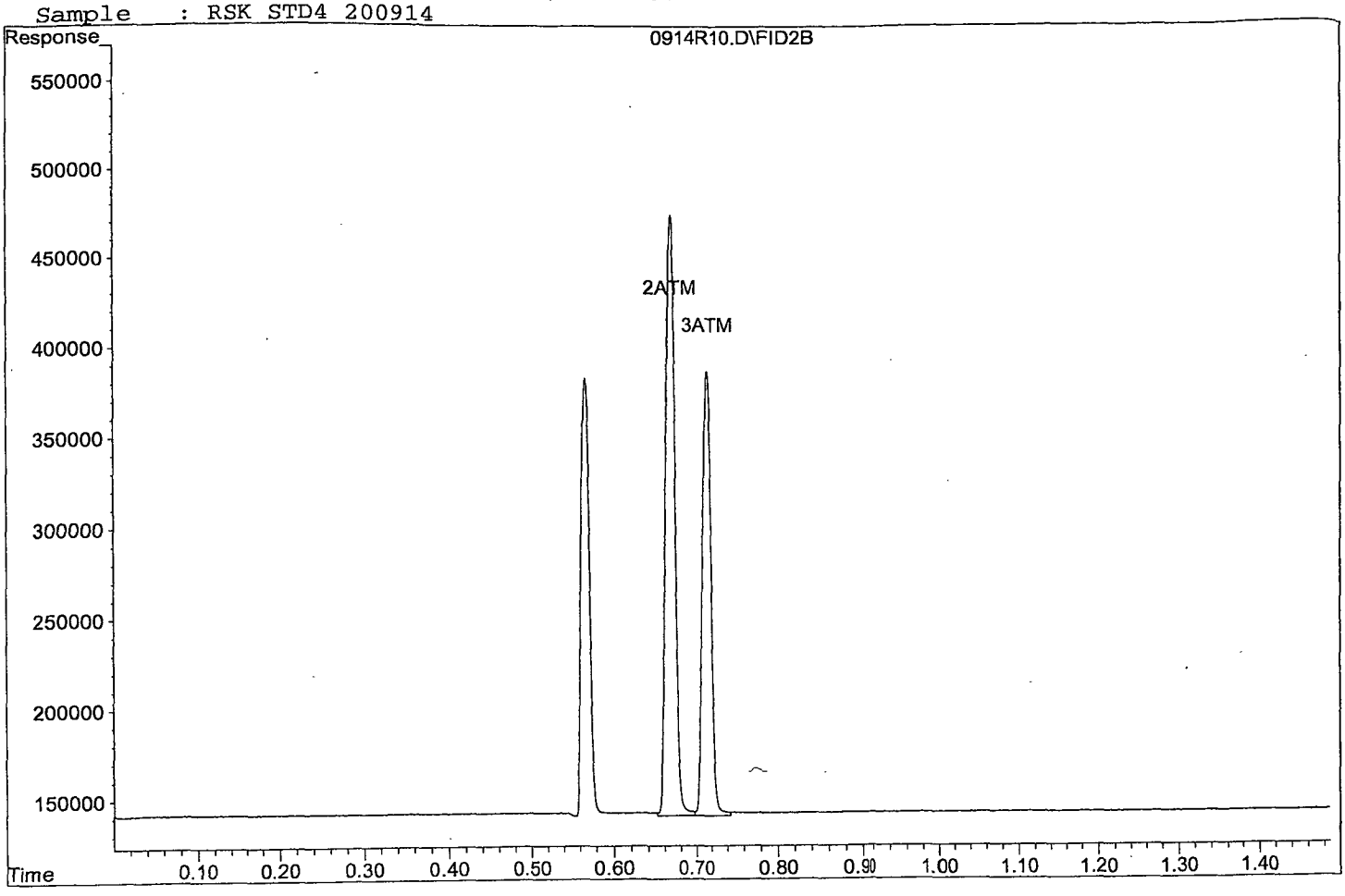
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	333873	844667.853 ppb
3) ATM Ethene	0.71	246286	34.810 ppb
Target Compounds			
1) ATM Methane	0.57	242197	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

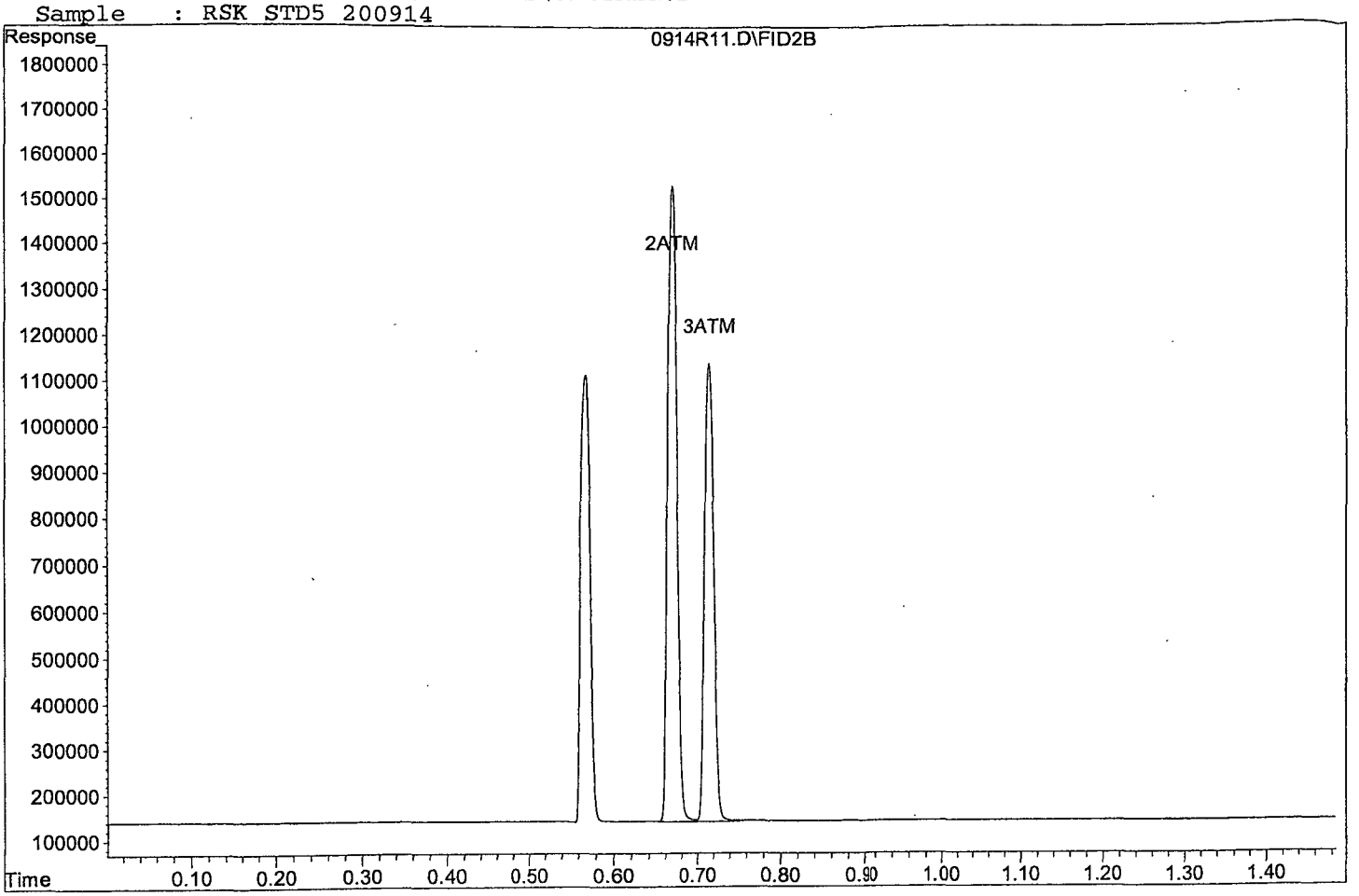
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	1392673	3534302.847 ppb
3) ATM Ethene	0.71	999836	141.654 ppb
Target Compounds			
1) ATM Methane	0.57	973152	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

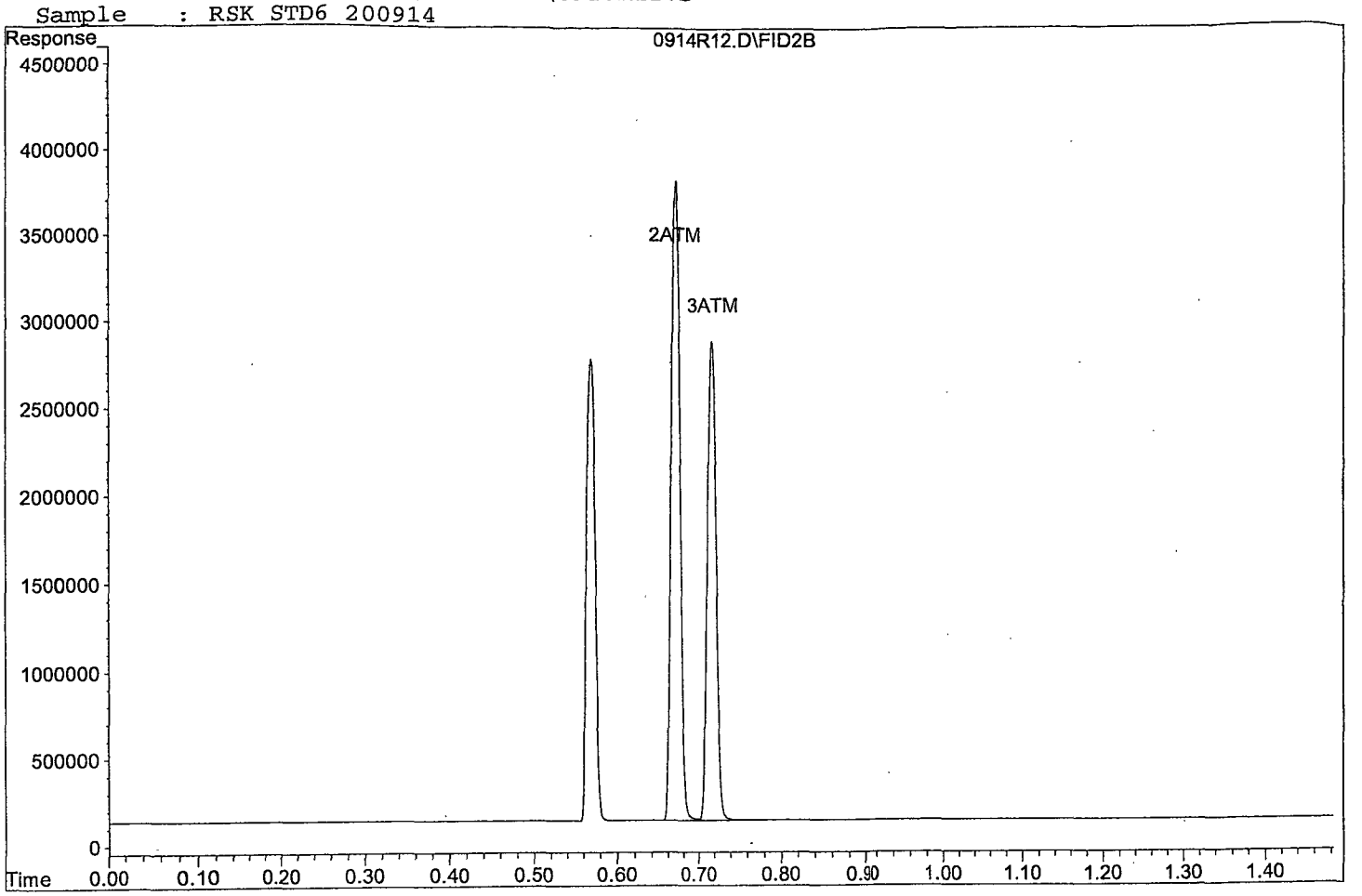
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

(f)=RT Delta > 1/2 Window

(m)=manual int.
0914R12.D RSK0914A.M Mon Sep 14 12:51:49 2020

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

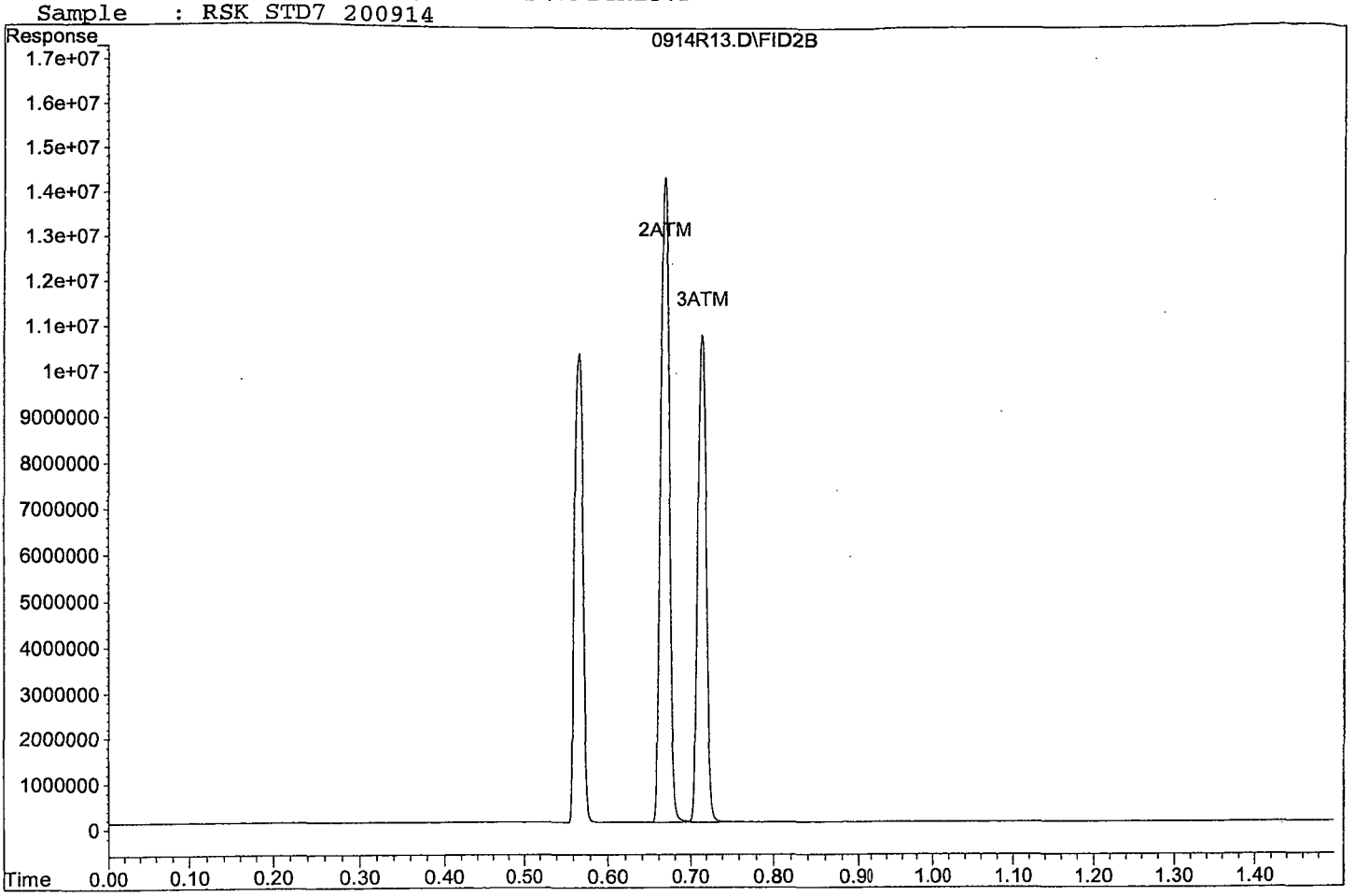
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

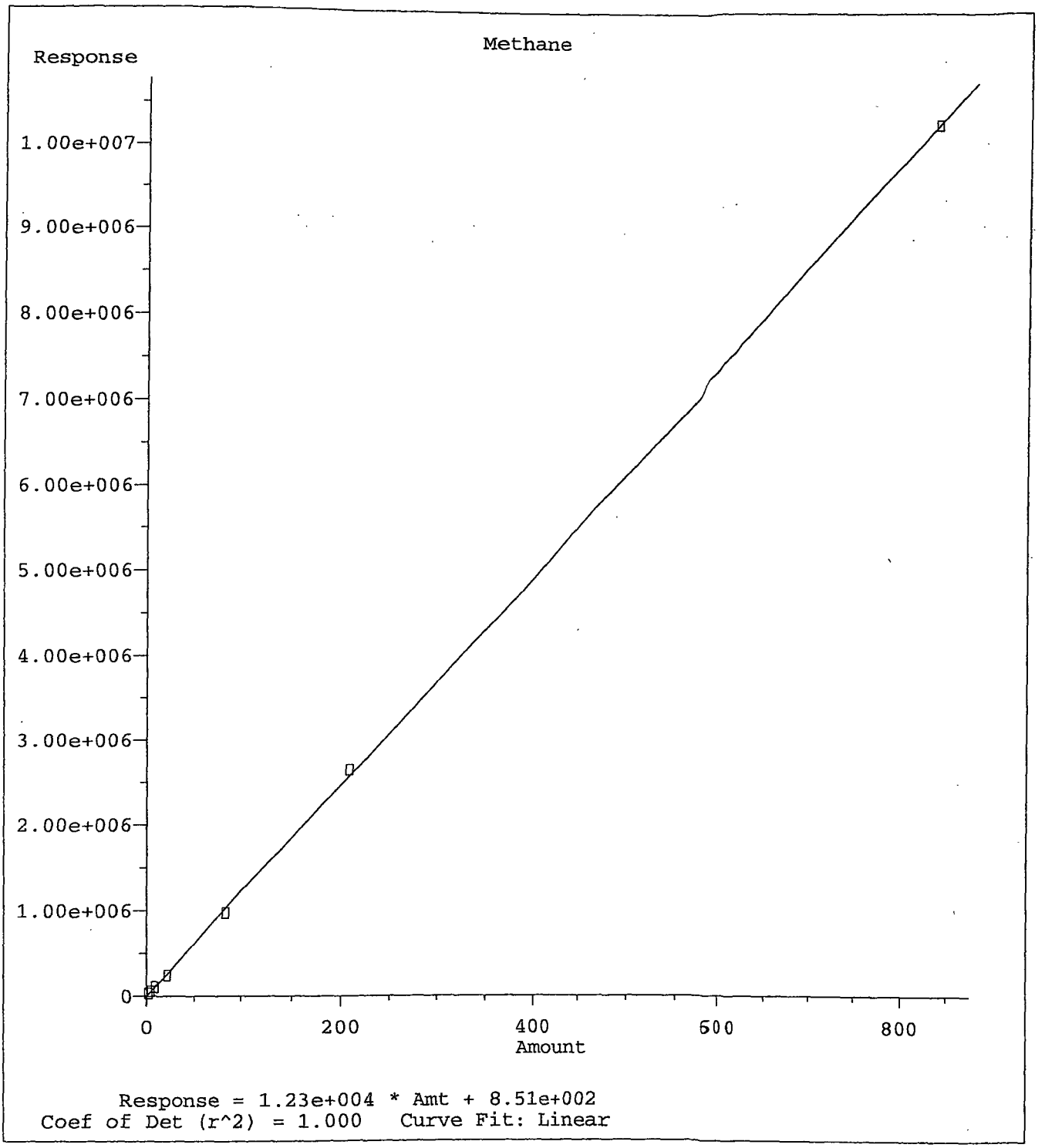
Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	3616 8407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

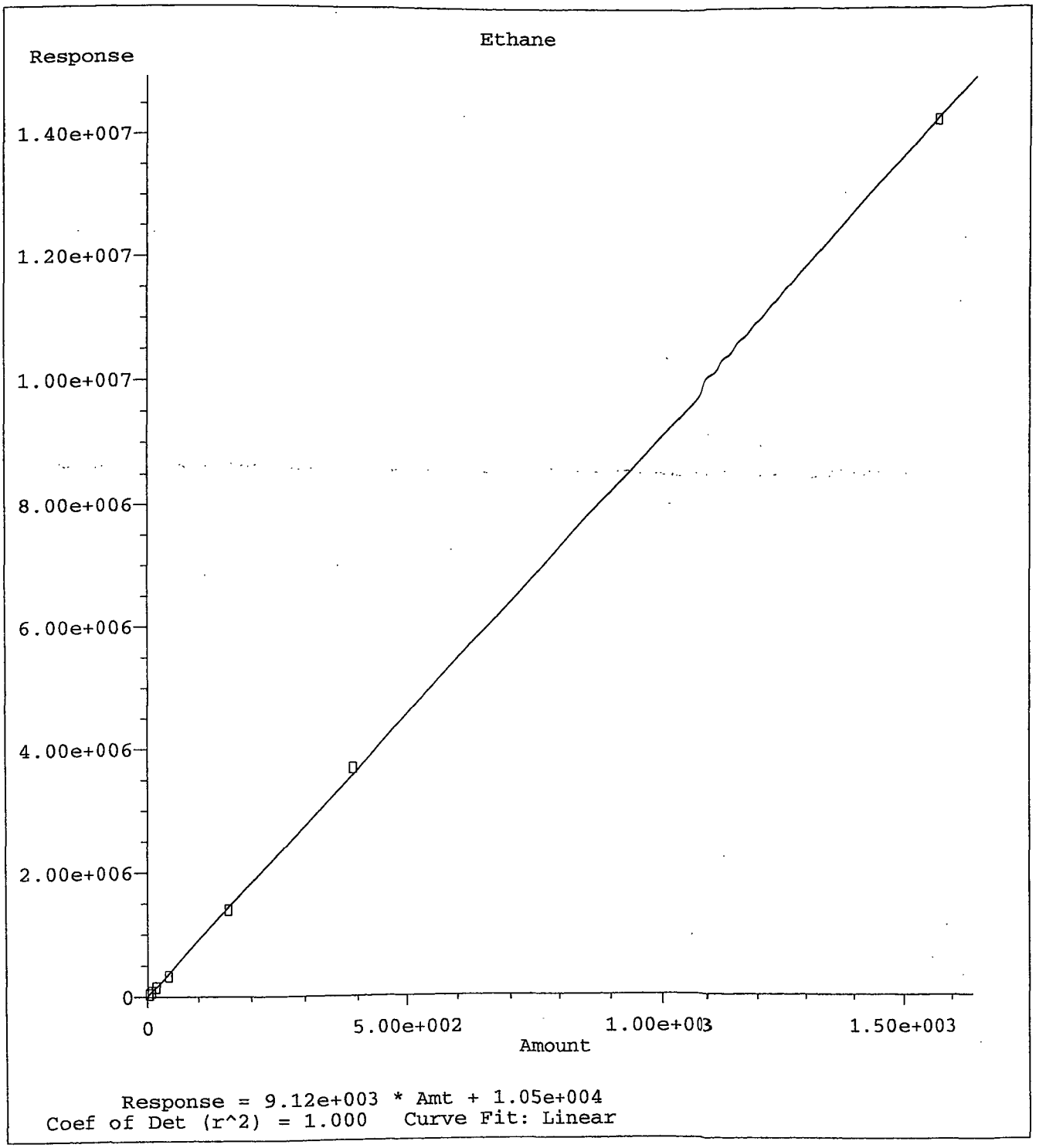
Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

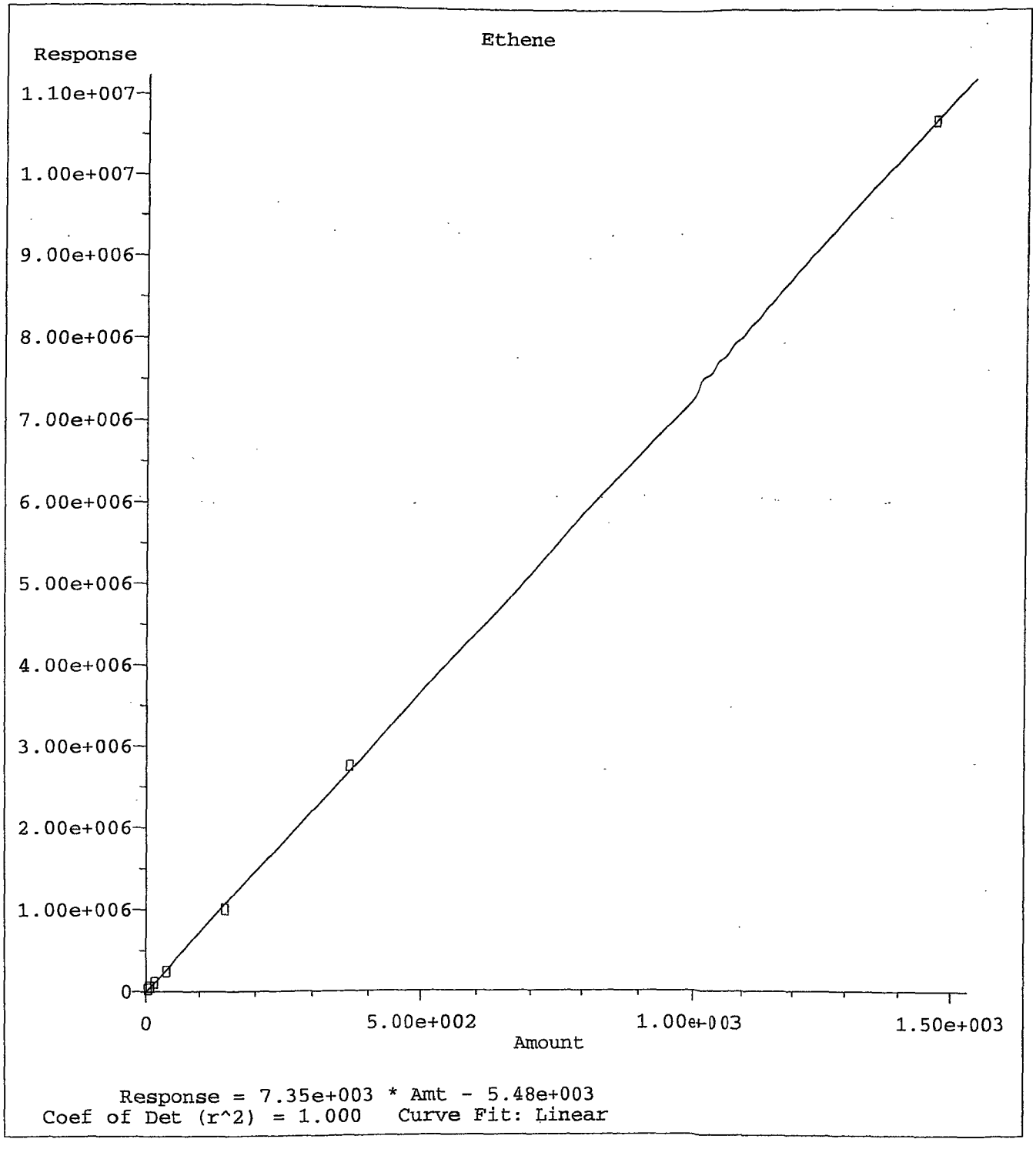




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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19							
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22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

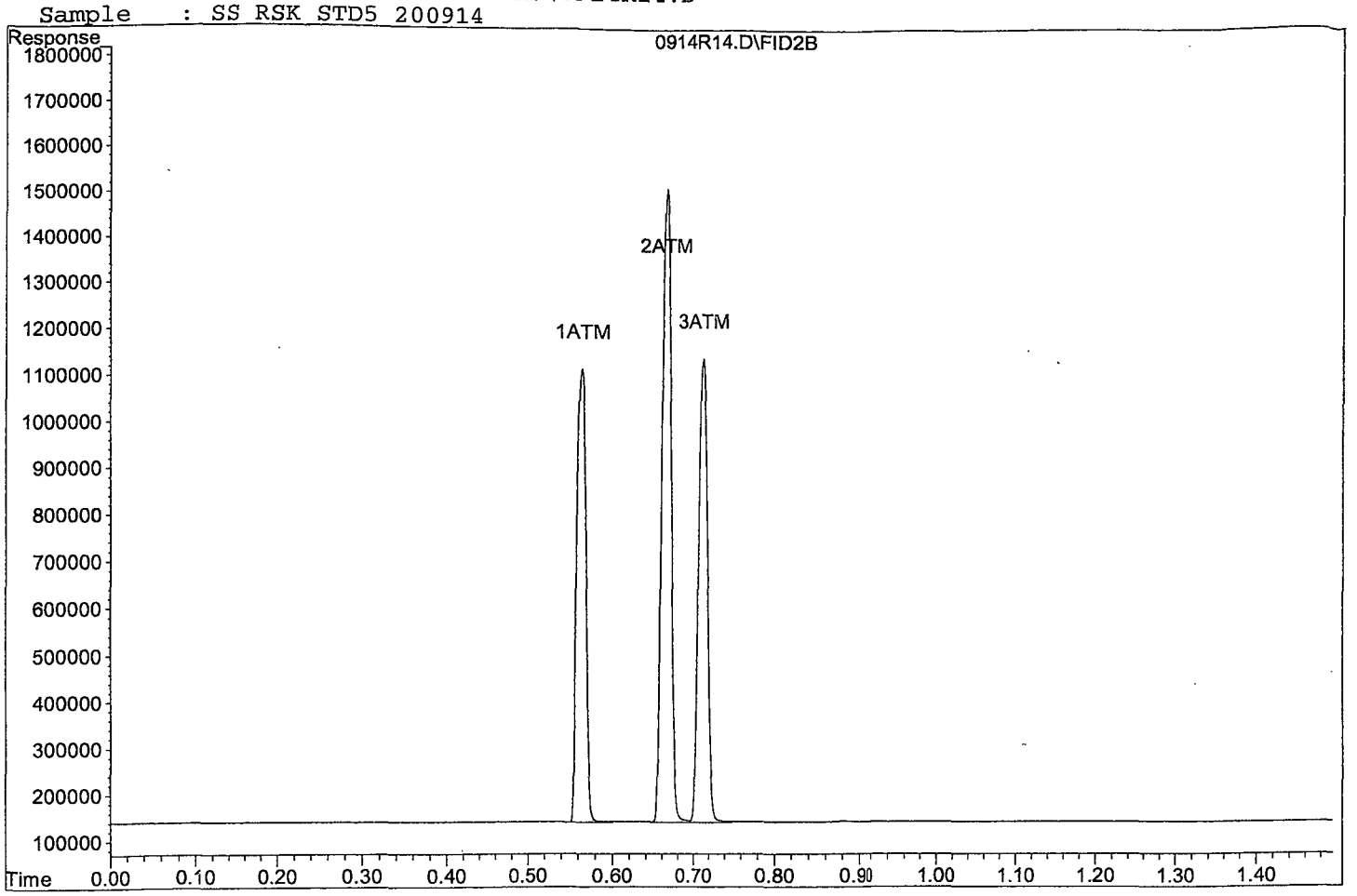
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R02.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	21901	15	ATML	11
2	ATML	Ethane	18863	17262	8.5	ATML	6.0
3	ATML	Ethene	14798	14487	2.1	ATML	0.99
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

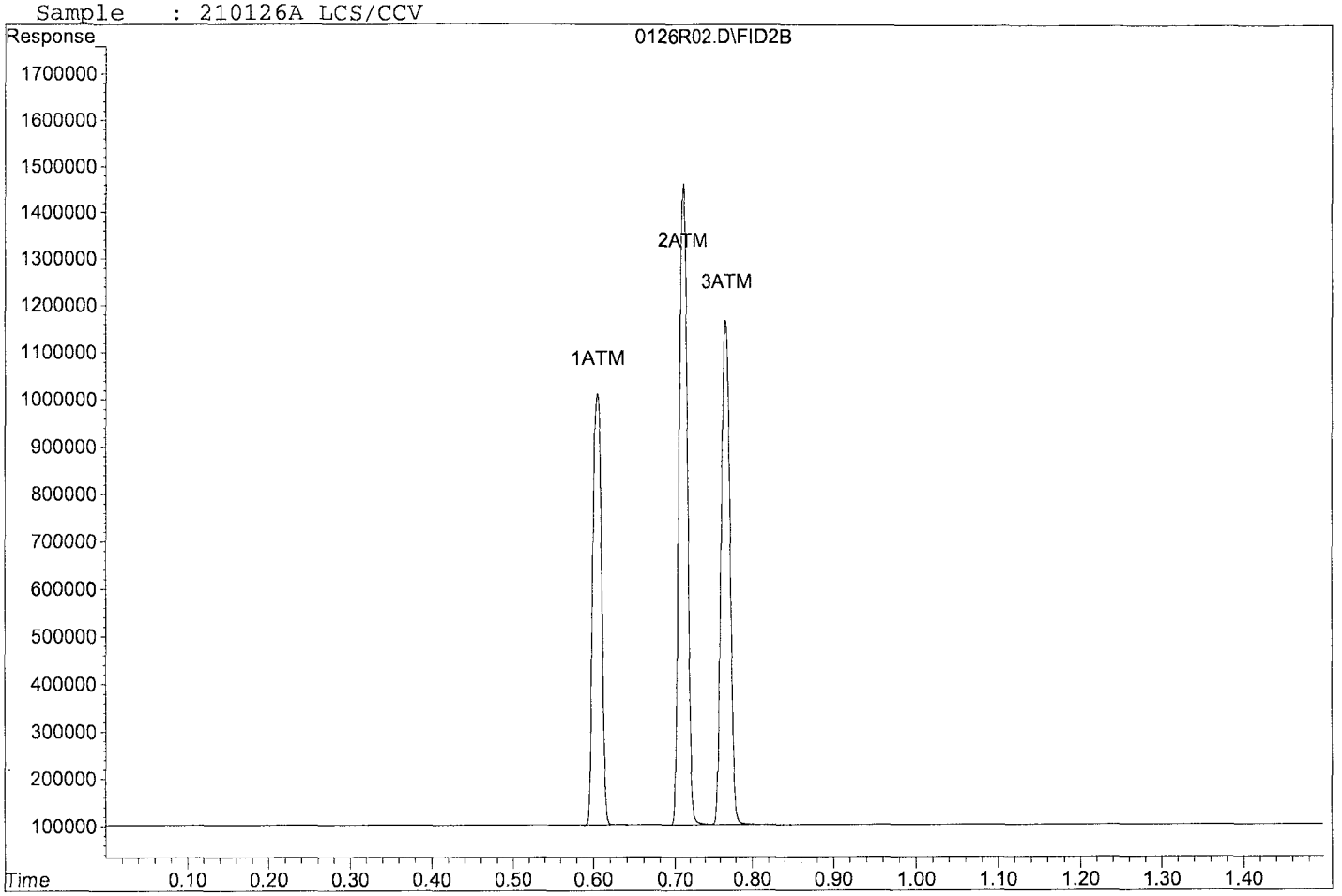
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	913253	73.981 ppb
2) ATM Ethane	0.71	1349471	146.899 ppb
3) ATM Ethene	0.77	1056358	144.398 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R23.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24003	6.5	ATML	2.8
2	ATML	Ethane	18863	19959	5.8	ATML	8.7
3	ATML	Ethene	14798	16308	10	ATML	11
4							
5							
6							
7							
8							
9							
10							
11							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.4		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R23.D Vial: 23
Acq On : 26 Jan 21 14:38 Operator: LS
Sample : 210126A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:40 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

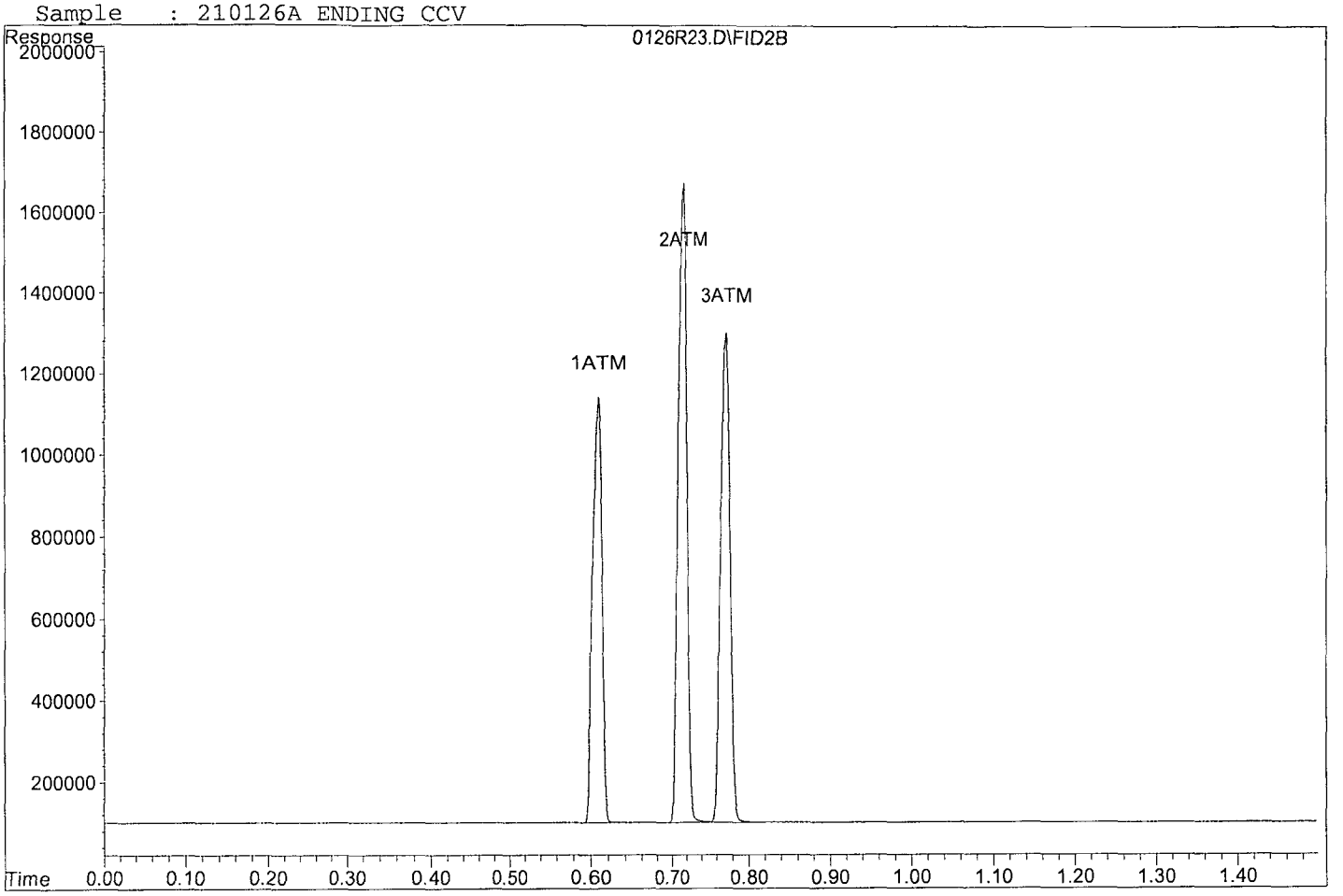
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1000941	81.091 ppb
2) ATM Ethane	0.71	1560302	170.028 ppb
3) ATM Ethene	0.77	1189206	162.464 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R23.D
Sample : 210126A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R09.D Vial: 9
Acq On : 26 Jan 21 13:47 Operator: LS
Sample : BA25525W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:49 2021 Quant Results File: RSK0914A.RES

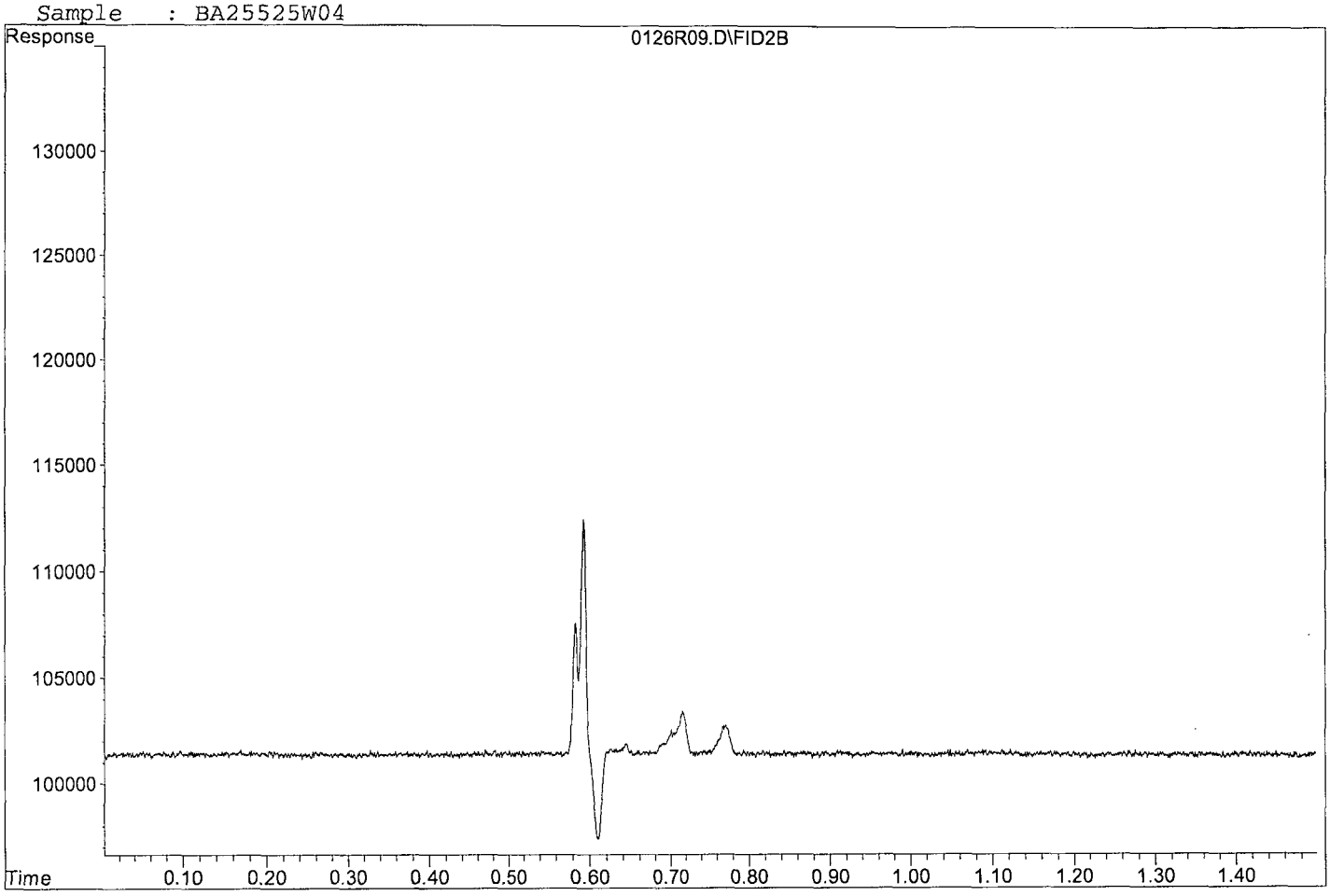
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R09.D
Sample : BA25525W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R10.D Vial: 10
Acq On : 26 Jan 21 13:51 Operator: LS
Sample : BA25526W03 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:53 2021 Quant Results File: RSK0914A.RES

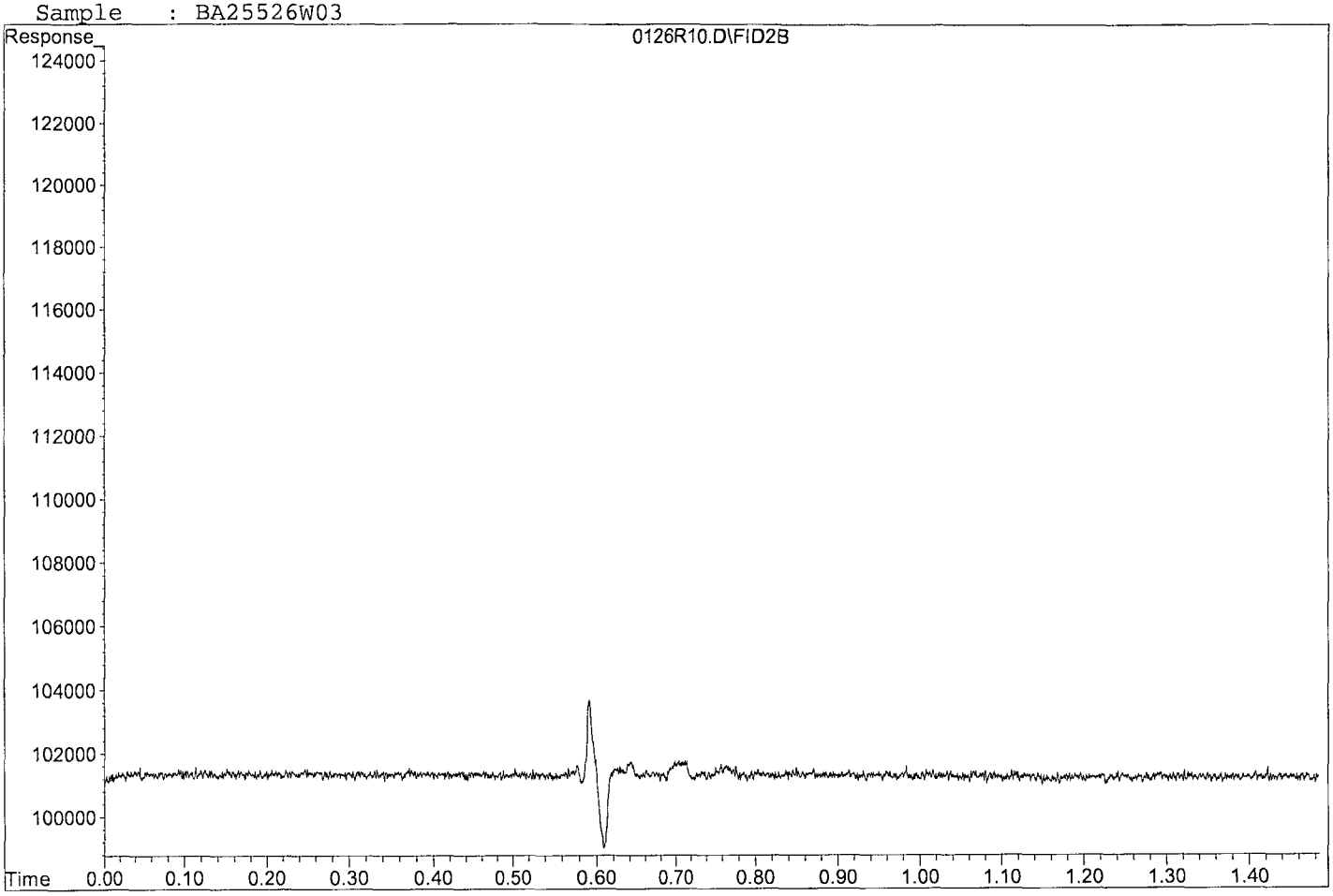
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R10.D
Sample : BA25526W03



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R05.D Vial: 5
Acq On : 26 Jan 21 13:30 Operator: LS
Sample : 210126A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:33 2021 Quant Results File: RSK0914A.RES

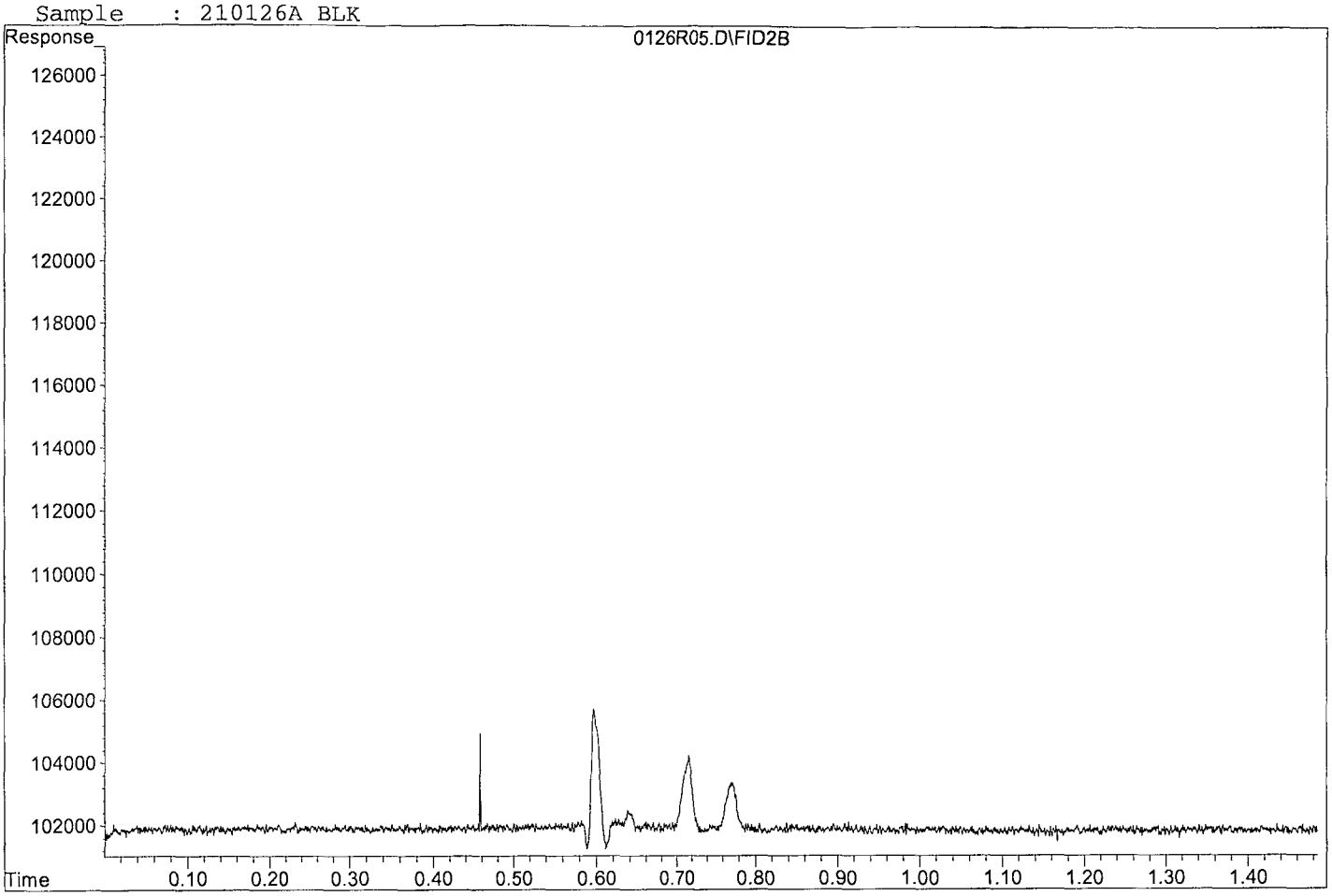
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R05.D
Sample : 210126A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

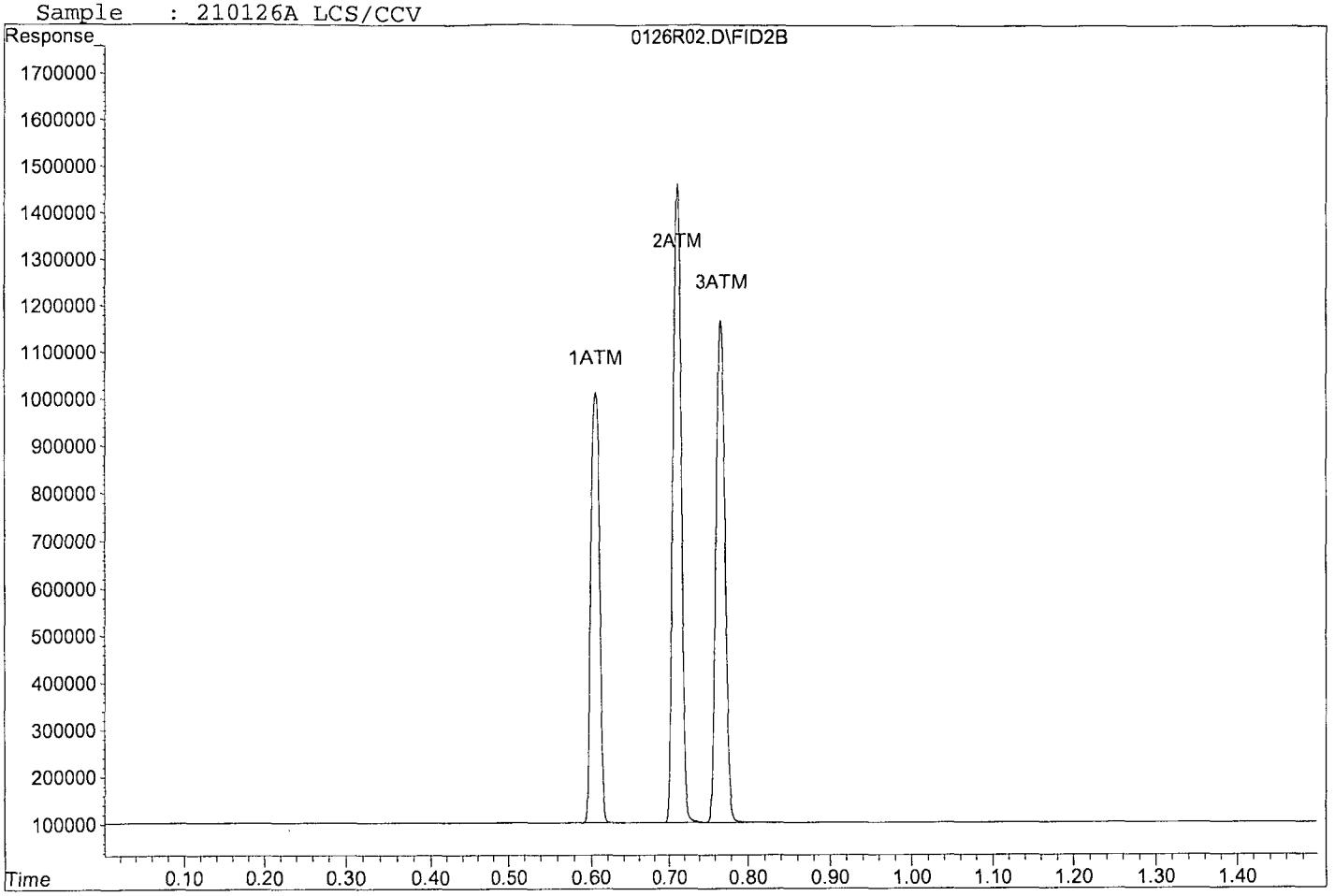
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	913253	73.981	ppb
2) ATM Ethane	0.71	1349471	146.899	ppb
3) ATM Ethene	0.77	1056358	144.398	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R04.D Vial: 4
Acq On : 26 Jan 21 13:26 Operator: LS
Sample : 210126A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:29 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

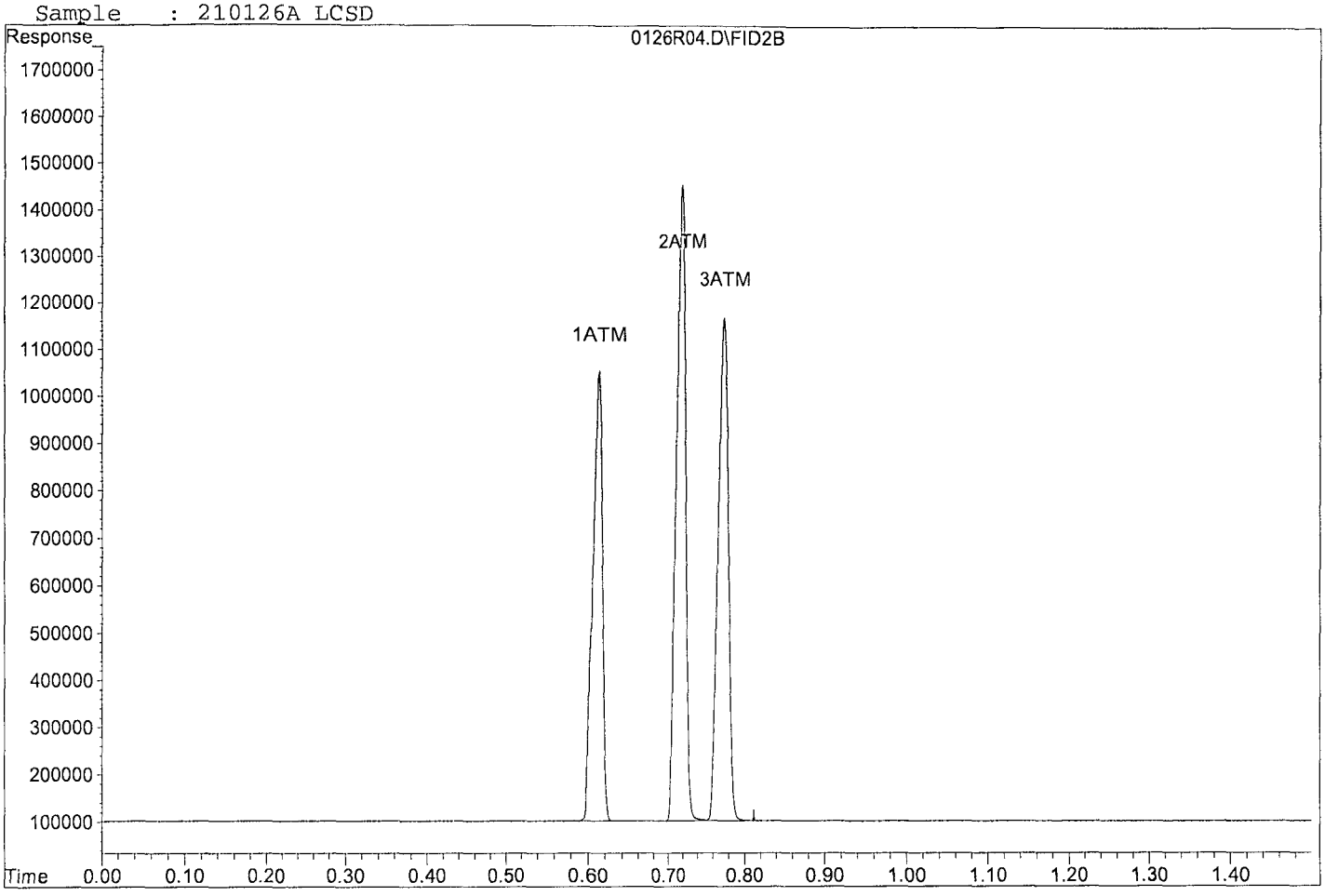
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	899840	72.893	ppb
2) ATM Ethane	0.72	1340838	145.952	ppb
3) ATM Ethene	0.77	1069151	146.137	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R04.D
Sample : 210126A LCSD



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R11.D Vial: 11
Acq On : 26 Jan 21 13:55 Operator: LS
Sample : BA25526W04 MS Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:58 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

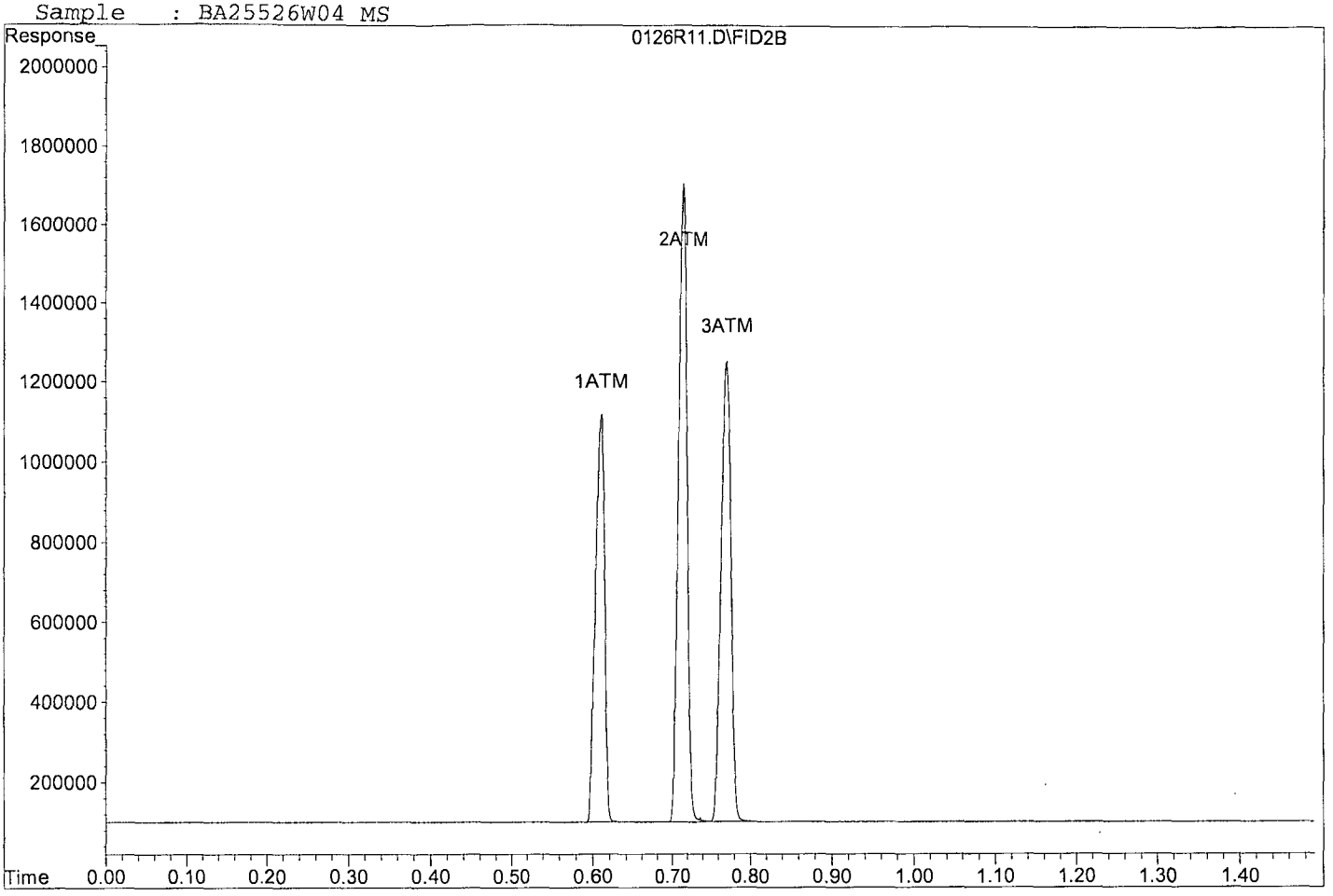
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	980019	79.394 ppb
2) ATM Ethane	0.71	1612758	175.783 ppb
3) ATM Ethene	0.77	1161674	158.719 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R11.D
Sample : BA25526W04 MS



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R12.D Vial: 12
Acq On : 26 Jan 21 13:59 Operator: LS
Sample : BA25526W04 MSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:02 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

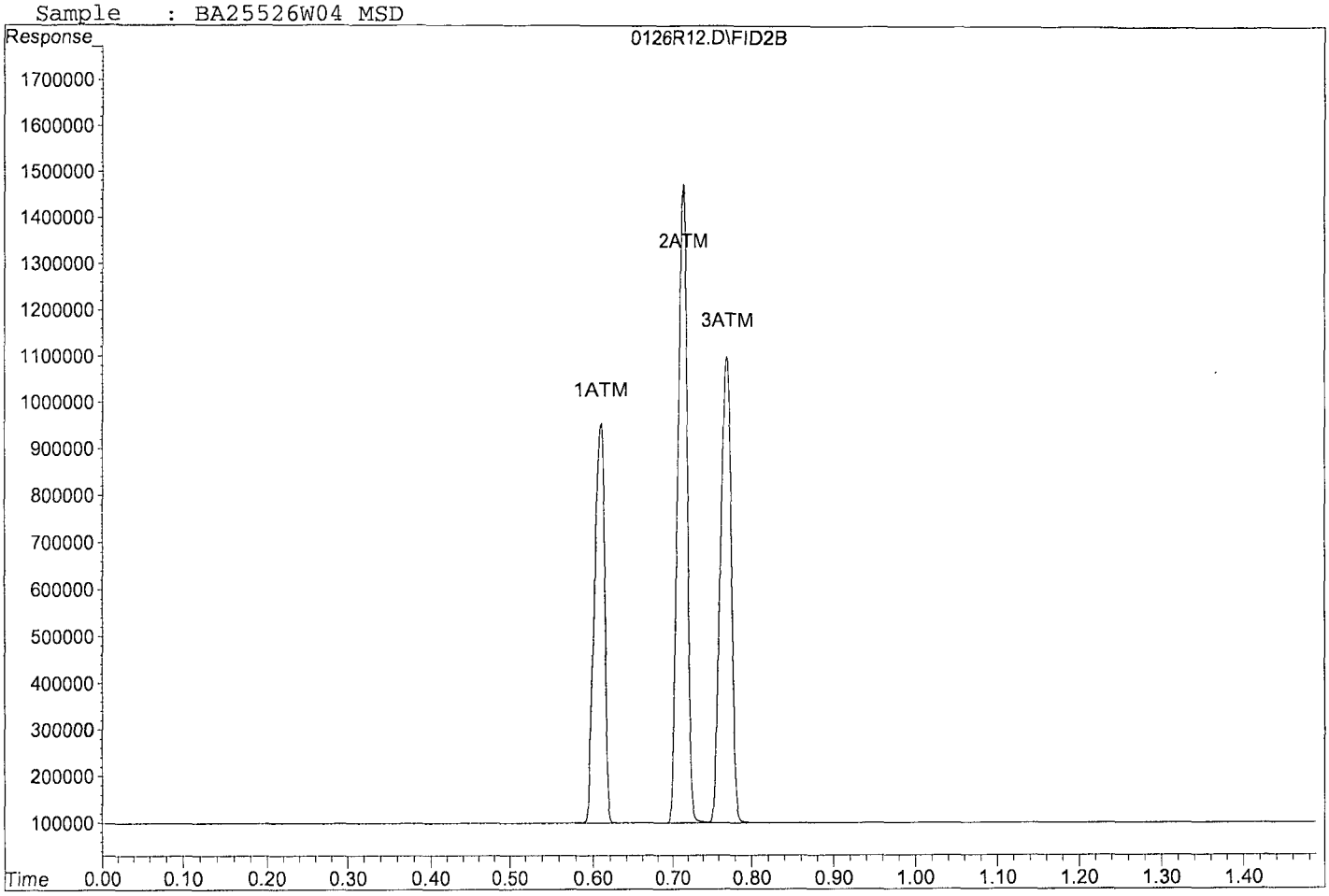
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	845245	68.466 ppb
2) ATM Ethane	0.71	1386965	151.012 ppb
3) ATM Ethene	0.77	1012639	138.452 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R12.D
Sample : BA25526W04 MSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25434W08 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25526W04 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0126R02.D	1	210126A LCS/CCV		26 Jan 21 13:12
2	4	0126R04.D	1	210126A LCSD		26 Jan 21 13:26
3	5	0126R05.D	1	210126A BLK		26 Jan 21 13:30
4	9	0126R09.D	1	BA25525W04		26 Jan 21 13:47
5	10	0126R10.D	1	BA25526W03		26 Jan 21 13:51
6	11	0126R11.D	1	BA25526W04 MS		26 Jan 21 13:55
7	12	0126R12.D	1	BA25526W04 MSD		26 Jan 21 13:59
8	23	0126R23.D	1	210126A ENDING CCV		26 Jan 21 14:38
9	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
10	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
11	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
12	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
13	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
14	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
15	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
16	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

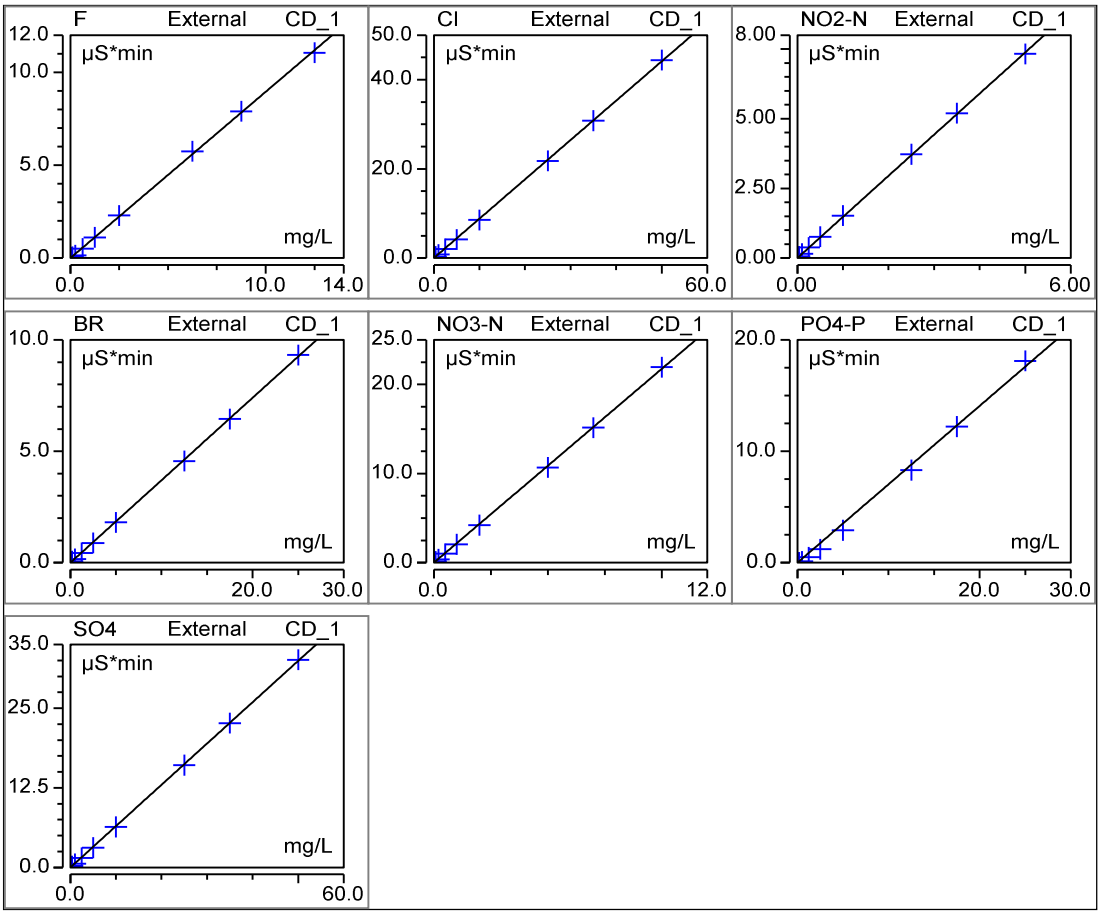
Calibration Batch Report

Sequence:	**201229**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.895	0.000	99.9560
Cl	Area	Lin	9.000	0.000	0.883	0.000	99.9833
NO2-N	Area	Lin	9.000	0.000	1.476	0.000	99.9867
BR	Area	Lin	9.000	0.000	0.370	0.000	99.9857
NO3-N	Area	Lin	9.000	0.000	2.175	0.000	99.9776
PO4-P	Area	Lin	8.000	0.000	0.704	0.000	99.5670
SO4	Area	Lin	9.000	0.000	0.649	0.000	99.9894

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.12.29	0.030	0.1952	0.0206	0.0879	0.0399	n.a.	0.2546
Cal 2 2020.12.29	0.065	0.3660	0.0382	0.1779	0.0685	0.0484	0.3350
Cal 3 2020.12.29	0.165	0.8899	0.1058	0.4441	0.1794	0.1725	0.8705
Cal 4 2020.12.29	0.569	2.3118	0.2547	1.1840	0.4620	0.7043	2.2914
Cal 5 2020.12.29	1.241	4.7003	0.5172	2.3974	0.9491	1.7211	4.7702
Cal 6 2020.12.29	2.562	9.6722	1.0305	4.8975	1.9393	4.1390	9.8124
Cal 7 2020.12.29	6.421	24.6930	2.5228	12.3317	4.9143	11.8093	24.7570
Cal 8 2020.12.29	8.827	34.9228	3.5216	17.4201	6.9681	17.3586	34.9246
Cal 9 2020.12.29	12.354	50.3149	4.9653	25.1755	10.0848	25.7294	50.2481

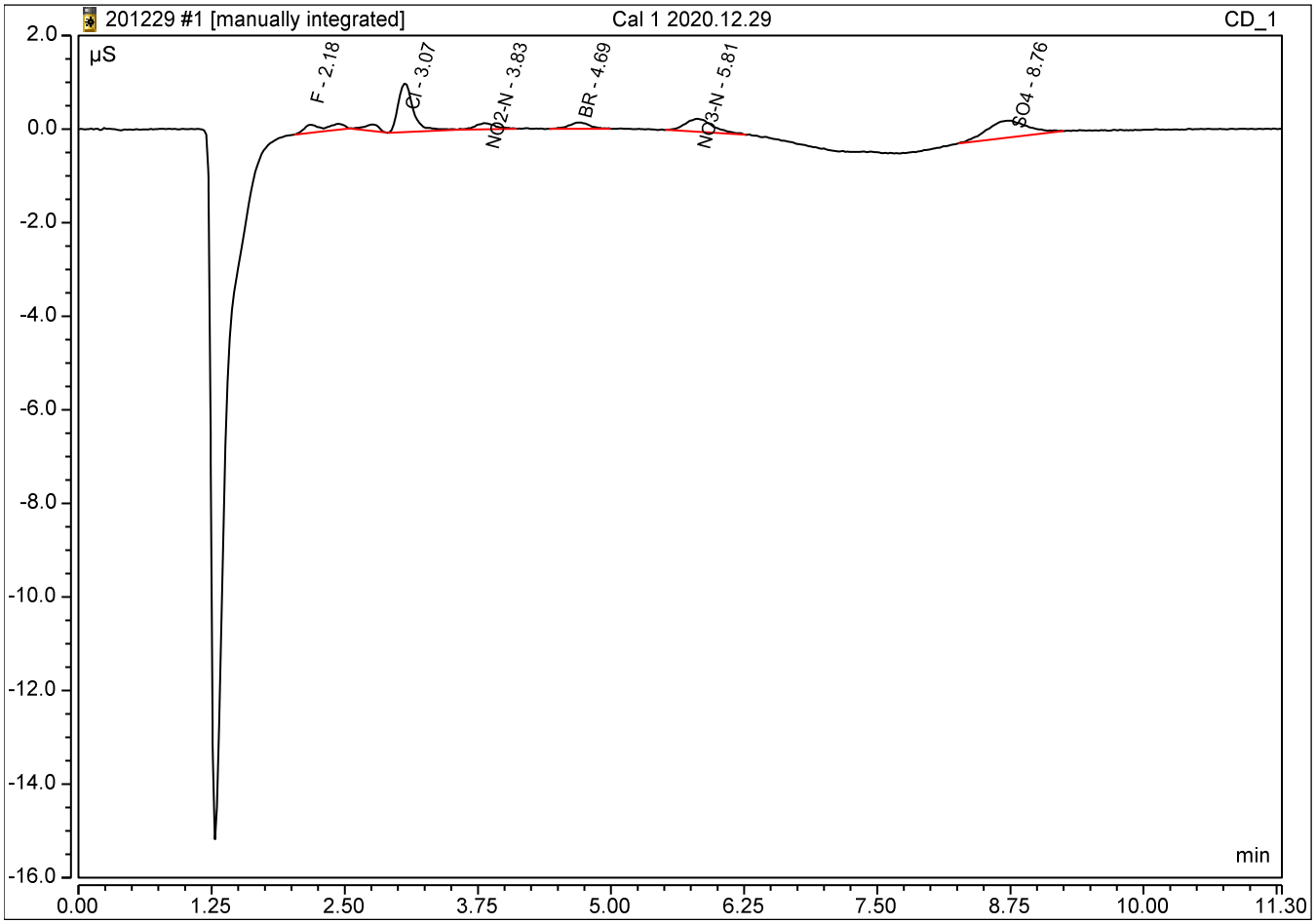


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.027	0.170	0.03	0.05	60.9%
4	3.07	**Cl**	BMB	0.172	1.041	0.20	0.2	97.6%
5	3.83	**NO2-N**	BMB	0.030	0.136	0.02	0.02	103.2%
6	4.69	**BR**	BMB*	0.033	0.142	0.09	0.1	87.9%
7	5.81	**NO3-N**	BMB	0.087	0.279	0.04	0.04	99.6%
8	8.76	**SO4**	BMB*	0.165	0.356	0.25	0.2	127.3%



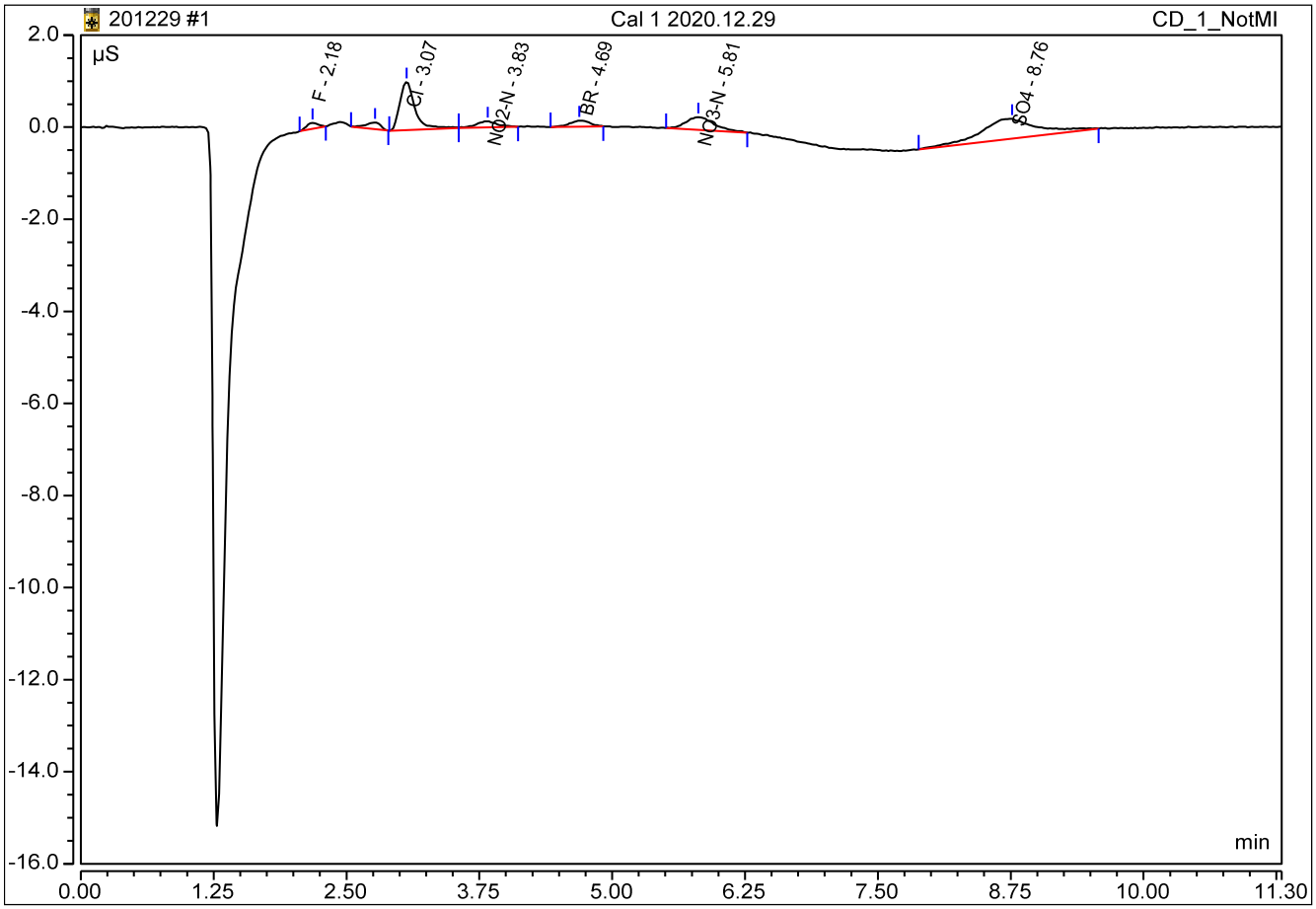
MI 5 F Br SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.017	0.127	0.0188
4	3.07	**Cl**	BMB	0.172	1.041	0.1952
5	3.83	**NO2-N**	BMB	0.030	0.136	0.0206
6	4.69	**BR**	BMB*	0.029	0.136	0.0777
7	5.81	**NO3-N**	BMB	0.087	0.279	0.0399
8	8.76	**SO4**	BMB*	0.271	0.433	0.4316

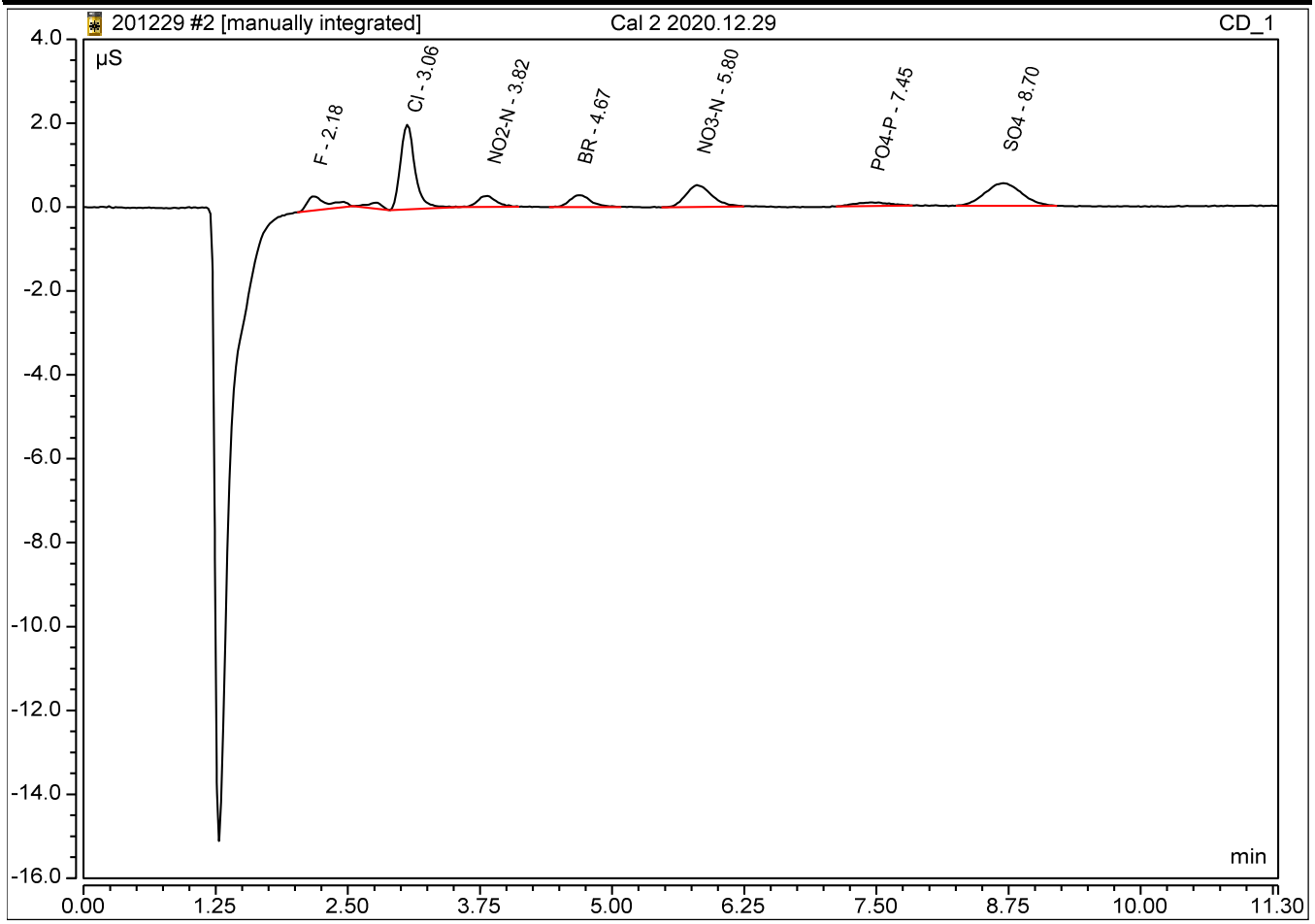


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.058	0.338	0.06	0.1	64.6%
4	3.06	**Cl**	BMB	0.323	2.016	0.37	0.4	91.5%
5	3.82	**NO2-N**	BMB	0.056	0.268	0.04	0.04	95.6%
6	4.67	**BR**	BMB	0.066	0.282	0.18	0.2	89.0%
7	5.80	**NO3-N**	BMB	0.149	0.521	0.07	0.08	85.6%
8	7.45	**PO4-P**	BMB	0.034	0.096	0.05	0.2	24.2%
9	8.70	**SO4**	BMB	0.217	0.542	0.33	0.4	83.7%

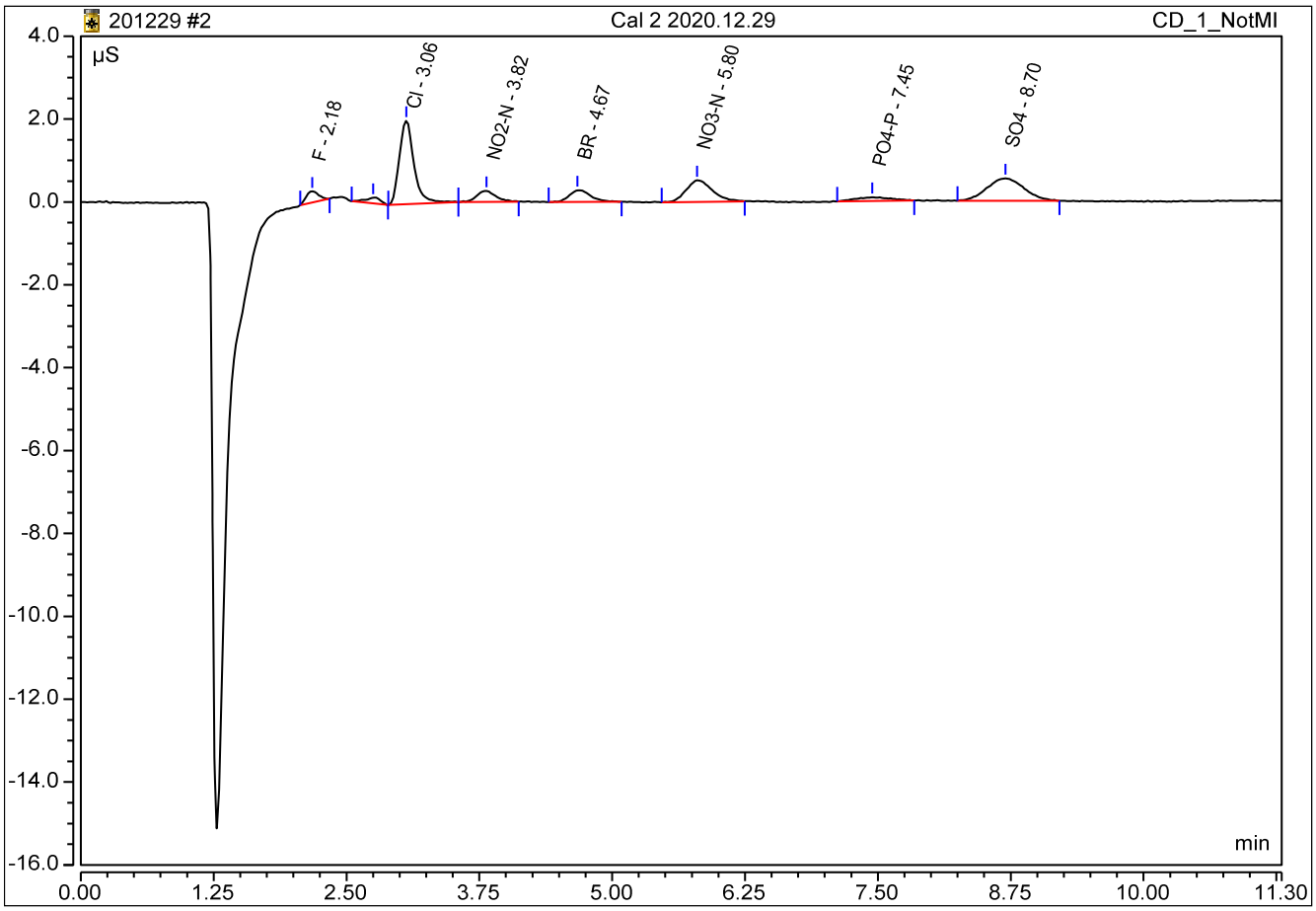


MI 5 F GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.037	0.268	0.0419
4	3.06	**Cl**	BMB	0.323	2.016	0.3660
5	3.82	**NO2-N**	BMB	0.056	0.268	0.0382
6	4.67	**BR**	BMB	0.066	0.282	0.1779
7	5.80	**NO3-N**	BMB	0.149	0.521	0.0685
8	7.45	**PO4-P**	BMB	0.034	0.096	0.0504
9	8.70	**SO4**	BMB	0.217	0.542	0.3465

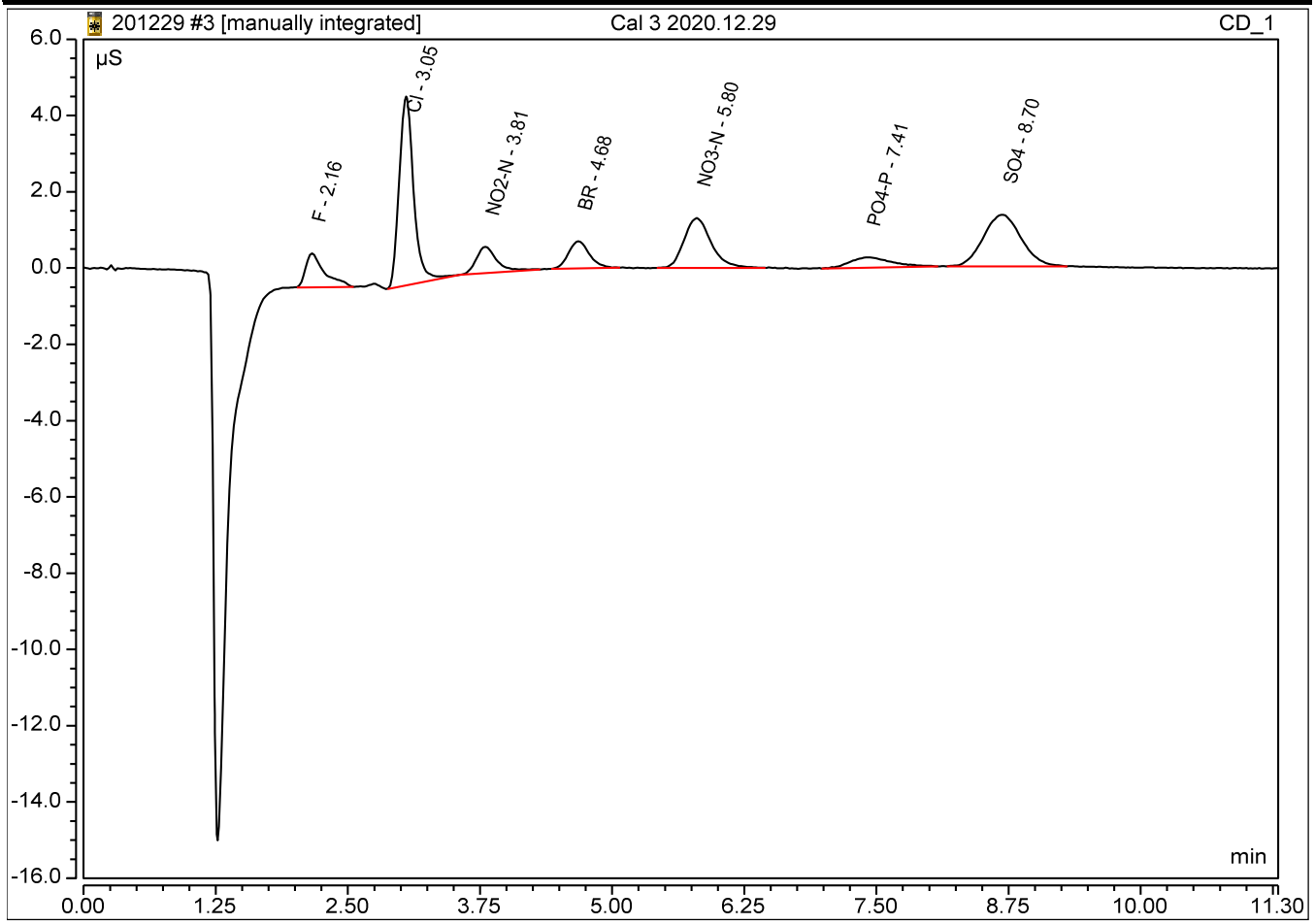


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BM *	0.147	0.890	0.16	0.25	65.8%
3	3.05	**Cl**	BMB	0.785	4.952	0.89	1	89.0%
4	3.81	**NO2-N**	BMB	0.156	0.689	0.11	0.1	105.8%
5	4.68	**BR**	BMB	0.164	0.714	0.44	0.5	88.8%
6	5.80	**NO3-N**	BMB	0.390	1.313	0.18	0.2	89.7%
7	7.41	**PO4-P**	BMB*	0.121	0.273	0.17	0.5	34.5%
8	8.70	**SO4**	BMB	0.565	1.354	0.87	1	87.1%

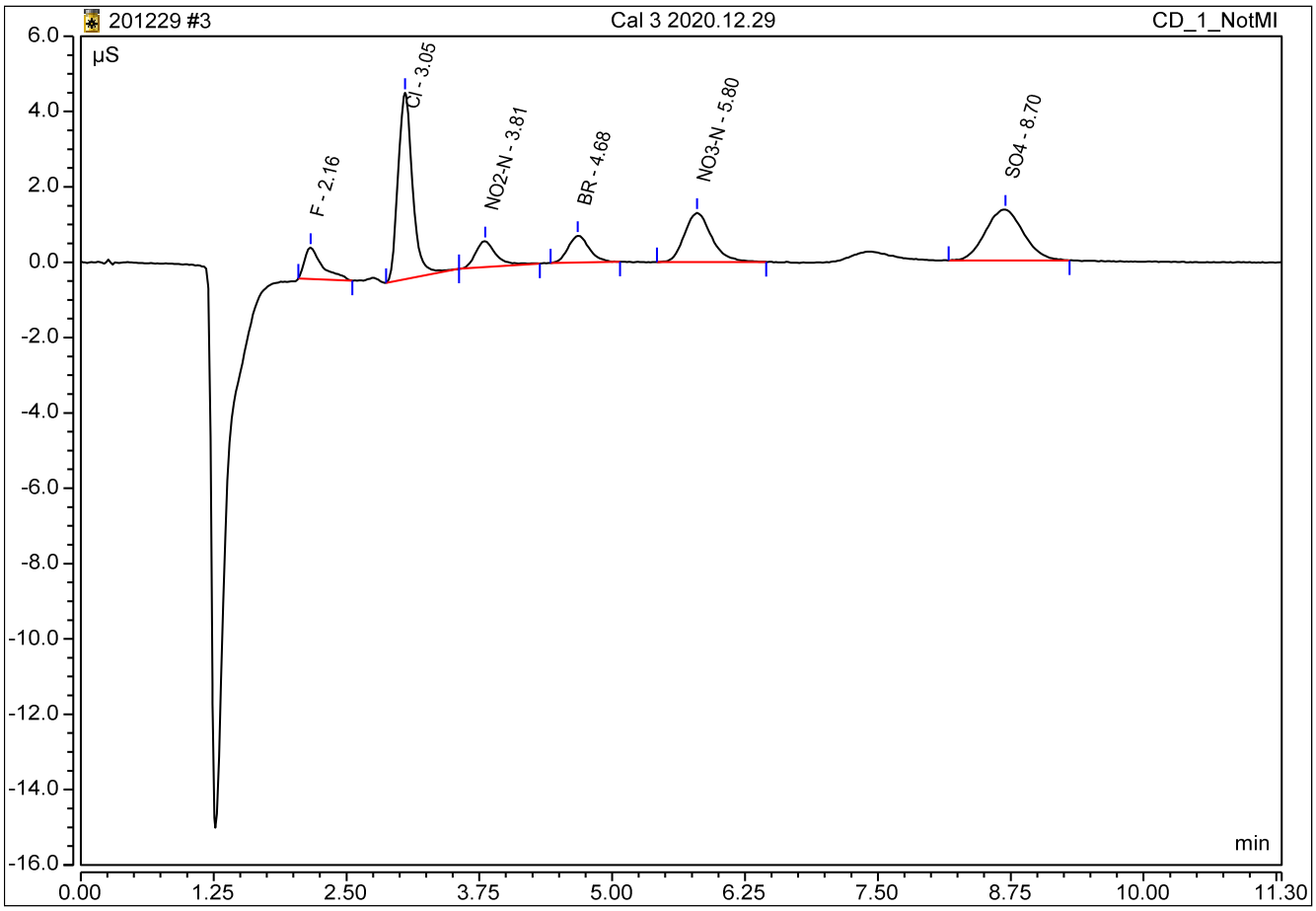


MI 5 F PO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BM *	0.163	0.830	0.1851
3	3.05	**Cl**	BMB	0.785	4.952	0.8899
4	3.81	**NO2-N**	BMB	0.156	0.689	0.1058
5	4.68	**BR**	BMB	0.164	0.714	0.4441
6	5.80	**NO3-N**	BMB	0.390	1.313	0.1794
7	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
8	8.70	**SO4**	BMB	0.565	1.354	0.9004

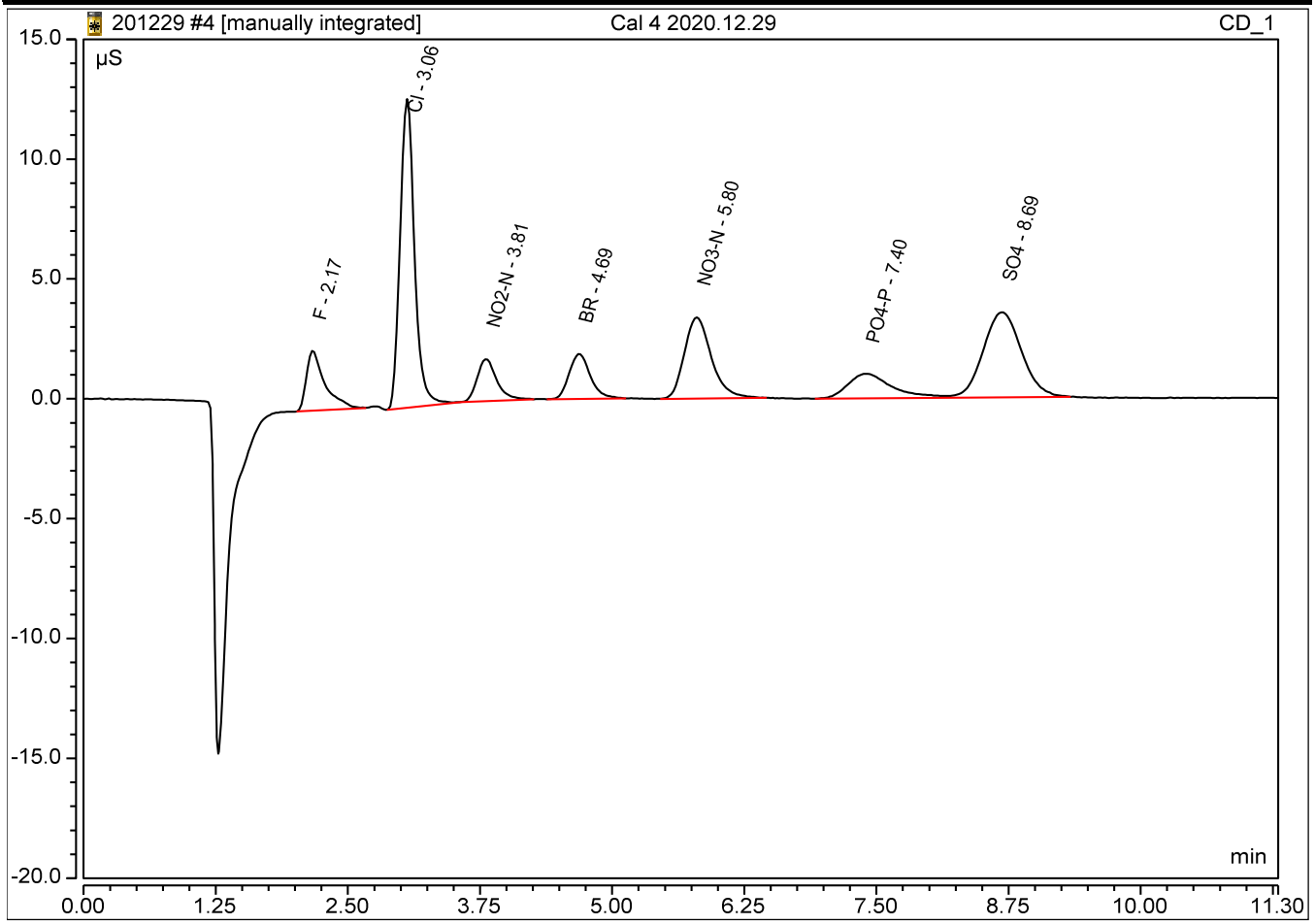


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB*	0.510	2.511	0.57	0.625	91.1%
2	3.06	**Cl**	BMB	2.040	12.880	2.31	2.5	92.5%
3	3.81	**NO2-N**	BMB	0.376	1.749	0.25	0.25	101.9%
4	4.69	**BR**	BMB	0.438	1.879	1.18	1.25	94.7%
5	5.80	**NO3-N**	BMB	1.005	3.393	0.46	0.5	92.4%
6	7.40	**PO4-P**	BM *	0.496	1.023	0.70	1.25	56.3%
7	8.69	**SO4**	MB*	1.487	3.545	2.29	2.5	91.7%



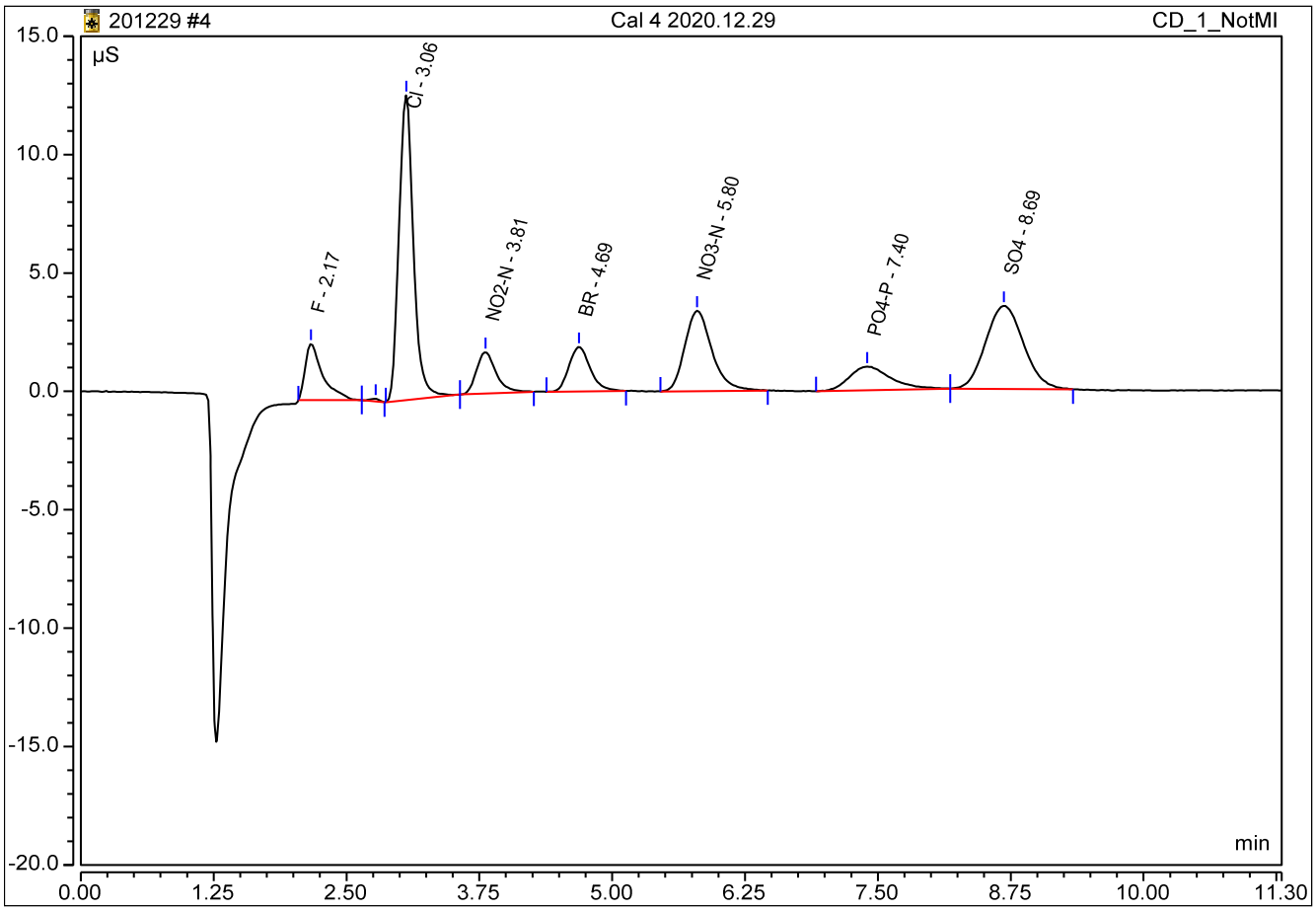
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

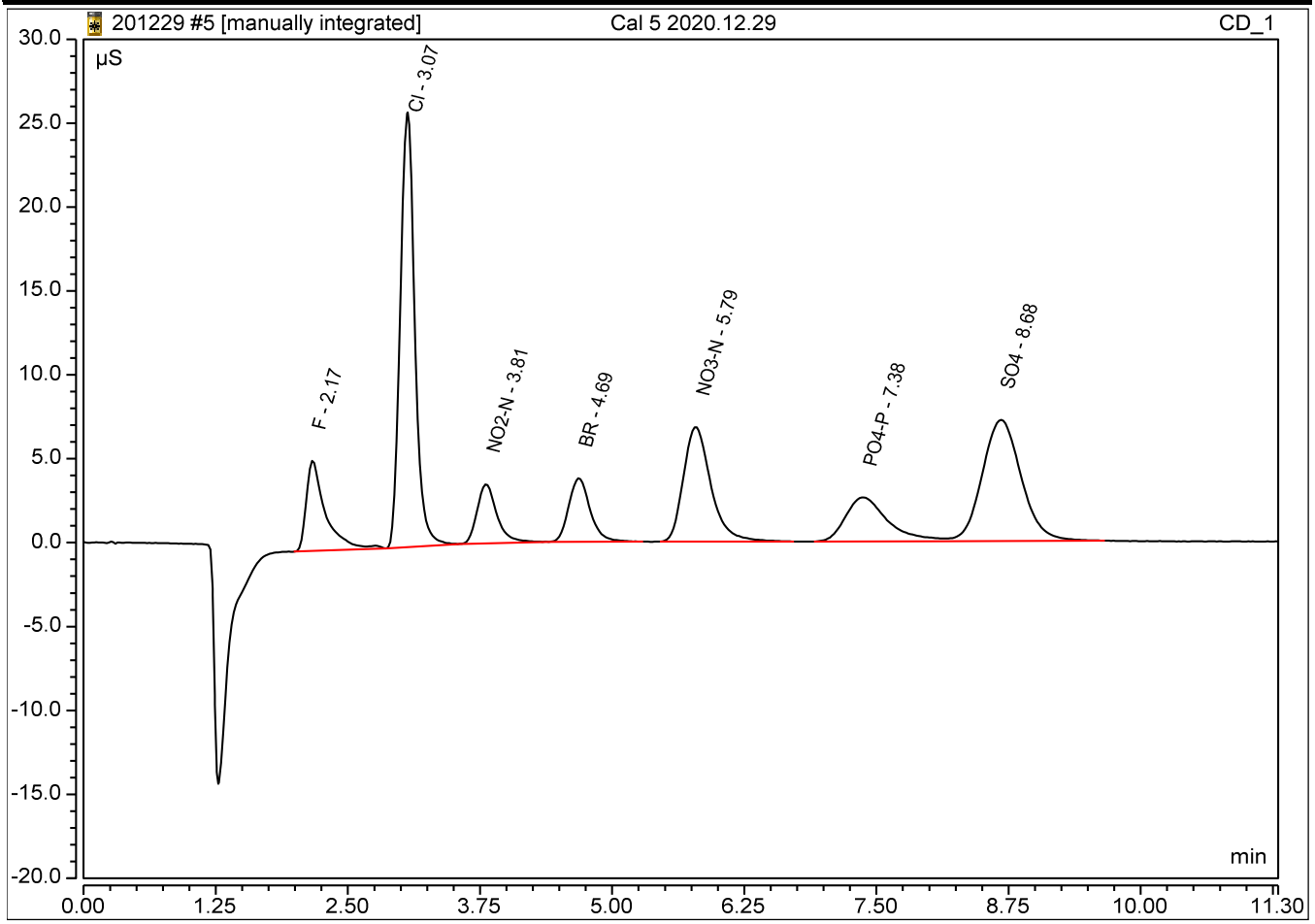
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB*	0.454	2.383	0.5138
2	3.06	**Cl**	BMB	2.040	12.880	2.3118
3	3.81	**NO2-N**	BMB	0.376	1.749	0.2547
4	4.69	**BR**	BMB	0.438	1.879	1.1840
5	5.80	**NO3-N**	BMB	1.005	3.393	0.4620
6	7.40	**PO4-P**	BM *	0.451	0.996	0.6677
7	8.69	**SO4**	MB*	1.446	3.505	2.3045



Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	1.110	5.384	1.24	1.25	99.3%
3	3.07	**Cl**	bMB*	4.148	25.916	4.70	5	94.0%
4	3.81	**NO2-N**	BMB	0.763	3.513	0.52	0.5	103.4%
5	4.69	**BR**	BMB	0.887	3.786	2.40	2.5	95.9%
6	5.79	**NO3-N**	BMB	2.064	6.848	0.95	1	94.9%
7	7.38	**PO4-P**	BM *	1.211	2.626	1.72	2.5	68.8%
8	8.68	**SO4**	MB*	3.095	7.217	4.77	5	95.4%

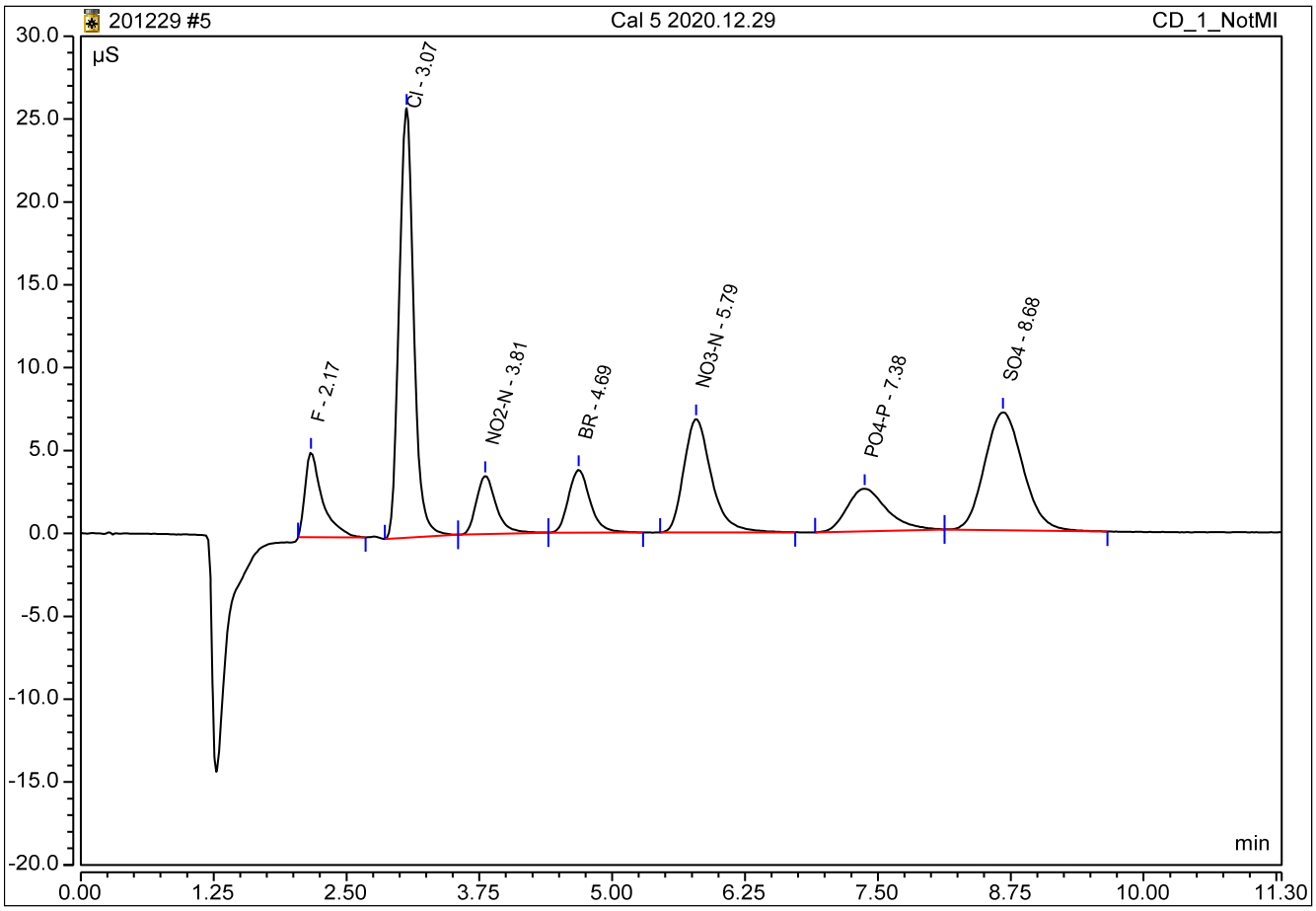


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	0.966	5.118	1.0941
3	3.07	**Cl**	bMB*	4.148	25.916	4.7003
4	3.81	**NO2-N**	BMB	0.763	3.513	0.5172
5	4.69	**BR**	BMB	0.887	3.786	2.3974
6	5.79	**NO3-N**	BMB	2.064	6.848	0.9491
7	7.38	**PO4-P**	BM *	1.118	2.567	1.6557
8	8.68	**SO4**	MB*	2.978	7.119	4.7469

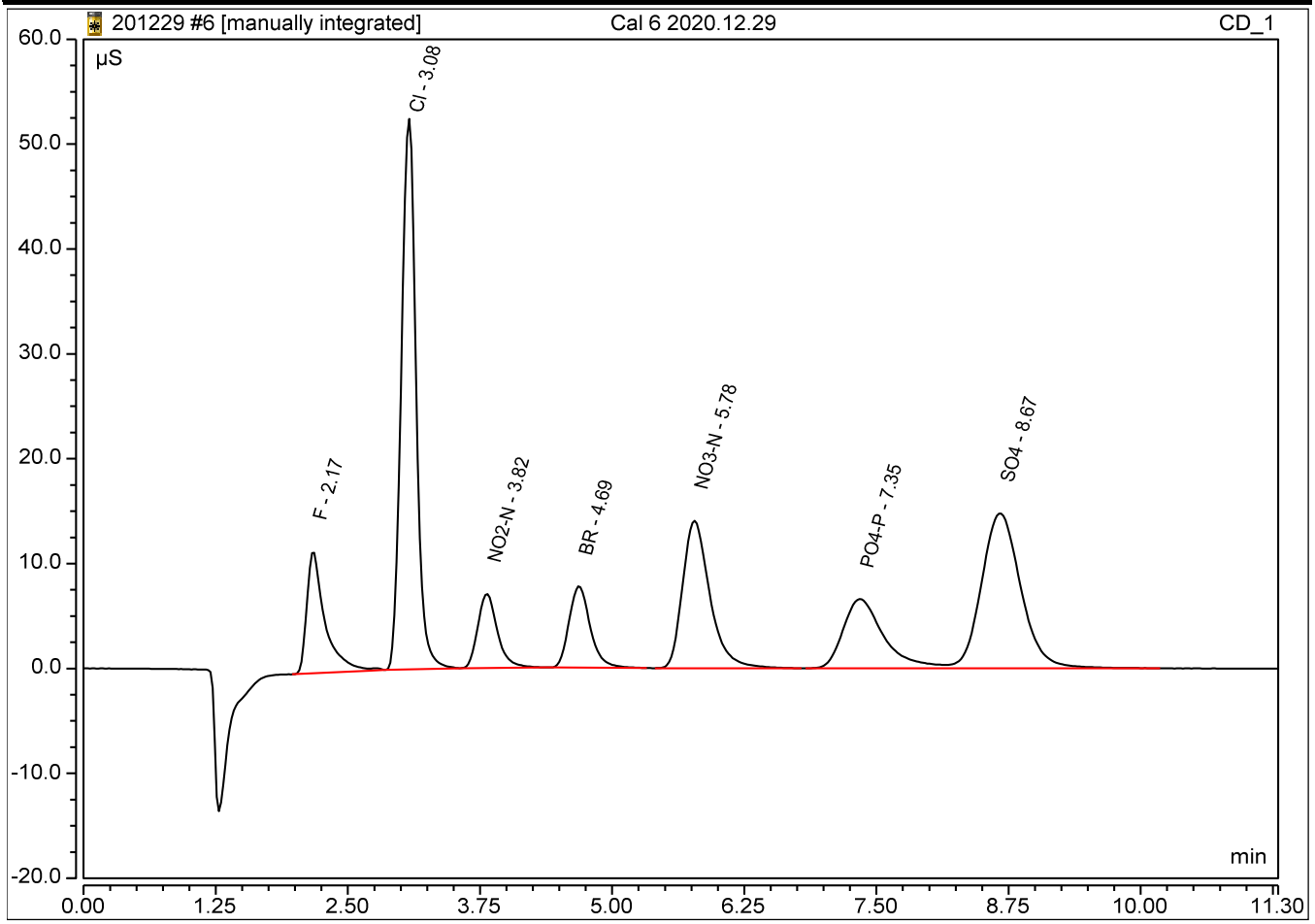


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	2.292	11.657	2.56	2.5	102.5%
3	3.08	**Cl**	bMB*	8.536	52.533	9.67	10	96.7%
4	3.82	**NO2-N**	BMB	1.521	7.071	1.03	1	103.1%
5	4.69	**BR**	BMB	1.813	7.778	4.90	5	98.0%
6	5.78	**NO3-N**	BMB	4.218	14.063	1.94	2	97.0%
7	7.35	**PO4-P**	BM *	2.913	6.594	4.14	5	82.8%
8	8.67	**SO4**	MB*	6.367	14.783	9.81	10	98.1%



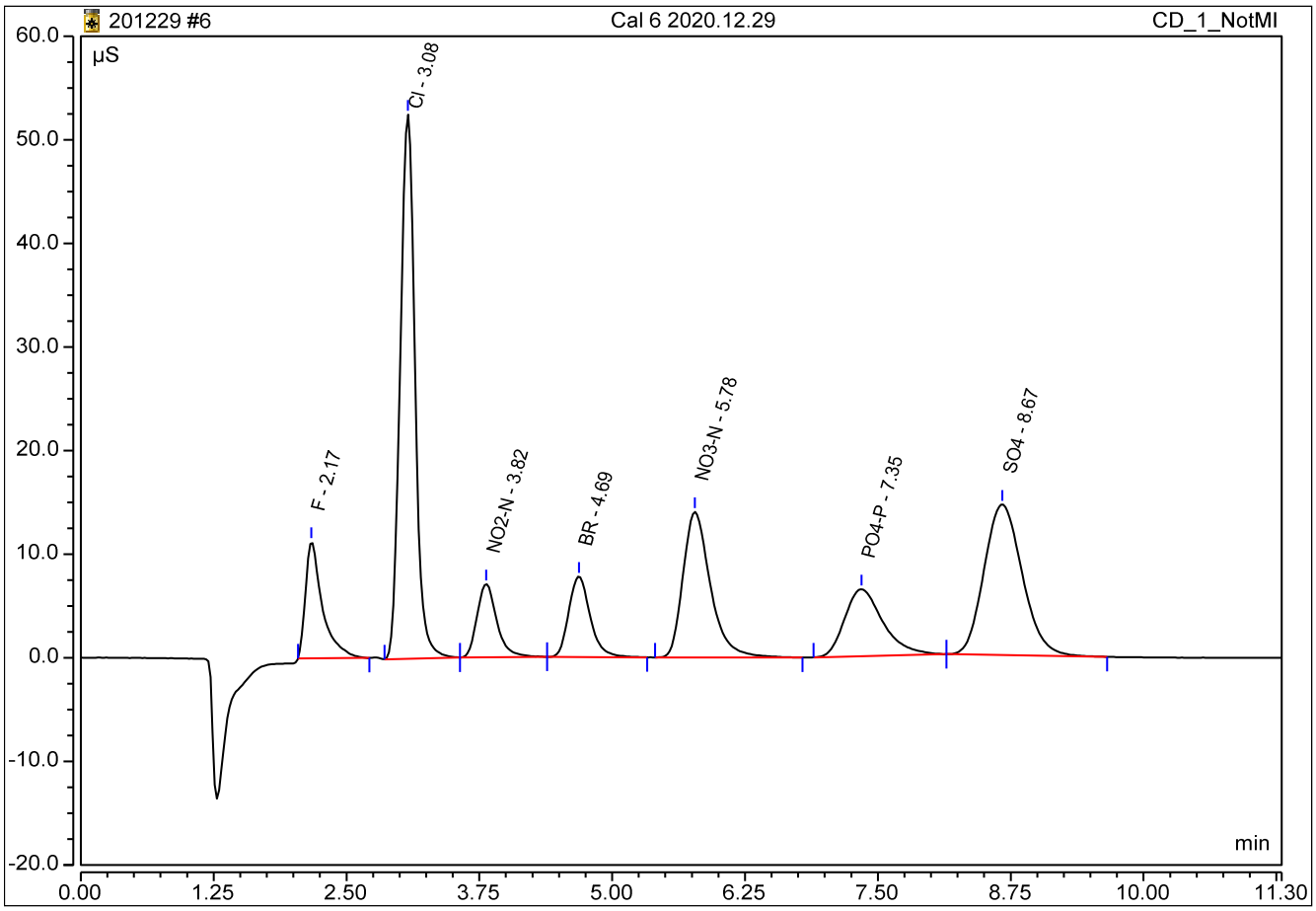
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	2.075	11.256	2.3510
3	3.08	**Cl**	bMB*	8.536	52.533	9.6722
4	3.82	**NO2-N**	BMB	1.521	7.071	1.0305
5	4.69	**BR**	BMB	1.813	7.778	4.8975
6	5.78	**NO3-N**	BMB	4.218	14.063	1.9393
7	7.35	**PO4-P**	BM *	2.699	6.468	3.9983
8	8.67	**SO4**	MB*	6.057	14.547	9.6546

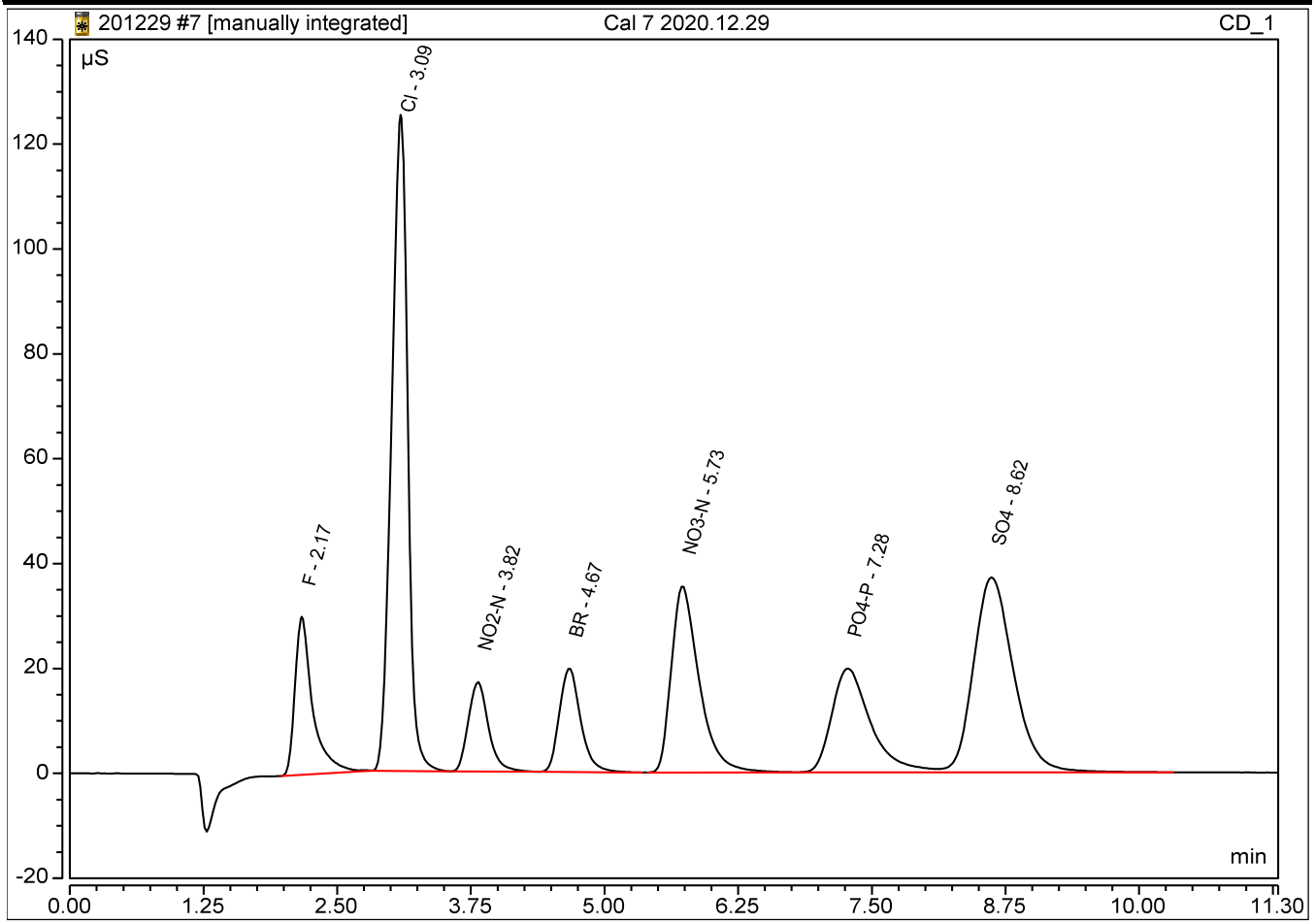


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	5.745	30.169	6.42	6.25	102.7%
3	3.09	**Cl**	BMB	21.792	125.137	24.69	25	98.8%
4	3.82	**NO2-N**	BMB	3.723	17.070	2.52	2.5	100.9%
5	4.67	**BR**	BMB	4.564	19.790	12.33	12.5	98.7%
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.91	5	98.3%
7	7.28	**PO4-P**	bM *	8.312	19.803	11.81	12.5	94.5%
8	8.62	**SO4**	MB*	16.064	37.197	24.76	25	99.0%



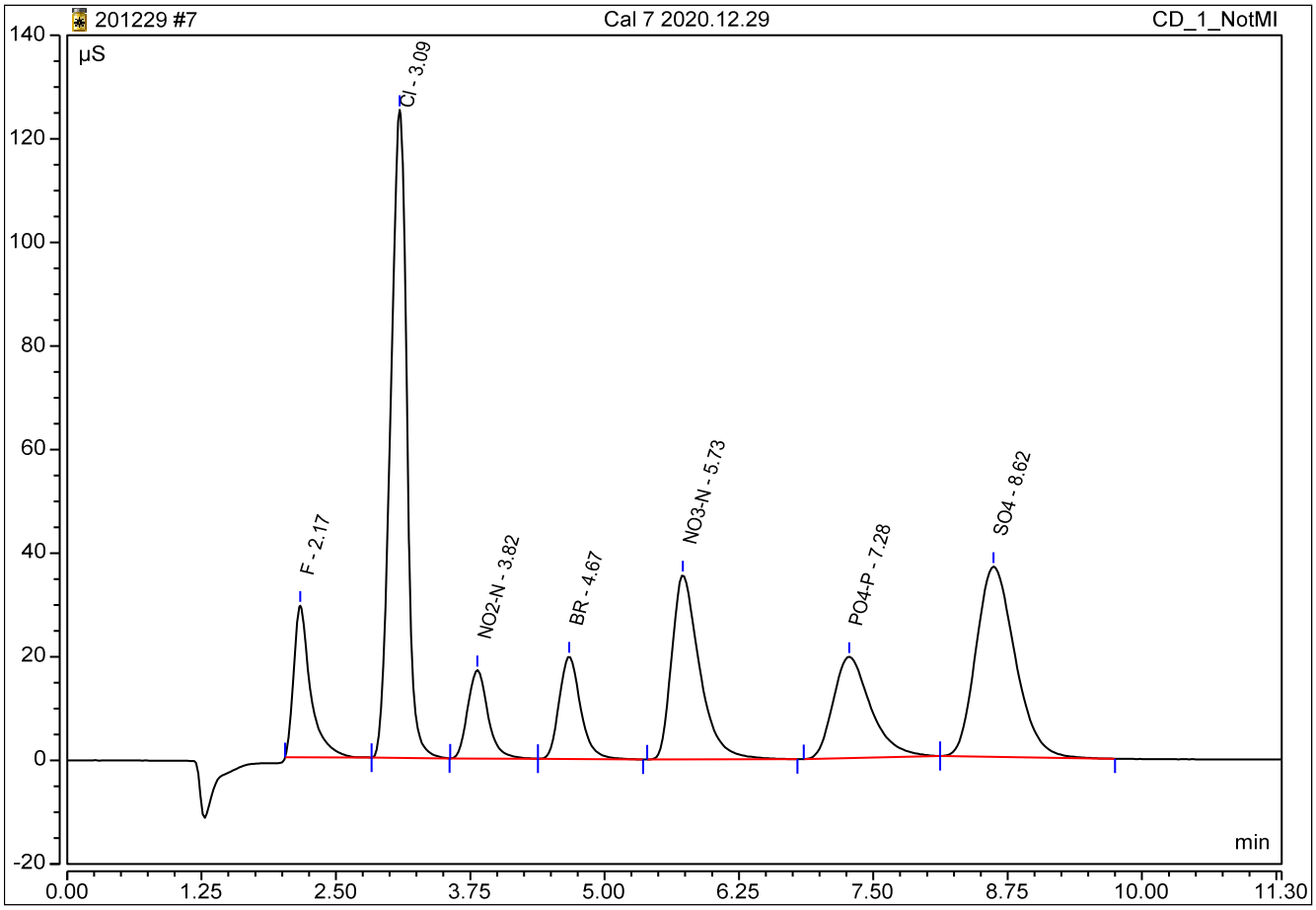
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	5.326	29.299	6.0342
3	3.09	**Cl**	BMB	21.792	125.137	24.6930
4	3.82	**NO2-N**	BMB	3.723	17.070	2.5228
5	4.67	**BR**	BMB	4.564	19.790	12.3317
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.9143
7	7.28	**PO4-P**	bM *	7.897	19.579	11.6959
8	8.62	**SO4**	MB*	15.439	36.724	24.6109

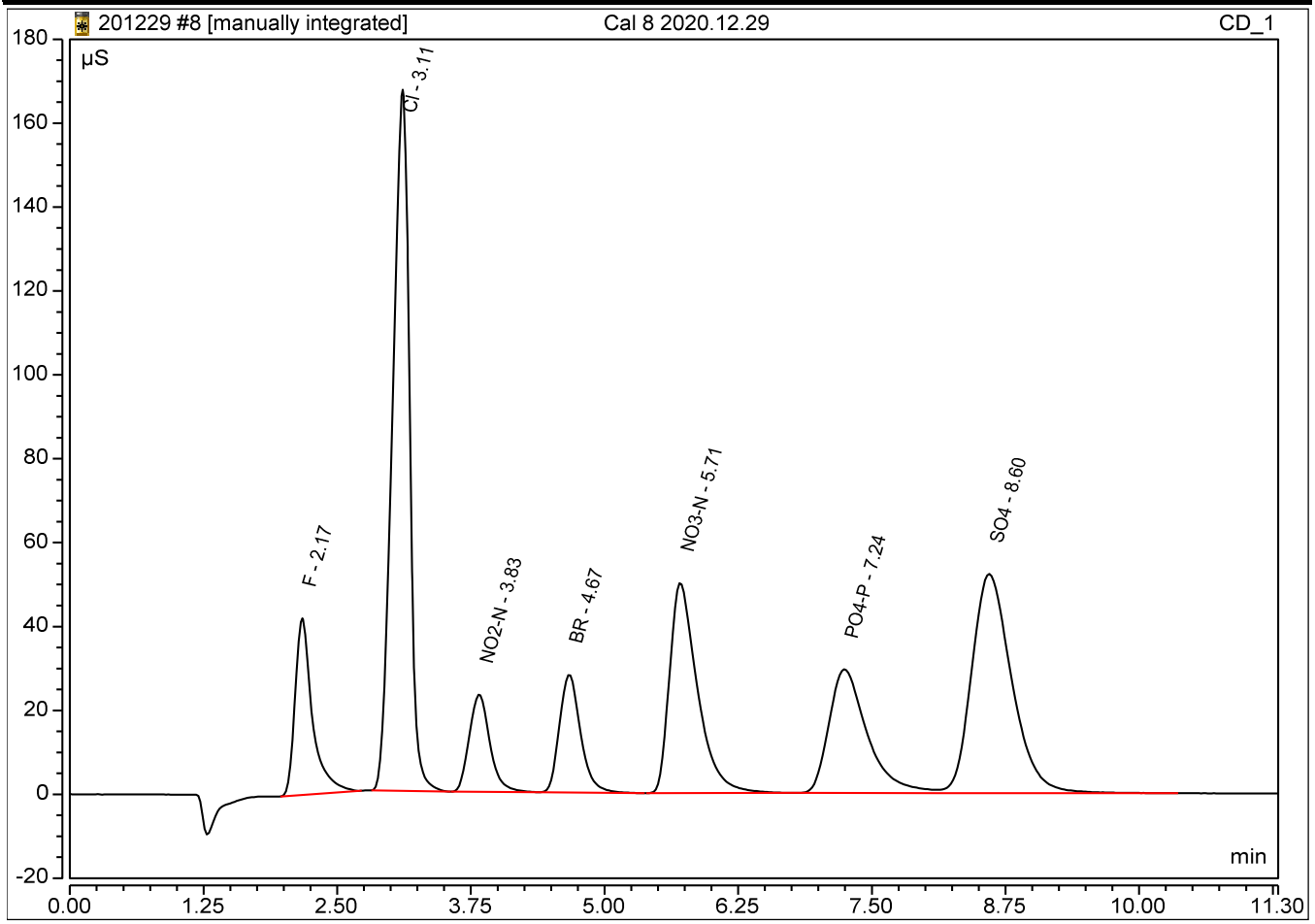


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	7.898	42.129	8.83	8.75	100.9%
2	3.11	**Cl**	BMB	30.820	167.162	34.92	35	99.8%
3	3.83	**NO2-N**	BMB	5.198	23.244	3.52	3.5	100.6%
4	4.67	**BR**	BMB	6.447	28.118	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.97	7	99.5%
6	7.24	**PO4-P**	bM *	12.218	29.486	17.36	17.5	99.2%
7	8.60	**SO4**	MB*	22.662	52.231	34.92	35	99.8%

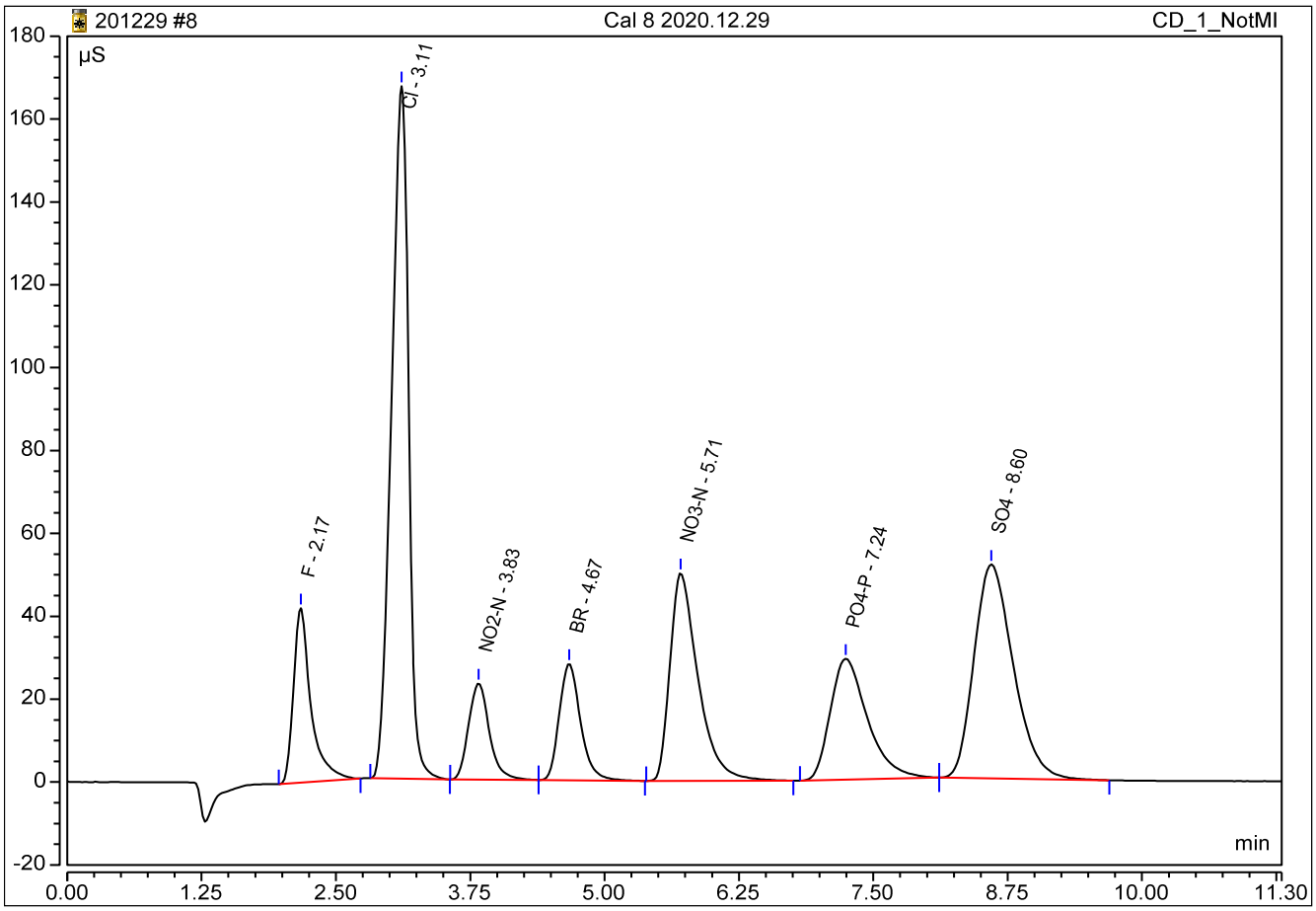


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB	7.898	42.129	8.9476
2	3.11	**Cl**	BMB	30.820	167.162	34.9228
3	3.83	**NO2-N**	BMB	5.198	23.244	3.5216
4	4.67	**BR**	BMB	6.447	28.118	17.4201
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.9681
6	7.24	**PO4-P**	bM *	11.697	29.216	17.3256
7	8.60	**SO4**	MB*	21.877	51.638	34.8732

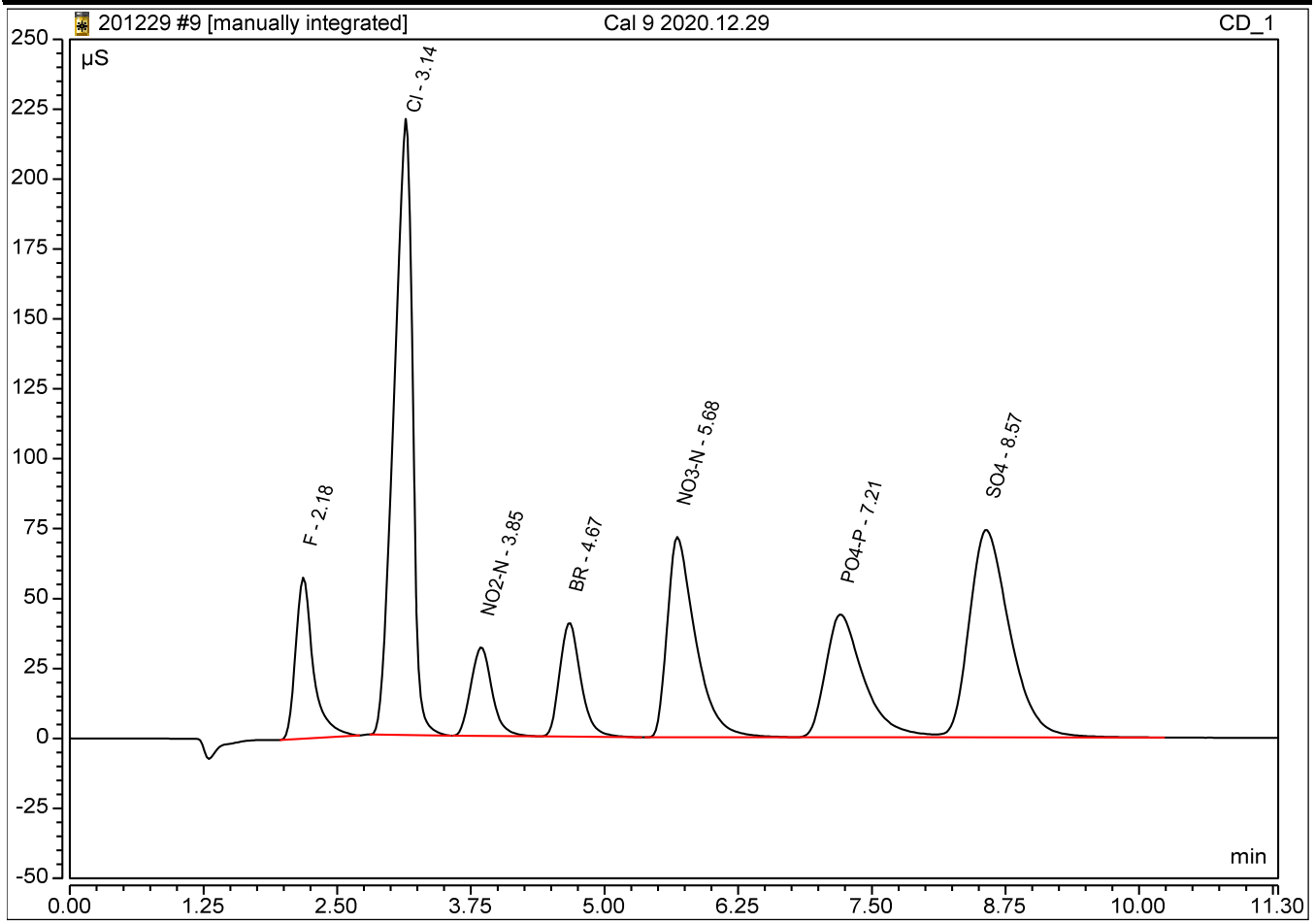


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	11.054	57.647	12.35	12.5	98.8%
2	3.14	**Cl**	BMB	44.404	220.347	50.31	50	100.6%
3	3.85	**NO2-N**	BMB	7.328	31.750	4.97	5	99.3%
4	4.67	**BR**	BMB	9.318	40.765	25.18	25	100.7%
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.08	10	100.8%
6	7.21	**PO4-P**	bM *	18.109	43.974	25.73	25	102.9%
7	8.57	**SO4**	MB*	32.605	74.256	50.25	50	100.5%



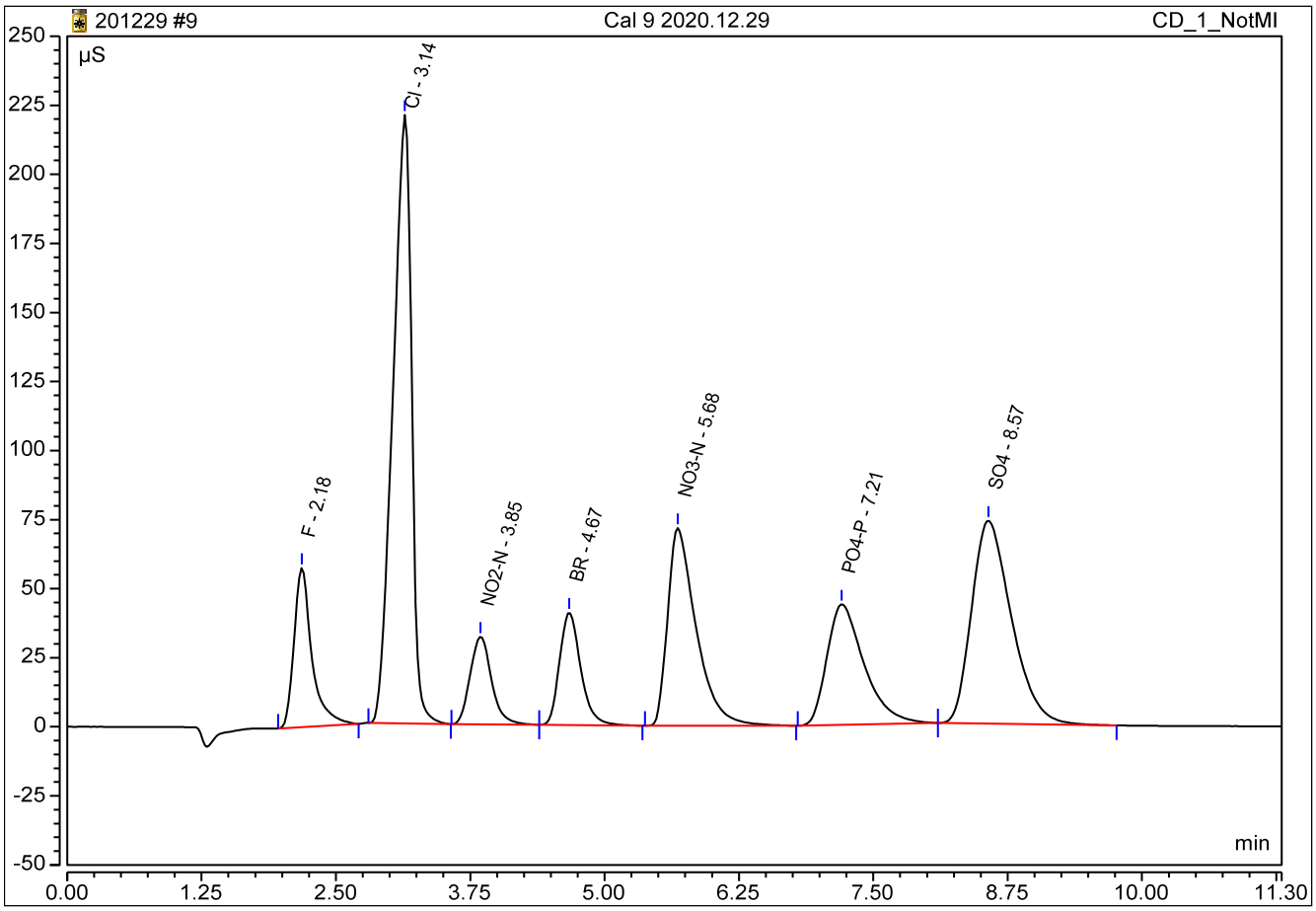
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BMB	11.054	57.647	12.5224
2	3.14	**Cl**	BMB	44.404	220.347	50.3149
3	3.85	**NO2-N**	BMB	7.328	31.750	4.9653
4	4.67	**BR**	BMB	9.318	40.765	25.1755
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.0848
6	7.21	**PO4-P**	bM *	17.446	43.647	25.8392
7	8.57	**SO4**	MB*	31.610	73.494	50.3889

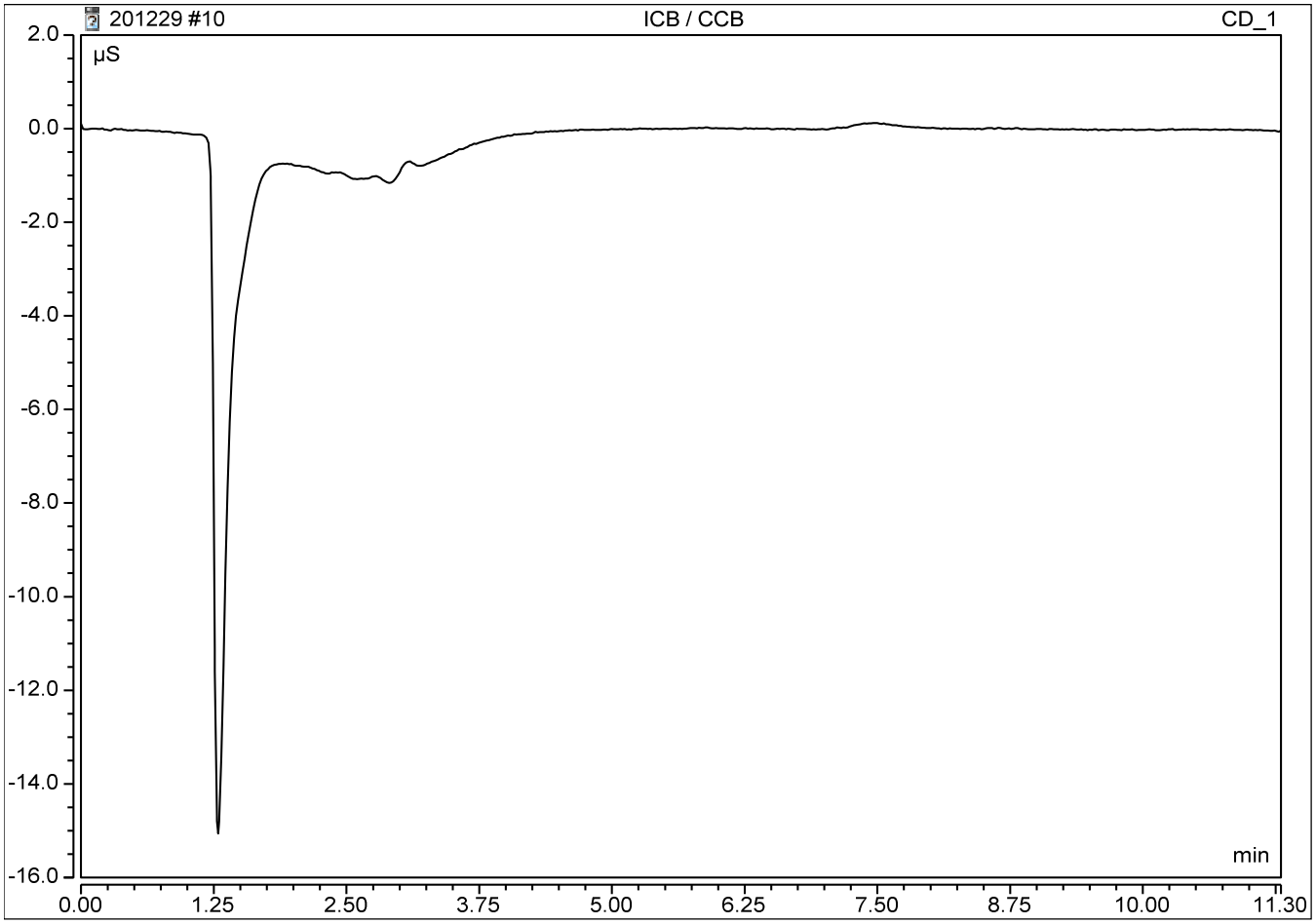


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



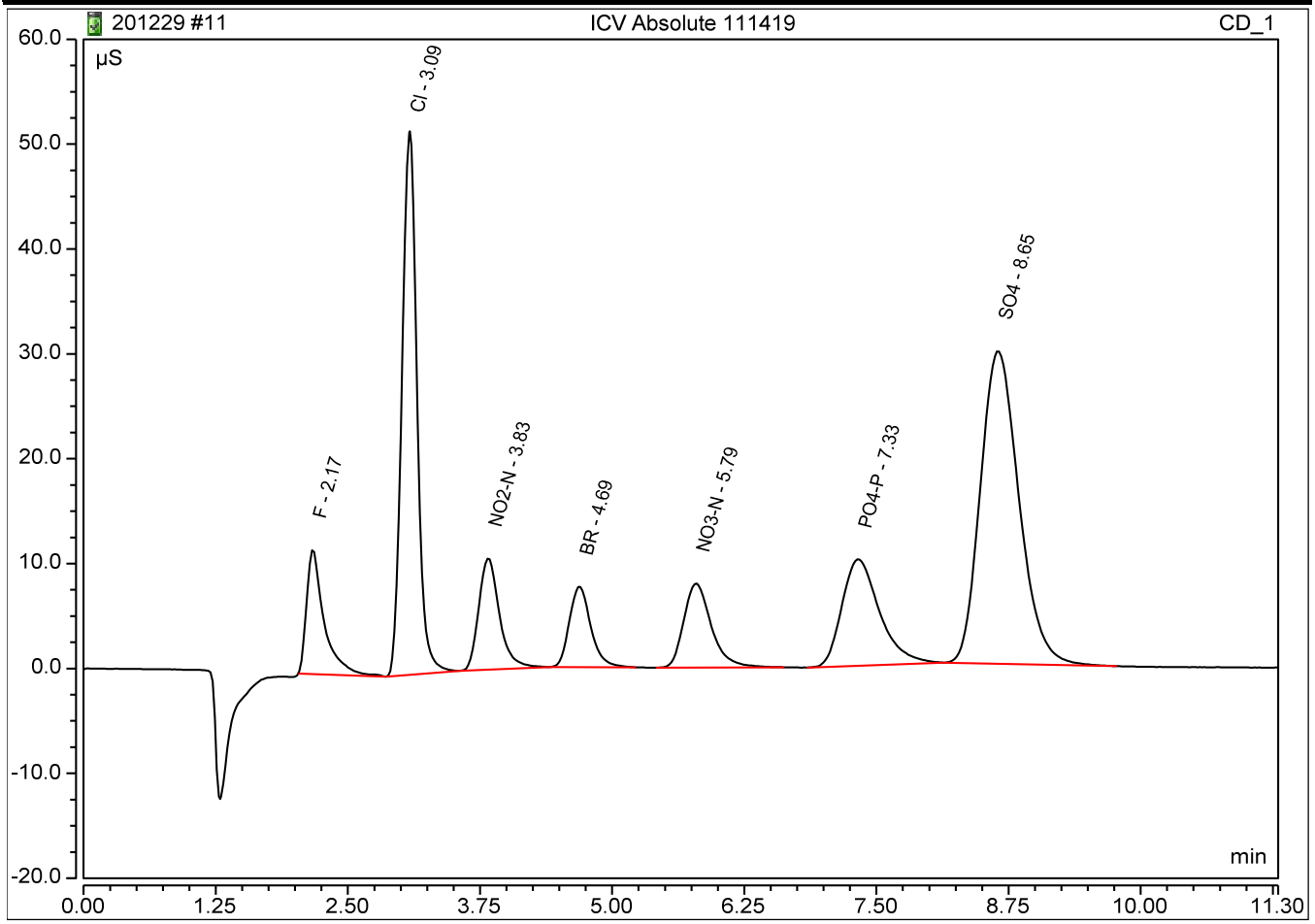
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	2.283	11.892	2.55	2.5	102.0%
2	3.09	**Cl**	BMB	8.560	51.822	9.70	10	97.0%
3	3.83	**NO2-N**	BMB	2.410	10.631	1.63	1.522334	107.3%
4	4.69	**BR**	BMB	1.802	7.686	4.87	5	97.4%
5	5.79	**NO3-N**	BMB	2.430	8.038	1.12	1.129525	98.9%
6	7.33	**PO4-P**	BMB	4.179	10.161	5.94	6.522	91.0%
7	8.65	**SO4**	BMB	12.629	29.844	19.46	20	97.3%



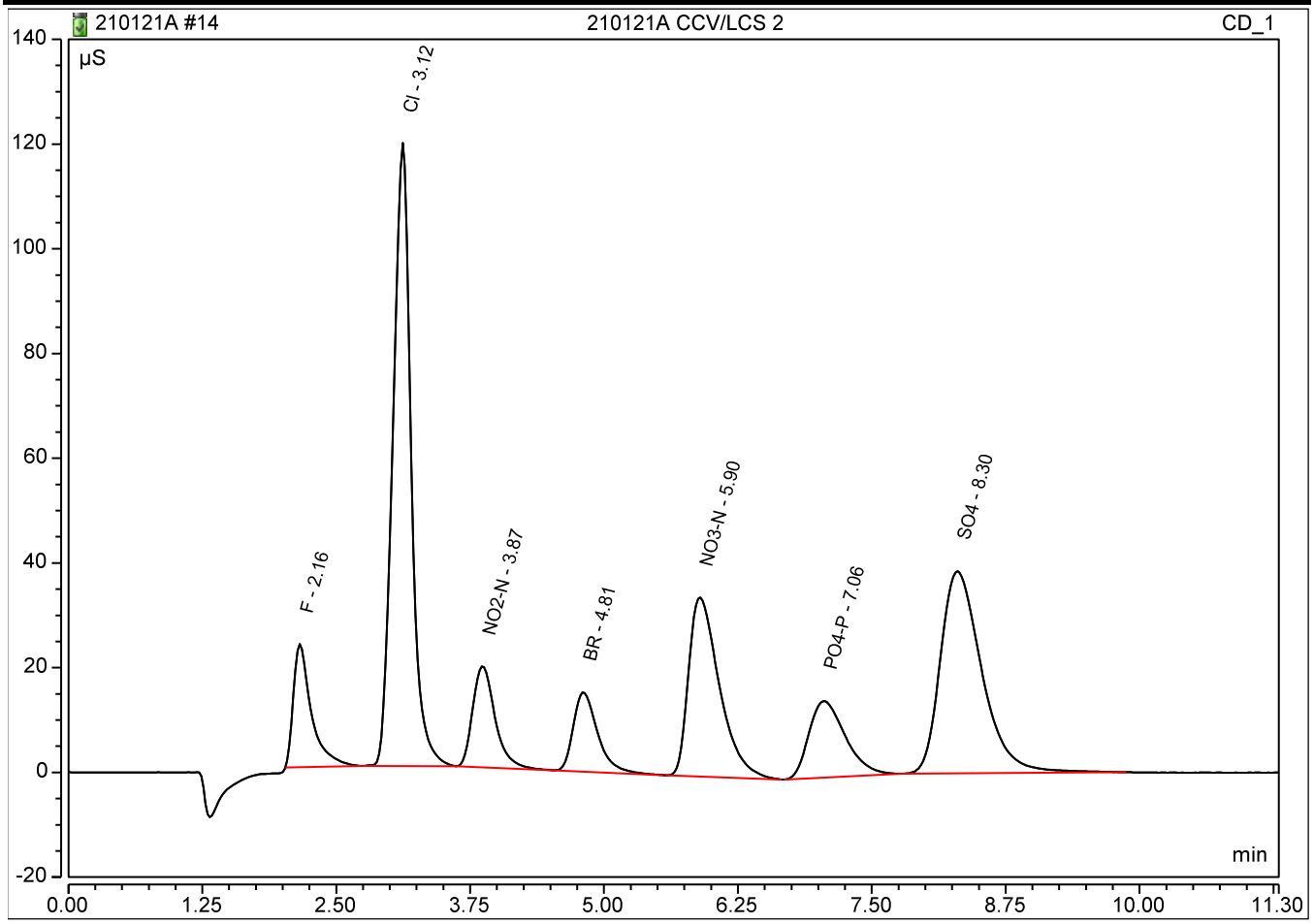
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 13:18**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB	4.579	23.493	5.12	5	102.3%
2	3.12	**Cl**	BMB	23.468	118.977	26.59	25	106.4%
3	3.87	**NO2-N**	BMB	4.675	19.317	3.17	3.04	104.2%
4	4.81	**BR**	BMB	4.000	15.172	10.81	10	108.1%
5	5.90	**NO3-N**	BMB	11.425	34.231	5.25	5	105.1%
6	7.06	**PO4-P**	BMB	5.755	14.600	8.18	10	81.8%
7	8.30	**SO4**	BMB	17.288	38.621	26.64	25	106.6%



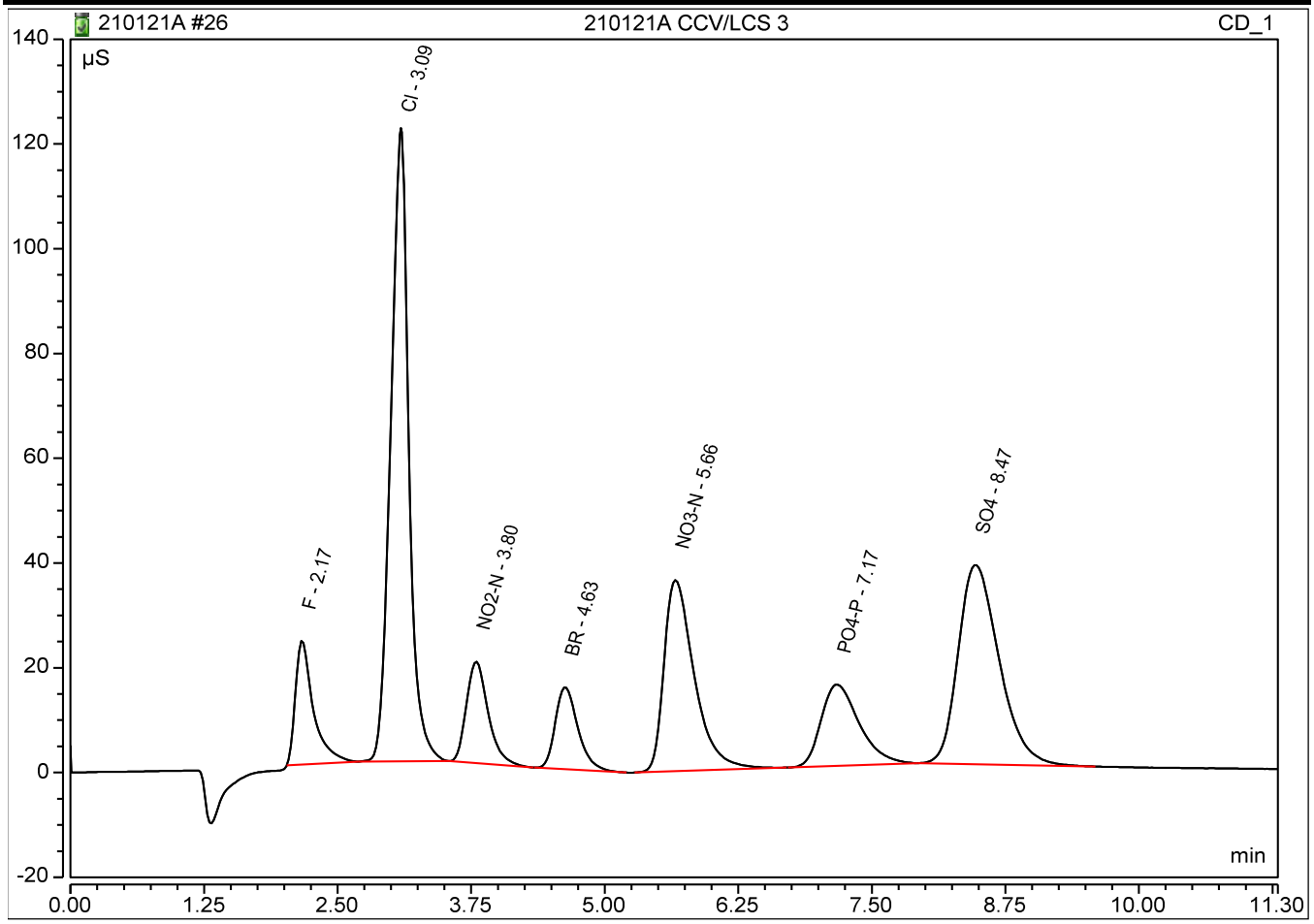
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	4.604	23.729	5.15	5	102.9%
2	3.09	**Cl**	BMB	23.604	120.881	26.75	25	107.0%
3	3.80	**NO2-N**	BMB	4.594	19.380	3.11	3.04	102.4%
4	4.63	**BR**	BMB	3.862	15.675	10.44	10	104.4%
5	5.66	**NO3-N**	BMB	12.007	36.522	5.52	5	110.4%
6	7.17	**PO4-P**	BMB	6.405	15.534	9.10	10	91.0%
7	8.47	**SO4**	BMB	16.903	38.079	26.05	25	104.2%



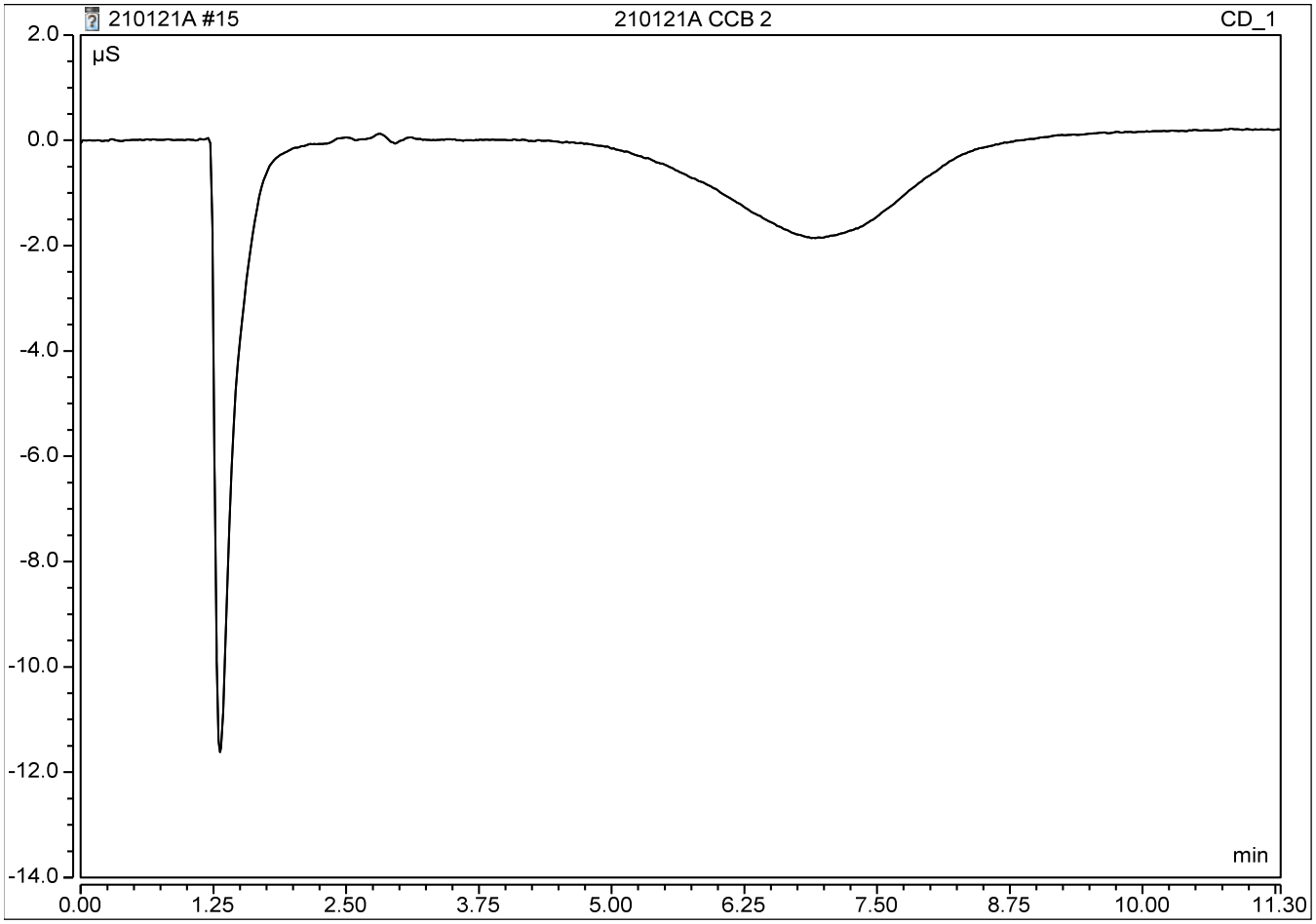
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCB 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 13:33**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

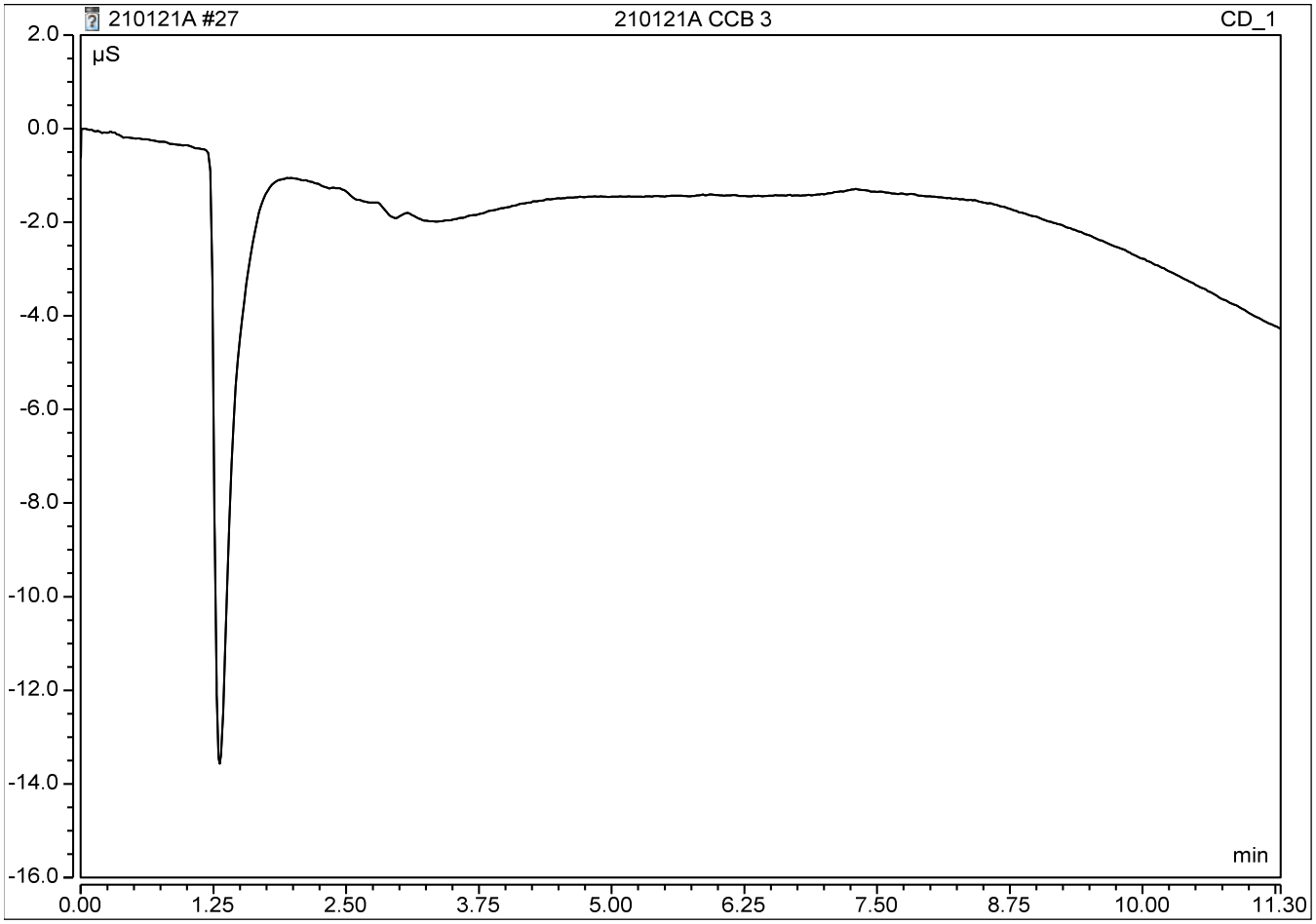


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCB 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

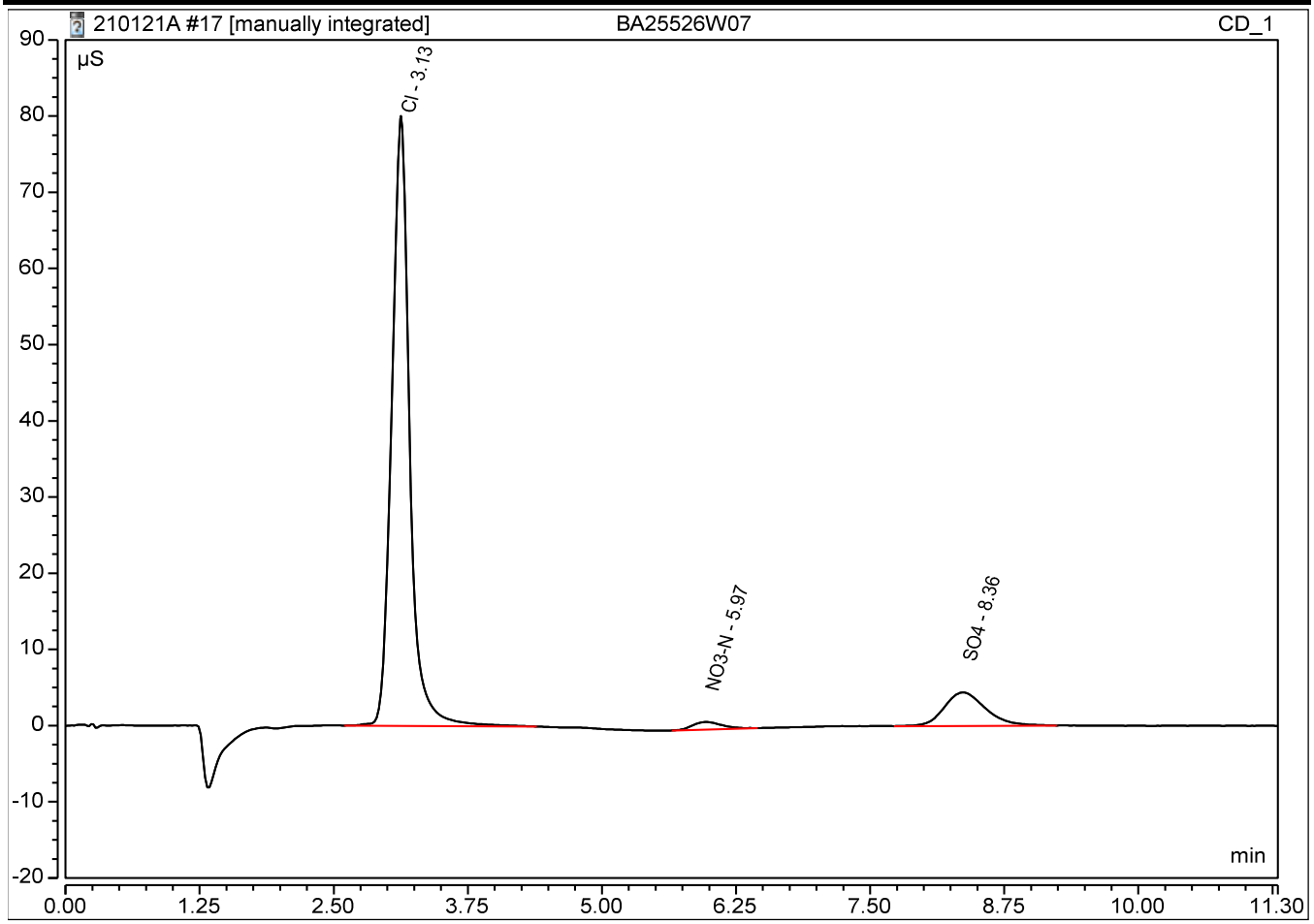
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**BA25526W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 14:18**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.13	**Cl**	BMB	15.458	80.058	17.52		
2	5.97	**NO3-N**	BMB*	0.314	1.002	0.14		
3	8.36	**SO4**	BMB	1.967	4.400	3.03		



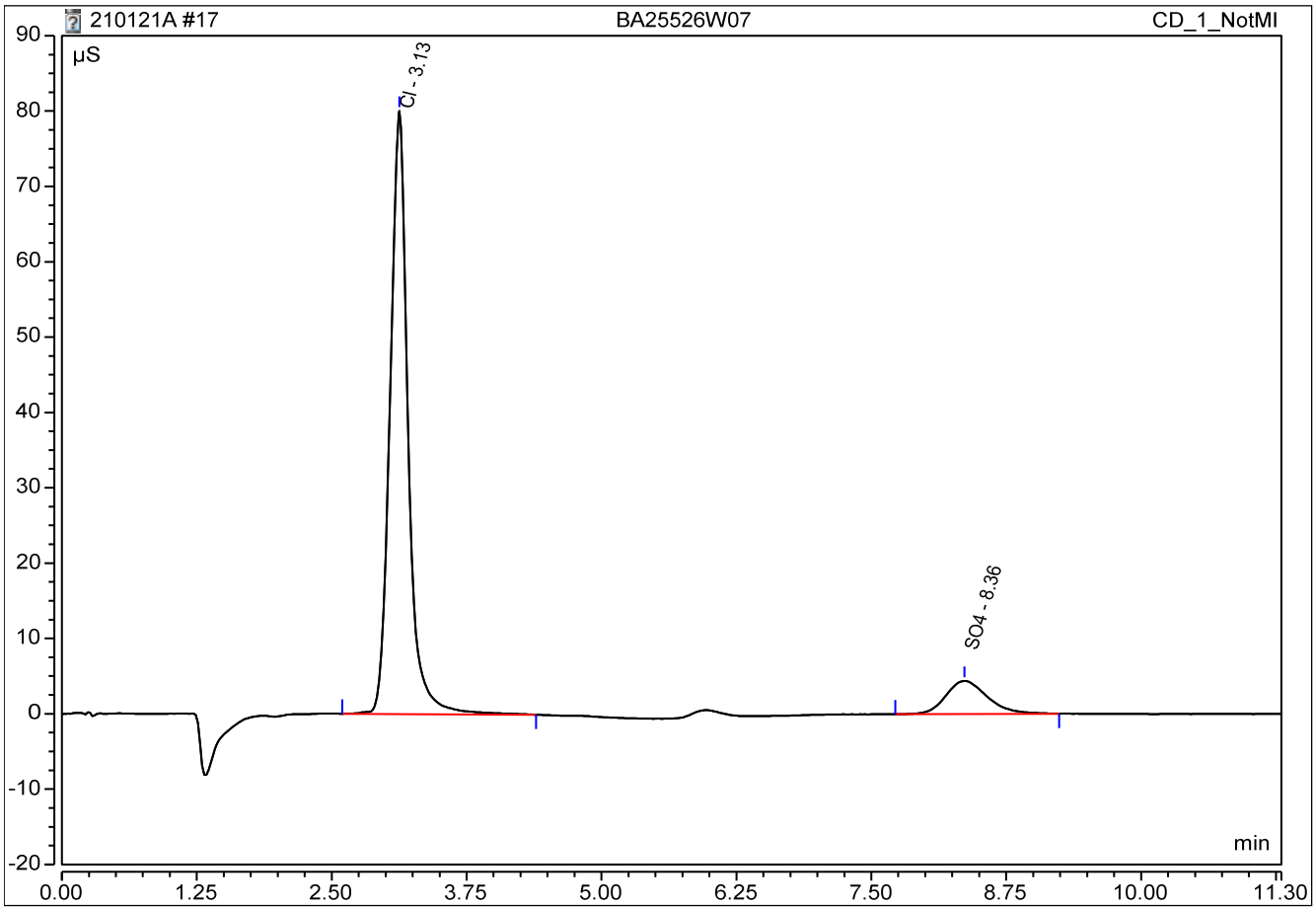
MI 5 NO3 GA 01/21/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**BA25526W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 14:18**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	3.13	**Cl**	BMB	15.458	80.058	17.5154
2	n.a.	**NO3-N**	BMB*	n.a.	n.a.	n.a.
3	8.36	**SO4**	BMB	1.967	4.400	3.1354



Anion Chromatography Working Standard

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 12/29/20	12/30/20	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 12/29/20	12/30/20	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 12/29/20	12/30/20	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 12/29/20	12/30/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 12/29/20	12/30/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 12/29/20	12/30/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 12/29/20	12/30/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 12/29/20	12/30/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 12/29/20	12/30/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	RC6	Cal 1 2020.12.29	29/Dec/2020	11:24	Calibration Standard	
2	RC7	Cal 2 2020.12.29	29/Dec/2020	11:39	Calibration Standard	
3	RC8	Cal 3 2020.12.29	29/Dec/2020	11:53	Calibration Standard	
4	RD1	Cal 4 2020.12.29	29/Dec/2020	12:08	Calibration Standard	
5	RD2	Cal 5 2020.12.29	29/Dec/2020	12:23	Calibration Standard	
6	RD3	Cal 6 2020.12.29	29/Dec/2020	12:37	Calibration Standard	
7	RD4	Cal 7 2020.12.29	29/Dec/2020	12:52	Calibration Standard	
8	RD5	Cal 8 2020.12.29	29/Dec/2020	13:07	Calibration Standard	
9	RD6	Cal 9 2020.12.29	29/Dec/2020	13:21	Calibration Standard	
10	R1	ICB / CCB	29/Dec/2020	13:36	Unknown	
11	RD7	ICV Absolute 111419	29/Dec/2020	13:51	Check Standard	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210121A CCV/LCS 1	21/Jan/2021	09:32	Check Standard	
2	R1	210121A CCB 1xxx	21/Jan/2021	09:47	Unknown	
3	R1	210121A CCB 1	21/Jan/2021	10:23	Unknown	re-prepped
4	RE3	BA25460	21/Jan/2021	10:51	Unknown	94818 01SB
5	RE4	BA25461	21/Jan/2021	11:06	Unknown	94818 01EB
6	RE5	BA25462 DF50	21/Jan/2021	11:21	Unknown	94818 MWBG1 DF50
7	RE6	BA25464 DF80	21/Jan/2021	11:35	Unknown	94818 MWBG5 DF80
8	RE7	BA25465 DF50	21/Jan/2021	11:50	Unknown	94818 MW1 DF50
9	RE8	BA25466 DF50	21/Jan/2021	12:05	Unknown	94818 MW2 DF50
10	GA1	BA25467 DF80	21/Jan/2021	12:19	Unknown	94818 MW3 DF80
11	GA2	BA25468 DF50	21/Jan/2021	12:34	Unknown	94818 MW4 DF50
12	GA3	BA25469 DF50	21/Jan/2021	12:49	Unknown	94818 MW4D DF50
13	GA4	BA25470 DF50	21/Jan/2021	13:03	Unknown	94818 MW5 DF50
14	R2	210121A CCV/LCS 2	21/Jan/2021	13:18	Check Standard	
15	R1	210121A CCB 2	21/Jan/2021	13:33	Unknown	
16	GA5	BA25507W01	21/Jan/2021	13:47	Unknown	94828 Well 2
17	GA6	BA25526W07	21/Jan/2021	14:18	Unknown	ERH 1247 ARF 94825
18	GA7	BA25529W07	21/Jan/2021	14:32	Unknown	ERH 1228 ARF 94826
19	GA8	BA25532W07	21/Jan/2021	14:47	Unknown	ERH 1230 ARF 94826
20	GB1	BA25535W07	21/Jan/2021	15:02	Unknown	ERH 1232 ARF 94826
21	GB2	BA25538W07	21/Jan/2021	15:16	Unknown	ERH 1236 ARF 94826
22	GB3	BA25591W01	21/Jan/2021	15:31	Unknown	94827 MW-365
23	GB4	BA25592W01	21/Jan/2021	15:46	Unknown	94827 MW-375
24	GD8	BA25592W01 DF5	21/Jan/2021	16:00	Unknown	94827 MW-375 DF5
25	GB5	BA25214W01 PT DF5	21/Jan/2021	16:15	Unknown	
26	R2	210121A CCV/LCS 3	21/Jan/2021	16:30	Check Standard	
27	R1	210121A CCB 3	21/Jan/2021	16:44	Unknown	
28	GB6	BA25324W08 DF40	21/Jan/2021	16:59	Unknown	
29	GB7	BA25329W08	21/Jan/2021	17:14	Unknown	
30	GB7	BA25329W08	21/Jan/2021	17:28	Unknown	
31	GB8	BA25346W08 DF50	21/Jan/2021	17:43	Unknown	
32	GC1	BA25347W08 DF50	21/Jan/2021	17:57	Unknown	
33	GC2	BA25348W22 DF50	21/Jan/2021	18:12	Unknown	
34	GC3	BA25348W22 DF50 MS	21/Jan/2021	18:27	Unknown	
35	GC4	BA25348W22 DF50 MSD	21/Jan/2021	18:41	Unknown	
36	GC5	BA25351W08	21/Jan/2021	18:56	Unknown	
37	GD6	BA25529W07 DF5	21/Jan/2021	19:11	Unknown	
38	GD7	BA25535W07 DF5	21/Jan/2021	19:25	Unknown	
39	R2	210121A CCV/LCS 4	21/Jan/2021	19:40	Check Standard	
40	R1	210121A CCB 4	21/Jan/2021	19:55	Unknown	
41	GC6	BA25462 DF500	21/Jan/2021	20:09	Unknown	
42	GC7	BA25464 DF1000	21/Jan/2021	20:24	Unknown	
43	GC8	BA25465 DF500	21/Jan/2021	20:39	Unknown	
44	GD1	BA25466 DF300	21/Jan/2021	20:53	Unknown	
45	GD2	BA25467 DF500	21/Jan/2021	21:08	Unknown	
46	GD3	BA25468 DF300	21/Jan/2021	21:22	Unknown	
47	GD4	BA25469 DF300	21/Jan/2021	21:37	Unknown	
48	GD5	BA25470 DF250	21/Jan/2021	21:52	Unknown	
49	R2	210121A CCV/LCS 5	21/Jan/2021	22:06	Check Standard	
50	R1	210121A CCB 5	21/Jan/2021	22:21	Unknown	
51	R2	stop	21/Jan/2021	22:32	Unknown	
52	R3	stop	22/Jan/2021	11:50	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

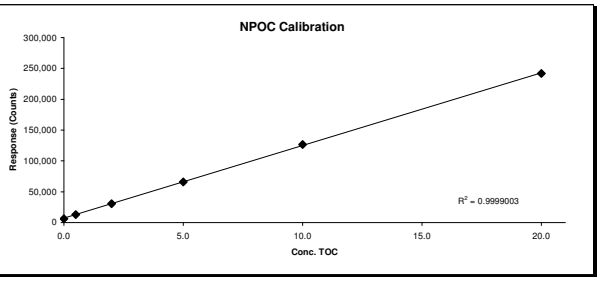
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210122A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-22	02:20 PM	QCB	1	4300	40mL	0.000	0	0.00	0.00		
2021-01-22	02:59 PM	CCV	1	61345	40mL	0.000	4.842	4.84	0.14	5.00	96.8%
2021-01-22	03:40 PM	CCB	1	3842	40mL	0.000	0	0.00	0.00		
2021-01-22	04:19 PM	210122A LCS	1	58530	40mL	0.000	4.603	4.60	0.03	5.00	92.1%
2021-01-22	04:59 PM	210122A LCSD	1	56481	40mL	0.000	4.43	4.43	0.02	5.00	88.6%
2021-01-22	05:41 PM	BA25526W06	1	165001	40mL	0.000	13.862	13.86	0.55		
2021-01-22	06:19 PM	BA25529W06	1	4350	40mL	0.000	0.226	0.23	0.02		
2021-01-22	06:56 PM	BA25532W05	1	7216	40mL	0.000	0.469	0.47	0.03		
2021-01-22	07:33 PM	BA25535W06	1	5455	40mL	0.000	0.32	0.32	0.05		
2021-01-22	08:11 PM	BA25538W06	1	3387	40mL	0.000	0.144	0.14	0.01		
2021-01-22	08:46 PM	BA25538W05 DUP	1	3620	40mL	0.000	0.164	0.16	0.02		
2021-01-22	09:23 PM	CCV	1	59148	40mL	0.000	4.656	4.66	0.02	5.00	93.1%
2021-01-22	10:03 PM	CCB	1	2277	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**6465171-49409**	**06/30/21**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_MS/MSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**sample**	5 ppm

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94825 SDG: 94825
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/25/21

Analyte	Calibration Verification									M
	True ICV	Found 21:45	%R(1)	True CCV1	Found 22:36	%R(1)	True CCV1	Found 23:04	%R(1)	
TOXN	3	3.0502	102	3	3.1184	104	3	3.233	108	

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94825 SDG: 94825

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 01/25/21 21:48	C	CCB 01/25/21 22:38	C	CCB 01/25/21 23:06	C		C		C	
TOXN	.100	U	.100	U	.100	U					

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 14:21:23
Tray Number:	2
Tray Name:	210125A NO2 NO3 TOXN PT

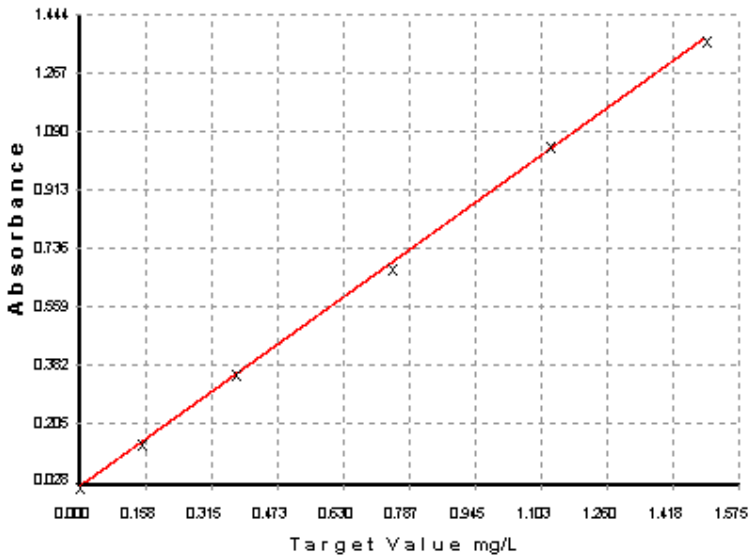
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0284	0.0005	0.0000	
S90	0.1625	0.1492	0.1500	-0.54
S91	0.3706	0.3799	0.3750	1.32
S92	0.6902	0.7344	0.7500	-2.08
S93	1.0579	1.1422	1.1250	1.53
S94	1.3749	1.4937	1.5000	-0.42
S0	0.0384	0.0116	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9998
Carryover(%):	0.7
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-3.101574E-002
b =:	1.108986E+000
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 20:01:06

Calibration Graph



Test Results

Cup Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
S1	Standard 1	0.0284			0.028434			ERR	2021-01-25 19:53:45
S1	Standard 1	0.0279			0.027917			ERR	2021-01-25 19:08:06
S1	Standard 1	0.0270			0.026971			ERR	2021-01-25 18:36:44
S90	Standard 90	0.1625			0.162497			ERR	2021-01-25 19:54:58
S90	Standard 90	0.1843			0.184284			ERR	2021-01-25 19:09:19
S90	Standard 90	0.1852			0.185231			ERR	2021-01-25 18:37:58
S91	Standard 91	0.3706			0.370564			ERR	2021-01-25 19:56:11
S91	Standard 91	0.4272			0.427209			ERR	2021-01-25 19:10:33
S91	Standard 91	0.4237			0.423696			ERR	2021-01-25 18:39:11
S92	Standard 92	0.6902			0.690216			ERR	2021-01-25 19:57:25
S92	Standard 92	0.8171			0.817072			ERR	2021-01-25 19:11:46
S92	Standard 92	0.8306			0.830618			ERR	2021-01-25 18:40:25
S93	Standard 93	1.0579			1.057907			ERR	2021-01-25 19:58:39
S93	Standard 93	1.2275			1.227511			ERR	2021-01-25 19:13:00
S93	Standard 93	1.2596			1.259574			ERR	2021-01-25 18:41:38
S94	Standard 94	1.3749			1.374914			ERR	2021-01-25 19:59:52
S94	Standard 94	1.6100			1.610047			ERR	2021-01-25 19:14:13
S94	Standard 94	1.5814			1.581402			ERR	2021-01-25 18:42:52
S0	Standard 0	0.0384			0.038450			ERR	2021-01-25 20:01:06
S0	Standard 0	0.0406			0.040558			ERR	2021-01-25 19:15:27
S0	Standard 0	0.0396			0.039613			ERR	2021-01-25 18:44:05
CCV	CCV .75	0.7553	mg/L		0.709018			ERR	2021-01-25 20:02:20
CCV	CCV .75	0.6409	mg/L		0.705998			ERR	2021-01-25 19:16:40
CCV	CCV .75	0.6297	mg/L		0.696527			ERR	2021-01-25 18:45:19

	CCB	CCB	0.0065	mg/L	0.033842	ERR	2021-01-25 20:03:33
	CCB	CCB	0.0058	mg/L	0.033973	ERR	2021-01-25 19:17:54
	CCB	CCB	-0.0001	mg/L	0.032549	ERR	2021-01-25 18:46:33
3	U1	ICV NO2	0.7446	mg/L	0.699414	ERR	2021-01-25 20:04:47
3	U1	ICV NO2	0.6145	mg/L	0.678119	ERR	2021-01-25 19:19:08
3	U1	ICV NO2	0.6199	mg/L	0.686146	ERR	2021-01-25 18:47:47
4	U2	ICV NO3 TOXN	0.0065	mg/L	0.033871	ERR	2021-01-25 20:06:01
4	U2	ICV NO3 TOXN	0.0057	mg/L	0.033915	ERR	2021-01-25 19:20:22
5	U3	ICB NO2 NO3 TOXN	-0.0002ELL	mg/L	0.027760	ERR	2021-01-25 20:07:14
5	U3	ICB NO2 NO3 TOXN	-0.0003	mg/L	0.027516	ERR	2021-01-25 19:21:35
6	U4	210125A Blk NO2 NO3 TOXN	0.0005ELL	mg/L	0.028420	ERR	2021-01-25 20:08:30
6	U4	210125A Blk NO2 NO3 TOXN	0.0005	mg/L	0.028391	ERR	2021-01-25 19:22:51
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0002ELL	mg/L	0.028190	ERR	2021-01-25 20:09:43
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0001	mg/L	0.027932	ERR	2021-01-25 19:24:04
8	U6	210125A LCS NO2	0.7340	mg/L	0.689821	ERR	2021-01-25 20:10:58
8	U6	210125A LCS NO2	0.6225	mg/L	0.686604	ERR	2021-01-25 19:25:19
9	U7	210125A LCS NO3 TOXN	0.0055	mg/L	0.032898	ERR	2021-01-25 20:12:12
9	U7	210125A LCS NO3 TOXN	0.0045	mg/L	0.032622	ERR	2021-01-25 19:26:33
10	U8	210125A LCSD NO2	0.7531	mg/L	0.707025	ERR	2021-01-25 20:13:26
10	U8	210125A LCSD NO2	0.6341	mg/L	0.698808	ERR	2021-01-25 19:27:47
11	U9	210125A LCSD NO3 TOXN	0.0060	mg/L	0.033333	ERR	2021-01-25 20:14:40
11	U9	210125A LCSD NO3 TOXN	0.0045	mg/L	0.032564	ERR	2021-01-25 19:29:01
12	U10	1 ppm NO2	0.0105	mg/L	0.037466	ERR	2021-01-25 20:15:55
	CCV	CCV .75	0.7377	mg/L	0.693128	ERR	2021-01-25 20:17:09
	CCB	CCB	0.0058	mg/L	0.033173	ERR	2021-01-25 20:18:24
13	U11	1 ppm NO3	0.0048	mg/L	0.032332	ERR	2021-01-25 20:19:38
14	U12	BA25605W03 pH 6.07	0.0076	mg/L	0.034833	ERR	2021-01-25 20:20:52
15	U13	BA25606W03 pH 7.47	0.0064	mg/L	0.033770	ERR	2021-01-25 20:22:06
16	U14	BA25607W03 pH 6.99	0.0072	mg/L	0.034454	ERR	2021-01-25 20:23:21
17	U15	BA25608W03 pH 5.98	0.0070	mg/L	0.034264	ERR	2021-01-25 20:24:35
18	U16	BA25609W03 pH 5.30	0.0067	mg/L	0.034002	ERR	2021-01-25 20:25:49
19	U17	BA25610W06 pH 6.98	0.0065	mg/L	0.033828	ERR	2021-01-25 20:27:02
20	U18	BA25611W04 pH 6.45	0.0113	mg/L	0.038126	ERR	2021-01-25 20:28:16
21	U19	BA25612W04 pH 5.63	0.0101	mg/L	0.037040	ERR	2021-01-25 20:29:29
22	U20	BA25613W02 pH 5.58	0.0091	mg/L	0.036206	ERR	2021-01-25 20:30:42
	CCV	CCV .75	0.7557	mg/L	0.709431	ERR	2021-01-25 20:31:55
	CCB	CCB	0.0060	mg/L	0.033333	ERR	2021-01-25 20:33:10
23	U21	BA25614W02 pH 6.34	0.0067	mg/L	0.034031	ERR	2021-01-25 20:34:25
24	U22	BA25615W02 pH 6.95	0.0075	mg/L	0.034774	ERR	2021-01-25 20:35:38
25	U23	BA25616W02 pH 7.67	0.0056	mg/L	0.033028	ERR	2021-01-25 20:36:52
26	U24	BA25617W02 pH 6.34	0.0077	mg/L	0.034906	ERR	2021-01-25 20:38:07
27	U25	BA25618W02 pH 6.24	0.0058	mg/L	0.033173	ERR	2021-01-25 20:39:21
28	U26	BA25619W05 pH 6.07	0.0004ELL	mg/L	0.028363	ERR	2021-01-25 20:40:35
40	U38	BA25600W06	0.0067	mg/L	0.034002	ERR	2021-01-25 20:41:49
41	U39	BA25600W07 pH 6.01	0.0023	mg/L	0.030076	ERR	2021-01-25 20:43:03
42	U40	BA25601W06	0.0037	mg/L	0.031260	ERR	2021-01-25 20:44:16
43	U41	BA25601W07 pH 6.27	0.0015	mg/L	0.029341	ERR	2021-01-25 20:45:32
	CCV	CCV .75	0.7357	mg/L	0.691339	ERR	2021-01-25 20:46:45
	CCB	CCB	0.0061	mg/L	0.033508	ERR	2021-01-25 20:48:02
44	U42	BA25602W06	0.0031	mg/L	0.030783	ERR	2021-01-25 20:48:42
45	U43	BA25602W07 pH 8.28	0.0012	mg/L	0.029024	ERR	2021-01-25 20:49:47
46	U44	BA25215 PT	1.0767	mg/L	0.998898	ERR	2021-01-25 20:50:43
47	U45	BA25214 PT	0.0082	mg/L	0.035343	ERR	2021-01-25 20:51:39
	CCV	CCV .75	0.7507	mg/L	0.704905	ERR	2021-01-25 20:52:35
	CCB	CCB	0.0058	mg/L	0.033159	ERR	2021-01-25 20:53:33
	CCV	CCV .75	0.7490	mg/L	0.703339		2021-01-25 19:51:15
	CCB	CCB	0.0051	mg/L	0.032578		2021-01-25 19:52:29
	CCV	CCV .75	0.7469	mg/L	0.701508		2021-01-25 20:54:31
	CCB	CCB	0.0062	mg/L	0.033595		2021-01-25 20:55:29

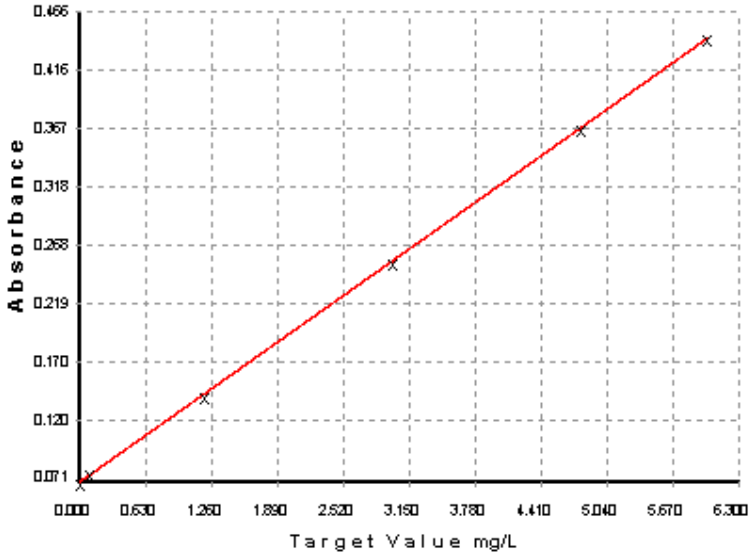
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0710	0.0080	0.0000	
S90	0.0785	0.1297	0.1000	29.72
S91	0.1427	1.1661	1.2000	-2.83
S92	0.2553	2.9823	3.0000	-0.59
S93	0.3675	4.7942	4.8000	-0.12
S94	0.4435	6.0198	6.0000	0.33
S0	0.0794	0.1443	0.0000	

Polynomial Order:	1
Correlation Coefficient:	1.0000
Carryover(%):	2.3
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-1.137157E+000
b =:	1.613783E+001
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 21:38:54

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0710		0.070958			ERR	2021-01-25 21:25:07
	S90	Standard 90	0.0785		0.078503			ERR	2021-01-25 21:27:24
	S91	Standard 91	0.1427		0.142723			ERR	2021-01-25 21:29:42
	S92	Standard 92	0.2553		0.255264			ERR	2021-01-25 21:32:00
	S93	Standard 93	0.3675		0.367542			ERR	2021-01-25 21:34:18
	S94	Standard 94	0.4435		0.443491			ERR	2021-01-25 21:36:36
	S0	Standard 0	0.0794		0.079407			ERR	2021-01-25 21:38:54
	CCV	CCV	3.0207	mg/L	0.257645			ERR	2021-01-25 21:41:13
	CCB	CCB	-0.0196	mg/L	0.069250			ERR	2021-01-25 21:43:31
4	U2	ICV NO3 TOXN	3.0502	mg/L	0.259476			ERR	2021-01-25 21:45:50
5	U3	ICB NO2 NO3 TOXN	0.0028ELL	mg/L	0.070641			ERR	2021-01-25 21:48:08
6	U4	210125A Blk NO2 NO3 TOXN	-0.0303ELL	mg/L	0.068587			ERR	2021-01-25 21:50:27
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0247ELL	mg/L	0.068934			ERR	2021-01-25 21:52:46
9	U7	210125A LCS NO3 TOXN	2.9363	mg/L	0.252415			ERR	2021-01-25 21:55:04
11	U9	210125A LCSD NO3 TOXN	2.9014	mg/L	0.250254			ERR	2021-01-25 21:57:23
13	U11	1 ppm NO3	0.0092	mg/L	0.071037			ERR	2021-01-25 21:59:42
14	U12	BA25605W03 pH 6.07	0.0585	mg/L	0.074091			ERR	2021-01-25 22:02:01
15	U13	BA25606W03 pH 7.47	0.0745	mg/L	0.075082			ERR	2021-01-25 22:04:20
16	U14	BA25607W03 pH 6.99	0.0282	mg/L	0.072212			ERR	2021-01-25 22:06:38
	CCV	CCV	3.0621	mg/L	0.260210			ERR	2021-01-25 22:08:57
	CCB	CCB	-0.0148	mg/L	0.069550			ERR	2021-01-25 22:11:16
17	U15	BA25608W03 pH 5.98	0.0325	mg/L	0.072482			ERR	2021-01-25 22:13:35
18	U16	BA25609W03 pH 5.30	0.0498	mg/L	0.073549			ERR	2021-01-25 22:15:53
19	U17	BA25610W06 pH 6.98	0.0601	mg/L	0.074187			ERR	2021-01-25 22:18:12
20	U18	BA25611W04 pH 6.45	0.2677	mg/L	0.087053			ERR	2021-01-25 22:20:30
21	U19	BA25612W04 pH 5.63	0.2563	mg/L	0.086346			ERR	2021-01-25 22:22:49
22	U20	BA25613W02 pH 5.58	0.1146	mg/L	0.077569			ERR	2021-01-25 22:25:07
23	U21	BA25614W02 pH 6.34	0.0900	mg/L	0.076043			ERR	2021-01-25 22:27:25
24	U22	BA25615W02 pH 6.95	0.0952	mg/L	0.076364			ERR	2021-01-25 22:29:43
25	U23	BA25616W02 pH 7.67	0.0565	mg/L	0.073964			ERR	2021-01-25 22:32:00
26	U24	BA25617W02 pH 6.34	0.0916	mg/L	0.076139			ERR	2021-01-25 22:34:18
	CCV	CCV	3.1184	mg/L	0.263704			ERR	2021-01-25 22:36:36
	CCB	CCB	-0.0461	mg/L	0.067611			ERR	2021-01-25 22:38:54
27	U25	BA25618W02 pH 6.24	0.1053	mg/L	0.076990			ERR	2021-01-25 22:41:13
28	U26	BA25619W05 pH 6.07	-0.0567ELL	mg/L	0.066951			ERR	2021-01-25 22:43:32
29	U27	BA25526W08 pH 8.10	0.3728	mg/L	0.093565			ERR	2021-01-25 22:45:51
30	U28	BA25529W08 pH 6.26	0.5989	mg/L	0.107578			ERR	2021-01-25 22:48:09
31	U29	BA25532W08 pH 7.05	1.3644	mg/L	0.155010			ERR	2021-01-25 22:50:26
32	U30	BA25535W08 pH 7.62	1.0767	mg/L	0.137187			ERR	2021-01-25 22:52:44
33	U31	BA25538W08 pH 6.35	0.4087	mg/L	0.095791			ERR	2021-01-25 22:55:02

34	U32	BA25591W02 pH 6.16	7.6305	mg/L	0.117749	x10.0000	ERR	2021-01-25 23:57:41
34	U32	BA25591W02 pH 6.16	6.0234	mg/L	0.443715		ERR	2021-01-25 22:57:19
35	U33	BA25592W02 pH 7.61	0.7429	mg/L	0.116497		ERR	2021-01-25 22:59:37
36	U34	BA25690W11 pH 6.32	0.3936	mg/L	0.094852		ERR	2021-01-25 23:01:54
	CCV	CCV	3.2330	mg/L	0.270801		ERR	2021-01-25 23:04:12
	CCB	CCB	-0.0450	mg/L	0.067674		ERR	2021-01-25 23:06:30
37	U35	BA25693W08 pH 8.53	0.1712	mg/L	0.081075		ERR	2021-01-25 23:08:49
38	U36	BA25696W08 pH 6.45	-0.0293ELL	mg/L	0.068650		ERR	2021-01-25 23:11:07
39	U37	BA25699W11 pH 6.24	0.0269	mg/L	0.072132		ERR	2021-01-25 23:13:27
40	U38	BA25600W06	220.6245	mg/L	0.298320	x60.0000	ERR	2021-01-26 00:32:22
40	U38	BA25600W06	172.1695	mg/L	1.137335	x10.0000	ERR	2021-01-25 23:58:37
40	U38	BA25600W06	52.6451	mg/L	3.332681		ERR	2021-01-25 23:15:44
41	U39	BA25600W07 pH 6.01	223.9008	mg/L	0.301703	x60.0000	ERR	2021-01-26 00:33:19
41	U39	BA25600W07 pH 6.01	169.5951	mg/L	1.121382	x10.0000	ERR	2021-01-25 23:59:33
41	U39	BA25600W07 pH 6.01	52.6451	mg/L	3.332681		ERR	2021-01-25 23:18:02
42	U40	BA25601W06	1258.1431ELH	mg/L	1.369838	x60.0000	ERR	2021-01-26 00:34:15
42	U40	BA25601W06	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:00:30
42	U40	BA25601W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:20:22
43	U41	BA25601W07 pH 6.27	1180.5591ELH	mg/L	1.289712	x60.0000	ERR	2021-01-26 00:35:11
43	U41	BA25601W07 pH 6.27	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:01:26
43	U41	BA25601W07 pH 6.27	60.3448	mg/L	3.809802		ERR	2021-01-25 23:21:29
44	U42	BA25602W06	1158.3044ELH	mg/L	1.266728	x60.0000	ERR	2021-01-26 00:36:07
44	U42	BA25602W06	536.4799	mg/L	3.394829	x10.0000	ERR	2021-01-26 00:02:22
44	U42	BA25602W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:22:26
45	U43	BA25602W07 pH 8.28	1279.7607ELH	mg/L	1.392164	x60.0000	ERR	2021-01-26 00:37:04
45	U43	BA25602W07 pH 8.28	531.2860	mg/L	3.362644	x10.0000	ERR	2021-01-26 00:03:18
45	U43	BA25602W07 pH 8.28	60.3448	mg/L	3.809802		ERR	2021-01-25 23:23:22
46	U44	BA25215 PT	2.7372	mg/L	0.240077		ERR	2021-01-25 23:24:18
	CCV	CCV	3.5657	mg/L	0.291420		ERR	2021-01-25 23:25:15
	CCB	CCB	0.3138	mg/L	0.089908		ERR	2021-01-25 23:26:12
47	U45	BA25214 PT	4.5484	mg/L	0.352314		ERR	2021-01-25 23:27:10
	CCV	CCV	3.4140	mg/L	0.282018		ERR	2021-01-25 23:28:06
	CCB	CCB	0.1446	mg/L	0.079424		ERR	2021-01-25 23:29:04
	CCV	CCV	3.1878	mg/L	0.267998			2021-01-25 23:54:10
	CCB	CCB	0.1261	mg/L	0.078278			2021-01-25 23:56:31
	CCV	CCV	4.0923	mg/L	0.324052			2021-01-26 00:04:15
	CCB	CCB	0.3612	mg/L	0.092848			2021-01-26 00:05:13
	CCV	CCV	3.3696	mg/L	0.279269			2021-01-26 00:30:14
	CCB	CCB	0.2290	mg/L	0.084658			2021-01-26 00:31:24
	CCV	CCV	3.7972	mg/L	0.305766			2021-01-26 00:38:00
	CCB	CCB	0.2871	mg/L	0.088255			2021-01-26 00:38:58

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.0437	mg/L		0.000000			ERR	2021-01-26 07:45:58
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN	0.0031	mg/L		0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN	-0.0308	mg/L		0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0250	mg/L		0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN	2.9308	mg/L		0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN	2.8955	mg/L		0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3	0.0044	mg/L		0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3				0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07	0.0509	mg/L		0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47	0.0681	mg/L		0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47				0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99	0.0210	mg/L		0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99				0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98	0.0256	mg/L		0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98				0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30	0.0431	mg/L		0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30				0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98	0.0536	mg/L		0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98				0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45	0.2564	mg/L		0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45				0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63	0.2462	mg/L		0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63				0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58	0.1055	mg/L		0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58				0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34	0.0833	mg/L		0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95	0.0876	mg/L		0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95				0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67	0.0508	mg/L		0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67				0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34	0.0839	mg/L		0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24	0.0995	mg/L		0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24				0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07	-0.0571	mg/L		0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06	220.6178	mg/L		0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06				0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01	223.8985	mg/L		0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01				0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06	1258.1394	mg/L		0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06				0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27	1180.5576	mg/L		0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27				0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06	1158.3013	mg/L		0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06				0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28	1279.7595	mg/L		0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28				0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT	1.6604	mg/L		0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT				0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT	4.5402	mg/L		0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT				0.000000			ERR	2021-01-26 07:45:58

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

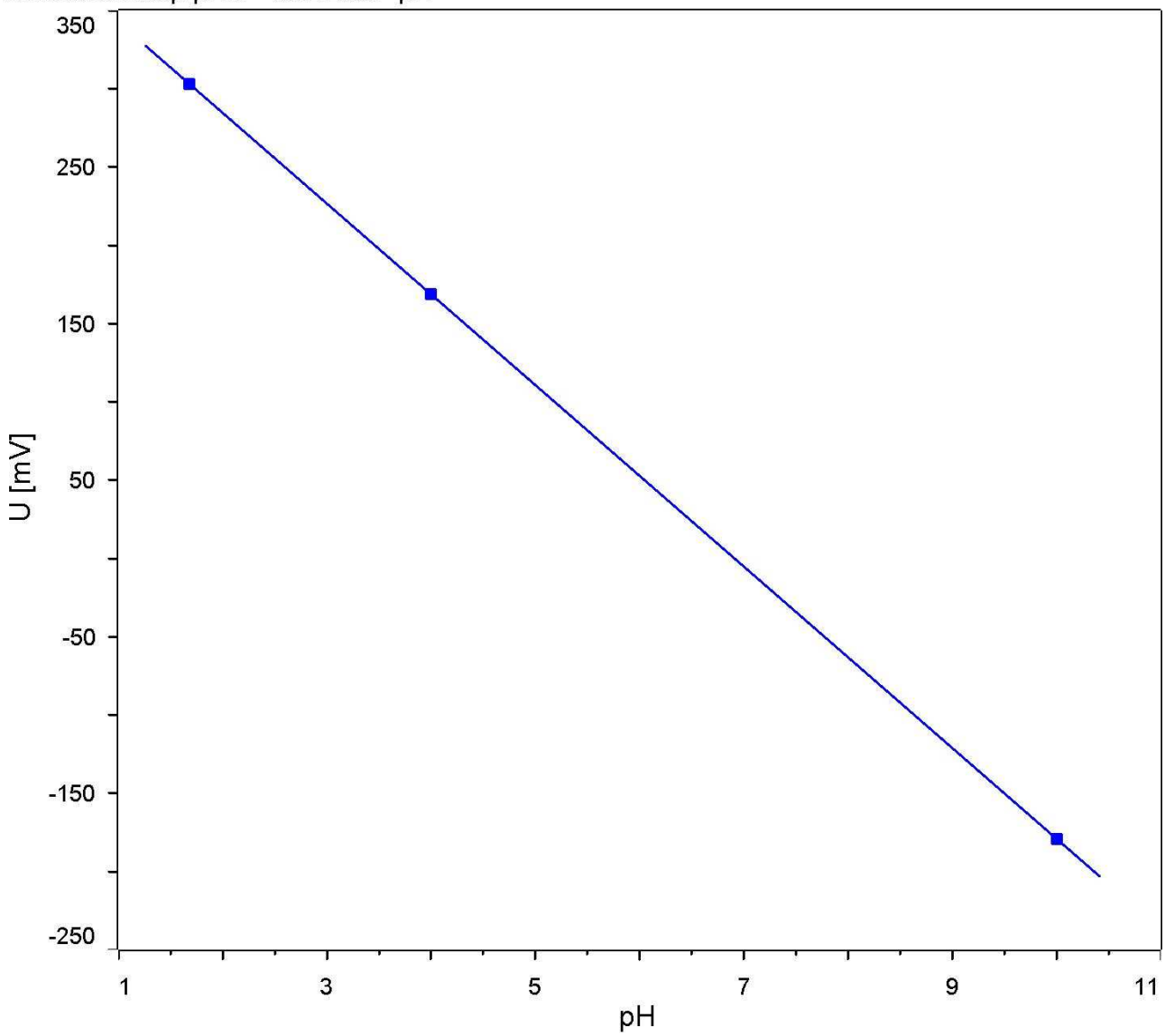
Timao Calibration Curve

2021-01-22 12:27:40

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0407	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.91	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.908	
Res19	20.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	20.4806	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA25538W07	2021-01-22 17:26:52 UTC-8	Alkalinity	0.000	1.678	0.00	0.00	69.80	69.80	mg/L	25 mL	0.0208	210122A	AR
BA25535W07	2021-01-22 17:21:31 UTC-8	Alkalinity	0.000	1.876	0.00	0.00	78.04	78.04	mg/L	25 mL	0.0208	210122A	AR
BA25532W07	2021-01-22 17:16:10 UTC-8	Alkalinity	0.000	2.468	0.00	0.00	102.67	102.67	mg/L	25 mL	0.0208	210122A	AR
BA25529W07	2021-01-22 17:10:17 UTC-8	Alkalinity	0.000	2.796	0.00	0.00	116.31	116.31	mg/L	25 mL	0.0208	210122A	AR
BA25526W07	2021-01-22 17:06:23 UTC-8	Alkalinity	0.000	1.512	0.00	0.00	62.90	62.90	mg/L	25 mL	0.0208	210122A	AR
210122A LCSD	2021-01-22 13:43:58 UTC-8	Alkalinity	0.180	6.234	0.00	14.26	232.61	246.87	mg/L	25 mL	0.0198	210122A	AR
210122A LCS	2021-01-22 12:56:32 UTC-8	Alkalinity	0.180	6.190	0.00	14.26	230.87	245.12	mg/L	25 mL	0.0198	210122A	AR
210122A BLK	2021-01-22 12:53:58 UTC-8	Alkalinity	0.000	0.022	0.00	0.00	0.87	0.87	mg/L	25 mL	0.0198	210122A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA
ORP standard	Thermo Fisher Scientific	mV	NA	WZ1-40222	01/11/19	1/31/20	20mL	20mL	ORP STD	220mV

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210121 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

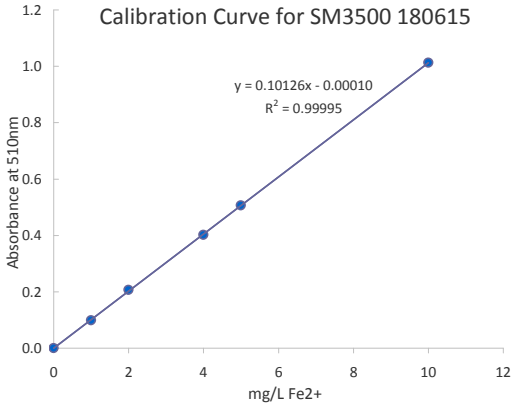
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210121	0.302	2.98

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	01/21/21	2.98



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
01/21/21	23:31	CCV 4.0 A210121	1	0.407	25mL		4.02	4.02	4.00	100.5%
01/21/21	23:30	Blk/ CCB A210121	1	0.000	25mL		0.00	0.00		
01/21/21	23:32	LCS A210121	1	0.302	25mL		2.98	2.98	3.00	99.5%
01/21/21	23:32	LCSD A210121	1	0.302	25mL		2.98	2.98	3.00	99.5%
01/21/21	23:49	BA25526W09	1	0.016	25mL		0.16	0.16		
01/21/21	23:50	BA25529W09	1	0.010	25mL		0.10	0.10		
01/21/21	23:50	BA25532W09	1	0.012	25mL		0.12	0.12		
01/21/21	23:58	BA25535W09	1	0.003	25mL		0.03	0.03		
01/21/21	0:01	BA25538W09	1	0.006	25mL		0.06	0.06		
01/21/21	0:01	BA25538W09 MS	1	0.308	25mL		3.04	3.04		
01/21/21	0:01	BA25538W09 MSD	1	0.309	25mL		3.05	3.05		
01/21/21	0:01	CCV 4.0 A210121	1	0.403	25mL		3.98	3.98	4.00	99.5%
01/21/21	0:02	Blk/ CCB A210121	1	0.005	25mL		0.05	0.05		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 17, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94826

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Eight water samples were received January 21, 2021. Written results for the requested analyses are being provided on this February 17, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94826
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	8
Sample Results	17
QC Forms	66
Method 8015B Calibration Data	141
Method 8015B Raw Data	173
Method 8270D Calibration Data	203
Method 8270D Raw Data	254
Method 8270D SIM Calibration Data	284
Method 8270D SIM Raw Data	311
APPL SOP 2-MEE Calibration Data	338
APPL SOP 2-MEE Raw Data	365
Method 8260B Calibration Data	392
Method 8260B Raw Data	456
Method 8260B GRO Calibration Data	488
Method 8260B GRO Raw Data	538
Method RSK-175 Calibration Data	574
Method RSK-175 Raw Data	602
Method 300 Calibration Data	627
Method 300 Raw Data	659
Inorganic Analyses and Calibration Raw Data	672

CASE NARRATIVE

Case Narrative

ARF: 94826

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Eight water samples were received January 21, 2021 at 8.0°C, 8.0°C, 3.0°C and 1.5°C. Samples ERH1227, ERH1228, ERH1231, & ERH1232 were received at 8.0°C. The client was notified and analyses continued. The sample group was assigned Analytical Request Form (ARF) number 94826.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

None.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94826	01/21/21	ERH1227	BA25528	01/19/21 9:42:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1227	BA25528	01/19/21 9:42:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1227	BA25528	01/19/21 9:42:00 AM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	SM3500FeB	Ferrous Iron
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94826	01/21/21	ERH1228	BA25529	01/19/21 10:15:00 AM	WATER	SW846 9060A	9060A TOC
94826	01/21/21	ERH1229	BA25531	01/19/21 12:11:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1229	BA25531	01/19/21 12:11:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1229	BA25531	01/19/21 12:11:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	SM3500FeB	Ferrous Iron
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94826	01/21/21	ERH1230	BA25532	01/19/21 1:19:00 PM	WATER	SW846 9060A	9060A TOC
94826	01/21/21	ERH1231	BA25534	01/19/21 3:06:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1231	BA25534	01/19/21 3:06:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1231	BA25534	01/19/21 3:06:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	SM 2320B	Wetlab 2320B - Water

94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	SM3500FeB	Ferrous Iron
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94826	01/21/21	ERH1232	BA25535	01/19/21 3:58:00 PM	WATER	SW846 9060A	9060A TOC
94826	01/21/21	ERH1235	BA25537	01/20/21 12:05:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1235	BA25537	01/20/21 12:05:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1235	BA25537	01/20/21 12:05:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	SM3500FeB	Ferrous Iron
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	RSK 175	METHANE BY RSK 175
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94826	01/21/21	ERH1236	BA25538	01/20/21 12:08:00 PM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

94826

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Brooke Gottmeier
Phone: 808-954-4536 Fax: 808-523-8950
Job: 60571032 CV18F0126 Red Hill Fuel Storage
PO #: 18S-22209-HI27 PO# 102604
Chain of Custody (Y/N): Y # 202111,202113,20211
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: AAR
Date Received: 01/21/21 Time: 11:20
Delivered by: FEDEX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 8.0,8.0,3.0,1.5°C
Color: VFRG/B-Red
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 01/28/21

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com

Sample Distribution:
GC: 4-$87DC53W5, 4-$87DMEEW5, 4-$DOC53W5LIQ, 4-$SIM53LIQ51
Extractions: 4-_LIQ003, 4-_LIQ005, 4-_MWE2MEE
VOA: 8-$86BTOTXDOD5W, 8-$GASBL, 8-$GRO86BW, 8-$RSKMETH
Wetlab: 4-$232W(HCO3,CO3,ALK), 4-$300W, 2-$300WD, 4-$353TOXNW, 4-$35FE, 4-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH1227	LCSD BA25528W	01/19/21 09:42	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1228	LCSD BA25529W	01/19/21 10:15	$232W(HCO3,CO3,ALK), $300W, $300WD, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
3.	ERH1229	LCSD BA25531W	01/19/21 12:11	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH1230	LCSD BA25532W	01/19/21	13:19	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
5.	ERH1231	LCSD BA25534W	01/19/21	15:06	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
6.	ERH1232	LCSD BA25535W	01/19/21	15:58	$232W(HCO3,CO3,ALK), $300W, $300WD, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
7.	ERH1235	LCSD BA25537W	01/20/21	12:05	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
8.	ERH1236	LCSD BA25538W	01/20/21	12:08	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments

APPL Sample Receipt Form

ARF# **94826**

Sample	Container Type	Count	p
BA25528	[13] VOAs - HCL	4	NA
BA25529	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA25531	[13] VOAs - HCL	4	NA
BA25532	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.3
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA25534	[13] VOAs - HCL	4	NA
BA25535	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA25537	[13] VOAs - HCL	4	NA
BA25538	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA

Sample	Container Type	Count	p

94826

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202111

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM, JV, RS

Sampler (Signature): Alex For GM, JV, RS

Date Shipped: 1/19/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1227	Trip Blank	1/19/21	0942	HST	4	X			X		X	RSK	1/19/20			X						
ERH1228	RHMW06	1/19/21	1015	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

AEM 1/19/21 @ 1247

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: R1@8.0/8.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/19/21	1300					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-21-21	1120	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202112

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM, JV, RS

Sampler (Signature):

Date Shipped: 1/20/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxyethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1229	Trip Blank	1/19/21	1211	HST	4	X			X							X						
ERH1230	RHMW078	1/19/21	1319	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

BS 1/20/21

BS 1/20/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: BI @ 3.0/3.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	1/20/21	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-21-21	1120	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202113

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM.RS.JV

Sampler (Signature):

Date Shipped: 1/20/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1231	Trip Blank	1/19/21	1606	HST	4	X			X							X						
ERH1232	RHMW087	1/19/21	1558	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

BS 1/20/21

BK 1/20/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: R1@ 8.0/8.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/20/21	1400					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-21-21	1120	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202115

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): GM, ES, JV
Sampler (Signature):

Date Shipped: 1/20/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1235	Trip Blank	1/20/21	1205	HST	4	X			X							X						
ERH1236	RHMW10	1/20/21	1208	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

1/20/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: IRB 3.4/1.8°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date 1/20/21	Time 1400	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 1-21-21	Time 1120	Received at lab by:

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94826**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/21/21

2) Coolers: Number of Coolers: 4

3) YES Were custody seals present and intact?
How many? 8 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) No Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: IRB CF:-1.9°C/R1 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 8.0/8.0 2: 3.0/3.0 3: 8.0/8.0 4: 3.4/1.5 5: _____ 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA25528all, BA25531all, BA25534all, BA25537all
Smaller than a pea: BA25529w02-04, BA25532w04, BA25535w03-04, BA25538w03-04

Preservation Hold time:

18) No Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

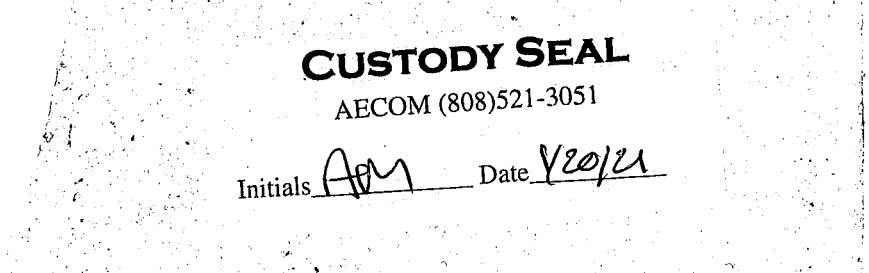
20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate: _____

Notes/Deficiencies:
Ferrous iron received out of hold time. 1 nitrate sample received out of hold time



Personnel receiving samples: MS Second reviewer:
Personnel labeling samples: MS
Project manager notified: MS Date/Time of notification 01/21/21
Name of client notified: _____ Date/Time of notification _____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #DOC53-210122A-260639

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.2	60-142			%	01/22/21	01/26/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.2	56-125			%	01/22/21	01/26/21

Quant Method:	DOC1218.M
Run #:	107118
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:37:27 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	86.9	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.2	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107137
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:37:27 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	83.8	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	74.8	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107138
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:37:27 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	87.6	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.8	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107139
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:37:27 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	89.8	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	85.0	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	87.9	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	90.1	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	91.8	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	110	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y111
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/27/21 11:46:47 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	92.2	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	84.3	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	90.7	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	94.4	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	94.9	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	116	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y112
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	91.0	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	83.7	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	86.0	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	90.0	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	89.6	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	112	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y113
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #87DC5-210122A-260605

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	93.9	43-140			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	87.2	44-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	85.9	19-119			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	91.7	44-120			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	90.8	10-115			%	01/22/21	01/25/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	115	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y114
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	92.4	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	99.8	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L042
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	98.3	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	106	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L043
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	101	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	106	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L044
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #SIM53-210122A-260603

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	96.7	39-114			%	01/22/21	01/25/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	105	58-120			%	01/22/21	01/25/21

Quant Method:	L0118.M
Run #:	0118L045
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K023
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1230

Sample Collection Date: 01/19/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94826

APPL ID: BA25532

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K024
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1232

Sample Collection Date: 01/19/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94826

APPL ID: BA25535

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K025
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1236

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94826

APPL ID: BA25538

QCG: #87DME-210125A-260641

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:	KMEE0125.M
Run #:	0125K026
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1227

APPL ID: BA25528

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	110	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z21
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	116	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.6	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z22
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

Printed: 01/28/21 1:34:24 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1229

APPL ID: BA25531

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.6	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z23
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.7	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z24
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1231

APPL ID: BA25534

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	114	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.3	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z25
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.9	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z26
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1235

APPL ID: BA25537

Sample Collection Date: 01/20/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	113	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z27
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #86BTO-210122AZ-260666

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	114	81-118			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.4	85-114			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/22/21	01/22/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/22/21	01/22/21

Quant Method: Z0122W.M
Run #: 0122Z28
Instrument: ZEUS
Sequence: 210122
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1227

APPL ID: BA25528

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z21
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.6	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z22
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1229

APPL ID: BA25531

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.6	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z23
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.7	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z24
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1231

APPL ID: BA25534

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.3	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z25
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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EPA 8260B GRO WATER

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.9	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z26
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1235

APPL ID: BA25537

Sample Collection Date: 01/20/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z27
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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EPA 8260B GRO WATER

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #GRO86-210122AZ-260680

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.4	85-114			%	01/22/21	01/22/21

Quant Method:	ZGAS0104.M
Run #:	0122Z28
Instrument:	ZEUS
Sequence:	210122
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1227

APPL ID: BA25528

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R14
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R15
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1229

APPL ID: BA25531

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R16
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R17
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

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1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1231

APPL ID: BA25534

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R18
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R19
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

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Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1235

APPL ID: BA25537

Sample Collection Date: 01/20/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R20
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/27/21 3:54:11 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94826

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

QCG: #RSKME-210126A-260649

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method:	RSK0914A.M
Run #:	0126R21
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/27/21 3:54:11 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	475	10.0	2.00	0.80	mg/L	10	01/22/21	01/22/21
EPA 300.0	NITRATE	0.93	0.5	0.18	0.04	mg/L	1	01/21/21	01/21/21
EPA 300.0	SULFATE	36.5	1.0	0.20	0.09	mg/L	1	01/21/21	01/21/21

Printed: 02/01/21 10:39:59 AM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	45.0	1.0	0.20	0.08	mg/L	1	01/21/21	01/21/21
EPA 300.0	NITRATE	1.5	0.5	0.18	0.04	mg/L	1	01/21/21	01/21/21
EPA 300.0	SULFATE	9.8	1.0	0.20	0.09	mg/L	1	01/21/21	01/21/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	455	10.0	2.00	0.80	mg/L	10	01/22/21	01/22/21
EPA 300.0	NITRATE	1.6	0.5	0.18	0.04	mg/L	1	01/21/21	01/21/21
EPA 300.0	SULFATE	44.2	1.0	0.20	0.09	mg/L	1	01/21/21	01/21/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	19.9	1.0	0.20	0.08	mg/L	1	01/21/21	01/21/21
EPA 300.0	NITRATE	0.72	0.5	0.18	0.04	mg/L	1	01/21/21	01/21/21
EPA 300.0	SULFATE	3.4	1.0	0.20	0.09	mg/L	1	01/21/21	01/21/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1228

APPL ID: BA25529

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.60	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	116	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	116	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/21/21	01/21/21
SW846 9060A	TOTAL ORGANIC CARBON	0.23 J	0.93	0.350	0.130	mg/L	1	01/22/21	01/22/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1230

APPL ID: BA25532

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	1.4	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	103	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	103	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/21/21	01/21/21
SW846 9060A	TOTAL ORGANIC CARBON	0.47 J	0.93	0.350	0.130	mg/L	1	01/22/21	01/22/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1232

APPL ID: BA25535

Sample Collection Date: 01/19/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	1.1	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	78.0	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	78.0	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/21/21	01/21/21
SW846 9060A	TOTAL ORGANIC CARBON	0.32 J	0.93	0.350	0.130	mg/L	1	01/22/21	01/22/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1236

APPL ID: BA25538

Sample Collection Date: 01/20/21

ARF: 94826

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.41	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	69.8	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM 2320B	TOTAL ALKALINITY AS CACO	69.8	2.0	1.70	0.85	mg/L	1	01/22/21	01/22/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/21/21	01/21/21
SW846 9060A	TOTAL ORGANIC CARBON	0.14 J	0.93	0.350	0.130	mg/L	1	01/22/21	01/22/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	60-142	87.3		56-125	74.0	
210122A-LCS	Lab Control Spike	60-142	86.7		56-125	84.7	
BA25529	ERH1228	60-142	89.2		56-125	77.2	

Comments: Batch: #DOC53-210122A

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210126A-BLK	Blank	60-142	88.1		56-125	78.1	
210126A-LCS	Lab Control Spike	60-142	87.3		56-125	83.3	
210126A-LCSD	Lab Control SpikeD	60-142	82.7		56-125	80.0	
BA25532	ERH1230	60-142	86.9		56-125	77.2	
BA25535	ERH1232	60-142	83.8		56-125	74.8	
BA25538	ERH1236	60-142	87.6		56-125	77.8	

Comments: Batch: #DOC53-210126A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210122A-BLK	Time Analyzed:	1019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
BA25529	ERH1228	107118	01/26/21 1307

Comments: Batch: #DOC53-210122A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Apollo

Blank ID: 210126A-BLK Time Analyzed: 1947

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	107134	01/27/21 1947
210126A-LCS	Lab Control Spike	107135	01/27/21 2015
210126A-LCSD	Lab Control SpikeD	107136	01/27/21 2043
BA25532	ERH1230	107137	01/27/21 2111
BA25535	ERH1232	107138	01/27/21 2139
BA25538	ERH1236	107139	01/27/21 2207

Comments: Batch: #DOC53-210126A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210122W-25526 - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/22/21	01/26/21
BLANK	SURROGATE: OCTACOSANE (S)	87.3	60-142			%	01/22/21	01/26/21
BLANK	SURROGATE: ORTHO-TERPHEN	74.0	56-125			%	01/22/21	01/26/21

Quant Method: DOC1218.M
Run #: 107112
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 9:37:37 AM

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210126W-25532 - 260661**
Batch ID: #DOC53-210126A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
BLANK	SURROGATE: OCTACOSANE (S)	88.1	60-142			%	01/26/21	01/27/21
BLANK	SURROGATE: ORTHO-TERPHEN	78.1	56-125			%	01/26/21	01/27/21

Quant Method: DOC1218.M
Run #: 107134
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 9:37:37 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210122A-LCS	Time Analyzed:	1047

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	107112	01/26/21 1019
210122A-LCS	Lab Control Spike	107113	01/26/21 1047
BA25529	ERH1228	107118	01/26/21 1307

Comments: Batch: #DOC53-210122A

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210126A-LCS	Time Analyzed:	2015

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	107134	01/27/21 1947
210126A-LCS	Lab Control Spike	107135	01/27/21 2015
210126A-LCSD	Lab Control SpikeD	107136	01/27/21 2043
BA25532	ERH1230	107137	01/27/21 2111
BA25535	ERH1232	107138	01/27/21 2139
BA25538	ERH1236	107139	01/27/21 2207

Comments: Batch: #DOC53-210126A

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **210122W-25526 LCS - 260639**
Batch ID: #DOC53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1790	89.5	36-132
OIL (C24-C40)	2000	1920	96.0	41-113
SURROGATE: OCTACOSANE (S)	150	130	86.7	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	127	84.7	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	01/22/21
Analysis Date :	01/26/21
Instrument :	Apollo
Run :	107113
Initials :	SSE

Printed: 01/28/21 9:38:46 AM
APPL Standard LCS

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210126W-25532 LCS - 260661**
Batch ID: #DOC53-210126A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	1670	1580	83.5	79.0	36-132	5.5	30
OIL (C24-C40)	2000	1840	1790	92.0	89.5	41-113	2.8	30
SURROGATE: OCTACOSANE (S)	150	131	124	87.3	82.7	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	125	120	83.3	80.0	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/27/21	01/27/21
Instrument :	Apollo	Apollo
Run :	107135	107136
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	43-140	48.6		44-119	50.5	
210122A-LCS	Lab Control Spike	43-140	96.4		44-119	88.8	
BA25529	ERH1228	43-140	89.8		44-119	85.0	
BA25532	ERH1230	43-140	92.2		44-119	84.3	
BA25535	ERH1232	43-140	91.0		44-119	83.7	
BA25538	ERH1236	43-140	93.9		44-119	87.2	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	19-119	52.2		44-120	55.0	
210122A-LCS	Lab Control Spike	19-119	90.8		44-120	92.8	
BA25529	ERH1228	19-119	87.9		44-120	90.1	
BA25532	ERH1230	19-119	90.7		44-120	94.4	
BA25535	ERH1232	19-119	86.0		44-120	90.0	
BA25538	ERH1236	19-119	85.9		44-120	91.7	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	10-115	53.7		50-134	68.9	
210122A-LCS	Lab Control Spike	10-115	92.4		50-134	112	
BA25529	ERH1228	10-115	91.8		50-134	110	
BA25532	ERH1230	10-115	94.9		50-134	116	
BA25535	ERH1232	10-115	89.6		50-134	112	
BA25538	ERH1236	10-115	90.8		50-134	115	

Comments: Batch: #87DC5-210122A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
Blank ID:	210122A-BLK	Time Analyzed:	1656

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
BA25529	ERH1228	0105Y111	01/25/21 1928
BA25532	ERH1230	0105Y112	01/25/21 1953
BA25535	ERH1232	0105Y113	01/25/21 2019
BA25538	ERH1236	0105Y114	01/25/21 2044

Comments: Batch: #87DC5-210122A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25526 - 260605**
Batch ID: #87DC5-210122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	48.6	43-140			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUORBIPHENY	50.5	44-119			%	01/22/21	01/25/21
BLANK	SURROGATE: 2-FLUOROPHENO	52.2	19-119			%	01/22/21	01/25/21
BLANK	SURROGATE: NITROBENZENE-	55.0	44-120			%	01/22/21	01/25/21
BLANK	SURROGATE: PHENOL-D6 (S)	53.7	10-115			%	01/22/21	01/25/21
BLANK	SURROGATE: TERPHENYL-D14 (	68.9	50-134			%	01/22/21	01/25/21

Quant Method: Y0105.M
Run #: 0105Y105
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 11:24:09 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210122A-LCS	Time Analyzed:	1721

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0105Y105	01/25/21 1656
210122A-LCS	Lab Control Spike	0105Y106	01/25/21 1721
BA25529	ERH1228	0105Y111	01/25/21 1928
BA25532	ERH1230	0105Y112	01/25/21 1953
BA25535	ERH1232	0105Y113	01/25/21 2019
BA25538	ERH1236	0105Y114	01/25/21 2044

Comments: Batch: #87DC5-210122A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **210122W-25526 LCS - 260605**
Batch ID: #87DC5-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	62.5	57.4	91.8	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	241	96.4	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	125	111	88.8	44-119
SURROGATE: 2-FLUOROPHENOL (S)	250	227	90.8	19-119
SURROGATE: NITROBENZENE-D5 (S)	125	116	92.8	44-120
SURROGATE: PHENOL-D6 (S)	250	231	92.4	10-115
SURROGATE: TERPHENYL-D14 (S)	125	140	112	50-134

Comments:

Primary	SPK
Quant Method :	Y0105.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Yoda
Run :	0105Y106
Initials :	MA

Printed: 01/27/21 11:23:57 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/05/21
Matrix: Water Instrument: Yoda
ID: 0105Y002.D Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94826
Case No: 94826 Date Analyzed: 01/25/21
Matrix: Water Instrument: Yoda
ID: 0105Y099.D Time Analyzed: 12:23

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y100.D	01/25/21 12:38
2	Blank	210122A BLK 1/800	0105Y105.D	01/25/21 16:56
3	Lab Control Spike	210122A LCS-1 1/0.8	0105Y106.D	01/25/21 17:21
4	ERH1228	BA25529W13 1/800	0105Y111.D	01/25/21 19:28
5	ERH1230	BA25532W14 1/1010	0105Y112.D	01/25/21 19:53
6	ERH1232	BA25535W14 1/1040	0105Y113.D	01/25/21 20:19
7	ERH1236	BA25538W15 1/800	0105Y114.D	01/25/21 20:44
8		50ug/mL 8270 08/12/2	0105Y115.D	01/25/21 21:09
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	46.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	29.9
365	1 - 100% of mass 198	4.2
441	0.01 - 24% of mass 442	17.3
442	50 - 500% of mass 198	97.4
443	15 - 24% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2786020	10.21	2774520	13.29	2634210	14.98
	UPPER LIMIT	5572040	10.38	5549040	13.46	5268420	15.15
	LOWER LIMIT	1393010	10.04	1387260	13.12	1317105	14.81
	SAMPLE NO.						
01	210122A BLK 1/800	2061370	10.20	1858840	13.28	1771380	14.97
02	210122A LCS-1 1/0.8	2027580	10.20	1902850	13.28	1802110	14.97
03	BA25529W13 1/800	2179720	10.20	2005540	13.28	1922060	14.97
04	BA25532W14 1/1010	2067970	10.20	1864110	13.28	1815330	14.96
05	BA25535W14 1/1040	2239990	10.20	2026510	13.28	1947570	14.96
06	BA25538W15 1/800	2099140	10.20	1915610	13.28	1834330	14.96
07	50ug/mL 8270 08/12/20	3029920	10.21	2959440	13.29	2751560	14.97
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y100.D Date Analyzed: 01/25/21

Instrument ID: Yoda Time Analyzed: 12:38

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	533085	5.05	2194340	6.47	1385450	8.48
	UPPER LIMIT	1066170	5.22	4388680	6.64	2770900	8.65
	LOWER LIMIT	266543	4.88	1097170	6.30	692725	8.31
	SAMPLE NO.						
01	210122A BLK 1/800	425738	5.05	1634420	6.46	1005650	8.47
02	210122A LCS-1 1/0.8	400800	5.05	1600610	6.46	971879	8.48
03	BA25529W13 1/800	429862	5.05	1687640	6.46	1063730	8.47
04	BA25532W14 1/1010	408645	5.05	1606510	6.46	1019860	8.47
05	BA25535W14 1/1040	450825	5.05	1752660	6.46	1084780	8.47
06	BA25538W15 1/800	419694	5.05	1627110	6.46	1018250	8.47
07	50ug/mL 8270 08/12/20	565875	5.05	2319310	6.47	1466190	8.48
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/25/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122A-BLK	Blank	39-114	61.5		58-120	66.9	
210122A-LCS	Lab Control Spike	39-114	91.8		58-120	101	
BA25529	ERH1228	39-114	92.4		58-120	99.8	
BA25532	ERH1230	39-114	98.3		58-120	106	
BA25535	ERH1232	39-114	101		58-120	106	
BA25538	ERH1236	39-114	96.7		58-120	105	

Comments: Batch: #SIM53-210122A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Linus
Blank ID:	210122A-BLK	Time Analyzed:	1638

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
BA25529	ERH1228	0118L042	01/25/21 1850
BA25532	ERH1230	0118L043	01/25/21 1912
BA25535	ERH1232	0118L044	01/25/21 1934
BA25538	ERH1236	0118L045	01/25/21 1956

Comments: Batch: #SIM53-210122A

Method Blank
EPA 8270D SIM LIQ-LIQ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25434 - 260603**
Batch ID: #SIM53-210122A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/22/21	01/25/21
BLANK	SURROGATE: 2-METHYLNAPHT	61.5	39-114			%	01/22/21	01/25/21
BLANK	SURROGATE: FLUORANTHENE-	66.9	58-120			%	01/22/21	01/25/21

Quant Method:L0118.M
Run #:0118L036
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/26/21 4:14:45 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Linus
LCS ID:	210122A-LCS	Time Analyzed:	1700

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	0118L036	01/25/21 1638
210122A-LCS	Lab Control Spike	0118L037	01/25/21 1700
BA25529	ERH1228	0118L042	01/25/21 1850
BA25532	ERH1230	0118L043	01/25/21 1912
BA25535	ERH1232	0118L044	01/25/21 1934
BA25538	ERH1236	0118L045	01/25/21 1956

Comments: Batch: #SIM53-210122A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **210122W-25434 LCS - 260603**
Batch ID: #SIM53-210122A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	6.25	5.61	89.8	41-115
2-METHYLNAPHTHALENE	6.25	5.64	90.2	39-114
NAPHTHALENE	6.25	5.62	89.9	43-114
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.74	91.8	39-114
SURROGATE: FLUORANTHENE-D10 (S)	6.25	6.31	101	58-120

Comments:

Primary	SPK
Quant Method :	L0118.M
Extraction Date :	01/22/21
Analysis Date :	01/25/21
Instrument :	Linus
Run :	0118L037
Initials :	MA

Printed: 01/26/21 4:14:03 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94826
Case No: 94826 Date Analyzed: 01/25/21
Matrix: Water Instrument: Linus
ID: 0118L034.D Time Analyzed: 12:39

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21 (1)	0118L035.D	01/25/21 12:55
2	Blank	210122A BLK 1/800	0118L036.D	01/25/21 16:38
3	Lab Control Spike	210122A LCS-2 1/800	0118L037.D	01/25/21 17:00
4	ERH1228	BA25529W13 1/800	0118L042.D	01/25/21 18:50
5	ERH1230	BA25532W14 1/1010	0118L043.D	01/25/21 19:12
6	ERH1232	BA25535W14 1/1040	0118L044.D	01/25/21 19:34
7	ERH1236	BA25538W15 1/800	0118L045.D	01/25/21 19:56
8		5 SIM 08/21/20	0118L046.D	01/25/21 20:18
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.1
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	53.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	24.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	16.5
442	50 - 500% of mass 198	90.5
443	15 - 24% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	64820	4.25	31514	6.25	57372	7.98
	UPPER LIMIT	129640	4.42	63028	6.42	114744	8.15
	LOWER LIMIT	32410	4.08	15757	6.08	28686	7.81
	SAMPLE NO.						
01	210122A BLK 1/800	64715	4.25	29769	6.27	53529	7.99
02	210122A LCS-2 1/800	64477	4.25	30653	6.25	55532	7.98
03	BA25529W13 1/800	71035	4.25	34262	6.25	62769	7.98
04	BA25532W14 1/1010	65776	4.25	31286	6.25	58256	7.98
05	BA25535W14 1/1040	63611	4.25	30805	6.25	57693	7.98
06	BA25538W15 1/800	69608	4.25	33203	6.25	61916	7.98
07	5 SIM 08/21/20	71331	4.25	32623	6.25	60248	7.98
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L035.D Date Analyzed: 01/25/21

Instrument ID: Linus Time Analyzed: 12:55

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	69725	11.12	64837	13.57		
	UPPER LIMIT	139450	11.29	129674	13.74		
	LOWER LIMIT	34863	10.95	32419	13.40		
	SAMPLE NO.						
01	210122A BLK 1/800	62085	11.13	58308	13.58		
02	210122A LCS-2 1/800	67366	11.12	63014	13.57		
03	BA25529W13 1/800	77353	11.12	73536	13.56		
04	BA25532W14 1/1010	71429	11.12	68602	13.56		
05	BA25535W14 1/1040	69914	11.12	67072	13.56		
06	BA25538W15 1/800	76217	11.12	72450	13.56		
07	5 SIM 08/21/20	72741	11.12	71783	13.56		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	KYLO
Blank ID:	210125A-BLK	Time Analyzed:	1146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
BA25529	ERH1228	0125K023	01/26/21 1414
BA25532	ERH1230	0125K024	01/26/21 1434
BA25535	ERH1232	0125K025	01/26/21 1455
BA25538	ERH1236	0125K026	01/26/21 1516

Comments: Batch: #87DME-210125A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **210125W-25526 - 260641**
Batch ID: #87DME-210125A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/25/21	01/26/21

Quant Method:KMEE0125.M
Run #:0125K017
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 9:59:14 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210125A-LCS	Time Analyzed:	1207

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0125K017	01/26/21 1146
210125A-LCS	Lab Control Spike	0125K018	01/26/21 1207
BA25529	ERH1228	0125K023	01/26/21 1414
BA25532	ERH1230	0125K024	01/26/21 1434
BA25535	ERH1232	0125K025	01/26/21 1455
BA25538	ERH1236	0125K026	01/26/21 1516

Comments: Batch: #87DME-210125A

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **210125W-25526 LCS - 260641**
Batch ID: #87DME-210125A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	69.3	86.6	30-130

Comments:

Primary	SPK
Quant Method :	KMEE0125.M
Extraction Date :	01/25/21
Analysis Date :	01/26/21
Instrument :	KYLO
Run :	0125K018
Initials :	MA

Printed: 01/27/21 9:58:58 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94826
Case No: 94826 Date Analyzed: 01/26/21
Matrix: Water Instrument: KYLO
ID: 0125K013.D Time Analyzed: 10:06

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K014.D	01/26/21 10:19
2	Blank	210125A BLK 1/500	0125K017.D	01/26/21 11:46
3	Lab Control Spike	210125A LCS-1 1/500	0125K018.D	01/26/21 12:07
4	ERH1228	BA25529W10 2/500	0125K023.D	01/26/21 14:14
5	ERH1230	BA25532W10 2/500	0125K024.D	01/26/21 14:34
6	ERH1232	BA25535W10 2/500	0125K025.D	01/26/21 14:55
7	ERH1236	BA25538W10 2/500	0125K026.D	01/26/21 15:16
8		2MEE 500 1/26/21 (2)	0125K028.D	01/26/21 15:58
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	33.2
68	0 - 2.04% of mass 69	1.9
70	0 - 2.04% of mass 69	0.6
127	10 - 80% of mass 198	53.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	27.9
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	114.6
443	15 - 24% of mass 442	18.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K014.D Date Analyzed: 01/26/21

Instrument ID: KYLO Time Analyzed: 10:19

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	433460	5.33					
	UPPER LIMIT	866920	5.50					
	LOWER LIMIT	216730	5.16					
	SAMPLE NO.							
01	210125A BLK 1/500	370288	5.31					
02	210125A LCS-1 1/500	355190	5.31					
03	BA25529W10 2/500	275984	5.31					
04	BA25532W10 2/500	260316	5.31					
05	BA25535W10 2/500	232391	5.31					
06	BA25538W10 2/500	244005	5.31					
07	2MEE 500 1/26/21 (2)	234567	5.32					
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	81-118	109		85-114	99.6	
210122AZ-LCSD	Lab Control SpikeD	81-118	108		85-114	100	
210122AZ-BLK	Blank	81-118	113		85-114	97.1	
BA25528	ERH1227	81-118	112		85-114	96.8	
BA25529	ERH1228	81-118	116		85-114	99.6	
BA25531	ERH1229	81-118	115		85-114	98.6	
BA25532	ERH1230	81-118	115		85-114	98.7	
BA25534	ERH1231	81-118	114		85-114	98.3	
BA25535	ERH1232	81-118	112		85-114	97.9	
BA25537	ERH1235	81-118	115		85-114	100	
BA25538	ERH1236	81-118	114		85-114	99.4	

Comments: Batch: #86BTO-210122AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	80-119	109		89-112	110	
210122AZ-LCSD	Lab Control SpikeD	80-119	109		89-112	110	
210122AZ-BLK	Blank	80-119	110		89-112	107	
BA25528	ERH1227	80-119	110		89-112	106	
BA25529	ERH1228	80-119	112		89-112	108	
BA25531	ERH1229	80-119	112		89-112	107	
BA25532	ERH1230	80-119	112		89-112	108	
BA25534	ERH1231	80-119	111		89-112	107	
BA25535	ERH1232	80-119	111		89-112	109	
BA25537	ERH1235	80-119	113		89-112	109	
BA25538	ERH1236	80-119	112		89-112	109	

Comments: Batch: #86BTO-210122AZ

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

Blank ID: 210122AZ-BLK Time Analyzed: 1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z13	01/22/21 1406
210122AZ-LCSD	Lab Control SpikeD	0122Z14	01/22/21 1429
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25528	ERH1227	0122Z21	01/22/21 1710
BA25529	ERH1228	0122Z22	01/22/21 1733
BA25531	ERH1229	0122Z23	01/22/21 1756
BA25532	ERH1230	0122Z24	01/22/21 1819
BA25534	ERH1231	0122Z25	01/22/21 1842
BA25535	ERH1232	0122Z26	01/22/21 1905
BA25537	ERH1235	0122Z27	01/22/21 1928
BA25538	ERH1236	0122Z28	01/22/21 1951

Comments: Batch: #86BTO-210122AZ

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210122W-25525 - 260666**
Batch ID: #86BTO-210122AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/22/21	01/22/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/22/21	01/22/21
BLANK	SURROGATE: 1,2-DICHLOROET	113	81-118			%	01/22/21	01/22/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.1	85-114			%	01/22/21	01/22/21
BLANK	SURROGATE: DIBROMOFLUOR	110	80-119			%	01/22/21	01/22/21
BLANK	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/22/21	01/22/21

Quant Method:Z0122W.M
Run #:0122Z18
Instrument:ZEUS
Sequence:210122
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 1:34:15 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210122AZ-LCS	Time Analyzed:	1406

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z13	01/22/21 1406
210122AZ-LCSD	Lab Control SpikeD	0122Z14	01/22/21 1429
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25528	ERH1227	0122Z21	01/22/21 1710
BA25529	ERH1228	0122Z22	01/22/21 1733
BA25531	ERH1229	0122Z23	01/22/21 1756
BA25532	ERH1230	0122Z24	01/22/21 1819
BA25534	ERH1231	0122Z25	01/22/21 1842
BA25535	ERH1232	0122Z26	01/22/21 1905
BA25537	ERH1235	0122Z27	01/22/21 1928
BA25538	ERH1236	0122Z28	01/22/21 1951

Comments: Batch: #86BTO-210122AZ

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210122W-25525 LCS - 260666**
Batch ID: #86BTO-210122AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	10.2	10.4	102	104	79-120	1.9	20
ETHYLBENZENE	10.00	10.3	10.7	103	107	79-121	3.8	20
TOLUENE	10.00	9.89	10.2	98.9	102	80-121	3.1	20
XYLENES (TOTAL)	30.0	31.5	32.6	105	109	79-121	3.4	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.2	27.1	109	108	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.9	25.0	99.6	100	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.2	27.2	109	109	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.4	27.6	110	110	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0122W.M	Z0122W.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/22/21	01/22/21
Instrument :	ZEUS	ZEUS
Run :	0122Z13	0122Z14
Initials :	CHE	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0122Z00.D

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Time Analyzed: 9:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD1/22/	0122Z02.D	01/22/21 9:53
2		0.5ug/L VOC STD1/22/	0122Z03.D	01/22/21 10:16
3		1ug/L VOC STD1/22/21	0122Z04.D	01/22/21 10:39
4		2ug/L VOC STD1/22/21	0122Z05.D	01/22/21 11:02
5		5ug/L VOC STD1/22/21	0122Z06.D	01/22/21 11:25
6		10ug/L VOC STD1/22/2	0122Z07.D	01/22/21 11:48
7		20ug/L VOC STD1/22/2	0122Z08.D	01/22/21 12:11
8		40ug/L VOC STD1/22/2	0122Z09.D	01/22/21 12:34
9		100ug/L VOC STD1/22/	0122Z10.D	01/22/21 12:57
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 60.0% of mas 95	42.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0
174	50.0 - 200.0% of mass 95	142.3
175	5.0 - 9.0% of mass 174	7.4
176	95.0 - 101.0% of mass 174	97.4
177	5.0 - 9.0% of mass 176	6.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94826
Case No: 94826 Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
ID: 0122Z11.D Time Analyzed: 13:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		(SS) 10ug/L VOC STD1	0122Z12.D	01/22/21 13:43
2	Lab Control Spike	210122A LCS 10ug/L	0122Z13.D	01/22/21 14:06
3	Lab Control SpikeD	210122A LCSD 10ug/L	0122Z14.D	01/22/21 14:29
4	Blank	210122A BLK	0122Z18.D	01/22/21 16:01
5	ERH1227	BA25528W01	0122Z21.D	01/22/21 17:10
6	ERH1228	BA25529W01	0122Z22.D	01/22/21 17:33
7	ERH1229	BA25531W01	0122Z23.D	01/22/21 17:56
8	ERH1230	BA25532W01	0122Z24.D	01/22/21 18:19
9	ERH1231	BA25534W01	0122Z25.D	01/22/21 18:42
10	ERH1232	BA25535W01	0122Z26.D	01/22/21 19:05
11	ERH1235	BA25537W01	0122Z27.D	01/22/21 19:28
12	ERH1236	BA25538W01	0122Z28.D	01/22/21 19:51
13		Ending CCV 10ug/L 1/	0122Z39.D	01/23/21 0:04
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.3
75	30.0 - 60.0% of mas 95	44.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	130.6
175	5.0 - 9.0% of mass 174	7.5
176	95.0 - 101.0% of mass 174	98.5
177	5.0 - 9.0% of mass 176	6.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Z07.D Date Analyzed: 01/22/21

Instrument ID: ZEUS Time Analyzed: 11:48

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3548400	6.16	2918490	9.62	1061380	12.17
	UPPER LIMIT	7096800	6.33	5836980	9.79	2122760	12.34
	LOWER LIMIT	1774200	5.99	1459245	9.45	530690	12.00
	SAMPLE NO.						
01	(SS) 10ug/L VOC STD1,	3829970	6.16	2992920	9.62	1148930	12.17
02	210122A LCS 10ug/L	3840030	6.16	3020190	9.62	1124350	12.17
03	210122A LCSD 10ug/L	3807630	6.16	2979250	9.62	1138180	12.17
04	210122A BLK	3518020	6.16	2841690	9.62	1093120	12.17
05	BA25528W01	3272340	6.16	2702730	9.62	1046340	12.17
06	BA25529W01	3229980	6.16	2691600	9.62	1032510	12.17
07	BA25531W01	3272890	6.16	2718570	9.62	1024900	12.17
08	BA25532W01	3195990	6.16	2654490	9.62	979840	12.17
09	BA25534W01	3184850	6.16	2640980	9.62	1008000	12.17
10	BA25535W01	3192330	6.16	2632010	9.62	996736	12.17
11	BA25537W01	3155140	6.16	2616190	9.62	1008000	12.17
12	BA25538W01	3165480	6.16	2618800	9.62	969280	12.17
13	Ending CCV 10ug/L 1/2	3207710	6.16	2626100	9.62	973568	12.17
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210122AZ-LCS	Lab Control Spike	85-114	98.4				
210122AZ-LCSD	Lab Control SpikeD	85-114	98.0				
210122AZ-BLK	Blank	85-114	97.1				
BA25528	ERH1227	85-114	96.8				
BA25529	ERH1228	85-114	99.6				
BA25531	ERH1229	85-114	98.6				
BA25532	ERH1230	85-114	98.7				
BA25534	ERH1231	85-114	98.3				
BA25535	ERH1232	85-114	97.9				
BA25537	ERH1235	85-114	100				
BA25538	ERH1236	85-114	99.4				

Comments: Batch: #GRO86-210122AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210122AZ-BLK	Time Analyzed:	1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z16	01/22/21 1515
210122AZ-LCSD	Lab Control SpikeD	0122Z17	01/22/21 1538
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25528	ERH1227	0122Z21	01/22/21 1710
BA25529	ERH1228	0122Z22	01/22/21 1733
BA25531	ERH1229	0122Z23	01/22/21 1756
BA25532	ERH1230	0122Z24	01/22/21 1819
BA25534	ERH1231	0122Z25	01/22/21 1842
BA25535	ERH1232	0122Z26	01/22/21 1905
BA25537	ERH1235	0122Z27	01/22/21 1928
BA25538	ERH1236	0122Z28	01/22/21 1951

Comments: Batch: #GRO86-210122AZ

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210122W-25525 - 260680**
Batch ID: #GRO86-210122AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/22/21	01/22/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.1	85-114			%	01/22/21	01/22/21

Quant Method:ZGAS0104.M
Run #:0122Z18
Instrument:ZEUS
Sequence:210122
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 3:59:09 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210122AZ-LCS	Time Analyzed:	1515

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122AZ-LCS	Lab Control Spike	0122Z16	01/22/21 1515
210122AZ-LCSD	Lab Control SpikeD	0122Z17	01/22/21 1538
210122AZ-BLK	Blank	0122Z18	01/22/21 1601
BA25528	ERH1227	0122Z21	01/22/21 1710
BA25529	ERH1228	0122Z22	01/22/21 1733
BA25531	ERH1229	0122Z23	01/22/21 1756
BA25532	ERH1230	0122Z24	01/22/21 1819
BA25534	ERH1231	0122Z25	01/22/21 1842
BA25535	ERH1232	0122Z26	01/22/21 1905
BA25537	ERH1235	0122Z27	01/22/21 1928
BA25538	ERH1236	0122Z28	01/22/21 1951

Comments: Batch: #GRO86-210122AZ

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210122W-25525 LCS - 260680**
Batch ID: #GRO86-210122AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	268	283	89.3	94.3	78-122	5.4	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.6	24.5	98.4	98.0	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0104.M	ZGAS0104.M
Extraction Date :	01/22/21	01/22/21
Analysis Date :	01/22/21	01/22/21
Instrument :	ZEUS	ZEUS
Run :	0122Z16	0122Z17
Initials :	CHE	

Printed: 01/28/21 3:59:18 PM
APPL Standard LCSD

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

Blank ID: 210126A-BLK Time Analyzed: 1330

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25528	ERH1227	0126R14	01/26/21 1408
BA25529	ERH1228	0126R15	01/26/21 1411
BA25531	ERH1229	0126R16	01/26/21 1415
BA25532	ERH1230	0126R17	01/26/21 1419
BA25534	ERH1231	0126R18	01/26/21 1423
BA25535	ERH1232	0126R19	01/26/21 1425
BA25537	ERH1235	0126R20	01/26/21 1428
BA25538	ERH1236	0126R21	01/26/21 1432

Comments: Batch: #RSKME-210126A

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Rocky

LCS ID: 210126A-LCS Time Analyzed: 1312

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-LCS	Lab Control Spike	0126R02	01/26/21 1312
210126A-LCSD	Lab Control SpikeD	0126R04	01/26/21 1326
210126A-BLK	Blank	0126R05	01/26/21 1330
BA25528	ERH1227	0126R14	01/26/21 1408
BA25529	ERH1228	0126R15	01/26/21 1411
BA25531	ERH1229	0126R16	01/26/21 1415
BA25532	ERH1230	0126R17	01/26/21 1419
BA25534	ERH1231	0126R18	01/26/21 1423
BA25535	ERH1232	0126R19	01/26/21 1425
BA25537	ERH1235	0126R20	01/26/21 1428
BA25538	ERH1236	0126R21	01/26/21 1432

Comments: Batch: #RSKME-210126A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210126W-25434 - 260649**
Batch ID: #RSKME-210126A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/26/21	01/26/21

Quant Method: RSK0914A.M
Run #: 0126R05
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 01/27/21 3:54:14 PM

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210126W-25434 LCS - 260649**
Batch ID: #RSKME-210126A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	74.0	72.9	88.7	87.4	72-125	1.5	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	Rocky	Rocky
Run :	0126R02	0126R04
Initials :	LSI	

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/21/21

Matrix: WATER Instrument: Charlie

Blank ID: 210121A2-BLK Time Analyzed: 1333

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A2-LCS	Lab Control Spike	14	01/21/21 1318
210121A2-BLK	Blank	15	01/21/21 1333
BA25529	ERH1228	18	01/21/21 1432
BA25532	ERH1230	19	01/21/21 1447
BA25535	ERH1232	20	01/21/21 1502
BA25538	ERH1236	21	01/21/21 1516
210121A2-LCSD	Lab Control SpikeD	26	01/21/21 1630

Comments: Batch: #300W-210121A2

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210122A-BLK	Time Analyzed:	1838

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-LCS	Lab Control Spike	24	01/22/21 1823
210122A-BLK	Blank	25	01/22/21 1838
BA25529	ERH1228	34	01/22/21 2050
BA25535	ERH1232	35	01/22/21 2104
210122A-LCSD	Lab Control SpikeD	36	01/22/21 2119

Comments: Batch: #300WD-210122A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.10 J	1.0	0.20	0.08	mg/L	01/22/21	01/22/21	#300WD-210122A-BA25529
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/21/21	01/21/21	#300W-210121A2-BA25532
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/21/21	01/21/21	#300W-210121A2-BA25532
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/21/21	01/21/21	#300W-210121A2-BA25532

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/21/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210121A2-LCS	Time Analyzed:	1318

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210121A2-LCS	Lab Control Spike	14	01/21/21 1318
210121A2-BLK	Blank	15	01/21/21 1333
BA25529	ERH1228	18	01/21/21 1432
BA25532	ERH1230	19	01/21/21 1447
BA25535	ERH1232	20	01/21/21 1502
BA25538	ERH1236	21	01/21/21 1516
210121A2-LCSD	Lab Control SpikeD	26	01/21/21 1630

Comments: Batch: #300W-210121A2

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210122A-LCS	Time Analyzed:	1823

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-LCS	Lab Control Spike	24	01/22/21 1823
210122A-BLK	Blank	25	01/22/21 1838
BA25529	ERH1228	34	01/22/21 2050
BA25535	ERH1232	35	01/22/21 2104
210122A-LCSD	Lab Control SpikeD	36	01/22/21 2119

Comments: Batch: #300WD-210122A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	26.6	26.7	106	107	0.38	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A2-BA2553
EPA 300.0	NITRATE	22.1	23.3	24.4	105	110	4.6	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A2-BA2553
EPA 300.0	SULFATE	25.0	26.6	26.1	106	104	1.9	20	90-110	01/21/21	01/21/21	01/21/21	01/21/21	#300W-210121A2-BA2553

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	25.7	25.7	103	103	0.0	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#300WD-210122A-BA2552

Comments:

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
SM 2320B	TOTAL ALKALINITY	0.87 J	2.0	1.70	0.85	mg/L	01/22/21	01/22/21	#232W-210122A1-BA25434
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/25/21	01/25/21	#353TO-210125A2-BA25526
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/22/21	01/22/21	#TOCW5-210122A-BA25526
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/21/21	01/21/21	#35FE-210120A-BA25538

Wetlab SC-Blank-REG MDLs
Printed: 01/29/21 11:42:52 AM

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/25/21

Matrix: WATER Instrument: EVE

Blank ID: 210125A2-BLK Time Analyzed: 2152

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A2-BLK	Blank	13	01/25/21 2152
210125A2-LCS	Lab Control Spike	14	01/25/21 2155
210125A2-LCSD	Lab Control SpikeD	15	01/25/21 2157
BA25529	ERH1228	37	01/25/21 2248
BA25532	ERH1230	38	01/25/21 2250
BA25535	ERH1232	39	01/25/21 2252
BA25538	ERH1236	40	01/25/21 2255

Comments: Batch: #353TO-210125A2

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: Tiamo

Blank ID: 210122A1-BLK Time Analyzed: 1253

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
BA25535	ERH1232	10	01/22/21 1721
BA25538	ERH1236	11	01/22/21 1726
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25529	ERH1228	8	01/22/21 1710
BA25532	ERH1230	9	01/22/21 1716

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/21/21

Matrix: WATER Instrument: Manual Spec

Blank ID: 210120A-BLK Time Analyzed: 0002

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-MSD	Matrix SpikeD	20	01/21/21 0001
BA25538	ERH1236	21	01/21/21 0001
210120A-MS	Matrix Spike	22	01/21/21 0001
210120A-BLK	Blank	24	01/21/21 0002
210120A-LCSD	Lab Control SpikeD	27	01/21/21 2332
210120A-LCS	Lab Control Spike	28	01/21/21 2332
BA25532	ERH1230	30	01/21/21 2350
BA25529	ERH1228	31	01/21/21 2350
BA25535	ERH1232	32	01/21/21 2358

Comments: Batch: #35FE-210120A

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/22/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210122A-BLK Time Analyzed: 1540

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	30	01/22/21 1540
210122A-LCS	Lab Control Spike	31	01/22/21 1619
210122A-LCSD	Lab Control SpikeD	32	01/22/21 1659
BA25529	ERH1228	34	01/22/21 1819
BA25532	ERH1230	35	01/22/21 1856
BA25535	ERH1232	36	01/22/21 1933
BA25538	ERH1236	37	01/22/21 2011

Comments: Batch: #TOCW5-210122A

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210125A2-LCS	Time Analyzed:	2155

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A2-BLK	Blank	13	01/25/21 2152
210125A2-LCS	Lab Control Spike	14	01/25/21 2155
210125A2-LCSD	Lab Control SpikeD	15	01/25/21 2157
BA25529	ERH1228	37	01/25/21 2248
BA25532	ERH1230	38	01/25/21 2250
BA25535	ERH1232	39	01/25/21 2252
BA25538	ERH1236	40	01/25/21 2255

Comments: Batch: #353TO-210125A2

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210122A1-LCS	Time Analyzed:	1256

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A1-BLK	Blank	1	01/22/21 1253
BA25535	ERH1232	10	01/22/21 1721
BA25538	ERH1236	11	01/22/21 1726
210122A1-LCS	Lab Control Spike	2	01/22/21 1256
210122A1-LCSD	Lab Control SpikeD	3	01/22/21 1343
BA25529	ERH1228	8	01/22/21 1710
BA25532	ERH1230	9	01/22/21 1716

Comments: Batch: #232W-210122A1

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94826

Case No: 94826 Date Analyzed: 01/21/21

Matrix: WATER Instrument: Manual Spec

LCS ID: 210120A-LCS Time Analyzed: 2332

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210120A-MSD	Matrix SpikeD	20	01/21/21 0001
BA25538	ERH1236	21	01/21/21 0001
210120A-MS	Matrix Spike	22	01/21/21 0001
210120A-BLK	Blank	24	01/21/21 0002
210120A-LCSD	Lab Control SpikeD	27	01/21/21 2332
210120A-LCS	Lab Control Spike	28	01/21/21 2332
BA25532	ERH1230	30	01/21/21 2350
BA25529	ERH1228	31	01/21/21 2350
BA25535	ERH1232	32	01/21/21 2358

Comments: Batch: #35FE-210120A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94826
Case No:	94826	Date Analyzed:	01/22/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210122A-LCS	Time Analyzed:	1619

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-BLK	Blank	30	01/22/21 1540
210122A-LCS	Lab Control Spike	31	01/22/21 1619
210122A-LCSD	Lab Control SpikeD	32	01/22/21 1659
BA25529	ERH1228	34	01/22/21 1819
BA25532	ERH1230	35	01/22/21 1856
BA25535	ERH1232	36	01/22/21 1933
BA25538	ERH1236	37	01/22/21 2011

Comments: Batch: #TOCW5-210122A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	2.94	2.90	98.0	96.7	1.4	20	90-110	01/25/21	01/25/21	01/25/21	01/25/21	#353TO-210125A2-BA255
SM 2320B	BICARBONATE AS CACO3	250	231	233	92.4	93.2	0.86	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SM 2320B	TOTAL ALKALINITY AS CA	250	245	247	98.0	98.8	0.81	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#232W-210122A1-BA2543
SW846 90	TOTAL ORGANIC CARBO	5.00	4.60	4.43	92.0	88.6	3.8	20	80-120	01/22/21	01/22/21	01/22/21	01/22/21	#TOCW5-210122A-BA255

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM3500Fe	FERROUS IRON	3.00	2.98	2.98	99.3	99.3	0.0	20	80-120	01/21/21	01/21/21	01/21/21	01/21/21	#35FE-210120A-BA25538

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **210121W-25538 MS - 260525**

Sample ID: BA25538

Client ID: ERH1236

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	0.060	3.04	3.05	99.3	99.7	0.33	20	80-120	01/21/21	01/21/21	01/21/21	01/21/21	260525	BA25538

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/TW

			1218004.D	1218005.D	1218006.D	1218007.D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
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35																	

1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

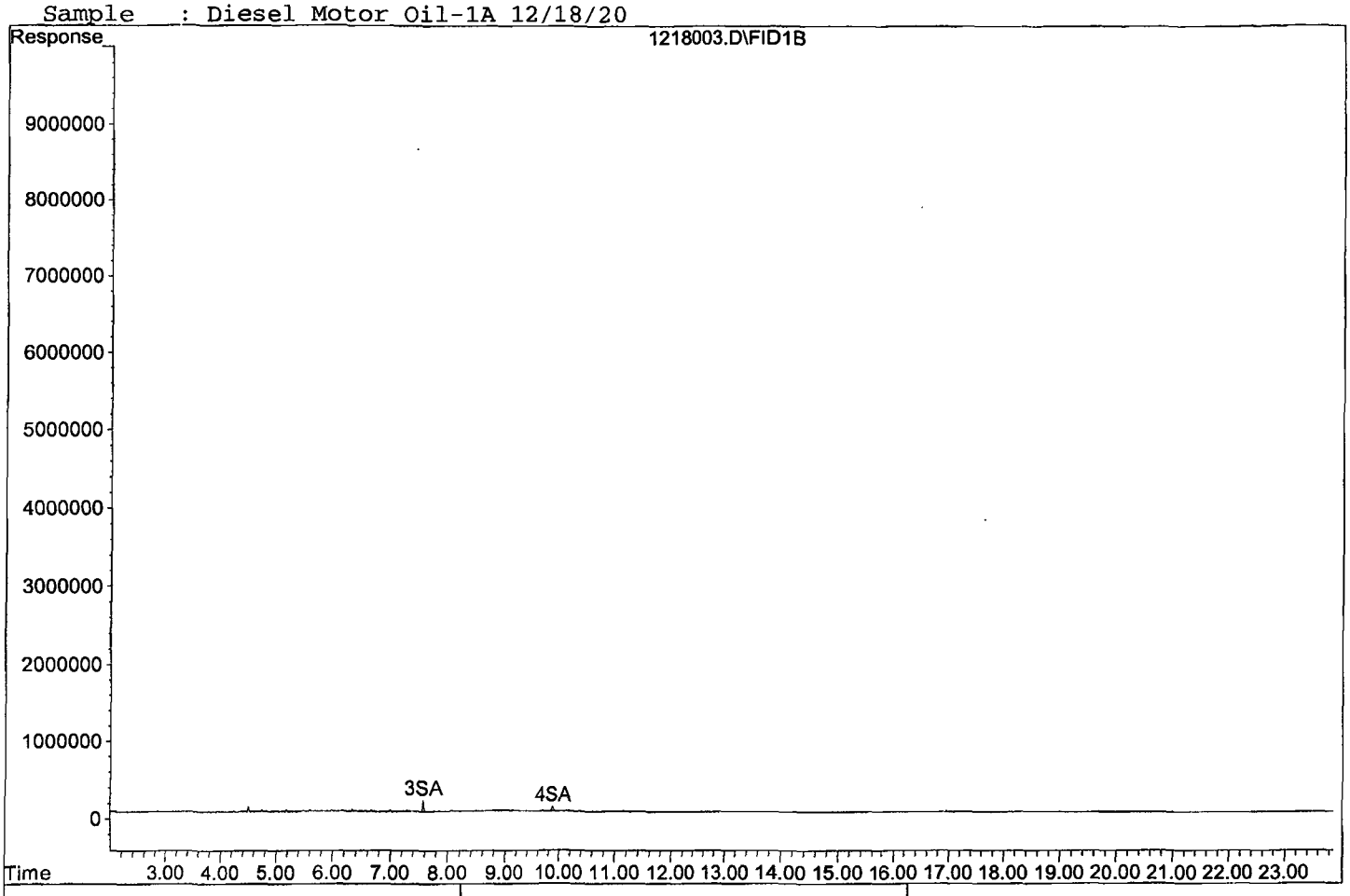
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

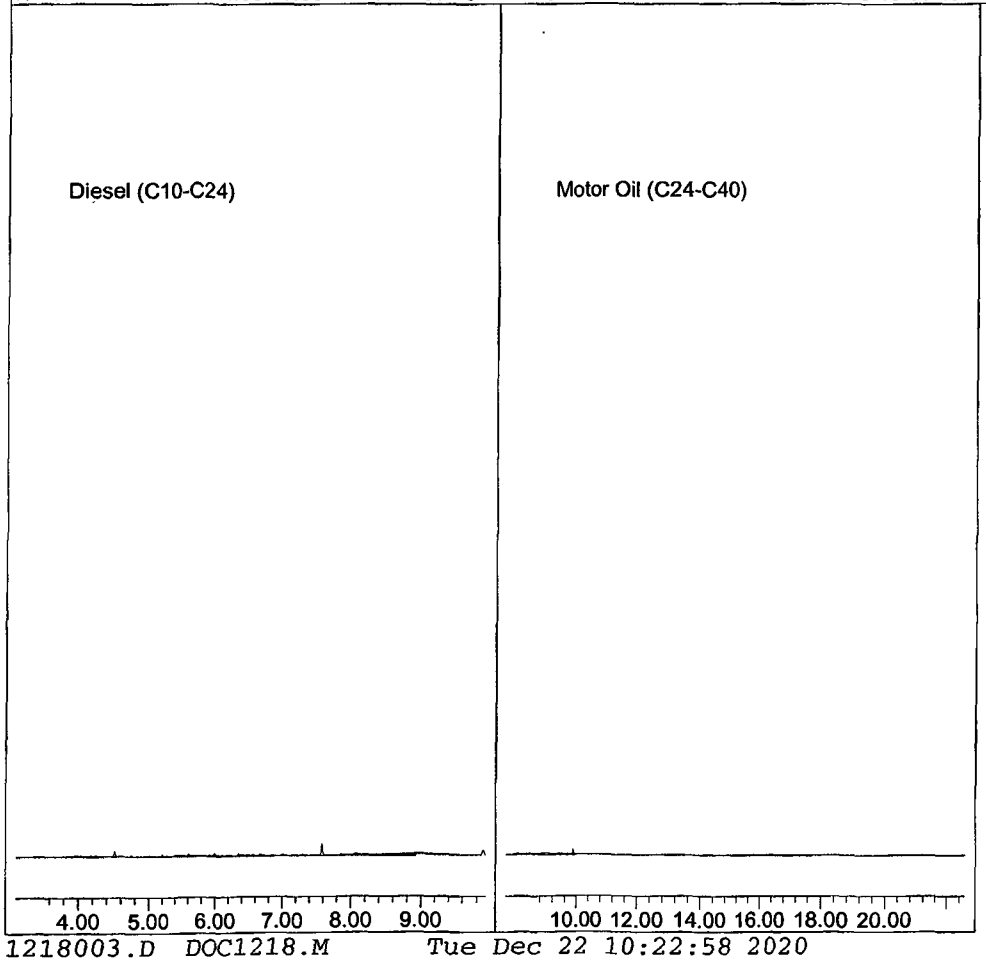
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

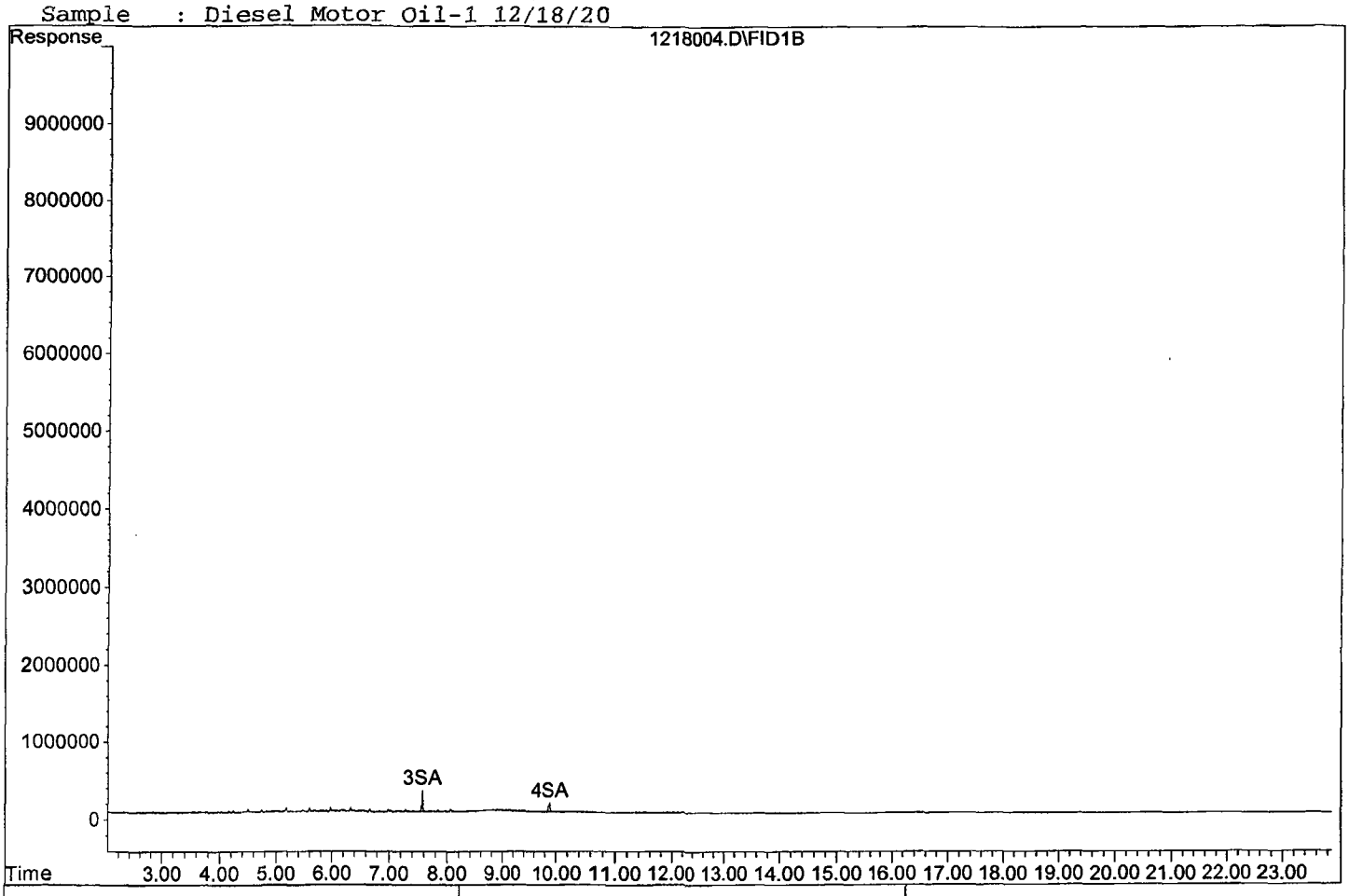
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

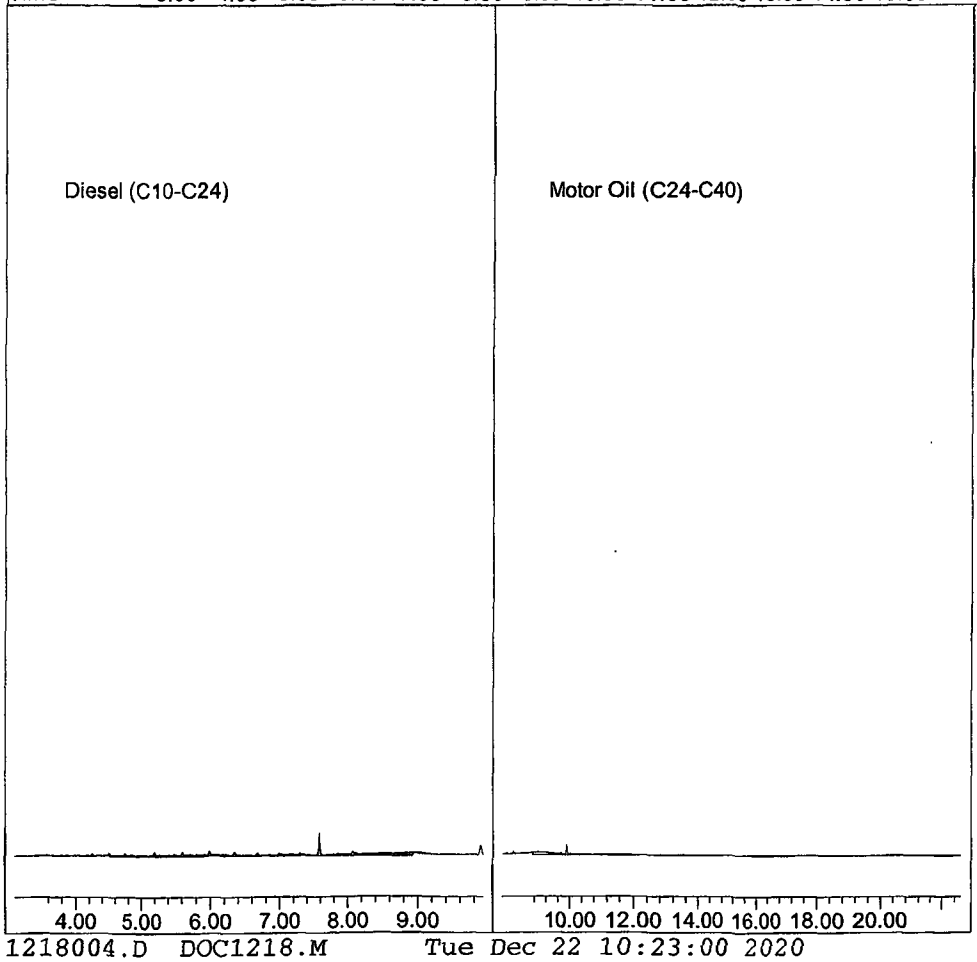
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery =		1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery =		1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

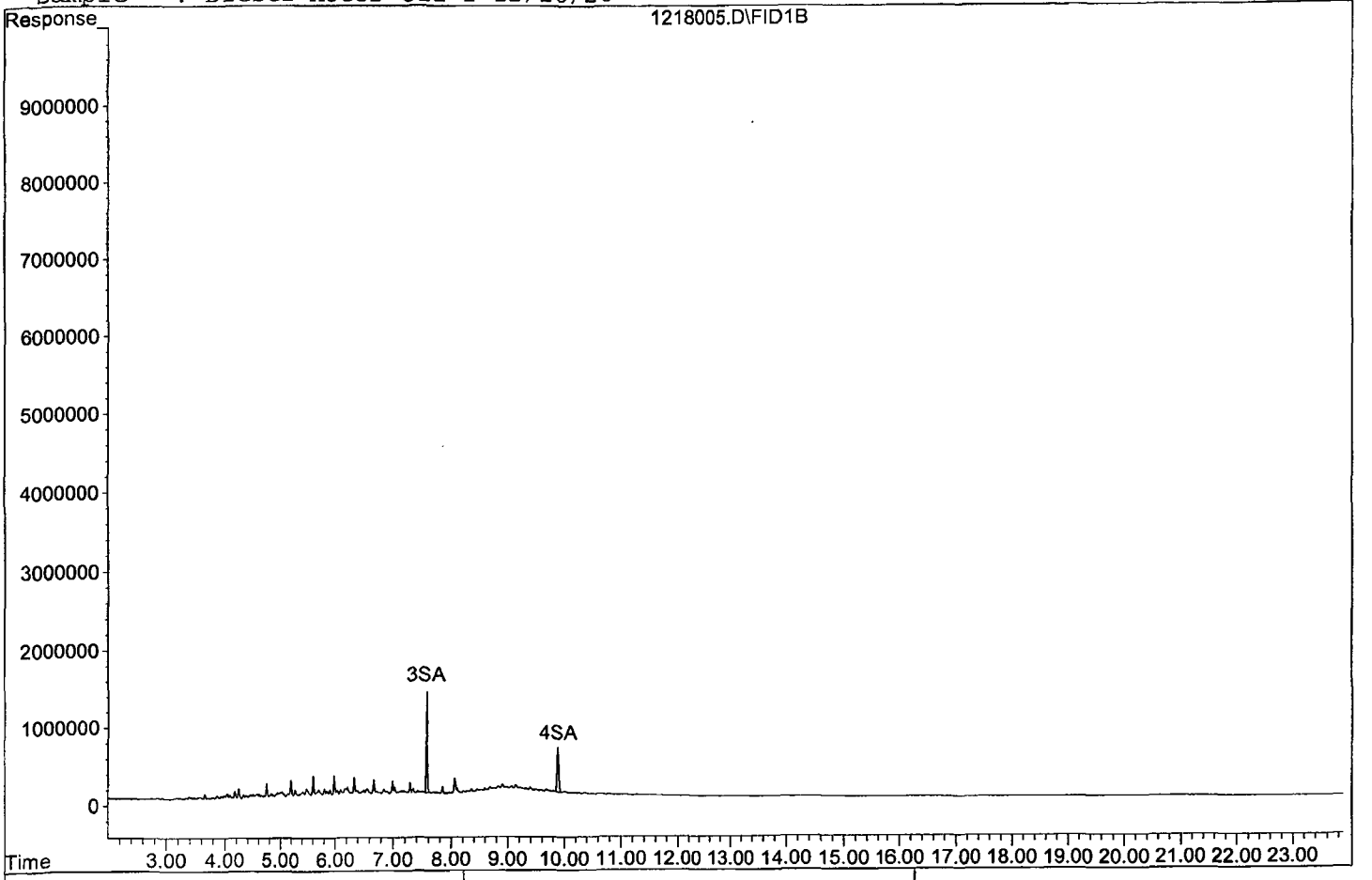
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

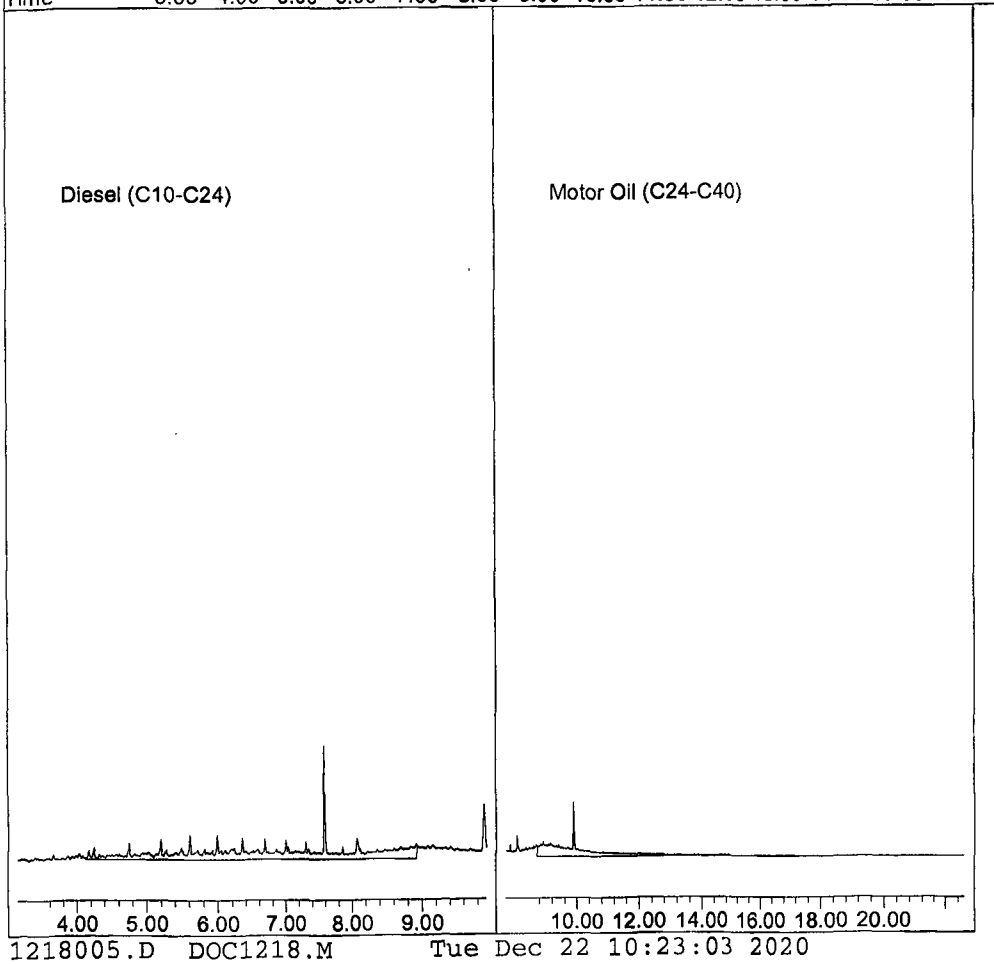
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





1218005.D DOC1218.M Tue Dec 22 10:23:03 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

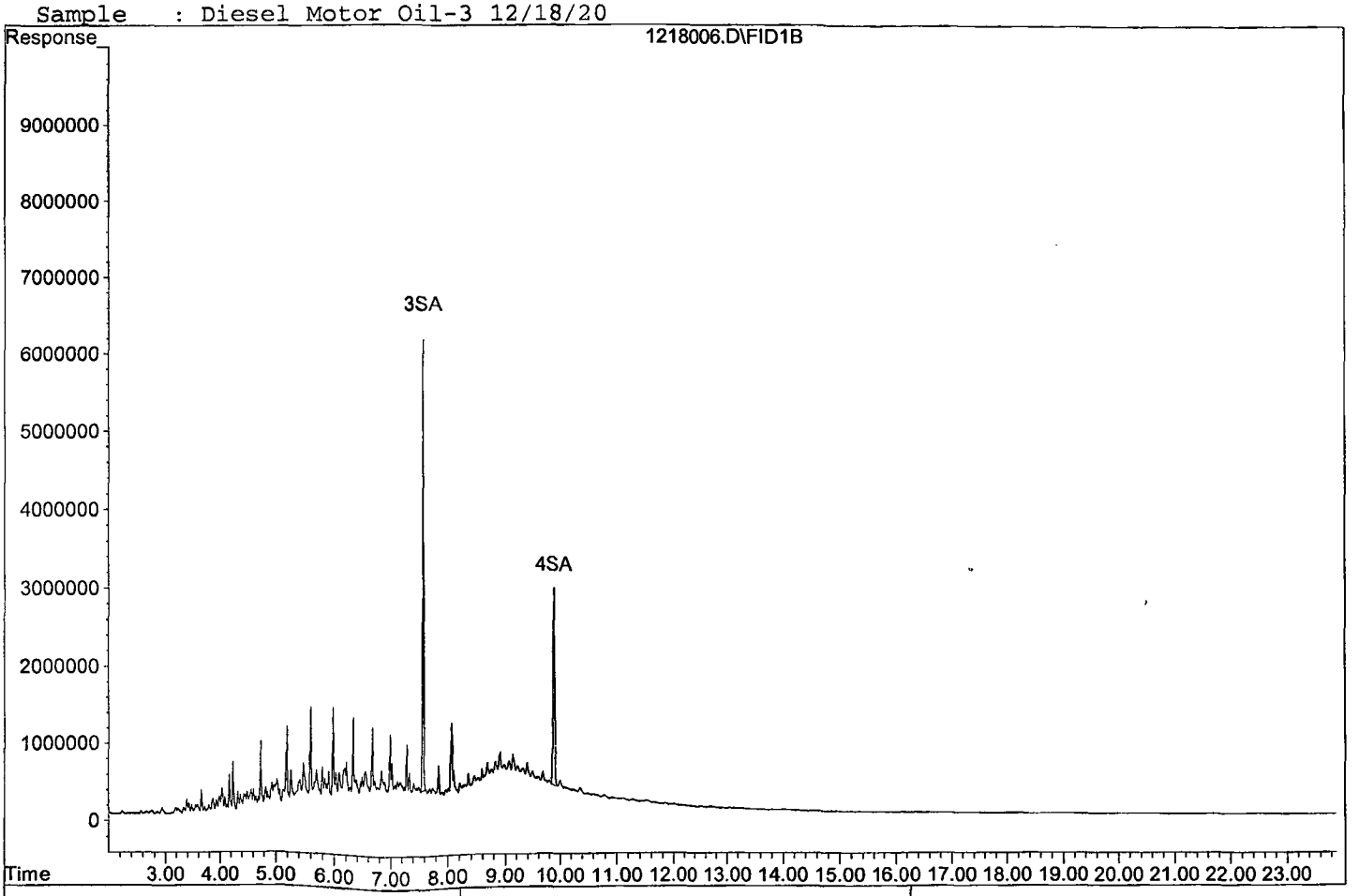
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

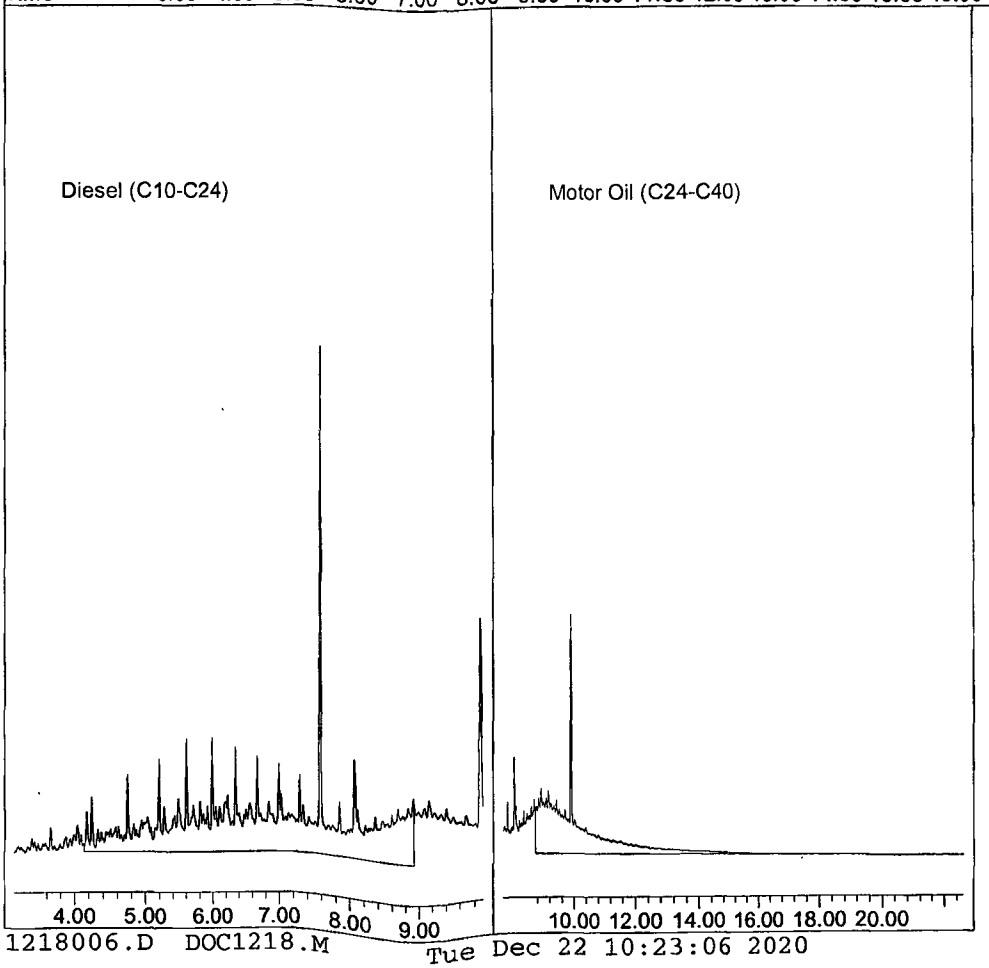
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000	Recovery =		40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000	Recovery =		40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

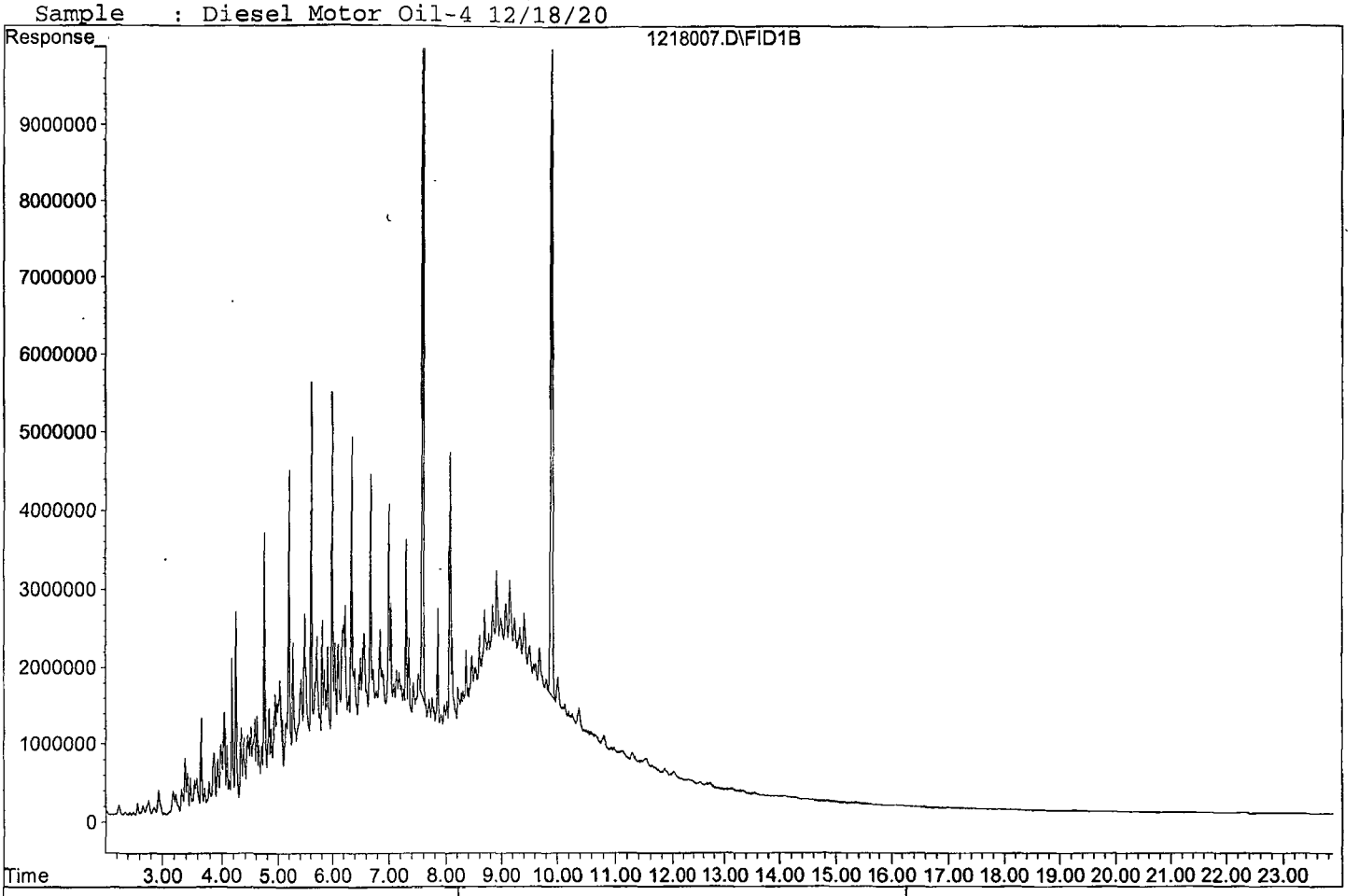
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

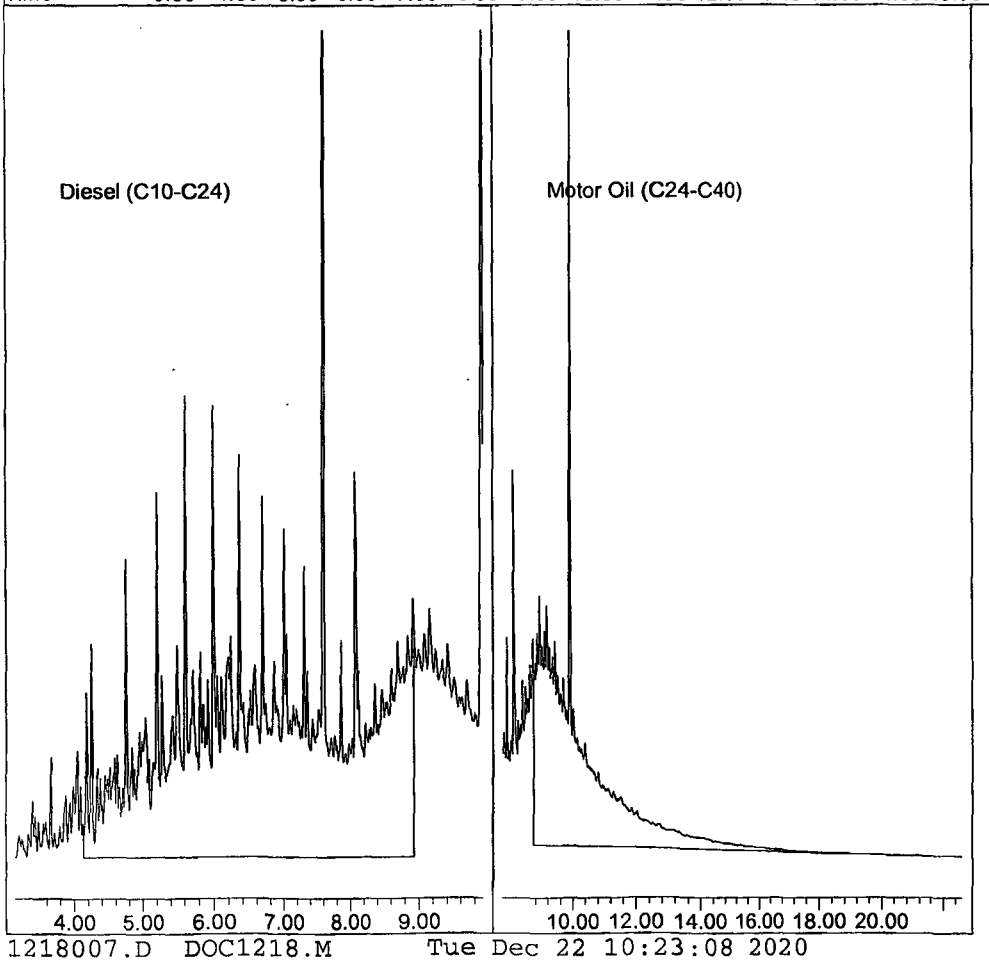
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





1218007.D DOC1218.M Tue Dec 22 10:23:08 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

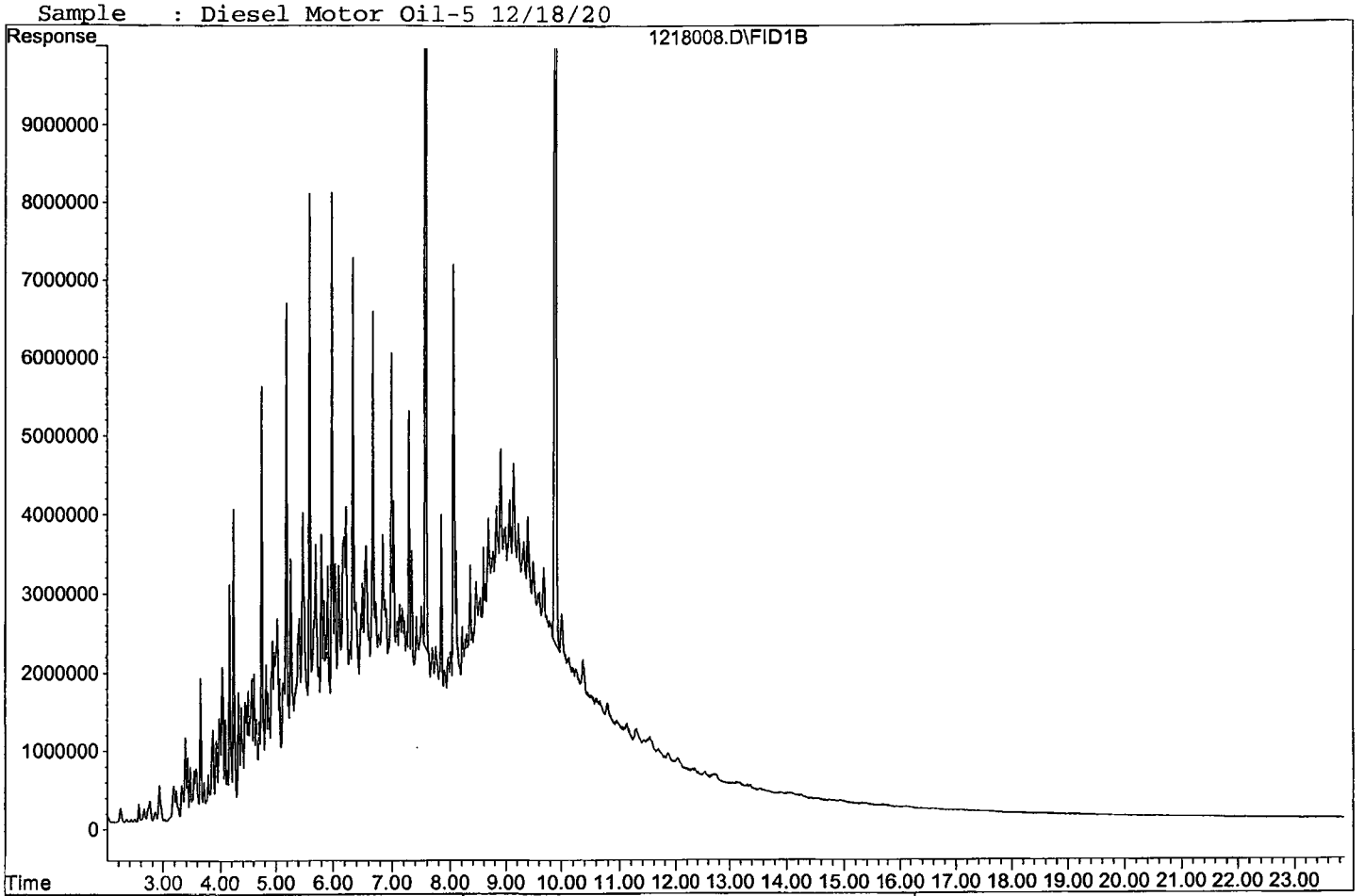
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

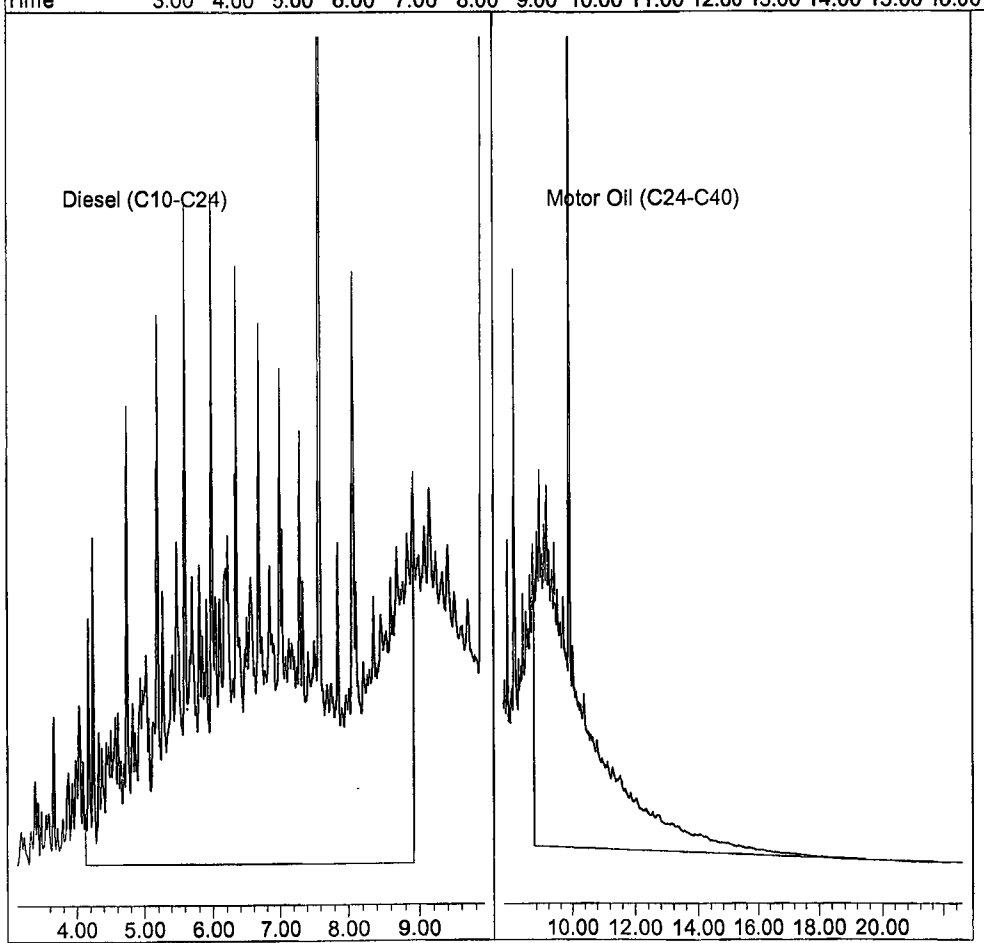
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000		Recovery =	224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000		Recovery =	237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

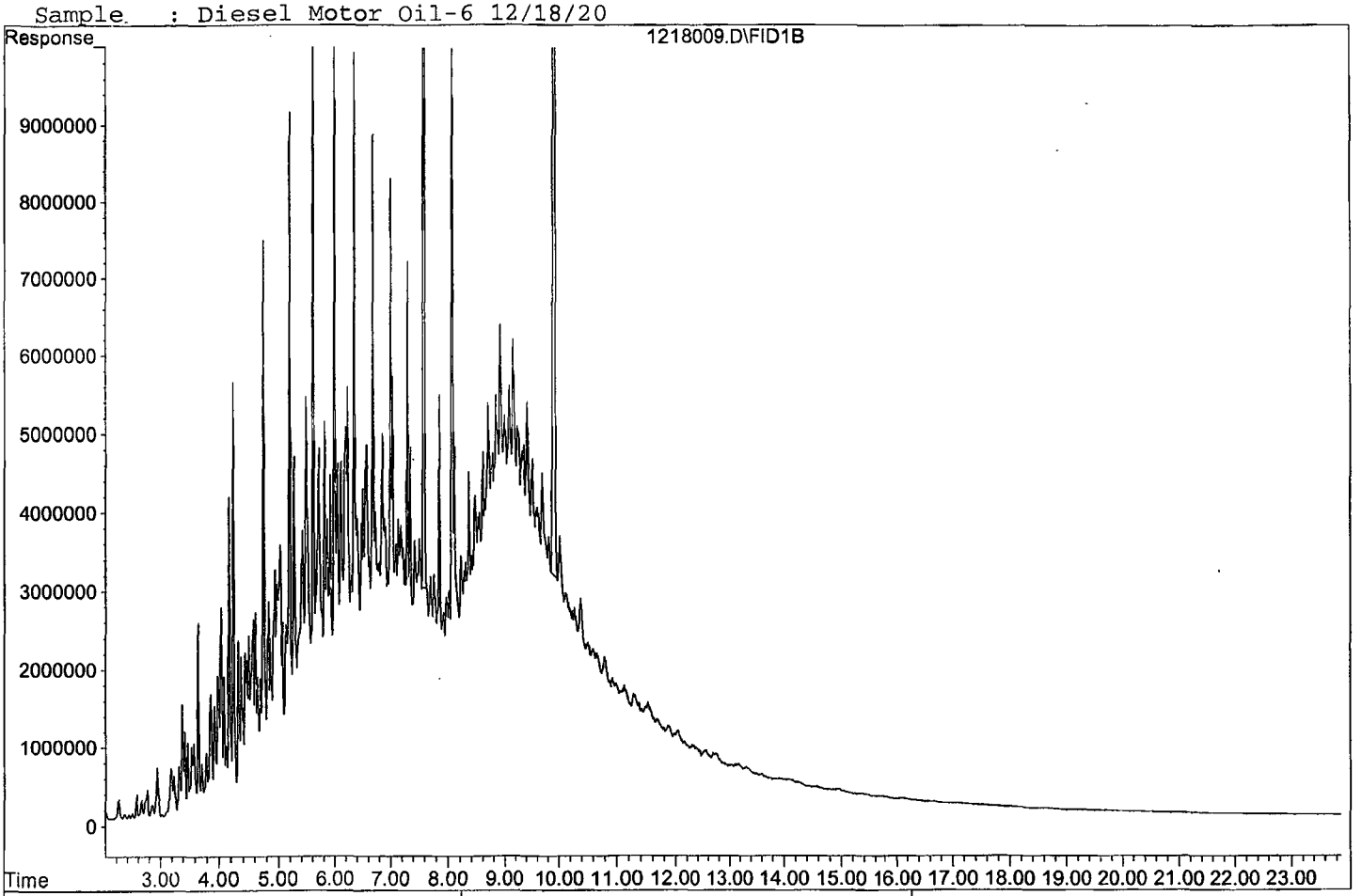
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

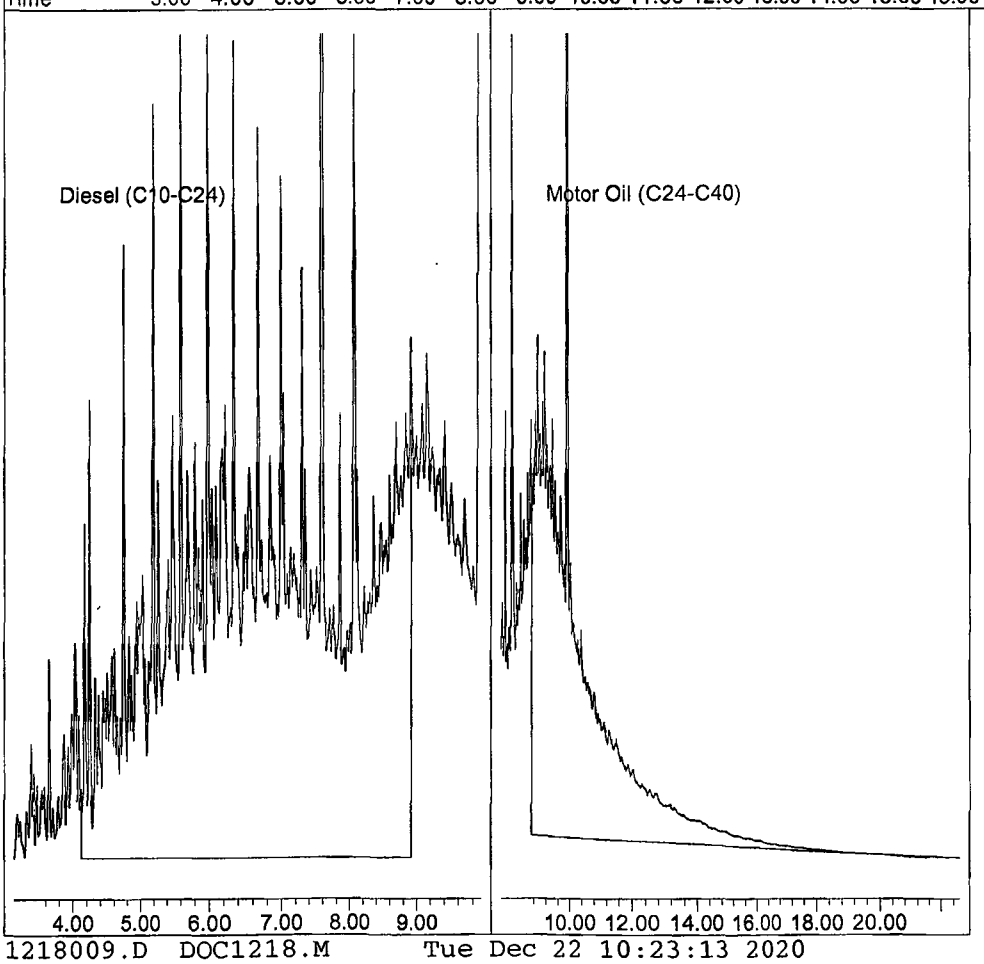
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572 ppb
Surrogate Spike 30.000		Recovery =	311.91%
4) SA Octacosane(S)	9.91	438795924	96.608 ppb
Surrogate Spike 30.000		Recovery =	322.03%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330 ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739 ppb

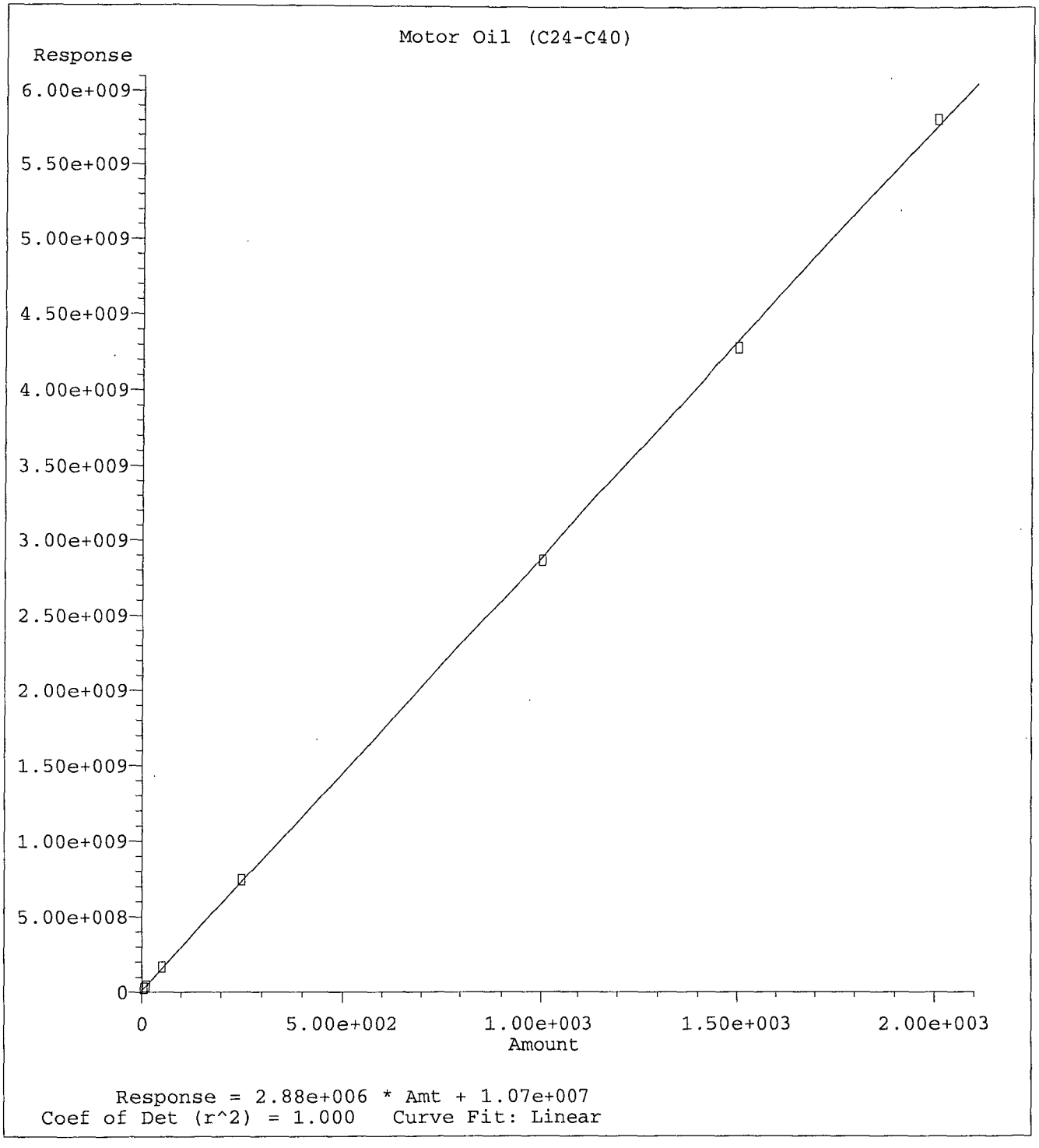
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20







Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
3							
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

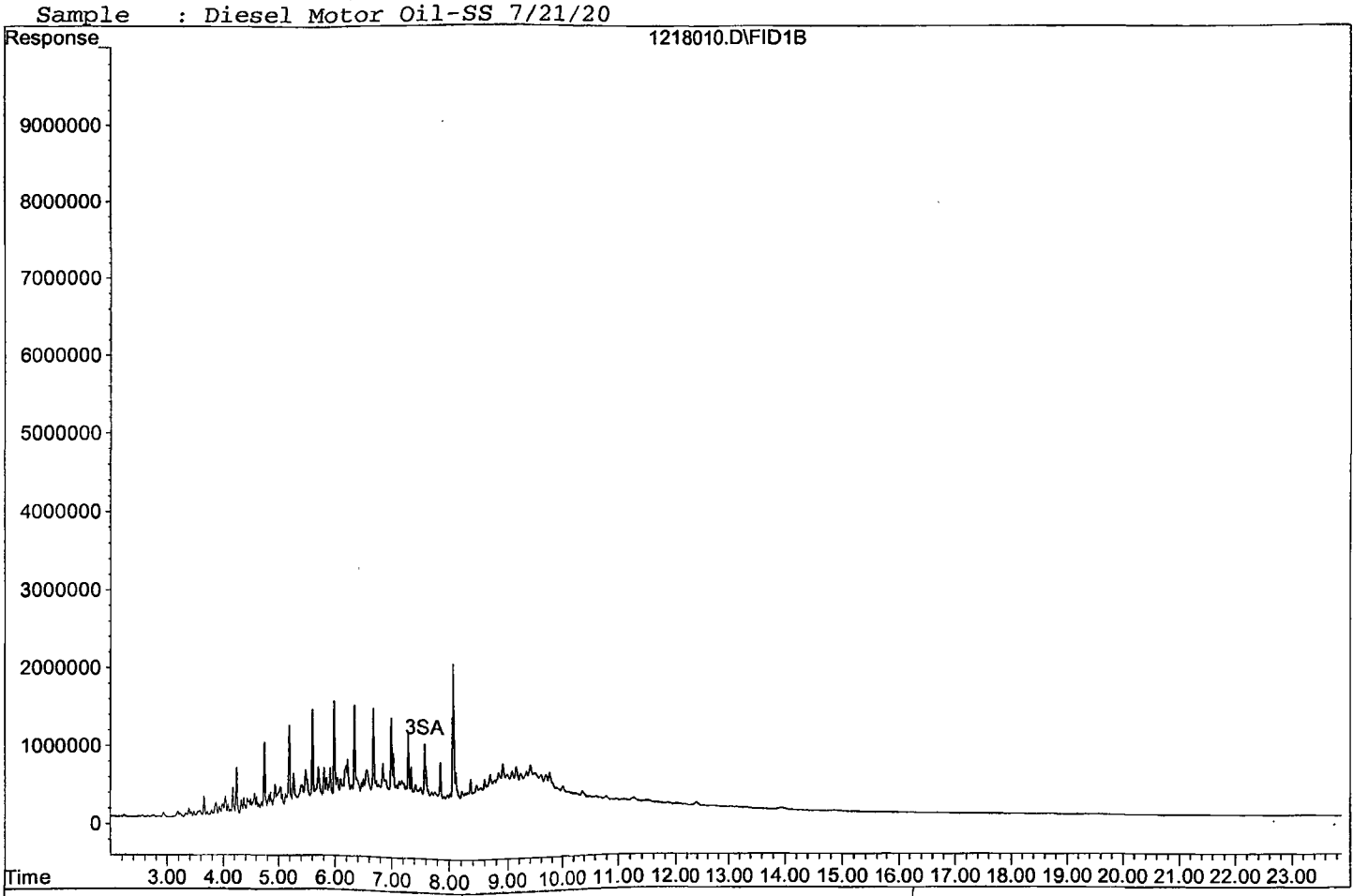
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

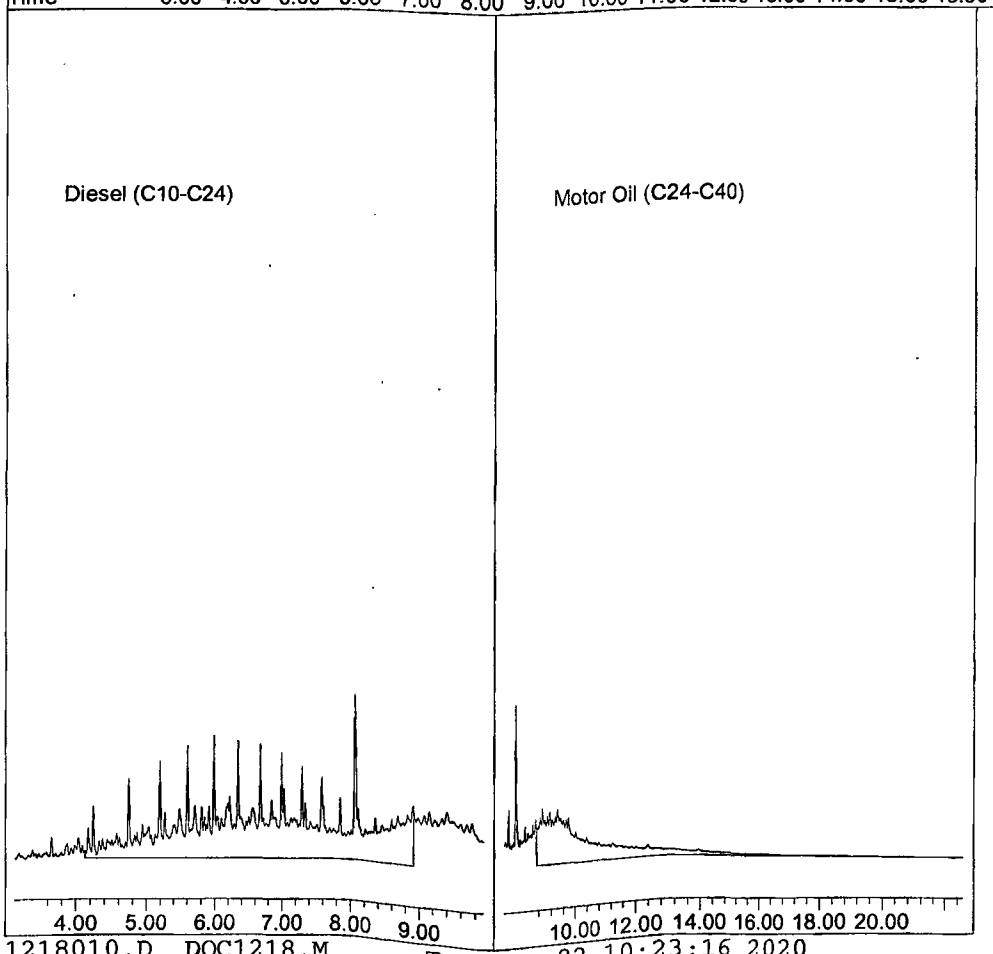
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000	Recovery =		2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000	Recovery =		0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





1218010.D DOC1218.M Tue Dec 22 10:23:16 2020

TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107111.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2415920	1.5	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1552090	10	HBTML	6.4
3	SA	Ortho-Terphenyl(S)	2953720	2981650	0.95	SA	
4	SA	Octacosane(S)	2271000	2341700	3.1	SA	
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		Average			3.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107111.D Vial: 11
Acq On : 1-26-21 9:51:23 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 27 9:14 2021 Quant Results File: DOC1218.RES

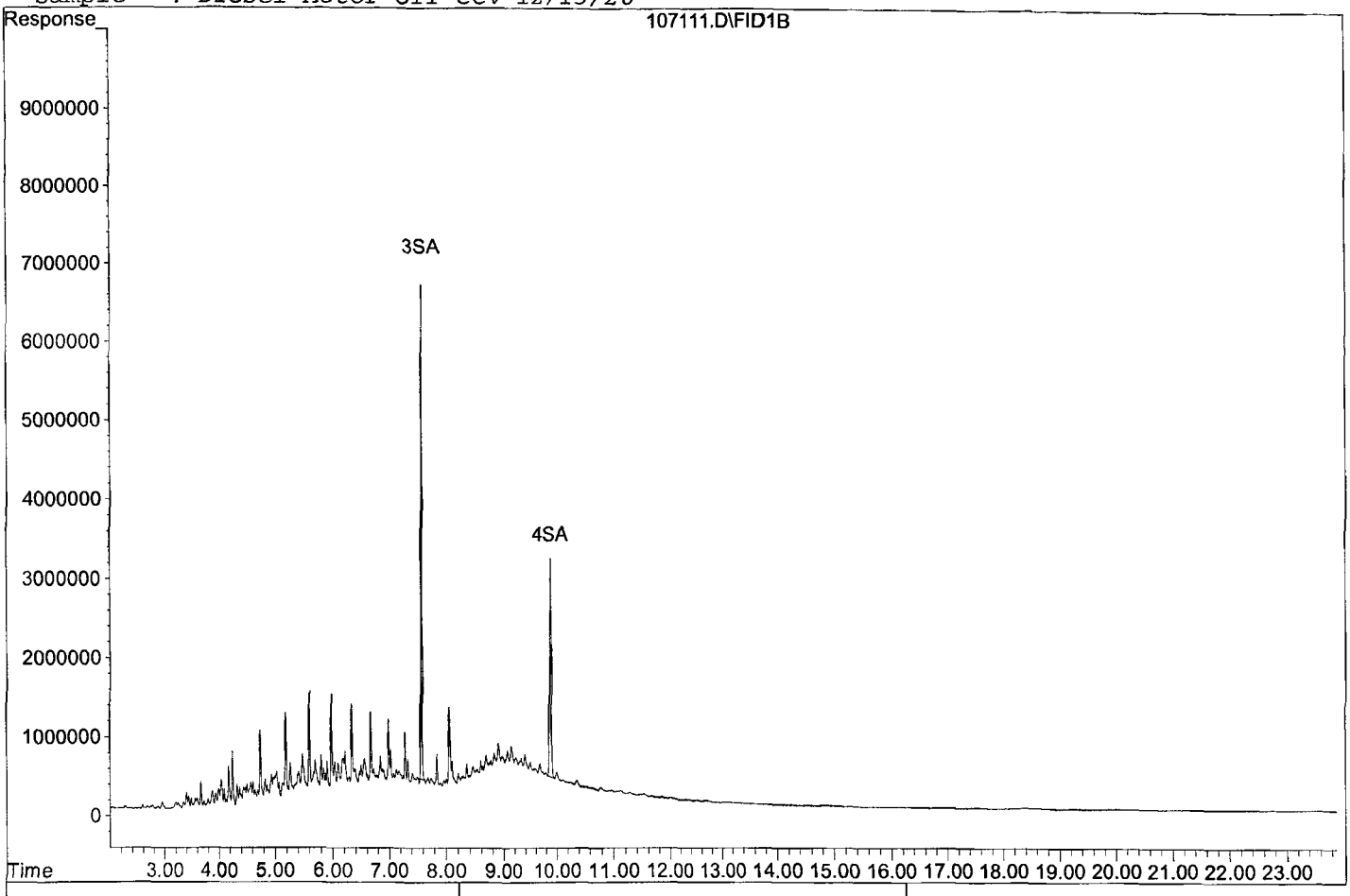
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

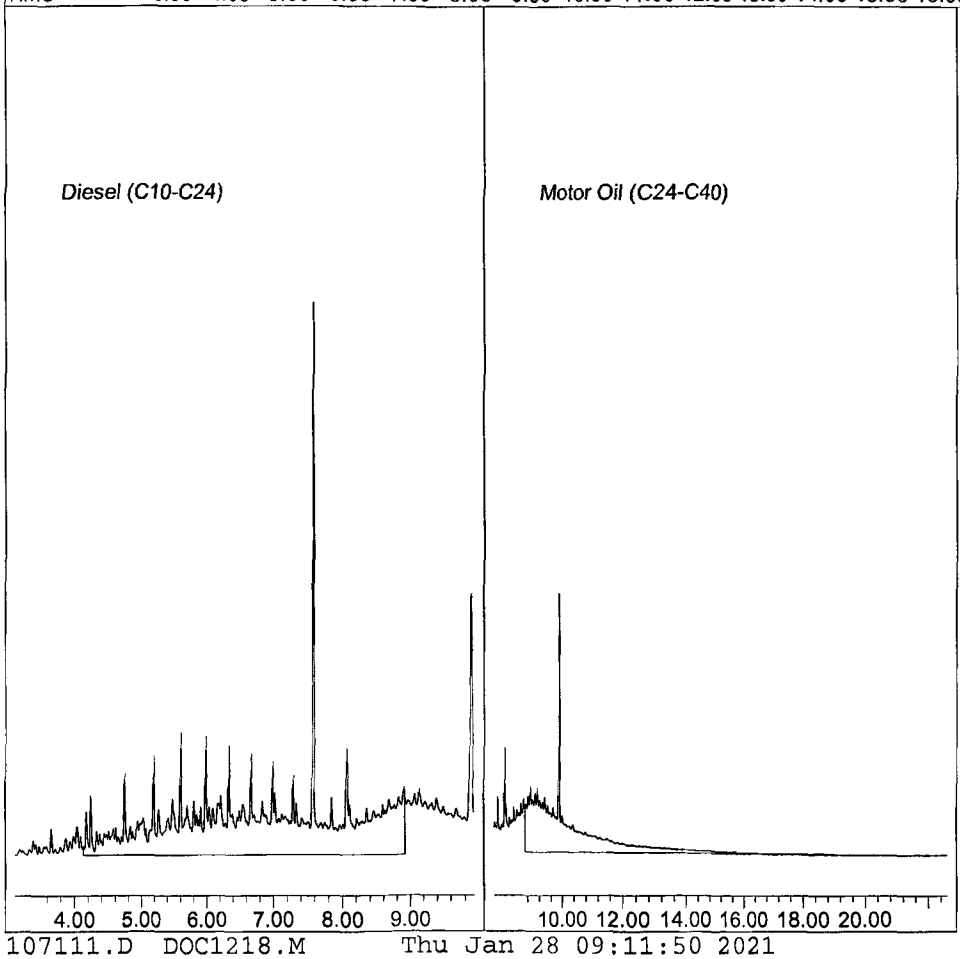
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	74541219	12.618 ppb
Surrogate Spike 30.000	Recovery =		42.06%
4) SA Octacosane(S)	9.88	58542440	12.889 ppb
Surrogate Spike 30.000	Recovery =		42.96%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1207959049	246.324 ppb
2) HBTM Motor Oil (C24-C40)	15.16	776047378	265.908 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107111.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107119.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2522880	2.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1603320	7.2	HBTML	9.9
3	SA	Ortho-Terphenyl(S)	2953720	3185830	7.9	SA	
4	SA	Octacosane(S)	2271000	2460990	8.4	SA	
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		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107119.D Vial: 19
Acq On : 1-26-21 13:35:30 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 26 15:28 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

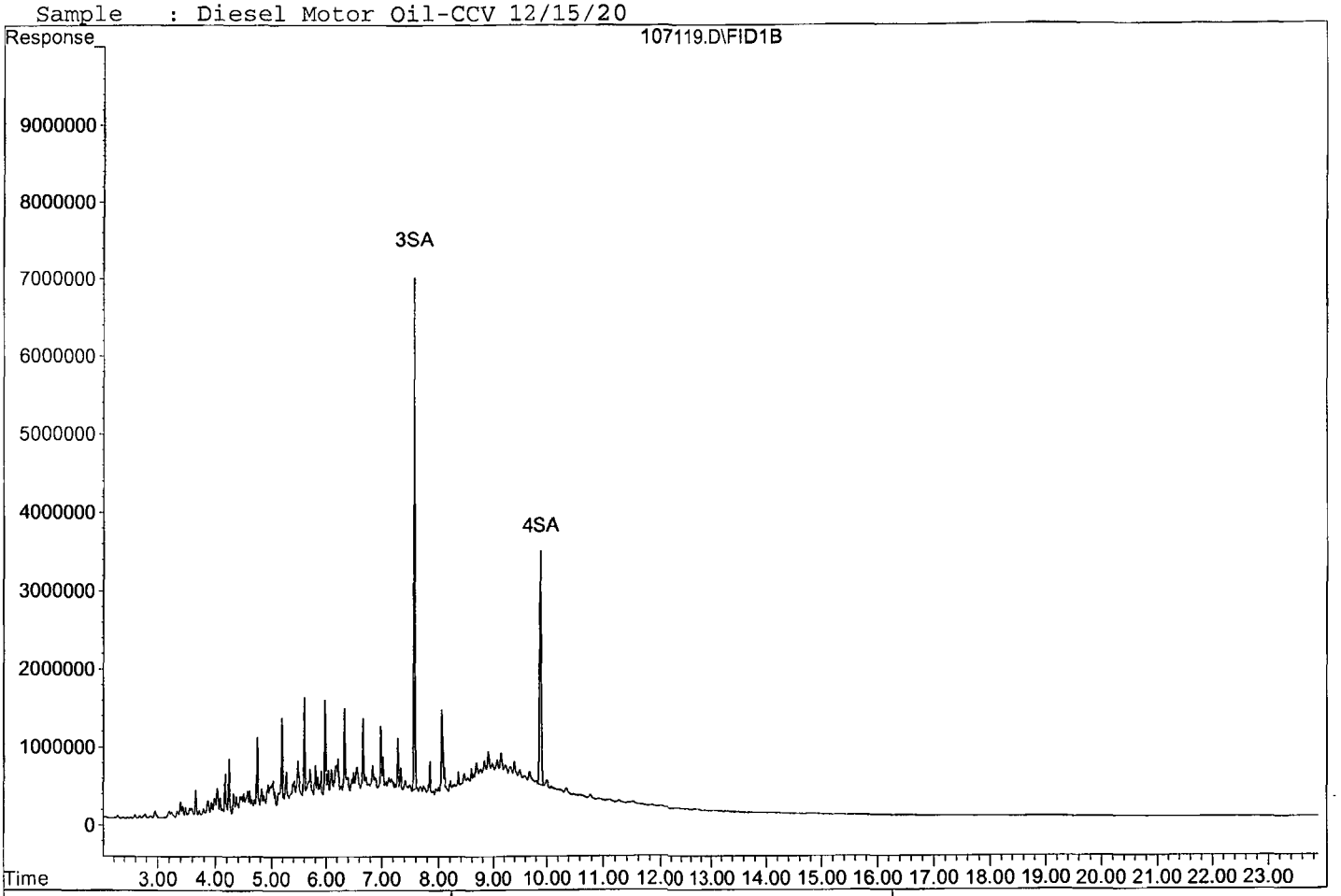
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

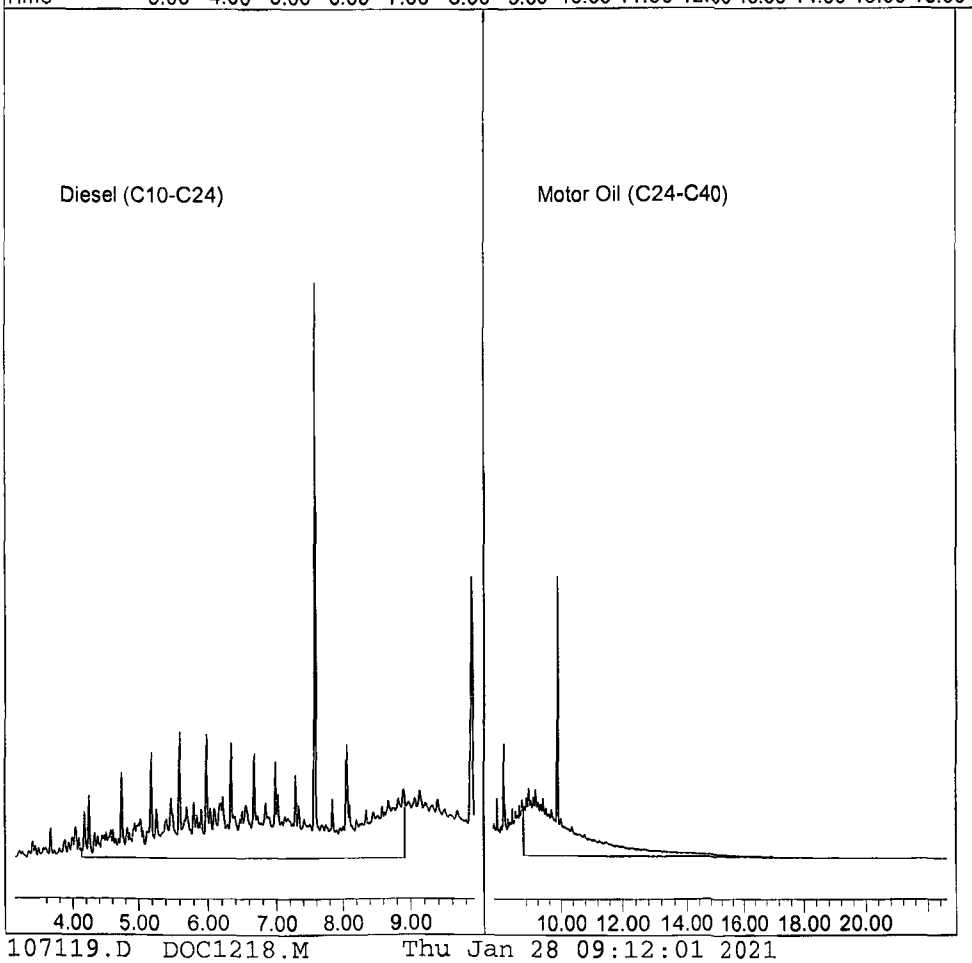
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	79645867	13.482 ppb
Surrogate Spike 30.000		Recovery =	44.94%
4) SA Octacosane(S)	9.88	61524758	13.546 ppb
Surrogate Spike 30.000		Recovery =	45.15%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1261442444	257.230 ppb
2) HBTM Motor Oil (C24-C40)	15.16	801661802	274.807 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

165 of 687

Data File: G:\APOLLO\DATA\210107\107119.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107133.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2497740	1.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1587980	8.0	HBTML	8.9
3	SA	Ortho-Terphenyl(S)	2953720	3153820	6.8	SA	
4	SA	Octacosane(S)	2271000	2435320	7.2	SA	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107133.D Vial: 33
Acq On : 1-27-21 19:19:05 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

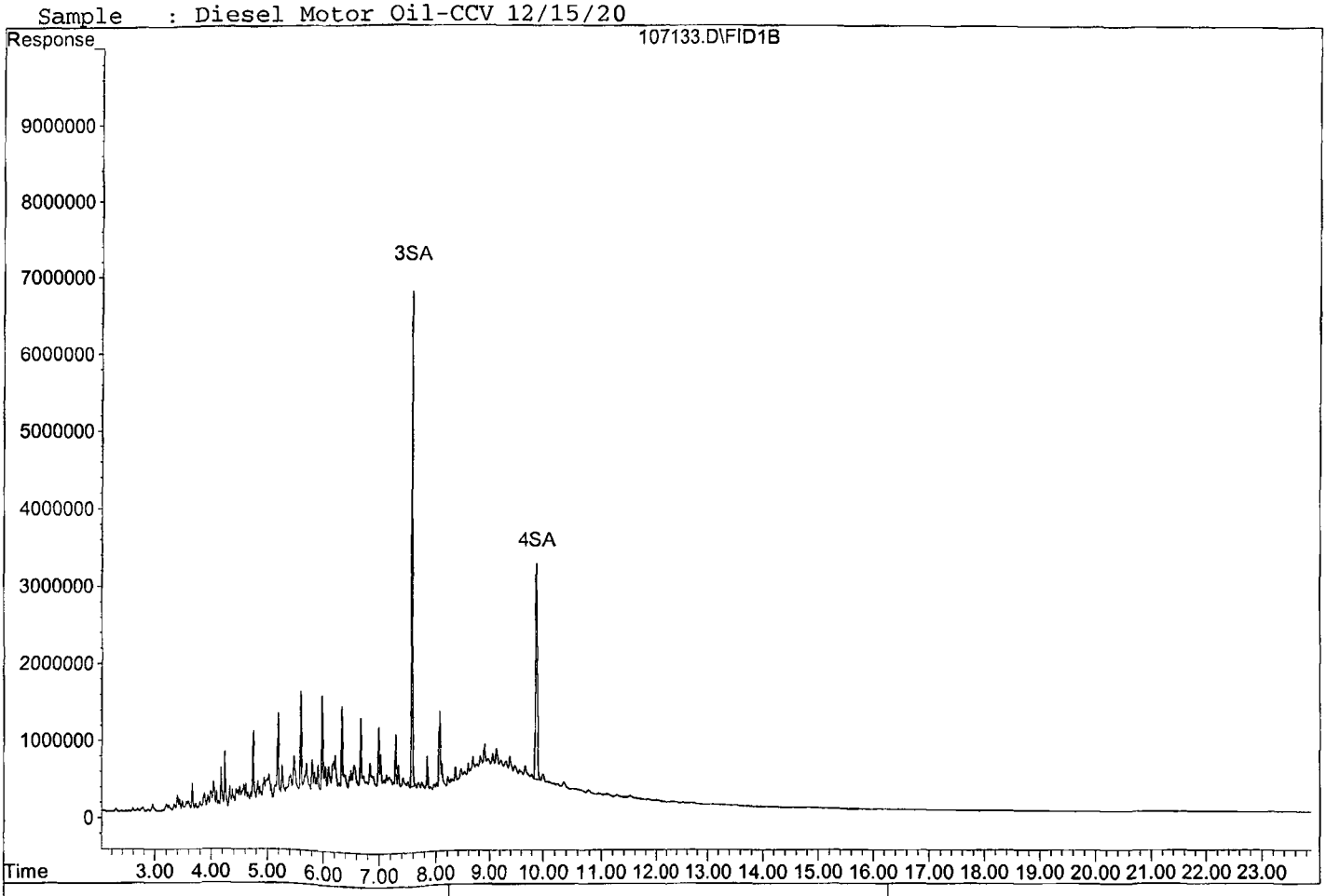
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

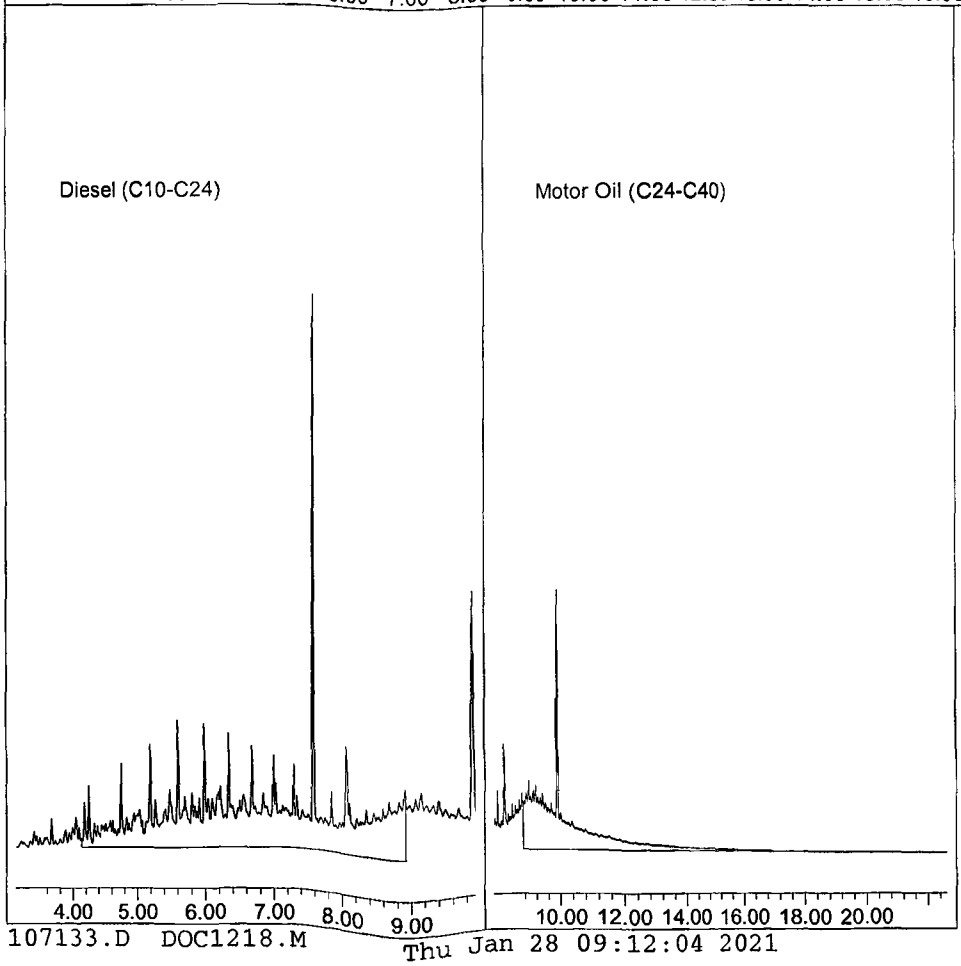
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	78845468	13.347 ppb
Surrogate Spike 30.000		Recovery =	44.49%
4) SA Octacosane(S)	9.88	60883048	13.404 ppb
Surrogate Spike 30.000		Recovery =	44.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1248868238	254.666 ppb
2) HBTM Motor Oil (C24-C40)	15.16	793991978	272.142 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107133.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/28/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107144.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2727550	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1722560	0.25	HBTML	18
3	SA	Ortho-Terphenyl(S)	2953720	3429530	16	SA	
4	SA	Octacosane(S)	2271000	2659560	17	SA	
5							
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39							
40							
		Average			11.1		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107144.D Vial: 44
Acq On : 1-28-21 0:27:43 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

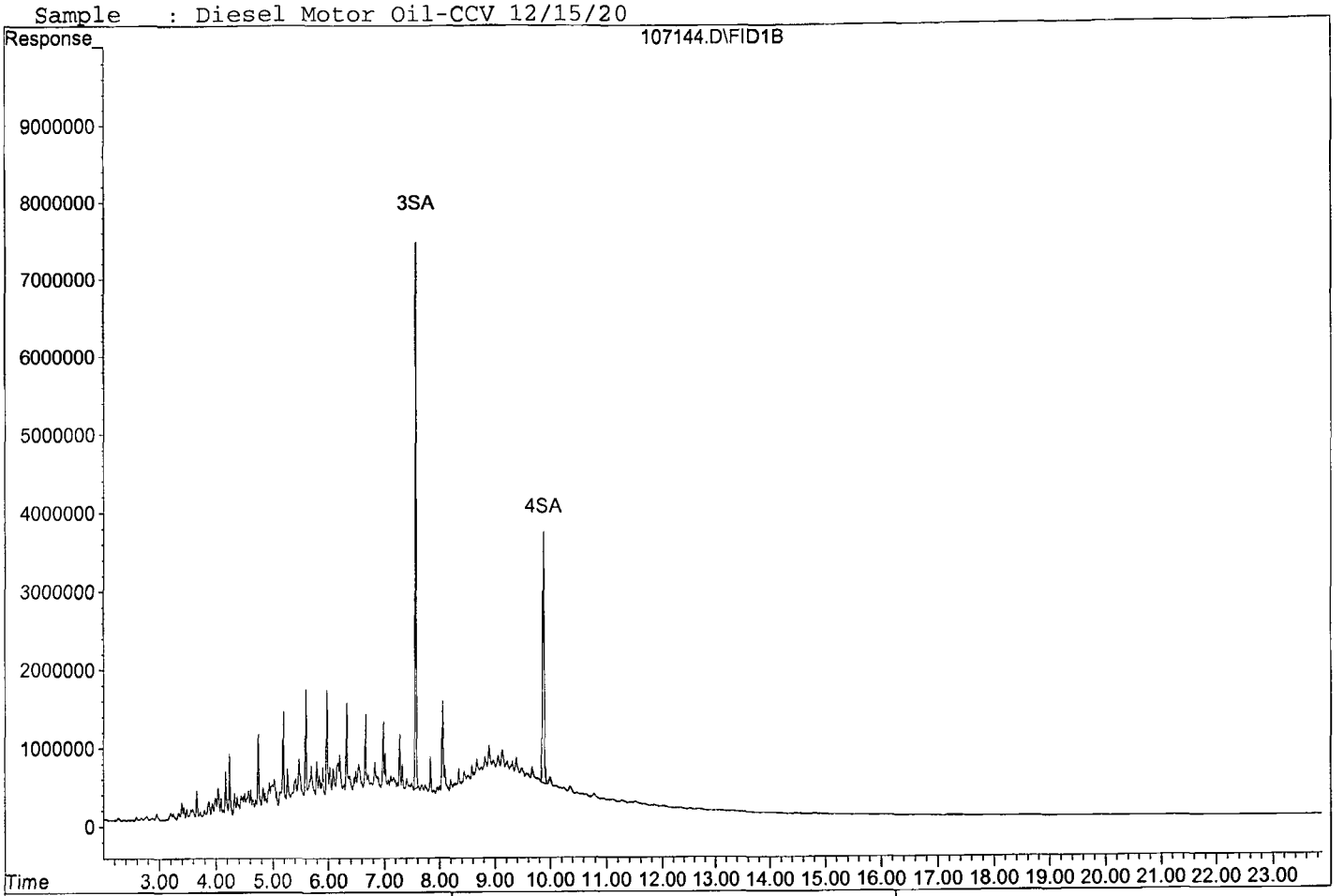
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

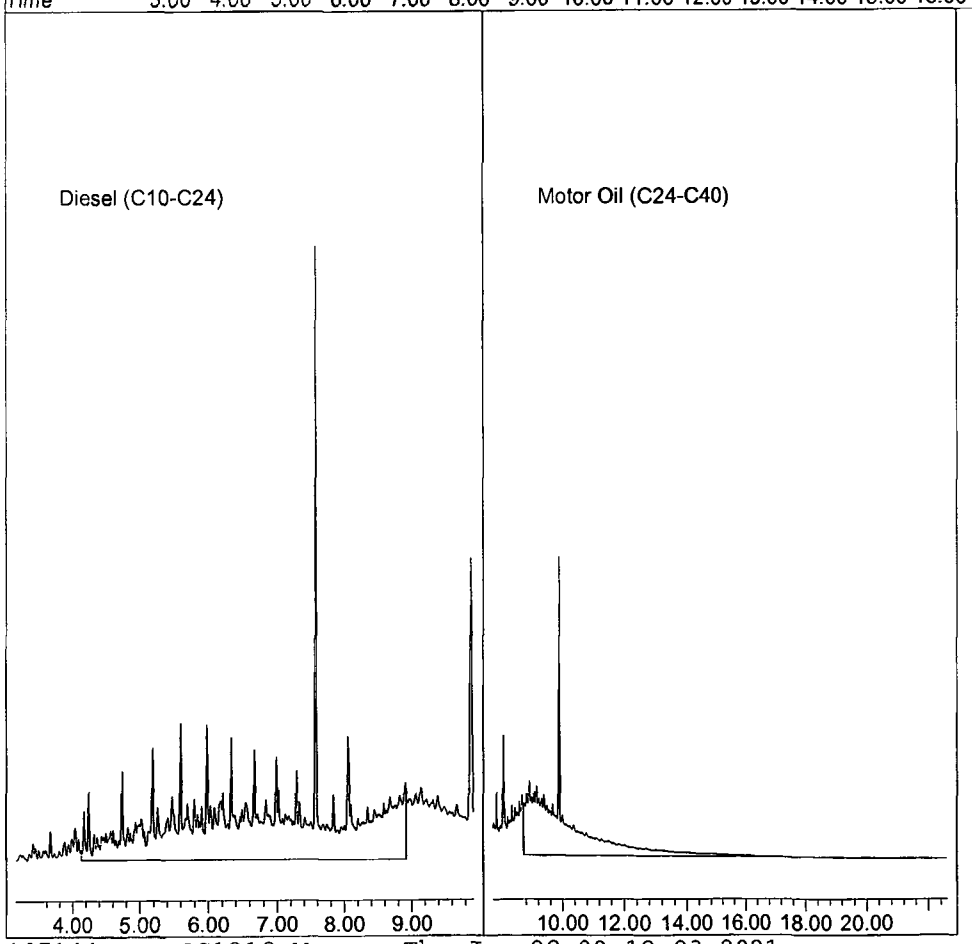
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	85738203	14.514 ppb
Surrogate Spike 30.000	Recovery =		48.38%
4) SA Octacosane(S)	9.88	66488915	14.639 ppb
Surrogate Spike 30.000	Recovery =		48.80%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1363774513	278.097 ppb
2) HBTM Motor Oil (C24-C40)	15.16	861281756	295.521 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107144.D
Sample : Diesel Motor Oil-CCV 12/15/20





107144.D DOC1218.M Thu Jan 28 09:12:23 2021

ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107137.D Vial: 37
Acq On : 1-27-21 21:11:17 Operator:
Sample : BA25532W17 5/990 Inst : Apollo
Misc : water Multiplr: 5.05
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

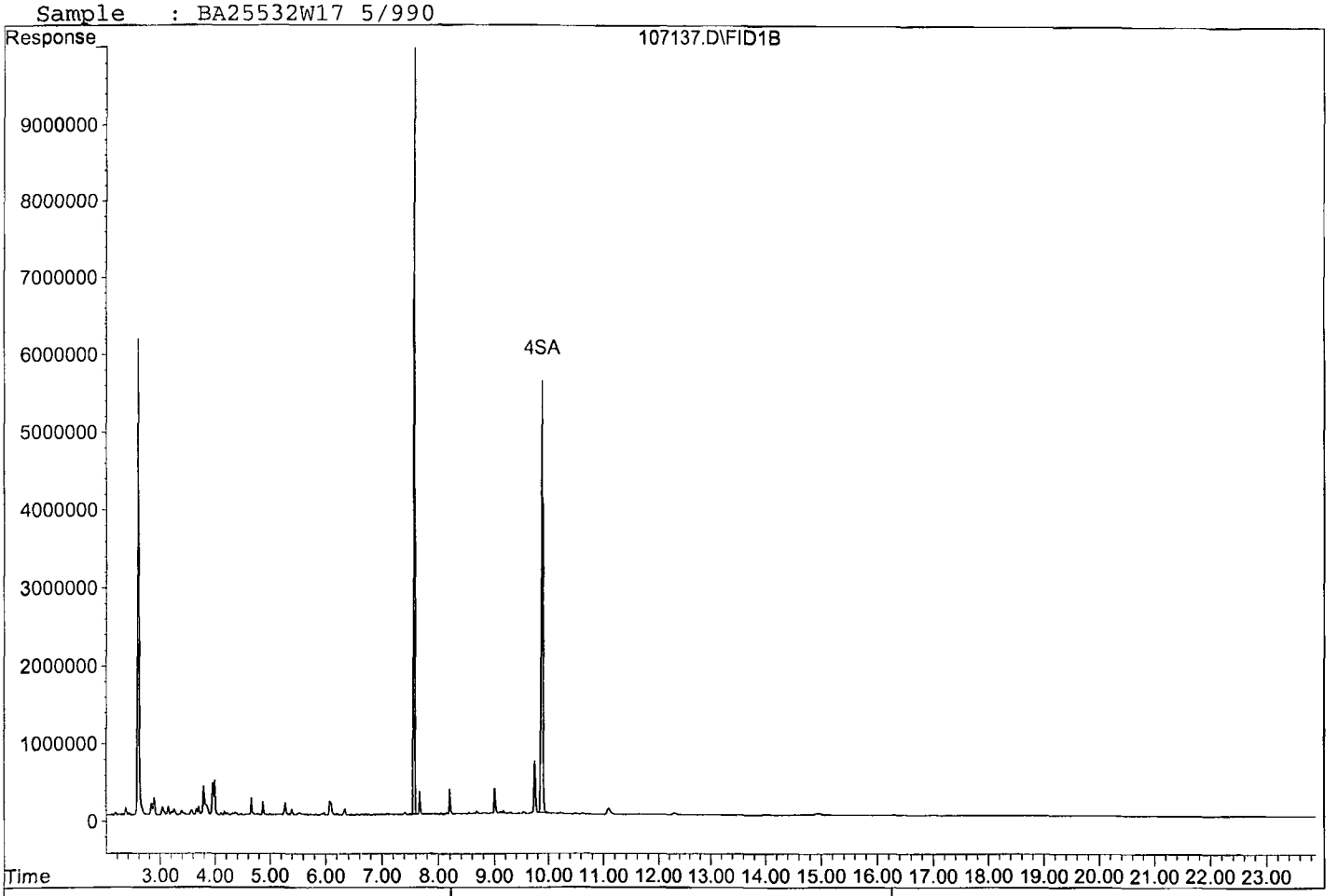
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

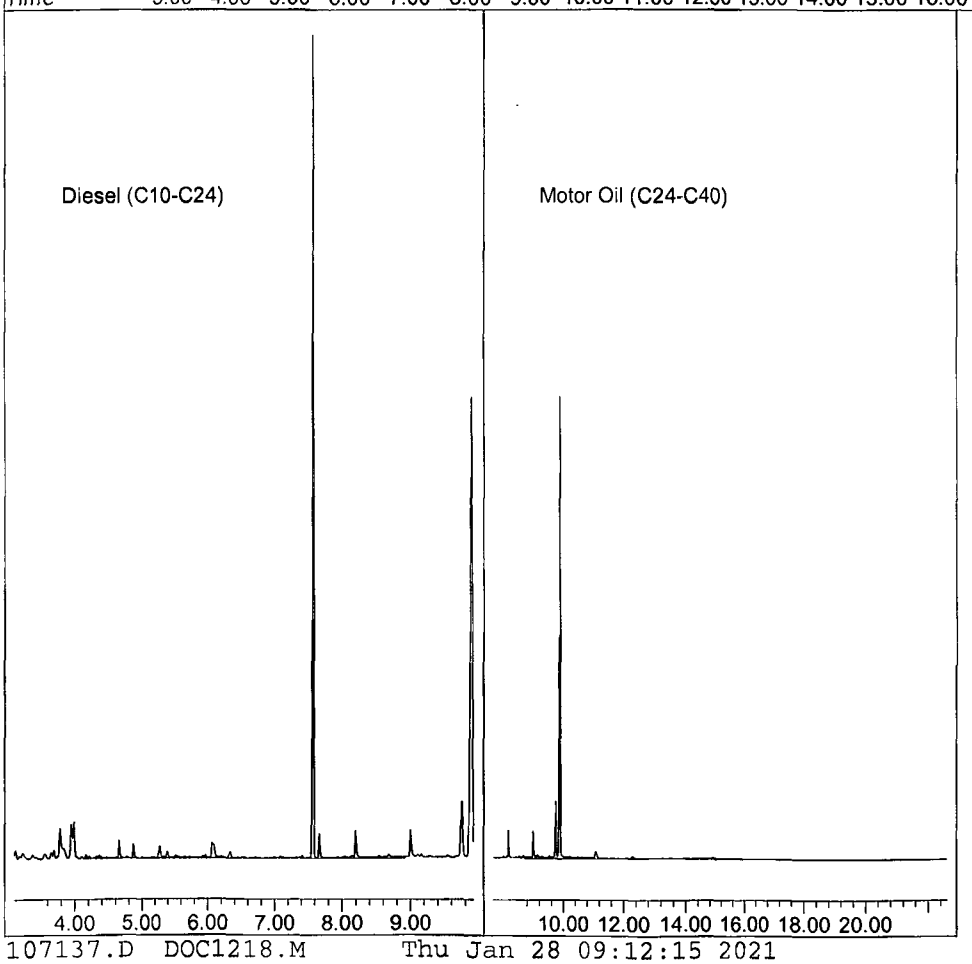
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	136887687	117.031 ppb
Surrogate Spike 151.515		Recovery =	77.24%
4) SA Octacosane(S)	9.88	118399254	131.655 ppb
Surrogate Spike 151.515		Recovery =	86.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	56726231	58.422 ppb
2) HBTM Motor Oil (C24-C40)	15.16	69816937	103.726 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107137.D
Sample : BA25532W17 5/990





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107138.D Vial: 38
Acq On : 1-27-21 21:39:19 Operator:
Sample : BA25535W17 5/1040 Inst : Apollo
Misc : water Multiplr: 4.81
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

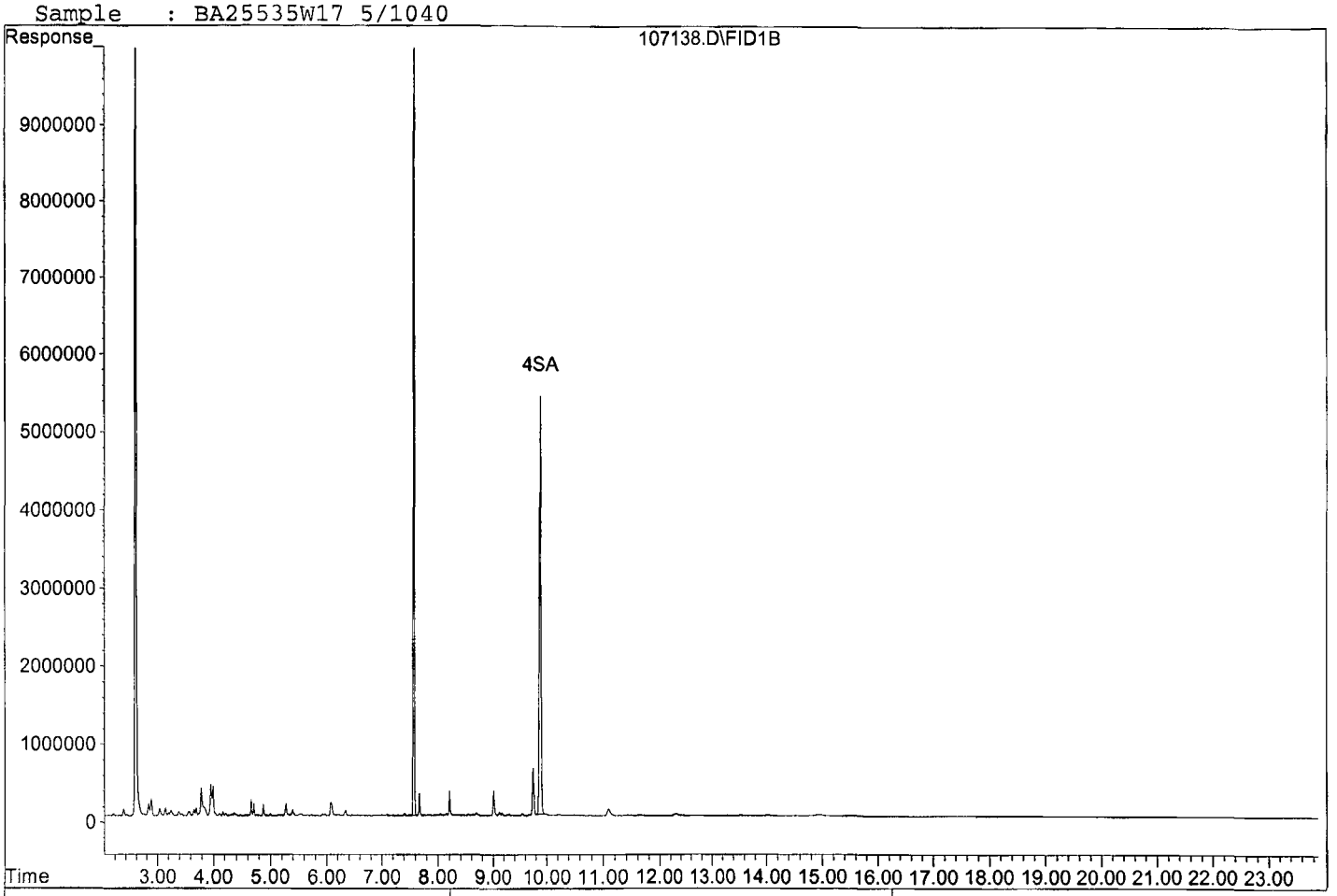
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

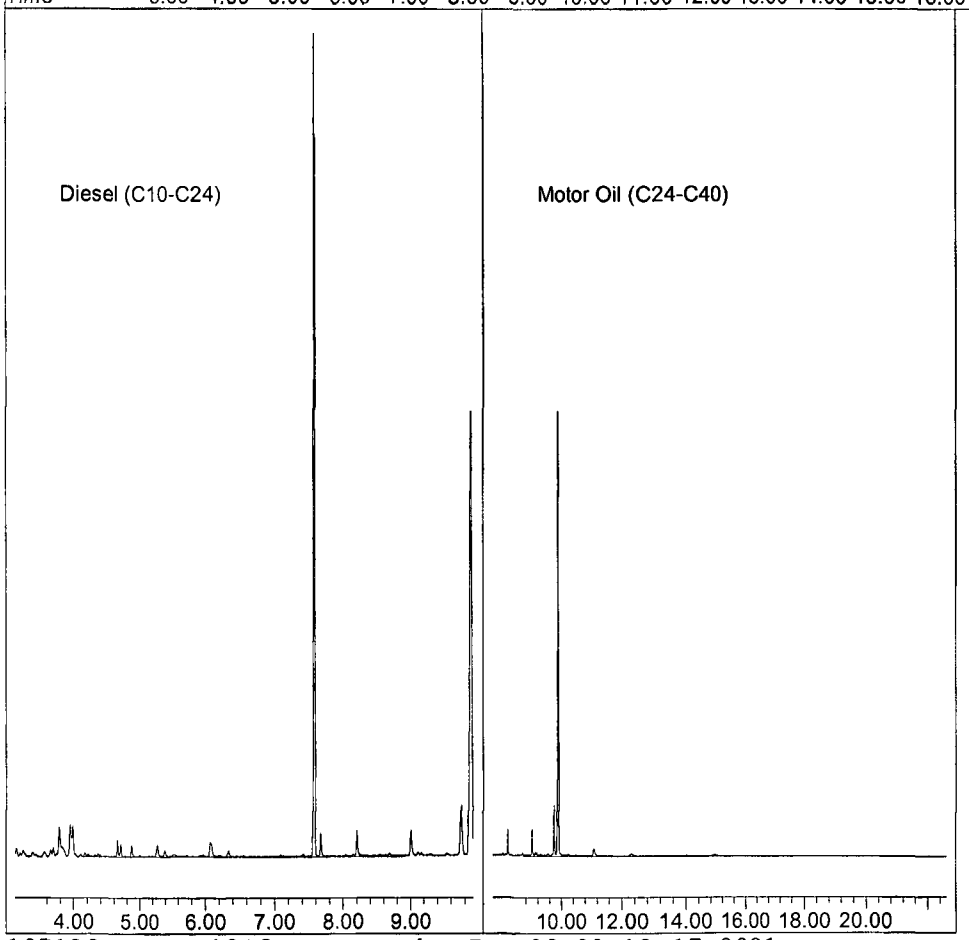
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	132554027	107.877 ppb
Surrogate Spike 144.231		Recovery =	74.79%
4) SA Octacosane(S)	9.89	114145654	120.823 ppb
Surrogate Spike 144.231		Recovery =	83.77%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	52381734	51.354 ppb
2) HBTM Motor Oil (C24-C40)	15.16	60595656	83.336 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107138.D
Sample : BA25535W17 5/1040





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107139.D Vial: 39
Acq On : 1-27-21 22:07:25 Operator:
Sample : BA25538W17 5/1030 Inst : Apollo
Misc : water Multiplr: 4.85
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

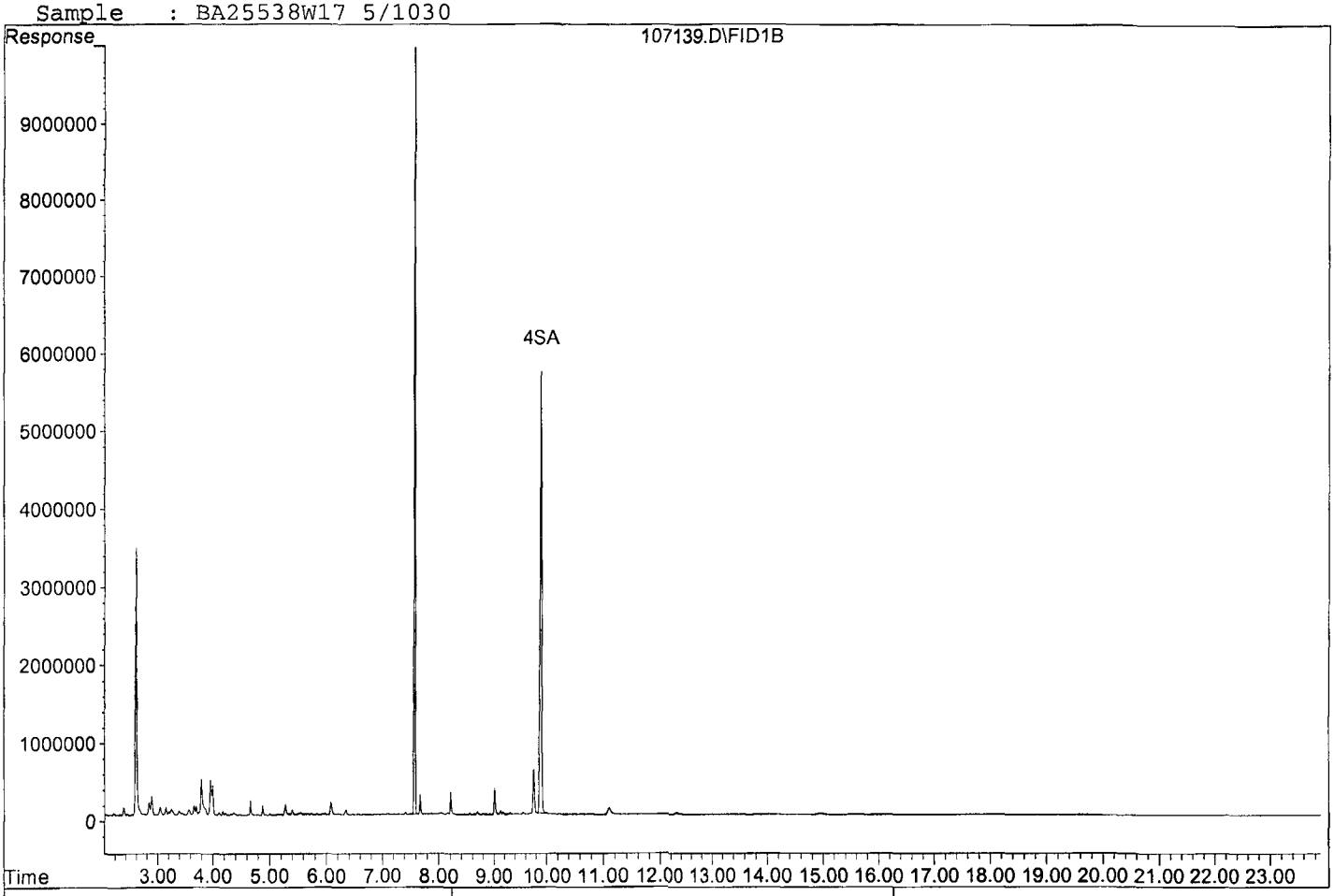
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

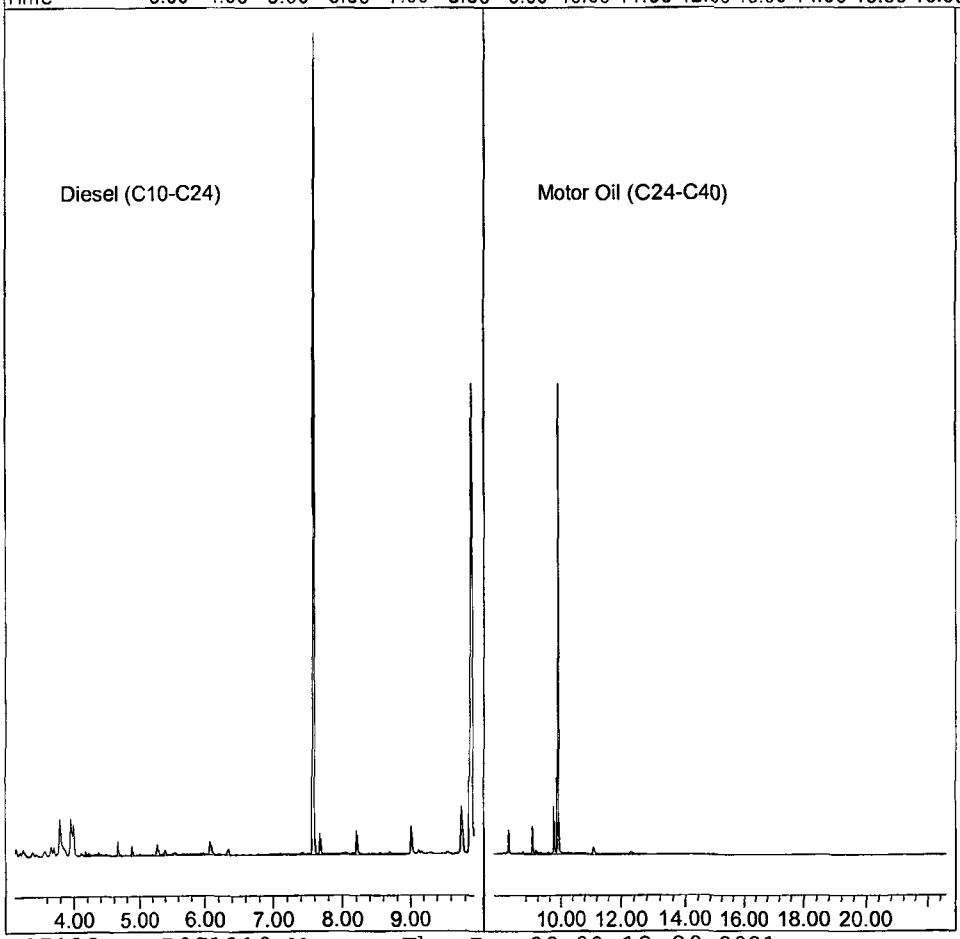
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	137829365	113.260 ppb
Surrogate Spike 145.631		Recovery =	77.77%
4) SA Octacosane(S)	9.89	119323905	127.530 ppb
Surrogate Spike 145.631		Recovery =	87.57%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	48992218	48.497 ppb
2) HBTM Motor Oil (C24-C40)	15.16	55401253	75.384 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107139.D
Sample : BA25538W17 5/1030





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107118.D Vial: 18
Acq On : 1-26-21 13:07:27 Operator:
Sample : BA25529W17 5/1050 Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Jan 26 13:57 2021 Quant Results File: DOC1218.RES

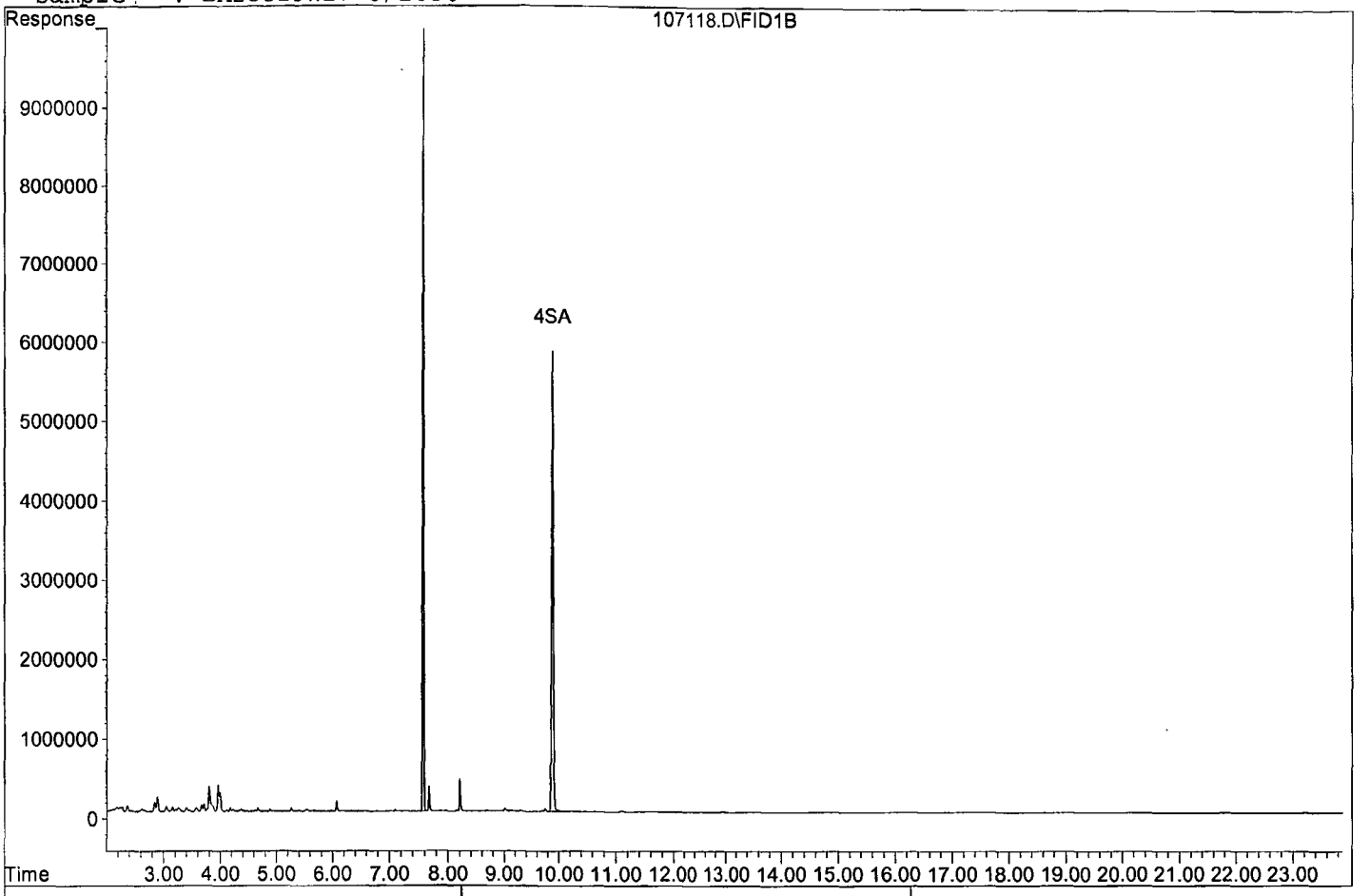
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

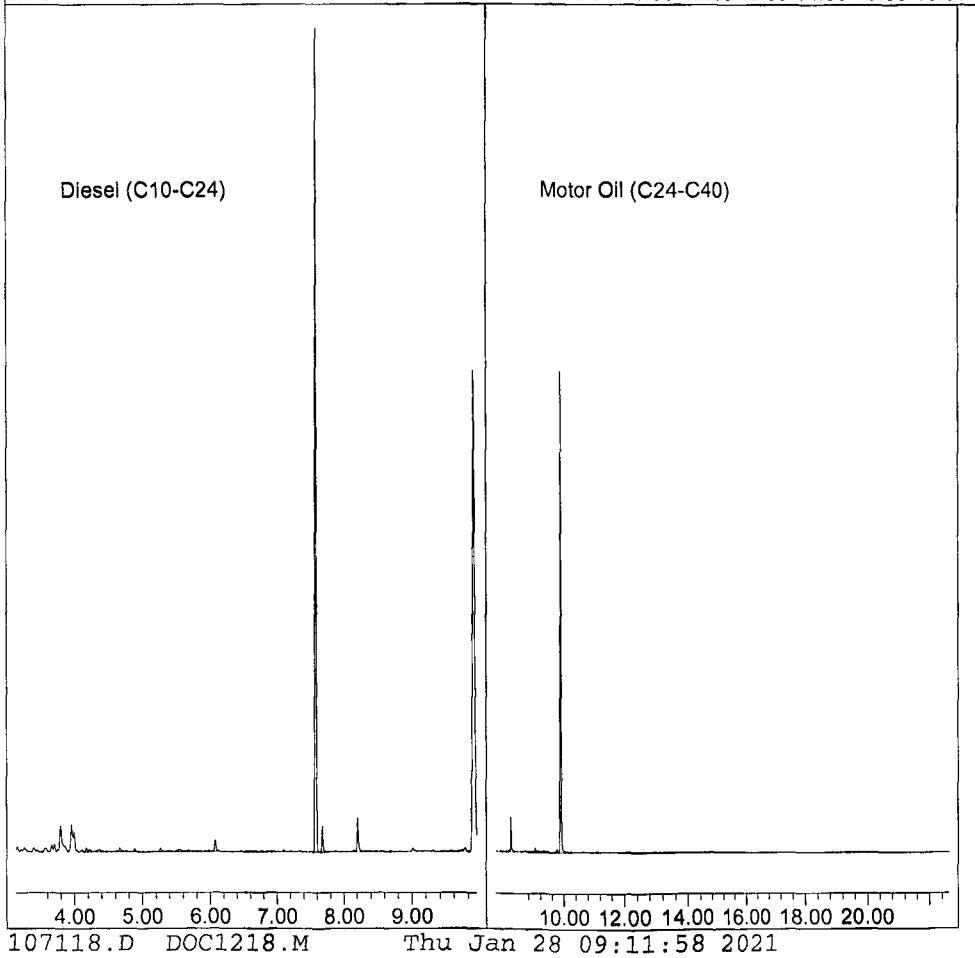
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	136771220	110.249 ppb
Surrogate Spike 142.857		Recovery =	77.17%
4) SA Octacosane(S)	9.88	121545188	127.430 ppb
Surrogate Spike 142.857		Recovery =	89.20%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30077957	29.207 ppb
2) HBTM Motor Oil (C24-C40)	15.16	25520778	24.512 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107118.D
Sample : BA25529W17 5/1050





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107134.D Vial: 34
Acq On : 1-27-21 19:47:07 Operator:
Sample : 210126A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

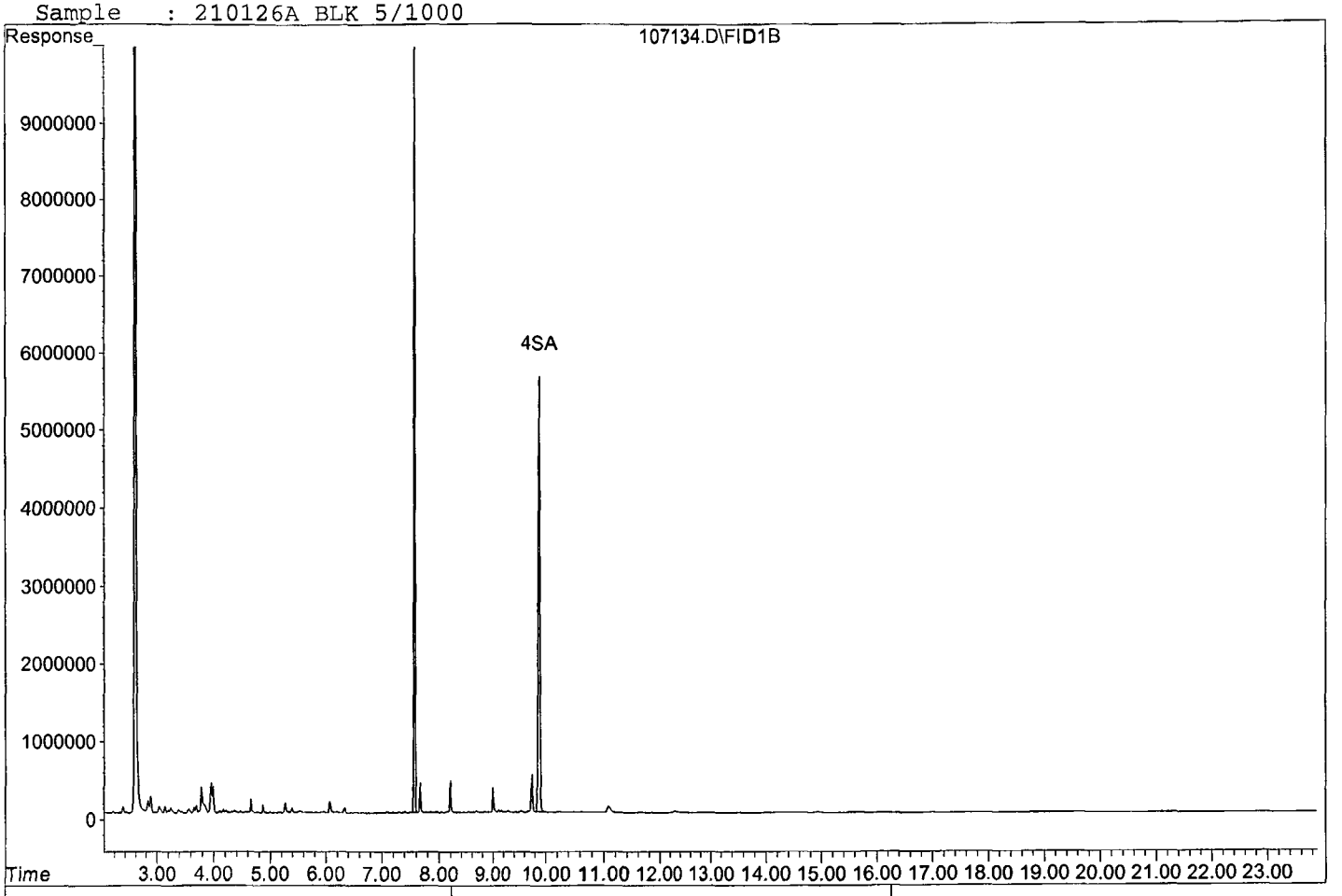
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

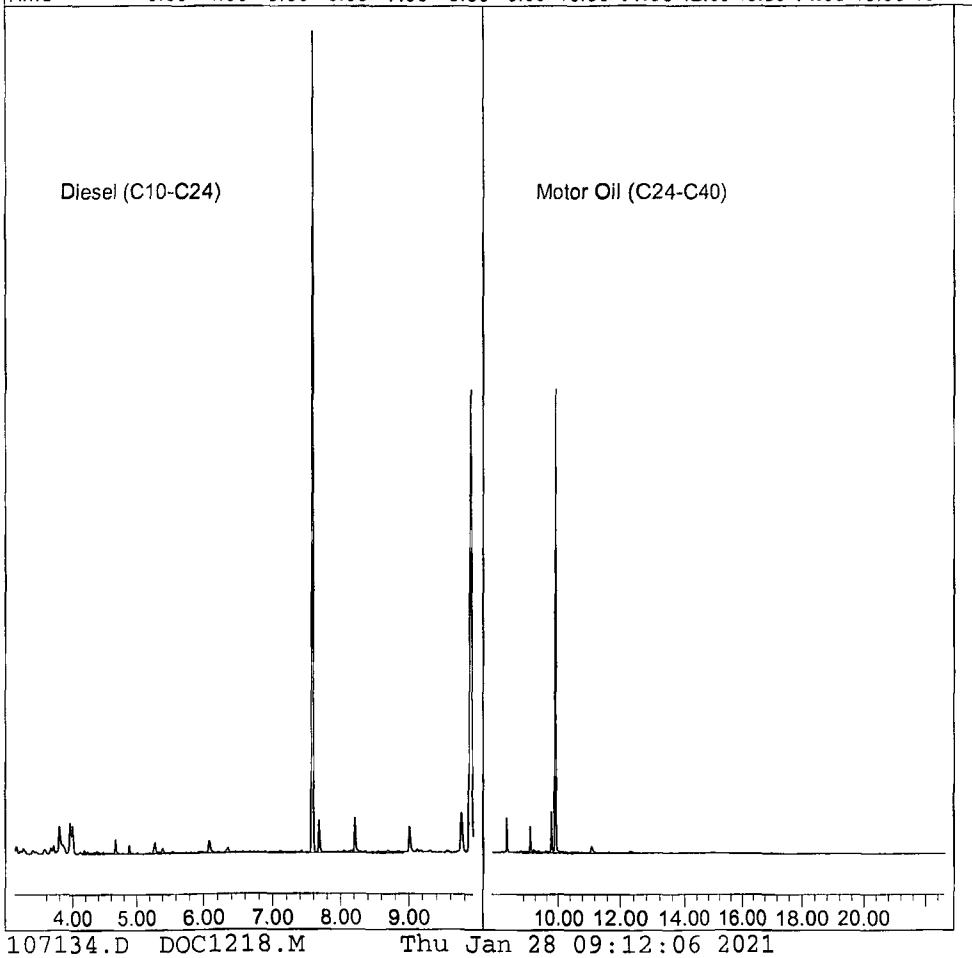
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	138454275	117.186 ppb
Surrogate Spike 150.000		Recovery =	78.12%
4) SA Octacosane(S)	9.88	120098534	132.209 ppb
Surrogate Spike 150.000		Recovery =	88.14%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	50864037	51.860 ppb
2) HBTM Motor Oil (C24-C40)	15.16	57254152	80.864 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107134.D
Sample : 210126A BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107112.D Vial: 12
Acq On : 1-26-21 10:19:24 Operator:
Sample : 210122A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:22 2021 Quant Results File: DOC1218.RES

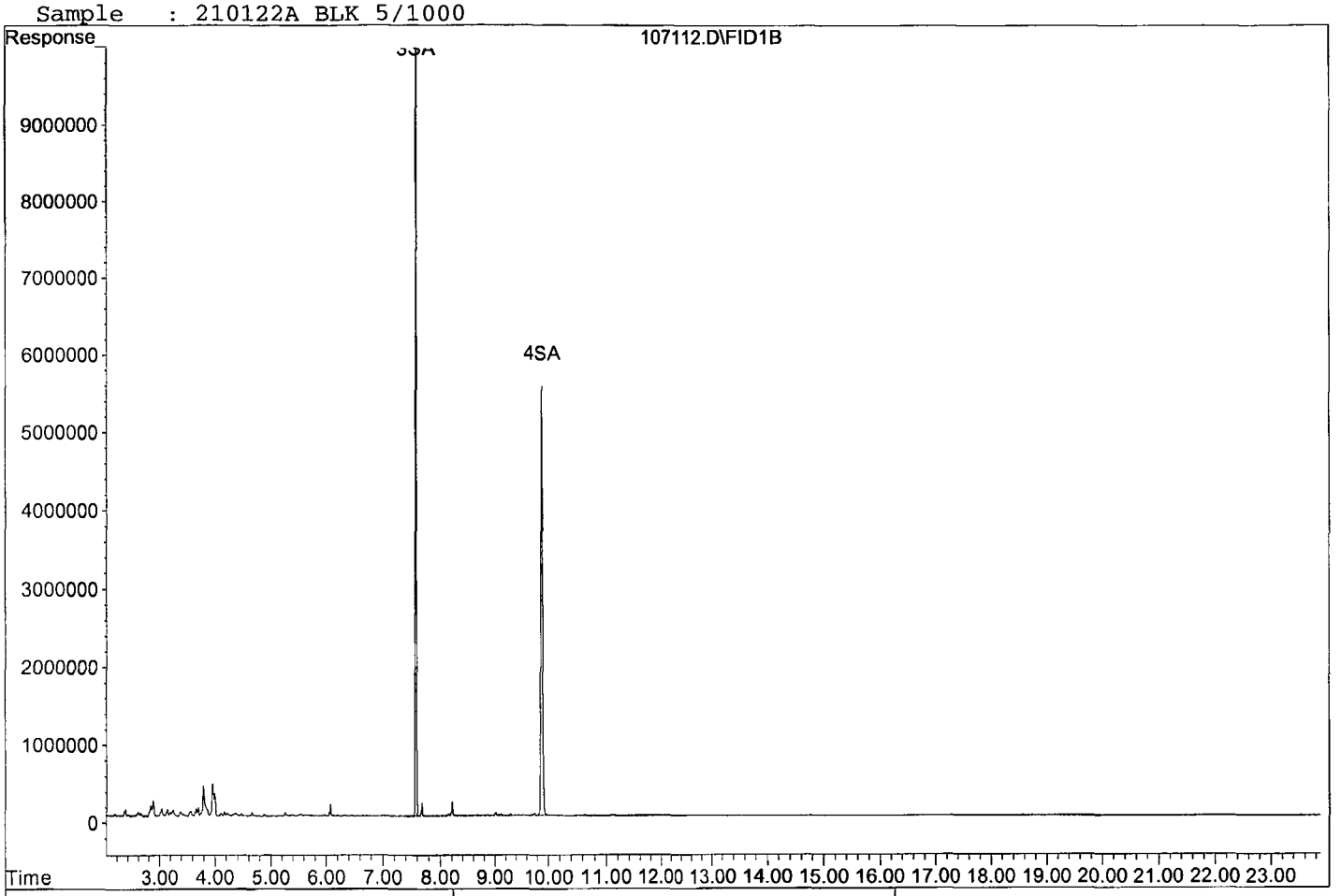
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

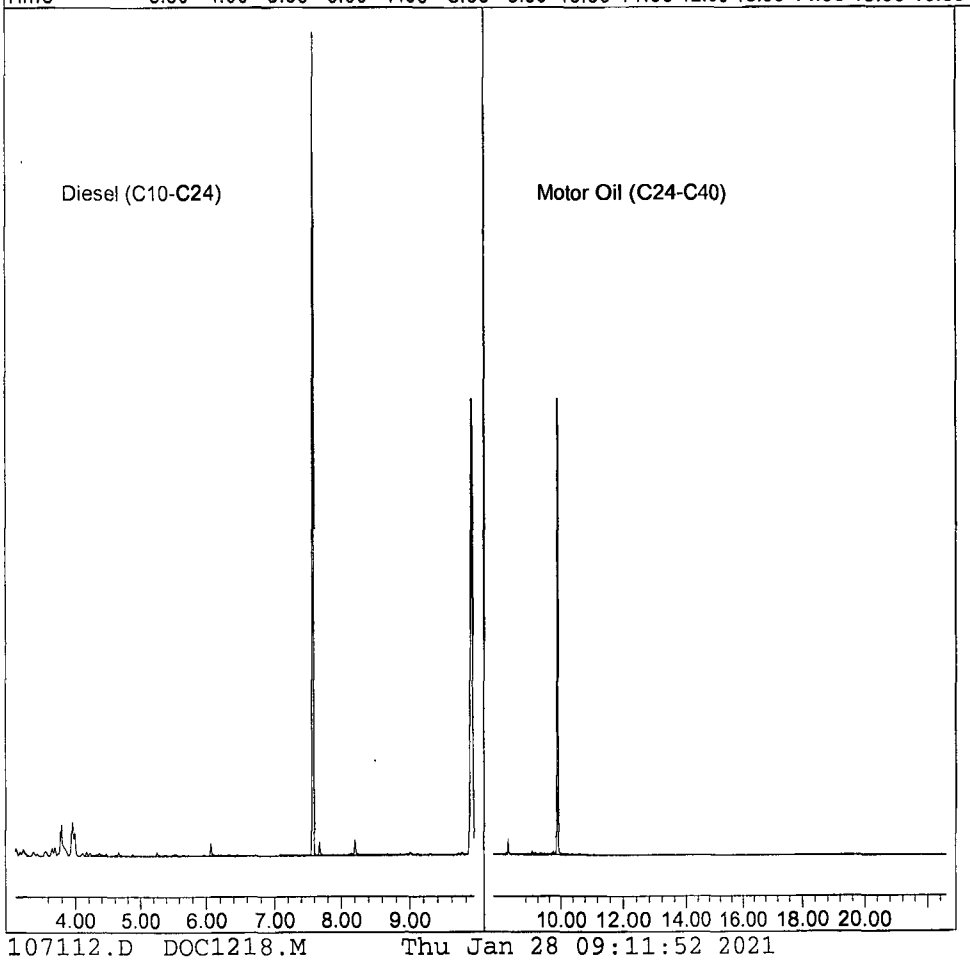
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	131200030	111.046 ppb
Surrogate Spike 150.000		Recovery =	74.03%
4) SA Octacosane(S)	9.88	118928389	130.921 ppb
Surrogate Spike 150.000		Recovery =	87.28%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	26352074	26.868 ppb
2) HBTM Motor Oil (C24-C40)	15.16	27606510	29.361 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107112.D
Sample : 210122A BLK 5/1000





107112.D DOC1218.M Thu Jan 28 09:11:52 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107113.D Vial: 13
Acq On : 1-26-21 10:47:24 Operator:
Sample : 210122A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 26 13:23 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

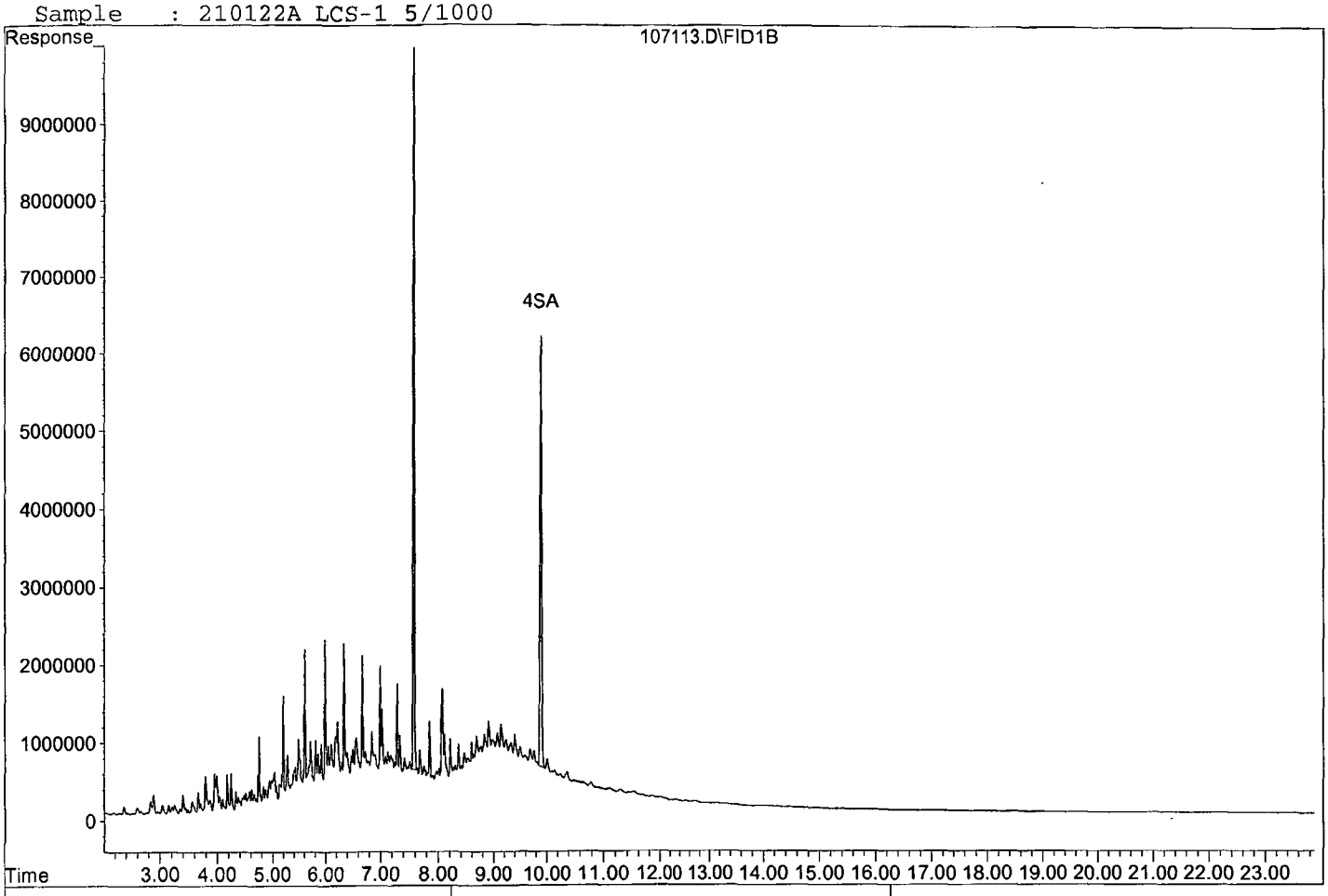
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

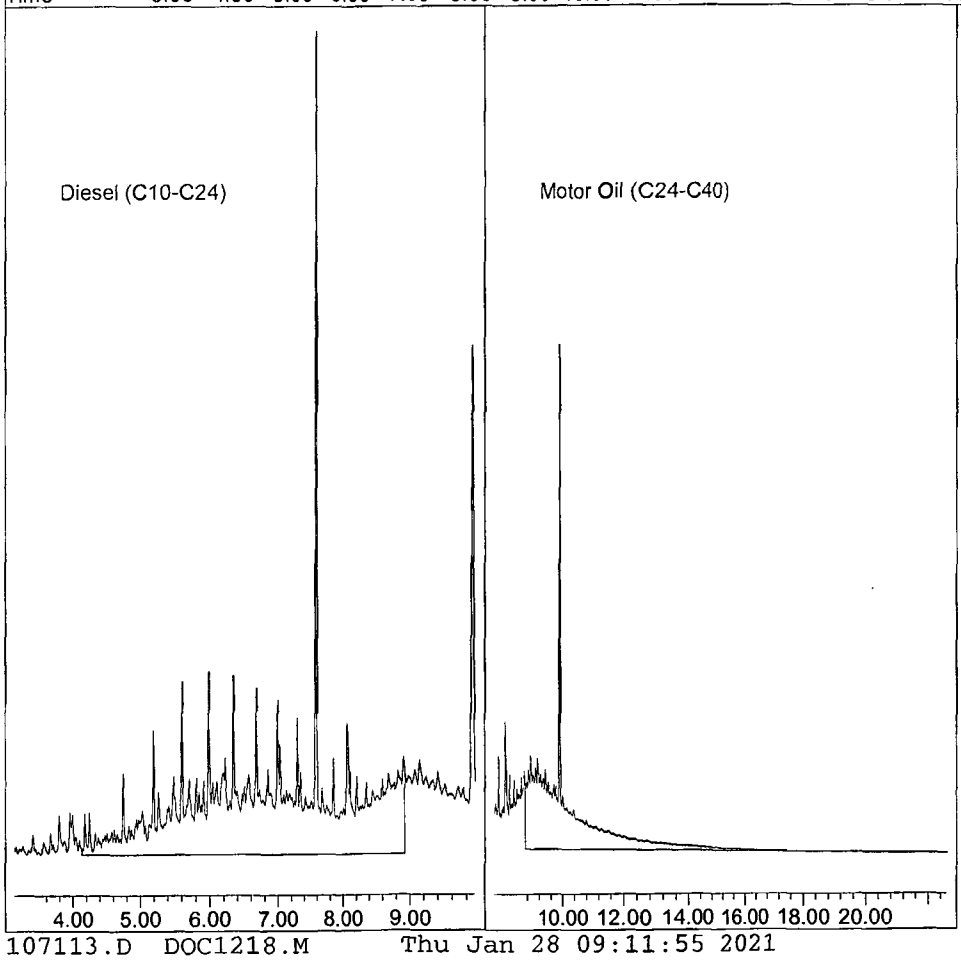
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	149887610	126.863 ppb
Surrogate Spike 150.000		Recovery =	84.58%
4) SA Octacosane(S)	9.89	118201428	130.120 ppb
Surrogate Spike 150.000		Recovery =	86.75%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1751334011	1785.637 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1113164484	1915.171 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107113.D
Sample : 210122A LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107135.D Vial: 35
Acq On : 1-27-21 20:15:11 Operator:
Sample : 210126A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

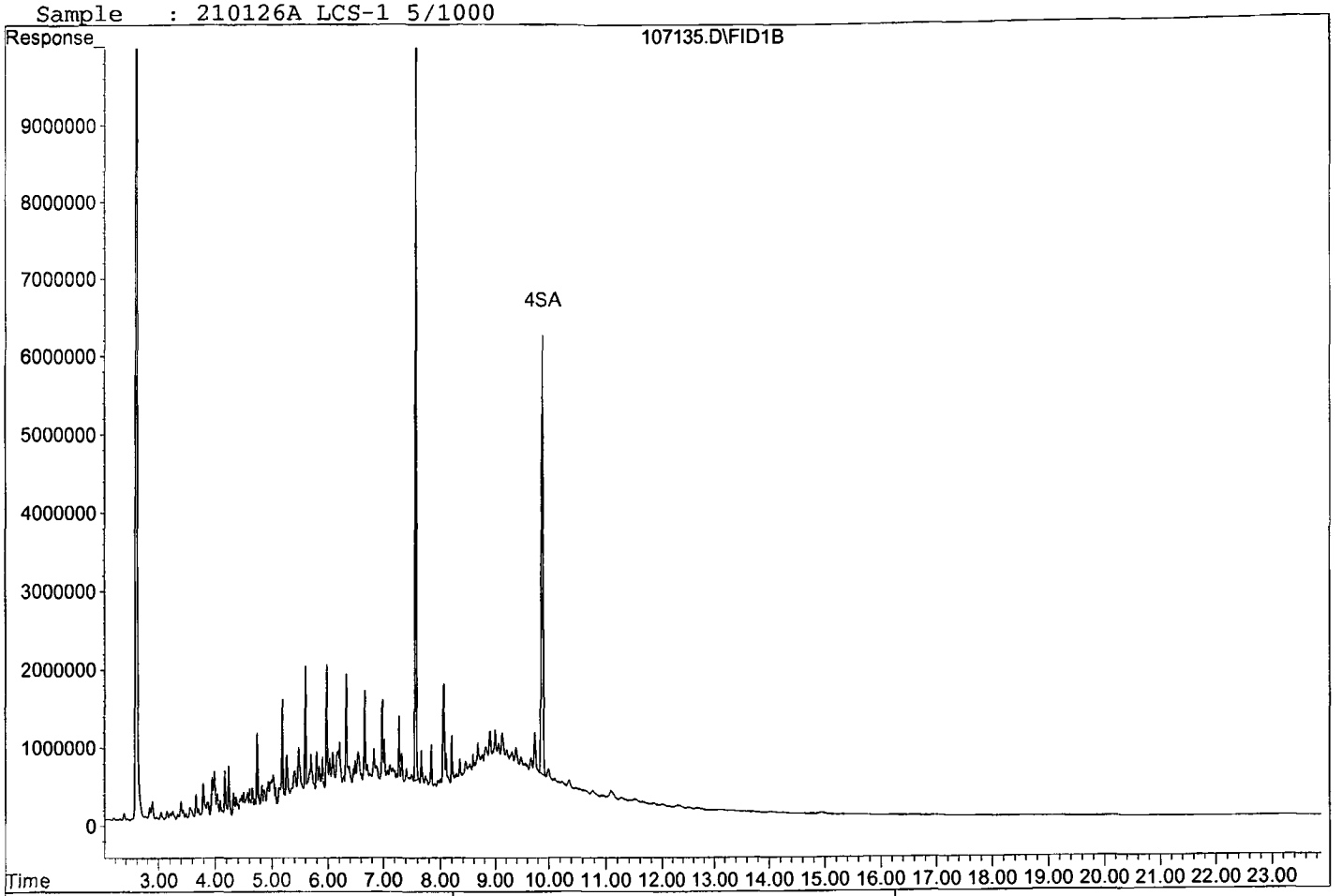
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

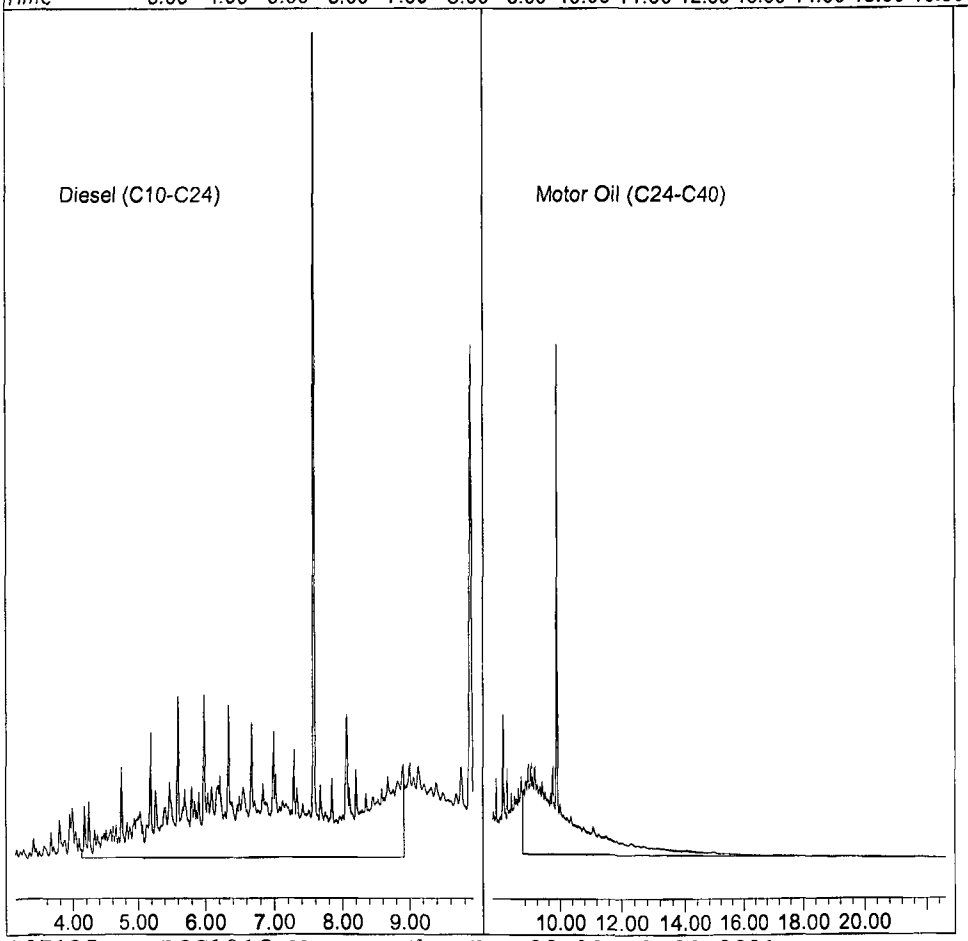
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	147984280	125.252 ppb
Surrogate Spike 150.000		Recovery =	83.50%
4) SA Octacosane(S)	9.89	118716815	130.688 ppb
Surrogate Spike 150.000		Recovery =	87.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1637494186	1669.568 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1068251166	1837.149 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107135.D
Sample : 210126A LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107136.D Vial: 36
Acq On : 1-27-21 20:43:15 Operator:
Sample : 210126A LCSD-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

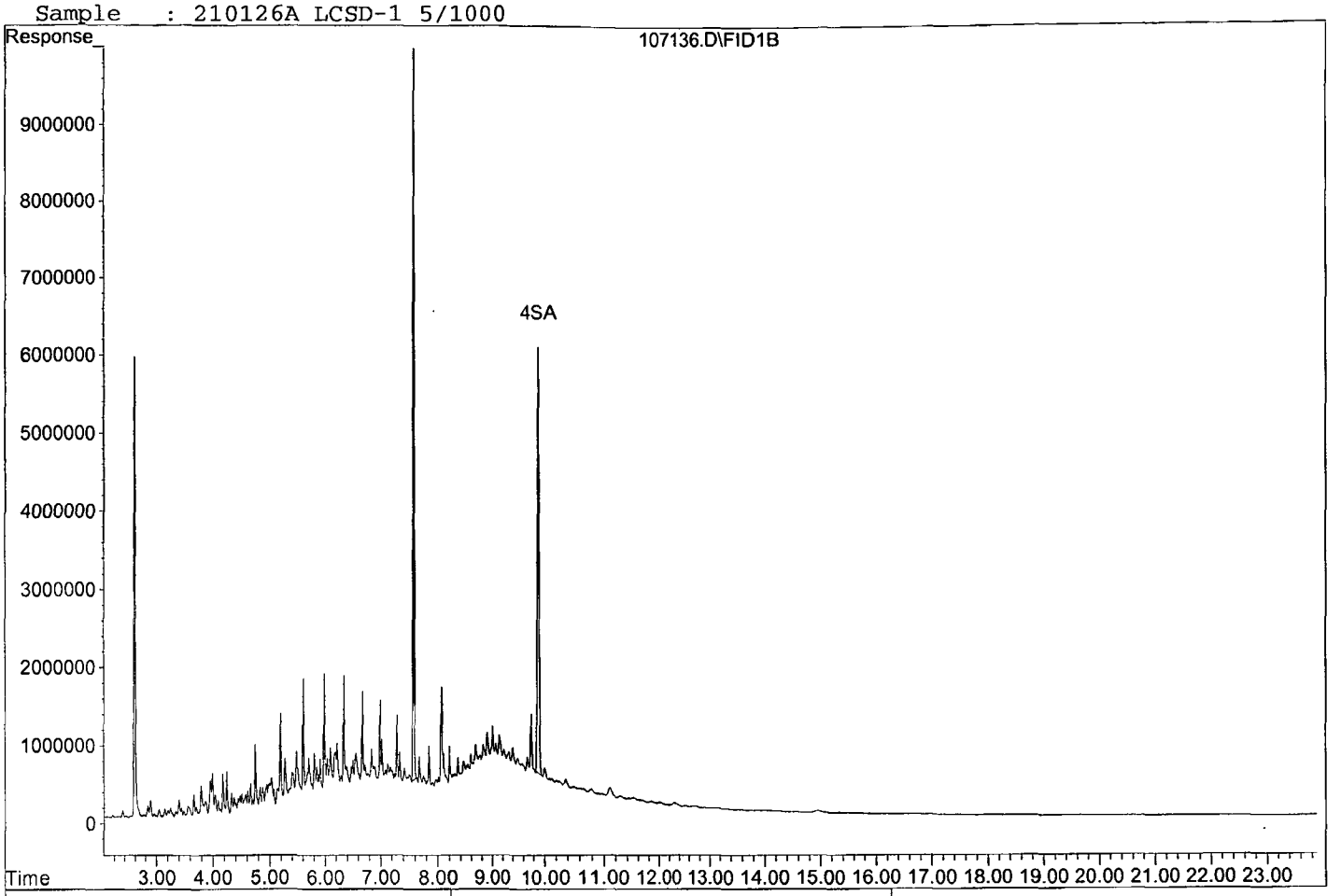
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

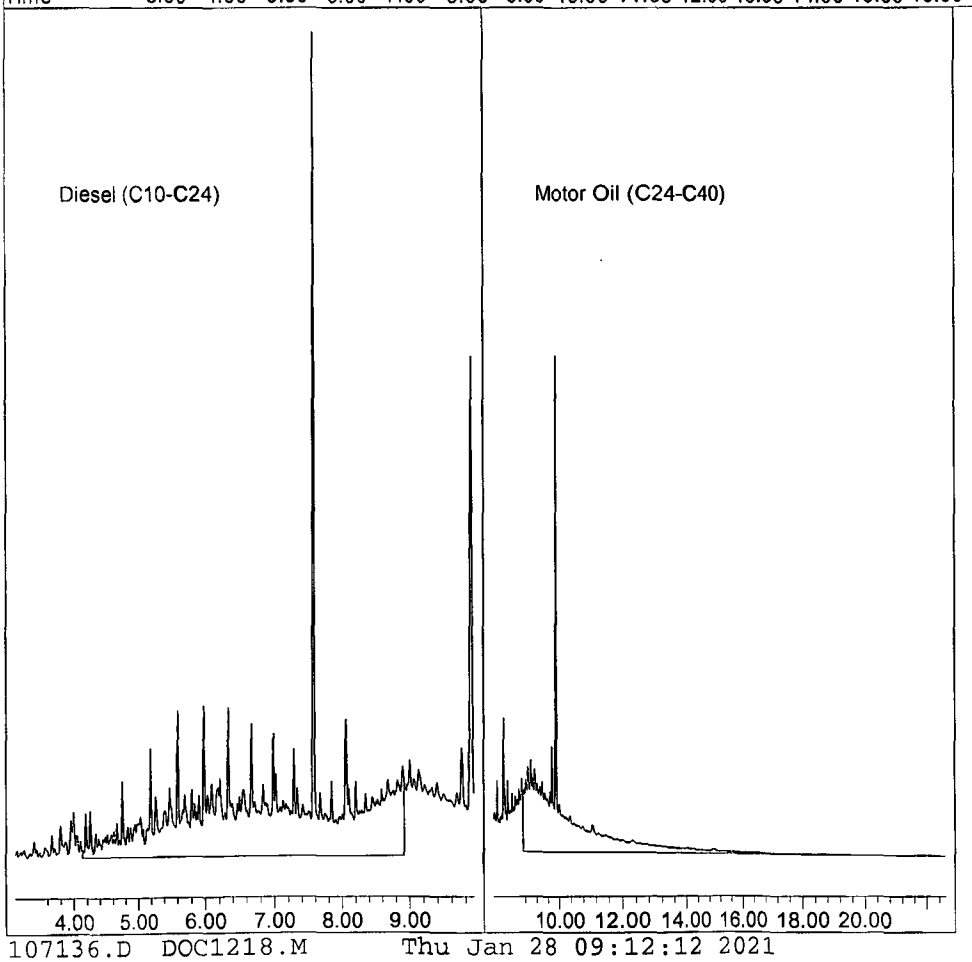
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	141877510	120.084 ppb
Surrogate Spike 150.000		Recovery =	80.06%
4) SA Octacosane(S)	9.89	112859251	124.239 ppb
Surrogate Spike 150.000		Recovery =	82.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1547549135	1577.861 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1042939344	1793.177 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107136.D
Sample : 210126A LCSD-1 5/1000





Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	02/28/22	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	01/09/23	50uL			

Diesel / Motor Oil CCV

Prepared: 12/15/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155868-50515,50516,50519 CL15440-50421	08/05/21	06/30/25	1250uL	10mL	MC	250

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Prep'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20 **Prepared By (Initials): SS**

Expires: 08/05/21

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	A0154201-50381,50522,50526	08/11/21	11/30/26	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	A0155668-50515,50518,50519	08/11/21	01/31/27	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	CL15440-50421	08/05/21	06/30/25	1666uL			100

Diesel Motor Oil Mix

Prepared: 11/23/20

Expires: 11/23/21

Prepared By (Initials): LS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0156490-50988,50989,50993**	**11/23/21**	**02/28/27**	3.84 mL	7.68 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0157842-50995,50996,50997**	**11/23/21**	**03/31/27**	3.84 mL			25,000

THC Surrogate

Prepared: 01/11/21 **Prepared By (Initials): SS**

Expires: 01/11/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	*Phenova*	ALO-130161	600	**CL15902-50967**	**12/14/21**	**10/31/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 01/26/21 **Prepared By (Initials): MA**

Expires: 12/08/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50525**	**01/26/22**	**11/30/26**	1 mL	2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0155668-50521**	**12/08/21**	**01/31/27**	1 mL			25,000

THC Surrogate

Prepared: 01/26/21 **Prepared By (Initials): DL**

Expires: 01/26/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15902-50951**	**01/26/22**	**06/30/25**	N/A	N/A	N/A	600

_LIQ005

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210122A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 11-23-20 11-23-21		Surrogate ID 1	THC Surrogate 1-11-21 1-11-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	
			GC Requires Extract By:		

pH1	2	01/22/21 12:45	Water Bath Temp 1 °C	40/38.5 °C
pH2			Water Bath Temp 2 °C	38/41.1
pH3			Water Bath Temp 3 °C	37/36.5 °C

Spiked By: KY **Date** 01/22/21 **Witnessed By:** CFM **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP25 E-WB1				
2	210122A LCS-1		0.080	1	0.250	1	1000	5	2	01/22/21 12:48	
						equip	E-HP26 E-WB2				
3	BA25434	BA25434W25			0.250	1	1010	5	2	01/22/21 12:48	94808
						equip	E-HP47 E-WB3				
4	BA25526 MS-1	BA25526W29	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP48 E-WB2				
5	BA25526 MSD-1	BA25526W24	0.080	1	0.250	1	1000	5	2	01/22/21 12:48	94825
						equip	E-HP49 E-WB3				
6	BA25526	BA25526W28			0.250	1	1010	5	2	01/22/21 12:48	94825
						equip	E-HP50 E-WB1				
7	BA25529	BA25529W17			0.250	1	1050	5	2	01/22/21 12:48	94826
						equip	E-HP51 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/26/21
Time	7:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	DL,KY
Concentration	YL,SB

Modified	01/26/21 8:19:48 AM

Reviewed By: SS **Date** 01/27/21

_LIQ005

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210126A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-26-21 1-26-22		Surrogate ID 1	THC Surrogate 1-26-21 1-26-22	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/26/21 13:00	
Spiked ID 8			Ext. End Time:	01/27/21 7:00	
			GC Requires Extract By:		

pH1	2	01/26/21 11:45	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: DL **Date** 01/26/21 **Witnessed By:** CFM **Date** 01/26/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210126A Blk				0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP51 E-WB1				
2	210126A LCS-1		0.080	1	0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP50 E-WB2				
3	210126A LCSD-1		0.080	1	0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP49 E-WB3				
4	BA25532	BA25532W17			0.250	1	990	5	2	01/26/21 11:50	94826
						equip	E-HP48 E-WB1				
5	BA25535	BA25535W17			0.250	1	1040	5	2	01/26/21 11:50	94826
						equip	E-HP47 E-WB2				
6	BA25538	BA25538W17			0.250	1	1030	5	2	01/26/21 11:50	94826
						equip	E-HP25 E-WB3				
7	BA25690	BA25690W19			0.250	1	1040	5	2	01/26/21 11:50	94863
						equip	E-HP26 E-WB1				
8	BA25693	BA25693W16			0.250	1	1000	5	2	01/26/21 11:50	94863
						equip	E-HP27 E-WB2				
9	BA25696	BA25696W16			0.250	1	980	5	2	01/26/21 11:50	94863
						equip	E-HP28 E-WB3				
10	BA25699	BA25699W19			0.250	1	980	5	2	01/26/21 11:50	94863
						equip	E-HP29 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs) AMBER	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/27/21
Time	13:00
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	01/27/21 11:02:46 AM

Reviewed By: SS **Date** 01/28/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	11	107111.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 9:51:23
10	12	107112.D	5	210122A BLK 5/1000	water	1-26-21 10:19:24
11	13	107113.D	5	210122A LCS-1 5/1000	water	1-26-21 10:47:24
12	18	107118.D	4.7619	BA25529W17 5/1050	water	1-26-21 13:07:27
13	19	107119.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-26-21 13:35:30
14	33	107133.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-27-21 19:19:05
15	34	107134.D	5	210126A BLK 5/1000	water	1-27-21 19:47:07
16	35	107135.D	5	210126A LCS-1 5/1000	water	1-27-21 20:15:11
17	36	107136.D	5	210126A LCSD-1 5/1000	water	1-27-21 20:43:15
18	37	107137.D	5.05051	BA25532W17 5/990	water	1-27-21 21:11:17
19	38	107138.D	4.80769	BA25535W17 5/1040	water	1-27-21 21:39:19
20	39	107139.D	4.85437	BA25538W17 5/1030	water	1-27-21 22:07:25
21	44	107144.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-28-21 0:27:43

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

			0105Y003.D	0105Y004 D	0105Y005.D	0105Y006 D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	*n-Nitrosodiphenylamine*		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration Percent Error Verification

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda

			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D		
		Compound	4	5	10	20	40	50	60	80	100		Q
1	I	1,4-dichlorobenzene-D4(IS)											
2		1,4-Dioxane			23.7	11.2	14.3	7.1	12.9	6.6	23.1		
3	TM	n-Nitrosodimethylamine			10.9	9.3	0.7	2.5	0.8	3.1	2.5		
4	TM	Pyridine			1.1	8.4	5.4	3.4	1.6	2.9	0.2		
5	S	2-Fluorophenol (S)			2.5	1.8	0.8	1.6	0.1	0.1	1.4		
6	S	Phenol-D6 (S)			1.6	2.7	0.4	2.4	0.1	0.2	1.2		
7	*TM	Phenol		3.8	0.5	2.2	2.5	1.0	0.1	1.3	0.8		
8	TM	Aniline			2.8	13.1	4.3	0.6	2.4	1.5	4.6		
9	TM	Bis (2-chloroethyl) ether			1.8	0.3	1.6	1.8	0.7	1.0	0.6		
10	TM	2-Chlorophenol			1.0	1.7	1.8	0.5	0.3	1.1	0.8		
11	TM	1,3-DCB			0.6	1.7	1.7	1.0	0.4	0.7	0.1		
12	*TM	1,4-DCB			0.0	0.4	0.5	1.4	1.2	0.8	0.9		
13	TM	Benzyl alcohol			1.6	0.8	1.8	0.4	0.5	2.8	0.9		
14	TM	1,2-DCB			3.2	0.9	0.9	0.4	0.4	1.0	0.9		
15	TM	2-Methylphenol			2.1	0.9	1.8	0.4	0.9	1.8	2.3		
16	TM	Bis (2-chloroisopropyl) ether			1.3	1.4	1.2	1.1	0.3	0.1	0.7		
17	TM	Acetophenone			0.6	0.7	0.5	0.4	0.1	1.7	0.8		
18	TM	3&4-Methylphenol			0.8	0.1	1.6	0.3	0.9	3.1	2.5		
19	**TM	n-Nitrosodi-n-propylamine			1.1	0.9	1.3	0.4	0.4	1.4	0.5		
20	TM	Hexachloroethane			1.5	1.6	0.6	1.8	0.4	2.7	2.3		
21	I	Napthalene-D8(IS)											
22	S	Nitrobenzene-D5(S)			5.5	1.2	0.5	1.3	1.6	1.3	0.4		
23	TM	Nitrobenzene			1.0	0.4	0.6	0.8	1.0	2.4	0.0		
24	TM	Isophorone			0.0	1.3	1.4	0.7	0.7	1.4	0.8		
25	*TM	2-Nitrophenol			4.2	0.9	2.9	2.5	2.5	5.8	5.6		
26	TM	2,4-Dimethylphenol			1.0	0.6	0.2	1.2	0.4	3.0	1.0		
27	TML	Benzoic acid			20.3	0.4	2.2	1.8	4.2	2.3	0.9		
28	TM	Bis (2-chloroethoxy) methane			1.4	1.8	0.7	0.7	2.7	1.1	0.5		
29	*TM	2,4-Dichlorophenol			1.9	0.8	0.1	1.7	0.5	3.6	3.9		
30	TM	1,2,4-Trichlorobenzene			0.9	0.2	0.1	0.4	0.3	3.5	2.3		
31	TM	3,4-Dimethylphenol			1.7	0.1	1.2	1.7	1.5	1.0	4.9		
32	TM	Naphthalene			1.6	0.5	0.0	0.0	1.4	2.5	2.8		
33	TM	4-Chloroaniline			5.8	5.1	5.1	4.4	1.6	5.3	0.6		
34	TM	2,6-Dichlorophenol			2.1	0.3	0.7	1.0	1.0	4.7	5.5		
35	TM	Hexachloropropene			6.0	2.3	2.5	2.7	2.2	6.6	7.9		

Percent Error = (A-B)/A*100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6

Initial Calibration Percent Error Verification

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda

			0105Y003.D	0105Y004.D	0105Y005 D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D		
		Compound	4	5	10	20	40	50	60	80	100		Q
36	*TM	Hexachlorobutadiene			2.0	0.7	1.5	0.6	0.4	5.0	6.7		
37	TM	Caprolactum			0.1	0.0	0.9	0.5	1.8	3.0	1.0		
38	*TM	4-Chloro-3-methylphenol			1.0	0.1	1.3	0.7	1.3	3.6	3.7		
39	TM	2-Methylnaphthalene			2.0	0.7	1.1	0.8	2.6	2.8	4.1		
40	TM	1-Methylnaphthalene			1.3	0.0	0.0	1.0	0.6	3.5	4.6		
41	I	Acenaphthene-D10(IS)											
42	**TML	Hexachlorocyclopentadiene			8.0	8.5	4.2	0.6	4.1	3.1	2.7		
43	TM	1,2,4,5-Tetrachlorobenzene			3.3	0.7	0.6	1.0	2.0	3.4	2.7		
44	*TM	2,4,6-Trichlorophenol			1.0	2.7	1.4	0.7	3.2	6.4	3.5		
45	TM	2,4,5-Trichlorophenol			4.1	3.2	2.1	0.9	0.0	6.6	3.4		
46	S	2-Fluorobiphenyl(S)			1.1	0.1	1.4	2.5	0.1	2.8	2.0		
47	TM	1,1'-Biphenyl			0.7	1.0	0.2	0.2	1.9	5.2	2.6		
48	TM	2-Chloronaphthalene			0.7	1.8	0.4	0.8	1.8	3.4	1.6		
49	TM	2-Nitroaniline			5.4	0.3	2.5	4.3	4.2	3.2	3.7		
50	TM	Dimethyl phthalate			2.2	0.3	1.5	0.6	3.0	2.7	2.0		
51	TM	2,6-DNT			8.2	0.2	3.5	3.9	6.3	6.1	6.2		
52	TM	Acenaphthylene			3.0	0.4	1.5	2.7	2.5	4.4	0.8		
53	TM	3-Nitroaniline			2.9	2.7	4.4	2.9	4.3	5.1	1.8		
54	*TM	Acenaphthene			1.6	1.8	0.5	0.9	2.5	3.0	2.0		
55	**TML	2,4-Dinitrophenol				13.4	2.2	4.7	4.0	3.2	0.4		
56	**TM	4-Nitrophenol			18.7	9.0	2.4	2.6	4.0	10.5	8.1		
57	TM	Dibenzofuran			0.5	0.3	0.6	0.4	0.0	4.5	2.3		
58	TM	2,4-DNT			6.3	2.0	2.1	3.4	6.4	7.2	10.8		
59	TM	2,3,4,6-Tetrachlorophenol			7.7	3.2	3.6	3.3	3.9	7.7	7.9		
60	TM	Diethyl phthalate			0.6	0.2	1.4	0.3	1.3	4.0	2.8		
61	TM	4-Chlorophenyl phenyl ether			1.9	3.5	2.2	0.8	0.7	7.7	5.8		
62	TM	Fluorene			3.8	2.3	0.2	1.3	0.4	7.8	8.5		
63	TM	4-Nitroaniline			5.0	0.7	3.5	1.1	1.6	4.1	0.0		
64	S	2,4,6-Tribromophenol(S)			8.3	4.0	0.2	0.7	3.4	9.0	13.8		
65	I	Phenanthrene-D10(IS)											
66	TM	4,6-Dinitro-2-methylphenol				19.0	4.6	1.7	1.1	11.3	9.6		
67	TM	Diphenyl amine			3.6	1.4	0.3	5.4	0.9	2.2	6.2		
68	*TM	n-Nitrosodiphenylamine			3.6	1.4	0.3	5.4	0.9	2.2	6.2		
69	TM	1,2-Diphenylhydrazine			0.6	0.8	1.3	3.7	1.7	0.7	0.5		
70	TM	4-Bromophenyl phenyl ether			1.2	1.3	0.3	1.7	2.6	4.6	7.2		

Percent Error = (A-B)/A*100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration Percent Error Verification

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda

			0105Y003.D		0105Y004.D		0105Y005.D		0105Y006.D		0105Y007.D		0105Y008.D		0105Y009.D		0105Y010.D		0105Y011.D			
		Compound	4		5		10		20		40		50		60		80		100			Q
71	TM	Hexachlorobenzene					3.0		1.5		0.7		3.7		0.2		4.6		4.8			
72	TM	Atrazine					3.4		0.6		4.2		5.0		1.0		4.3		5.8			
73	*TM	Pentachlorophenol					19.7		9.3		0.3		4.8		1.9		10.1		11.9			
74	TM	Phenanthrene					1.2		0.0		0.8		3.5		1.4		3.4		1.9			
75	TM	Anthracene					2.3		0.6		1.8		3.7		0.2		1.6		4.9			
76	TM	Carbazol					2.9		1.1		1.3		4.3		0.5		3.0		2.6			
77	TM	Di-n-butylphthalate					2.6		1.0		2.4		4.0		0.2		4.9		1.3			
78	*TM	Fluoranthene					0.2		1.7		2.9		5.4		2.1		4.1		6.8			
79	I	Chrysene-D12(IS)																				
80	TM	Benzidine					14.4		3.8		7.8		8.1		5.3		2.5		3.8			
81	TM	Pyrene					2.2		0.2		4.0		6.0		2.5		0.8		4.6			
82	S	Terphenyl-D14(S)					2.0		0.7		0.2		0.4		1.2		4.3		1.3			
83	TM	Butyl benzylphthalate					1.8		1.2		1.3		2.2		0.9		2.6		4.1			
84	TM	3,3'-Dichlorobenzidine					12.7		4.7		7.4		7.6		3.3		3.5		0.3			
85	TM	Benz (a) anthracene					2.4		1.1		1.5		1.5		1.7		4.5		4.6			
86	TM	Bis (2-ethylhexyl) phthalate					6.4		2.5		0.5		0.4		1.0		8.9		9.5			
87	TM	Chrysene					5.5		1.2		3.9		4.8		4.4		0.6		2.6			
88	*TM	Di-n-octylphthalate					4.5		0.7		3.3		5.0		1.6		5.6		3.3			
89	I	Perylene-D12(IS)																				
90	TM	Benzo (b) fluoranthene					11.1		2.6		1.0		1.1		10.2		8.8		5.8			
91	TM	Benzo (k) fluoranthene					3.9		11.8		0.7		2.8		10.0		0.1		4.5			
92	*TM	Benzo (a) pyrene	4.3		12.9		6.6		1.0		1.8		4.7		2.7		8.2		7.4			
93	TM	Indeno (1,2,3-cd) pyrene					4.0		1.5		0.7		2.7		2.0		5.5		5.6			
94	TM	Dibenz (a,h) anthracene					6.6		1.7		0.6		2.3		1.7		7.5		8.0			
95	TM	Benzo (g,h,i) perylene					4.5		0.9		1.5		1.9		1.2		5.8		5.4			
96																						
97																						
98																						
99																						
100																						
101																						
102																						
103																						
104																						
105																						

Percent Error = (A-B)/A*100

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
82) Terphenyl-D14(S)	0.00	244	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
Target Compounds						Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784	ppb	98

(#) = qualifier out of range (m) = manual integration

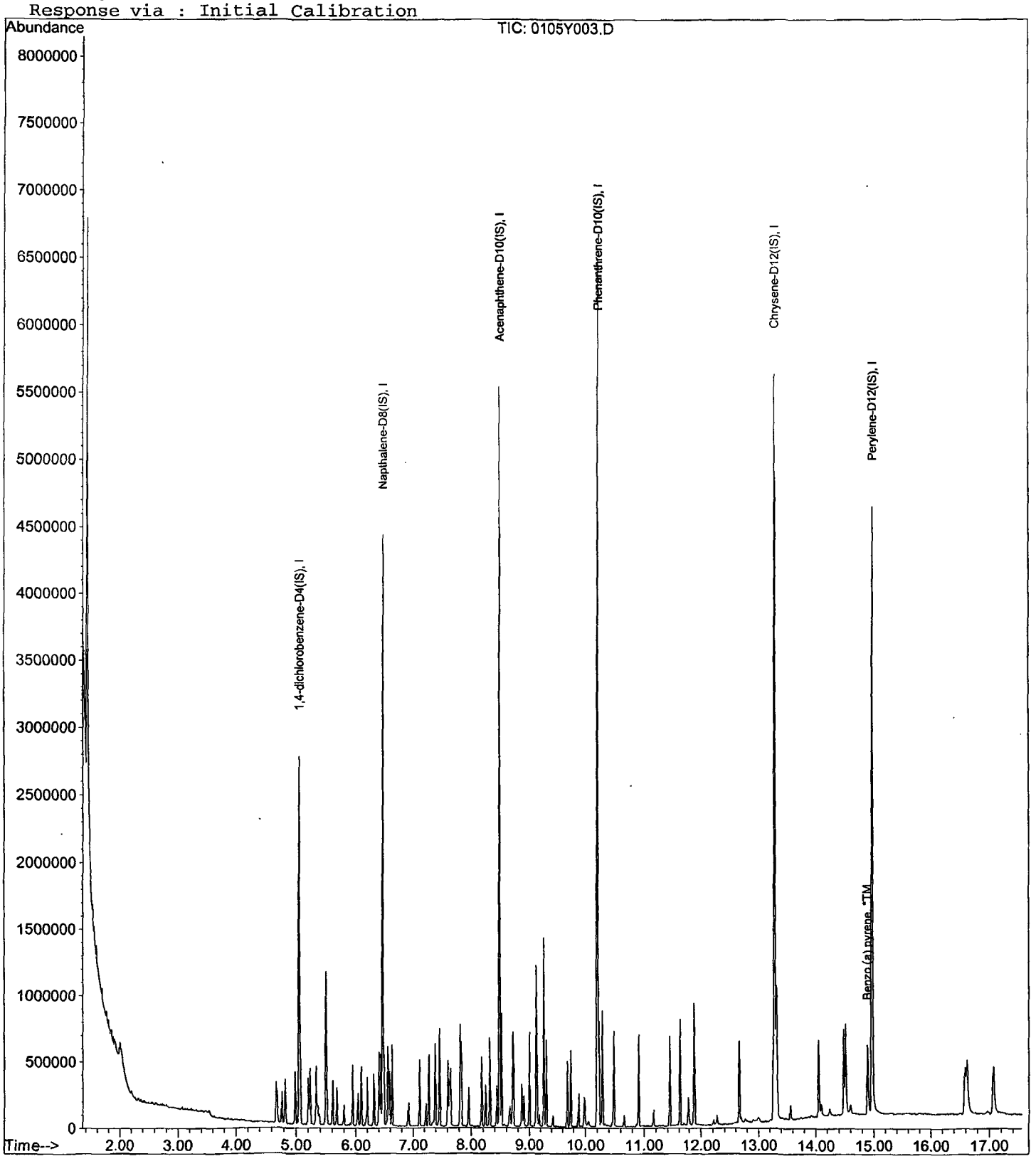
Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D
Acq On : 5 Jan 21 11:25
Sample : 4ug/mL 8270 01/05/21
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000				Recovery = 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000				Recovery = 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000				Recovery = 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000				Recovery = 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000				Recovery = 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000				Recovery = 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037	# 1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

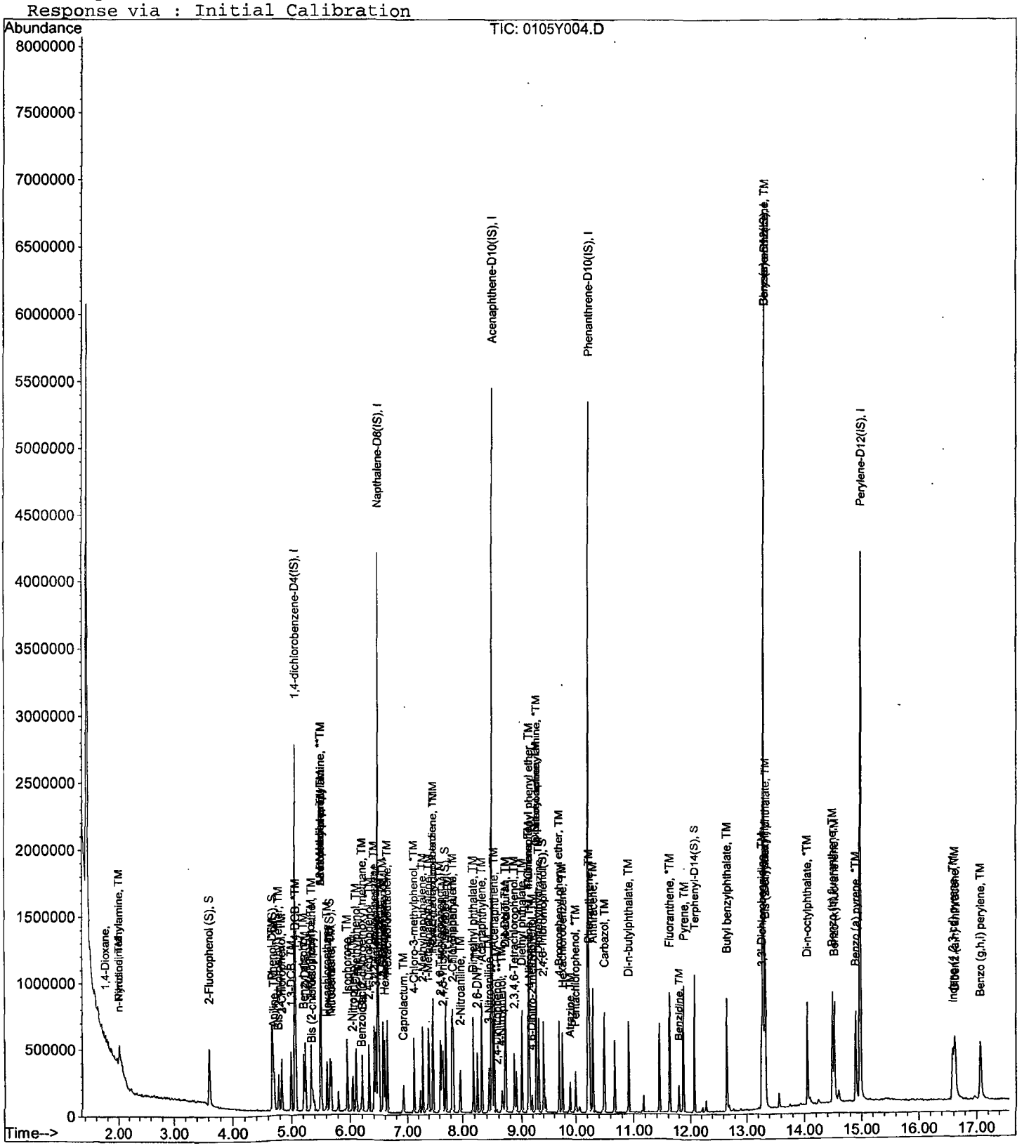
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411	ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%			
6) Phenol-D6 (S)	4.66	99	492275	20.31208	ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%			
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036	ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%			
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840	ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%			
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194	ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%			
82) Terphenyl-D14(S)	12.07	244	719678	9.80130	ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713			91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743	ppb		80
4) Pyridine	2.00	79	159922	10.10773	ppb		95
7) Phenol	4.67	94	284850	9.94852	ppb		94
8) Aniline	4.69	93	215040	10.28244	ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288	ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397	ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890	ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580	ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889	ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913	ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047	ppb		96
17) Acetophenone	5.49	105	301622	9.93857	ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173	ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080	ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192	ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780	ppb		91
24) Isophorone	5.95	82	433948	9.99676	ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219	ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036	ppb		99
27) Benzoic acid	6.19	105	96995	12.03014	ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695	ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390	ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216	ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228	ppb		98
32) Naphthalene	6.49	128	626299	10.16177	ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495	ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280	ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411	ppb		94
37) Caprolactum	6.93	55	62259	10.01107	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140	ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527	ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336	ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419	ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080	ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556	ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652	ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275	ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712	ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781	ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017	ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977	ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081	ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113	ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192	ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657	ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145	ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698	ppb		92
62)	Fluorene	9.11	166	544214	9.62094	ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611	ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027	ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157	ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887	ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023	ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959	ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855	ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313	ppb		100
75)	Anthracene	10.28	178	836112	9.77106	ppb		98
76)	Carbazol	10.48	167	736110	9.71477	ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566	ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374	ppb		97
80)	Benzidine	11.78	184	208309	8.56218	ppb		99
81)	Pyrene	11.87	202	997155	9.77669	ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749	ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353	ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583	ppb		98
87)	Chrysene	13.31	228	929904	9.44644	ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708	ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542	ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249	ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197	ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392	ppb		99

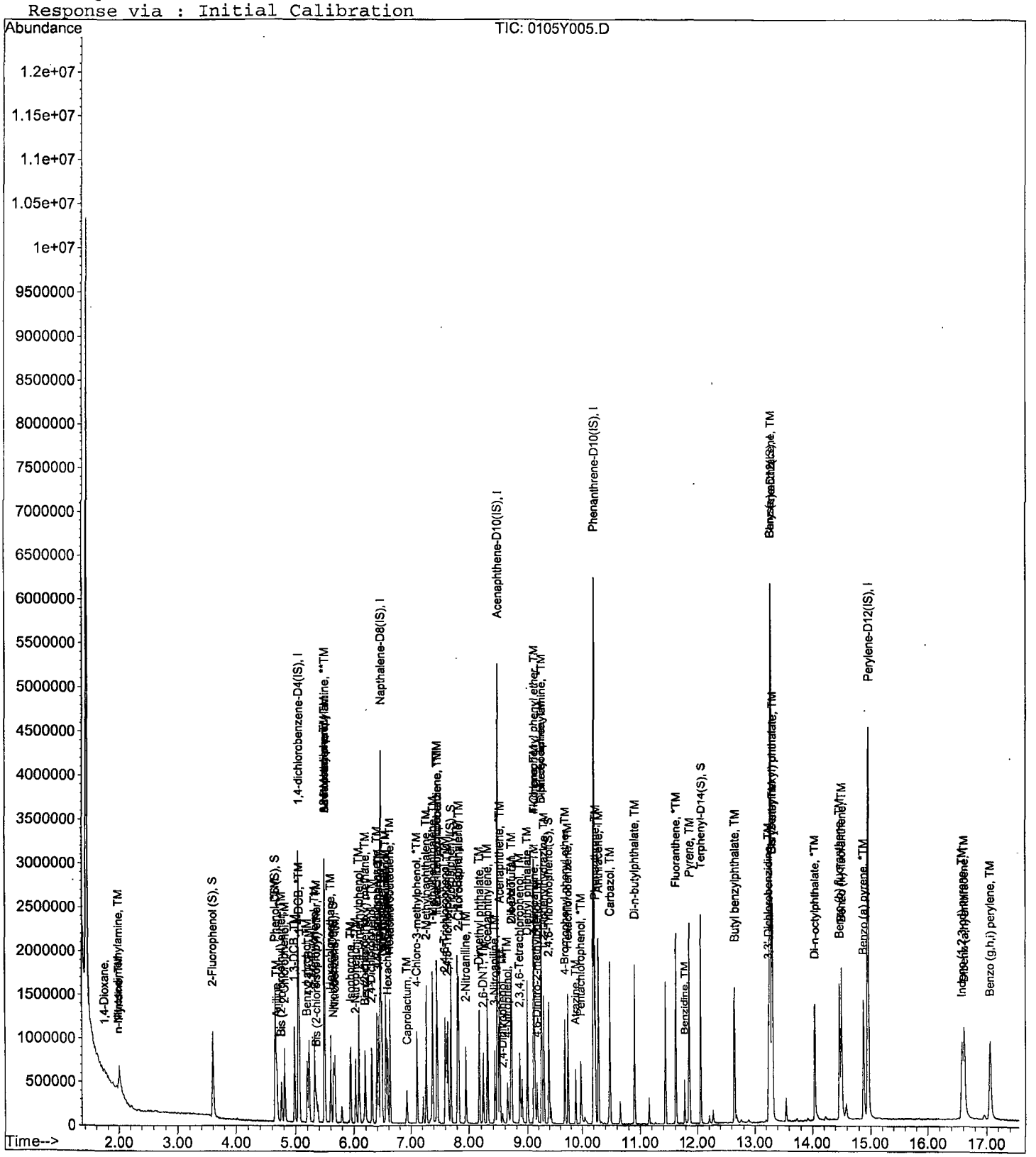
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291	ppb	0.00
Spiked Amount 200.000			Recovery =	20.367%		
6) Phenol-D6 (S)	4.66	99	982259	41.09491	ppb	0.00
Spiked Amount 200.000			Recovery =	20.548%		
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676	ppb	0.00
Spiked Amount 100.000			Recovery =	20.247%		
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838	ppb	0.00
Spiked Amount 100.000			Recovery =	19.988%		
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560	ppb	0.00
Spiked Amount 200.000			Recovery =	19.203%		
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382	ppb	0.00
Spiked Amount 100.000			Recovery =	20.144%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361		95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205	ppb	77
4) Pyridine	2.00	79	285742	18.31197	ppb	93
7) Phenol	4.67	94	577332	20.44481	ppb	98
8) Aniline	4.69	93	466624	22.62348	ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322	ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045	ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920	ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675	ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685	ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353	ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390	ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265	ppb	99
17) Acetophenone	5.49	105	602936	20.14408	ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933	ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837	ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841	ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574	ppb	92
24) Isophorone	5.95	82	880199	20.26492	ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391	ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280	ppb	97
27) Benzoic acid	6.20	105	256511	20.08076	ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476	ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992	ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794	ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850	ppb	98
32) Naphthalene	6.49	128	1239162	20.09363	ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498	ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561	ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334	ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574	ppb	97
37) Caprolactum	6.94	55	124469	20.00238	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349 ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784 ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412 ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630 ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439 ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287 ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502 ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195 ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023 ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351 ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294 ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621 ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050 ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157 ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201 ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912 ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583 ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779 ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763 ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911 ppb		94
62)	Fluorene	9.11	166	1109731	19.54391 ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174 ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829 ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000 ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090 ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297 ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022 ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799 ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723 ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337 ppb		99
75)	Anthracene	10.28	178	1715659	19.88979 ppb		99
76)	Carbazol	10.48	167	1511452	19.78820 ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619 ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353 ppb		98
80)	Benzidine	11.78	184	500470	20.76094 ppb		99
81)	Pyrene	11.87	202	2024473	20.03244 ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969 ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793 ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478 ppb		98
87)	Chrysene	13.31	228	1927311	19.75942 ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333 ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945 ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423 ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245 ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577 ppb		98

(#) = qualifier out of range (m) = manual integration

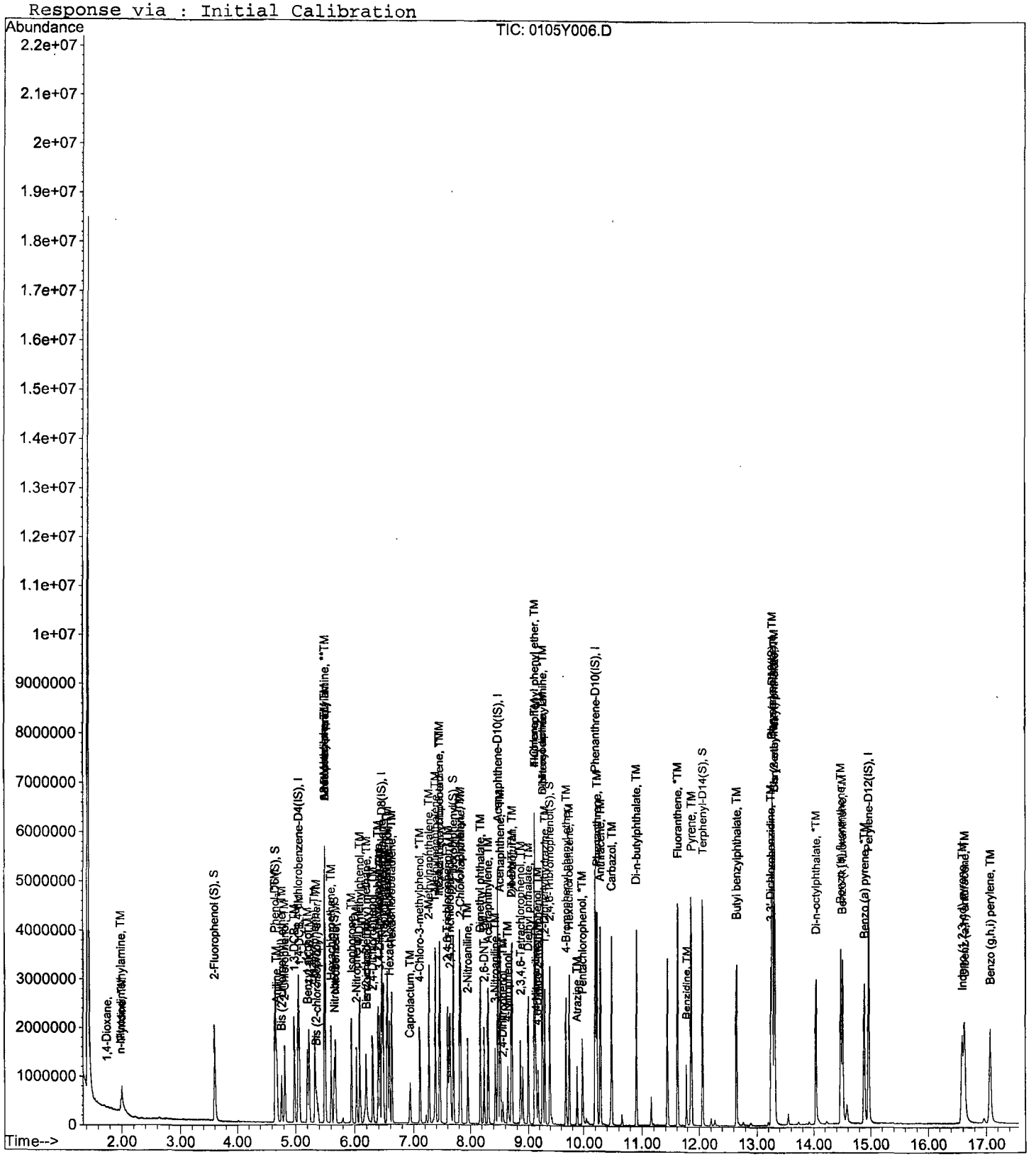
Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D
Acq On : 5 Jan 21 12:40
Sample : 20ug/mL 8270 01/05/21
Misc :

Vial: 6
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967 ppb	0.00
Spiked Amount 200.000			Recovery = 40.315%		
6) Phenol-D6 (S)	4.67	99	2073058	80.33420 ppb	0.00
Spiked Amount 200.000			Recovery = 40.167%		
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156 ppb	0.00
Spiked Amount 100.000			Recovery = 39.782%		
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219 ppb	0.00
Spiked Amount 100.000			Recovery = 39.422%		
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158 ppb	0.00
Spiked Amount 200.000			Recovery = 39.906%		
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922 ppb	0.00
Spiked Amount 100.000			Recovery = 40.089%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747	54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850 ppb	93
4) Pyridine	1.99	79	710577	42.17927 ppb	100
7) Phenol	4.68	94	1249780	40.99379 ppb	96
8) Aniline	4.69	93	852672	38.29141 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360 ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826 ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439 ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338 ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093 ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316 ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142 ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767 ppb	98
17) Acetophenone	5.49	105	1298420	40.18079 ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972 ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083 ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355 ppb	99
24) Isophorone	5.95	82	1929574	40.57653 ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009 ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262 ppb	95
27) Benzoic acid	6.22	105	694050	39.13552 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698 ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676 ppb	97
32) Naphthalene	6.49	128	2700428	39.99560 ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681 ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710 ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202 ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790 ppb	96
37) Caprolactum	6.96	55	275073	40.37550 ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

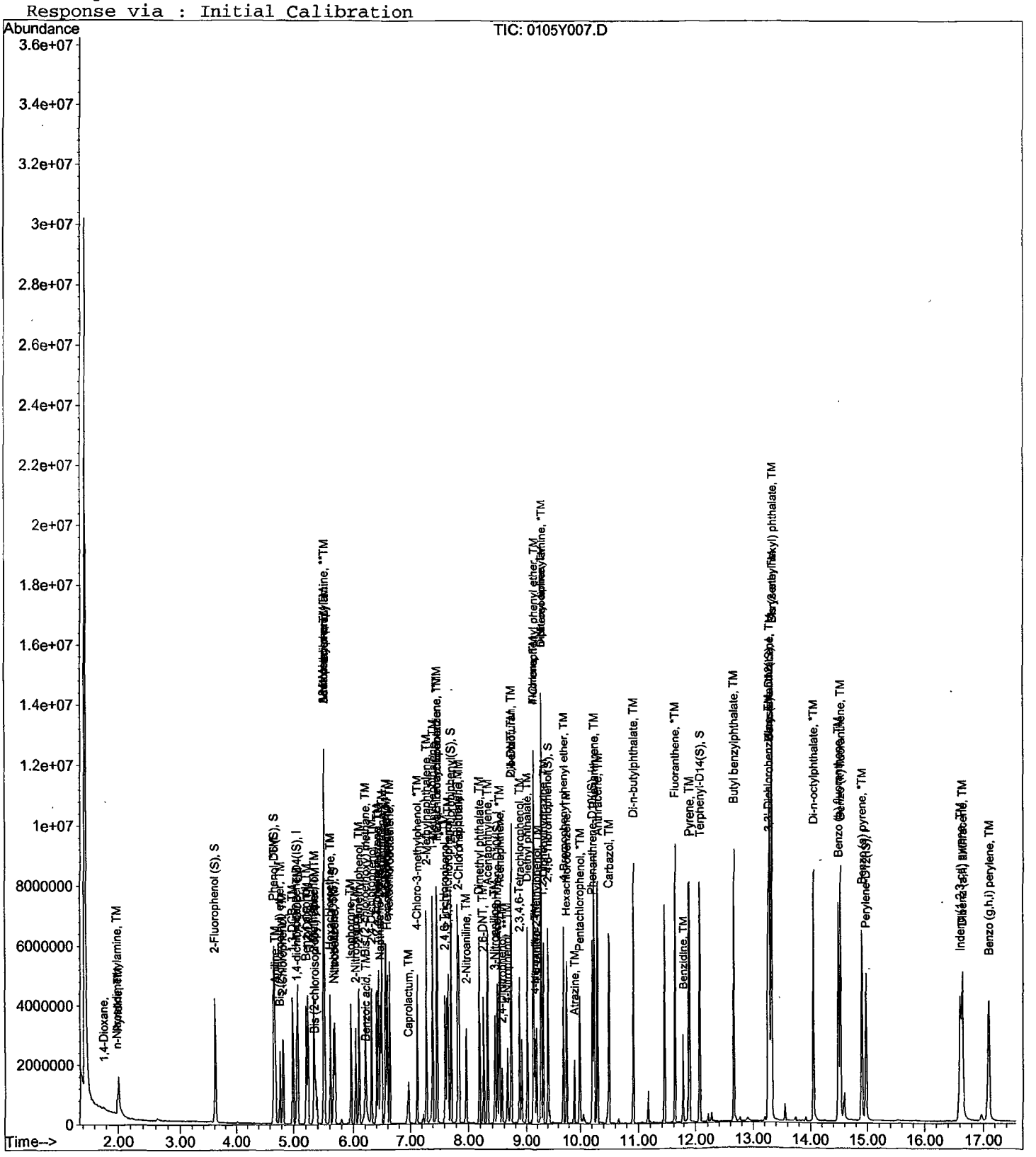
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501 ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827 ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678 ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033 ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973 ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691 ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290 ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584 ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983 ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022 ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174 ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741 ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990 ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046 ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381 ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245 ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395 ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389 ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069 ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506 ppb	100
62)	Fluorene	9.11	166	2868571	49.36863 ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128 ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785 ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785 ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089 ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978 ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367 ppb	100
72)	Atrazine	9.89	200	418889	26.25754 ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356 ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640 ppb	100
75)	Anthracene	10.29	178	4512131	51.82540 ppb	100
76)	Carbazol	10.49	167	4021683	52.16528 ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661 ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724 ppb	100
80)	Benzidine	11.78	184	1334887	54.03870 ppb	100
81)	Pyrene	11.88	202	5487771	52.99187 ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593 ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347 ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761 ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599 ppb	100
87)	Chrysene	13.31	228	5235913	52.38491 ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495 ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338 ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646 ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782 ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159 ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960 ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590 ppb	100

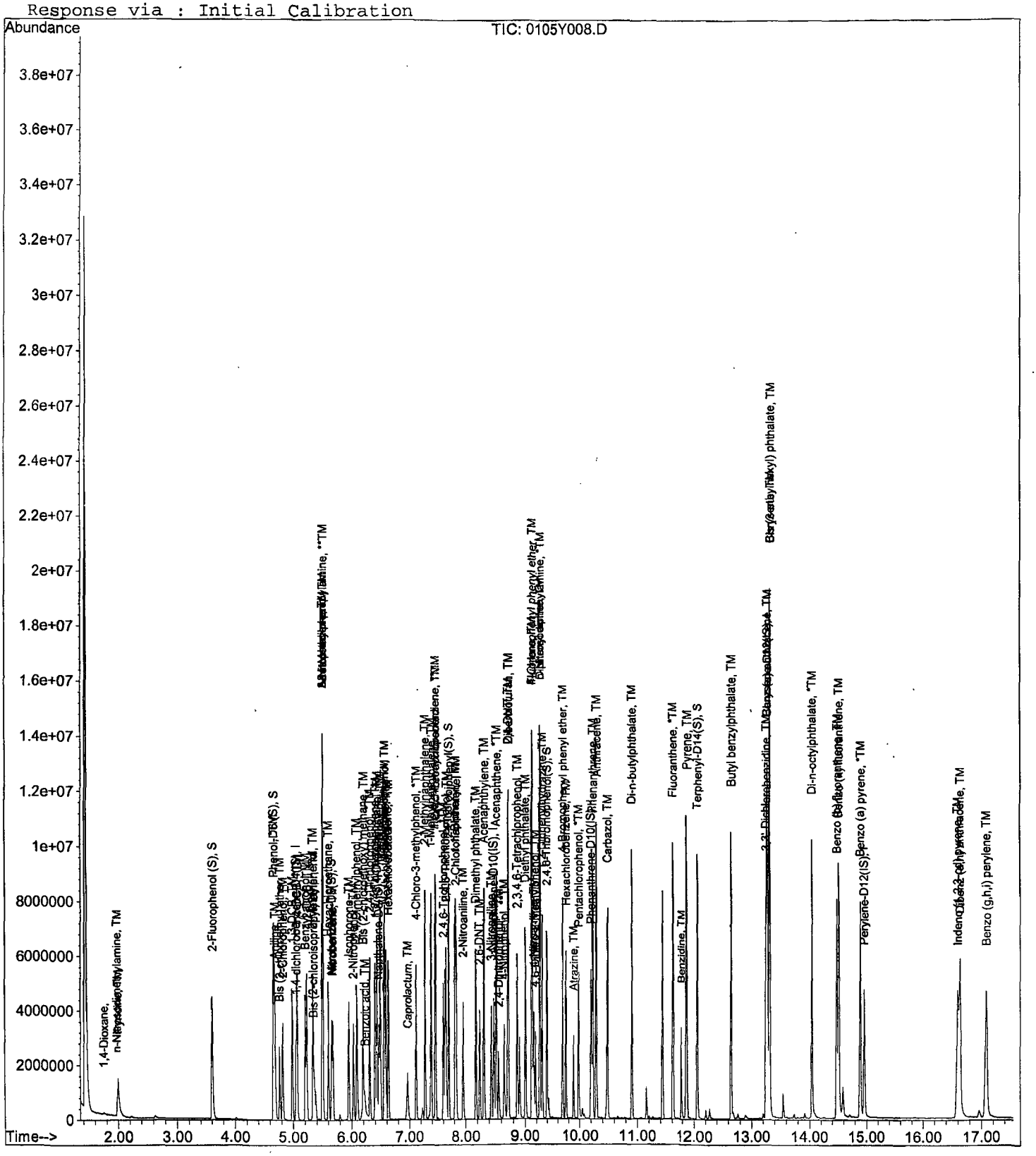
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382 ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%			
6) Phenol-D6 (S)	4.67	99	2714982	119.91052 ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%			
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297 ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%			
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223 ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868 ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%			
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361 ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380		95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310 ppb		92
4) Pyridine	1.99	79	901311	60.97669 ppb		97
7) Phenol	4.68	94	1606167	60.04495 ppb		96
8) Aniline	4.69	93	1200640	61.45164 ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145 ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776 ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182 ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978 ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043 ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365 ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897 ppb		96
17) Acetophenone	5.50	105	1702308	60.04028 ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638 ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425 ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967 ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951 ppb		89
24) Isophorone	5.96	82	2504820	59.55758 ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859 ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930 ppb		99
27) Benzoic acid	6.23	105	965560	57.47534 ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945 ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990 ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563 ppb		100
32) Naphthalene	6.49	128	3532998	59.16571 ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729 ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808 ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347 ppb		98
37) Caprolactum	6.98	55	354905	58.90188 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb		97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb		99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb		95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb		99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb		98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb		91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb		97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb		92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb		100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb		99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb		99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb		93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb		93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb		98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb		98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb		98
62)	Fluorene	9.11	166	3228662	60.22935	ppb		100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb	#	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb		96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb		96
72)	Atrazine	9.89	200	456257	29.70998	ppb		98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb		99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb		99
75)	Anthracene	10.29	178	5016441	59.85415	ppb		100
76)	Carbazol	10.49	167	4476193	60.31428	ppb		98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb		99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb	#	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb		99
81)	Pyrene	11.88	202	6087066	61.51608	ppb		100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb		99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb		99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb		98
87)	Chrysene	13.32	228	5981915	62.63562	ppb		99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb	#	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb		100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb		97

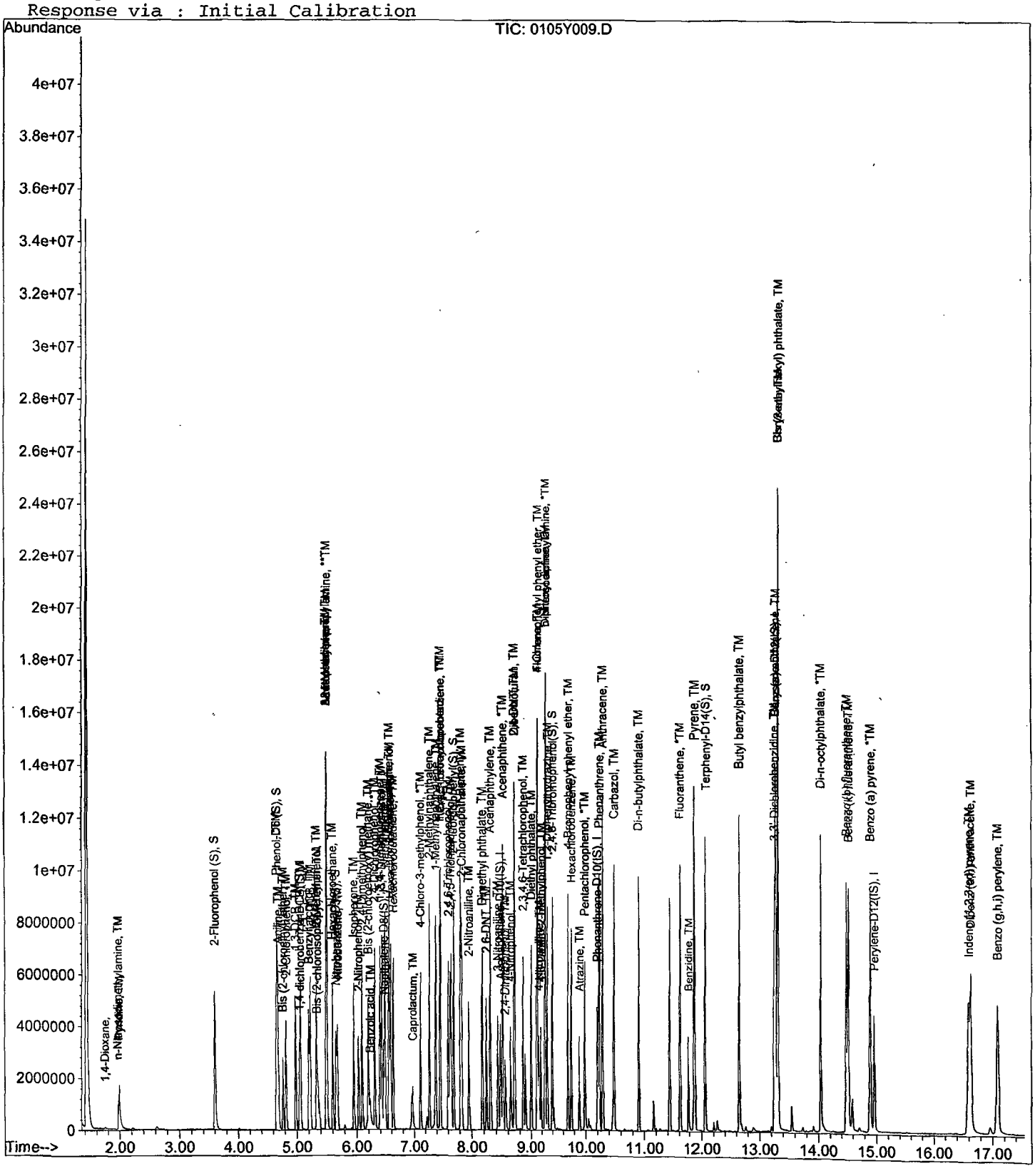
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y010.D
Acq On : 5 Jan 21 14:21
Sample : 80ug/mL 8270 01/05/21
Misc :

Vial: 10
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

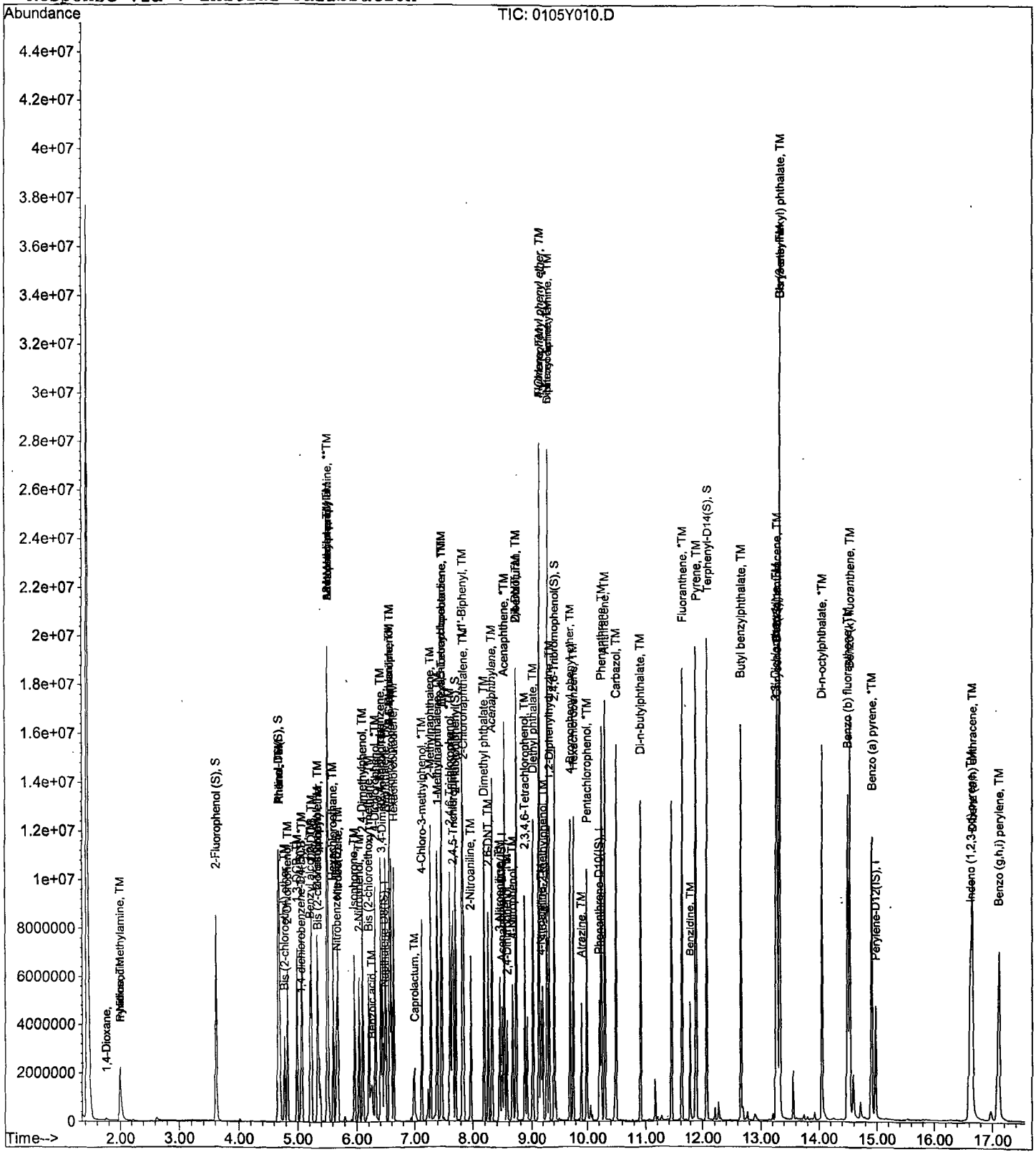
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%			
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%			
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%			
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%			
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%			
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

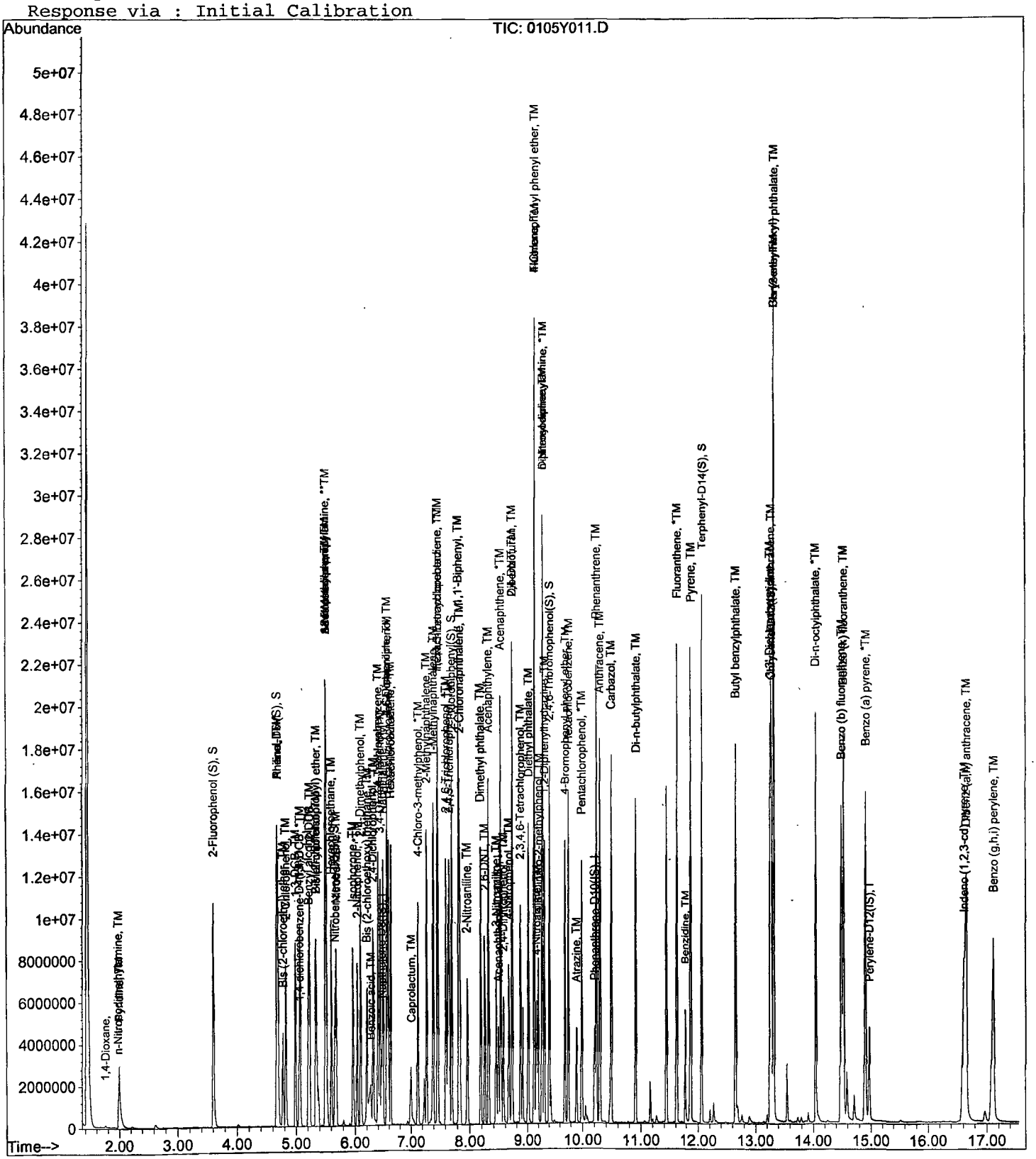
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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117							
118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery	= 6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery	= 0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery	= 0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery	= 0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

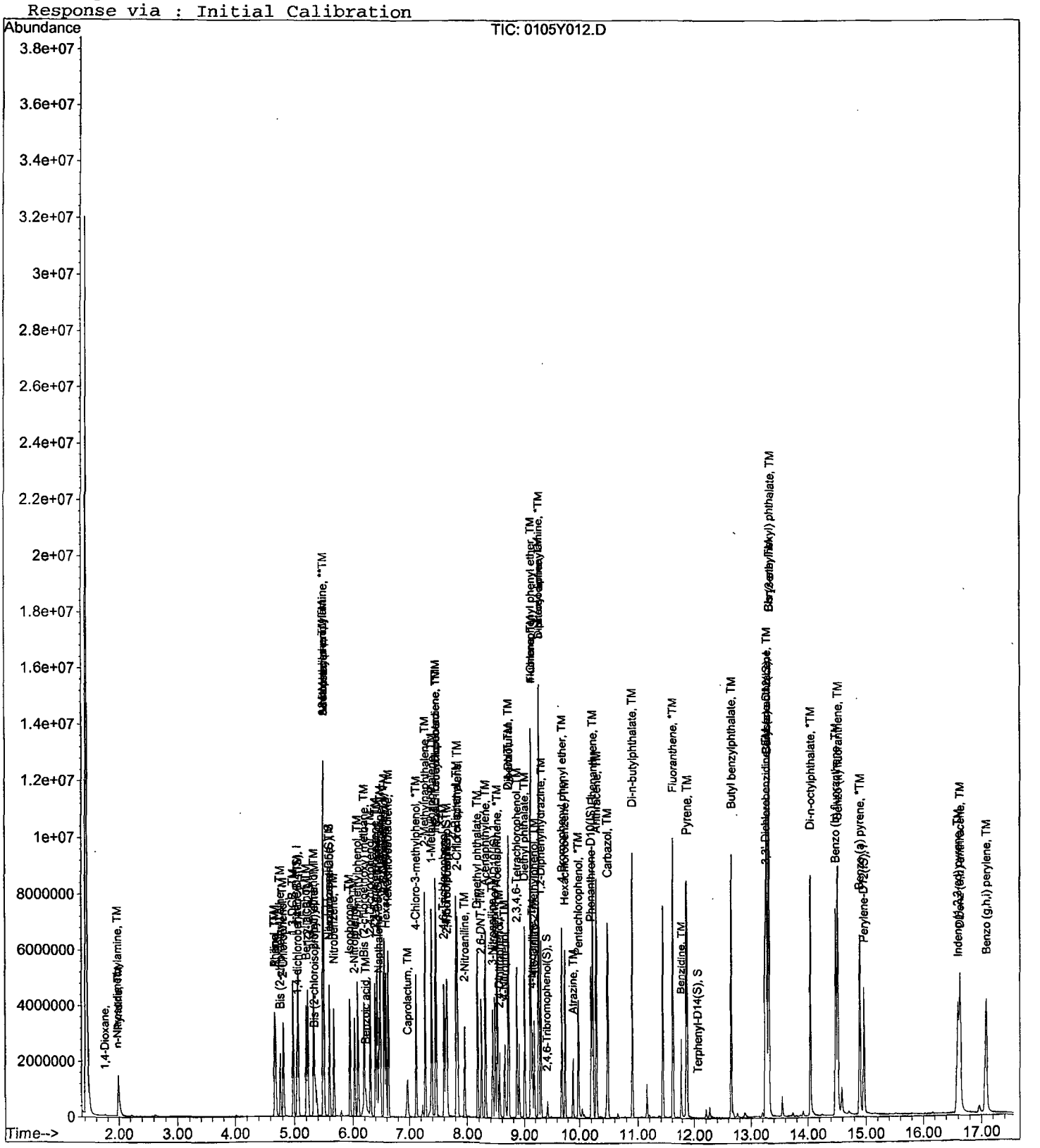
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2598	19			
3	TM	n-Nitrosodimethylamine	0.6105	0.5837	4.4	TM		
4	TM	Pyridine	1.336	1.259	5.8	TM		
5	S	2-Fluorophenol (S)	1.601	1.677	4.8	S		
6	S	Phenol-D6 (S)	2.046	2.237	9.3	S		
7	*TM	Phenol	2.418	2.670	10	*TM		
8	TM	Aniline	1.766	1.993	13	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.149	11	TM		
10	TM	2-Chlorophenol	1.829	1.960	7.2	TM		
11	TM	1,3-DCB	2.107	2.040	3.2	TM		
12	*TM	1,4-DCB	2.122	2.109	0.59	*TM		
13	TM	Benzyl alcohol	1.073	1.152	7.4	TM		
14	TM	1,2-DCB	1.992	2.001	0.46	TM		
15	TM	2-Methylphenol	1.401	1.499	7.0	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.158	19	TM		
17	TM	Acetophenone	2.563	2.781	8.5	TM		
18	TM	3&4-Methylphenol	1.892	2.095	11	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.706	14	**TM		
20	TM	Hexachloroethane	0.8684	0.8855	2.0	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5861	0.64	S		
23	TM	Nitrobenzene	0.6068	0.6171	1.7	TM		
24	TM	Isophorone	0.9746	0.9928	1.9	TM		
25	*TM	2-Nitrophenol	0.2562	0.2568	0.24	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4226	0.25	TM		
27	TML	Benzoic acid	0.3484	0.2255	35	TML	35	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5655	2.6	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4319	1.5	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4999	2.2	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6757	0.08	TM		
32	TM	Naphthalene	1.384	1.404	1.5	TM		
33	TM	4-Chloroaniline	0.5189	0.5719	10	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4310	1.0	TM		
35	TM	Hexachloropropene	0.4576	0.4222	7.7	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3466	4.1	*TM		
37	TM	Caprolactum	0.1396	0.1471	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4653	1.5	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9342	2.7	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9728	3.7	TM		
		Average			6.4			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D	%Drift		
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5506	3.3	**TML	10	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8850	1.7	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5525	1.4	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.6007	1.8	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.852	1.2	S		
47	TM	1,1'-Biphenyl	2.012	2.117	5.2	TM		
48	TM	2-Chloronaphthalene	1.564	1.605	2.6	TM		
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM		
50	TM	Dimethyl phthalate	1.914	1.958	2.3	TM		
51	TM	2,6-DNT	0.4186	0.4214	0.66	TM		
52	TM	Acenaphthylene	2.382	2.404	0.89	TM		
53	TM	3-Nitroaniline	0.3908	0.4159	6.4	TM		
54	*TM	Acenaphthene	1.584	1.592	0.51	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.1597	28	**TML	22	*NT
56	**TM	4-Nitrophenol	0.3856	0.3629	5.9	**TM		
57	TM	Dibenzofuran	2.358	2.370	0.51	TM		
58	TM	2,4-DNT	0.6015	0.6003	0.20	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4473	7.7	TM		
60	TM	Diethyl phthalate	1.956	1.951	0.26	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.107	2.5	TM		
62	TM	Fluorene	1.985	2.067	4.1	TM		
63	TM	4-Nitroaniline	0.4251	0.4277	0.60	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2791	7.4	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1743	9.1	TM		
67	TM	Diphenyl amine	0.7523	0.7707	2.4	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7707	2.4	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9878	3.6	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3037	0.33	TM		
71	TM	Hexachlorobenzene	0.3129	0.3069	1.9	TM		
72	TM	Atrazine	0.2649	0.2618	1.1	TM		
73	*TM	Pentachlorophenol	0.2072	0.1985	4.2	*TM		
74	TM	Phenanthrene	1.386	1.423	2.7	TM		
75	TM	Anthracene	1.445	1.503	4.0	TM		
76	TM	Carbazol	1.280	1.304	1.9	TM		
77	TM	Di-n-butylphthalate	1.570	1.676	6.8	TM		
78	*TM	Fluoranthene	1.617	1.650	2.0	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.4028	1.3	TM		
		Average			3.6			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y100.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.767	6.0	TM	
82	S	Terphenyl-D14(S)	1.201	1.214	1.1	S	
83	TM	Butyl benzylphthalate	0.7149	0.7759	8.5	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6314	14	TM	
85	TM	Benz (a) anthracene	1.709	1.764	3.2	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.158	13	TM	
87	TM	Chrysene	1.610	1.788	11	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.792	14	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.522	0.39	TM	
92	*TM	Benzo (a) pyrene	1.467	1.547	5.5	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.673	1.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.456	1.6	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
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116							
117							
118							
119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	533085	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2194335	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1385446	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2786023	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2774517	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.98	264	2634209	40.00000 ppb	0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2235576	104.80889 ppb	0.00
Spiked Amount 200.000			Recovery	= 52.405%	
6) Phenol-D6 (S)	4.67	99	2981420	109.31539 ppb	0.00
Spiked Amount 200.000			Recovery	= 54.658%	
22) Nitrobenzene-D5(S)	5.66	82	1607512	49.68240 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.682%	
46) 2-Fluorobiphenyl(S)	7.71	172	3207255	49.38865 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.389%	
64) 2,4,6-Tribromophenol(S)	9.40	330	966848	92.57566 ppb	0.00
Spiked Amount 200.000			Recovery	= 46.288%	
82) Terphenyl-D14(S)	12.07	244	4209281	50.54570 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.546%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17311	4.06981	90
3) n-Nitrosodimethylamine	1.97	42	388923	47.80079 ppb	79
4) Pyridine	1.99	79	838890	47.11531 ppb	94
7) Phenol	4.68	94	1779060	55.21337 ppb	87
8) Aniline	4.69	93	1328128	56.43239 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	765351	55.65806 ppb	93
10) 2-Chlorophenol	4.82	128	1306315	53.58587 ppb	99
11) 1,3-DCB	4.98	146	1359350	48.42079 ppb	99
12) 1,4-DCB	5.07	146	1405572	49.70368 ppb	99
13) Benzyl alcohol	5.21	108	767506	53.69409 ppb	92
14) 1,2-DCB	5.23	146	1333446	50.23123 ppb	98
15) 2-Methylphenol	5.33	107	998997	53.52128 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	771502	59.36942 ppb	94
17) Acetophenone	5.50	105	1853156	54.26057 ppb	94
18) 3&4-Methylphenol	5.51	107	2791494	110.72488 ppb	96
19) n-Nitrosodi-n-propylamine	5.51	70	1136514	57.03056 ppb	95
20) Hexachloroethane	5.60	117	590038	50.98156 ppb	94
23) Nitrobenzene	5.69	77	1692605	50.84746 ppb	93
24) Isophorone	5.96	82	2723136	50.93502 ppb	95
25) 2-Nitrophenol	6.04	139	704319	50.12154 ppb	82
26) 2,4-Dimethylphenol	6.10	122	1159148	49.87449 ppb	98
27) Benzoic acid	6.24	105	618468	32.41632 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1551188	51.30726 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1184651	49.24379 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1371127	48.89941 ppb	99
31) 3,4-Dimethylphenol	6.43	107	1853438	49.96122 ppb	97
32) Naphthalene	6.49	128	3850481	50.72574 ppb	99
33) 4-Chloroaniline	6.56	127	1568589	55.10632 ppb	94
34) 2,6-Dichlorophenol	6.57	162	1182088	50.52388 ppb	94
35) Hexachloropropene	6.59	213	1158129	46.13169 ppb	100
36) Hexachlorobutadiene	6.63	225	950821	47.92895 ppb	99
37) Caprolactum	6.99	55	403612	52.69480 ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1276387	50.74603	ppb		95
39)	2-Methylnaphthalene	7.27	142	2562457	51.35373	ppb		99
40)	1-Methylnaphthalene	7.40	142	2668197	51.86615	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	953472	44.91138	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1532645	49.15476	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	956785	49.31755	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1040231	49.07954	ppb		96
47)	1,1'-Biphenyl	7.82	154	3666052	52.61084	ppb		99
48)	2-Chloronaphthalene	7.84	162	2780318	51.30960	ppb		97
49)	2-Nitroaniline	7.96	65	902779	52.35141	ppb		83
50)	Dimethyl phthalate	8.18	163	3390923	51.16044	ppb		98
51)	2,6-DNT	8.25	165	729759	50.33121	ppb	#	65
52)	Acenaphthylene	8.31	152	4162756	50.44542	ppb		99
53)	3-Nitroaniline	8.44	138	720246	53.20650	ppb		93
54)	Acenaphthene	8.52	154	2757519	50.25560	ppb		99
55)	2,4-Dinitrophenol	8.57	184	276555	38.91683	ppb		90
56)	4-Nitrophenol	8.66	65	628519	47.05521	ppb		90
57)	Dibenzofuran	8.72	168	4103530	50.25269	ppb		92
58)	2,4-DNT	8.71	165	1039556	49.90133	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	774684	46.15909	ppb		93
60)	Diethyl phthalate	9.01	149	3378496	49.87084	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1917773	51.24493	ppb		96
62)	Fluorene	9.12	166	3578838	52.06515	ppb		100
63)	4-Nitroaniline	9.16	138	740629	50.29902	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	606978	45.42608	ppb		97
67)	Diphenyl amine	9.27	169	5368202	102.44406	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5368202	102.44406	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3439953	51.78803	ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	1057645	49.83439	ppb	#	84
71)	Hexachlorobenzene	9.75	284	1068870	49.05094	ppb	#	82
72)	Atrazine	9.89	200	455920	24.71478	ppb		94
73)	Pentachlorophenol	9.99	266	691369	47.89642	ppb		98
74)	Phenanthrene	10.24	178	4955670	51.34732	ppb		100
75)	Anthracene	10.29	178	5232849	51.97712	ppb		99
76)	Carbazol	10.49	167	4540661	50.93377	ppb		96
77)	Di-n-butylphthalate	10.91	149	5838223	53.38008	ppb		98
78)	Fluoranthene	11.62	202	5745675	51.01696	ppb		99
80)	Benzidine	11.79	184	1396925	50.62677	ppb		98
81)	Pyrene	11.88	202	6127980	52.97578	ppb		99
83)	Butyl benzylphthalate	12.66	149	2690764	54.26218	ppb		85
84)	3,3'-Dichlorobenzidine	13.26	252	2189624	56.94079	ppb		100
85)	Benz (a) anthracene	13.28	228	6119145	51.61903	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4015164	56.28307	ppb	#	95
87)	Chrysene	13.32	228	6202258	55.55336	ppb		100
88)	Di-n-octylphthalate	14.05	149	6344526	54.24926	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5902044	57.03771	ppb		99
91)	Benzo (k) fluoranthene	14.53	252	5012644	50.19678	ppb		98
92)	Benzo (a) pyrene	14.91	252	5095190	52.74778	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5509560	49.49468	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	4794965	49.21957	ppb		98
95)	Benzo (g,h,i) perylene	17.12	276	4620679	48.55093	ppb		99

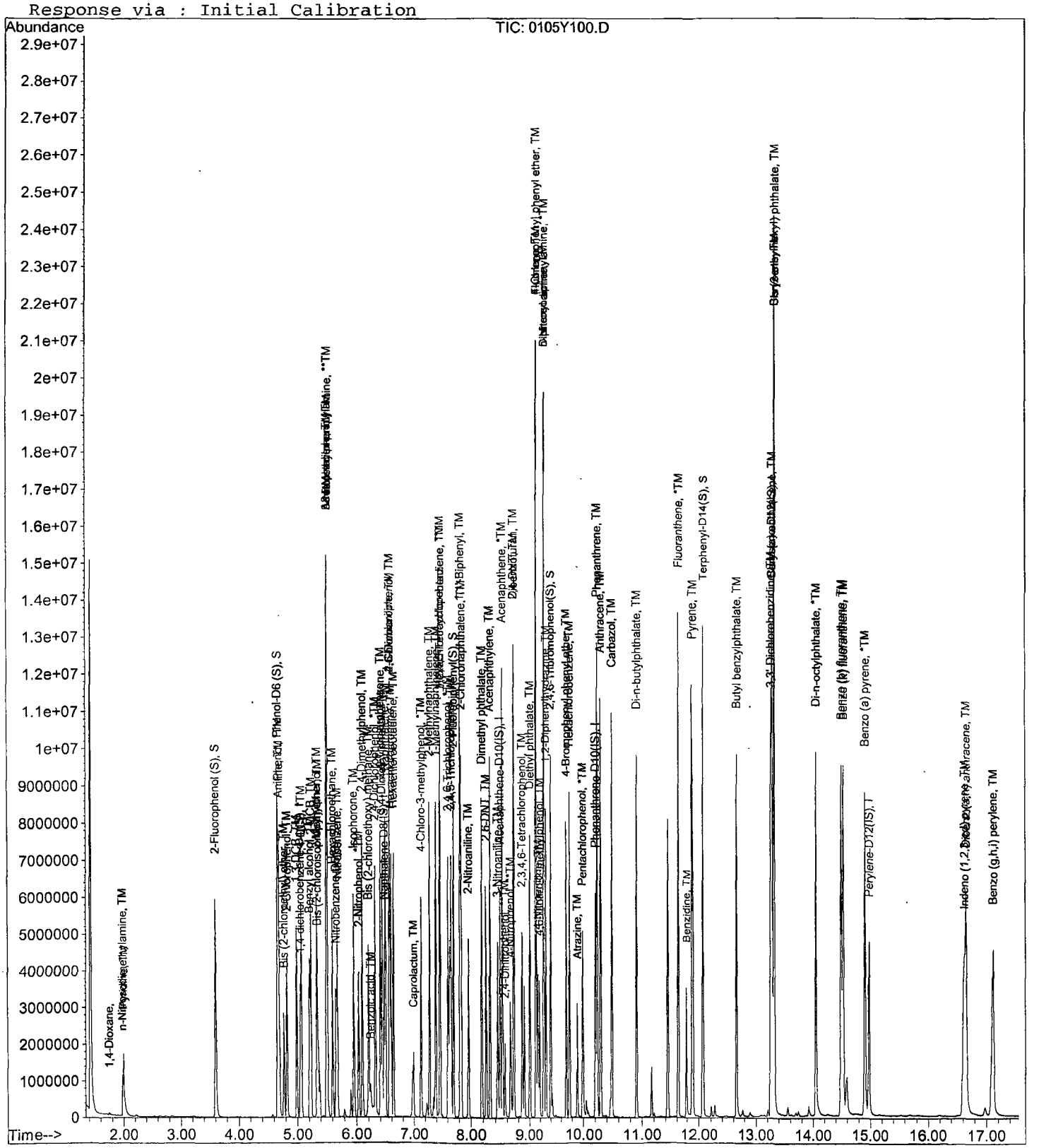
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y100.D Vial: 100
Acq On : 25 Jan 21 12:38 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 25 12:38 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2514	21		
3	TM	n-Nitrosodimethylamine	0.6105	0.5552	9.1	TM	
4	TM	Pyridine	1.336	1.243	7.0	TM	
5	S	2-Fluorophenol (S)	1.601	1.666	4.1	S	
6	S	Phenol-D6 (S)	2.046	2.251	10.0	S	
7	*TM	Phenol	2.418	2.713	12	*TM	
8	TM	Aniline	1.766	1.951	11	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.138	10	TM	
10	TM	2-Chlorophenol	1.829	1.954	6.8	TM	
11	TM	1,3-DCB	2.107	2.042	3.0	TM	
12	*TM	1,4-DCB	2.122	2.091	1.5	*TM	
13	TM	Benzyl alcohol	1.073	1.165	8.6	TM	
14	TM	1,2-DCB	1.992	2.018	1.3	TM	
15	TM	2-Methylphenol	1.401	1.509	7.7	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.120	15	TM	
17	TM	Acetophenone	2.563	2.815	9.8	TM	
18	TM	3&4-Methylphenol	1.892	2.088	10	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.731	16	**TM	
20	TM	Hexachloroethane	0.8684	0.8775	1.0	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6014	2.0	S	
23	TM	Nitrobenzene	0.6068	0.6264	3.2	TM	
24	TM	Isophorone	0.9746	0.9984	2.4	TM	
25	*TM	2-Nitrophenol	0.2562	0.2652	3.5	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4293	1.3	TM	
27	TML	Benzoic acid	0.3484	0.4027	16	TML	4.7
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5612	1.8	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4359	0.61	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4927	3.6	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6712	0.74	TM	
32	TM	Naphthalene	1.384	1.377	0.52	TM	
33	TM	4-Chloroaniline	0.5189	0.5718	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4359	2.2	TM	
35	TM	Hexachloropropene	0.4576	0.4382	4.2	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3495	3.4	*TM	
37	TM	Caprolactum	0.1396	0.1451	3.9	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4678	2.0	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9299	2.2	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9558	1.9	TM	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: 0 Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5836	2.5	**TML	5.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8826	2.0	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5658	1.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6136	0.27	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.837	2.0	S	
47	TM	1,1'-Biphenyl	2.012	2.076	3.2	TM	
48	TM	2-Chloronaphthalene	1.564	1.609	2.8	TM	
49	TM	2-Nitroaniline	0.4979	0.5253	5.5	TM	
50	TM	Dimethyl phthalate	1.914	1.967	2.8	TM	
51	TM	2,6-DNT	0.4186	0.4369	4.4	TM	
52	TM	Acenaphthylene	2.382	2.425	1.8	TM	
53	TM	3-Nitroaniline	0.3908	0.4202	7.5	TM	
54	*TM	Acenaphthene	1.584	1.599	0.96	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2223	0.38	**TML	2.5
56	**TM	4-Nitrophenol	0.3856	0.3999	3.7	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6278	4.4	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4700	3.0	TM	
60	TM	Diethyl phthalate	1.956	1.964	0.40	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.118	3.4	TM	
62	TM	Fluorene	1.985	2.070	4.3	TM	
63	TM	4-Nitroaniline	0.4251	0.4492	5.7	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2900	3.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1889	1.5	TM	
67	TM	Diphenyl amine	0.7523	0.7904	5.1	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7904	5.1	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9735	2.1	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2950	3.2	TM	
71	TM	Hexachlorobenzene	0.3129	0.3078	1.6	TM	
72	TM	Atrazine	0.2649	0.2565	3.2	TM	
73	*TM	Pentachlorophenol	0.2072	0.1967	5.1	*TM	
74	TM	Phenanthrene	1.386	1.418	2.3	TM	
75	TM	Anthracene	1.445	1.453	0.50	TM	
76	TM	Carbazol	1.280	1.292	0.92	TM	
77	TM	Di-n-butylphthalate	1.570	1.640	4.4	TM	
78	*TM	Fluoranthene	1.617	1.625	0.50	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.4060	2.1	TM	
		Average			2.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/25/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y115.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.760	5.5	TM	
82	S	Terphenyl-D14(S)	1.201	1.243	3.5	S	
83	TM	Butyl benzylphthalate	0.7149	0.7718	8.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6257	13	TM	
85	TM	Benz (a) anthracene	1.709	1.758	2.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.181	15	TM	
87	TM	Chrysene	1.610	1.742	8.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.838	9.0	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.642	4.5	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.666	9.9	TM	
92	*TM	Benzo (a) pyrene	1.467	1.555	6.0	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.670	1.2	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.478	0.06	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.403	2.9	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	565875	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2319312	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1466187	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3029918	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2959437	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2751561	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2357181	104.10644 ppb	0.00
Spiked Amount 200.000			Recovery =	52.053%	
6) Phenol-D6 (S)	4.67	99	3184619	109.99973 ppb	0.00
Spiked Amount 200.000			Recovery =	55.000%	
22) Nitrobenzene-D5(S)	5.66	82	1743523	50.98234 ppb	0.00
Spiked Amount 100.000			Recovery =	50.982%	
46) 2-Fluorobiphenyl(S)	7.71	172	3367365	48.99865 ppb	0.00
Spiked Amount 100.000			Recovery =	48.999%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1062904	96.16852 ppb	0.00
Spiked Amount 200.000			Recovery =	48.085%	
82) Terphenyl-D14(S)	12.07	244	4598336	51.76727 ppb	0.00
Spiked Amount 100.000			Recovery =	51.767%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17786	3.93918	80
3) n-Nitrosodimethylamine	1.97	42	392741	45.47301 ppb	77
4) Pyridine	1.99	79	879245	46.52034 ppb	92
7) Phenol	4.68	94	1919316	56.11463 ppb	86
8) Aniline	4.69	93	1380352	55.25281 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	804929	55.14434 ppb	94
10) 2-Chlorophenol	4.82	128	1381800	53.39782 ppb	100
11) 1,3-DCB	4.98	146	1444690	48.47873 ppb	99
12) 1,4-DCB	5.07	146	1478994	49.26946 ppb	99
13) Benzyl alcohol	5.20	108	824248	54.32235 ppb	93
14) 1,2-DCB	5.23	146	1427364	50.65346 ppb	99
15) 2-Methylphenol	5.33	107	1067037	53.85397 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	792570	57.45652 ppb	95
17) Acetophenone	5.50	105	1991147	54.92267 ppb	93
18) 3&4-Methylphenol	5.51	107	2953267	110.35377 ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	1224298	57.87566 ppb	99
20) Hexachloroethane	5.60	117	620701	50.52328 ppb	94
23) Nitrobenzene	5.69	77	1816036	51.61570 ppb	94
24) Isophorone	5.96	82	2894471	51.22242 ppb	95
25) 2-Nitrophenol	6.04	139	768818	51.76334 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1244679	50.66881 ppb	99
27) Benzoic acid	6.24	105	1167506	52.35840 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	1627047	50.91647 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1263635	49.69658 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1428366	48.19580 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1946015	49.63007 ppb	98
32) Naphthalene	6.49	128	3990737	49.74051 ppb	100
33) 4-Chloroaniline	6.56	127	1657731	55.09981 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1263732	51.10291 ppb	93
35) Hexachloropropene	6.59	213	1270430	47.87810 ppb	99
36) Hexachlorobutadiene	6.63	225	1013152	48.31895 ppb	98
37) Caprolactum	6.99	55	420722	51.96880 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1356213	51.01424	ppb		93
39)	2-Methylnaphthalene	7.27	142	2695888	51.11649	ppb		98
40)	1-Methylnaphthalene	7.40	142	2770924	50.96059	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1069568	47.26961	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1617520	49.02007	ppb		97
44)	2,4,6-Trichlorophenol	7.61	196	1036955	50.50650	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	1124538	50.13547	ppb		93
47)	1,1'-Biphenyl	7.82	154	3804968	51.59741	ppb		99
48)	2-Chloronaphthalene	7.84	162	2948560	51.41791	ppb		98
49)	2-Nitroaniline	7.96	65	962801	52.75744	ppb		86
50)	Dimethyl phthalate	8.18	163	3605631	51.40411	ppb		98
51)	2,6-DNT	8.25	165	800748	52.18600	ppb	#	75
52)	Acenaphthylene	8.31	152	4443485	50.88207	ppb		100
53)	3-Nitroaniline	8.44	138	770025	53.75129	ppb		90
54)	Acenaphthene	8.52	154	2931123	50.47777	ppb		99
55)	2,4-Dinitrophenol	8.57	184	407373	48.74129	ppb		88
56)	4-Nitrophenol	8.66	65	732829	51.84324	ppb		94
57)	Dibenzofuran	8.72	168	4408186	51.01076	ppb		91
58)	2,4-DNT	8.71	165	1150680	52.19382	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.87	232	861302	48.49404	ppb		91
60)	Diethyl phthalate	9.01	149	3599071	50.20118	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2048253	51.71750	ppb		96
62)	Fluorene	9.12	166	3793658	52.15110	ppb		99
63)	4-Nitroaniline	9.16	138	823273	52.83271	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	715429	49.23259	ppb	#	58
67)	Diphenyl amine	9.27	169	5986980	105.05568	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5986980	105.05568	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3686983	51.03896	ppb		94
70)	4-Bromophenyl phenyl ether	9.69	248	1117128	48.40007	ppb		90
71)	Hexachlorobenzene	9.75	284	1165833	49.19405	ppb	#	86
72)	Atrazine	9.89	200	485688	24.20914	ppb		95
73)	Pentachlorophenol	9.99	266	745061	47.46121	ppb		99
74)	Phenanthrene	10.24	178	5370053	51.16203	ppb		99
75)	Anthracene	10.29	178	5501731	50.24897	ppb		99
76)	Carbazol	10.49	167	4892232	50.46004	ppb		97
77)	Di-n-butylphthalate	10.90	149	6211786	52.22385	ppb		100
78)	Fluoranthene	11.62	202	6154749	50.25019	ppb		98
80)	Benzidine	11.79	184	1501770	51.02568	ppb		98
81)	Pyrene	11.88	202	6508989	52.75357	ppb		99
83)	Butyl benzylphthalate	12.65	149	2854964	53.97598	ppb		91
84)	3,3'-Dichlorobenzidine	13.25	252	2314715	56.43256	ppb	#	98
85)	Benz (a) anthracene	13.28	228	6504240	51.43917	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4368690	57.41217	ppb	#	93
87)	Chrysene	13.32	228	6444804	54.11884	ppb		100
88)	Di-n-octylphthalate	14.04	149	6799817	54.50924	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	5648925	52.26327	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5731800	54.95044	ppb		99
92)	Benzo (a) pyrene	14.91	252	5349714	53.02070	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5745048	49.40904	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5084924	49.96984	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4825721	48.54283	ppb		99

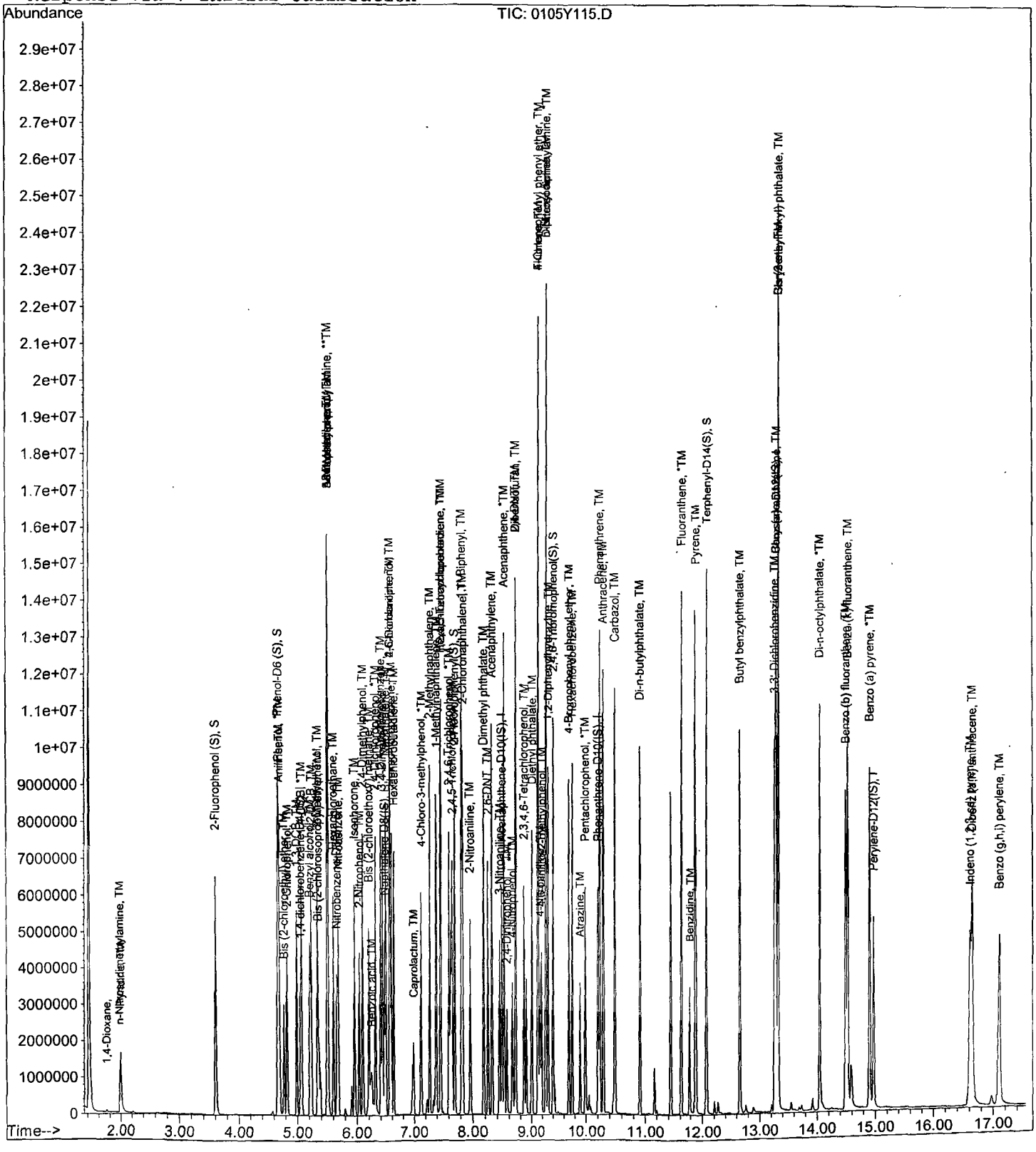
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y115.D Vial: 15
Acq On : 25 Jan 21 21:09 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:28 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y111.D Vial: 11
Acq On : 25 Jan 21 19:28 Operator: MA
Sample : BA25529W13 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:06 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	429862	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1687636	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1063734	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2179722	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2005542	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1922061	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	3022070	219.62948 ppb	0.00
Spiked Amount 250.000			Recovery =	87.852%	
6) Phenol-D6 (S)	4.67	99	4038861	229.55909 ppb	0.00
Spiked Amount 250.000			Recovery =	91.824%	
22) Nitrobenzene-D5(S)	5.66	82	2242195	112.63047 ppb	0.00
Spiked Amount 125.000			Recovery =	90.104%	
46) 2-Fluorobiphenyl(S)	7.70	172	4240362	106.30732 ppb	0.00
Spiked Amount 125.000			Recovery =	85.046%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1440718	224.58678 ppb	0.00
Spiked Amount 250.000			Recovery =	89.835%	
82) Terphenyl-D14(S)	12.07	244	6613483	137.33214 ppb	0.00
Spiked Amount 125.000			Recovery =	109.866%	

Target Compounds Qvalue

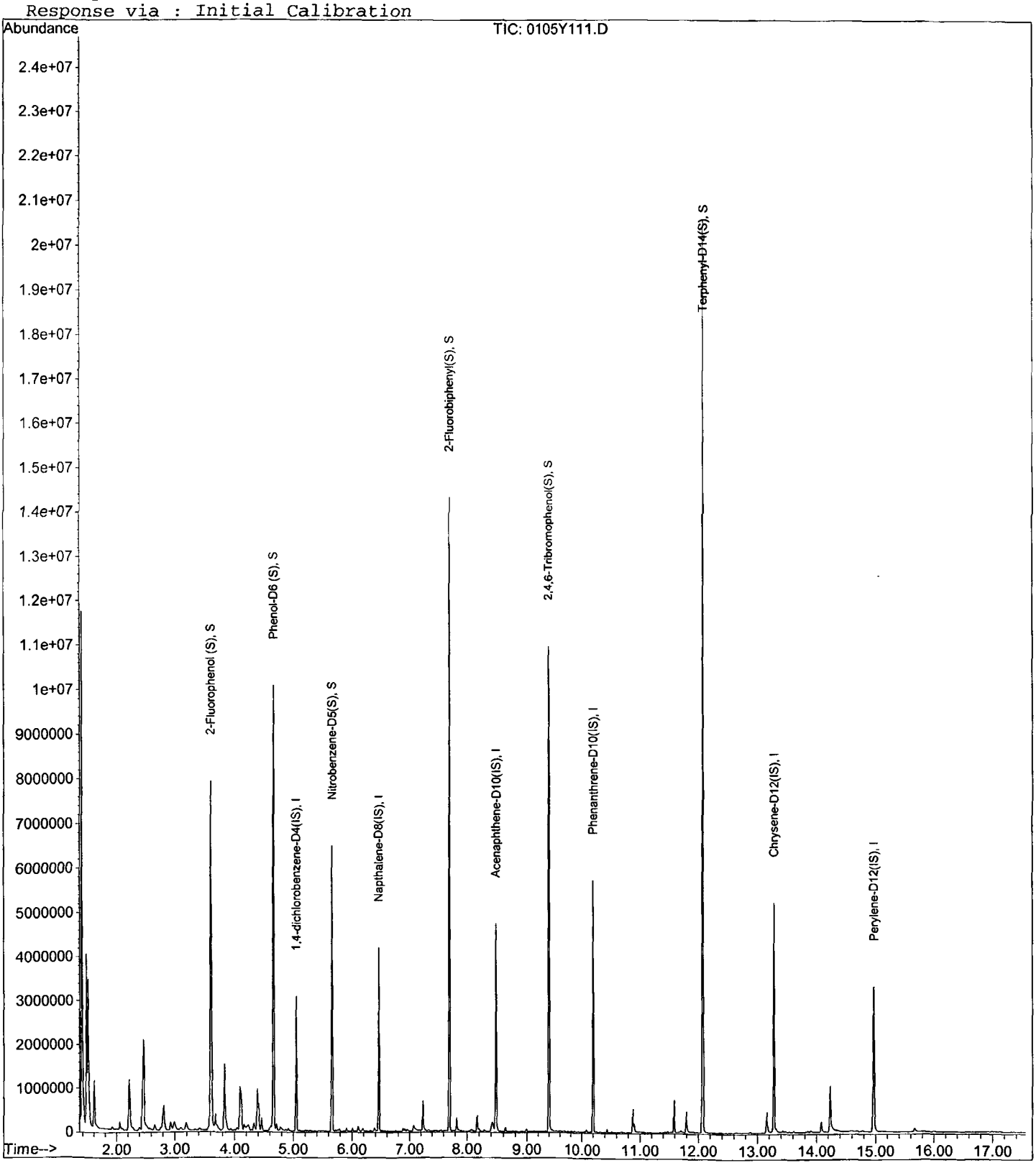
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y111.D Vial: 11
Acq On : 25 Jan 21 19:28 Operator: MA
Sample : BA25529W13 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:06 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y112.D Vial: 12
Acq On : 25 Jan 21 19:53 Operator: MA
Sample : BA25532W14 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 10:08 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	408645	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1606507	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1019863	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2067967	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1864110	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1815325	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2967624	179.69951 ppb	0.00
Spiked Amount 198.020			Recovery =	90.748%	
6) Phenol-D6 (S)	4.67	99	3968298	187.92812 ppb	0.00
Spiked Amount 198.020			Recovery =	94.904%	
22) Nitrobenzene-D5(S)	5.66	82	2236244	93.46885 ppb	0.00
Spiked Amount 99.010			Recovery =	94.404%	
46) 2-Fluorobiphenyl(S)	7.70	172	4029783	83.46457 ppb	0.00
Spiked Amount 99.010			Recovery =	84.300%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1417352	182.53375 ppb	0.00
Spiked Amount 198.020			Recovery =	92.180%	
82) Terphenyl-D14(S)	12.08	244	6498851	115.00263 ppb	0.00
Spiked Amount 99.010			Recovery =	116.153%	

Target Compounds Qvalue

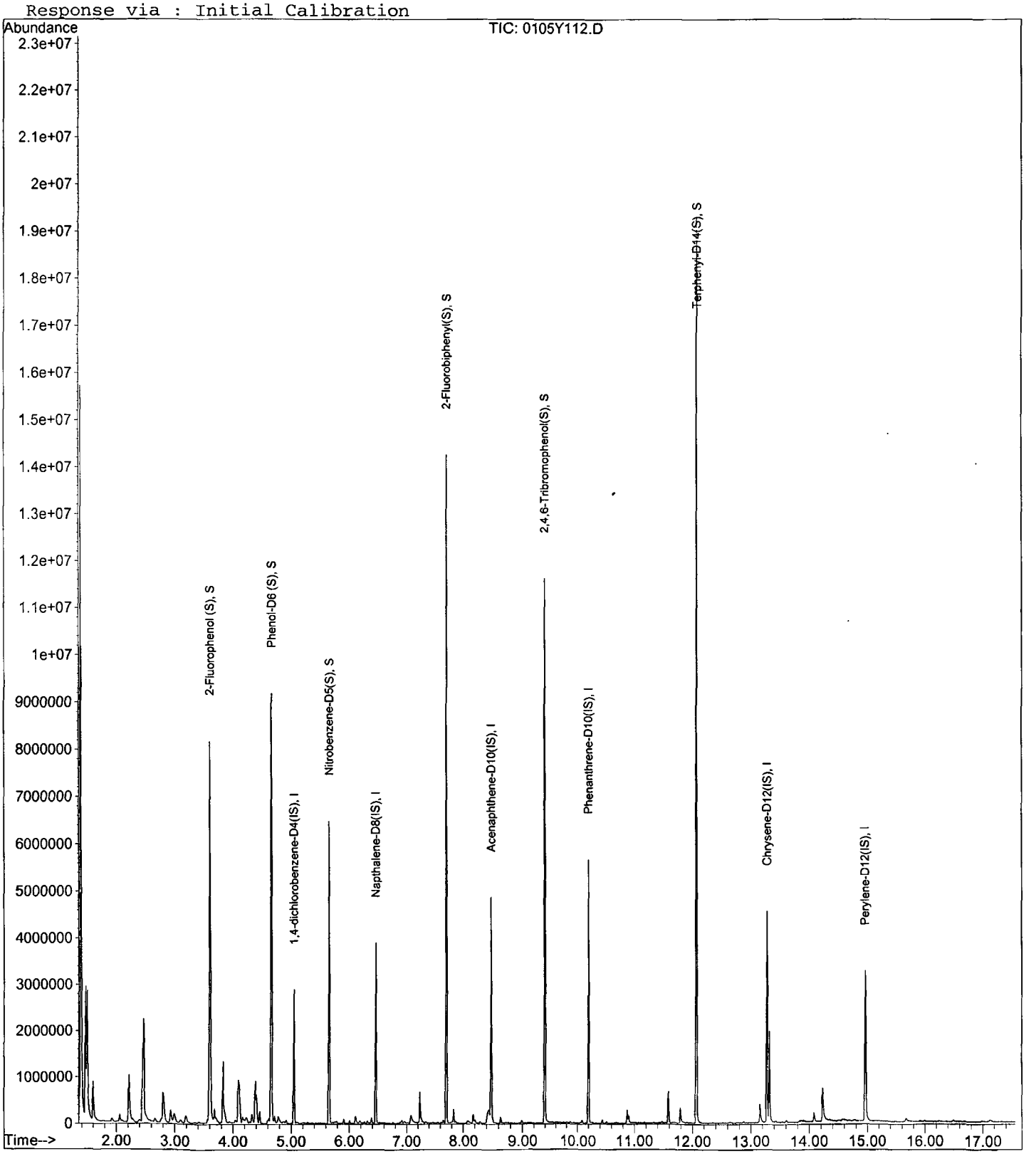
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y112.D Vial: 12
Acq On : 25 Jan 21 19:53 Operator: MA
Sample : BA25532W14 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Jan 26 10:08 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y113.D Vial: 13
Acq On : 25 Jan 21 20:19 Operator: MA
Sample : BA25535W14 1/1040 Inst : Yoda
Misc : Multiplr: 0.96

Quant Time: Jan 26 10:08 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	450825	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1752659	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1084783	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2239988	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2026505	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1947568	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	3102303	165.36696 ppb	0.00
Spiked Amount 192.308			Recovery	= 85.991%	
6) Phenol-D6 (S)	4.66	99	4131877	172.25085 ppb	0.00
Spiked Amount 192.308			Recovery	= 89.571%	
22) Nitrobenzene-D5(S)	5.66	82	2326217	86.55087 ppb	0.00
Spiked Amount 96.154			Recovery	= 90.013%	
46) 2-Fluorobiphenyl(S)	7.70	172	4256429	80.49208 ppb	0.00
Spiked Amount 96.154			Recovery	= 83.712%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1488929	175.07604 ppb	0.00
Spiked Amount 192.308			Recovery	= 91.040%	
82) Terphenyl-D14(S)	12.08	244	6790910	107.35229 ppb	0.00
Spiked Amount 96.154			Recovery	= 111.646%	

Target Compounds Qvalue

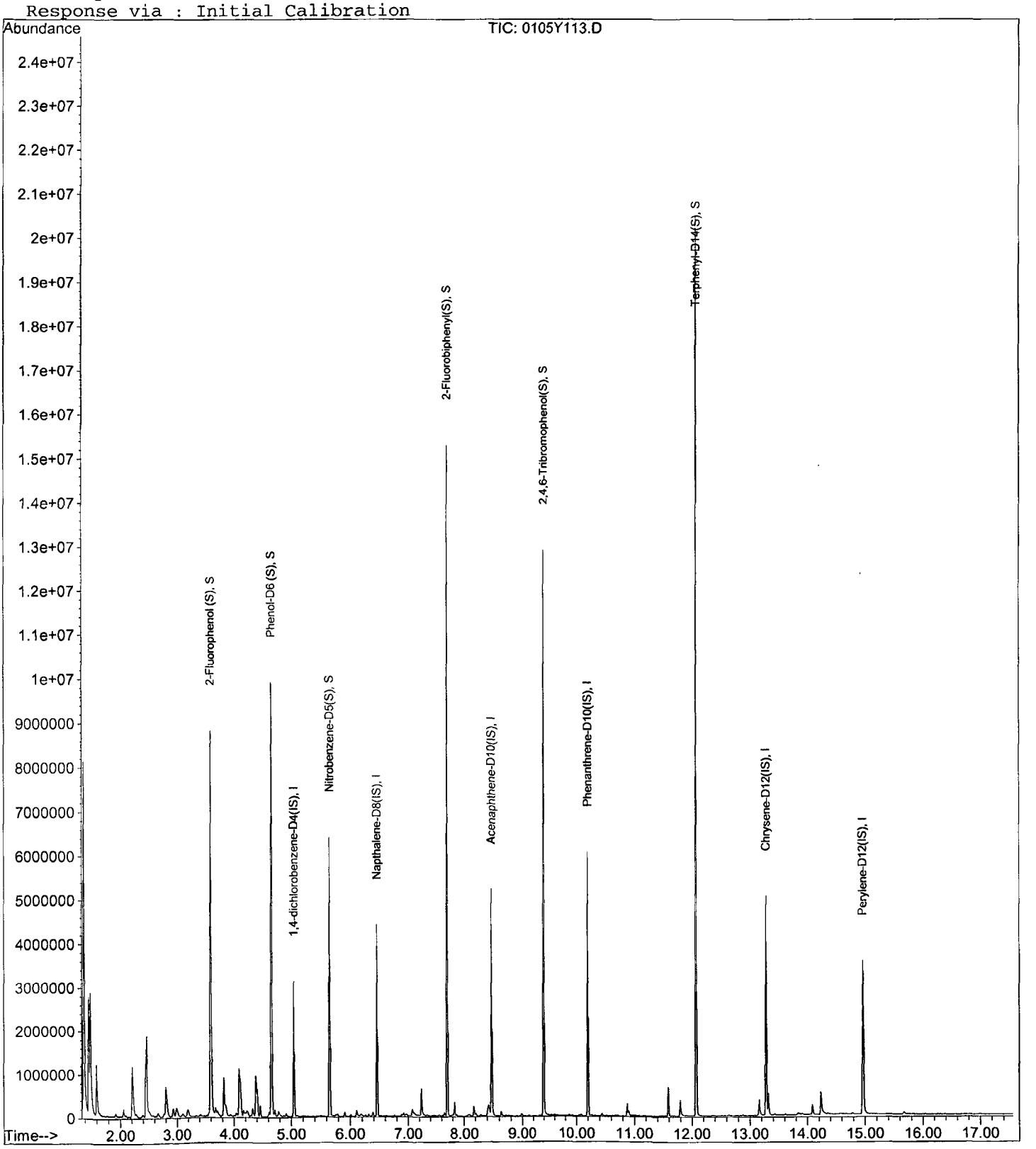
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y113.D Vial: 13
Acq On : 25 Jan 21 20:19 Operator: MA
Sample : BA25535W14 1/1040 Inst : Yoda
Misc : Multiplr: 0.96

Quant Time: Jan 26 10:08 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y114.D Vial: 14
Acq On : 25 Jan 21 20:44 Operator: MA
Sample : BA25538W15 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:09 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	419694	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1627109	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1018245	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2099141	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1915606	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	1834330	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2885848	214.81068	ppb	0.00
Spiked Amount 250.000			Recovery =	85.924%		
6) Phenol-D6 (S)	4.66	99	3900928	227.09094	ppb	0.00
Spiked Amount 250.000			Recovery =	90.836%		
22) Nitrobenzene-D5(S)	5.66	82	2199031	114.57134	ppb	0.00
Spiked Amount 125.000			Recovery =	91.657%		
46) 2-Fluorobiphenyl(S)	7.70	172	4160856	108.97419	ppb	0.00
Spiked Amount 125.000			Recovery =	87.179%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1442109	234.84648	ppb	0.00
Spiked Amount 250.000			Recovery =	93.938%		
82) Terphenyl-D14(S)	12.07	244	6637443	144.30066	ppb	0.00
Spiked Amount 125.000			Recovery =	115.441%		

Target Compounds Qvalue

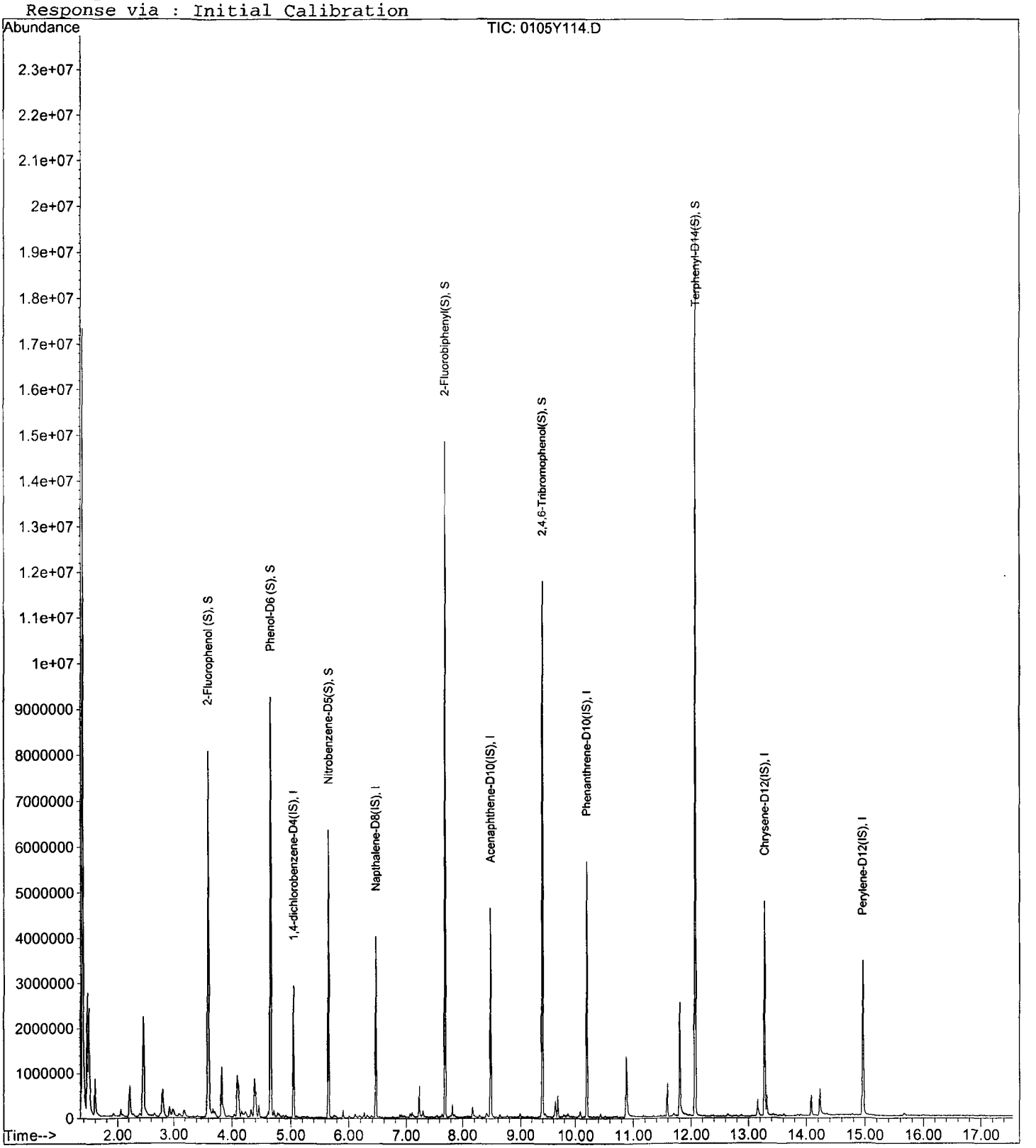
(#) = qualifier out of range (m) = manual integration
0105Y114.D Y0105.M Wed Jan 27 12:23:22 2021 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y114.D Vial: 14
Acq On : 25 Jan 21 20:44 Operator: MA
Sample : BA25538W15 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:09 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	425738	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1634419	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1005652	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2061374	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1858844	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1771379	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1777337	130.41950 ppb	0.00
Spiked Amount 250.000			Recovery =	52.168%	
6) Phenol-D6 (S)	4.66	99	2340174	134.29826 ppb	0.00
Spiked Amount 250.000			Recovery =	53.719%	
22) Nitrobenzene-D5(S)	5.65	82	1324847	68.71691 ppb	0.00
Spiked Amount 125.000			Recovery =	54.974%	
46) 2-Fluorobiphenyl(S)	7.70	172	2379678	63.10500 ppb	0.00
Spiked Amount 125.000			Recovery =	50.484%	
64) 2,4,6-Tribromophenol(S)	9.39	330	736575	121.45279 ppb	0.00
Spiked Amount 250.000			Recovery =	48.581%	
82) Terphenyl-D14(S)	12.08	244	3846067	86.16831 ppb	0.00
Spiked Amount 125.000			Recovery =	68.934%	

Target Compounds Qvalue

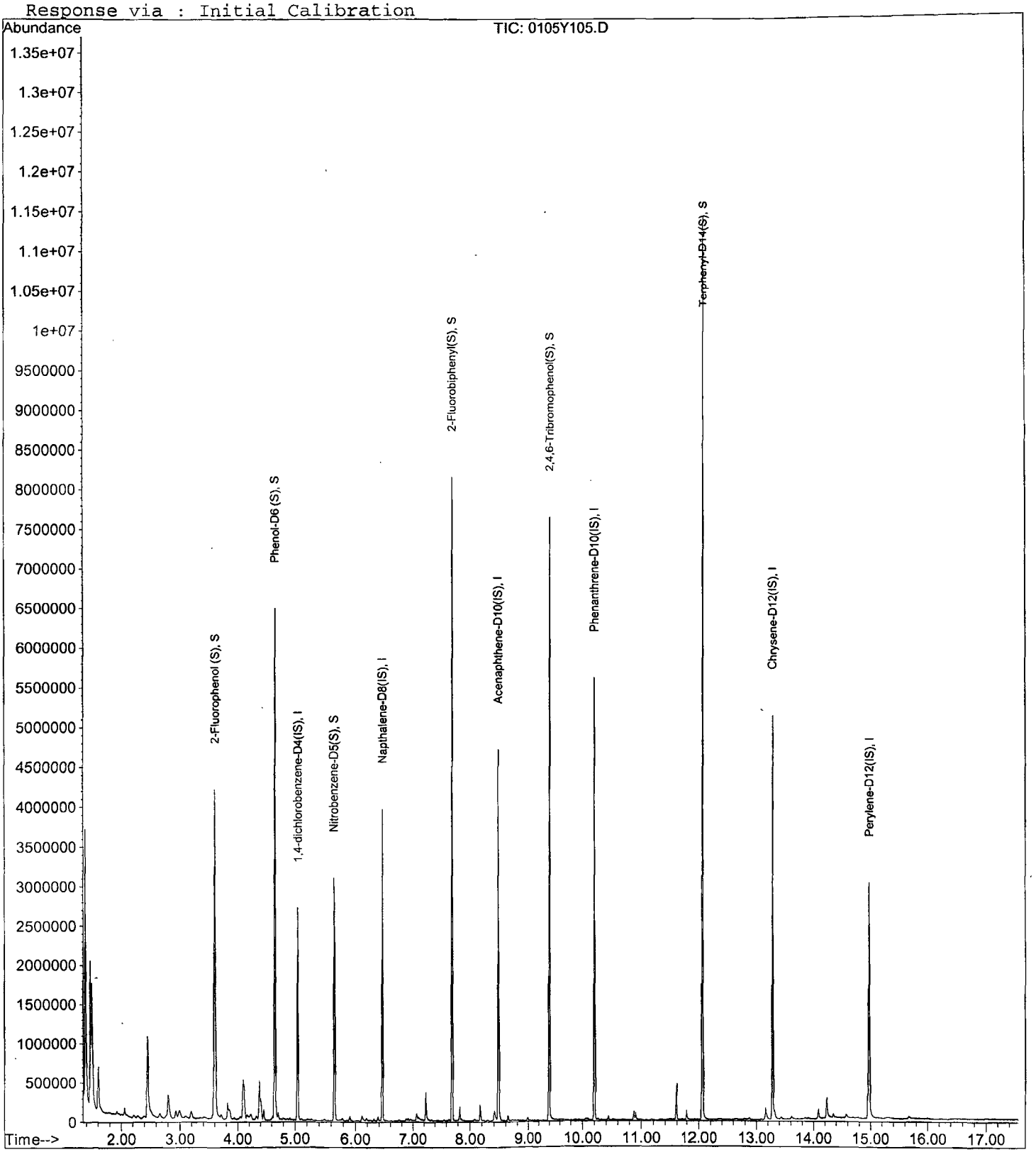
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y105.D Vial: 5
Acq On : 25 Jan 21 16:56 Operator: MA
Sample : 210122A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 26 10:03 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	400800	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1600610	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	971879	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2027584	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1902852	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1802107	40.00000	ppb		0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	2913375	227.08259	ppb		0.00
Spiked Amount 250.000			Recovery = 90.833%				
6) Phenol-D6 (S)	4.67	99	3789371	230.99578	ppb		0.00
Spiked Amount 250.000			Recovery = 92.398%				
22) Nitrobenzene-D5(S)	5.66	82	2186247	115.79105	ppb		0.00
Spiked Amount 125.000			Recovery = 92.633%				
46) 2-Fluorobiphenyl(S)	7.71	172	4033199	110.67021	ppb		0.00
Spiked Amount 125.000			Recovery = 88.536%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1413508	241.17058	ppb		0.00
Spiked Amount 250.000			Recovery = 96.468%				
82) Terphenyl-D14(S)	12.08	244	6418869	140.48411	ppb		0.00
Spiked Amount 125.000			Recovery = 112.387%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	9641	3.76836		#	49
3) n-Nitrosodimethylamine	1.98	42	245236	50.11116	ppb		74
4) Pyridine	2.00	79	491006	45.84823	ppb		89
7) Phenol	4.68	94	1112494	57.40240	ppb		88
8) Aniline	4.69	93	797376	56.32880	ppb	#	60
9) Bis (2-chloroethyl) ether	4.77	63	523218	63.25995	ppb		98
10) 2-Chlorophenol	4.82	128	839432	57.24884	ppb		91
11) 1,3-DCB	4.98	146	829253	49.10960	ppb		98
12) 1,4-DCB	5.07	146	870236	51.16244	ppb		98
13) Benzyl alcohol	5.21	108	511672	59.51345	ppb		98
14) 1,2-DCB	5.23	146	825556	51.70395	ppb		96
15) 2-Methylphenol	5.34	107	656220	58.45081	ppb		99
16) Bis (2-chloroisopropyl) et	5.36	45	513339	65.67632	ppb		96
17) Acetophenone	5.50	105	1210671	58.93554	ppb		97
18) 3&4-Methylphenol	5.50	107	1753767	115.65361	ppb		96
19) n-Nitrosodi-n-propylamine	5.50	70	735717	61.37937	ppb		95
20) Hexachloroethane	5.61	117	317233	45.57118	ppb		86
23) Nitrobenzene	5.68	77	1110166	57.15168	ppb		98
24) Isophorone	5.95	82	1760498	56.43001	ppb		95
25) 2-Nitrophenol	6.03	139	451445	55.05380	ppb		93
26) 2,4-Dimethylphenol	6.09	122	690061	50.88086	ppb		95
27) Benzoic acid	6.22	105	634560	53.41547	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1026931	58.20806	ppb		99
29) 2,4-Dichlorophenol	6.31	162	758478	54.02957	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	780197	47.68235	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1180807	54.54579	ppb		95
32) Naphthalene	6.49	128	2447945	55.26402	ppb		99
33) 4-Chloroaniline	6.55	127	633425	38.13422	ppb		95
34) 2,6-Dichlorophenol	6.56	162	748224	54.80320	ppb		95
35) Hexachloropropene	6.58	213	322148	21.99000	ppb		99
36) Hexachlorobutadiene	6.63	225	447523	38.65823	ppb		98
37) Caprolactum	6.97	55	273017	61.08306	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	821428	55.96502 ppb		99
39)	2-Methylnaphthalene	7.28	142	1592622	54.69600 ppb		100
40)	1-Methylnaphthalene	7.39	142	1578731	52.58982 ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	195904	21.39217 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	876192	50.07382 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	614426	56.43443 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	647219	54.41384 ppb		95
47)	1,1'-Biphenyl	7.82	154	2172479	55.55455 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	1702963	56.00113 ppb		96
49)	2-Nitroaniline	7.96	65	580016	59.93415 ppb		78
50)	Dimethyl phthalate	8.18	163	2257065	60.68031 ppb		99
51)	2,6-DNT	8.24	165	486326	59.76856 ppb	#	68
52)	Acenaphthylene	8.31	152	2569259	55.47996 ppb		99
53)	3-Nitroaniline	8.44	138	377668	49.71431 ppb		89
54)	Acenaphthene	8.51	154	1703669	55.32718 ppb		99
55)	2,4-Dinitrophenol	8.56	184	203896	50.24428 ppb		94
56)	4-Nitrophenol	8.65	65	433033	57.76938 ppb		86
57)	Dibenzofuran	8.72	168	2554036	55.73347 ppb		95
58)	2,4-DNT	8.71	165	691192	59.12217 ppb		93
59)	2,3,4,6-Tetrachlorophenol	8.87	232	537426	57.06092 ppb		96
60)	Diethyl phthalate	9.00	149	2258845	59.41514 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.13	204	1210780	57.65093 ppb		93
62)	Fluorene	9.12	166	2201854	57.07961 ppb		100
63)	4-Nitroaniline	9.15	138	465962	56.38930 ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	339890	43.69046 ppb	#	64
67)	Diphenyl amine	9.26	169	3297054	108.06867 ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3297054	108.06867 ppb		100
69)	1,2-Diphenylhydrazine	9.30	77	2242370	57.98291 ppb		89
70)	4-Bromophenyl phenyl ether	9.69	248	674732	54.60550 ppb		92
71)	Hexachlorobenzene	9.75	284	681749	53.73569 ppb	#	72
72)	Atrazine	9.90	200	335142	31.20419 ppb		98
73)	Pentachlorophenol	9.99	266	429091	51.05737 ppb		99
74)	Phenanthrene	10.23	178	3205663	57.04914 ppb		99
75)	Anthracene	10.30	178	3275781	55.88621 ppb		99
76)	Carbazol	10.48	167	2905206	55.97312 ppb		95
77)	Di-n-butylphthalate	10.91	149	3888527	61.06601 ppb		99
78)	Fluoranthene	11.61	202	3674770	56.04277 ppb		99
80)	Benzidine	11.78	184	416073	27.48331 ppb		98
81)	Pyrene	11.88	202	3878509	61.11069 ppb		99
83)	Butyl benzylphthalate	12.65	149	1776298	65.28747 ppb		98
84)	3,3'-Dichlorobenzidine	13.26	252	518589	24.57931 ppb		100
85)	Benz (a) anthracene	13.28	228	3619114	55.64341 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2630986	67.21797 ppb		98
87)	Chrysene	13.31	228	3728418	60.86638 ppb		99
88)	Di-n-octylphthalate	14.05	149	4073866	63.48831 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3658811	64.60696 ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3175254	58.09880 ppb		98
92)	Benzo (a) pyrene	14.90	252	3008431	56.90671 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	3260499	53.51868 ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	2951436	55.35609 ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	2860270	54.91342 ppb		100

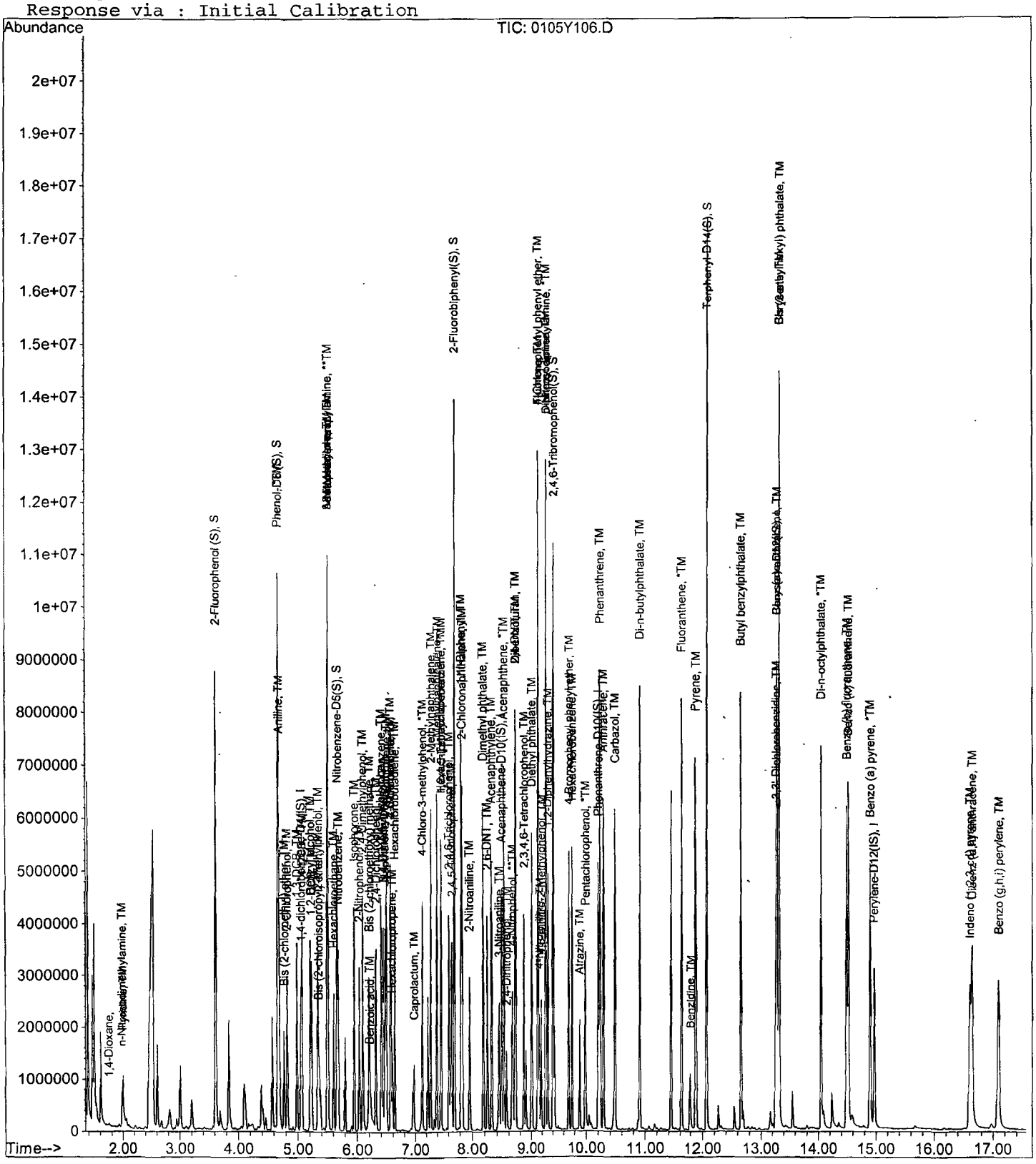
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y106.D Vial: 6
Acq On : 25 Jan 21 17:21 Operator: MA
Sample : 210122A LCS-1 1/0.8 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 25 18:00 2021 Quant Results File: Y0105.RES

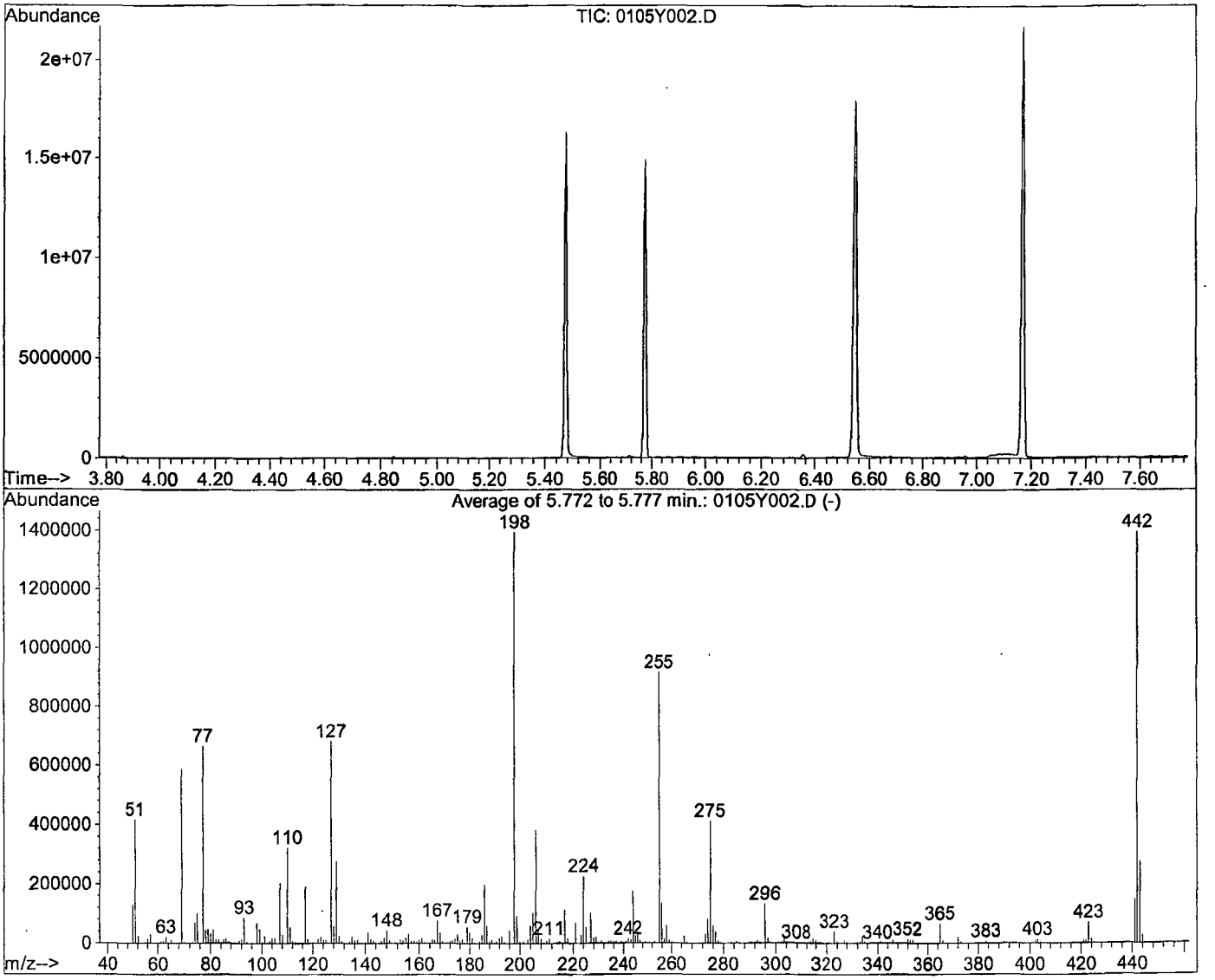
Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

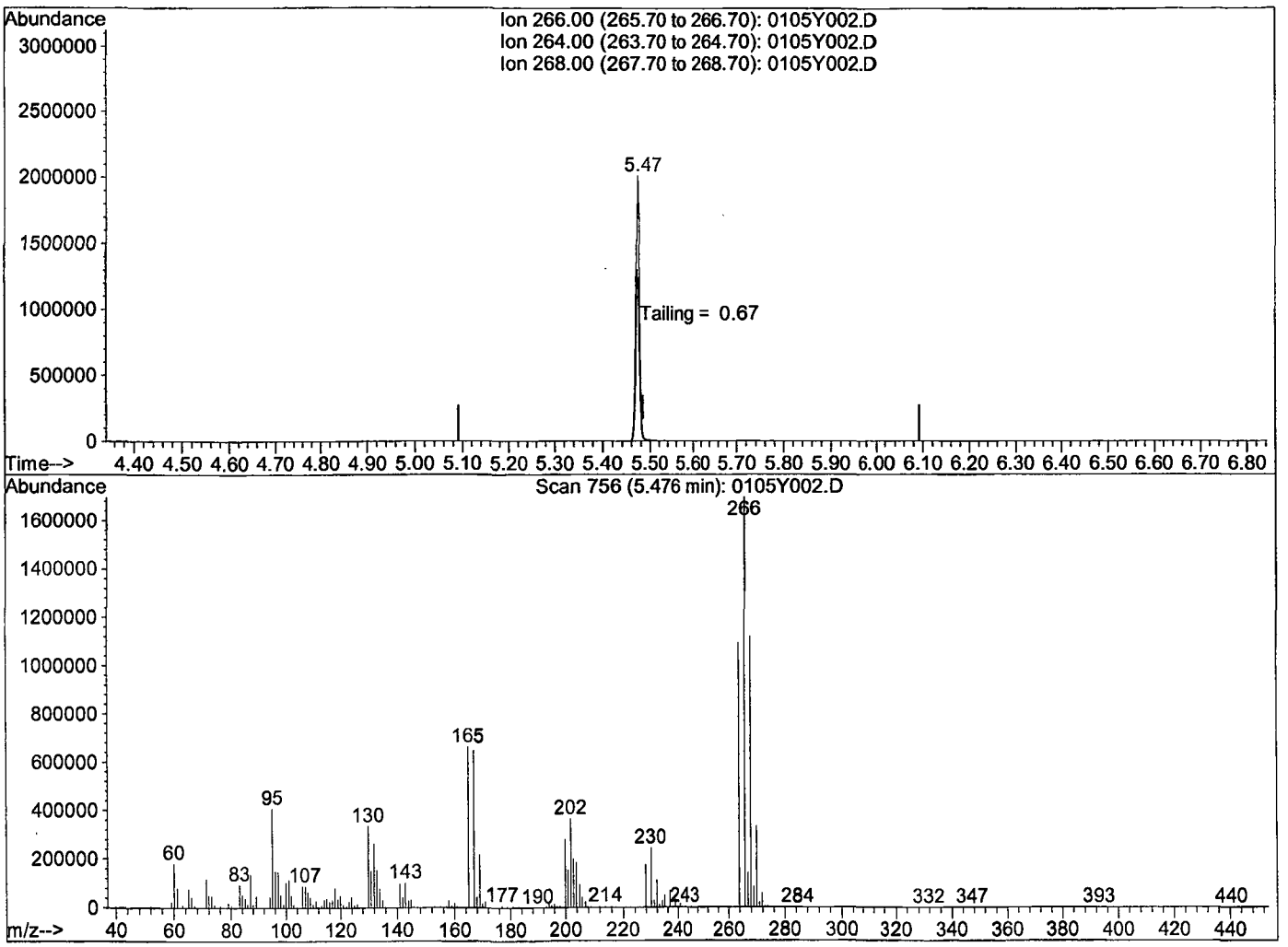
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

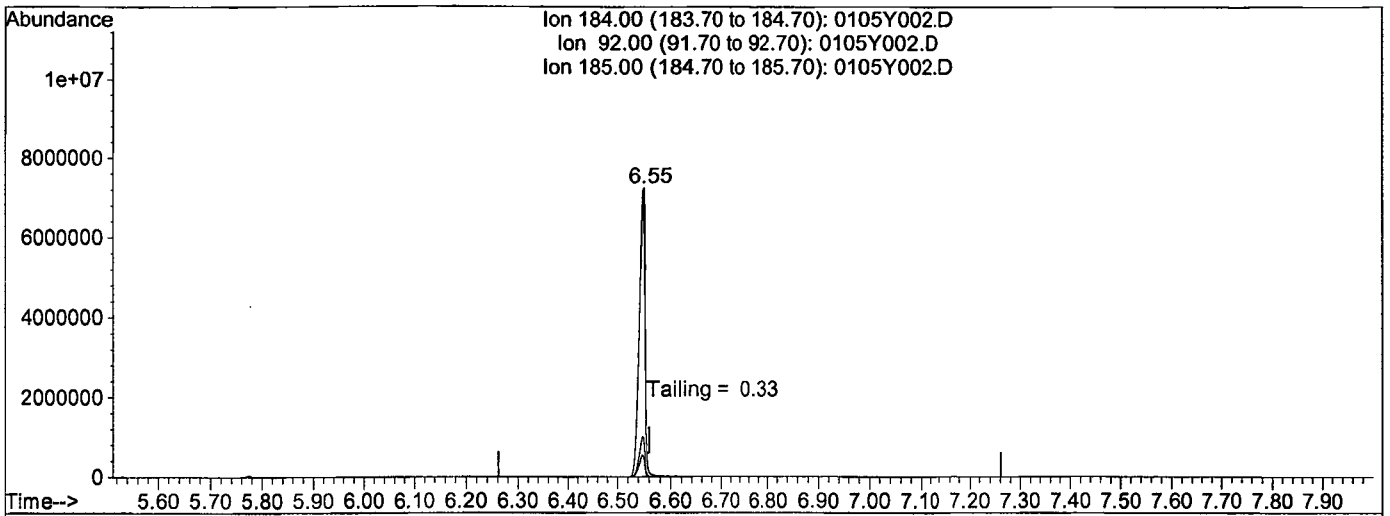
response 10909057

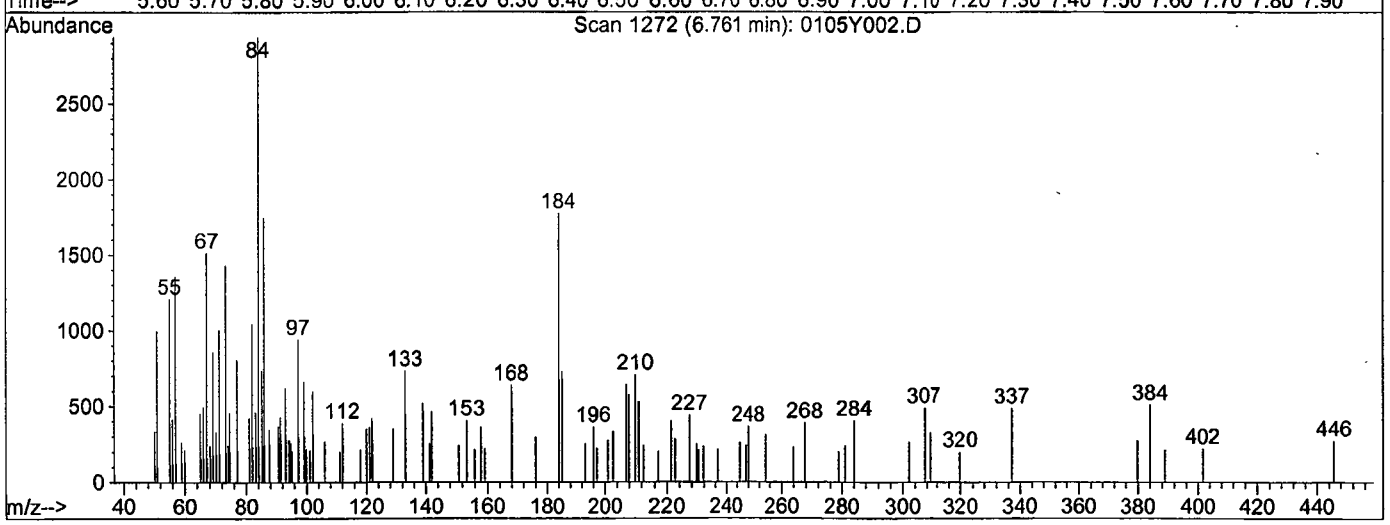
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

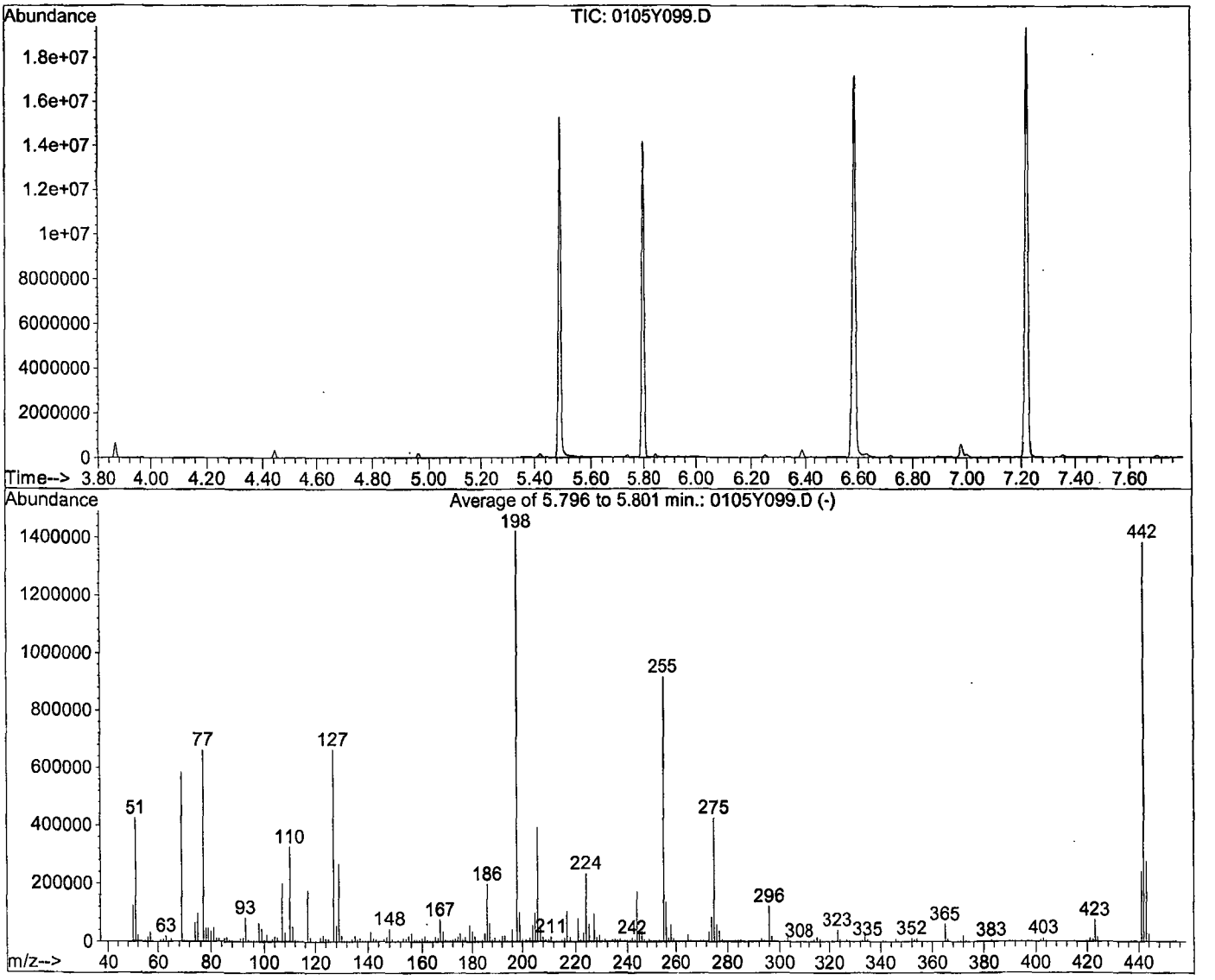
response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 884, 885, 886; Background Corrected with Scan 875

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	423872	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	3612	PASS
127	198	10	80	46.7	662677	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1420459	PASS
199	198	5	9	6.9	98451	PASS
275	198	10	60	29.9	424256	PASS
365	198	1	100	4.2	59421	PASS
441	442	0.01	24	17.3	239381	PASS
442	198	50	500	97.4	1383403	PASS
443	442	15	24	19.9	274965	PASS

0105Y099.D Y0105.M Mon Jan 25 12:34:26 2021

Data File Name:	**0105Y099.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:23**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**99**
Instrument Name:	**Yoda**

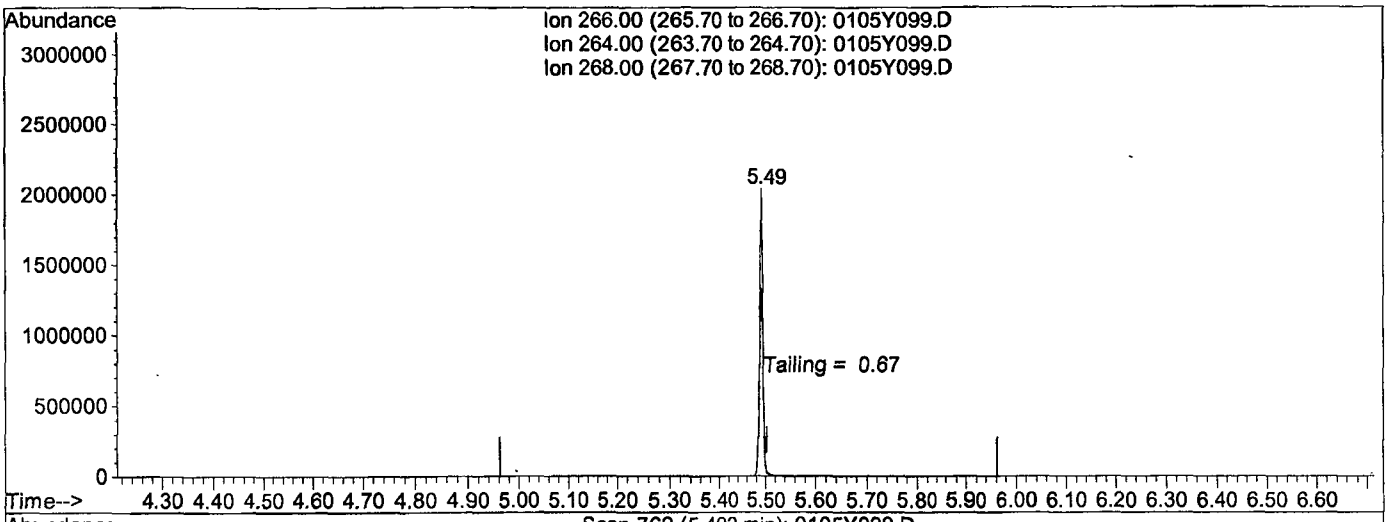
#	Name	Ret Time	Target Response
1)	DDT	7.12	144580000
2)	DDD	6.84	300557
3)	DDE	5.89	127448

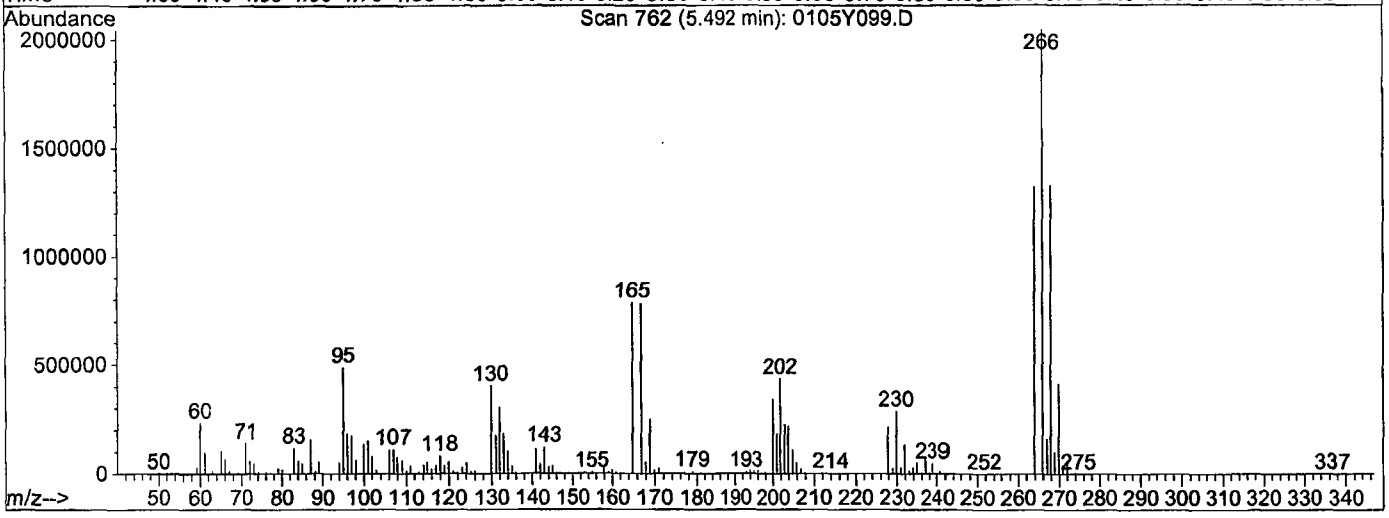
Breakdown **0.30**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y099.D

(5) Pentachlorophenol

5.49min 0.0000

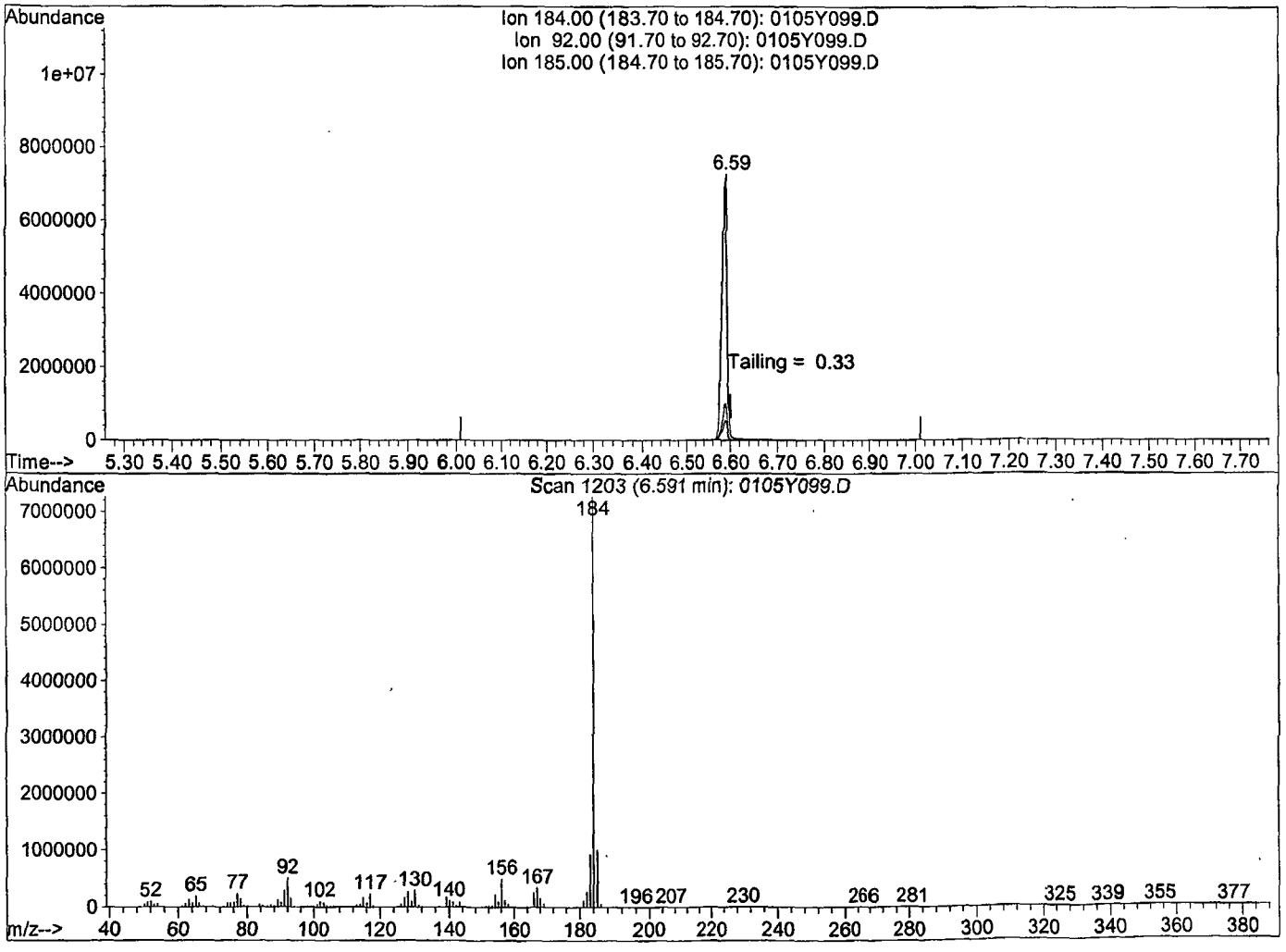
response 10863019

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.81
268.00	64.30	63.53
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y099.D Vial: 99
Acq On : 25 Jan 21 12:23 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:34 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y099.D

(6) Benzidine

6.59min 0.0000

response 54196247

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.24
185.00	14.10	13.77
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	"	"	"

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	"	"	"

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL	"	"	1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	(4)	Prep'd By (Initials)	MA
Prep Date	05/29/20		
Exp Date	12/31/25		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Name of Final Standard	8270 Surrogate	Prep'd By (Initials)	MA
Prep Date	10/06/20		
Exp Date	10/06/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	**A0158618-50006, A0152714-49436**	**09/30/27**	20 mL	200 mL	**Acetone246130/ MC59353 1:1**	1000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	**A0158684-50244,5024550248,50004**	**02/28/26**	20 mL	*	*	500 ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	

GC Requires Extract By:				
pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2 equip	800 E-HP27 E-WB6	1	2/1	01/22/21 12:00	
2	210122A LCS-1		1	1	0.2	1 equip	800 E-HP28 E-WB6	1	2/1	01/22/21 12:00	
3	210122A LCS-2		0.125	2	0.050	2 equip	800 E-HP29 E-WB6	1	2/1	01/22/21 12:00	
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2 equip	900 E-HP16 E-WB6	1	2/1	01/22/21 12:00	94808
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2 equip	900 E-HP15 E-WB6	1	2/1	01/22/21 12:00	94808
6	BA25434	BA25434W23			0.2,0.050	1,2 equip	980 E-HP30 E-WB6	1	2/1	01/22/21 12:00	94808
7	BA25526 MS-1	BA25526W18	1	1	0.2	1 equip	1010 E-HP13 E-WB6	1	2/1	01/22/21 12:00	94825
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1 equip	1010 E-HP12 E-WB6	1	2/1	01/22/21 12:00	94825
9	BA25526	BA25526W17			0.2,0.050	1,2 equip	1000 E-HP14 E-WB6	1	2/1	01/22/21 12:00	94825
10	BA25529	BA25529W13			0.2,0.050	1,2 equip	800 E-HP11 E-WB6	1	2/1	01/22/21 12:00	94826
11	BA25532	BA25532W14			0.2,0.050	1,2 equip	1010 E-HP10 E-WB6	1	2/1	01/22/21 12:00	94826
12	BA25535	BA25535W14			0.2,0.050	1,2 equip	1040 E-HP9 E-WB6	1	2/1	01/22/21 12:00	94826
13	BA25538	BA25538W15			0.2,0.050	1,2 equip	800 E-HP8 E-WB6	1	2/1	01/22/21 12:00	94826

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
99	0105Y099.D	1	SV TUNE 10/02/20		25 Jan 21 12:23
100	0105Y100.D	1	50ug/mL 8270 01/05/21 (1)		25 Jan 21 12:38
5	0105Y105.D	1.25	210122A BLK 1/800		25 Jan 21 16:56
6	0105Y106.D	1.25	210122A LCS-1 1/0.8		25 Jan 21 17:21
11	0105Y111.D	1.25	BA25529W13 1/800		25 Jan 21 19:28
12	0105Y112.D	0.9901	BA25532W14 1/1010		25 Jan 21 19:53
13	0105Y113.D	0.96154	BA25535W14 1/1040		25 Jan 21 20:19
14	0105Y114.D	1.25	BA25538W15 1/800		25 Jan 21 20:44
15	0105Y115.D	1	50ug/mL 8270 08/12/20 (5)		25 Jan 21 21:09

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus
Initials: MA/AM

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365 ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%		
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430 ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	3319	0.10747 ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732 ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840 ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989 ppb		99
8) Acenaphthene	6.29	154	2015	0.11591 ppb		99
9) Fluorene	6.89	166	2152	0.10616 ppb		99
11) Phenanthrene	8.00	178	3385	0.11073 ppb		99
12) Anthracene	8.06	178	2860	0.10435 ppb		99
14) Fluoranthene	9.39	202	4464	0.11015 ppb		96
16) Pyrene	9.64	202	4575	0.10974 ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559 ppb		98
18) Chrysene	11.15	228	4309	0.11468 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100 ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329 ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757 ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750 ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678 ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168 ppb		94

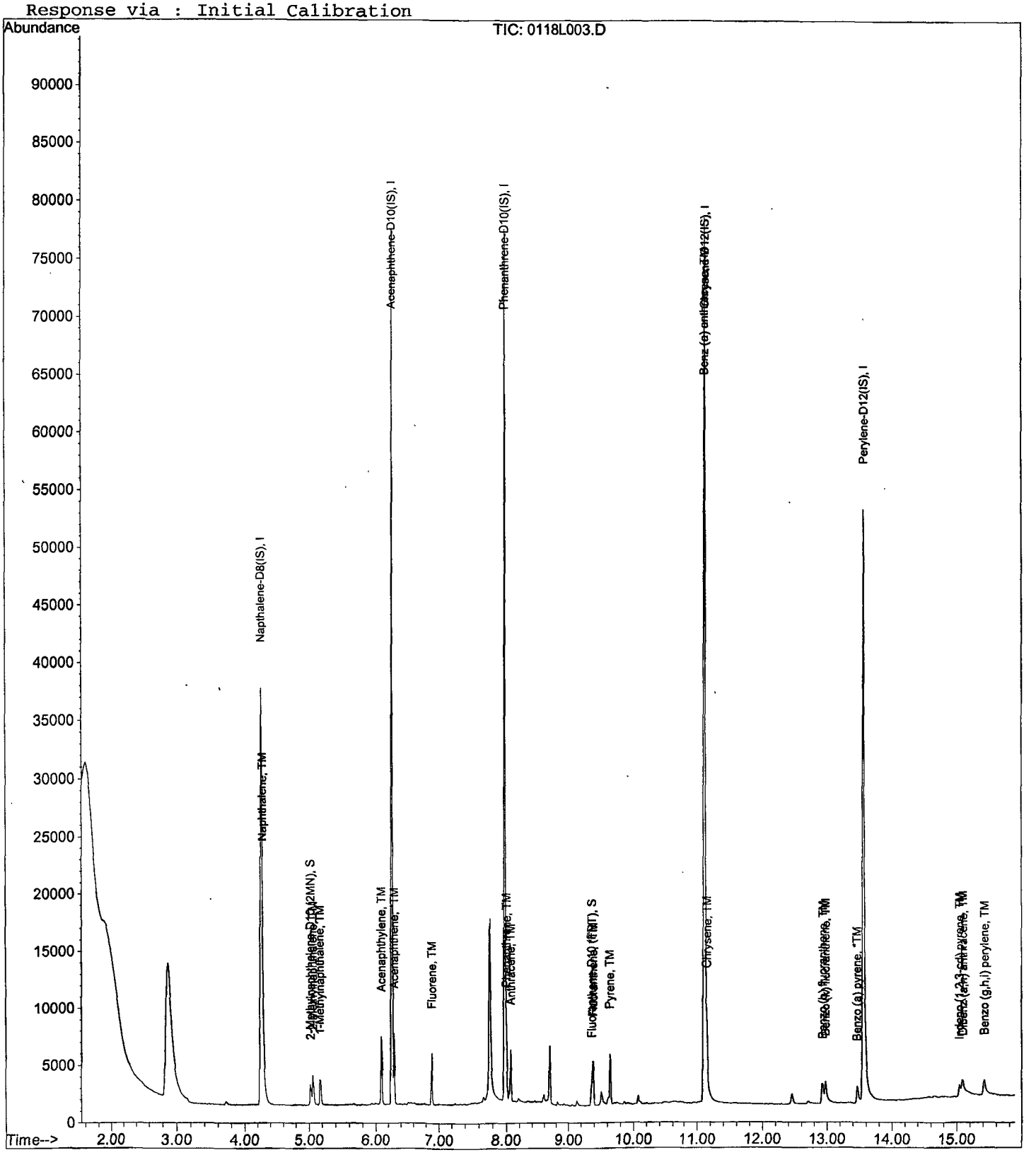
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562	ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%			
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183	ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	6554	0.21427	ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578	ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723	ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472	ppb		99
8) Acenaphthene	6.29	154	3730	0.21987	ppb		98
9) Fluorene	6.89	166	4201	0.21236	ppb		99
11) Phenanthrene	8.00	178	6614	0.21709	ppb		99
12) Anthracene	8.06	178	5555	0.20337	ppb		100
14) Fluoranthene	9.38	202	8388	0.20768	ppb	#	84
16) Pyrene	9.64	202	8654	0.21194	ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097	ppb		96
18) Chrysene	11.15	228	7901	0.21470	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777	ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570	ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787	ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285	ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333	ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832	ppb		97

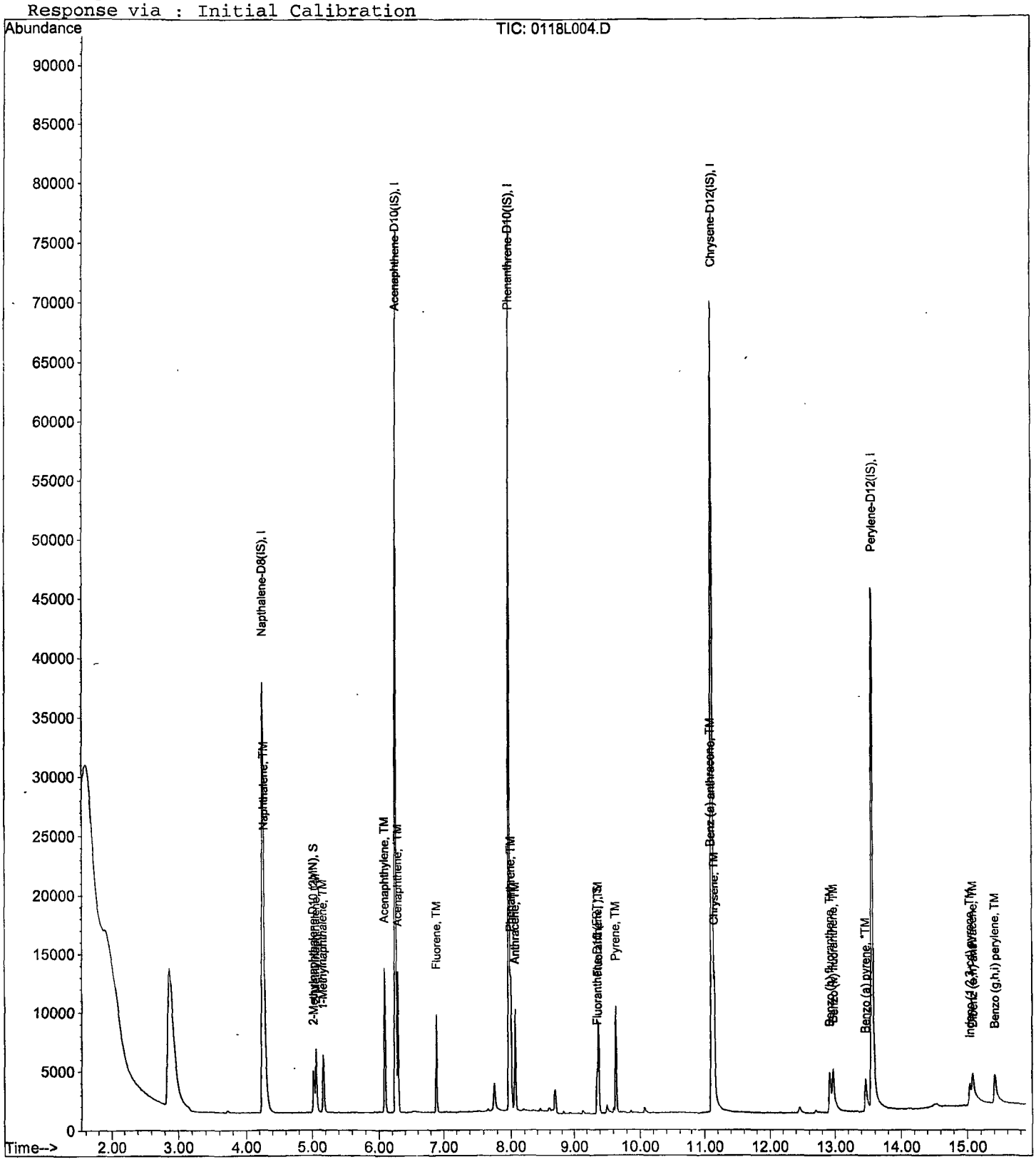
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979	ppb		0.00
Spiked Amount 5.000			Recovery =	5.200%			
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727	ppb		0.00
Spiked Amount 5.000			Recovery =	4.940%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	15152	0.53197	ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641	ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883	ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452	ppb		99
8) Acenaphthene	6.29	154	8507	0.53809	ppb		99
9) Fluorene	6.89	166	9747	0.52871	ppb		100
11) Phenanthrene	8.00	178	15220	0.53650	ppb		99
12) Anthracene	8.06	178	13445	0.52863	ppb		99
14) Fluoranthene	9.39	202	19405	0.51598	ppb		97
16) Pyrene	9.64	202	19829	0.52483	ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713	ppb		97
18) Chrysene	11.15	228	17766	0.52174	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842	ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592	ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124	ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285	ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408	ppb		92

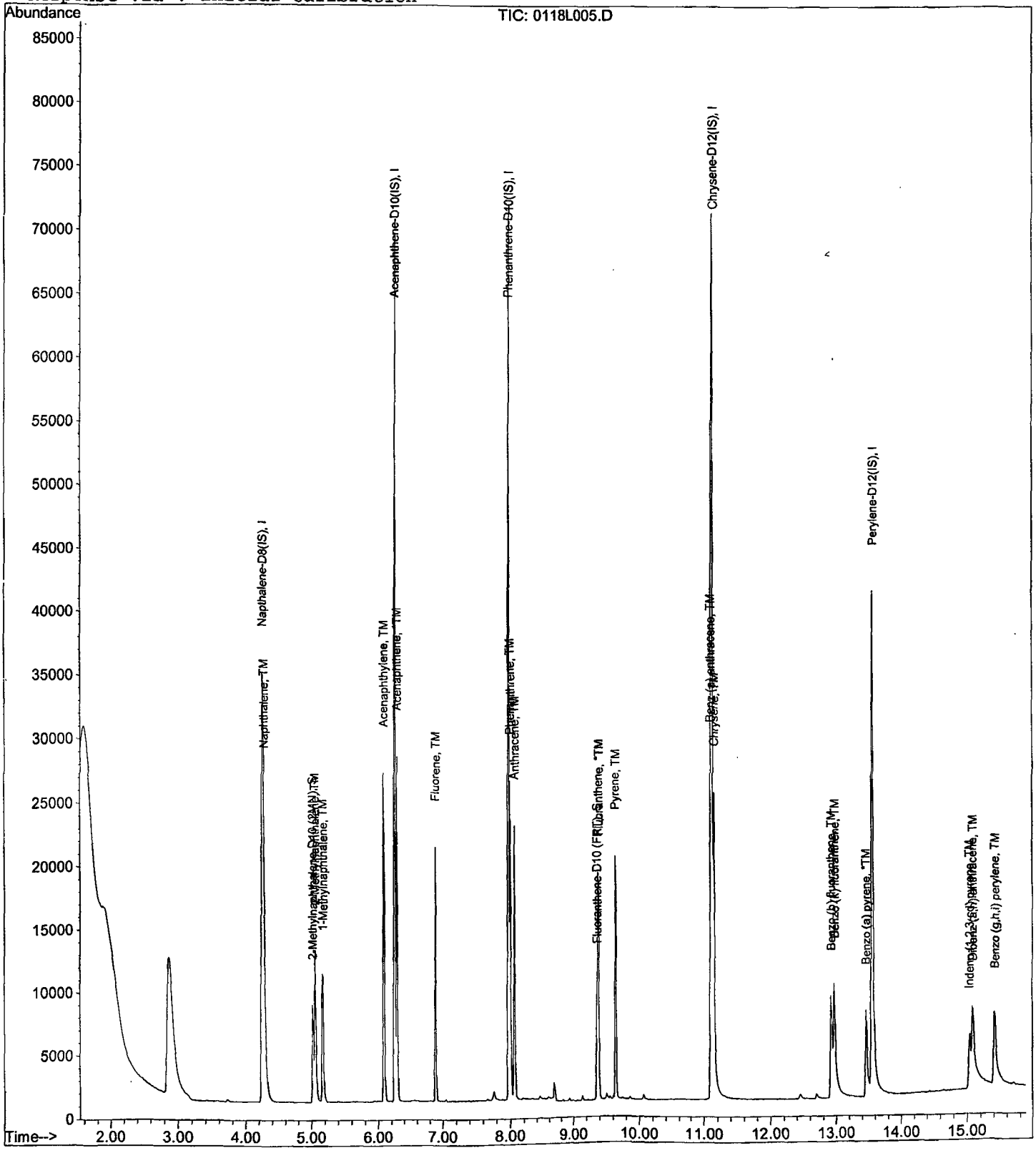
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779 ppb		0.00
Spiked Amount 5.000			Recovery = 10.160%			
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272 ppb		0.00
Spiked Amount 5.000			Recovery = 10.060%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	29158	1.03706 ppb		100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438 ppb		99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359 ppb		99
7) Acenaphthylene	6.08	152	55396	1.05240 ppb		99
8) Acenaphthene	6.29	154	16277	1.05847 ppb		100
9) Fluorene	6.89	166	18901	1.05405 ppb		99
11) Phenanthrene	8.00	178	29034	1.07377 ppb		100
12) Anthracene	8.06	178	25745	1.06201 ppb		100
14) Fluoranthene	9.39	202	38564	1.07584 ppb		98
16) Pyrene	9.65	202	38462	1.03286 ppb		100
17) Benz (a) anthracene	11.11	228	30159	0.95752 ppb		99
18) Chrysene	11.15	228	33925	1.01080 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864 ppb	#	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514 ppb		99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606 ppb		99
23) Benzo (a) pyrene	13.46	252	22522	0.92324 ppb		98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684 ppb		98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232 ppb		94

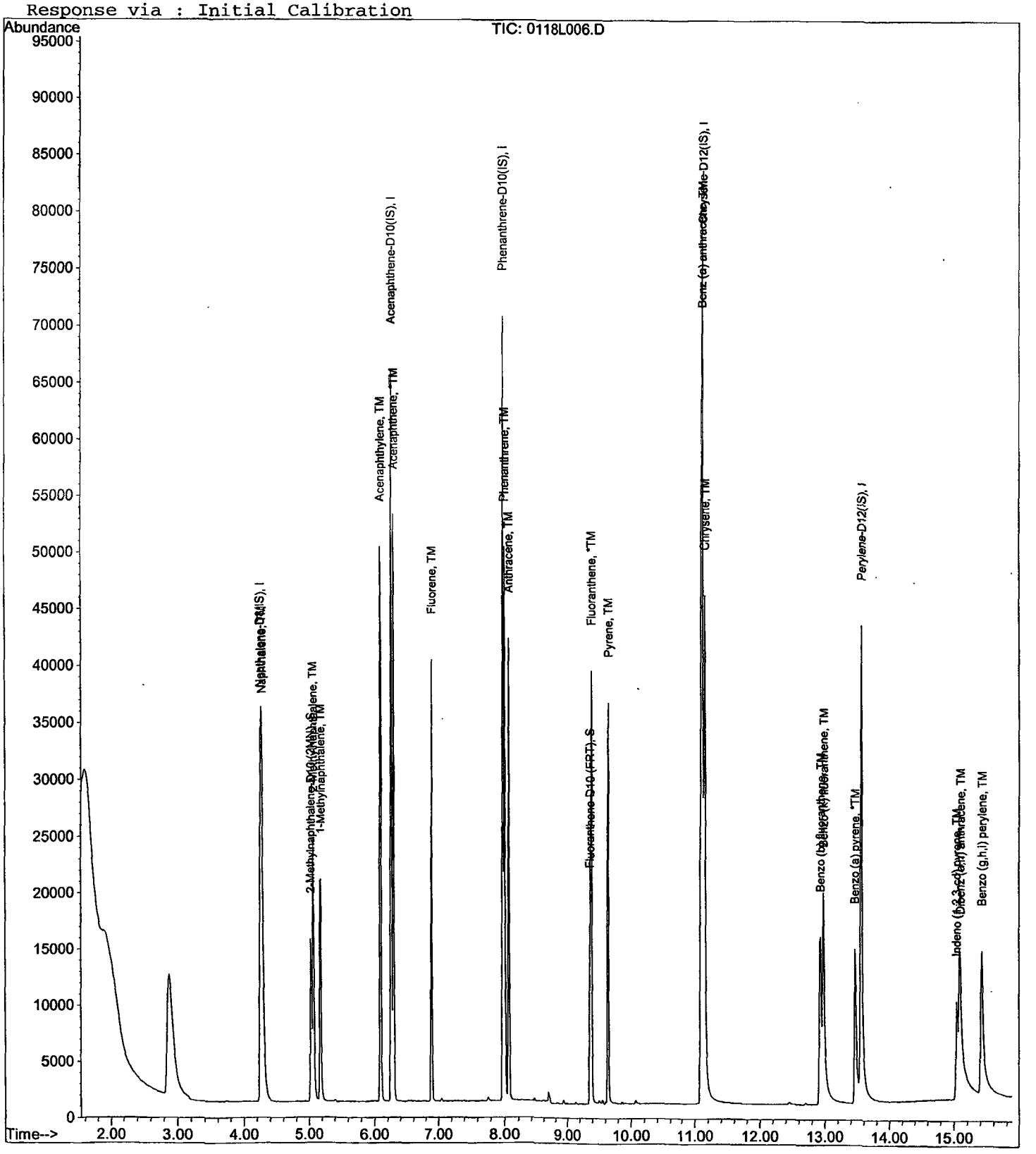
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467	ppb		0.00
Spiked Amount 5.000			Recovery = 49.300%				
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357	ppb		0.00
Spiked Amount 5.000			Recovery = 50.280%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	134538	4.98585	ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293	ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401	ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969	ppb		100
8) Acenaphthene	6.29	154	75592	5.12022	ppb		100
9) Fluorene	6.89	166	91323	5.30474	ppb		100
11) Phenanthrene	8.00	178	136722	5.27514	ppb		100
12) Anthracene	8.06	178	124850	5.37298	ppb		100
14) Fluoranthene	9.39	202	188170	5.47654	ppb		100
16) Pyrene	9.65	202	189979	5.19874	ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636	ppb		100
18) Chrysene	11.15	228	168073	5.10305	ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112	ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853	ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449	ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925	ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274	ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602	ppb		100

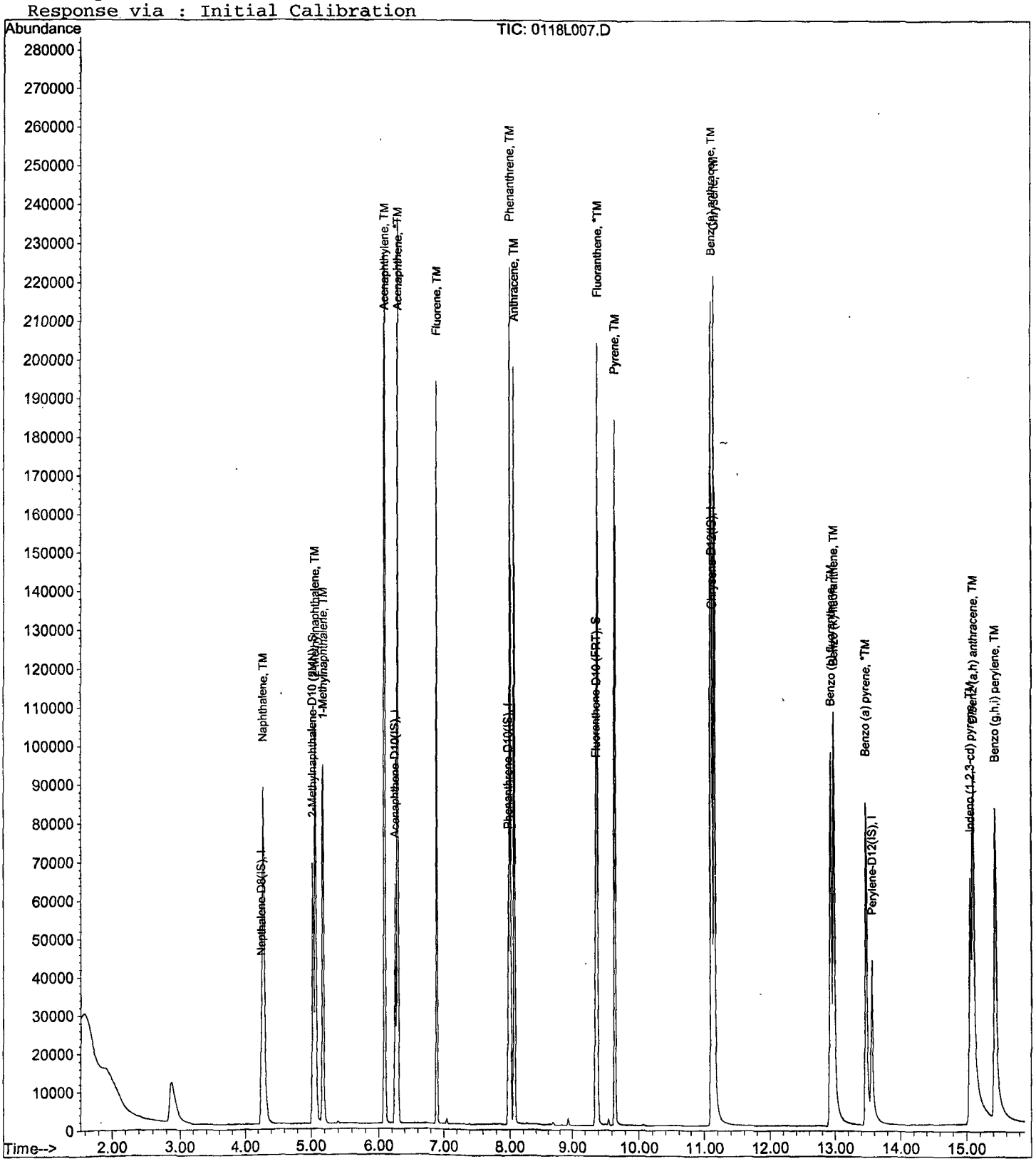
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897 ppb		0.00
Spiked Amount 5.000			Recovery = 98.180%			
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763 ppb		0.00
Spiked Amount 5.000			Recovery = 101.560%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	268559	9.44564 ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736 ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451 ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932 ppb		100
8) Acenaphthene	6.29	154	143677	9.22655 ppb		99
9) Fluorene	6.89	166	175331	9.65565 ppb		99
11) Phenanthrene	8.00	178	252445	9.28323 ppb		99
12) Anthracene	8.06	178	235818	9.67255 ppb		99
14) Fluoranthene	9.39	202	356187	9.88031 ppb		97
16) Pyrene	9.65	202	358384	9.35054 ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203 ppb		99
18) Chrysene	11.16	228	320451	9.27660 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742 ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427 ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043 ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132 ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641 ppb	#	90

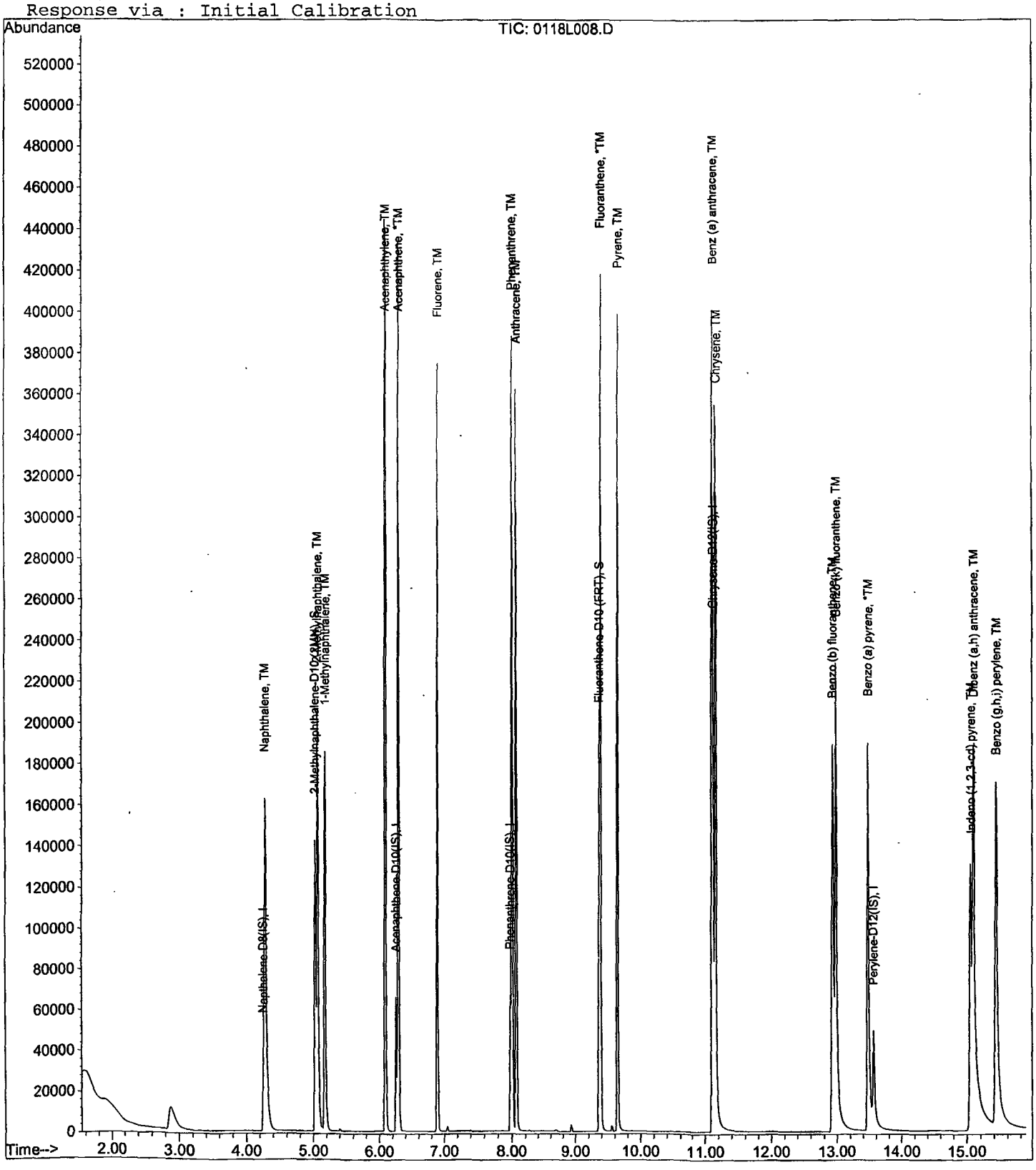
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275	ppb		0.00
Spiked Amount 5.000			Recovery	= 467.860%			
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323	ppb		0.01
Spiked Amount 5.000			Recovery	= 485.860%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	1196891	46.08087	ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476	ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633	ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017	ppb		97
8) Acenaphthene	6.30	154	631316	43.96491	ppb		89
9) Fluorene	6.89	166	764075	45.63163	ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079	ppb		98
12) Anthracene	8.08	178	1010706	44.13554	ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367	ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458	ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809	ppb		97
18) Chrysene	11.17	228	1338368	43.66618	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600	ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049	ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551	ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246	ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934	ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437	ppb		99

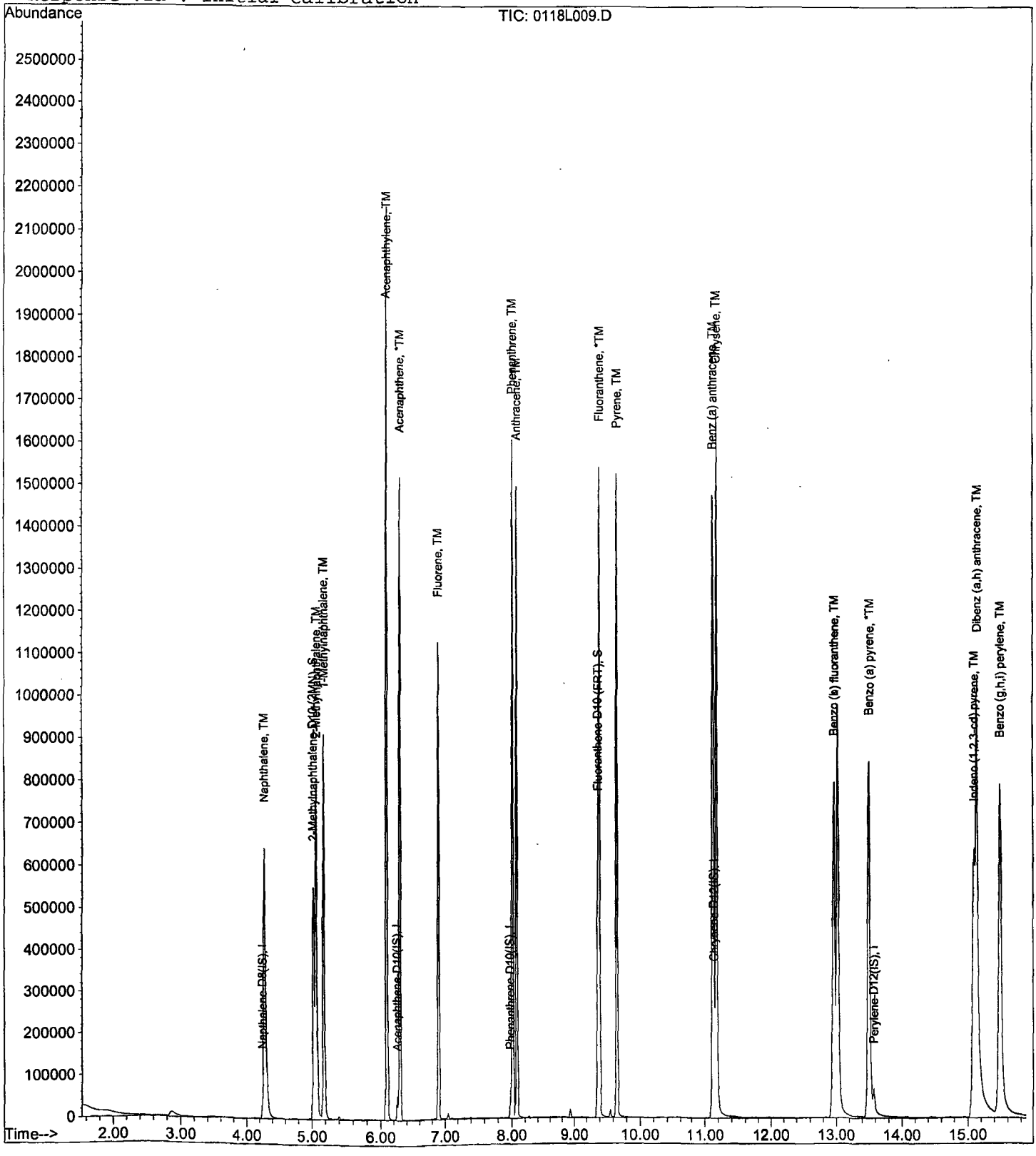
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000 ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000 ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000 ppb		0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210 ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%			
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423 ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	2224048	88.96172 ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956 ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247 ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934 ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300 ppb		96
9) Fluorene	6.90	166	1390953	82.59956 ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367 ppb		97
12) Anthracene	8.09	178	2040467	89.58105 ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099 ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549 ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522 ppb		96
18) Chrysene	11.19	228	2703165	90.38960 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219 ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732 ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829 ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873 ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705 ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621 ppb		99

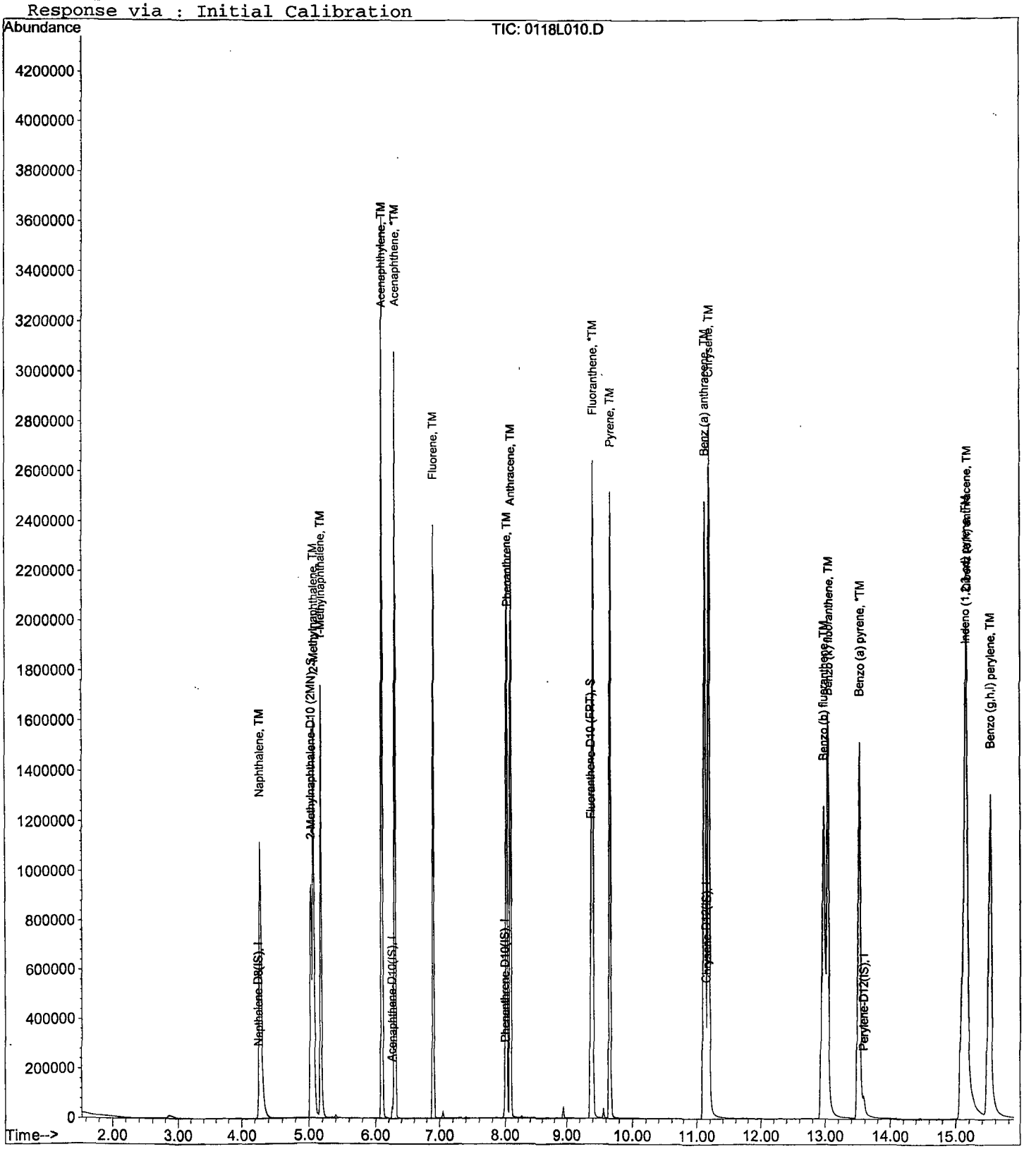
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069	ppb		0.00
Spiked Amount 5.000			Recovery	= 0.020%			
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132	ppb		0.00
Spiked Amount 5.000			Recovery	= 0.220%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	137423	5.27705	ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831	ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437	ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224	ppb		100
8) Acenaphthene	6.29	154	77645	5.22665	ppb		99
9) Fluorene	6.89	166	92294	5.32787	ppb		100
11) Phenanthrene	8.00	178	132877	5.01426	ppb		100
12) Anthracene	8.06	178	132921	5.59477	ppb		99
14) Fluoranthene	9.39	202	184979	5.26550	ppb		100
16) Pyrene	9.65	202	190804	5.11487	ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082	ppb		100
18) Chrysene	11.15	228	165836	4.93766	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773	ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329	ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901	ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275	ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374	ppb		93

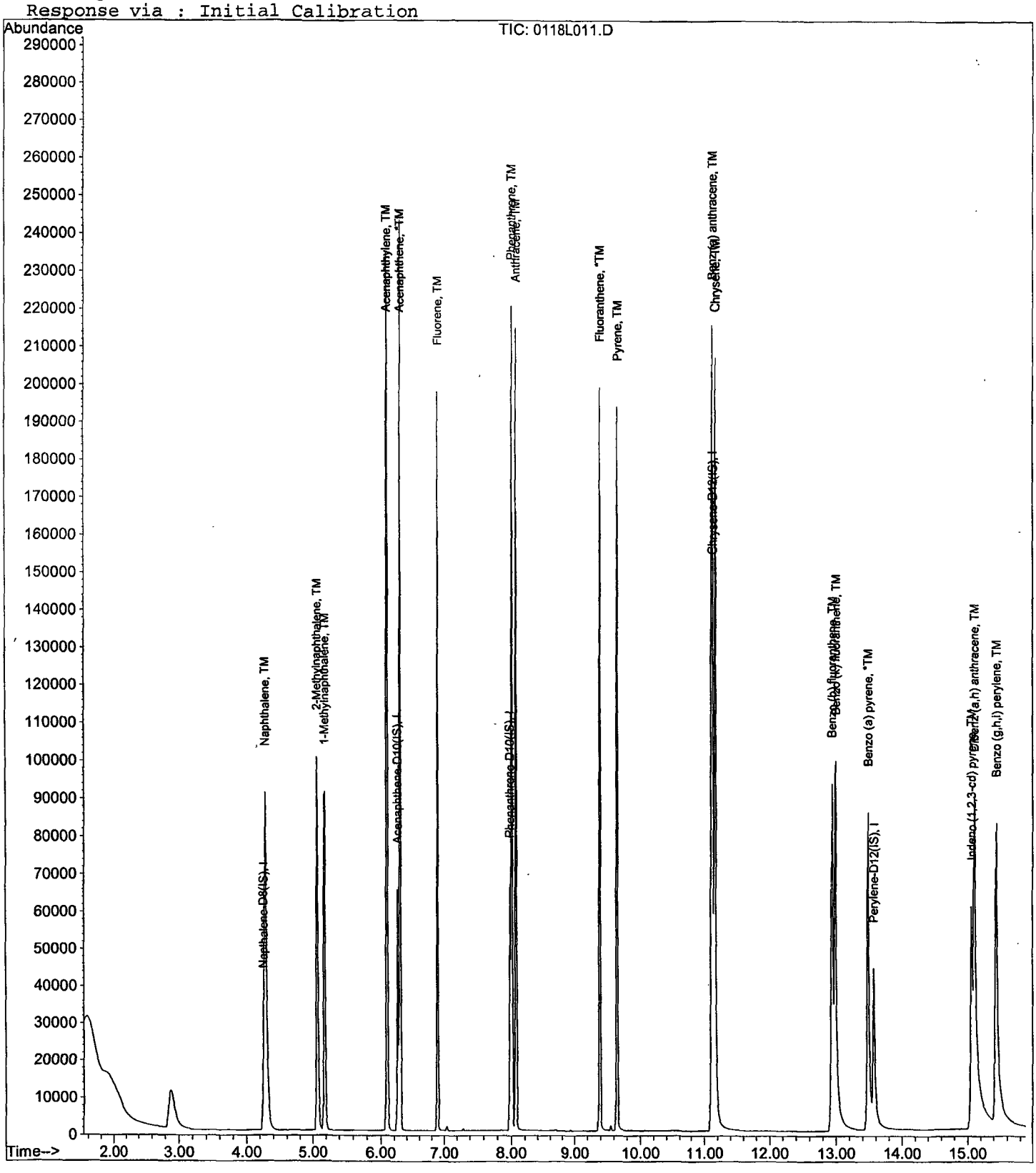
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L035.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.076	5.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.044	2.7	S	
4	TM	2-Methylnaphthalene	0.6368	0.6954	9.2	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6776	6.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.315	6.1	TM	
8	*TM	Acenaphthene	1.188	1.238	4.2	*TM	
9	TM	Fluorene	1.385	1.491	7.6	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.205	4.0	TM	
12	TM	Anthracene	1.039	1.106	6.4	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.348	0.25	S	
14	*TM	Fluoranthene	1.536	1.660	8.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.381	1.4	TM	
17	TM	Benz (a) anthracene	1.150	1.100	4.4	TM	
18	TM	Chrysene	1.226	1.183	3.5	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.107	1.9	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.007	2.8	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.381	9.0	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.059	12	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9671	9.3	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.105	9.5	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.7		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L035.D Vial: 35
Acq On : 25 Jan 21 12:55 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 25 13:41 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64820	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31514	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57372	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69725	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	64837	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	67696	2.43318 ppb		0.00
Spiked Amount 5.000			Recovery	= 48.660%		
13) Fluoranthene-D10 (FRT)	9.37	212	77334	2.49380 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.880%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	139433	5.28683 ppb		99
4) 2-Methylnaphthalene	5.06	142	90150	5.45995 ppb		97
5) 1-Methylnaphthalene	5.17	142	87838	5.34020 ppb		95
7) Acenaphthylene	6.08	152	271956	5.30591 ppb		99
8) Acenaphthene	6.29	154	78010	5.20973 ppb		98
9) Fluorene	6.89	166	93976	5.38211 ppb		98
11) Phenanthrene	8.00	178	138230	5.19853 ppb		100
12) Anthracene	8.06	178	126870	5.32192 ppb		100
14) Fluoranthene	9.39	202	190513	5.40459 ppb		97
16) Pyrene	9.65	202	192578	5.07172 ppb		96
17) Benz (a) anthracene	11.11	228	153431	4.78237 ppb		97
18) Chrysene	11.16	228	164971	4.82561 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.06	276	154332	5.09446 ppb		93
21) Benzo (b) fluoranthene	12.94	252	130572	5.14154 ppb		100
22) Benzo (k) fluoranthene	12.99	252	179036	5.45143 ppb		100
23) Benzo (a) pyrene	13.49	252	137291	5.60648 ppb	#	93
24) Dibenz (a,h) anthracene	15.11	278	125405	5.46307 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	143305	5.47497 ppb		94

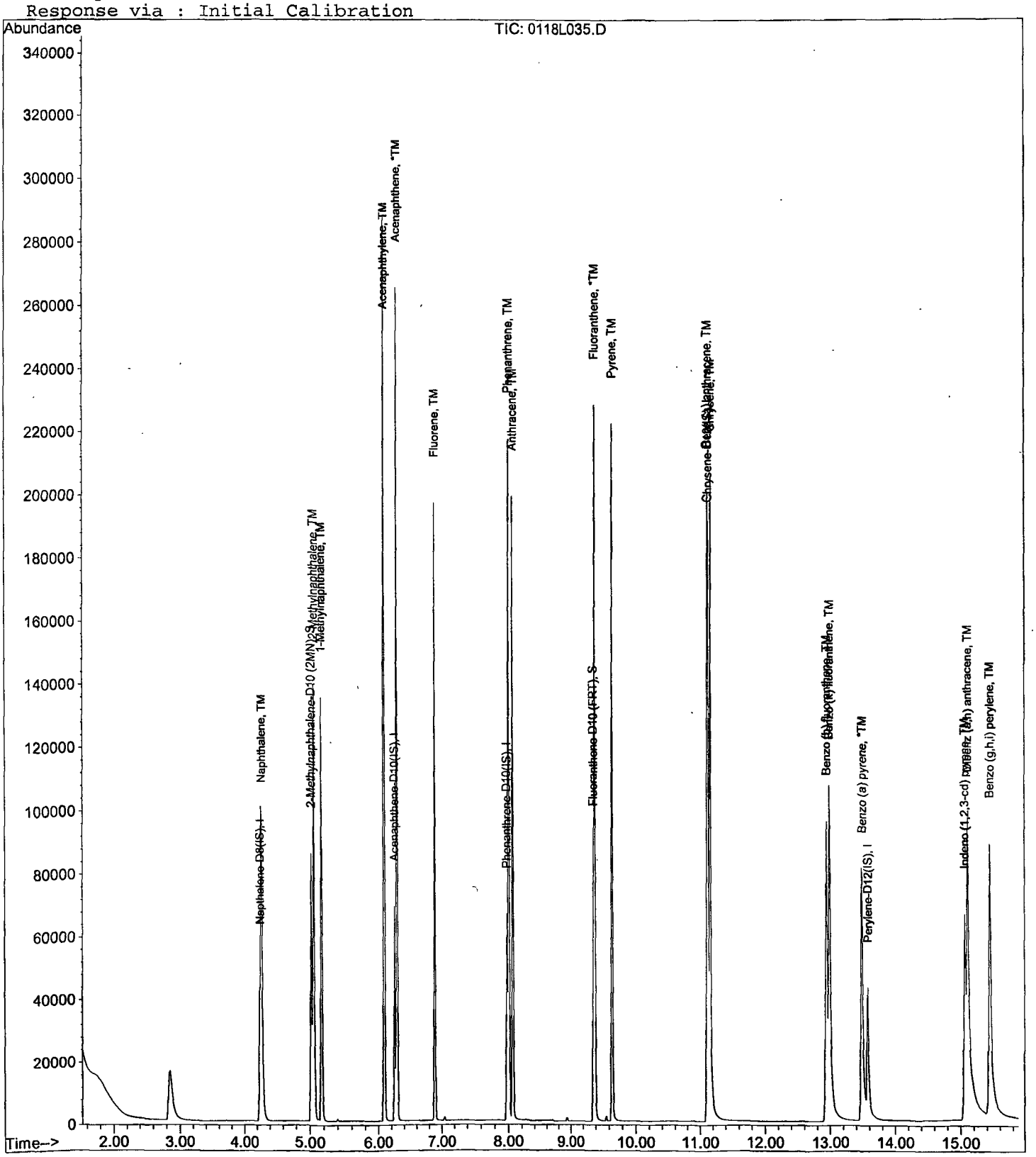
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L035.D Vial: 35
Acq On : 25 Jan 21 12:55 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 25 13:41 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.008	0.86	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.065	0.77	S	
4	TM	2-Methylnaphthalene	0.6368	0.6453	1.3	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6359	0.23	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.302	5.8	TM	
8	*TM	Acenaphthene	1.188	1.210	1.9	*TM	
9	TM	Fluorene	1.385	1.493	7.8	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.191	2.8	TM	
12	TM	Anthracene	1.039	1.103	6.2	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.363	0.90	S	
14	*TM	Fluoranthene	1.536	1.684	9.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.418	4.2	TM	
17	TM	Benz (a) anthracene	1.150	1.150	0.07	TM	
18	TM	Chrysene	1.226	1.252	2.2	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.246	15	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.175	20	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.259	0.59	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.091	16	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.047	18	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.119	11	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71331	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32623	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	60248	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72741	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	71783	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	75956	2.48087	ppb		0.00
Spiked Amount 5.000			Recovery = 49.620%				
13) Fluoranthene-D10 (FRT)	9.37	212	82143	2.52243	ppb		0.00
Spiked Amount 5.000			Recovery = 50.440%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	143861	4.95682	ppb		99
4) 2-Methylnaphthalene	5.06	142	92066	5.06702	ppb		98
5) 1-Methylnaphthalene	5.17	142	90713	5.01158	ppb		94
7) Acenaphthylene	6.08	152	280660	5.28958	ppb		99
8) Acenaphthene	6.29	154	78958	5.09378	ppb		99
9) Fluorene	6.89	166	97434	5.39046	ppb		99
11) Phenanthrene	8.00	178	143550	5.14089	ppb		100
12) Anthracene	8.06	178	132876	5.30779	ppb		100
14) Fluoranthene	9.39	202	202912	5.48155	ppb		98
16) Pyrene	9.65	202	206359	5.20932	ppb		97
17) Benz (a) anthracene	11.11	228	167243	4.99674	ppb		99
18) Chrysene	11.15	228	182215	5.10902	ppb	#	97
19) Indeno (1,2,3-cd) pyrene	15.06	276	181207	5.73359	ppb		96
21) Benzo (b) fluoranthene	12.93	252	168697	6.00001	ppb		97
22) Benzo (k) fluoranthene	12.99	252	180733	4.97060	ppb		97
23) Benzo (a) pyrene	13.48	252	156659	5.77836	ppb		95
24) Dibenz (a,h) anthracene	15.11	278	150309	5.91437	ppb		98
25) Benzo (g,h,i) perylene	15.44	276	160638	5.54332	ppb	#	90

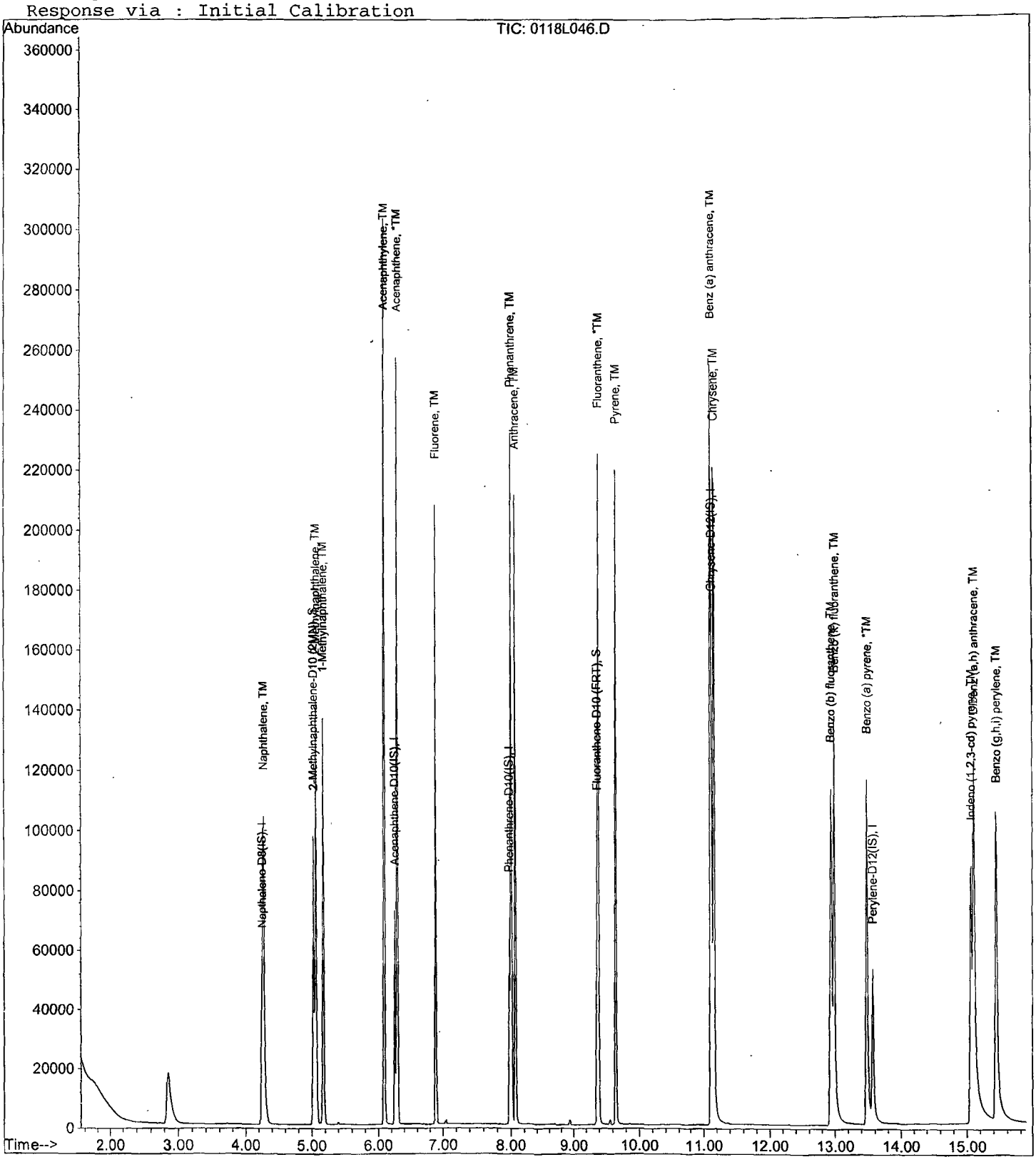
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L046.D Vial: 46
Acq On : 25 Jan 21 20:18 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 26 9:31 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L042.D Vial: 42
Acq On : 25 Jan 21 18:50 Operator: MA
Sample : BA25529W13 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:48 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71035	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	34262	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	62769	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	77353	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	73536	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	140826	5.77352	ppb	0.00
Spiked Amount 6.250			Recovery = 92.384%			
13) Fluoranthene-D10 (FRT)	9.37	212	169375	6.24030	ppb	0.00
Spiked Amount 6.250			Recovery = 99.840%			

Target Compounds Qvalue

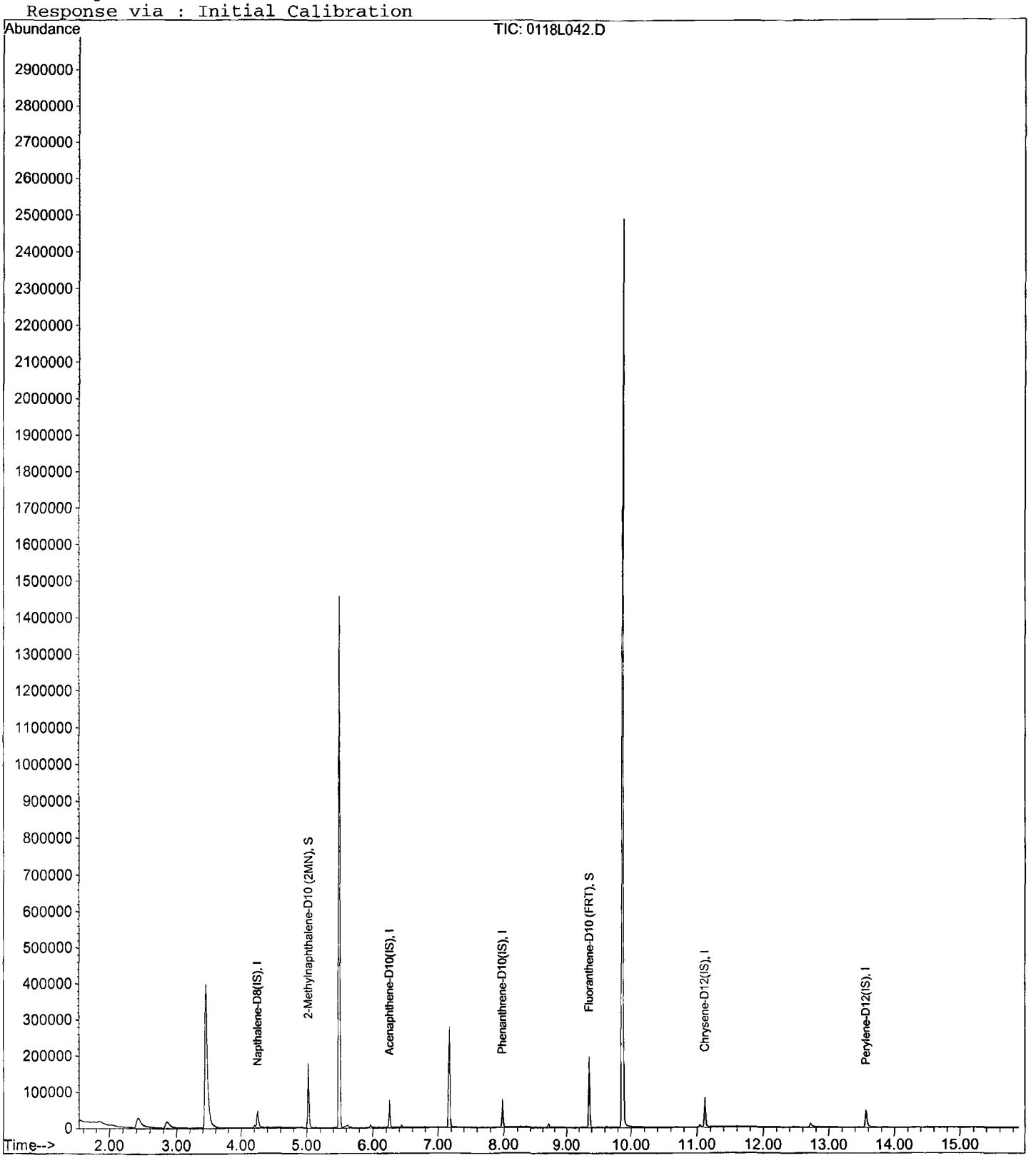
(#) = qualifier out of range (m) = manual integration
0118L042.D L0118.M Tue Jan 26 15:21:37 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L042.D Vial: 42
Acq On : 25 Jan 21 18:50 Operator: MA
Sample : BA25529W13 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:48 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L043.D
Acq On : 25 Jan 21 19:12
Sample : BA25532W14 1/1010
Misc :

Vial: 43
Operator: MA
Inst : Linus
Multiplr: 0.99

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65776	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31286	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	58256	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	71429	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	68602	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	138814	4.86816 ppb	0.00
Spiked Amount 4.950			Recovery	= 98.334%	
13) Fluoranthene-D10 (FRT)	9.37	212	166655	5.24020 ppb	0.00
Spiked Amount 4.950			Recovery	= 105.848%	

Target Compounds Qvalue

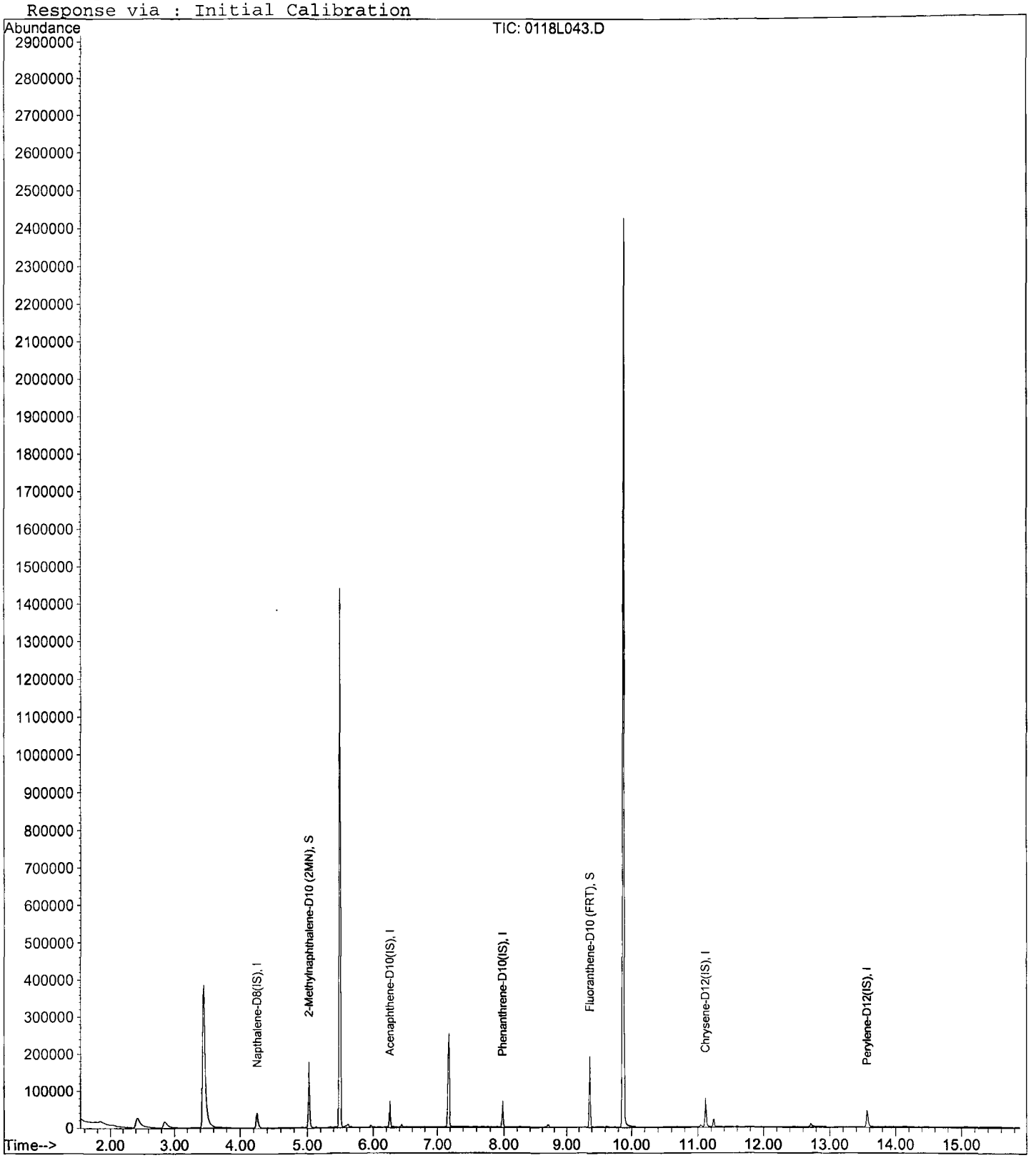
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L043.D Vial: 43
Acq On : 25 Jan 21 19:12 Operator: MA
Sample : BA25532W14 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L044.D Vial: 44
Acq On : 25 Jan 21 19:34 Operator: MA
Sample : BA25535W14 1/1040 Inst : Linus
Misc : Multiplr: 0.96

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63611	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30805	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	57693	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	69914	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	67072	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	137801	4.85297	ppb	0.00
Spiked Amount 4.808			Recovery	= 100.942%		
13) Fluoranthene-D10 (FRT)	9.37	212	164693	5.07821	ppb	0.00
Spiked Amount 4.808			Recovery	= 105.622%		

Target Compounds	Qvalue

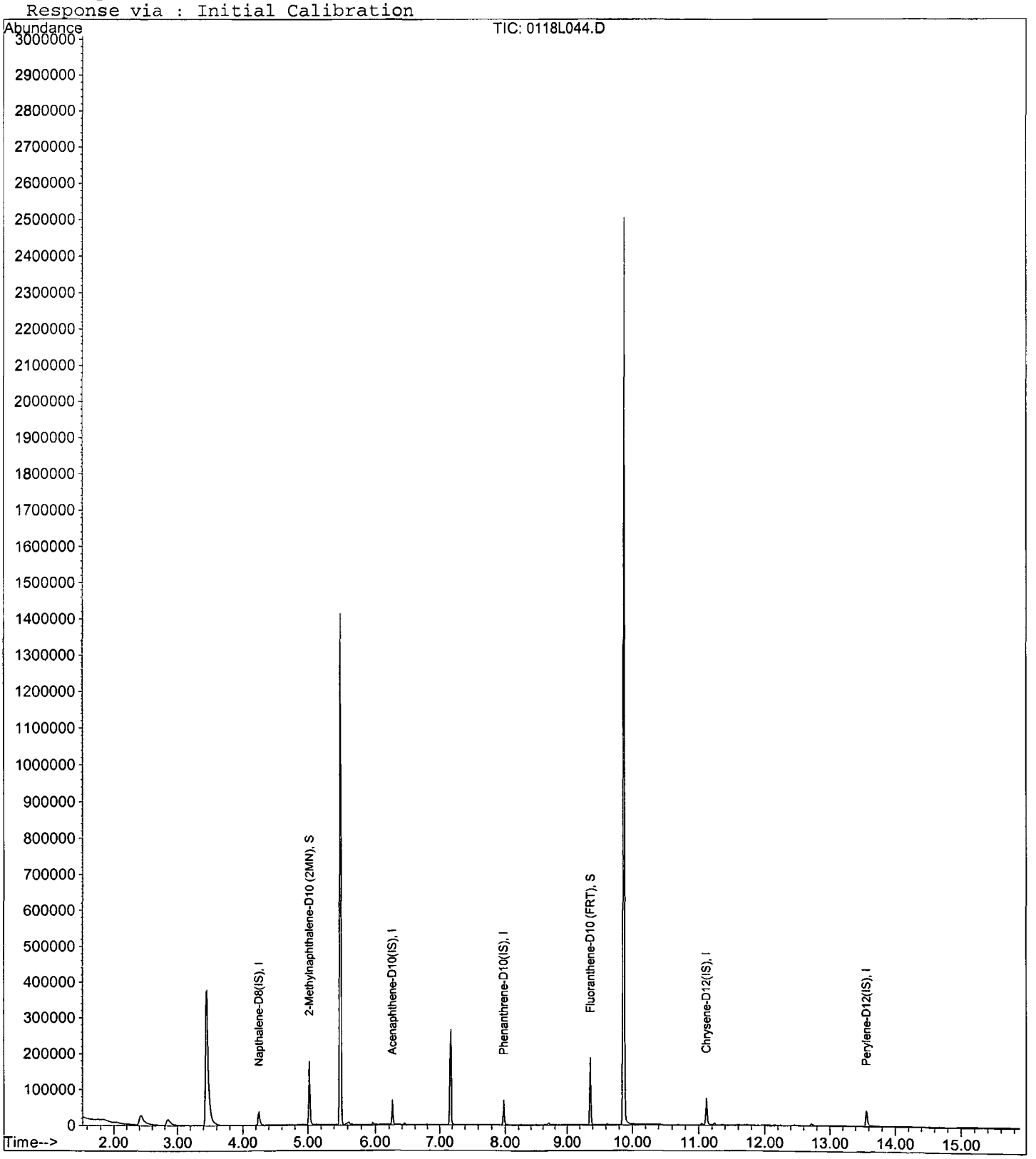
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L044.D Vial: 44
Acq On : 25 Jan 21 19:34 Operator: MA
Sample : BA25535W14 1/1040 Inst : Linus
Misc : Multiplr: 0.96

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L045.D Vial: 45
Acq On : 25 Jan 21 19:56 Operator: MA
Sample : BA25538W15 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69608	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	33203	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	61916	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	76217	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	72450	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	144428	6.04258	ppb	0.00
Spiked Amount 6.250			Recovery = 96.688%			
13) Fluoranthene-D10 (FRT)	9.37	212	175918	6.57066	ppb	0.00
Spiked Amount 6.250			Recovery = 105.136%			

Target Compounds	Qvalue

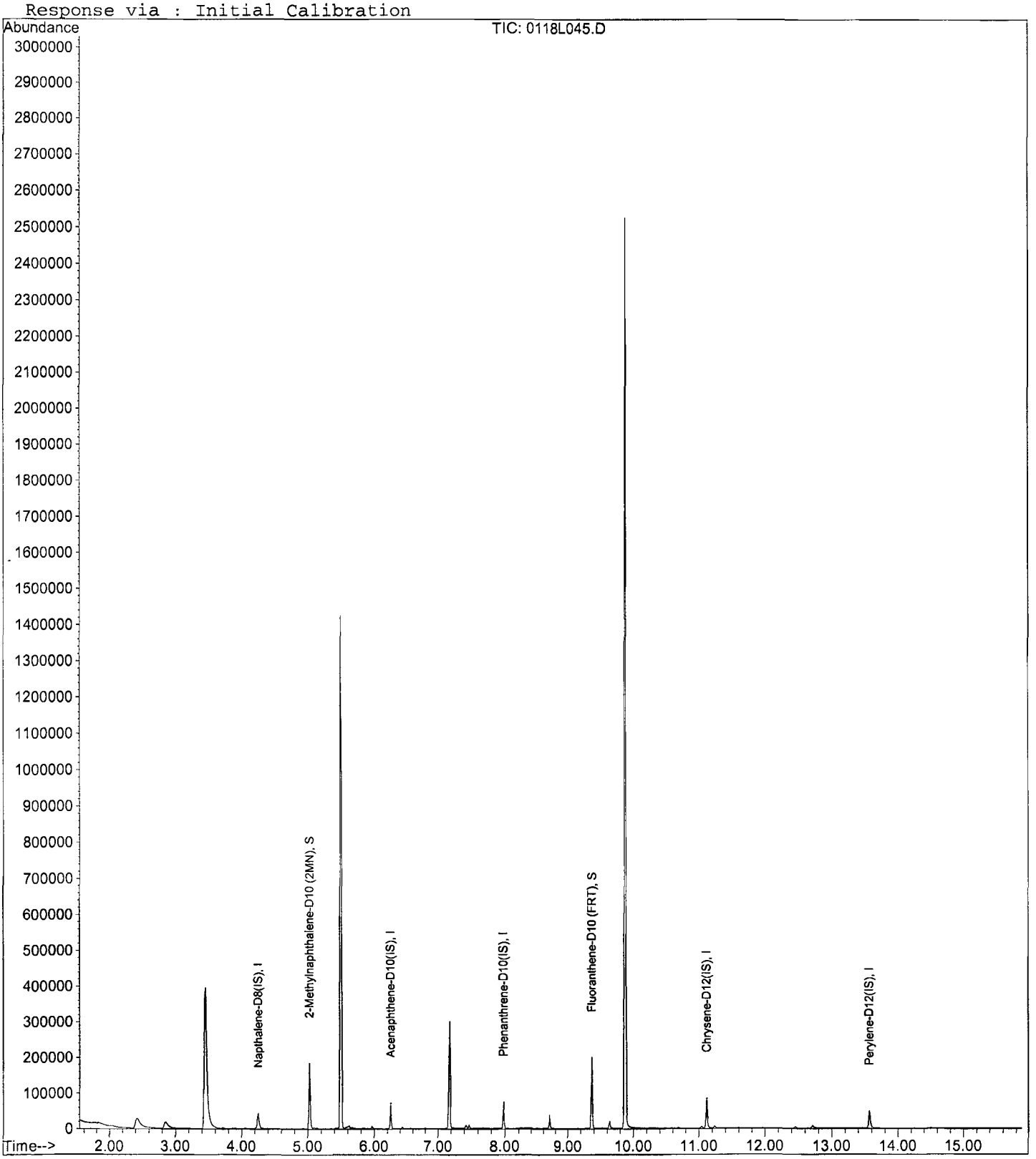
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L045.D Vial: 45
Acq On : 25 Jan 21 19:56 Operator: MA
Sample : BA25538W15 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:49 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64715	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.27	164	29769	2.50000 ppb	0.01
10) Phenanthrene-D10(IS)	7.99	188	53529	2.50000 ppb	0.01
15) Chrysene-D12(IS)	11.13	240	62085	2.50000 ppb	0.01
20) Perylene-D12(IS)	13.58	264	58308	2.50000 ppb	0.02
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	85383	3.84235 ppb	0.00
Spiked Amount 6.250			Recovery = 61.472%		
13) Fluoranthene-D10 (FRT)	9.38	212	96778	4.18109 ppb	0.01
Spiked Amount 6.250			Recovery = 66.896%		

Target Compounds Qvalue

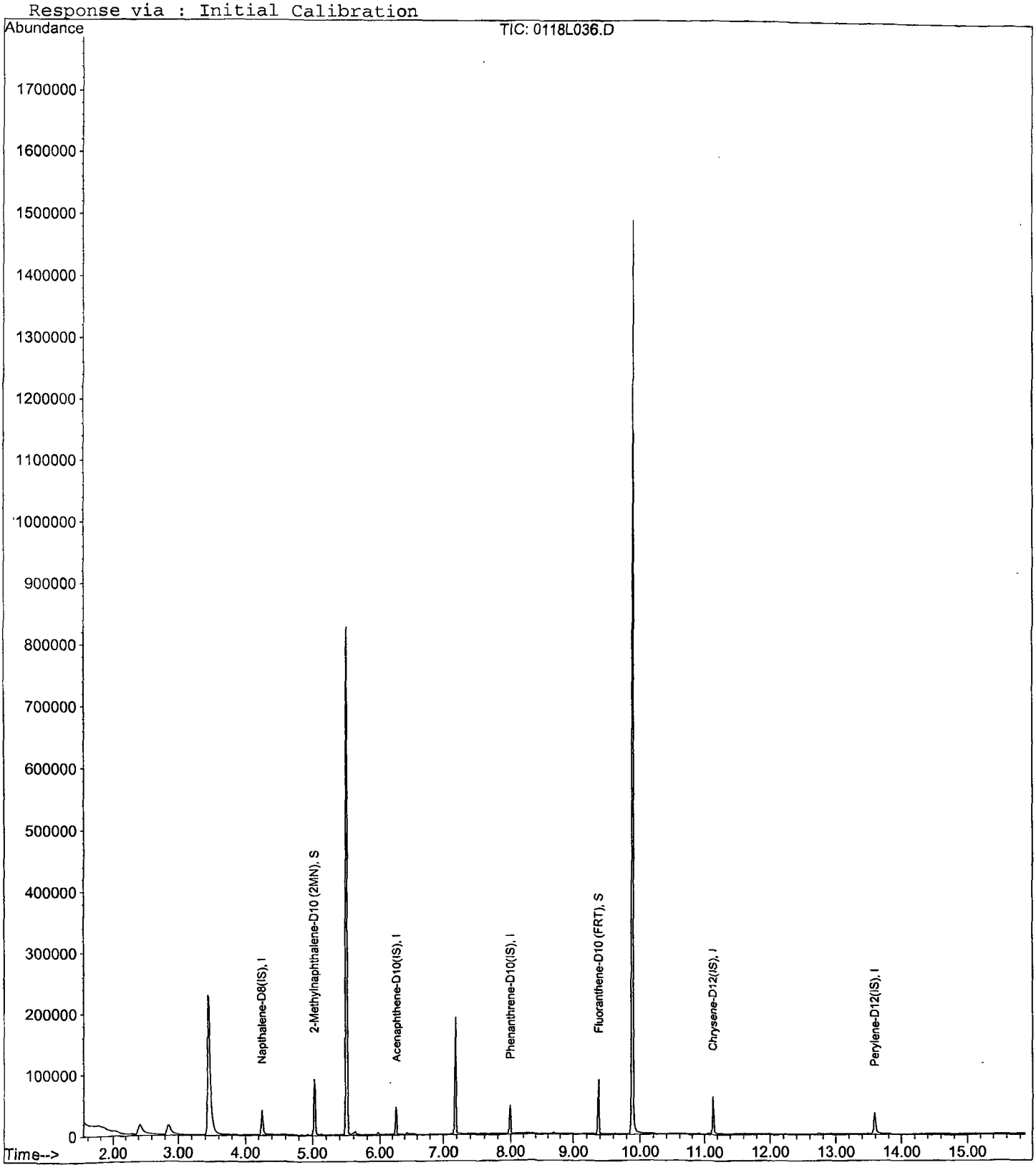
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L036.D Vial: 36
Acq On : 25 Jan 21 16:38 Operator: MA
Sample : 210122A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 26 9:50 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L037.D Vial: 37
Acq On : 25 Jan 21 17:00 Operator: MA
Sample : 210122A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 25 17:16 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64477	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30653	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55532	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67366	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.57	264	63014	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	127177	5.74426	ppb		0.00
Spiked Amount 6.250			Recovery	= 91.904%			
13) Fluoranthene-D10 (FRT)	9.37	212	151551	6.31127	ppb		0.00
Spiked Amount 6.250			Recovery	= 100.976%			
Target Compounds							Qvalue
2) Naphthalene	4.26	128	117943	5.61974	ppb		100
4) 2-Methylnaphthalene	5.06	142	74143	5.64296	ppb		97
5) 1-Methylnaphthalene	5.17	142	73486	5.61427	ppb		96
7) Acenaphthylene	6.08	152	223120	5.59423	ppb		99
8) Acenaphthene	6.29	154	65314	5.60546	ppb		98
9) Fluorene	6.89	166	80637	5.93486	ppb		98
11) Phenanthrene	8.00	178	119939	5.82513	ppb		100
12) Anthracene	8.06	178	98983	5.36213	ppb		100
14) Fluoranthene	9.39	202	169711	6.21749	ppb		97
16) Pyrene	9.65	202	169504	5.77546	ppb		98
17) Benz (a) anthracene	11.11	228	135423	5.46110	ppb		98
18) Chrysene	11.16	228	154553	5.84897	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	141648	6.04938	ppb		99
21) Benzo (b) fluoranthene	12.94	252	134850	6.82951	ppb		99
22) Benzo (k) fluoranthene	12.99	252	155948	6.10725	ppb		98
23) Benzo (a) pyrene	13.48	252	107521	5.64725	ppb		97
24) Dibenz (a,h) anthracene	15.11	278	117295	6.57200	ppb		98
25) Benzo (g,h,i) perylene	15.44	276	126635	6.22257	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

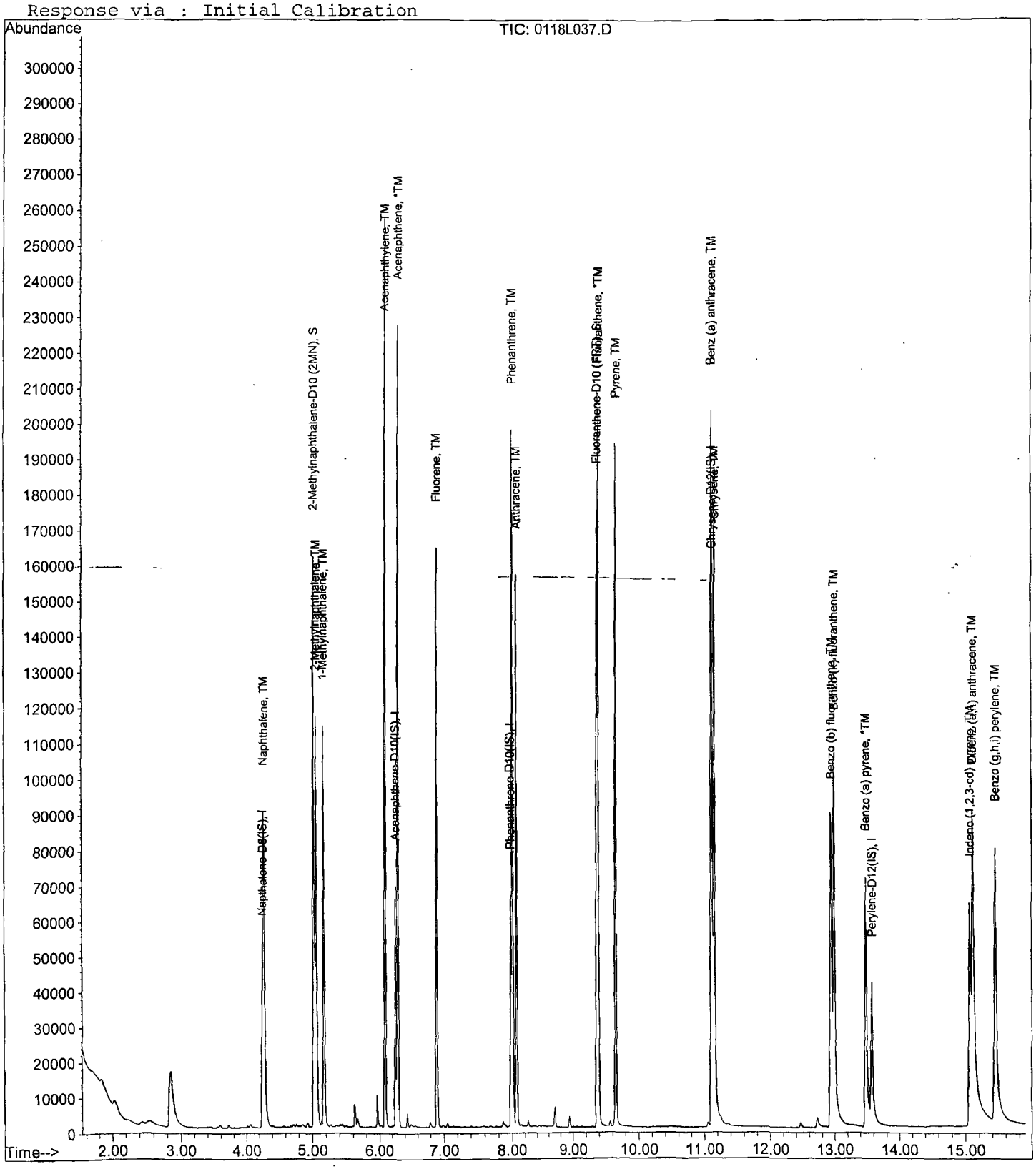
Data File : M:\LINUS\DATA\L210118\0118L037.D
Acq On : 25 Jan 21 17:00
Sample : 210122A LCS-2 1/800
Misc :

Vial: 37
Operator: MA
Inst : Linus
Multiplr: 1.25

Quant Time: Jan 25 17:16 2021

Quant Results File: L0118.RES

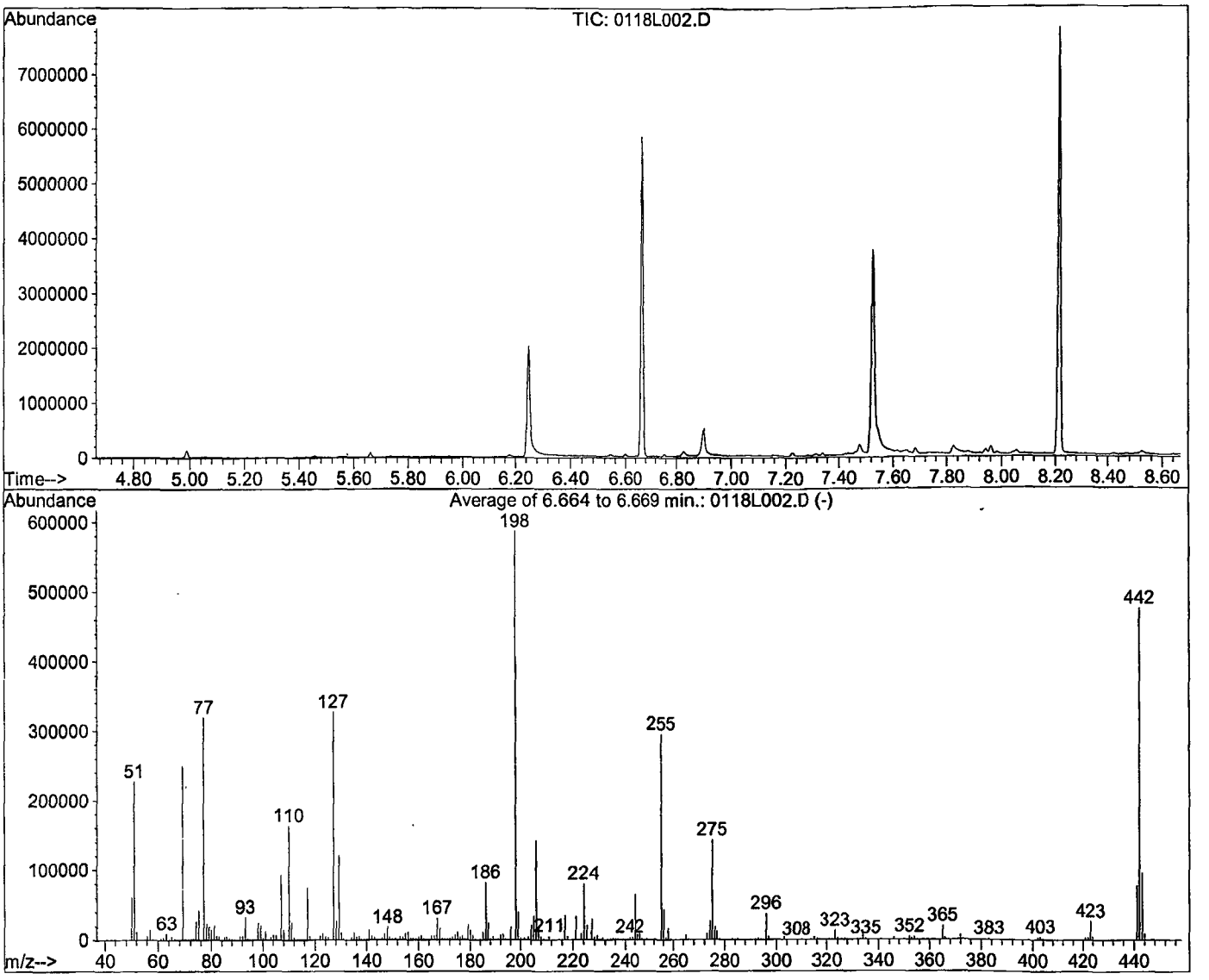
Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L210118\0118L002.D
Acq On : 18 Jan 21 11:17
Sample : SV Tune 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

0118L002.D L0118.M Mon Jan 18 16:16:32 2021

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

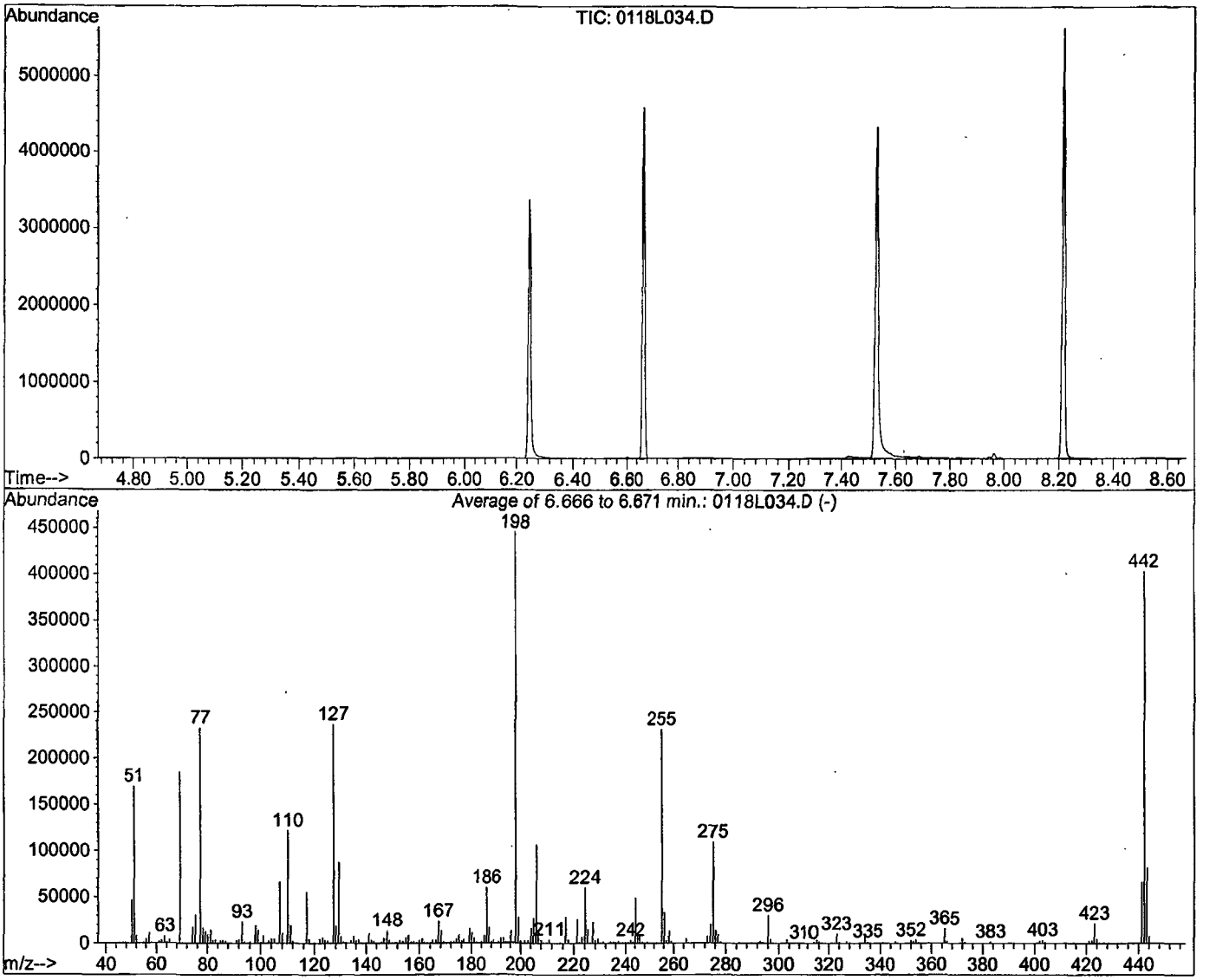
Breakdown **1.63**

DFTPP

Data File : M:\LINUS\DATA\L210118\0118L034.D
Acq On : 25 Jan 21 12:39
Sample : SV TUNE 10/02/20
Misc :

Vial: 34
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1639, 1640, 1641; Background Corrected with Scan 1630

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.1	169813	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1087	PASS
127	198	10	80	53.2	237333	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	445845	PASS
199	198	5	9	6.3	28235	PASS
275	198	10	60	24.5	109365	PASS
365	198	1	100	3.5	15823	PASS
441	442	0.01	24	16.5	66579	PASS
442	198	50	500	90.5	403563	PASS
443	442	15	24	20.2	81613	PASS

Data File Name:	**0118L034.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**25 Jan 2021 12:39**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**34**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	36454500
2)	DDD	7.98	511535
3)	DDE	7.69	140202

Breakdown **1.76**

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**	**Prep'd By**	**MA**
Prep Date	**01/14/21**		
Exp Date	**01/14/22**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	08/11/20
Exp Date	04/01/21

Prep'd By (Initials) CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**06/19/20**
Exp Date	**06/19/21**

Prep'd By (Initials) **CD**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Name of Final Standard	SIM Spike
Prep Date	09/11/20
Exp Date	09/11/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41545 41546 41547 49548	12/31/22	5 mL	25 mL	Acetone 0246130	40 ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	11/30/20
Exp Date	11/30/21

Prep'd By (Initials) LS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0154854-50257, 50258, 50259 A0161454-50790, 50794**	**10/31/2025 5/31/26**	5mL	100 mL	**Acetone #246130**	100 ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210122A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1/7/21 ex 1/7/22		Surrogate ID 1	8270 Surrogate 10/6/20 ex 10/6/21	
Spiked ID 2	Sim Spike 9/11/20 ex 9/11/21		Surrogate ID 2	SIM Surrogate 11/30/20 ex 11/30/21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/22/21 13:30	
Spiked ID 8			Ext. End Time:	01/23/21 7:30	

GC Requires Extract By:				
pH1	2	01/22/21 12:05	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/23/21 9:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/22/21 **Witnessed By:** DL **Date** 01/22/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210122A Blk				0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	
						equip	E-HP27 E-WB6				
2	210122A LCS-1		1	1	0.2	1	800	1	2/1	01/22/21 12:00	
						equip	E-HP28 E-WB6				
3	210122A LCS-2		0.125	2	0.050	2	800	1	2/1	01/22/21 12:00	
						equip	E-HP29 E-WB6				
4	BA25434 MS-2	BA25434W16	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP16 E-WB6				
5	BA25434 MSD-2	BA25434W18	0.125	2	0.050	2	900	1	2/1	01/22/21 12:00	94808
						equip	E-HP15 E-WB6				
6	BA25434	BA25434W23			0.2,0.050	1,2	980	1	2/1	01/22/21 12:00	94808
						equip	E-HP30 E-WB6				
7	BA25526 MS-1	BA25526W18	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP13 E-WB6				
8	BA25526 MSD-1	BA25526W22	1	1	0.2	1	1010	1	2/1	01/22/21 12:00	94825
						equip	E-HP12 E-WB6				
9	BA25526	BA25526W17			0.2,0.050	1,2	1000	1	2/1	01/22/21 12:00	94825
						equip	E-HP14 E-WB6				
10	BA25529	BA25529W13			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP11 E-WB6				
11	BA25532	BA25532W14			0.2,0.050	1,2	1010	1	2/1	01/22/21 12:00	94826
						equip	E-HP10 E-WB6				
12	BA25535	BA25535W14			0.2,0.050	1,2	1040	1	2/1	01/22/21 12:00	94826
						equip	E-HP9 E-WB6				
13	BA25538	BA25538W15			0.2,0.050	1,2	800	1	2/1	01/22/21 12:00	94826
						equip	E-HP8 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/25/20
Time	4:30pm
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL,YL,KY
Concentration	SR

Modified	01/26/21 8:16:07 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
34	0118L034.D	1	SV TUNE 10/02/20		25 Jan 21 12:39
35	0118L035.D	1	5 SIM 01/15/21 (1)		25 Jan 21 12:55
36	0118L036.D	1.25	210122A BLK 1/800		25 Jan 21 16:38
37	0118L037.D	1.25	210122A LCS-2 1/800		25 Jan 21 17:00
42	0118L042.D	1.25	BA25529W13 1/800		25 Jan 21 18:50
43	0118L043.D	0.9901	BA25532W14 1/1010		25 Jan 21 19:12
44	0118L044.D	0.96154	BA25535W14 1/1040		25 Jan 21 19:34
45	0118L045.D	1.25	BA25538W15 1/800		25 Jan 21 19:56
46	0118L046.D	1	5 SIM 08/21/20		25 Jan 21 20:18

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO

Initials: MA

			0125K004 D	0125K005 D	0125K006 D	0125K007 D	0125K003 D	0125K008 D	0125K009.D	0125K010 D									
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
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Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

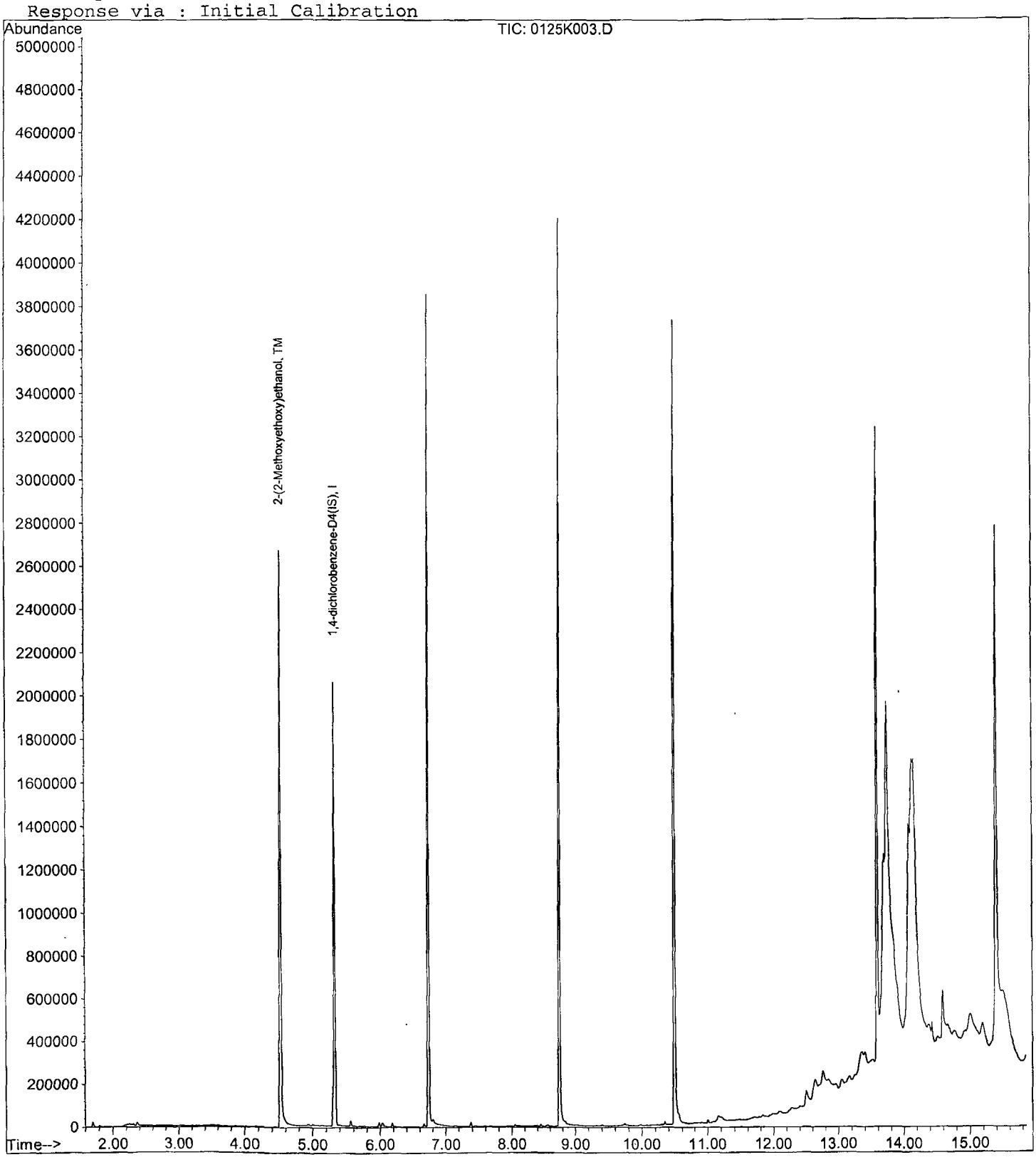
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

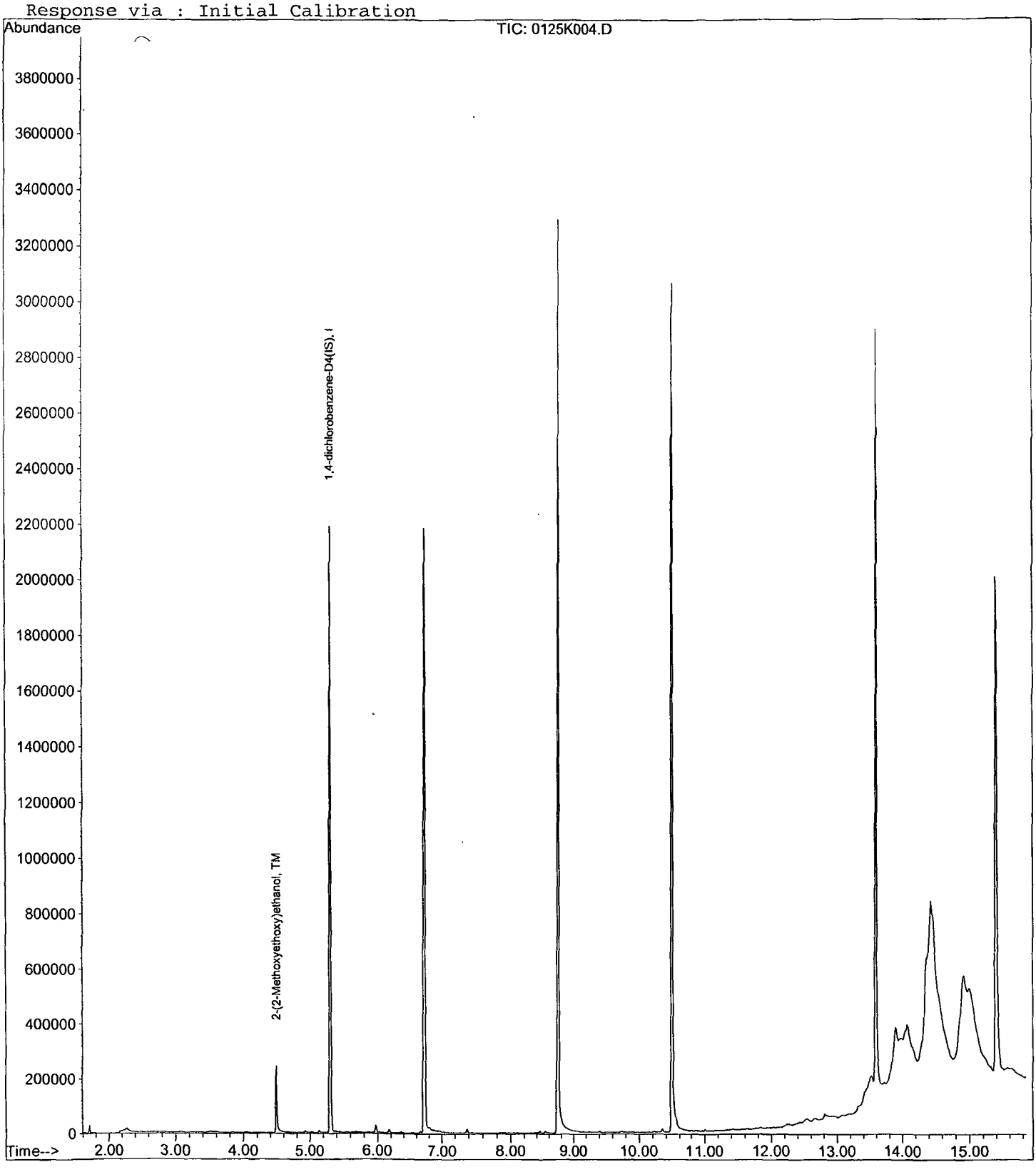
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

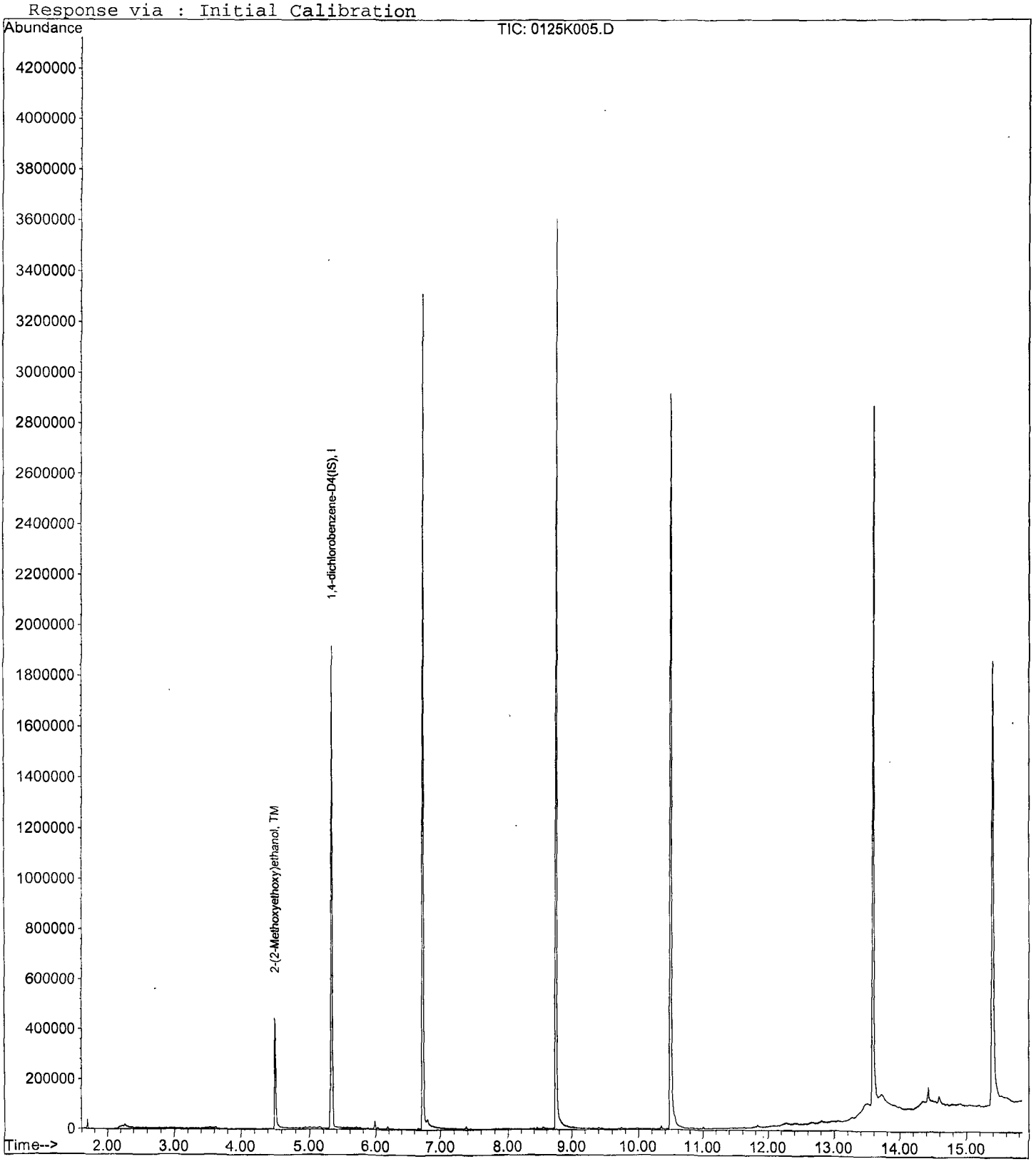
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

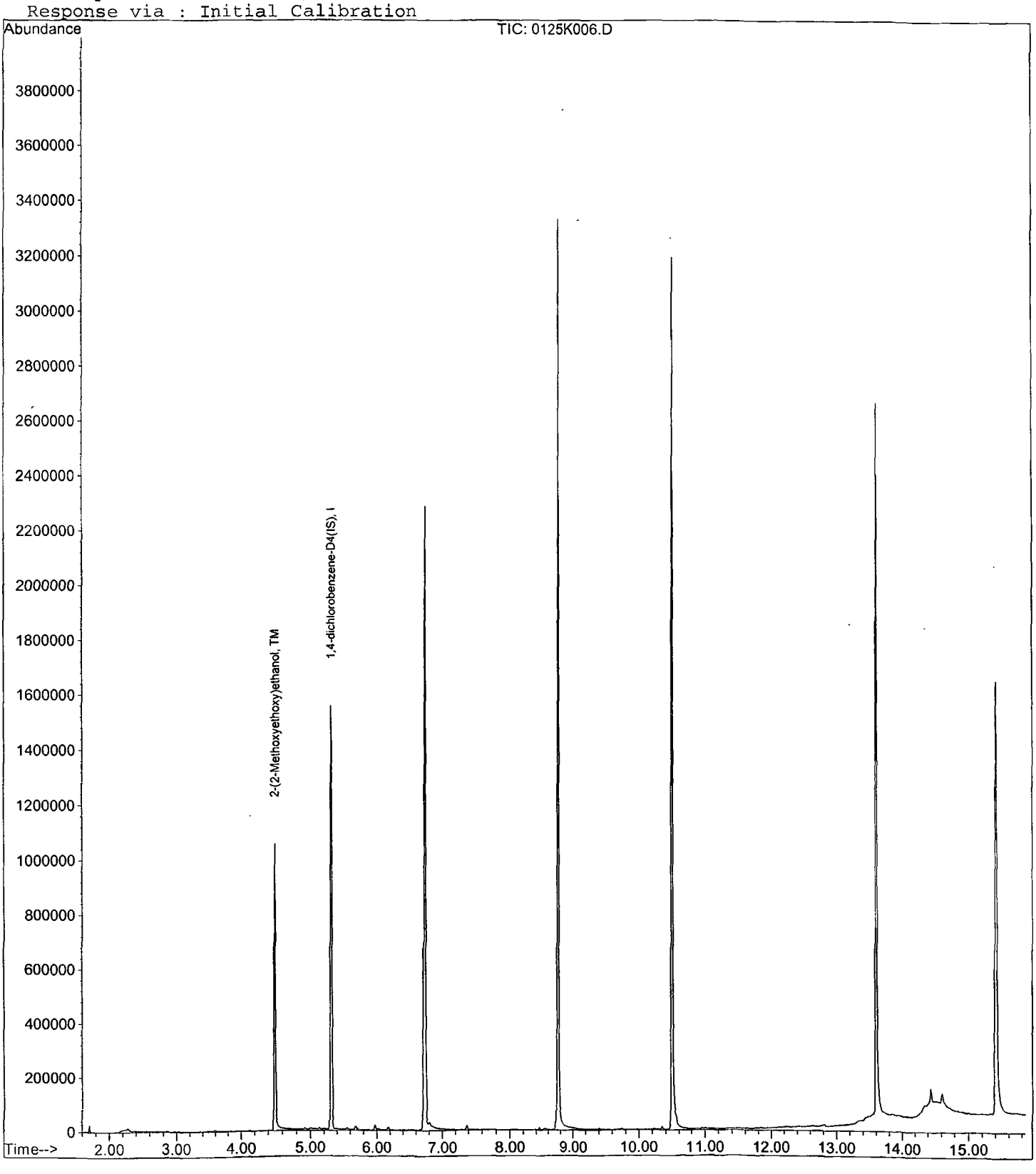
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

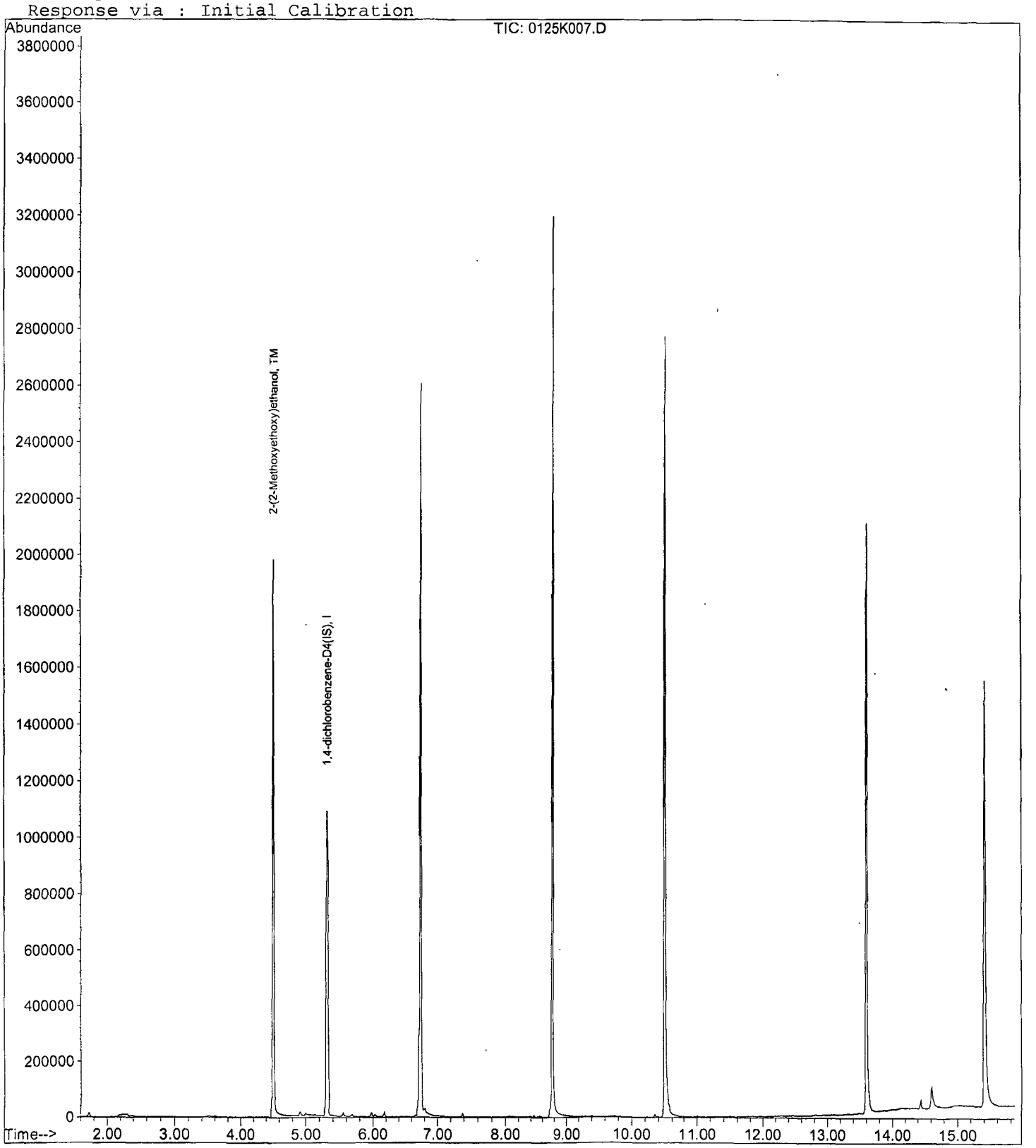
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

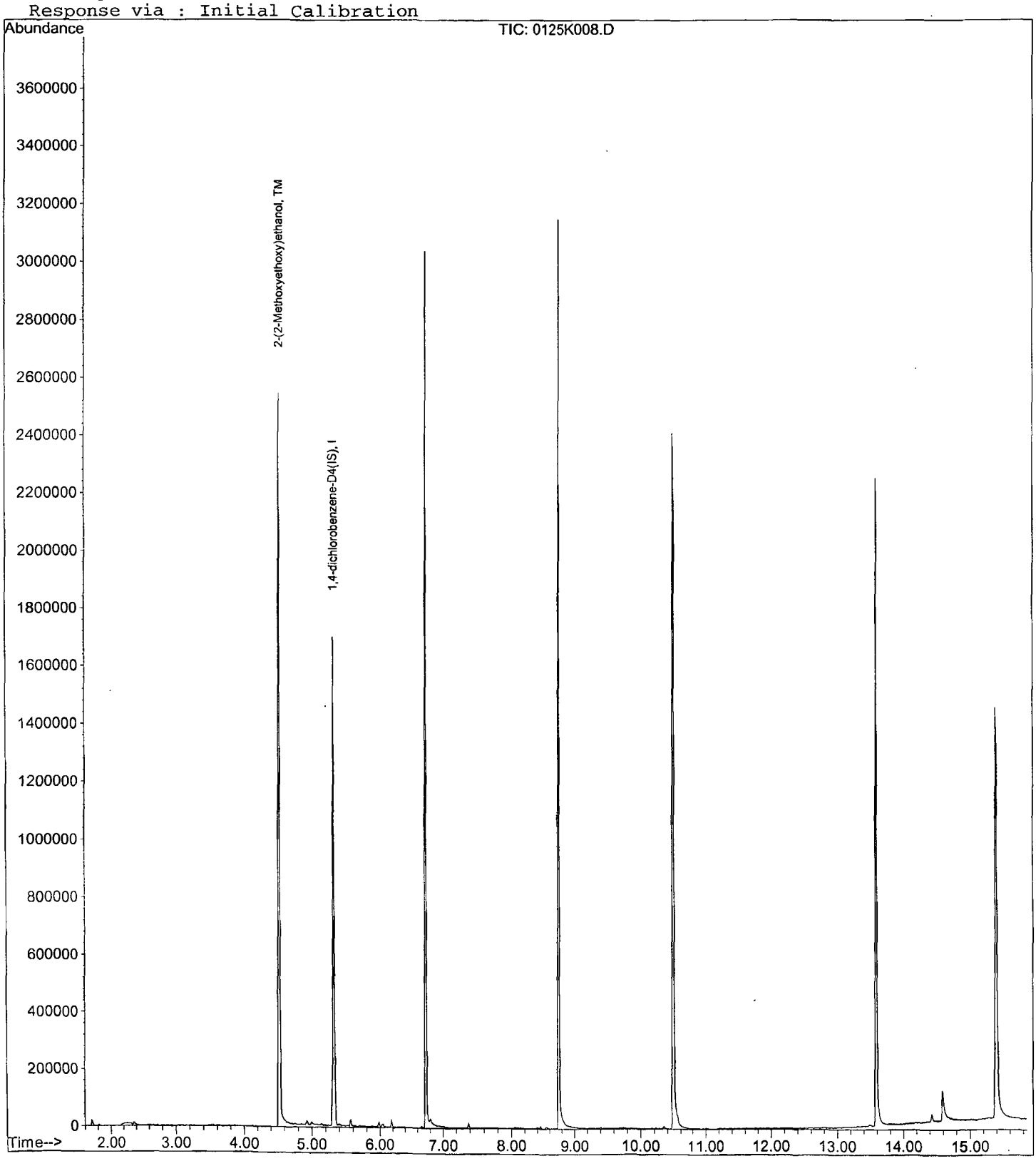
(#) = qualifier out of range (m) = manual integration
0125K008.D KMEE0125.M Tue Jan 26 10:35:44 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

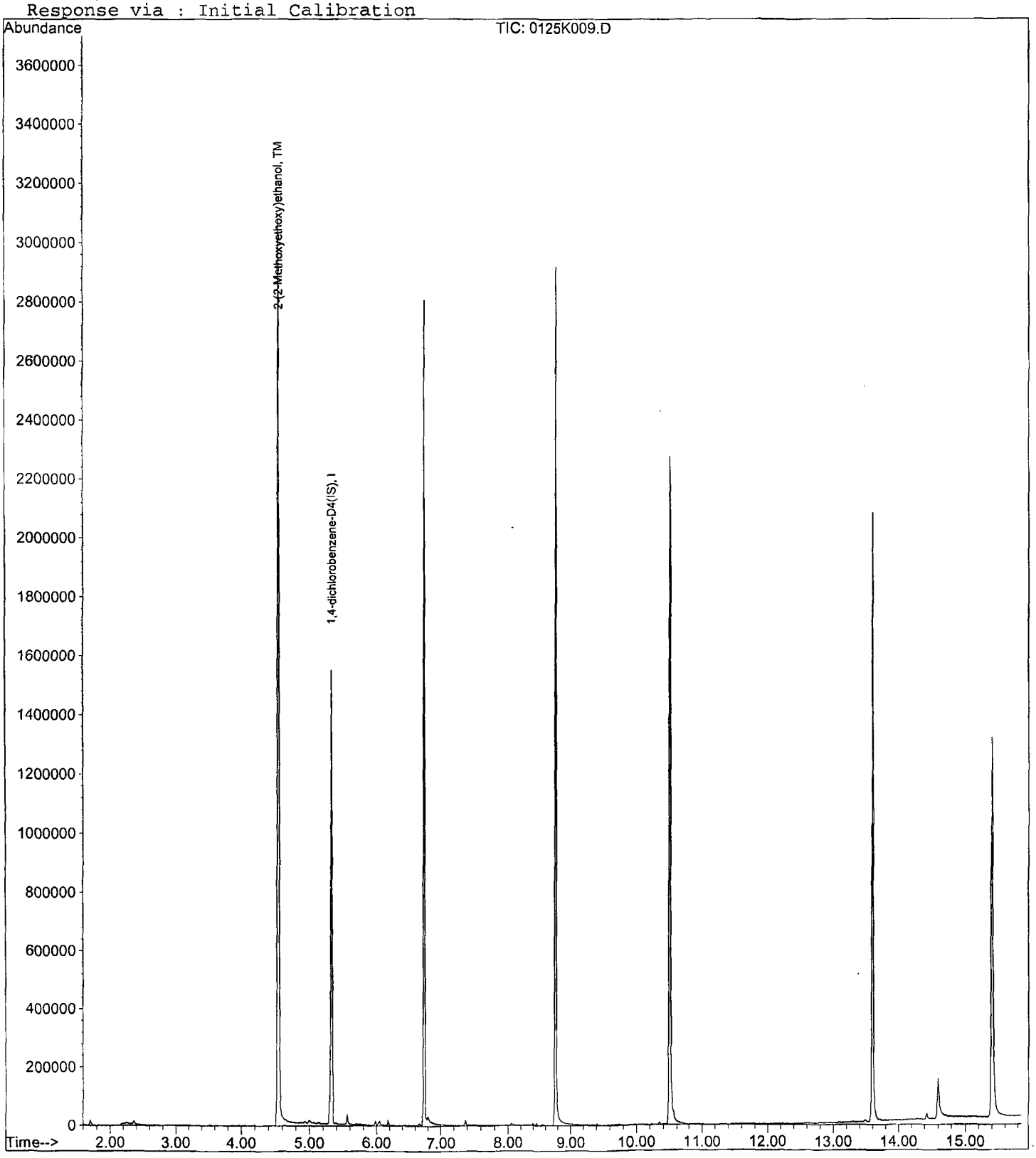
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

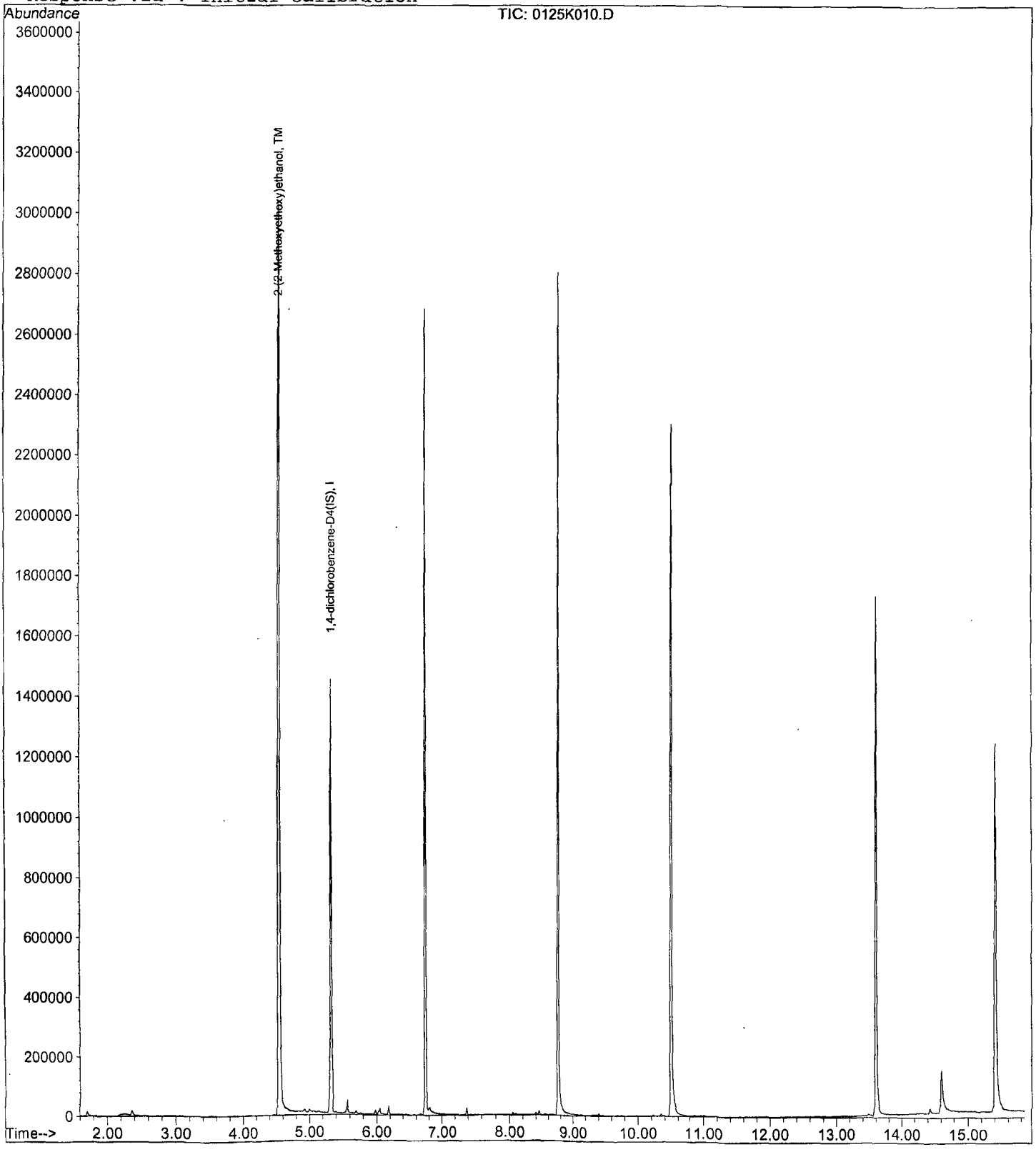
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

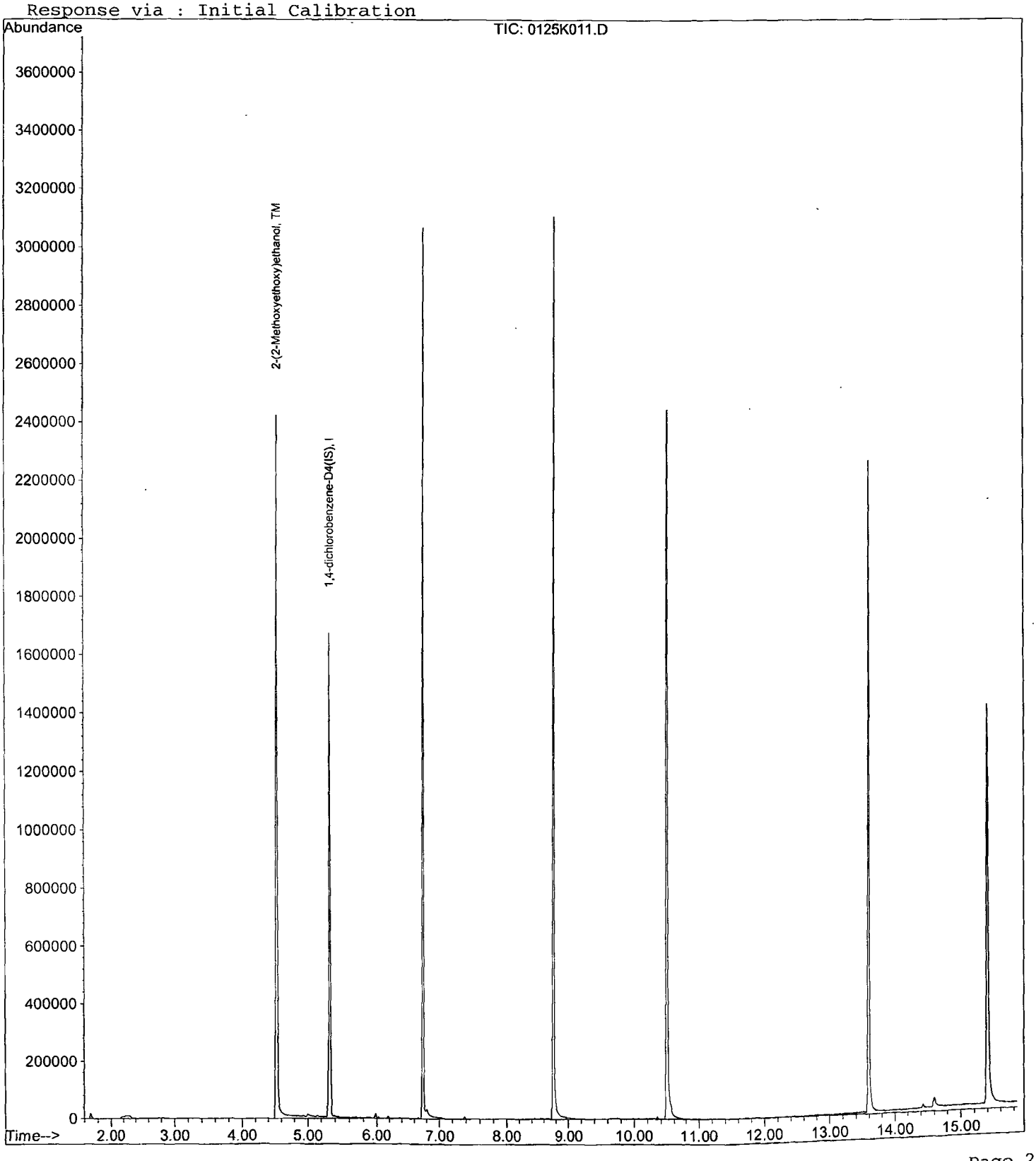
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K014.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2338	9.1	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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21							
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26							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			9.1		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	433460	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1266566	454.49763	ppb	100

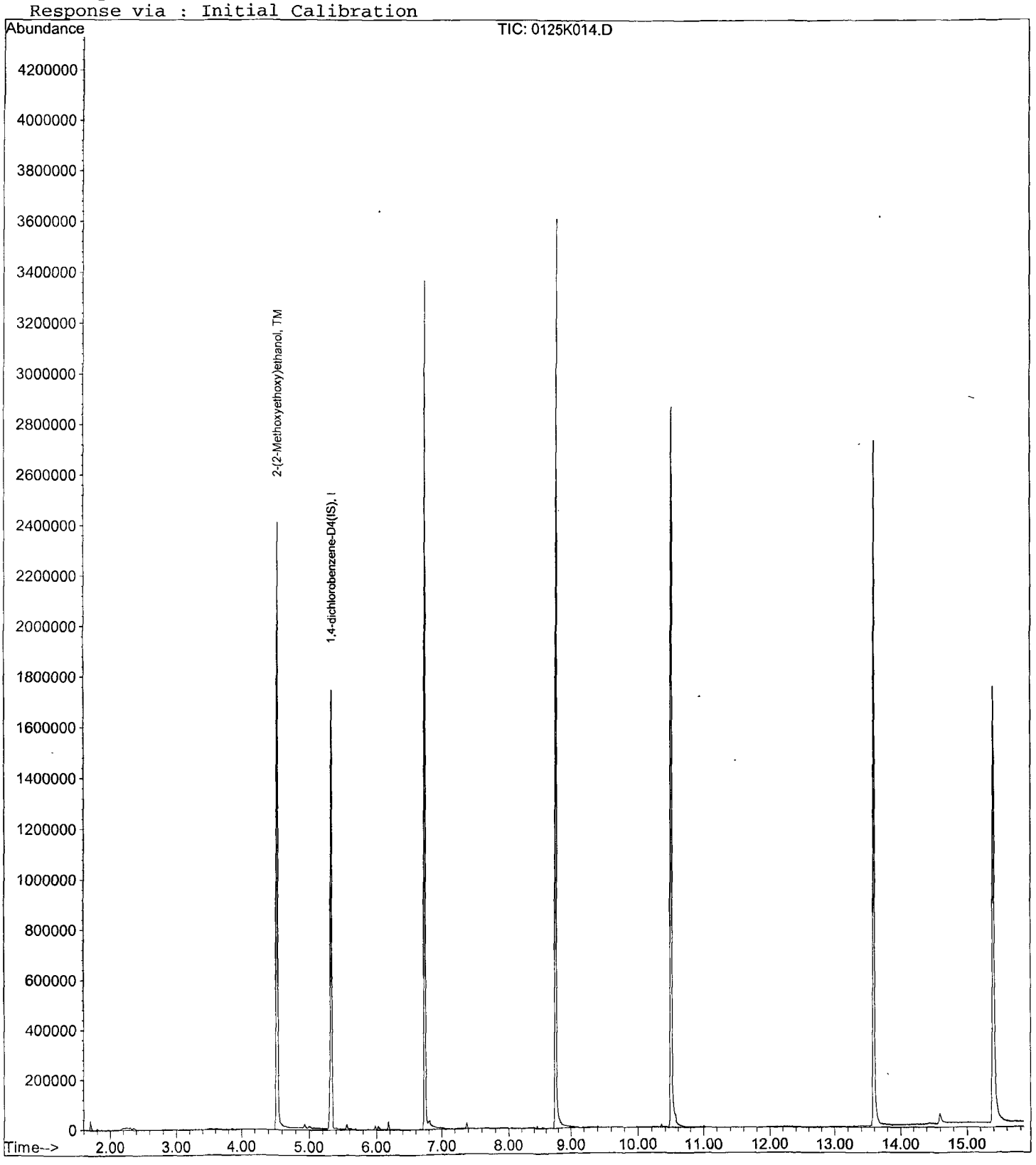
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K014.D Vial: 14
Acq On : 26 Jan 21 10:19 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:35 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K028.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2666	3.7	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.7		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	234567	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	781801	518.42045	ppb	96

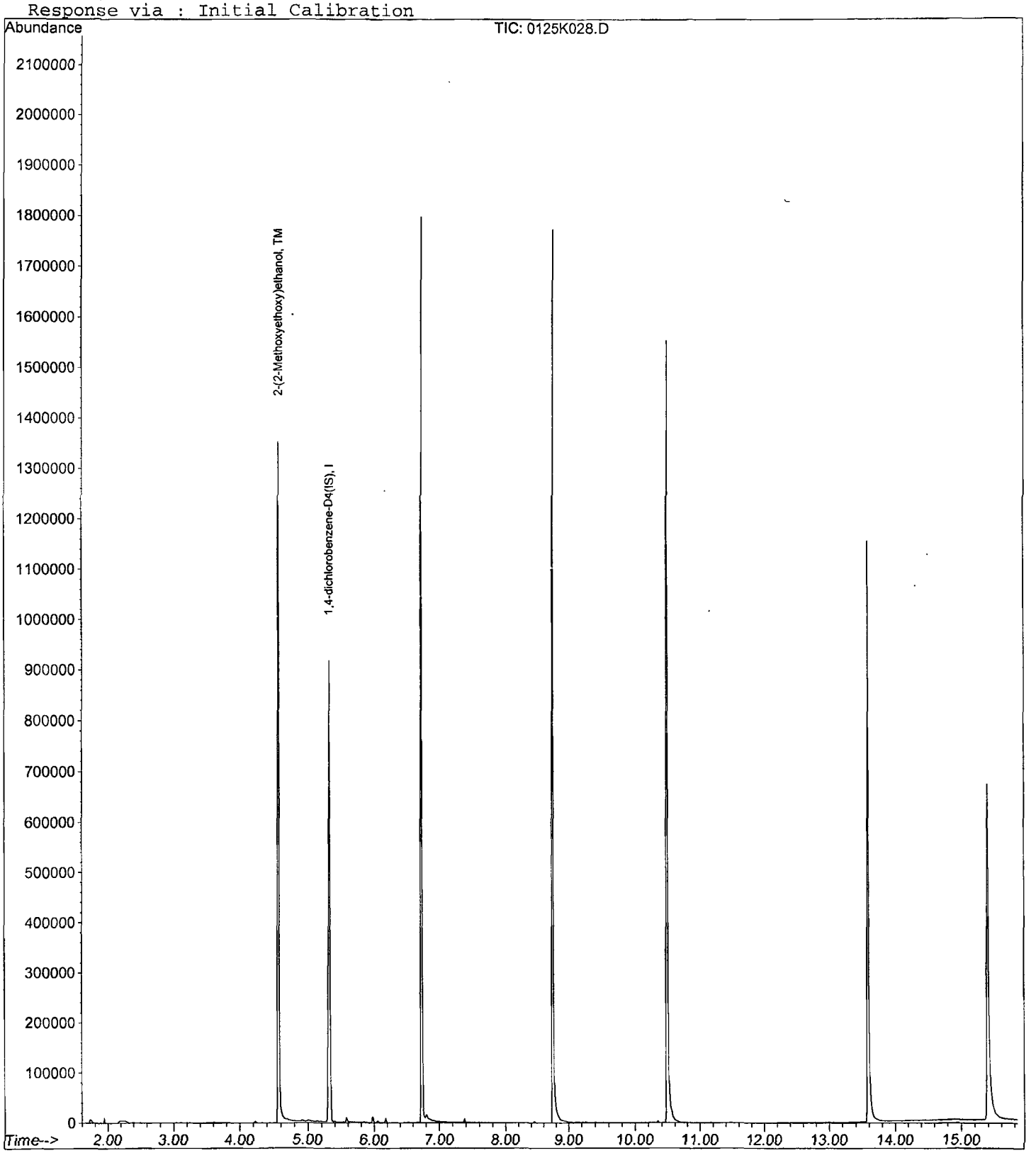
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K028.D Vial: 28
Acq On : 26 Jan 21 15:58 Operator:
Sample : 2MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 16:18 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K023.D
Acq On : 26 Jan 21 14:14
Sample : BA25529W10 2/500
Misc :

Vial: 23
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 26 15:26 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	275984	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

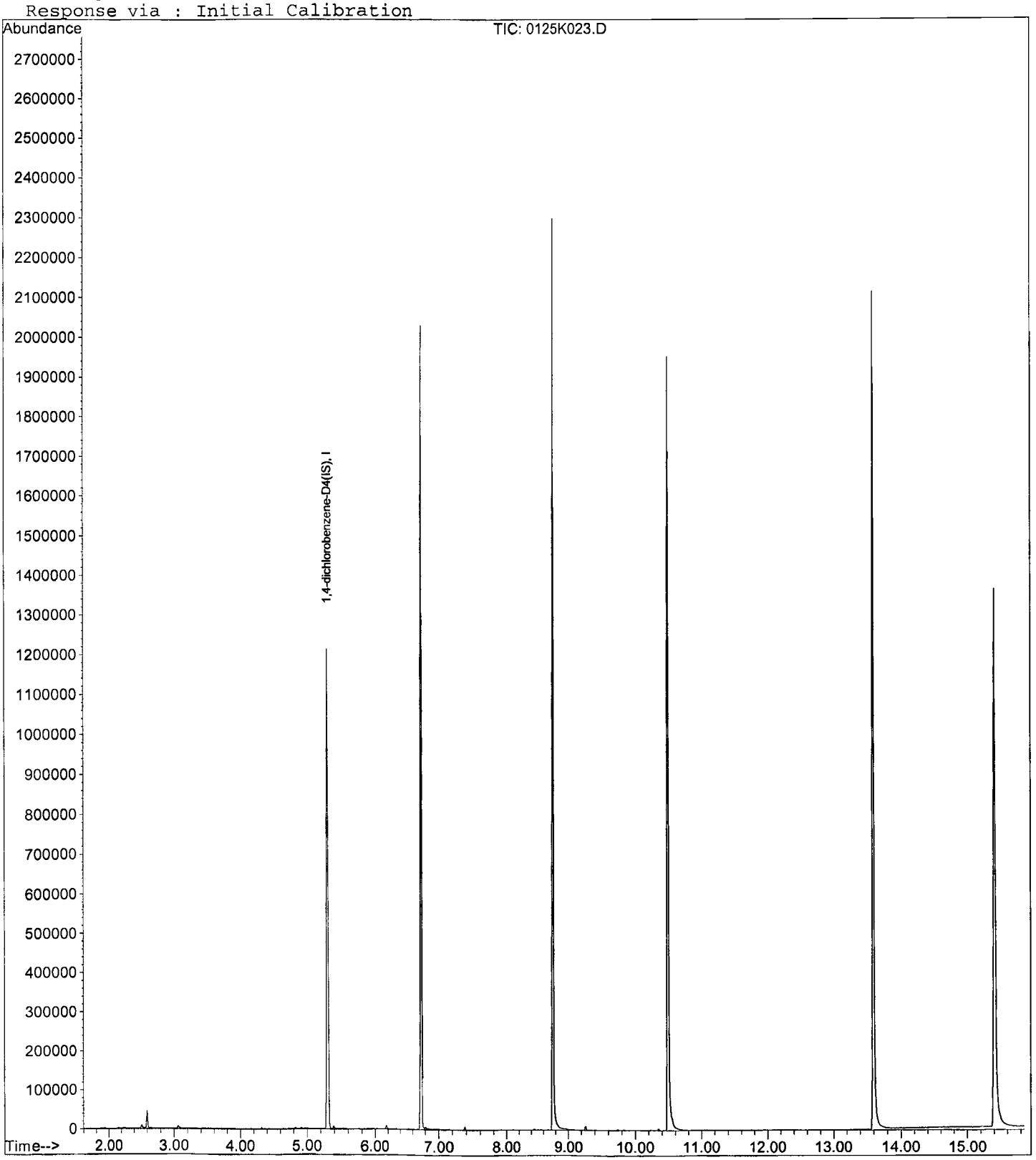
(#) = qualifier out of range (m) = manual integration
0125K023.D KMEE0125.M Wed Jan 27 13:48:56 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K023.D Vial: 23
Acq On : 26 Jan 21 14:14 Operator:
Sample : BA25529W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:26 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K024.D Vial: 24
Acq On : 26 Jan 21 14:34 Operator:
Sample : BA25532W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	260316	40.00000	ppb	-0.03

System Monitoring Compounds

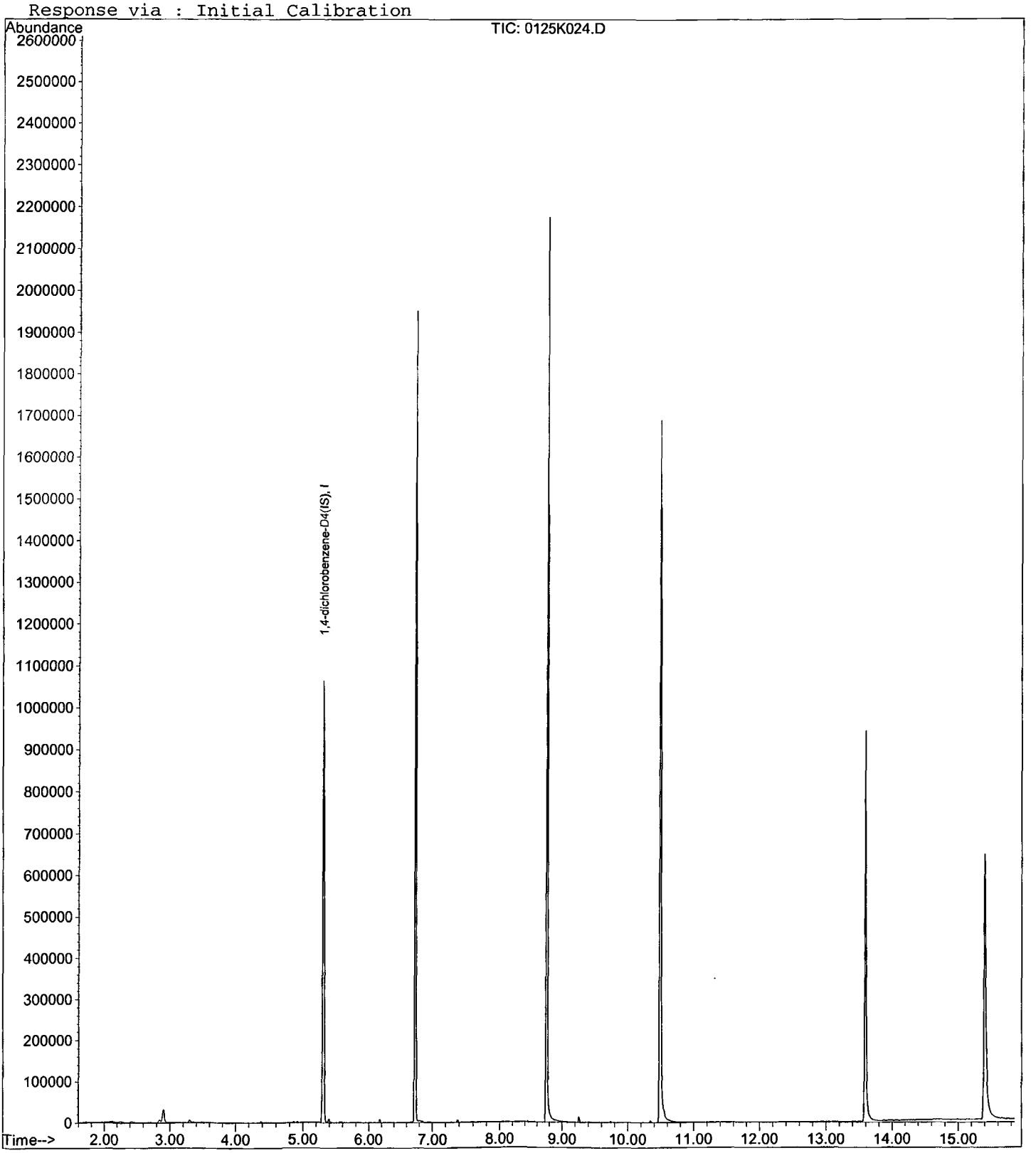
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125K024.D KMEE0125.M Wed Jan 27 13:49:00 2021 Page 1

Data File : M:\KYLO\DATA\210125M\0125K024.D Vial: 24
Acq On : 26 Jan 21 14:34 Operator:
Sample : BA25532W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K025.D Vial: 25
Acq On : 26 Jan 21 14:55 Operator:
Sample : BA25535W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	232391	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

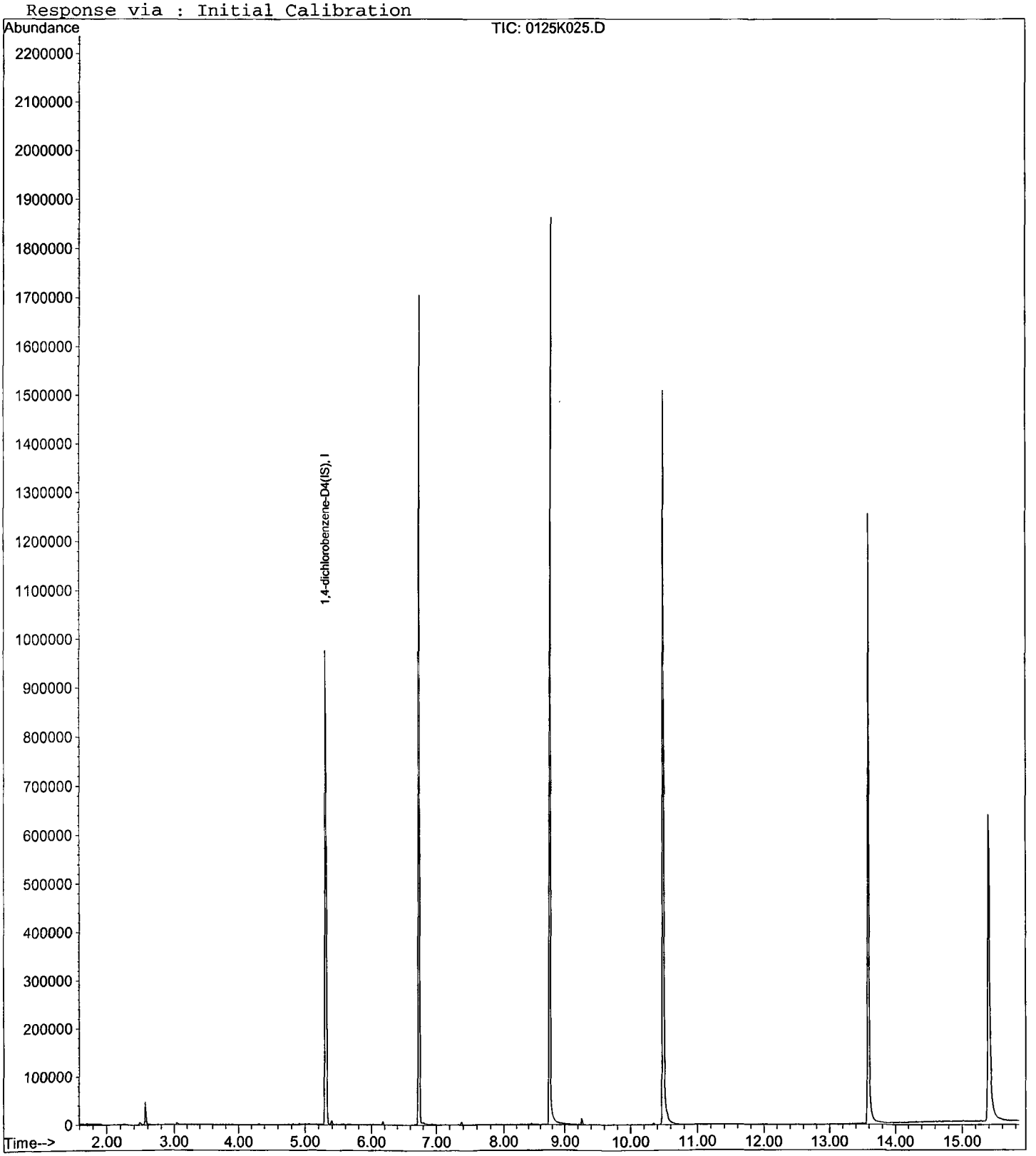
(#) = qualifier out of range (m) = manual integration
0125K025.D KMEE0125.M Wed Jan 27 13:49:05 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K025.D Vial: 25
Acq On : 26 Jan 21 14:55 Operator:
Sample : BA25535W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K026.D Vial: 26
Acq On : 26 Jan 21 15:16 Operator:
Sample : BA25538W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	244005	40.00000 ppb	-0.02

System Monitoring Compounds

Target Compounds Qvalue

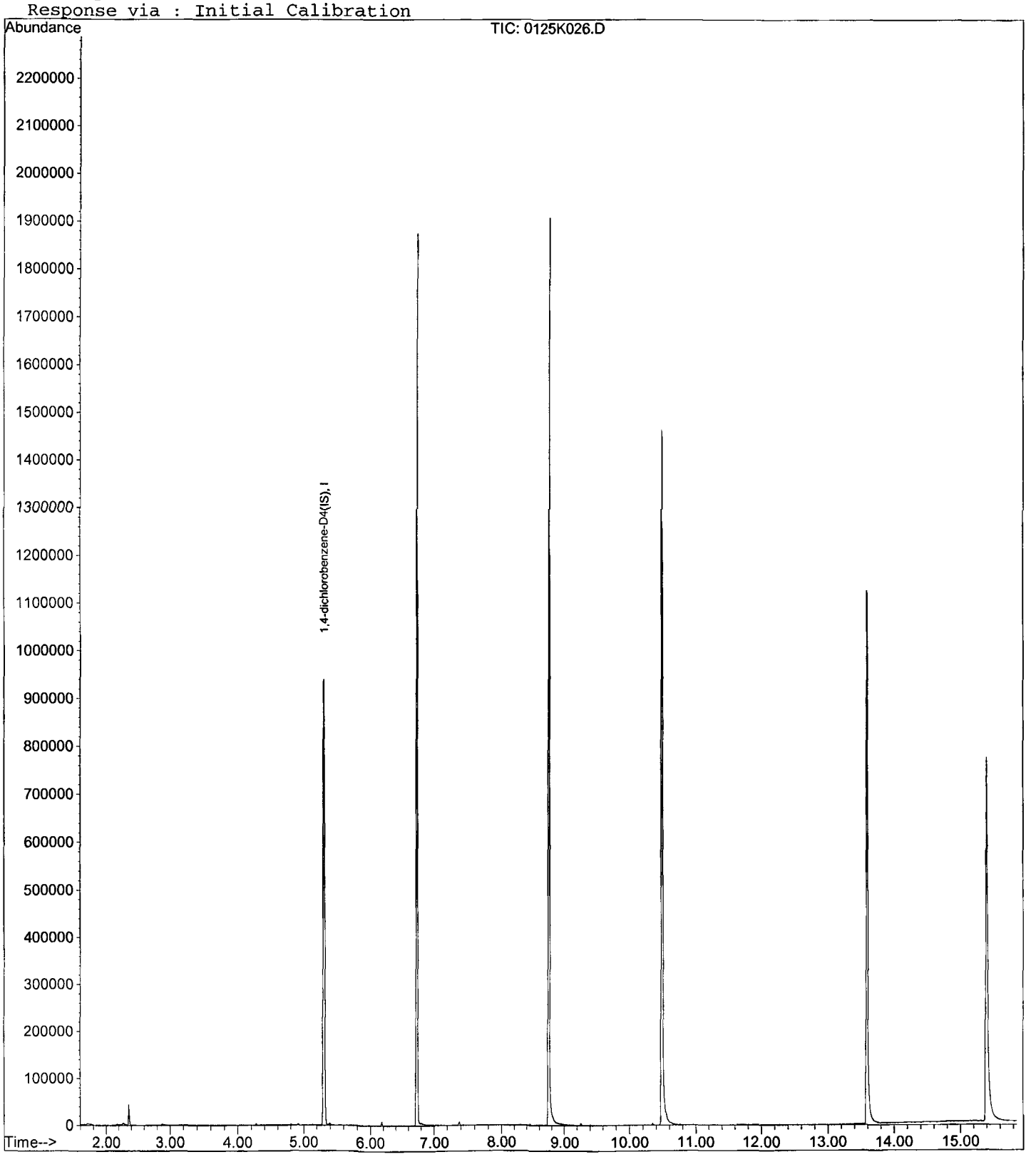
(#) = qualifier out of range (m) = manual integration
0125K026.D KMEE0125.M Wed Jan 27 13:49:10 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K026.D Vial: 26
Acq On : 26 Jan 21 15:16 Operator:
Sample : BA25538W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	370288	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

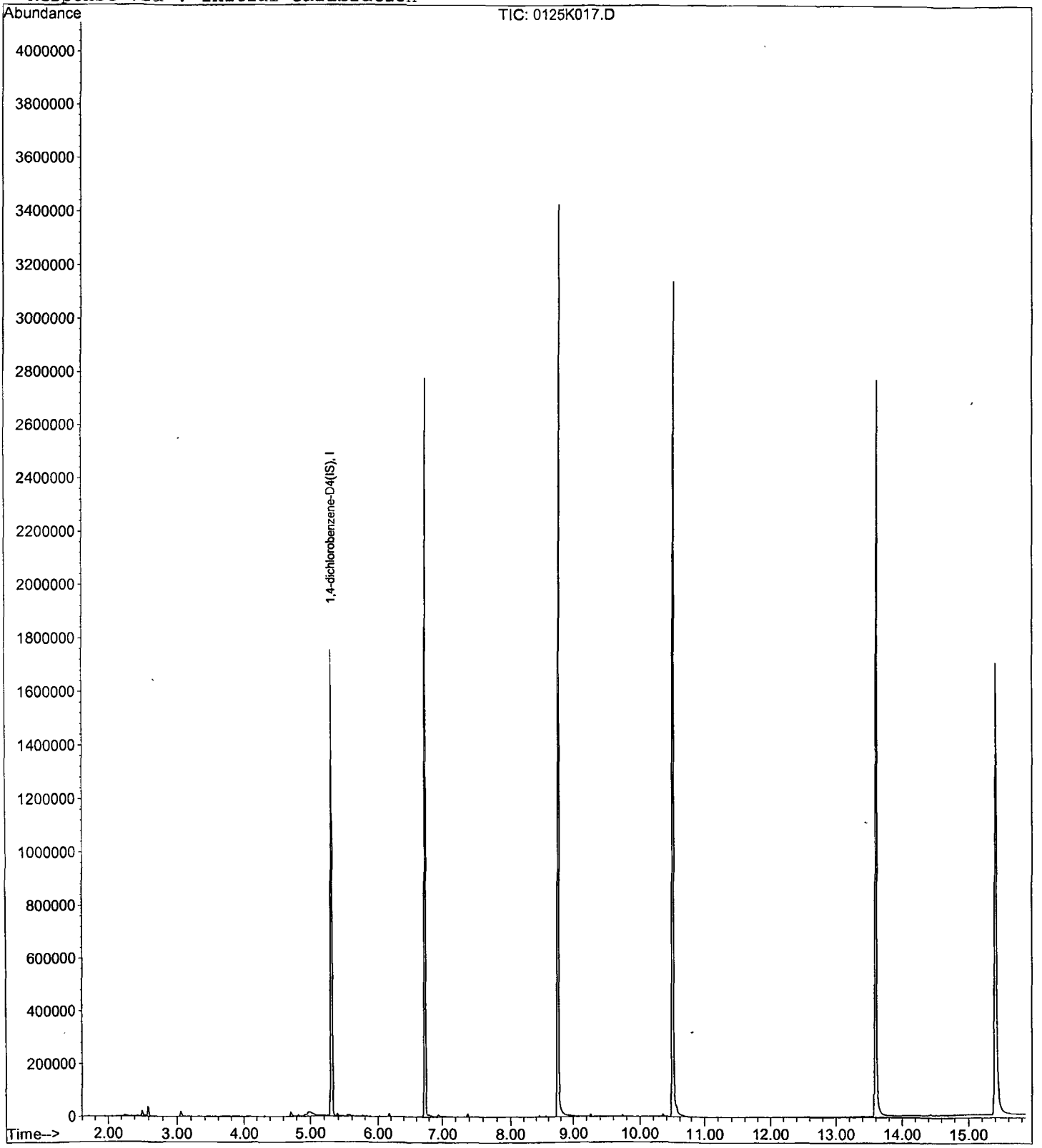
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K017.D Vial: 17
Acq On : 26 Jan 21 11:46 Operator:
Sample : 210125A BLK 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:12 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 12:27:39 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	355190	40.00000 ppb	-0.03

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.74	45	158285	69.31574 ppb	100

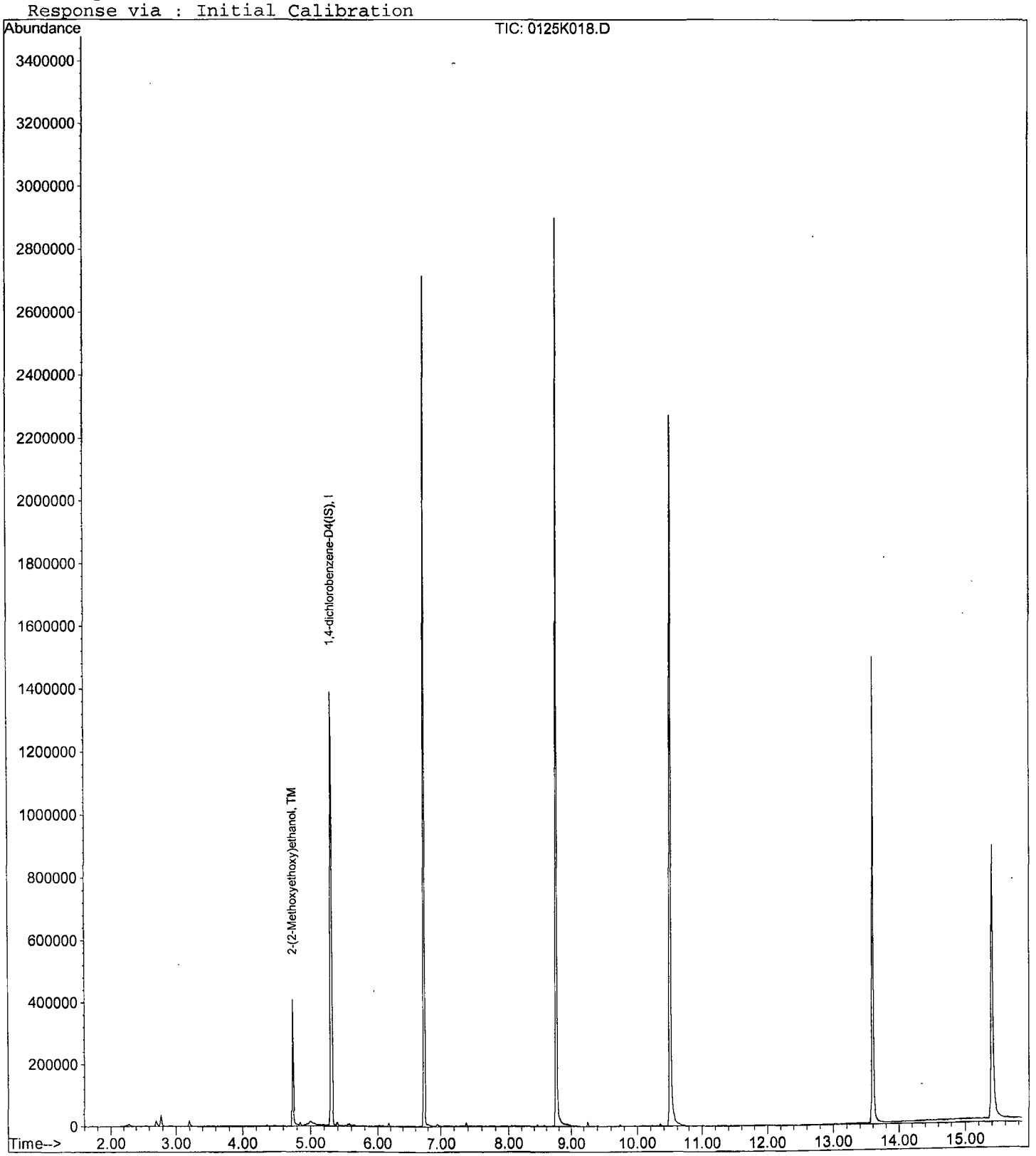
(#) = qualifier out of range (m) = manual integration
0125K018.D KMEE0125.M Wed Jan 27 13:48:33 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K018.D Vial: 18
Acq On : 26 Jan 21 12:07 Operator:
Sample : 210125A LCS-1 1/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:53 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 26 16:18:00 2021
Response via : Initial Calibration

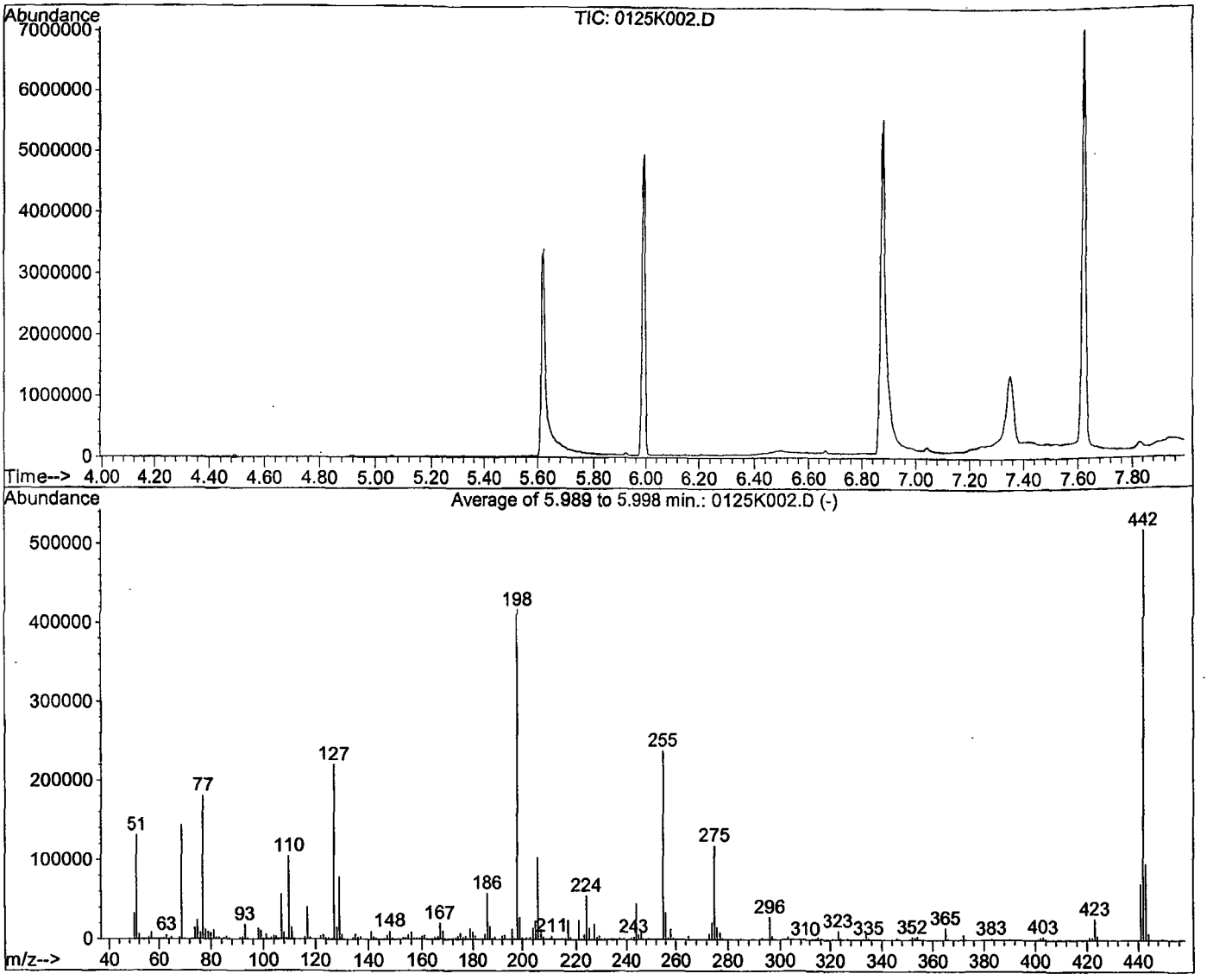


DFTPP

Data File : M:\KYLO\DATA\210125M\0125K002.D
Acq On : 25 Jan 21 12:32
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator:
Inst : KYLO
Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

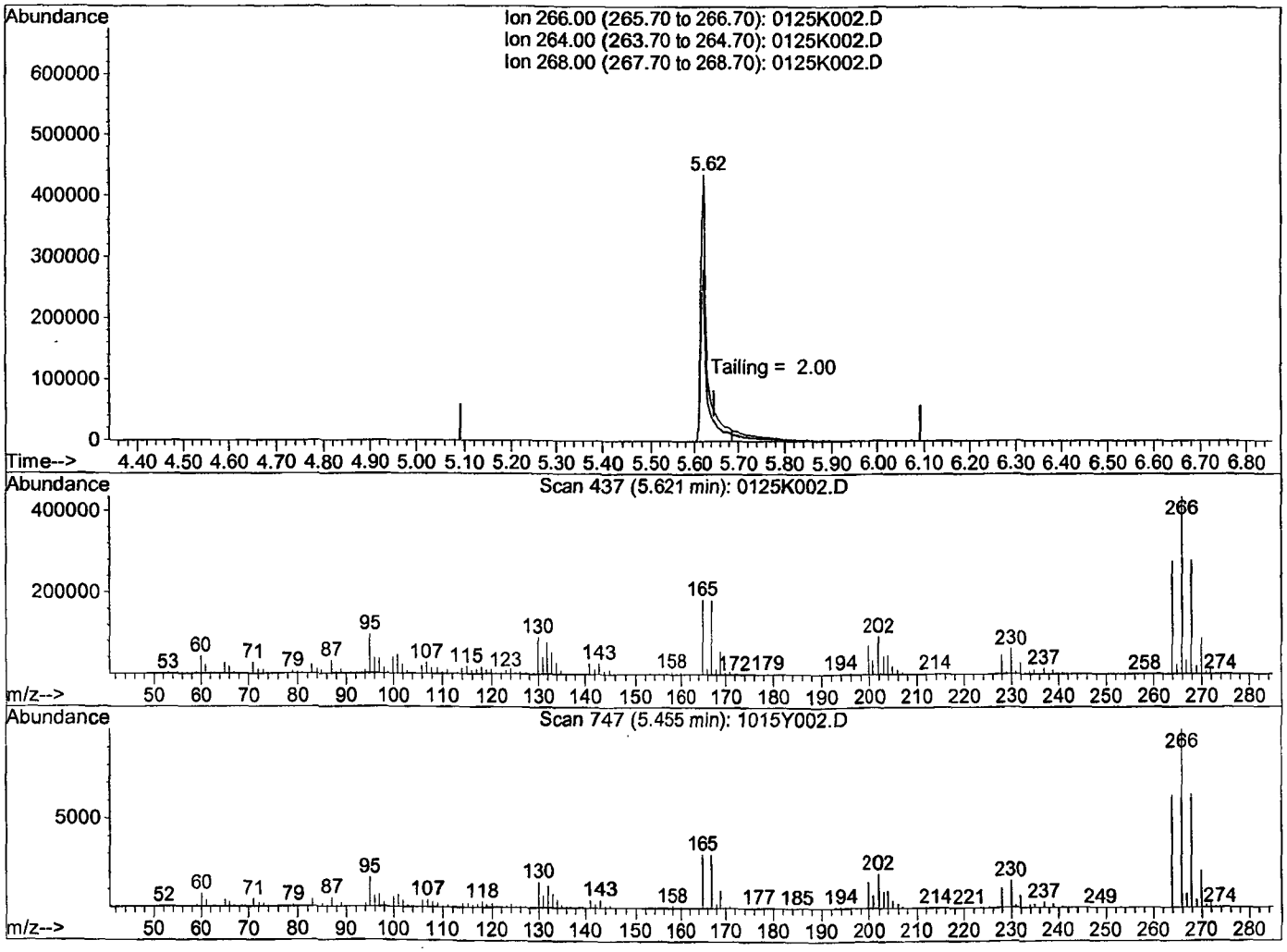
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

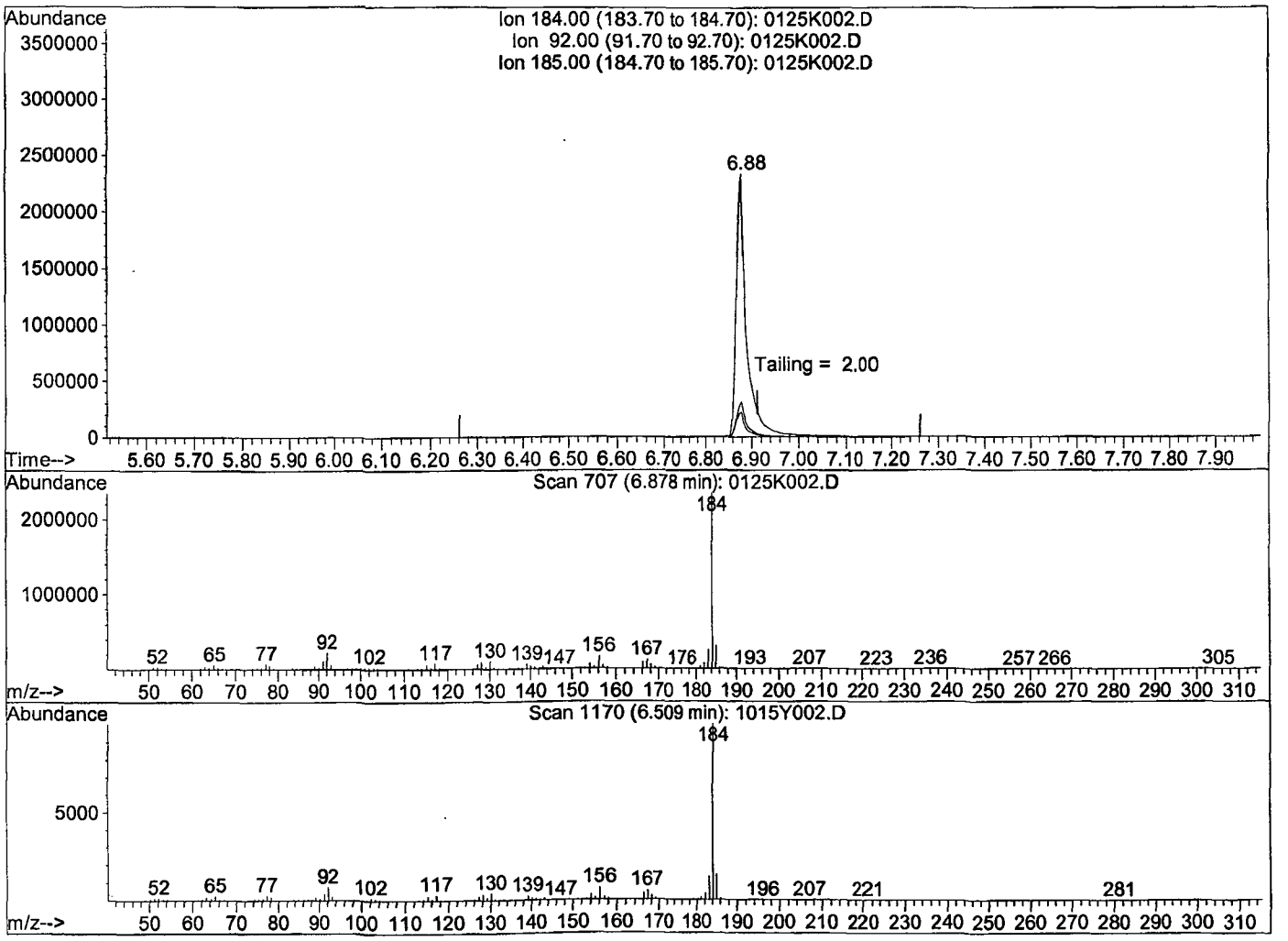
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

response 34626758

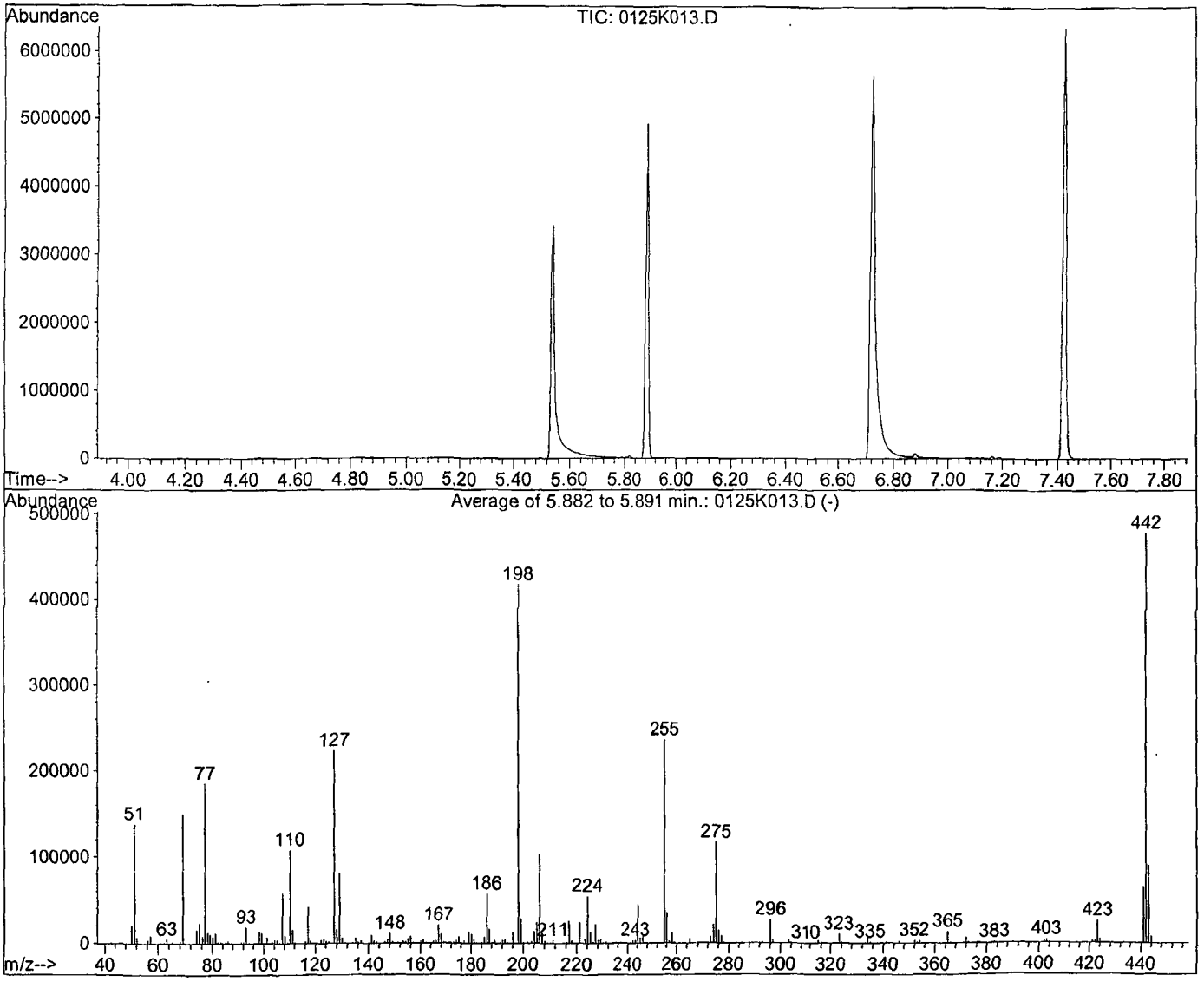
Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K013.D
Acq On : 26 Jan 21 10:06
Sample : SV TUNE 10/02/20
Misc :

Vial: 13
Operator:
Inst : KYLO
Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 493, 494, 495; Background Corrected with Scan 487

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.2	138565	PASS
68	69	0.00	2	1.9	2813	PASS
70	69	0.00	2	0.6	828	PASS
127	198	10	80	53.5	223723	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	417856	PASS
199	198	5	9	6.8	28451	PASS
275	198	10	60	27.9	116741	PASS
365	198	1	100	3.3	13916	PASS
441	442	0.01	24	13.7	65373	PASS
442	198	50	500	114.6	478805	PASS
443	442	15	24	18.8	90181	PASS

Data File Name:	**0125K013.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**26 Jan 2021 10:06**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**13**
Instrument Name:	**KYLO**

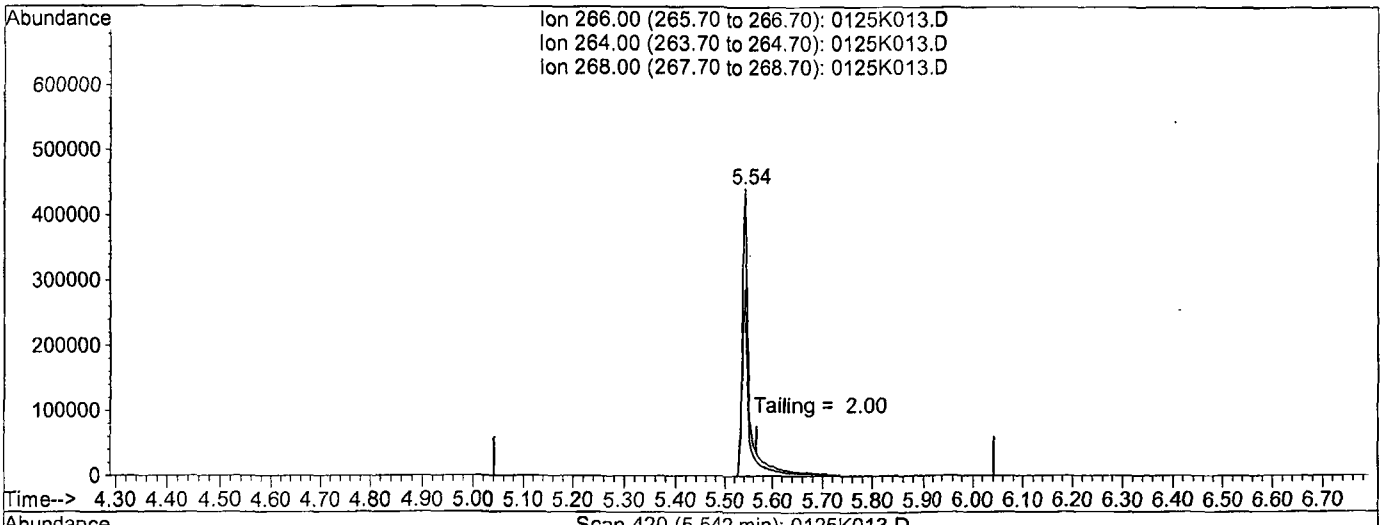
#	Name	Ret Time	Target Response
1)	DDT	7.43	56946000
2)	DDD	7.19	223290
3)	DDE	6.09	0

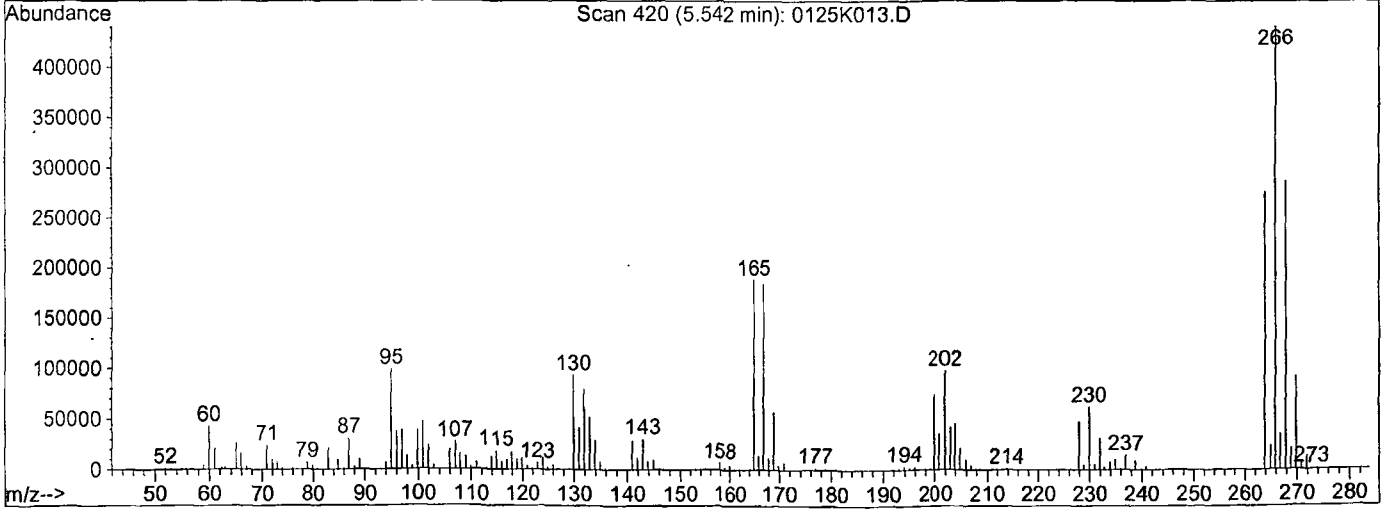
Breakdown **0.39**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K013.D

(5) Pentachlorophenol

5.54min 0.0000

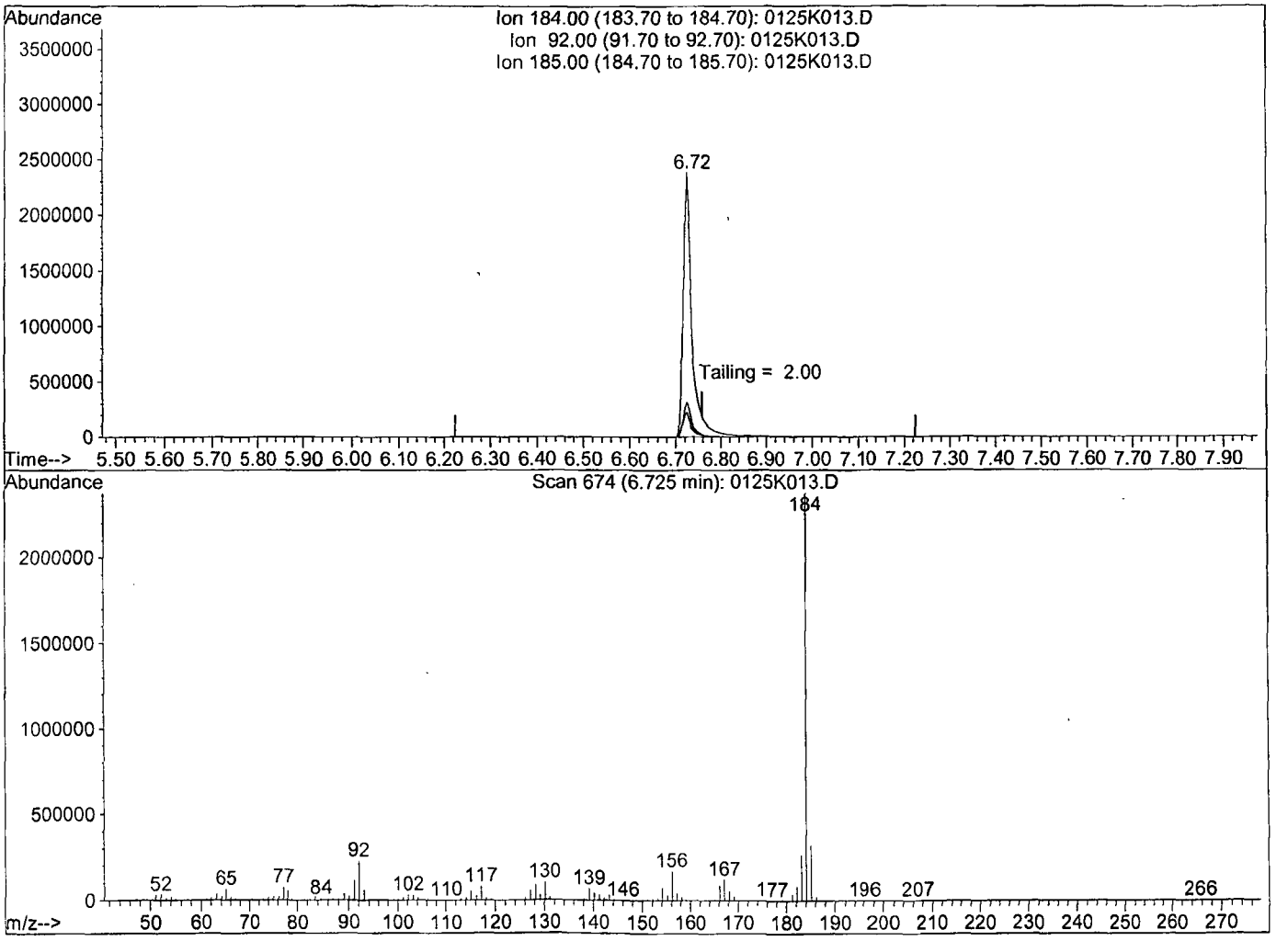
response 4229552

Ion	Exp%	Act%
266.00	100	100
264.00	*62.70*	*66.06*
268.00	65.00	68.63
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K013.D Vial: 13
Acq On : 26 Jan 21 10:06 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 26 10:15 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration



TIC: 0125K013.D

(6) Benzidine

6.73min 0.0000

response 32216964

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	9.36
185.00	13.40	13.61
0.00	0.00	0.00

Name of Final Standard 2MEE Second Source Stock

Prep'd By (Initials) JP

Prep Date 10/28/19

Exp Date 10/28/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)

0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard Diethylene Glycol **Prep'd By (Initials)** MA

Prep Date 11/05/19

Exp Date 04/25/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of Final Standard: MEE Curve
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	11/06/19	10/28/21	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	MA
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49871,872,873**	**07/31/25**	3mL	3 mL	**NA**	2000ug/mL

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210125A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01/20/21 ex 01/20/22		Surrogate ID 1		
Spiked ID 2	2MEE SS 1630ug/mL 01/20/21 ex 01/20/22		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	01/25/21 9:00	
Spiked ID 8			Ext. End Time:	01/26/21 7:55	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/25/21 **Witnessed By:** CFM **Date** 01/25/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210125A Blk				NA	NA equip	500	2	7	01/25/21 9:00	
2	210125A LCS-1		0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	80ug/L
3	BA25434	BA25434W14			NA	NA equip	500	2	7	01/25/21 9:00	94808
4	BA25526 MS-1	BA25526W13	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
5	BA25526 MSD-1	BA25526W14	0.040	1	NA	NA equip	500	2	7	01/25/21 9:00	94825
6	BA25526	BA25526W12			NA	NA equip	500	2	7	01/25/21 9:00	94825
7	BA25529	BA25529W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
8	BA25532	BA25532W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
9	BA25535	BA25535W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
10	BA25538	BA25538W10			NA	NA equip	500	2	7	01/25/21 9:00	94826
11	M STD		1	3	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L
12	SS		0.613	2	NA	NA equip	500	2	7	01/25/21 9:00	2000ug/L

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	
Reverible Tube Lot:	047266-EY
PH Strip	HC025486
Di Water	1-25-21
MeOH:DCM MIX	8-4-20

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	1/26/20
Time	9:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	YL
Sample Preparation	YL,KY
Extraction	YL,KY
Concentration	KY

Modified	01/25/21 8:17:11 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
13	0125K013.D	1	SV TUNE 10/02/20		26 Jan 21 10:06
14	0125K014.D	1	2MEE 500 5/1/20		26 Jan 21 10:19
17	0125K017.D	1	210125A BLK 1/500		26 Jan 21 11:46
18	0125K018.D	1	210125A LCS-1 1/500		26 Jan 21 12:07
23	0125K023.D	1	BA25529W10 2/500		26 Jan 21 14:14
24	0125K024.D	1	BA25532W10 2/500		26 Jan 21 14:34
25	0125K025.D	1	BA25535W10 2/500		26 Jan 21 14:55
26	0125K026.D	1	BA25538W10 2/500		26 Jan 21 15:16
28	0125K028.D	1	2MEE 500 1/26/21 (2)		26 Jan 21 15:58

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0122Z02.D	0122Z03.D	0122Z04.D	0122Z05.D	0122Z06.D	0122Z07.D	0122Z08.D	0122Z09.D	0122Z10.D		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane	0.1364	0.1247	0.1448	0.1599	0.1294	0.1388	0.1407	0.1430	0.1338		0.14	7.3	TM			
4	TM	Freon 114	0.0947	0.0902	0.0909	0.0875	0.0698	0.0803	0.0798	0.0780	0.0721		0.08	11	TM			
5	TM**L	Chloromethane		0.1807	0.2160	0.1037	0.0572	0.0568	0.0526	0.0503	0.0487		0.10	69	TM**	1.000		
6	TM*	Vinyl chloride	0.1481	0.1461	0.1353	0.1369	0.1268	0.1301	0.1223	0.1217	0.1139		0.13	8.7	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0819	0.0973	0.0546	0.0429	0.0386	0.0355	0.0321	0.0287		0.05	49	TM	0.998		
10	TML	Chloroethane	0.0583	0.0603	0.0472	0.0377	0.0342	0.0316	0.0293	0.0259			0.04	33	TM	0.996		
11	TM	Dichlorofluoromethane	0.2370	0.2570	0.2362	0.2324	0.2290	0.2301	0.2110	0.1694			0.23	11	TM			
12	TM	Trichlorofluoromethane	0.2350	0.2299	0.2296	0.2303	0.2215	0.2306	0.2295	0.2101			0.23	3.4	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein	0.0036	0.0037	0.0041	0.0043	0.0044	0.0046	0.0046	0.0048	0.0040		0.00	9.9	TM			
17	TM	Acetone	0.0297	0.0289	0.0294	0.0293	0.0296	0.0301	0.0288	0.0289	0.0258		0.03	4.3	TM			
18	TM	Freon-113	0.0602	0.0574	0.0592	0.0635	0.0568	0.0585	0.0592	0.0581	0.0543		0.06	4.3	TM			
19	TM*	1,1-DCE	0.1490	0.1531	0.1505	0.1580	0.1445	0.1518	0.1535	0.1526	0.1482		0.15	2.5	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile	0.0033	0.0028	0.0030	0.0028	0.0028	0.0027	0.0025	0.0021			0.00	13	TM			
22	TM	t-Butanol	0.0024	0.0024	0.0028	0.0028	0.0028	0.0029	0.0028	0.0026	0.0018		0.00	13	TM			
23	TM	Methyl Acetate		0.1009	0.0845	0.0797	0.0677	0.0711	0.0707	0.0724	0.0687		0.08	15	TM			
24	TML	Iodomethane	0.2057	0.1545	0.1665	0.1127	0.0916	0.0998	0.1154	0.1357	0.1563		0.14	27	TM	0.995		
25	TM	Acrylonitrile	0.0282	0.0358	0.0340	0.0322	0.0310	0.0317	0.0322	0.0325	0.0304		0.03	6.7	TM			
26	TML	Methylene chloride		0.2652	0.1508	0.1015	0.0792	0.0719	0.0652	0.0641	0.0552		0.11	67	TM	0.997		
27	TM	Carbon disulfide	0.1661	0.1585	0.1537	0.1476	0.1330	0.1497	0.1482	0.1560	0.1485		0.15	6.1	TM			
28	TM	Methyl t-butyl ether (MtBE)	0.2351	0.2420	0.2528	0.2520	0.2549	0.2781	0.2798	0.2825	0.2736		0.26	6.7	TM			
29	TM	Trans-1,2-DCE	0.1556	0.1617	0.1524	0.1524	0.1405	0.1488	0.1483	0.1467	0.1415		0.15	4.5	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether	0.2479	0.2636	0.2418	0.2582	0.2591	0.2798	0.2834	0.2872	0.2782		0.27	6.1	TM			
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
33	TM**	1,1-DCA	0.1816	0.1974	0.1965	0.1812	0.1762	0.1858	0.1868	0.1832	0.1778		0.19	4.0	TM**			
34	TM	Vinyl Acetate	0.0977	0.0904	0.0874	0.0838	0.0924	0.0994	0.1004	0.1028	0.0954		0.09	6.8	TM			
35	TM	Ethyl tert Butyl Ether	0.2271	0.2404	0.2250	0.2299	0.2403	0.2611	0.2751	0.2786	0.2776		0.25	9.0	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0305	0.0317	0.0358	0.0376	0.0391	0.0403	0.0408	0.0419	0.0383		0.04	11	TM			
37	TM	Cis-1,2-DCE	0.1952	0.1717	0.1650	0.1635	0.1575	0.1675	0.1651	0.1625	0.1577		0.17	6.8	TM			
38	TM	2,2-Dichloropropane	0.1608	0.1532	0.1451	0.1482	0.1466	0.1591	0.1663	0.1666	0.1657		0.16	5.6	TM			
39	TML	2-Methylpentane													TM			
40	TM	3-Methylpentane													TM			
41	TM*	Chloroform	0.1932	0.2029	0.1961	0.1959	0.1962	0.2044	0.2048	0.2067	0.1993		0.20	2.4	TM*			
42	TM	Bromochloromethane	0.0709	0.0840	0.0752	0.0732	0.0750	0.0774	0.0750	0.0736	0.0709		0.08	5.3	TM			
43	S	Dibromofluoromethane(S)	0.2042	0.1973	0.2437	0.2443	0.2769	0.2816	0.3016	0.2962	0.2909		0.26	15	S			
44	TM	1,1,1-TCA	0.1652	0.1646	0.1761	0.1816	0.1764	0.1901	0.1954	0.1988	0.1954		0.18	7.1	TM			
45	TM	Cyclohexane	0.1484	0.1401	0.1604	0.1613	0.1518	0.1619	0.1646	0.1630	0.1595		0.16	5.2	TM			
46	TM	1,1-Dichloropropene	0.1259	0.1415	0.1347	0.1372	0.1394	0.1430	0.1457	0.1465	0.1421		0.14	4.6	TM			
47	TM	2,2,4-Trimethylpentane	0.3013	0.2972	0.3235	0.3428	0.3028	0.3387	0.3437	0.3481	0.3441		0.33	6.4	TM			
48	S	1,2-DCA-D4(S)	0.1839	0.1845	0.2212	0.2200	0.2521	0.2518	0.2666	0.2602	0.2565		0.23	14	S			
49	TM	Carbon Tetrachloride	0.1449	0.1377	0.1417	0.1516	0.1458	0.1645	0.1685	0.1784	0.1826		0.16	11	TM			
50	TM	Tert Amyl Methyl Ether	0.1863	0.2067	0.2108	0.2147	0.2232	0.2414	0.2511	0.2671	0.2680		0.23	12	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA	0.1443	0.1402	0.1353	0.1338	0.1321	0.1346	0.1314	0.1307	0.1275		0.13	3.8	TM			
53	TM	Benzene	0.4583	0.4575	0.4513	0.4410	0.4337	0.4460	0.4423	0.4412	0.4214		0.44	2.6	TM			
54	TM	TCE	0.1829	0.1825	0.1616	0.1577	0.1517	0.1558	0.1532	0.1526	0.1517		0.16	7.9	TM			
55	TM	2-Pentanone	0.0412	0.0443	0.0513	0.0546	0.0583	0.0616	0.0632	0.0667	0.0587		0.06	15	TM			
56	TM*	1,2-Dichloropropane	0.1051	0.1071	0.0948	0.1020	0.0941	0.1000	0.0998	0.0990	0.0973		0.10	4.4	TM*			
57	TM	Bromodichloromethane	0.0947	0.1071	0.0966	0.1023	0.1082	0.1166	0.1220	0.1284	0.1367		0.11	13	TM			
58	TM	Methyl Cyclohexane	0.1752	0.1718	0.1874	0.1995	0.1827	0.1989	0.1974	0.1996	0.1998		0.19	5.9	TM			
59	TM	Dibromomethane	0.1154	0.1181	0.1041	0.1082	0.1067	0.1121	0.1105	0.1125	0.1101		0.11	3.9	TM			
60	TML	MIBK (methyl isobutyl ketone	0.0455	0.0505	0.0594	0.0624	0.0680	0.0717	0.0737	0.0780	0.0741		0.06	17	TM	0.997		
61	TM	1-Bromo-2-chloroethane	0.0206	0.0186	0.0208	0.0203	0.0220	0.0227	0.0189	0.0201	0.0196		0.02	6.5	TM			
62	TM	2-Chloroethyl vinyl ether	0.0250	0.0249	0.0282	0.0289	0.0321	0.0339	0.0345	0.0356	0.0358		0.03	14	TM			
63	TM	Cis-1,3-Dichloropropene	0.1214	0.1261	0.1207	0.1244	0.1342	0.1464	0.1514	0.1570	0.1606		0.14	12	TM			
64	TM*	Toluene	0.4931	0.5136	0.4917	0.4955	0.4751	0.4916	0.4827	0.4866	0.4797		0.49	2.3	TM*			
65	TML	Trans-1,3-Dichloropropene	0.0833	0.0950	0.0921	0.0993	0.1097	0.1254	0.1306	0.1371			0.11	18	TM	0.999		
66	TM	1,1,2-TCA	0.0871	0.0982	0.0926	0.0918	0.0954	0.0980	0.0962	0.0964	0.0956		0.09	3.7	TM			
67	TML	2-Hexanone	0.0153	0.0175	0.0220	0.0244	0.0261	0.0278	0.0297	0.0296	0.0283		0.02	21	TM	0.997		
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	0.8880	0.8878	1.100	1.091	1.216	1.217	1.274	1.279	1.200		1.1	13	S			
70	TM	1,2-EDB	0.0977	0.1083	0.1111	0.1141	0.1152	0.1257	0.1269	0.1313	0.1301		0.12	9.7	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene	0.2664	0.2584	0.2535	0.2544	0.2394	0.2493	0.2480	0.2443	0.2407		0.25	3.5	TM			
72	TM	1-Chlorohexane	0.1641	0.1747	0.1879	0.1965	0.1811	0.1908	0.1929	0.1965	0.1987		0.19	6.2	TM			
73	TM	1,1,1,2-Tetrachloroethane	0.1048	0.1134	0.1145	0.1173	0.1240	0.1386	0.1440	0.1517	0.1553		0.13	14	TM			
74	TM	m&p-Xylene	0.4423	0.4638	0.4650	0.4840	0.4759	0.4917	0.4882	0.4966	0.4905		0.48	3.7	TM			
75	TM	o-Xylene	0.4377	0.4504	0.4520	0.4563	0.4718	0.4941	0.4946	0.5062	0.5190		0.48	6.0	TM			
76	TM	Styrene	0.2957	0.3300	0.3181	0.3407	0.3703	0.3984	0.4126	0.4301	0.4546		0.37	15	TM			
77	SL	4-Bromofluorobenzene(S)	0.2949	0.2947	0.3733	0.3719	0.4276	0.4297	0.4509	0.4560	0.4845		0.40	17	S	0.999		
78	TM	1,3-Dichloropropane	0.1629	0.1768	0.1686	0.1686	0.1707	0.1826	0.1790	0.1822	0.1794		0.17	4.0	TM			
79	TML	Dibromochloromethane	0.0912	0.1021	0.0962	0.0920	0.1014	0.1177	0.1264	0.1395	0.1518		0.11	19	TM	0.998		
80	TM**	Chlorobenzene	0.4179	0.4655	0.4401	0.4365	0.4194	0.4371	0.4273	0.4263	0.4249		0.43	3.4	TM**			
81	TM*	Ethylbenzene	0.6148	0.6526	0.6205	0.6373	0.6248	0.6502	0.6463	0.6525	0.6412		0.64	2.3	TM*			
82	TM**L	Bromoform		0.0680	0.0720	0.0728	0.0764	0.0887	0.1015	0.1190	0.1357		0.09	27	TM**	0.996		
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene	1.520	1.606	1.597	1.715	1.721	1.930	1.837	1.889	1.881		1.7	8.5	TM			
85	TM**	1,1,2,2-Tetrachloroethane	0.2672	0.3084	0.2970	0.3107	0.3248	0.3753	0.3533	0.3780	0.3711		0.33	12	TM**			
86	TM	1,2,3-Trichloropropane	0.1268	0.1160	0.1279	0.1268	0.1281	0.1476	0.1342	0.1437	0.1391		0.13	7.4	TM			
87	TML	t-1,4-Dichloro-2-Butene		0.0468	0.0466	0.0483	0.0574	0.0649	0.0637	0.0742	0.0771		0.06	20	TM	0.999		
88	TM	Bromobenzene	0.5249	0.6585	0.6063	0.6181	0.5235	0.5711	0.5343	0.5610	0.5744		0.57	8.0	TM			
89	TM	n-Propylbenzene	1.696	1.814	1.782	1.874	1.900	2.083	1.993	2.044	2.018		1.9	6.9	TM			
90	TM	4-Ethyltoluene	1.445	1.563	1.594	1.713	1.694	1.885	1.771	1.811	1.814		1.7	8.3	TM			
91	TM	2-Chlorotoluene	1.121	1.254	1.218	1.276	1.269	1.382	1.305	1.355	1.396		1.3	6.7	TM			
92	TM	1,3,5-Trimethylbenzene	1.165	1.287	1.262	1.377	1.406	1.540	1.462	1.521	1.554		1.4	9.8	TM			
93	TM	4-Chlorotoluene	1.121	1.254	1.218	1.276	1.269	1.382	1.305	1.355	1.396		1.3	6.7	TM			
94	TM	Tert-Butylbenzene	1.142	1.440	1.290	1.338	1.332	1.493	1.422	1.481	1.494		1.4	8.5	TM			
95	TM	1,2,4-Trimethylbenzene	1.117	1.223	1.217	1.337	1.396	1.543	1.475	1.531	1.591		1.4	12	TM			
96	TM	Sec-Butylbenzene	1.542	1.727	1.724	1.883	1.858	2.095	2.000	2.077	2.107		1.9	10	TM			
97	TM	p-Isopropyltoluene	1.142	1.440	1.290	1.338	1.332	1.493	1.422	1.481	1.494		1.4	8.5	TM			
98	TML	Benzyl Chloride	0.3893	0.3853	0.3950	0.4071	0.4773	0.6138	0.6541	0.7559	0.7965		0.54	31	TM	0.999		
99	TM	1,3-DCB	1.085	1.179	1.063	1.083	1.088	1.176	1.079	1.112	1.116		1.1	3.8	TM			
100	TM	1,4-DCB	1.188	1.196	1.118	1.141	1.064	1.180	1.091	1.110	1.115		1.1	4.0	TM			
101	TM	n-Butylbenzene	1.079	1.124	1.183	1.264	1.336	1.501	1.451	1.526	1.593		1.3	14	TM			
102	TM	1,2-DCB	0.9129	1.030	0.9513	0.9832	0.9883	1.074	1.001	1.021	1.021		1.00	4.7	TM			
103	TML	Hexachloroethane	0.1963	0.1906	0.1917	0.2197	0.2340	0.2886	0.3146	0.3641	0.4071		0.27	30	TM	0.997		
104	TML	1,2-Dibromo-3-chloropropane		0.0610	0.0666	0.0756	0.0806	0.1021	0.1033	0.1209	0.1212		0.09	26	TM	0.999		
105	TM	1,2,4-Trichlorobenzene	0.8768	0.8778	0.8729	0.9156	0.8792	1.005	0.9435	0.9704	0.9420		0.92	5.2	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene	0.4593	0.4523	0.4102	0.4550	0.4394	0.4989	0.4812	0.4895	0.4718		0.46	5.9	TM			
107	TML	Naphthalene	0.9928	1.006	1.021	1.129	1.263	1.501	1.444	1.529	1.380		1.3	18	TM	0.998		
108	TM	1,2,3-Trichlorobenzene	0.5943	0.6156	0.5690	0.6094	0.6434	0.7200	0.6775	0.6955	0.6486		0.64	7.7	TM			
109																		
110																		
111																		
112																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z02.D Vial: 2
Acq On : 22 Jan 21 09:53 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3432041	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2860621	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1074176	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.29	111	140190	4.85	ppb		0.00
Spiked Amount 25.000			Recovery =	19.388%			
48) 1,2-DCA-D4(S)	5.71	65	126233	3.95	ppb		0.00
Spiked Amount 25.000			Recovery =	15.788%			
69) Toluene-D8(S)	8.03	98	508027	3.94	ppb		0.00
Spiked Amount 25.000			Recovery =	15.744%			
77) 4-Bromofluorobenzene(S)	10.91	95	168719	5.71	ppb		0.00
Spiked Amount 25.000			Recovery =	22.860%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	5618	0.29	ppb		99
4) Freon 114	1.16	85	3900	0.34	ppb	#	76
5) Chloromethane	1.20	50	10899	-0.39	ppb		98
6) Vinyl chloride	1.28	62	6101	0.34	ppb		90
9) Bromomethane	1.53	94	6056	-1.38	ppb		92
10) Chloroethane	1.61	64	2402	-0.51	ppb		92
11) Dichlorofluoromethane	1.79	67	9759	0.32	ppb		98
12) Trichlorofluoromethane	1.83	101	9679	0.31	ppb		91
16) Acrolein	2.20	55	4887	8.44	ppb	#	68
17) Acetone	2.36	43	20386	5.13	ppb		90
18) Freon-113	2.32	101	2481	0.31	ppb		91
19) 1,1-DCE	2.30	61	6137	0.30	ppb	#	89
21) Acetonitrile	2.63	40	4515	11.98	ppb		79
22) t-Butanol	3.03	59	3319	9.35	ppb		96
23) Methyl Acetate	2.72	43	4904	0.46	ppb	#	86
24) Iodomethane	2.43	142	8471	2.50	ppb		93
25) Acrylonitrile	3.09	52	1163	0.30	ppb		93
26) Methylene chloride	2.80	49	14533	-0.70	ppb		96
27) Carbon disulfide	2.49	76	6842	0.26	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	9682	0.27	ppb	#	56
29) Trans-1,2-DCE	3.15	61	6410	0.31	ppb		94
31) Diisopropyl Ether	3.92	45	10210	0.28	ppb	#	80
33) 1,1-DCA	3.71	63	7478	0.29	ppb	#	83
34) Vinyl Acetate	3.86	43	4023	0.31	ppb		99
35) Ethyl tert Butyl Ether	4.49	59	9353	0.27	ppb	#	74
36) MEK (2-Butanone)	4.68	43	20942	4.08	ppb		94
37) Cis-1,2-DCE	4.60	61	8038	0.35	ppb	#	82
38) 2,2-Dichloropropane	4.59	77	6622	0.31	ppb	#	71
39) 2-Methylpentane	2.90	43	174	619.06	ppb	#	38
40) 3-Methylpentane	3.19	57	2194	0.29	ppb	#	57
41) Chloroform	5.08	83	7957	0.29	ppb		98
42) Bromochloromethane	4.93	49	2919	0.28	ppb	#	80
44) 1,1,1-TCA	5.29	97	6804	0.27	ppb		95
45) Cyclohexane	5.37	56	6113	0.17	ppb	#	81
46) 1,1-Dichloropropene	5.53	75	5185	0.27	ppb	#	91
47) 2,2,4-Trimethylpentane	5.96	57	12409	0.37	ppb		95
49) Carbon Tetrachloride	5.51	117	5968	0.28	ppb		88
50) Tert Amyl Methyl Ether	6.01	73	7674	0.24	ppb	#	82
51) Methylcyclopentane	4.49	56	597	0.29	ppb	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z02.D Vial: 2
Acq On : 22 Jan 21 09:53 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

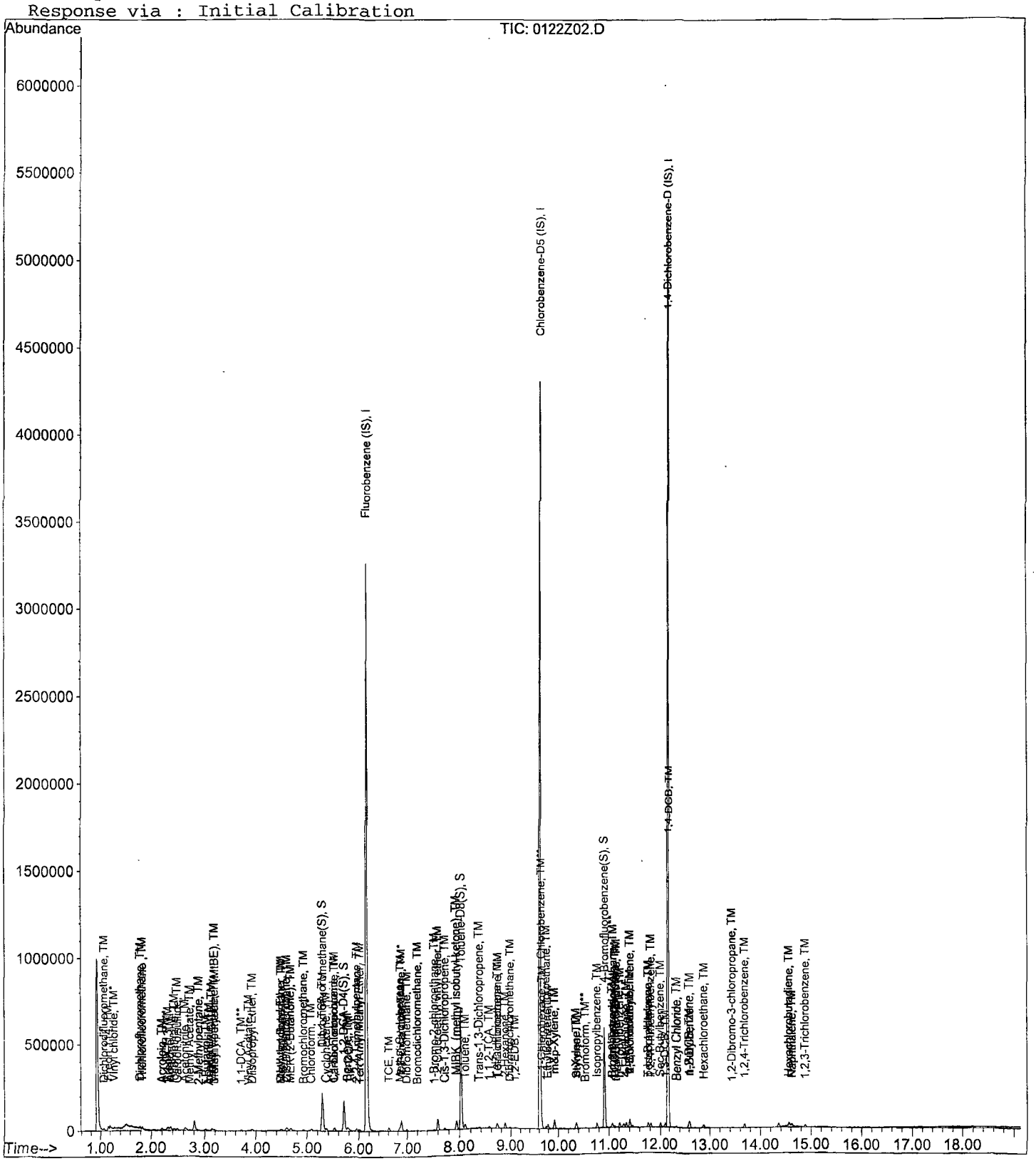
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	1,2-DCA	5.80	62	5944	0.32	ppb		95
53)	Benzene	5.78	78	18873	0.31	ppb		95
54)	TCE	6.61	130	7534	0.34	ppb		96
55)	2-Pentanone	6.87	43	56569	7.42	ppb		90
56)	1,2-Dichloropropane	6.86	63	4329	0.32	ppb	#	81
57)	Bromodichloromethane	7.20	83	3902	0.25	ppb	#	67
58)	Methyl Cyclohexane	6.84	83	7214	0.28	ppb		98
59)	Dibromomethane	6.99	174	4752	0.31	ppb		96
60)	MIBK (methyl isobutyl ket	7.94	43	31208	3.51	ppb		92
61)	1-Bromo-2-chloroethane	7.54	144	849	0.30	ppb	#	67
62)	2-Chloroethyl vinyl ether	7.60	43	17135	4.03	ppb	#	82
63)	Cis-1,3-Dichloropropene	7.73	75	5001	0.26	ppb		97
64)	Toluene	8.10	91	20307	0.30	ppb		87
65)	Trans-1,3-Dichloropropene	8.37	75	3432	0.22	ppb	#	90
66)	1,1,2-TCA	8.56	97	3589	0.28	ppb	#	76
67)	2-Hexanone	8.88	43	10506	3.12	ppb		96
70)	1,2-EDB	9.08	107	3354	0.25	ppb	#	84
71)	Tetrachloroethene	8.72	166	9145	0.32	ppb		98
72)	1-Chlorohexane	9.66	91	5632	0.26	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	3596	0.24	ppb	#	61
74)	m&p-Xylene	9.93	91	30363	0.56	ppb		100
75)	o-Xylene	10.35	91	15024	0.28	ppb	#	81
76)	Styrene	10.37	104	10152	0.24	ppb	#	81
78)	1,3-Dichloropropane	8.73	76	5592	0.28	ppb	#	78
79)	Dibromochloromethane	8.99	129	3132	1.52	ppb		93
80)	Chlorobenzene	9.65	112	14344	0.29	ppb	#	86
81)	Ethylbenzene	9.79	91	21103	0.29	ppb		99
82)	Bromoform	10.53	173	2262	2.08	ppb	#	84
84)	Isopropylbenzene	10.76	105	19593	0.26	ppb		96
85)	1,1,2,2-Tetrachloroethane	11.08	83	3444	0.24	ppb		88
86)	1,2,3-Trichloropropane	11.11	110	1634	0.29	ppb	#	79
87)	t-1,4-Dichloro-2-Butene	11.14	53	436	0.18	ppb	#	1
88)	Bromobenzene	11.07	77	6766	0.27	ppb		89
89)	n-Propylbenzene	11.21	91	21859	0.27	ppb	#	87
90)	4-Ethyltoluene	11.34	105	18629	0.26	ppb		94
91)	2-Chlorotoluene	11.41	91	14449	0.26	ppb	#	87
92)	1,3,5-Trimethylbenzene	11.41	105	15018	0.25	ppb		94
93)	4-Chlorotoluene	11.41	91	14449	0.26	ppb	#	87
94)	Tert-Butylbenzene	11.77	119	14726	0.25	ppb		91
95)	1,2,4-Trimethylbenzene	11.81	105	14393	0.24	ppb		98
96)	Sec-Butylbenzene	12.00	105	19877	0.24	ppb	#	86
97)	p-Isopropyltoluene	11.77	119	14726	0.25	ppb		95
98)	Benzyl Chloride	12.35	91	5018	1.56	ppb	#	81
99)	1,3-DCB	12.10	146	13991	0.29	ppb	#	83
100)	1,4-DCB	12.20	146	15308	0.31	ppb	#	84
101)	n-Butylbenzene	12.61	91	13911	0.24	ppb		91
102)	1,2-DCB	12.60	146	11768	0.27	ppb		95
103)	Hexachloroethane	12.89	201	2530	1.91	ppb	#	77
104)	1,2-Dibromo-3-chloropropan	13.44	157	840	1.18	ppb	#	80
105)	1,2,4-Trichlorobenzene	13.69	180	11302	0.29	ppb		96
106)	Hexachlorobutadiene	14.56	225	5920	0.30	ppb		95
107)	Naphthalene	14.62	128	12797	0.24	ppb	#	91
108)	1,2,3-Trichlorobenzene	14.89	180	7661	0.28	ppb		84

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z02.D Vial: 2
Acq On : 22 Jan 21 09:53 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z03.D
Acq On : 22 Jan 21 10:16
Sample : 0.5ug/L VOC STD1/22/21
Misc :

Vial: 3
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3468853	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2870932	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1079808	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	136869	4.73	ppb		0.00
Spiked Amount 25.000			Recovery = 18.924%				
48) 1,2-DCA-D4(S)	5.71	65	127981	3.96	ppb		0.00
Spiked Amount 25.000			Recovery = 15.836%				
69) Toluene-D8(S)	8.03	98	509770	3.94	ppb		0.00
Spiked Amount 25.000			Recovery = 15.740%				
77) 4-Bromofluorobenzene(S)	10.91	95	169193	5.71	ppb		0.00
Spiked Amount 25.000			Recovery = 22.848%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	8651	0.45	ppb		99
4) Freon 114	1.16	85	6257	0.55	ppb		87
5) Chloromethane	1.20	50	12533	-0.16	ppb		100
6) Vinyl chloride	1.28	62	10139	0.56	ppb		90
9) Bromomethane	1.53	94	5680	-1.49	ppb		96
10) Chloroethane	1.61	64	4181	-0.02	ppb		95
11) Dichlorofluoromethane	1.79	67	17832	0.57	ppb		94
12) Trichlorofluoromethane	1.83	101	15952	0.51	ppb		94
16) Acrolein	2.20	55	12690	21.69	ppb		94
17) Acetone	2.36	43	40152	9.99	ppb		99
18) Freon-113	2.33	101	3979	0.49	ppb		91
19) 1,1-DCE	2.30	61	10625	0.51	ppb		89
21) Acetonitrile	2.63	40	9798	25.72	ppb		96
22) t-Butanol	3.01	59	8408	23.43	ppb		92
23) Methyl Acetate	2.73	43	6999	0.66	ppb		99
24) Iodomethane	2.43	142	10720	2.60	ppb	#	97
25) Acrylonitrile	3.10	52	2482	0.63	ppb	#	50
26) Methylene chloride	2.81	49	18400	-0.21	ppb		94
27) Carbon disulfide	2.49	76	10999	0.46	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	16790	0.46	ppb	#	87
29) Trans-1,2-DCE	3.15	61	11215	0.54	ppb		94
30) Hexane	4.22	56	55	2.52	ppb	#	28
31) Diisopropyl Ether	3.92	45	18287	0.49	ppb		87
33) 1,1-DCA	3.71	63	13698	0.53	ppb		96
34) Vinyl Acetate	3.86	43	6275	0.48	ppb	#	85
35) Ethyl tert Butyl Ether	4.50	59	16676	0.48	ppb		98
36) MEK (2-Butanone)	4.67	43	44041	8.50	ppb		99
37) Cis-1,2-DCE	4.61	61	11912	0.51	ppb		95
38) 2,2-Dichloropropane	4.60	77	10626	0.49	ppb		98
39) 2-Methylpentane	2.87	43	305	370.01	ppb	#	44
40) 3-Methylpentane	3.18	57	3944	0.52	ppb	#	90
41) Chloroform	5.08	83	14080	0.51	ppb	#	75
42) Bromochloromethane	4.92	49	5829	0.56	ppb	#	81
44) 1,1,1-TCA	5.29	97	11420	0.45	ppb		96
45) Cyclohexane	5.37	56	9718	0.33	ppb	#	91
46) 1,1-Dichloropropene	5.52	75	9818	0.51	ppb	#	81
47) 2,2,4-Trimethylpentane	5.95	57	20616	0.54	ppb		99
49) Carbon Tetrachloride	5.52	117	9552	0.44	ppb		90
50) Tert Amyl Methyl Ether	6.01	73	14339	0.45	ppb	#	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z03.D Vial: 3
Acq On : 22 Jan 21 10:16 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	Methylcyclopentane	4.49	56	996	0.47	ppb	#	92
52)	1,2-DCA	5.81	62	9724	0.52	ppb	#	85
53)	Benzene	5.78	78	31737	0.52	ppb		98
54)	TCE	6.61	130	12664	0.57	ppb		89
55)	2-Pentanone	6.88	43	153831	19.96	ppb		91
56)	1,2-Dichloropropane	6.86	63	7433	0.54	ppb	#	81
57)	Bromodichloromethane	7.20	83	7428	0.48	ppb		95
58)	Methyl Cyclohexane	6.84	83	11917	0.45	ppb		90
59)	Dibromomethane	6.98	174	8190	0.53	ppb	#	86
60)	MIBK (methyl isobutyl ket	7.94	43	70081	7.79	ppb		99
61)	1-Bromo-2-chloroethane	7.53	144	1293	0.46	ppb		97
62)	2-Chloroethyl vinyl ether	7.60	43	34566	8.04	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	8747	0.46	ppb	#	84
64)	Toluene	8.11	91	35635	0.52	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	6594	0.42	ppb		98
66)	1,1,2-TCA	8.56	97	6812	0.52	ppb	#	79
67)	2-Hexanone	8.88	43	24344	7.15	ppb		95
70)	1,2-EDB	9.09	107	6220	0.46	ppb		91
71)	Tetrachloroethene	8.71	166	14838	0.52	ppb		97
72)	1-Chlorohexane	9.67	91	10033	0.47	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.75	131	6513	0.44	ppb	#	83
74)	m&p-Xylene	9.92	91	53263	0.97	ppb		98
75)	o-Xylene	10.35	91	25862	0.47	ppb		90
76)	Styrene	10.37	104	18950	0.44	ppb	#	80
78)	1,3-Dichloropropane	8.73	76	10149	0.51	ppb	#	85
79)	Dibromochloromethane	8.98	129	5861	1.68	ppb		93
80)	Chlorobenzene	9.65	112	26728	0.54	ppb	#	93
81)	Ethylbenzene	9.79	91	37470	0.51	ppb		97
82)	Bromoform	10.53	173	3903	2.19	ppb		98
84)	Isopropylbenzene	10.76	105	34686	0.46	ppb	#	88
85)	1,1,2,2-Tetrachloroethane	11.07	83	6661	0.46	ppb		88
86)	1,2,3-Trichloropropane	11.12	110	2506	0.44	ppb	#	83
87)	t-1,4-Dichloro-2-Butene	11.14	53	1011	0.41	ppb	#	54
88)	Bromobenzene	11.06	77	14220	0.57	ppb		89
89)	n-Propylbenzene	11.21	91	39168	0.47	ppb	#	86
90)	4-Ethyltoluene	11.34	105	33760	0.46	ppb		93
91)	2-Chlorotoluene	11.41	91	27092	0.49	ppb		94
92)	1,3,5-Trimethylbenzene	11.41	105	27799	0.46	ppb		99
93)	4-Chlorotoluene	11.41	91	27092	0.49	ppb		94
94)	Tert-Butylbenzene	11.76	119	31102	0.52	ppb		94
95)	1,2,4-Trimethylbenzene	11.81	105	26419	0.44	ppb		100
96)	Sec-Butylbenzene	12.00	105	37297	0.46	ppb		95
97)	p-Isopropyltoluene	11.76	119	31102	0.52	ppb		92
98)	Benzyl Chloride	12.34	91	8321	1.65	ppb	#	93
99)	1,3-DCB	12.10	146	25460	0.53	ppb		96
100)	1,4-DCB	12.20	146	25830	0.53	ppb		99
101)	n-Butylbenzene	12.60	91	24273	0.42	ppb		94
102)	1,2-DCB	12.59	146	22240	0.52	ppb		95
103)	Hexachloroethane	12.88	201	4117	2.00	ppb	#	65
104)	1,2-Dibromo-3-chloropropan	13.45	157	1317	1.27	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.69	180	18958	0.48	ppb		87
106)	Hexachlorobutadiene	14.56	225	9768	0.49	ppb		86
107)	Naphthalene	14.62	128	21716	0.40	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	13295	0.48	ppb	#	78

(#) = qualifier out of range (m) = manual integration

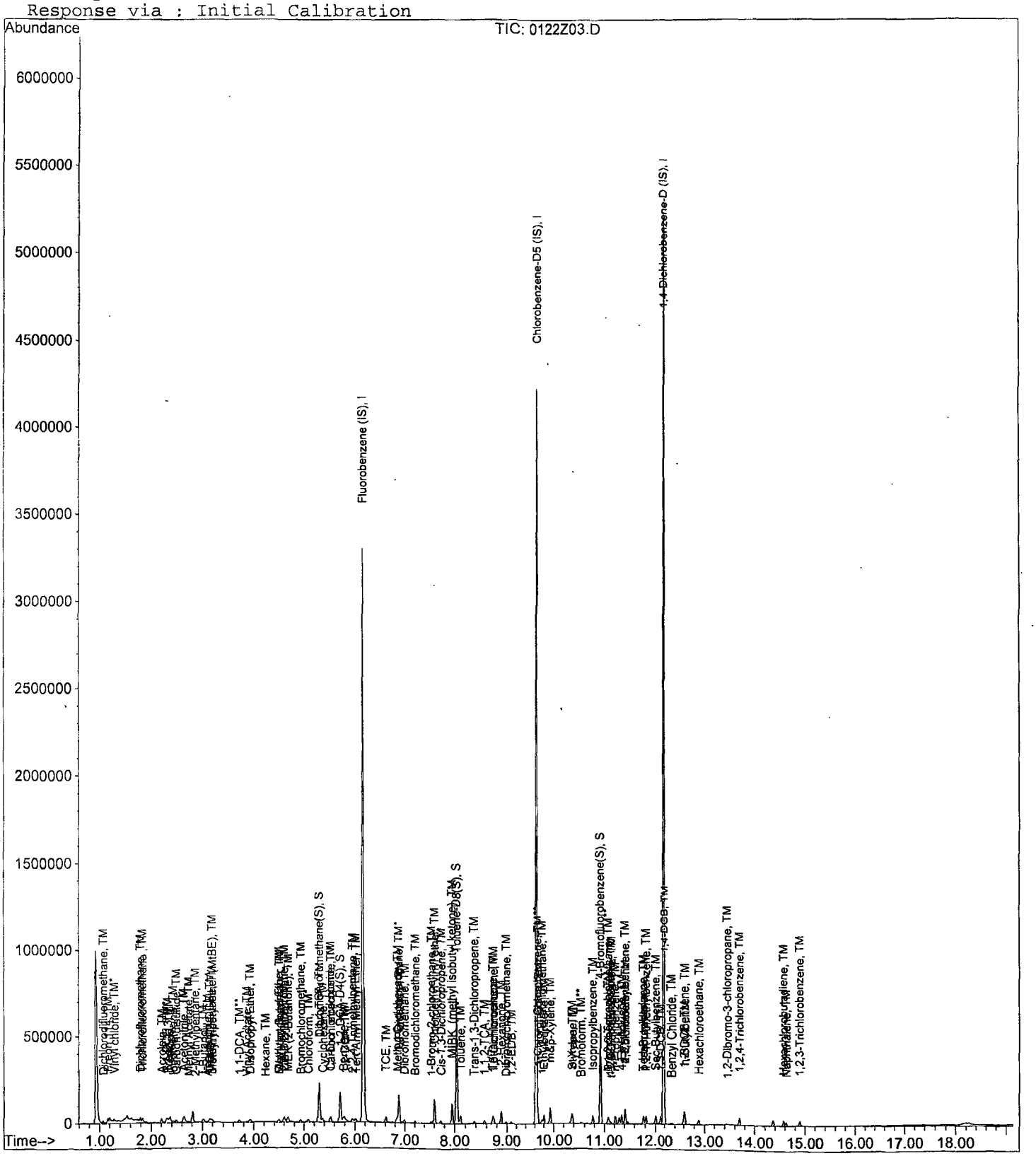
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z03.D
Acq On : 22 Jan 21 10:16
Sample : 0.5ug/L VOC STD1/22/21
Misc :

Vial: 3
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z04.D Vial: 4
Acq On : 22 Jan 21 10:39 Operator: LP,DG,CH
Sample : 1ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3441972	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2823876	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1097216	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	335581	9.59	ppb		0.00
Spiked Amount 25.000			Recovery = 38.344%				
48) 1,2-DCA-D4(S)	5.71	65	304572	9.50	ppb		0.00
Spiked Amount 25.000			Recovery = 37.980%				
69) Toluene-D8(S)	8.03	98	1242251	9.75	ppb		0.00
Spiked Amount 25.000			Recovery = 39.000%				
77) 4-Bromofluorobenzene(S)	10.92	95	421693	10.31	ppb		0.00
Spiked Amount 25.000			Recovery = 41.240%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	19934	1.04	ppb		100
4) Freon 114	1.16	85	12517	1.10	ppb		99
5) Chloromethane	1.20	50	29733	2.47	ppb		96
6) Vinyl chloride	1.28	62	18630	1.03	ppb		100
9) Bromomethane	1.53	94	13395	0.50	ppb		85
10) Chloroethane	1.61	64	6492	0.64	ppb		94
11) Dichlorofluoromethane	1.79	67	32526	1.05	ppb		94
12) Trichlorofluoromethane	1.83	101	31614	1.01	ppb		99
16) Acrolein	2.20	55	28387	48.89	ppb		98
17) Acetone	2.36	43	80931	20.30	ppb		93
18) Freon-113	2.32	101	8146	1.01	ppb		96
19) 1,1-DCE	2.30	61	20722	1.00	ppb		93
21) Acetonitrile	2.64	40	20654	54.64	ppb		99
22) t-Butanol	3.03	59	19312	54.23	ppb		99
23) Methyl Acetate	2.73	43	11629	1.10	ppb		91
24) Iodomethane	2.43	142	22923	3.17	ppb		98
25) Acrylonitrile	3.10	52	4685	1.19	ppb		85
26) Methylene chloride	2.81	49	20768	0.13	ppb		96
27) Carbon disulfide	2.49	76	21160	0.95	ppb		100
28) Methyl t-butyl ether (MtBE	3.18	73	34800	0.97	ppb		94
29) Trans-1,2-DCE	3.15	61	20980	1.02	ppb		83
31) Diisopropyl Ether	3.93	45	33288	0.91	ppb		90
33) 1,1-DCA	3.71	63	27053	1.06	ppb		94
34) Vinyl Acetate	3.86	43	12030	0.93	ppb		95
35) Ethyl tert Butyl Ether	4.49	59	30982	0.90	ppb		92
36) MEK (2-Butanone)	4.68	43	98693	19.19	ppb		96
37) Cis-1,2-DCE	4.60	61	22721	0.99	ppb		95
38) 2,2-Dichloropropane	4.60	77	19975	0.93	ppb	#	81
39) 2-Methylpentane	2.89	43	242	487.86	ppb	#	38
40) 3-Methylpentane	3.19	57	7662	1.01	ppb	#	85
41) Chloroform	5.09	83	26995	0.98	ppb		86
42) Bromochloromethane	4.92	49	10349	1.00	ppb		94
44) 1,1,1-TCA	5.30	97	24252	0.96	ppb		94
45) Cyclohexane	5.36	56	22090	0.90	ppb	#	88
46) 1,1-Dichloropropene	5.53	75	18541	0.96	ppb	#	93
47) 2,2,4-Trimethylpentane	5.95	57	44533	1.05	ppb		96
49) Carbon Tetrachloride	5.52	117	19506	0.90	ppb		89
50) Tert Amyl Methyl Ether	6.01	73	29021	0.92	ppb		92
51) Methylcyclopentane	4.50	56	2323	1.11	ppb	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z04.D Vial: 4
Acq On : 22 Jan 21 10:39 Operator: LP,DG,CH
Sample : 1ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

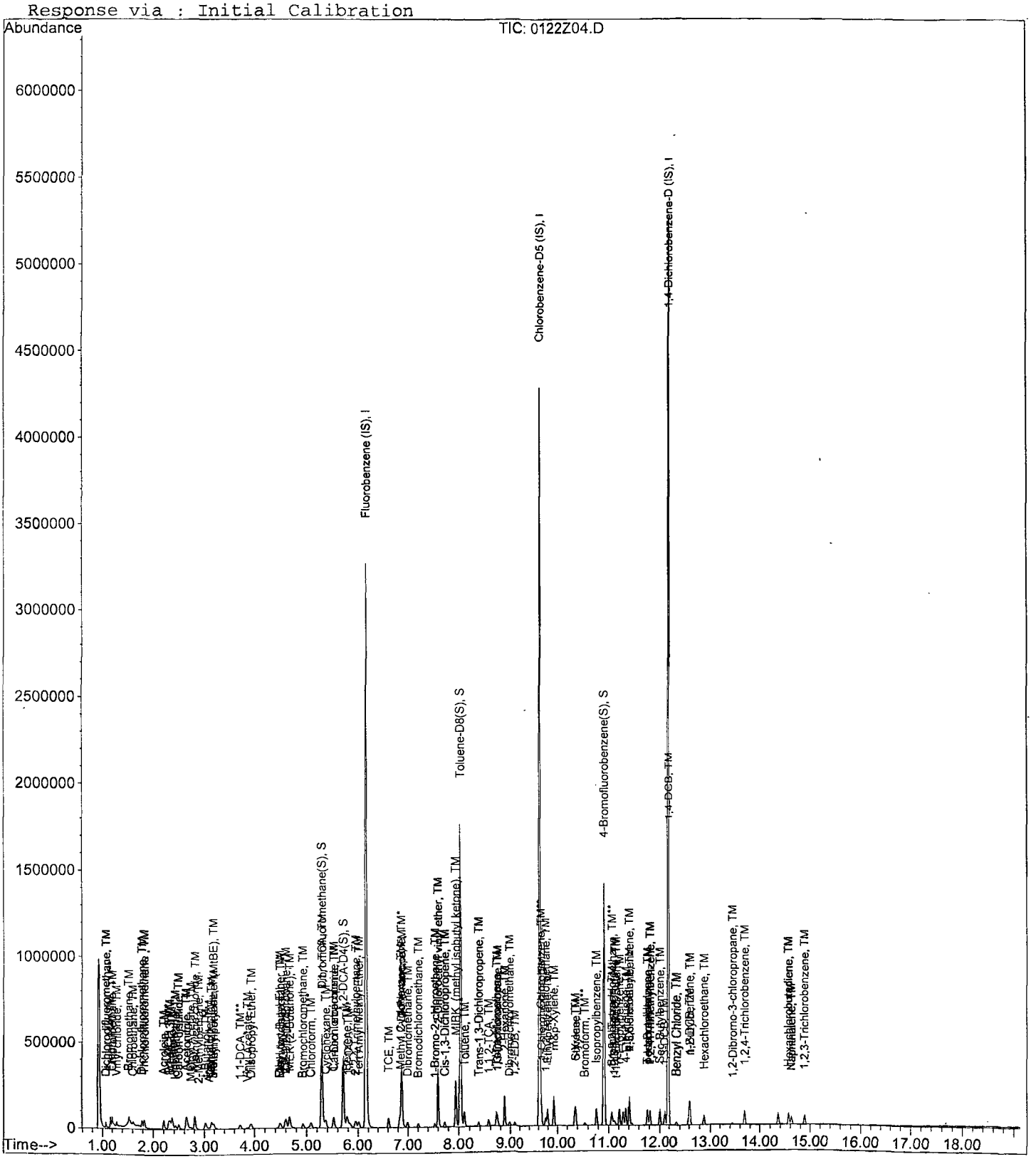
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	1,2-DCA	5.81	62	18630	1.01	ppb		100
53)	Benzene	5.78	78	62139	1.02	ppb		93
54)	TCE	6.61	130	22254	1.00	ppb		91
55)	2-Pentanone	6.87	43	353208	46.19	ppb		99
56)	1,2-Dichloropropane	6.86	63	13050	0.95	ppb		98
57)	Bromodichloromethane	7.21	83	13294	0.86	ppb		88
58)	Methyl Cyclohexane	6.84	83	25795	0.98	ppb		99
59)	Dibromomethane	6.99	174	14337	0.94	ppb		100
60)	MIBK (methyl isobutyl ket	7.94	43	163617	18.34	ppb		98
61)	1-Bromo-2-chloroethane	7.53	144	2861	1.02	ppb	#	82
62)	2-Chloroethyl vinyl ether	7.60	43	77568	18.18	ppb		96
63)	Cis-1,3-Dichloropropene	7.73	75	16624	0.87	ppb		97
64)	Toluene	8.10	91	67696	1.00	ppb		96
65)	Trans-1,3-Dichloropropene	8.37	75	12682	0.81	ppb	#	88
66)	1,1,2-TCA	8.56	97	12747	0.98	ppb		92
67)	2-Hexanone	8.88	43	60616	17.95	ppb		99
70)	1,2-EDB	9.09	107	12545	0.94	ppb	#	85
71)	Tetrachloroethene	8.71	166	28633	1.01	ppb		92
72)	1-Chlorohexane	9.67	91	21229	1.00	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.75	131	12934	0.89	ppb		90
74)	m&p-Xylene	9.93	91	105056	1.95	ppb		99
75)	o-Xylene	10.36	91	51059	0.95	ppb		98
76)	Styrene	10.37	104	35927	0.85	ppb		95
78)	1,3-Dichloropropane	8.74	76	19040	0.97	ppb		92
79)	Dibromochloromethane	8.98	129	10863	1.98	ppb		84
80)	Chlorobenzene	9.65	112	49706	1.02	ppb		98
81)	Ethylbenzene	9.79	91	70084	0.97	ppb		99
82)	Bromoform	10.54	173	8136	2.47	ppb	#	84
84)	Isopropylbenzene	10.76	105	70075	0.92	ppb		96
85)	1,1,2,2-Tetrachloroethane	11.08	83	13036	0.90	ppb	#	98
86)	1,2,3-Trichloropropane	11.12	110	5615	0.97	ppb	#	87
87)	t-1,4-Dichloro-2-Butene	11.15	53	2044	0.82	ppb		87
88)	Bromobenzene	11.07	77	26611	1.06	ppb	#	78
89)	n-Propylbenzene	11.21	91	78214	0.93	ppb		99
90)	4-Ethyltoluene	11.34	105	69970	0.94	ppb		92
91)	2-Chlorotoluene	11.41	91	53475	0.95	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	55394	0.90	ppb		97
93)	4-Chlorotoluene	11.41	91	53475	0.95	ppb		96
94)	Tert-Butylbenzene	11.76	119	56625	0.93	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	53409	0.88	ppb		99
96)	Sec-Butylbenzene	12.00	105	75656	0.91	ppb		97
97)	p-Isopropyltoluene	11.76	119	56625	0.93	ppb		97
98)	Benzyl Chloride	12.35	91	17338	1.90	ppb		93
99)	1,3-DCB	12.10	146	46665	0.96	ppb		96
100)	1,4-DCB	12.20	146	49069	0.99	ppb		95
101)	n-Butylbenzene	12.61	91	51912	0.88	ppb		94
102)	1,2-DCB	12.60	146	41750	0.95	ppb		90
103)	Hexachloroethane	12.89	201	8415	2.23	ppb	#	57
104)	1,2-Dibromo-3-chloropropan	13.45	157	2921	1.57	ppb		93
105)	1,2,4-Trichlorobenzene	13.69	180	38311	0.95	ppb		93
106)	Hexachlorobutadiene	14.57	225	18002	0.89	ppb		96
107)	Naphthalene	14.62	128	44812	0.82	ppb		97
108)	1,2,3-Trichlorobenzene	14.89	180	24972	0.89	ppb		88

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z04.D Vial: 4
Acq On : 22 Jan 21 10:39 Operator: LP,DG,CH
Sample : 1ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3451525	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2841135	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1075200	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	337282	9.60	ppb		0.00
Spiked Amount 25.000			Recovery =	38.416%			
48) 1,2-DCA-D4(S)	5.71	65	303742	9.44	ppb		0.00
Spiked Amount 25.000			Recovery =	37.772%			
69) Toluene-D8(S)	8.03	98	1239876	9.67	ppb		0.00
Spiked Amount 25.000			Recovery =	38.688%			
77) 4-Bromofluorobenzene(S)	10.91	95	422667	10.28	ppb		0.00
Spiked Amount 25.000			Recovery =	41.124%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	44159	2.30	ppb		92
4) Freon 114	1.16	85	24160	2.12	ppb		99
5) Chloromethane	1.20	50	28620	2.29	ppb		97
6) Vinyl chloride	1.28	62	37805	2.09	ppb		91
9) Bromomethane	1.53	94	15063	0.92	ppb		99
10) Chloroethane	1.60	64	10403	1.73	ppb		98
11) Dichlorofluoromethane	1.78	67	64170	2.06	ppb		100
12) Trichlorofluoromethane	1.82	101	63594	2.03	ppb		99
16) Acrolein	2.20	55	44542	76.50	ppb		84
17) Acetone	2.36	43	121387	30.36	ppb		99
18) Freon-113	2.32	101	17520	2.17	ppb		99
19) 1,1-DCE	2.29	61	43615	2.09	ppb		92
21) Acetonitrile	2.64	40	29158	76.93	ppb		92
22) t-Butanol	3.03	59	28704	80.38	ppb		94
23) Methyl Acetate	2.73	43	22002	2.07	ppb		94
24) Iodomethane	2.42	142	31117	3.55	ppb		93
25) Acrylonitrile	3.11	52	8890	2.26	ppb	#	75
26) Methylene chloride	2.80	49	28016	1.08	ppb		98
27) Carbon disulfide	2.49	76	40744	1.90	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	69576	1.93	ppb		100
29) Trans-1,2-DCE	3.14	61	42090	2.04	ppb		96
31) Diisopropyl Ether	3.92	45	71297	1.94	ppb		97
33) 1,1-DCA	3.71	63	50031	1.96	ppb		98
34) Vinyl Acetate	3.85	43	23129	1.78	ppb		96
35) Ethyl tert Butyl Ether	4.49	59	63492	1.84	ppb		95
36) MEK (2-Butanone)	4.67	43	155710	30.20	ppb		97
37) Cis-1,2-DCE	4.61	61	45140	1.95	ppb		94
38) 2,2-Dichloropropane	4.59	77	40927	1.89	ppb		97
39) 2-Methylpentane	2.90	43	459	68.55	ppb	#	89
40) 3-Methylpentane	3.19	57	15099	1.98	ppb	#	92
41) Chloroform	5.09	83	54086	1.96	ppb		84
42) Bromochloromethane	4.93	49	20221	1.95	ppb		94
44) 1,1,1-TCA	5.30	97	50148	1.99	ppb		92
45) Cyclohexane	5.36	56	44534	1.91	ppb		94
46) 1,1-Dichloropropene	5.53	75	37873	1.97	ppb		99
47) 2,2,4-Trimethylpentane	5.96	57	94646	2.09	ppb		97
49) Carbon Tetrachloride	5.52	117	41871	1.93	ppb		99
50) Tert Amyl Methyl Ether	6.01	73	59279	1.87	ppb	#	88
51) Methylcyclopentane	4.49	56	4775	2.28	ppb	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

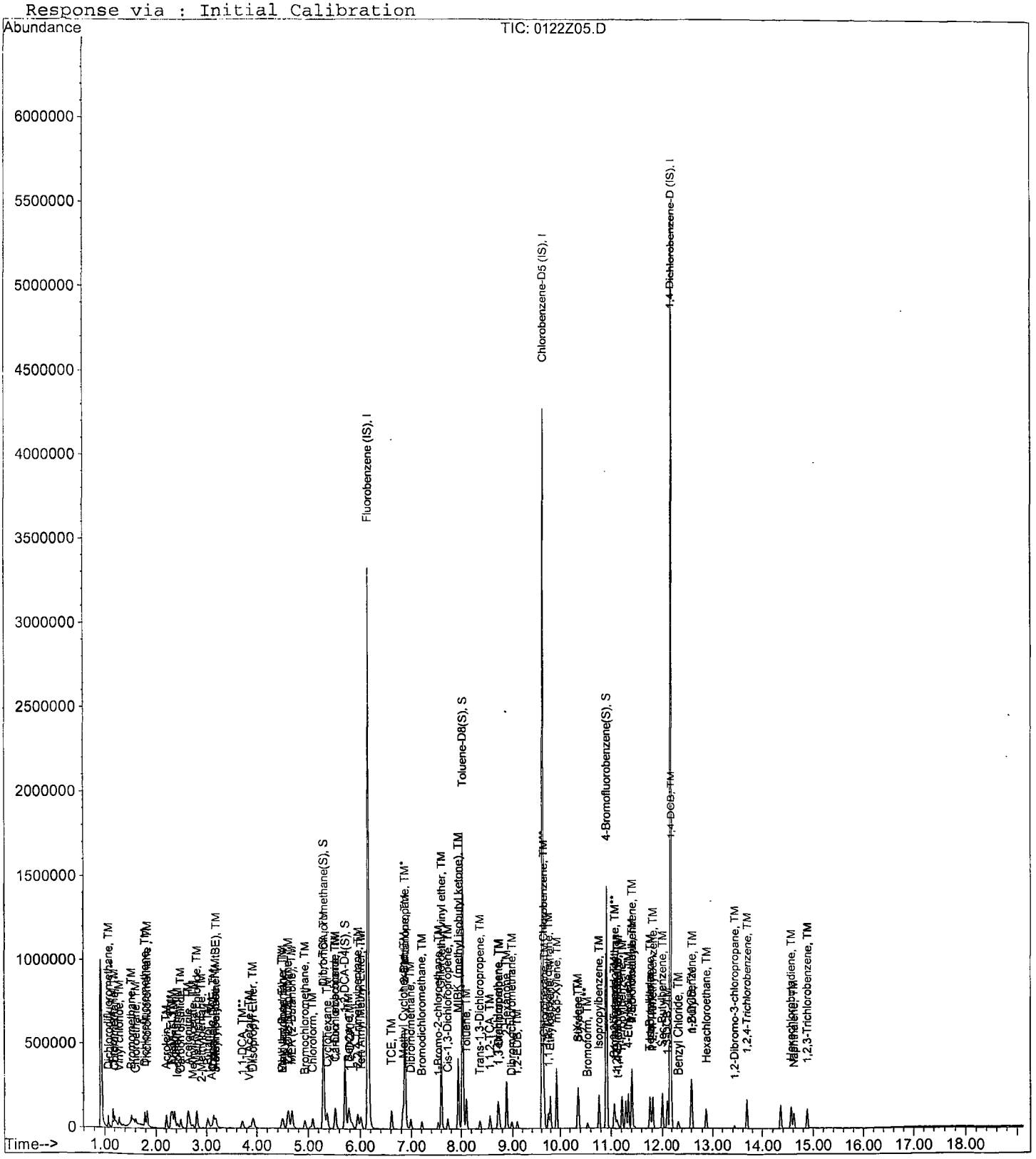
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	1,2-DCA	5.81	62	36932	1.99	ppb		100
53)	Benzene	5.78	78	121772	1.99	ppb		94
54)	TCE	6.61	130	43536	1.96	ppb		97
55)	2-Pentanone	6.87	43	564978	73.67	ppb		97
56)	1,2-Dichloropropane	6.86	63	28172	2.04	ppb		97
57)	Bromodichloromethane	7.21	83	28238	1.82	ppb		88
58)	Methyl Cyclohexane	6.84	83	55090	2.10	ppb		91
59)	Dibromomethane	6.99	174	29865	1.95	ppb		93
60)	MIBK (methyl isobutyl ket	7.94	43	258443	28.89	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	5600	1.99	ppb		100
62)	2-Chloroethyl vinyl ether	7.60	43	119712	27.98	ppb		97
63)	Cis-1,3-Dichloropropene	7.73	75	34342	1.80	ppb		98
64)	Toluene	8.11	91	136829	2.02	ppb		95
65)	Trans-1,3-Dichloropropene	8.37	75	27414	1.76	ppb		95
66)	1,1,2-TCA	8.56	97	25359	1.94	ppb		97
67)	2-Hexanone	8.88	43	100936	29.80	ppb		98
70)	1,2-EDB	9.09	107	25929	1.94	ppb		99
71)	Tetrachloroethene	8.72	166	57826	2.03	ppb		96
72)	1-Chlorohexane	9.67	91	44664	2.10	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.75	131	26662	1.81	ppb		97
74)	m&p-Xylene	9.93	91	220039	4.05	ppb		99
75)	o-Xylene	10.35	91	103711	1.92	ppb		99
76)	Styrene	10.37	104	77436	1.83	ppb		92
78)	1,3-Dichloropropane	8.74	76	38322	1.93	ppb		94
79)	Dibromochloromethane	8.99	129	20900	2.55	ppb		93
80)	Chlorobenzene	9.65	112	99216	2.02	ppb		98
81)	Ethylbenzene	9.79	91	144843	2.00	ppb		98
82)	Bromoform	10.54	173	16558	3.01	ppb	#	84
84)	Isopropylbenzene	10.76	105	147483	1.97	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	26722	1.87	ppb		95
86)	1,2,3-Trichloropropane	11.11	110	10911	1.92	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.14	53	4154	1.69	ppb		96
88)	Bromobenzene	11.06	77	53164	2.15	ppb		91
89)	n-Propylbenzene	11.21	91	161233	1.96	ppb		90
90)	4-Ethyltoluene	11.34	105	147361	2.02	ppb		98
91)	2-Chlorotoluene	11.41	91	109739	1.98	ppb		99
92)	1,3,5-Trimethylbenzene	11.41	105	118436	1.97	ppb		95
93)	4-Chlorotoluene	11.41	91	109739	1.98	ppb		99
94)	Tert-Butylbenzene	11.76	119	115052	1.94	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	115045	1.94	ppb		100
96)	Sec-Butylbenzene	12.00	105	161948	1.99	ppb		99
97)	p-Isopropyltoluene	11.76	119	115052	1.94	ppb		97
98)	Benzyl Chloride	12.34	91	35014	2.43	ppb		98
99)	1,3-DCB	12.10	146	93128	1.95	ppb		93
100)	1,4-DCB	12.20	146	98140	2.01	ppb		95
101)	n-Butylbenzene	12.61	91	108683	1.89	ppb		100
102)	1,2-DCB	12.60	146	84575	1.97	ppb		95
103)	Hexachloroethane	12.89	201	18900	2.84	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	6503	2.26	ppb	#	88
105)	1,2,4-Trichlorobenzene	13.69	180	78754	1.99	ppb		96
106)	Hexachlorobutadiene	14.56	225	39141	1.97	ppb		95
107)	Naphthalene	14.62	128	97152	1.80	ppb		94
108)	1,2,3-Trichlorobenzene	14.88	180	52415	1.90	ppb		89

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3550375	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2920207	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1120256	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	983240	24.60	ppb		0.00
Spiked Amount 25.000			Recovery = 98.388%				
48) 1,2-DCA-D4(S)	5.71	65	894975	27.05	ppb		0.00
Spiked Amount 25.000			Recovery = 108.196%				
69) Toluene-D8(S)	8.03	98	3549867	26.94	ppb		0.00
Spiked Amount 25.000			Recovery = 107.768%				
77) 4-Bromofluorobenzene(S)	10.92	95	1248589	24.46	ppb		0.00
Spiked Amount 25.000			Recovery = 97.844%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	91918	4.65	ppb		98
4) Freon 114	1.16	85	49568	4.23	ppb		92
5) Chloromethane	1.23	50	40650	3.95	ppb		98
6) Vinyl chloride	1.28	62	90062	4.83	ppb		96
9) Bromomethane	1.53	94	30430	4.64	ppb		99
10) Chloroethane	1.60	64	24306	5.45	ppb		92
11) Dichlorofluoromethane	1.78	67	162635	5.08	ppb		99
12) Trichlorofluoromethane	1.82	101	157304	4.88	ppb		96
16) Acrolein	2.20	55	61812	103.20	ppb		94
17) Acetone	2.36	43	168204	40.90	ppb		100
18) Freon-113	2.32	101	40360	4.85	ppb		92
19) 1,1-DCE	2.30	61	102623	4.78	ppb		98
21) Acetonitrile	2.64	40	39188	100.51	ppb		98
22) t-Butanol	3.04	59	39152	106.58	ppb		94
23) Methyl Acetate	2.73	43	48068	4.40	ppb		99
24) Iodomethane	2.43	142	65070	5.04	ppb		97
25) Acrylonitrile	3.11	52	22021	5.44	ppb	#	91
26) Methylene chloride	2.81	49	56208	4.59	ppb		98
27) Carbon disulfide	2.49	76	94416	4.38	ppb		97
28) Methyl t-butyl ether (MtBE	3.19	73	181021	4.88	ppb		97
29) Trans-1,2-DCE	3.14	61	99777	4.69	ppb		93
30) Hexane	4.34	56	62	2.77	ppb	#	1
31) Diisopropyl Ether	3.93	45	183984	4.86	ppb		97
33) 1,1-DCA	3.72	63	125120	4.76	ppb		96
34) Vinyl Acetate	3.86	43	65596	4.91	ppb		98
35) Ethyl tert Butyl Ether	4.49	59	170652	4.80	ppb		99
36) MEK (2-Butanone)	4.68	43	221994	41.85	ppb		97
37) Cis-1,2-DCE	4.60	61	111837	4.71	ppb		96
38) 2,2-Dichloropropane	4.60	77	104071	4.67	ppb		95
39) 2-Methylpentane	2.94	43	621	-211.94	ppb	#	74
40) 3-Methylpentane	3.19	57	36254	4.63	ppb		95
41) Chloroform	5.09	83	139324	4.91	ppb		95
42) Bromochloromethane	4.93	49	53241	5.00	ppb		96
44) 1,1,1-TCA	5.30	97	125243	4.83	ppb		99
45) Cyclohexane	5.36	56	107789	4.64	ppb		99
46) 1,1-Dichloropropene	5.53	75	99001	5.00	ppb		93
47) 2,2,4-Trimethylpentane	5.96	57	215023	4.50	ppb		99
49) Carbon Tetrachloride	5.52	117	103534	4.63	ppb		98
50) Tert Amyl Methyl Ether	6.01	73	158457	4.85	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	Methylcyclopentane	4.49	56	11394	5.28	ppb	#	92
52)	1,2-DCA	5.81	62	93778	4.91	ppb		98
53)	Benzene	5.78	78	307926	4.89	ppb		97
54)	TCE	6.61	130	107742	4.71	ppb		99
55)	2-Pentanone	6.87	43	827544	104.91	ppb		99
56)	1,2-Dichloropropane	6.86	63	66829	4.71	ppb		99
57)	Bromodichloromethane	7.21	83	76799	4.81	ppb		90
58)	Methyl Cyclohexane	6.84	83	129744	4.80	ppb		97
59)	Dibromomethane	6.99	174	75781	4.81	ppb		92
60)	MIBK (methyl isobutyl ket	7.95	43	385997	41.94	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	15633	5.39	ppb		98
62)	2-Chloroethyl vinyl ether	7.60	43	182564	41.48	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	95301	4.86	ppb		98
64)	Toluene	8.11	91	337329	4.85	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	77873	4.85	ppb		95
66)	1,1,2-TCA	8.56	97	67746	5.04	ppb		95
67)	2-Hexanone	8.88	43	148352	42.58	ppb		98
70)	1,2-EDB	9.09	107	67278	4.89	ppb		97
71)	Tetrachloroethene	8.72	166	139817	4.78	ppb		97
72)	1-Chlorohexane	9.67	91	105751	4.84	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.76	131	72394	4.79	ppb		95
74)	m&p-Xylene	9.93	91	555914	9.97	ppb		100
75)	o-Xylene	10.35	91	275533	4.96	ppb		99
76)	Styrene	10.37	104	216290	4.97	ppb		99
78)	1,3-Dichloropropane	8.74	76	99686	4.89	ppb		96
79)	Dibromochloromethane	8.99	129	59226	4.68	ppb		99
80)	Chlorobenzene	9.65	112	244950	4.85	ppb		97
81)	Ethylbenzene	9.79	91	364892	4.90	ppb		97
82)	Bromoform	10.54	173	44618	4.75	ppb		98
84)	Isopropylbenzene	10.76	105	385517	4.93	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	72780	4.90	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	28694	4.84	ppb		90
87)	t-1,4-Dichloro-2-Butene	11.15	53	12854	5.03	ppb		88
88)	Bromobenzene	11.06	77	117286	4.55	ppb		99
89)	n-Propylbenzene	11.21	91	425773	4.97	ppb		98
90)	4-Ethyltoluene	11.34	105	379605	4.99	ppb		99
91)	2-Chlorotoluene	11.41	91	284218	4.93	ppb		99
92)	1,3,5-Trimethylbenzene	11.41	105	314915	5.03	ppb		97
93)	4-Chlorotoluene	11.41	91	284218	4.93	ppb		99
94)	Tert-Butylbenzene	11.77	119	298347	4.82	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	312776	5.05	ppb		100
96)	Sec-Butylbenzene	12.01	105	416353	4.92	ppb		99
97)	p-Isopropyltoluene	11.77	119	298347	4.82	ppb		98
98)	Benzyl Chloride	12.35	91	106944	4.39	ppb		98
99)	1,3-DCB	12.10	146	243761	4.91	ppb		98
100)	1,4-DCB	12.20	146	238390	4.69	ppb		98
101)	n-Butylbenzene	12.61	91	299280	4.99	ppb		97
102)	1,2-DCB	12.60	146	221423	4.95	ppb		97
103)	Hexachloroethane	12.89	201	52438	4.63	ppb	#	80
104)	1,2-Dibromo-3-chloropropan	13.44	157	18068	4.33	ppb		88
105)	1,2,4-Trichlorobenzene	13.69	180	196987	4.78	ppb		99
106)	Hexachlorobutadiene	14.57	225	98453	4.76	ppb		95
107)	Naphthalene	14.62	128	282975	5.04	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	144165	5.02	ppb		97

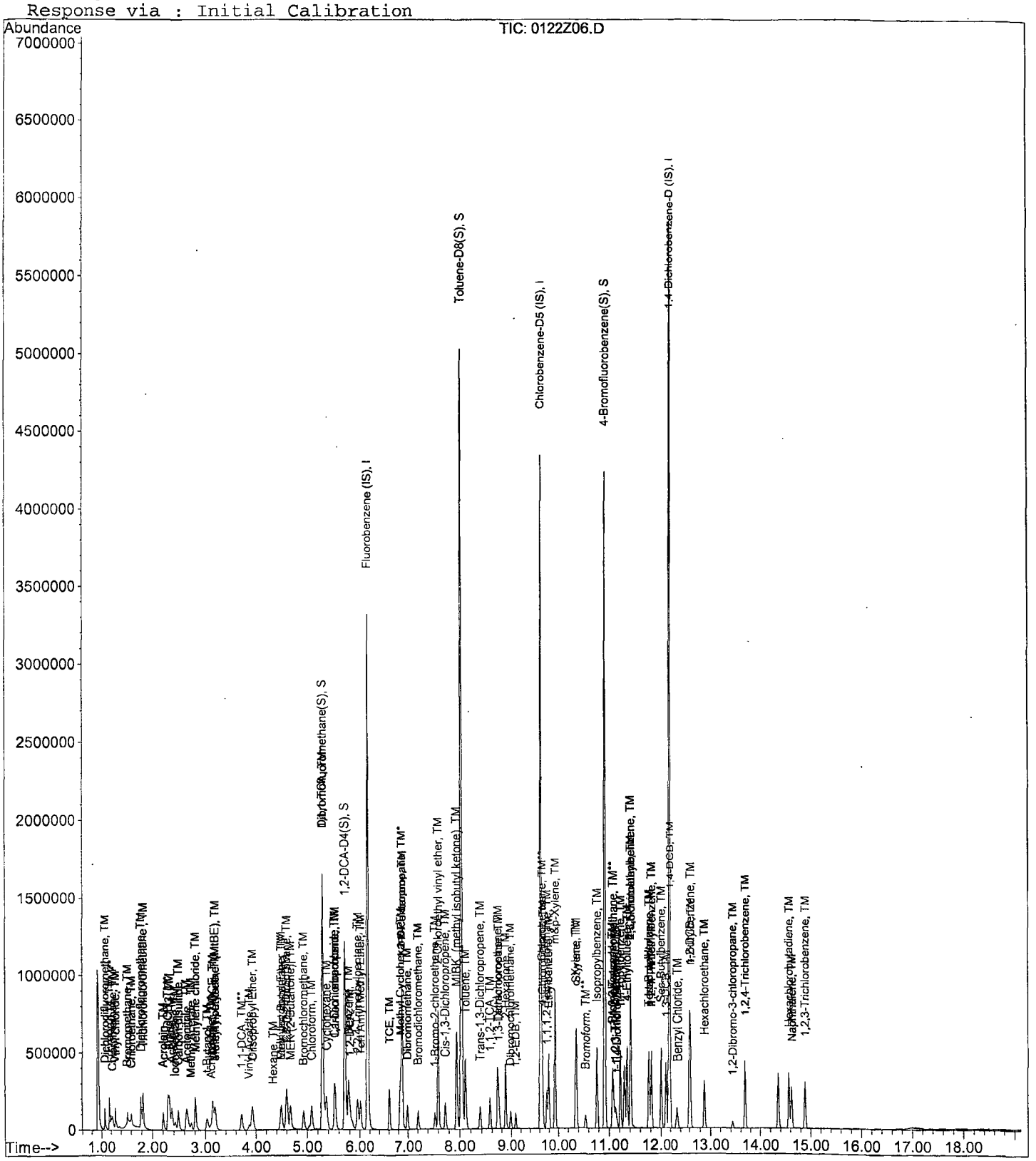
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3548403	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2918486	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1061376	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	999397	24.99	ppb		0.00
Spiked Amount 25.000			Recovery = 99.964%				
48) 1,2-DCA-D4(S)	5.71	65	893634	27.02	ppb		0.00
Spiked Amount 25.000			Recovery = 108.096%				
69) Toluene-D8(S)	8.03	98	3551875	26.97	ppb		0.00
Spiked Amount 25.000			Recovery = 107.892%				
77) 4-Bromofluorobenzene(S)	10.91	95	1254055	24.57	ppb		0.00
Spiked Amount 25.000			Recovery = 98.276%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	197011	9.98	ppb		100
4) Freon 114	1.16	85	114032	9.73	ppb		100
5) Chloromethane	1.23	50	80637	9.85	ppb		100
6) Vinyl chloride	1.28	62	184687	9.91	ppb		100
9) Bromomethane	1.53	94	54794	10.72	ppb		100
10) Chloroethane	1.60	64	44807	11.05	ppb		100
11) Dichlorofluoromethane	1.78	67	326581	10.21	ppb		100
12) Trichlorofluoromethane	1.82	101	327360	10.16	ppb		100
16) Acrolein	2.21	55	82159	137.25	ppb		100
17) Acetone	2.36	43	213855	52.03	ppb		100
18) Freon-113	2.32	101	83048	9.99	ppb		100
19) 1,1-DCE	2.29	61	215473	10.04	ppb		100
21) Acetonitrile	2.64	40	47499	121.90	ppb		100
22) t-Butanol	3.04	59	51688	140.79	ppb		100
23) Methyl Acetate	2.73	43	100877	9.24	ppb		100
24) Iodomethane	2.43	142	141674	8.49	ppb		100
25) Acrylonitrile	3.10	52	45064	11.13	ppb		99
26) Methylene chloride	2.81	49	102032	10.49	ppb		100
27) Carbon disulfide	2.49	76	212544	9.96	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	394680	10.65	ppb		100
29) Trans-1,2-DCE	3.15	61	211188	9.93	ppb		100
30) Hexane	4.29	56	52	2.33	ppb	#	100
31) Diisopropyl Ether	3.93	45	397074	10.49	ppb		100
32) 2,2-Dichloro-1,1,1-trifluo	2.18	83	310	9.47	ppb		100
33) 1,1-DCA	3.71	63	263665	10.03	ppb		100
34) Vinyl Acetate	3.86	43	141067	10.57	ppb		100
35) Ethyl tert Butyl Ether	4.49	59	370603	10.42	ppb		100
36) MEK (2-Butanone)	4.68	43	286205	53.99	ppb		100
37) Cis-1,2-DCE	4.61	61	237688	10.01	ppb		100
38) 2,2-Dichloropropane	4.60	77	225839	10.15	ppb		100
39) 2-Methylpentane	2.90	43	1011	-947.89	ppb		100
40) 3-Methylpentane	3.19	57	79612	10.16	ppb		100
41) Chloroform	5.09	83	290154	10.22	ppb		100
42) Bromochloromethane	4.93	49	109911	10.32	ppb		100
44) 1,1,1-TCA	5.30	97	269800	10.41	ppb		100
45) Cyclohexane	5.37	56	229862	10.03	ppb		100
46) 1,1-Dichloropropene	5.53	75	203017	10.25	ppb		100
47) 2,2,4-Trimethylpentane	5.95	57	480727	9.92	ppb		100
49) Carbon Tetrachloride	5.52	117	233494	10.46	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	Tert Amyl Methyl Ether	6.01	73	342628	10.50	ppb	100
51)	Methylcyclopentane	4.49	56	22214	10.30	ppb	100
52)	1,2-DCA	5.81	62	191067	10.01	ppb	100
53)	Benzene	5.78	78	633067	10.05	ppb	100
54)	TCE	6.61	130	221086	9.67	ppb	100
55)	2-Pentanone	6.87	43	1092794	138.61	ppb	100
56)	1,2-Dichloropropane	6.86	63	141947	10.01	ppb	100
57)	Bromodichloromethane	7.21	83	165473	10.36	ppb	100
58)	Methyl Cyclohexane	6.84	83	282293	10.45	ppb	100
59)	Dibromomethane	6.99	174	159046	10.11	ppb	100
60)	MIBK (methyl isobutyl ket	7.94	43	508569	55.29	ppb	100
61)	1-Bromo-2-chloroethane	7.54	144	32271	11.14	ppb	100
62)	2-Chloroethyl vinyl ether	7.60	43	240847	54.75	ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	207854	10.61	ppb	100
64)	Toluene	8.11	91	697826	10.03	ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	177983	11.09	ppb	100
66)	1,1,2-TCA	8.56	97	139118	10.36	ppb	100
67)	2-Hexanone	8.88	43	197568	56.74	ppb	100
70)	1,2-EDB	9.09	107	146719	10.67	ppb	100
71)	Tetrachloroethene	8.72	166	290980	9.95	ppb	100
72)	1-Chlorohexane	9.67	91	222760	10.20	ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	161799	10.72	ppb	100
74)	m&p-Xylene	9.93	91	1147946	20.59	ppb	100
75)	o-Xylene	10.35	91	576856	10.39	ppb	100
76)	Styrene	10.37	104	465066	10.70	ppb	100
78)	1,3-Dichloropropane	8.74	76	213170	10.46	ppb	100
79)	Dibromochloromethane	8.99	129	137423	9.09	ppb	100
80)	Chlorobenzene	9.65	112	510261	10.10	ppb	100
81)	Ethylbenzene	9.79	91	759039	10.19	ppb	100
82)	Bromoform	10.54	173	103505	8.47	ppb	100
84)	Isopropylbenzene	10.76	105	819300	11.07	ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	159325	11.31	ppb	100
86)	1,2,3-Trichloropropane	11.12	110	62657	11.16	ppb	100
87)	t-1,4-Dichloro-2-Butene	11.14	53	27554	11.39	ppb	100
88)	Bromobenzene	11.06	77	242452	9.94	ppb	100
89)	n-Propylbenzene	11.21	91	884234	10.90	ppb	100
90)	4-Ethyltoluene	11.34	105	800221	11.09	ppb	100
91)	2-Chlorotoluene	11.41	91	586686	10.74	ppb	100
92)	1,3,5-Trimethylbenzene	11.41	105	653966	11.03	ppb	100
93)	4-Chlorotoluene	11.41	91	586686	10.74	ppb	100
94)	Tert-Butylbenzene	11.77	119	633667	10.81	ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	655157	11.17	ppb	100
96)	Sec-Butylbenzene	12.00	105	889474	11.08	ppb	100
97)	p-Isopropyltoluene	11.77	119	633667	10.81	ppb	100
98)	Benzyl Chloride	12.35	91	260569	9.08	ppb	100
99)	1,3-DCB	12.10	146	499163	10.60	ppb	100
100)	1,4-DCB	12.20	146	501005	10.41	ppb	100
101)	n-Butylbenzene	12.61	91	637242	11.20	ppb	100
102)	1,2-DCB	12.60	146	455858	10.76	ppb	100
103)	Hexachloroethane	12.89	201	122532	8.84	ppb	100
104)	1,2-Dibromo-3-chloropropan	13.44	157	43326	9.38	ppb	100
105)	1,2,4-Trichlorobenzene	13.69	180	426665	10.92	ppb	100
106)	Hexachlorobutadiene	14.57	225	211814	10.80	ppb	100
107)	Naphthalene	14.62	128	637392	11.99	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

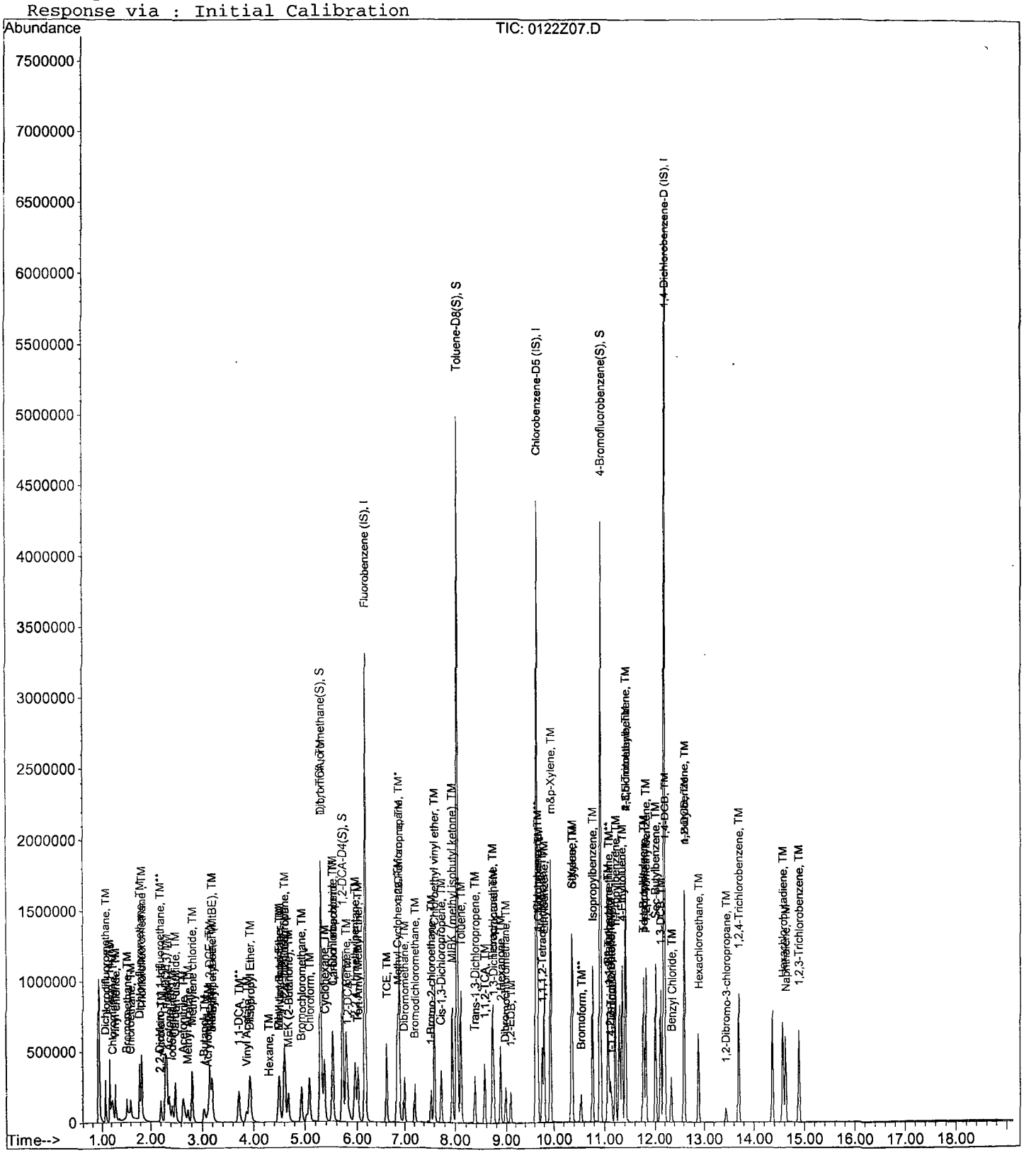
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
108) 1,2,3-Trichlorobenzene	14.89	180	305670	11.22	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3674138	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3010041	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1147904	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	2216386	51.89	ppb		0.00
Spiked Amount 25.000			Recovery =	207.572%			
48) 1,2-DCA-D4(S)	5.71	65	1958969	57.21	ppb		0.00
Spiked Amount 25.000			Recovery =	228.852%			
69) Toluene-D8(S)	8.03	98	7667888	56.46	ppb		0.00
Spiked Amount 25.000			Recovery =	225.840%			
77) 4-Bromofluorobenzene(S)	10.92	95	2714572	48.58	ppb		0.00
Spiked Amount 25.000			Recovery =	194.332%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	413609	20.24	ppb		98
4) Freon 114	1.16	85	234506	19.32	ppb		85
5) Chloromethane	1.23	50	154509	19.98	ppb		100
6) Vinyl chloride	1.28	62	359411	18.63	ppb		98
9) Bromomethane	1.52	94	104325	22.17	ppb		93
10) Chloroethane	1.60	64	86003	21.49	ppb		98
11) Dichlorofluoromethane	1.78	67	620176	18.73	ppb		100
12) Trichlorofluoromethane	1.81	101	674596	20.21	ppb		99
16) Acrolein	2.21	55	100566	162.25	ppb		95
17) Acetone	2.37	43	254322	59.76	ppb		98
18) Freon-113	2.32	101	174080	20.22	ppb		96
19) 1,1-DCE	2.29	61	451286	20.30	ppb		95
21) Acetonitrile	2.65	40	54221	134.39	ppb		93
22) t-Butanol	3.05	59	61680	162.25	ppb		98
23) Methyl Acetate	2.73	43	207932	18.38	ppb		98
24) Iodomethane	2.42	142	339295	16.86	ppb		93
25) Acrylonitrile	3.10	52	94763	22.61	ppb		94
26) Methylene chloride	2.80	49	191616	21.16	ppb		94
27) Carbon disulfide	2.48	76	435648	19.78	ppb		99
28) Methyl t-butyl ether (MtBE	3.19	73	822354	21.42	ppb		97
29) Trans-1,2-DCE	3.14	61	435902	19.80	ppb		98
30) Hexane	4.26	56	48	2.07	ppb	#	1
31) Diisopropyl Ether	3.93	45	832904	21.26	ppb		99
32) 2,2-Dichloro-1,1,1-trifluo	2.18	83	926	27.31	ppb	#	100
33) 1,1-DCA	3.71	63	549169	20.18	ppb		99
34) Vinyl Acetate	3.86	43	295105	21.36	ppb		99
35) Ethyl tert Butyl Ether	4.49	59	808591	21.96	ppb		97
36) MEK (2-Butanone)	4.67	43	360143	65.61	ppb		99
37) Cis-1,2-DCE	4.60	61	485160	19.73	ppb		98
38) 2,2-Dichloropropane	4.59	77	488808	21.21	ppb		95
39) 2-Methylpentane	2.96	43	225	548.54	ppb	#	37
40) 3-Methylpentane	3.19	57	162992	20.10	ppb		95
41) Chloroform	5.09	83	602116	20.49	ppb		96
42) Bromochloromethane	4.93	49	220414	19.99	ppb		92
44) 1,1,1-TCA	5.30	97	574289	21.40	ppb		98
45) Cyclohexane	5.36	56	483687	20.48	ppb		98
46) 1,1-Dichloropropene	5.53	75	428382	20.89	ppb		99
47) 2,2,4-Trimethylpentane	5.95	57	1010181	20.03	ppb		100
49) Carbon Tetrachloride	5.52	117	495216	21.42	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	Tert Amyl Methyl Ether	6.01	73	737937	21.84	ppb		100
51)	Methylcyclopentane	4.49	56	44210	19.80	ppb	#	95
52)	1,2-DCA	5.81	62	386226	19.55	ppb		99
53)	Benzene	5.78	78	1299955	19.94	ppb		98
54)	TCE	6.61	130	450244	19.02	ppb		99
55)	2-Pentanone	6.88	43	1393678	170.72	ppb		98
56)	1,2-Dichloropropane	6.86	63	293342	19.98	ppb		99
57)	Bromodichloromethane	7.21	83	358729	21.70	ppb		95
58)	Methyl Cyclohexane	6.84	83	580257	20.75	ppb		96
59)	Dibromomethane	6.99	174	324777	19.94	ppb		97
60)	MIBK (methyl isobutyl ket	7.95	43	650064	68.26	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	55659	18.55	ppb		92
62)	2-Chloroethyl vinyl ether	7.60	43	304481	66.84	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	445143	21.94	ppb		98
64)	Toluene	8.11	91	1418812	19.70	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	383910	23.11	ppb		98
66)	1,1,2-TCA	8.56	97	282864	20.35	ppb		100
67)	2-Hexanone	8.88	43	261760	72.60	ppb		98
70)	1,2-EDB	9.09	107	305614	21.54	ppb		97
71)	Tetrachloroethene	8.72	166	597107	19.80	ppb		98
72)	1-Chlorohexane	9.67	91	464508	20.63	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	346748	22.28	ppb		99
74)	m&p-Xylene	9.92	91	2351129	40.89	ppb		99
75)	o-Xylene	10.35	91	1191008	20.79	ppb		99
76)	Styrene	10.37	104	993619	22.17	ppb		95
78)	1,3-Dichloropropane	8.74	76	430946	20.51	ppb		97
79)	Dibromochloromethane	8.99	129	304261	17.98	ppb		99
80)	Chlorobenzene	9.65	112	1028909	19.75	ppb		97
81)	Ethylbenzene	9.79	91	1556275	20.27	ppb		100
82)	Bromoform	10.54	173	244367	16.89	ppb		98
84)	Isopropylbenzene	10.76	105	1686554	21.06	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	324465	21.30	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	123198	20.29	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.15	53	58527	22.37	ppb	#	74
88)	Bromobenzene	11.07	77	490630	18.59	ppb		94
89)	n-Propylbenzene	11.21	91	1829943	20.85	ppb		97
90)	4-Ethyltoluene	11.34	105	1625904	20.84	ppb		97
91)	2-Chlorotoluene	11.41	91	1198284	20.29	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	1342323	20.92	ppb		95
93)	4-Chlorotoluene	11.41	91	1198284	20.29	ppb		97
94)	Tert-Butylbenzene	11.77	119	1305837	20.59	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	1354931	21.36	ppb		99
96)	Sec-Butylbenzene	12.00	105	1836346	21.16	ppb		99
97)	p-Isopropyltoluene	11.77	119	1305837	20.59	ppb		97
98)	Benzyl Chloride	12.35	91	600643	17.75	ppb		98
99)	1,3-DCB	12.10	146	990863	19.46	ppb		100
100)	1,4-DCB	12.20	146	1002022	19.25	ppb		98
101)	n-Butylbenzene	12.61	91	1332404	21.66	ppb		99
102)	1,2-DCB	12.60	146	918790	20.05	ppb		98
103)	Hexachloroethane	12.89	201	288893	17.20	ppb		89
104)	1,2-Dibromo-3-chloropropan	13.44	157	94840	17.94	ppb		96
105)	1,2,4-Trichlorobenzene	13.69	180	866441	20.50	ppb		100
106)	Hexachlorobutadiene	14.57	225	441907	20.83	ppb		99
107)	Naphthalene	14.62	128	1325959	23.07	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
108) 1,2,3-Trichlorobenzene	14.89	180	622167	21.12 ppb	98

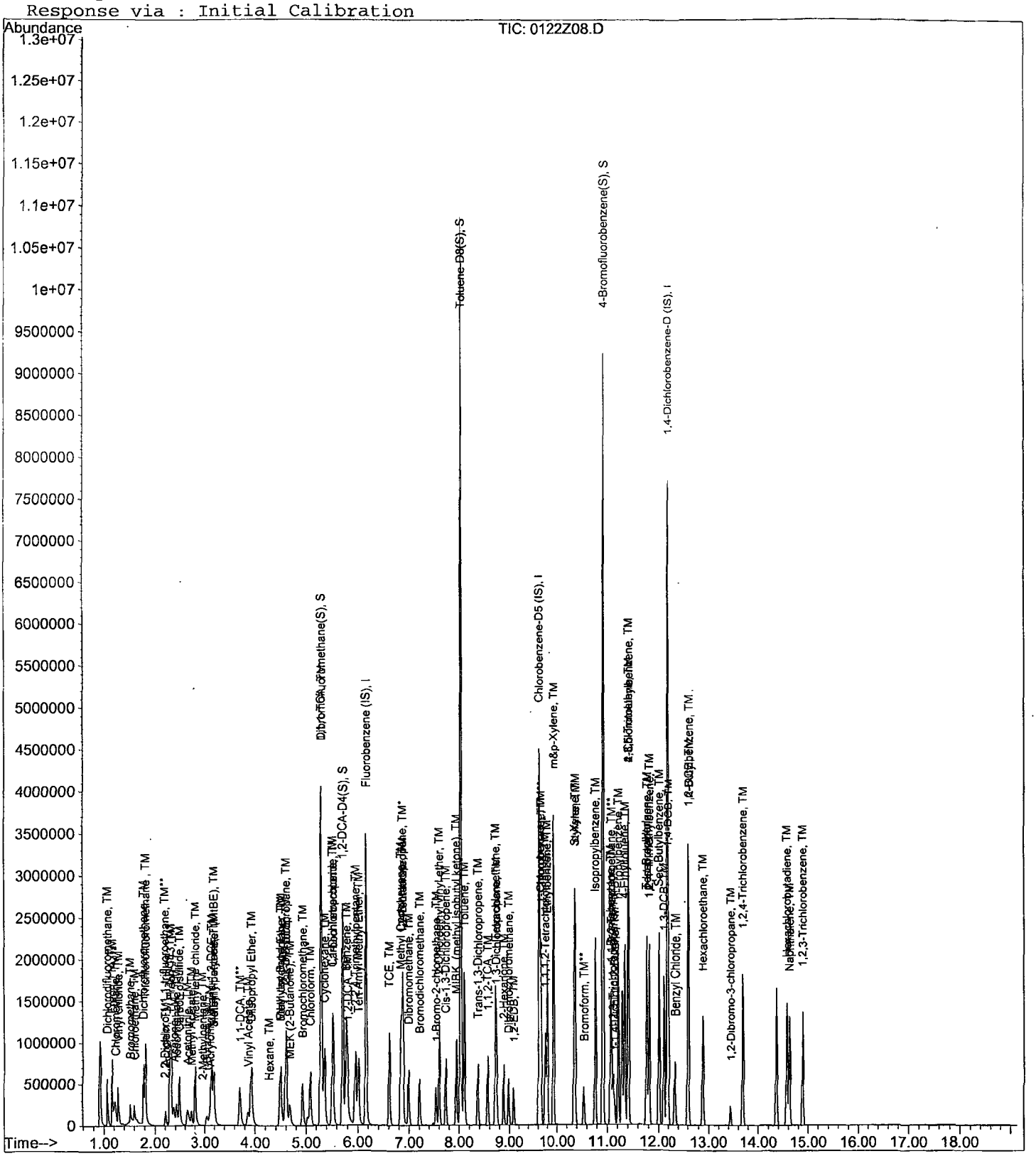
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z09.D Vial: 9
Acq On : 22 Jan 21 12:34 Operator: LP,DG,CH
Sample : 40ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3879780	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3107472	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1167872	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	2298360	50.99	ppb		0.00
Spiked Amount 25.000			Recovery = 203.944%				
48) 1,2-DCA-D4(S)	5.71	65	2018939	55.84	ppb		0.00
Spiked Amount 25.000			Recovery = 223.356%				
69) Toluene-D8(S)	8.03	98	7951610	56.71	ppb		0.00
Spiked Amount 25.000			Recovery = 226.852%				
77) 4-Bromofluorobenzene(S)	10.92	95	2833768	49.10	ppb		0.00
Spiked Amount 25.000			Recovery = 196.380%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	887834	41.14	ppb		99
4) Freon 114	1.16	85	484255	37.78	ppb		87
5) Chloromethane	1.23	50	312263	40.11	ppb		99
6) Vinyl chloride	1.28	62	755514	37.09	ppb		100
9) Bromomethane	1.53	94	199217	42.47	ppb		96
10) Chloroethane	1.60	64	160795	38.97	ppb		100
11) Dichlorofluoromethane	1.78	67	1051721	30.08	ppb		100
12) Trichlorofluoromethane	1.81	101	1304251	37.01	ppb		97
16) Acrolein	2.21	55	129236	197.46	ppb		91
17) Acetone	2.38	43	358681	79.81	ppb		98
18) Freon-113	2.31	101	360960	39.70	ppb		99
19) 1,1-DCE	2.29	61	947443	40.36	ppb		96
21) Acetonitrile	2.65	40	58038	136.22	ppb		96
22) t-Butanol	3.05	59	70928	176.69	ppb		94
23) Methyl Acetate	2.73	43	449324	37.62	ppb		97
24) Iodomethane	2.42	142	842390	36.80	ppb		94
25) Acrylonitrile	3.11	52	201962	45.63	ppb		97
26) Methylene chloride	2.81	49	397696	44.14	ppb		98
27) Carbon disulfide	2.48	76	968384	41.72	ppb		98
28) Methyl t-butyl ether (MtBE	3.19	73	1753452	43.26	ppb		100
29) Trans-1,2-DCE	3.14	61	910833	39.19	ppb		99
30) Hexane	4.24	56	53	2.17	ppb	#	1
31) Diisopropyl Ether	3.93	45	1782915	43.10	ppb		99
32) 2,2-Dichloro-1,1,1-trifluo	2.19	83	1139	31.81	ppb	#	100
33) 1,1-DCA	3.71	63	1137118	39.57	ppb		97
34) Vinyl Acetate	3.86	43	638195	43.75	ppb		99
35) Ethyl tert Butyl Ether	4.49	59	1729730	44.48	ppb		97
36) MEK (2-Butanone)	4.68	43	520162	89.74	ppb		98
37) Cis-1,2-DCE	4.60	61	1009046	38.87	ppb		96
38) 2,2-Dichloropropane	4.59	77	1033957	42.48	ppb		98
39) 2-Methylpentane	2.93	43	793	-409.18	ppb	#	25
40) 3-Methylpentane	3.19	57	351479	41.04	ppb		98
41) Chloroform	5.09	83	1283042	41.35	ppb		94
42) Bromochloromethane	4.93	49	456839	39.24	ppb		89
44) 1,1,1-TCA	5.30	97	1233825	43.54	ppb		99
45) Cyclohexane	5.36	56	1011659	40.68	ppb		98
46) 1,1-Dichloropropene	5.53	75	909272	41.98	ppb		99
47) 2,2,4-Trimethylpentane	5.95	57	2161016	40.47	ppb		100
49) Carbon Tetrachloride	5.52	117	1107416	45.36	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z09.D Vial: 9
Acq On : 22 Jan 21 12:34 Operator: LP,DG,CH
Sample : 40ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	Tert Amyl Methyl Ether	6.01	73	1658282	46.48	ppb		97
51)	Methylcyclopentane	4.49	56	87389	37.07	ppb	#	94
52)	1,2-DCA	5.81	62	811313	38.89	ppb		98
53)	Benzene	5.78	78	2738551	39.78	ppb		99
54)	TCE	6.61	130	947132	37.89	ppb		99
55)	2-Pentanone	6.88	43	1812593	210.27	ppb		99
56)	1,2-Dichloropropane	6.86	63	614569	39.63	ppb		99
57)	Bromodichloromethane	7.21	83	796763	45.64	ppb		98
58)	Methyl Cyclohexane	6.84	83	1239020	41.97	ppb		94
59)	Dibromomethane	6.99	174	698277	40.59	ppb		98
60)	MIBK (methyl isobutyl ket	7.95	43	968369	96.29	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	124573	39.32	ppb		90
62)	2-Chloroethyl vinyl ether	7.60	43	442292	91.95	ppb		97
63)	Cis-1,3-Dichloropropene	7.73	75	974409	45.49	ppb		98
64)	Toluene	8.11	91	3020630	39.73	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	850805	48.49	ppb		99
66)	1,1,2-TCA	8.56	97	598383	40.76	ppb		98
67)	2-Hexanone	8.88	43	367413	96.50	ppb		98
70)	1,2-EDB	9.09	107	652690	44.57	ppb		97
71)	Tetrachloroethene	8.72	166	1214650	39.01	ppb		98
72)	1-Chlorohexane	9.67	91	977060	42.03	ppb		97
73)	1,1,1,2-Tetrachloroethane	9.75	131	754304	46.94	ppb		99
74)	m&p-Xylene	9.93	91	4938103	83.19	ppb		98
75)	o-Xylene	10.36	91	2516586	42.55	ppb		99
76)	Styrene	10.37	104	2138191	46.21	ppb		98
78)	1,3-Dichloropropane	8.74	76	906043	41.77	ppb		96
79)	Dibromochloromethane	8.98	129	693486	38.06	ppb		96
80)	Chlorobenzene	9.65	112	2119786	39.41	ppb		98
81)	Ethylbenzene	9.79	91	3244270	40.92	ppb		99
82)	Bromoform	10.54	173	591802	37.02	ppb		99
84)	Isopropylbenzene	10.77	105	3529114	43.32	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	706374	45.58	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	268586	43.47	ppb		97
87)	t-1,4-Dichloro-2-Butene	11.14	53	138725	52.11	ppb	#	73
88)	Bromobenzene	11.06	77	1048358	39.05	ppb		97
89)	n-Propylbenzene	11.21	91	3820310	42.78	ppb		97
90)	4-Ethyltoluene	11.34	105	3384385	42.64	ppb		99
91)	2-Chlorotoluene	11.41	91	2531167	42.13	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	2842498	43.55	ppb		94
93)	4-Chlorotoluene	11.41	91	2531167	42.13	ppb		98
94)	Tert-Butylbenzene	11.77	119	2767761	42.89	ppb		98
95)	1,2,4-Trimethylbenzene	11.81	105	2861385	44.35	ppb		99
96)	Sec-Butylbenzene	12.01	105	3881664	43.96	ppb		100
97)	p-Isopropyltoluene	11.77	119	2767761	42.89	ppb		97
98)	Benzyl Chloride	12.35	91	1412447	39.17	ppb		99
99)	1,3-DCB	12.10	146	2077638	40.10	ppb		98
100)	1,4-DCB	12.20	146	2075005	39.18	ppb		98
101)	n-Butylbenzene	12.61	91	2852399	45.58	ppb		99
102)	1,2-DCB	12.60	146	1907729	40.92	ppb		97
103)	Hexachloroethane	12.89	201	680431	37.50	ppb	#	80
104)	1,2-Dibromo-3-chloropropan	13.44	157	225887	40.62	ppb		96
105)	1,2,4-Trichlorobenzene	13.69	180	1813306	42.18	ppb		98
106)	Hexachlorobutadiene	14.57	225	914623	42.38	ppb		96
107)	Naphthalene	14.62	128	2857484	48.86	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z09.D Vial: 9
Acq On : 22 Jan 21 12:34 Operator: LP,DG,CH
Sample : 40ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
108) 1,2,3-Trichlorobenzene	14.89	180	1299572	43.37	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

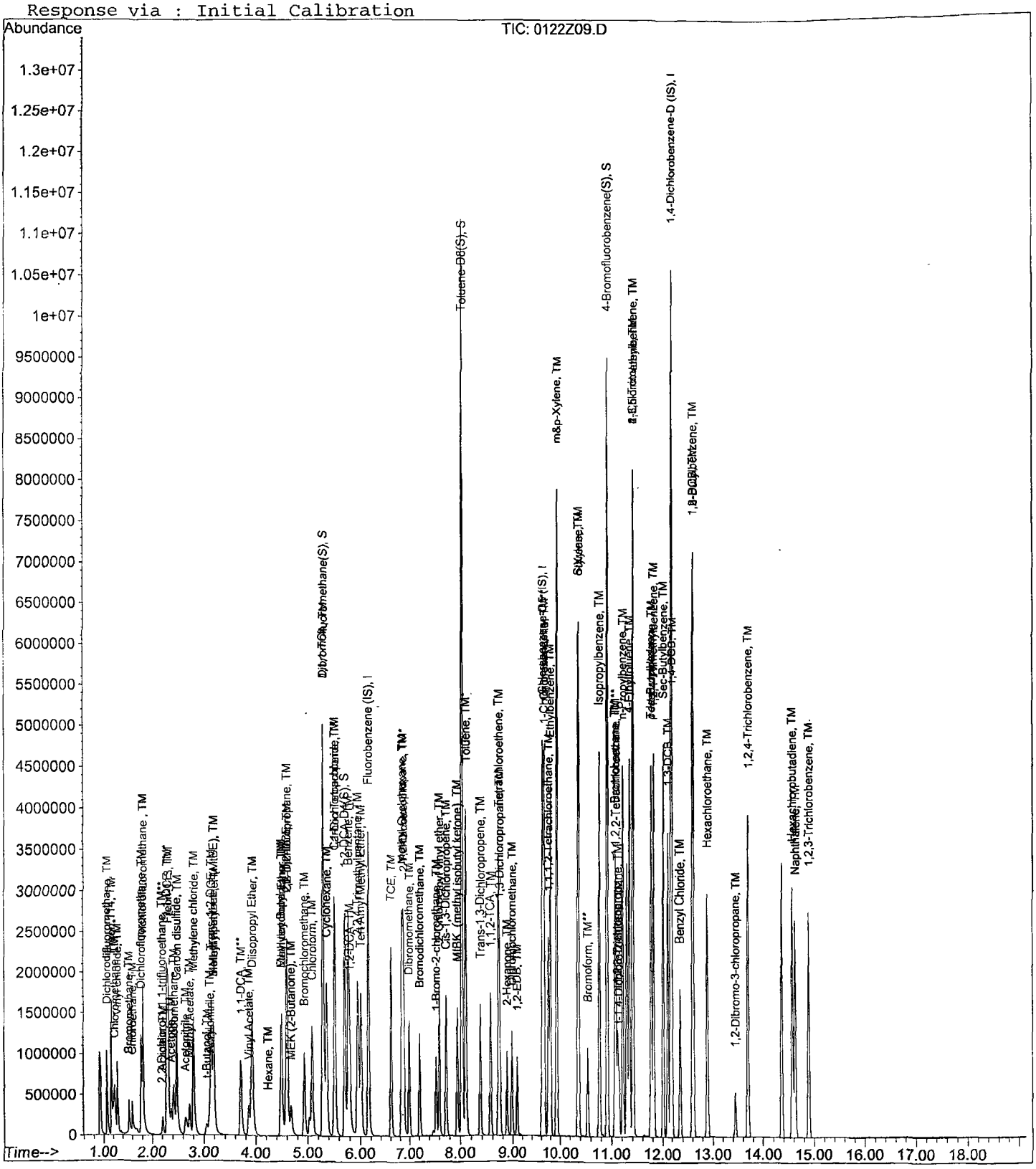
Data File : M:\ZEUS\DATA\210122\0122Z09.D
Acq On : 22 Jan 21 12:34
Sample : 40ug/L VOC STD1/22/21
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 8:52 2021

Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4214967	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3349419	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1279488	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	4904364	98.77	ppb		0.00
Spiked Amount 25.000			Recovery = 395.064%				
48) 1,2-DCA-D4(S)	5.71	65	4324969	110.11	ppb		0.00
Spiked Amount 25.000			Recovery = 440.424%				
69) Toluene-D8(S)	8.03	98	16070583	106.34	ppb		0.00
Spiked Amount 25.000			Recovery = 425.364%				
77) 4-Bromofluorobenzene(S)	10.92	95	6490594	101.27	ppb		0.00
Spiked Amount 25.000			Recovery = 405.092%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	2255046	96.18	ppb		98
4) Freon 114	1.16	85	1215223	87.27	ppb		94
5) Chloromethane	1.23	50	821171	100.01	ppb		98
6) Vinyl chloride	1.28	62	1919772	86.75	ppb		99
9) Bromomethane	1.53	94	483728	98.56	ppb		95
10) Chloroethane	1.60	64	336879	76.26	ppb		98
11) Dichlorofluoromethane	1.77	67	1344770	35.41	ppb		99
12) Trichlorofluoromethane	1.81	101	1673825	43.72	ppb		98
16) Acrolein	2.21	55	135177	190.11	ppb		95
17) Acetone	2.38	43	435165	89.13	ppb		98
18) Freon-113	2.31	101	916288	92.76	ppb		98
19) 1,1-DCE	2.28	61	2499177	98.00	ppb		96
21) Acetonitrile	2.66	40	52312	113.02	ppb		95
22) t-Butanol	3.08	59	60062	137.72	ppb		96
23) Methyl Acetate	2.73	43	1158988	89.32	ppb		99
24) Iodomethane	2.42	142	2634514	101.99	ppb		96
25) Acrylonitrile	3.11	52	512644	106.61	ppb		95
26) Methylene chloride	2.81	49	930816	98.12	ppb		99
27) Carbon disulfide	2.47	76	2503680	99.39	ppb		99
28) Methyl t-butyl ether (MtBE	3.19	73	4612057	104.74	ppb		99
29) Trans-1,2-DCE	3.14	61	2385149	94.46	ppb		97
30) Hexane	4.26	56	60	2.26	ppb	#	19
31) Diisopropyl Ether	3.93	45	4690965	104.37	ppb		98
32) 2,2-Dichloro-1,1,1-trifluo	2.18	83	3471	89.24	ppb	#	100
33) 1,1-DCA	3.71	63	2998362	96.04	ppb		98
34) Vinyl Acetate	3.86	43	1608237	101.48	ppb		98
35) Ethyl tert Butyl Ether	4.50	59	4680267	110.78	ppb		99
36) MEK (2-Butanone)	4.68	43	646066	102.60	ppb		95
37) Cis-1,2-DCE	4.60	61	2658834	94.27	ppb		96
38) 2,2-Dichloropropane	4.59	77	2794329	105.68	ppb		97
39) 2-Methylpentane	2.96	43	432	272.55	ppb	#	66
40) 3-Methylpentane	3.19	57	927988	99.75	ppb		96
41) Chloroform	5.09	83	3360150	99.67	ppb		95
42) Bromochloromethane	4.93	49	1195238	94.50	ppb		92
44) 1,1,1-TCA	5.30	97	3294075	106.99	ppb		99
45) Cyclohexane	5.36	56	2688524	99.65	ppb		99
46) 1,1-Dichloropropene	5.53	75	2395976	101.83	ppb		99
47) 2,2,4-Trimethylpentane	5.95	57	5801602	99.84	ppb		100
49) Carbon Tetrachloride	5.52	117	3078349	116.08	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
50)	Tert Amyl Methyl Ether	6.01	73	4518667	116.57	ppb		96
51)	Methylcyclopentane	4.50	56	217344	84.86	ppb	#	96
52)	1,2-DCA	5.81	62	2149770	94.85	ppb		99
53)	Benzene	5.78	78	7104682	94.99	ppb		98
54)	TCE	6.61	130	2557486	94.17	ppb		99
55)	2-Pentanone	6.88	43	1978263	211.24	ppb		98
56)	1,2-Dichloropropane	6.86	63	1639635	97.33	ppb		100
57)	Bromodichloromethane	7.21	83	2304523	121.50	ppb		96
58)	Methyl Cyclohexane	6.84	83	3368872	105.03	ppb		96
59)	Dibromomethane	6.99	174	1857032	99.37	ppb		98
60)	MIBK (methyl isobutyl ket	7.95	43	1249218	114.34	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	331219	96.24	ppb		86
62)	2-Chloroethyl vinyl ether	7.60	43	603109	115.41	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	2708431	116.38	ppb		98
64)	Toluene	8.11	91	8087216	97.90	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	2444285	128.24	ppb		98
66)	1,1,2-TCA	8.56	97	1611640	101.05	ppb		99
67)	2-Hexanone	8.88	43	477610	115.47	ppb		99
70)	1,2-EDB	9.09	107	1743688	110.46	ppb		96
71)	Tetrachloroethene	8.72	166	3225274	96.11	ppb		99
72)	1-Chlorohexane	9.67	91	2662074	106.24	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	2080949	120.14	ppb		99
74)	m&p-Xylene	9.93	91	13142336	205.41	ppb		99
75)	o-Xylene	10.36	91	6952718	109.07	ppb		100
76)	Styrene	10.37	104	6090365	122.11	ppb		100
78)	1,3-Dichloropropane	8.74	76	2403127	102.78	ppb		97
79)	Dibromochloromethane	8.98	129	2033769	101.26	ppb		99
80)	Chlorobenzene	9.65	112	5692369	98.18	ppb		95
81)	Ethylbenzene	9.79	91	8590717	100.54	ppb		99
82)	Bromoform	10.54	173	1818111	101.93	ppb		99
84)	Isopropylbenzene	10.77	105	9626949	107.87	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	1899101	111.85	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	712158	105.21	ppb		96
87)	t-1,4-Dichloro-2-Butene	11.15	53	394724	135.34	ppb	#	69
88)	Bromobenzene	11.07	77	2939544	99.95	ppb		97
89)	n-Propylbenzene	11.21	91	10325877	105.55	ppb		97
90)	4-Ethyltoluene	11.35	105	9285715	106.79	ppb		97
91)	2-Chlorotoluene	11.41	91	7142621	108.51	ppb		94
92)	1,3,5-Trimethylbenzene	11.41	105	7953559	111.23	ppb		93
93)	4-Chlorotoluene	11.41	91	7142621	108.51	ppb		94
94)	Tert-Butylbenzene	11.77	119	7645585	108.15	ppb		92
95)	1,2,4-Trimethylbenzene	11.82	105	8140140	115.15	ppb		100
96)	Sec-Butylbenzene	12.01	105	10786009	111.48	ppb		99
97)	p-Isopropyltoluene	11.77	119	7645585	108.15	ppb		98
98)	Benzyl Chloride	12.35	91	4076691	100.88	ppb		97
99)	1,3-DCB	12.11	146	5713498	100.66	ppb		99
100)	1,4-DCB	12.20	146	5705619	98.34	ppb		97
101)	n-Butylbenzene	12.61	91	8154854	118.94	ppb		99
102)	1,2-DCB	12.60	146	5227492	102.34	ppb		98
103)	Hexachloroethane	12.89	201	2083634	101.65	ppb	#	72
104)	1,2-Dibromo-3-chloropropan	13.44	157	620109	100.24	ppb		96
105)	1,2,4-Trichlorobenzene	13.69	180	4820867	102.35	ppb		97
106)	Hexachlorobutadiene	14.57	225	2414716	102.13	ppb		99
107)	Naphthalene	14.62	128	7065046	110.27	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 08:51:55 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
108) 1,2,3-Trichlorobenzene	14.89	180	3319681	101.11 ppb	99

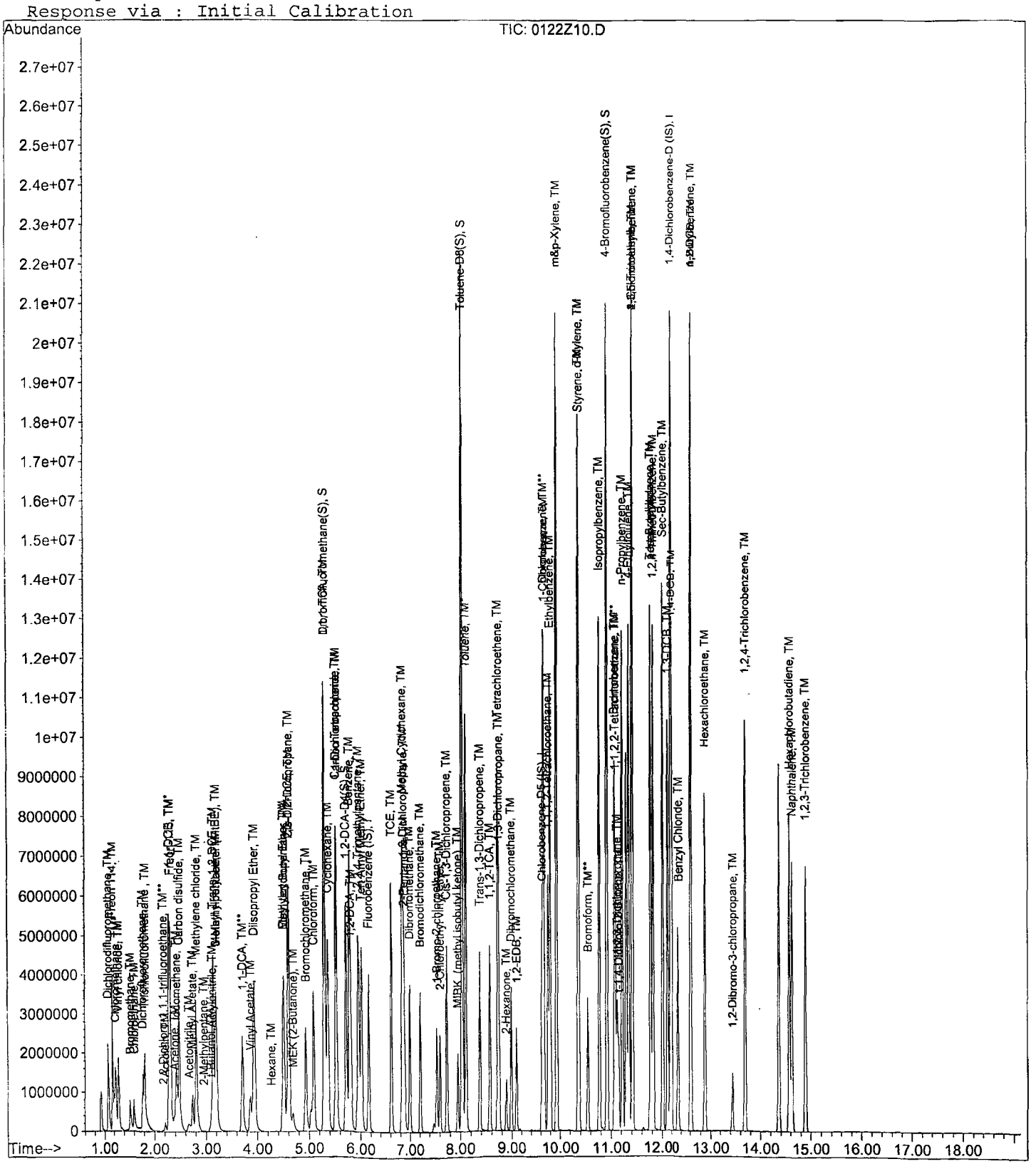
(#) = qualifier out of range (m) = manual integration

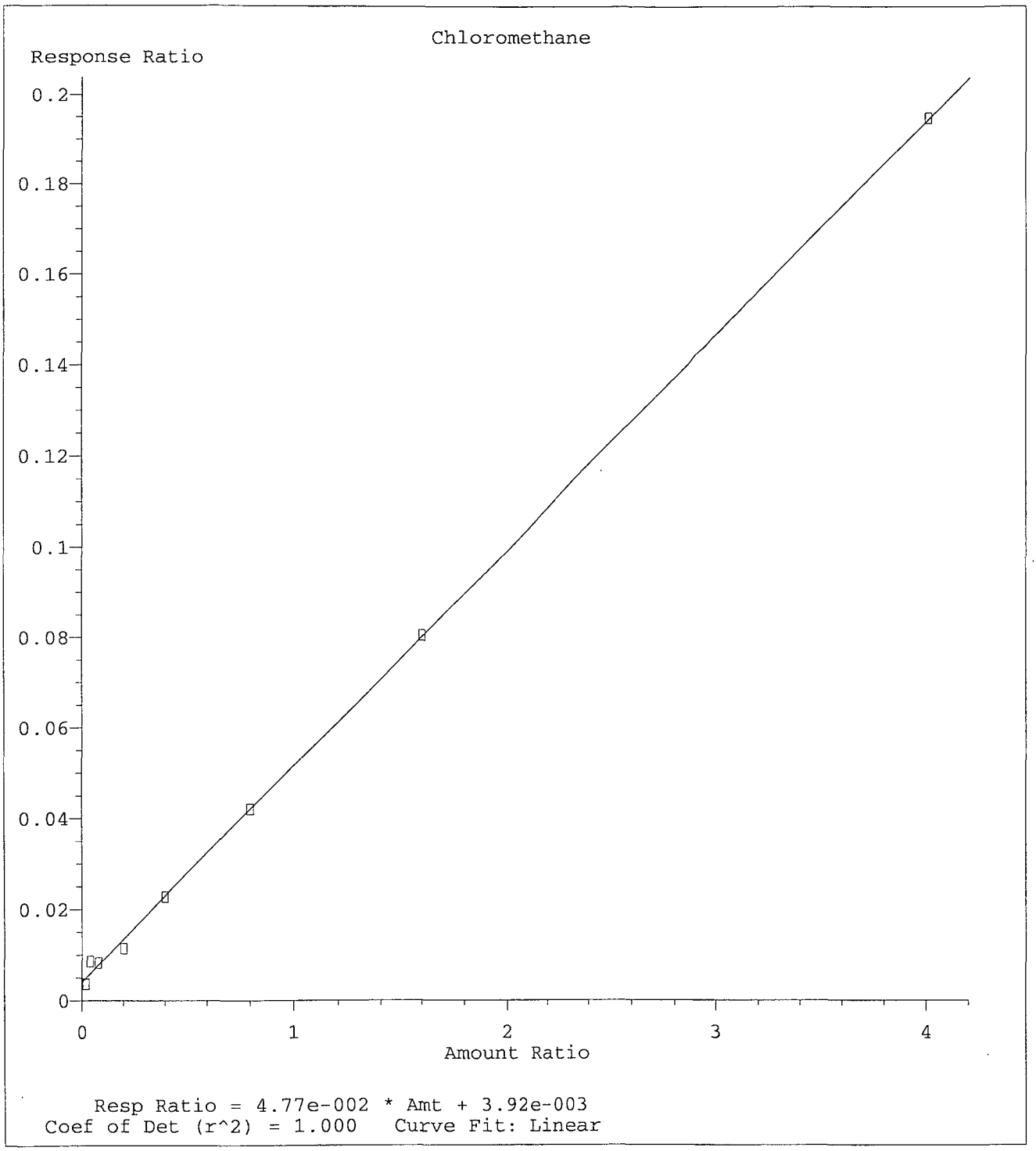
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

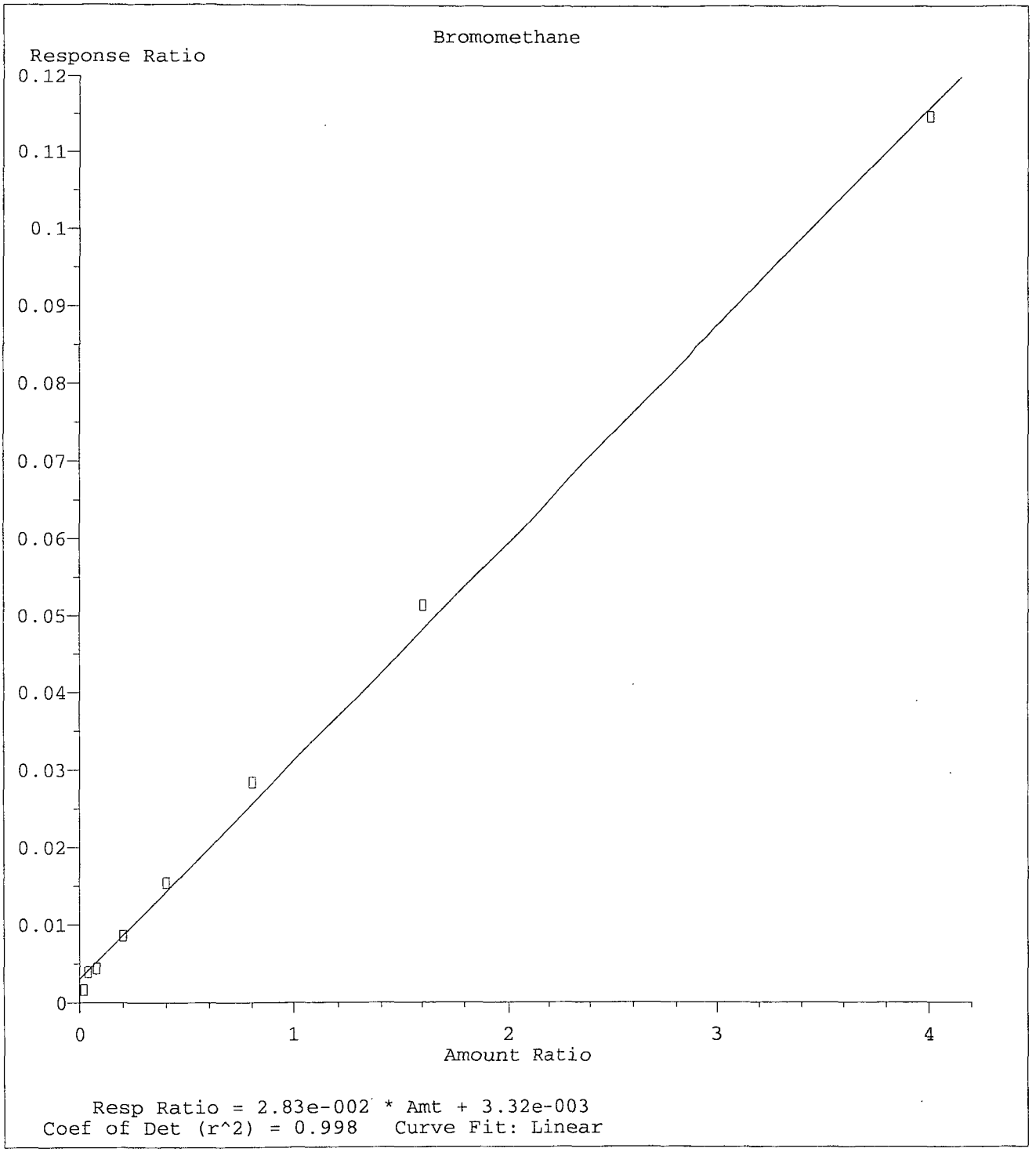
Quant Time: Jan 25 8:52 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration

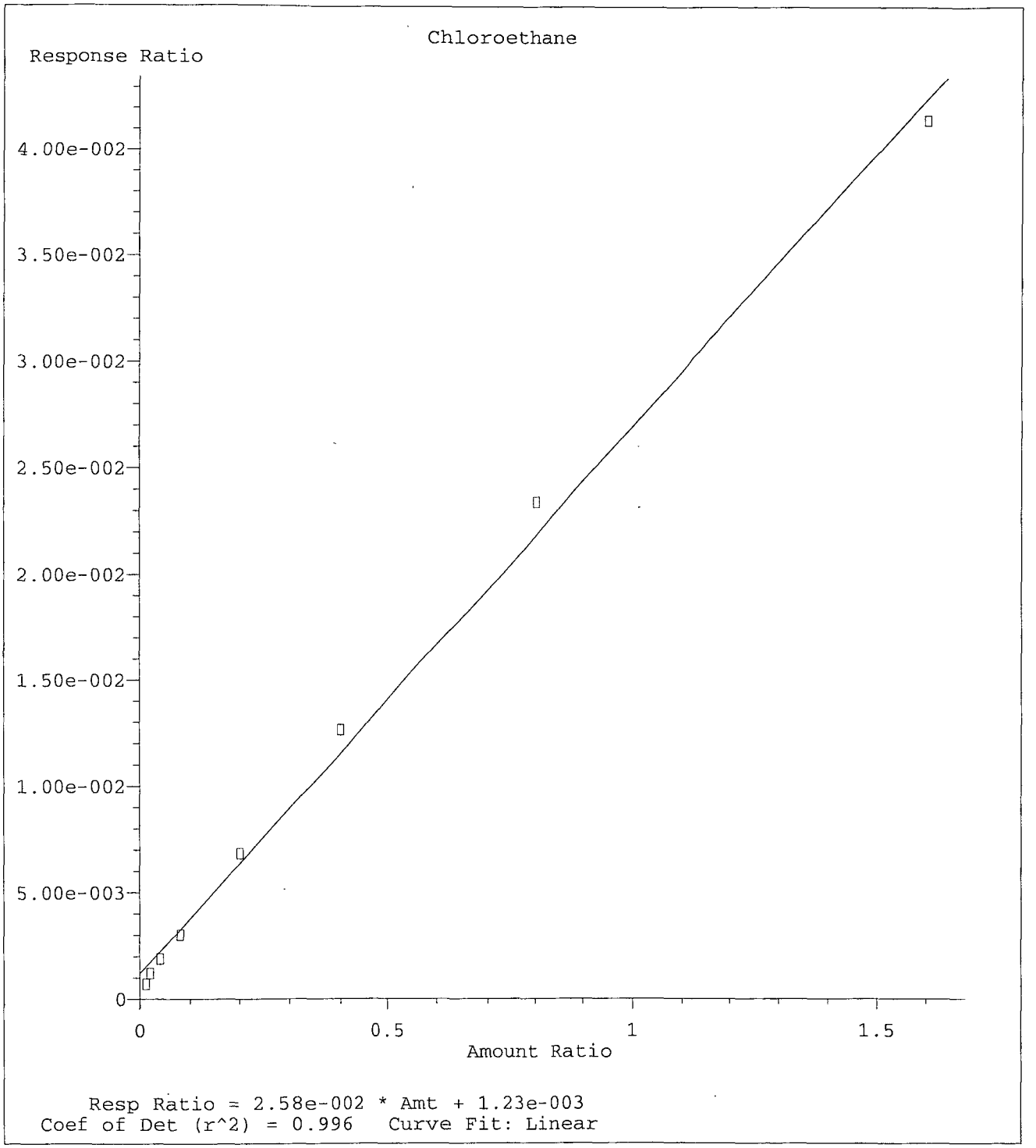




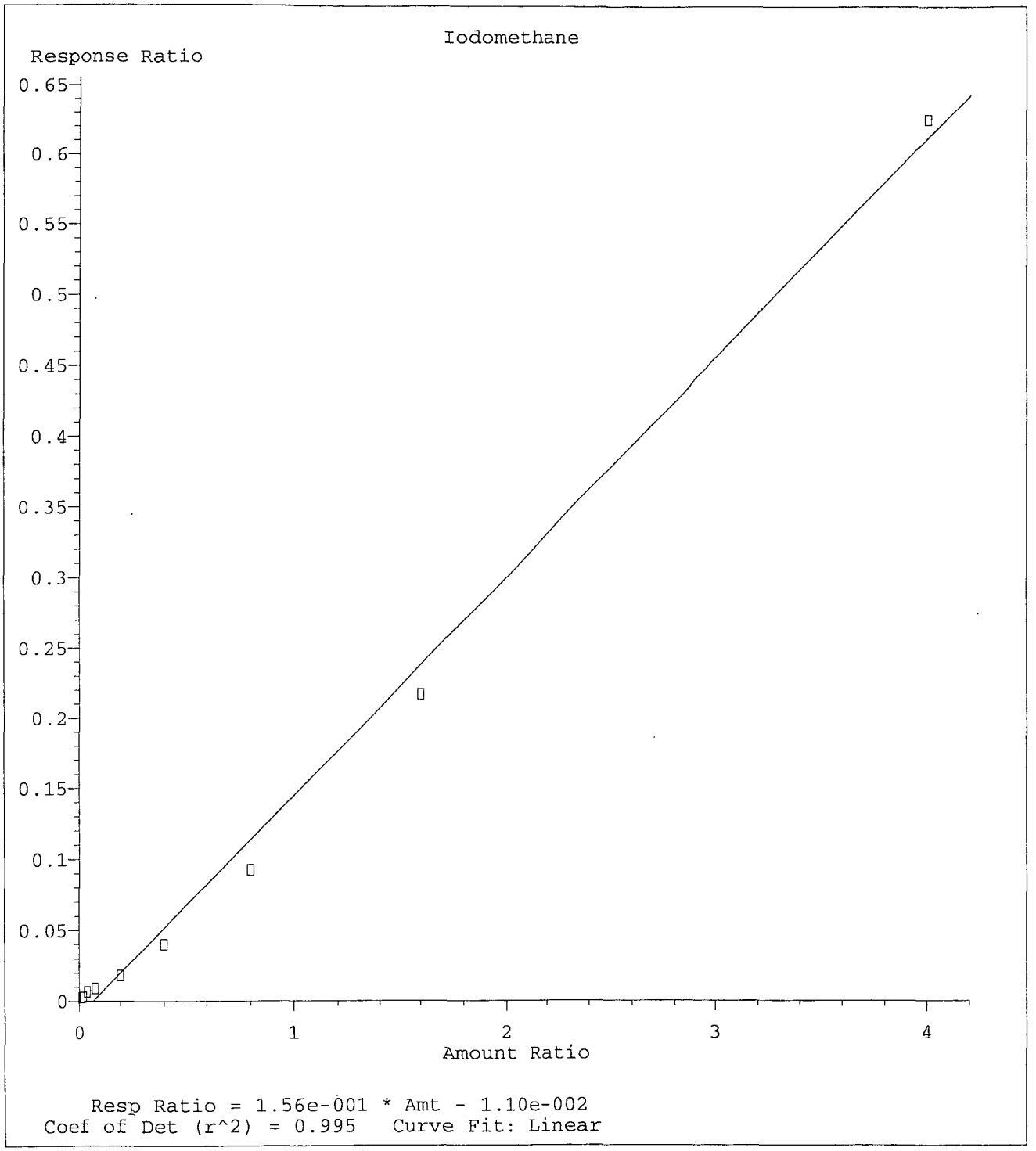
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



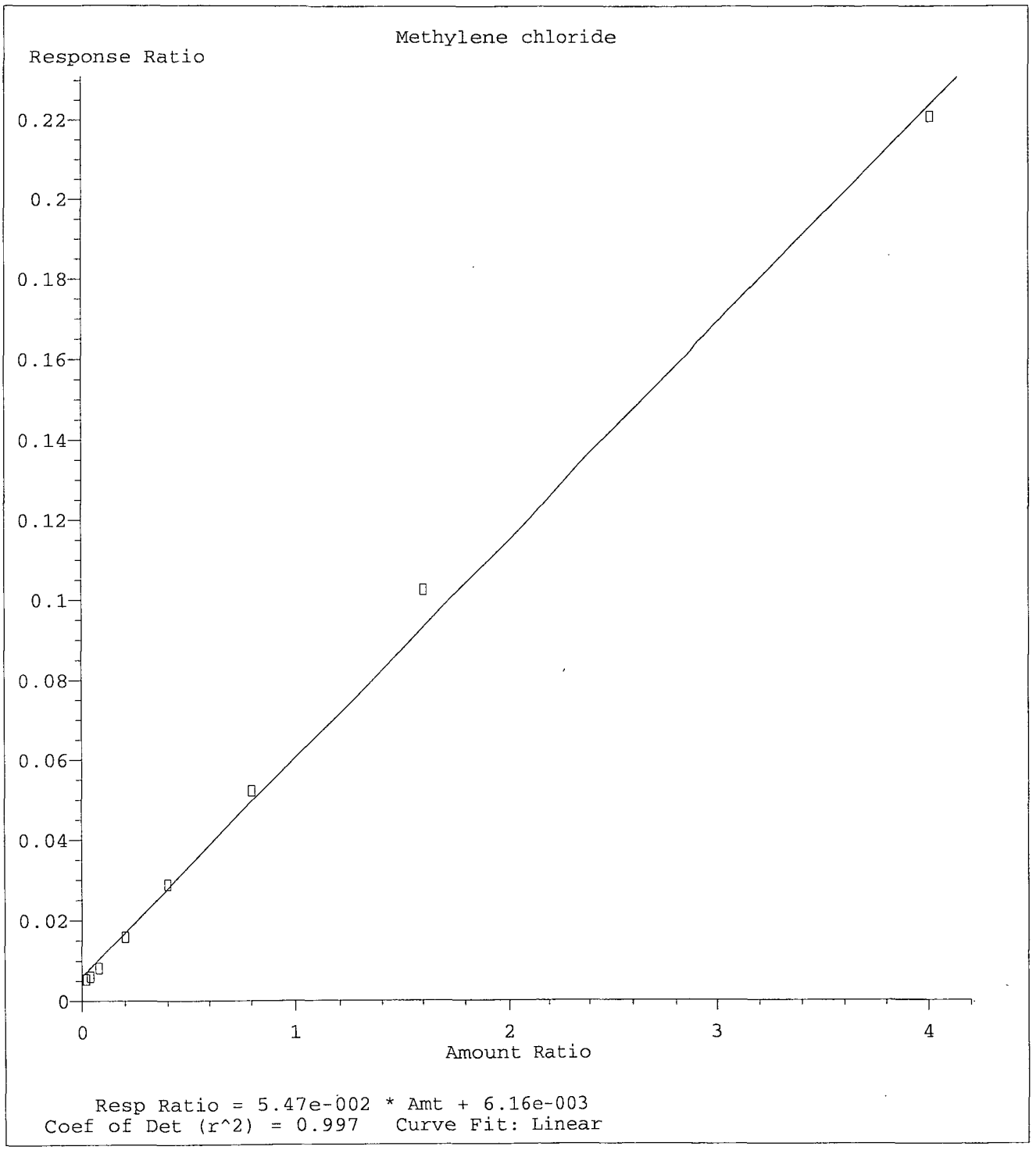
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



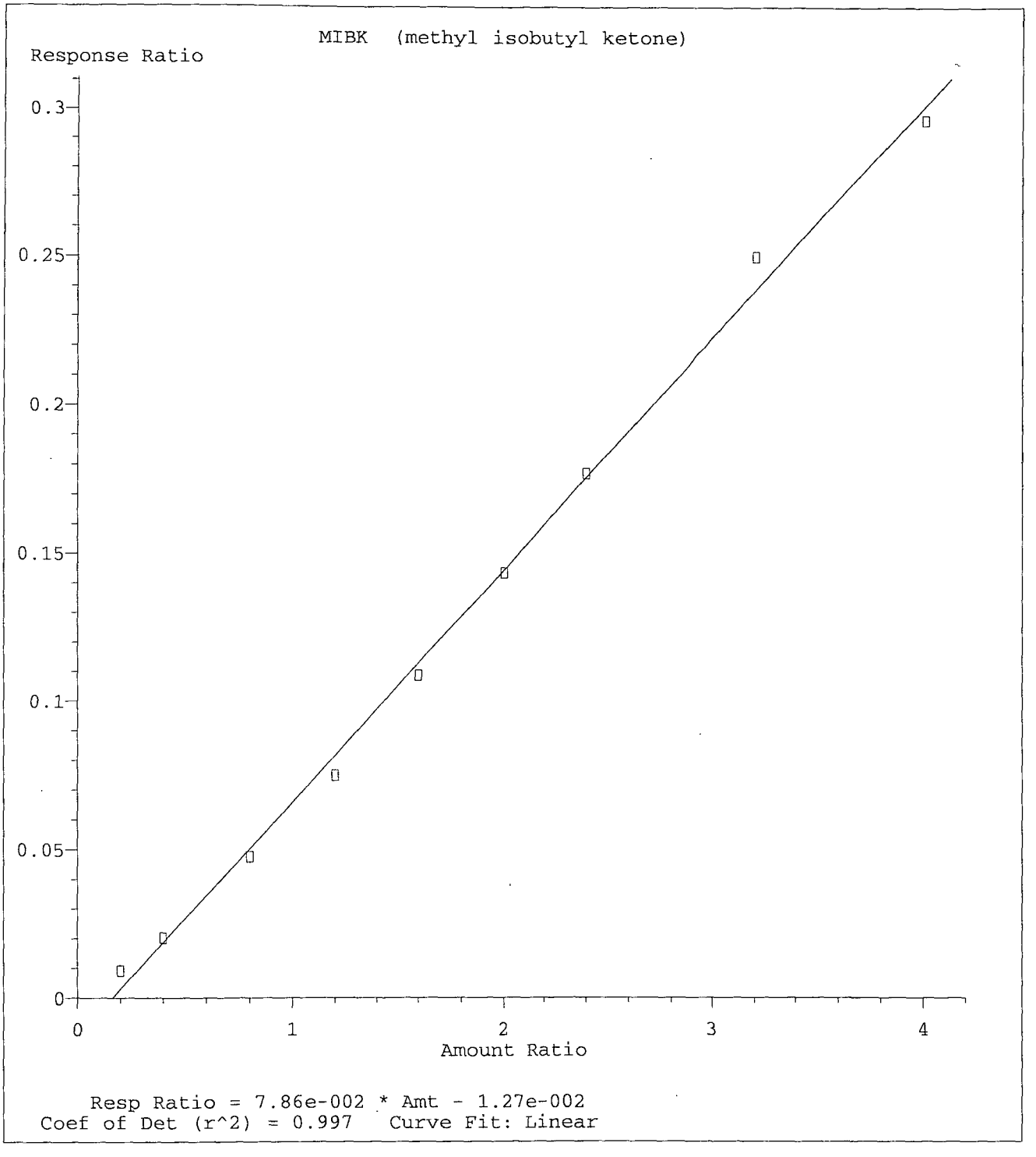
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



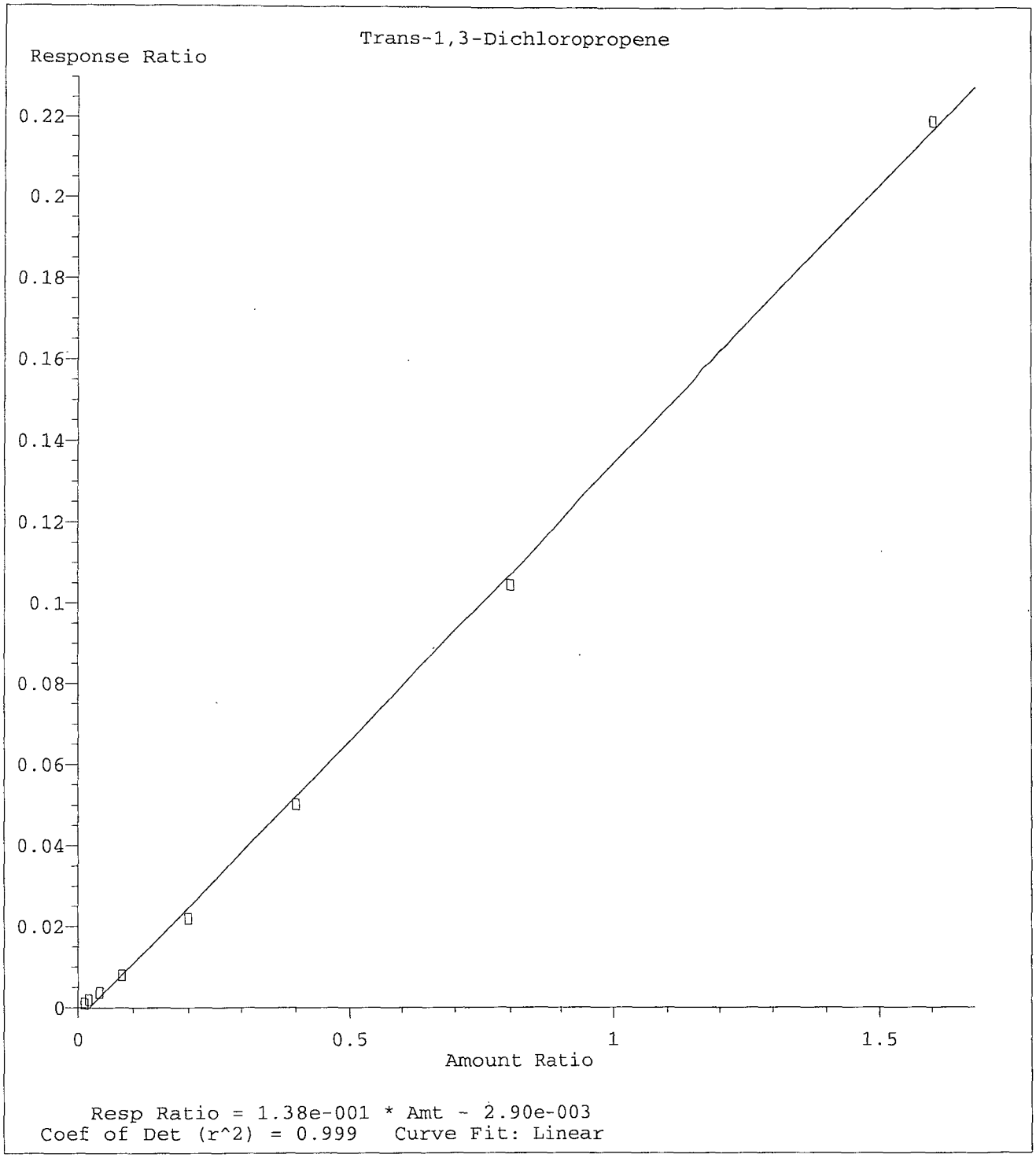
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



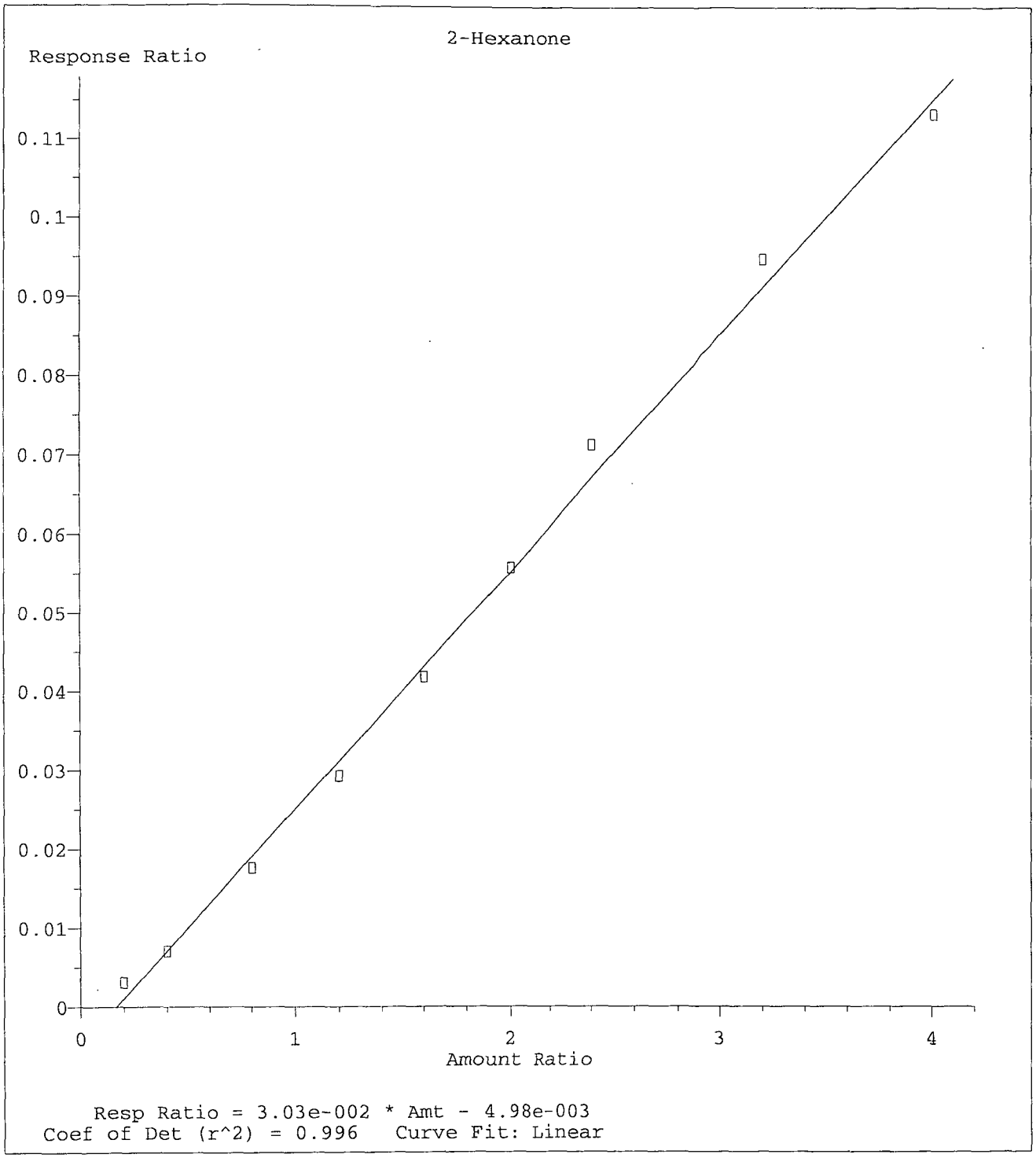
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



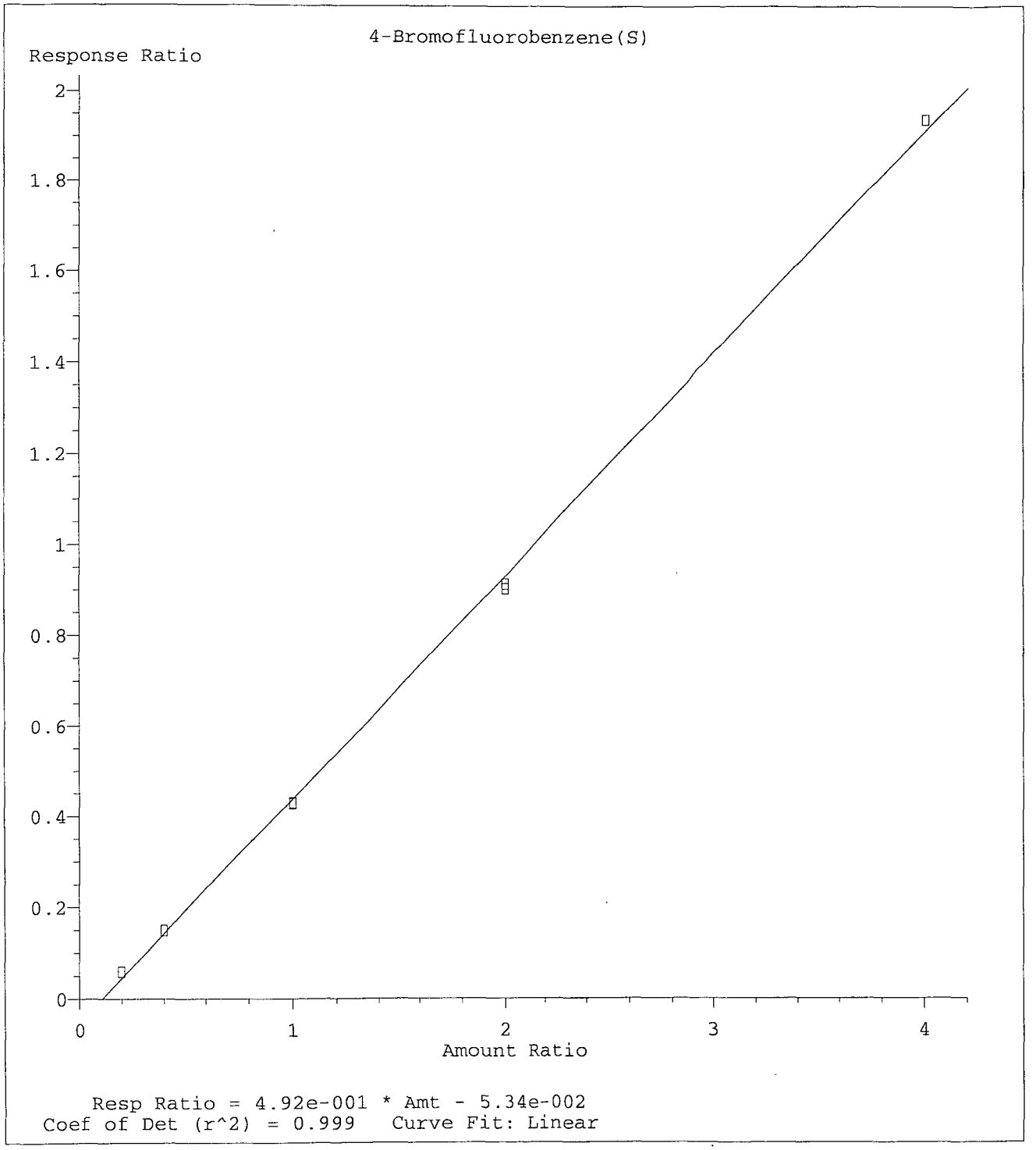
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



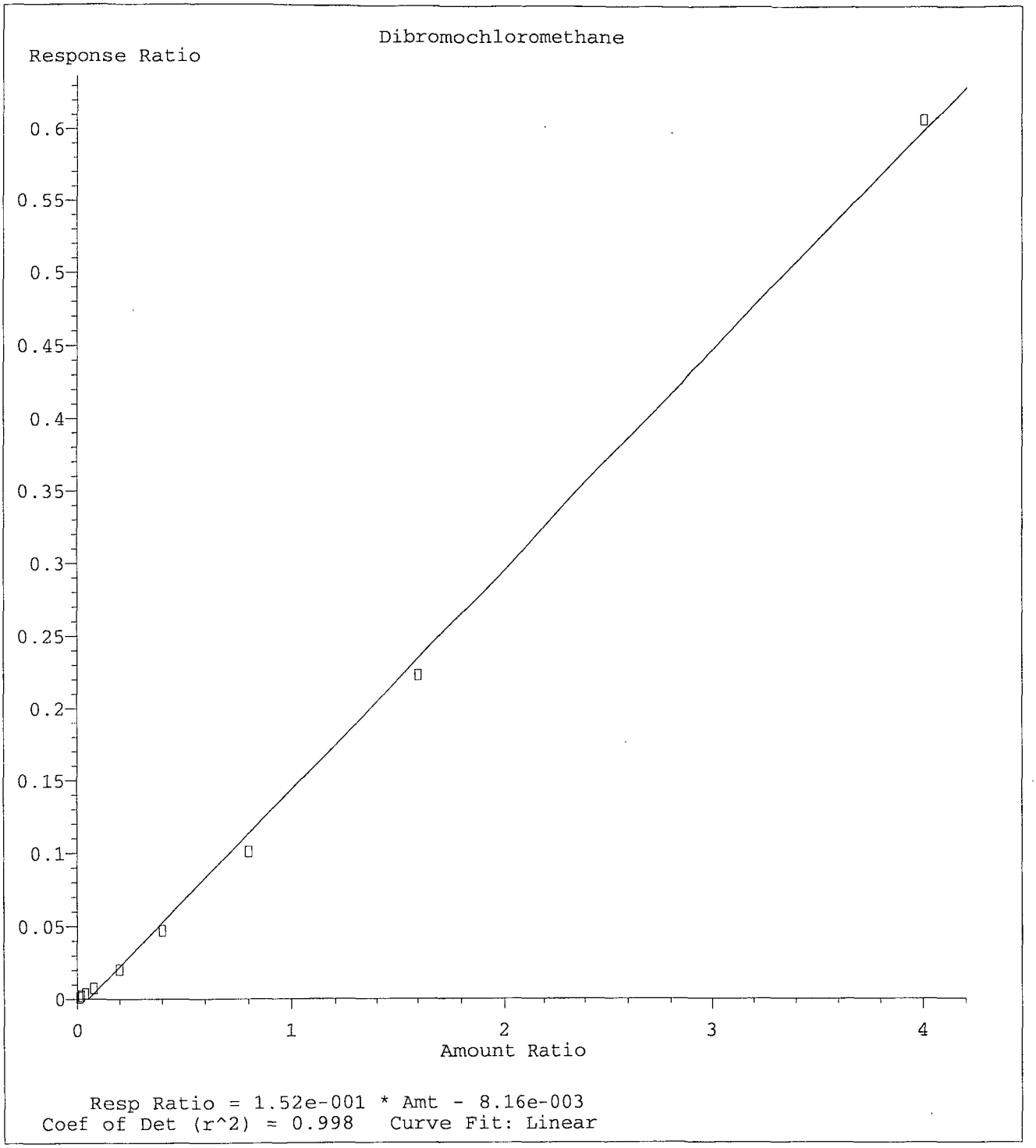
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



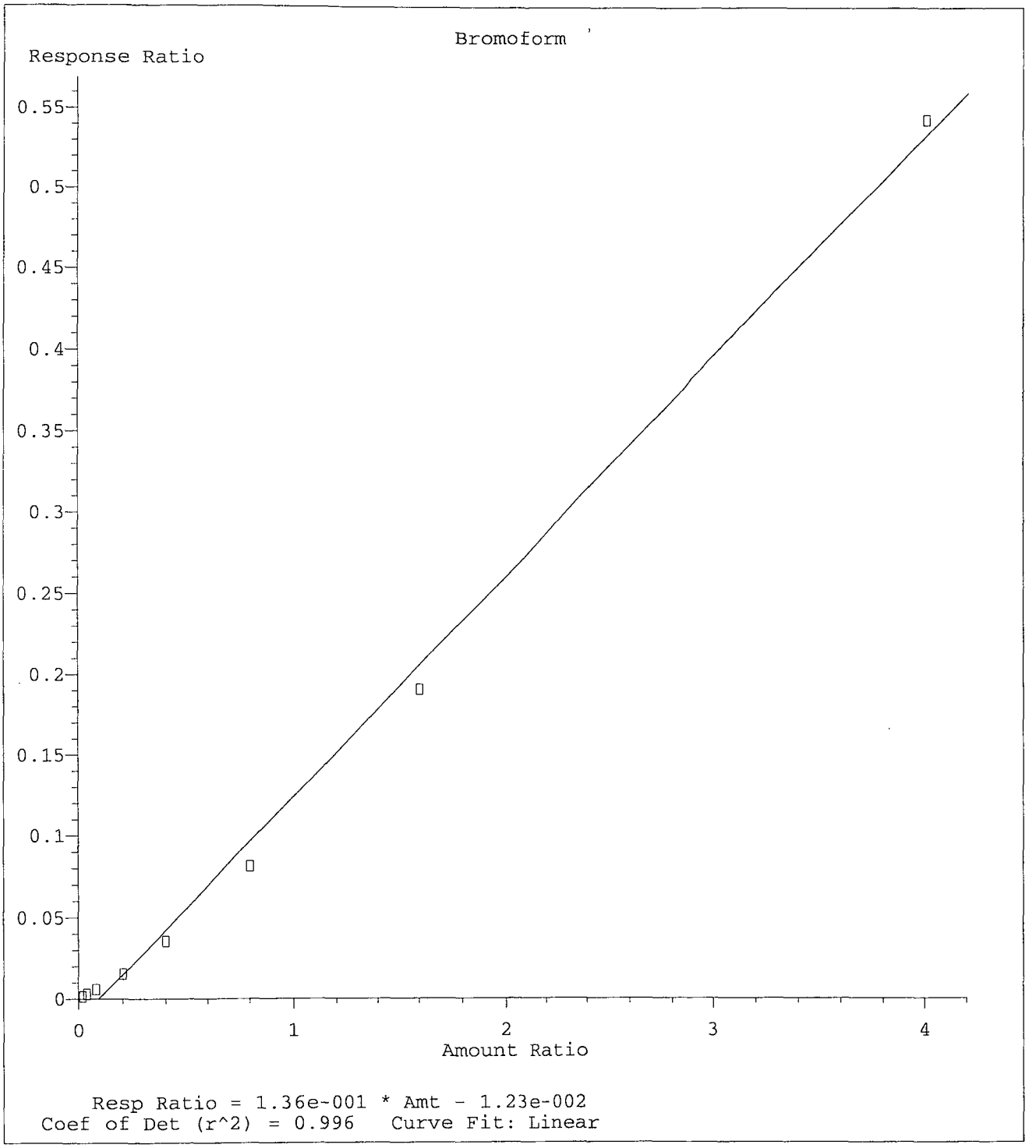
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



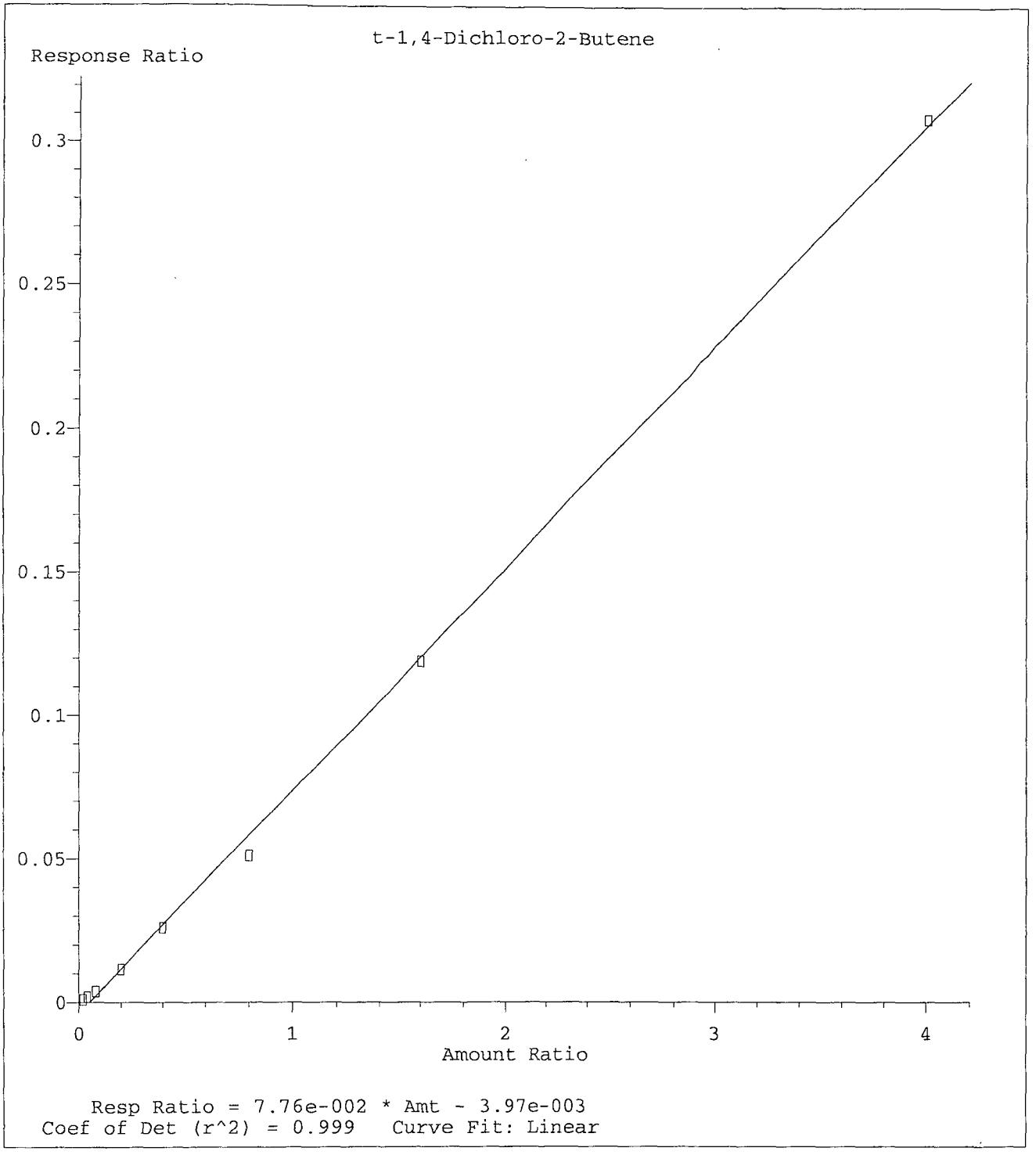
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



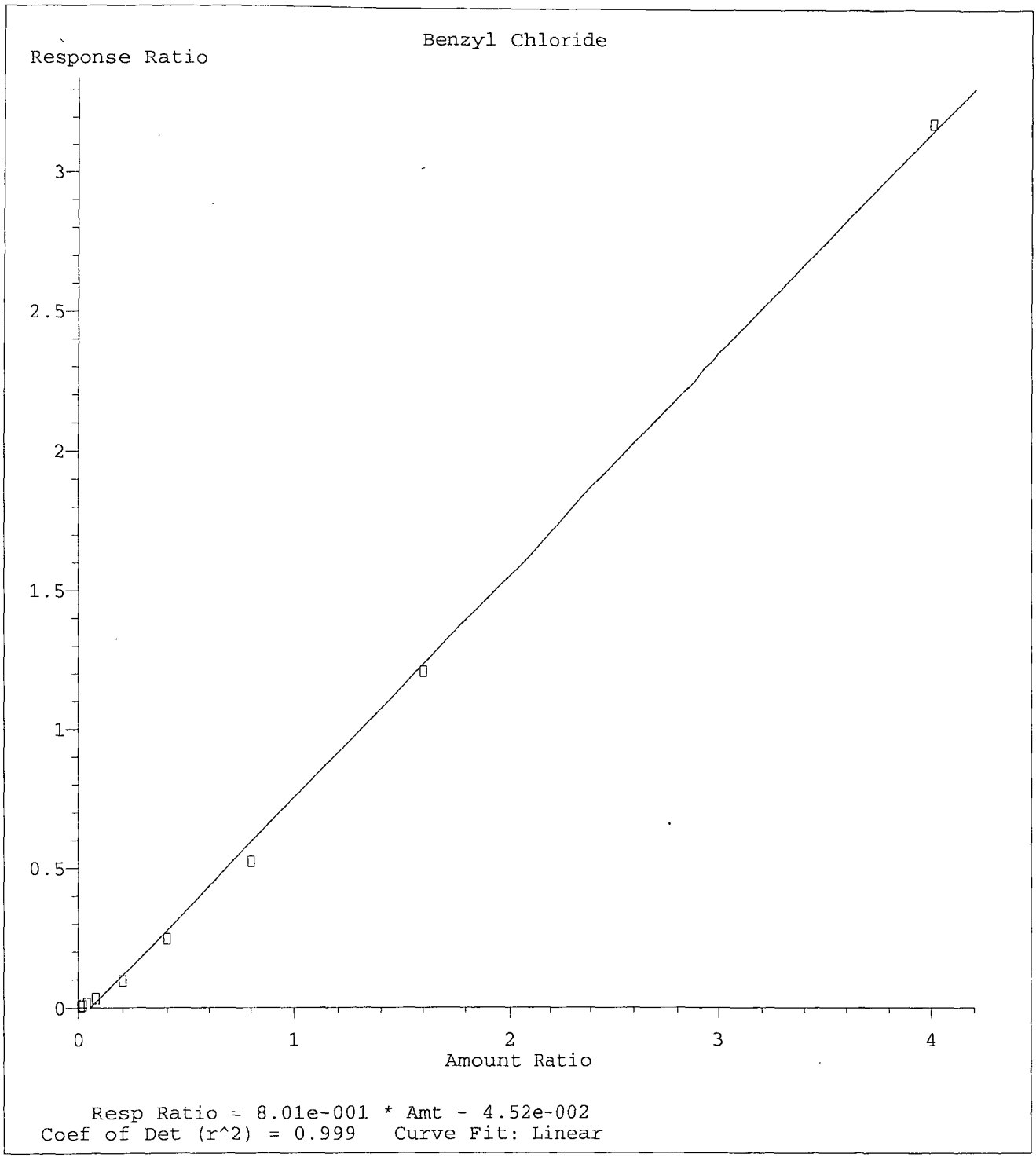
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



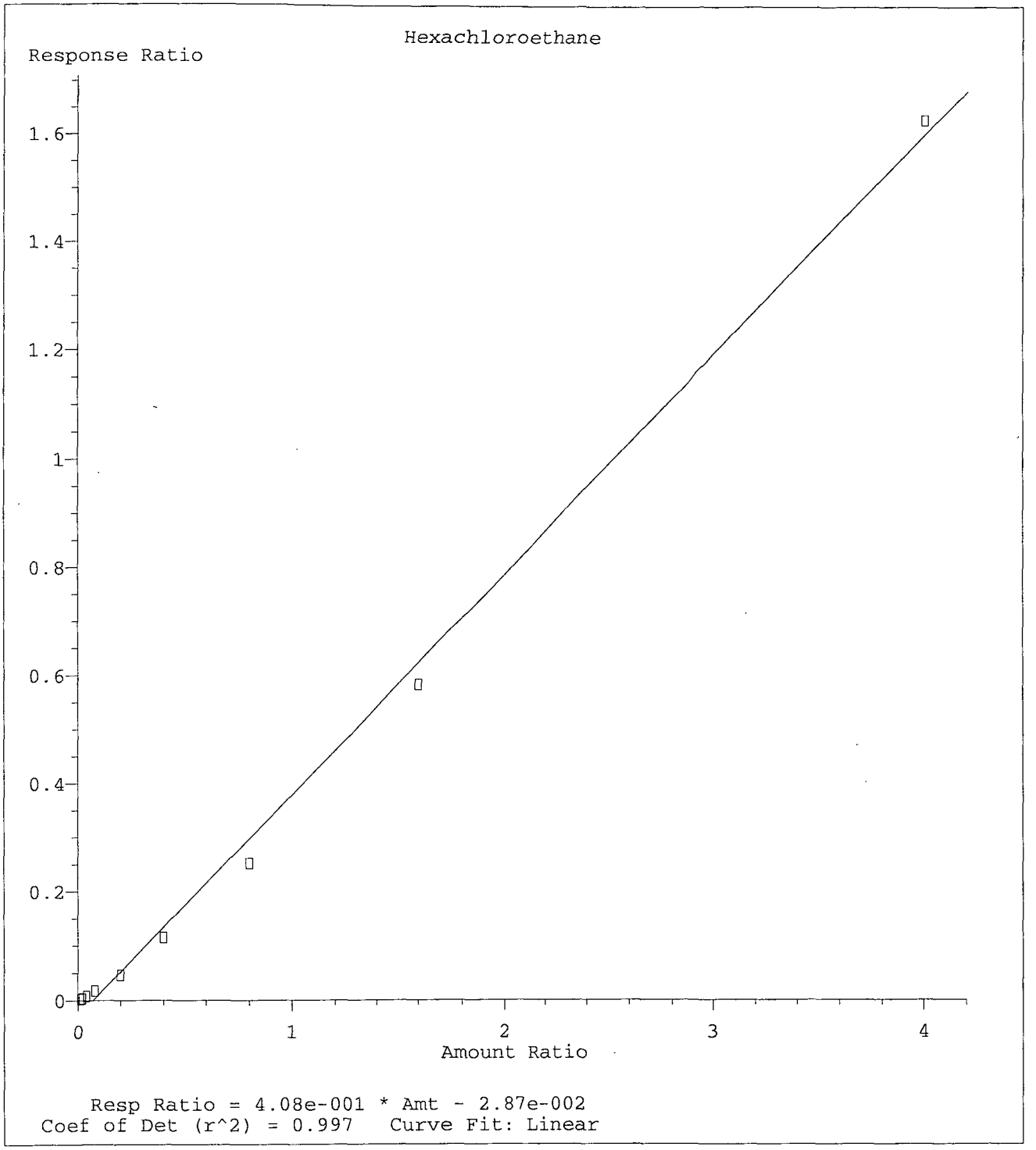
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



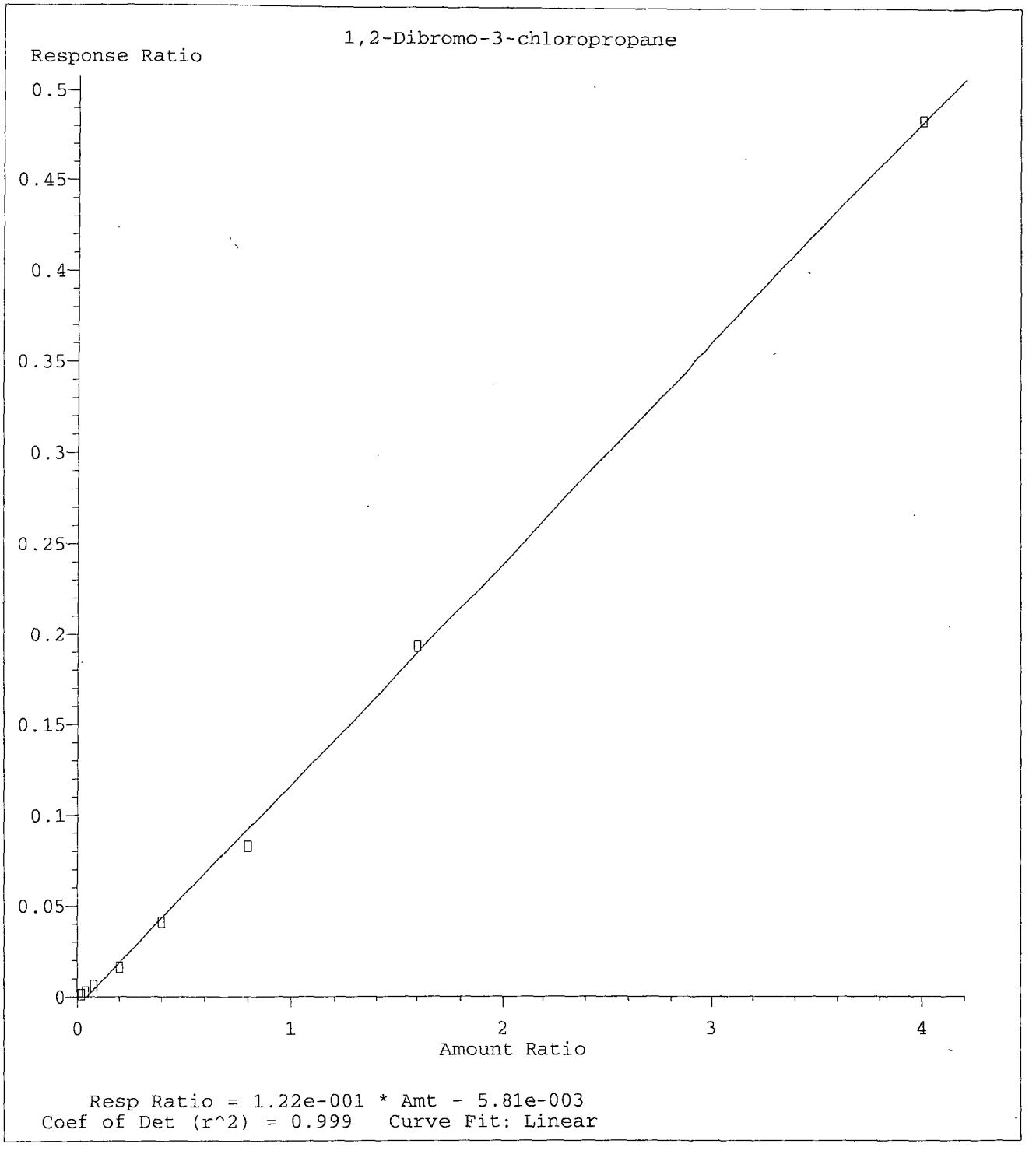
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



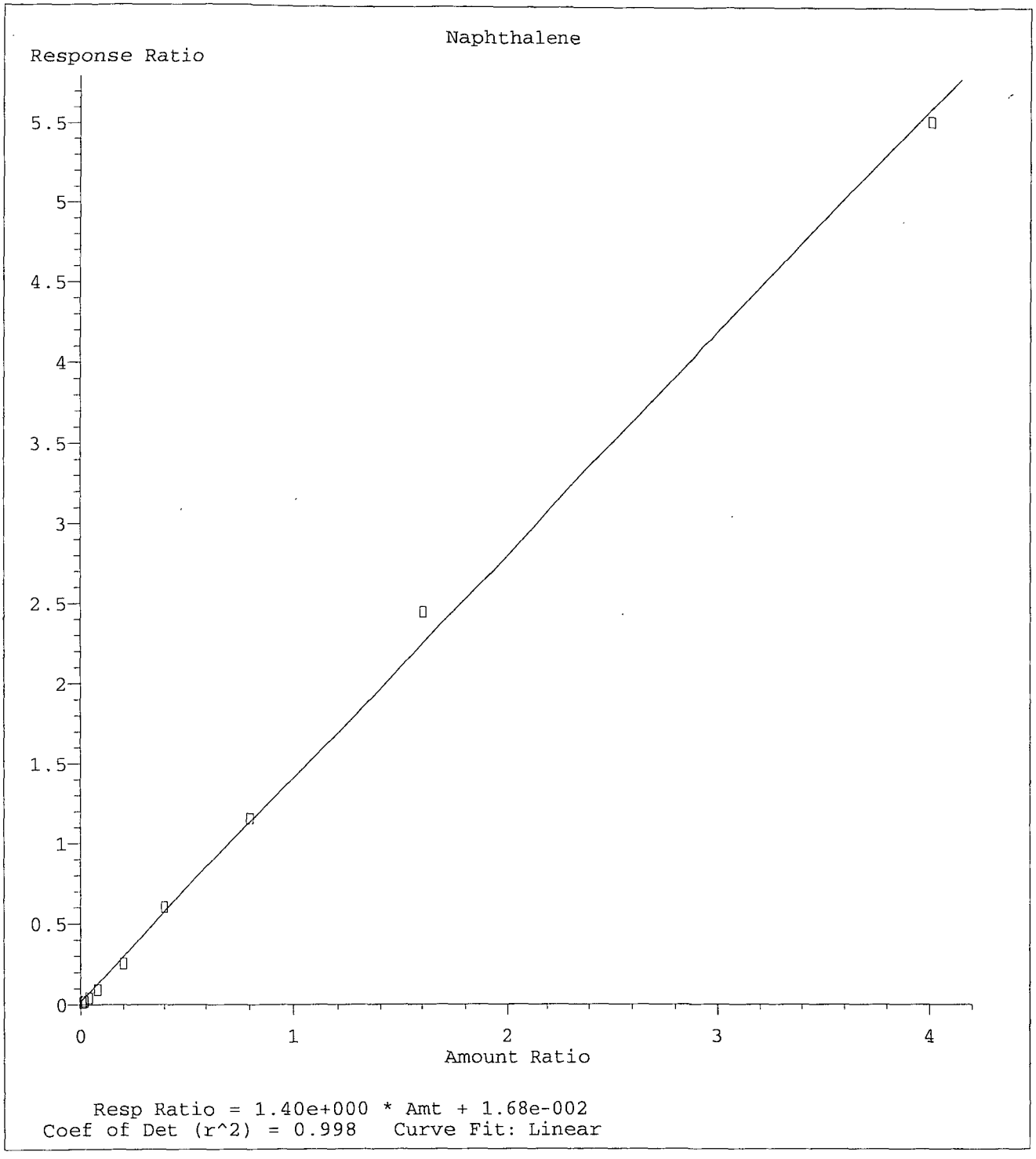
Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021



Method Name: M:\ZEUS\DATA\210122\Z0122W.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z12.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM	
2	TM	Dichlorodifluoromethane	0.1391	0.1232	11	TM	
3	TM	Freon 114	0.0826	0.0700	15	TM	
4	TM**L	Chloromethane	0.0957	0.0517	46	TM**L	12
5	TM*	Vinyl chloride	0.1313	0.1097	16	TM*	
6		Butane	0.0000	0.0006	0.00		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0514	0.0355	31	TML	3.9
9	TML	Chloroethane	0.0405	0.0250	38	TML	15
10	TM	Dichlorofluoromethane	0.2253	0.2019	10	TM	
11	TM	Trichlorofluoromethane	0.2271	0.1897	16	TM	
12	TM	Pentane	0.0000	0.0004	0.00	TM	
13	TM	Diethyl ether	0.0000	0.0000	0.00	TM	
14	TM	Acrolein	0.0042	0.0045	6.3	TM	
15	TM	Acetone	0.0290	0.0302	4.2	TM	
16	TM	Freon-113	0.0586	0.0527	10.0	TM	
17	TM*	1,1-DCE	0.1513	0.1433	5.2	TM*	
18	TM	2-Propanol	0.0000	0.0001	0.00	TM	
19	TM	Acetonitrile	0.0027	0.0027	1.3	TM	
20	TM	t-Butanol	0.0026	0.0030	16	TM	
21	TM	Methyl Acetate	0.0770	0.0665	14	TM	
22	TML	Iodomethane	0.1376	0.1412	2.6	TML	8.4
23	TM	Acrylonitrile	0.0320	0.0280	12	TM	
24	TML	Methylene chloride	0.1066	0.0650	39	TML	9.2
25	TM	Carbon disulfide	0.1513	0.1478	2.3	TM	
26	TM	Methyl t-butyl ether (MtBE)	0.2612	0.2476	5.2	TM	
27	TM	Trans-1,2-DCE	0.1498	0.1381	7.8	TM	
28	TM	Hexane	0.0000	0.0000	0.00	TM	
29	TM	Diisopropyl Ether	0.2666	0.2519	5.5	TM	
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM**	
31	TM**	1,1-DCA	0.1852	0.1800	2.8	TM**	
32	TM	Vinyl Acetate	0.0944	0.0927	1.8	TM	
33	TM	Ethyl tert Butyl Ether	0.2506	0.2391	4.6	TM	
34	TM	MEK (2-Butanone)	0.0374	0.0386	3.4	TM	
35	TM	Cis-1,2-DCE	0.1673	0.1612	3.7	TM	
36	TM	2,2-Dichloropropane	0.1568	0.1515	3.4	TM	
37	TML	2-Methylpentane	0.0000	0.0007	0.00	TML	
38	TM	3-Methylpentane	0.0000	0.0488	0.00	TM	
39	TM*	Chloroform	0.2000	0.1997	0.12	TM*	
40	TM	Bromochloromethane	0.0750	0.0728	3.0	TM	
		Average			8.4		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/22/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/22/21
Data File: 0122Z12.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1,1-TCA	0.1826	0.1797	1.6	TM	
42	TM	Cyclohexane	0.1568	0.1563	0.31	TM	
43	TM	1,1-Dichloropropene	0.1396	0.1412	1.2	TM	
44	TM	2,2,4-Trimethylpentane	0.3269	0.3057	6.5	TM	
45	TM	Carbon Tetrachloride	0.1573	0.1557	1.0	TM	
46	TM	Tert Amyl Methyl Ether	0.2299	0.2234	2.9	TM	
47	TM	Methylcyclopentane	0.0000	0.0133	0.00	TM	
48	TM	1,2-DCA	0.1344	0.1326	1.4	TM	
49	TM	Benzene	0.4436	0.4341	2.1	TM	
50	TM	TCE	0.1611	0.1466	9.0	TM	
51	TM	2-Pentanone	0.0555	0.0605	8.9	TM	
52	TM*	1,2-Dichloropropane	0.0999	0.0939	6.0	TM*	
53	TM	Bromodichloromethane	0.1125	0.1127	0.14	TM	
54	TM	Methyl Cyclohexane	0.1902	0.1783	6.3	TM	
55	TM	Dibromomethane	0.1108	0.1048	5.4	TM	
56	TML	MIBK (methyl isobutyl ketone)	0.0648	0.0685	5.7	TML	4.7
57	TM	1-Bromo-2-chloroethane	0.0204	0.0181	11	TM	
58	TM	2-Chloroethyl vinyl ether	0.0310	0.0334	7.9	TM	
59	TM	Cis-1,3-Dichloropropene	0.1380	0.1413	2.3	TM	
60	TM*	Toluene	0.4900	0.4674	4.6	TM*	
61	TML	Trans-1,3-Dichloropropene	0.1091	0.1180	8.2	TML	9.0
62	TM	1,1,2-TCA	0.0946	0.0869	8.1	TM	
63	TML	2-Hexanone	0.0245	0.0268	9.1	TML	3.4
64	TM	1,2-EDB	0.1178	0.1214	3.0	TM	
65	TM	Tetrachloroethene	0.2505	0.2352	6.1	TM	
66	TM	1-Chlorohexane	0.1870	0.1804	3.5	TM	
67	TM	1,1,1,2-Tetrachloroethane	0.1293	0.1332	3.0	TM	
68	TM	m&p-Xylene	0.4776	0.4763	0.27	TM	
69	TM	o-Xylene	0.4758	0.4759	0.02	TM	
70	TM	Styrene	0.3723	0.3881	4.3	TM	
71	TM	1,3-Dichloropropane	0.1745	0.1784	2.2	TM	
72	TML	Dibromochloromethane	0.1131	0.1142	0.95	TML	11
73	TM**	Chlorobenzene	0.4328	0.4136	4.4	TM**	
74	TM*	Ethylbenzene	0.6378	0.6364	0.21	TM*	
75	TM**L	Bromoform	0.0918	0.0865	5.8	TM**L	14
76	TM	Isopropylbenzene	1.744	1.739	0.26	TM	
77	TM**	1,1,2,2-Tetrachloroethane	0.3318	0.3149	5.1	TM**	
78	TM	1,2,3-Trichloropropane	0.1323	0.1291	2.4	TM	
79	TML	t-1,4-Dichloro-2-Butene	0.0599	0.0557	6.9	TML	15
80	TM	Bromobenzene	0.5747	0.5353	6.8	TM	
		Average			4.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Cal. Date: 01/22/21
Data File: 0122Z12.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	n-Propylbenzene	1.912	1.920	0.45	TM		
82	TM	4-Ethyltoluene	1.699	1.662	2.2	TM		
83	TM	2-Chlorotoluene	1.286	1.278	0.65	TM		
84	TM	1,3,5-Trimethylbenzene	1.397	1.405	0.58	TM		
85	TM	4-Chlorotoluene	1.286	1.278	0.65	TM		
86	TM	Tert-Butylbenzene	1.381	1.373	0.57	TM		
87	TM	1,2,4-Trimethylbenzene	1.381	1.448	4.9	TM		
88	TM	Sec-Butylbenzene	1.890	1.942	2.7	TM		
89	TM	p-Isopropyltoluene	1.381	1.373	0.57	TM		
90	TML	Benzyl Chloride	0.5416	0.4654	14	TML	28	*NT
91	TM	1,3-DCB	1.109	1.045	5.7	TM		
92	TM	1,4-DCB	1.134	1.055	7.0	TM		
93	TM	n-Butylbenzene	1.340	1.368	2.1	TM		
94	TM	1,2-DCB	0.9980	0.9609	3.7	TM		
95	TML	Hexachloroethane	0.2674	0.2590	3.1	TML	19	
96	TML	1,2-Dibromo-3-chloropropane	0.0914	0.0846	7.5	TML	19	
97	TM	1,2,4-Trichlorobenzene	0.9204	0.8684	5.6	TM		
98	TM	Hexachlorobutadiene	0.4620	0.4377	5.2	TM		
99	TML	Naphthalene	1.252	1.333	6.5	TML	7.5	
100	TM	1,2,3-Trichlorobenzene	0.6415	0.6352	0.99	TM		
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			3.7			

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z12.D Vial: 12
Acq On : 22 Jan 21 13:43 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:03 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3829971	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2992924	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1148928	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1077924	27.10	ppb	0.00
Spiked Amount 25.000			Recovery =	108.392%		
48) 1,2-DCA-D4(S)	5.71	65	970472	27.19	ppb	0.00
Spiked Amount 25.000			Recovery =	108.760%		
69) Toluene-D8(S)	8.03	98	3703692	27.43	ppb	0.00
Spiked Amount 25.000			Recovery =	109.708%		
77) 4-Bromofluorobenzene(S)	10.92	95	1305196	24.89	ppb	0.00
Spiked Amount 25.000			Recovery =	99.580%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	188729	8.86	ppb	97
4) Freon 114	1.16	85	107240	8.48	ppb	98
5) Chloromethane	1.22	50	79230	8.78	ppb	97
6) Vinyl chloride	1.28	62	168054	8.36	ppb	93
9) Bromomethane	1.53	94	54361	9.61	ppb	94
10) Chloroethane	1.60	64	38239	8.49	ppb	97
11) Dichlorofluoromethane	1.78	67	309275	8.96	ppb	100
12) Trichlorofluoromethane	1.82	101	290565	8.35	ppb	100
16) Acrolein	2.20	55	85829	132.84	ppb	89
17) Acetone	2.36	43	231063	52.08	ppb	98
18) Freon-113	2.32	101	80808	9.00	ppb	99
19) 1,1-DCE	2.29	61	219575	9.48	ppb	97
21) Acetonitrile	2.64	40	51891	123.38	ppb	97
22) t-Butanol	3.03	59	57288	144.57	ppb	100
23) Methyl Acetate	2.73	43	101820	8.64	ppb	94
24) Iodomethane	2.43	142	216347	10.84	ppb	95
25) Acrylonitrile	3.10	52	42947	8.75	ppb	94
26) Methylene chloride	2.81	49	99648	9.08	ppb	99
27) Carbon disulfide	2.49	76	226432	9.77	ppb	98
28) Methyl t-butyl ether (MtBE	3.18	73	379311	9.48	ppb	100
29) Trans-1,2-DCE	3.14	61	211519	9.22	ppb	98
31) Diisopropyl Ether	3.93	45	385939	9.45	ppb	99
33) 1,1-DCA	3.71	63	275724	9.72	ppb	99
34) Vinyl Acetate	3.86	43	142029	9.82	ppb	97
35) Ethyl tert Butyl Ether	4.49	59	366241	9.54	ppb	100
36) MEK (2-Butanone)	4.67	43	295763	51.69	ppb	96
37) Cis-1,2-DCE	4.60	61	246914	9.63	ppb	94
38) 2,2-Dichloropropane	4.60	77	232121	9.66	ppb	94
41) Chloroform	5.09	83	305959	9.99	ppb	93
42) Bromochloromethane	4.93	49	111454	9.70	ppb	91
44) 1,1,1-TCA	5.30	97	275249	9.84	ppb	97
45) Cyclohexane	5.36	56	239437	9.97	ppb	99
46) 1,1-Dichloropropene	5.53	75	216318	10.12	ppb	100
47) 2,2,4-Trimethylpentane	5.96	57	468277	9.35	ppb	100
49) Carbon Tetrachloride	5.52	117	238541	9.90	ppb	97
50) Tert Amyl Methyl Ether	6.01	73	342183	9.71	ppb	99
52) 1,2-DCA	5.81	62	203150	9.86	ppb	99
53) Benzene	5.78	78	665090	9.79	ppb	99
54) TCE	6.61	130	224618	9.10	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z12.D Vial: 12
Acq On : 22 Jan 21 13:43 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:03 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	2-Pentanone	6.87	43	1158711	136.16 ppb	99
56)	1,2-Dichloropropane	6.86	63	143922	9.40 ppb	98
57)	Bromodichloromethane	7.21	83	172579	10.01 ppb	98
58)	Methyl Cyclohexane	6.84	83	273197	9.37 ppb	96
59)	Dibromomethane	6.99	174	160619	9.46 ppb	98
60)	MIBK (methyl isobutyl ket	7.94	43	524817	47.66 ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	27695	8.86 ppb	94
62)	2-Chloroethyl vinyl ether	7.60	43	256138	53.94 ppb	96
63)	Cis-1,3-Dichloropropene	7.73	75	216403	10.23 ppb	96
64)	Toluene	8.11	91	716003	9.54 ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	180709	9.10 ppb	97
66)	1,1,2-TCA	8.56	97	133143	9.19 ppb	98
67)	2-Hexanone	8.88	43	205056	48.31 ppb	98
70)	1,2-EDB	9.09	107	145288	10.30 ppb	96
71)	Tetrachloroethene	8.72	166	281534	9.39 ppb	96
72)	1-Chlorohexane	9.67	91	216019	9.65 ppb	97
73)	1,1,1,2-Tetrachloroethane	9.75	131	159421	10.30 ppb	99
74)	m&p-Xylene	9.93	91	1140317	19.95 ppb	98
75)	o-Xylene	10.36	91	569710	10.00 ppb	100
76)	Styrene	10.37	104	464660	10.43 ppb	96
78)	1,3-Dichloropropane	8.74	76	213539	10.22 ppb	97
79)	Dibromochloromethane	8.98	129	136723	8.86 ppb	98
80)	Chlorobenzene	9.65	112	495187	9.56 ppb	98
81)	Ethylbenzene	9.79	91	761900	9.98 ppb	96
82)	Bromoform	10.54	173	103511	8.59 ppb	99
84)	Isopropylbenzene	10.76	105	799348	9.97 ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	144696	9.49 ppb	100
86)	1,2,3-Trichloropropane	11.12	110	59331	9.76 ppb	94
87)	t-1,4-Dichloro-2-Butene	11.14	53	25614	8.46 ppb	85
88)	Bromobenzene	11.06	77	246015	9.32 ppb	96
89)	n-Propylbenzene	11.21	91	882467	10.05 ppb	97
90)	4-Ethyltoluene	11.34	105	763743	9.78 ppb	95
91)	2-Chlorotoluene	11.41	91	587247	9.94 ppb	99
92)	1,3,5-Trimethylbenzene	11.41	105	645828	10.06 ppb	98
93)	4-Chlorotoluene	11.41	91	587247	9.94 ppb	99
94)	Tert-Butylbenzene	11.77	119	631203	9.94 ppb	99
95)	1,2,4-Trimethylbenzene	11.81	105	665606	10.49 ppb	100
96)	Sec-Butylbenzene	12.00	105	892312	10.27 ppb	99
97)	p-Isopropyltoluene	11.77	119	631203	9.94 ppb	98
98)	Benzyl Chloride	12.35	91	213870	7.22 ppb	97
99)	1,3-DCB	12.10	146	480442	9.43 ppb	97
100)	1,4-DCB	12.20	146	484687	9.30 ppb	98
101)	n-Butylbenzene	12.61	91	628684	10.21 ppb	99
102)	1,2-DCB	12.60	146	441587	9.63 ppb	99
103)	Hexachloroethane	12.89	201	119039	8.12 ppb	98
104)	1,2-Dibromo-3-chloropropan	13.44	157	38867	8.09 ppb	93
105)	1,2,4-Trichlorobenzene	13.69	180	399111	9.44 ppb	97
106)	Hexachlorobutadiene	14.57	225	201157	9.48 ppb	98
107)	Naphthalene	14.62	128	612752	9.25 ppb	97
108)	1,2,3-Trichlorobenzene	14.89	180	291902	9.90 ppb	98

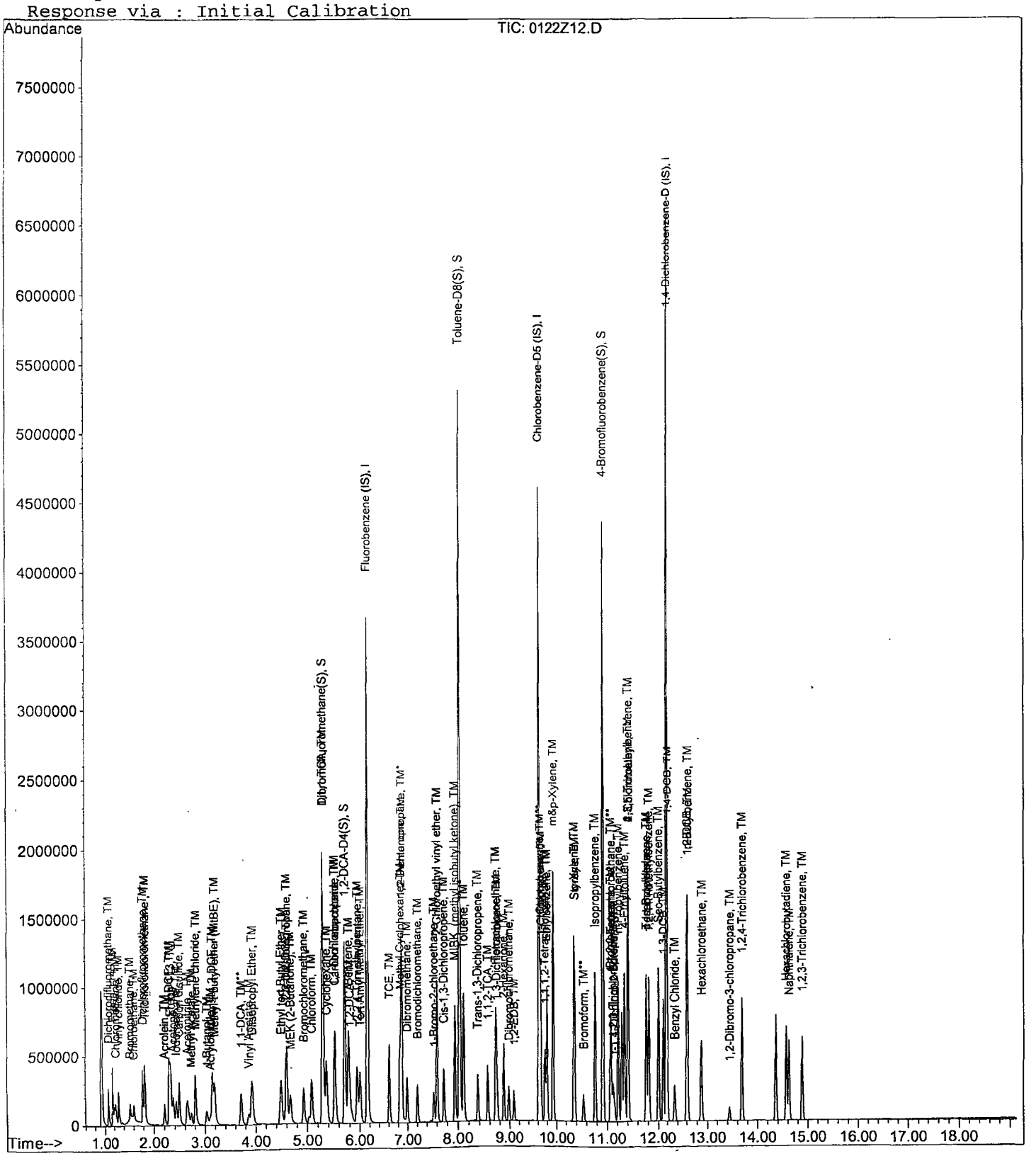
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z12.D Vial: 12
Acq On : 22 Jan 21 13:43 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:03 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z39.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM	
3	TM	Dichlorodifluoromethane	0.1391	0.1347	3.1	TM	
4	TM	Freon 114	0.0826	0.0672	19	TM	
5	TM**L	Chloromethane	0.0957	0.0514	46	TM**L	13
6	TM*	Vinyl chloride	0.1313	0.1277	2.7	TM*	
7		Butane	0.0000	0.0004	0.00		
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
9	TML	Bromomethane	0.0514	0.0253	51	TML	40
10	TML	Chloroethane	0.0405	0.0325	20	TML	14
11	TM	Dichlorofluoromethane	0.2253	0.2318	2.9	TM	
12	TM	Trichlorofluoromethane	0.2271	0.2264	0.30	TM	
13	TM	Pentane	0.0000	0.0002	0.00	TM	
14	TM	Diethyl ether	0.0000	0.0000	0.00	TM	
15	TM	Acrolein	0.0042	0.0046	8.3	TM	
16	TM	Acetone	0.0290	0.0288	0.59	TM	
17	TM	Freon-113	0.0586	0.0525	10	TM	
18	TM*	1,1-DCE	0.1513	0.1513	0.01	TM*	
19	TM	2-Propanol	0.0000	0.0001	0.00	TM	
20	TM	Acetonitrile	0.0027	0.0027	0.64	TM	
21	TM	t-Butanol	0.0026	0.0026	1.4	TM	
22	TM	Methyl Acetate	0.0770	0.0716	7.0	TM	
23	TML	Iodomethane	0.1376	0.1008	27	TML	18
24	TM	Acrylonitrile	0.0320	0.0315	1.5	TM	
25	TML	Methylene chloride	0.1066	0.0653	39	TML	8.8
26	TM	Carbon disulfide	0.1513	0.1413	6.6	TM	
27	TM	Methyl t-butyl ether (MtBE)	0.2612	0.2561	2.0	TM	
28	TM	Trans-1,2-DCE	0.1498	0.1453	3.0	TM	
29	TM	Hexane	0.0000	0.0000	0.00	TM	
30	TM	Diisopropyl Ether	0.2666	0.2674	0.30	TM	
31	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0002	0.00	TM**	
32	TM**	1,1-DCA	0.1852	0.1852	0.03	TM**	
33	TM	Vinyl Acetate	0.0944	0.0510	46	TM	
34	TM	Ethyl tert Butyl Ether	0.2506	0.2426	3.2	TM	
35	TM	MEK (2-Butanone)	0.0374	0.0376	0.69	TM	
36	TM	Cis-1,2-DCE	0.1673	0.1595	4.6	TM	
37	TM	2,2-Dichloropropane	0.1568	0.1262	20	TM	
38	TML	2-Methylpentane	0.0000	0.0002	0.00	TML	
39	TM	3-Methylpentane	0.0000	0.0518	0.00	TM	
40	TM*	Chloroform	0.2000	0.1970	1.5	TM*	
		Average			8.4		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Cal. Date: 01/22/21
Data File: 0122Z39.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Bromochloromethane	0.0750	0.0781	4.1	TM	
42	S	Dibromofluoromethane(S)	0.2597	0.2885	11	S	
43	TM	1,1,1-TCA	0.1826	0.1806	1.1	TM	
44	TM	Cyclohexane	0.1568	0.1499	4.4	TM	
45	TM	1,1-Dichloropropene	0.1396	0.1326	5.0	TM	
46	TM	2,2,4-Trimethylpentane	0.3269	0.2682	18	TM	
47	S	1,2-DCA-D4(S)	0.2330	0.2572	10	S	
48	TM	Carbon Tetrachloride	0.1573	0.1521	3.3	TM	
49	TM	Tert Amyl Methyl Ether	0.2299	0.2224	3.3	TM	
50	TM	Methylcyclopentane	0.0000	0.0174	0.00	TM	
51	TM	1,2-DCA	0.1344	0.1285	4.4	TM	
52	TM	Benzene	0.4436	0.4365	1.6	TM	
53	TM	TCE	0.1611	0.1570	2.5	TM	
54	TM	2-Pentanone	0.0555	0.0565	1.8	TM	
55	TM*	1,2-Dichloropropane	0.0999	0.0985	1.4	TM*	
56	TM	Bromodichloromethane	0.1125	0.1127	0.20	TM	
57	TM	Methyl Cyclohexane	0.1902	0.1745	8.3	TM	
58	TM	Dibromomethane	0.1108	0.1091	1.5	TM	
59	TML	MIBK (methyl isobutyl ketone)	0.0648	0.0648	0.06	TML	9.4
60	TM	1-Bromo-2-chloroethane	0.0204	0.0218	6.6	TM	
61	TM	2-Chloroethyl vinyl ether	0.0310	0.0303	2.4	TM	
62	TM	Cis-1,3-Dichloropropene	0.1380	0.1358	1.6	TM	
63	TM*	Toluene	0.4900	0.4864	0.72	TM*	
64	TML	Trans-1,3-Dichloropropene	0.1091	0.1114	2.1	TML	14
65	TM	1,1,2-TCA	0.0946	0.0970	2.5	TM	
66	TML	2-Hexanone	0.0245	0.0251	2.5	TML	8.7
67	I	Chlorobenzene-D5 (IS)	ISTD			I	
68	S	Toluene-D8(S)	1.128	1.260	12	S	
69	TM	1,2-EDB	0.1178	0.1210	2.7	TM	
70	TM	Tetrachloroethene	0.2505	0.2376	5.2	TM	
71	TM	1-Chlorohexane	0.1870	0.1752	6.3	TM	
72	TM	1,1,1,2-Tetrachloroethane	0.1293	0.1306	1.0	TM	
73	TM	m&p-Xylene	0.4776	0.4786	0.21	TM	
74	TM	o-Xylene	0.4758	0.4715	0.90	TM	
75	TM	Styrene	0.3723	0.3806	2.2	TM	
76	SL	4-Bromofluorobenzene(S)	0.3982	0.4439	11	SL	1.2
77	TM	1,3-Dichloropropane	0.1745	0.1734	0.62	TM	
78	TML	Dibromochloromethane	0.1131	0.1123	0.73	TML	13
79	TM**	Chlorobenzene	0.4328	0.4286	0.96	TM**	
80	TM*	Ethylbenzene	0.6378	0.6340	0.60	TM*	
		Average			3.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Cal. Date: 01/22/21
Data File: 0122Z39.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM**L	Bromoform	0.0918	0.0824	10	TM**L	17
82	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
83	TM	Isopropylbenzene	1.744	1.816	4.2	TM	
84	TM**	1,1,2,2-Tetrachloroethane	0.3318	0.3232	2.6	TM**	
85	TM	1,2,3-Trichloropropane	0.1323	0.1332	0.69	TM	
86	TML	t-1,4-Dichloro-2-Butene	0.0599	0.0288	52	TML	50
87	TM	Bromobenzene	0.5747	0.6429	12	TM	
88	TM	n-Propylbenzene	1.912	1.970	3.0	TM	
89	TM	4-Ethyltoluene	1.699	1.763	3.8	TM	
90	TM	2-Chlorotoluene	1.286	1.313	2.1	TM	
91	TM	1,3,5-Trimethylbenzene	1.397	1.465	4.9	TM	
92	TM	4-Chlorotoluene	1.286	1.313	2.1	TM	
93	TM	Tert-Butylbenzene	1.381	1.403	1.6	TM	
94	TM	1,2,4-Trimethylbenzene	1.381	1.457	5.5	TM	
95	TM	Sec-Butylbenzene	1.890	1.932	2.2	TM	
96	TM	p-Isopropyltoluene	1.381	1.403	1.6	TM	
97	TML	Benzyl Chloride	0.5416	0.3708	32	TML	40
98	TM	1,3-DCB	1.109	1.103	0.54	TM	
99	TM	1,4-DCB	1.134	1.091	3.7	TM	
100	TM	n-Butylbenzene	1.340	1.367	2.0	TM	
101	TM	1,2-DCB	0.9980	1.005	0.72	TM	
102	TML	Hexachloroethane	0.2674	0.2593	3.0	TML	19
103	TML	1,2-Dibromo-3-chloropropane	0.0914	0.0894	2.2	TML	15
104	TM	1,2,4-Trichlorobenzene	0.9204	0.8841	3.9	TM	
105	TM	Hexachlorobutadiene	0.4620	0.4374	5.3	TM	
106	TML	Naphthalene	1.252	1.342	7.2	TML	6.9
107	TM	1,2,3-Trichlorobenzene	0.6415	0.6442	0.42	TM	
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z39.D Vial: 39
Acq On : 23 Jan 21 00:04 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3207713	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2626098	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	973568	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	925546	27.78	ppb		0.00
Spiked Amount 25.000			Recovery = 111.124%				
48) 1,2-DCA-D4(S)	5.71	65	825098	27.60	ppb		0.00
Spiked Amount 25.000			Recovery = 110.404%				
69) Toluene-D8(S)	8.03	98	3309133	27.93	ppb		0.00
Spiked Amount 25.000			Recovery = 111.712%				
77) 4-Bromofluorobenzene(S)	10.92	95	1165625	25.29	ppb		0.00
Spiked Amount 25.000			Recovery = 101.160%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	172837	9.69	ppb		98
4) Freon 114	1.16	85	86256	8.14	ppb		96
5) Chloromethane	1.22	50	65908	8.71	ppb		95
6) Vinyl chloride	1.28	62	163874	9.73	ppb		94
9) Bromomethane	1.53	94	32432	6.00	ppb		94
10) Chloroethane	1.60	64	41669	11.40	ppb		100
11) Dichlorofluoromethane	1.78	67	297440	10.29	ppb		99
12) Trichlorofluoromethane	1.82	101	290502	9.97	ppb		99
16) Acrolein	2.20	55	73245	135.36	ppb		89
17) Acetone	2.36	43	184678	49.70	ppb		98
18) Freon-113	2.32	101	67312	8.95	ppb		99
19) 1,1-DCE	2.29	61	194069	10.00	ppb		94
21) Acetonitrile	2.64	40	43752	124.21	ppb		92
22) t-Butanol	3.03	59	42064	126.74	ppb		91
23) Methyl Acetate	2.73	43	91869	9.30	ppb		98
24) Iodomethane	2.42	142	129346	8.25	ppb		95
25) Acrylonitrile	3.10	52	40460	9.85	ppb	#	87
26) Methylene chloride	2.81	49	83736	9.12	ppb		95
27) Carbon disulfide	2.49	76	181312	9.34	ppb		96
28) Methyl t-butyl ether (MtBE	3.19	73	328570	9.80	ppb		97
29) Trans-1,2-DCE	3.14	61	186409	9.70	ppb		98
31) Diisopropyl Ether	3.93	45	343060	10.03	ppb		95
33) 1,1-DCA	3.71	63	237652	10.00	ppb		97
34) Vinyl Acetate	3.86	43	65443	5.40	ppb		99
35) Ethyl tert Butyl Ether	4.49	59	311304	9.68	ppb		97
36) MEK (2-Butanone)	4.68	43	241261	50.34	ppb		97
37) Cis-1,2-DCE	4.60	61	204704	9.54	ppb		97
38) 2,2-Dichloropropane	4.59	77	161929	8.05	ppb		97
41) Chloroform	5.09	83	252817	9.85	ppb		100
42) Bromochloromethane	4.92	49	100181	10.41	ppb		95
44) 1,1,1-TCA	5.30	97	231716	9.89	ppb		99
45) Cyclohexane	5.36	56	192345	9.56	ppb		98
46) 1,1-Dichloropropene	5.53	75	170147	9.50	ppb		95
47) 2,2,4-Trimethylpentane	5.96	57	344076	8.20	ppb		99
49) Carbon Tetrachloride	5.52	117	195128	9.67	ppb		95
50) Tert Amyl Methyl Ether	6.01	73	285407	9.67	ppb		91
52) 1,2-DCA	5.81	62	164875	9.56	ppb		98
53) Benzene	5.78	78	560112	9.84	ppb		99
54) TCE	6.61	130	201468	9.75	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z39.D Vial: 39
Acq On : 23 Jan 21 00:04 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	2-Pentanone	6.87	43	906658	127.21	ppb	99
56)	1,2-Dichloropropane	6.86	63	126397	9.86	ppb	99
57)	Bromodichloromethane	7.21	83	144627	10.02	ppb	97
58)	Methyl Cyclohexane	6.84	83	223920	9.17	ppb	94
59)	Dibromomethane	6.99	174	140027	9.85	ppb	97
60)	MIBK (methyl isobutyl ket	7.94	43	415970	45.32	ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	27914	10.66	ppb	99
62)	2-Chloroethyl vinyl ether	7.60	43	194108	48.81	ppb	99
63)	Cis-1,3-Dichloropropene	7.73	75	174284	9.84	ppb	99
64)	Toluene	8.11	91	624137	9.93	ppb	99
65)	Trans-1,3-Dichloropropene	8.37	75	142934	8.62	ppb	99
66)	1,1,2-TCA	8.56	97	124428	10.25	ppb	92
67)	2-Hexanone	8.88	43	161344	45.63	ppb	98
70)	1,2-EDB	9.09	107	127139	10.27	ppb	98
71)	Tetrachloroethene	8.72	166	249556	9.48	ppb	98
72)	1-Chlorohexane	9.67	91	184017	9.37	ppb	97
73)	1,1,1,2-Tetrachloroethane	9.75	131	137170	10.10	ppb	97
74)	m&p-Xylene	9.93	91	1005406	20.04	ppb	98
75)	o-Xylene	10.36	91	495297	9.91	ppb	96
76)	Styrene	10.37	104	399840	10.22	ppb	97
78)	1,3-Dichloropropane	8.74	76	182182	9.94	ppb	97
79)	Dibromochloromethane	8.98	129	117966	8.73	ppb	97
80)	Chlorobenzene	9.65	112	450253	9.90	ppb	98
81)	Ethylbenzene	9.79	91	665927	9.94	ppb	98
82)	Bromoform	10.54	173	86581	8.30	ppb	99
84)	Isopropylbenzene	10.77	105	707329	10.42	ppb	98
85)	1,1,2,2-Tetrachloroethane	11.08	83	125861	9.74	ppb	97
86)	1,2,3-Trichloropropane	11.12	110	51858	10.07	ppb	98
87)	t-1,4-Dichloro-2-Butene	11.14	53	11229	4.99	ppb	95
88)	Bromobenzene	11.06	77	250345	11.19	ppb	96
89)	n-Propylbenzene	11.21	91	767068	10.30	ppb	98
90)	4-Ethyltoluene	11.34	105	686512	10.38	ppb	98
91)	2-Chlorotoluene	11.41	91	511155	10.21	ppb	97
92)	1,3,5-Trimethylbenzene	11.41	105	570477	10.49	ppb	97
93)	4-Chlorotoluene	11.41	91	511155	10.21	ppb	97
94)	Tert-Butylbenzene	11.77	119	546314	10.16	ppb	100
95)	1,2,4-Trimethylbenzene	11.82	105	567323	10.55	ppb	99
96)	Sec-Butylbenzene	12.01	105	752215	10.22	ppb	97
97)	p-Isopropyltoluene	11.77	119	546314	10.16	ppb	97
98)	Benzyl Chloride	12.35	91	144405	6.04	ppb	96
99)	1,3-DCB	12.10	146	429537	9.95	ppb	97
100)	1,4-DCB	12.20	146	425052	9.63	ppb	99
101)	n-Butylbenzene	12.61	91	532351	10.20	ppb	100
102)	1,2-DCB	12.60	146	391463	10.07	ppb	97
103)	Hexachloroethane	12.89	201	100988	8.12	ppb	98
104)	1,2-Dibromo-3-chloropropan	13.44	157	34802	8.49	ppb	97
105)	1,2,4-Trichlorobenzene	13.69	180	344305	9.61	ppb	96
106)	Hexachlorobutadiene	14.57	225	170339	9.47	ppb	98
107)	Naphthalene	14.62	128	522612	9.31	ppb	99
108)	1,2,3-Trichlorobenzene	14.89	180	250870	10.04	ppb	94

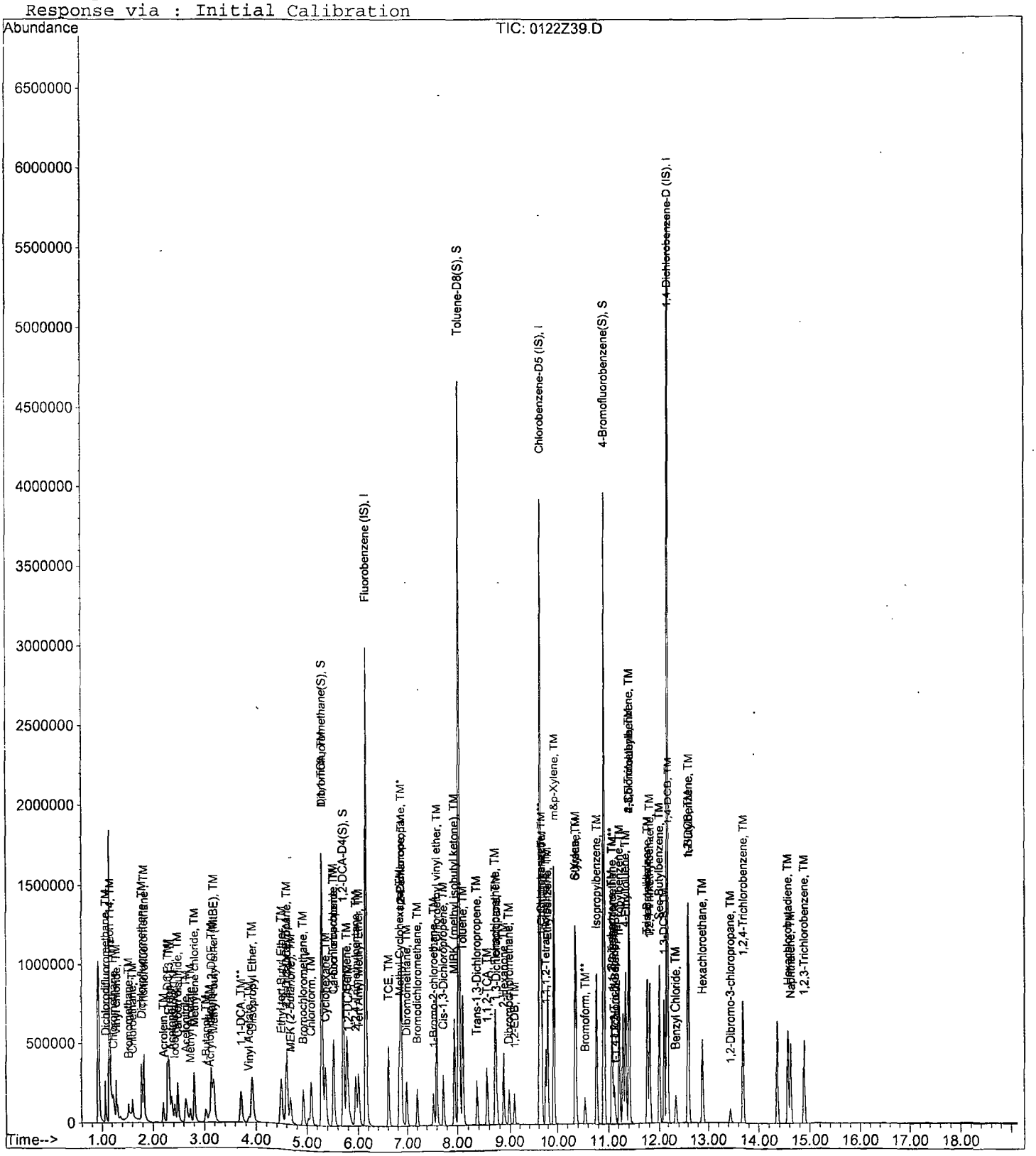
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z39.D Vial: 39
Acq On : 23 Jan 21 00:04 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z21.D Vial: 21
Acq On : 22 Jan 21 17:10 Operator: LP,DG,CH
Sample : BA25528W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:56 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3272343	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2702725	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1046336	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	930733	27.39	ppb	0.00
Spiked Amount 25.000			Recovery =	109.540%		
48) 1,2-DCA-D4(S)	5.71	65	853873	28.00	ppb	0.00
Spiked Amount 25.000			Recovery =	112.000%		
69) Toluene-D8(S)	8.03	98	3229713	26.48	ppb	0.00
Spiked Amount 25.000			Recovery =	105.940%		
77) 4-Bromofluorobenzene(S)	10.92	95	1141241	24.19	ppb	0.00
Spiked Amount 25.000			Recovery =	96.764%		

Target Compounds Qvalue

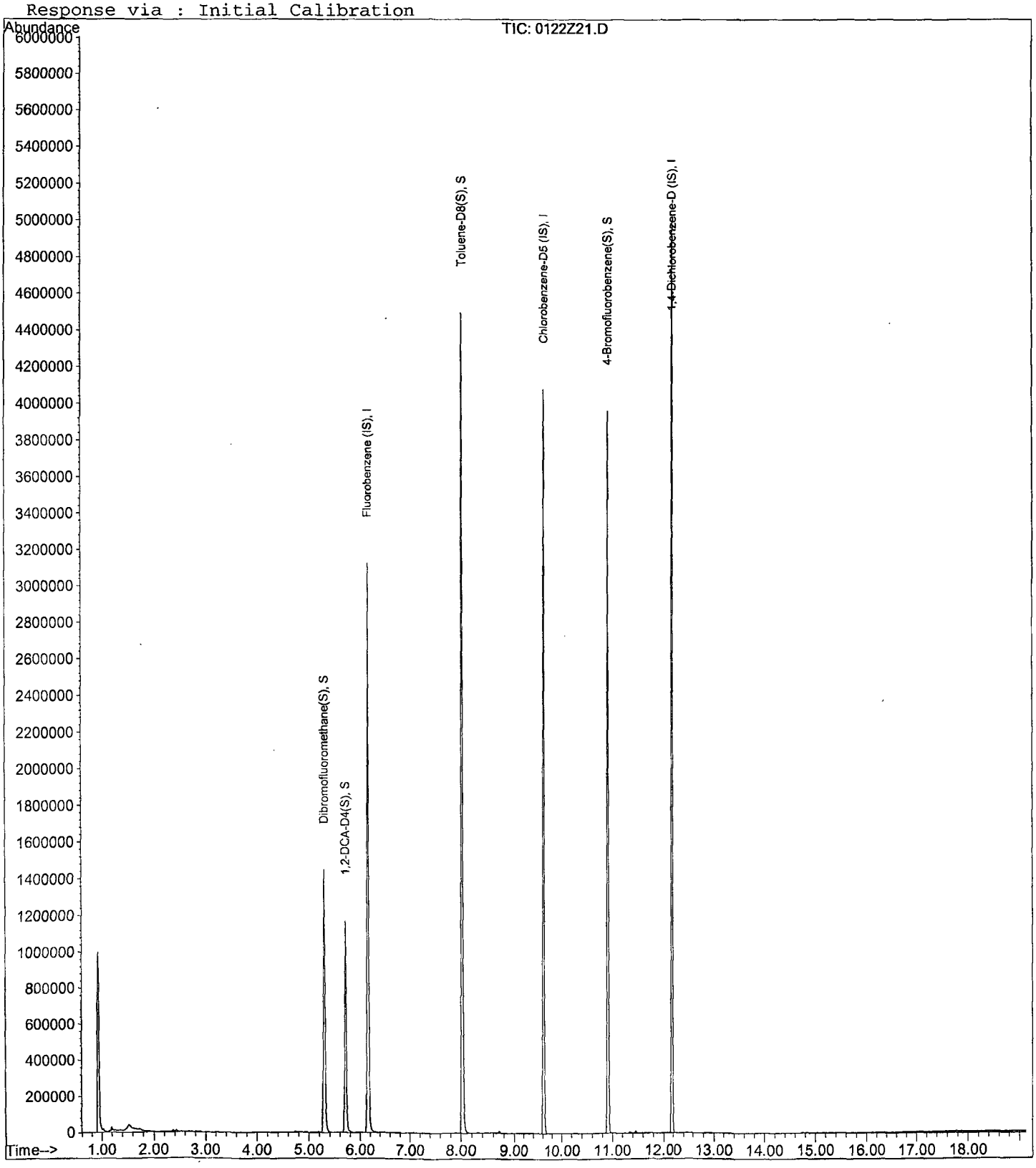
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z21.D Vial: 21
Acq On : 22 Jan 21 17:10 Operator: LP,DG,CH
Sample : BA25528W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:56 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z22.D Vial: 22
Acq On : 22 Jan 21 17:33 Operator: LP,DG,CH
Sample : BA25529W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:57 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3229984	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2691600	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1032512	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	942926	28.11	ppb	0.00
Spiked Amount 25.000			Recovery =	112.432%		
48) 1,2-DCA-D4(S)	5.71	65	872086	28.97	ppb	0.00
Spiked Amount 25.000			Recovery =	115.888%		
69) Toluene-D8(S)	8.03	98	3268996	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.672%		
77) 4-Bromofluorobenzene(S)	10.91	95	1173603	24.89	ppb	0.00
Spiked Amount 25.000			Recovery =	99.564%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

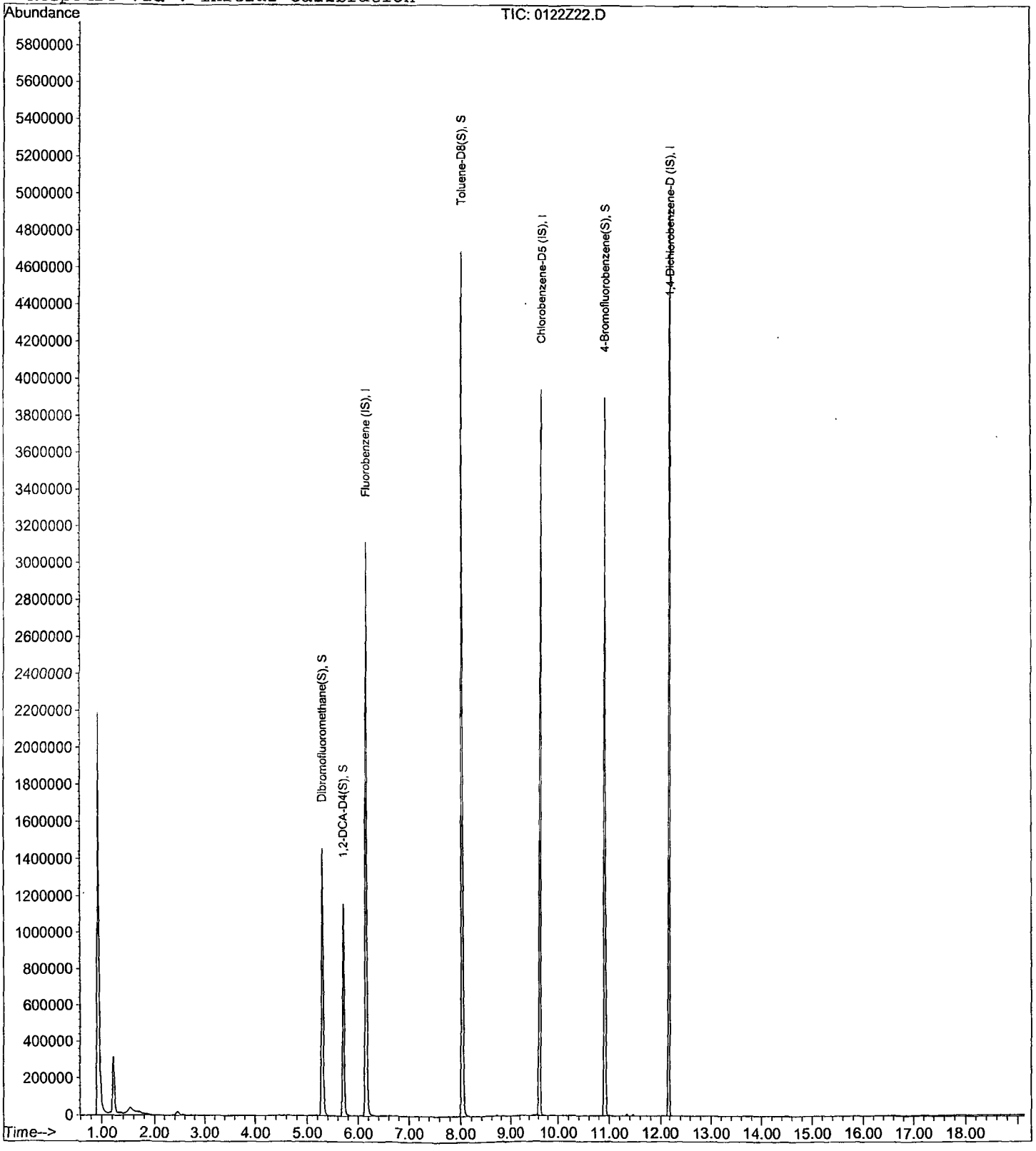
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z22.D
Acq On : 22 Jan 21 17:33
Sample : BA25529W01
Misc :

Vial: 22
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 12:57 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z23.D Vial: 23
Acq On : 22 Jan 21 17:56 Operator: LP,DG,CH
Sample : BA25531W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:58 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3272892	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2718574	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024896	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	952335	28.02	ppb	0.00
Spiked Amount 25.000			Recovery =	112.064%		
48) 1,2-DCA-D4(S)	5.71	65	877720	28.78	ppb	0.00
Spiked Amount 25.000			Recovery =	115.108%		
69) Toluene-D8(S)	8.03	98	3293388	26.85	ppb	0.00
Spiked Amount 25.000			Recovery =	107.400%		
77) 4-Bromofluorobenzene(S)	10.91	95	1172420	24.65	ppb	0.00
Spiked Amount 25.000			Recovery =	98.596%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

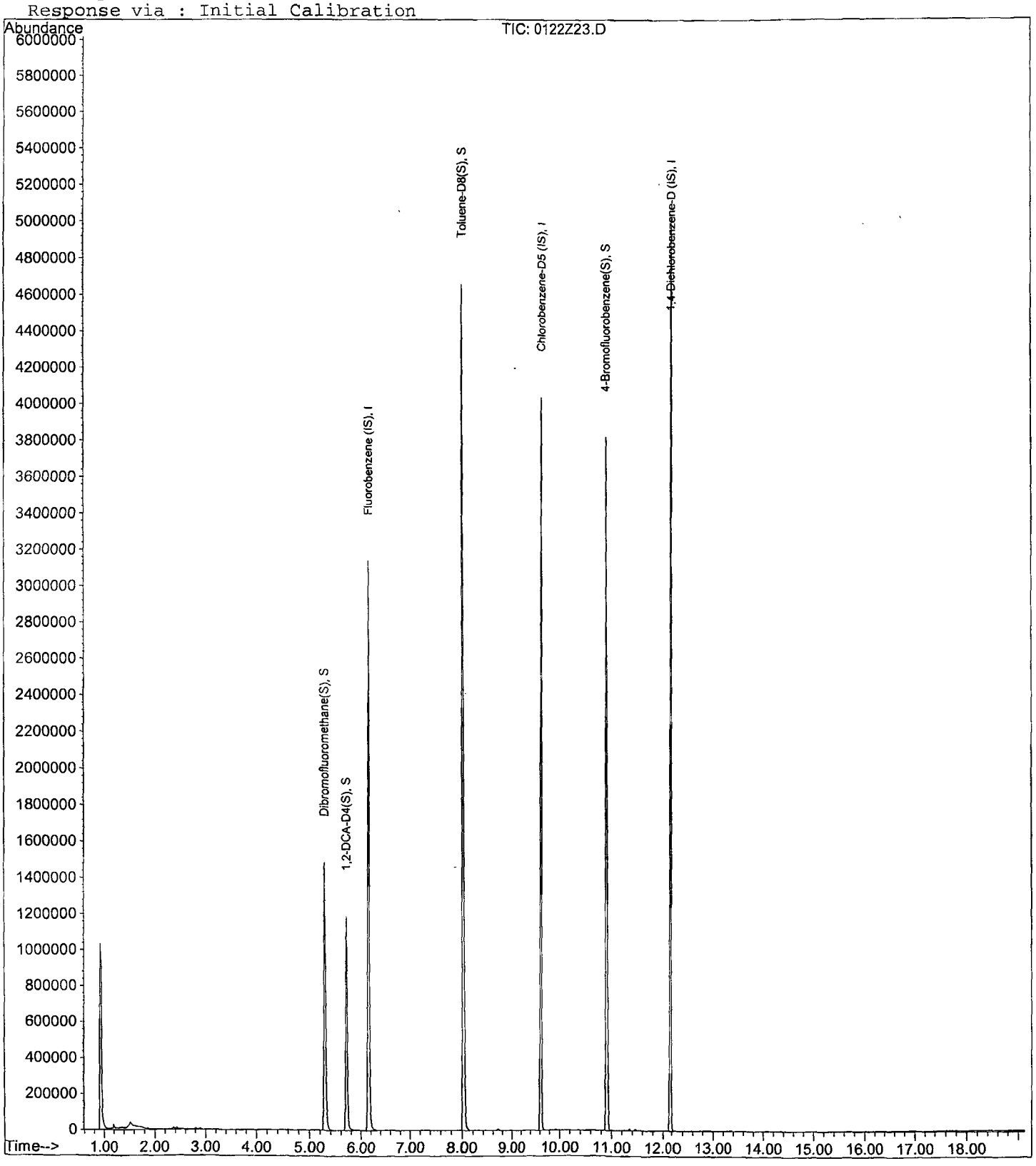
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z23.D
Acq On : 22 Jan 21 17:56
Sample : BA25531W01
Misc :

Vial: 23
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 12:58 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z24.D Vial: 24
Acq On : 22 Jan 21 18:19 Operator: LP,DG,CH
Sample : BA25532W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:59 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3195990	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2654488	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	979840	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	930793	28.04	ppb	0.00
Spiked Amount 25.000			Recovery =	112.164%		
48) 1,2-DCA-D4(S)	5.71	65	853521	28.66	ppb	0.00
Spiked Amount 25.000			Recovery =	114.628%		
69) Toluene-D8(S)	8.03	98	3225012	26.93	ppb	0.00
Spiked Amount 25.000			Recovery =	107.708%		
77) 4-Bromofluorobenzene(S)	10.91	95	1146061	24.67	ppb	0.00
Spiked Amount 25.000			Recovery =	98.696%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

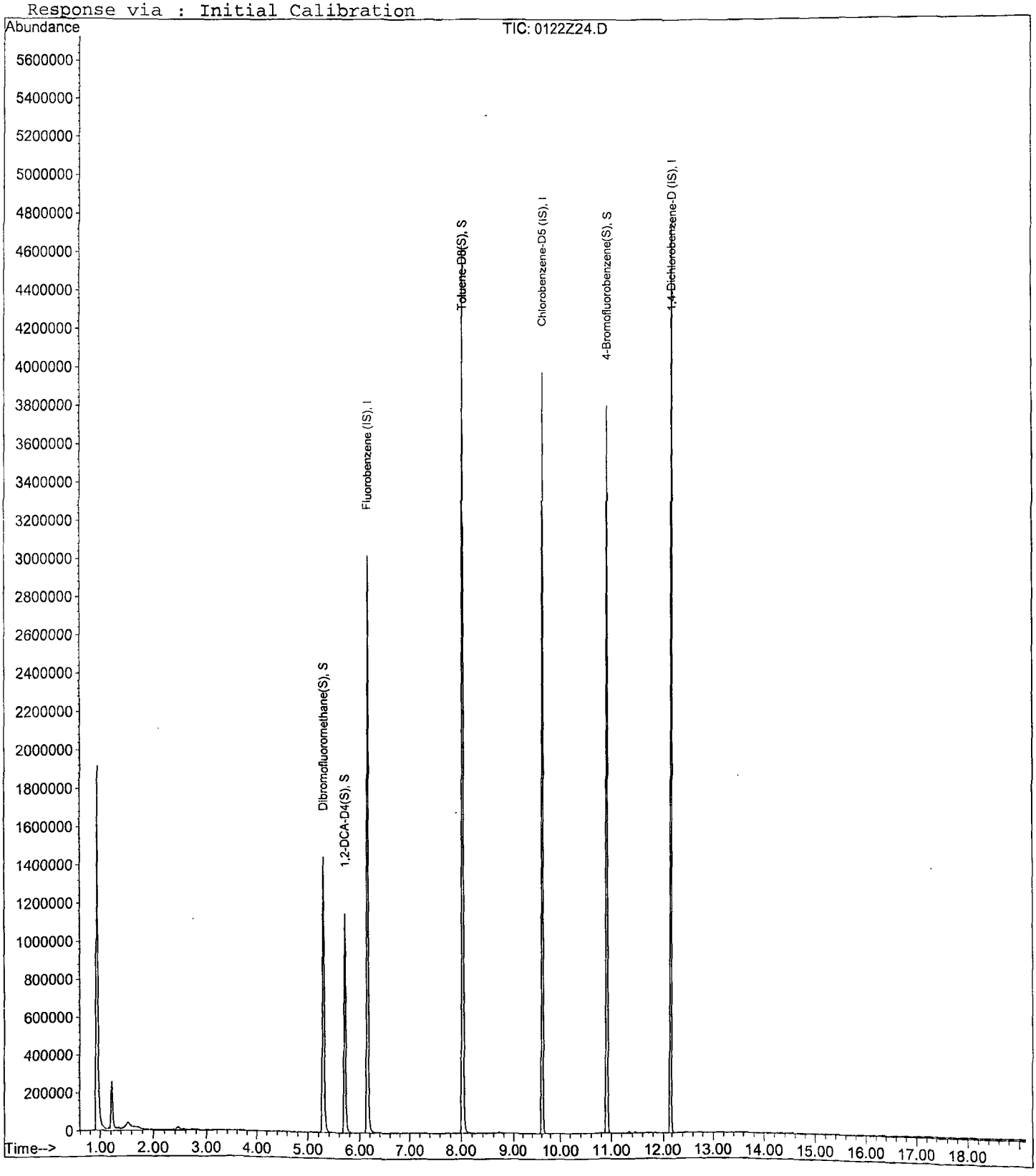
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z24.D
Acq On : 22 Jan 21 18:19
Sample : BA25532W01
Misc :

Vial: 24
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 12:59 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z25.D
Acq On : 22 Jan 21 18:42
Sample : BA25534W01
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:03 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3184846	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2640978	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1008000	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	918485	27.77	ppb	0.00
Spiked Amount 25.000			Recovery = 111.068%			
48) 1,2-DCA-D4(S)	5.71	65	848961	28.60	ppb	0.00
Spiked Amount 25.000			Recovery = 114.416%			
69) Toluene-D8(S)	8.03	98	3201489	26.87	ppb	0.00
Spiked Amount 25.000			Recovery = 107.468%			
77) 4-Bromofluorobenzene(S)	10.91	95	1135314	24.58	ppb	0.00
Spiked Amount 25.000			Recovery = 98.316%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

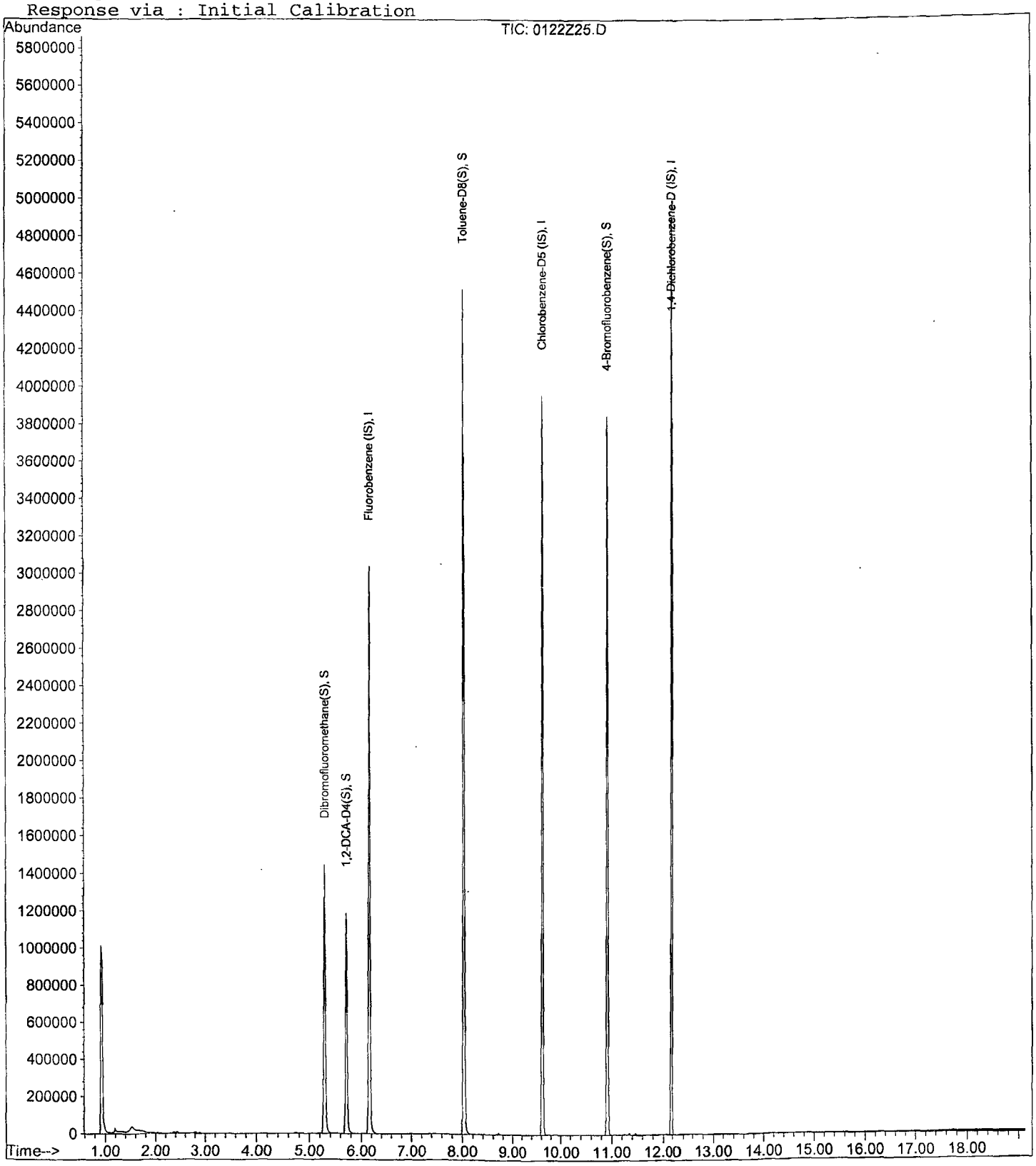
Data File : M:\ZEUS\DATA\210122\0122Z25.D
Acq On : 22 Jan 21 18:42
Sample : BA25534W01
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:03 2021

Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z26.D Vial: 26
Acq On : 22 Jan 21 19:05 Operator: LP,DG,CH
Sample : BA25535W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3192333	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2632007	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	996736	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	919437	27.73	ppb	0.00
Spiked Amount 25.000			Recovery = 110.924%			
48) 1,2-DCA-D4(S)	5.71	65	833771	28.03	ppb	0.00
Spiked Amount 25.000			Recovery = 112.104%			
69) Toluene-D8(S)	8.03	98	3229203	27.19	ppb	0.00
Spiked Amount 25.000			Recovery = 108.768%			
77) 4-Bromofluorobenzene(S)	10.91	95	1125741	24.47	ppb	0.00
Spiked Amount 25.000			Recovery = 97.876%			

Target Compounds Qvalue

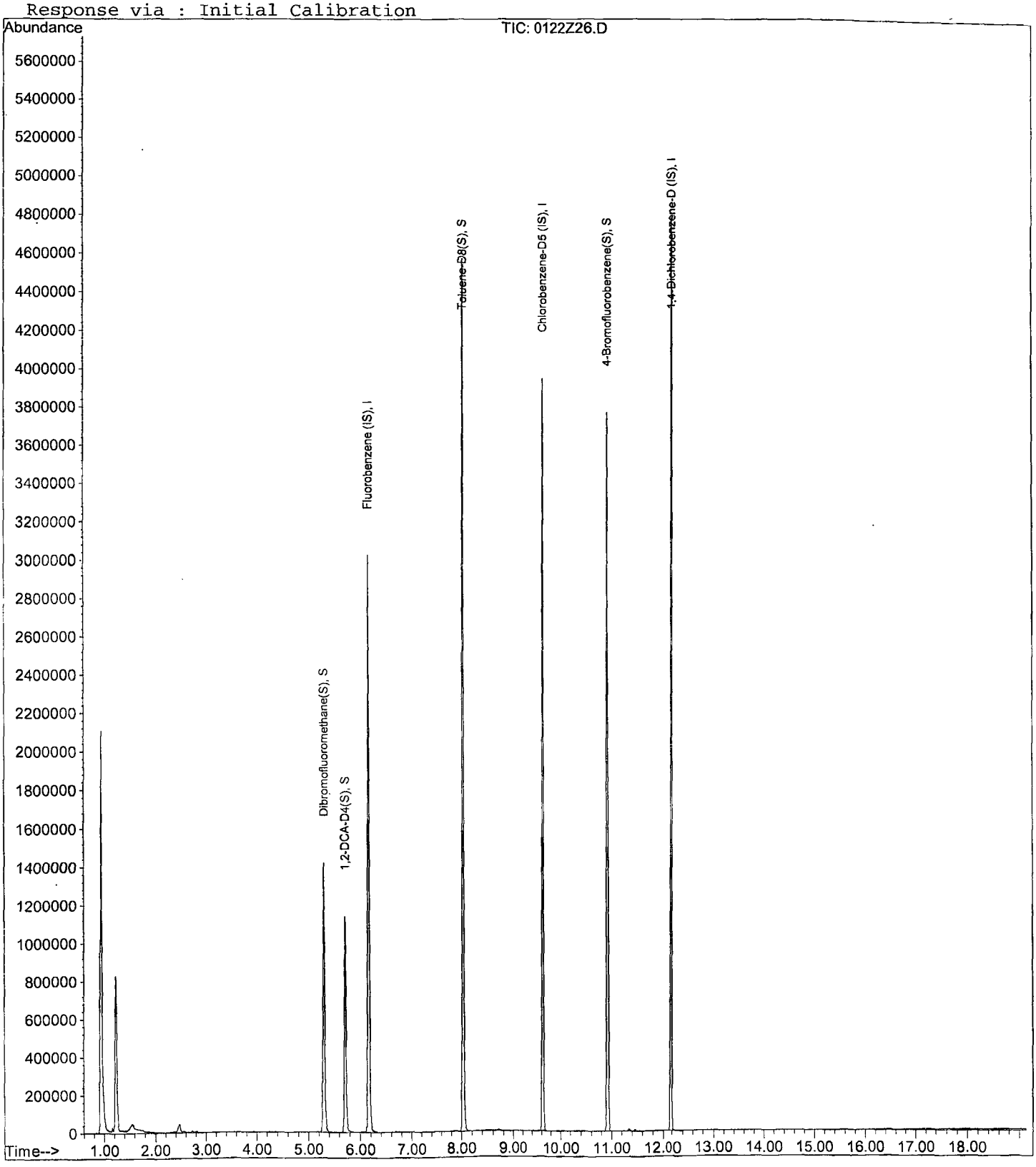
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z26.D
Acq On : 22 Jan 21 19:05
Sample : BA25535W01
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z27.D Vial: 27
Acq On : 22 Jan 21 19:28 Operator: LP,DG,CH
Sample : BA25537W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:05 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3155136	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2616194	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1008000	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	923529	28.18	ppb	0.00
Spiked Amount 25.000			Recovery = 112.732%			
48) 1,2-DCA-D4(S)	5.71	65	848857	28.87	ppb	0.00
Spiked Amount 25.000			Recovery = 115.476%			
69) Toluene-D8(S)	8.03	98	3223592	27.31	ppb	0.00
Spiked Amount 25.000			Recovery = 109.236%			
77) 4-Bromofluorobenzene(S)	10.92	95	1149823	25.07	ppb	0.00
Spiked Amount 25.000			Recovery = 100.272%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

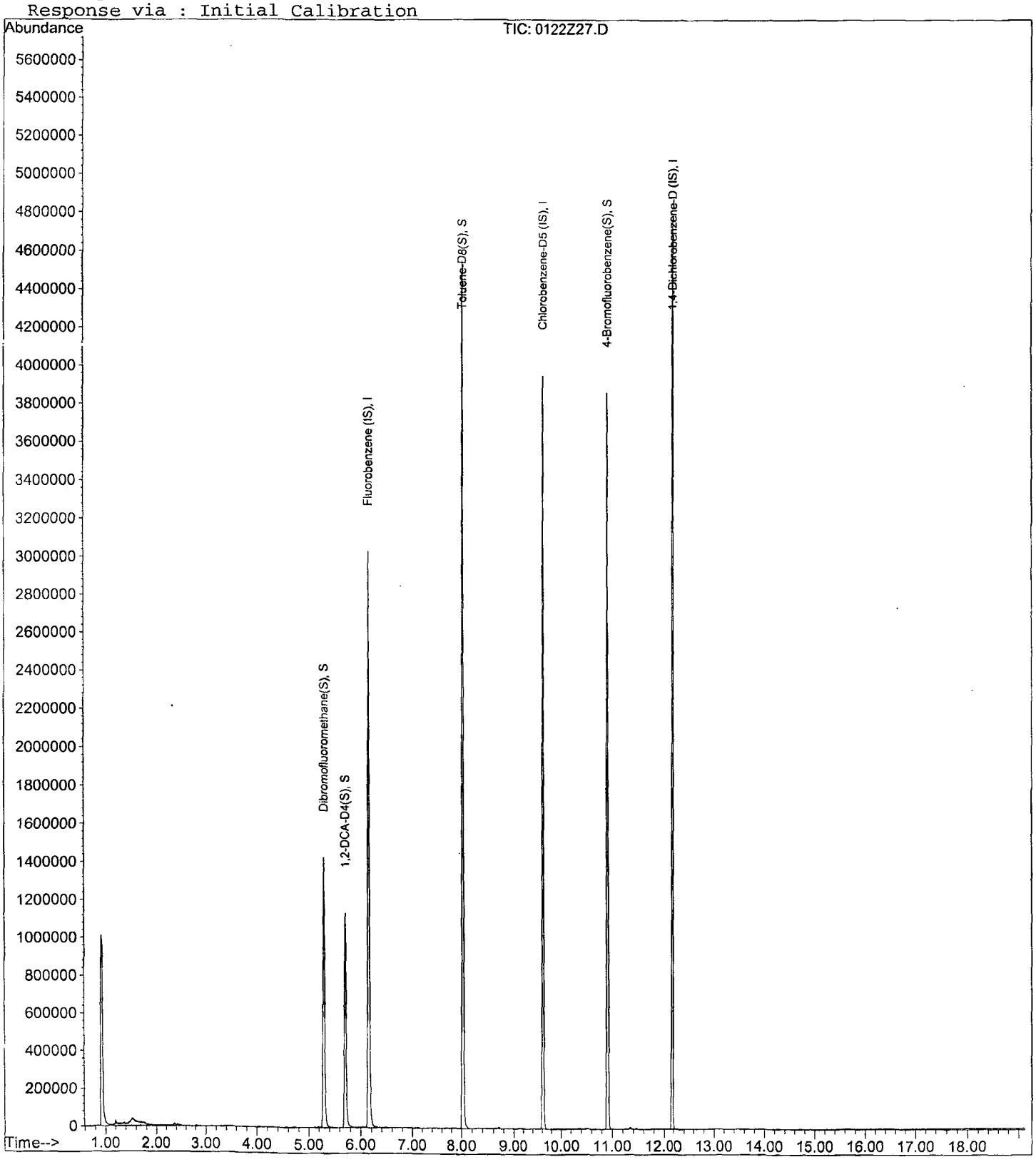
Data File : M:\ZEUS\DATA\210122\0122Z27.D
Acq On : 22 Jan 21 19:28
Sample : BA25537W01
Misc :

Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:05 2021

Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z28.D
Acq On : 22 Jan 21 19:51
Sample : BA25538W01
Misc :

Vial: 28
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:06 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3165476	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2618800	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	969280	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	922714	28.07	ppb	0.00
Spiked Amount 25.000			Recovery =	112.264%		
48) 1,2-DCA-D4(S)	5.71	65	840477	28.49	ppb	0.00
Spiked Amount 25.000			Recovery =	113.964%		
69) Toluene-D8(S)	8.03	98	3233386	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.460%		
77) 4-Bromofluorobenzene(S)	10.91	95	1139431	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.376%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

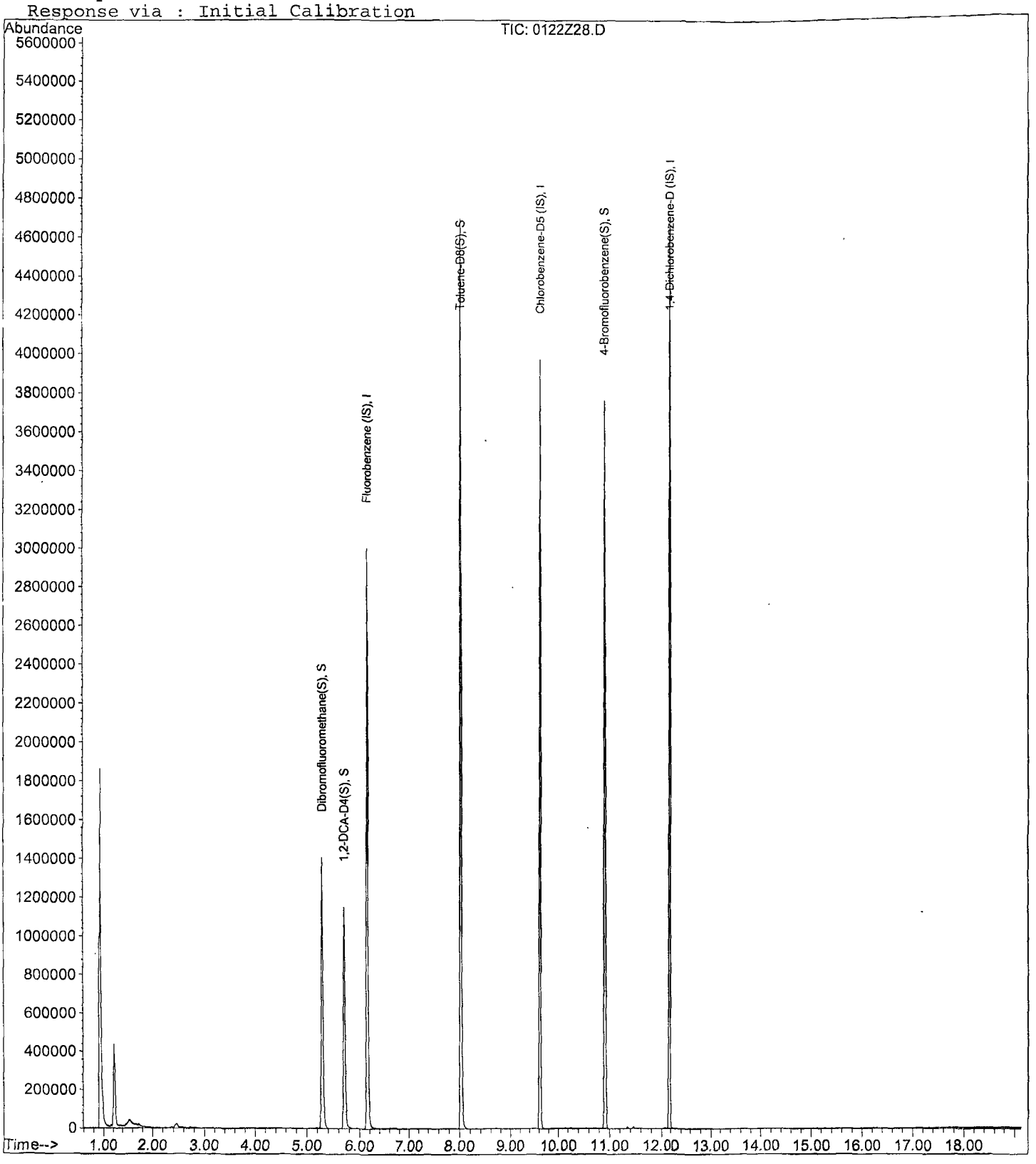
Data File : M:\ZEUS\DATA\210122\0122Z28.D
Acq On : 22 Jan 21 19:51
Sample : BA25538W01
Misc :

Vial: 28
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 13:06 2021

Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z18.D Vial: 18
Acq On : 22 Jan 21 16:01 Operator: LP,DG,CH
Sample : 210122A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:16 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3518019	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2841691	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1093120	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1006633	27.55	ppb	0.00
Spiked Amount 25.000			Recovery =	110.200%		
48) 1,2-DCA-D4(S)	5.71	65	926393	28.26	ppb	0.00
Spiked Amount 25.000			Recovery =	113.024%		
69) Toluene-D8(S)	8.03	98	3421154	26.68	ppb	0.00
Spiked Amount 25.000			Recovery =	106.732%		
77) 4-Bromofluorobenzene(S)	10.91	95	1205013	24.28	ppb	0.00
Spiked Amount 25.000			Recovery =	97.128%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

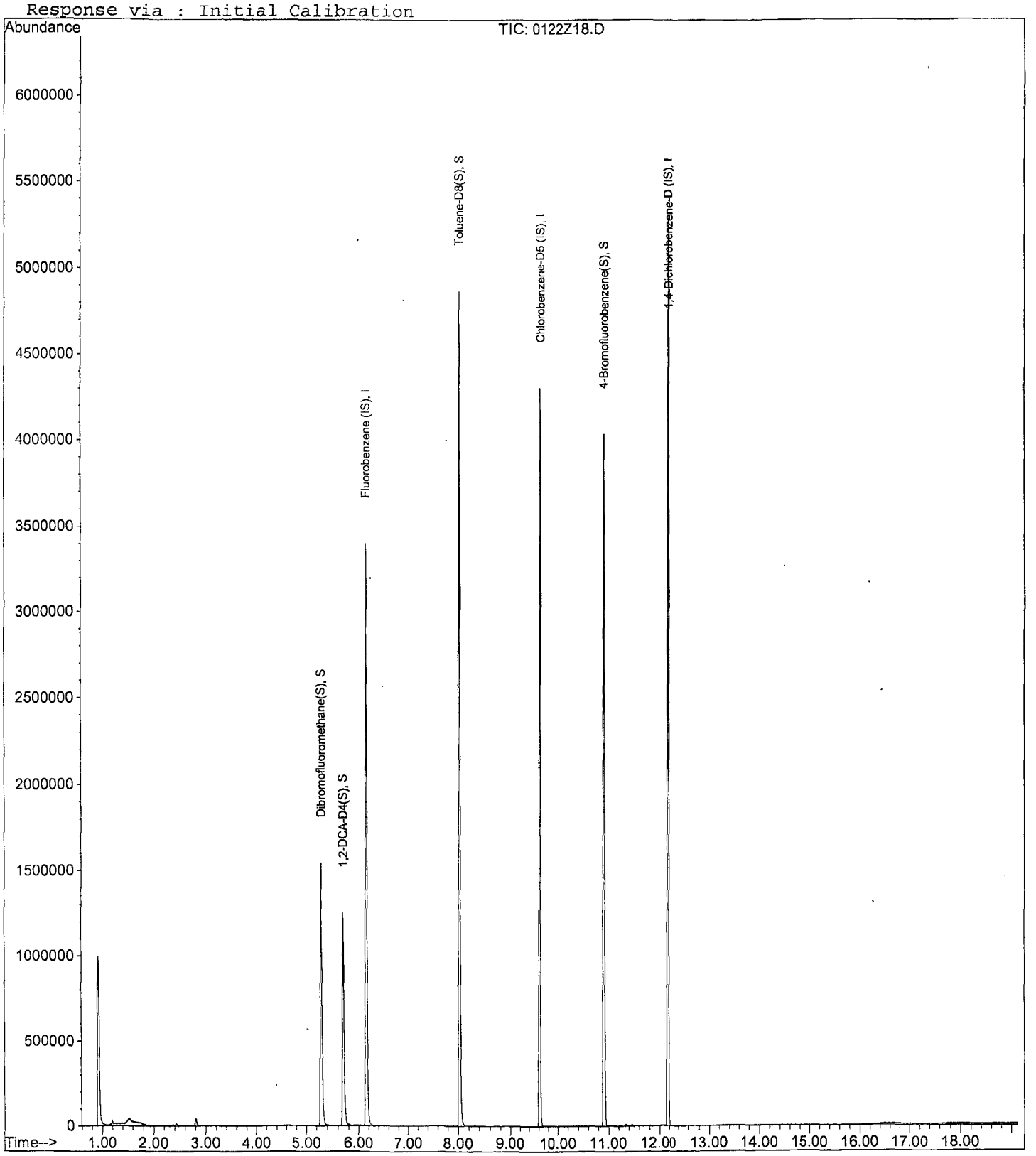
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z18.D
Acq On : 22 Jan 21 16:01
Sample : 210122A BLK
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 12:16 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z13.D Vial: 13
Acq On : 22 Jan 21 14:06 Operator: LP,DG,CH
Sample : 210122A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3840026	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3020194	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1124352	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1086286	27.24	ppb		0.00
Spiked Amount 25.000			Recovery = 108.948%				
48) 1,2-DCA-D4(S)	5.71	65	973673	27.21	ppb		0.00
Spiked Amount 25.000			Recovery = 108.832%				
69) Toluene-D8(S)	8.03	98	3727318	27.35	ppb		0.00
Spiked Amount 25.000			Recovery = 109.412%				
77) 4-Bromofluorobenzene(S)	10.91	95	1317021	24.89	ppb		0.00
Spiked Amount 25.000			Recovery = 99.576%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	205469	9.62	ppb		99
4) Freon 114	1.16	85	113104	8.92	ppb		99
5) Chloromethane	1.22	50	83611	9.35	ppb		97
6) Vinyl chloride	1.28	62	185830	9.22	ppb		95
9) Bromomethane	1.53	94	55840	9.92	ppb		96
10) Chloroethane	1.60	64	42398	9.51	ppb		97
11) Dichlorofluoromethane	1.78	67	337842	9.76	ppb		98
12) Trichlorofluoromethane	1.82	101	330510	9.48	ppb		98
16) Acrolein	2.20	55	89812	138.64	ppb		87
17) Acetone	2.36	43	230559	51.83	ppb		98
18) Freon-113	2.32	101	85240	9.47	ppb		97
19) 1,1-DCE	2.29	61	234728	10.10	ppb		99
21) Acetonitrile	2.64	40	52398	124.26	ppb		94
22) t-Butanol	3.03	59	59280	149.20	ppb		94
23) Methyl Acetate	2.73	43	101023	8.55	ppb		94
24) Iodomethane	2.43	142	232894	11.51	ppb		94
25) Acrylonitrile	3.10	52	45707	9.29	ppb	#	81
26) Methylene chloride	2.81	49	99256	9.00	ppb		100
27) Carbon disulfide	2.49	76	231808	9.98	ppb		98
28) Methyl t-butyl ether (MtBE	3.18	73	400378	9.98	ppb		99
29) Trans-1,2-DCE	3.15	61	230580	10.02	ppb		98
31) Diisopropyl Ether	3.93	45	412340	10.07	ppb		100
33) 1,1-DCA	3.71	63	282984	9.95	ppb		98
34) Vinyl Acetate	3.86	43	125043	8.62	ppb		98
35) Ethyl tert Butyl Ether	4.49	59	395595	10.28	ppb		98
36) MEK (2-Butanone)	4.67	43	306874	53.49	ppb		98
37) Cis-1,2-DCE	4.60	61	256144	9.97	ppb		95
38) 2,2-Dichloropropane	4.59	77	248542	10.32	ppb		99
41) Chloroform	5.09	83	318985	10.39	ppb		94
42) Bromochloromethane	4.93	49	113531	9.85	ppb		95
44) 1,1,1-TCA	5.30	97	304091	10.84	ppb		98
45) Cyclohexane	5.37	56	244432	10.15	ppb		98
46) 1,1-Dichloropropene	5.53	75	226902	10.58	ppb		97
47) 2,2,4-Trimethylpentane	5.96	57	472081	9.40	ppb		99
49) Carbon Tetrachloride	5.52	117	261577	10.83	ppb		98
50) Tert Amyl Methyl Ether	6.01	73	368230	10.43	ppb		100
52) 1,2-DCA	5.81	62	207109	10.03	ppb		99
53) Benzene	5.78	78	696358	10.22	ppb		98
54) TCE	6.61	130	240991	9.74	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z13.D Vial: 13
Acq On : 22 Jan 21 14:06 Operator: LP,DG,CH
Sample : 210122A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.87	43	1146535	134.38	ppb		98
56)	1,2-Dichloropropane	6.86	63	155643	10.14	ppb		100
57)	Bromodichloromethane	7.21	83	182658	10.57	ppb		95
58)	Methyl Cyclohexane	6.83	83	285407	9.77	ppb		97
59)	Dibromomethane	6.99	174	163972	9.63	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	553958	49.96	ppb		100
61)	1-Bromo-2-chloroethane	7.54	144	28989	9.25	ppb		86
62)	2-Chloroethyl vinyl ether	7.60	43	266966	56.08	ppb		95
63)	Cis-1,3-Dichloropropene	7.73	75	225193	10.62	ppb		97
64)	Toluene	8.11	91	744216	9.89	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	189013	9.47	ppb		99
66)	1,1,2-TCA	8.56	97	142398	9.80	ppb		97
67)	2-Hexanone	8.88	43	207024	48.62	ppb		98
70)	1,2-EDB	9.09	107	151581	10.65	ppb		91
71)	Tetrachloroethene	8.72	166	305300	10.09	ppb		95
72)	1-Chlorohexane	9.67	91	233464	10.33	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.75	131	169603	10.86	ppb		99
74)	m&p-Xylene	9.92	91	1219445	21.14	ppb		99
75)	o-Xylene	10.35	91	596348	10.38	ppb		98
76)	Styrene	10.37	104	485226	10.79	ppb		99
78)	1,3-Dichloropropane	8.74	76	214543	10.18	ppb		98
79)	Dibromochloromethane	8.98	129	140523	9.00	ppb		99
80)	Chlorobenzene	9.65	112	522108	9.99	ppb		99
81)	Ethylbenzene	9.79	91	793075	10.29	ppb		98
82)	Bromoform	10.54	173	106603	8.73	ppb		94
84)	Isopropylbenzene	10.76	105	855896	10.91	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	150116	10.06	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	59551	10.01	ppb		100
87)	t-1,4-Dichloro-2-Butene	11.14	53	27351	9.12	ppb	#	82
88)	Bromobenzene	11.06	77	251559	9.73	ppb		97
89)	n-Propylbenzene	11.21	91	919778	10.70	ppb		99
90)	4-Ethyltoluene	11.34	105	834029	10.91	ppb		98
91)	2-Chlorotoluene	11.41	91	620675	10.73	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	680281	10.83	ppb		97
93)	4-Chlorotoluene	11.41	91	620675	10.73	ppb		98
94)	Tert-Butylbenzene	11.77	119	661716	10.65	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	686958	11.06	ppb		98
96)	Sec-Butylbenzene	12.00	105	935492	11.00	ppb		100
97)	p-Isopropyltoluene	11.77	119	661716	10.65	ppb		99
98)	Benzyl Chloride	12.35	91	234971	7.94	ppb		99
99)	1,3-DCB	12.10	146	505095	10.13	ppb		99
100)	1,4-DCB	12.20	146	506514	9.93	ppb		96
101)	n-Butylbenzene	12.61	91	661000	10.97	ppb		99
102)	1,2-DCB	12.60	146	464176	10.34	ppb		97
103)	Hexachloroethane	12.89	201	120272	8.32	ppb		95
104)	1,2-Dibromo-3-chloropropan	13.44	157	40149	8.48	ppb		96
105)	1,2,4-Trichlorobenzene	13.69	180	431251	10.42	ppb		99
106)	Hexachlorobutadiene	14.57	225	217349	10.46	ppb		99
107)	Naphthalene	14.62	128	622019	9.60	ppb		97
108)	1,2,3-Trichlorobenzene	14.88	180	299807	10.39	ppb		99

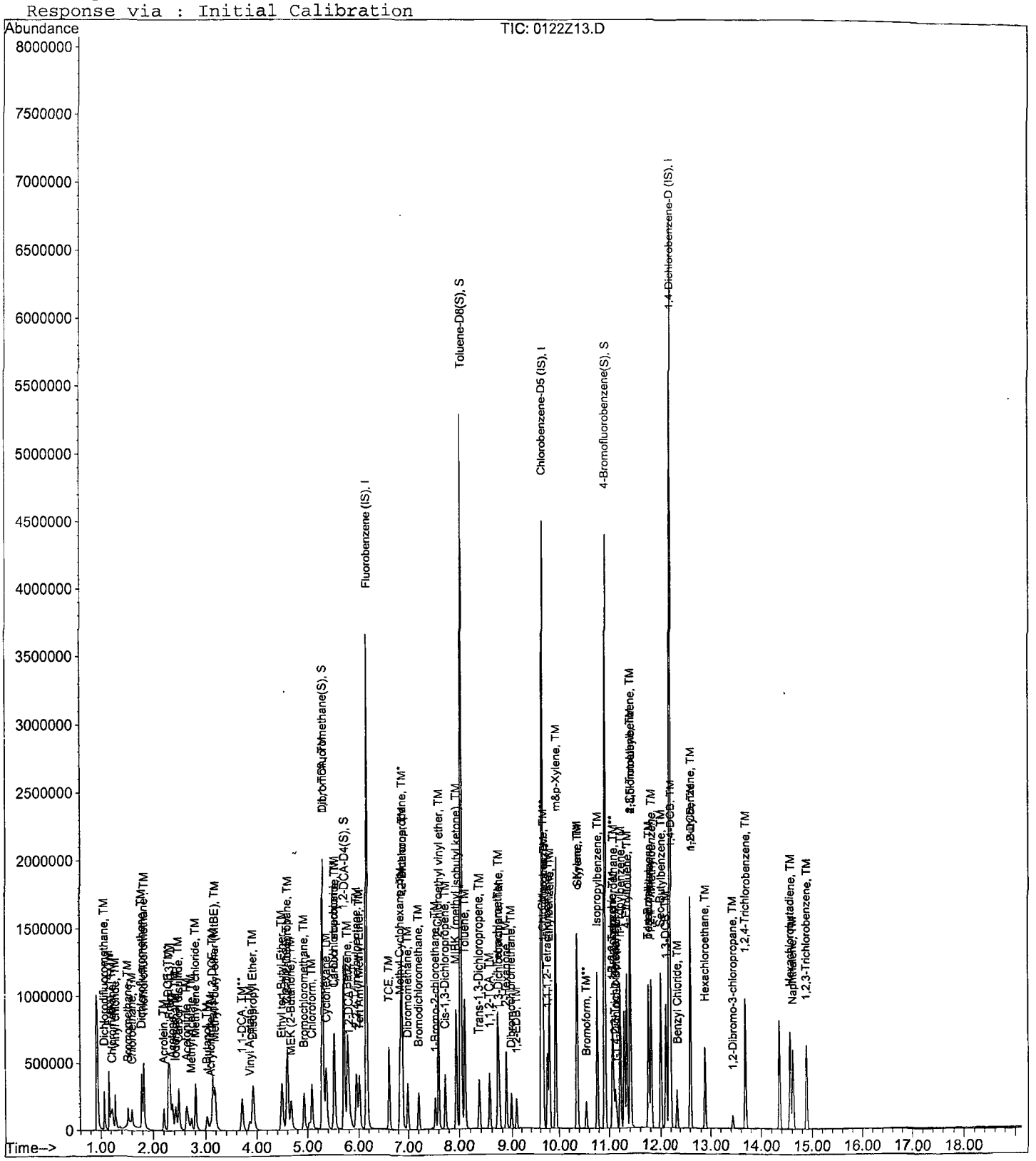
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z13.D Vial: 13
Acq On : 22 Jan 21 14:06 Operator: LP,DG,CH
Sample : 210122A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z14.D Vial: 14
Acq On : 22 Jan 21 14:29 Operator: LP,DG,CH
Sample : 210122A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3807631	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2979247	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1138176	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1074954	27.18	ppb		0.00
Spiked Amount 25.000			Recovery =	108.728%			
48) 1,2-DCA-D4(S)	5.71	65	962172	27.12	ppb		0.00
Spiked Amount 25.000			Recovery =	108.464%			
69) Toluene-D8(S)	8.03	98	3713435	27.63	ppb		0.00
Spiked Amount 25.000			Recovery =	110.500%			
77) 4-Bromofluorobenzene(S)	10.92	95	1302836	24.96	ppb		0.00
Spiked Amount 25.000			Recovery =	99.824%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	214673	10.14	ppb		100
4) Freon 114	1.16	85	121744	9.68	ppb		97
5) Chloromethane	1.23	50	84911	9.63	ppb		93
6) Vinyl chloride	1.28	62	192427	9.63	ppb		98
9) Bromomethane	1.53	94	61581	11.37	ppb		98
10) Chloroethane	1.60	64	44128	10.04	ppb		98
11) Dichlorofluoromethane	1.78	67	339347	9.89	ppb		97
12) Trichlorofluoromethane	1.82	101	336468	9.73	ppb		100
16) Acrolein	2.20	55	88179	137.28	ppb		93
17) Acetone	2.36	43	223080	50.58	ppb		97
18) Freon-113	2.32	101	88704	9.94	ppb		99
19) 1,1-DCE	2.29	61	240702	10.45	ppb		96
21) Acetonitrile	2.64	40	50987	121.94	ppb		89
22) t-Butanol	3.03	59	53032	134.61	ppb		99
23) Methyl Acetate	2.73	43	108084	9.22	ppb		99
24) Iodomethane	2.43	142	236404	11.74	ppb	#	89
25) Acrylonitrile	3.10	52	48867	10.02	ppb		98
26) Methylene chloride	2.81	49	104440	9.73	ppb		95
27) Carbon disulfide	2.49	76	222016	9.64	ppb		99
28) Methyl t-butyl ether (MtBE	3.19	73	417600	10.50	ppb		99
29) Trans-1,2-DCE	3.14	61	229811	10.07	ppb		99
31) Diisopropyl Ether	3.93	45	421204	10.37	ppb		98
33) 1,1-DCA	3.71	63	289170	10.25	ppb		99
34) Vinyl Acetate	3.86	43	135050	9.39	ppb		100
35) Ethyl tert Butyl Ether	4.49	59	405721	10.63	ppb		98
36) MEK (2-Butanone)	4.67	43	295866	52.01	ppb		96
37) Cis-1,2-DCE	4.60	61	253600	9.95	ppb		97
38) 2,2-Dichloropropane	4.59	77	246076	10.30	ppb		96
41) Chloroform	5.09	83	322544	10.59	ppb		90
42) Bromochloromethane	4.92	49	117967	10.32	ppb		97
44) 1,1,1-TCA	5.30	97	311849	11.21	ppb		98
45) Cyclohexane	5.37	56	250824	10.50	ppb		95
46) 1,1-Dichloropropene	5.53	75	223009	10.49	ppb		98
47) 2,2,4-Trimethylpentane	5.95	57	505397	10.15	ppb		99
49) Carbon Tetrachloride	5.52	117	263970	11.02	ppb		100
50) Tert Amyl Methyl Ether	6.01	73	382704	10.93	ppb		96
52) 1,2-DCA	5.81	62	210045	10.26	ppb		99
53) Benzene	5.78	78	700682	10.37	ppb		99
54) TCE	6.61	130	238367	9.72	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z14.D Vial: 14
Acq On : 22 Jan 21 14:29 Operator: LP,DG,CH
Sample : 210122A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	6.87	43	1115727	131.88	ppb		99
56)	1,2-Dichloropropane	6.86	63	158546	10.42	ppb		99
57)	Bromodichloromethane	7.21	83	186539	10.89	ppb		95
58)	Methyl Cyclohexane	6.84	83	296580	10.24	ppb		94
59)	Dibromomethane	6.99	174	166883	9.88	ppb		96
60)	MIBK (methyl isobutyl ket	7.94	43	537479	48.97	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	30353	9.76	ppb		93
62)	2-Chloroethyl vinyl ether	7.60	43	259877	55.05	ppb		96
63)	Cis-1,3-Dichloropropene	7.73	75	230207	10.95	ppb		96
64)	Toluene	8.11	91	758633	10.17	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	196884	9.92	ppb		99
66)	1,1,2-TCA	8.56	97	146219	10.15	ppb		99
67)	2-Hexanone	8.88	43	210368	49.72	ppb		99
70)	1,2-EDB	9.09	107	153075	10.90	ppb		96
71)	Tetrachloroethene	8.72	166	305675	10.24	ppb		99
72)	1-Chlorohexane	9.67	91	238281	10.69	ppb		94
73)	1,1,1,2-Tetrachloroethane	9.75	131	169716	11.02	ppb		100
74)	m&p-Xylene	9.93	91	1233657	21.68	ppb		99
75)	o-Xylene	10.36	91	620379	10.94	ppb		99
76)	Styrene	10.37	104	494317	11.14	ppb		99
78)	1,3-Dichloropropane	8.74	76	222364	10.69	ppb		97
79)	Dibromochloromethane	8.98	129	145086	9.36	ppb		99
80)	Chlorobenzene	9.65	112	537428	10.42	ppb		98
81)	Ethylbenzene	9.79	91	815855	10.73	ppb		98
82)	Bromoform	10.54	173	110637	9.06	ppb		96
84)	Isopropylbenzene	10.76	105	864706	10.89	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	158414	10.49	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	61957	10.29	ppb		97
87)	t-1,4-Dichloro-2-Butene	11.15	53	28808	9.43	ppb	#	83
88)	Bromobenzene	11.06	77	259114	9.90	ppb		98
89)	n-Propylbenzene	11.21	91	939023	10.79	ppb		98
90)	4-Ethyltoluene	11.34	105	832133	10.76	ppb		99
91)	2-Chlorotoluene	11.41	91	626495	10.70	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	691927	10.88	ppb		96
93)	4-Chlorotoluene	11.41	91	626495	10.70	ppb		96
94)	Tert-Butylbenzene	11.77	119	671838	10.68	ppb		98
95)	1,2,4-Trimethylbenzene	11.81	105	696503	11.08	ppb		99
96)	Sec-Butylbenzene	12.00	105	936664	10.88	ppb		100
97)	p-Isopropyltoluene	11.77	119	671838	10.68	ppb		96
98)	Benzyl Chloride	12.35	91	261403	8.58	ppb	#	98
99)	1,3-DCB	12.10	146	516541	10.23	ppb		97
100)	1,4-DCB	12.20	146	517882	10.03	ppb		99
101)	n-Butylbenzene	12.61	91	661383	10.84	ppb		99
102)	1,2-DCB	12.60	146	468670	10.31	ppb		98
103)	Hexachloroethane	12.89	201	131630	8.86	ppb		99
104)	1,2-Dibromo-3-chloropropan	13.44	157	43106	8.92	ppb		94
105)	1,2,4-Trichlorobenzene	13.69	180	429875	10.26	ppb		99
106)	Hexachlorobutadiene	14.57	225	216689	10.30	ppb		99
107)	Naphthalene	14.62	128	643741	9.82	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	310150	10.62	ppb		99

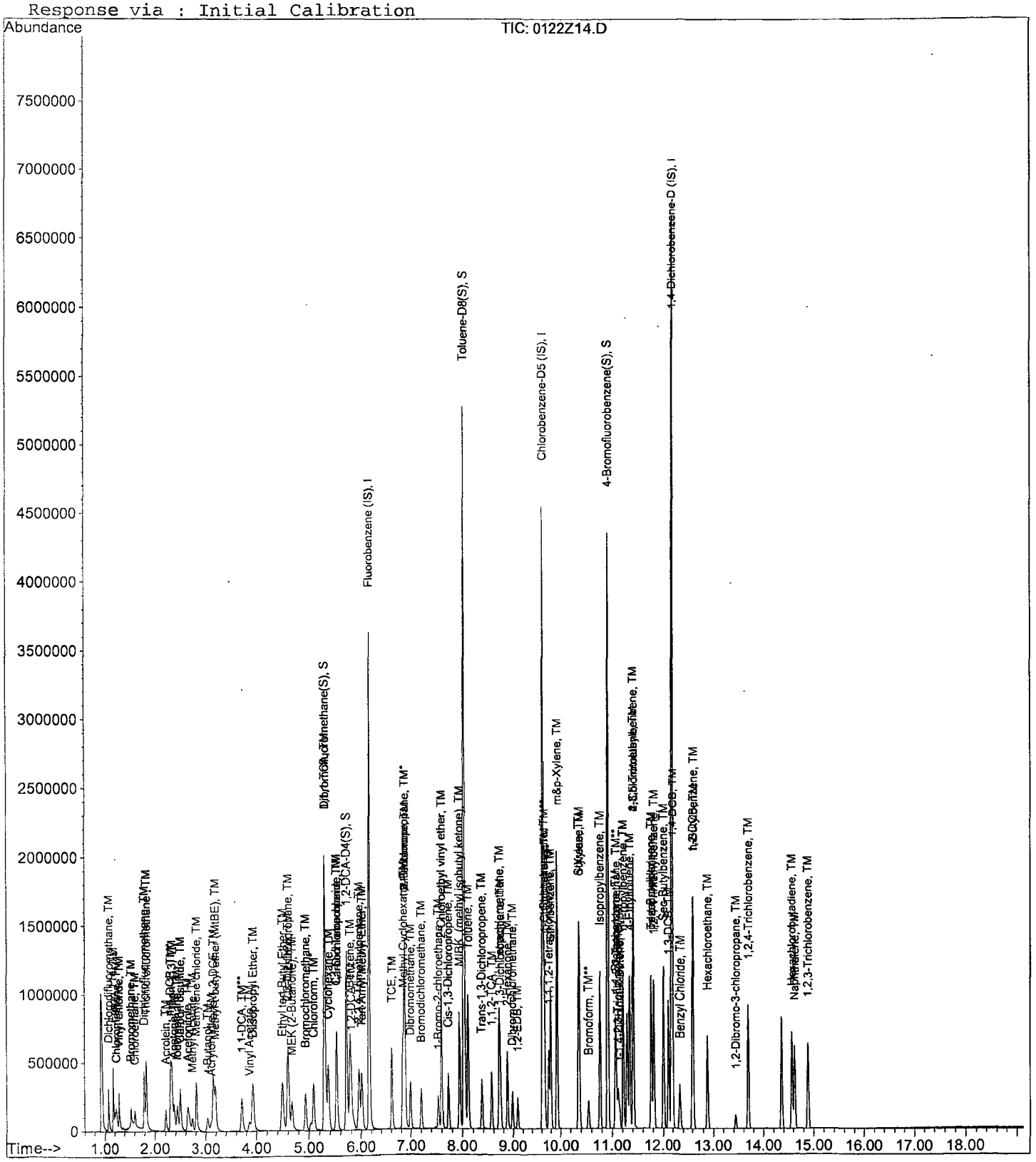
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z14.D Vial: 14
Acq On : 22 Jan 21 14:29 Operator: LP,DG,CH
Sample : 210122A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:04 2021 Quant Results File: Z0122W.RES

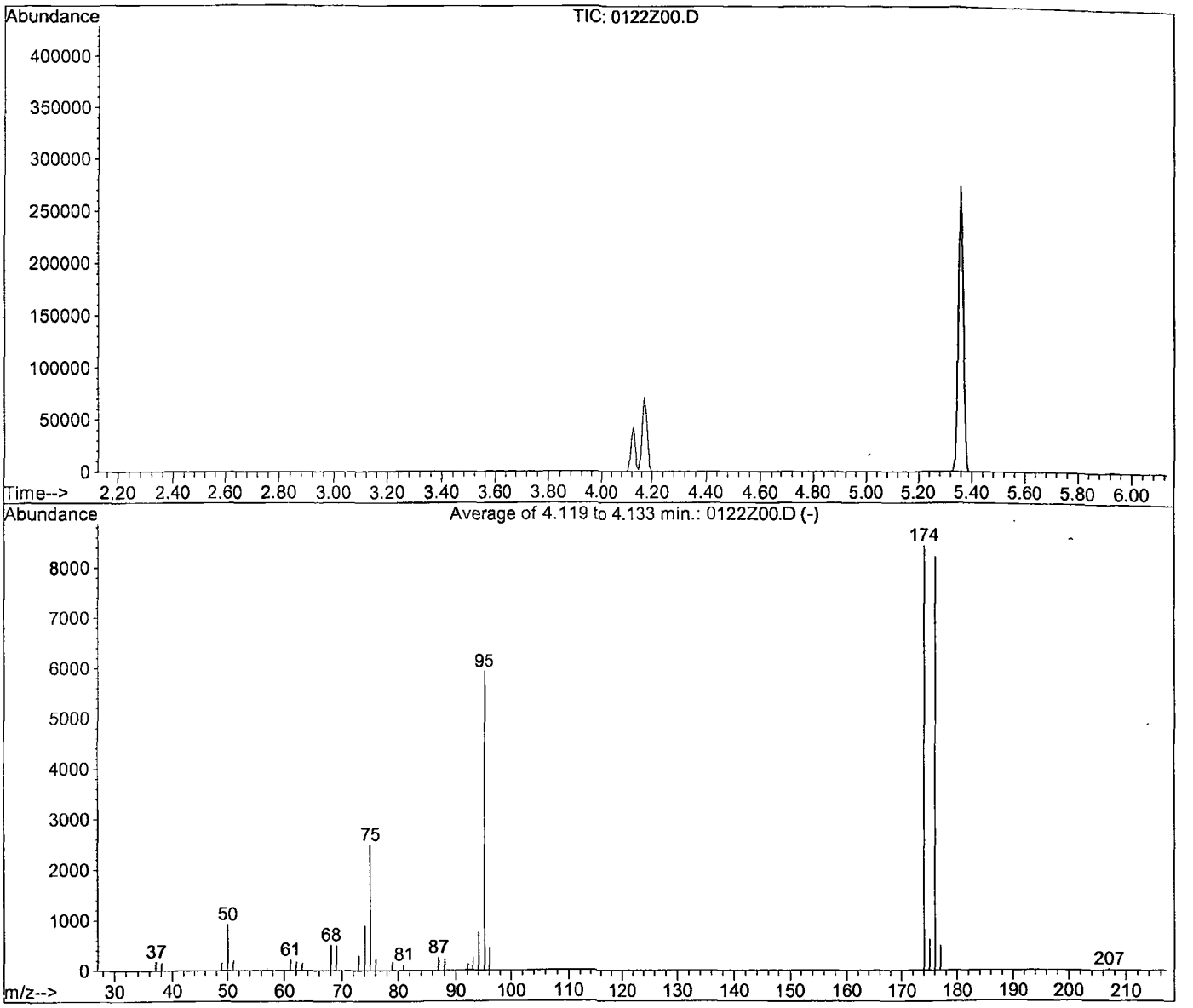
Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Data File : M:\ZEUS\DATA\210122\0122Z00.D
Acq On : 22 Jan 21 09:04
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 1
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 144, 145, 146; Background Corrected with Scan 139

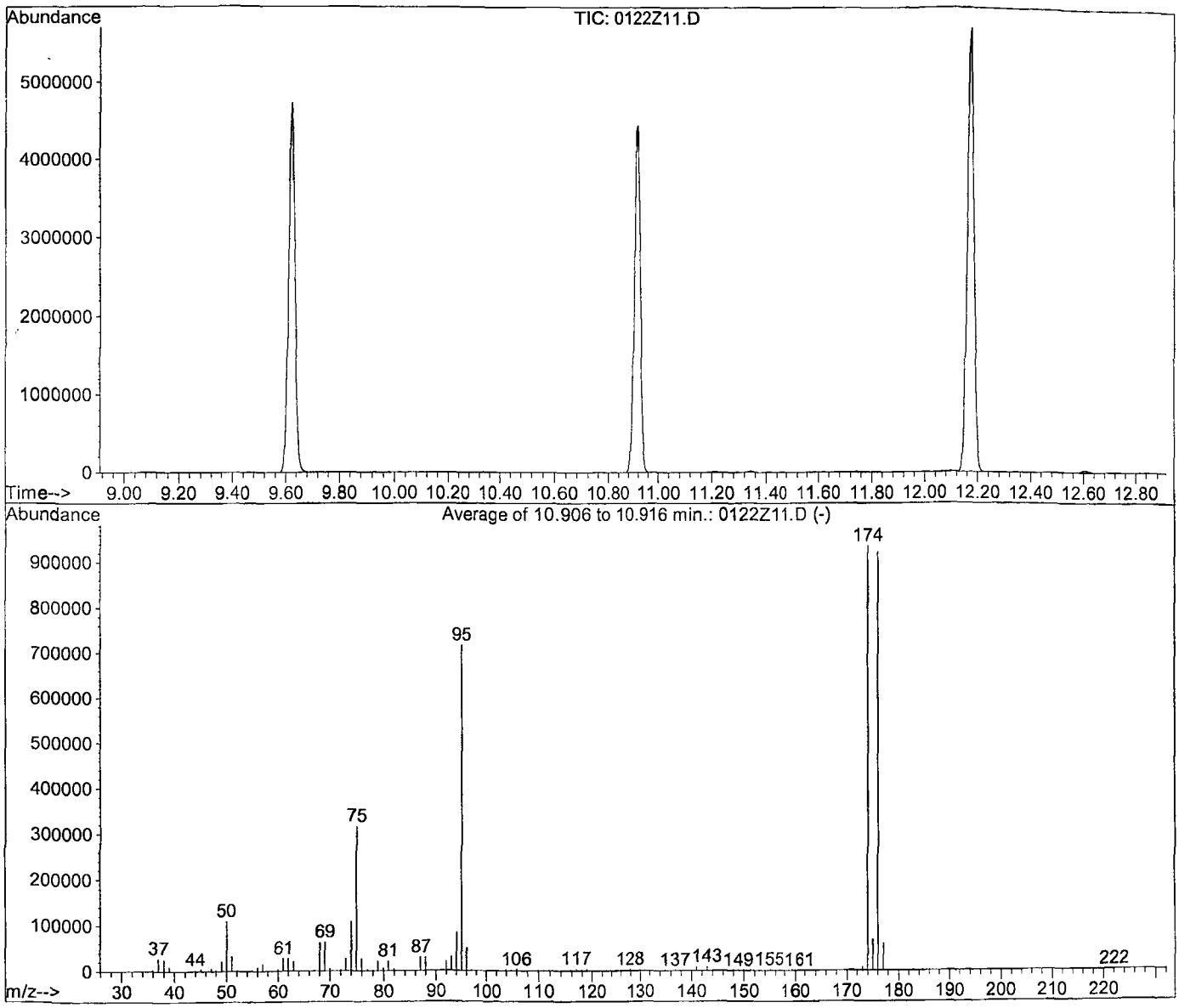
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	916	PASS
75	95	30	60	42.1	2495	PASS
95	95	100	100	100.0	5933	PASS
96	95	5	9	7.6	452	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	142.3	8444	PASS
175	174	5	9	7.4	624	PASS
176	174	95	101	97.4	8227	PASS
177	176	5	9	6.1	498	PASS

0122Z00.D ZGAS0104.M Thu Jan 28 11:32:43 2021

Data File : M:\ZEUS\DATA\210122\0122Z11.D
Acq On : 22 Jan 21 13:20
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 11
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210122\Z0122W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	110056	PASS
75	95	30	60	44.2	317205	PASS
95	95	100	100	100.0	717504	PASS
96	95	5	9	7.0	50341	PASS
173	174	0.00	2	0.7	6352	PASS
174	95	50	200	130.6	936853	PASS
175	174	5	9	7.5	69933	PASS
176	174	95	101	98.5	923264	PASS
177	176	5	9	6.5	59728	PASS

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 01/18/21 A
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	219061767-50972	01/18/22	06/28/29	200uL			50
Benzyl Chloride	Absolute	70037	1,000	082720-51148	01/04/22	08/27/21	200uL			50

VOA STD 8

Prepared: 01/18/21 B
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-51043	01/04/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16071-51542	01/04/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16248-51598	01/04/22	01/27/21	100uL			50

VOA STD TBA

Prepared: 01/18/21 C
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL15725-51578	01/04/22	09/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16253-51600	01/04/22	01/27/21	100uL			250

VOA STD 1

Prepared: 01/18/21 D
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-51156	01/04/22	11/14/22	50	2mL	Methanol	50

VOA STD 2

Prepared: 01/18/21 E
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16074-51593	01/04/22	11/30/30	100	4mL	Methanol	50

VOA STD 9

Prepared: 01/18/21 F
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 01/18/21	01/04/22	N/A	200uL			5

VOA STD. 10

Prepared: 01/18/21 G
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 01/18/21 H
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 01/18/21 I
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16067-51588	01/04/22	11/30/30	50uL	2mL	Methanol	50

VOA STD Gases

Prepared: 01/18/21 J
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 01/18/21 K
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14381-51056	01/04/22	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16187-51524	01/04/22	01/13/22	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	091818-51617	1/18//2022	09/18/23	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-51625	12/22/21	12/25/21	500uL			50

VOA STD. TBA

Prepared: 01/18/21 L
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL16012-51128	01/04/22	11/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16193-51526	01/04/22	01/13/22	50uL			250

VOA STD. 0

Prepared: 01/18/21 M
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-51568	01/04/22	09/30/22	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 01/18/21 N
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-51151	01/04/22	12/11/22	50uL	2mL	Methanol	50

ZEUS 8260 Standard Prep

ZEUS 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0 3ug/L	5	Prepared 01/18/21	03/19/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	2.5uL			5
VOA STD TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD 9	Various	0.5ug/L	5	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	5
VOA STD 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/18/21	03/19/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/22/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/18/21	03/19/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	40uL			200

ZEUS 8260 Water Second Source (SS)

Prepared: 01/22/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/18/21	03/19/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/18/21	01/18/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/18/21	03/19/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/22/21

Prepared By (Initials): CH

Expires: 01/23/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/18/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\ZEUS\DATA\210122\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0122Z00.D	1	25ug/L BFB STD 12/22/20		22 Jan 21 09:04
2	2	0122Z02.D	1	0.3ug/L VOC STD1/22/21		22 Jan 21 09:53
3	3	0122Z03.D	1	0.5ug/L VOC STD1/22/21		22 Jan 21 10:16
4	4	0122Z04.D	1	1ug/L VOC STD1/22/21		22 Jan 21 10:39
5	5	0122Z05.D	1	2ug/L VOC STD1/22/21		22 Jan 21 11:02
6	6	0122Z06.D	1	5ug/L VOC STD1/22/21		22 Jan 21 11:25
7	7	0122Z07.D	1	10ug/L VOC STD1/22/21		22 Jan 21 11:48
8	8	0122Z08.D	1	20ug/L VOC STD1/22/21		22 Jan 21 12:11
9	9	0122Z09.D	1	40ug/L VOC STD1/22/21		22 Jan 21 12:34
10	10	0122Z10.D	1	100ug/L VOC STD1/22/21		22 Jan 21 12:57
11	11	0122Z11.D	1	25ug/L BFB STD 12/22/20		22 Jan 21 13:20
12	12	0122Z12.D	1	(SS) 10ug/L VOC STD1/22/21		22 Jan 21 13:43
13	13	0122Z13.D	1	210122A LCS 10ug/L		22 Jan 21 14:06
14	14	0122Z14.D	1	210122A LCSD 10ug/L		22 Jan 21 14:29
15	18	0122Z18.D	1	210122A BLK		22 Jan 21 16:01
16	21	0122Z21.D	1	BA25528W01		22 Jan 21 17:10
17	22	0122Z22.D	1	BA25529W01		22 Jan 21 17:33
18	23	0122Z23.D	1	BA25531W01		22 Jan 21 17:56
19	24	0122Z24.D	1	BA25532W01		22 Jan 21 18:19
20	25	0122Z25.D	1	BA25534W01		22 Jan 21 18:42
21	26	0122Z26.D	1	BA25535W01		22 Jan 21 19:05
22	27	0122Z27.D	1	BA25537W01		22 Jan 21 19:28
23	28	0122Z28.D	1	BA25538W01		22 Jan 21 19:51
24	39	0122Z39.D	1	Ending CCV 10ug/L 1/21/21		23 Jan 21 00:04

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/04/21
Matrix: Water Instrument: ZEUS
Initials: CH

			0104Z13.D	0104Z14.D	0104Z15.D	0104Z16 D	0104Z17.D	0104Z18 D	0104Z19.D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.4	6.186	3.316	1.365	1.082	0.9536	0.8954				4.0	123	TMHB	0.994		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
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Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z13.D Vial: 13
Acq On : 04 Jan 21 20:33 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:24 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4211284	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6827319	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5332452	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	48590209m	57.38	ppb	100

(#) = qualifier out of range (m) = manual integration
0104Z13.D ZGAS0104.M Thu Jan 07 11:05:47 2021

Quantitation Report

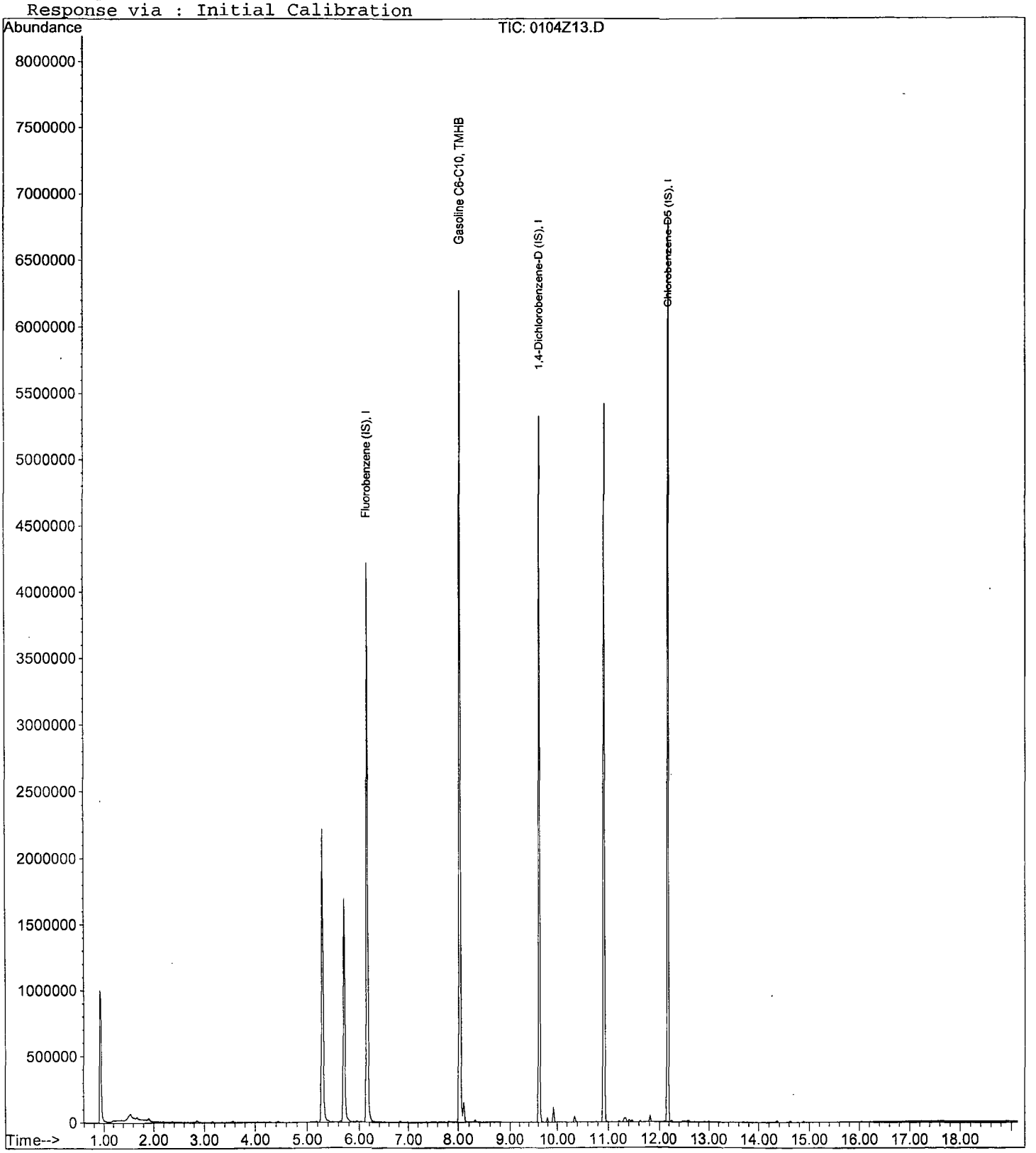
Data File : M:\ZEUS\DATA\210104\0104Z13.D
Acq On : 04 Jan 21 20:33
Sample : 20ug/L GAS STD 1/4/20
Misc :

Vial: 13
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:24 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z14.D Vial: 14
Acq On : 04 Jan 21 20:56 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4078655	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6899405	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5237060	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	50462587m	108.01	ppb	100

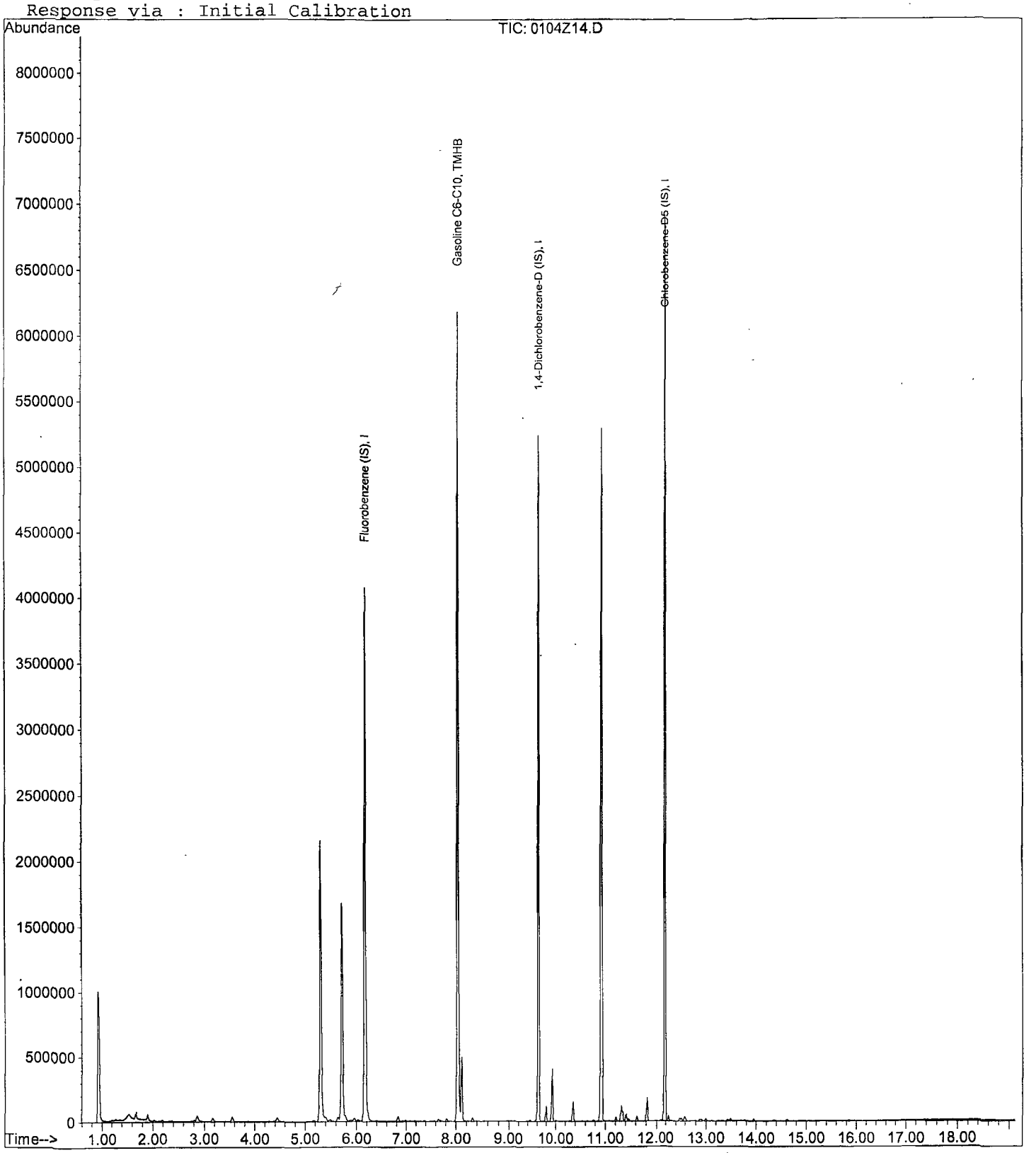
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z14.D Vial: 14
Acq On : 04 Jan 21 20:56 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:25 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z15.D
Acq On : 04 Jan 21 21:19
Sample : 100ug/L GAS STD 1/4/20
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4186849	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7055503	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5266421	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	55526796m	162.02	ppb	100

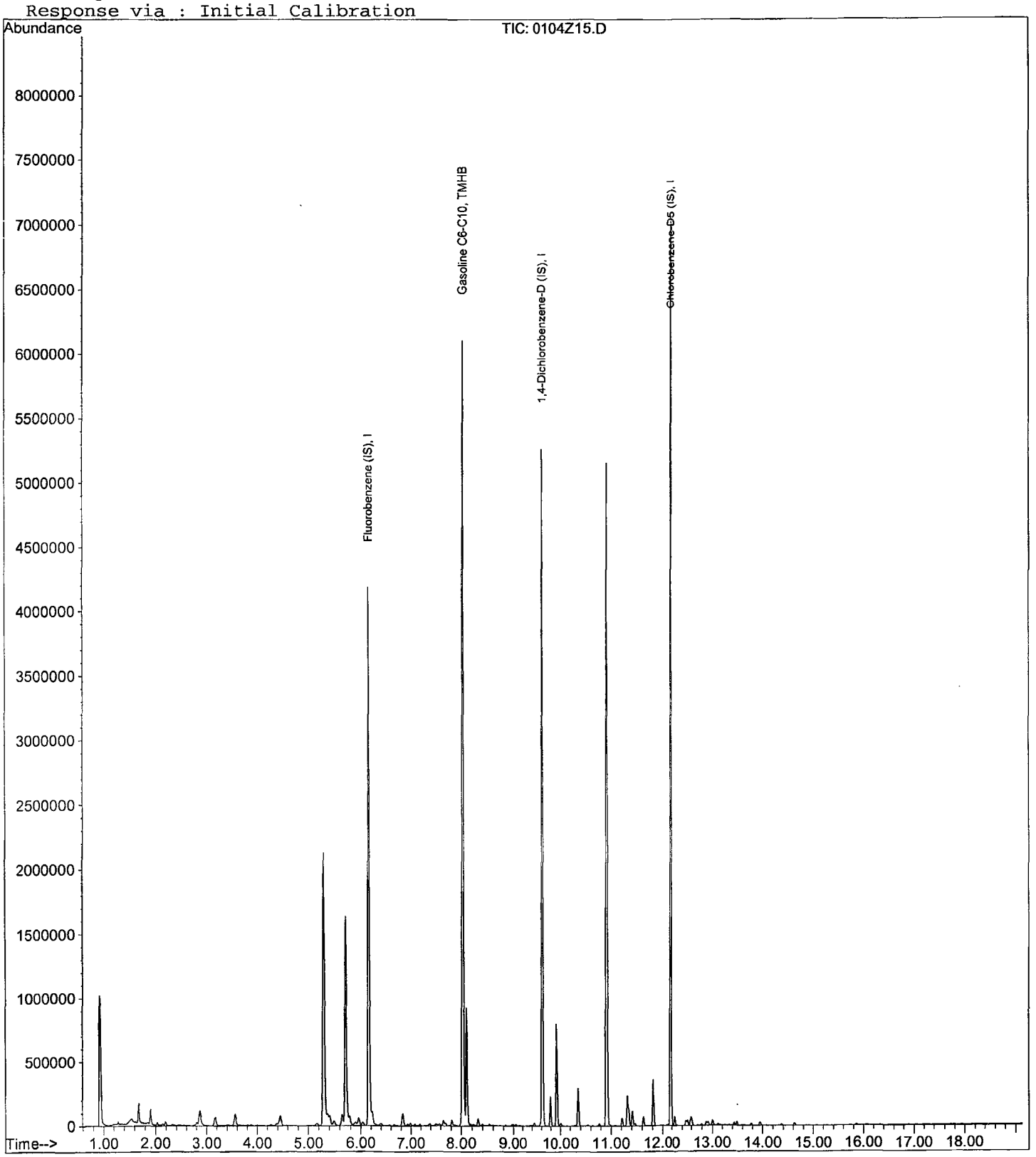
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z15.D Vial: 15
Acq On : 04 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z16.D Vial: 16
Acq On : 04 Jan 21 21:42 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4233137	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7141314	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316746	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	69360645m	351.55	ppb	100

(#) = qualifier out of range (m) = manual integration

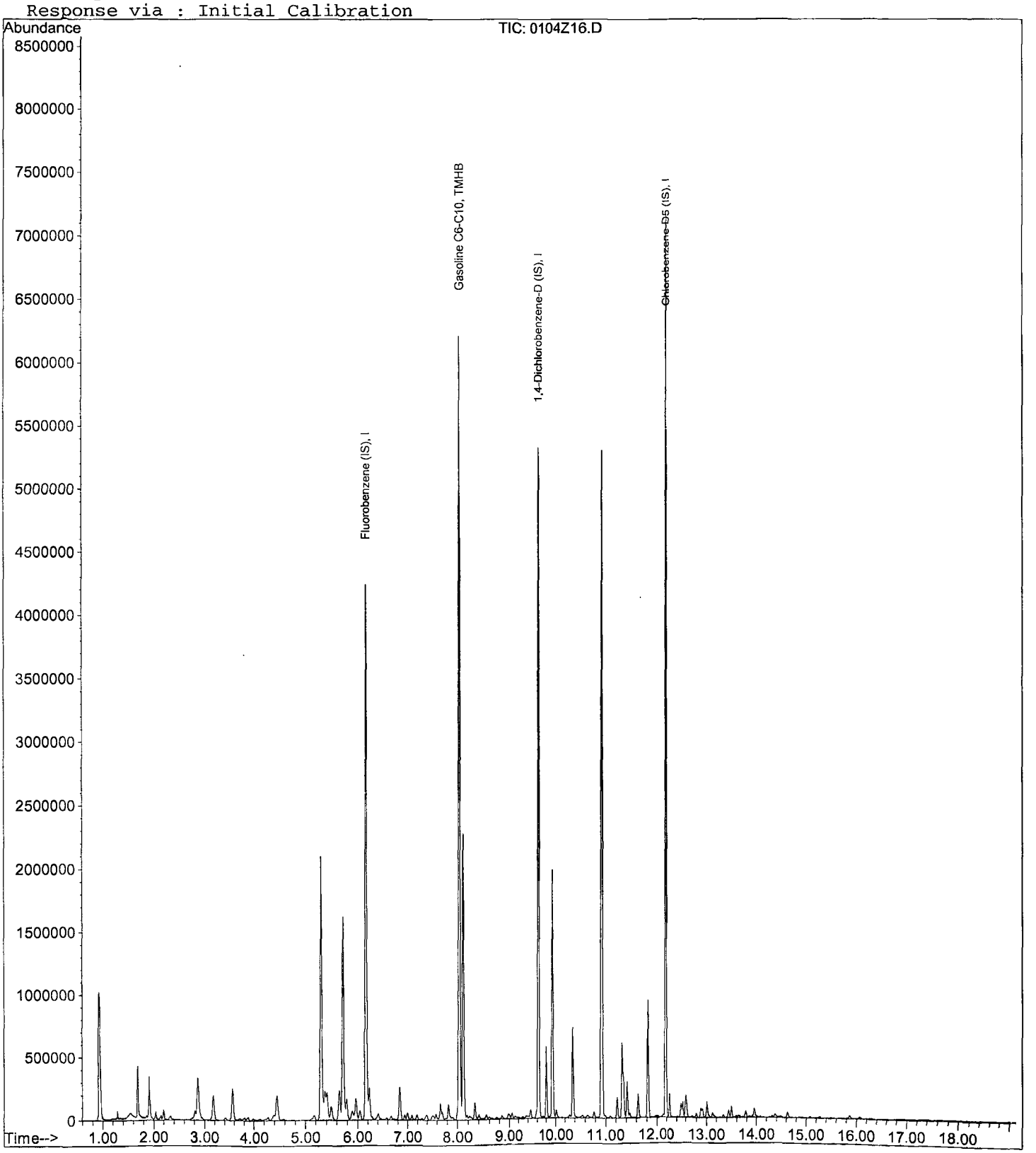
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z16.D
Acq On : 04 Jan 21 21:42
Sample : 300ug/L GAS STD 1/4/20
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:26 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z17.D Vial: 17
Acq On : 04 Jan 21 22:04 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4262471	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6861206	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5336374	25.00 ppb	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	110715882m	933.52 ppb	100

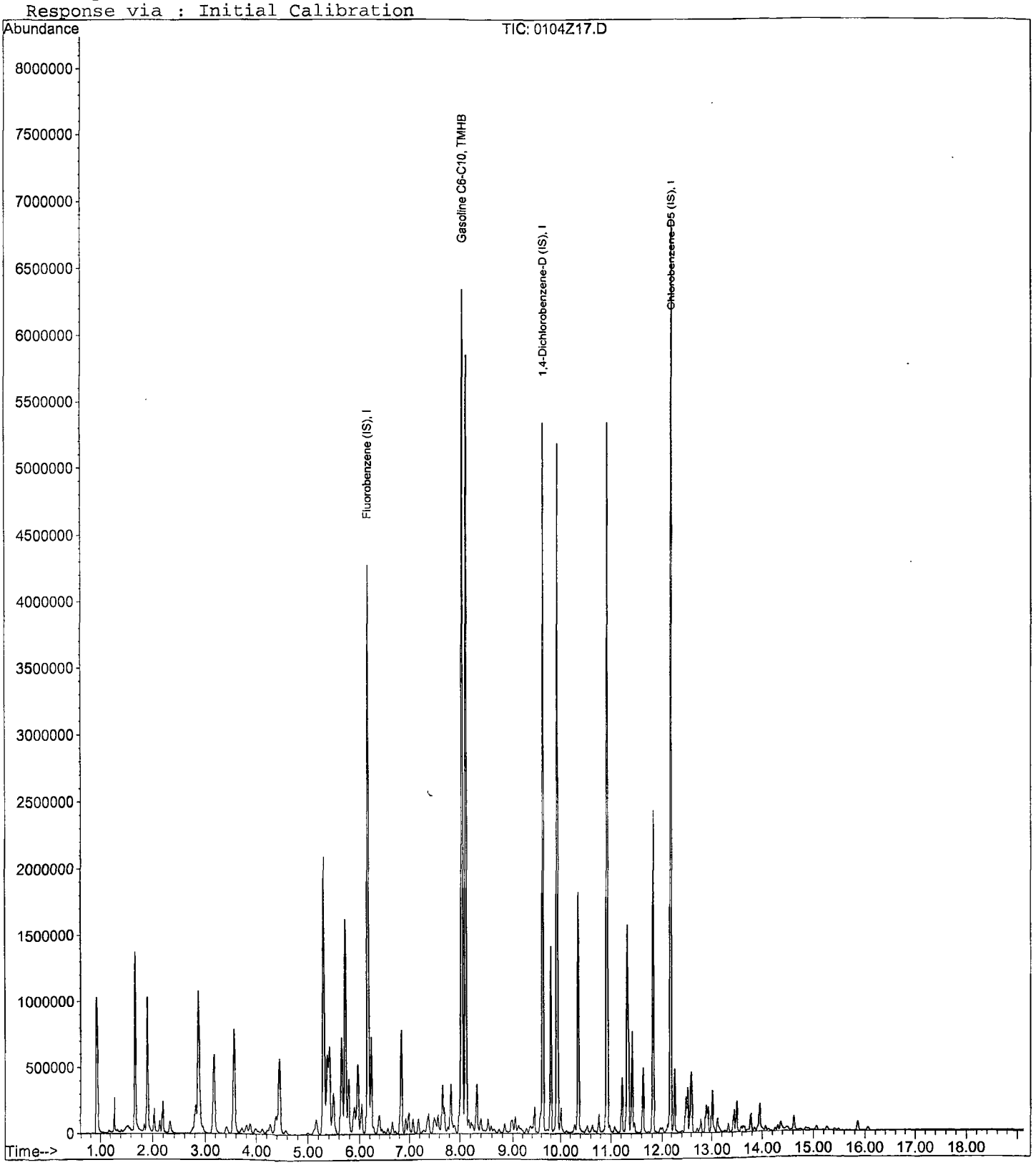
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z17.D Vial: 17
Acq On : 04 Jan 21 22:04 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:27 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z18.D Vial: 18
Acq On : 04 Jan 21 22:27 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4519136	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	7160046	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5316063	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	137907122m	1209.15	ppb	100

(#) = qualifier out of range (m) = manual integration

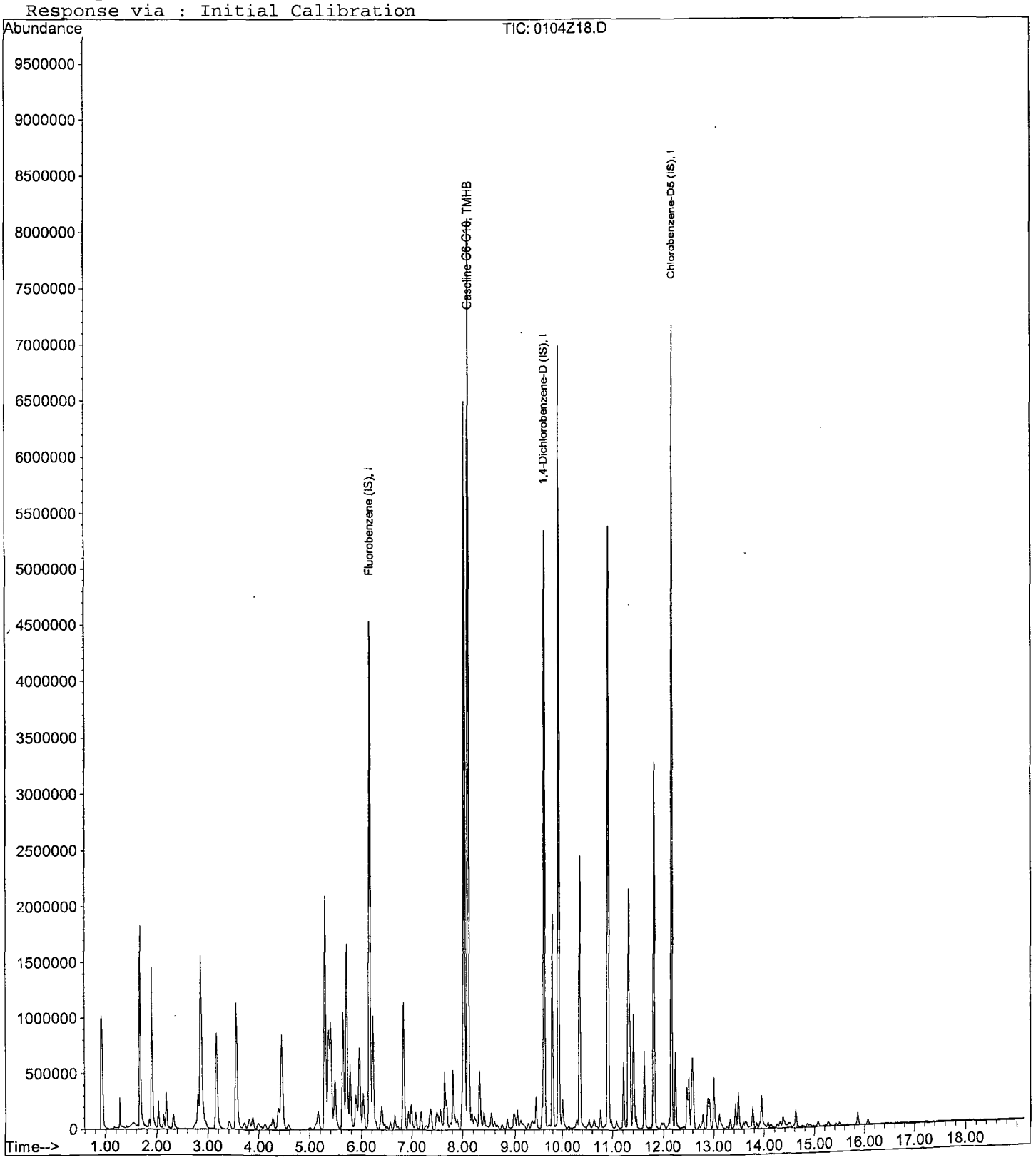
Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z18.D
Acq On : 04 Jan 21 22:27
Sample : 800ug/L GAS STD 1/4/20
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:29 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z19.D Vial: 19
Acq On : 04 Jan 21 22:50 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 5 11:45 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 05 11:21:37 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4357256	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6940368	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5466243	25.00 ppb	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.11	TIC	156056392m	1530.74 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

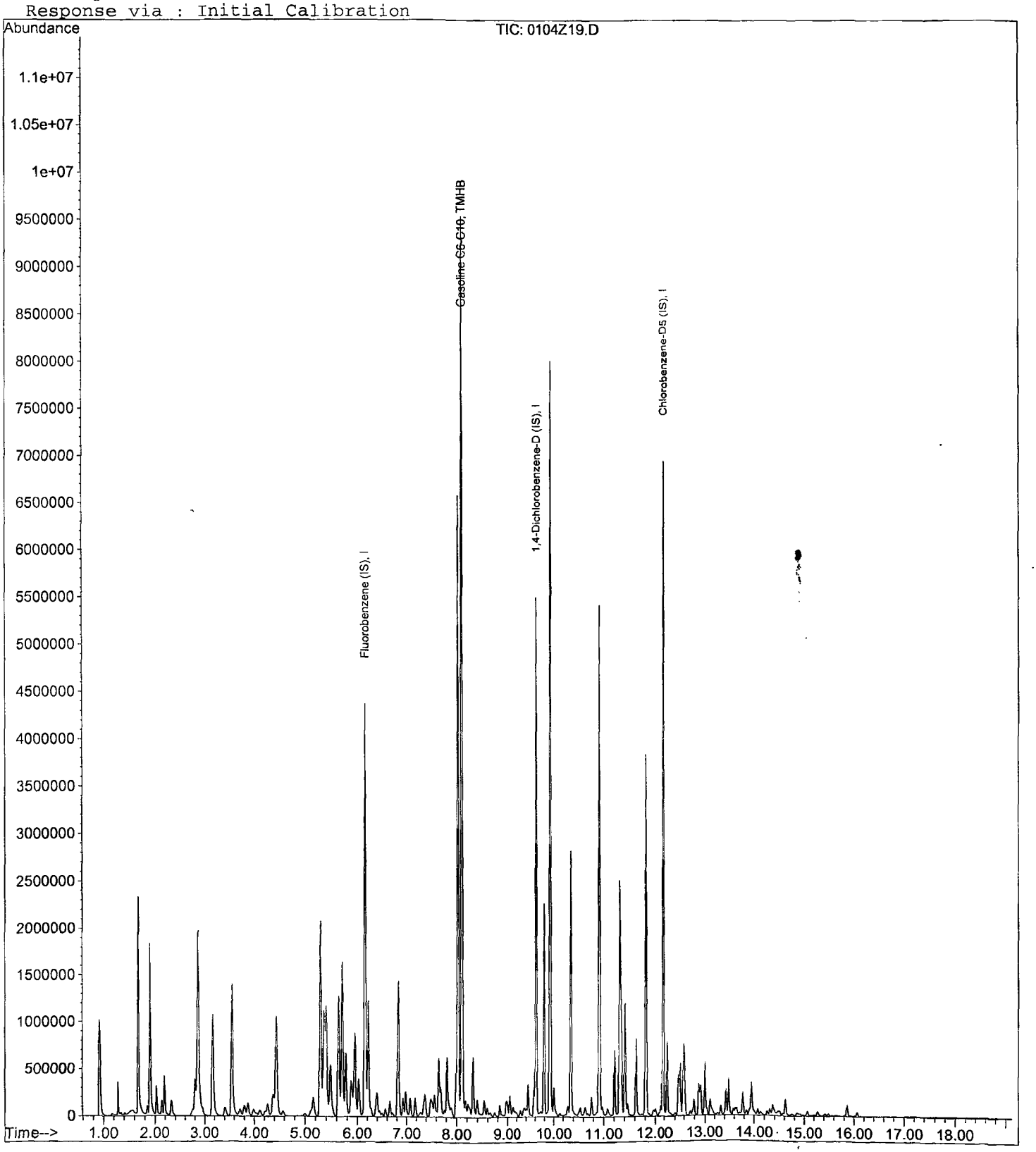
Data File : M:\ZEUS\DATA\210104\0104Z19.D
Acq On : 04 Jan 21 22:50
Sample : 1000ug/L GAS STD 1/4/20
Misc :

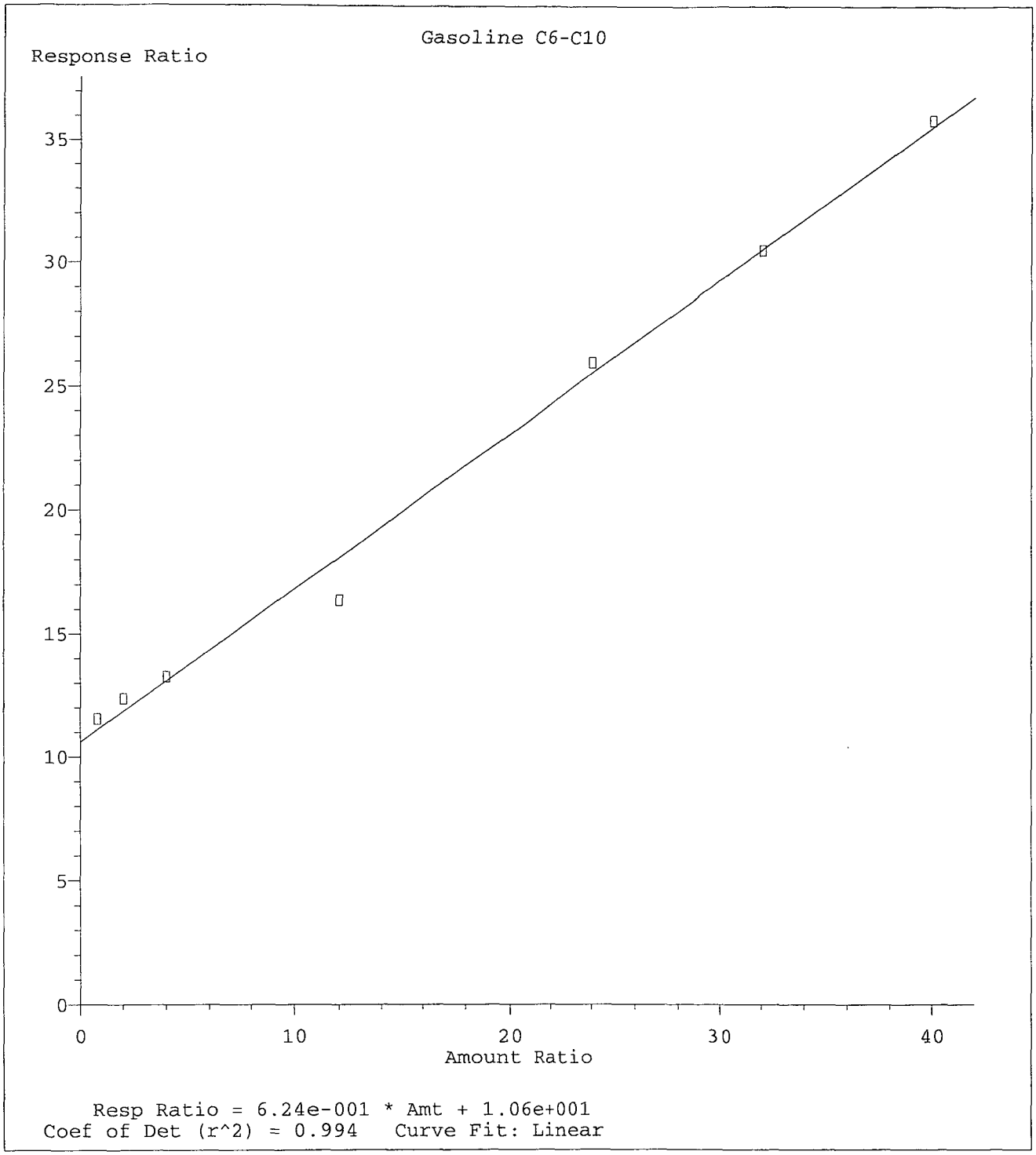
Vial: 19
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 5 11:45 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210104\ZGAS0104.M
Calibration Table Last Updated: Thu Jan 07 09:32:25 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/04/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0104Z21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.032	1.457	64	TMHBL	8.1
2							
3							
4							
5							
6							
7							
8							
9							
10							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			64.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	4193018	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	6786780	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	5176749	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	73335098m	275.77	ppb	100

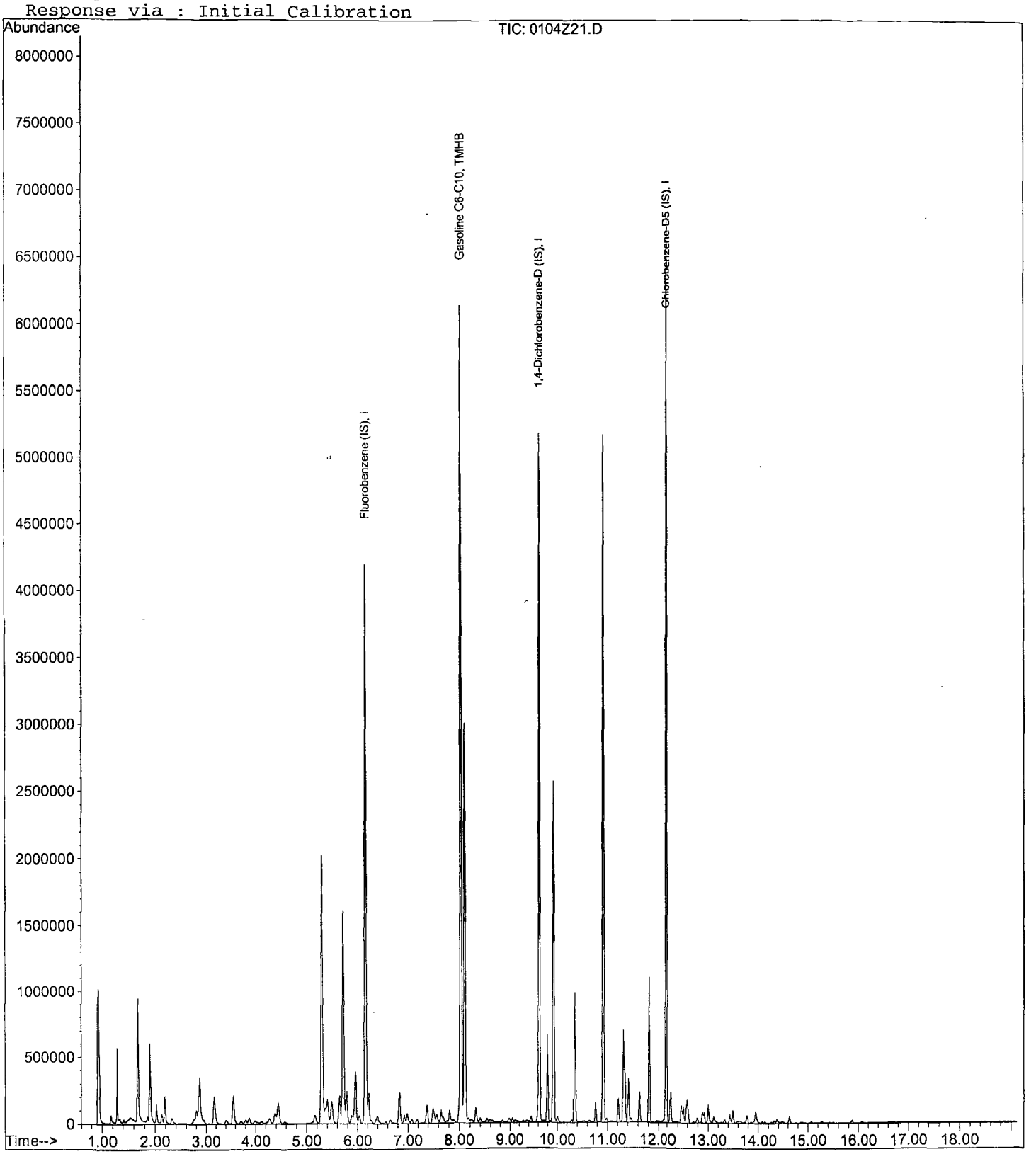
(#) = qualifier out of range (m) = manual integration
0104Z21.D ZGAS0104.M Thu Jan 07 11:06:00 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210104\0104Z21.D Vial: 21
Acq On : 04 Jan 21 23:36 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/4/20 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 7 9:34 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210104\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0122Z02.D	0122Z03 D	0122Z04 D	0122Z05.D	0122Z06.D	0122Z07.D	0122Z08 D	0122Z09.D	0122Z10.D		Avg	%RSD	Type	r^2	Q	MRF
			1	2	3	4	5	6	7	8	9							
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.2042	0.1973	0.2437	0.2443	0.2769	0.2816	0.3016	0.2962	0.2909		0.26	15	TM			
3	S	1,2-DCA-D4(S)	0.1839	0.1845	0.2212	0.2200	0.2521	0.2518	0.2666	0.2602	0.2565		0.23	14	TM			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.8880	0.8878	1.100	1.091	1.216	1.217	1.274	1.279	1.200		1.1	13	TM**			
6	SL	4-Bromofluorobenzene(S)	0.2949	0.2947	0.3733	0.3719	0.4276	0.4297	0.4509	0.4560	0.4845		0.40	17	TM*	0.999		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
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34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z02.D Vial: 2
Acq On : 22 Jan 21 09:53 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3432041	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2860621	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1074176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.29	111	140190	3.93	ppb	0.00
Spiked Amount 25.000			Recovery =	15.732%		
3) 1,2-DCA-D4(S)	5.71	65	126233	3.95	ppb	0.00
Spiked Amount 25.000			Recovery =	15.788%		
5) Toluene-D8(S)	8.03	98	508027	3.94	ppb	0.00
Spiked Amount 25.000			Recovery =	15.744%		
6) 4-Bromofluorobenzene(S)	10.91	95	168719	5.71	ppb	0.00
Spiked Amount 25.000			Recovery =	22.860%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

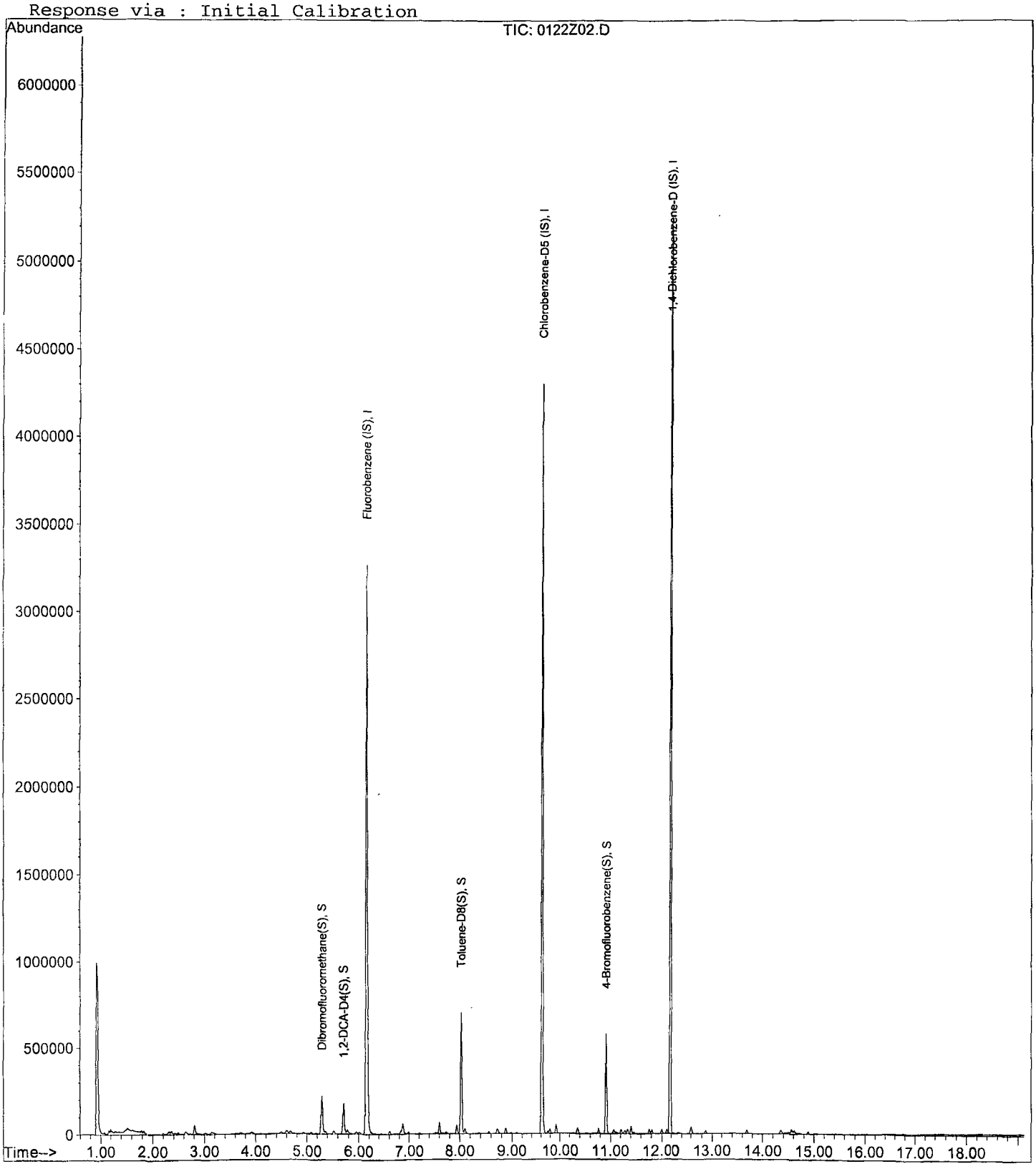
Data File : M:\ZEUS\DATA\210122\0122Z02.D
Acq On : 22 Jan 21 09:53
Sample : 0.3ug/L VOC STD1/22/21
Misc :

Vial: 2
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:22 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z03.D Vial: 3
Acq On : 22 Jan 21 10:16 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3468853	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2870932	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1079808	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	136869	3.80	ppb	0.00
Spiked Amount 25.000			Recovery =	15.196%		
3) 1,2-DCA-D4(S)	5.71	65	127981	3.96	ppb	0.00
Spiked Amount 25.000			Recovery =	15.836%		
5) Toluene-D8(S)	8.03	98	509770	3.94	ppb	0.00
Spiked Amount 25.000			Recovery =	15.740%		
6) 4-Bromofluorobenzene(S)	10.91	95	169193	5.71	ppb	0.00
Spiked Amount 25.000			Recovery =	22.848%		

Target Compounds Qvalue

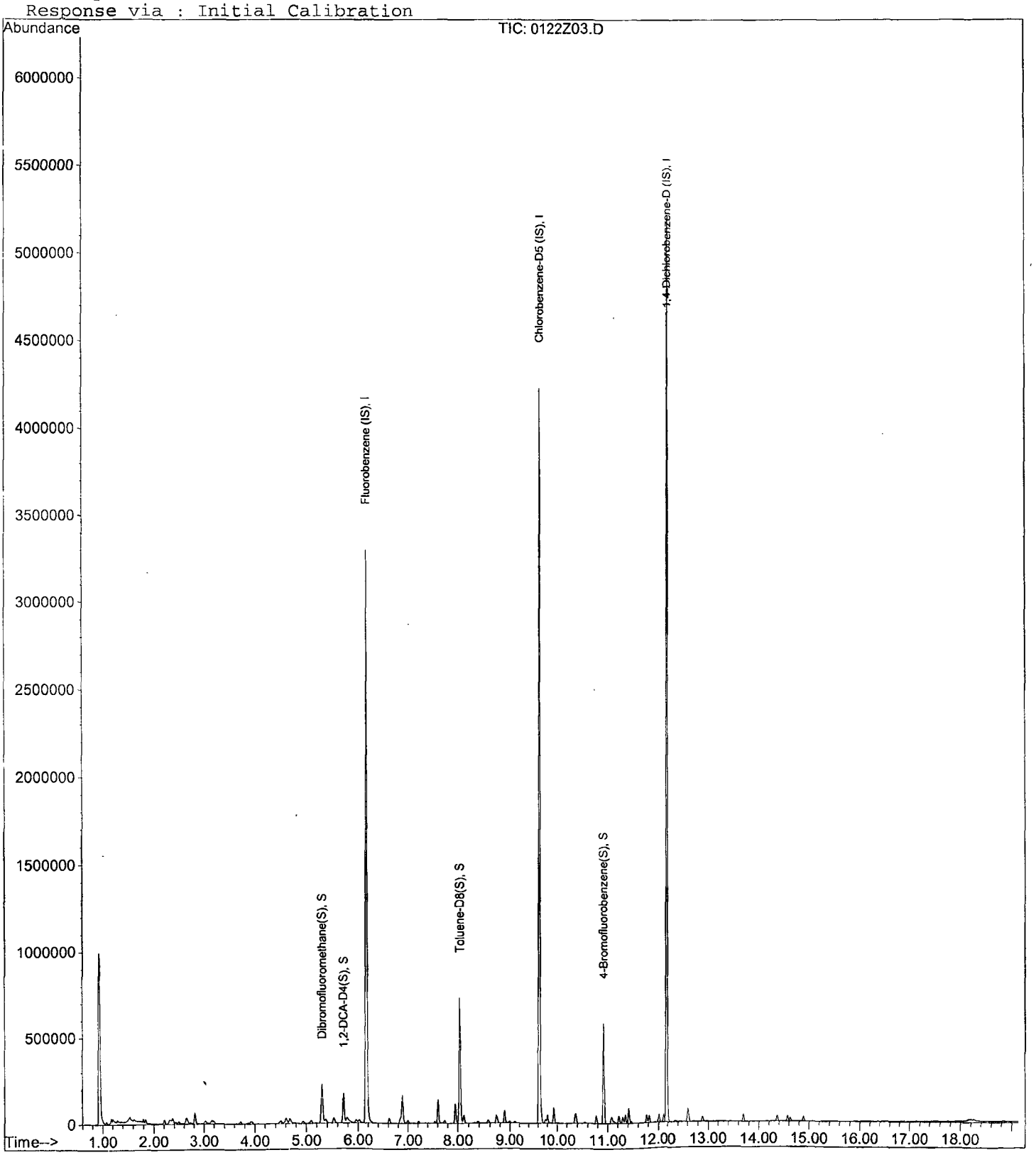
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z03.D Vial: 3
Acq On : 22 Jan 21 10:16 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:22 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z04.D Vial: 4
Acq On : 22 Jan 21 10:39 Operator: LP,DG,CH
Sample : 1ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3441972	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2823876	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1097216	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	335581	9.39	ppb	0.00
Spiked Amount 25.000			Recovery =	37.548%		
3) 1,2-DCA-D4(S)	5.71	65	304572	9.50	ppb	0.00
Spiked Amount 25.000			Recovery =	37.980%		
5) Toluene-D8(S)	8.03	98	1242251	9.75	ppb	0.00
Spiked Amount 25.000			Recovery =	39.000%		
6) 4-Bromofluorobenzene(S)	10.92	95	421693	10.31	ppb	0.00
Spiked Amount 25.000			Recovery =	41.240%		

Target Compounds Qvalue

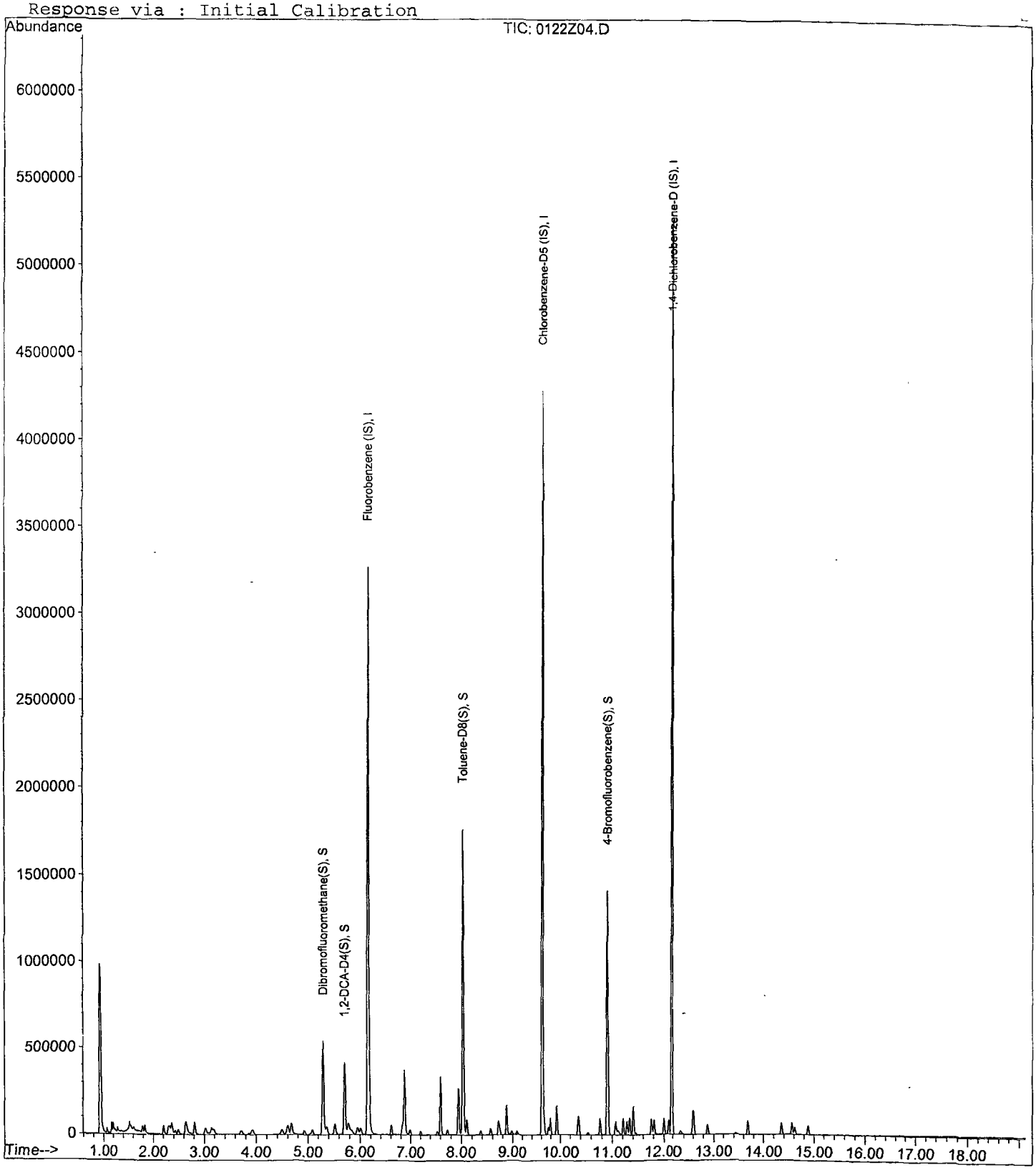
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z04.D
Acq On : 22 Jan 21 10:39
Sample : 1ug/L VOC STD1/22/21
Misc :

Vial: 4
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z05.D Vial: 5
Acq On : 22 Jan 21 11:02 Operator: LP,DG,CH
Sample : 2ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3451525	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2841135	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1075200	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	337282	9.41	ppb	0.00
Spiked Amount 25.000			Recovery =	37.636%		
3) 1,2-DCA-D4(S)	5.71	65	303742	9.44	ppb	0.00
Spiked Amount 25.000			Recovery =	37.772%		
5) Toluene-D8(S)	8.03	98	1239876	9.67	ppb	0.00
Spiked Amount 25.000			Recovery =	38.688%		
6) 4-Bromofluorobenzene(S)	10.91	95	422667	10.28	ppb	0.00
Spiked Amount 25.000			Recovery =	41.124%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

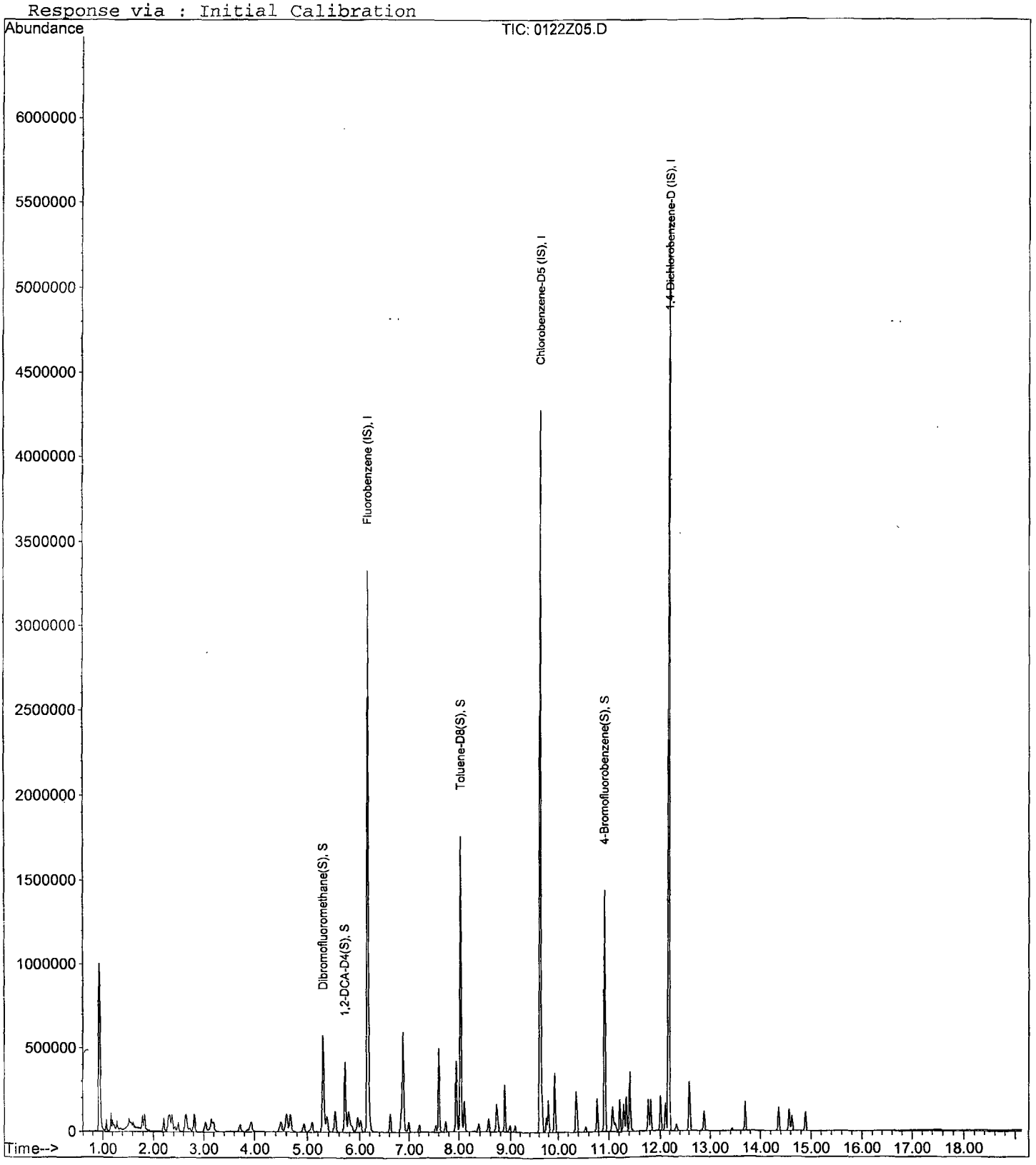
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z05.D
Acq On : 22 Jan 21 11:02
Sample : 2ug/L VOC STD1/22/21
Misc :

Vial: 5
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3550375	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2920207	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1120256	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	983240	26.66	ppb	0.00
Spiked Amount 25.000			Recovery = 106.660%			
3) 1,2-DCA-D4(S)	5.71	65	894975	27.05	ppb	0.00
Spiked Amount 25.000			Recovery = 108.196%			
5) Toluene-D8(S)	8.03	98	3549867	26.94	ppb	0.00
Spiked Amount 25.000			Recovery = 107.768%			
6) 4-Bromofluorobenzene(S)	10.92	95	1248589	24.46	ppb	0.00
Spiked Amount 25.000			Recovery = 97.844%			

Target Compounds Qvalue

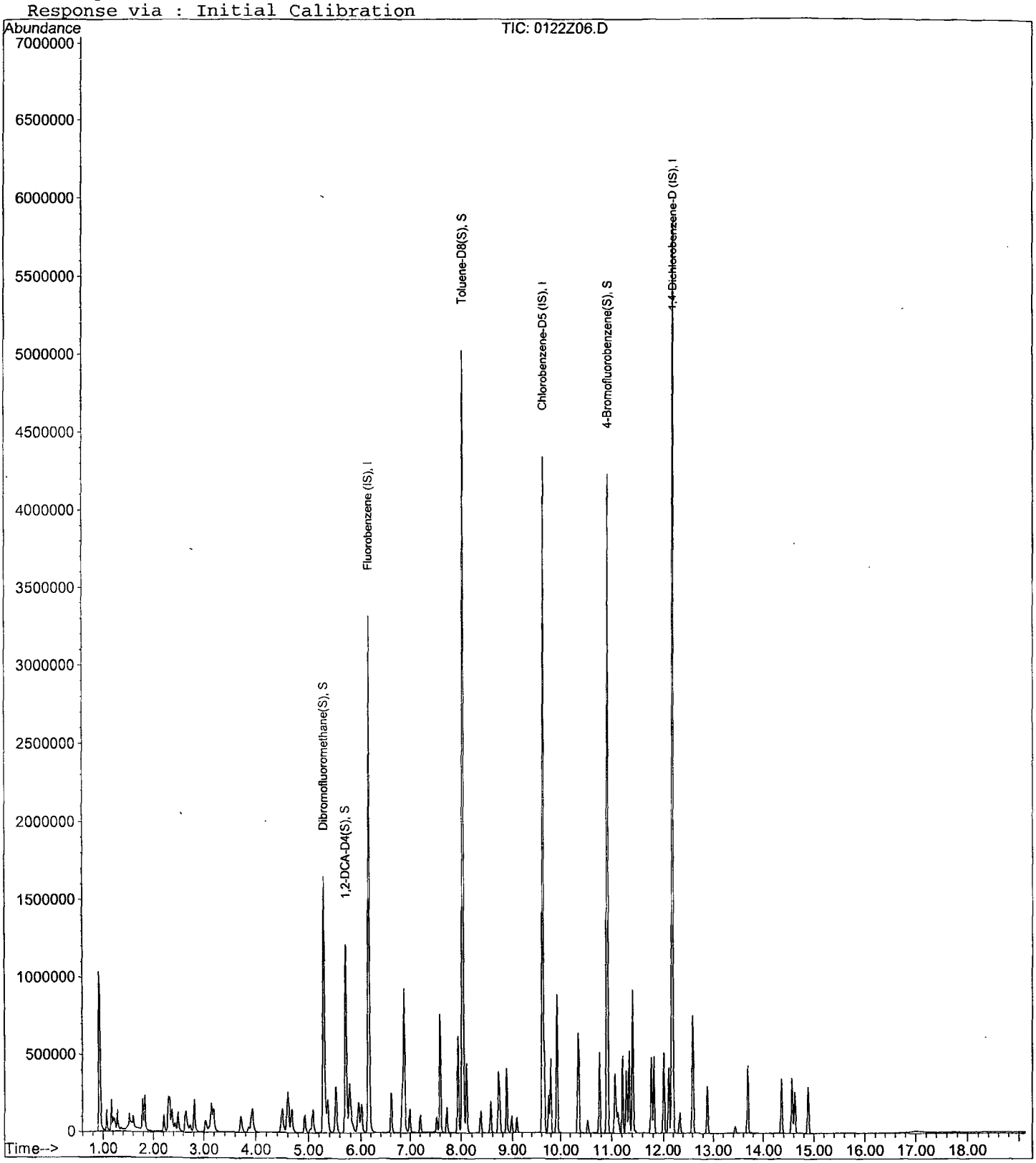
(#) = qualifier out of range (m) = manual integration
0122Z06.D Z0122SUR.M Thu Jan 28 15:25:54 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z06.D Vial: 6
Acq On : 22 Jan 21 11:25 Operator: LP,DG,CH
Sample : 5ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3548403	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2918486	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1061376	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	999397	27.12	ppb	0.00
Spiked Amount 25.000			Recovery =	108.472%		
3) 1,2-DCA-D4(S)	5.71	65	893634	27.02	ppb	0.00
Spiked Amount 25.000			Recovery =	108.096%		
5) Toluene-D8(S)	8.03	98	3551875	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.892%		
6) 4-Bromofluorobenzene(S)	10.91	95	1254055	24.57	ppb	0.00
Spiked Amount 25.000			Recovery =	98.276%		

Target Compounds Qvalue

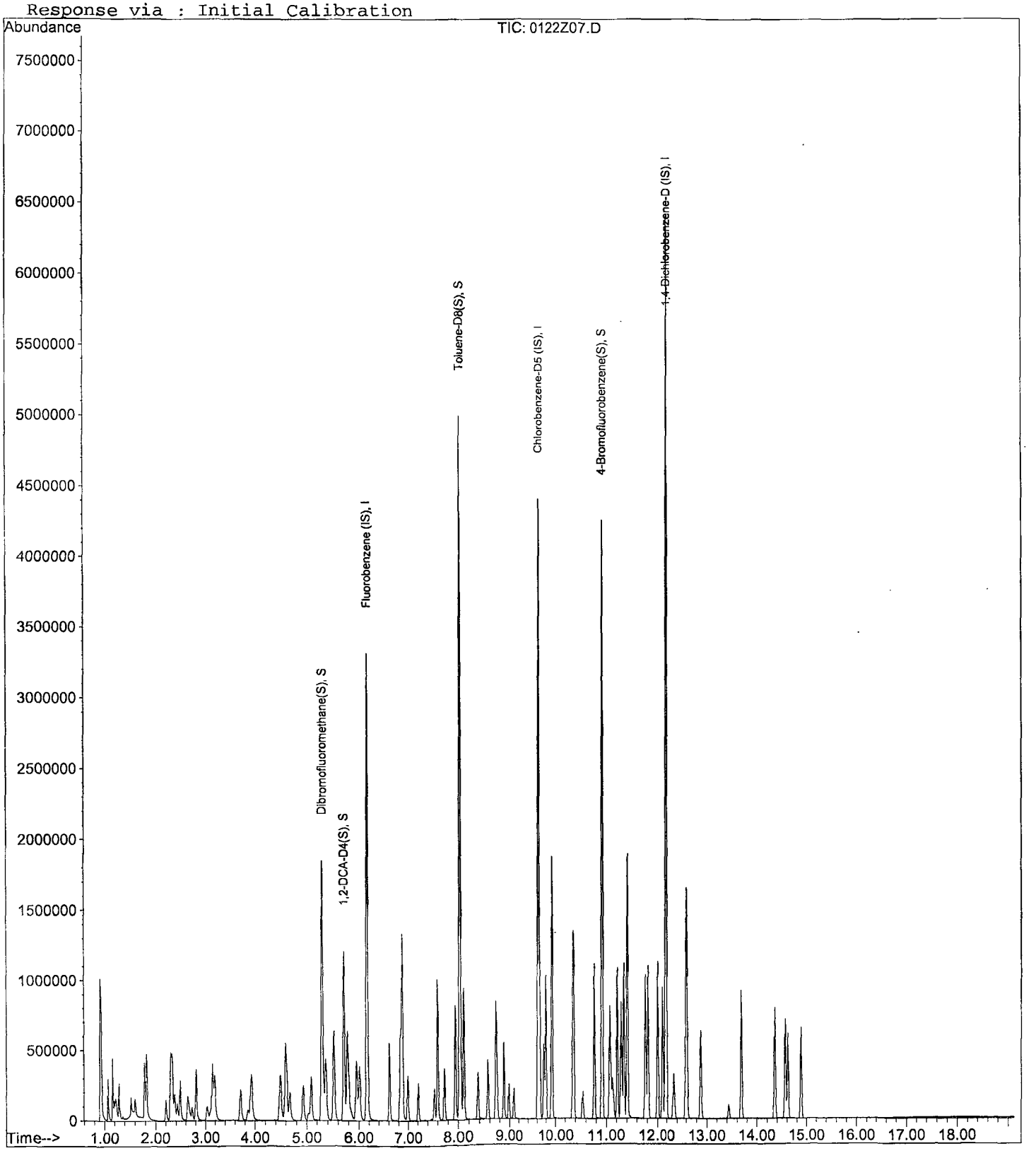
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z07.D Vial: 7
Acq On : 22 Jan 21 11:48 Operator: LP,DG,CH
Sample : 10ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z08.D Vial: 8
Acq On : 22 Jan 21 12:11 Operator: LP,DG,CH
Sample : 20ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3674138	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3010041	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1147904	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2216386	58.08	ppb	0.00
Spiked Amount 25.000			Recovery =	232.328%		
3) 1,2-DCA-D4(S)	5.71	65	1958969	57.21	ppb	0.00
Spiked Amount 25.000			Recovery =	228.852%		
5) Toluene-D8(S)	8.03	98	7667888	56.46	ppb	0.00
Spiked Amount 25.000			Recovery =	225.840%		
6) 4-Bromofluorobenzene(S)	10.92	95	2714572	48.58	ppb	0.00
Spiked Amount 25.000			Recovery =	194.332%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

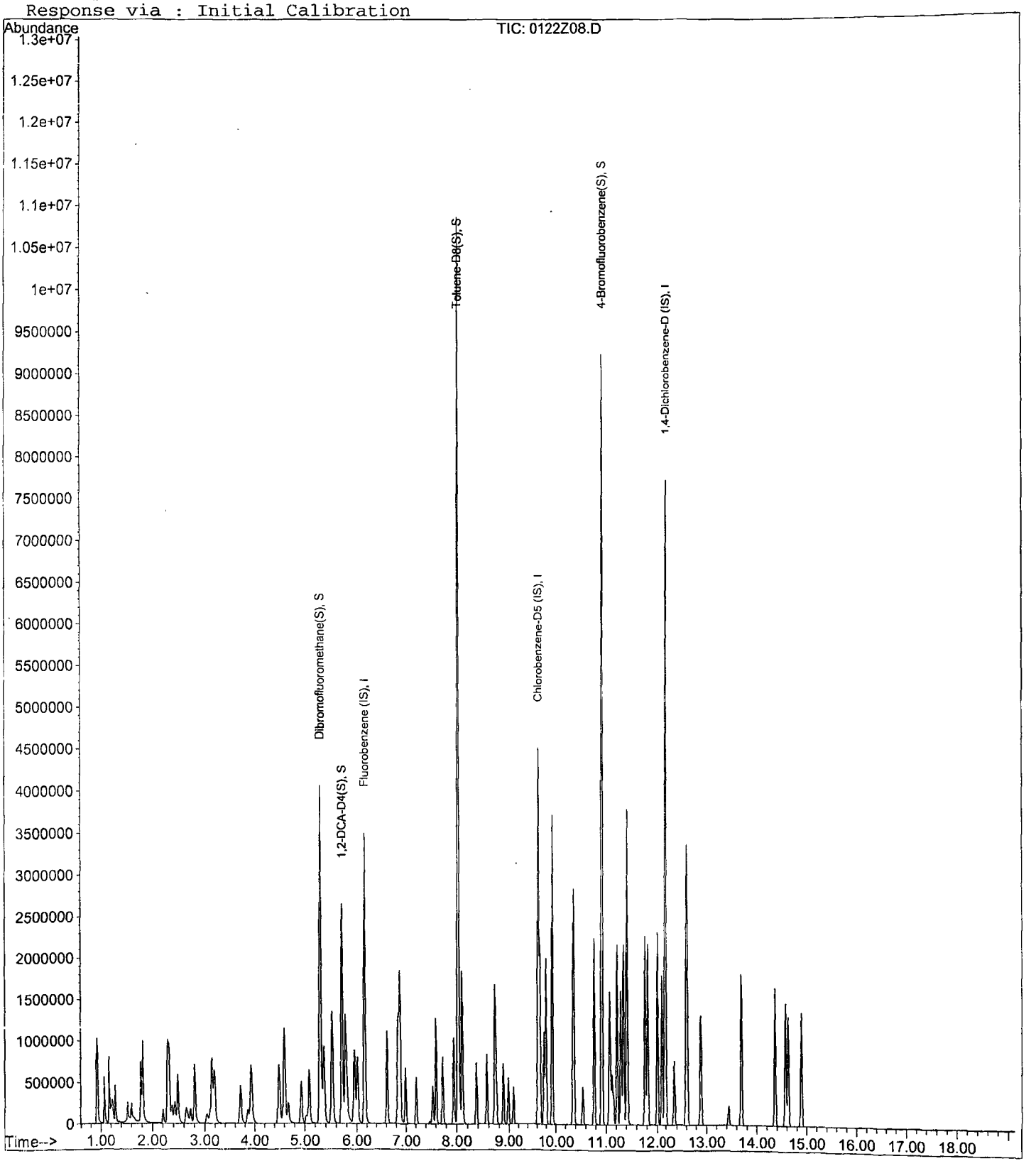
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z08.D
Acq On : 22 Jan 21 12:11
Sample : 20ug/L VOC STD1/22/21
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z09.D Vial: 9
Acq On : 22 Jan 21 12:34 Operator: LP,DG,CH
Sample : 40ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3879780	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3107472	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1167872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2298360	57.04	ppb	0.00
Spiked Amount 25.000			Recovery = 228.152%			
3) 1,2-DCA-D4(S)	5.71	65	2018939	55.84	ppb	0.00
Spiked Amount 25.000			Recovery = 223.356%			
5) Toluene-D8(S)	8.03	98	7951610	56.71	ppb	0.00
Spiked Amount 25.000			Recovery = 226.852%			
6) 4-Bromofluorobenzene(S)	10.92	95	2833768	49.10	ppb	0.00
Spiked Amount 25.000			Recovery = 196.380%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

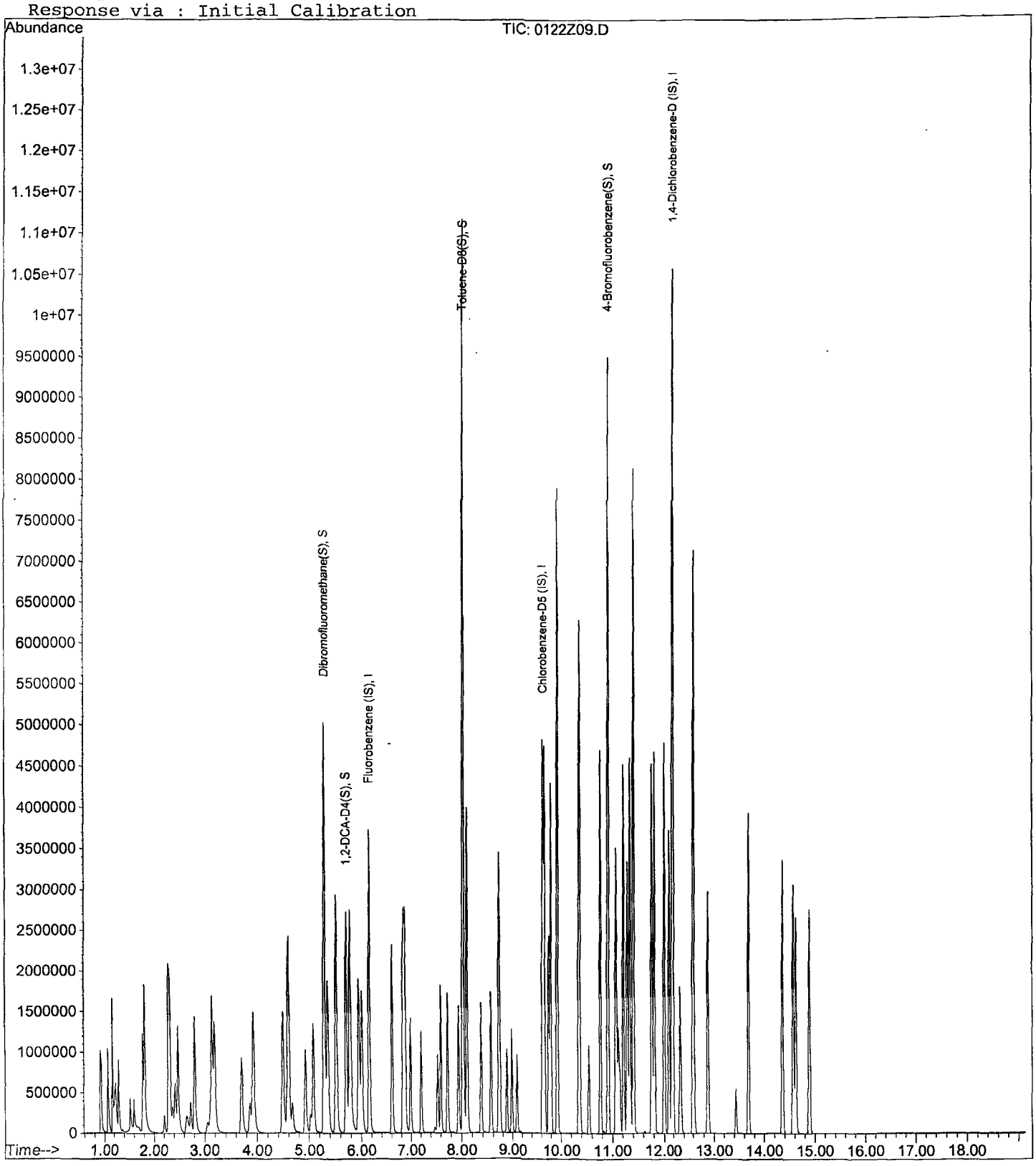
Data File : M:\ZEUS\DATA\210122\0122Z09.D
Acq On : 22 Jan 21 12:34
Sample : 40ug/L VOC STD1/22/21
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z10.D Vial: 10
Acq On : 22 Jan 21 12:57 Operator: LP,DG,CH
Sample : 100ug/L VOC STD1/22/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	4214967	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3349419	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1279488	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	4904364	112.03	ppb	0.00
Spiked Amount 25.000			Recovery =	448.124%		
3) 1,2-DCA-D4(S)	5.71	65	4324969	110.11	ppb	0.00
Spiked Amount 25.000			Recovery =	440.424%		
5) Toluene-D8(S)	8.03	98	16070583	106.34	ppb	0.00
Spiked Amount 25.000			Recovery =	425.364%		
6) 4-Bromofluorobenzene(S)	10.92	95	6490594	101.27	ppb	0.00
Spiked Amount 25.000			Recovery =	405.092%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

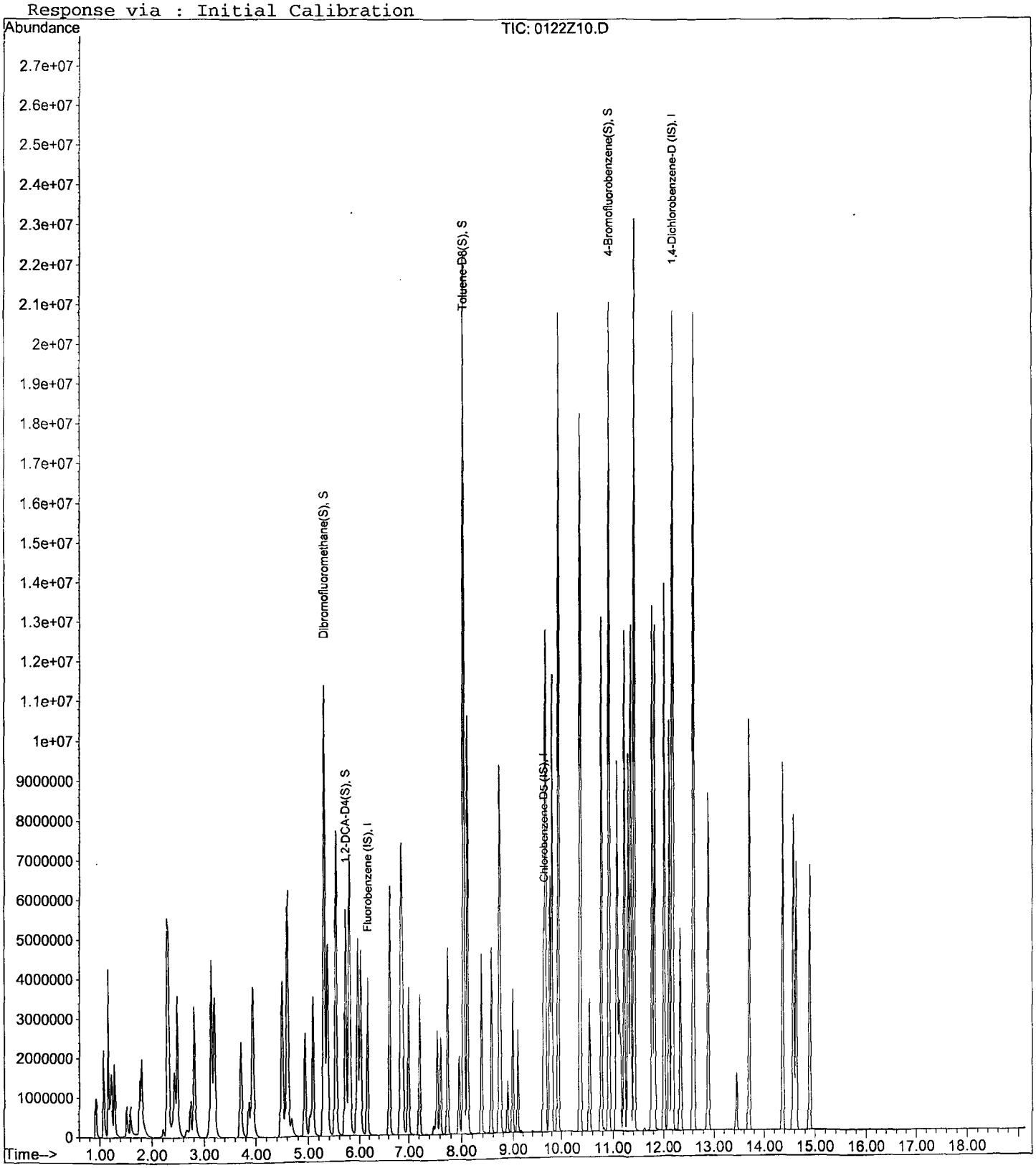
Data File : M:\ZEUS\DATA\210122\0122Z10.D
Acq On : 22 Jan 21 12:57
Sample : 100ug/L VOC STD1/22/21
Misc :

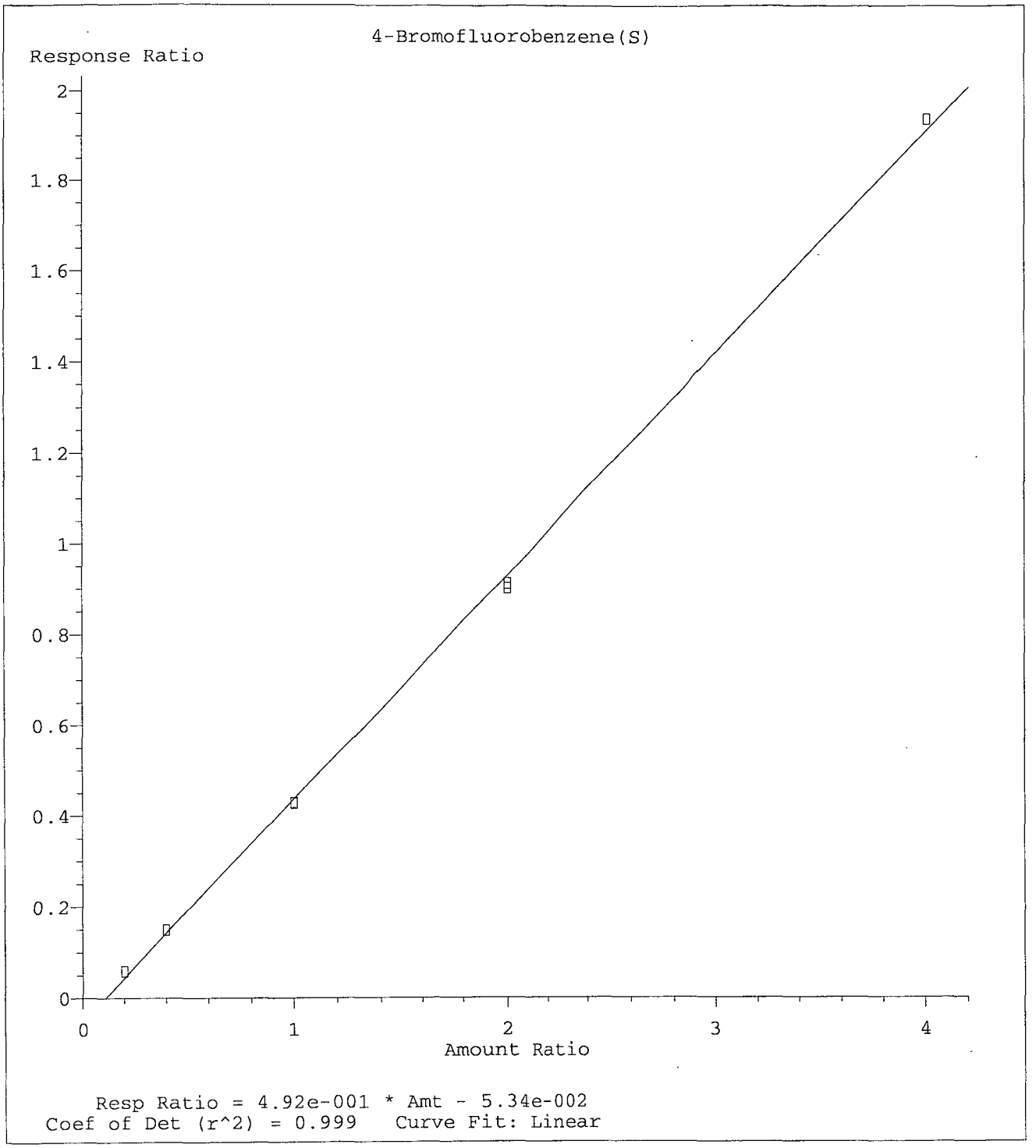
Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:23 2021

Quant Results File: Z0122SUR.RES

Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210122\Z0122SUR.M
Calibration Table Last Updated: Mon Jan 25 09:03:18 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0122Z15.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.467	64	TMHBL	6.5
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/22/21
Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z15.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2597	0.2770	6.7	S	
3	S	1,2-DCA-D4(S)	0.2330	0.2536	8.9	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.128	1.224	8.5	S	
6	SL	4-Bromofluorobenzene(S)	0.3982	0.4295	7.9	SL	1.8
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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		Average			8.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z15.D Vial: 15
Acq On : 22 Jan 21 14:52 Operator: LP,DG,CH
Sample : 210122A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3590724	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5456592	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4553260	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63229426m	280.55	ppb	100

(#) = qualifier out of range (m) = manual integration
0122Z15.D ZGAS0104.M Thu Jan 28 15:18:02 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z15.D Vial: 15
Acq On : 22 Jan 21 14:52 Operator: LP,DG,CH
Sample : 210122A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3757887	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2970410	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1123840	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1041055	26.67	ppb	0.00
Spiked Amount 25.000			Recovery = 106.696%			
3) 1,2-DCA-D4(S)	5.71	65	953022	27.21	ppb	0.00
Spiked Amount 25.000			Recovery = 108.852%			
5) Toluene-D8(S)	8.03	98	3634545	27.12	ppb	0.00
Spiked Amount 25.000			Recovery = 108.476%			
6) 4-Bromofluorobenzene(S)	10.92	95	1275909	24.56	ppb	0.00
Spiked Amount 25.000			Recovery = 98.244%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

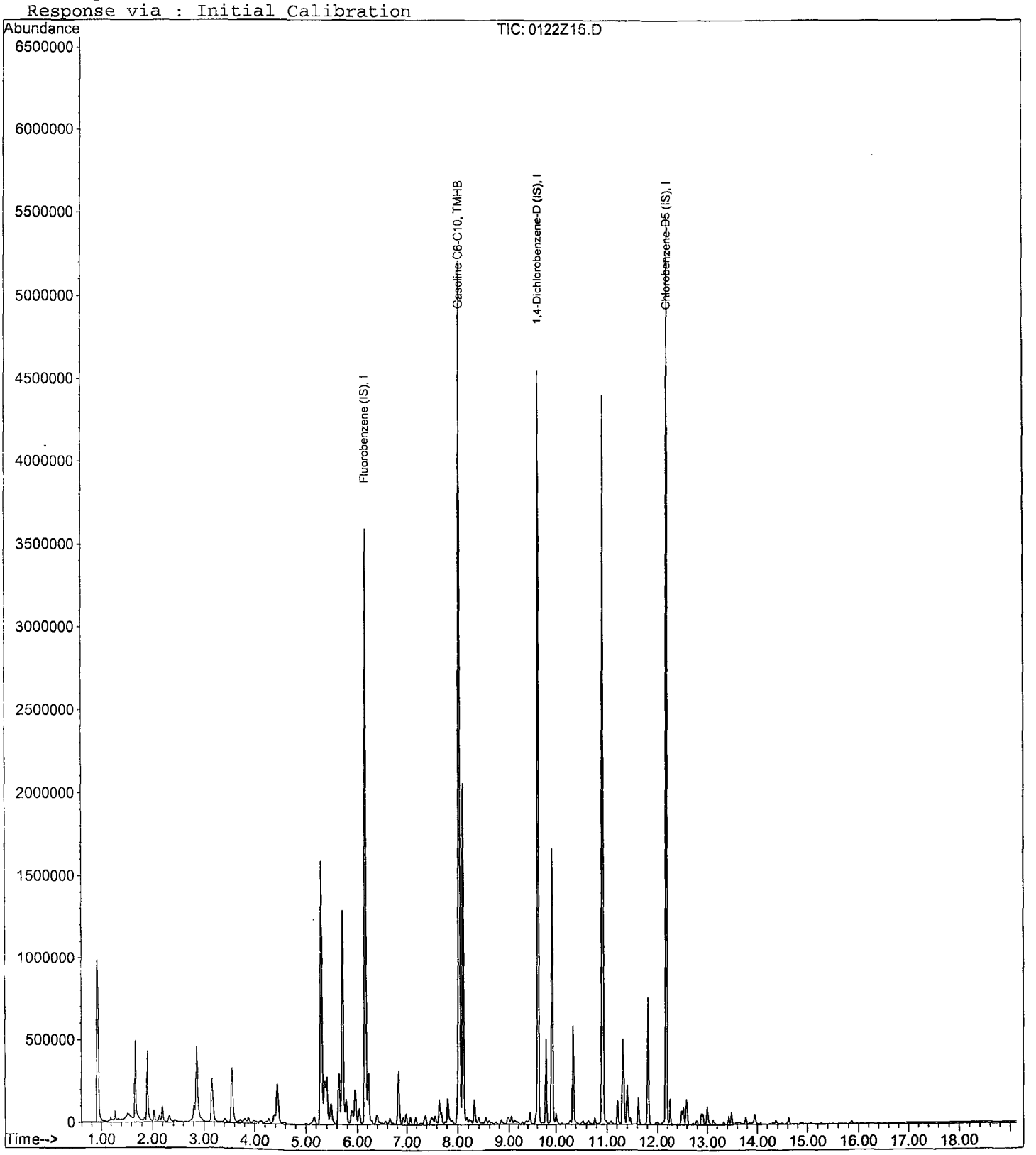
Data File : M:\ZEUS\DATA\210122\0122Z15.D
Acq On : 22 Jan 21 14:52
Sample : 210122A CCV 300ug/L
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:13 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Initial Cal. Date: 01/04/21
Data File: 0122Z40.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.032	1.466	64	TMHBL	6.7
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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37							
38							
39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/23/21
Instrument: ZEUS
Initial Cal. Date: 01/22/21
Data File: 0122Z40.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2597	0.2874	11	S	
3	S	1,2-DCA-D4(S)	0.2330	0.2627	13	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.128	1.266	12	S	
6	SL	4-Bromofluorobenzene(S)	0.3982	0.4473	12	SL	1.9
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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10							
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12							
13							
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39							
40							
		Average			12.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z40.D Vial: 40
Acq On : 23 Jan 21 00:27 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3088761	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4869110	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3879433	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	54345196m	279.96	ppb	100

(#) = qualifier out of range (m) = manual integration
0122Z40.D ZGAS0104.M Thu Jan 28 15:18:09 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z40.D Vial: 40
Acq On : 23 Jan 21 00:27 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3247021	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2645146	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	997056	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	933042	27.67	ppb	0.00
Spiked Amount 25.000			Recovery =	110.668%		
3) 1,2-DCA-D4(S)	5.71	65	852882	28.19	ppb	0.00
Spiked Amount 25.000			Recovery =	112.740%		
5) Toluene-D8(S)	8.03	98	3350049	28.07	ppb	0.00
Spiked Amount 25.000			Recovery =	112.280%		
6) 4-Bromofluorobenzene(S)	10.92	95	1183253	25.47	ppb	0.00
Spiked Amount 25.000			Recovery =	101.864%		

Target Compounds Qvalue

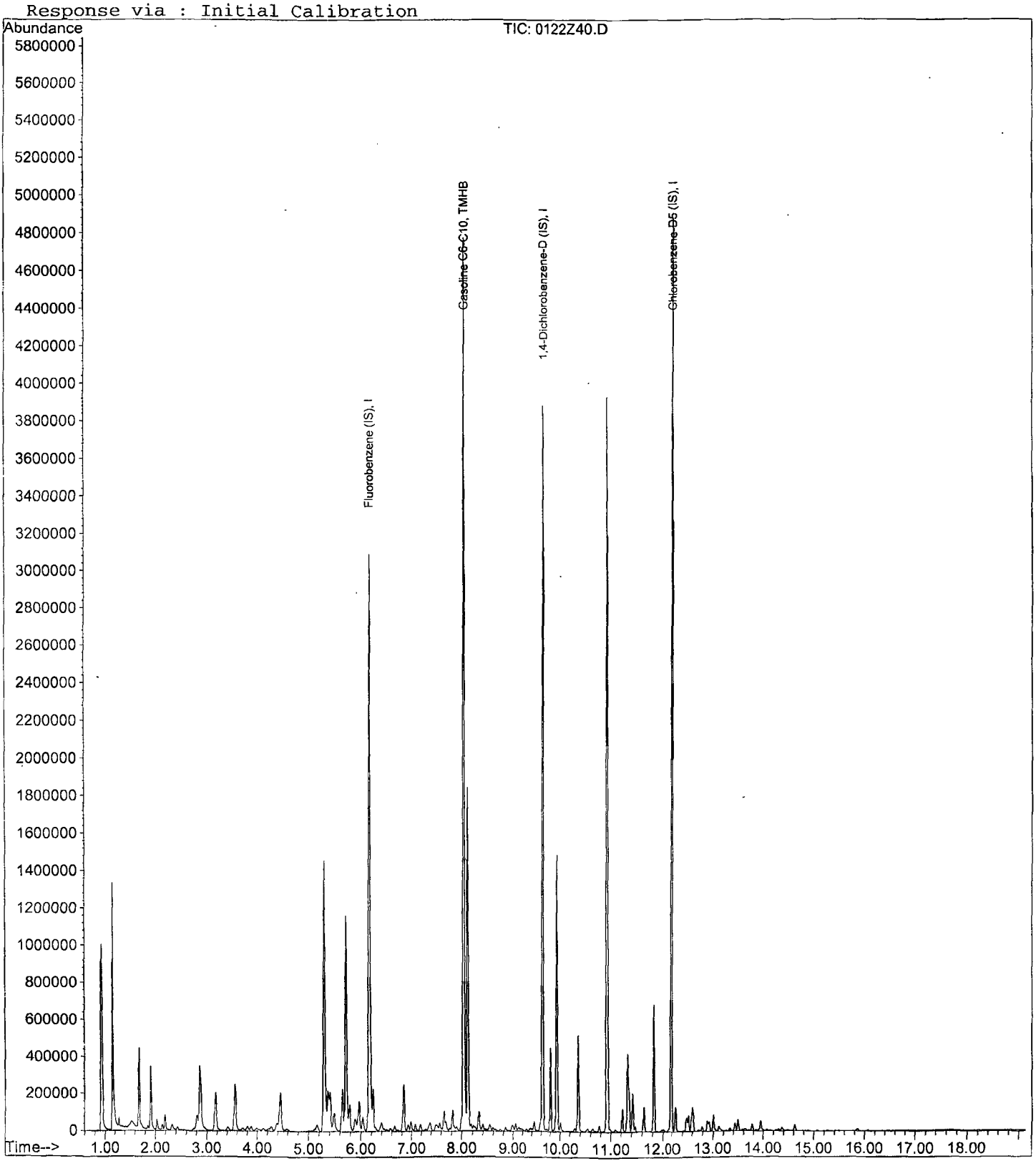
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z40.D Vial: 40
Acq On : 23 Jan 21 00:27 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/21/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z21.D Vial: 21
Acq On : 22 Jan 21 17:10 Operator: LP,DG,CH
Sample : BA25528W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3122762	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5005688	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4076164	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z21.D Vial: 21
Acq On : 22 Jan 21 17:10 Operator: LP,DG,CH
Sample : BA25528W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3272343	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2702725	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1046336	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	930733	27.39	ppb	0.00
Spiked Amount 25.000			Recovery =	109.540%		
3) 1,2-DCA-D4(S)	5.71	65	853873	28.00	ppb	0.00
Spiked Amount 25.000			Recovery =	112.000%		
5) Toluene-D8(S)	8.03	98	3229713	26.48	ppb	0.00
Spiked Amount 25.000			Recovery =	105.940%		
6) 4-Bromofluorobenzene(S)	10.92	95	1141241	24.19	ppb	0.00
Spiked Amount 25.000			Recovery =	96.764%		

Target Compounds Qvalue

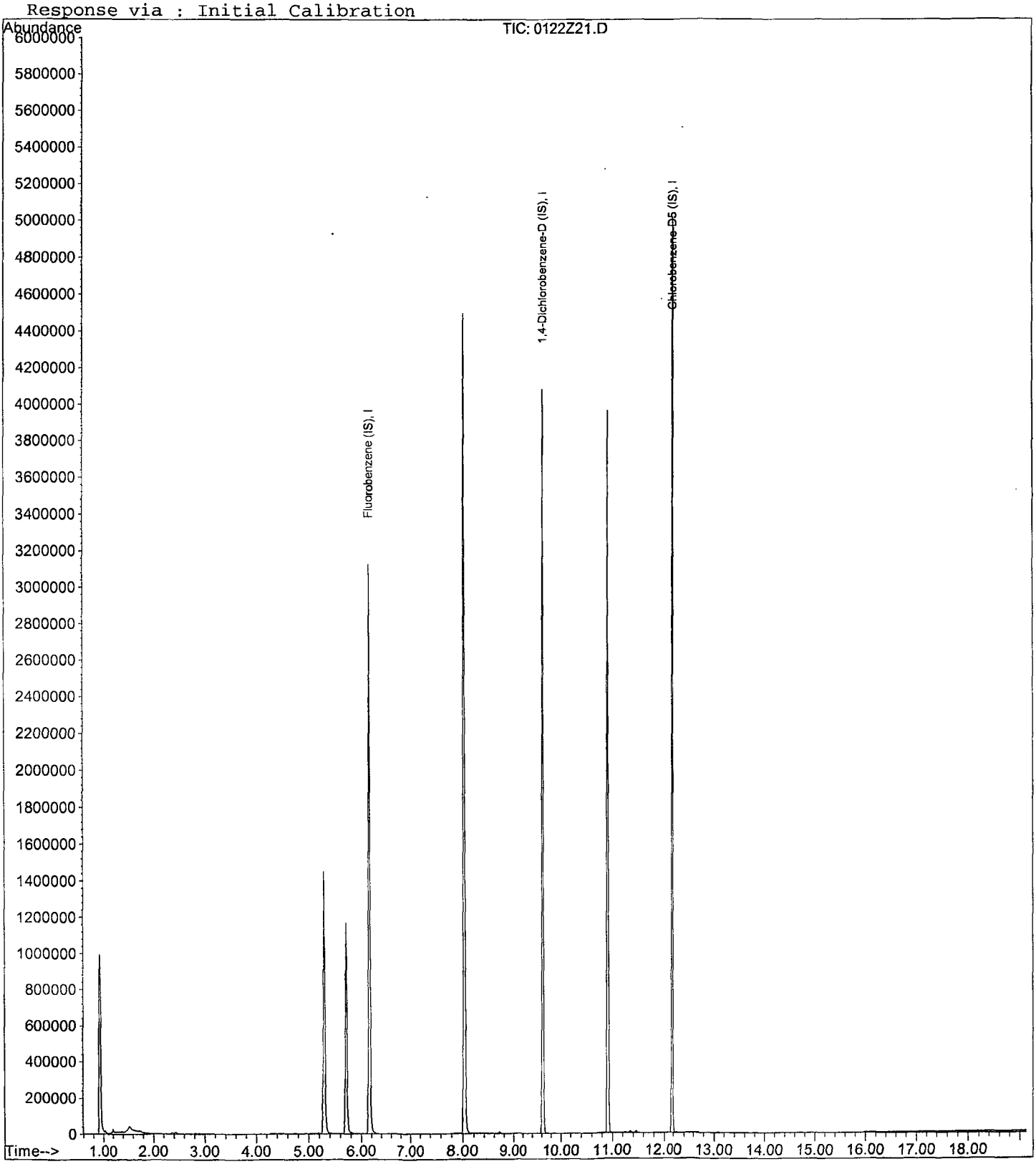
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z21.D Vial: 21
Acq On : 22 Jan 21 17:10 Operator: LP,DG,CH
Sample : BA25528W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z22.D Vial: 22
Acq On : 22 Jan 21 17:33 Operator: LP,DG,CH
Sample : BA25529W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3111670	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4941419	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3941867	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z22.D Vial: 22
Acq On : 22 Jan 21 17:33 Operator: LP,DG,CH
Sample : BA25529W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3229984	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2691600	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1032512	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	942926	28.11	ppb	0.00
Spiked Amount 25.000			Recovery =	112.432%		
3) 1,2-DCA-D4(S)	5.71	65	872086	28.97	ppb	0.00
Spiked Amount 25.000			Recovery =	115.888%		
5) Toluene-D8(S)	8.03	98	3268996	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.672%		
6) 4-Bromofluorobenzene(S)	10.91	95	1173603	24.89	ppb	0.00
Spiked Amount 25.000			Recovery =	99.564%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

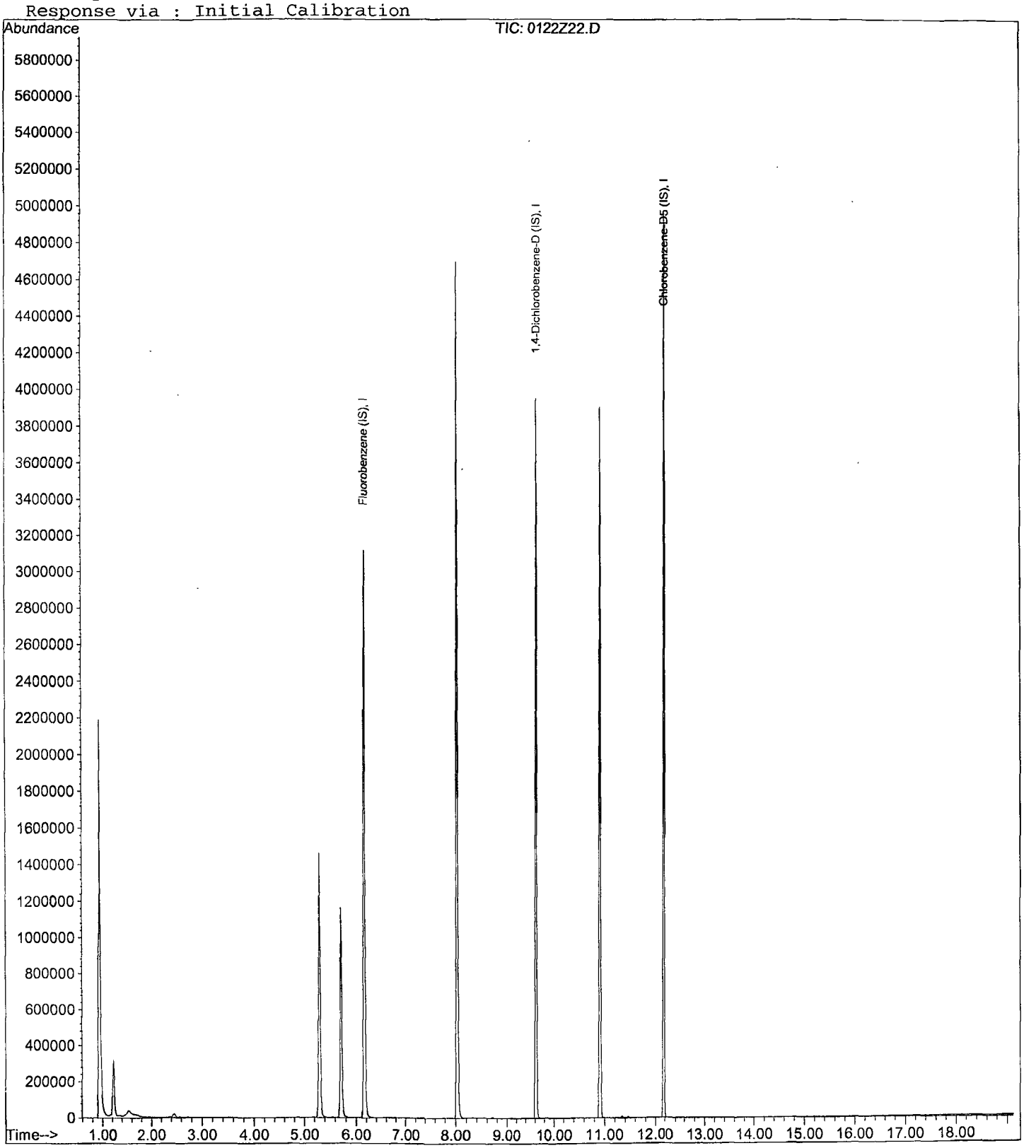
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z22.D
Acq On : 22 Jan 21 17:33
Sample : BA25529W01
Misc :

Vial: 22
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z23.D Vial: 23
Acq On : 22 Jan 21 17:56 Operator: LP,DG,CH
Sample : BA25531W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3137909	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5012806	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4035777	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z23.D Vial: 23
Acq On : 22 Jan 21 17:56 Operator: LP,DG,CH
Sample : BA25531W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3272892	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2718574	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024896	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	952335	28.02	ppb	0.00
Spiked Amount 25.000			Recovery =	112.064%		
3) 1,2-DCA-D4(S)	5.71	65	877720	28.78	ppb	0.00
Spiked Amount 25.000			Recovery =	115.108%		
5) Toluene-D8(S)	8.03	98	3293388	26.85	ppb	0.00
Spiked Amount 25.000			Recovery =	107.400%		
6) 4-Bromofluorobenzene(S)	10.91	95	1172420	24.65	ppb	0.00
Spiked Amount 25.000			Recovery =	98.596%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

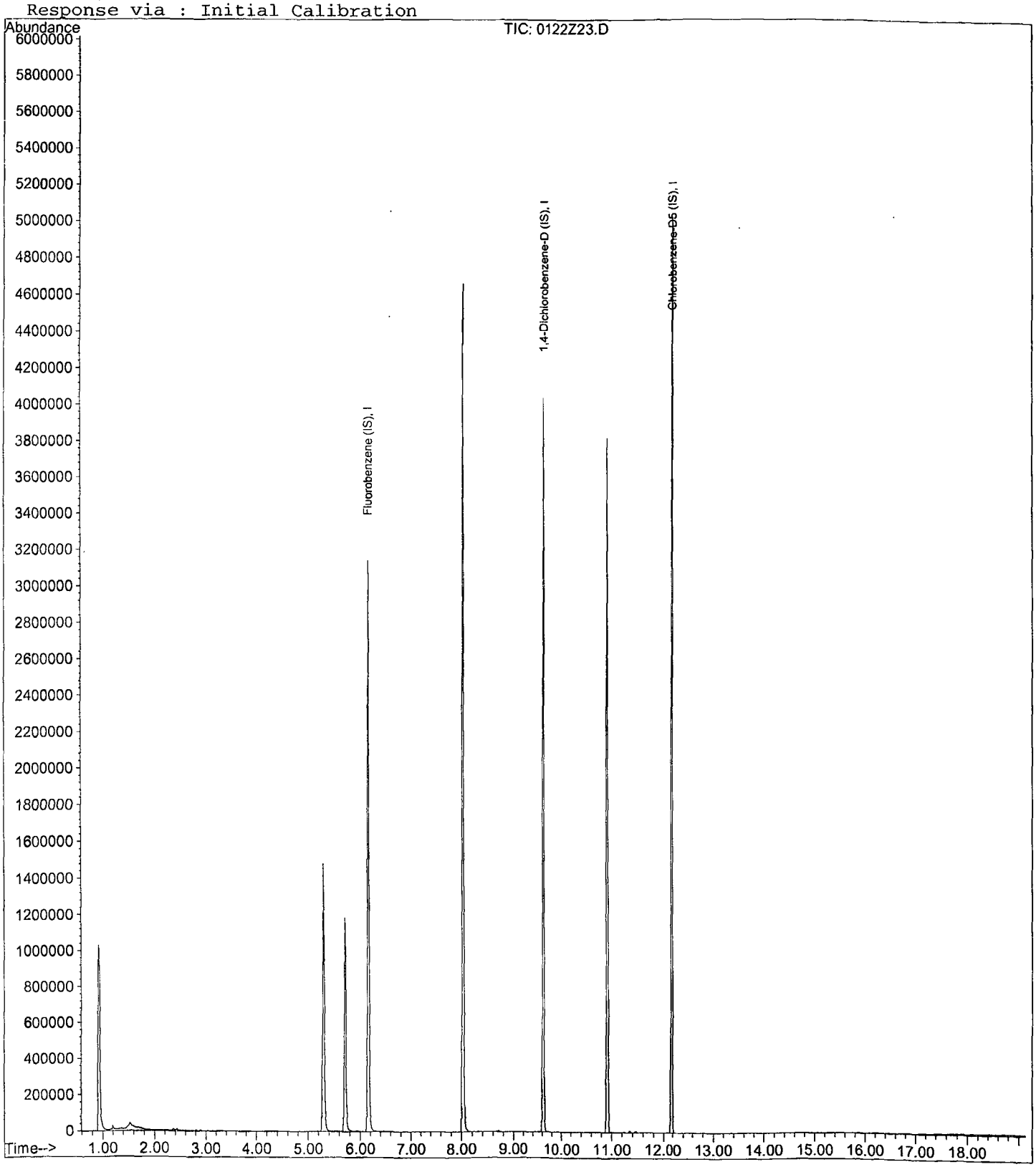
Data File : M:\ZEUS\DATA\210122\0122Z23.D
Acq On : 22 Jan 21 17:56
Sample : BA25531W01
Misc :

Vial: 23
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z24.D
Acq On : 22 Jan 21 18:19
Sample : BA25532W01
Misc :

Vial: 24
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3020723	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4775146	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3977123	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0122Z24.D ZGAS0104.M Thu Jan 28 15:32:59 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z24.D Vial: 24
Acq On : 22 Jan 21 18:19 Operator: LP,DG,CH
Sample : BA25532W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3195990	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2654488	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	979840	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	930793	28.04	ppb	0.00
Spiked Amount 25.000			Recovery =	112.164%		
3) 1,2-DCA-D4(S)	5.71	65	853521	28.66	ppb	0.00
Spiked Amount 25.000			Recovery =	114.628%		
5) Toluene-D8(S)	8.03	98	3225012	26.93	ppb	0.00
Spiked Amount 25.000			Recovery =	107.708%		
6) 4-Bromofluorobenzene(S)	10.91	95	1146061	24.67	ppb	0.00
Spiked Amount 25.000			Recovery =	98.696%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

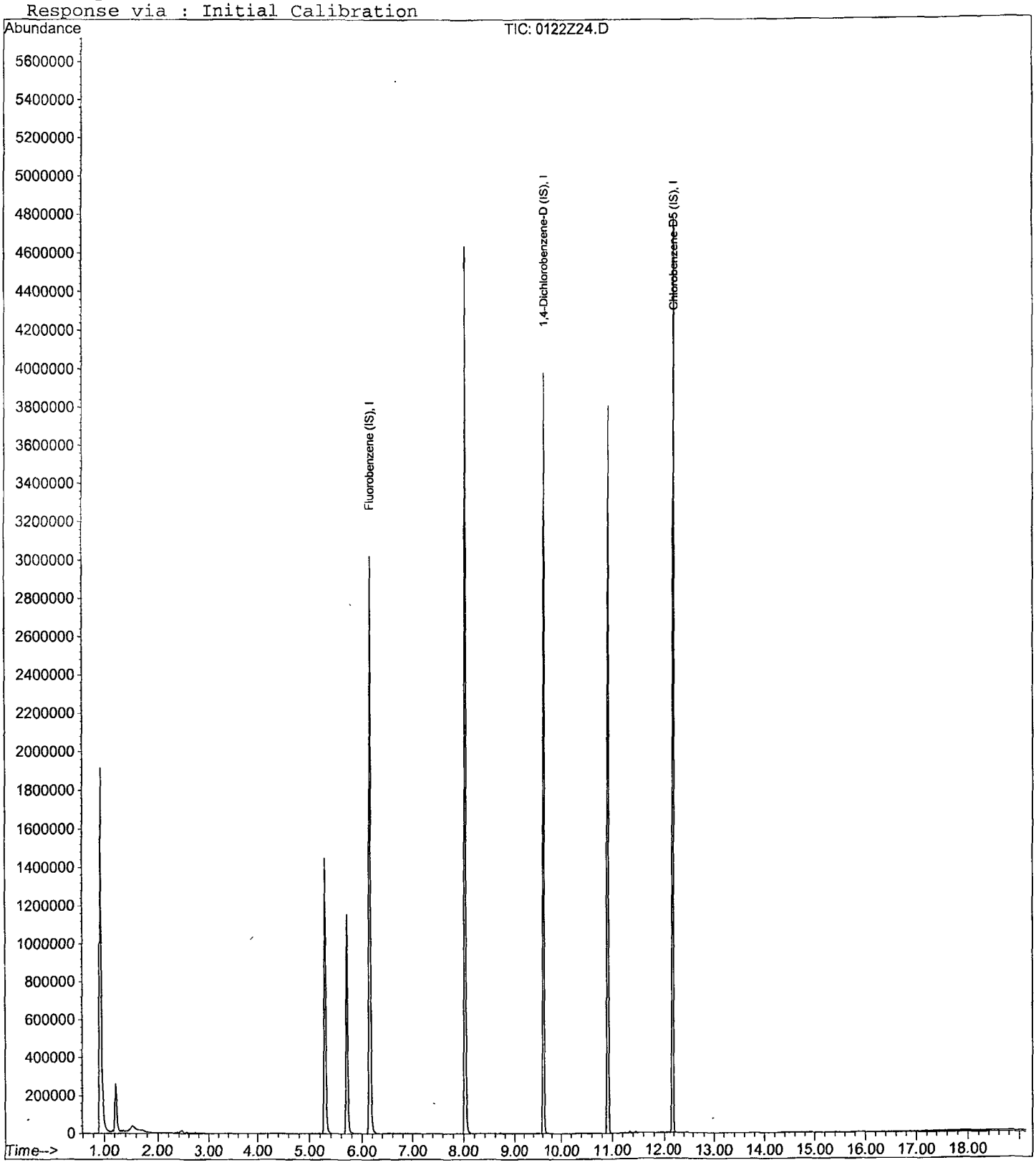
Data File : M:\ZEUS\DATA\210122\0122Z24.D
Acq On : 22 Jan 21 18:19
Sample : BA25532W01
Misc :

Vial: 24
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021

Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z25.D
Acq On : 22 Jan 21 18:42
Sample : BA25534W01
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3033165	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4887449	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3953187	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z25.D Vial: 25
Acq On : 22 Jan 21 18:42 Operator: LP,DG,CH
Sample : BA25534W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3184846	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2640978	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1008000	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	918485	27.77	ppb	0.00
Spiked Amount 25.000			Recovery =	111.068%		
3) 1,2-DCA-D4(S)	5.71	65	848961	28.60	ppb	0.00
Spiked Amount 25.000			Recovery =	114.416%		
5) Toluene-D8(S)	8.03	98	3201489	26.87	ppb	0.00
Spiked Amount 25.000			Recovery =	107.468%		
6) 4-Bromofluorobenzene(S)	10.91	95	1135314	24.58	ppb	0.00
Spiked Amount 25.000			Recovery =	98.316%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

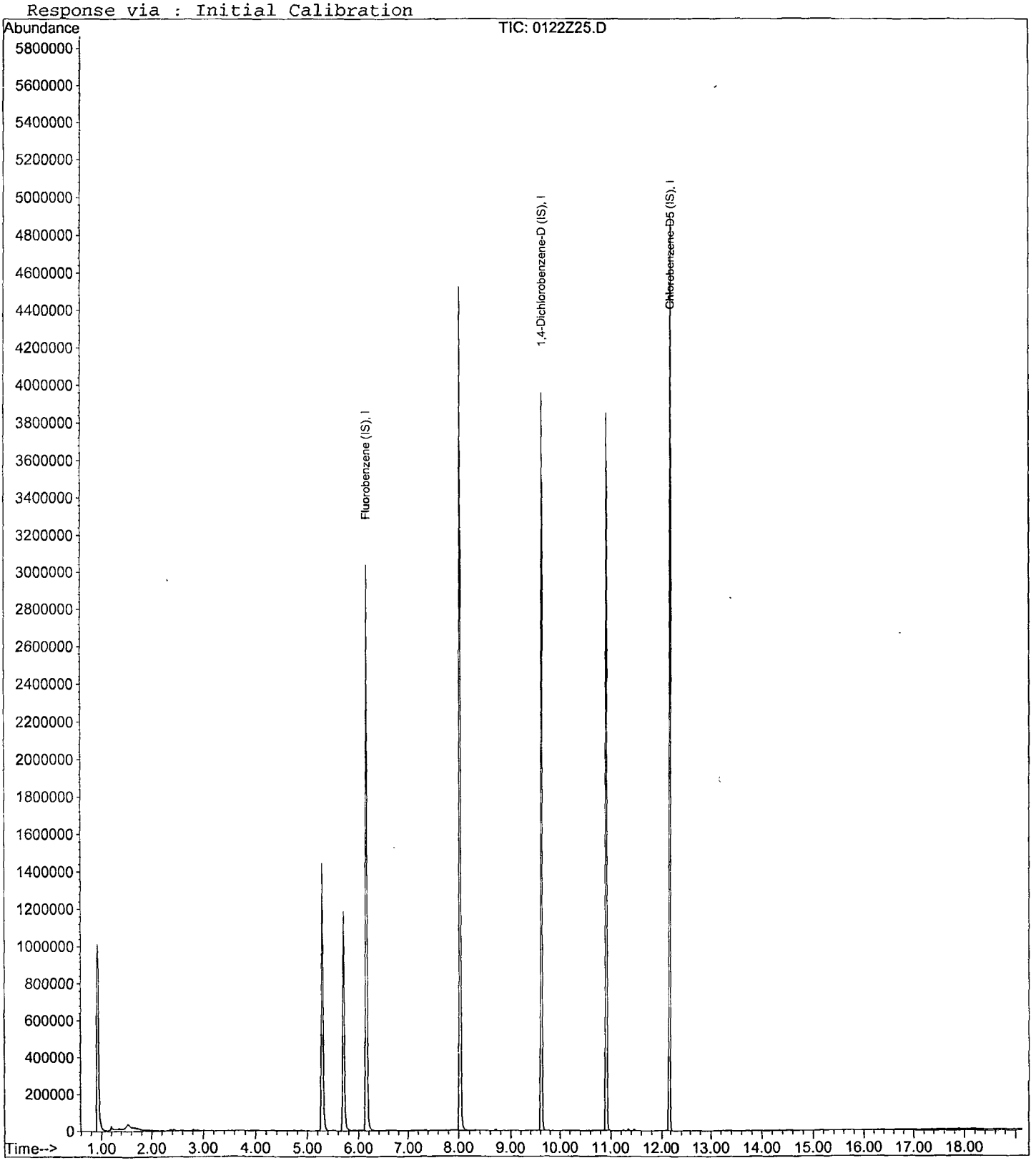
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z25.D
Acq On : 22 Jan 21 18:42
Sample : BA25534W01
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z26.D Vial: 26
Acq On : 22 Jan 21 19:05 Operator: LP,DG,CH
Sample : BA25535W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3018832	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4775319	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3939156	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z26.D Vial: 26
Acq On : 22 Jan 21 19:05 Operator: LP,DG,CH
Sample : BA25535W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3192333	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2632007	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	996736	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	919437	27.73	ppb	0.00
Spiked Amount 25.000			Recovery =	110.924%		
3) 1,2-DCA-D4(S)	5.71	65	833771	28.03	ppb	0.00
Spiked Amount 25.000			Recovery =	112.104%		
5) Toluene-D8(S)	8.03	98	3229203	27.19	ppb	0.00
Spiked Amount 25.000			Recovery =	108.768%		
6) 4-Bromofluorobenzene(S)	10.91	95	1125741	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.876%		

Target Compounds Qvalue

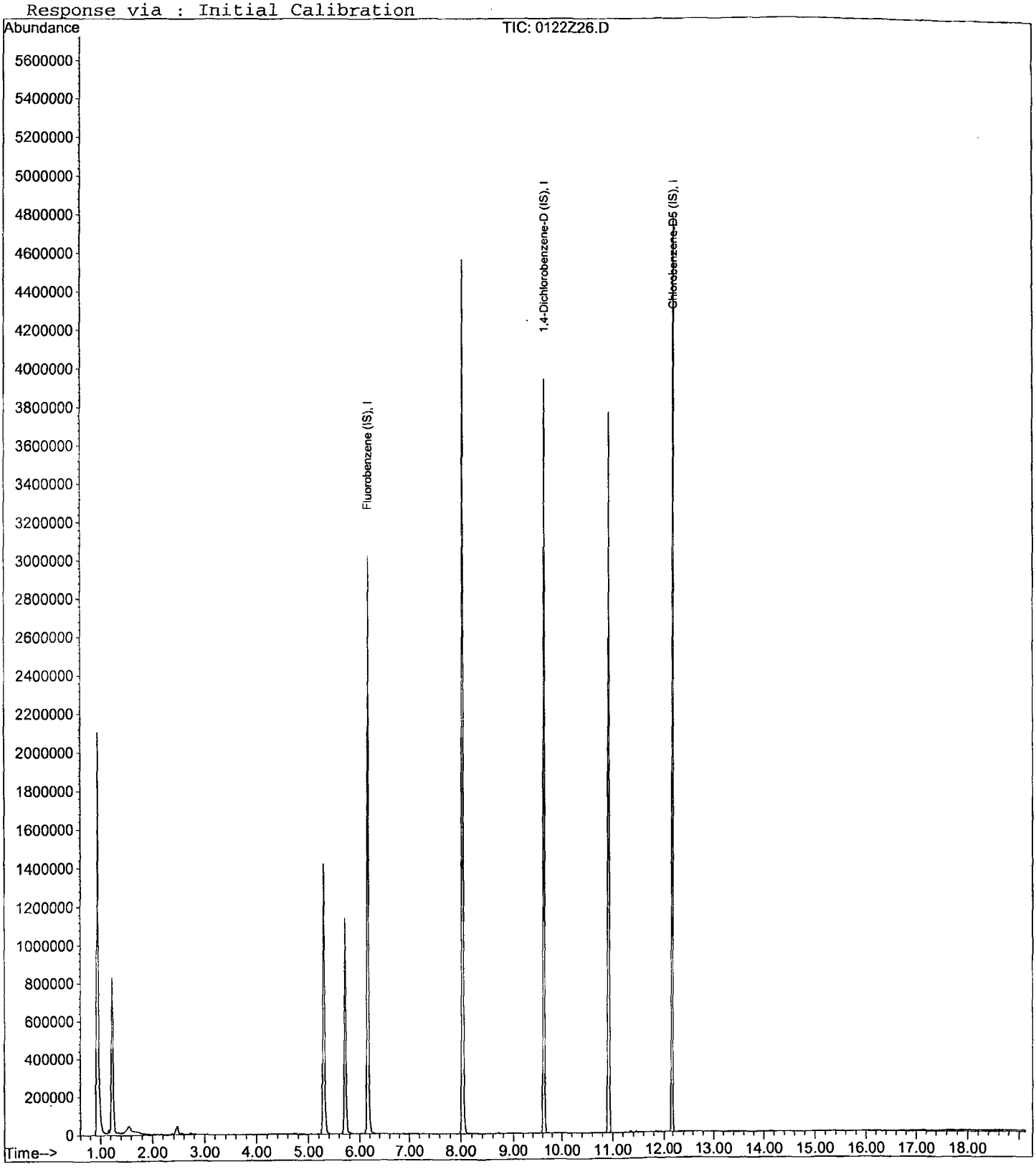
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210122\0122Z26.D
Acq On : 22 Jan 21 19:05
Sample : BA25535W01
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z27.D Vial: 27
Acq On : 22 Jan 21 19:28 Operator: LP,DG,CH
Sample : BA25537W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3025614	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4769678	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3947213	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z27.D Vial: 27
Acq On : 22 Jan 21 19:28 Operator: LP,DG,CH
Sample : BA25537W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3155136	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2616194	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1008000	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	923529	28.18	ppb	0.00
Spiked Amount 25.000			Recovery = 112.732%			
3) 1,2-DCA-D4(S)	5.71	65	848857	28.87	ppb	0.00
Spiked Amount 25.000			Recovery = 115.476%			
5) Toluene-D8(S)	8.03	98	3223592	27.31	ppb	0.00
Spiked Amount 25.000			Recovery = 109.236%			
6) 4-Bromofluorobenzene(S)	10.92	95	1149823	25.07	ppb	0.00
Spiked Amount 25.000			Recovery = 100.272%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

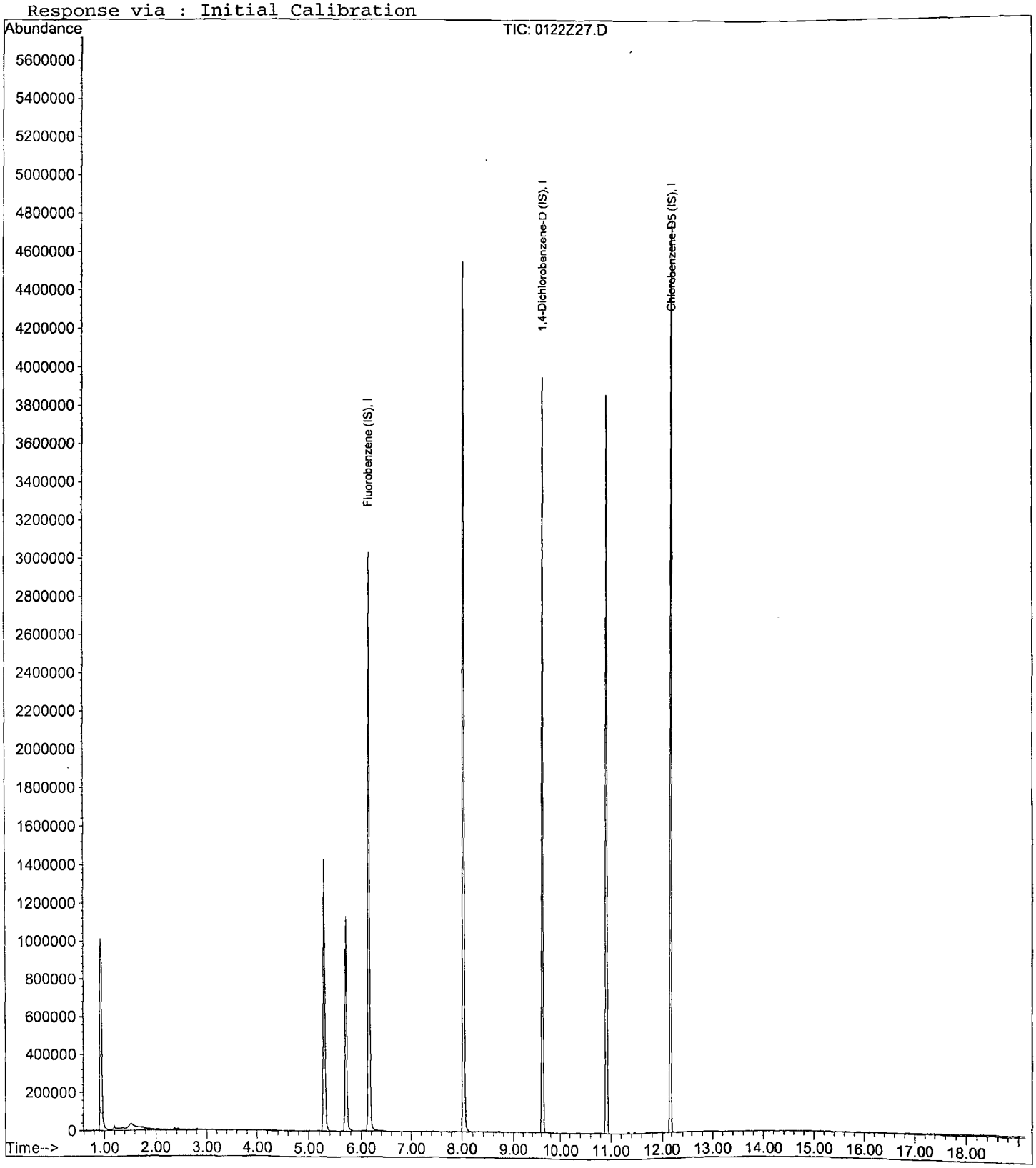
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z27.D
Acq On : 22 Jan 21 19:28
Sample : BA25537W01
Misc :

Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z28.D Vial: 28
Acq On : 22 Jan 21 19:51 Operator: LP,DG,CH
Sample : BA25538W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	2997705	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4678369	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3969289	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z28.D Vial: 28
Acq On : 22 Jan 21 19:51 Operator: LP,DG,CH
Sample : BA25538W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3165476	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2618800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	969280	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	922714	28.07	ppb	0.00
Spiked Amount 25.000			Recovery =	112.264%		
3) 1,2-DCA-D4(S)	5.71	65	840477	28.49	ppb	0.00
Spiked Amount 25.000			Recovery =	113.964%		
5) Toluene-D8(S)	8.03	98	3233386	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.460%		
6) 4-Bromofluorobenzene(S)	10.91	95	1139431	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.376%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

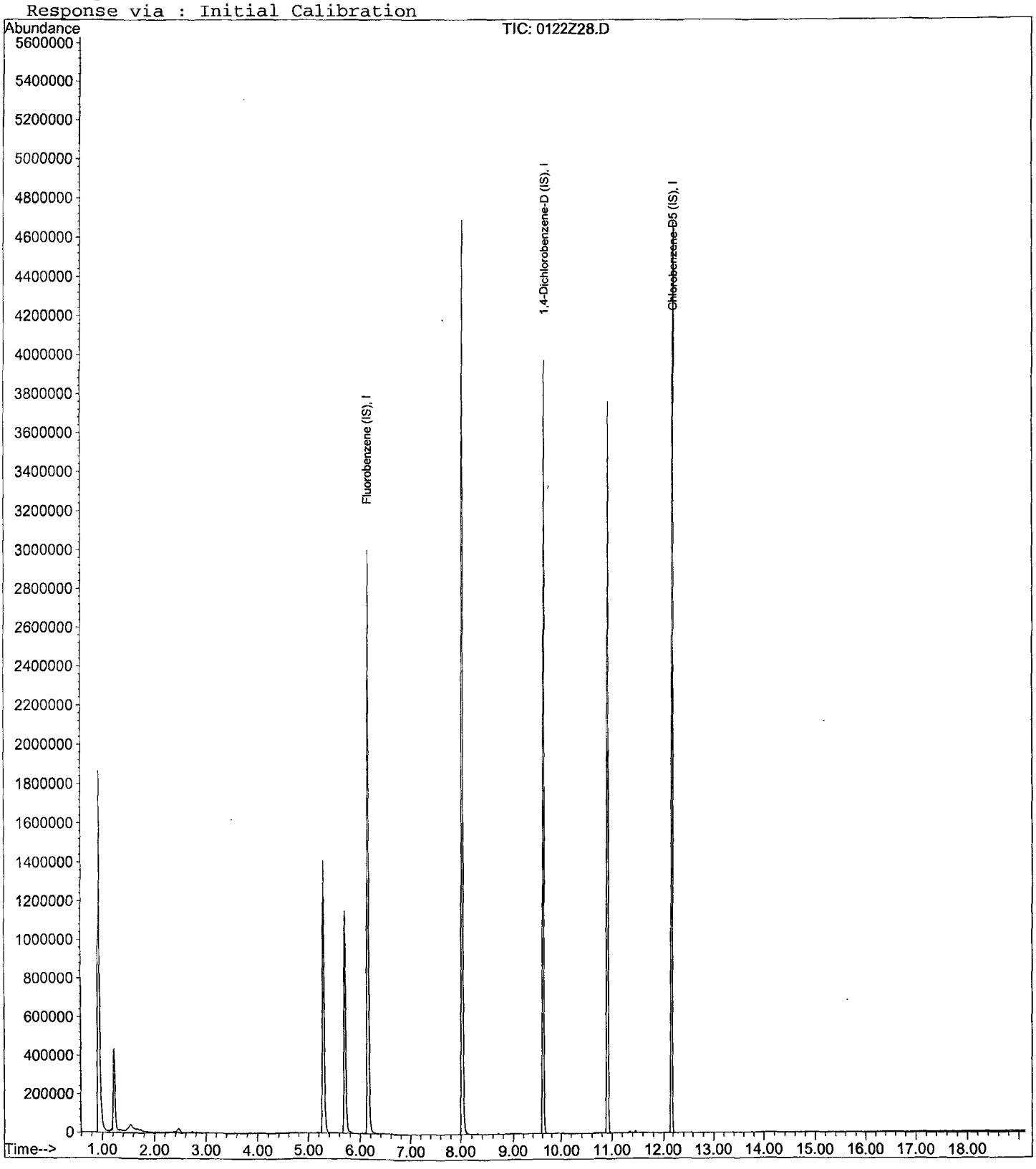
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z28.D
Acq On : 22 Jan 21 19:51
Sample : BA25538W01
Misc :

Vial: 28
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z18.D
Acq On : 22 Jan 21 16:01
Sample : 210122A BLK
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3395936	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5289310	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4303588	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z18.D Vial: 18
Acq On : 22 Jan 21 16:01 Operator: LP,DG,CH
Sample : 210122A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3518019	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2841691	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1093120	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1006633	27.55	ppb	0.00
Spiked Amount 25.000			Recovery = 110.200%			
3) 1,2-DCA-D4(S)	5.71	65	926393	28.26	ppb	0.00
Spiked Amount 25.000			Recovery = 113.024%			
5) Toluene-D8(S)	8.03	98	3421154	26.68	ppb	0.00
Spiked Amount 25.000			Recovery = 106.732%			
6) 4-Bromofluorobenzene(S)	10.91	95	1205013	24.28	ppb	0.00
Spiked Amount 25.000			Recovery = 97.128%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

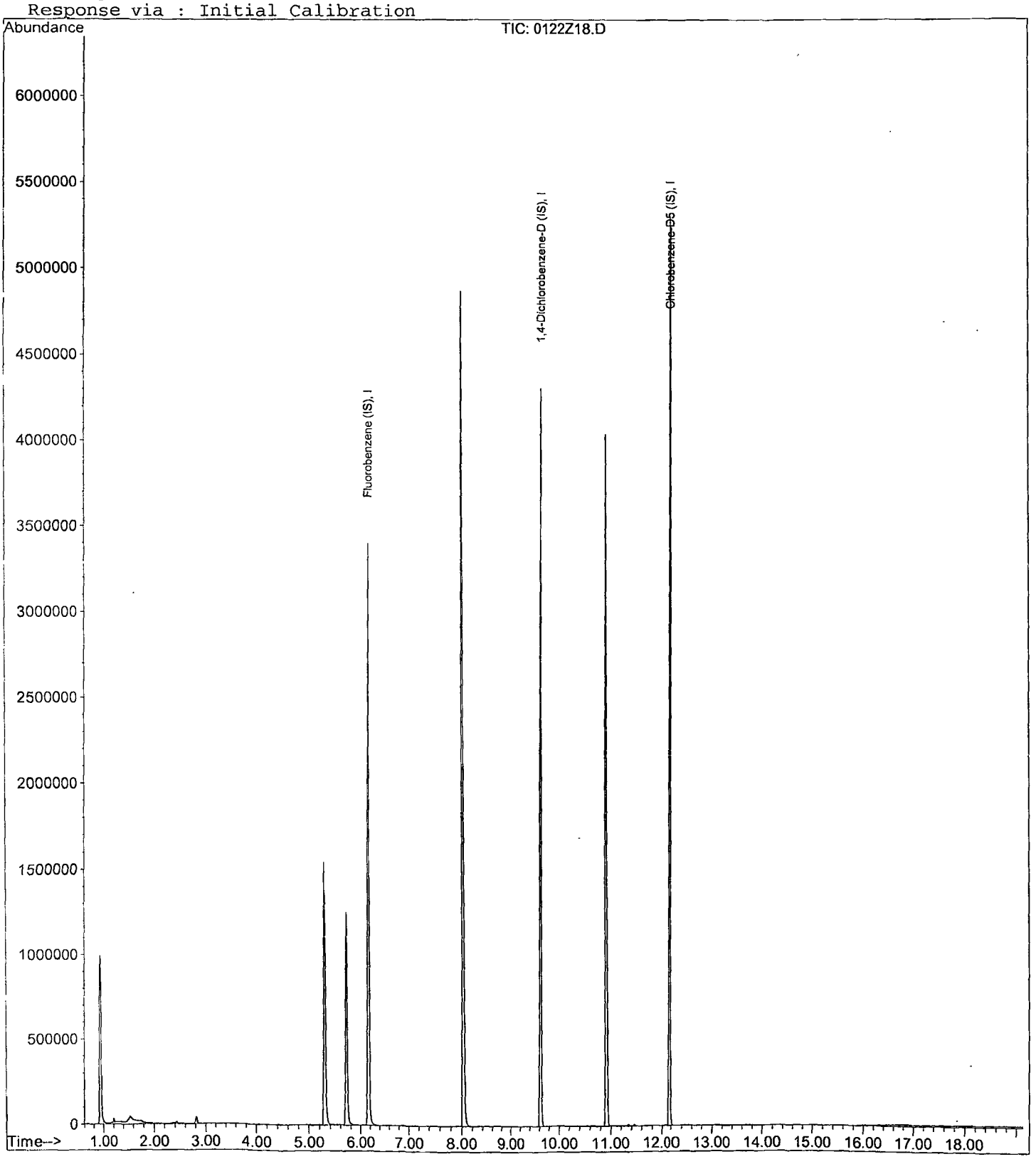
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z18.D
Acq On : 22 Jan 21 16:01
Sample : 210122A BLK
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 15:14 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z16.D
Acq On : 22 Jan 21 15:15
Sample : 210122A LCS 300ug/L
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3564146	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5466822	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4604554	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	61665371m	268.22	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z16.D Vial: 16
Acq On : 22 Jan 21 15:15 Operator: LP,DG,CH
Sample : 210122A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3712051	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2966155	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1121792	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1036658	26.89	ppb	0.00
Spiked Amount 25.000			Recovery =	107.556%		
3) 1,2-DCA-D4(S)	5.71	65	961988	27.81	ppb	0.00
Spiked Amount 25.000			Recovery =	111.232%		
5) Toluene-D8(S)	8.03	98	3607853	26.96	ppb	0.00
Spiked Amount 25.000			Recovery =	107.832%		
6) 4-Bromofluorobenzene(S)	10.91	95	1274755	24.57	ppb	0.00
Spiked Amount 25.000			Recovery =	98.292%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

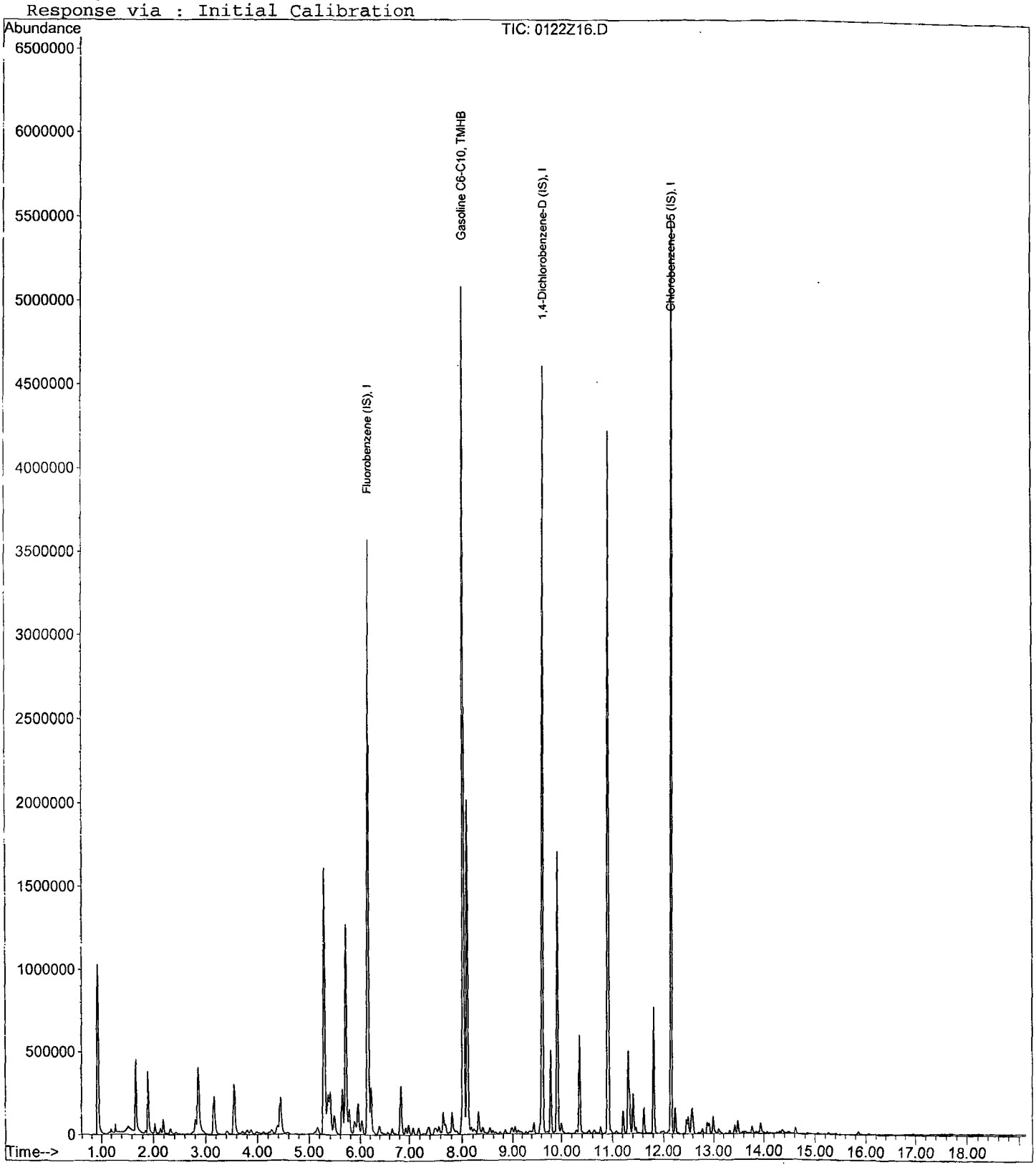
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z16.D
Acq On : 22 Jan 21 15:15
Sample : 210122A LCS 300ug/L
Misc :

Vial: 16
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:13 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z17.D
Acq On : 22 Jan 21 15:38
Sample : 210122A LCSD 300ug/L
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:14 2021 Quant Results File: ZGAS0104.RES

Quant Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3543897	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5251076	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4396710	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	62638843m	283.20	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210122\0122Z17.D Vial: 17
Acq On : 22 Jan 21 15:38 Operator: LP,DG,CH
Sample : 210122A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:23 2021 Quant Results File: Z0122SUR.RES

Quant Method : M:\ZEUS\DATA\210122\Z0122SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Jan 25 09:03:18 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3687656	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2923410	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1098752	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1020510	26.65	ppb	0.00
Spiked Amount 25.000			Recovery =	106.580%		
3) 1,2-DCA-D4(S)	5.71	65	944805	27.49	ppb	0.00
Spiked Amount 25.000			Recovery =	109.968%		
5) Toluene-D8(S)	8.03	98	3550564	26.92	ppb	0.00
Spiked Amount 25.000			Recovery =	107.672%		
6) 4-Bromofluorobenzene(S)	10.92	95	1254783	24.55	ppb	0.00
Spiked Amount 25.000			Recovery =	98.180%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

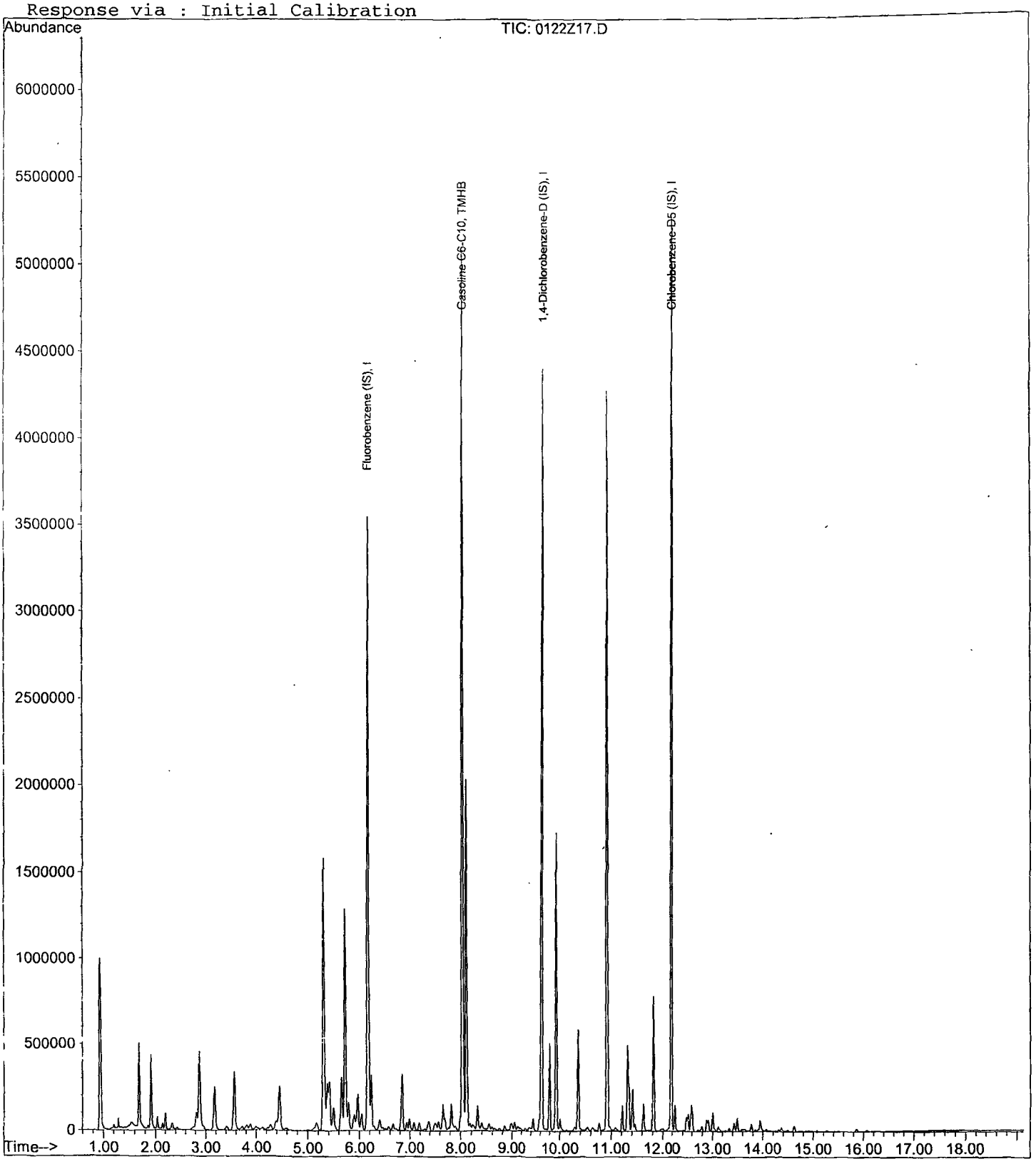
Quantitation Report

Data File : M:\ZEUS\DATA\210122\0122Z17.D
Acq On : 22 Jan 21 15:38
Sample : 210122A LCSD 300ug/L
Misc :

Vial: 17
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 25 9:14 2021 Quant Results File: ZGAS0104.RES

Method : M:\ZEUS\DATA\210122\ZGAS0104.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Jan 07 09:32:25 2021
Response via : Initial Calibration



Zeus Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21
Expires: 01/04/22
Methanol Lot No.

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20
Expires: 01/31/30
Methanol Lot No.

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

Zeus Gas Calibration Curve

Prepared: 01/04/21
Expires: 03/05/21

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/04/21
Expires: 03/05/21

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

Zeus Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/04/21
Expires: 01/05/21

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\ZEUS\DATA\210104\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	13	0104Z13.D	1	20ug/L GAS STD 1/4/20		04 Jan 21 20:33
2	14	0104Z14.D	1	50ug/L GAS STD 1/4/20		04 Jan 21 20:56
3	15	0104Z15.D	1	100ug/L GAS STD 1/4/20		04 Jan 21 21:19
4	16	0104Z16.D	1	300ug/L GAS STD 1/4/20		04 Jan 21 21:42
5	17	0104Z17.D	1	600ug/L GAS STD 1/4/20		04 Jan 21 22:04
6	18	0104Z18.D	1	800ug/L GAS STD 1/4/20		04 Jan 21 22:27
7	19	0104Z19.D	1	1000ug/L GAS STD 1/4/20		04 Jan 21 22:50
8	21	0104Z21.D	1	(SS) 300ug/L GAS STD 1/4/20		04 Jan 21 23:36
9	2	0122Z02.D	1	0.3ug/L VOC STD1/22/21		22 Jan 21 09:53
10	3	0122Z03.D	1	0.5ug/L VOC STD1/22/21		22 Jan 21 10:16
11	4	0122Z04.D	1	1ug/L VOC STD1/22/21		22 Jan 21 10:39
12	5	0122Z05.D	1	2ug/L VOC STD1/22/21		22 Jan 21 11:02
13	6	0122Z06.D	1	5ug/L VOC STD1/22/21		22 Jan 21 11:25
14	7	0122Z07.D	1	10ug/L VOC STD1/22/21		22 Jan 21 11:48
15	8	0122Z08.D	1	20ug/L VOC STD1/22/21		22 Jan 21 12:11
16	9	0122Z09.D	1	40ug/L VOC STD1/22/21		22 Jan 21 12:34
17	10	0122Z10.D	1	100ug/L VOC STD1/22/21		22 Jan 21 12:57
18	15	0122Z15.D	1	210122A CCV 300ug/L		22 Jan 21 14:52
19	16	0122Z16.D	1	210122A LCS 300ug/L		22 Jan 21 15:15
20	17	0122Z17.D	1	210122A LCSD 300ug/L		22 Jan 21 15:38
21	18	0122Z18.D	1	210122A BLK		22 Jan 21 16:01
22	21	0122Z21.D	1	BA25528W01		22 Jan 21 17:10
23	22	0122Z22.D	1	BA25529W01		22 Jan 21 17:33
24	23	0122Z23.D	1	BA25531W01		22 Jan 21 17:56
25	24	0122Z24.D	1	BA25532W01		22 Jan 21 18:19
26	25	0122Z25.D	1	BA25534W01		22 Jan 21 18:42
27	26	0122Z26.D	1	BA25535W01		22 Jan 21 19:05
28	27	0122Z27.D	1	BA25537W01		22 Jan 21 19:28
29	28	0122Z28.D	1	BA25538W01		22 Jan 21 19:51
30	40	0122Z40.D	1	Ending CCV 300ug/L 1/21/21		23 Jan 21 00:27

ORGANICS

Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/14/20
Matrix: Instrument: 7890

Initials: CD

0914R07.D 0914R08.D 0914R09.D 0914R10.D 0914R11.D 0914R12.D 0914R13.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
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0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

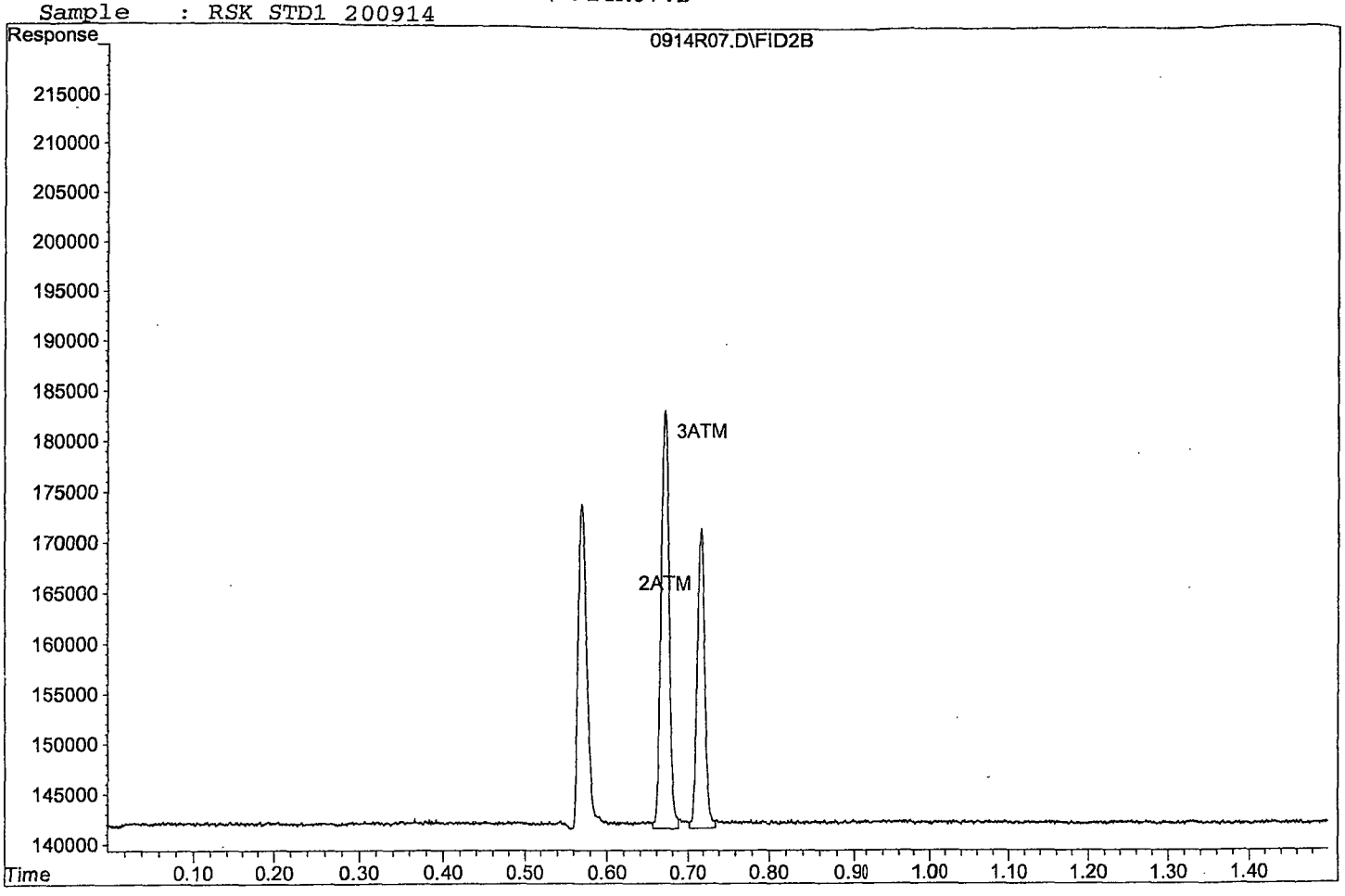
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	41762	102628.492	ppb
3) ATM Ethene	0.72	29966	4.139	ppb
Target Compounds				
1) ATM Methane	0.57	32423	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

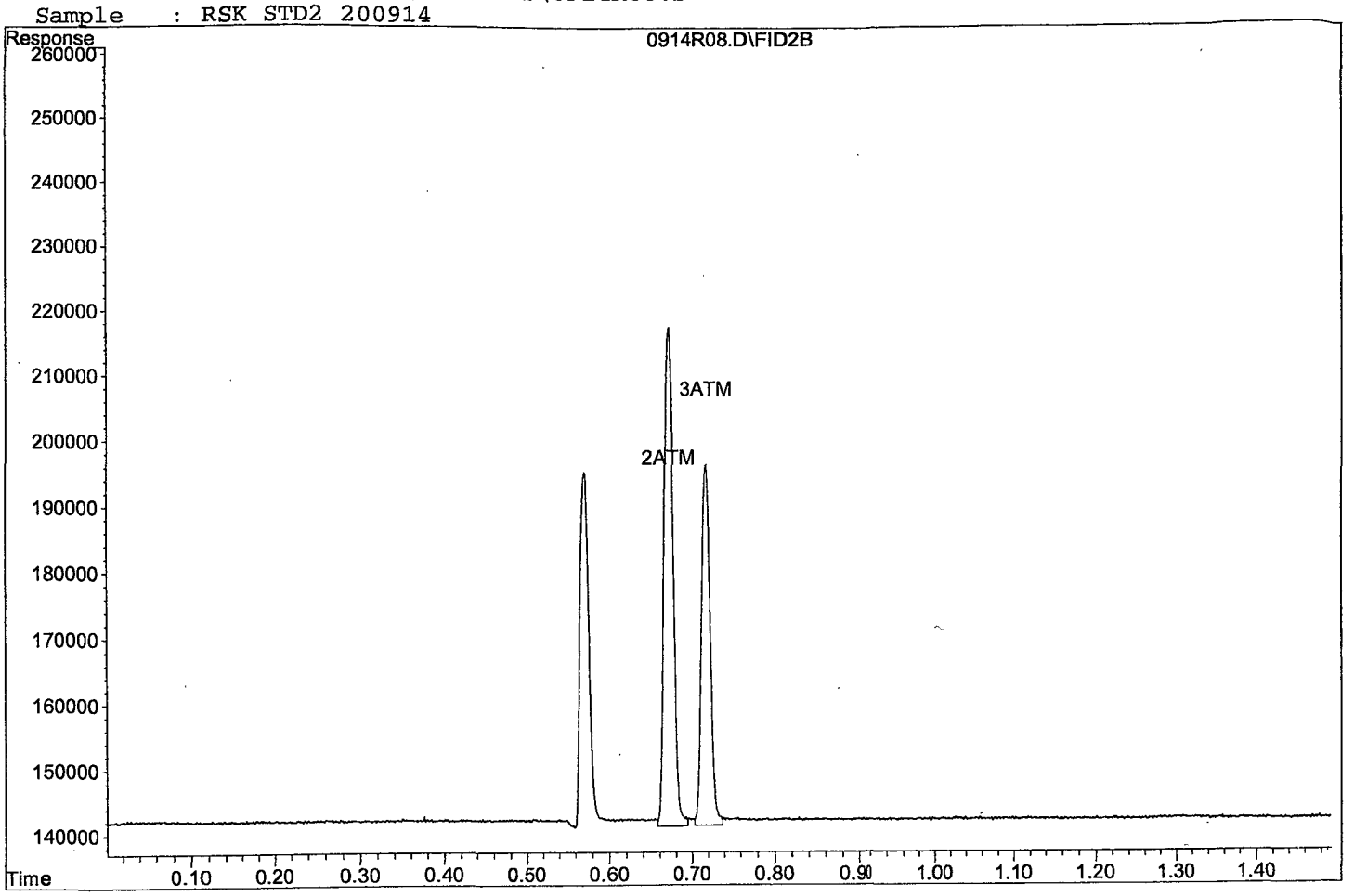
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	76271	190289.144	ppb
3) ATM Ethene	0.72	54983	7.686	ppb
Target Compounds				
1) ATM Methane	0.57	54196	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

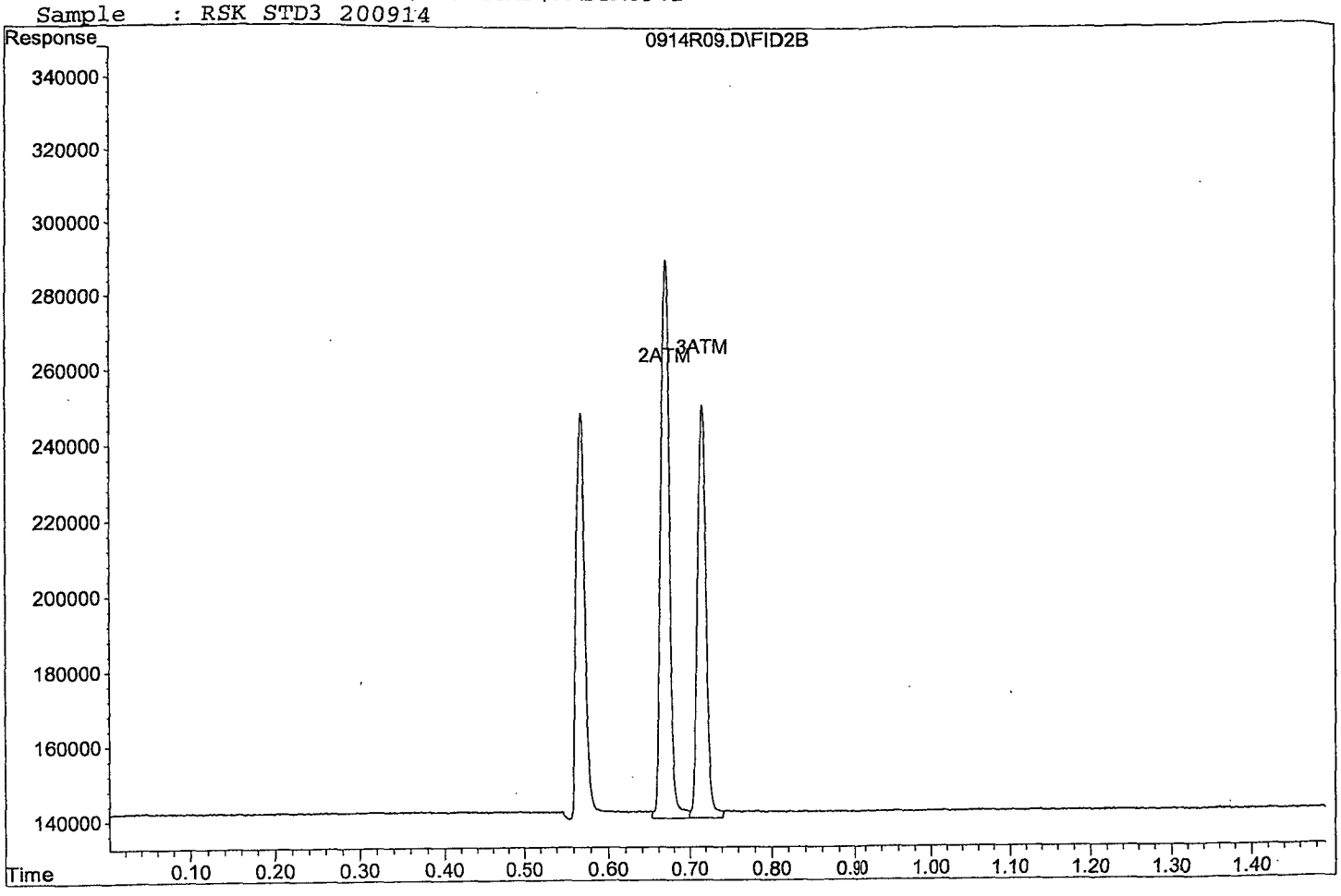
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

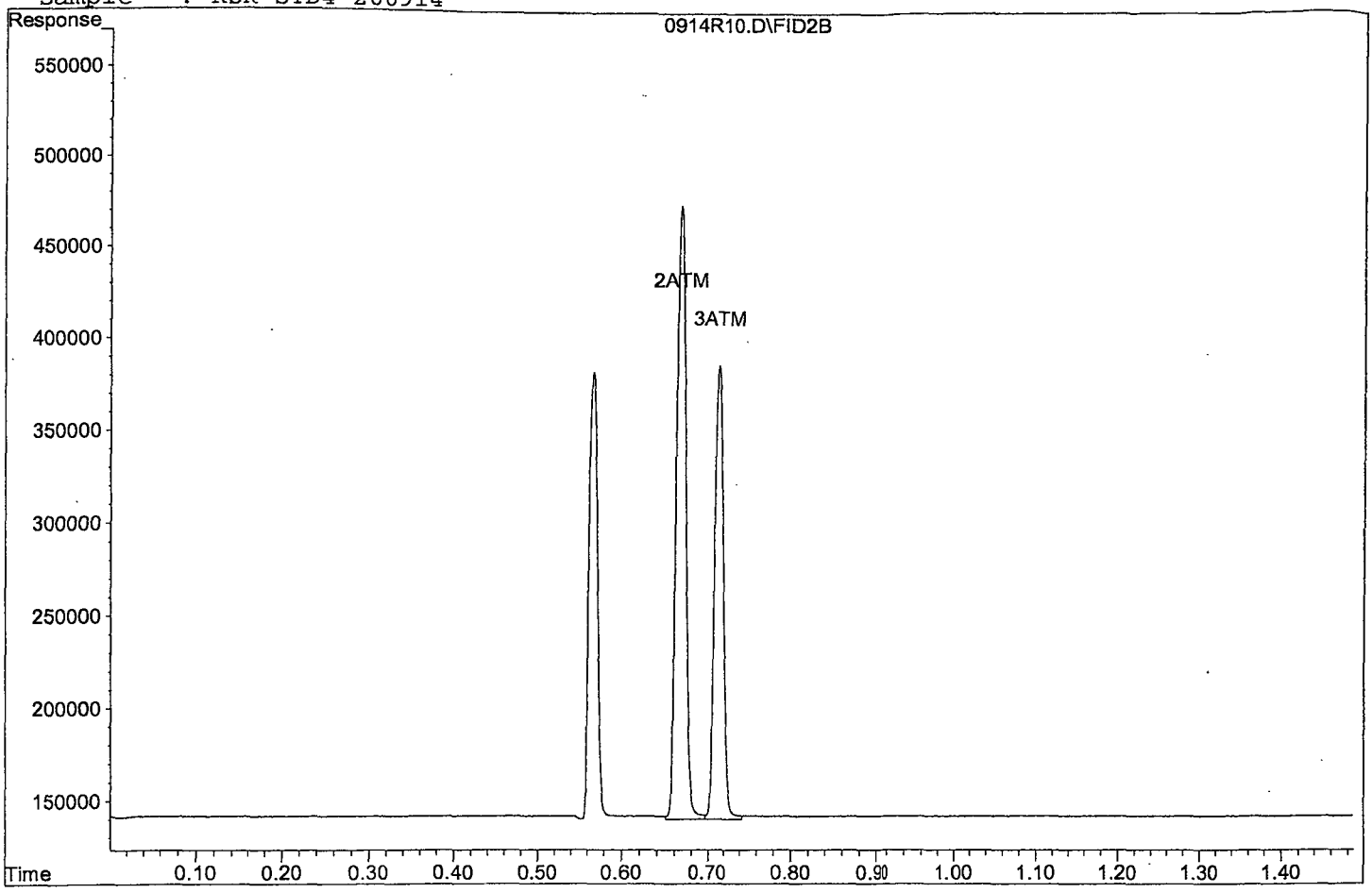
Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	333873	844667.853 ppb
3) ATM Ethene	0.71	246286	34.810 ppb
Target Compounds			
1) ATM Methane	0.57	242197	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

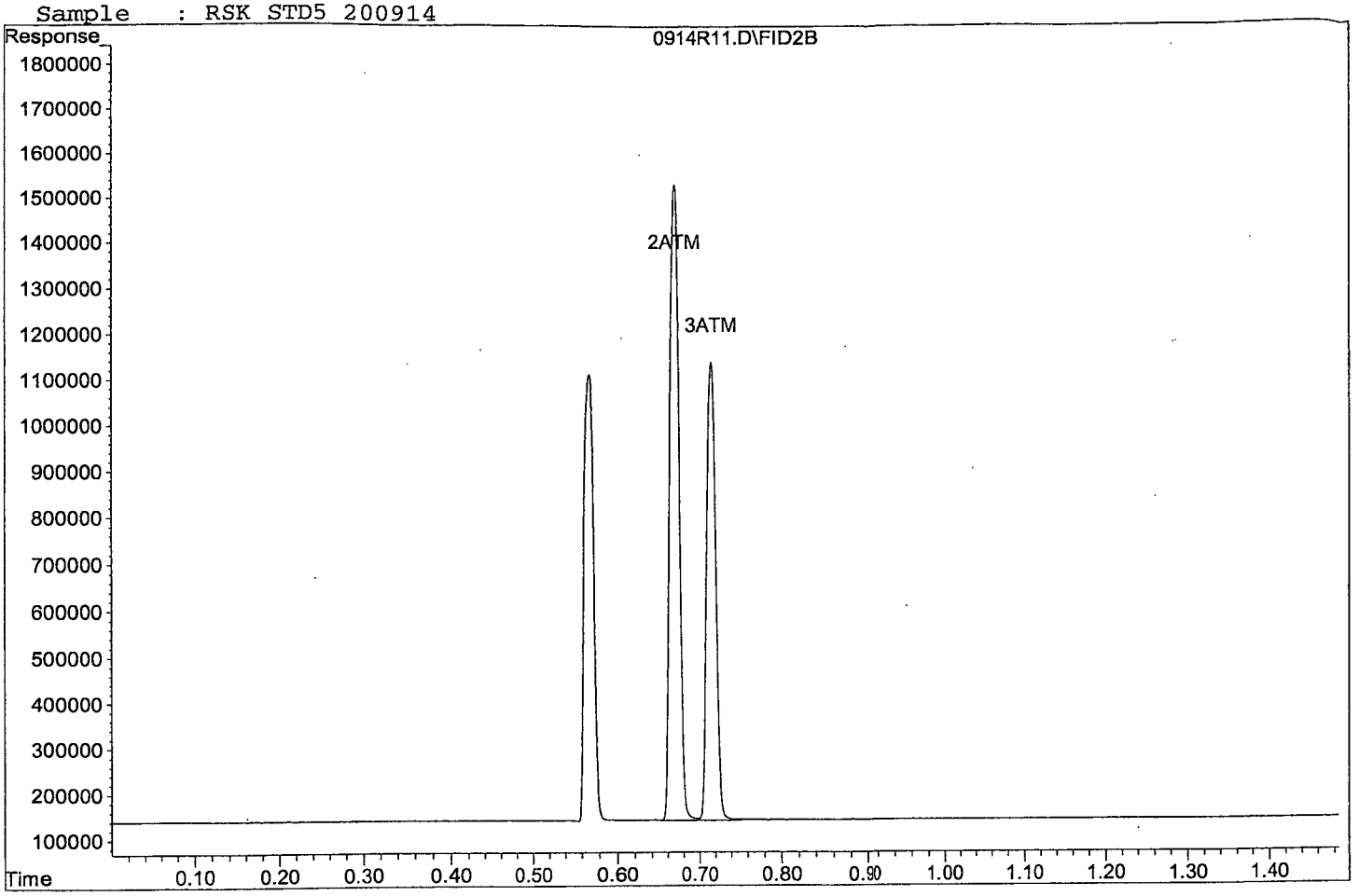
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	1392673	3534302.847 ppb
3) ATM Ethene	0.71	999836	141.654 ppb
Target Compounds			
1) ATM Methane	0.57	973152	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

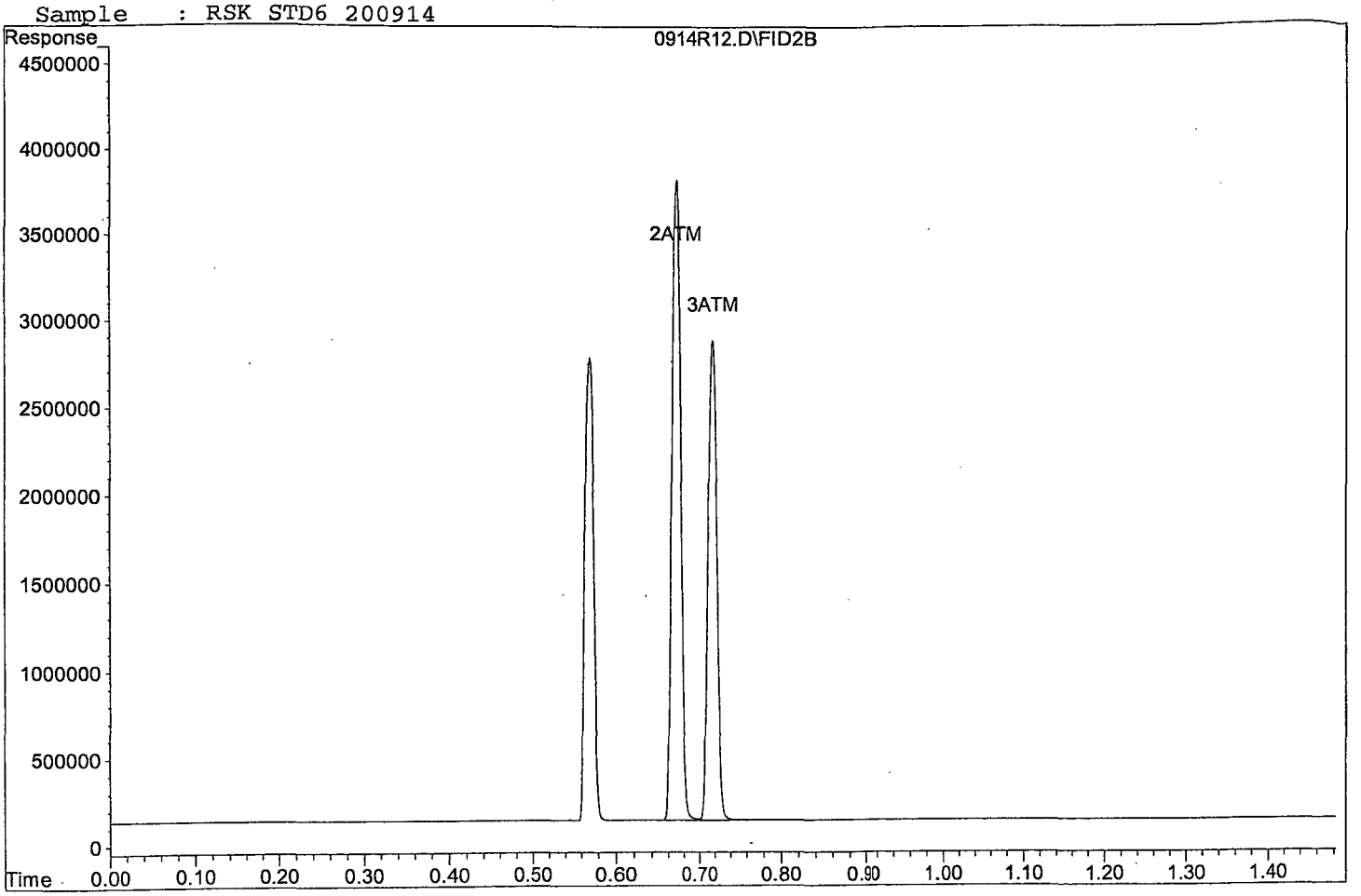
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

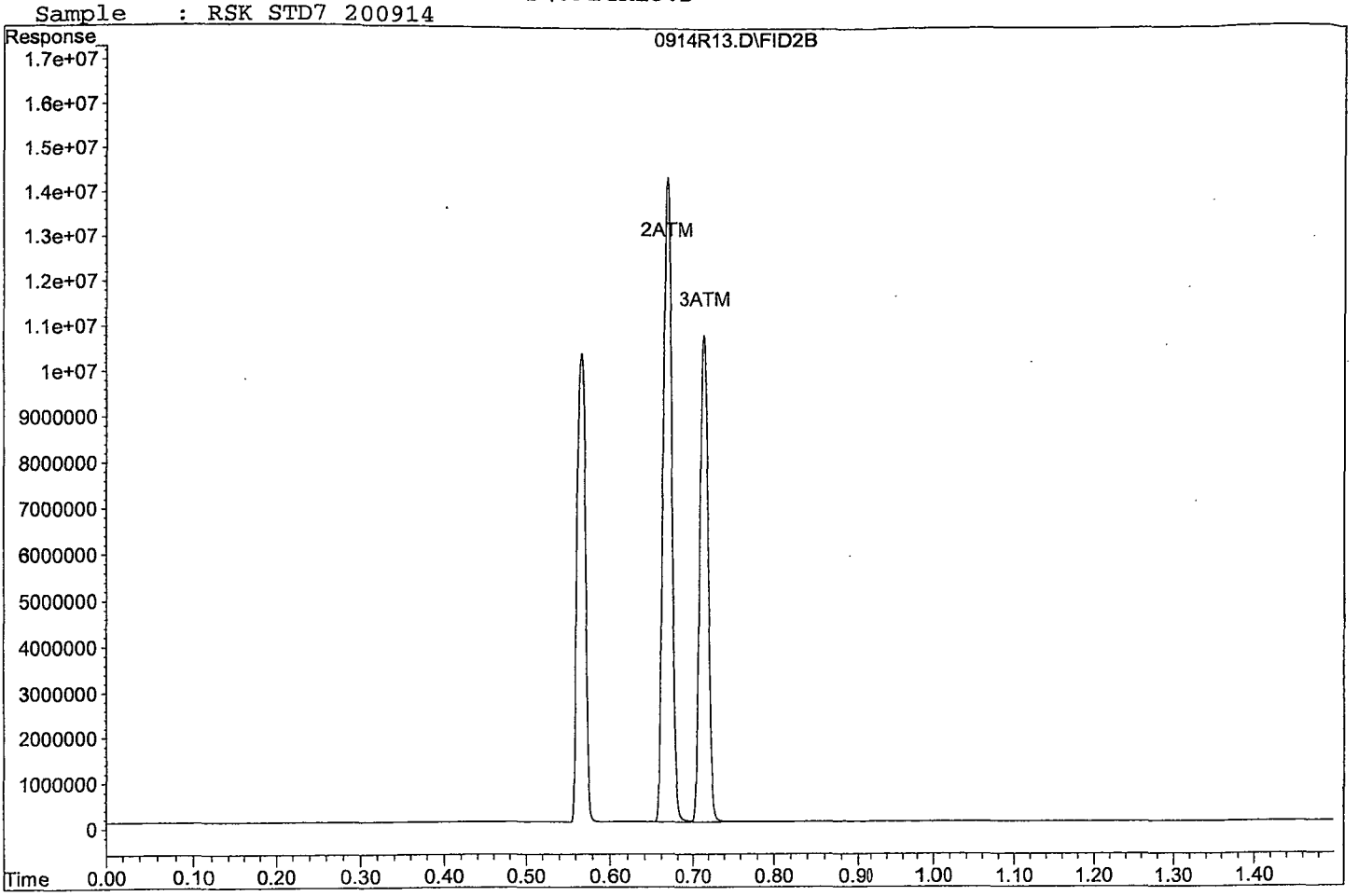
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

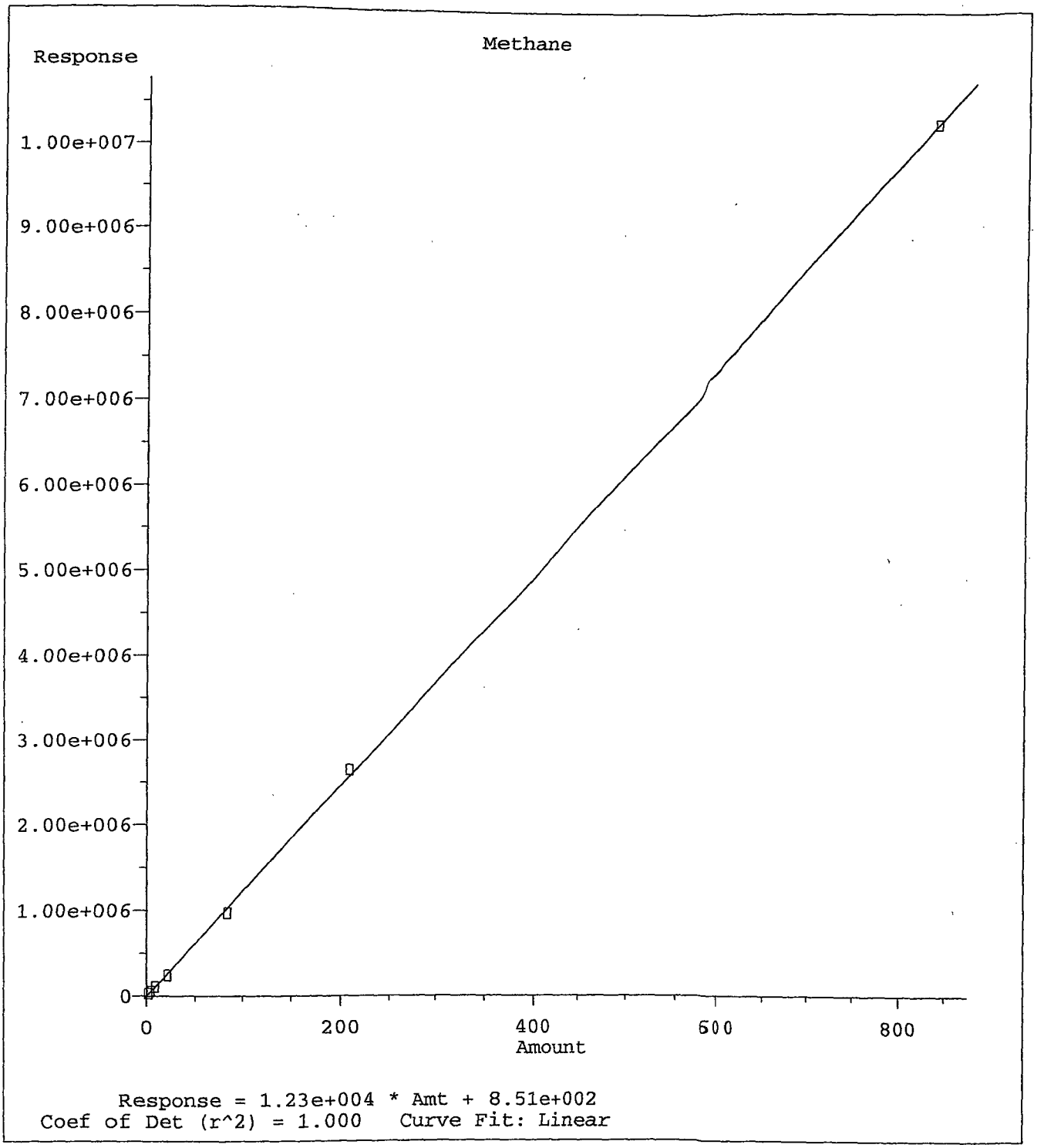
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	3616 8407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

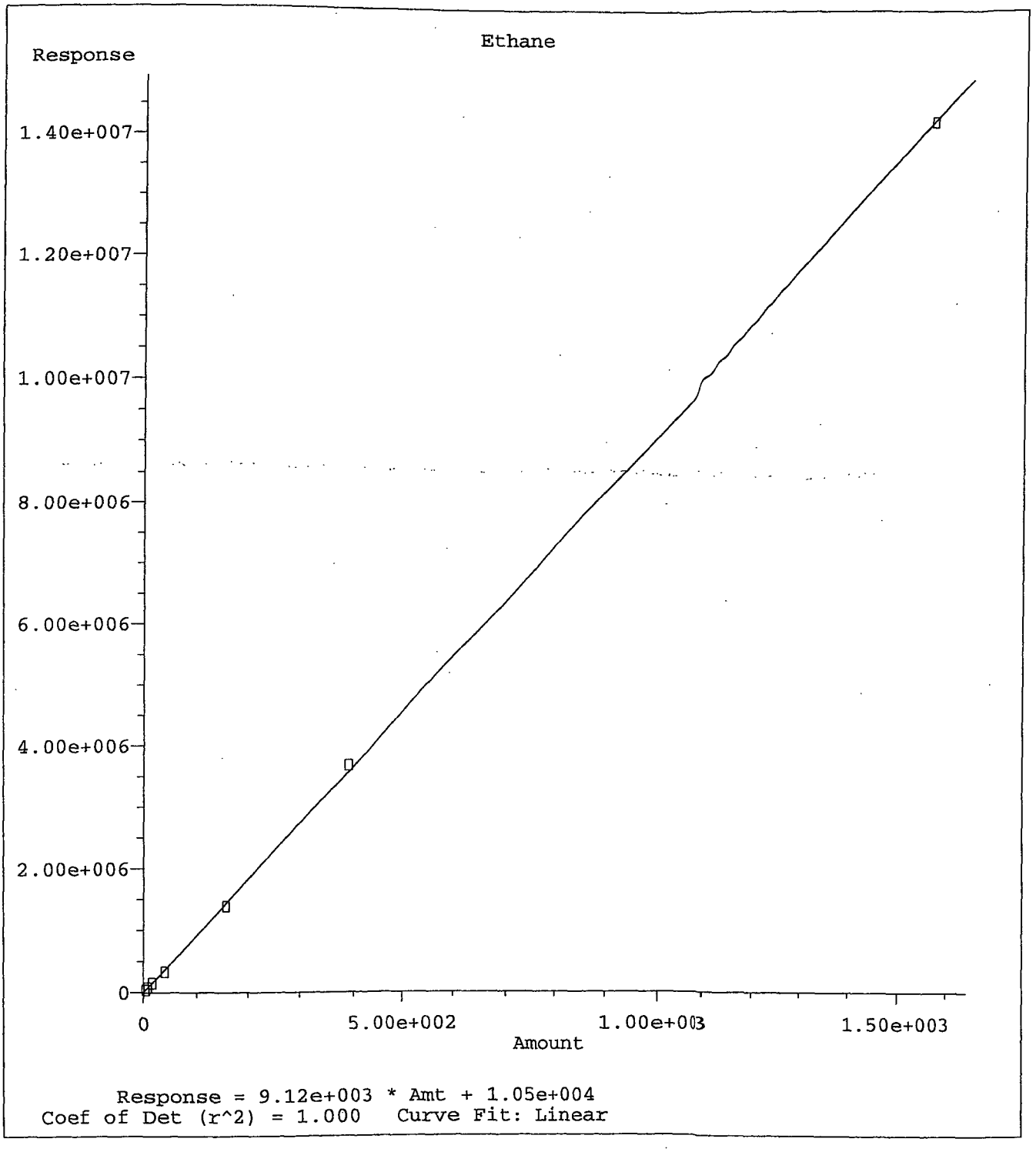
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

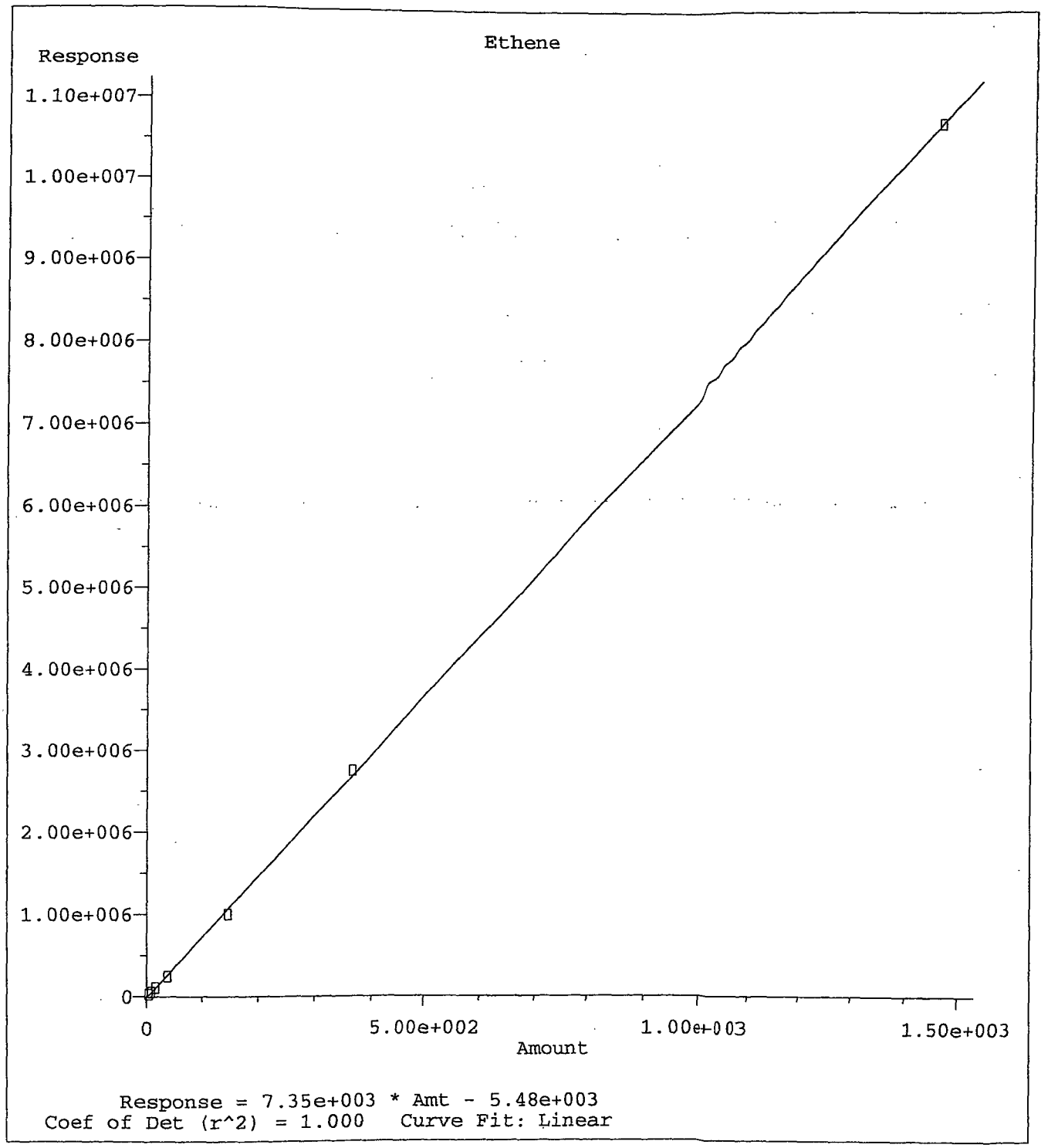




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

RSK 175

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

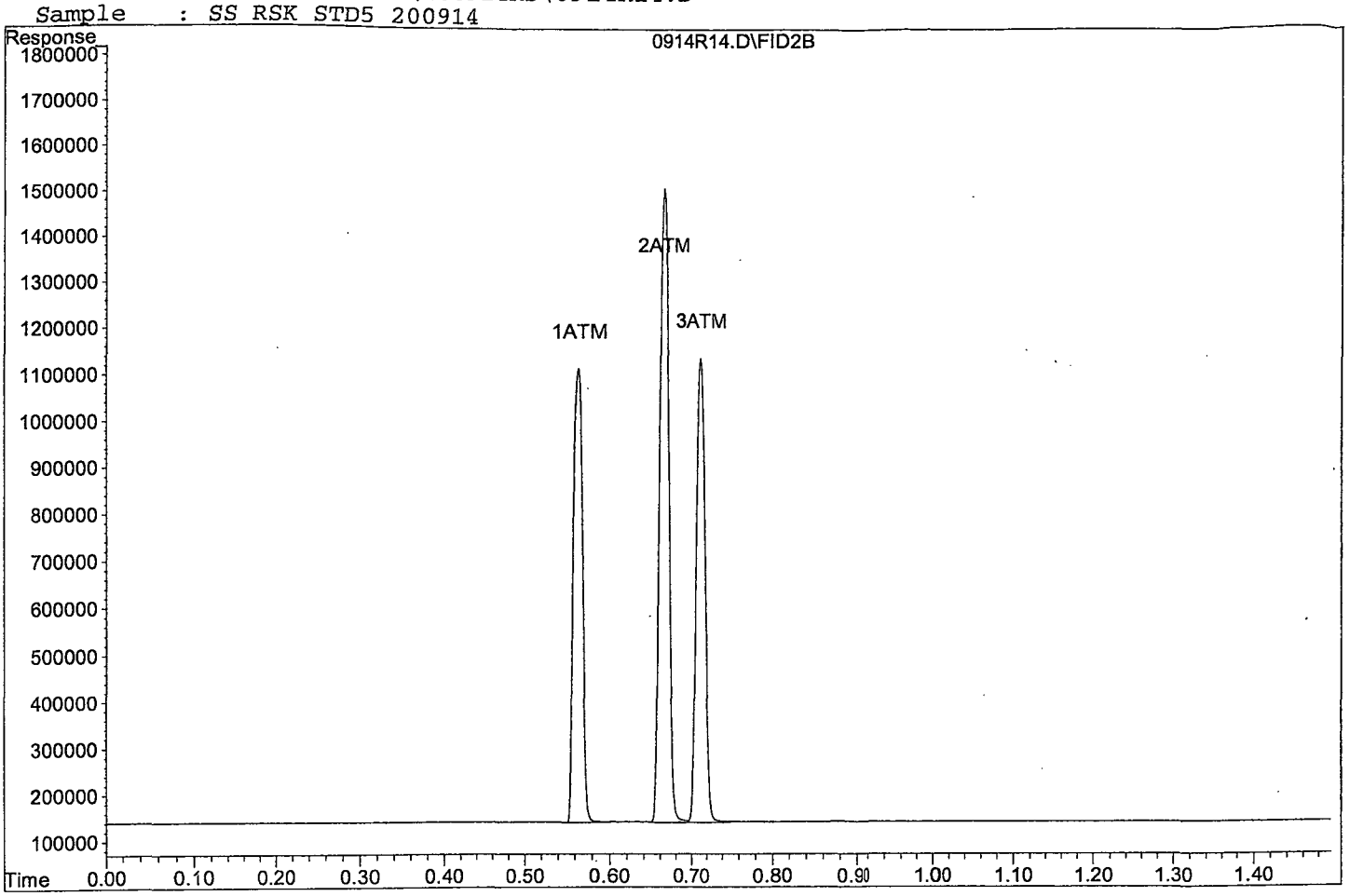
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R02.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	21901	15	ATML	11
2	ATML	Ethane	18863	17262	8.5	ATML	6.0
3	ATML	Ethene	14798	14487	2.1	ATML	0.99
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

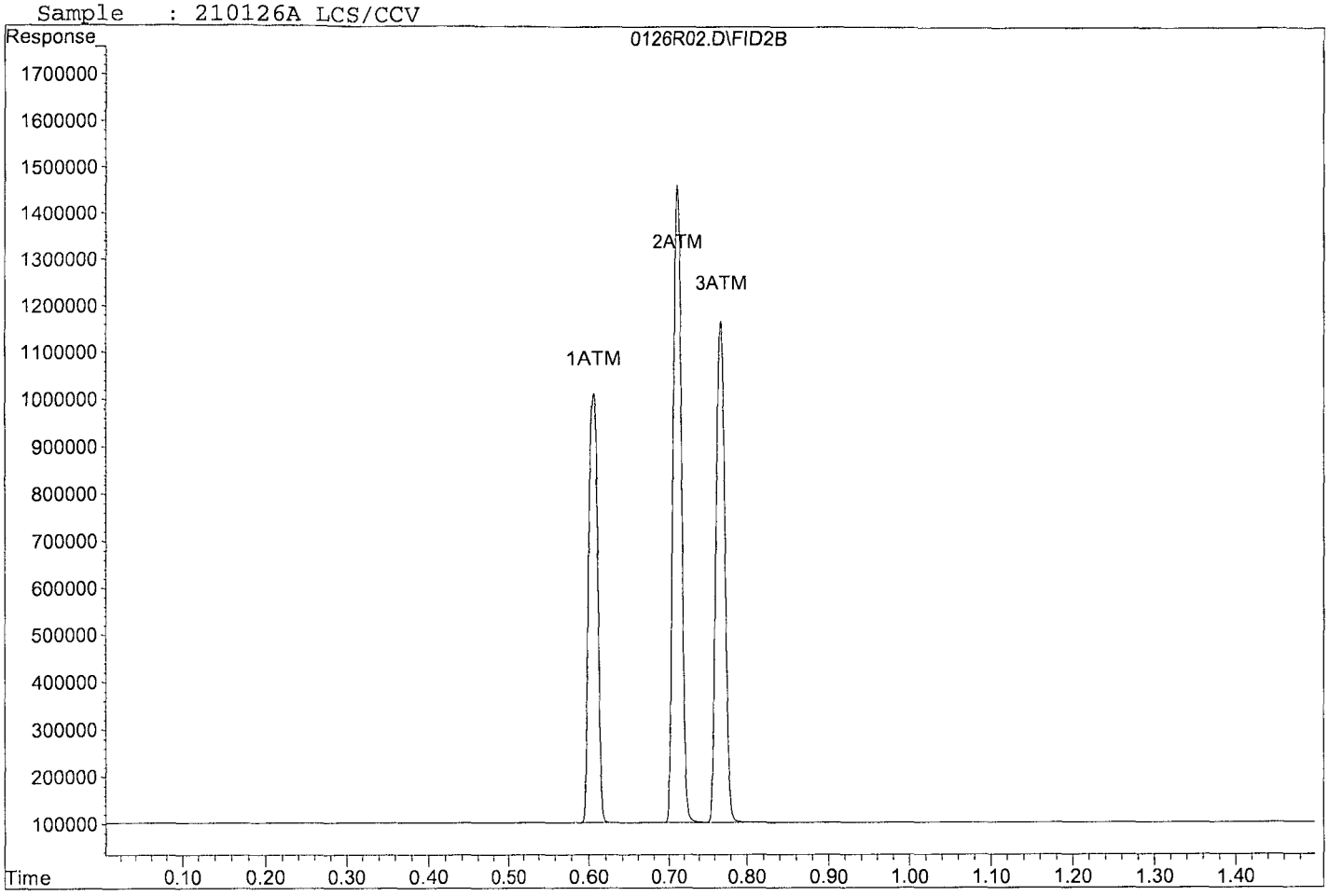
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	913253	73.981	ppb
2) ATM Ethane	0.71	1349471	146.899	ppb
3) ATM Ethene	0.77	1056358	144.398	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0126R23.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24003	6.5	ATML	2.8
2	ATML	Ethane	18863	19959	5.8	ATML	8.7
3	ATML	Ethene	14798	16308	10	ATML	11
4							
5							
6							
7							
8							
9							
10							
11							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.4		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R23.D Vial: 23
Acq On : 26 Jan 21 14:38 Operator: LS
Sample : 210126A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:40 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

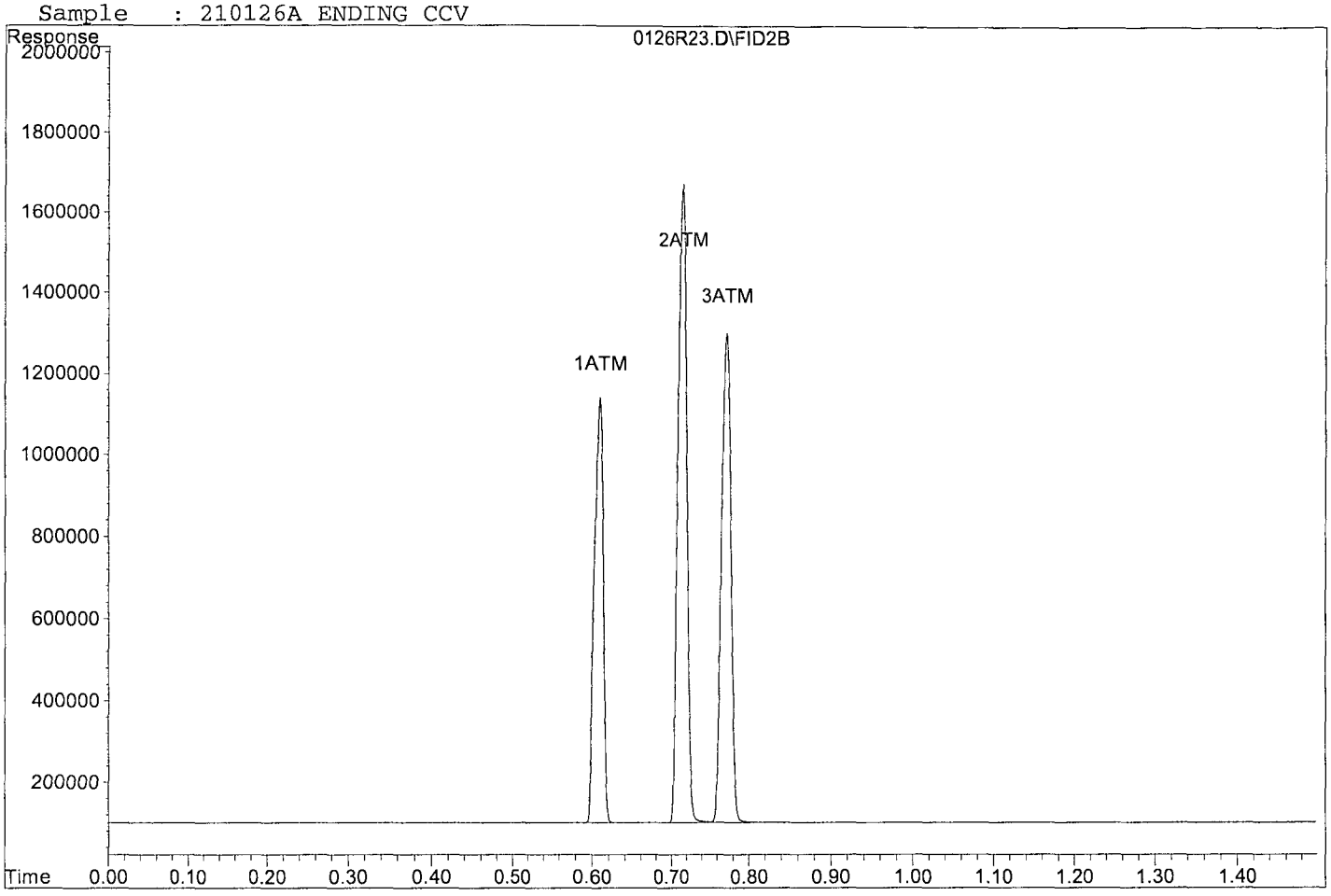
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1000941	81.091	ppb
2) ATM Ethane	0.71	1560302	170.028	ppb
3) ATM Ethene	0.77	1189206	162.464	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R23.D
Sample : 210126A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R14.D Vial: 14
Acq On : 26 Jan 21 14:08 Operator: LS
Sample : BA25528W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:10 2021 Quant Results File: RSK0914A.RES

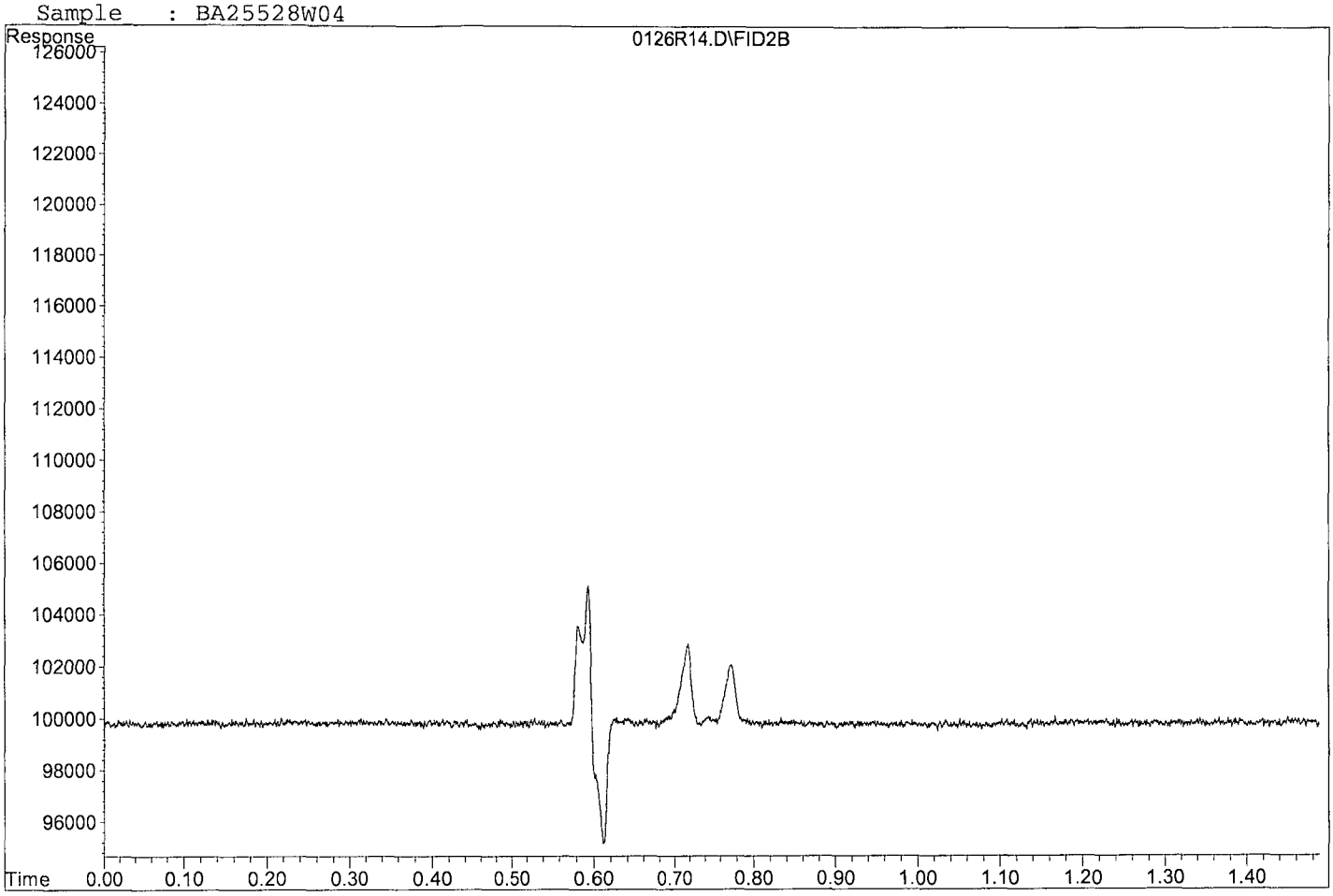
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R14.D
Sample : BA25528W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R15.D Vial: 15
Acq On : 26 Jan 21 14:11 Operator: LS
Sample : BA25529W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:14 2021 Quant Results File: RSK0914A.RES

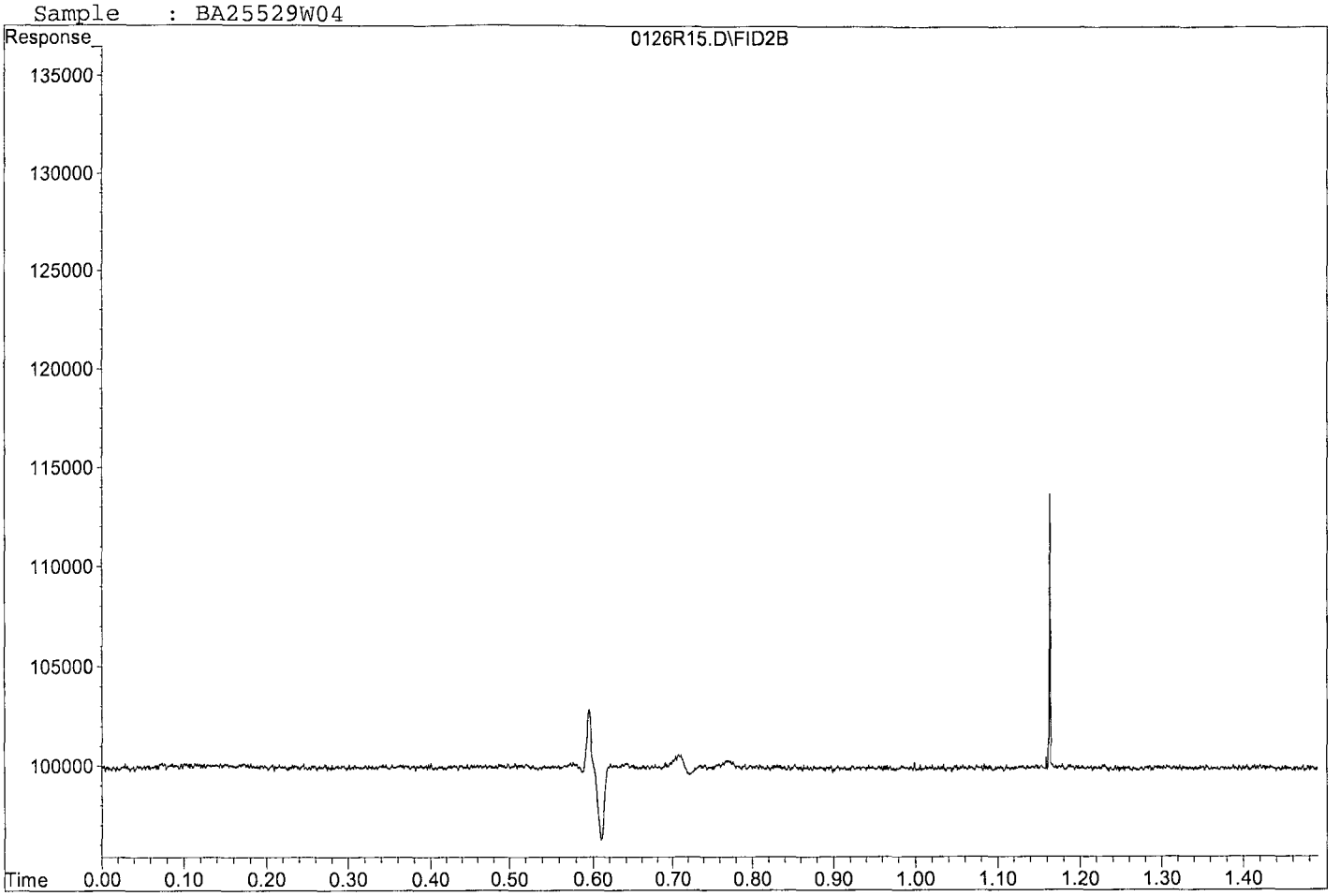
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R15.D
Sample : BA25529W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R16.D Vial: 16
Acq On : 26 Jan 21 14:15 Operator: LS
Sample : BA25531W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:17 2021 Quant Results File: RSK0914A.RES

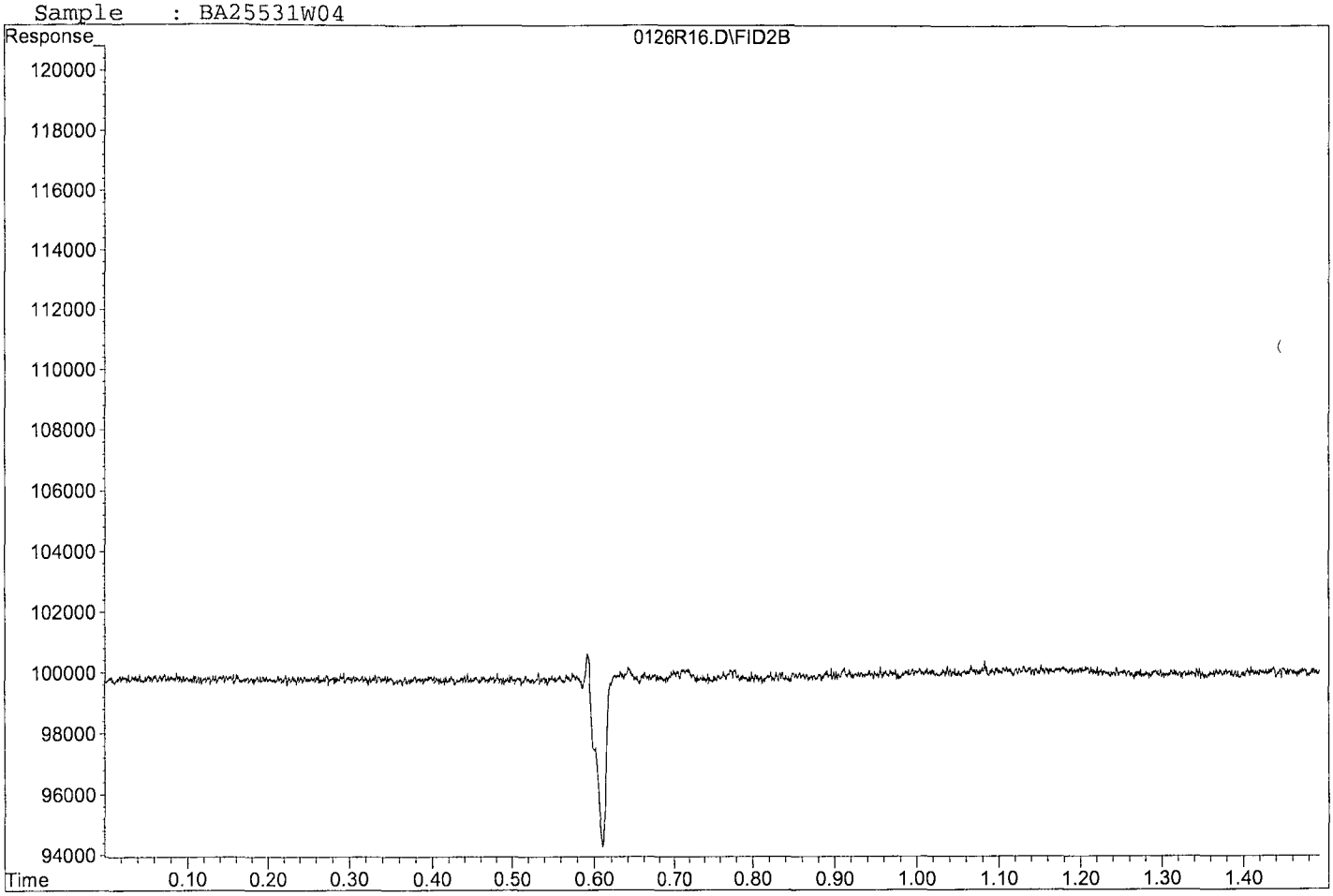
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R16.D
Sample : BA25531W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R17.D Vial: 17
Acq On : 26 Jan 21 14:19 Operator: LS
Sample : BA25532W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:22 2021 Quant Results File: RSK0914A.RES

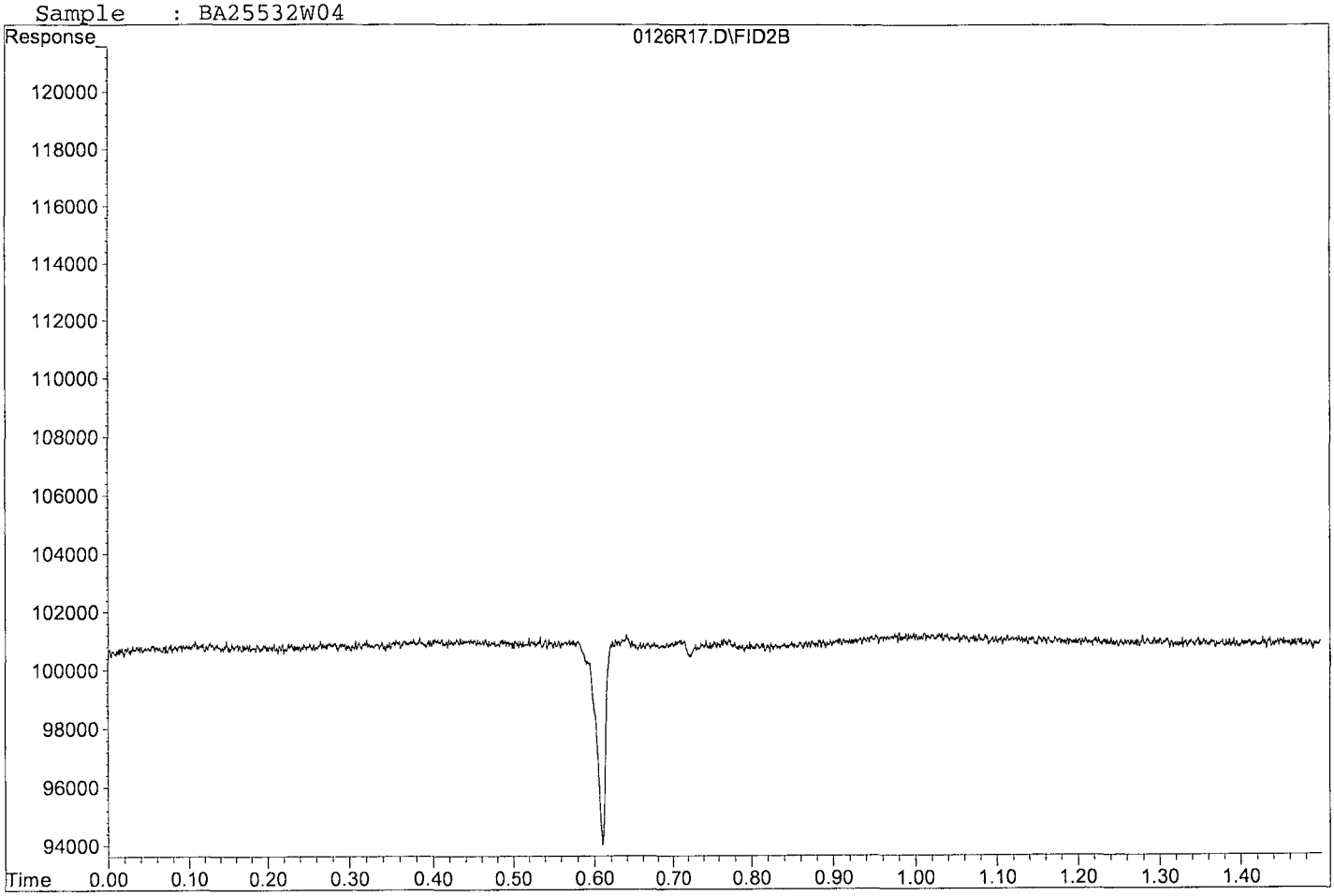
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R17.D
Sample : BA25532W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R18.D Vial: 18
Acq On : 26 Jan 21 14:23 Operator: LS
Sample : BA25534W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:25 2021 Quant Results File: RSK0914A.RES

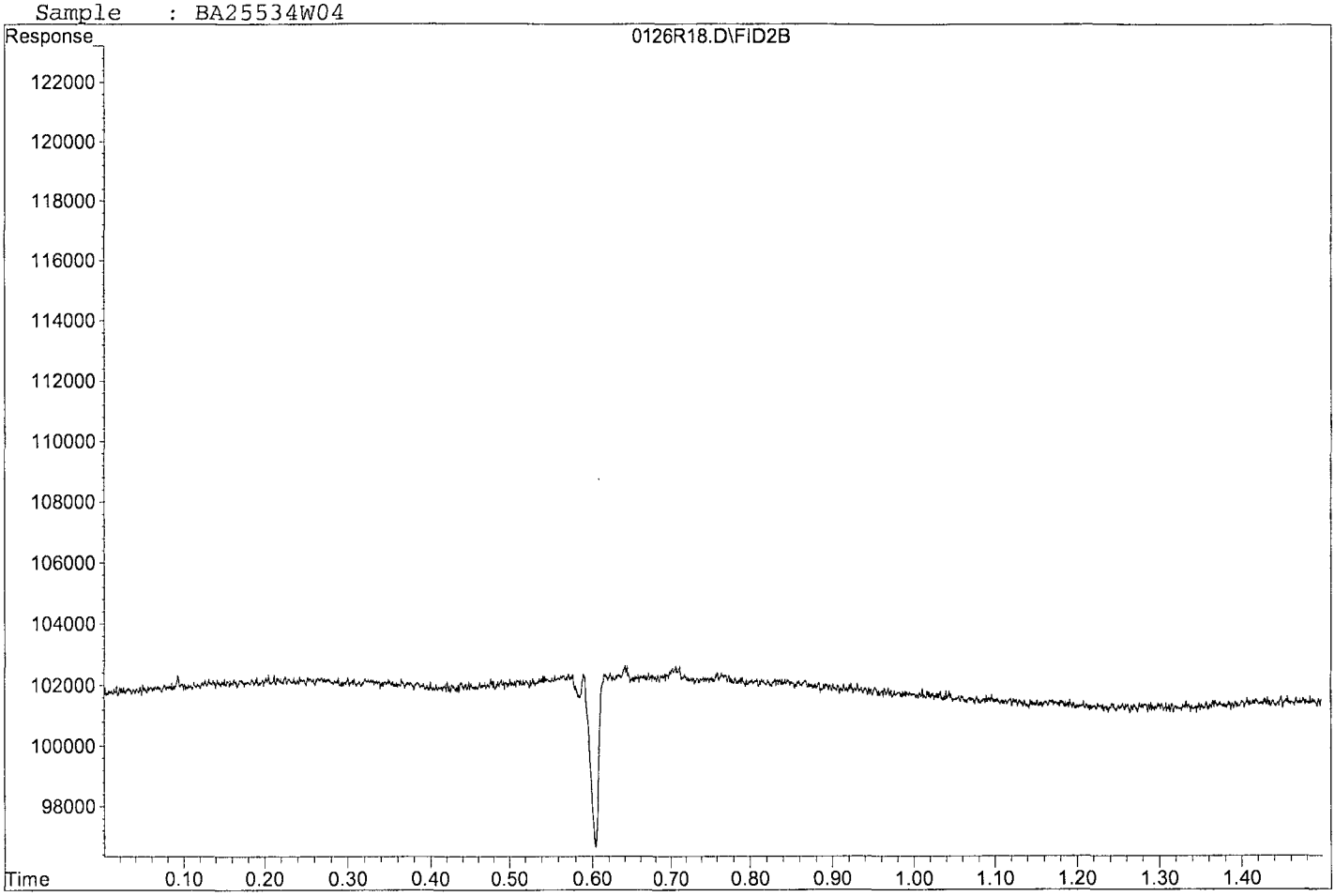
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R18.D
Sample : BA25534W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R19.D Vial: 19
Acq On : 26 Jan 21 14:25 Operator: LS
Sample : BA25535W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:28 2021 Quant Results File: RSK0914A.RES

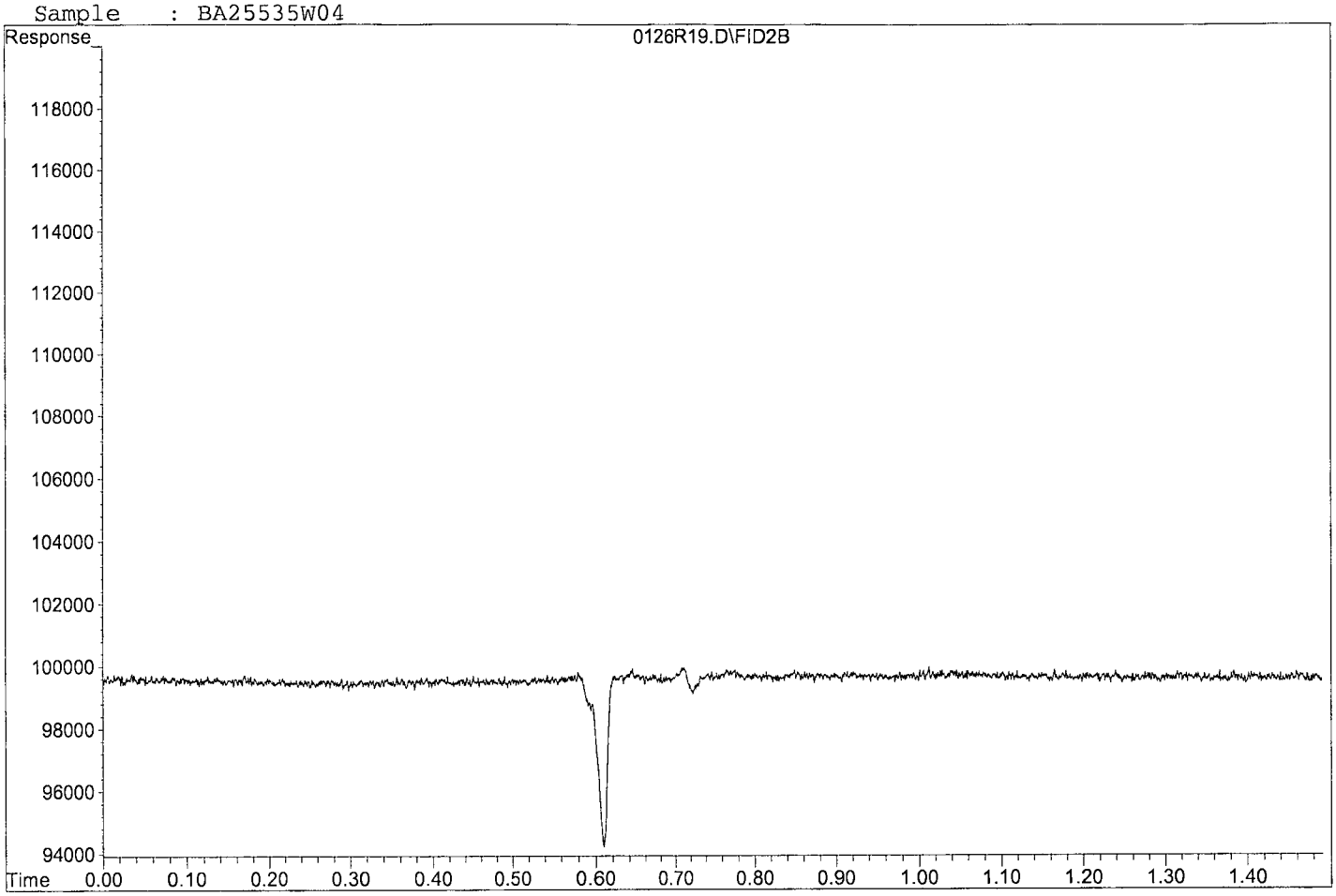
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R19.D
Sample : BA25535W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R20.D Vial: 20
Acq On : 26 Jan 21 14:28 Operator: LS
Sample : BA25537W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:31 2021 Quant Results File: RSK0914A.RES

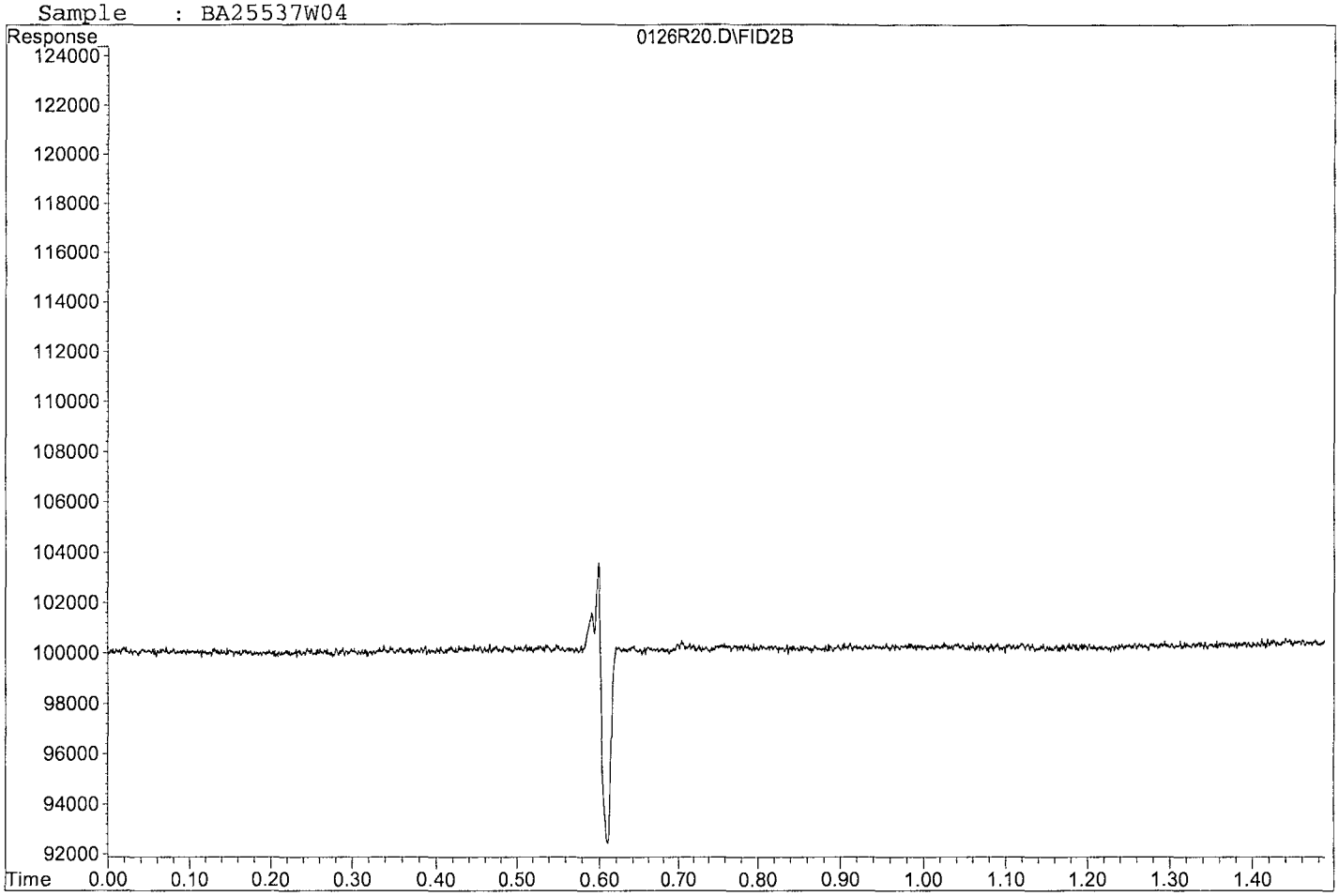
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R20.D
Sample : BA25537W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R21.D Vial: 21
Acq On : 26 Jan 21 14:32 Operator: LS
Sample : BA25538W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 14:34 2021 Quant Results File: RSK0914A.RES

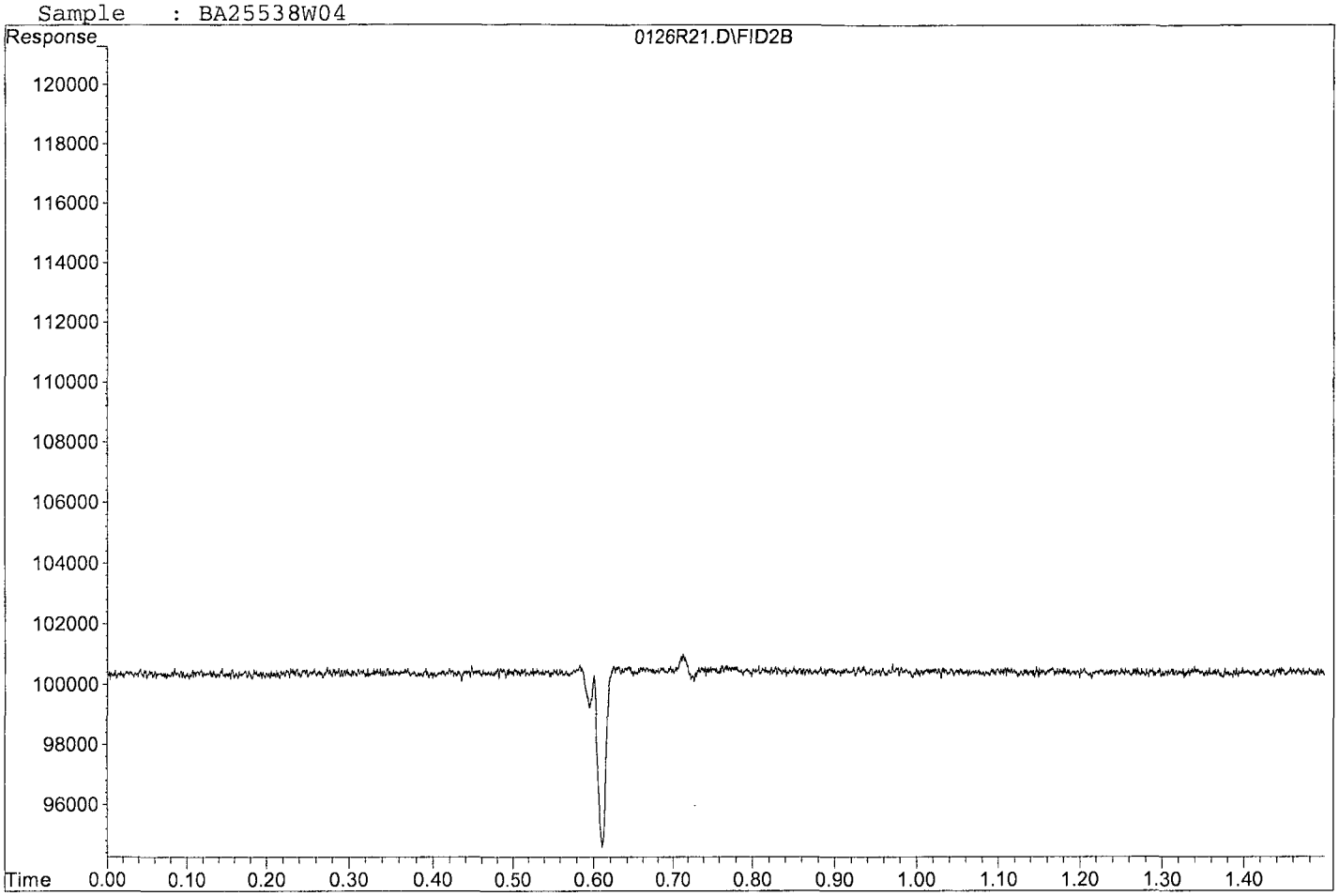
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R21.D
Sample : BA25538W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R05.D Vial: 5
Acq On : 26 Jan 21 13:30 Operator: LS
Sample : 210126A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:33 2021 Quant Results File: RSK0914A.RES

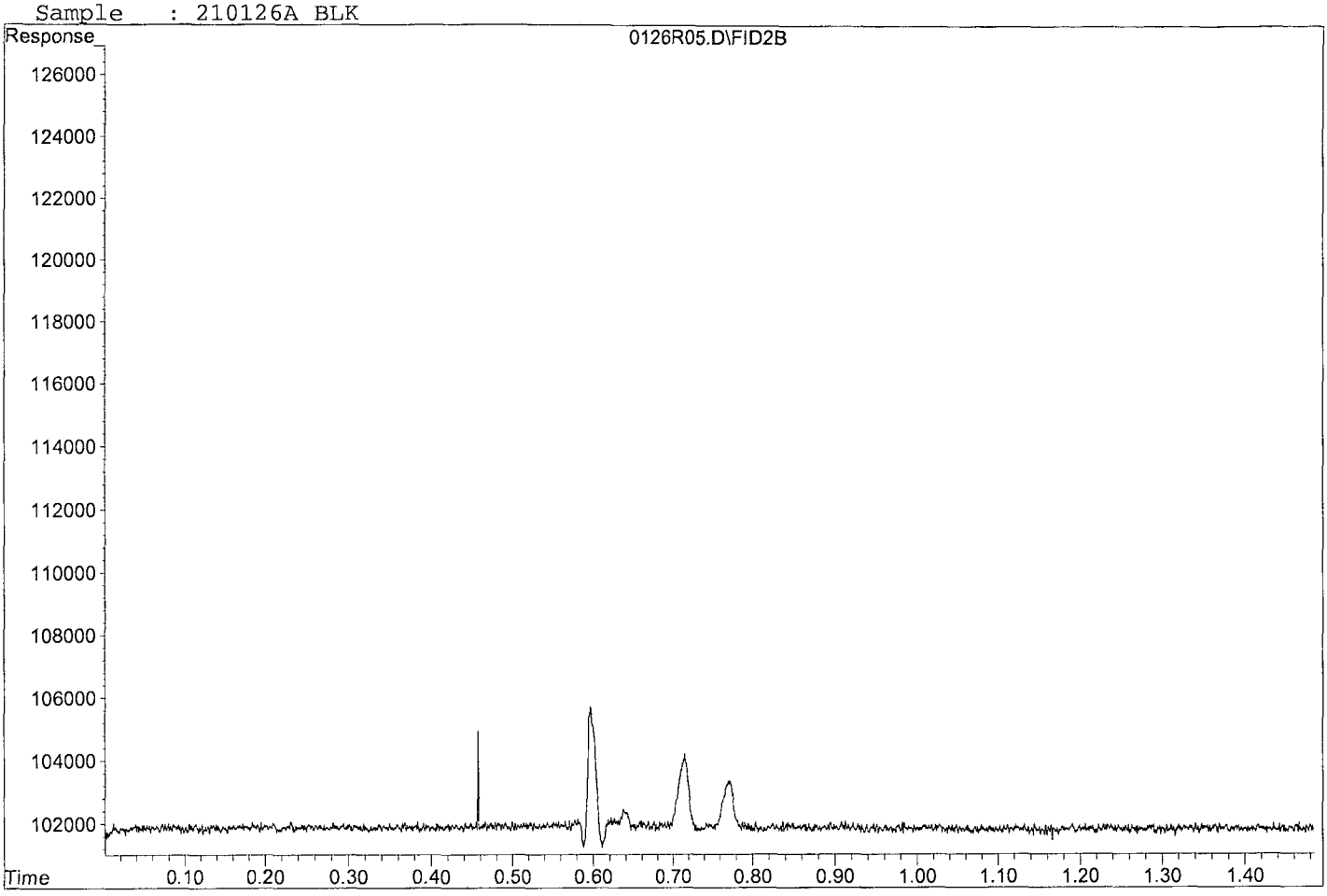
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R05.D
Sample : 210126A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R02.D Vial: 2
Acq On : 26 Jan 21 13:12 Operator: LS
Sample : 210126A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:14 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

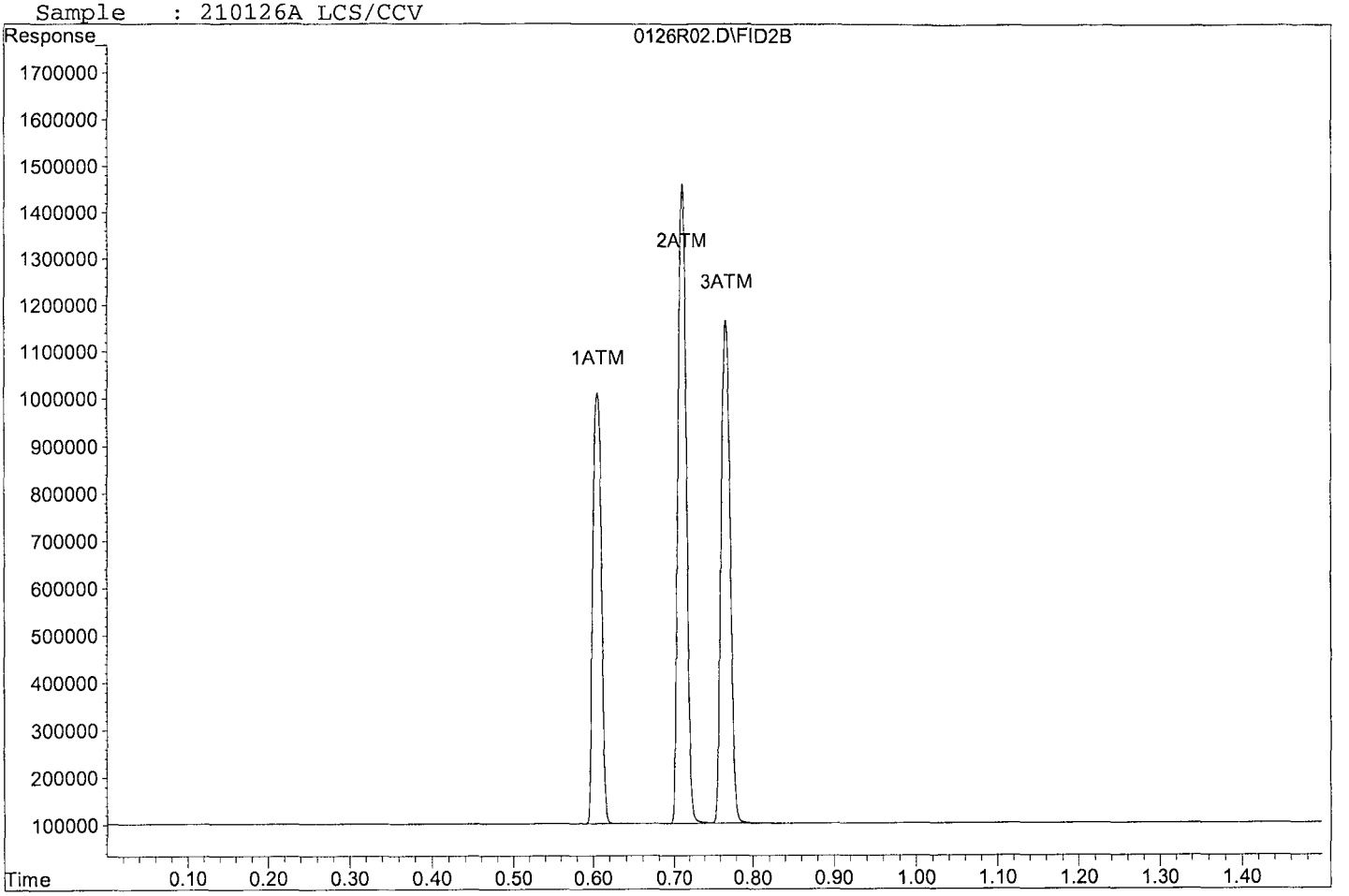
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	913253	73.981 ppb
2) ATM Ethane	0.71	1349471	146.899 ppb
3) ATM Ethene	0.77	1056358	144.398 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R02.D
Sample : 210126A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0126R04.D Vial: 4
Acq On : 26 Jan 21 13:26 Operator: LS
Sample : 210126A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 26 13:29 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

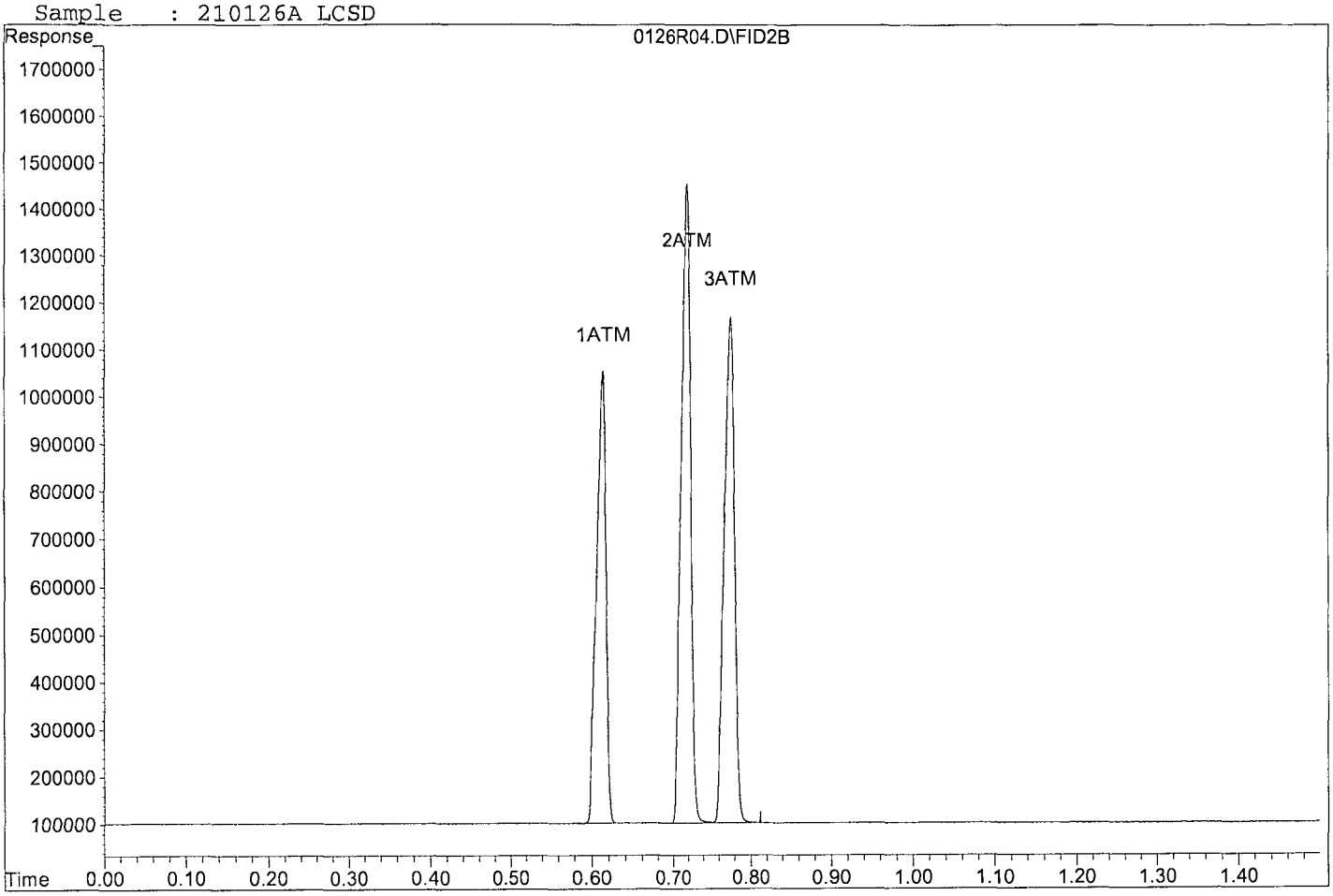
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	899840	72.893	ppb
2) ATM Ethane	0.72	1340838	145.952	ppb
3) ATM Ethene	0.77	1069151	146.137	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0126R04.D
Sample : 210126A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25434W08 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA25526W04 MS/MSD **LS 1/26/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0126R02.D	1	210126A LCS/CCV		26 Jan 21 13:12
2	4	0126R04.D	1	210126A LCSD		26 Jan 21 13:26
3	5	0126R05.D	1	210126A BLK		26 Jan 21 13:30
4	14	0126R14.D	1	BA25528W04		26 Jan 21 14:08
5	15	0126R15.D	1	BA25529W04		26 Jan 21 14:11
6	16	0126R16.D	1	BA25531W04		26 Jan 21 14:15
7	17	0126R17.D	1	BA25532W04		26 Jan 21 14:19
8	18	0126R18.D	1	BA25534W04		26 Jan 21 14:23
9	19	0126R19.D	1	BA25535W04		26 Jan 21 14:25
10	20	0126R20.D	1	BA25537W04		26 Jan 21 14:28
11	21	0126R21.D	1	BA25538W04		26 Jan 21 14:32
12	23	0126R23.D	1	210126A ENDING CCV		26 Jan 21 14:38
13	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
14	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
15	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
16	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
17	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
18	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
19	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
20	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

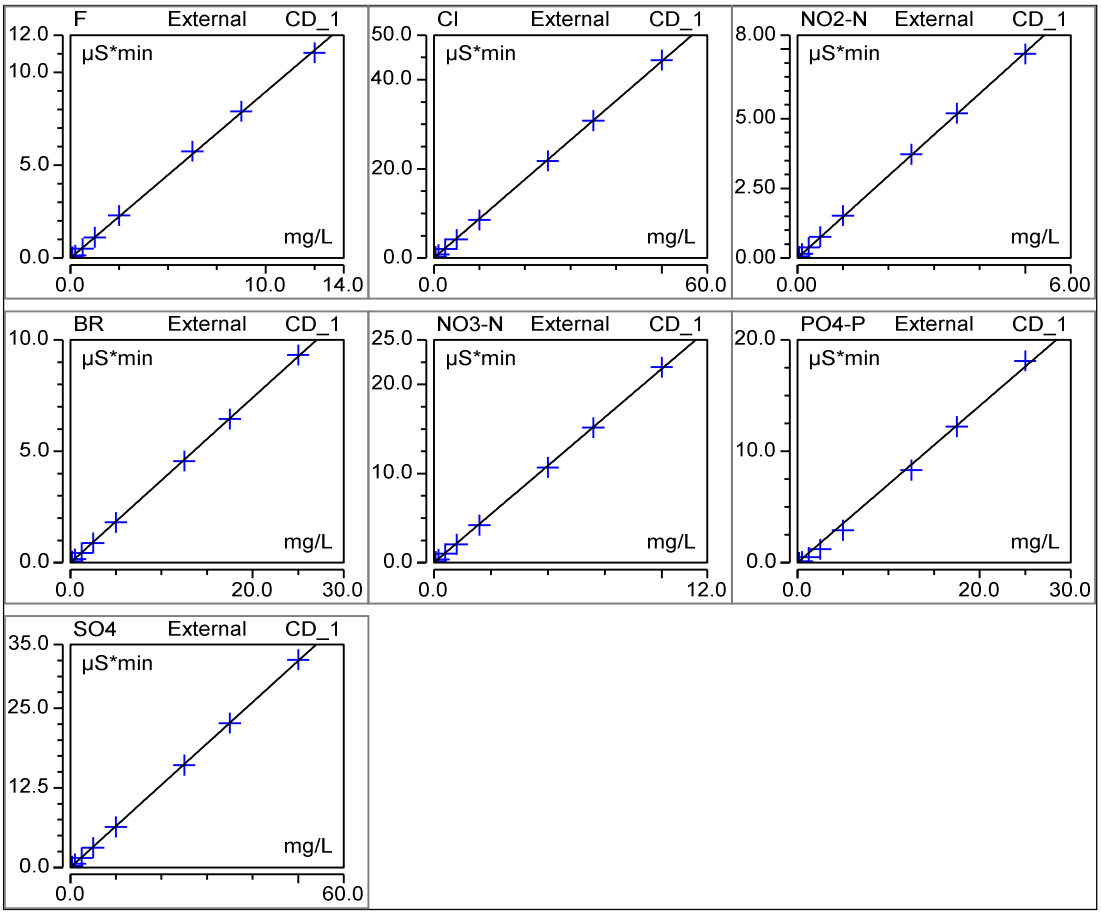
Calibration Batch Report

Sequence:	**201229**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.895	0.000	99.9560
Cl	Area	Lin	9.000	0.000	0.883	0.000	99.9833
NO2-N	Area	Lin	9.000	0.000	1.476	0.000	99.9867
BR	Area	Lin	9.000	0.000	0.370	0.000	99.9857
NO3-N	Area	Lin	9.000	0.000	2.175	0.000	99.9776
PO4-P	Area	Lin	8.000	0.000	0.704	0.000	99.5670
SO4	Area	Lin	9.000	0.000	0.649	0.000	99.9894

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.12.29	0.030	0.1952	0.0206	0.0879	0.0399	n.a.	0.2546
Cal 2 2020.12.29	0.065	0.3660	0.0382	0.1779	0.0685	0.0484	0.3350
Cal 3 2020.12.29	0.165	0.8899	0.1058	0.4441	0.1794	0.1725	0.8705
Cal 4 2020.12.29	0.569	2.3118	0.2547	1.1840	0.4620	0.7043	2.2914
Cal 5 2020.12.29	1.241	4.7003	0.5172	2.3974	0.9491	1.7211	4.7702
Cal 6 2020.12.29	2.562	9.6722	1.0305	4.8975	1.9393	4.1390	9.8124
Cal 7 2020.12.29	6.421	24.6930	2.5228	12.3317	4.9143	11.8093	24.7570
Cal 8 2020.12.29	8.827	34.9228	3.5216	17.4201	6.9681	17.3586	34.9246
Cal 9 2020.12.29	12.354	50.3149	4.9653	25.1755	10.0848	25.7294	50.2481

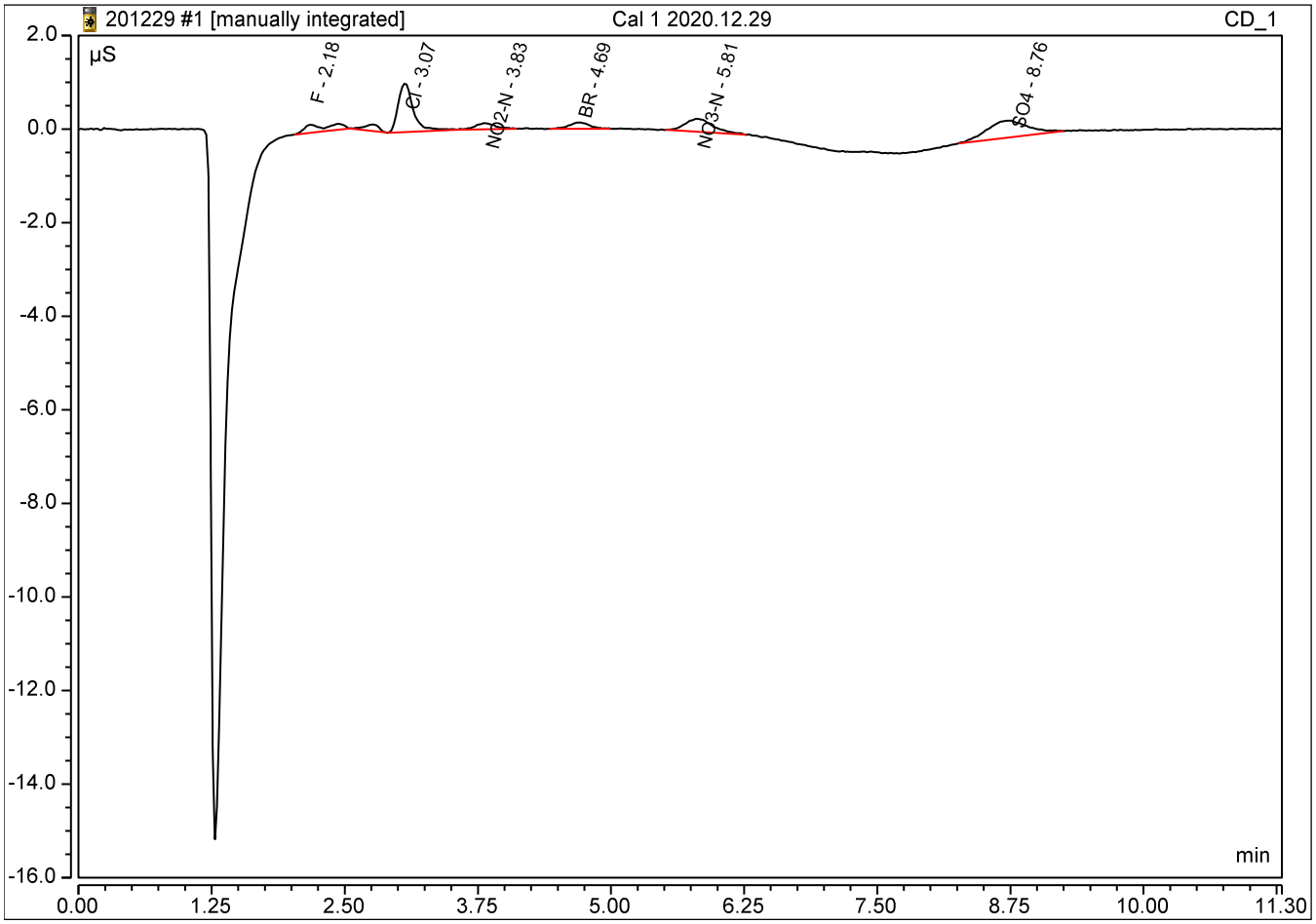


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.027	0.170	0.03	0.05	60.9%
4	3.07	**Cl**	BMB	0.172	1.041	0.20	0.2	97.6%
5	3.83	**NO2-N**	BMB	0.030	0.136	0.02	0.02	103.2%
6	4.69	**BR**	BMB*	0.033	0.142	0.09	0.1	87.9%
7	5.81	**NO3-N**	BMB	0.087	0.279	0.04	0.04	99.6%
8	8.76	**SO4**	BMB*	0.165	0.356	0.25	0.2	127.3%



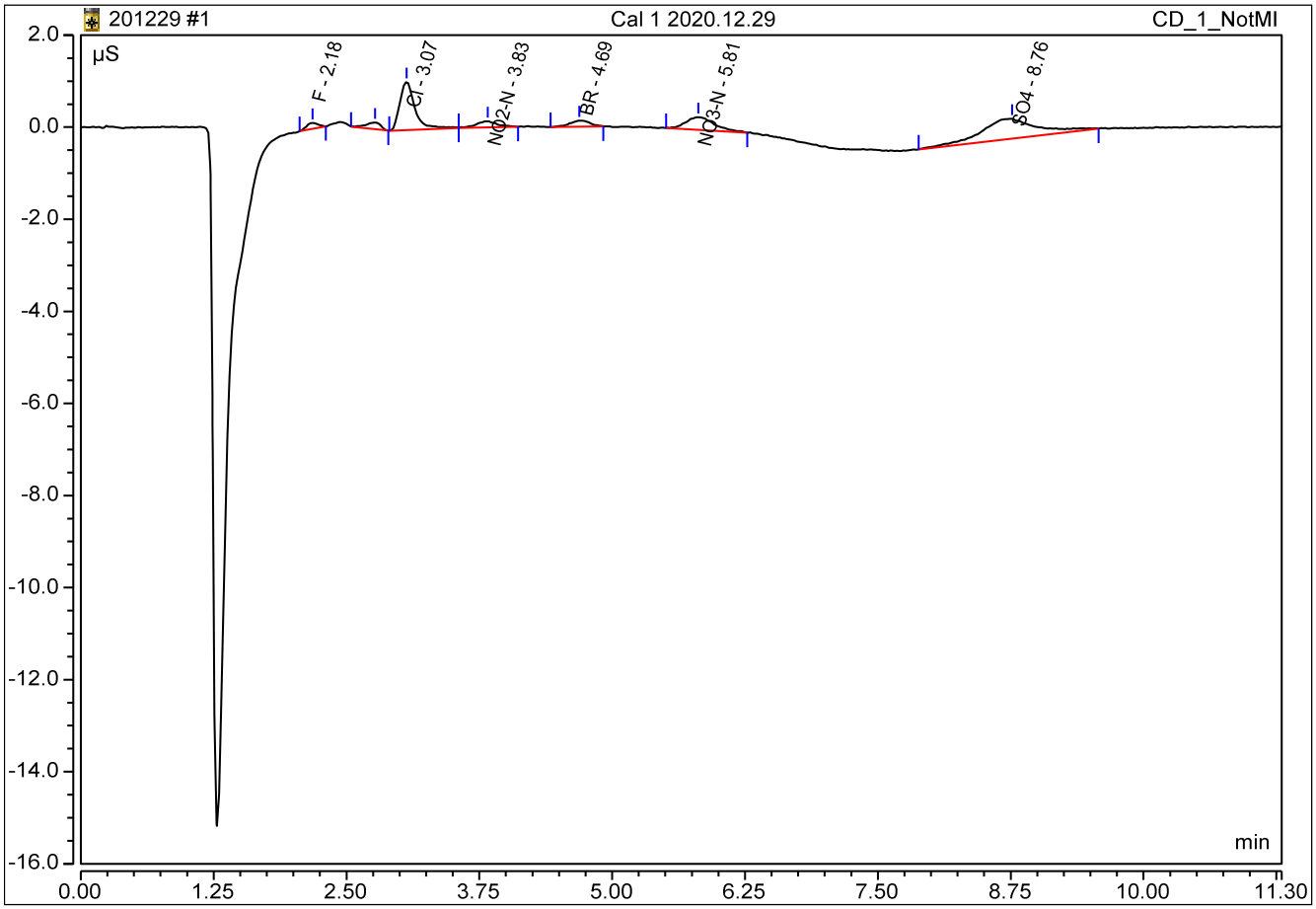
MI 5 F Br SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.017	0.127	0.0188
4	3.07	**Cl**	BMB	0.172	1.041	0.1952
5	3.83	**NO2-N**	BMB	0.030	0.136	0.0206
6	4.69	**BR**	BMB*	0.029	0.136	0.0777
7	5.81	**NO3-N**	BMB	0.087	0.279	0.0399
8	8.76	**SO4**	BMB*	0.271	0.433	0.4316

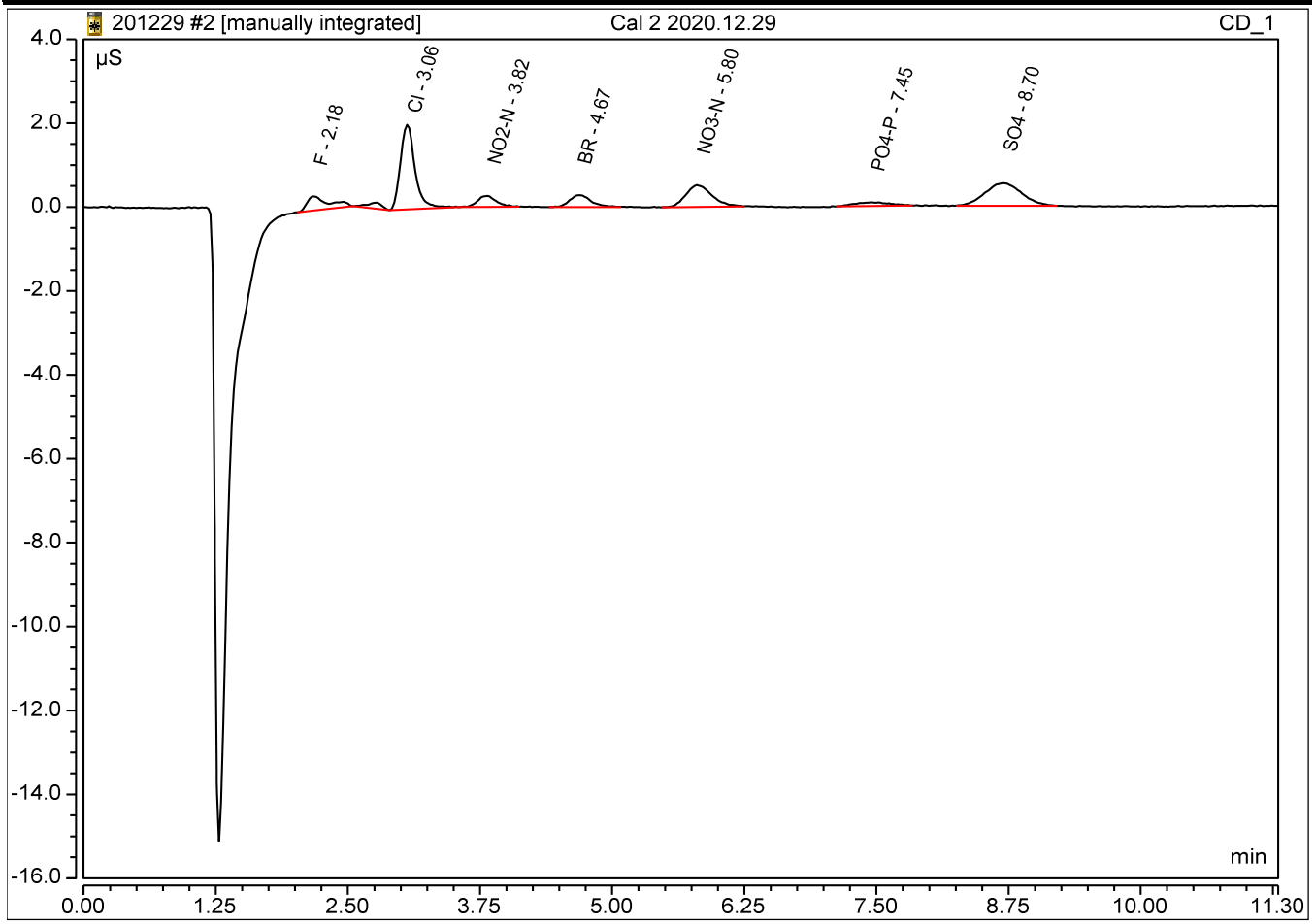


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.058	0.338	0.06	0.1	64.6%
4	3.06	**Cl**	BMB	0.323	2.016	0.37	0.4	91.5%
5	3.82	**NO2-N**	BMB	0.056	0.268	0.04	0.04	95.6%
6	4.67	**BR**	BMB	0.066	0.282	0.18	0.2	89.0%
7	5.80	**NO3-N**	BMB	0.149	0.521	0.07	0.08	85.6%
8	7.45	**PO4-P**	BMB	0.034	0.096	0.05	0.2	24.2%
9	8.70	**SO4**	BMB	0.217	0.542	0.33	0.4	83.7%

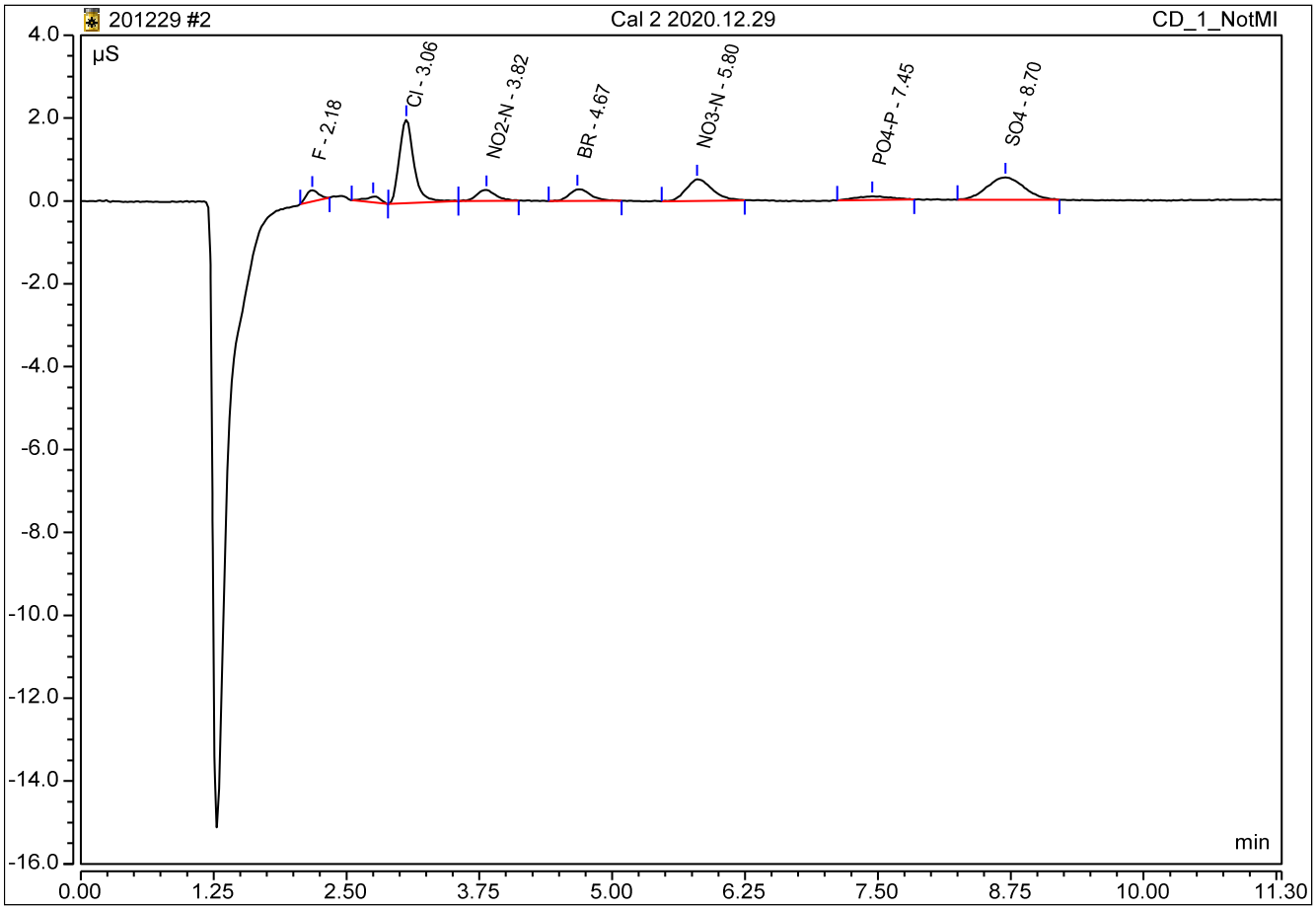


MI 5 F GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.037	0.268	0.0419
4	3.06	**Cl**	BMB	0.323	2.016	0.3660
5	3.82	**NO2-N**	BMB	0.056	0.268	0.0382
6	4.67	**BR**	BMB	0.066	0.282	0.1779
7	5.80	**NO3-N**	BMB	0.149	0.521	0.0685
8	7.45	**PO4-P**	BMB	0.034	0.096	0.0504
9	8.70	**SO4**	BMB	0.217	0.542	0.3465

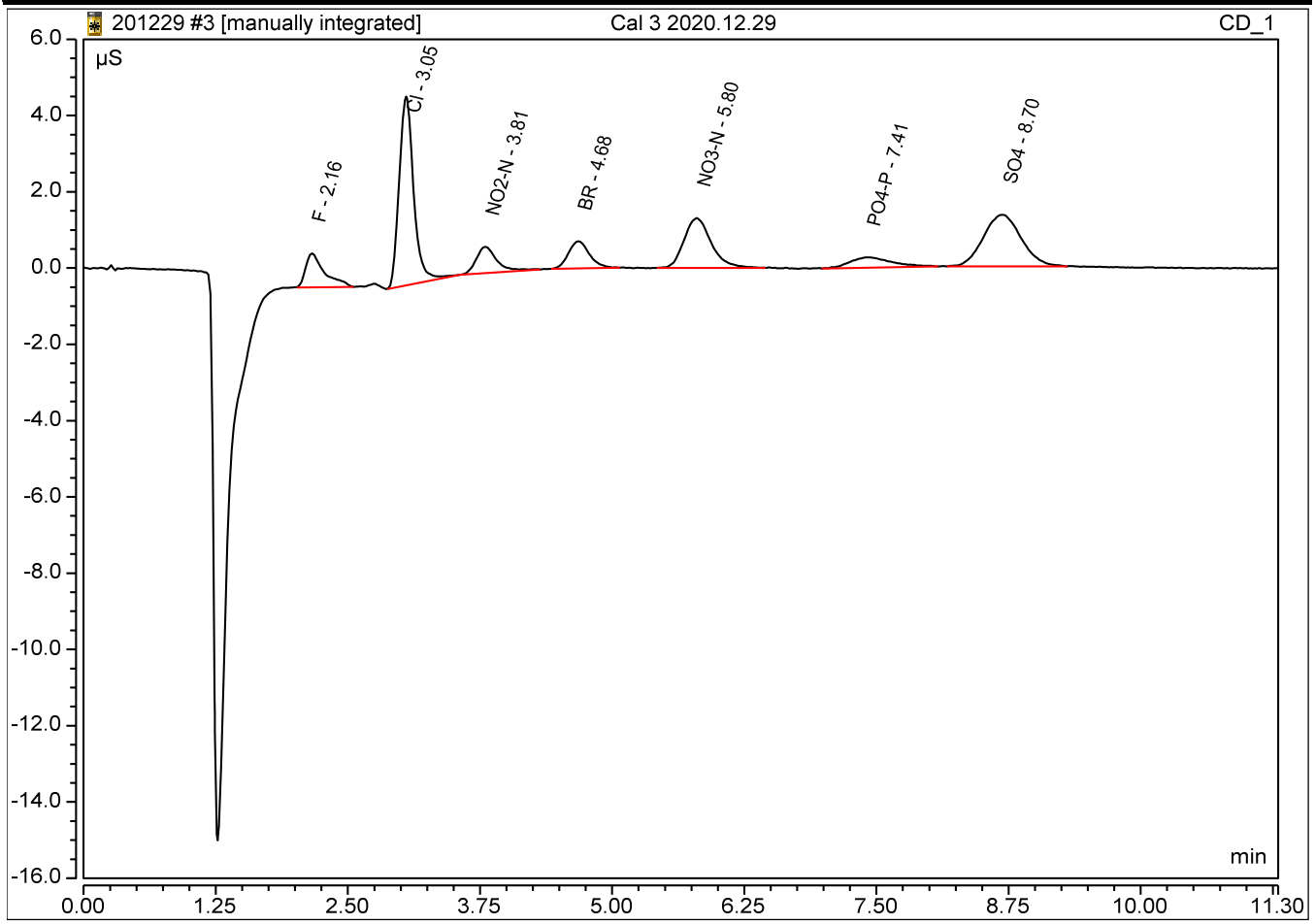


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BM *	0.147	0.890	0.16	0.25	65.8%
3	3.05	**Cl**	BMB	0.785	4.952	0.89	1	89.0%
4	3.81	**NO2-N**	BMB	0.156	0.689	0.11	0.1	105.8%
5	4.68	**BR**	BMB	0.164	0.714	0.44	0.5	88.8%
6	5.80	**NO3-N**	BMB	0.390	1.313	0.18	0.2	89.7%
7	7.41	**PO4-P**	BMB*	0.121	0.273	0.17	0.5	34.5%
8	8.70	**SO4**	BMB	0.565	1.354	0.87	1	87.1%

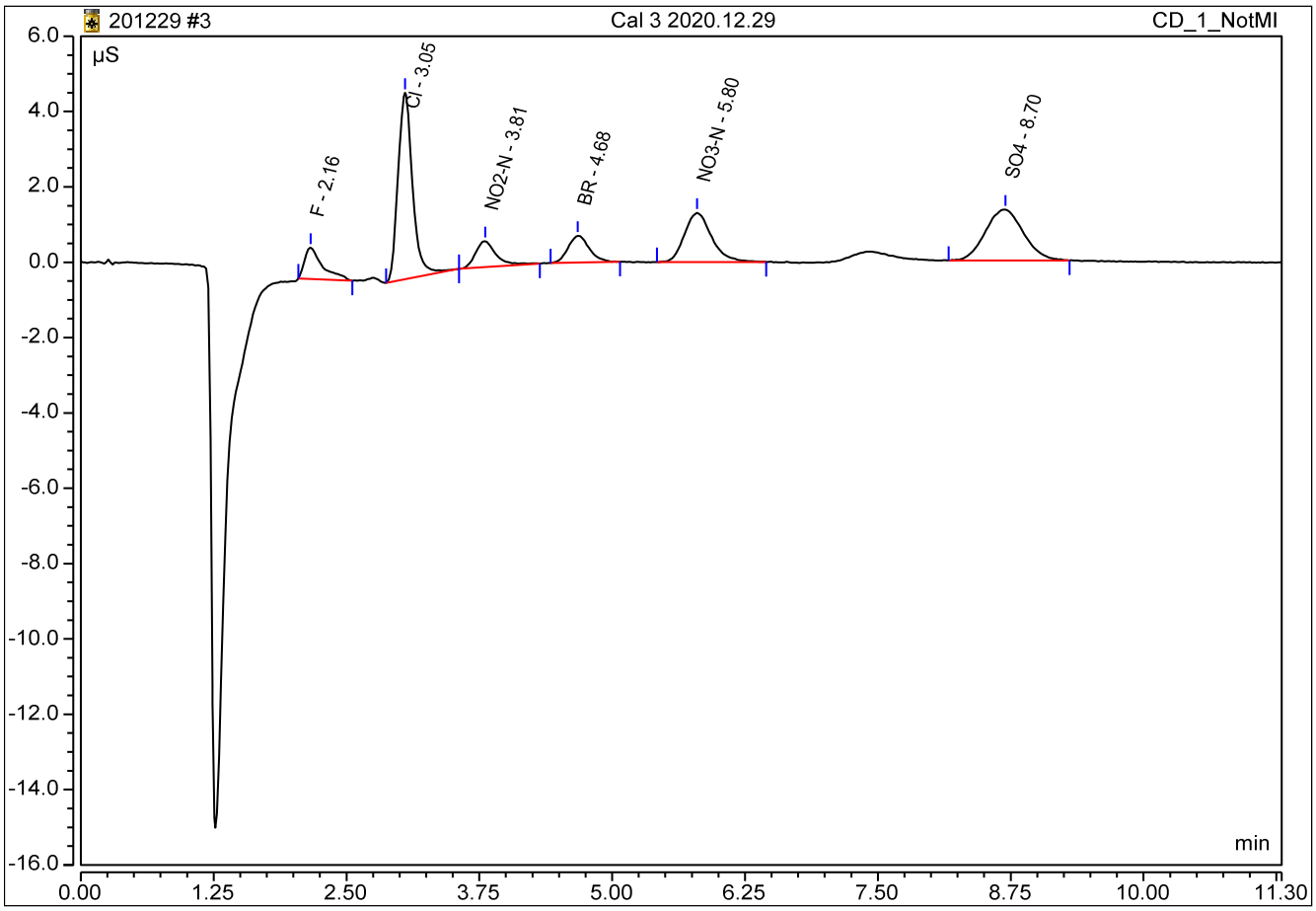


MI 5 F PO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BM *	0.163	0.830	0.1851
3	3.05	**Cl**	BMB	0.785	4.952	0.8899
4	3.81	**NO2-N**	BMB	0.156	0.689	0.1058
5	4.68	**BR**	BMB	0.164	0.714	0.4441
6	5.80	**NO3-N**	BMB	0.390	1.313	0.1794
7	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
8	8.70	**SO4**	BMB	0.565	1.354	0.9004

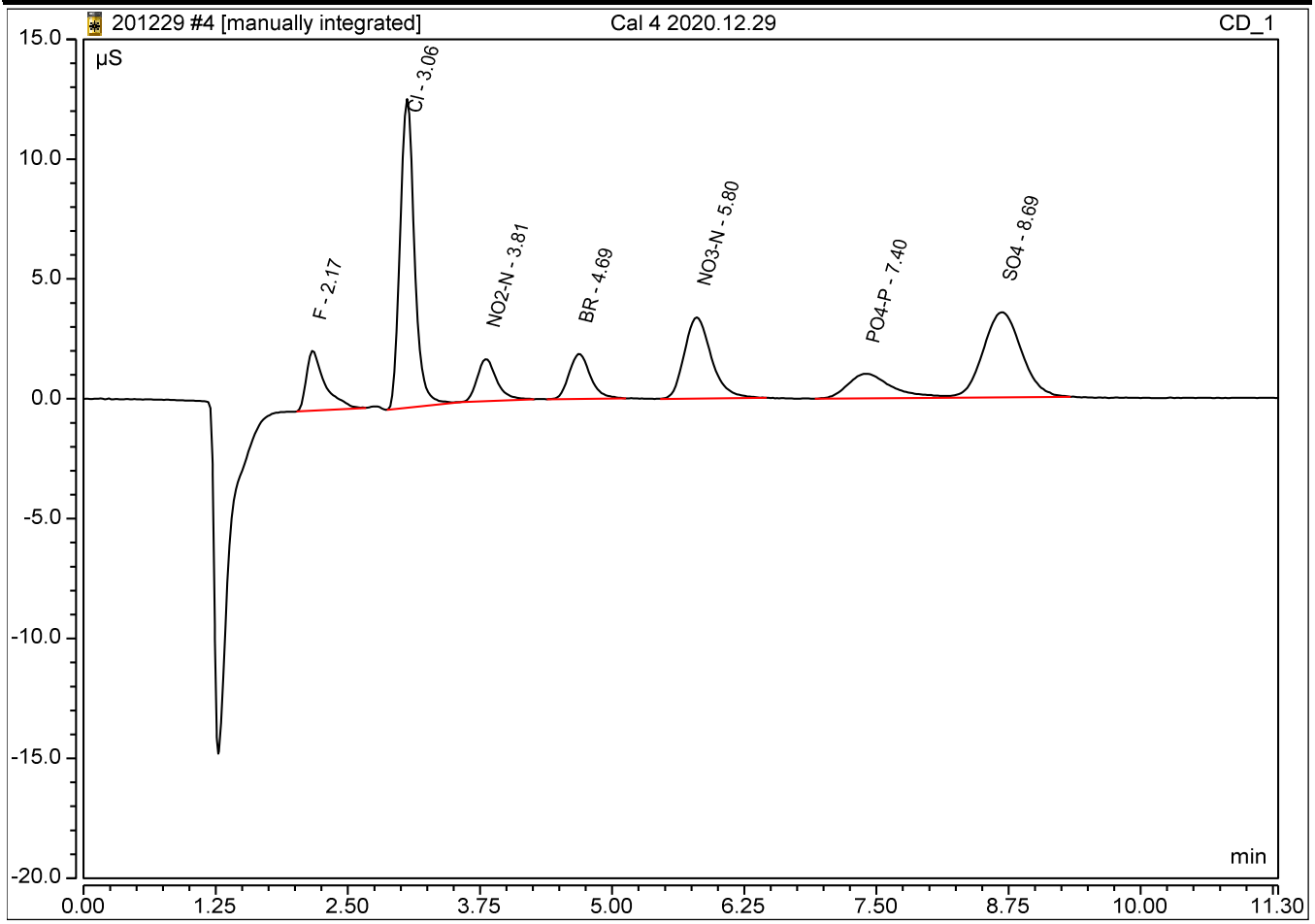


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB*	0.510	2.511	0.57	0.625	91.1%
2	3.06	**Cl**	BMB	2.040	12.880	2.31	2.5	92.5%
3	3.81	**NO2-N**	BMB	0.376	1.749	0.25	0.25	101.9%
4	4.69	**BR**	BMB	0.438	1.879	1.18	1.25	94.7%
5	5.80	**NO3-N**	BMB	1.005	3.393	0.46	0.5	92.4%
6	7.40	**PO4-P**	BM *	0.496	1.023	0.70	1.25	56.3%
7	8.69	**SO4**	MB*	1.487	3.545	2.29	2.5	91.7%

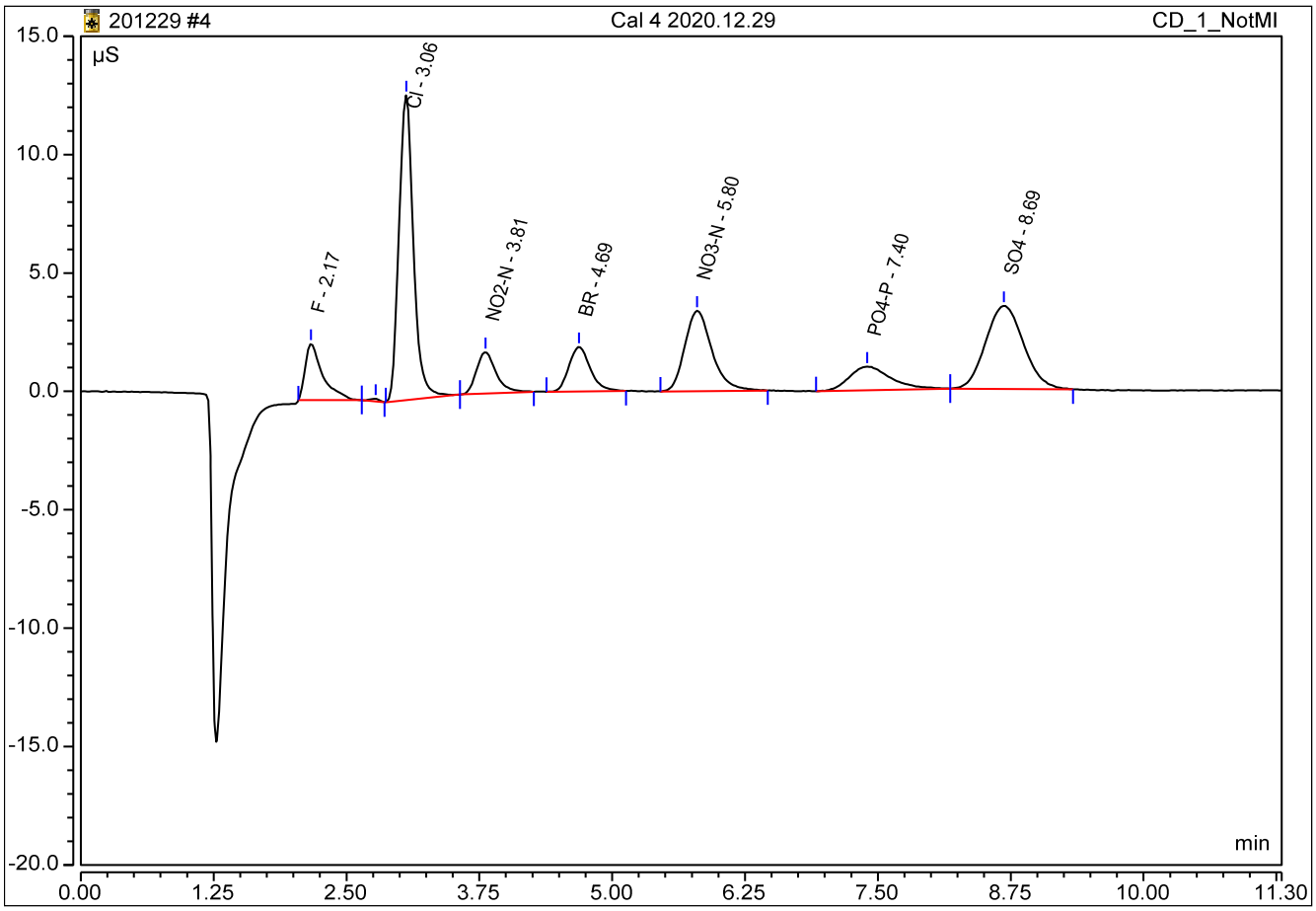


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB*	0.454	2.383	0.5138
2	3.06	**Cl**	BMB	2.040	12.880	2.3118
3	3.81	**NO2-N**	BMB	0.376	1.749	0.2547
4	4.69	**BR**	BMB	0.438	1.879	1.1840
5	5.80	**NO3-N**	BMB	1.005	3.393	0.4620
6	7.40	**PO4-P**	BM *	0.451	0.996	0.6677
7	8.69	**SO4**	MB*	1.446	3.505	2.3045

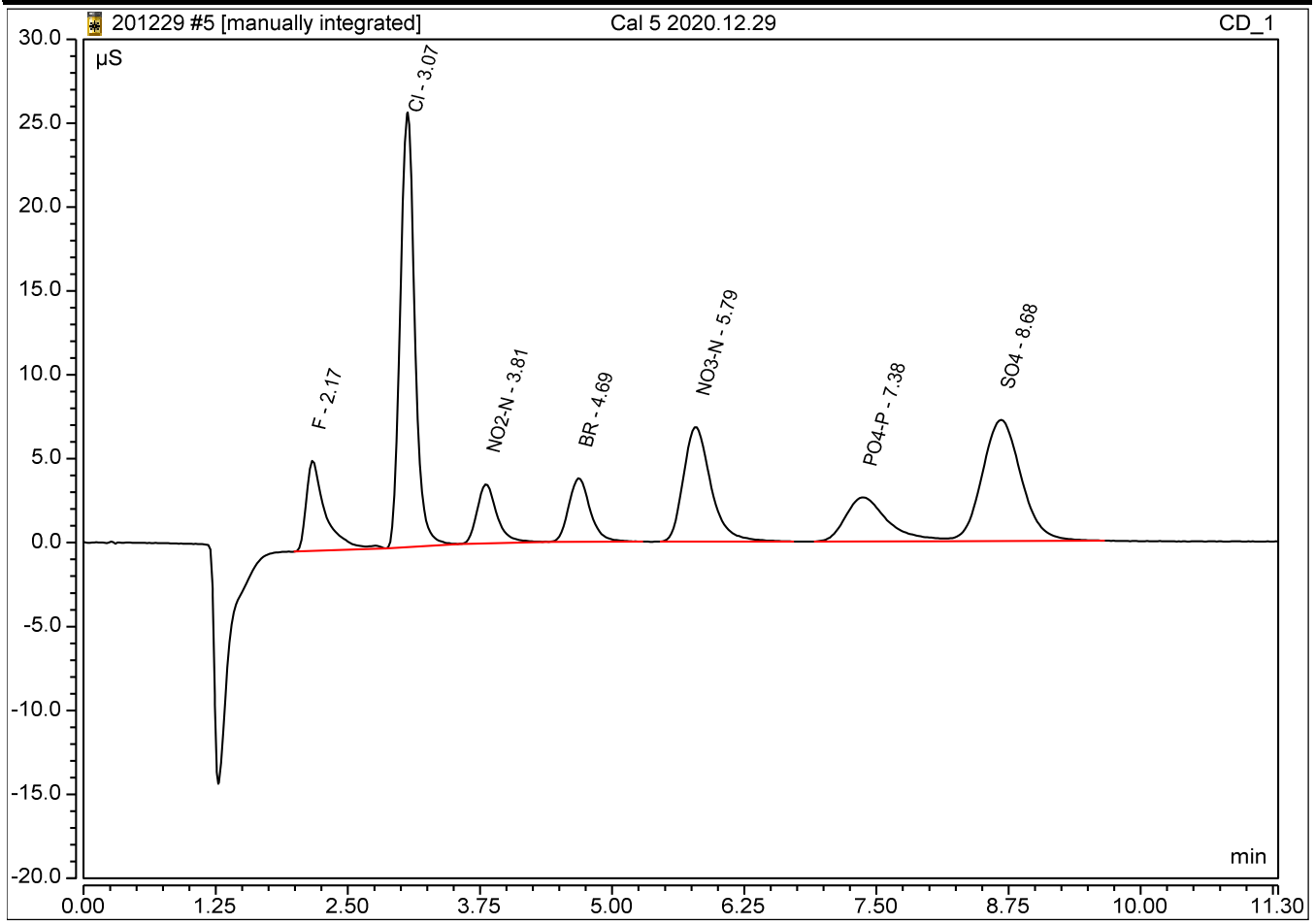


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	1.110	5.384	1.24	1.25	99.3%
3	3.07	**Cl**	bMB*	4.148	25.916	4.70	5	94.0%
4	3.81	**NO2-N**	BMB	0.763	3.513	0.52	0.5	103.4%
5	4.69	**BR**	BMB	0.887	3.786	2.40	2.5	95.9%
6	5.79	**NO3-N**	BMB	2.064	6.848	0.95	1	94.9%
7	7.38	**PO4-P**	BM *	1.211	2.626	1.72	2.5	68.8%
8	8.68	**SO4**	MB*	3.095	7.217	4.77	5	95.4%



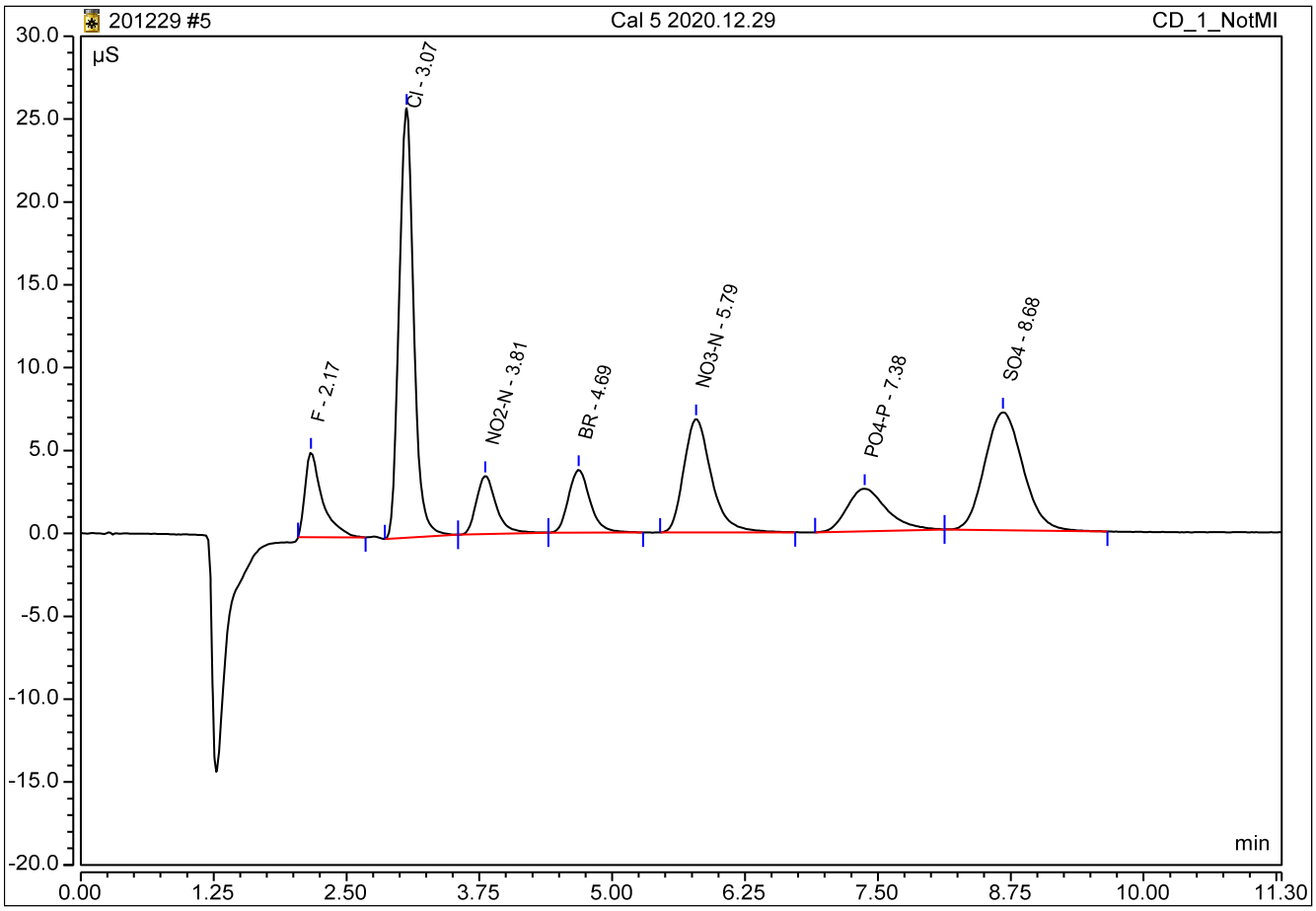
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	0.966	5.118	1.0941
3	3.07	**Cl**	bMB*	4.148	25.916	4.7003
4	3.81	**NO2-N**	BMB	0.763	3.513	0.5172
5	4.69	**BR**	BMB	0.887	3.786	2.3974
6	5.79	**NO3-N**	BMB	2.064	6.848	0.9491
7	7.38	**PO4-P**	BM *	1.118	2.567	1.6557
8	8.68	**SO4**	MB*	2.978	7.119	4.7469

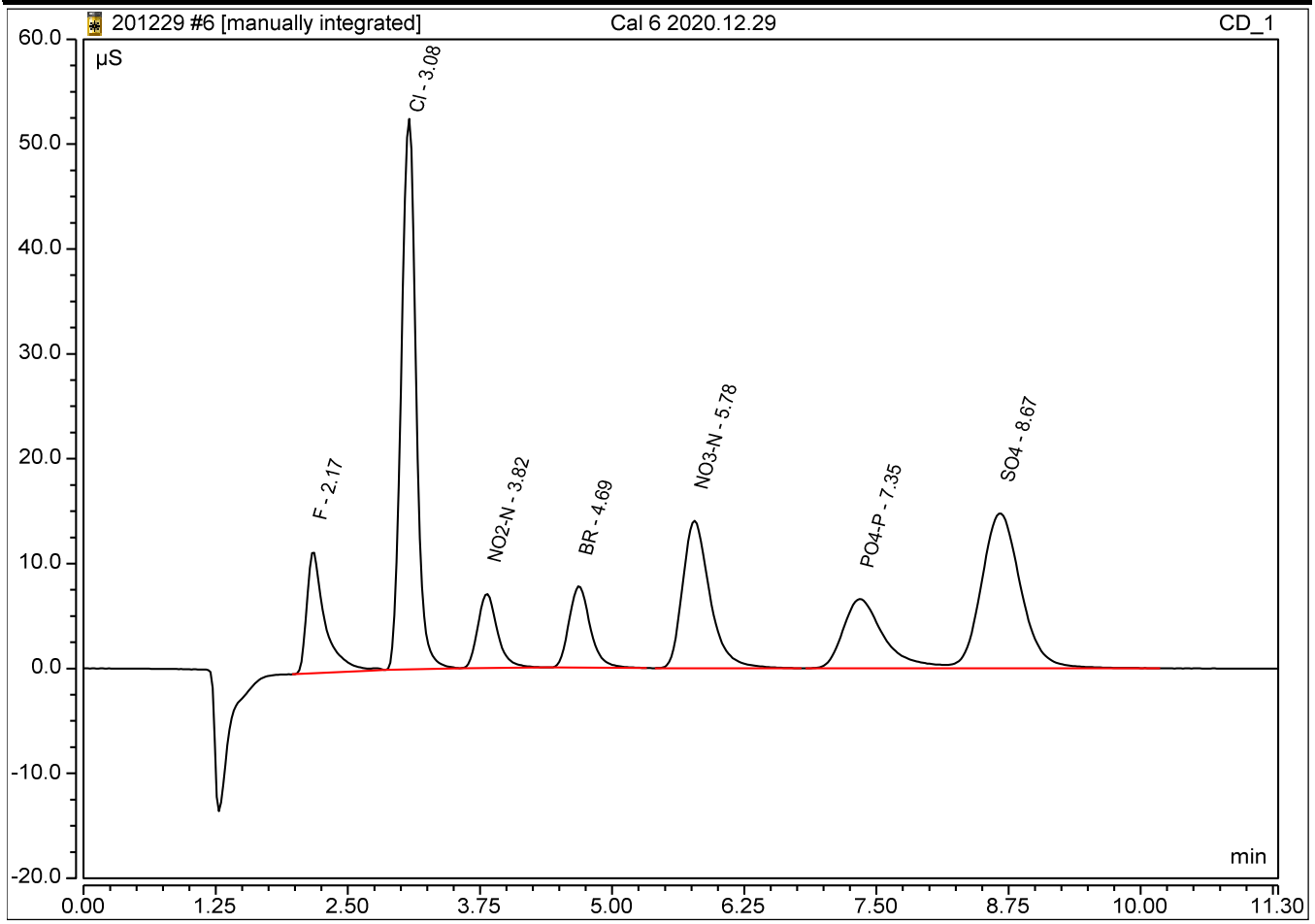


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	2.292	11.657	2.56	2.5	102.5%
3	3.08	**Cl**	bMB*	8.536	52.533	9.67	10	96.7%
4	3.82	**NO2-N**	BMB	1.521	7.071	1.03	1	103.1%
5	4.69	**BR**	BMB	1.813	7.778	4.90	5	98.0%
6	5.78	**NO3-N**	BMB	4.218	14.063	1.94	2	97.0%
7	7.35	**PO4-P**	BM *	2.913	6.594	4.14	5	82.8%
8	8.67	**SO4**	MB*	6.367	14.783	9.81	10	98.1%



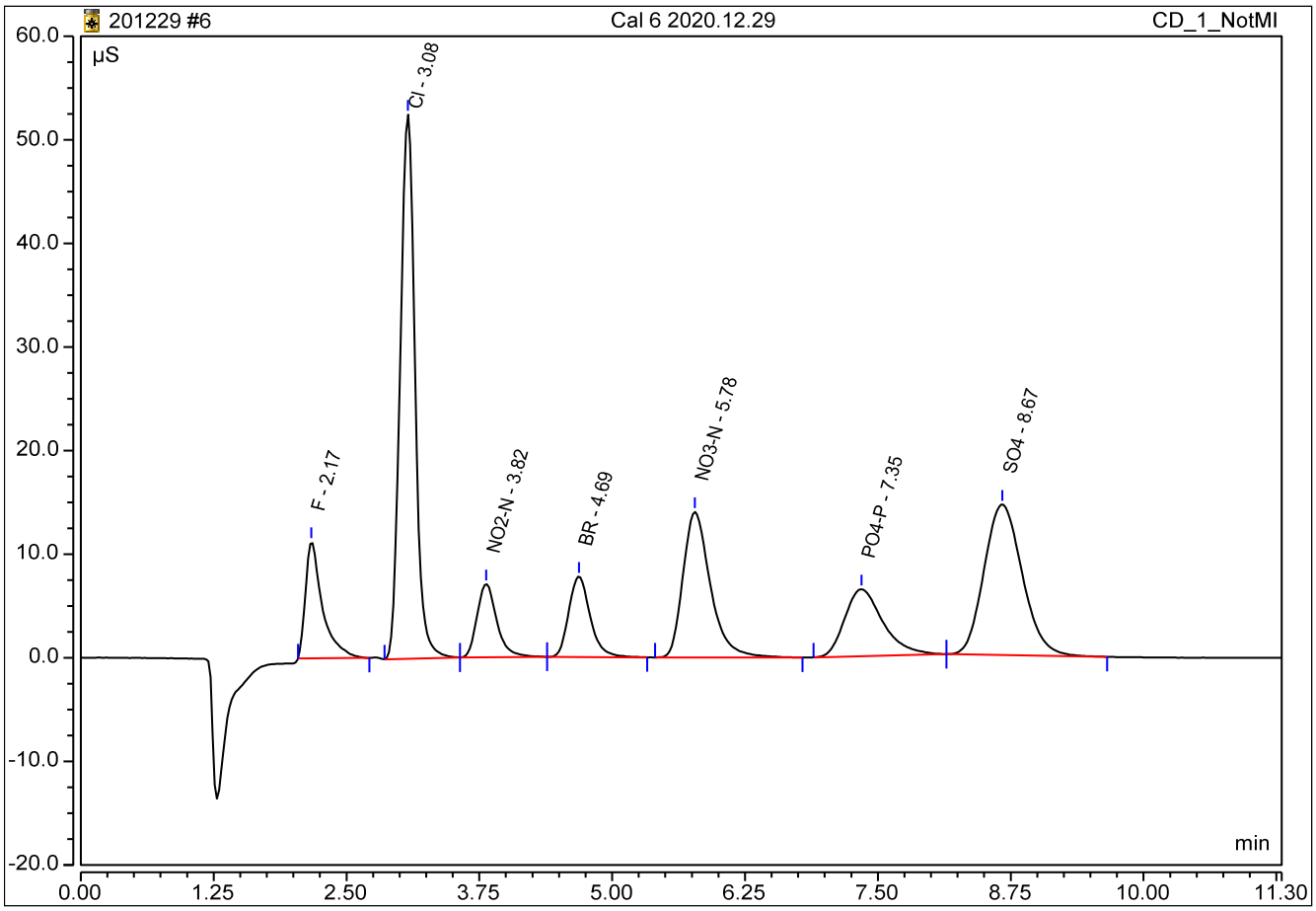
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	2.075	11.256	2.3510
3	3.08	**Cl**	bMB*	8.536	52.533	9.6722
4	3.82	**NO2-N**	BMB	1.521	7.071	1.0305
5	4.69	**BR**	BMB	1.813	7.778	4.8975
6	5.78	**NO3-N**	BMB	4.218	14.063	1.9393
7	7.35	**PO4-P**	BM *	2.699	6.468	3.9983
8	8.67	**SO4**	MB*	6.057	14.547	9.6546

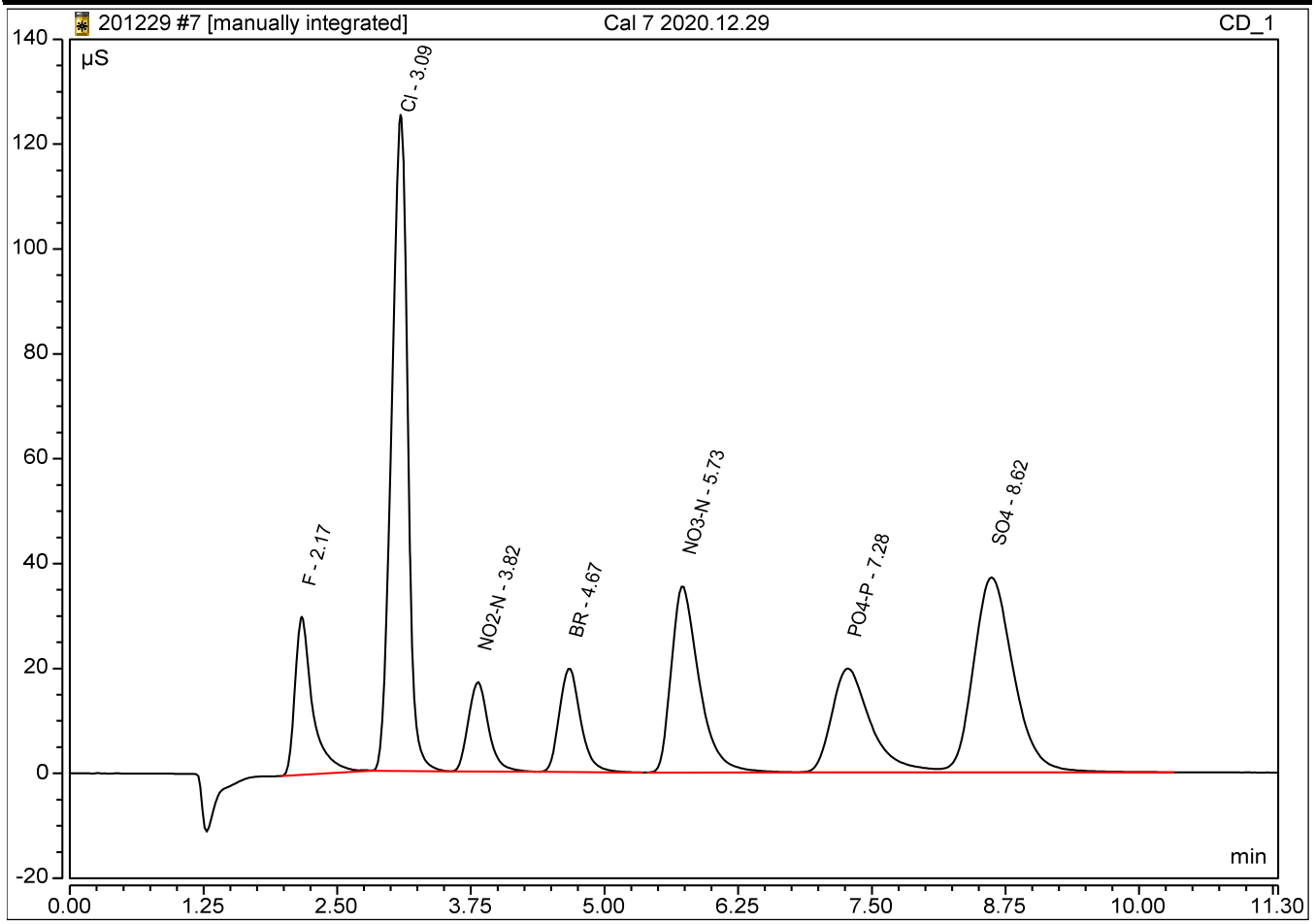


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	5.745	30.169	6.42	6.25	102.7%
3	3.09	**Cl**	BMB	21.792	125.137	24.69	25	98.8%
4	3.82	**NO2-N**	BMB	3.723	17.070	2.52	2.5	100.9%
5	4.67	**BR**	BMB	4.564	19.790	12.33	12.5	98.7%
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.91	5	98.3%
7	7.28	**PO4-P**	bM *	8.312	19.803	11.81	12.5	94.5%
8	8.62	**SO4**	MB*	16.064	37.197	24.76	25	99.0%



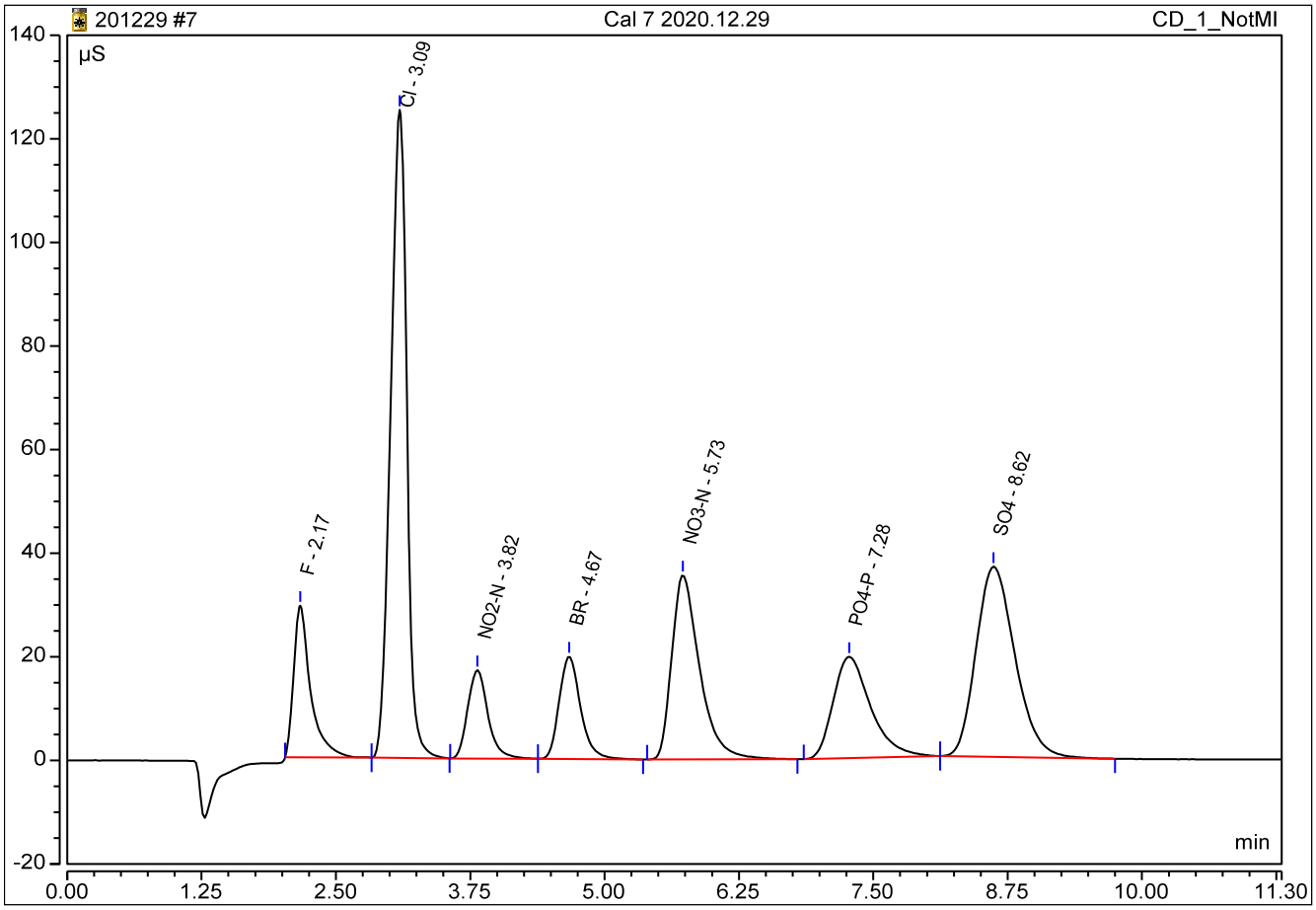
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	5.326	29.299	6.0342
3	3.09	**Cl**	BMB	21.792	125.137	24.6930
4	3.82	**NO2-N**	BMB	3.723	17.070	2.5228
5	4.67	**BR**	BMB	4.564	19.790	12.3317
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.9143
7	7.28	**PO4-P**	bM *	7.897	19.579	11.6959
8	8.62	**SO4**	MB*	15.439	36.724	24.6109

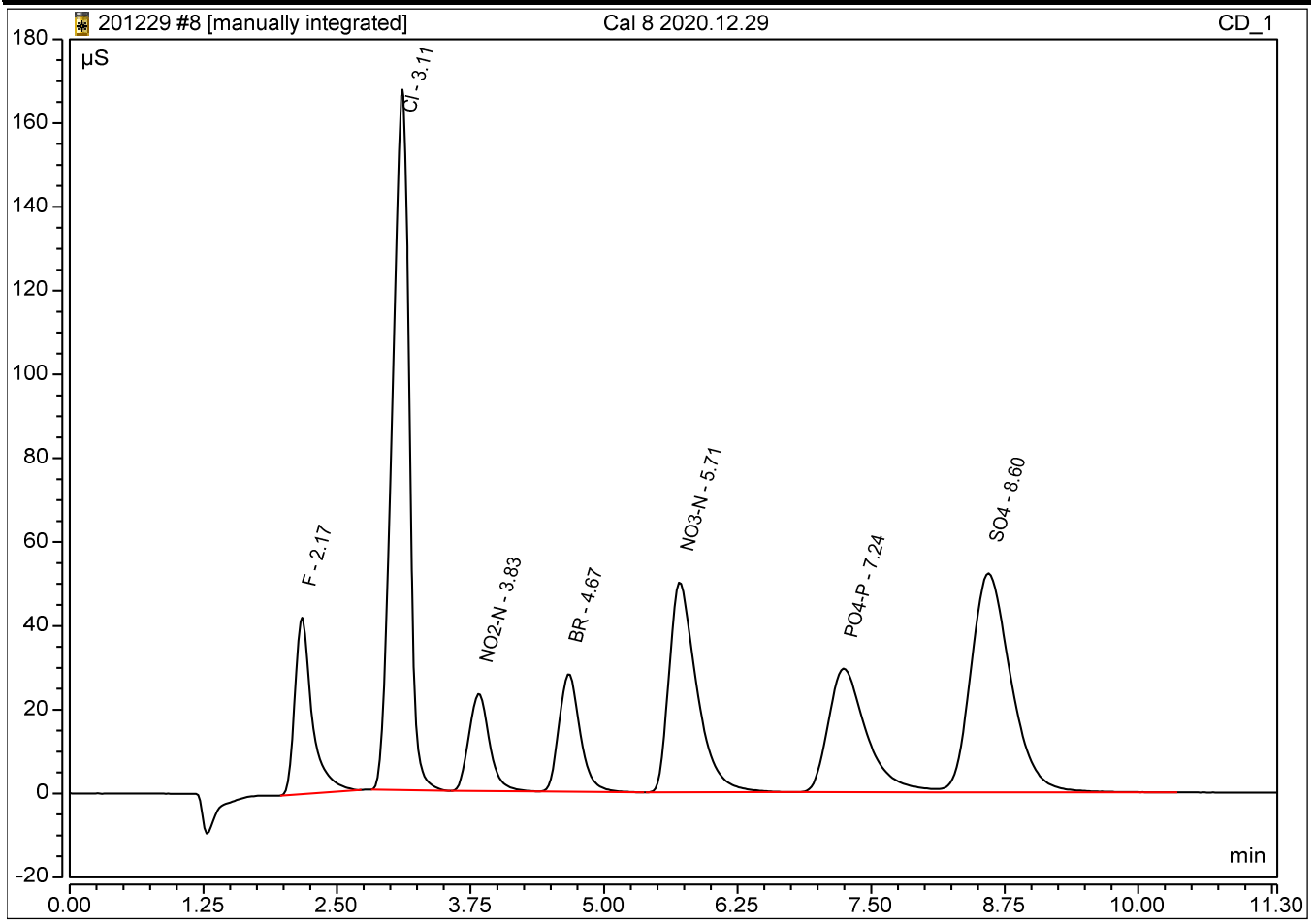


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	7.898	42.129	8.83	8.75	100.9%
2	3.11	**Cl**	BMB	30.820	167.162	34.92	35	99.8%
3	3.83	**NO2-N**	BMB	5.198	23.244	3.52	3.5	100.6%
4	4.67	**BR**	BMB	6.447	28.118	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.97	7	99.5%
6	7.24	**PO4-P**	bM *	12.218	29.486	17.36	17.5	99.2%
7	8.60	**SO4**	MB*	22.662	52.231	34.92	35	99.8%

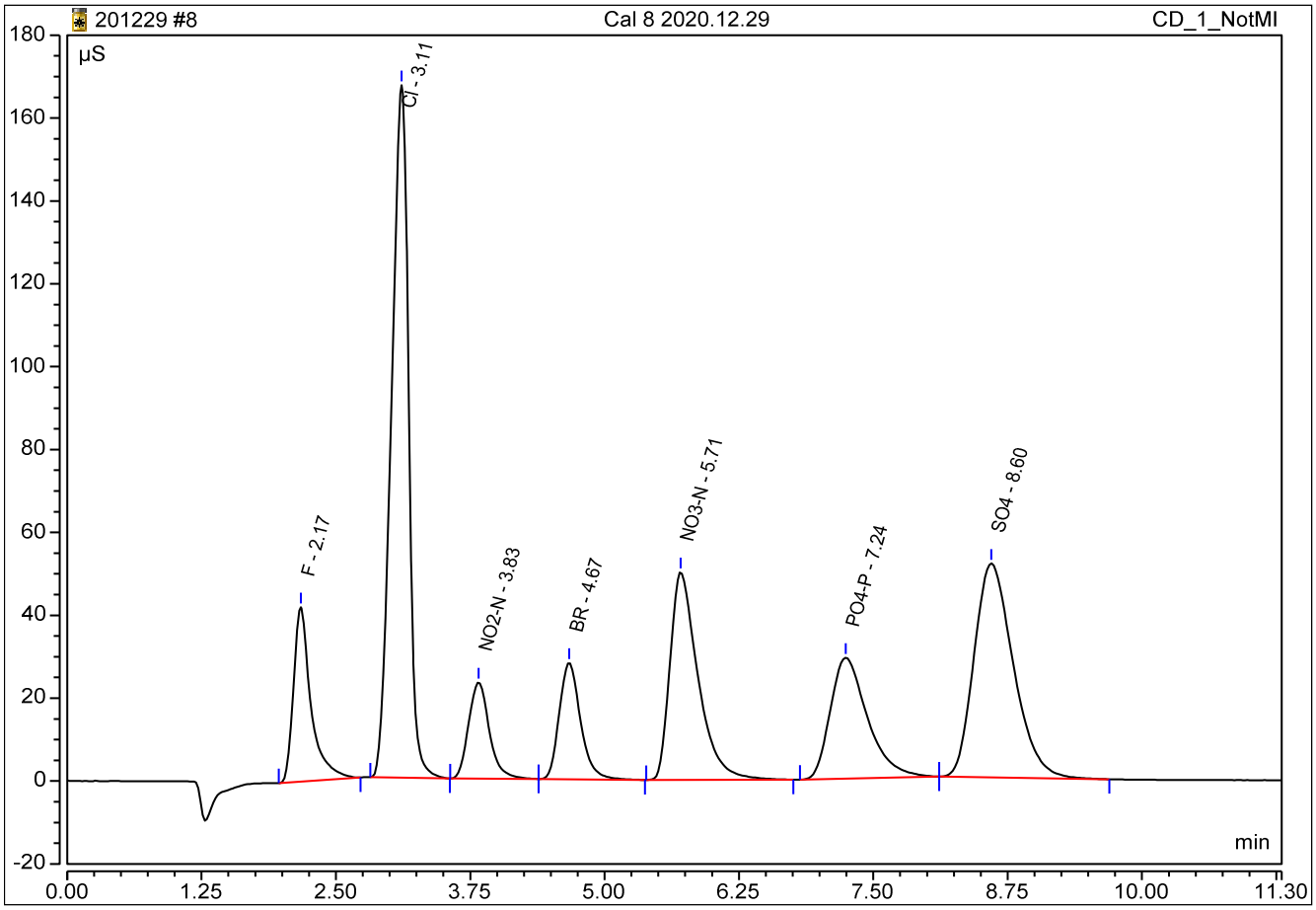


MI 5 F PO4 SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB	7.898	42.129	8.9476
2	3.11	**Cl**	BMB	30.820	167.162	34.9228
3	3.83	**NO2-N**	BMB	5.198	23.244	3.5216
4	4.67	**BR**	BMB	6.447	28.118	17.4201
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.9681
6	7.24	**PO4-P**	bM *	11.697	29.216	17.3256
7	8.60	**SO4**	MB*	21.877	51.638	34.8732

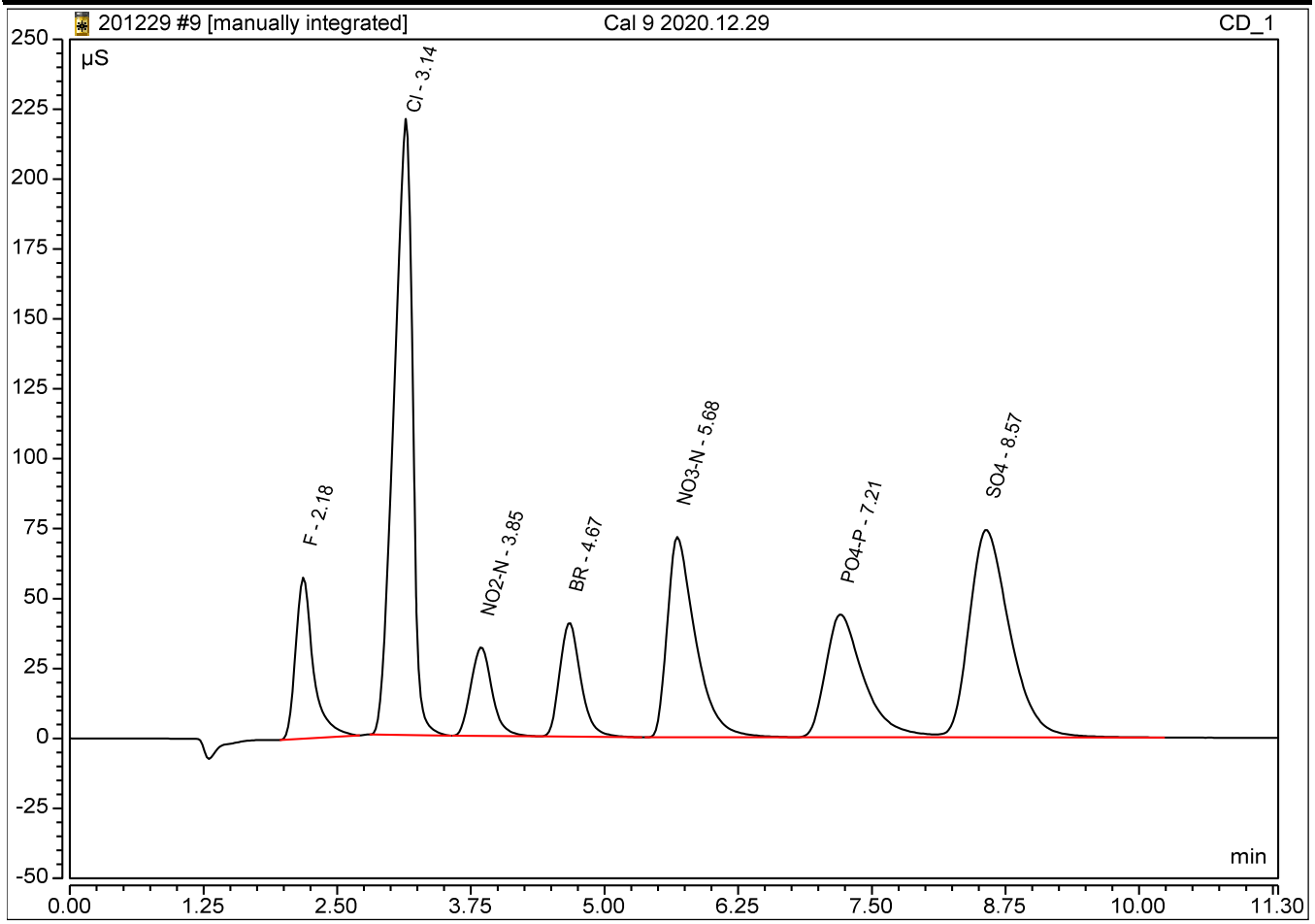


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	11.054	57.647	12.35	12.5	98.8%
2	3.14	**Cl**	BMB	44.404	220.347	50.31	50	100.6%
3	3.85	**NO2-N**	BMB	7.328	31.750	4.97	5	99.3%
4	4.67	**BR**	BMB	9.318	40.765	25.18	25	100.7%
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.08	10	100.8%
6	7.21	**PO4-P**	bM *	18.109	43.974	25.73	25	102.9%
7	8.57	**SO4**	MB*	32.605	74.256	50.25	50	100.5%



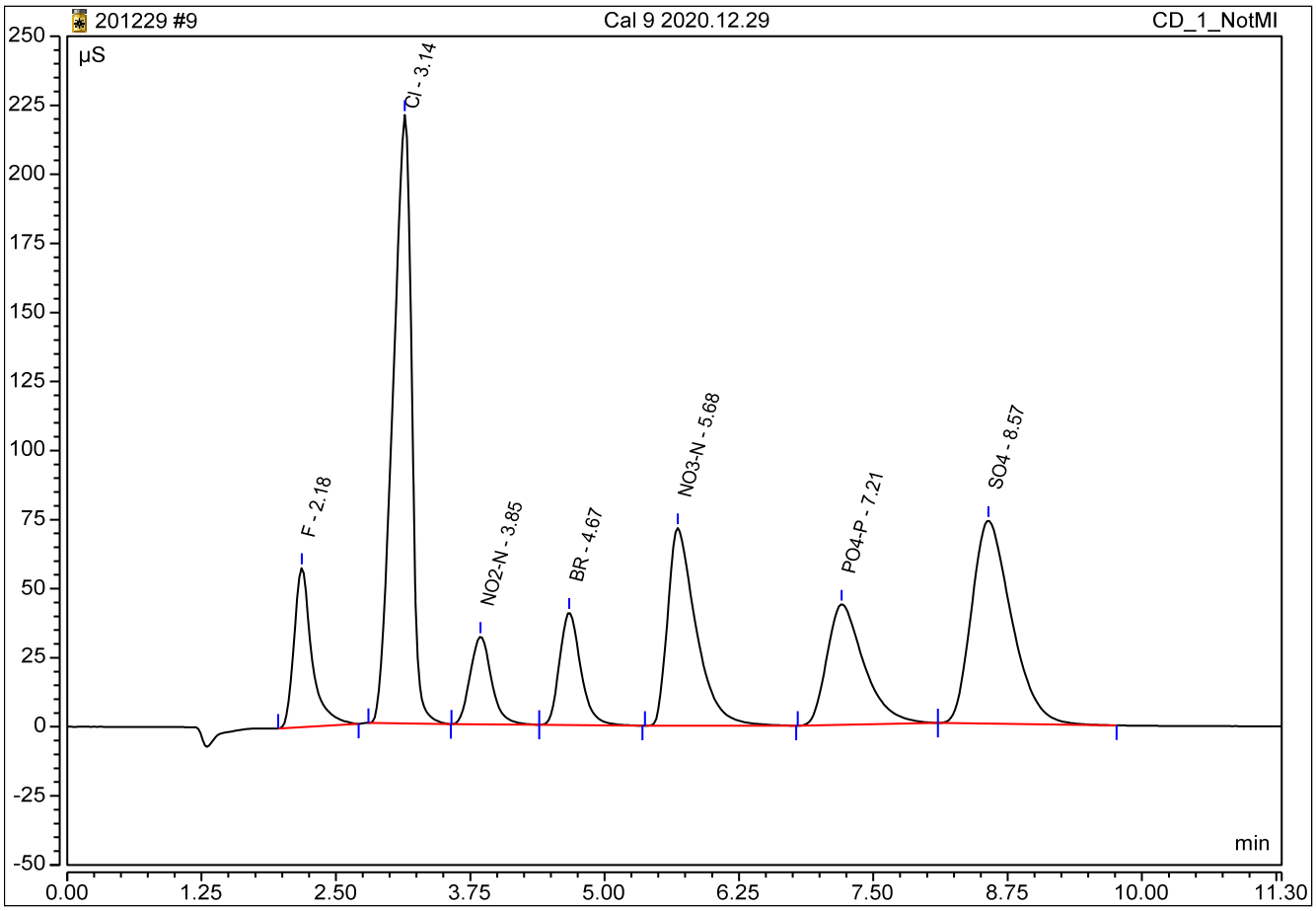
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BMB	11.054	57.647	12.5224
2	3.14	**Cl**	BMB	44.404	220.347	50.3149
3	3.85	**NO2-N**	BMB	7.328	31.750	4.9653
4	4.67	**BR**	BMB	9.318	40.765	25.1755
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.0848
6	7.21	**PO4-P**	bM *	17.446	43.647	25.8392
7	8.57	**SO4**	MB*	31.610	73.494	50.3889

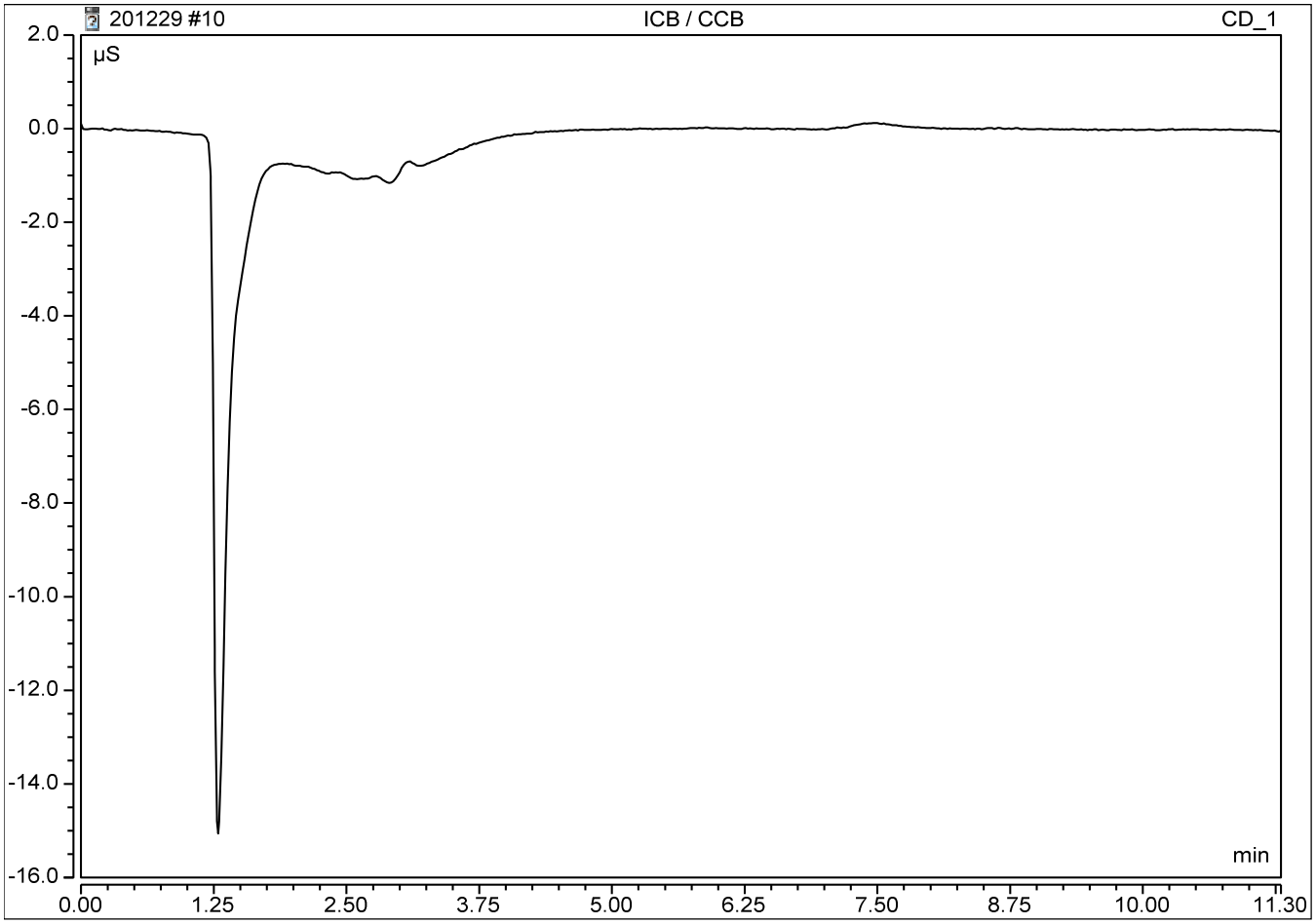


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



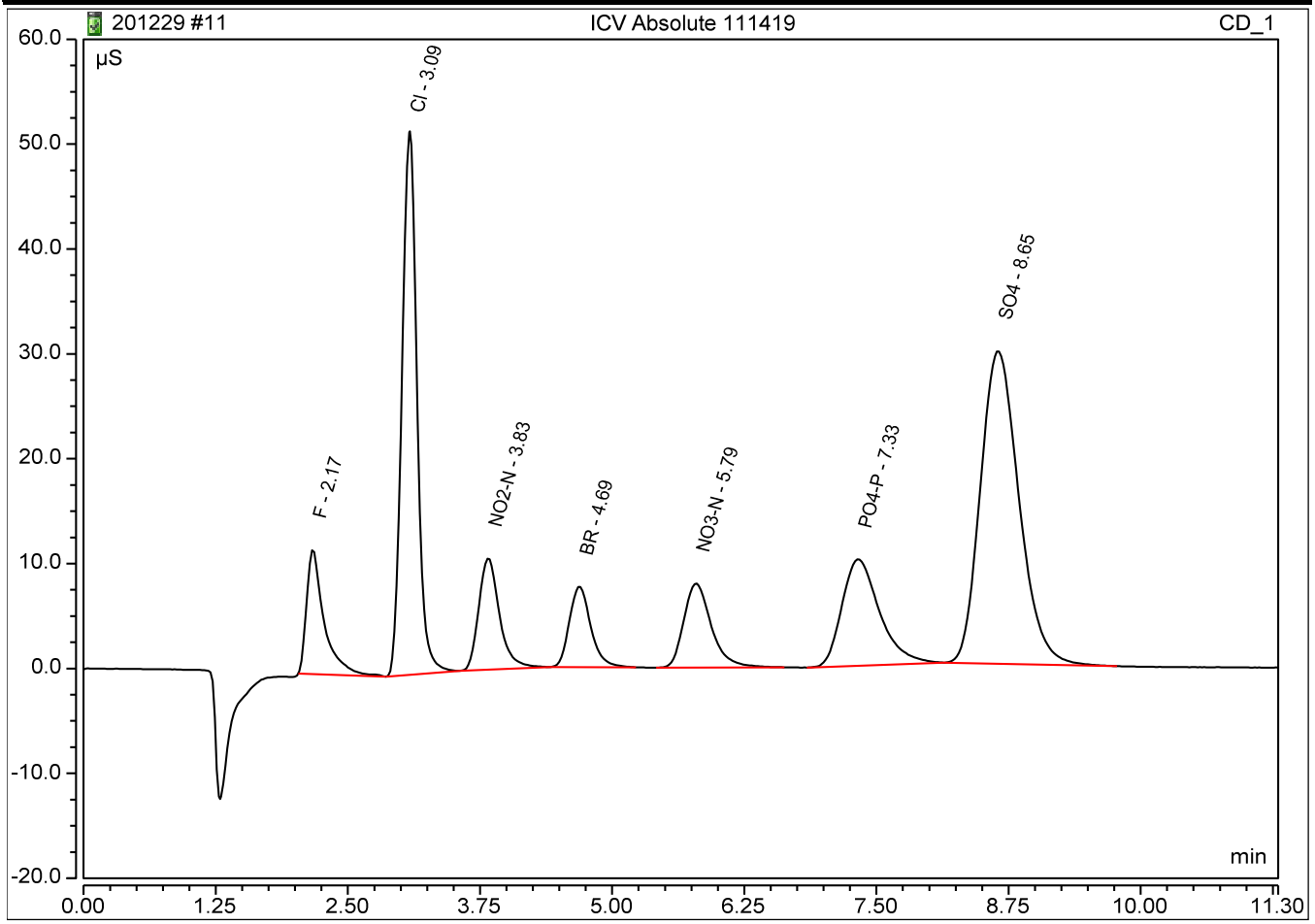
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	2.283	11.892	2.55	2.5	102.0%
2	3.09	**Cl**	BMB	8.560	51.822	9.70	10	97.0%
3	3.83	**NO2-N**	BMB	2.410	10.631	1.63	1.522334	107.3%
4	4.69	**BR**	BMB	1.802	7.686	4.87	5	97.4%
5	5.79	**NO3-N**	BMB	2.430	8.038	1.12	1.129525	98.9%
6	7.33	**PO4-P**	BMB	4.179	10.161	5.94	6.522	91.0%
7	8.65	**SO4**	BMB	12.629	29.844	19.46	20	97.3%



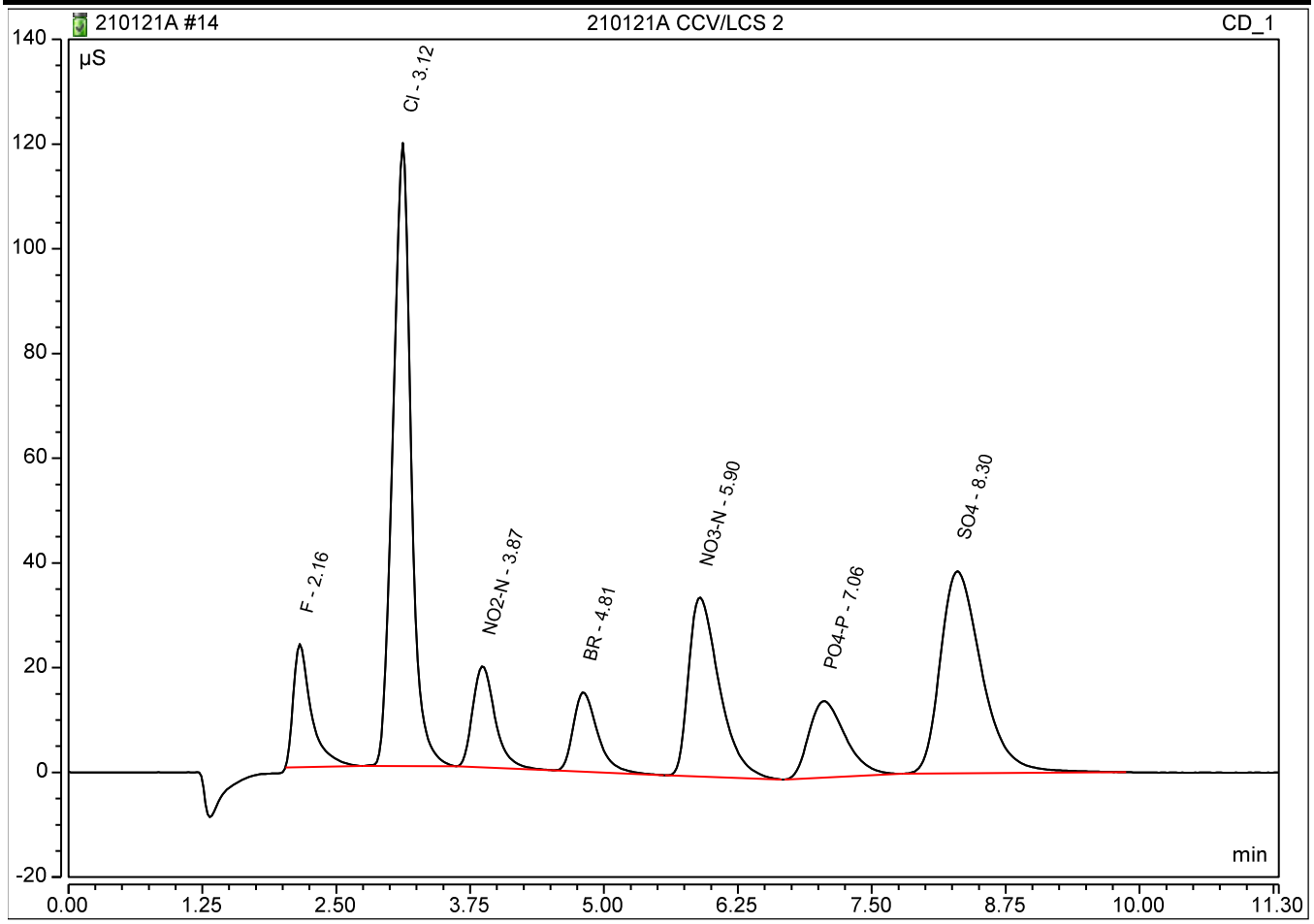
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 13:18**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB	4.579	23.493	5.12	5	102.3%
2	3.12	**Cl**	BMB	23.468	118.977	26.59	25	106.4%
3	3.87	**NO2-N**	BMB	4.675	19.317	3.17	3.04	104.2%
4	4.81	**BR**	BMB	4.000	15.172	10.81	10	108.1%
5	5.90	**NO3-N**	BMB	11.425	34.231	5.25	5	105.1%
6	7.06	**PO4-P**	BMB	5.755	14.600	8.18	10	81.8%
7	8.30	**SO4**	BMB	17.288	38.621	26.64	25	106.6%



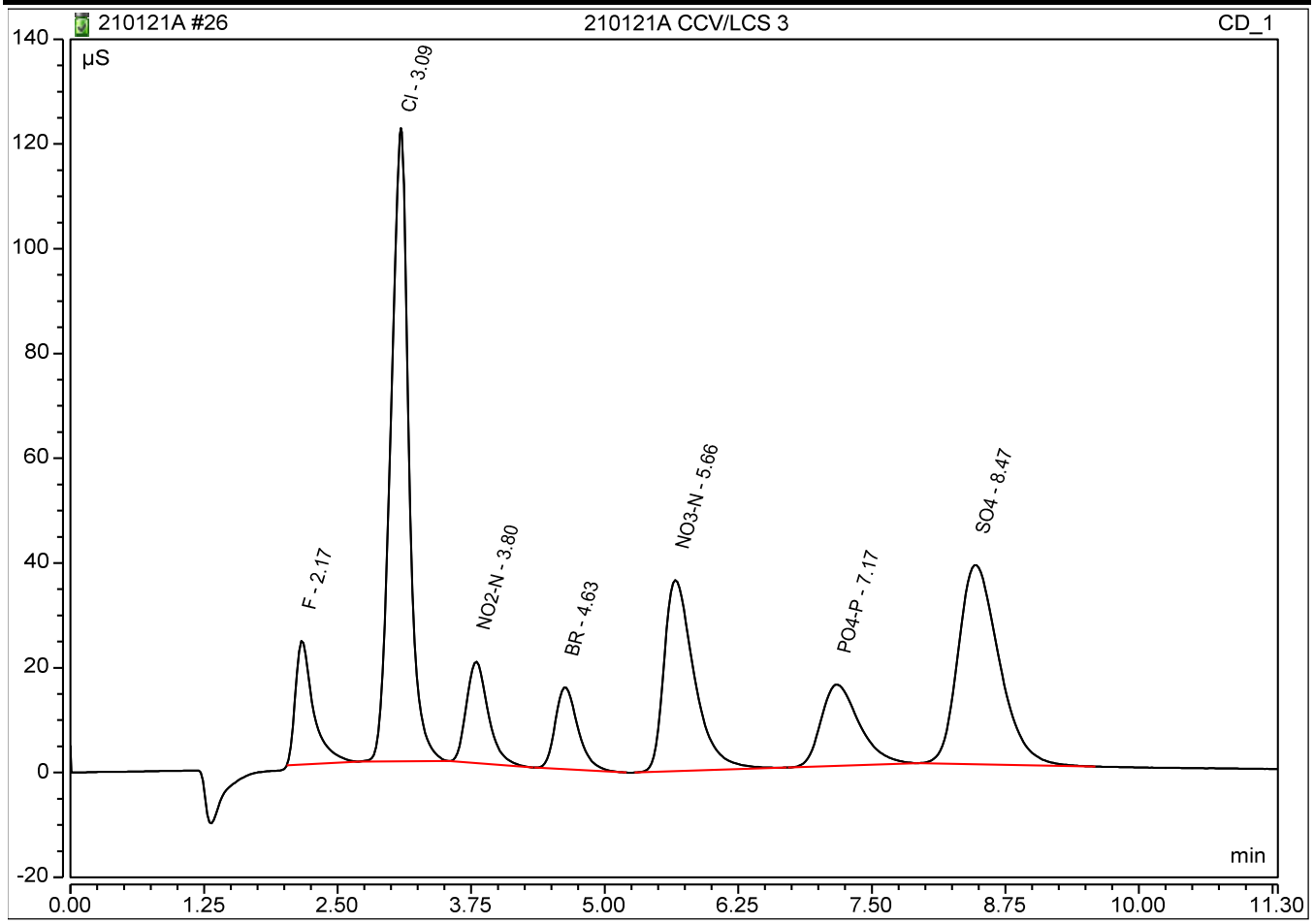
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	4.604	23.729	5.15	5	102.9%
2	3.09	**Cl**	BMB	23.604	120.881	26.75	25	107.0%
3	3.80	**NO2-N**	BMB	4.594	19.380	3.11	3.04	102.4%
4	4.63	**BR**	BMB	3.862	15.675	10.44	10	104.4%
5	5.66	**NO3-N**	BMB	12.007	36.522	5.52	5	110.4%
6	7.17	**PO4-P**	BMB	6.405	15.534	9.10	10	91.0%
7	8.47	**SO4**	BMB	16.903	38.079	26.05	25	104.2%



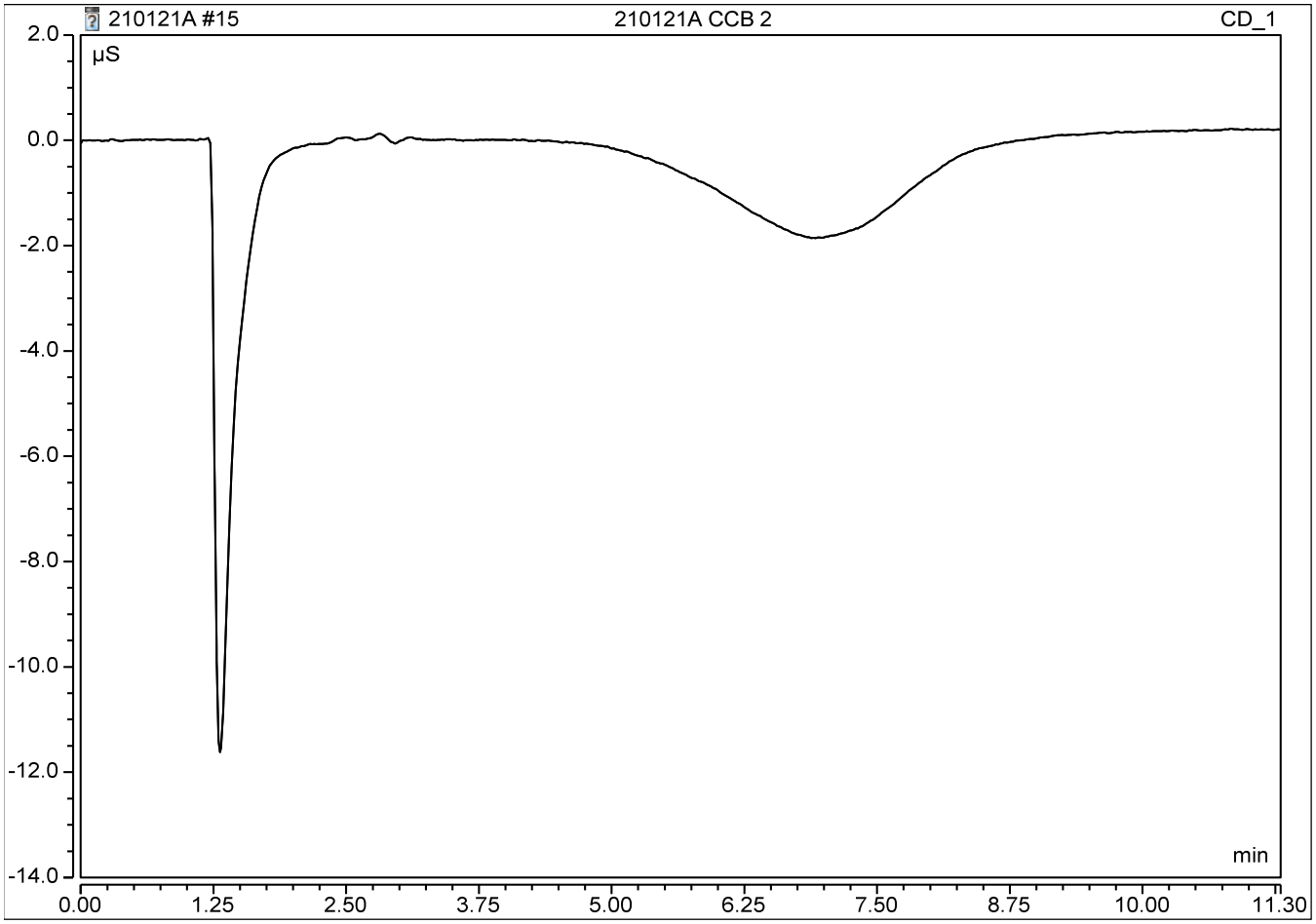
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCB 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 13:33**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

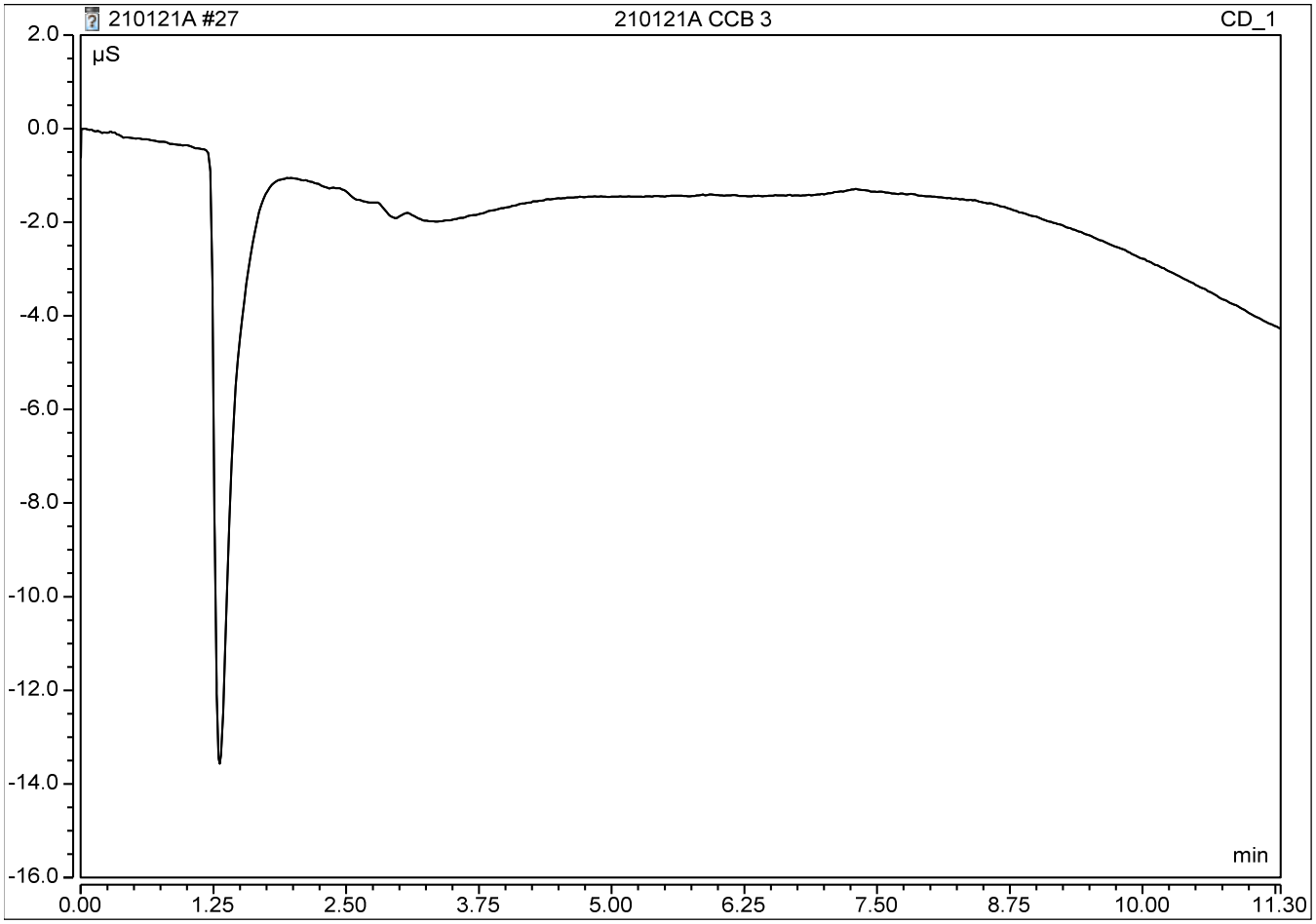


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**210121A CCB 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



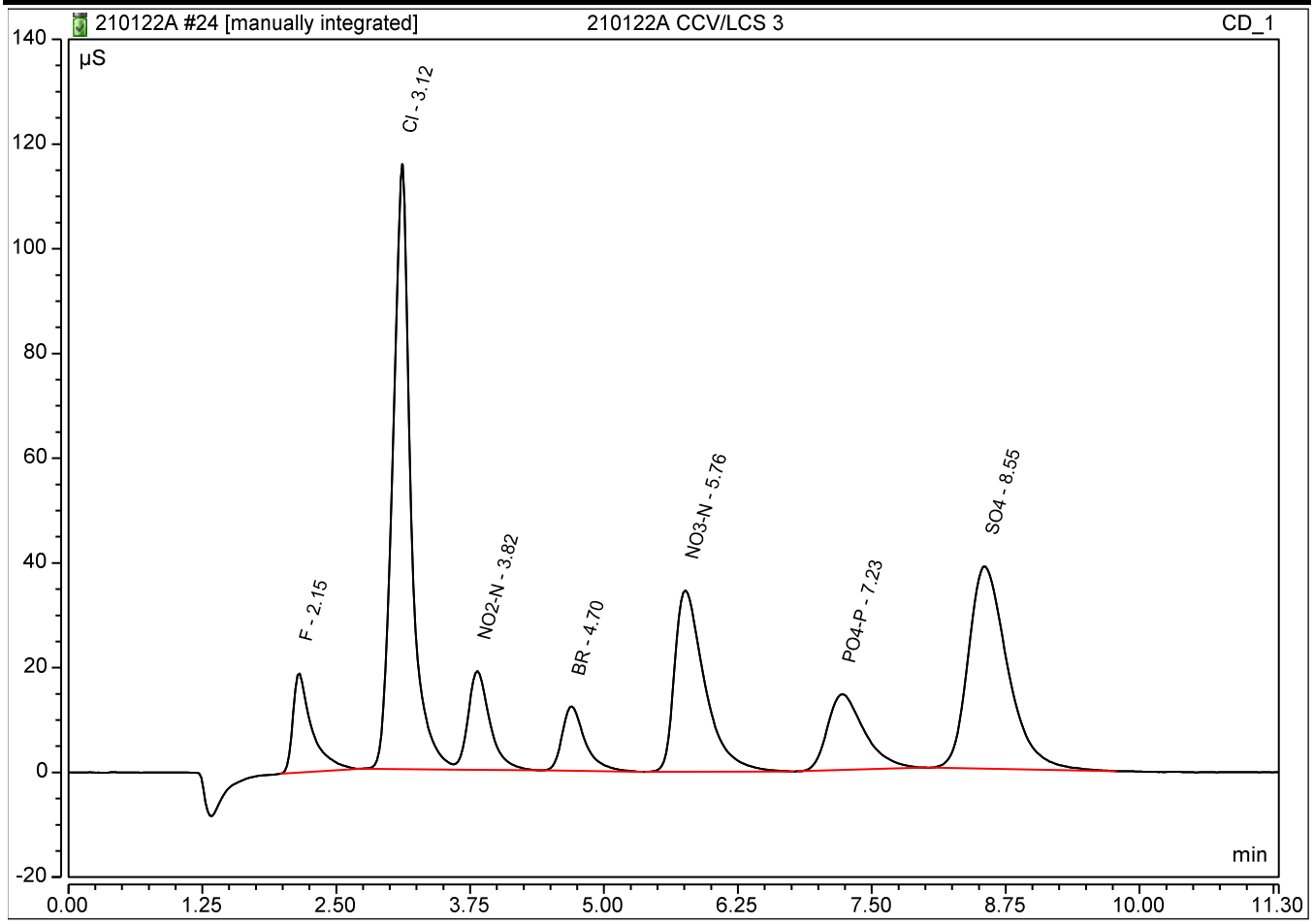
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	3.886	19.120	4.34	5	86.9%
2	3.12	**Cl**	bM *	22.665	115.565	25.68	25	102.7%
3	3.82	**NO2-N**	Mb*	4.461	18.900	3.02	3.04	99.4%
4	4.70	**BR**	bMB*	3.070	12.334	8.30	10	83.0%
5	5.76	**NO3-N**	BMB	11.340	34.662	5.21	5	104.3%
6	7.23	**PO4-P**	BMB	5.769	14.469	8.20	10	82.0%
7	8.55	**SO4**	BMB	16.498	38.682	25.43	25	101.7%

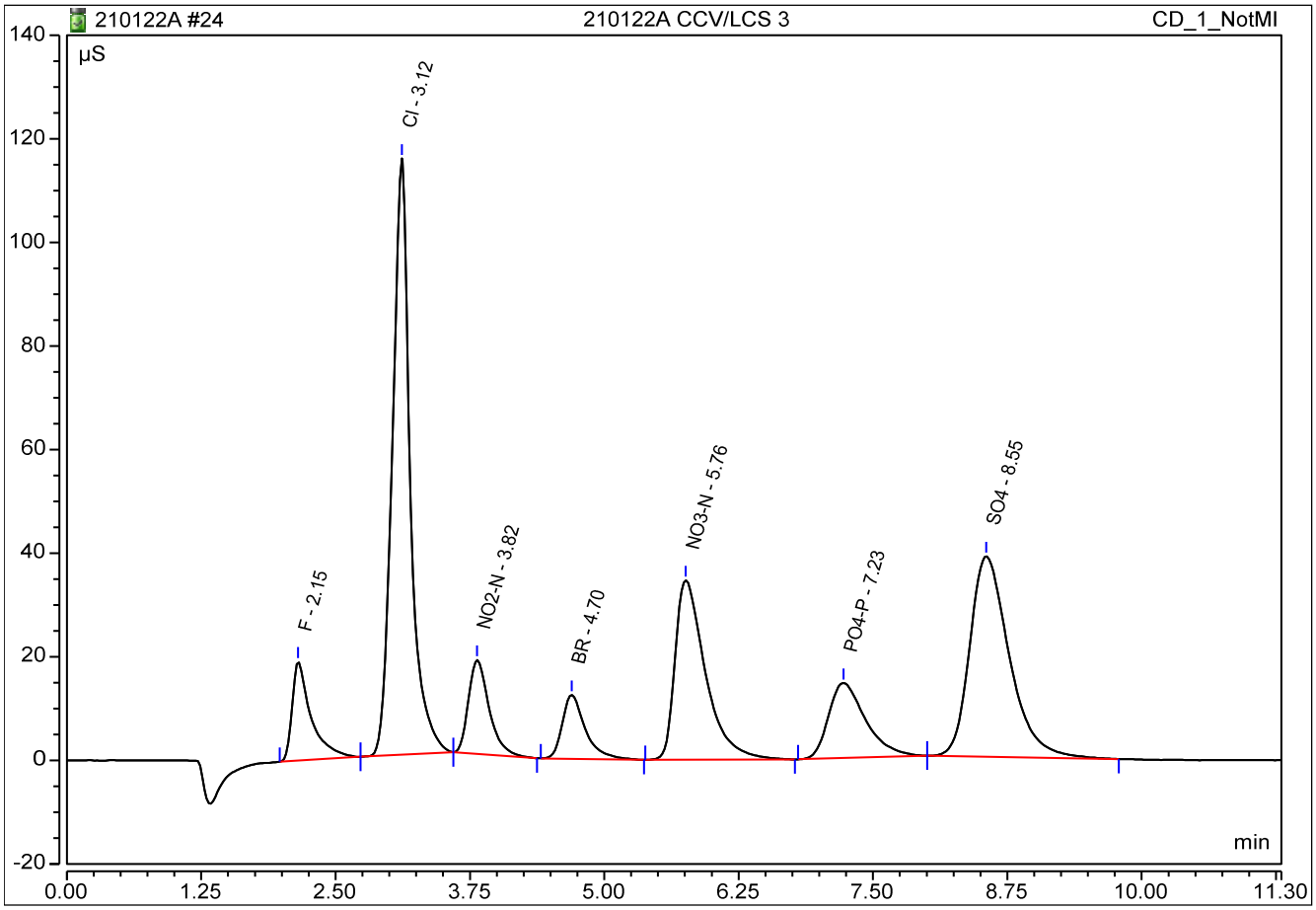


MI 1 Cl NO2 GA KS 01/25/21

Not Manipulated Peak Integration Report

Sample Name:	**210122A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	3.886	19.120	4.4028
2	3.12	**Cl**	bM *	22.217	115.107	25.1740
3	3.82	**NO2-N**	Mb*	4.048	18.150	2.7427
4	4.70	**BR**	bMB*	3.070	12.334	8.2951
5	5.76	**NO3-N**	BMB	11.340	34.662	5.2143
6	7.23	**PO4-P**	BMB	5.769	14.469	8.5454
7	8.55	**SO4**	BMB	16.498	38.682	26.2985

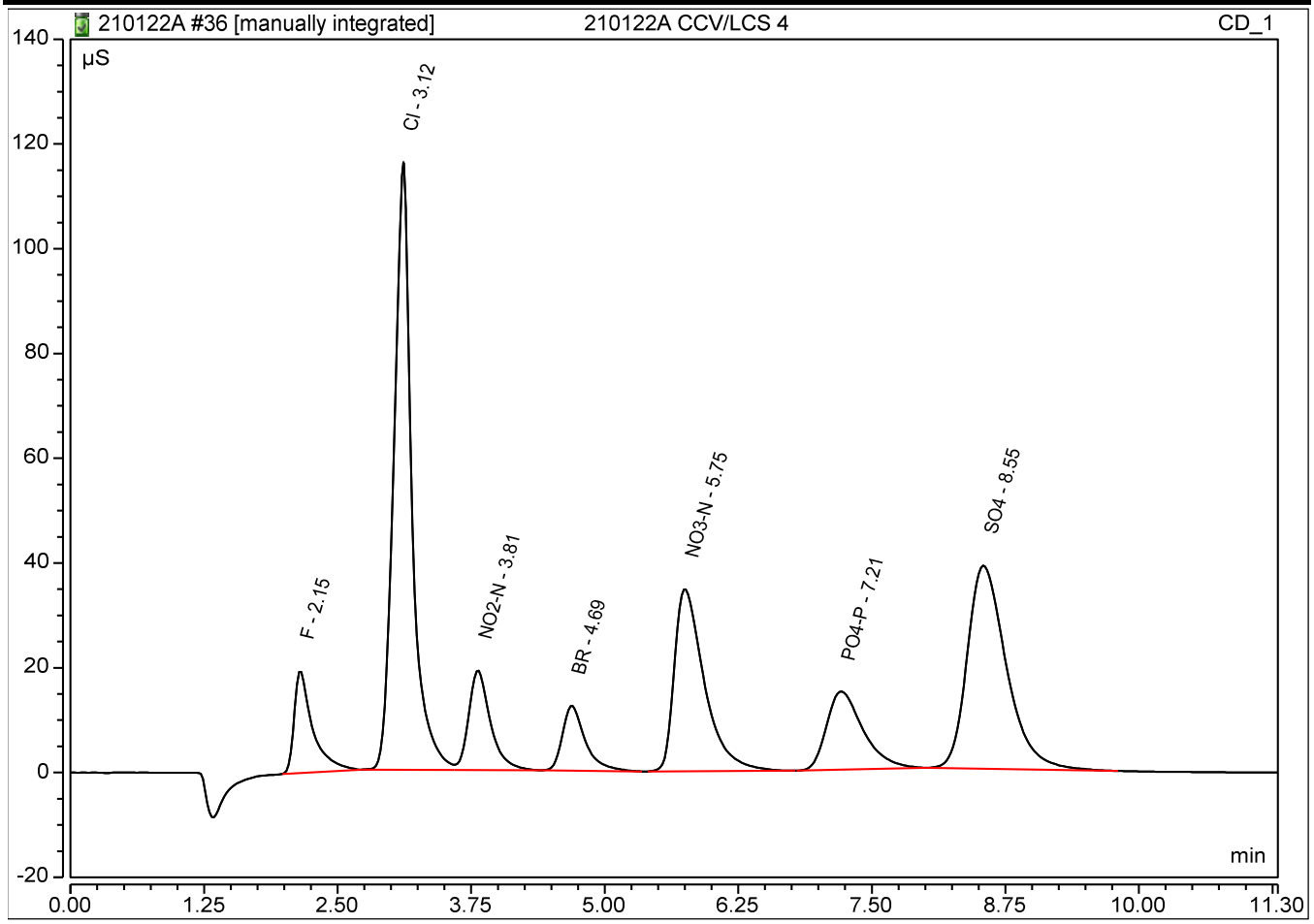


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCV/LCS 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:19**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	3.888	19.577	4.35	5	86.9%
2	3.12	**Cl**	bM *	22.662	115.975	25.68	25	102.7%
3	3.81	**NO2-N**	Mb*	4.492	19.053	3.04	3.04	100.1%
4	4.69	**BR**	bMB*	3.065	12.398	8.28	10	82.8%
5	5.75	**NO3-N**	BMB	11.343	34.871	5.22	5	104.3%
6	7.21	**PO4-P**	BMB	5.923	14.930	8.41	10	84.1%
7	8.55	**SO4**	BMB	16.512	38.823	25.45	25	101.8%



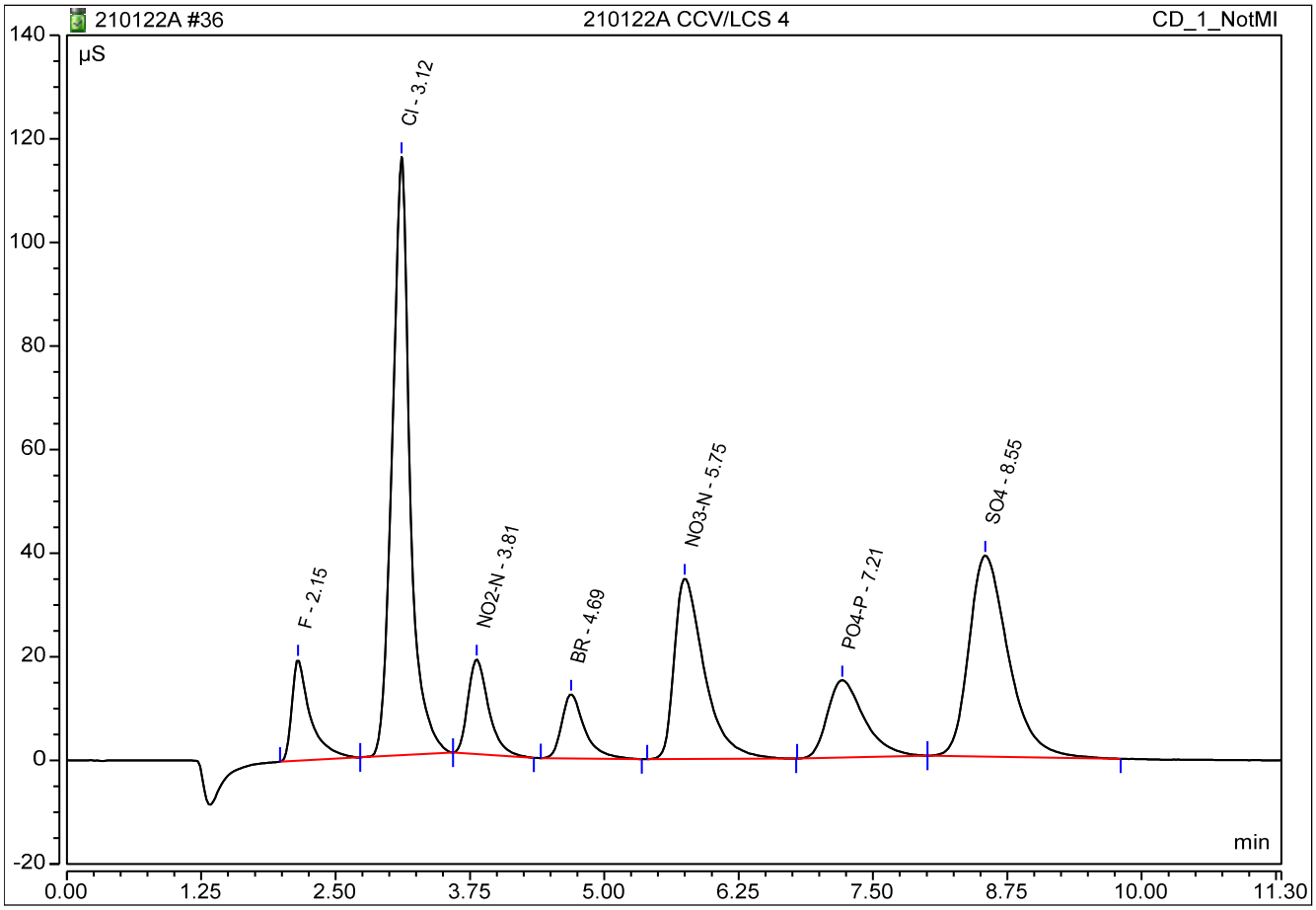
MI 1 Cl NO2 GA KS 01/25/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**210122A CCV/LCS 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:19**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	3.888	19.577	4.4048
2	3.12	**Cl**	bM *	22.233	115.530	25.1921
3	3.81	**NO2-N**	Mb*	4.092	18.332	2.7725
4	4.69	**BR**	bMB*	3.065	12.398	8.2817
5	5.75	**NO3-N**	BMB	11.343	34.871	5.2155
6	7.21	**PO4-P**	BMB	5.923	14.930	8.7721
7	8.55	**SO4**	BMB	16.512	38.823	26.3218

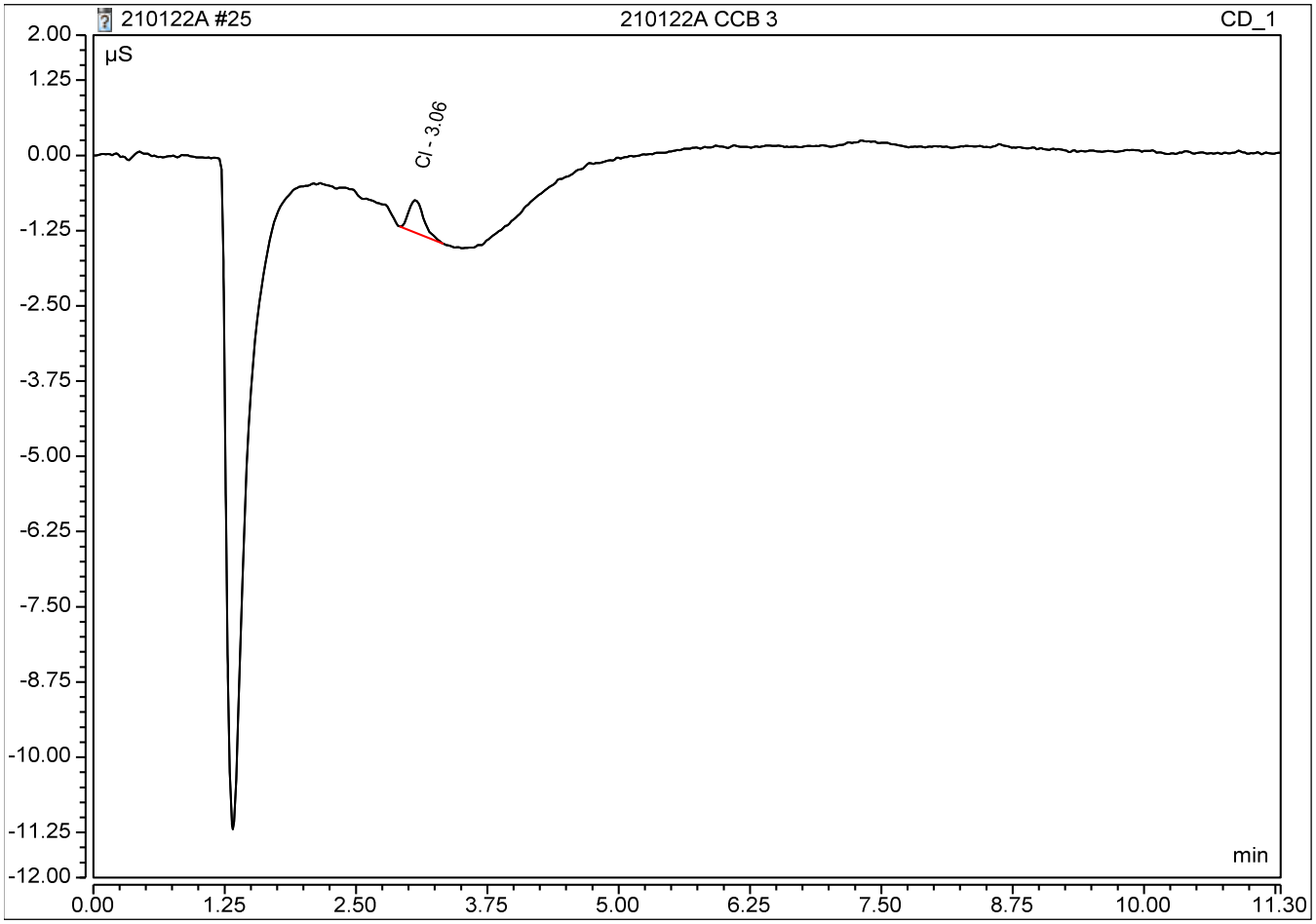


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCB 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:38**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.06	**Cl**	BMB	0.091	0.540	0.10		

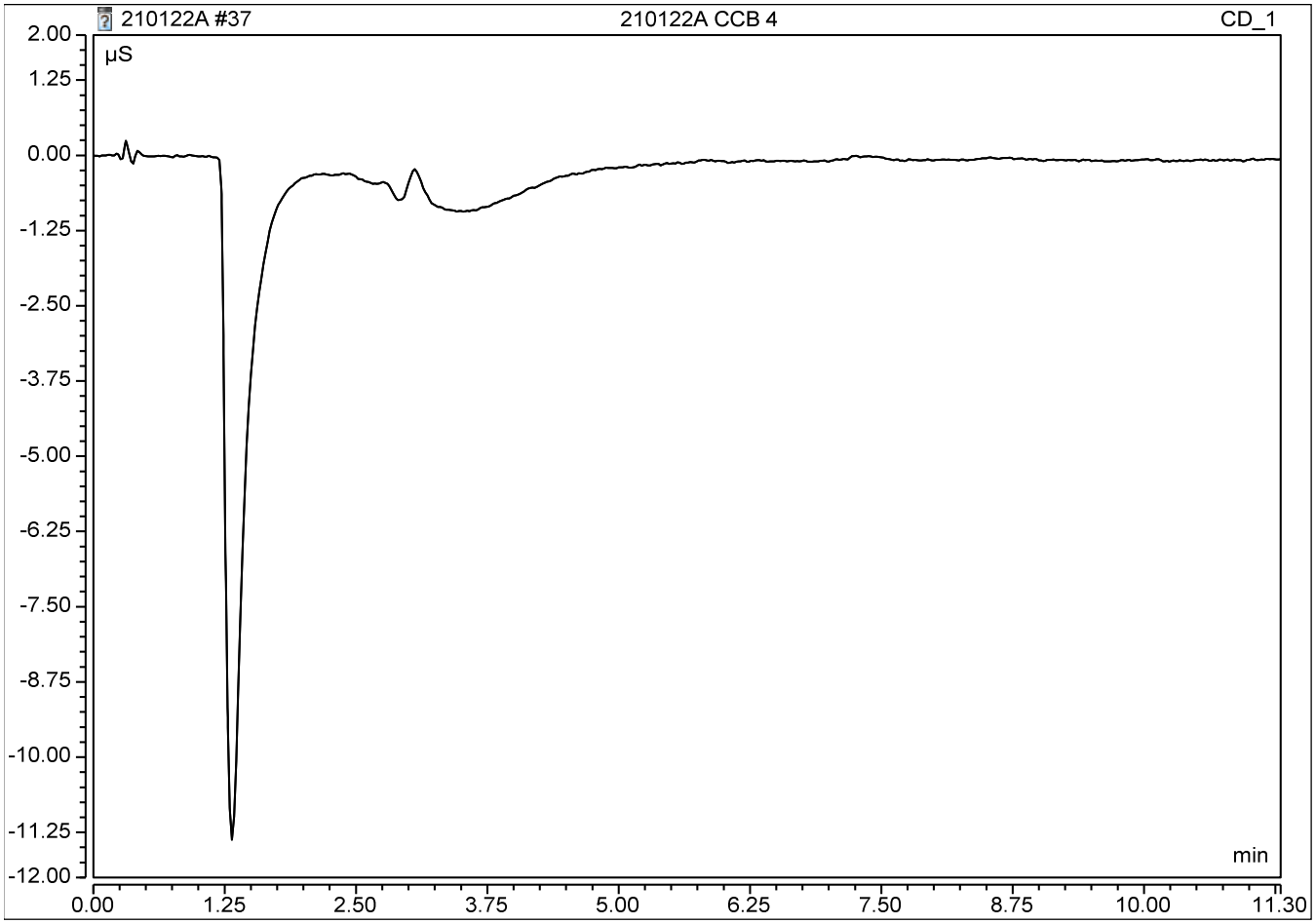


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCB 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:34**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



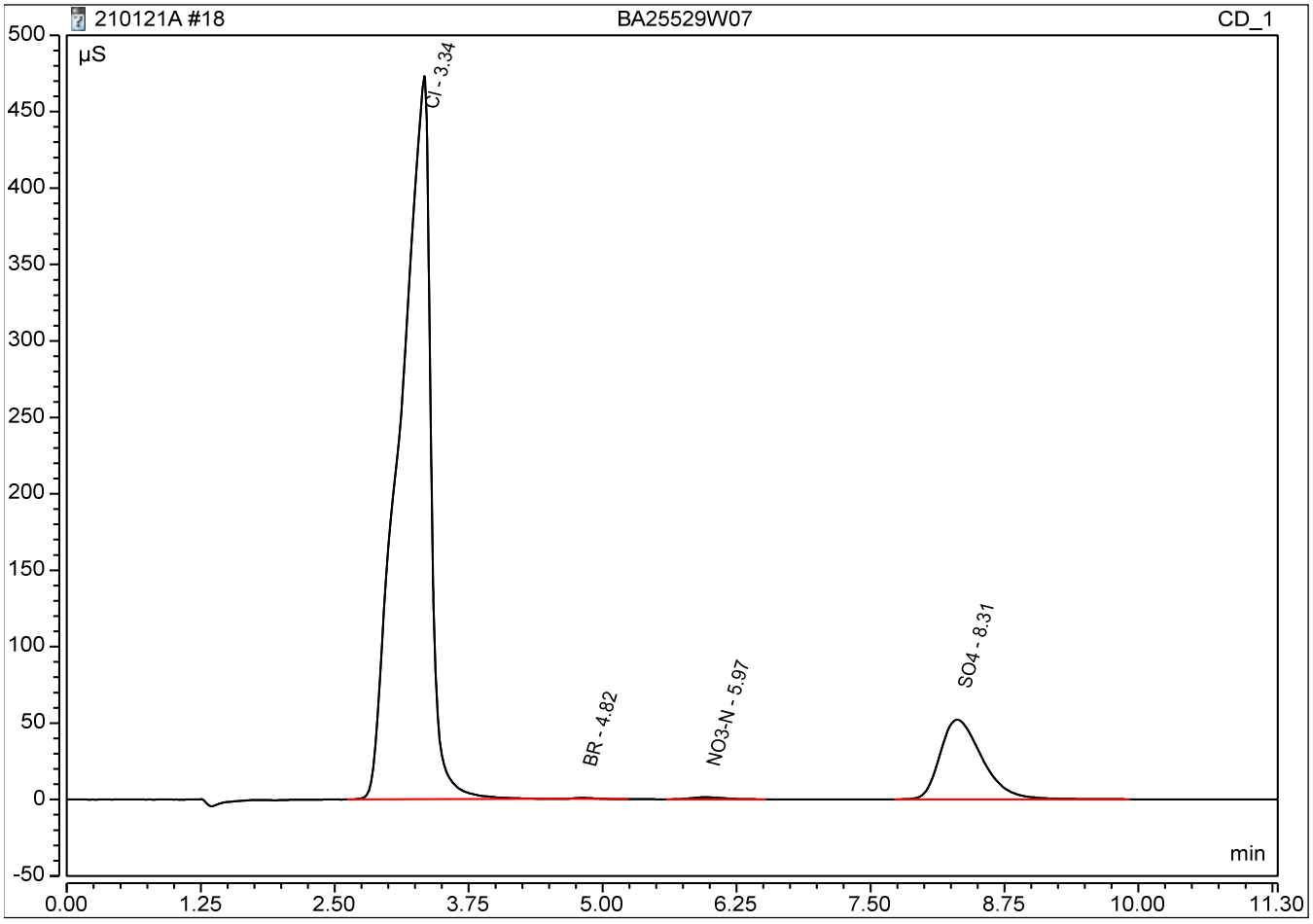
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**BA25529W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 14:32**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.34	**Cl**	BMB	155.219	473.042	175.88		
2	4.82	**BR**	BMB	0.174	0.696	0.47		
3	5.97	**NO3-N**	BMB	0.457	1.368	0.21		
4	8.31	**SO4**	BMB	23.714	52.090	36.55		



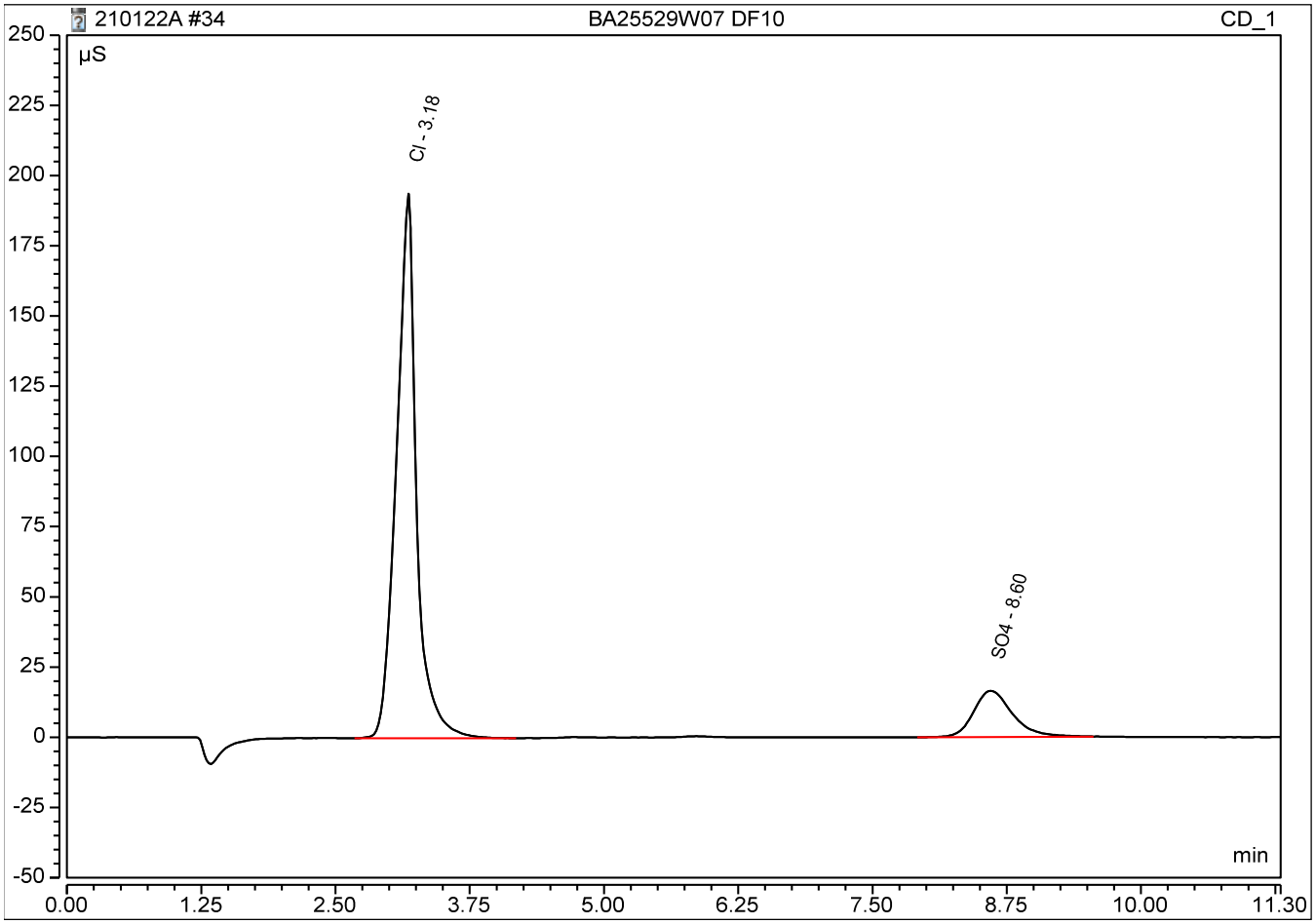
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25529W07 DF10**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 20:50**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**Cl**	BMB	41.958	193.930	475.44		
2	8.60	**SO4**	BMB	6.932	16.477	106.83		



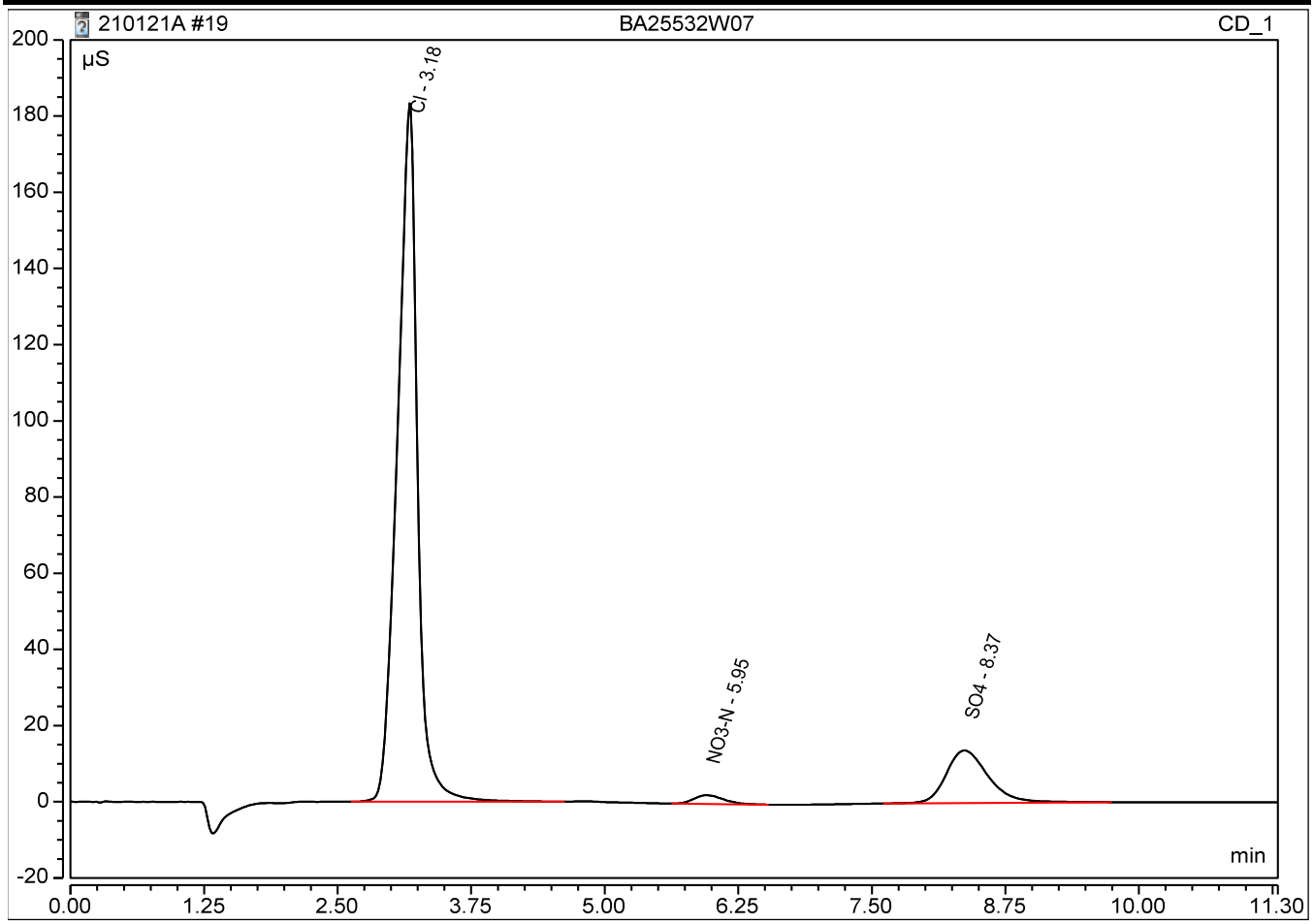
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**BA25532W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 14:47**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**Cl**	BMB	39.741	183.372	45.03		
2	5.95	**NO3-N**	BMB	0.745	2.295	0.34		
3	8.37	**SO4**	BMB	6.352	13.842	9.79		



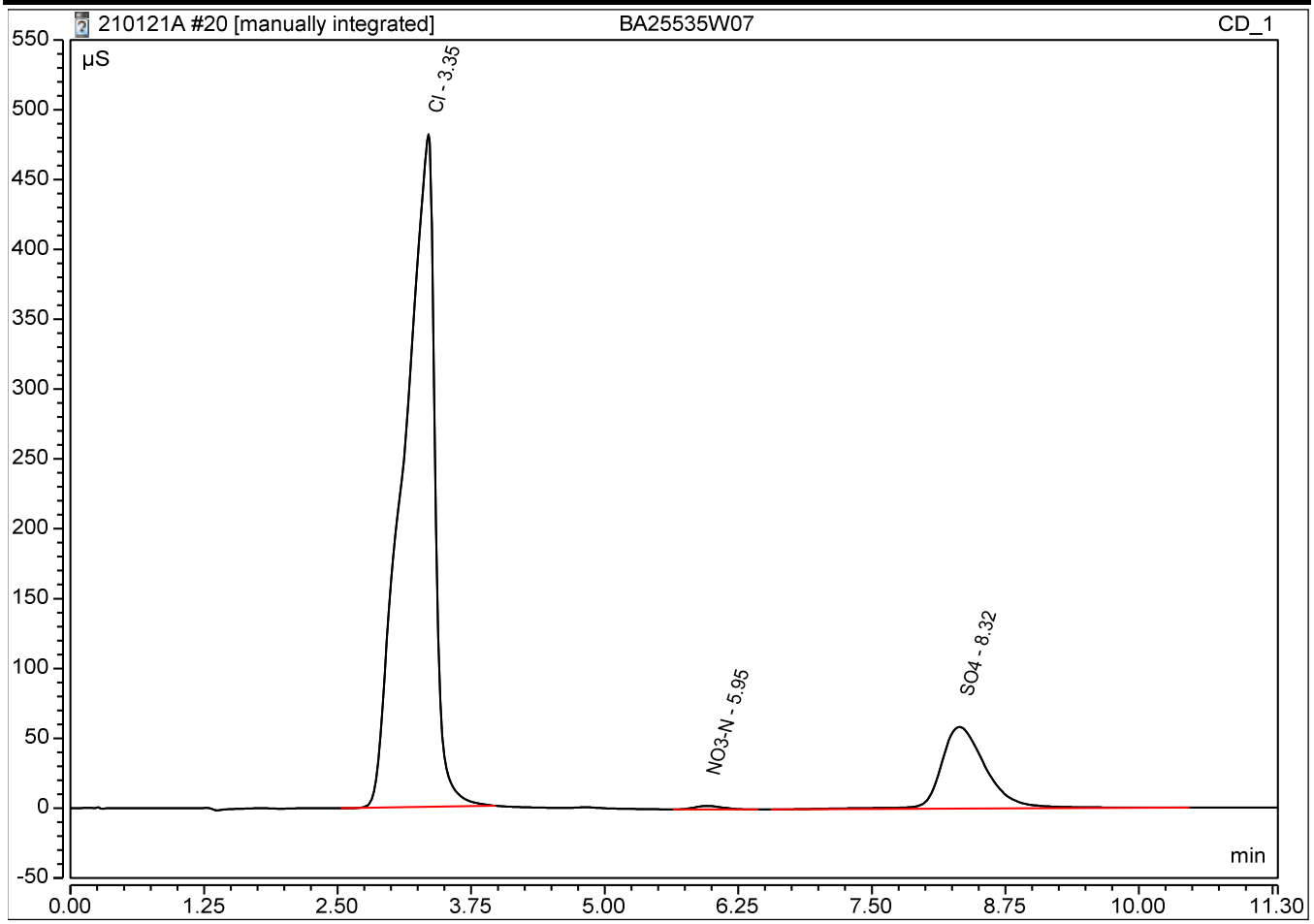
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**BA25535W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 15:02**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.35	**Cl**	BMB*	160.028	481.336	181.33		
2	5.95	**NO3-N**	BMB	0.767	2.472	0.35		
3	8.32	**SO4**	BMB	28.704	58.519	44.24		



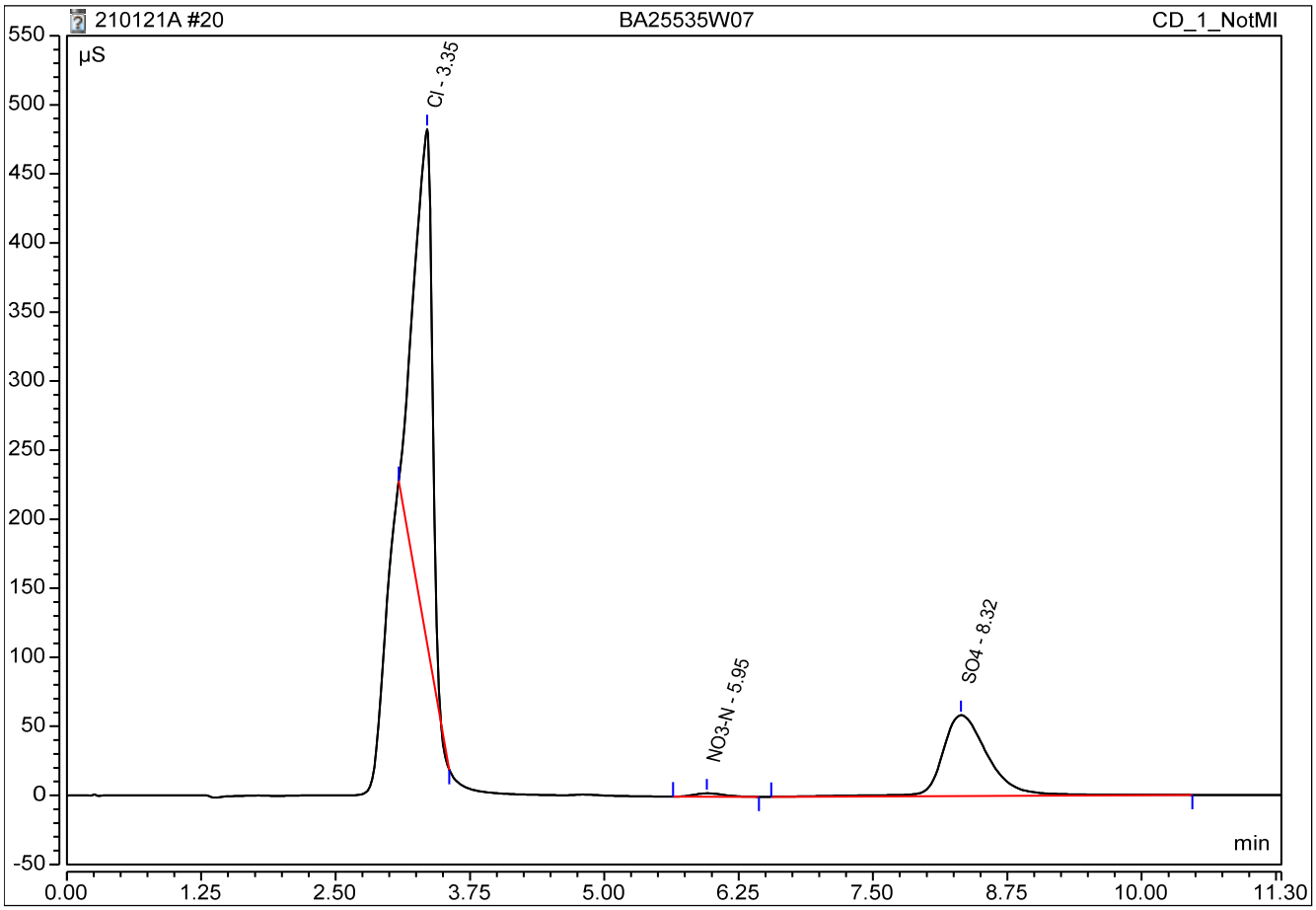
MI 5 Cl GA 01/21/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**BA25535W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 15:02**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	3.35	**Cl**	BMB*	70.742	371.886	80.1595
2	5.95	**NO3-N**	BMB	0.767	2.472	0.3527
3	8.32	**SO4**	BMB	28.704	58.519	45.7565

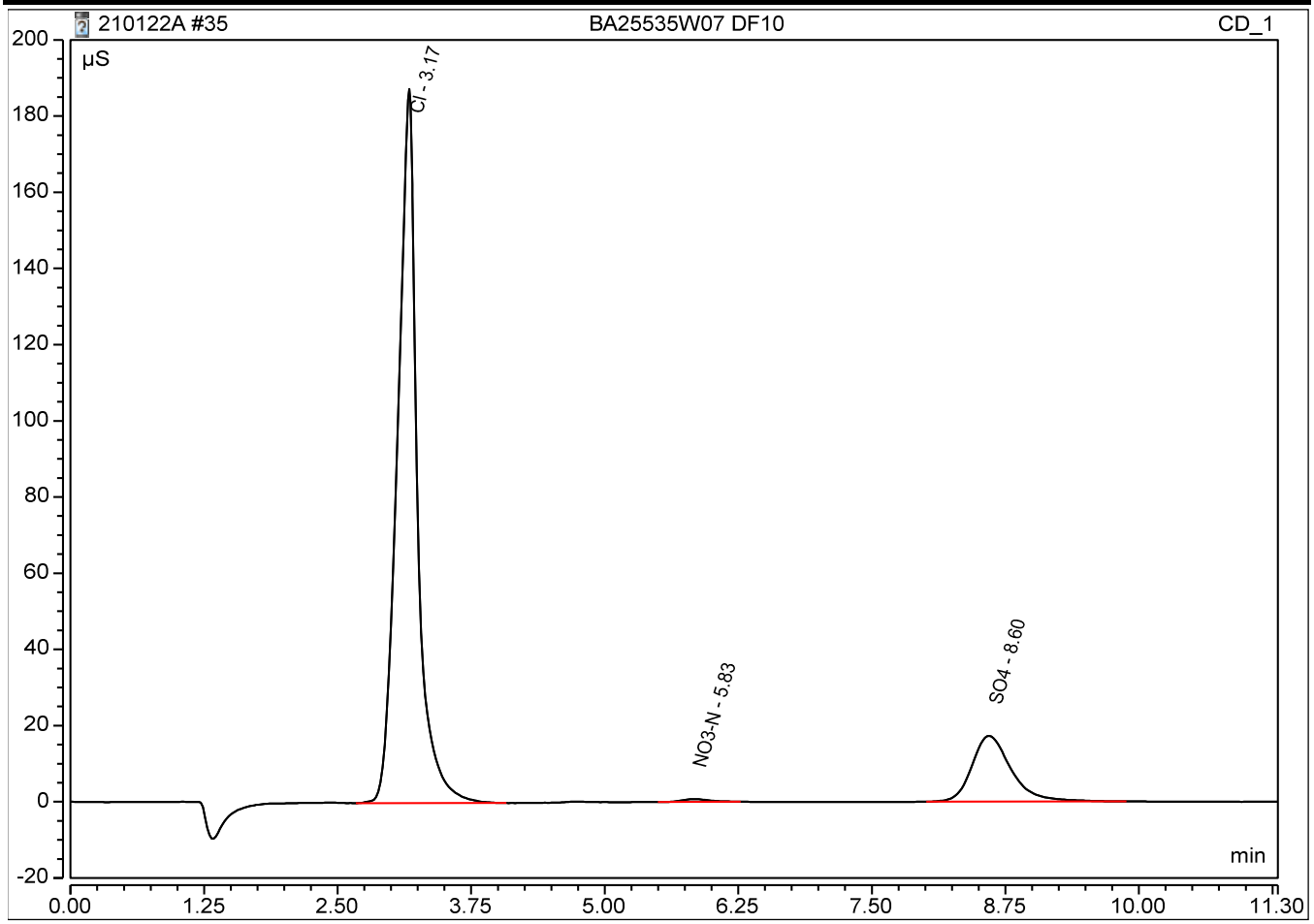


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25535W07 DF10**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:04**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**Cl**	BMB	40.151	187.457	454.96		
2	5.83	**NO3-N**	BMB	0.222	0.759	1.02		
3	8.60	**SO4**	BMB	7.359	17.292	113.42		



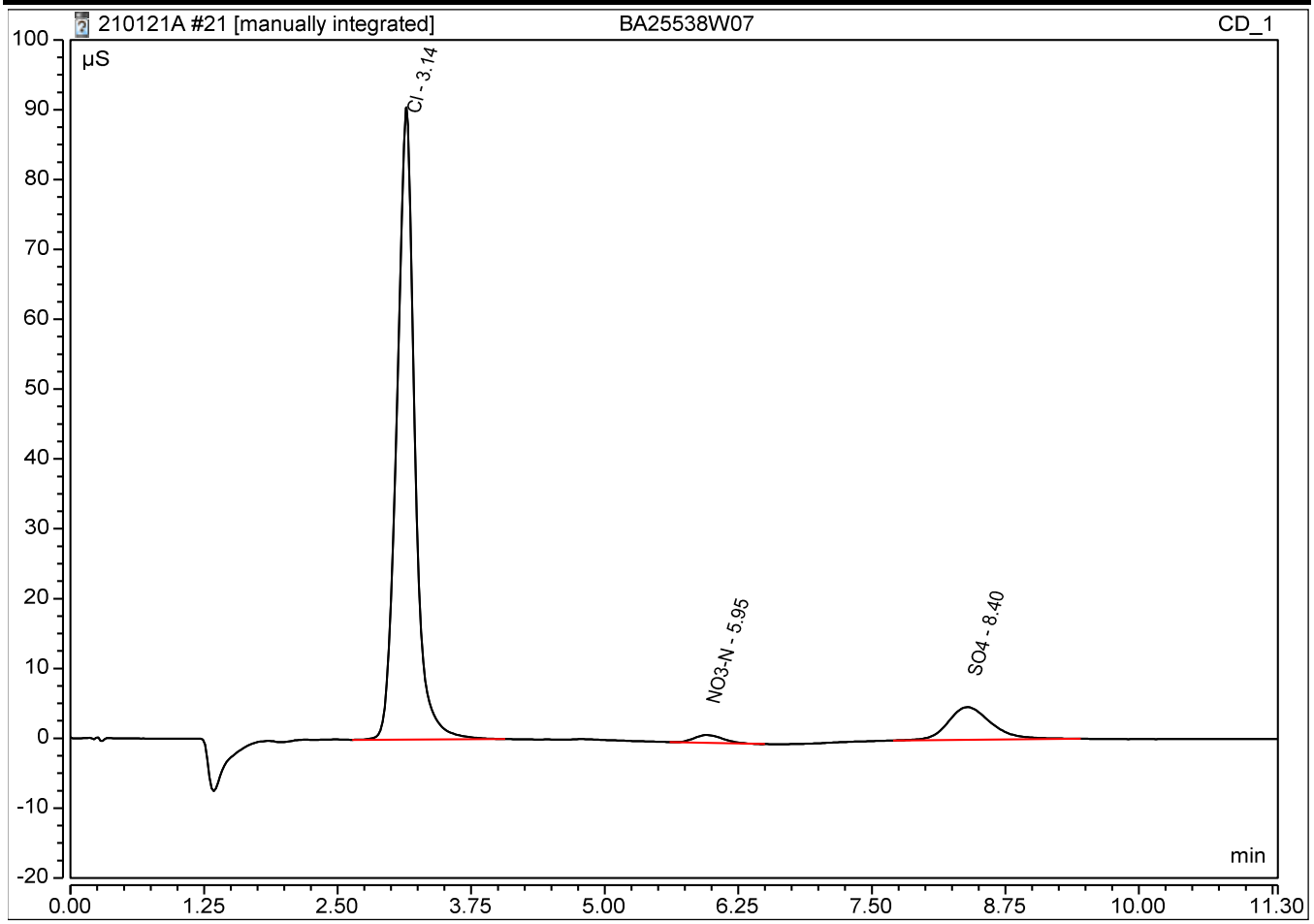
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210121A

Peak Integration Report

Sample Name:	**BA25538W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 15:16**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.14	**Cl**	BMB	17.596	90.537	19.94		
2	5.95	**NO3-N**	BMB*	0.355	1.130	0.16		
3	8.40	**SO4**	BMB	2.216	4.688	3.41		



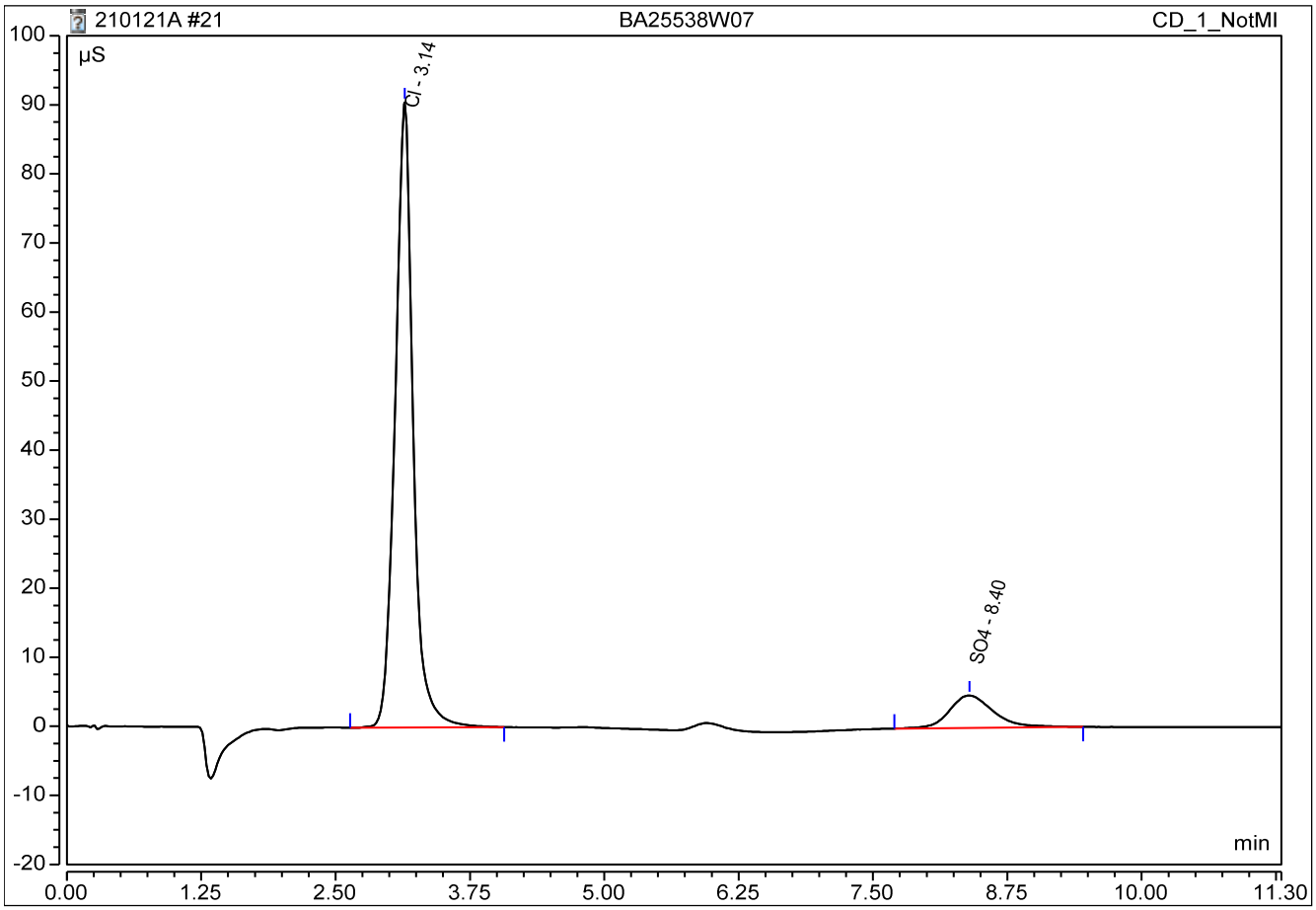
MI 5 NO3 GA 01/21/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**BA25538W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**21-Jan-2021 / 15:16**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	3.14	**Cl**	BMB	17.596	90.537	19.9389
2	n.a.	**NO3-N**	BMB*	n.a.	n.a.	n.a.
3	8.40	**SO4**	BMB	2.216	4.688	3.5321



Anion Chromatography Working Standard

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 12/29/20	12/30/20	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 12/29/20	12/30/20	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 12/29/20	12/30/20	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 12/29/20	12/30/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 12/29/20	12/30/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 12/29/20	12/30/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 12/29/20	12/30/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 12/29/20	12/30/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 12/29/20	12/30/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	RC6	Cal 1 2020.12.29	29/Dec/2020	11:24	Calibration Standard	
2	RC7	Cal 2 2020.12.29	29/Dec/2020	11:39	Calibration Standard	
3	RC8	Cal 3 2020.12.29	29/Dec/2020	11:53	Calibration Standard	
4	RD1	Cal 4 2020.12.29	29/Dec/2020	12:08	Calibration Standard	
5	RD2	Cal 5 2020.12.29	29/Dec/2020	12:23	Calibration Standard	
6	RD3	Cal 6 2020.12.29	29/Dec/2020	12:37	Calibration Standard	
7	RD4	Cal 7 2020.12.29	29/Dec/2020	12:52	Calibration Standard	
8	RD5	Cal 8 2020.12.29	29/Dec/2020	13:07	Calibration Standard	
9	RD6	Cal 9 2020.12.29	29/Dec/2020	13:21	Calibration Standard	
10	R1	ICB / CCB	29/Dec/2020	13:36	Unknown	
11	RD7	ICV Absolute 111419	29/Dec/2020	13:51	Check Standard	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210121A CCV/LCS 1	21/Jan/2021	09:32	Check Standard	
2	R1	210121A CCB 1xxx	21/Jan/2021	09:47	Unknown	
3	R1	210121A CCB 1	21/Jan/2021	10:23	Unknown	re-prepped
4	RE3	BA25460	21/Jan/2021	10:51	Unknown	94818 01SB
5	RE4	BA25461	21/Jan/2021	11:06	Unknown	94818 01EB
6	RE5	BA25462 DF50	21/Jan/2021	11:21	Unknown	94818 MWBG1 DF50
7	RE6	BA25464 DF80	21/Jan/2021	11:35	Unknown	94818 MWBG5 DF80
8	RE7	BA25465 DF50	21/Jan/2021	11:50	Unknown	94818 MW1 DF50
9	RE8	BA25466 DF50	21/Jan/2021	12:05	Unknown	94818 MW2 DF50
10	GA1	BA25467 DF80	21/Jan/2021	12:19	Unknown	94818 MW3 DF80
11	GA2	BA25468 DF50	21/Jan/2021	12:34	Unknown	94818 MW4 DF50
12	GA3	BA25469 DF50	21/Jan/2021	12:49	Unknown	94818 MW4D DF50
13	GA4	BA25470 DF50	21/Jan/2021	13:03	Unknown	94818 MW5 DF50
14	R2	210121A CCV/LCS 2	21/Jan/2021	13:18	Check Standard	
15	R1	210121A CCB 2	21/Jan/2021	13:33	Unknown	
16	GA5	BA25507W01	21/Jan/2021	13:47	Unknown	94828 Well 2
17	GA6	BA25526W07	21/Jan/2021	14:18	Unknown	ERH 1247 ARF 94825
18	GA7	BA25529W07	21/Jan/2021	14:32	Unknown	ERH 1228 ARF 94826
19	GA8	BA25532W07	21/Jan/2021	14:47	Unknown	ERH 1230 ARF 94826
20	GB1	BA25535W07	21/Jan/2021	15:02	Unknown	ERH 1232 ARF 94826
21	GB2	BA25538W07	21/Jan/2021	15:16	Unknown	ERH 1236 ARF 94826
22	GB3	BA25591W01	21/Jan/2021	15:31	Unknown	94827 MW-365
23	GB4	BA25592W01	21/Jan/2021	15:46	Unknown	94827 MW-375
24	GD8	BA25592W01 DF5	21/Jan/2021	16:00	Unknown	94827 MW-375 DF5
25	GB5	BA25214W01 PT DF5	21/Jan/2021	16:15	Unknown	
26	R2	210121A CCV/LCS 3	21/Jan/2021	16:30	Check Standard	
27	R1	210121A CCB 3	21/Jan/2021	16:44	Unknown	
28	GB6	BA25324W08 DF40	21/Jan/2021	16:59	Unknown	
29	GB7	BA25329W08	21/Jan/2021	17:14	Unknown	
30	GB7	BA25329W08	21/Jan/2021	17:28	Unknown	
31	GB8	BA25346W08 DF50	21/Jan/2021	17:43	Unknown	
32	GC1	BA25347W08 DF50	21/Jan/2021	17:57	Unknown	
33	GC2	BA25348W22 DF50	21/Jan/2021	18:12	Unknown	
34	GC3	BA25348W22 DF50 MS	21/Jan/2021	18:27	Unknown	
35	GC4	BA25348W22 DF50 MSD	21/Jan/2021	18:41	Unknown	
36	GC5	BA25351W08	21/Jan/2021	18:56	Unknown	
37	GD6	BA25529W07 DF5	21/Jan/2021	19:11	Unknown	
38	GD7	BA25535W07 DF5	21/Jan/2021	19:25	Unknown	
39	R2	210121A CCV/LCS 4	21/Jan/2021	19:40	Check Standard	
40	R1	210121A CCB 4	21/Jan/2021	19:55	Unknown	
41	GC6	BA25462 DF500	21/Jan/2021	20:09	Unknown	
42	GC7	BA25464 DF1000	21/Jan/2021	20:24	Unknown	
43	GC8	BA25465 DF500	21/Jan/2021	20:39	Unknown	
44	GD1	BA25466 DF300	21/Jan/2021	20:53	Unknown	
45	GD2	BA25467 DF500	21/Jan/2021	21:08	Unknown	
46	GD3	BA25468 DF300	21/Jan/2021	21:22	Unknown	
47	GD4	BA25469 DF300	21/Jan/2021	21:37	Unknown	
48	GD5	BA25470 DF250	21/Jan/2021	21:52	Unknown	
49	R2	210121A CCV/LCS 5	21/Jan/2021	22:06	Check Standard	
50	R1	210121A CCB 5	21/Jan/2021	22:21	Unknown	
51	R2	stop	21/Jan/2021	22:32	Unknown	
52	R3	stop	22/Jan/2021	11:50	Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210122A CCV/LCS 1	22/Jan/2021	12:42	Check Standard	F Br PO4 fail
2	R1	210122A CCB 1	22/Jan/2021	13:01	Unknown	
3	BA1	BA25672W01	22/Jan/2021	13:16	Unknown	80.03R ARF 94834
4	BA2	BA25661W01	22/Jan/2021	13:30	Unknown	48.97L ARF 94835
5	BA3	BA25662W01	22/Jan/2021	13:45	Unknown	58.28L ARF 94835
6	BA4	BA25663W01	22/Jan/2021	14:00	Unknown	79.12R ARF 94835
7	BA5	BA25664W01	22/Jan/2021	14:14	Unknown	79.13R ARF 94835
8	BA6	BA25665W01	22/Jan/2021	14:29	Unknown	79.13L ARF 94835
9	BA7	BA25666W01	22/Jan/2021	14:44	Unknown	79.60L ARF 94835
10	BA8	BA25667W01	22/Jan/2021	14:58	Unknown	80.03L ARF 94835
11	BC4	BA25661W01 DF5	22/Jan/2021	15:13	Unknown	48.97L ARF 94835 DF5
12	R2	210122A CCV/LCS 2	22/Jan/2021	15:28	Check Standard	F Br PO4 fail
13	R1	210122A CCB 2	22/Jan/2021	15:42	Unknown	
14	BB8	BA25690W10	22/Jan/2021	15:57	Unknown	94863 ERH 1212
15	BC1	BA25693W07	22/Jan/2021	16:12	Unknown	94863 ERH 1234
16	BC2	BA25696W07	22/Jan/2021	16:26	Unknown	94863 ERH 1242
17	BC3	BA25699W10	22/Jan/2021	16:41	Unknown	94863 ERH 1244
18	BA1	BA25672W01 DF5	22/Jan/2021	16:56	Unknown	80.03R ARF 94834 DF5
19	BA2	BA25662W01 DF5	22/Jan/2021	17:10	Unknown	58.28L ARF 94835 DF5
20	BA3	BA25663W01 DF5	22/Jan/2021	17:25	Unknown	79.12R ARF 94835 DF5
21	BA4	BA25664W01 DF5	22/Jan/2021	17:40	Unknown	79.13R ARF 94835 DF5
22	BA5	BA25664W01 DF20	22/Jan/2021	17:54	Unknown	79.13R ARF 94835 DF20
23	BA6	BA25665W01 DF5	22/Jan/2021	18:09	Unknown	79.13L ARF 94835 DF5
24	R2	210122A CCV/LCS 3	22/Jan/2021	18:23	Check Standard	F Br PO4 fail
25	R1	210122A CCB 3	22/Jan/2021	18:38	Unknown	
26	BA7	BA25666W01 DF5	22/Jan/2021	18:53	Unknown	79.60L ARF 94835 DF5
27	BA8	BA25667W01 DF10	22/Jan/2021	19:07	Unknown	80.03L ARF 94835 DF10
28	BC5	BA25693W07 DF5	22/Jan/2021	19:22	Unknown	94863 ERH 1234 DF5
29	BC6	BA25696W07 DF5	22/Jan/2021	19:37	Unknown	94863 ERH 1242 DF5
30	BC7	BA25699W10 DF5	22/Jan/2021	19:51	Unknown	94863 ERH 1244 DF5
31	BC8	BA25324W08 DF50	22/Jan/2021	20:06	Unknown	
32	BD1	BA25346W08 DF80	22/Jan/2021	20:21	Unknown	
33	BD2	BA25347W08 DF80	22/Jan/2021	20:35	Unknown	
34	BD3	BA25529W07 DF10	22/Jan/2021	20:50	Unknown	
35	BD4	BA25535W07 DF10	22/Jan/2021	21:04	Unknown	
36	R2	210122A CCV/LCS 4	22/Jan/2021	21:19	Check Standard	F Br PO4 fail
37	R1	210122A CCB 4	22/Jan/2021	21:34	Unknown	
38	BB1	BA25621W04	22/Jan/2021	21:48	Unknown	01EB ARF 94845
39	BB2	01EB ARF 94845XXX	22/Jan/2021	22:03	Unknown	WRONG VIAL
40	BB2	BA25623W04 DF200	22/Jan/2021	22:18	Unknown	MW1-6 ARF 94845 DF200
41	BB3	BA25624W04 DF200	22/Jan/2021	22:32	Unknown	MW1-9 ARF 94845 DF200
42	BB4	BA25625W04 DF200	22/Jan/2021	22:47	Unknown	MW-9-D ARF 94845 DF200
43	BB5	BA25626W04 DF200	22/Jan/2021	23:02	Unknown	MW1-7 ARF 94845 DF200
44	BB6	BA25627W04 DF200	22/Jan/2021	23:16	Unknown	MW1-10 ARF 94845 DF200
45	BB7	BA25628W04 DF200	22/Jan/2021	23:31	Unknown	MW1-8 ARF 94845 DF200
46	R2	210122A CCV/LCS 5	22/Jan/2021	23:46	Check Standard	F Br PO4 fail
47	R1	210122A CCB 5	23/Jan/2021	00:00	Unknown	
48	BD5	BA25462 DF500	23/Jan/2021	00:15	Unknown	
49	BD6	BA25464 DF500	23/Jan/2021	00:30	Unknown	
50	BD7	BA25465 DF400	23/Jan/2021	00:44	Unknown	
51	BD8	BA25466 DF200	23/Jan/2021	00:59	Unknown	
52	BE1	BA25467 DF500	23/Jan/2021	01:13	Unknown	
53	BE2	BA25468 DF250	23/Jan/2021	01:28	Unknown	
54	BE3	BA25469 DF200	23/Jan/2021	01:43	Unknown	
55	BE4	BA25470 DF200	23/Jan/2021	01:57	Unknown	
56	R2	210122A CCV/LCS 6	23/Jan/2021	02:12	Check Standard	F Br PO4 fail
57	R1	210122A CCB 6	23/Jan/2021	02:27	Unknown	
58	R2	STOP	23/Jan/2021	02:38	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

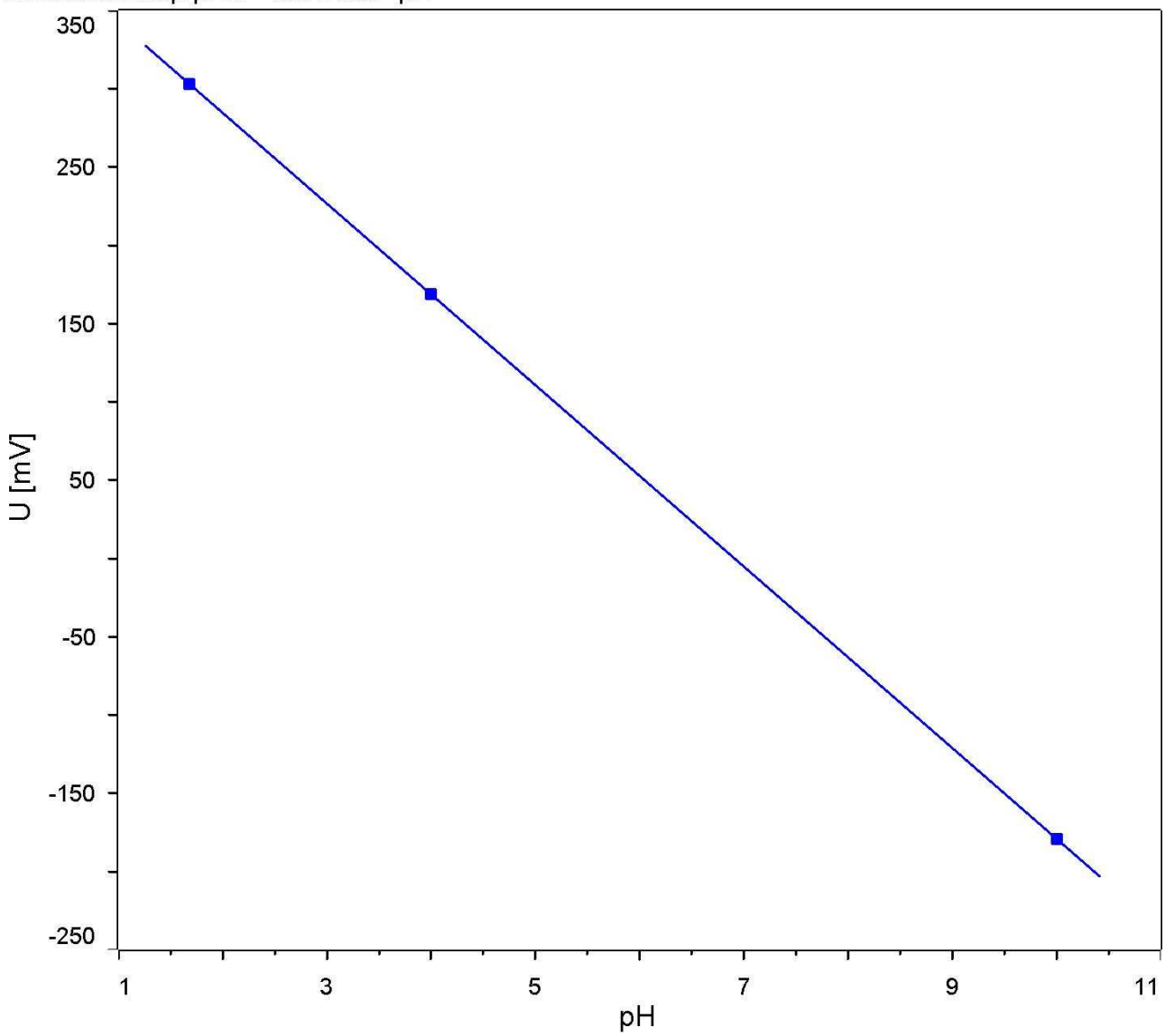
Timao Calibration Curve

2021-01-22 12:27:40

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0407	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.91	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.908	
Res19	20.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	20.4806	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA25538W07	2021-01-22 17:26:52 UTC-8	Alkalinity	0.000	1.678	0.00	0.00	69.80	69.80	mg/L	25 mL	0.0208	210122A	AR
BA25535W07	2021-01-22 17:21:31 UTC-8	Alkalinity	0.000	1.876	0.00	0.00	78.04	78.04	mg/L	25 mL	0.0208	210122A	AR
BA25532W07	2021-01-22 17:16:10 UTC-8	Alkalinity	0.000	2.468	0.00	0.00	102.67	102.67	mg/L	25 mL	0.0208	210122A	AR
BA25529W07	2021-01-22 17:10:17 UTC-8	Alkalinity	0.000	2.796	0.00	0.00	116.31	116.31	mg/L	25 mL	0.0208	210122A	AR
BA25526W07	2021-01-22 17:06:23 UTC-8	Alkalinity	0.000	1.512	0.00	0.00	62.90	62.90	mg/L	25 mL	0.0208	210122A	AR
210122A LCSD	2021-01-22 13:43:58 UTC-8	Alkalinity	0.180	6.234	0.00	14.26	232.61	246.87	mg/L	25 mL	0.0198	210122A	AR
210122A LCS	2021-01-22 12:56:32 UTC-8	Alkalinity	0.180	6.190	0.00	14.26	230.87	245.12	mg/L	25 mL	0.0198	210122A	AR
210122A BLK	2021-01-22 12:53:58 UTC-8	Alkalinity	0.000	0.022	0.00	0.00	0.87	0.87	mg/L	25 mL	0.0198	210122A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA
ORP standard	Thermo Fisher Scientific	mV	NA	WZ1-40222	01/11/19	1/31/20	20mL	20mL	ORP STD	220mV

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210121 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

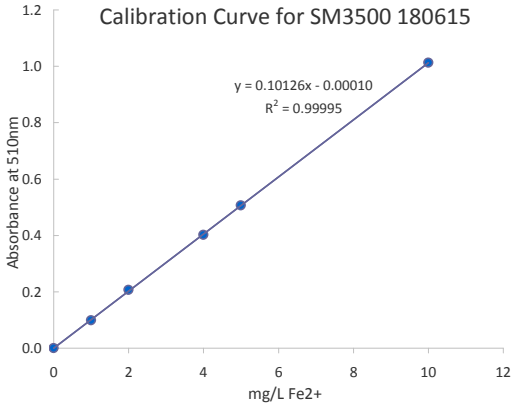
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210121	0.302	2.98

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	01/21/21	2.98



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
01/21/21	23:31	CCV 4.0 A210121	1	0.407	25mL		4.02	4.02	4.00	100.5%
01/21/21	23:30	Blk/ CCB A210121	1	0.000	25mL		0.00	0.00		
01/21/21	23:32	LCS A210121	1	0.302	25mL		2.98	2.98	3.00	99.5%
01/21/21	23:32	LCSD A210121	1	0.302	25mL		2.98	2.98	3.00	99.5%
01/21/21	23:49	BA25526W09	1	0.016	25mL		0.16	0.16		
01/21/21	23:50	BA25529W09	1	0.010	25mL		0.10	0.10		
01/21/21	23:50	BA25532W09	1	0.012	25mL		0.12	0.12		
01/21/21	23:58	BA25535W09	1	0.003	25mL		0.03	0.03		
01/21/21	0:01	BA25538W09	1	0.006	25mL		0.06	0.06		
01/21/21	0:01	BA25538W09 MS	1	0.308	25mL		3.04	3.04		
01/21/21	0:01	BA25538W09 MSD	1	0.309	25mL		3.05	3.05		
01/21/21	0:01	CCV 4.0 A210121	1	0.403	25mL		3.98	3.98	4.00	99.5%
01/21/21	0:02	Blk/ CCB A210121	1	0.005	25mL		0.05	0.05		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

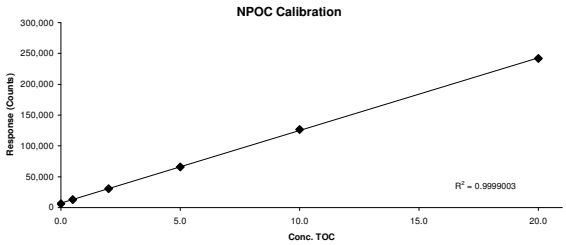
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210122A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-22	02:20 PM	QCB	1	4300	40mL	0.000	0	0.00	0.00		
2021-01-22	02:59 PM	CCV	1	61345	40mL	0.000	4.842	4.84	0.14	5.00	96.8%
2021-01-22	03:40 PM	CCB	1	3842	40mL	0.000	0	0.00	0.00		
2021-01-22	04:19 PM	210122A LCS	1	58530	40mL	0.000	4.603	4.60	0.03	5.00	92.1%
2021-01-22	04:59 PM	210122A LCSD	1	56481	40mL	0.000	4.43	4.43	0.02	5.00	88.6%
2021-01-22	05:41 PM	BA25526W06	1	165001	40mL	0.000	13.862	13.86	0.55		
2021-01-22	06:19 PM	BA25529W06	1	4350	40mL	0.000	0.226	0.23	0.02		
2021-01-22	06:56 PM	BA25532W05	1	7216	40mL	0.000	0.469	0.47	0.03		
2021-01-22	07:33 PM	BA25535W06	1	5455	40mL	0.000	0.32	0.32	0.05		
2021-01-22	08:11 PM	BA25538W06	1	3387	40mL	0.000	0.144	0.14	0.01		
2021-01-22	08:46 PM	BA25538W05 DUP	1	3620	40mL	0.000	0.164	0.16	0.02		
2021-01-22	09:23 PM	CCV	1	59148	40mL	0.000	4.656	4.66	0.02	5.00	93.1%
2021-01-22	10:03 PM	CCB	1	2277	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**6465171-49409**	**06/30/21**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_MS/MSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**sample**	5 ppm

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94826 SDG: 94826
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/25/21

Analyte	Calibration Verification									M
	True ICV	Found 21:45	%R(1)	True CCV1	Found 22:36	%R(1)	True CCV1	Found 23:04	%R(1)	
TOXN	3	3.0502	102	3	3.1184	104	3	3.233	108	

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94826 SDG: 94826

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 01/25/21 21:48	C	CCB 01/25/21 22:38	C	CCB 01/25/21 23:06	C		C		C	
TOXN	.100	U	.100	U	.100	U					

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 14:21:23
Tray Number:	2
Tray Name:	210125A NO2 NO3 TOXN PT

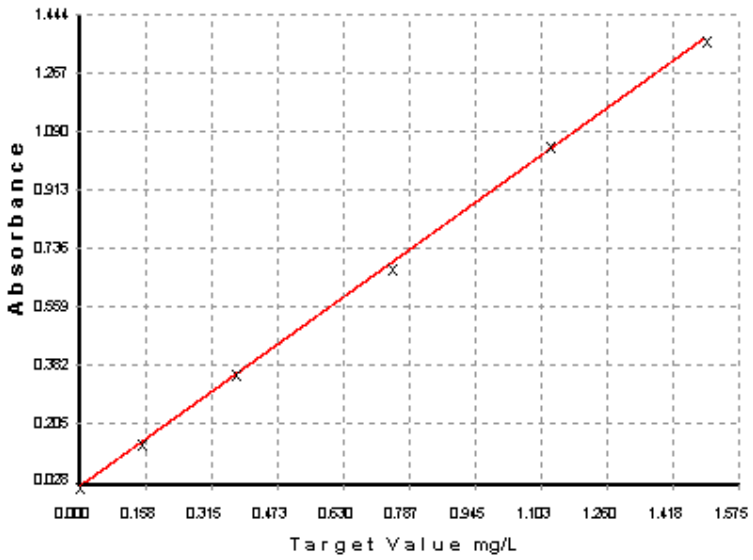
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0284	0.0005	0.0000	
S90	0.1625	0.1492	0.1500	-0.54
S91	0.3706	0.3799	0.3750	1.32
S92	0.6902	0.7344	0.7500	-2.08
S93	1.0579	1.1422	1.1250	1.53
S94	1.3749	1.4937	1.5000	-0.42
S0	0.0384	0.0116	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9998
Carryover(%):	0.7
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-3.101574E-002
b =:	1.108986E+000
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 20:01:06

Calibration Graph



Test Results

Cup Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
S1	Standard 1	0.0284			0.028434			ERR	2021-01-25 19:53:45
S1	Standard 1	0.0279			0.027917			ERR	2021-01-25 19:08:06
S1	Standard 1	0.0270			0.026971			ERR	2021-01-25 18:36:44
S90	Standard 90	0.1625			0.162497			ERR	2021-01-25 19:54:58
S90	Standard 90	0.1843			0.184284			ERR	2021-01-25 19:09:19
S90	Standard 90	0.1852			0.185231			ERR	2021-01-25 18:37:58
S91	Standard 91	0.3706			0.370564			ERR	2021-01-25 19:56:11
S91	Standard 91	0.4272			0.427209			ERR	2021-01-25 19:10:33
S91	Standard 91	0.4237			0.423696			ERR	2021-01-25 18:39:11
S92	Standard 92	0.6902			0.690216			ERR	2021-01-25 19:57:25
S92	Standard 92	0.8171			0.817072			ERR	2021-01-25 19:11:46
S92	Standard 92	0.8306			0.830618			ERR	2021-01-25 18:40:25
S93	Standard 93	1.0579			1.057907			ERR	2021-01-25 19:58:39
S93	Standard 93	1.2275			1.227511			ERR	2021-01-25 19:13:00
S93	Standard 93	1.2596			1.259574			ERR	2021-01-25 18:41:38
S94	Standard 94	1.3749			1.374914			ERR	2021-01-25 19:59:52
S94	Standard 94	1.6100			1.610047			ERR	2021-01-25 19:14:13
S94	Standard 94	1.5814			1.581402			ERR	2021-01-25 18:42:52
S0	Standard 0	0.0384			0.038450			ERR	2021-01-25 20:01:06
S0	Standard 0	0.0406			0.040558			ERR	2021-01-25 19:15:27
S0	Standard 0	0.0396			0.039613			ERR	2021-01-25 18:44:05
CCV	CCV .75	0.7553	mg/L		0.709018			ERR	2021-01-25 20:02:20
CCV	CCV .75	0.6409	mg/L		0.705998			ERR	2021-01-25 19:16:40
CCV	CCV .75	0.6297	mg/L		0.696527			ERR	2021-01-25 18:45:19

	CCB	CCB	0.0065	mg/L	0.033842	ERR	2021-01-25 20:03:33
	CCB	CCB	0.0058	mg/L	0.033973	ERR	2021-01-25 19:17:54
	CCB	CCB	-0.0001	mg/L	0.032549	ERR	2021-01-25 18:46:33
3	U1	ICV NO2	0.7446	mg/L	0.699414	ERR	2021-01-25 20:04:47
3	U1	ICV NO2	0.6145	mg/L	0.678119	ERR	2021-01-25 19:19:08
3	U1	ICV NO2	0.6199	mg/L	0.686146	ERR	2021-01-25 18:47:47
4	U2	ICV NO3 TOXN	0.0065	mg/L	0.033871	ERR	2021-01-25 20:06:01
4	U2	ICV NO3 TOXN	0.0057	mg/L	0.033915	ERR	2021-01-25 19:20:22
5	U3	ICB NO2 NO3 TOXN	-0.0002ELL	mg/L	0.027760	ERR	2021-01-25 20:07:14
5	U3	ICB NO2 NO3 TOXN	-0.0003	mg/L	0.027516	ERR	2021-01-25 19:21:35
6	U4	210125A Blk NO2 NO3 TOXN	0.0005ELL	mg/L	0.028420	ERR	2021-01-25 20:08:30
6	U4	210125A Blk NO2 NO3 TOXN	0.0005	mg/L	0.028391	ERR	2021-01-25 19:22:51
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0002ELL	mg/L	0.028190	ERR	2021-01-25 20:09:43
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0001	mg/L	0.027932	ERR	2021-01-25 19:24:04
8	U6	210125A LCS NO2	0.7340	mg/L	0.689821	ERR	2021-01-25 20:10:58
8	U6	210125A LCS NO2	0.6225	mg/L	0.686604	ERR	2021-01-25 19:25:19
9	U7	210125A LCS NO3 TOXN	0.0055	mg/L	0.032898	ERR	2021-01-25 20:12:12
9	U7	210125A LCS NO3 TOXN	0.0045	mg/L	0.032622	ERR	2021-01-25 19:26:33
10	U8	210125A LCSD NO2	0.7531	mg/L	0.707025	ERR	2021-01-25 20:13:26
10	U8	210125A LCSD NO2	0.6341	mg/L	0.698808	ERR	2021-01-25 19:27:47
11	U9	210125A LCSD NO3 TOXN	0.0060	mg/L	0.033333	ERR	2021-01-25 20:14:40
11	U9	210125A LCSD NO3 TOXN	0.0045	mg/L	0.032564	ERR	2021-01-25 19:29:01
12	U10	1 ppm NO2	0.0105	mg/L	0.037466	ERR	2021-01-25 20:15:55
	CCV	CCV .75	0.7377	mg/L	0.693128	ERR	2021-01-25 20:17:09
	CCB	CCB	0.0058	mg/L	0.033173	ERR	2021-01-25 20:18:24
13	U11	1 ppm NO3	0.0048	mg/L	0.032332	ERR	2021-01-25 20:19:38
14	U12	BA25605W03 pH 6.07	0.0076	mg/L	0.034833	ERR	2021-01-25 20:20:52
15	U13	BA25606W03 pH 7.47	0.0064	mg/L	0.033770	ERR	2021-01-25 20:22:06
16	U14	BA25607W03 pH 6.99	0.0072	mg/L	0.034454	ERR	2021-01-25 20:23:21
17	U15	BA25608W03 pH 5.98	0.0070	mg/L	0.034264	ERR	2021-01-25 20:24:35
18	U16	BA25609W03 pH 5.30	0.0067	mg/L	0.034002	ERR	2021-01-25 20:25:49
19	U17	BA25610W06 pH 6.98	0.0065	mg/L	0.033828	ERR	2021-01-25 20:27:02
20	U18	BA25611W04 pH 6.45	0.0113	mg/L	0.038126	ERR	2021-01-25 20:28:16
21	U19	BA25612W04 pH 5.63	0.0101	mg/L	0.037040	ERR	2021-01-25 20:29:29
22	U20	BA25613W02 pH 5.58	0.0091	mg/L	0.036206	ERR	2021-01-25 20:30:42
	CCV	CCV .75	0.7557	mg/L	0.709431	ERR	2021-01-25 20:31:55
	CCB	CCB	0.0060	mg/L	0.033333	ERR	2021-01-25 20:33:10
23	U21	BA25614W02 pH 6.34	0.0067	mg/L	0.034031	ERR	2021-01-25 20:34:25
24	U22	BA25615W02 pH 6.95	0.0075	mg/L	0.034774	ERR	2021-01-25 20:35:38
25	U23	BA25616W02 pH 7.67	0.0056	mg/L	0.033028	ERR	2021-01-25 20:36:52
26	U24	BA25617W02 pH 6.34	0.0077	mg/L	0.034906	ERR	2021-01-25 20:38:07
27	U25	BA25618W02 pH 6.24	0.0058	mg/L	0.033173	ERR	2021-01-25 20:39:21
28	U26	BA25619W05 pH 6.07	0.0004ELL	mg/L	0.028363	ERR	2021-01-25 20:40:35
40	U38	BA25600W06	0.0067	mg/L	0.034002	ERR	2021-01-25 20:41:49
41	U39	BA25600W07 pH 6.01	0.0023	mg/L	0.030076	ERR	2021-01-25 20:43:03
42	U40	BA25601W06	0.0037	mg/L	0.031260	ERR	2021-01-25 20:44:16
43	U41	BA25601W07 pH 6.27	0.0015	mg/L	0.029341	ERR	2021-01-25 20:45:32
	CCV	CCV .75	0.7357	mg/L	0.691339	ERR	2021-01-25 20:46:45
	CCB	CCB	0.0061	mg/L	0.033508	ERR	2021-01-25 20:48:02
44	U42	BA25602W06	0.0031	mg/L	0.030783	ERR	2021-01-25 20:48:42
45	U43	BA25602W07 pH 8.28	0.0012	mg/L	0.029024	ERR	2021-01-25 20:49:47
46	U44	BA25215 PT	1.0767	mg/L	0.998898	ERR	2021-01-25 20:50:43
47	U45	BA25214 PT	0.0082	mg/L	0.035343	ERR	2021-01-25 20:51:39
	CCV	CCV .75	0.7507	mg/L	0.704905	ERR	2021-01-25 20:52:35
	CCB	CCB	0.0058	mg/L	0.033159	ERR	2021-01-25 20:53:33
	CCV	CCV .75	0.7490	mg/L	0.703339		2021-01-25 19:51:15
	CCB	CCB	0.0051	mg/L	0.032578		2021-01-25 19:52:29
	CCV	CCV .75	0.7469	mg/L	0.701508		2021-01-25 20:54:31
	CCB	CCB	0.0062	mg/L	0.033595		2021-01-25 20:55:29

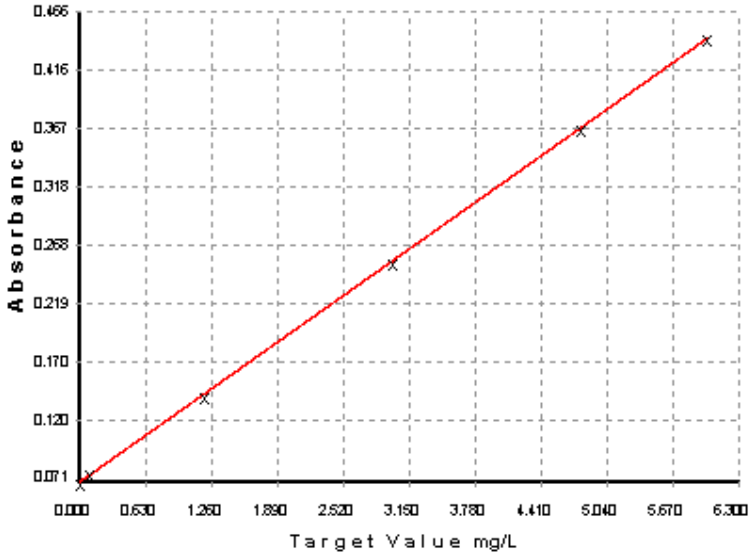
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0710	0.0080	0.0000	
S90	0.0785	0.1297	0.1000	29.72
S91	0.1427	1.1661	1.2000	-2.83
S92	0.2553	2.9823	3.0000	-0.59
S93	0.3675	4.7942	4.8000	-0.12
S94	0.4435	6.0198	6.0000	0.33
S0	0.0794	0.1443	0.0000	

Polynomial Order:	1
Correlation Coefficient:	1.0000
Carryover(%):	2.3
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-1.137157E+000
b =:	1.613783E+001
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 21:38:54

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0710		0.070958			ERR	2021-01-25 21:25:07
	S90	Standard 90	0.0785		0.078503			ERR	2021-01-25 21:27:24
	S91	Standard 91	0.1427		0.142723			ERR	2021-01-25 21:29:42
	S92	Standard 92	0.2553		0.255264			ERR	2021-01-25 21:32:00
	S93	Standard 93	0.3675		0.367542			ERR	2021-01-25 21:34:18
	S94	Standard 94	0.4435		0.443491			ERR	2021-01-25 21:36:36
	S0	Standard 0	0.0794		0.079407			ERR	2021-01-25 21:38:54
	CCV	CCV	3.0207	mg/L	0.257645			ERR	2021-01-25 21:41:13
	CCB	CCB	-0.0196	mg/L	0.069250			ERR	2021-01-25 21:43:31
4	U2	ICV NO3 TOXN	3.0502	mg/L	0.259476			ERR	2021-01-25 21:45:50
5	U3	ICB NO2 NO3 TOXN	0.0028ELL	mg/L	0.070641			ERR	2021-01-25 21:48:08
6	U4	210125A Blk NO2 NO3 TOXN	-0.0303ELL	mg/L	0.068587			ERR	2021-01-25 21:50:27
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0247ELL	mg/L	0.068934			ERR	2021-01-25 21:52:46
9	U7	210125A LCS NO3 TOXN	2.9363	mg/L	0.252415			ERR	2021-01-25 21:55:04
11	U9	210125A LCSD NO3 TOXN	2.9014	mg/L	0.250254			ERR	2021-01-25 21:57:23
13	U11	1 ppm NO3	0.0092	mg/L	0.071037			ERR	2021-01-25 21:59:42
14	U12	BA25605W03 pH 6.07	0.0585	mg/L	0.074091			ERR	2021-01-25 22:02:01
15	U13	BA25606W03 pH 7.47	0.0745	mg/L	0.075082			ERR	2021-01-25 22:04:20
16	U14	BA25607W03 pH 6.99	0.0282	mg/L	0.072212			ERR	2021-01-25 22:06:38
	CCV	CCV	3.0621	mg/L	0.260210			ERR	2021-01-25 22:08:57
	CCB	CCB	-0.0148	mg/L	0.069550			ERR	2021-01-25 22:11:16
17	U15	BA25608W03 pH 5.98	0.0325	mg/L	0.072482			ERR	2021-01-25 22:13:35
18	U16	BA25609W03 pH 5.30	0.0498	mg/L	0.073549			ERR	2021-01-25 22:15:53
19	U17	BA25610W06 pH 6.98	0.0601	mg/L	0.074187			ERR	2021-01-25 22:18:12
20	U18	BA25611W04 pH 6.45	0.2677	mg/L	0.087053			ERR	2021-01-25 22:20:30
21	U19	BA25612W04 pH 5.63	0.2563	mg/L	0.086346			ERR	2021-01-25 22:22:49
22	U20	BA25613W02 pH 5.58	0.1146	mg/L	0.077569			ERR	2021-01-25 22:25:07
23	U21	BA25614W02 pH 6.34	0.0900	mg/L	0.076043			ERR	2021-01-25 22:27:25
24	U22	BA25615W02 pH 6.95	0.0952	mg/L	0.076364			ERR	2021-01-25 22:29:43
25	U23	BA25616W02 pH 7.67	0.0565	mg/L	0.073964			ERR	2021-01-25 22:32:00
26	U24	BA25617W02 pH 6.34	0.0916	mg/L	0.076139			ERR	2021-01-25 22:34:18
	CCV	CCV	3.1184	mg/L	0.263704			ERR	2021-01-25 22:36:36
	CCB	CCB	-0.0461	mg/L	0.067611			ERR	2021-01-25 22:38:54
27	U25	BA25618W02 pH 6.24	0.1053	mg/L	0.076990			ERR	2021-01-25 22:41:13
28	U26	BA25619W05 pH 6.07	-0.0567ELL	mg/L	0.066951			ERR	2021-01-25 22:43:32
29	U27	BA25526W08 pH 8.10	0.3728	mg/L	0.093565			ERR	2021-01-25 22:45:51
30	U28	BA25529W08 pH 6.26	0.5989	mg/L	0.107578			ERR	2021-01-25 22:48:09
31	U29	BA25532W08 pH 7.05	1.3644	mg/L	0.155010			ERR	2021-01-25 22:50:26
32	U30	BA25535W08 pH 7.62	1.0767	mg/L	0.137187			ERR	2021-01-25 22:52:44
33	U31	BA25538W08 pH 6.35	0.4087	mg/L	0.095791			ERR	2021-01-25 22:55:02

34	U32	BA25591W02 pH 6.16	7.6305	mg/L	0.117749	x10.0000	ERR	2021-01-25 23:57:41
34	U32	BA25591W02 pH 6.16	6.0234	mg/L	0.443715		ERR	2021-01-25 22:57:19
35	U33	BA25592W02 pH 7.61	0.7429	mg/L	0.116497		ERR	2021-01-25 22:59:37
36	U34	BA25690W11 pH 6.32	0.3936	mg/L	0.094852		ERR	2021-01-25 23:01:54
	CCV	CCV	3.2330	mg/L	0.270801		ERR	2021-01-25 23:04:12
	CCB	CCB	-0.0450	mg/L	0.067674		ERR	2021-01-25 23:06:30
37	U35	BA25693W08 pH 8.53	0.1712	mg/L	0.081075		ERR	2021-01-25 23:08:49
38	U36	BA25696W08 pH 6.45	-0.0293ELL	mg/L	0.068650		ERR	2021-01-25 23:11:07
39	U37	BA25699W11 pH 6.24	0.0269	mg/L	0.072132		ERR	2021-01-25 23:13:27
40	U38	BA25600W06	220.6245	mg/L	0.298320	x60.0000	ERR	2021-01-26 00:32:22
40	U38	BA25600W06	172.1695	mg/L	1.137335	x10.0000	ERR	2021-01-25 23:58:37
40	U38	BA25600W06	52.6451	mg/L	3.332681		ERR	2021-01-25 23:15:44
41	U39	BA25600W07 pH 6.01	223.9008	mg/L	0.301703	x60.0000	ERR	2021-01-26 00:33:19
41	U39	BA25600W07 pH 6.01	169.5951	mg/L	1.121382	x10.0000	ERR	2021-01-25 23:59:33
41	U39	BA25600W07 pH 6.01	52.6451	mg/L	3.332681		ERR	2021-01-25 23:18:02
42	U40	BA25601W06	1258.1431ELH	mg/L	1.369838	x60.0000	ERR	2021-01-26 00:34:15
42	U40	BA25601W06	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:00:30
42	U40	BA25601W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:20:22
43	U41	BA25601W07 pH 6.27	1180.5591ELH	mg/L	1.289712	x60.0000	ERR	2021-01-26 00:35:11
43	U41	BA25601W07 pH 6.27	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:01:26
43	U41	BA25601W07 pH 6.27	60.3448	mg/L	3.809802		ERR	2021-01-25 23:21:29
44	U42	BA25602W06	1158.3044ELH	mg/L	1.266728	x60.0000	ERR	2021-01-26 00:36:07
44	U42	BA25602W06	536.4799	mg/L	3.394829	x10.0000	ERR	2021-01-26 00:02:22
44	U42	BA25602W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:22:26
45	U43	BA25602W07 pH 8.28	1279.7607ELH	mg/L	1.392164	x60.0000	ERR	2021-01-26 00:37:04
45	U43	BA25602W07 pH 8.28	531.2860	mg/L	3.362644	x10.0000	ERR	2021-01-26 00:03:18
45	U43	BA25602W07 pH 8.28	60.3448	mg/L	3.809802		ERR	2021-01-25 23:23:22
46	U44	BA25215 PT	2.7372	mg/L	0.240077		ERR	2021-01-25 23:24:18
	CCV	CCV	3.5657	mg/L	0.291420		ERR	2021-01-25 23:25:15
	CCB	CCB	0.3138	mg/L	0.089908		ERR	2021-01-25 23:26:12
47	U45	BA25214 PT	4.5484	mg/L	0.352314		ERR	2021-01-25 23:27:10
	CCV	CCV	3.4140	mg/L	0.282018		ERR	2021-01-25 23:28:06
	CCB	CCB	0.1446	mg/L	0.079424		ERR	2021-01-25 23:29:04
	CCV	CCV	3.1878	mg/L	0.267998			2021-01-25 23:54:10
	CCB	CCB	0.1261	mg/L	0.078278			2021-01-25 23:56:31
	CCV	CCV	4.0923	mg/L	0.324052			2021-01-26 00:04:15
	CCB	CCB	0.3612	mg/L	0.092848			2021-01-26 00:05:13
	CCV	CCV	3.3696	mg/L	0.279269			2021-01-26 00:30:14
	CCB	CCB	0.2290	mg/L	0.084658			2021-01-26 00:31:24
	CCV	CCV	3.7972	mg/L	0.305766			2021-01-26 00:38:00
	CCB	CCB	0.2871	mg/L	0.088255			2021-01-26 00:38:58

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.0437	mg/L		0.000000			ERR	2021-01-26 07:45:58
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN	0.0031	mg/L		0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN	-0.0308	mg/L		0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0250	mg/L		0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN	2.9308	mg/L		0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN	2.8955	mg/L		0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3	0.0044	mg/L		0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3				0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07	0.0509	mg/L		0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47	0.0681	mg/L		0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47				0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99	0.0210	mg/L		0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99				0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98	0.0256	mg/L		0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98				0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30	0.0431	mg/L		0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30				0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98	0.0536	mg/L		0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98				0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45	0.2564	mg/L		0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45				0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63	0.2462	mg/L		0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63				0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58	0.1055	mg/L		0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58				0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34	0.0833	mg/L		0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95	0.0876	mg/L		0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95				0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67	0.0508	mg/L		0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67				0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34	0.0839	mg/L		0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24	0.0995	mg/L		0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24				0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07	-0.0571	mg/L		0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06	220.6178	mg/L		0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06				0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01	223.8985	mg/L		0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01				0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06	1258.1394	mg/L		0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06				0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27	1180.5576	mg/L		0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27				0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06	1158.3013	mg/L		0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06				0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28	1279.7595	mg/L		0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28				0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT	1.6604	mg/L		0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT				0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT	4.5402	mg/L		0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT				0.000000			ERR	2021-01-26 07:45:58

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 12, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94863

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Twelve water samples were received January 22, 2021. Written results for the requested analyses are being provided on this February 12, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94863
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	8
Sample Results	20
QC Forms	97
Method 8011 Calibration Data	194
Method 8011 Raw Data	223
Method 8015B Calibration Data	253
Method 8015B Raw Data	285
Method 8270D Calibration Data	321
Method 8270D Raw Data	369
Method 8270D SIM Calibration Data	407
Method 8270D SIM Raw Data	434
APPL SOP 2-MEE Calibration Data	469
APPL SOP 2-MEE Raw Data	496
Method 8260B Calibration Data	531
Method 8260B Raw Data	611
Method 8260B GRO Calibration Data	660
Method 8260B GRO Raw Data	718
Method RSK-175 Calibration Data	775
Method RSK-175 Raw Data	803
Method 300 Calibration Data	828
Method 300 Raw Data	859
Inorganic Analyses and Calibration Raw Data	871

CASE NARRATIVE

Case Narrative

ARF: 94863

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Twelve water samples were received January 22, 2021 at 4.0°C, 1.5°C, 2.0°C, 1.0°, 1.0°C 3.5°C and 2.1°C. The sample group was assigned Analytical Request Form (ARF) number 94863.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to APPL SOP method MWE012.

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

None.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94863	01/22/21	ERH1211	BA25689	01/20/21 2:26:00 PM	WATER	8011	EPA 8011
94863	01/22/21	ERH1211	BA25689	01/20/21 2:26:00 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1211	BA25689	01/20/21 2:26:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1211	BA25689	01/20/21 2:26:00 PM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	SM3500FeB	Ferrous Iron
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	8011	EPA 8011
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1212	BA25690	01/20/21 3:28:00 PM	WATER	SW846 9060A	9060A TOC
94863	01/22/21	ERH1233	BA25692	01/21/21 9:34:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94863	01/22/21	ERH1233	BA25692	01/21/21 9:34:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1233	BA25692	01/21/21 9:34:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	SM3500FeB	Ferrous Iron
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1234	BA25693	01/21/21 9:58:00 AM	WATER	SW846 9060A	9060A TOC
94863	01/22/21	ERH1241	BA25695	01/21/21 8:03:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94863	01/22/21	ERH1241	BA25695	01/21/21 8:03:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1241	BA25695	01/21/21 8:03:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	SM3500FeB	Ferrous Iron
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER

94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1242	BA25696	01/21/21 10:00:00 AM	WATER	SW846 9060A	9060A TOC
94863	01/22/21	ERH1243	BA25698	01/20/21 8:45:00 AM	WATER	8011	EPA 8011
94863	01/22/21	ERH1243	BA25698	01/20/21 8:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1243	BA25698	01/20/21 8:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1243	BA25698	01/20/21 8:45:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	SM3500FeB	Ferrous Iron
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	8011	EPA 8011
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	RSK 175	METHANE BY RSK 175
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1244	BA25699	01/20/21 9:45:00 AM	WATER	SW846 9060A	9060A TOC
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	8011	EPA 8011
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1245	BA25701	01/20/21 9:45:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1250	BA25703	01/20/21 10:00:00 AM	WATER	8011	EPA 8011
94863	01/22/21	ERH1250	BA25703	01/20/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1250	BA25703	01/20/21 10:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	8011	EPA 8011
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1251	BA25704	01/20/21 11:00:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	8011	EPA 8011
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94863	01/22/21	ERH1252	BA25706	01/20/21 12:00:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 94863

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Brooke Gottmeier**
Phone: **808-954-4536** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **202101,202114,20211**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **01/22/21** Time: **11:00**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **SEE CRF**
Color: **VFRG/A-Green**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **01/29/21**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com

AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. no q-delete
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com

Sample Distribution:
GC: 8-$8011, 7-$87DC53W5, 7-$87DMEEW5, 7-$DOC53W5LIQ, 7-$SIM53LIQ51
Extractions: 8-_MWE012, 7-_LIQ003, 7-_LIQ005, 7-_MWE2MEE
VOA: 8-$86BTOTXDCAW, 12-$GASBL, 12-$GRO86BW, 8-$RSKMETH, 4-$86BTOTXDOD5W
Wetlab: 4-$232W(HCO3,CO3,ALK), 4-$300W, 4-$353TOXNW, 4-$35FE, 4-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH1211	LCSD BA25689W	01/20/21 14:26	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1212	LCSD BA25690W	01/20/21 15:28	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
3.	ERH1233	LCSD BA25692W	01/21/21 09:34	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH1234	LCSD BA25693W	01/21/21	09:58	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
5.	ERH1241	LCSD BA25695W	01/21/21	08:03	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
6.	ERH1242	LCSD BA25696W	01/21/21	10:00	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
7.	ERH1243	LCSD BA25698W	01/20/21	08:45	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- See Comments
8.	ERH1244	LCSD BA25699W	01/20/21	09:45	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
9.	ERH1245	LCSD BA25701W	01/20/21	09:45	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
10.	ERH1250	LCSD BA25703W	01/20/21	10:00	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW -- See Comments
11.	ERH1251	LCSD BA25704W	01/20/21	11:00	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
12.	ERH1252	LCSD BA25706W	01/20/21	12:00	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments

APPL Sample Receipt Form

ARF# **94863**

Sample	Container Type	Count	p
BA25689	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
BA25690	3 PL 250mL	1	NA
	10 PL 250mL - H2SO4	1	1.6
	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	4	NA
	32 Clear VOA - H2SO4	2	NA
	38 250mL brn poly, HCl prsvd	1	1.6
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25692	13 VOAs - HCL	4	NA
BA25693	3 PL 250mL	1	NA
	10 PL 250mL - H2SO4	1	1.3
	13 VOAs - HCL	4	NA
	17 Amber Liter	4	NA
	32 Clear VOA - H2SO4	2	NA
	38 250mL brn poly, HCl prsvd	1	1.6
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25695	13 VOAs - HCL	4	NA
BA25696	3 PL 250mL	1	NA
	10 PL 250mL - H2SO4	1	1.3
	13 VOAs - HCL	4	NA
	17 Amber Liter	4	NA
	32 Clear VOA - H2SO4	2	NA
	38 250mL brn poly, HCl prsvd	1	1.6
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25698	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
BA25699	3 PL 250mL	1	NA
	10 PL 250mL - H2SO4	1	1.3
	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	4	NA
	32 Clear VOA - H2SO4	2	NA
	38 250mL brn poly, HCl prsvd	1	1.6
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25701	13 VOAs - HCL	4	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	4	NA
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25703	13 VOAs - HCL	3	NA
	15 VOAs - NP	3	NA
BA25704	13 VOAs - HCL	3	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	4	NA
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA
BA25706	13 VOAs - HCL	3	NA
	15 VOAs - NP	3	NA
	17 Amber Liter	4	NA
	39 Amber Liter, HCL prsvd	2	1.6
	40 500mL Amber, unprsrvd	2	NA

94863

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202101

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): GM, RS, TV
Sampler (Signature):

Date Shipped: 1/21/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1211	Trip Blank	1/20/21	1426	HST	7	X			X	X						X						
ERH1212	RHMW19	1/20/21	1528	HST	20	X			X	X	X	X*	X	X	X	X	X	X	X		X		

RS 1/21/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: 25: 4.0/4.0, 1.5/1.5, 2.0/2.0, 1.0/1.0, 3.5/3.5, 2.0/2.0

Turnaround Requested: Check one ☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal: ☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/21/21	15:30					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/22/21	1100	

See page 2 for Container Preservative and Sampling Information

CHAIN OF CUSTODY RECORD

COC 202114 REV01 1/21/2021

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

C.O.C. 202114

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600 Fax: 808-523-8950
Honolulu, HI 96813

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600 Fax: 808-523-8950
Honolulu, HI 96813

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): G.M, J.V, R.S

Sampler (Signature):

Date Shipped: 1/21/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX, TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	200.8 Bromide,Fluoride 6010 Total Ca,Mg,Mn,K,Na EPA1664 Total & Dissolved O&G	9060A TOC	9060A DOC
ERH1233	Trip Blank	1/21/21	0934	HST	4	X			X							X						
ERH1234	HDMW7253-03	1/21/21	0950	HST	7	X			X		X	X*	X	X	X	X	X	X	X		X	

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

	Date	Time			Date	Time	
Relinquished by sampler:	1/21/20	15:30	Received by:	Relinquished by:			Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
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Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202118

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Sampler (Print): BM, WZ, EB

Purchase Order Number: 102604

Sampler (Signature):

Date Shipped: 1/21/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1241	Trip Blank	1/21/21	0803	HST	4	X			X							X						
ERH1242	EHMW11-05	1/21/21	1000	HST	17	X			X		X	X*	X	X	X	X	X	X	X	X		X	

1/21/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Cindy Broomson (AECOM)	1/21/21	1530					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/22/21	1100	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202119

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): EB, BM, WZ
Sampler (Signature):
Date Shipped: 1/21/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1243	Trip Blank	1/20/21	0845	HST	0	X			X	X						X							
ERH1244	RHMW13-05	1/20/21	0945	HST	3	X			X	X	X	X*	X	X	X	X	X	X	X		X		
ERH1245	RHMW13-05	1/21/21	0945	HST	6	X			X	X	X	X*	X	X	X								see other cooler

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

BB 1/21/21

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date: 1/21/21	Time: 1530	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date: 1/22/21	Time: 1100	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202120

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): EB, BM, WZ
Sampler (Signature):
Date Shipped: 1/21/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1243	Trip blank	1/20/21	0845	HST	7	X			X	X						X							
ERH1244	RHMW13-05	1/20/21	0945	HST	17	X			X	X	X	X*	X	X	X	X	X	X	X	X		X		
ERH1245	RHMW13-05	1/20/21	0945	HST	9	X			X	X	X	X*	X	X	X									See other Cooler

1/21/20

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date 1/21/21	Time 15:30	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 1/22/21	Time 1100	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202126

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Sampler (Print): BM, EB, WZ

Purchase Order Number: 102604

Sampler (Signature): Cindy B

Date Shipped: 1/21/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1250	Trip Blank	1/20/21	1000	HST	0	X			X	X													see other cooler
ERH1251	Field Blank	1/20/21	1100	HST	8	X			X	X	X	X*	X	X	X								see other cooler
ERH1252	Equip. Blank	1/20/21	1200	HST	0	X			X	X	X	X*	X	X	X								

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

CB 1/21/21

17 of 892

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Cindy B (AECOM)	1/21/21	1530					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/22/21	1100	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202125

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, WZ, EB

Sampler (Signature):

Date Shipped: 1/21/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1250	Trip Blank	1/20/21	1000	HST	7	X			X	X													see other
ERH1251	Field Blank	1/20/21	1100	HST	6	X			X	X	X	X*	X	X	X								Cooler
ERH1252	Equip. Blank	1/20/21	1200	HST	14	X			X	X	X	X*	X	X	X								

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

CB 1/21/21

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Cindy B (AECOM)	1/21/21	1530					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/22/21	1100	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94863**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/22/21

2) Coolers: Number of Coolers: 7

3) YES Were custody seals present and intact?
How many? 14 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R5 CF:-1.9°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 4.0/4.0 2: 1.5/1.5 3: 2.0/2.0 4: 1.0/1.0 5: 1.0/1.0 6: 3.5/3.5
7: 2.0/2.0 8: 9: 10: 11: 12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA25689all, BA25692w03-04, BA25695w04, BA25703all
Smaller than a pea: BA25690w02-04, BA25692w02, BA25693all, BA25695w02-03

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

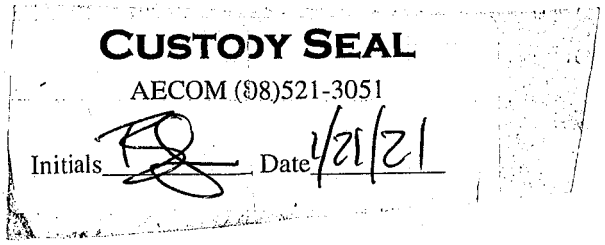
20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate:

Notes/Deficiencies:
Ferrous iron received out of hold time



Personnel receiving samples: AA Second reviewer: MK
Personnel labeling samples: MS
Project manager notified: RB Date/Time of notification 01/22/21
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1211

APPL ID: BA25689

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	92.6	70-132			%	01/27/21	01/27/21

Quant Method: 80110127.M
Run #: 210127014
Instrument: HERBIE
Sequence: 210127
Dilution Factor: 1
Initials: SSE

Printed: 01/28/21 9:42:54 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	91.7	70-132			%	01/27/21	01/27/21

Quant Method:	80110127.M
Run #:	210127015
Instrument:	HERBIE
Sequence:	210127
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:42:54 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1243

APPL ID: BA25698

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.0	70-132			%	01/27/21	01/27/21

Quant Method:	80110127.M
Run #:	210127016
Instrument:	HERBIE
Sequence:	210127
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:42:54 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.0	70-132			%	01/27/21	01/27/21

Quant Method: 80110127.M
Run #: 210127017
Instrument: HERBIE
Sequence: 210127
Dilution Factor: 1
Initials: SSE

Printed: 01/28/21 9:42:54 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1245

APPL ID: BA25701

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	92.9	70-132			%	01/27/21	01/27/21

Quant Method:	80110127.M
Run #:	210127018
Instrument:	HERBIE
Sequence:	210127
Dilution Factor:	1
Initials:	SSE

Printed: 01/28/21 9:42:54 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1250

APPL ID: BA25703

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	93.7	70-132			%	01/27/21	01/27/21

Quant Method:	80110127.M
Run #:	210127019
Instrument:	HERBIE
Sequence:	210127
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1251

APPL ID: BA25704

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.0	70-132			%	01/27/21	01/27/21

Quant Method:	80110127.M
Run #:	210127020
Instrument:	HERBIE
Sequence:	210127
Dilution Factor:	1
Initials:	SSE

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EPA 8011

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1252

APPL ID: BA25706

Sample Collection Date: 01/20/21

QCG: #8011-210127A-260656

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
8011	SURROGATE: 1,3-DIBROMOPROPANE	97.4	70-132			%	01/27/21	01/27/21

Quant Method: 80110127.M
Run #: 210127021
Instrument: HERBIE
Sequence: 210127
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	88.1	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	78.3	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107140
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	83.5	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	74.2	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107141
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	87.8	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.4	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107142
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #DOC53-210126A-260661

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	87.8	60-142			%	01/26/21	01/27/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	78.2	56-125			%	01/26/21	01/27/21

Quant Method:	DOC1218.M
Run #:	107143
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1245

APPL ID: BA25701

Sample Collection Date: 01/20/21

QCG: #DOC53-210127B-260718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	84.4	60-142			%	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	74.8	56-125			%	01/27/21	01/29/21

Quant Method:	DOC1218.M
Run #:	107215
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1251

APPL ID: BA25704

Sample Collection Date: 01/20/21

QCG: #DOC53-210127B-260718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.1	60-142			%	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	79.1	56-125			%	01/27/21	01/29/21

Quant Method:	DOC1218.M
Run #:	107216
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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908 North Temperance Avenue
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1252

APPL ID: BA25706

Sample Collection Date: 01/20/21

QCG: #DOC53-210127B-260718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	90.9	60-142			%	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	80.8	56-125			%	01/27/21	01/29/21

Quant Method:	DOC1218.M
Run #:	107217
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	88.1	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	84.6	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	82.7	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	88.2	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	86.6	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	110	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y122
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/28/21 4:33:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	86.6	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	81.8	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	82.8	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	86.7	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	85.4	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	109	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y123
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	91.3	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	86.3	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	88.7	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	91.4	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	89.8	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	116	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y124
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	89.0	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	84.3	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	84.7	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	87.1	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	87.4	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	113	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y125
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/28/21 4:33:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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APPL Inc.
908 North Temperance Avenue
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1245

APPL ID: BA25701

Sample Collection Date: 01/20/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	90.8	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	82.4	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	85.6	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	89.7	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	87.1	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	114	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y126
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/28/21 4:33:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1251

APPL ID: BA25704

Sample Collection Date: 01/20/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	84.6	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	84.3	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	83.6	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	89.3	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	84.8	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	116	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y127
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/28/21 4:33:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1252

APPL ID: BA25706

Sample Collection Date: 01/20/21

QCG: #87DC5-210125A-260678

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	90.9	43-140			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	89.1	44-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	87.1	19-119			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	93.6	44-120			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	90.9	10-115			%	01/25/21	01/28/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	119	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y128
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 01/28/21 4:33:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	91.1	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	99.3	58-120			%	01/25/21	01/28/21

Quant Method: L0118.M
Run #: 0118L053
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	93.3	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	101	58-120			%	01/25/21	01/28/21

Quant Method:	L0118.M
Run #:	0118L054
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	93.3	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	100.0	58-120			%	01/25/21	01/28/21

Quant Method:	L0118.M
Run #:	0118L055
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	94.6	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	101	58-120			%	01/25/21	01/28/21

Quant Method: L0118.M
Run #: 0118L056
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 01/29/21 10:15:51 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1245

APPL ID: BA25701

Sample Collection Date: 01/20/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	87.5	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	97.5	58-120			%	01/25/21	01/28/21

Quant Method:	L0118.M
Run #:	0118L057
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1251

APPL ID: BA25704

Sample Collection Date: 01/20/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	92.3	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	100	58-120			%	01/25/21	01/28/21

Quant Method:	L0118.M
Run #:	0118L058
Instrument:	Linus
Sequence:	L210118
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1252

APPL ID: BA25706

Sample Collection Date: 01/20/21

QCG: #SIM53-210125A-260679

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	95.6	39-114			%	01/25/21	01/28/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	101	58-120			%	01/25/21	01/28/21

Quant Method: L0118.M
Run #: 0118L059
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 01/29/21 10:15:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1212

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25690

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K038
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1234

Sample Collection Date: 01/21/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25693

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K039
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K040
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1244

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25699

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K041
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1245

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25701

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K042
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1251

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25704

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K043
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1252

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25706

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K044
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 10:58:18 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1211

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25689

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.1	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	114	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z61
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

Printed: 02/02/21 8:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1212

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25690

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	115	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.9	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	113	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z62
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

Printed: 02/02/21 8:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1233

APPL ID: BA25692

Sample Collection Date: 01/21/21

QCG: #86BTO-210125AZ1-260607

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	113	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z69
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

Printed: 02/02/21 8:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #86BTO-210126AZ-260721

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	114	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.4	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0126Z14
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1241

APPL ID: BA25695

Sample Collection Date: 01/21/21

QCG: #86BTO-210126AZ-260721

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	113	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0126Z09
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

Printed: 02/02/21 8:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #86BTO-210126AZ-260721

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	116	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.3	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	113	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	110	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0126Z15
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1243

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25698

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	113	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.3	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z63
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1244

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25699

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	111	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.6	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	110	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	110	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z64
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1245

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25701

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z65
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1250

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25703

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	113	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z66
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1251

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25704

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z67
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

Printed: 02/02/21 8:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1252

Sample Collection Date: 01/20/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94863

APPL ID: BA25706

QCG: #86BTO-210125AZ-260606

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.6	85-114			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	01/26/21	01/26/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/26/21	01/26/21

Quant Method: Z0125W.M
Run #: 0125Z68
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1211

APPL ID: BA25689

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.1	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z61
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.9	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z62
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1233

APPL ID: BA25692

Sample Collection Date: 01/21/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z69
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #GRO86-210126AZ-260725

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.4	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0126Z14
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1241

APPL ID: BA25695

Sample Collection Date: 01/21/21

QCG: #GRO86-210126AZ-260725

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0126Z09
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #GRO86-210126AZ-260725

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.3	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0126Z15
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1243

APPL ID: BA25698

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.3	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z63
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.6	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z64
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1245

APPL ID: BA25701

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z65
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1250

APPL ID: BA25703

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z66
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1251

APPL ID: BA25704

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z67
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

Printed: 02/02/21 9:00:09 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1252

APPL ID: BA25706

Sample Collection Date: 01/20/21

QCG: #GRO86-210125AZ-260724

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.6	85-114			%	01/26/21	01/26/21

Quant Method:	ZGAS0125.M
Run #:	0125Z68
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	CHE

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1211

APPL ID: BA25689

Sample Collection Date: 01/20/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R33
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/28/21 2:31:38 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R34
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/28/21 2:31:38 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1233

APPL ID: BA25692

Sample Collection Date: 01/21/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R35
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/28/21 2:31:38 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R36
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/28/21 2:31:38 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1241

APPL ID: BA25695

Sample Collection Date: 01/21/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R37
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 01/28/21 2:31:38 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R38
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1243

APPL ID: BA25698

Sample Collection Date: 01/20/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R39
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94863

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

QCG: #RSKME-210127A-260675

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	9.6	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method:	RSK0914A.M
Run #:	0127R40
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	22.4	1.0	0.20	0.08	mg/L	1	01/22/21	01/22/21
EPA 300.0	NITRATE	0.84	0.5	0.18	0.04	mg/L	1	01/22/21	01/22/21
EPA 300.0	SULFATE	2.9	1.0	0.20	0.09	mg/L	1	01/22/21	01/22/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	0.94	0.5	0.18	0.04	mg/L	1	01/22/21	01/22/21
EPA 300.0	SULFATE	28.2	1.0	0.20	0.09	mg/L	1	01/22/21	01/22/21
EPA 300.0	CHLORIDE	90.0	5.0	1.00	0.40	mg/L	5	01/22/21	01/22/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	1	01/22/21	01/22/21
EPA 300.0	SULFATE	11.2	1.0	0.20	0.09	mg/L	1	01/22/21	01/22/21
EPA 300.0	CHLORIDE	52.7	5.0	1.00	0.40	mg/L	5	01/22/21	01/22/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	1	01/22/21	01/22/21
EPA 300.0	SULFATE	9.7	1.0	0.20	0.09	mg/L	1	01/22/21	01/22/21
EPA 300.0	CHLORIDE	54.0	5.0	1.00	0.40	mg/L	5	01/22/21	01/22/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1212

APPL ID: BA25690

Sample Collection Date: 01/20/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.39	0.10	0.090	0.028	mg/L	1	01/25/21	01/25/21
SM 2320B	BICARBONATE AS CACO3	66.6	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	TOTAL ALKALINITY AS CACO	66.6	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	0.350 U	0.93	0.350	0.130	mg/L	1	01/25/21	01/25/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1234

APPL ID: BA25693

Sample Collection Date: 01/21/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.23	0.10	0.090	0.028	mg/L	1	01/26/21	01/26/21
SM 2320B	BICARBONATE AS CACO3	47.1	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	TOTAL ALKALINITY AS CACO	47.1	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM3500FeB	FERROUS IRON	0.77 J	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	0.13 J	0.93	0.350	0.130	mg/L	1	01/25/21	01/25/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1242

APPL ID: BA25696

Sample Collection Date: 01/21/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.090 U	0.10	0.090	0.028	mg/L	1	01/26/21	01/26/21
SM 2320B	BICARBONATE AS CACO3	110	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	TOTAL ALKALINITY AS CACO	110	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	13.7	0.93	0.350	0.130	mg/L	1	01/25/21	01/25/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1244

APPL ID: BA25699

Sample Collection Date: 01/20/21

ARF: 94863

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.090 U	0.10	0.090	0.028	mg/L	1	01/26/21	01/26/21
SM 2320B	BICARBONATE AS CACO3	96.0	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM 2320B	TOTAL ALKALINITY AS CACO	96.0	2.0	1.70	0.85	mg/L	1	01/25/21	01/25/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	1.1	0.93	0.350	0.130	mg/L	1	01/25/21	01/25/21

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APPL-F1-SC-NoMC-REG MDLs

QC FORMS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: HERBIE

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127A-BLK	Blank	70-132	94.9				
210127A-LCS	Lab Control Spike	70-132	100				
210127A-LCSD	Lab Control SpikeD	70-132	98.4				
BA25689	ERH1211	70-132	92.6				
BA25690	ERH1212	70-132	91.7				
BA25698	ERH1243	70-132	94.0				
BA25699	ERH1244	70-132	94.0				
BA25701	ERH1245	70-132	92.9				
BA25703	ERH1250	70-132	93.7				
BA25704	ERH1251	70-132	94.0				
BA25706	ERH1252	70-132	97.4				

Comments: Batch: #8011-210127A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: HERBIE

Blank ID: 210127A-BLK Time Analyzed: 1712

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	210127010	01/27/21 1712
210127A-LCS	Lab Control Spike	210127011	01/27/21 1732
210127A-LCSD	Lab Control SpikeD	210127012	01/27/21 1752
BA25689	ERH1211	210127014	01/27/21 1833
BA25690	ERH1212	210127015	01/27/21 1854
BA25698	ERH1243	210127016	01/27/21 1914
BA25699	ERH1244	210127017	01/27/21 1934
BA25701	ERH1245	210127018	01/27/21 1955
BA25703	ERH1250	210127019	01/27/21 2015
BA25704	ERH1251	210127020	01/27/21 2035
BA25706	ERH1252	210127021	01/27/21 2056

Comments: Batch: #8011-210127A

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210127W-25689 - 260656**
Batch ID: #8011-210127A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.019 U	0.02	0.019	0.010	ug/L	01/27/21	01/27/21
BLANK	SURROGATE: 1,3-DIBROMOPRO	94.9	70-132			%	01/27/21	01/27/21

Quant Method:80110127.M
Run #:210127010
Instrument:HERBIE
Sequence:210127
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 9:42:59 AM

8011

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: HERBIE

LCS ID: 210127A-LCS Time Analyzed: 1732

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	210127010	01/27/21 1712
210127A-LCS	Lab Control Spike	210127011	01/27/21 1732
210127A-LCSD	Lab Control SpikeD	210127012	01/27/21 1752
BA25689	ERH1211	210127014	01/27/21 1833
BA25690	ERH1212	210127015	01/27/21 1854
BA25698	ERH1243	210127016	01/27/21 1914
BA25699	ERH1244	210127017	01/27/21 1934
BA25701	ERH1245	210127018	01/27/21 1955
BA25703	ERH1250	210127019	01/27/21 2015
BA25704	ERH1251	210127020	01/27/21 2035
BA25706	ERH1252	210127021	01/27/21 2056

Comments: Batch: #8011-210127A

Laboratory Control Spike Recoveries
EPA 8011

APPL ID: **210127W-25689 LCS - 260656**
Batch ID: #8011-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	0.248	0.242	99.2	96.8	60-140	2.4	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	0.250	0.246	100	98.4	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	80110127.M	80110127.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/27/21	01/27/21
Instrument :	HERBIE	HERBIE
Run :	210127011	210127012
Initials :	SSE	

Printed: 01/28/21 9:42:45 AM
APPL Standard LCSD

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210126A-BLK	Blank	60-142	88.1		56-125	78.1	
210126A-LCS	Lab Control Spike	60-142	87.3		56-125	83.3	
210126A-LCSD	Lab Control SpikeD	60-142	82.7		56-125	80.0	
BA25690	ERH1212	60-142	88.1		56-125	78.3	
BA25693	ERH1234	60-142	83.5		56-125	74.2	
BA25696	ERH1242	60-142	87.8		56-125	77.4	
BA25699	ERH1244	60-142	87.8		56-125	78.2	

Comments: Batch: #DOC53-210126A

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127B-BLK	Blank	60-142	90.4		56-125	80.6	
210127B-LCS	Lab Control Spike	60-142	86.7		56-125	84.7	
210127B-LCSD	Lab Control SpikeD	60-142	87.3		56-125	85.3	
BA25701	ERH1245	60-142	84.4		56-125	74.8	
BA25704	ERH1251	60-142	89.1		56-125	79.1	
BA25706	ERH1252	60-142	90.9		56-125	80.8	

Comments: Batch: #DOC53-210127B

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Apollo

Blank ID: 210126A-BLK Time Analyzed: 1947

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	107134	01/27/21 1947
210126A-LCS	Lab Control Spike	107135	01/27/21 2015
210126A-LCSD	Lab Control SpikeD	107136	01/27/21 2043
BA25690	ERH1212	107140	01/27/21 2235
BA25693	ERH1234	107141	01/27/21 2303
BA25696	ERH1242	107142	01/27/21 2331
BA25699	ERH1244	107143	01/27/21 2359

Comments: Batch: #DOC53-210126A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210127B-BLK	Time Analyzed:	1023

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127B-BLK	Blank	107212	01/29/21 1023
210127B-LCS	Lab Control Spike	107213	01/29/21 1051
210127B-LCSD	Lab Control SpikeD	107214	01/29/21 1119
BA25701	ERH1245	107215	01/29/21 1147
BA25704	ERH1251	107216	01/29/21 1215
BA25706	ERH1252	107217	01/29/21 1243

Comments: Batch: #DOC53-210127B

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210126W-25532 - 260661**
Batch ID: #DOC53-210126A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/26/21	01/27/21
BLANK	SURROGATE: OCTACOSANE (S)	88.1	60-142			%	01/26/21	01/27/21
BLANK	SURROGATE: ORTHO-TERPHEN	78.1	56-125			%	01/26/21	01/27/21

Quant Method: DOC1218.M
Run #: 107134
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 2:54:11 PM

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210127W-25701 - 260718**
Batch ID: #DOC53-210127B

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
BLANK	SURROGATE: OCTACOSANE (S)	90.4	60-142			%	01/27/21	01/29/21
BLANK	SURROGATE: ORTHO-TERPHEN	80.6	56-125			%	01/27/21	01/29/21

Quant Method: DOC1218.M
Run #: 107212
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 2:54:11 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210126A-LCS	Time Analyzed:	2015

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	107134	01/27/21 1947
210126A-LCS	Lab Control Spike	107135	01/27/21 2015
210126A-LCSD	Lab Control SpikeD	107136	01/27/21 2043
BA25690	ERH1212	107140	01/27/21 2235
BA25693	ERH1234	107141	01/27/21 2303
BA25696	ERH1242	107142	01/27/21 2331
BA25699	ERH1244	107143	01/27/21 2359

Comments: Batch: #DOC53-210126A

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210127B-LCS	Time Analyzed:	1051

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127B-BLK	Blank	107212	01/29/21 1023
210127B-LCS	Lab Control Spike	107213	01/29/21 1051
210127B-LCSD	Lab Control SpikeD	107214	01/29/21 1119
BA25701	ERH1245	107215	01/29/21 1147
BA25704	ERH1251	107216	01/29/21 1215
BA25706	ERH1252	107217	01/29/21 1243

Comments: Batch: #DOC53-210127B

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210126W-25532 LCS - 260661**
Batch ID: #DOC53-210126A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	1670	1580	83.5	79.0	36-132	5.5	30
OIL (C24-C40)	2000	1840	1790	92.0	89.5	41-113	2.8	30
SURROGATE: OCTACOSANE (S)	150	131	124	87.3	82.7	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	125	120	83.3	80.0	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/27/21	01/27/21
Instrument :	Apollo	Apollo
Run :	107135	107136
Initials :	SSE	

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210127W-25701 LCS - 260718**
Batch ID: #DOC53-210127B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	1690	1670	84.5	83.5	36-132	1.2	30
OIL (C24-C40)	2000	1820	1830	91.0	91.5	41-113	0.55	30
SURROGATE: OCTACOSANE (S)	150	130	131	86.7	87.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	127	128	84.7	85.3	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Apollo	Apollo
Run :	107213	107214
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125A-BLK	Blank	43-140	87.7		44-119	77.5	
210125A-LCS	Lab Control Spike	43-140	93.0		44-119	87.7	
210125A-LCSD	Lab Control SpikeD	43-140	91.5		44-119	83.6	
BA25690	ERH1212	43-140	88.1		44-119	84.6	
BA25693	ERH1234	43-140	86.6		44-119	81.8	
BA25696	ERH1242	43-140	91.3		44-119	86.3	
BA25699	ERH1244	43-140	89.0		44-119	84.3	
BA25701	ERH1245	43-140	90.8		44-119	82.4	
BA25704	ERH1251	43-140	84.6		44-119	84.3	
BA25706	ERH1252	43-140	90.9		44-119	89.1	

Comments: Batch: #87DC5-210125A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125A-BLK	Blank	19-119	81.4		44-120	85.7	
210125A-LCS	Lab Control Spike	19-119	92.0		44-120	93.4	
210125A-LCSD	Lab Control SpikeD	19-119	91.0		44-120	92.1	
BA25690	ERH1212	19-119	82.7		44-120	88.2	
BA25693	ERH1234	19-119	82.8		44-120	86.7	
BA25696	ERH1242	19-119	88.7		44-120	91.4	
BA25699	ERH1244	19-119	84.7		44-120	87.1	
BA25701	ERH1245	19-119	85.6		44-120	89.7	
BA25704	ERH1251	19-119	83.6		44-120	89.3	
BA25706	ERH1252	19-119	87.1		44-120	93.6	

Comments: Batch: #87DC5-210125A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125A-BLK	Blank	10-115	84.7		50-134	111	
210125A-LCS	Lab Control Spike	10-115	93.5		50-134	111	
210125A-LCSD	Lab Control SpikeD	10-115	91.0		50-134	110	
BA25690	ERH1212	10-115	86.6		50-134	110	
BA25693	ERH1234	10-115	85.4		50-134	109	
BA25696	ERH1242	10-115	89.8		50-134	116	
BA25699	ERH1244	10-115	87.4		50-134	113	
BA25701	ERH1245	10-115	87.1		50-134	114	
BA25704	ERH1251	10-115	84.8		50-134	116	
BA25706	ERH1252	10-115	90.9		50-134	119	

Comments: Batch: #87DC5-210125A

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: Yoda

Blank ID: 210125A-BLK Time Analyzed: 1121

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0105Y119	01/28/21 1121
210125A-LCS	Lab Control Spike	0105Y120	01/28/21 1146
210125A-LCSD	Lab Control SpikeD	0105Y121	01/28/21 1212
BA25690	ERH1212	0105Y122	01/28/21 1237
BA25693	ERH1234	0105Y123	01/28/21 1303
BA25696	ERH1242	0105Y124	01/28/21 1328
BA25699	ERH1244	0105Y125	01/28/21 1353
BA25701	ERH1245	0105Y126	01/28/21 1419
BA25704	ERH1251	0105Y127	01/28/21 1444
BA25706	ERH1252	0105Y128	01/28/21 1509

Comments: Batch: #87DC5-210125A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210125W-25690 - 260678**
Batch ID: #87DC5-210125A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/25/21	01/28/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	87.7	43-140			%	01/25/21	01/28/21
BLANK	SURROGATE: 2-FLUORBIPHENY	77.5	44-119			%	01/25/21	01/28/21
BLANK	SURROGATE: 2-FLUOROPHENO	81.4	19-119			%	01/25/21	01/28/21
BLANK	SURROGATE: NITROBENZENE-	85.7	44-120			%	01/25/21	01/28/21
BLANK	SURROGATE: PHENOL-D6 (S)	84.7	10-115			%	01/25/21	01/28/21
BLANK	SURROGATE: TERPHENYL-D14 (	111	50-134			%	01/25/21	01/28/21

Quant Method: Y0105.M
Run #: 0105Y119
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 4:33:15 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210125A-LCS	Time Analyzed:	1146

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0105Y119	01/28/21 1121
210125A-LCS	Lab Control Spike	0105Y120	01/28/21 1146
210125A-LCSD	Lab Control SpikeD	0105Y121	01/28/21 1212
BA25690	ERH1212	0105Y122	01/28/21 1237
BA25693	ERH1234	0105Y123	01/28/21 1303
BA25696	ERH1242	0105Y124	01/28/21 1328
BA25699	ERH1244	0105Y125	01/28/21 1353
BA25701	ERH1245	0105Y126	01/28/21 1419
BA25704	ERH1251	0105Y127	01/28/21 1444
BA25706	ERH1252	0105Y128	01/28/21 1509

Comments: Batch: #87DC5-210125A

Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **210125W-25690 LCS - 260678**
Batch ID: #87DC5-210125A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	43.2	43.6	86.4	87.2	10-115	0.92	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	186	183	93.0	91.5	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	87.7	83.6	87.7	83.6	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	184	182	92.0	91.0	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	93.4	92.1	93.4	92.1	44-120		
SURROGATE: PHENOL-D6 (S)	200	187	182	93.5	91.0	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	111	110	111	110	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y0105.M	Y0105.M
Extraction Date :	01/25/21	01/25/21
Analysis Date :	01/28/21	01/28/21
Instrument :	Yoda	Yoda
Run :	0105Y120	0105Y121
Initials :	MA	

Printed: 01/28/21 4:32:58 PM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0105Y002.D

SDG No:
Date Analyzed: 01/05/21
Instrument: Yoda
Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0105Y117.D

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Time Analyzed: 10:28

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y118.D	01/28/21 10:44
2	Blank	210125A BLK 1/1000	0105Y119.D	01/28/21 11:21
3	Lab Control Spike	210125A LCS-1 1/1000	0105Y120.D	01/28/21 11:46
4	Lab Control SpikeD	210125A LCSD-1 1/100	0105Y121.D	01/28/21 12:12
5		BA25690W16 1/1000	0105Y122.D	01/28/21 12:37
6		BA25693W12 1/1000	0105Y123.D	01/28/21 13:03
7		BA25696W14 1/1000	0105Y124.D	01/28/21 13:28
8		BA25699W16 1/1000	0105Y125.D	01/28/21 13:53
9		BA25701W13 1/1000	0105Y126.D	01/28/21 14:19
10		BA25704W12 1/1000	0105Y127.D	01/28/21 14:44
11		BA25706W12 1/1000	0105Y128.D	01/28/21 15:09
12		50ug/mL 8270 01/05/2	0105Y129.D	01/28/21 15:35
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	47.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	29.3
365	1 - 100% of mass 198	4.0
441	0.01 - 24% of mass 442	17.3
442	50 - 500% of mass 197.95	92.5
443	15 - 24% of mass 442	19.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y118.D Date Analyzed: 01/28/21

Instrument ID: Yoda Time Analyzed: 10:44

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	615888	5.05	2552410	6.47	1609770	8.48
	UPPER LIMIT	1231776	5.22	5104820	6.64	3219540	8.65
	LOWER LIMIT	307944	4.88	1276205	6.30	804885	8.31
	SAMPLE NO.						
01	210125A BLK 1/1000	420597	5.05	1585640	6.46	982185	8.47
02	210125A LCS-1 1/1000	410779	5.05	1605320	6.46	997251	8.47
03	210125A LCSD-1 1/100	390596	5.05	1519710	6.46	954124	8.48
04	BA25690W16 1/1000	401037	5.05	1567250	6.46	968816	8.47
05	BA25693W12 1/1000	420456	5.05	1638640	6.46	998473	8.47
06	BA25696W14 1/1000	397998	5.05	1580580	6.46	988814	8.47
07	BA25699W16 1/1000	415404	5.05	1644070	6.46	1011570	8.47
08	BA25701W13 1/1000	415119	5.05	1610150	6.46	1016040	8.47
09	BA25704W12 1/1000	416736	5.05	1611860	6.46	1021520	8.48
10	BA25706W12 1/1000	435798	5.05	1673290	6.46	1055630	8.47
11	50ug/mL 8270 01/05/20	524123	5.05	2073210	6.47	1311380	8.48
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y118.D Date Analyzed: 01/28/21

Instrument ID: Yoda Time Analyzed: 10:44

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3252300	10.21	3318020	13.29	3043180	14.97
	UPPER LIMIT	6504600	10.38	6636040	13.46	6086360	15.14
	LOWER LIMIT	1626150	10.04	1659010	13.12	1521590	14.80
	SAMPLE NO.						
01	210125A BLK 1/1000	2070230	10.20	1833920	13.28	1731650	14.96
02	210125A LCS-1 1/1000	2057070	10.20	1952300	13.28	1765490	14.97
03	210125A LCSD-1 1/100	1982390	10.20	1850760	13.28	1648590	14.96
04	BA25690W16 1/1000	1986270	10.20	1819810	13.28	1729190	14.96
05	BA25693W12 1/1000	2112710	10.20	1879830	13.28	1740930	14.96
06	BA25696W14 1/1000	2054370	10.20	1828600	13.28	1721260	14.96
07	BA25699W16 1/1000	2135500	10.20	1908890	13.28	1812910	14.96
08	BA25701W13 1/1000	2069420	10.20	1874280	13.28	1695090	14.96
09	BA25704W12 1/1000	2115320	10.20	1839280	13.28	1814500	14.96
10	BA25706W12 1/1000	2184750	10.20	1934950	13.27	1857620	14.96
11	50ug/mL 8270 01/05/20	2685020	10.21	2621290	13.29	2442070	14.97
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125A-BLK	Blank	39-114	90.2		58-120	103	
210125A-LCS	Lab Control Spike	39-114	85.8		58-120	96.8	
210125A-LCSD	Lab Control SpikeD	39-114	85.8		58-120	102	
BA25690	ERH1212	39-114	91.1		58-120	99.3	
BA25693	ERH1234	39-114	93.3		58-120	101	
BA25696	ERH1242	39-114	93.3		58-120	100.0	
BA25699	ERH1244	39-114	94.6		58-120	101	
BA25701	ERH1245	39-114	87.5		58-120	97.5	
BA25704	ERH1251	39-114	92.3		58-120	100	
BA25706	ERH1252	39-114	95.6		58-120	101	

Comments: Batch: #SIM53-210125A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	Linus
Blank ID:	210125A-BLK	Time Analyzed:	1103

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0118L050	01/28/21 1103
210125A-LCS	Lab Control Spike	0118L051	01/28/21 1125
210125A-LCSD	Lab Control SpikeD	0118L052	01/28/21 1147
BA25690	ERH1212	0118L053	01/28/21 1209
BA25693	ERH1234	0118L054	01/28/21 1231
BA25696	ERH1242	0118L055	01/28/21 1253
BA25699	ERH1244	0118L056	01/28/21 1315
BA25701	ERH1245	0118L057	01/28/21 1337
BA25704	ERH1251	0118L058	01/28/21 1359
BA25706	ERH1252	0118L059	01/28/21 1421

Comments: Batch: #SIM53-210125A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **210125W-25690 - 260679**
Batch ID: #SIM53-210125A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/25/21	01/28/21
BLANK	SURROGATE: 2-METHYLNAPHT	90.2	39-114			%	01/25/21	01/28/21
BLANK	SURROGATE: FLUORANTHENE-	103	58-120			%	01/25/21	01/28/21

Quant Method:L0118.M
Run #:0118L050
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 10:15:56 AM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	Linus
LCS ID:	210125A-LCS	Time Analyzed:	1125

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	0118L050	01/28/21 1103
210125A-LCS	Lab Control Spike	0118L051	01/28/21 1125
210125A-LCSD	Lab Control SpikeD	0118L052	01/28/21 1147
BA25690	ERH1212	0118L053	01/28/21 1209
BA25693	ERH1234	0118L054	01/28/21 1231
BA25696	ERH1242	0118L055	01/28/21 1253
BA25699	ERH1244	0118L056	01/28/21 1315
BA25701	ERH1245	0118L057	01/28/21 1337
BA25704	ERH1251	0118L058	01/28/21 1359
BA25706	ERH1252	0118L059	01/28/21 1421

Comments: Batch: #SIM53-210125A

Laboratory Control Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **210125W-25690 LCS - 260679**
Batch ID: #SIM53-210125A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	4.13	4.14	82.6	82.8	41-115	0.24	20
2-METHYLNAPHTHALENE	5.00	4.10	4.02	82.0	80.4	39-114	2.0	20
NAPHTHALENE	5.00	4.05	4.18	81.0	83.6	43-114	3.2	20
SURROGATE: 2-METHYLNAPHTHALEN	5.00	4.29	4.29	85.8	85.8	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	5.00	4.84	5.11	96.8	102	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0118.M	L0118.M
Extraction Date :	01/25/21	01/25/21
Analysis Date :	01/28/21	01/28/21
Instrument :	Linus	Linus
Run :	0118L051	0118L052
Initials :	MA	

Printed: 01/29/21 10:15:35 AM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94863
Case No: 94863 Date Analyzed: 01/28/21
Matrix: Water Instrument: Linus
ID: 0118L048.D Time Analyzed: 10:13

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21 (1)	0118L049.D	01/28/21 10:28
2	Blank	210125A BLK 1/1000	0118L050.D	01/28/21 11:03
3	Lab Control Spike	210125A LCS-2 1/1000	0118L051.D	01/28/21 11:25
4	Lab Control SpikeD	210125A LCSD-2 1/100	0118L052.D	01/28/21 11:47
5	ERH1212	BA25690W16 1/1000	0118L053.D	01/28/21 12:09
6	ERH1234	BA25693W12 1/1000	0118L054.D	01/28/21 12:31
7	ERH1242	BA25696W14 1/1000	0118L055.D	01/28/21 12:53
8	ERH1244	BA25699W16 1/1000	0118L056.D	01/28/21 13:15
9	ERH1245	BA25701W13 1/1000	0118L057.D	01/28/21 13:37
10	ERH1251	BA25704W12 1/1000	0118L058.D	01/28/21 13:59
11	ERH1252	BA25706W12 1/1000	0118L059.D	01/28/21 14:21
12		5 SIM 08/21/20	0118L060.D	01/28/21 15:06
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	36.4
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.3
127	10 - 80% of mass 198	53.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	25.2
365	1 - 100% of mass 198	3.4
441	0.01 - 24% of mass 442	15.5
442	50 - 500% of mass 198	98.4
443	15 - 24% of mass 442	20.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L049.D Date Analyzed: 01/28/21

Instrument ID: Linus Time Analyzed: 10:28

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	66975	4.25	32486	6.25	58989	7.98
	UPPER LIMIT	133950	4.42	64972	6.42	117978	8.15
	LOWER LIMIT	33488	4.08	16243	6.08	29495	7.81
	SAMPLE NO.						
01	210125A BLK 1/1000	60541	4.25	28431	6.27	51985	7.99
02	210125A LCS-2 1/1000	59299	4.25	27758	6.25	51510	7.98
03	210125A LCSD-2 1/100	61281	4.25	28160	6.25	53056	7.98
04	BA25690W16 1/1000	62441	4.25	30165	6.25	55805	7.98
05	BA25693W12 1/1000	61176	4.25	29065	6.25	53795	7.98
06	BA25696W14 1/1000	62656	4.25	29785	6.25	55809	7.98
07	BA25699W16 1/1000	63077	4.25	29865	6.25	56583	7.98
08	BA25701W13 1/1000	65008	4.25	30737	6.25	57486	7.98
09	BA25704W12 1/1000	62866	4.25	30415	6.25	55623	7.98
10	BA25706W12 1/1000	64531	4.25	30792	6.25	56986	7.98
11	5 SIM 08/21/20	71151	4.25	33541	6.27	60245	7.99
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L049.D Date Analyzed: 01/28/21

Instrument ID: Linus Time Analyzed: 10:28

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	71500	11.12	65746	13.57		
	UPPER LIMIT	143000	11.29	131492	13.74		
	LOWER LIMIT	35750	10.95	32873	13.40		
	SAMPLE NO.						
01	210125A BLK 1/1000	63848	11.13	57385	13.57		
02	210125A LCS-2 1/1000	62505	11.12	59025	13.56		
03	210125A LCSD-2 1/100	64355	11.12	44285	13.56		
04	BA25690W16 1/1000	66893	11.12	62399	13.56		
05	BA25693W12 1/1000	64442	11.12	55314	13.56		
06	BA25696W14 1/1000	67303	11.12	62939	13.56		
07	BA25699W16 1/1000	68773	11.12	64917	13.56		
08	BA25701W13 1/1000	69665	11.12	61312	13.56		
09	BA25704W12 1/1000	67498	11.12	64167	13.56		
10	BA25706W12 1/1000	68547	11.12	64625	13.56		
11	5 SIM 08/21/20	72901	11.13	70435	13.58		
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/28/21

Matrix: WATER Instrument: KYLO

Blank ID: 210127A-BLK Time Analyzed: 1352

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0125K035	01/28/21 1352
210127A-LCS	Lab Control Spike	0125K036	01/28/21 1413
210127A-LCSD	Lab Control SpikeD	0125K037	01/28/21 1434
BA25690	ERH1212	0125K038	01/28/21 1455
BA25693	ERH1234	0125K039	01/28/21 1516
BA25696	ERH1242	0125K040	01/28/21 1537
BA25699	ERH1244	0125K041	01/28/21 1558
BA25701	ERH1245	0125K042	01/28/21 1618
BA25704	ERH1251	0125K043	01/28/21 1639
BA25706	ERH1252	0125K044	01/28/21 1700

Comments: Batch: #87DME-210127A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **210127W-25690 - 260697**
Batch ID: #87DME-210127A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:KMEE0125.M
Run #:0125K035
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 10:58:29 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210127A-LCS	Time Analyzed:	1413

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0125K035	01/28/21 1352
210127A-LCS	Lab Control Spike	0125K036	01/28/21 1413
210127A-LCSD	Lab Control SpikeD	0125K037	01/28/21 1434
BA25690	ERH1212	0125K038	01/28/21 1455
BA25693	ERH1234	0125K039	01/28/21 1516
BA25696	ERH1242	0125K040	01/28/21 1537
BA25699	ERH1244	0125K041	01/28/21 1558
BA25701	ERH1245	0125K042	01/28/21 1618
BA25704	ERH1251	0125K043	01/28/21 1639
BA25706	ERH1252	0125K044	01/28/21 1700

Comments: Batch: #87DME-210127A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **210127W-25690 LCS - 260697**
Batch ID: #87DME-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	89.6	84.6	112	106	30-130	5.7	20

Comments:

Primary	SPK	DUP
Quant Method :	KMEE0125.M	KMEE0125.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/28/21	01/28/21
Instrument :	KYLO	KYLO
Run :	0125K036	0125K037
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94863
Case No: 94863 Date Analyzed: 01/28/21
Matrix: Water Instrument: KYLO
ID: 0125K030.D Time Analyzed: 11:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2 MEE 500 1/26/21 (2	0125K032.D	01/28/21 12:46
2	Blank	210127A BLK 5/500	0125K035.D	01/28/21 13:52
3	Lab Control Spike	210127A LCS-1 5/500	0125K036.D	01/28/21 14:13
4	Lab Control SpikeD	210127A LCSD-1 5/500	0125K037.D	01/28/21 14:34
5	ERH1212	BA25690W14 5/500	0125K038.D	01/28/21 14:55
6	ERH1234	BA25693W10 5/500	0125K039.D	01/28/21 15:16
7	ERH1242	BA25696W10 5/500	0125K040.D	01/28/21 15:37
8	ERH1244	BA25699W13 5/500	0125K041.D	01/28/21 15:58
9	ERH1245	BA25701W08 5/500	0125K042.D	01/28/21 16:18
10	ERH1251	BA25704W07 5/500	0125K043.D	01/28/21 16:39
11	ERH1252	BA25706W07 5/500	0125K044.D	01/28/21 17:00
12		2 MEE 500 1/26/21 (1	0125K047.D	01/28/21 18:20
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	33.4
68	0 - 2.04% of mass 69	1.9
70	0 - 2.04% of mass 69	0.5
127	10 - 80% of mass 198	54.3
197	0 - 2% of mass 198	0.5
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	28.3
365	1 - 100% of mass 198	3.6
441	0.01 - 24% of mass 442	14.0
442	50 - 500% of mass 198	117.4
443	15 - 24% of mass 442	18.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K032.D Date Analyzed: 01/28/21

Instrument ID: KYLO Time Analyzed: 12:46

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	207359	5.33					
	UPPER LIMIT	414718	5.50					
	LOWER LIMIT	103680	5.16					
	SAMPLE NO.							
01	210127A BLK 5/500	231854	5.31					
02	210127A LCS-1 5/500	200500	5.31					
03	210127A LCSD-1 5/500	191564	5.31					
04	BA25690W14 5/500	244882	5.31					
05	BA25693W10 5/500	188297	5.31					
06	BA25696W10 5/500	209694	5.31					
07	BA25699W13 5/500	195289	5.31					
08	BA25701W08 5/500	210794	5.31					
09	BA25704W07 5/500	215180	5.31					
10	BA25706W07 5/500	214535	5.31					
11	2 MEE 500 1/26/21 (1)	191125	5.33					
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125AZ-LCS	Lab Control Spike	81-118	109		85-114	100	
210125AZ-LCSD	Lab Control SpikeD	81-118	107		85-114	98.8	
210125AZ-BLK	Blank	81-118	113		85-114	97.6	
BA25689	ERH1211	81-118	115		85-114	98.1	
BA25690	ERH1212	81-118	115		85-114	96.9	
BA25698	ERH1243	81-118	113		85-114	96.3	
BA25699	ERH1244	81-118	111		85-114	96.6	
BA25701	ERH1245	81-118	112		85-114	96.1	
BA25703	ERH1250	81-118	113		85-114	96.5	
BA25704	ERH1251	81-118	112		85-114	96.5	
BA25706	ERH1252	81-118	112		85-114	95.6	

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125AZ-LCS	Lab Control Spike	80-119	110		89-112	112	
210125AZ-LCSD	Lab Control SpikeD	80-119	108		89-112	110	
210125AZ-BLK	Blank	80-119	110		89-112	109	
BA25689	ERH1211	80-119	114		89-112	108	
BA25690	ERH1212	80-119	113		89-112	107	
BA25698	ERH1243	80-119	111		89-112	108	
BA25699	ERH1244	80-119	110		89-112	110	
BA25701	ERH1245	80-119	112		89-112	109	
BA25703	ERH1250	80-119	111		89-112	108	
BA25704	ERH1251	80-119	112		89-112	108	
BA25706	ERH1252	80-119	111		89-112	107	

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125AZ1-LCS	Lab Control Spike	81-118	109		85-114	100	
210125AZ1-LCSD	Lab Control SpikeD	81-118	107		85-114	98.8	
210125AZ1-BLK	Blank	81-118	113		85-114	97.6	
BA25692	ERH1233	81-118	113		85-114	96.1	

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125AZ1-LCS	Lab Control Spike	80-119	110		89-112	112	
210125AZ1-LCSD	Lab Control SpikeD	80-119	108		89-112	110	
210125AZ1-BLK	Blank	80-119	110		89-112	109	
BA25692	ERH1233	80-119	112		89-112	108	

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210126AZ-LCS	Lab Control Spike	81-118	109		85-114	98.0	
210126AZ-LCSD	Lab Control SpikeD	81-118	109		85-114	99.6	
210126AZ-BLK	Blank	81-118	114		85-114	97.5	
BA25695	ERH1241	81-118	113		85-114	97.1	
BA25693	ERH1234	81-118	114		85-114	96.4	
BA25696	ERH1242	81-118	116		85-114	98.3	

Comments: Batch: #86BTO-210126AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210126AZ-LCS	Lab Control Spike	80-119	110		89-112	110	
210126AZ-LCSD	Lab Control SpikeD	80-119	112		89-112	110	
210126AZ-BLK	Blank	80-119	113		89-112	110	
BA25695	ERH1241	80-119	112		89-112	108	
BA25693	ERH1234	80-119	111		89-112	109	
BA25696	ERH1242	80-119	113		89-112	110	

Comments: Batch: #86BTO-210126AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210125AZ-BLK	Time Analyzed:	0142

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ-LCS	Lab Control Spike	0125Z45	01/26/21 0010
210125AZ-LCSD	Lab Control SpikeD	0125Z46	01/26/21 0033
210125AZ-BLK	Blank	0125Z49	01/26/21 0142
BA25689	ERH1211	0125Z61	01/26/21 0618
BA25690	ERH1212	0125Z62	01/26/21 0641
BA25698	ERH1243	0125Z63	01/26/21 0704
BA25699	ERH1244	0125Z64	01/26/21 0727
BA25701	ERH1245	0125Z65	01/26/21 0750
BA25703	ERH1250	0125Z66	01/26/21 0813
BA25704	ERH1251	0125Z67	01/26/21 0836
BA25706	ERH1252	0125Z68	01/26/21 0859

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210125AZ1-BLK	Time Analyzed:	0142

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ1-LCS	Lab Control Spike	0125Z45	01/26/21 0010
210125AZ1-LCSD	Lab Control SpikeD	0125Z46	01/26/21 0033
210125AZ1-BLK	Blank	0125Z49	01/26/21 0142
BA25692	ERH1233	0125Z69	01/26/21 0922

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210126AZ-BLK	Time Analyzed:	1631

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126AZ-LCS	Lab Control Spike	0126Z03	01/26/21 1436
210126AZ-LCSD	Lab Control SpikeD	0126Z04	01/26/21 1459
210126AZ-BLK	Blank	0126Z08	01/26/21 1631
BA25695	ERH1241	0126Z09	01/26/21 1654
BA25693	ERH1234	0126Z14	01/26/21 1849
BA25696	ERH1242	0126Z15	01/26/21 1912

Comments: Batch: #86BTO-210126AZ

Method Blank
EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **210125W-25689 - 260606**
Batch ID: #86BTO-210125AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	01/26/21	01/26/21
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	SURROGATE: 1,2-DICHLOROET	113	81-118			%	01/26/21	01/26/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.6	85-114			%	01/26/21	01/26/21
BLANK	SURROGATE: DIBROMOFLUOR	110	80-119			%	01/26/21	01/26/21
BLANK	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/26/21	01/26/21

Quant Method:Z0125W.M
Run #:0125Z49
Instrument:ZEUS
Sequence:210125
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 8:57:30 AM

Method Blank
EPA 8260B BTEX WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210125W-25692 - 260607**
Batch ID: #86BTO-210125AZ1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	SURROGATE: 1,2-DICHLOROET	113	81-118			%	01/26/21	01/26/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.6	85-114			%	01/26/21	01/26/21
BLANK	SURROGATE: DIBROMOFLUOR	110	80-119			%	01/26/21	01/26/21
BLANK	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/26/21	01/26/21

Quant Method:Z0125W.M
Run #:0125Z49
Instrument:ZEUS
Sequence:210125
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 8:57:30 AM

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210126W-25693 - 260721**
Batch ID: #86BTO-210126AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/26/21	01/26/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/26/21	01/26/21
BLANK	SURROGATE: 1,2-DICHLOROET	114	81-118			%	01/26/21	01/26/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.5	85-114			%	01/26/21	01/26/21
BLANK	SURROGATE: DIBROMOFLUOR	113	80-119			%	01/26/21	01/26/21
BLANK	SURROGATE: TOLUENE-D8 (S)	110	89-112			%	01/26/21	01/26/21

Quant Method:Z0125W.M
Run #:0126Z08
Instrument:ZEUS
Sequence:210125
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 8:57:30 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210125AZ-LCS	Time Analyzed:	0010

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ-LCS	Lab Control Spike	0125Z45	01/26/21 0010
210125AZ-LCSD	Lab Control SpikeD	0125Z46	01/26/21 0033
210125AZ-BLK	Blank	0125Z49	01/26/21 0142
BA25689	ERH1211	0125Z61	01/26/21 0618
BA25690	ERH1212	0125Z62	01/26/21 0641
BA25698	ERH1243	0125Z63	01/26/21 0704
BA25699	ERH1244	0125Z64	01/26/21 0727
BA25701	ERH1245	0125Z65	01/26/21 0750
BA25703	ERH1250	0125Z66	01/26/21 0813
BA25704	ERH1251	0125Z67	01/26/21 0836
BA25706	ERH1252	0125Z68	01/26/21 0859

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210125AZ1-LCS	Time Analyzed:	0010

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ1-LCS	Lab Control Spike	0125Z45	01/26/21 0010
210125AZ1-LCSD	Lab Control SpikeD	0125Z46	01/26/21 0033
210125AZ1-BLK	Blank	0125Z49	01/26/21 0142
BA25692	ERH1233	0125Z69	01/26/21 0922

Comments: Batch: #86BTO-210125AZ

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210126AZ-LCS	Time Analyzed:	1436

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126AZ-LCS	Lab Control Spike	0126Z03	01/26/21 1436
210126AZ-LCSD	Lab Control SpikeD	0126Z04	01/26/21 1459
210126AZ-BLK	Blank	0126Z08	01/26/21 1631
BA25695	ERH1241	0126Z09	01/26/21 1654
BA25693	ERH1234	0126Z14	01/26/21 1849
BA25696	ERH1242	0126Z15	01/26/21 1912

Comments: Batch: #86BTO-210126AZ

Laboratory Control Spike Recoveries
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **210126W-25689 LCS - 260606**
Batch ID: #86BTO-210125AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	10.5	9.79	105	97.9	73-128	7.0	20
BENZENE	10.00	10.4	9.76	104	97.6	79-120	6.3	20
ETHYLBENZENE	10.00	10.7	10.0	107	100	79-121	6.8	20
TOLUENE	10.00	10.6	10.0	106	100	80-121	5.8	20
XYLENES (TOTAL)	30.0	32.9	30.6	110	102	79-121	7.2	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.2	26.8	109	107	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.1	24.7	100	98.8	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.6	27.1	110	108	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.9	27.5	112	110	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0125W.M	Z0125W.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0125Z45	0125Z46
Initials :	CHE	

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210126W-25692 LCS - 260607**
Batch ID: #86BTO-210125AZ1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	10.4	9.76	104	97.6	79-120	6.3	20
ETHYLBENZENE	10.00	10.7	10.0	107	100	79-121	6.8	20
TOLUENE	10.00	10.6	10.0	106	100	80-121	5.8	20
XYLENES (TOTAL)	30.0	32.9	30.6	110	102	79-121	7.2	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.2	26.8	109	107	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.1	24.7	100	98.8	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.6	27.1	110	108	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.9	27.5	112	110	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0125W.M	Z0125W.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0125Z45	0125Z46
Initials :	CHE	

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210126W-25693 LCS - 260721**
Batch ID: #86BTO-210126AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	10.2	10.7	102	107	79-120	4.8	20
ETHYLBENZENE	10.00	10.2	10.9	102	109	79-121	6.6	20
TOLUENE	10.00	10.1	10.7	101	107	80-121	5.8	20
XYLENES (TOTAL)	30.0	31.1	33.0	104	110	79-121	5.9	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.3	27.3	109	109	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	24.9	98.0	99.6	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.6	27.9	110	112	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	27.4	27.6	110	110	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	Z0125W.M	Z0125W.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0126Z03	0126Z04
Initials :	CHE	

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Water Instrument: ZEUS
ID: 0125Z23.D Time Analyzed: 15:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/25	0125Z24.D	01/25/21 16:07
2		0.5ug/L VOC STD 1/25	0125Z25.D	01/25/21 16:30
3		1ug/L VOC STD 1/25/2	0125Z26.D	01/25/21 16:53
4		2ug/L VOC STD 1/25/2	0125Z27.D	01/25/21 17:16
5		5ug/L VOC STD 1/25/2	0125Z28.D	01/25/21 17:39
6		10ug/L VOC STD 1/25/	0125Z29.D	01/25/21 18:02
7		20ug/L VOC STD 1/25/	0125Z30.D	01/25/21 18:25
8		40ug/L VOC STD 1/25/	0125Z31.D	01/25/21 18:47
9		100ug/L VOC STD 1/25	0125Z32.D	01/25/21 19:10
10		(SS) 10ug/L VOC STD	0125Z34.D	01/25/21 19:57
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.4
75	30 - 60% of mass 95	45.0
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2.05% of mass 174	0.7
174	50 - 200% of mass 95	126.6
175	5 - 9% of mass 174	7.2
176	95 - 101% of mass 174	97.2
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 94863
Matrix: Water
ID: 0125Z44.D

SDG No: 94863
Date Analyzed: 01/25/21
Instrument: ZEUS
Time Analyzed: 23:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	210125A CCV/LCS 10ug	0125Z45.D	01/26/21 0:10
2	Lab Control SpikeD	210125A LCSD 10ug/L	0125Z46.D	01/26/21 0:33
3	Blank	210125A BLK	0125Z49.D	01/26/21 1:42
4	ERH1211	BA25689W01	0125Z61.D	01/26/21 6:18
5	ERH1212	BA25690W01	0125Z62.D	01/26/21 6:41
6	ERH1243	BA25698W01	0125Z63.D	01/26/21 7:04
7	ERH1244	BA25699W01	0125Z64.D	01/26/21 7:27
8	ERH1245	BA25701W01	0125Z65.D	01/26/21 7:50
9	ERH1250	BA25703W01	0125Z66.D	01/26/21 8:13
10	ERH1251	BA25704W01	0125Z67.D	01/26/21 8:36
11	ERH1252	BA25706W01	0125Z68.D	01/26/21 8:59
12	ERH1233	BA25692W01	0125Z69.D	01/26/21 9:22
13		Ending CCV 10ug/L 1/	0125Z70.D	01/26/21 9:45
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.1
75	30 - 60% of mass 95	45.1
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2.05% of mass 174	0.7
174	50 - 200% of mass 95	124.7
175	5 - 9% of mass 174	7.4
176	95 - 101% of mass 174	98.8
177	5 - 9% of mass 176	6.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94863
Case No: 94863 Date Analyzed: 01/26/21
Matrix: Water Instrument: ZEUS
ID: 0126Z01.D Time Analyzed: 13:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	210126A CCV/LCS 10ug	0126Z03.D	01/26/21 14:36
2	Lab Control SpikeD	210126A LCSD 10ug/L	0126Z04.D	01/26/21 14:59
3	Blank	210126A BLK	0126Z08.D	01/26/21 16:31
4	ERH1241	BA25695W01	0126Z09.D	01/26/21 16:54
5	ERH1234	BA25693W01	0126Z14.D	01/26/21 18:49
6	ERH1242	BA25696W01	0126Z15.D	01/26/21 19:12
7		Ending CCV 10ug/L 1/	0126Z29.D	01/27/21 0:34
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.5
75	30 - 60% of mass 95	43.9
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.4
173	0 - 2.05% of mass 174	0.8
174	50 - 200% of mass 95	107.5
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	97.2
177	5 - 9% of mass 176	7.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125Z45.D Date Analyzed: 01/26/21

Instrument ID: ZEUS Time Analyzed: 0:10

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3756220	6.16	2831710	9.62	1036740	12.17
	UPPER LIMIT	7512440	6.33	5663420	9.79	2073480	12.34
	LOWER LIMIT	1878110	5.99	1415855	9.45	518370	12.00
	SAMPLE NO.						
01	210125A LCSD 10ug/L	3779070	6.16	2854070	9.62	1061380	12.17
02	210125A BLK	3705410	6.16	2791950	9.62	1050110	12.17
03	BA25689W01	3271490	6.16	2494230	9.62	928256	12.17
04	BA25690W01	3406940	6.16	2618710	9.62	1007740	12.17
05	BA25698W01	3370660	6.16	2595820	9.62	975552	12.17
06	BA25699W01	3371320	6.16	2507100	9.62	950720	12.17
07	BA25701W01	3338230	6.16	2552320	9.62	934080	12.17
08	BA25703W01	3156760	6.16	2437210	9.62	896256	12.17
09	BA25704W01	3294050	6.16	2521060	9.62	912128	12.17
10	BA25706W01	3342310	6.16	2554850	9.62	903296	12.17
11	BA25692W01	3227170	6.16	2472960	9.62	934336	12.17
12	Ending CCV 10ug/L 1/25	3363520	6.16	2555060	9.62	940096	12.17
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0126Z03.D Date Analyzed: 01/26/21

Instrument ID: ZEUS Time Analyzed: 14:36

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3328530	6.16	2523910	9.62	921280	12.17
	UPPER LIMIT	6657060	6.33	5047820	9.79	1842560	12.34
	LOWER LIMIT	1664265	5.99	1261955	9.45	460640	12.00
	SAMPLE NO.						
01	210126A LCSD 10ug/L	3378710	6.16	2534720	9.62	928000	12.17
02	210126A BLK	3140270	6.16	2401010	9.62	887360	12.17
03	BA25695W01	3362290	6.16	2560560	9.62	938112	12.17
04	BA25693W01	3071800	6.16	2350190	9.62	867136	12.17
05	BA25696W01	3113210	6.16	2375670	9.62	877824	12.17
06	Ending CCV 10ug/L 1/26	3246970	6.16	2428270	9.62	896512	12.17
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210125AZ-LCS	Lab Control Spike	85-114	98.0				
210125AZ-LCSD	Lab Control SpikeD	85-114	98.4				
210125AZ-BLK	Blank	85-114	97.6				
BA25689	ERH1211	85-114	98.1				
BA25690	ERH1212	85-114	96.9				
BA25698	ERH1243	85-114	96.3				
BA25699	ERH1244	85-114	96.6				
BA25701	ERH1245	85-114	96.1				
BA25703	ERH1250	85-114	96.5				
BA25704	ERH1251	85-114	96.5				
BA25706	ERH1252	85-114	95.6				
BA25692	ERH1233	85-114	96.1				

Comments: Batch: #GRO86-210125AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210126AZ-LCS	Lab Control Spike	85-114	96.8				
210126AZ-LCSD	Lab Control SpikeD	85-114	99.2				
210126AZ-BLK	Blank	85-114	97.5				
BA25695	ERH1241	85-114	97.1				
BA25693	ERH1234	85-114	96.4				
BA25696	ERH1242	85-114	98.3				

Comments: Batch: #GRO86-210126AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210125AZ-BLK	Time Analyzed:	0142

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ-LCS	Lab Control Spike	0125Z47	01/26/21 0056
210125AZ-LCSD	Lab Control SpikeD	0125Z48	01/26/21 0119
210125AZ-BLK	Blank	0125Z49	01/26/21 0142
BA25689	ERH1211	0125Z61	01/26/21 0618
BA25690	ERH1212	0125Z62	01/26/21 0641
BA25698	ERH1243	0125Z63	01/26/21 0704
BA25699	ERH1244	0125Z64	01/26/21 0727
BA25701	ERH1245	0125Z65	01/26/21 0750
BA25703	ERH1250	0125Z66	01/26/21 0813
BA25704	ERH1251	0125Z67	01/26/21 0836
BA25706	ERH1252	0125Z68	01/26/21 0859
BA25692	ERH1233	0125Z69	01/26/21 0922

Comments: Batch: #GRO86-210125AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210126AZ-BLK	Time Analyzed:	1631

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126AZ-LCS	Lab Control Spike	0126Z06	01/26/21 1545
210126AZ-LCSD	Lab Control SpikeD	0126Z07	01/26/21 1608
210126AZ-BLK	Blank	0126Z08	01/26/21 1631
BA25695	ERH1241	0126Z09	01/26/21 1654
BA25693	ERH1234	0126Z14	01/26/21 1849
BA25696	ERH1242	0126Z15	01/26/21 1912

Comments: Batch: #GRO86-210126AZ

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210125W-25689 - 260724**
Batch ID: #GRO86-210125AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.6	85-114			%	01/26/21	01/26/21

Quant Method:ZGAS0125.M
Run #:0125Z49
Instrument:ZEUS
Sequence:210125
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 9:00:19 AM

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210126W-25693 - 260725**
Batch ID: #GRO86-210126AZ

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/26/21	01/26/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.5	85-114			%	01/26/21	01/26/21

Quant Method:ZGAS0125.M
Run #:0126Z08
Instrument:ZEUS
Sequence:210125
Initials:CHE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 9:00:19 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210125AZ-LCS	Time Analyzed:	0056

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125AZ-LCS	Lab Control Spike	0125Z47	01/26/21 0056
210125AZ-LCSD	Lab Control SpikeD	0125Z48	01/26/21 0119
210125AZ-BLK	Blank	0125Z49	01/26/21 0142
BA25689	ERH1211	0125Z61	01/26/21 0618
BA25690	ERH1212	0125Z62	01/26/21 0641
BA25698	ERH1243	0125Z63	01/26/21 0704
BA25699	ERH1244	0125Z64	01/26/21 0727
BA25701	ERH1245	0125Z65	01/26/21 0750
BA25703	ERH1250	0125Z66	01/26/21 0813
BA25704	ERH1251	0125Z67	01/26/21 0836
BA25706	ERH1252	0125Z68	01/26/21 0859
BA25692	ERH1233	0125Z69	01/26/21 0922

Comments: Batch: #GRO86-210125AZ

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210126AZ-LCS	Time Analyzed:	1545

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126AZ-LCS	Lab Control Spike	0126Z06	01/26/21 1545
210126AZ-LCSD	Lab Control SpikeD	0126Z07	01/26/21 1608
210126AZ-BLK	Blank	0126Z08	01/26/21 1631
BA25695	ERH1241	0126Z09	01/26/21 1654
BA25693	ERH1234	0126Z14	01/26/21 1849
BA25696	ERH1242	0126Z15	01/26/21 1912

Comments: Batch: #GRO86-210126AZ

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210126W-25689 LCS - 260724**
Batch ID: #GRO86-210125AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	300	300	100	100	78-122	0.0	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.5	24.6	98.0	98.4	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0125.M	ZGAS0125.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0125Z47	0125Z48
Initials :	CHE	

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210126W-25693 LCS - 260725**
Batch ID: #GRO86-210126AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	307	305	102	102	78-122	0.65	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.2	24.8	96.8	99.2	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0125.M	ZGAS0125.M
Extraction Date :	01/26/21	01/26/21
Analysis Date :	01/26/21	01/26/21
Instrument :	ZEUS	ZEUS
Run :	0126Z06	0126Z07
Initials :	CHE	

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Rocky

Blank ID: 210127A-BLK Time Analyzed: 1246

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-LCS	Lab Control Spike	0127R07	01/27/21 1223
210127A-LCSD	Lab Control SpikeD	0127R12	01/27/21 1242
210127A-BLK	Blank	0127R13	01/27/21 1246
BA25689	ERH1211	0127R33	01/27/21 1451
BA25690	ERH1212	0127R34	01/27/21 1454
BA25692	ERH1233	0127R35	01/27/21 1457
BA25693	ERH1234	0127R36	01/27/21 1459
BA25695	ERH1241	0127R37	01/27/21 1503
BA25696	ERH1242	0127R38	01/27/21 1512
BA25698	ERH1243	0127R39	01/27/21 1515
BA25699	ERH1244	0127R40	01/27/21 1518

Comments: Batch: #RSKME-210127A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210127W-25689 - 260675**
Batch ID: #RSKME-210127A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/27/21	01/27/21

Quant Method: RSK0914A.M
Run #: 0127R13
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 01/28/21 2:31:41 PM

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Rocky

LCS ID: 210127A-LCS Time Analyzed: 1223

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-LCS	Lab Control Spike	0127R07	01/27/21 1223
210127A-LCSD	Lab Control SpikeD	0127R12	01/27/21 1242
210127A-BLK	Blank	0127R13	01/27/21 1246
BA25689	ERH1211	0127R33	01/27/21 1451
BA25690	ERH1212	0127R34	01/27/21 1454
BA25692	ERH1233	0127R35	01/27/21 1457
BA25693	ERH1234	0127R36	01/27/21 1459
BA25695	ERH1241	0127R37	01/27/21 1503
BA25696	ERH1242	0127R38	01/27/21 1512
BA25698	ERH1243	0127R39	01/27/21 1515
BA25699	ERH1244	0127R40	01/27/21 1518

Comments: Batch: #RSKME-210127A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210127W-25689 LCS - 260675**
Batch ID: #RSKME-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	95.0	74.9	114	89.8	72-125	23.7	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/27/21	01/27/21
Instrument :	Rocky	Rocky
Run :	0127R07	0127R12
Initials :	LSI	

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/22/21

Matrix: WATER Instrument: Charlie

Blank ID: 210122A-BLK Time Analyzed: 1542

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-LCS	Lab Control Spike	12	01/22/21 1528
210122A-BLK	Blank	13	01/22/21 1542
BA25690	ERH1212	14	01/22/21 1557
BA25693	ERH1234	15	01/22/21 1612
BA25696	ERH1242	16	01/22/21 1626
BA25699	ERH1244	17	01/22/21 1641
210122A-LCSD	Lab Control SpikeD	24	01/22/21 1823
BA25693	ERH1234	28	01/22/21 1922
BA25696	ERH1242	29	01/22/21 1937
BA25699	ERH1244	30	01/22/21 1951

Comments: Batch: #300W-210122A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.083 J	1.0	0.20	0.08	mg/L	01/22/21	01/22/21	#300W-210122A-BA25690
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/22/21	01/22/21	#300W-210122A-BA25690
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/22/21	01/22/21	#300W-210122A-BA25690

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 02/04/21 7:20:48 AM

EPA 300.0

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/22/21

Matrix: WATER Instrument: Charlie

LCS ID: 210122A-LCS Time Analyzed: 1528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210122A-LCS	Lab Control Spike	12	01/22/21 1528
210122A-BLK	Blank	13	01/22/21 1542
BA25690	ERH1212	14	01/22/21 1557
BA25693	ERH1234	15	01/22/21 1612
BA25696	ERH1242	16	01/22/21 1626
BA25699	ERH1244	17	01/22/21 1641
210122A-LCSD	Lab Control SpikeD	24	01/22/21 1823
BA25693	ERH1234	28	01/22/21 1922
BA25696	ERH1242	29	01/22/21 1937
BA25699	ERH1244	30	01/22/21 1951

Comments: Batch: #300W-210122A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	26.1	25.7	104	103	1.5	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#300W-210122A-BA25690
EPA 300.0	NITRATE	22.1	22.0	23.1	99.5	105	4.9	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#300W-210122A-BA25690
EPA 300.0	SULFATE	25.0	25.0	24.4	100	97.6	2.4	20	90-110	01/22/21	01/22/21	01/22/21	01/22/21	#300W-210122A-BA25690

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	EVE
Blank ID:	210125A1-BLK	Time Analyzed:	2150

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A1-LCS	Lab Control Spike	10	01/25/21 2145
210125A1-BLK	Blank	12	01/25/21 2150
BA25690	ERH1212	42	01/25/21 2301

Comments: Batch: #353TO-210125A1

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: EVE

Blank ID: 210125A3-BLK Time Analyzed: 1203

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A3-LCSD	Lab Control SpikeD	11	01/26/21 1158
210125A3-BLK	Blank	13	01/26/21 1203
210125A3-LCS	Lab Control Spike	14	01/26/21 1205
BA25693	ERH1234	15	01/26/21 1207
BA25696	ERH1242	16	01/26/21 1209
BA25699	ERH1244	17	01/26/21 1211

Comments: Batch: #353TO-210125A3

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	210125A-BLK	Time Analyzed:	1808

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-LCS	Lab Control Spike	1	01/25/21 1719
BA25690	ERH1212	2	01/25/21 1737
BA25693	ERH1234	3	01/25/21 1741
BA25696	ERH1242	4	01/25/21 1746
BA25699	ERH1244	5	01/25/21 1750
210125A-BLK	Blank	6	01/25/21 1808
210125A-LCSD	Lab Control SpikeD	7	01/25/21 1821

Comments: Batch: #232W-210125A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Manual Spec

Blank ID: A210126-BLK Time Analyzed: 0031

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210126-BLK	Blank	19	01/26/21 0031
A210126-LCSD	Lab Control SpikeD	20	01/26/21 0031
A210126-LCS	Lab Control Spike	21	01/26/21 0031
BA25693	ERH1234	23	01/26/21 0032
BA25690	ERH1212	24	01/26/21 0032
BA25699	ERH1244	25	01/26/21 0033
BA25696	ERH1242	26	01/26/21 0033

Comments: Batch: #35FE-A210126

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/25/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210125A-BLK Time Analyzed: 1930

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	32	01/25/21 1930
210125A-LCS	Lab Control Spike	33	01/25/21 2009
210125A-LCSD	Lab Control SpikeD	34	01/25/21 2050
BA25690	ERH1212	35	01/25/21 2130
BA25693	ERH1234	36	01/25/21 2206
BA25696	ERH1242	37	01/25/21 2242
BA25699	ERH1244	38	01/25/21 2321

Comments: Batch: #TOCW5-210125A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	3.2	2.0	1.70	0.85	mg/L	01/25/21	01/25/21	#232W-210125A-BA25690
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	01/25/21	01/25/21	#232W-210125A-BA25690
SM 2320B	TOTAL ALKALINITY	3.2	2.0	1.70	0.85	mg/L	01/25/21	01/25/21	#232W-210125A-BA25690
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/25/21	01/25/21	#353TO-210125A1-BA25605
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/26/21	01/26/21	#35FE-A210126-BA25870
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/25/21	01/25/21	#TOCW5-210125A-BA25690
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/26/21	01/26/21	#353TO-210125A3-BA25693

Wetlab SC-Blank-REG MDLs
Printed: 01/29/21 1:39:22 PM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210125A1-LCS	Time Analyzed:	2145

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A1-LCS	Lab Control Spike	10	01/25/21 2145
210125A1-BLK	Blank	12	01/25/21 2150
BA25690	ERH1212	42	01/25/21 2301

Comments: Batch: #353TO-210125A1

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210125A3-LCS	Time Analyzed:	1205

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A3-LCSD	Lab Control SpikeD	11	01/26/21 1158
210125A3-BLK	Blank	13	01/26/21 1203
210125A3-LCS	Lab Control Spike	14	01/26/21 1205
BA25693	ERH1234	15	01/26/21 1207
BA25696	ERH1242	16	01/26/21 1209
BA25699	ERH1244	17	01/26/21 1211

Comments: Batch: #353TO-210125A3

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210125A-LCS	Time Analyzed:	1719

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-LCS	Lab Control Spike	1	01/25/21 1719
BA25690	ERH1212	2	01/25/21 1737
BA25693	ERH1234	3	01/25/21 1741
BA25696	ERH1242	4	01/25/21 1746
BA25699	ERH1244	5	01/25/21 1750
210125A-BLK	Blank	6	01/25/21 1808
210125A-LCSD	Lab Control SpikeD	7	01/25/21 1821

Comments: Batch: #232W-210125A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94863

Case No: 94863 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Manual Spec

LCS ID: A210126-LCS Time Analyzed: 0031

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210126-BLK	Blank	19	01/26/21 0031
A210126-LCSD	Lab Control SpikeD	20	01/26/21 0031
A210126-LCS	Lab Control Spike	21	01/26/21 0031
BA25693	ERH1234	23	01/26/21 0032
BA25690	ERH1212	24	01/26/21 0032
BA25699	ERH1244	25	01/26/21 0033
BA25696	ERH1242	26	01/26/21 0033

Comments: Batch: #35FE-A210126

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94863
Case No:	94863	Date Analyzed:	01/25/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210125A-LCS	Time Analyzed:	2009

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210125A-BLK	Blank	32	01/25/21 1930
210125A-LCS	Lab Control Spike	33	01/25/21 2009
210125A-LCSD	Lab Control SpikeD	34	01/25/21 2050
BA25690	ERH1212	35	01/25/21 2130
BA25693	ERH1234	36	01/25/21 2206
BA25696	ERH1242	37	01/25/21 2242
BA25699	ERH1244	38	01/25/21 2321

Comments: Batch: #TOCW5-210125A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM 2320B	BICARBONATE AS CACO3	250	232	229	92.8	91.6	1.3	20	90-110	01/25/21	01/25/21	01/25/21	01/25/21	#232W-210125A-BA25690
SM 2320B	TOTAL ALKALINITY AS CA	250	253	247	101	98.8	2.4	20	90-110	01/25/21	01/25/21	01/25/21	01/25/21	#232W-210125A-BA25690
SM3500Fe	FERROUS IRON	3.00	2.95	2.97	98.3	99.0	0.68	20	80-120	01/26/21	01/26/21	01/26/21	01/26/21	#35FE-A210126-BA25870
SW846 90	TOTAL ORGANIC CARBO	5.00	4.88	4.91	97.6	98.2	0.61	20	80-120	01/25/21	01/25/21	01/25/21	01/25/21	#TOCW5-210125A-BA256

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	3.07	3.29	102	110	6.9	20	90-110	01/26/21	01/26/21	01/26/21	01/26/21	#353TO-210125A3-BA256

Comments:

ORGANICS

Calibration Data

DBCP/EDB/1,2,3-TCP Analysis by METHOD

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Initial Cal. Date: 01/27/21

Matrix: Water Instrument: HERBIE

Initials: SS

210127002 D 210127003.D 210127004 D 210127005 D 210127006 D 210127007 D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	TM	EDB	41200	38910	37834	35867	43719	33912					38574	9	TM		
2	TML	1,2,3-TCP	14425	8320	8280	7584		7227.5					9167	32	TM	0.9992	NT
3	S	1,3-DIBROMOPROPANE(S)	37500	33680	33060	31471	38366	28818					33816	10.7	S		
4	TM	DBCP	138400	126065	125042	121418	155364	123912					131700	9.9	TM		HA 1/29/21
5		Signal #2											0	0			
6																	
7																	
8																	
9																	
10																	
11																	
12																	
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1.778391

DBCP/EDB/1,2,3-TCP Analysis by METHOD

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/27/21
Matrix: Water Instrument: HERBIE Initials: SS

210127002.D 210127003.D 210127004 D 210127005.D 210127006.D 210127007 D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
36	TM	EDB #2	179875	159555	151454	145188	177050.8333	138951					158678.972	10.5865279	TM		
37	TM	1,2,3-TCP #2	29400	28870	28112	26889	33071.66667	26052.5					28732.5278	8.56182998	TM		
38	S	1,3-DIBROMOPROPANE(S) #2	122200	112540	109370	103616	127027.5	97693					112074.417	9.87170771	S		
39	TM	DBCP #2	580650	520565	546300	508865	664245.8333	529809.5					558405.889	10.3022082	TM		
40																	
41																	
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70																	

1.123494

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127002.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:29 pm
Operator : SS
Sample : 8011-1 1/27/21
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:25:14 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBRO...	10.298	11.294	1500	4888	0.022	0.022	
	Spiked Amount 0.350			Recovery	=	6.29%	6.29%	
	Target Compounds							
1)	TM EDB	6.128	7.528	1648	7195	0.021	0.023	
2)	TM 1,2,3-TCP	9.505	10.708	577	1176	0.013m	0.020	#
4)	TM DBCP	13.581	14.234	5536	23226	0.021	0.021	

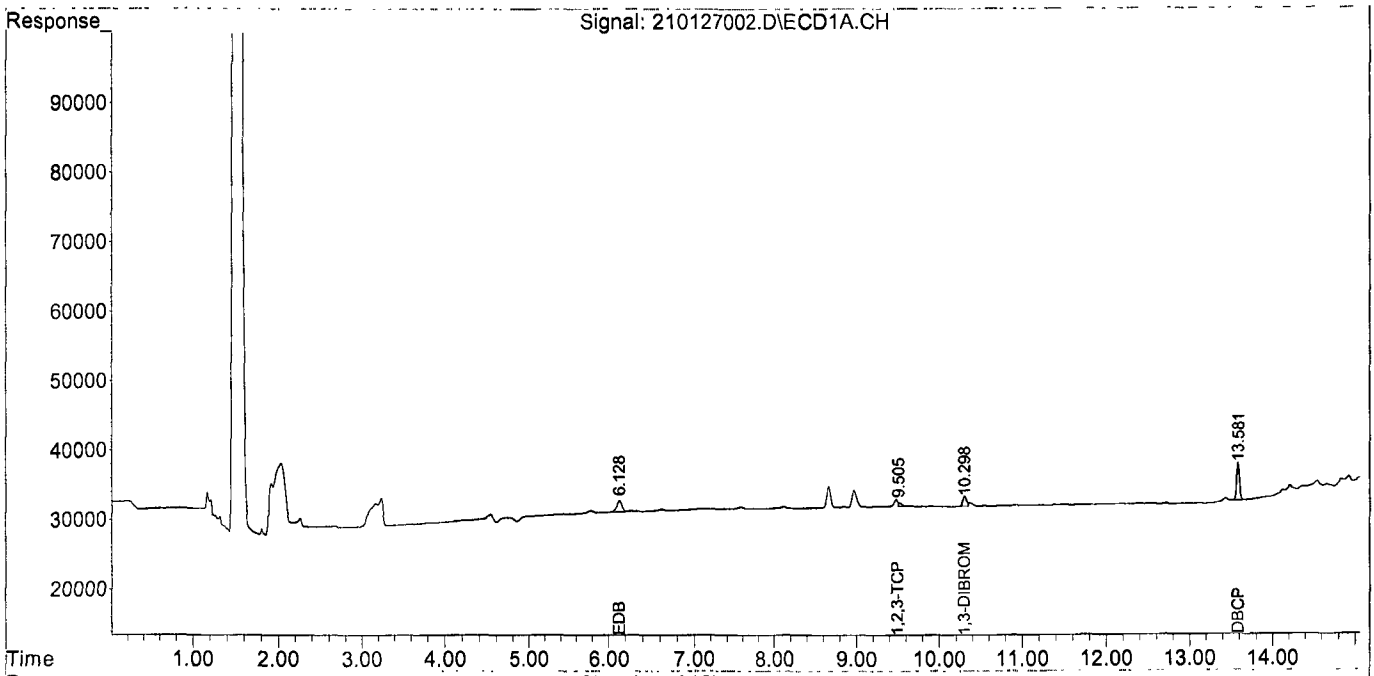
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

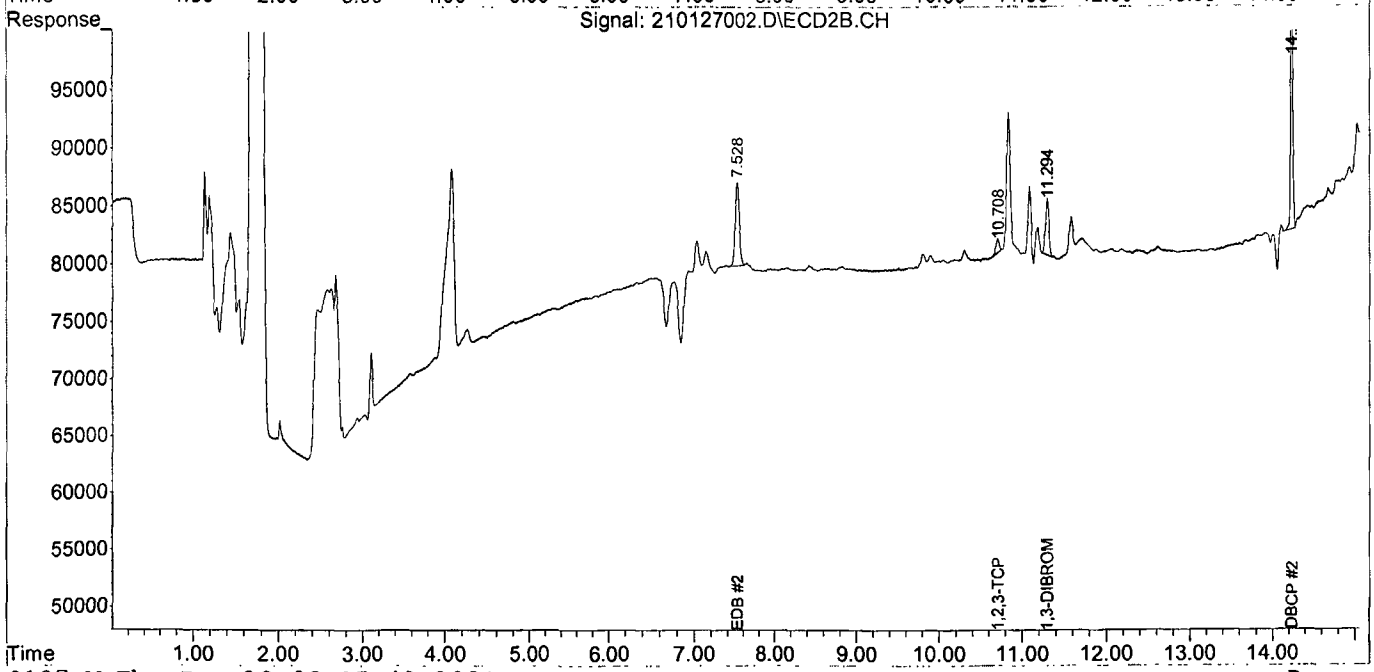
Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127002.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:29 pm
Operator : SS
Sample : 8011-1 1/27/21
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:25:14 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



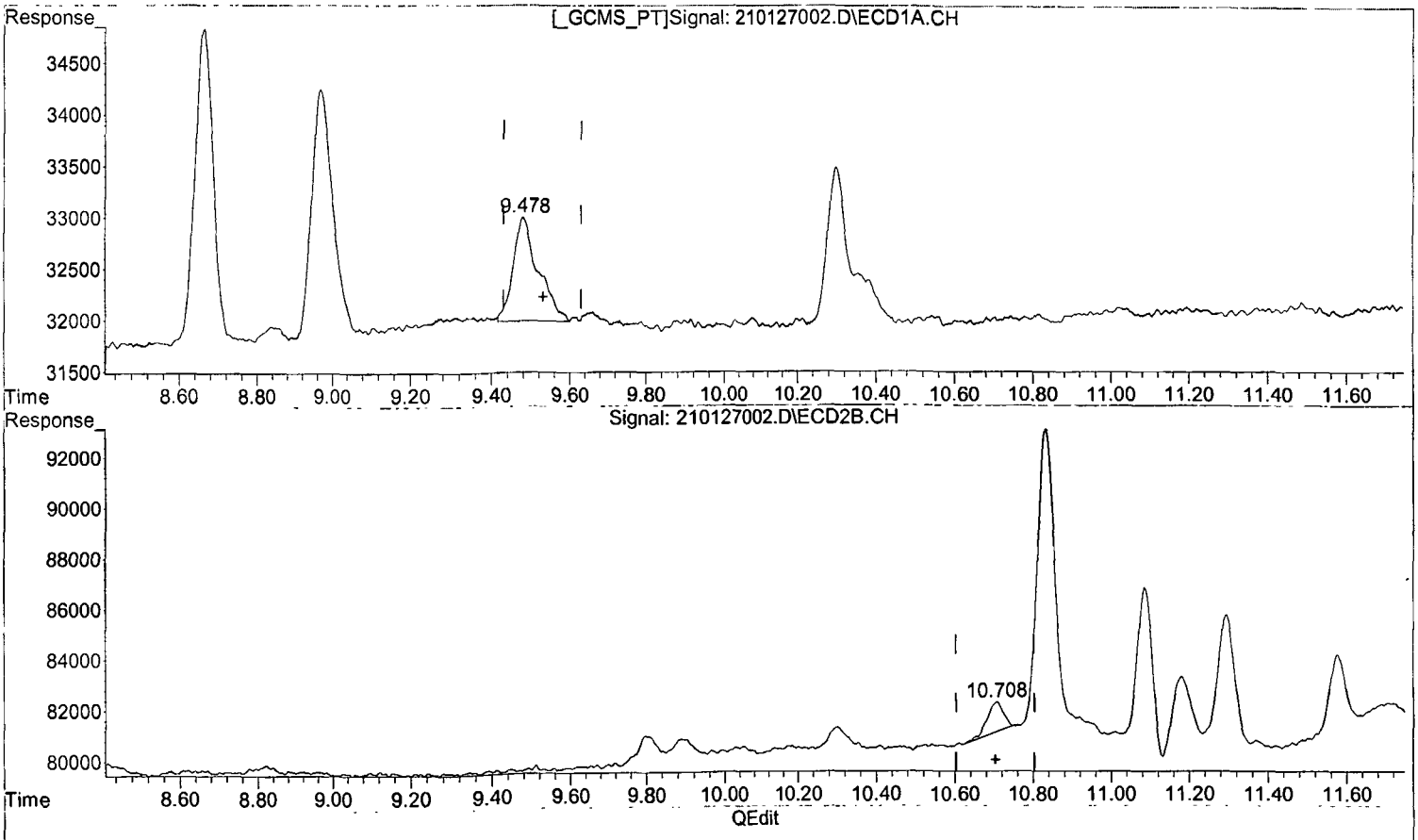


Quantitation Report (Qedit)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127002.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:29 pm
Operator : SS
Sample : 8011-1 1/27/21
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:30 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



(2) 1,2,3-TCP (TM)

9.478min 0.044 UG/L

response 1013

(2) 1,2,3-TCP #2 (TM)

10.708min 0.020 UG/L

response 1176

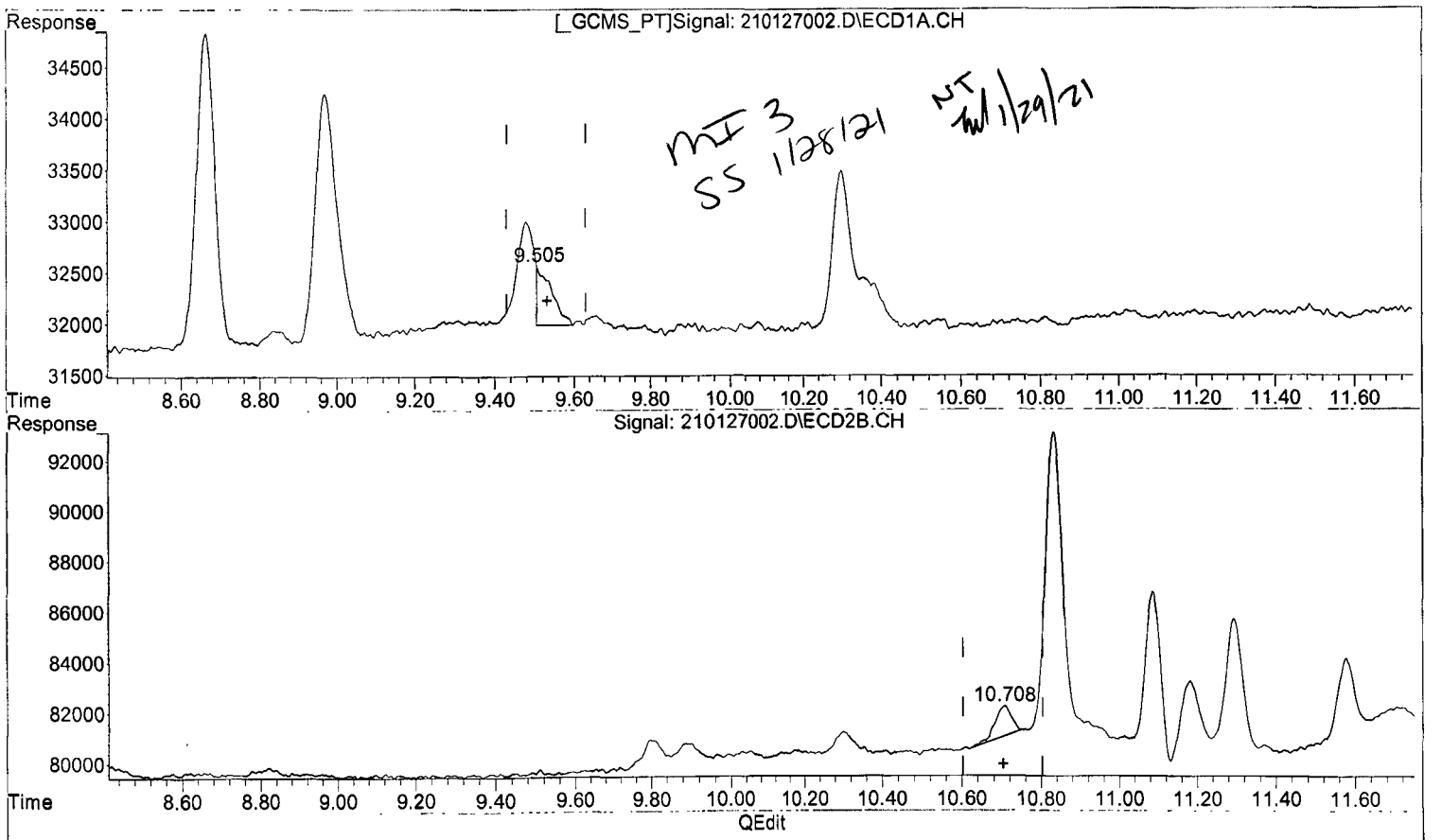
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127002.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:29 pm
Operator : SS
Sample : 8011-1 1/27/21
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:30 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



(2) 1,2,3-TCP (TM)

9.505min 0.013 UG/L m

response 577

(2) 1,2,3-TCP #2 (TM)

10.708min 0.020 UG/L

response 1176

(+) = Expected Retention Time

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127003.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:49 pm
Operator : SS
Sample : 8011-2 1/27/21
Misc : water
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:33 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.298	11.294	6736	22508	0.100	0.100
Spiked Amount 0.350			Recovery =		28.57%	28.57%
Target Compounds						
1) TM EDB	6.131	7.527	7782	31911	0.101	0.101
2) TM 1,2,3-TCP	9.528	10.704	1664	5774	0.090	0.100
4) TM DBCP	13.581	14.234	25213	104113	0.096	0.093

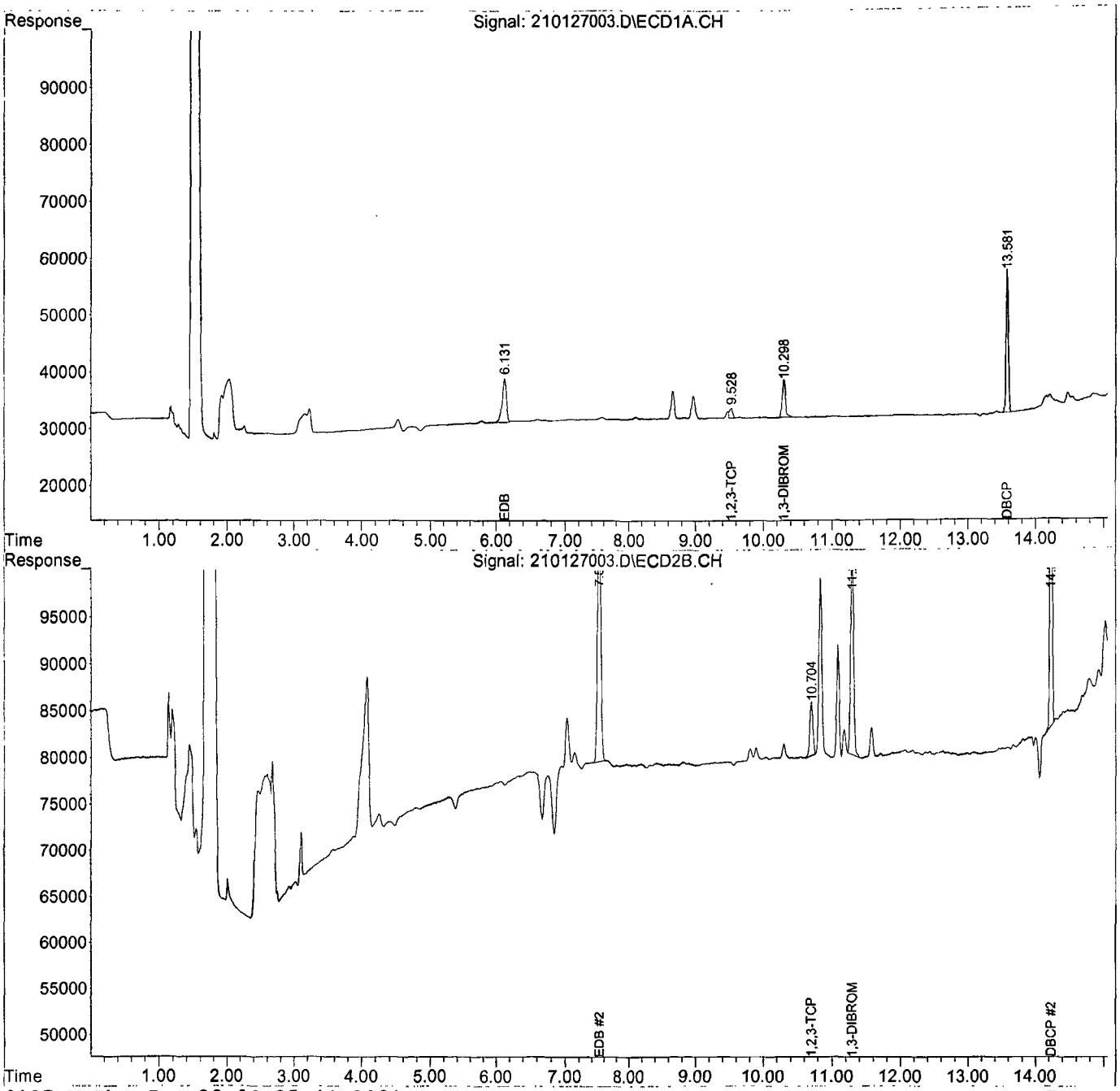
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127003.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 2:49 pm
Operator : SS
Sample : 8011-2 1/27/21
Misc : water
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:33 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127004.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:10 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:36 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.297	11.294	16530	54685	0.244	0.244
Spiked Amount 0.350			Recovery =		69.71%	69.71%
Target Compounds						
1) TM EDB	6.131	7.527	18917	75727	0.245	0.239
2) TM 1,2,3-TCP	9.531	10.704	4140	14056	0.265	0.245
4) TM DBCP	13.581	14.234	62521	273150	0.237	0.245

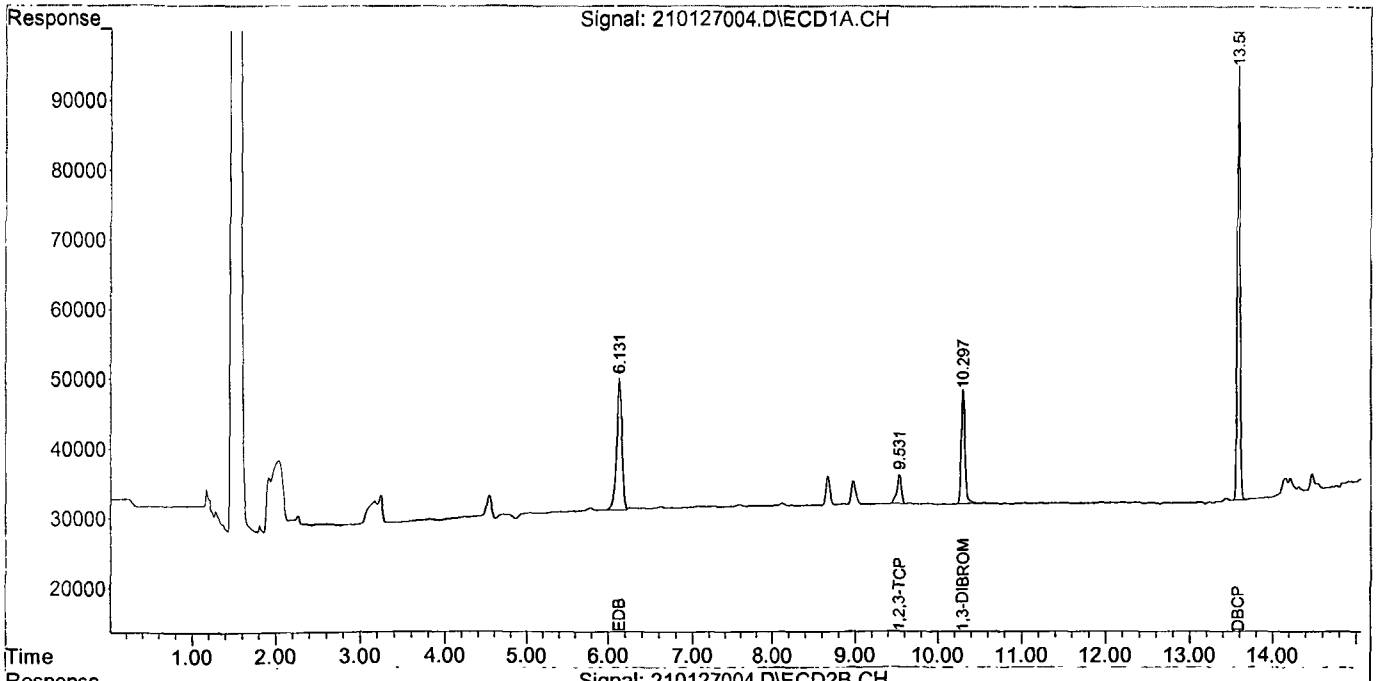
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

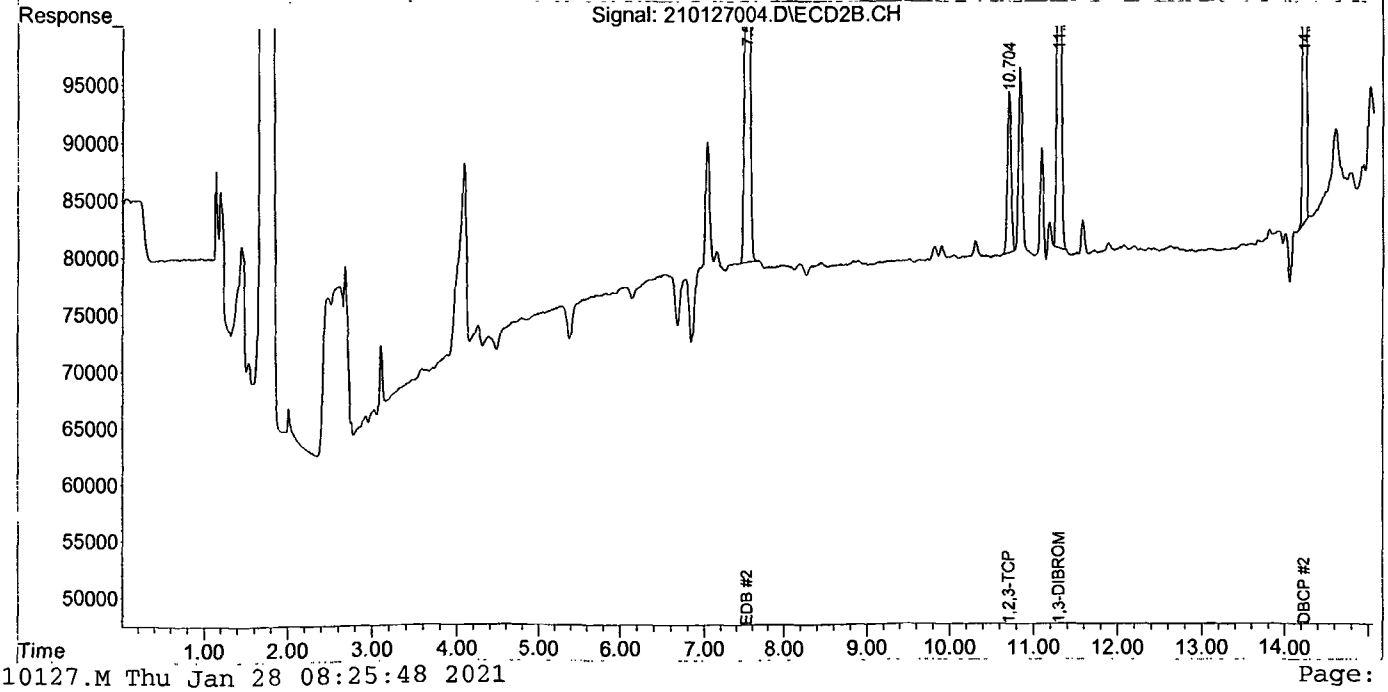
Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127004.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:10 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:36 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127005.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:30 pm
Operator : SS
Sample : 8011-4 1/27/21
Misc : water
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:39 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBRO...	10.299	11.295	31471	103616	0.465	0.462
	Spiked Amount 0.350			Recovery	=	132.86%	132.00%
	Target Compounds						
1)	TM EDB	6.132	7.525	35867	145188	0.465	0.457
2)	TM 1,2,3-TCP	9.532	10.705	7584	26889	0.508	0.468
4)	TM DBCP	13.582	14.235	121418	508865	0.461	0.456

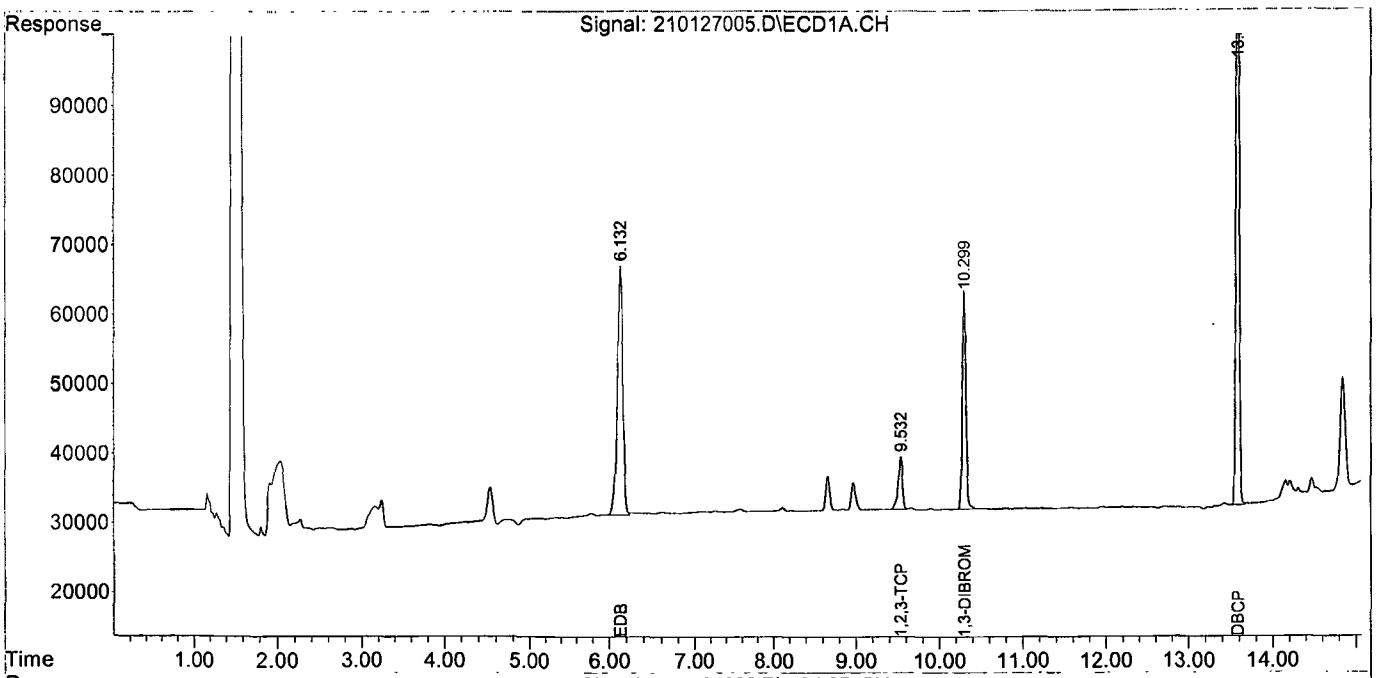
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

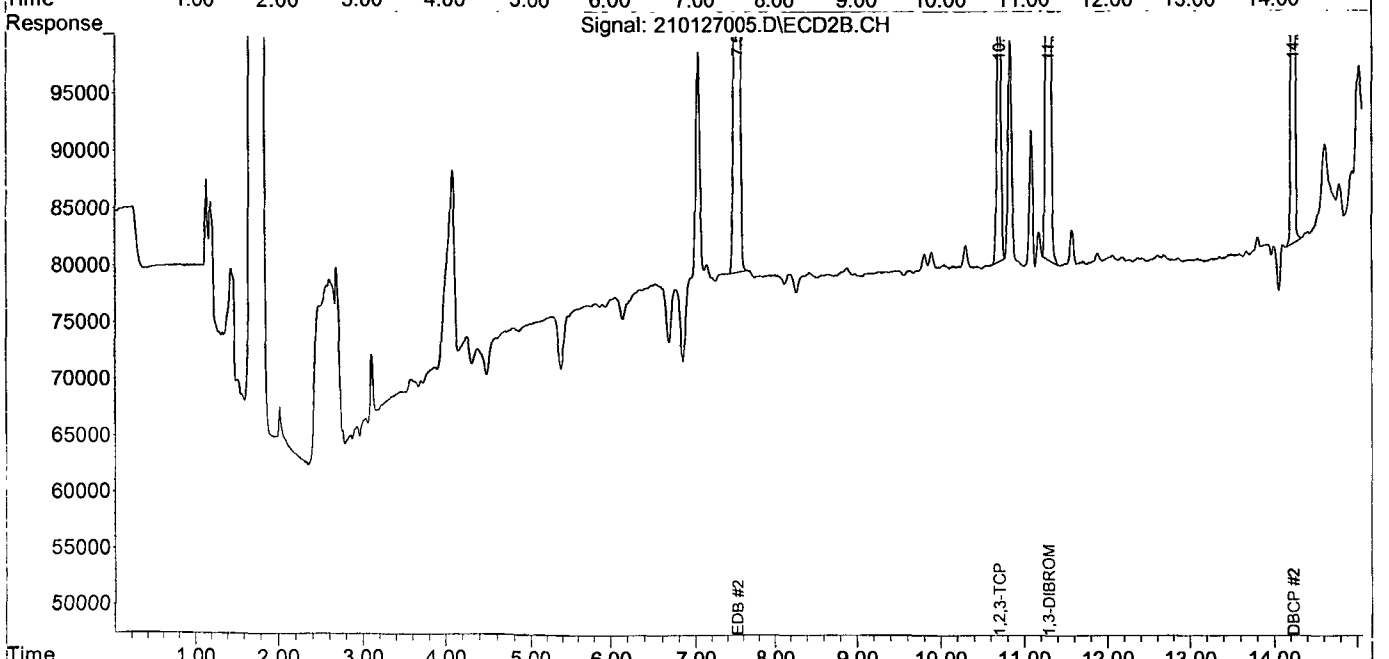
Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127005.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:30 pm
Operator : SS
Sample : 8011-4 1/27/21
Misc : water
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:39 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127006.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:50 pm
Operator : SS
Sample : 8011-5 1/27/21
Misc : water
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:42 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.297	11.296	46039	152433	0.681	0.680
Spiked Amount 0.350			Recovery =		194.57%	194.29%
Target Compounds						
1) TM EDB	6.130	7.526	52463	212461	0.680	0.669
2) TM 1,2,3-TCP	9.530	10.703	11344	39686	0.774	0.691
4) TM DBCP	13.580	14.233	186437	797095	0.708	0.714

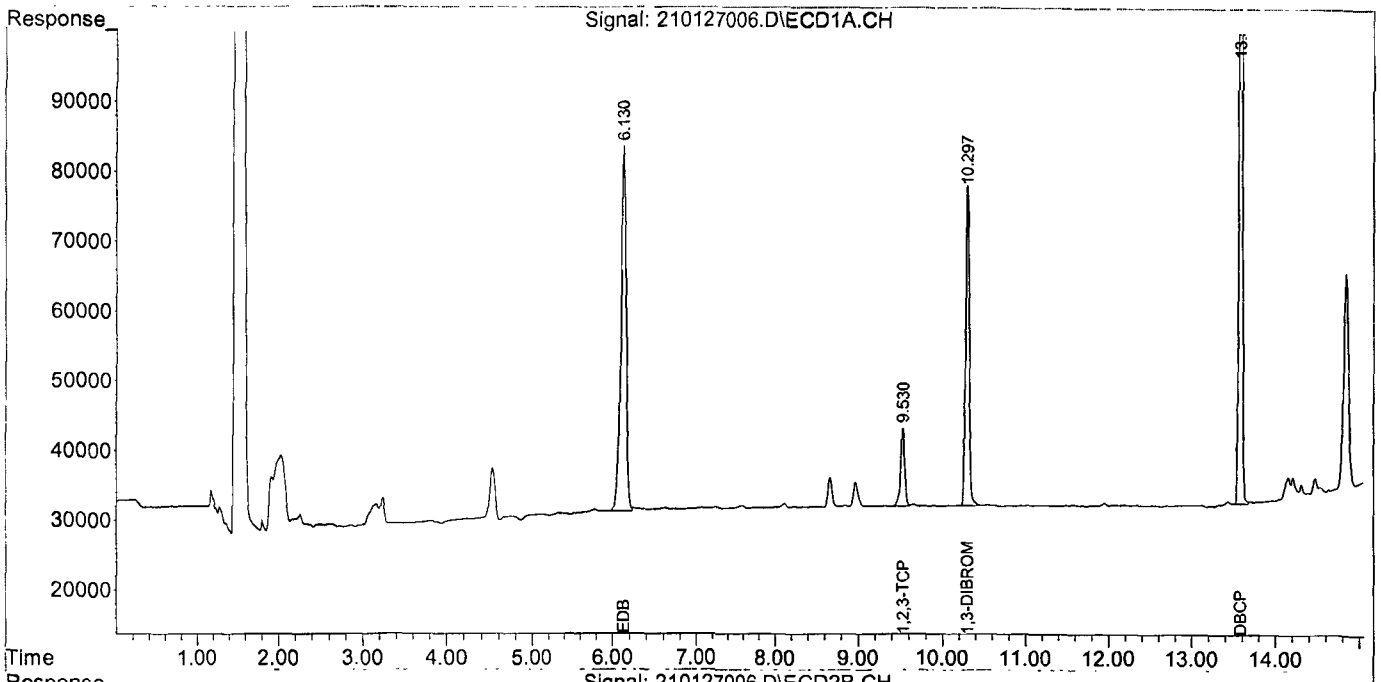
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

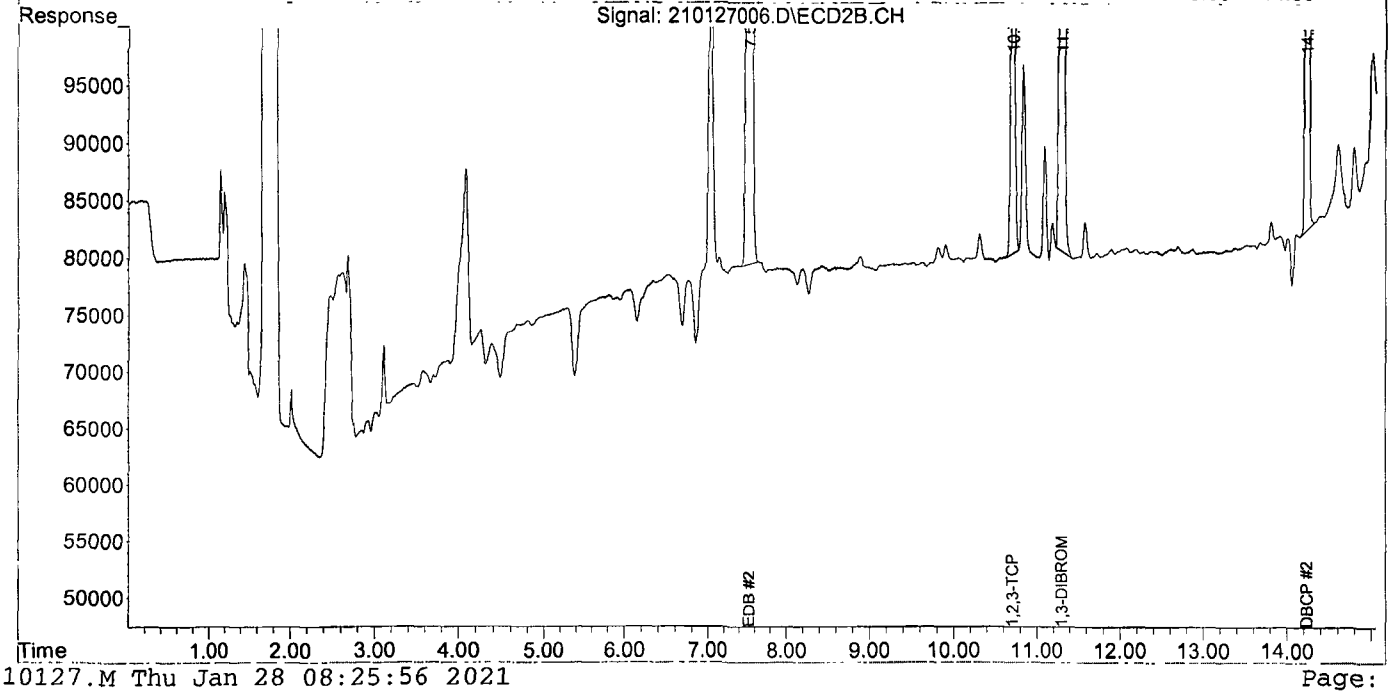
Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127006.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 3:50 pm
Operator : SS
Sample : 8011-5 1/27/21
Misc : water
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:42 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127007.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:11 pm
Operator : SS
Sample : 8011-6 1/27/21
Misc : water
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:45 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.297	11.296	57636	195386	0.852	0.872
	Spiked Amount 0.350			Recovery =		243.43%	249.14%
	Target Compounds						
1) TM	EDB	6.130	7.526	67823	277902	0.879	0.876
2) TM	1,2,3-TCP	9.530	10.703	14455	52105	0.993	0.907
4) TM	DBCP	13.580	14.233	247824	1059619	0.941	0.949

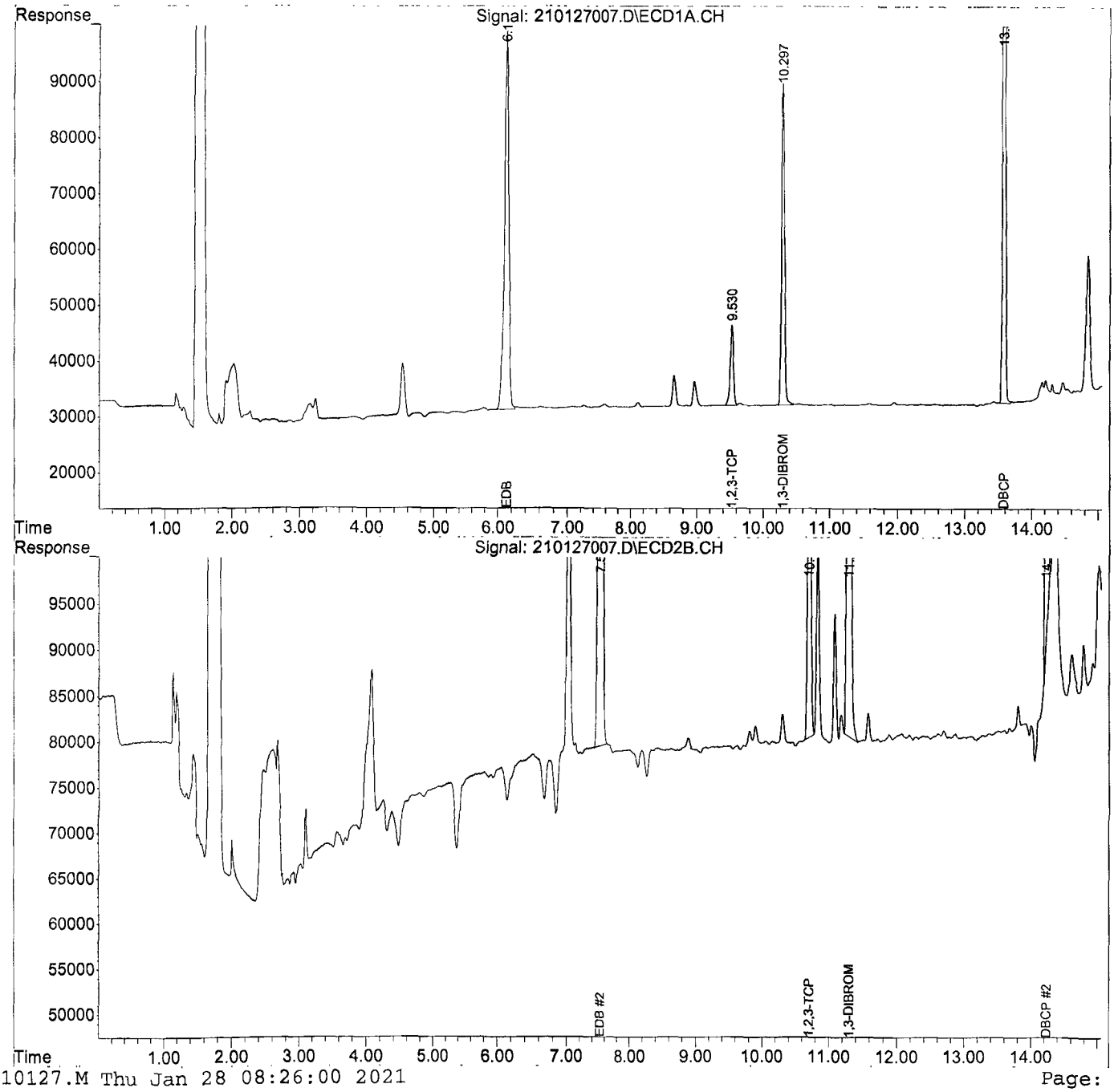
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127007.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:11 pm
Operator : SS
Sample : 8011-6 1/27/21
Misc : water
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:45 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Initial Cal. Date: 01/27/21
Data File: 210127008.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	38574	33335	14	TM	
2	TML	1,2,3-TCP	9167	7360	20	TML	23 *see back
3	TM	DBCP	131700	112505	15	TM	
4							
5							
6							
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35							
36							
37							
38							
39							
40							
		Average			16.3		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Cal. Date: 01/27/21
Data File: 210127008.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	EDB	158679	137725	13	TM		
42	TM	1,2,3-TCP	28733	25165	12	TM		
43	TM	DBCP	558406	439805	21	TM		*see front
44								
45								
46								
47								
48								
49								
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79								
80								
		Average			15.3			

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127008.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:31 pm
Operator : SS
Sample : 8011-SS 1/27/21
Misc : water
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:24:51 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	0.000	0.000	0	0	N.D. d	N.D. d
Spiked Amount 0.350			Recovery =		0.00%	0.00%
Target Compounds						
1) TM EDB	6.130	7.526	6667	27545	0.086	0.087
2) TM 1,2,3-TCP	9.530	10.702	1472	5033	0.077	0.088
4) TM DBCP	13.580	14.236	22501	87961	0.085	0.079

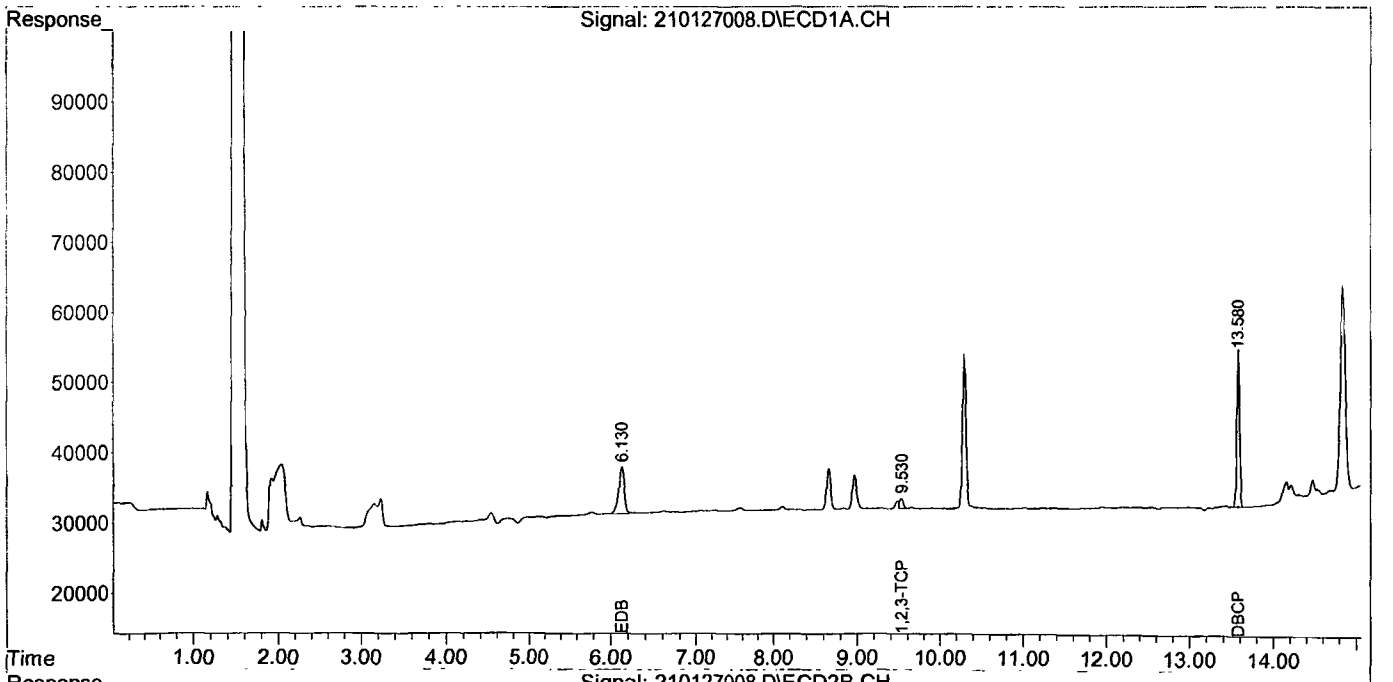
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

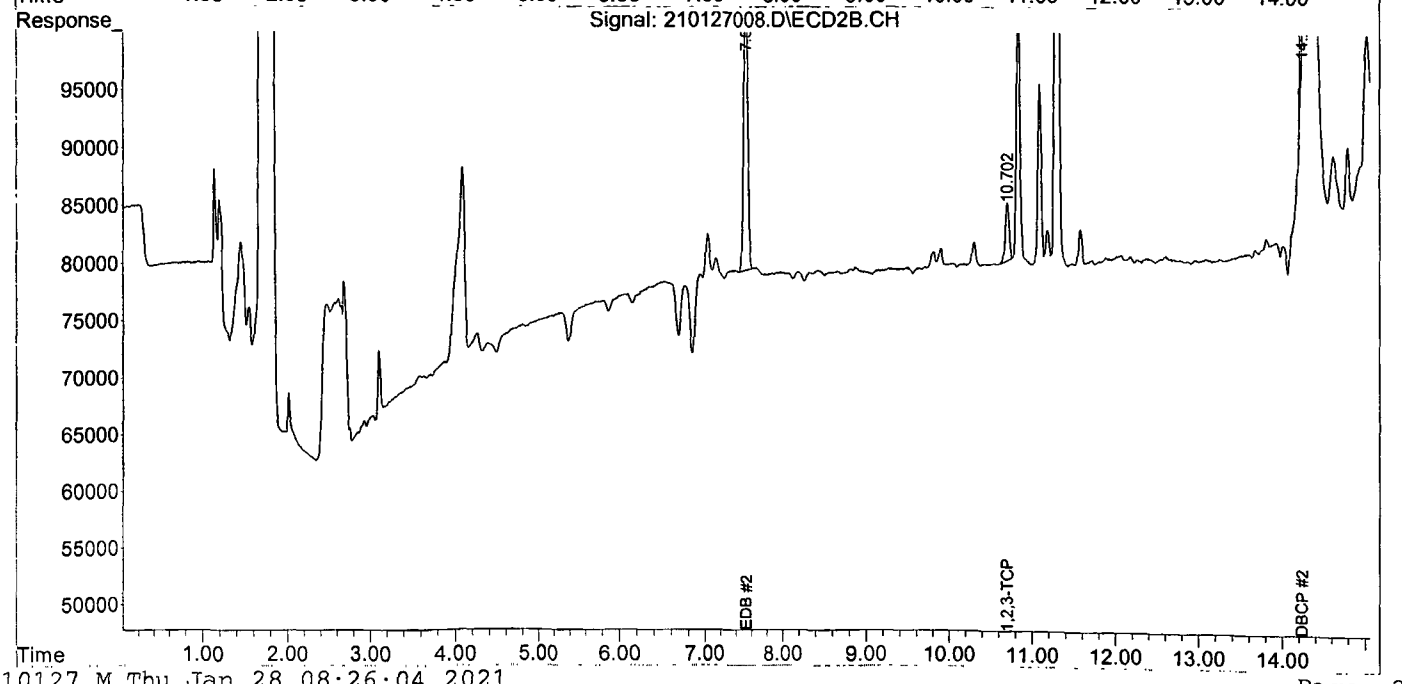
Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127008.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:31 pm
Operator : SS
Sample : 8011-SS 1/27/21
Misc : water
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:24:51 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Initial Cal. Date: 01/27/21
Data File: 210127009.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	38574	36808	4.6	TM	
2	TML	1,2,3-TCP	9167	8228	10	TML	5.3
3	S	1,3-DIBROMOPROPANE(S)	33816	33550	0.79	S	
4	TM	DBCP	131700	128336	2.6	TM	
5							
6							
7							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.5		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Cal. Date: 01/27/21
Data File: 210127009.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	158679	153620	3.2	TM	
42	TM	1,2,3-TCP	28733	28164	2.0	TM	
43	S	1,3-DIBROMOPROPANE(S)	112074	111438	0.57	S	
44	TM	DBCP	558406	531950	4.7	TM	
45							
46							
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78							
79							
80							
		Average			2.6		

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127009.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:51 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:52 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.296	11.296	16775	55719	0.248	0.249
	Spiked Amount 0.350			Recovery =		70.86%	71.14%
	Target Compounds						
1) TM	EDB	6.129	7.526	18404	76810	0.239	0.242
2) TM	1,2,3-TCP	9.529	10.706	4114	14082	0.263	0.245
4) TM	DBCP	13.579	14.236	64168	265975	0.244	0.238

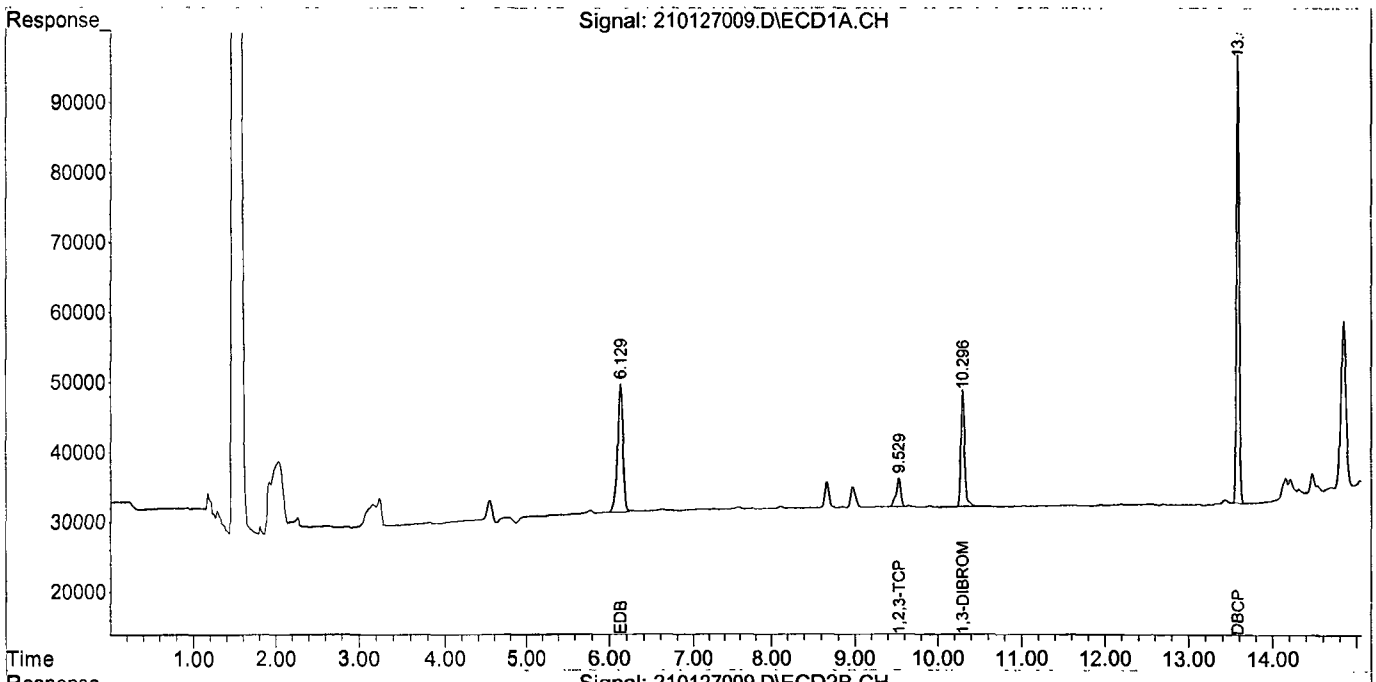
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

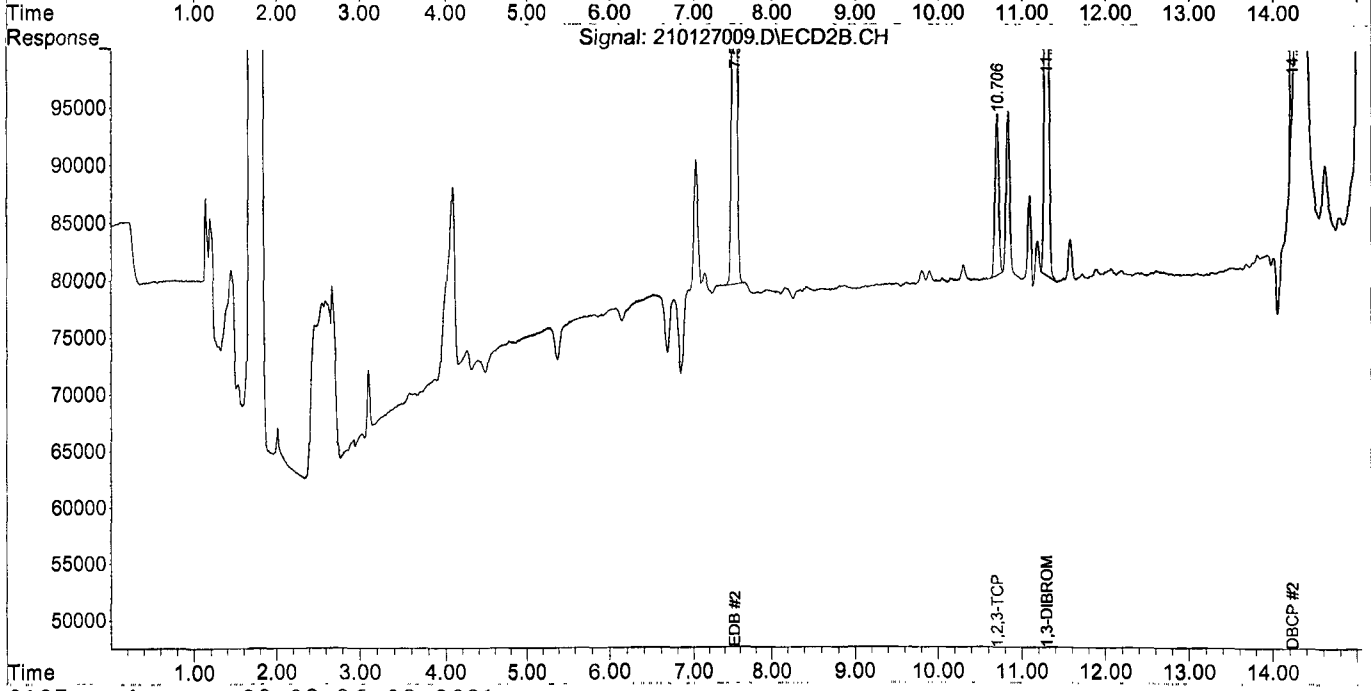
Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127009.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 4:51 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:23:52 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Initial Cal. Date: 01/27/21
Data File: 210127022.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	38574	36104	6.4	TM	
2	TML	1,2,3-TCP	9167	8230	10	TML	5.3
3	S	1,3-DIBROMOPROPANE(S)	33816	33828	0.04	S	
4	TM	DBCP	131700	130956	0.57	TM	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.3		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: HERBIE
Cal. Date: 01/27/21
Data File: 210127022.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	158679	149622	5.7	TM	
42	TM	1,2,3-TCP	28733	28604	0.45	TM	
43	S	1,3-DIBROMOPROPANE(S)	112074	112378	0.27	S	
44	TM	DBCP	558406	549334	1.6	TM	
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
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61							
62							
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64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			2.0		

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127022.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 9:16 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:27:10 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.297	11.297	16914	56189	0.250	0.251
Spiked Amount 0.350			Recovery =		71.43%	71.71%
Target Compounds						
1) TM EDB	6.131	7.527	18052	74811	0.234	0.236
2) TM 1,2,3-TCP	9.531	10.704	4115	14302	0.263	0.249
4) TM DBCP	13.581	14.234	65478	274667	0.249	0.246

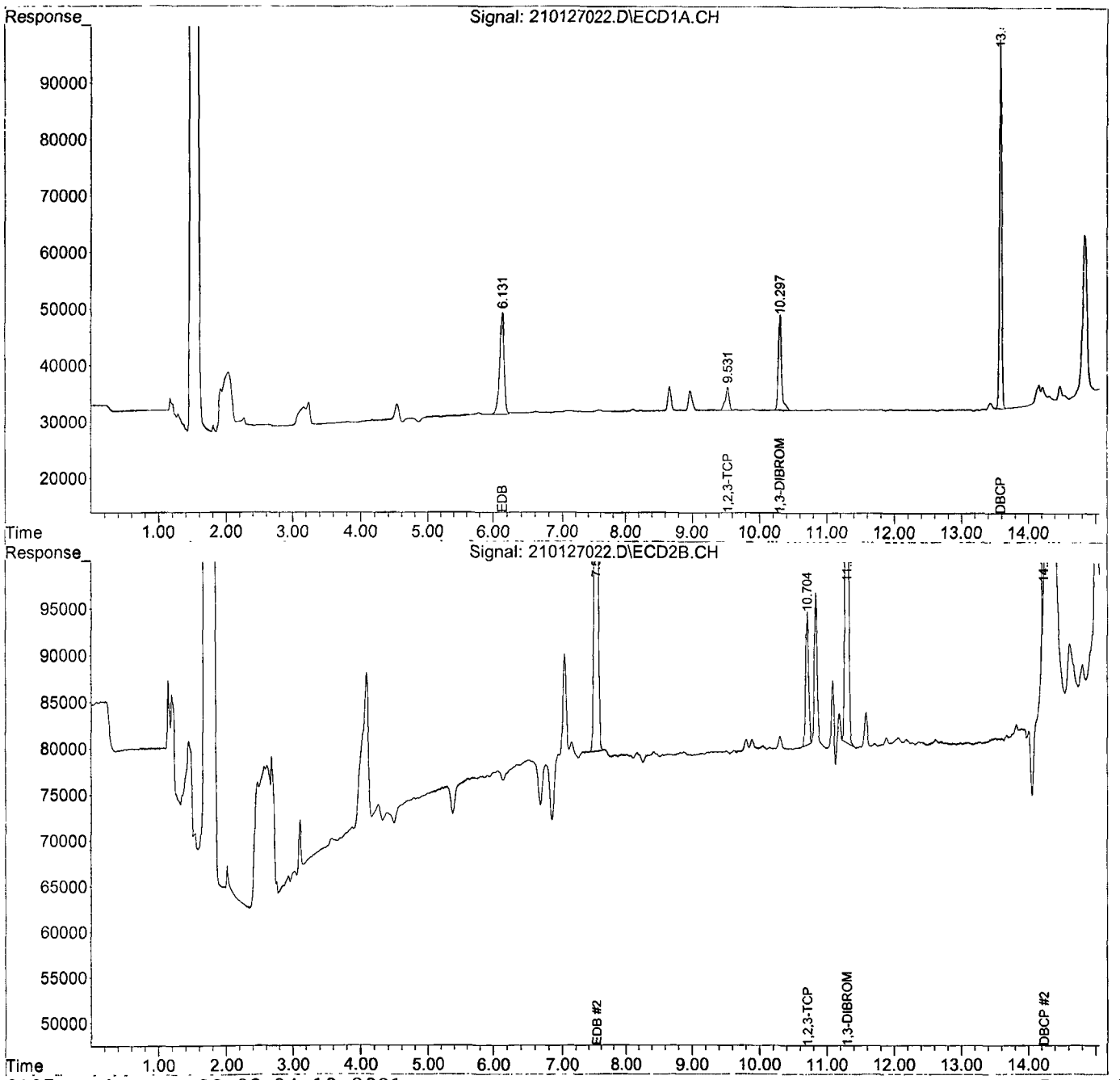
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127022.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 9:16 pm
Operator : SS
Sample : 8011-3 1/27/21
Misc : water
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:27:10 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127014.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 6:33 pm
Operator : SS
Sample : BA25689W06 2/35.11
Misc : water
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:29:23 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.298	11.294	21910	71641	0.324	0.320
Spiked Amount 0.350			Recovery	=	92.57%	91.43%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

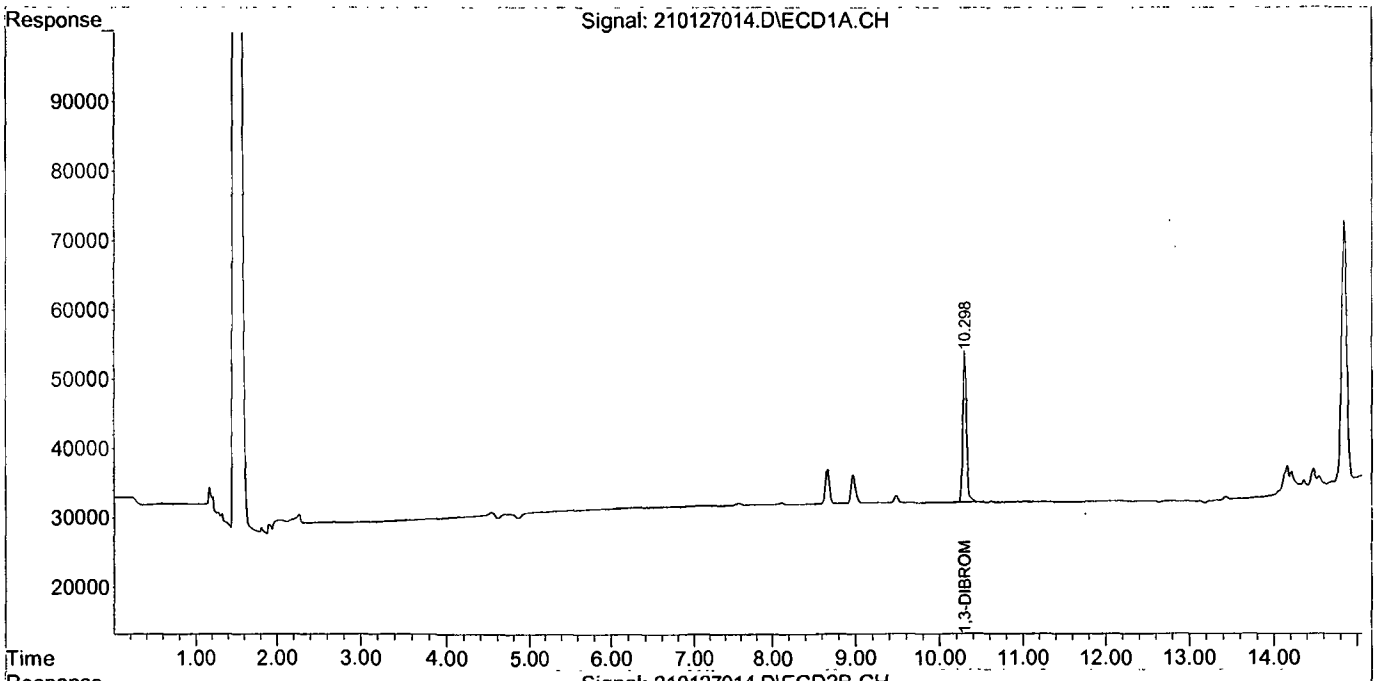
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

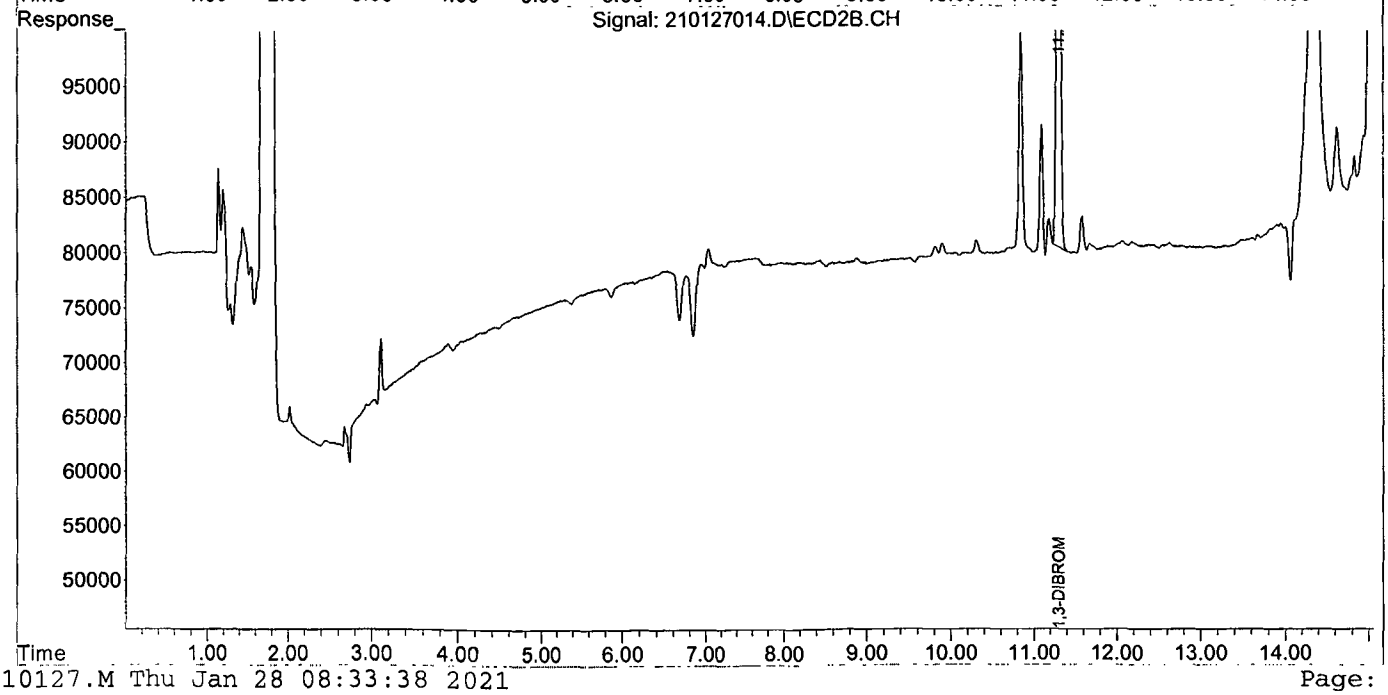
Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127014.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 6:33 pm
Operator : SS
Sample : BA25689W06 2/35.11
Misc : water
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:29:23 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127015.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 6:54 pm
Operator : SS
Sample : BA25690W05 2/35.29
Misc : water
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:29:48 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.298	11.294	21737	70696	0.321	0.315
Spiked Amount 0.350			Recovery =		91.71%	90.00%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

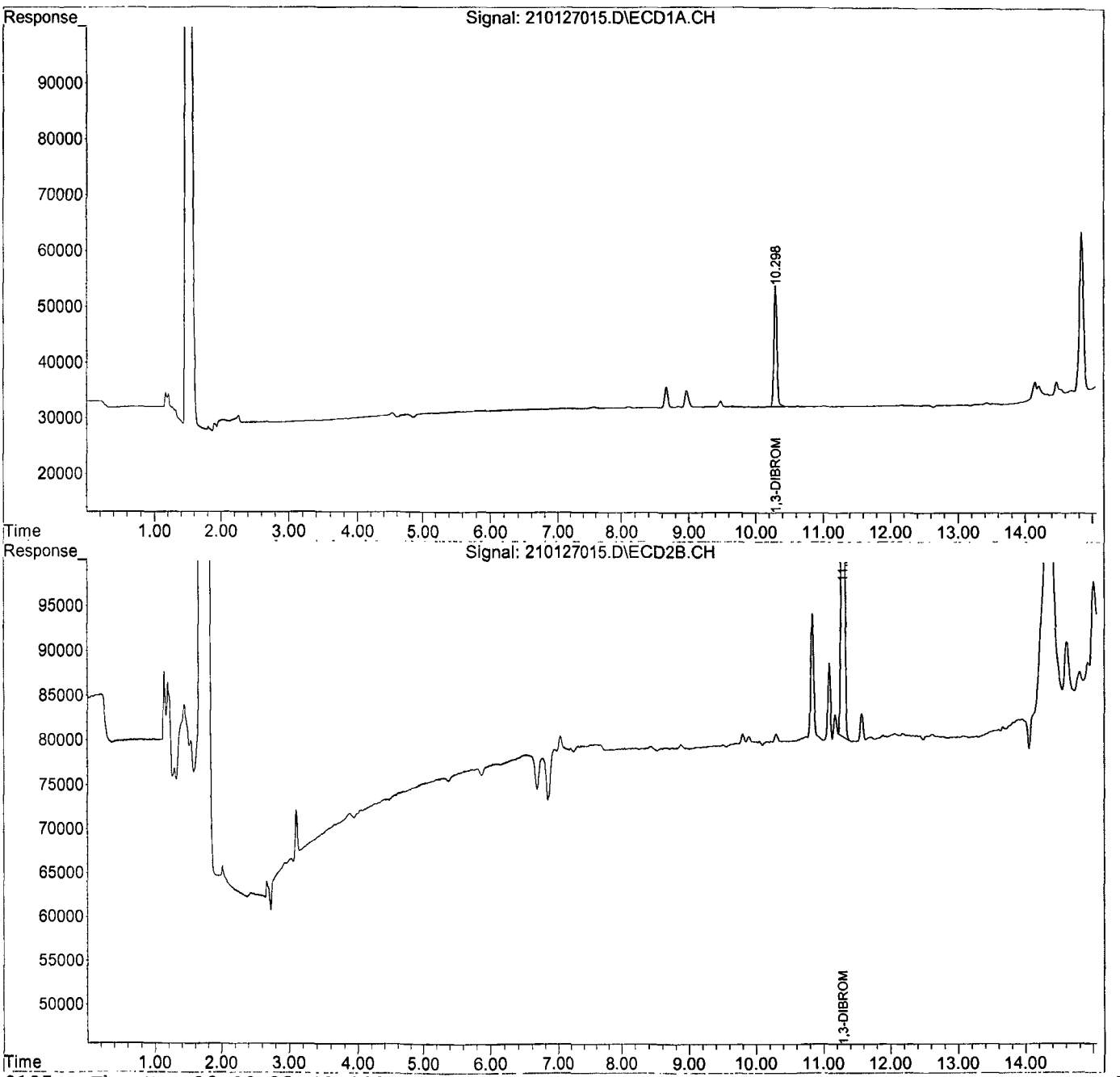
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127015.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 6:54 pm
Operator : SS
Sample : BA25690W05 2/35.29
Misc : water
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:29:48 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127016.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:14 pm
Operator : SS
Sample : BA25698W07 2/35.75
Misc : water
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:04 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.296	11.296	22261	72199	0.329	0.322
Spiked Amount 0.350			Recovery =		94.00%	92.00%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

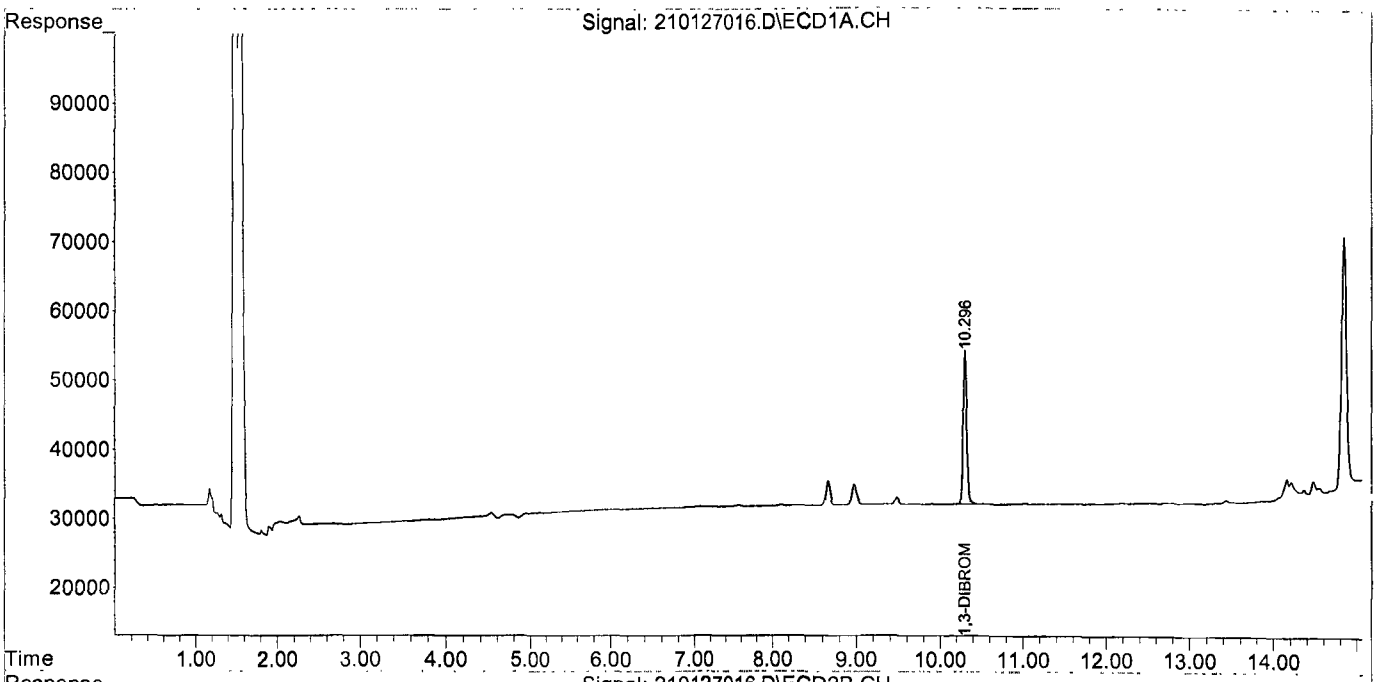
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

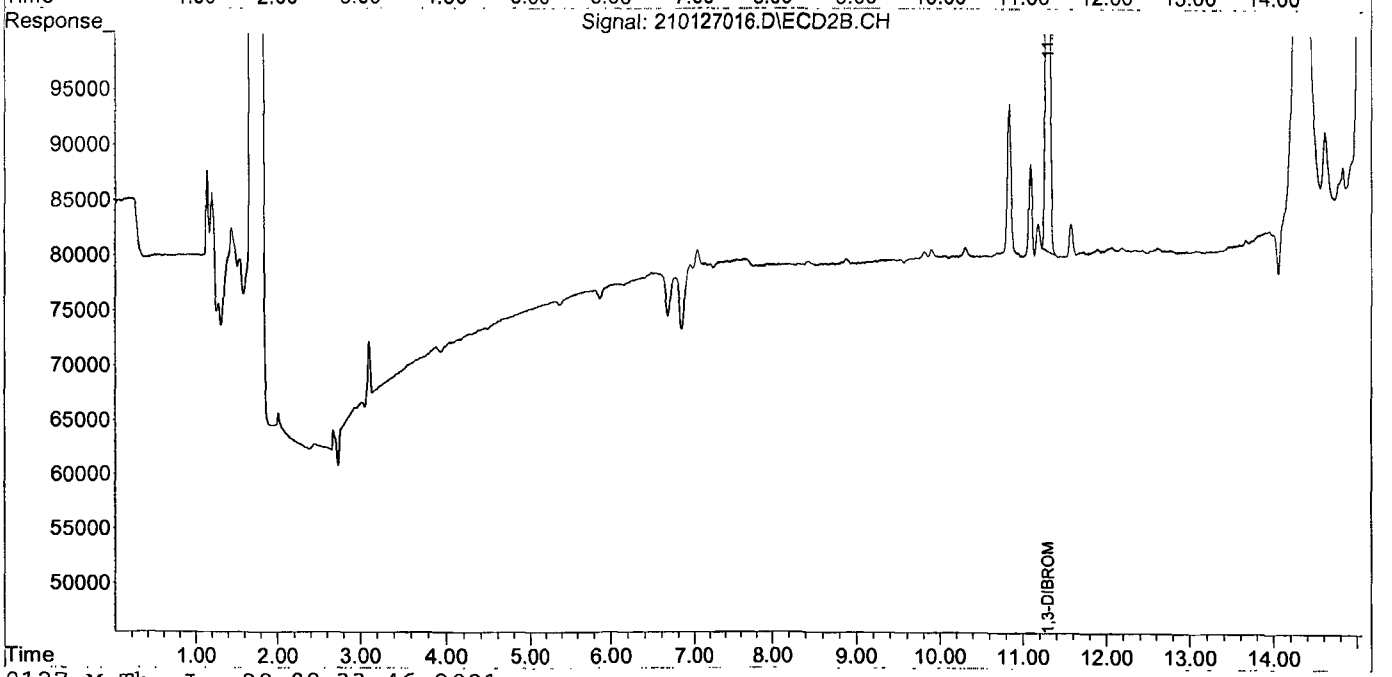
Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127016.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:14 pm
Operator : SS
Sample : BA25698W07 2/35.75
Misc : water
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:04 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127017.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:34 pm
Operator : SS
Sample : BA25699W06 2/35.19
Misc : water
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:26 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

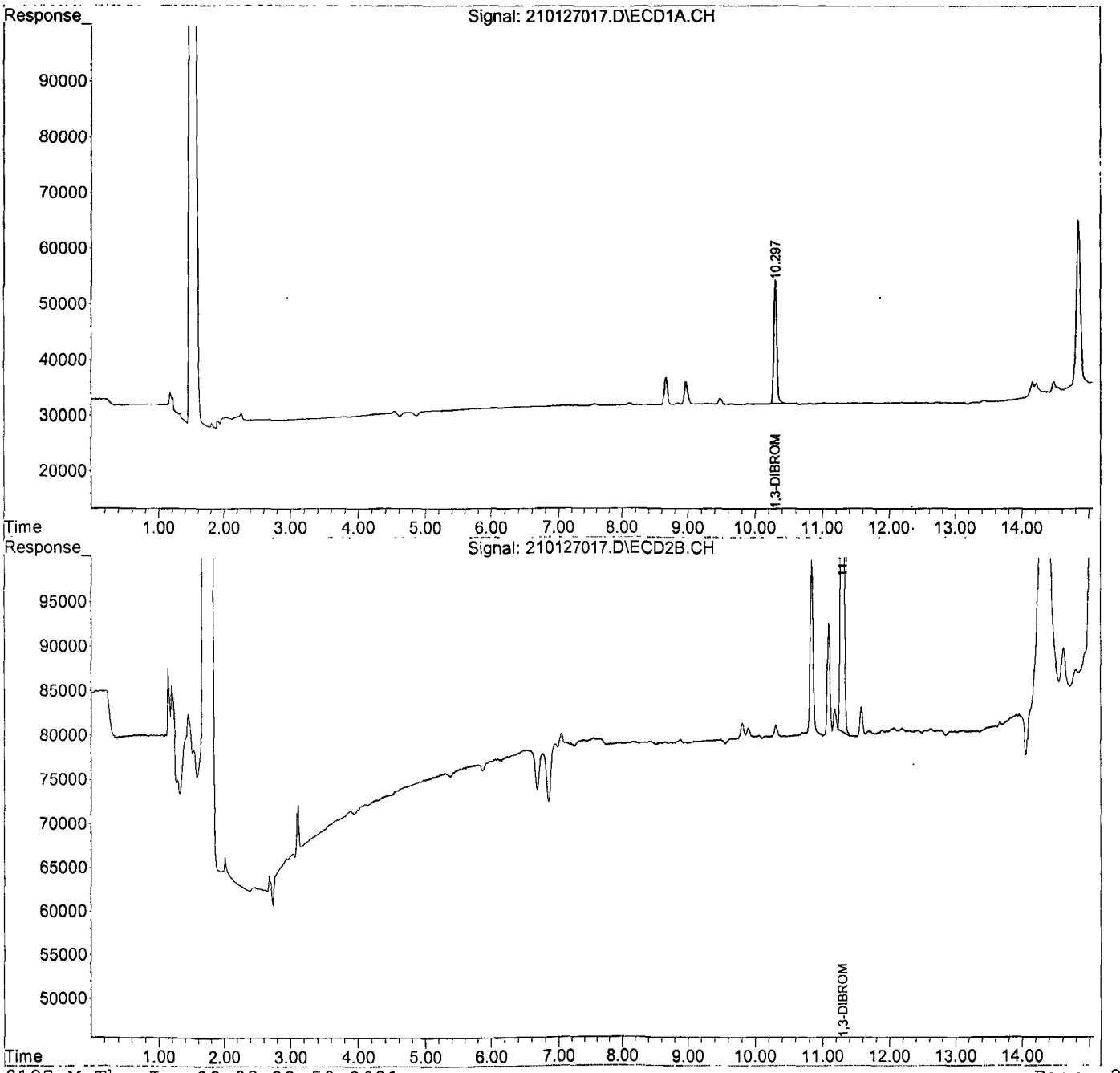
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.297	11.297	22251	73336	0.329	0.327
	Spiked Amount 0.350			Recovery	=	94.00%	93.43%
	Target Compounds						
1) TM	EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM	DBCP	0.000	0.000	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127017.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:34 pm
Operator : SS
Sample : BA25699W06 2/35.19
Misc : water
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:26 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127018.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:55 pm
Operator : SS
Sample : BA25701W05 2/35.38
Misc : water
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:41 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.299	11.295	21977	72495	0.325	0.323
Spiked Amount 0.350			Recovery =		92.86%	92.29%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

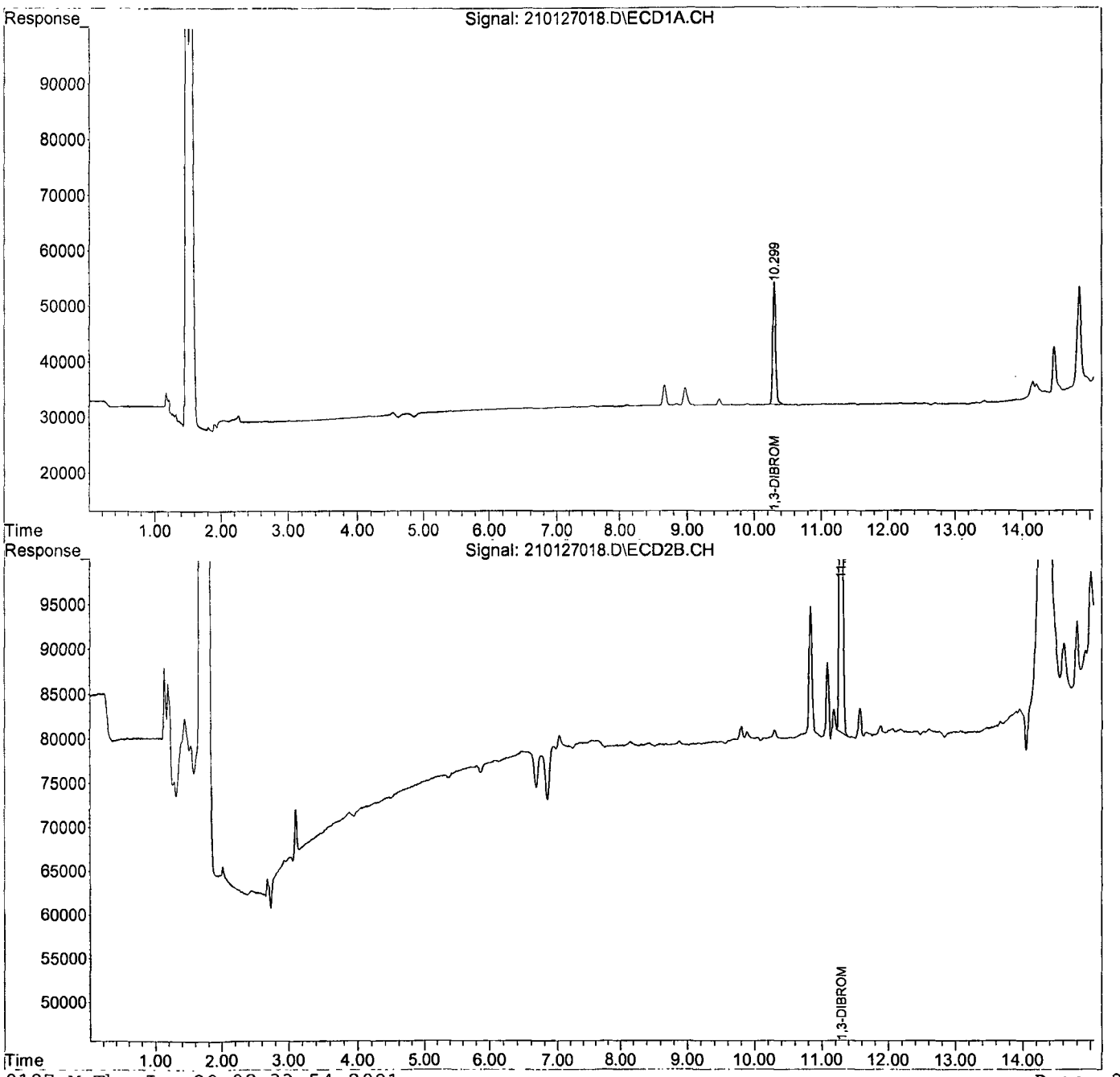
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127018.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 7:55 pm
Operator : SS
Sample : BA25701W05 2/35.38
Misc : water
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:41 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127019.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:15 pm
Operator : SS
Sample : BA25703W04 2/35.59
Misc : water
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:55 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

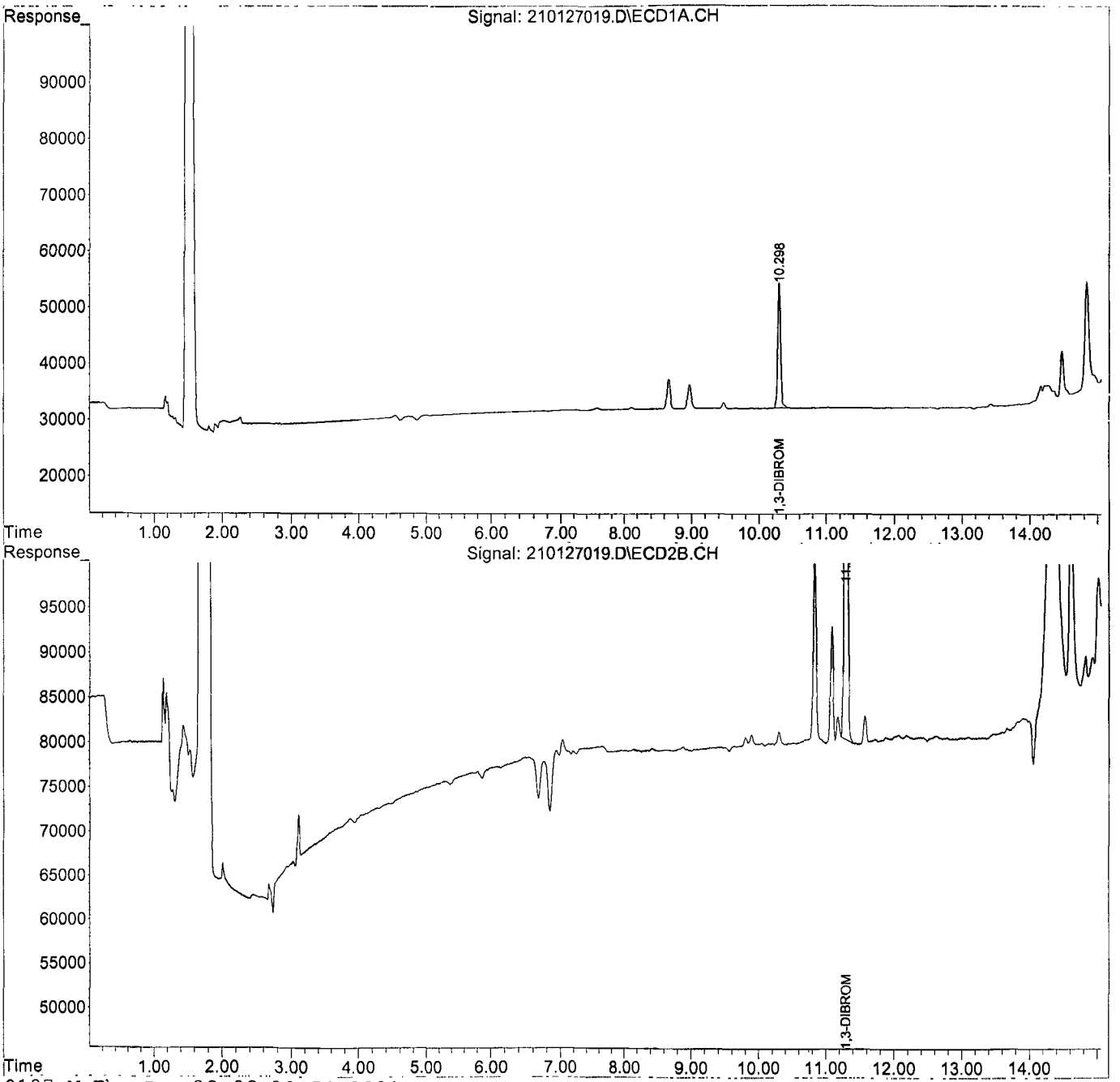
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.298	11.294	22193	72460	0.328	0.323
Spiked Amount 0.350			Recovery =		93.71%	92.29%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127019.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:15 pm
Operator : SS
Sample : BA25703W04 2/35.59
Misc : water
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:30:55 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127020.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:35 pm
Operator : SS
Sample : BA25704W04 2/35.52
Misc : water
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:31:16 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBRO...	10.298	11.297	22253	69315	0.329	0.309
Spiked Amount 0.350			Recovery	=	94.00%	88.29%
Target Compounds						
1) TM EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM 1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM DBCP	0.000	0.000	0	0	N.D. d	N.D. d

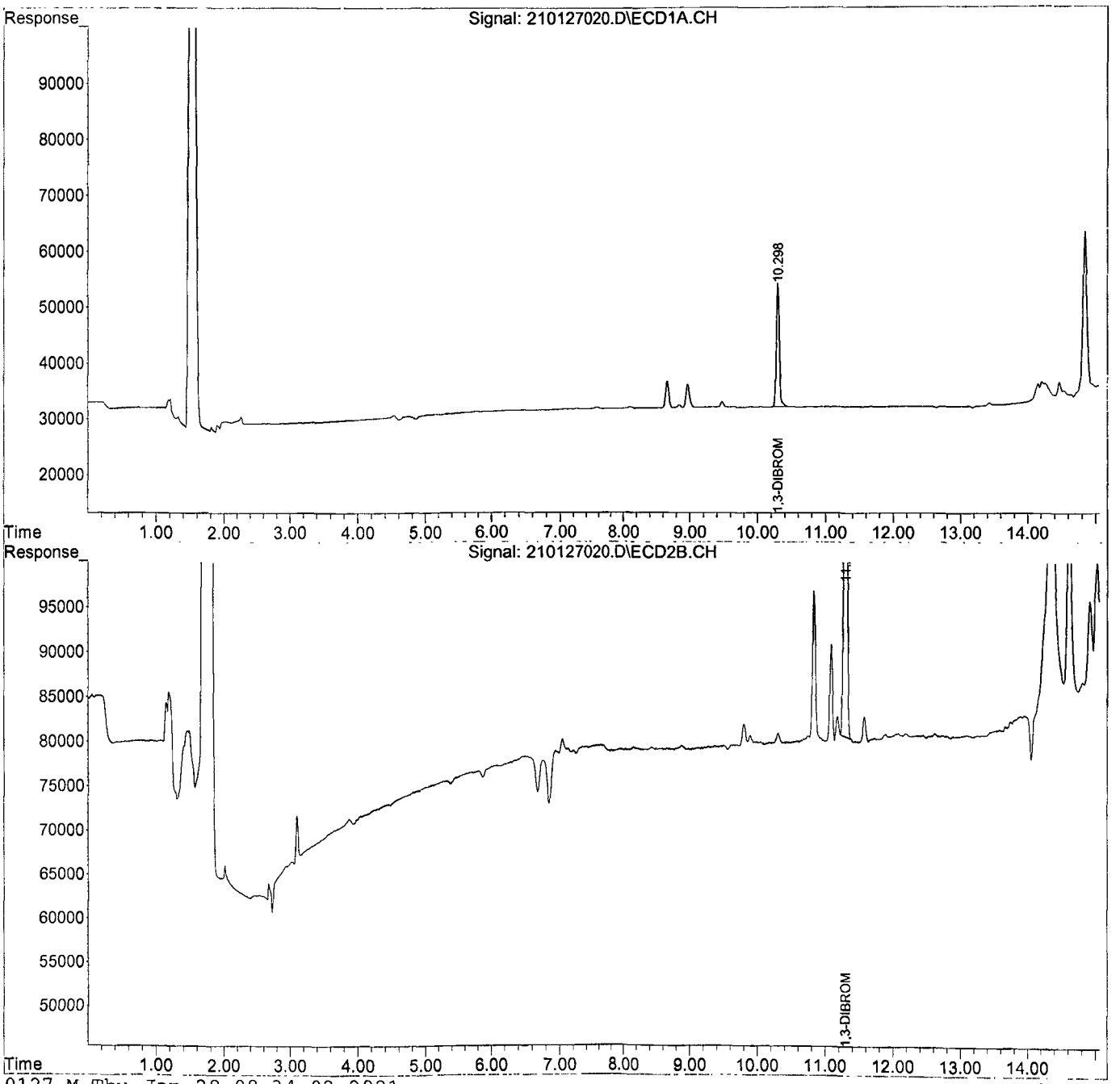
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127020.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:35 pm
Operator : SS
Sample : BA25704W04 2/35.52
Misc : water
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:31:16 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127021.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:56 pm
Operator : SS
Sample : BA25706W04 2/35.33
Misc : water
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:31:31 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.296	11.296	23089	75453	0.341	0.337
	Spiked Amount 0.350			Recovery	=	97.43%	96.29%
	Target Compounds						
1) TM	EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM	DBCP	0.000	0.000	0	0	N.D. d	N.D. d

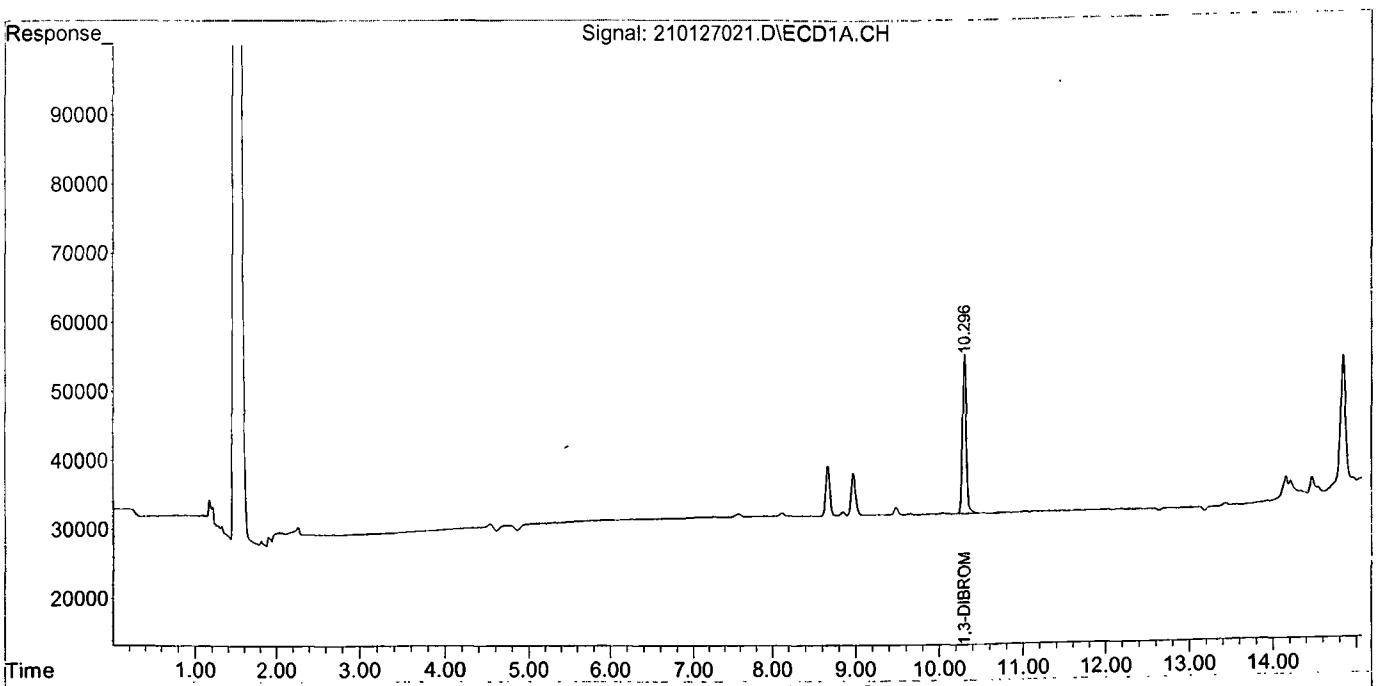
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

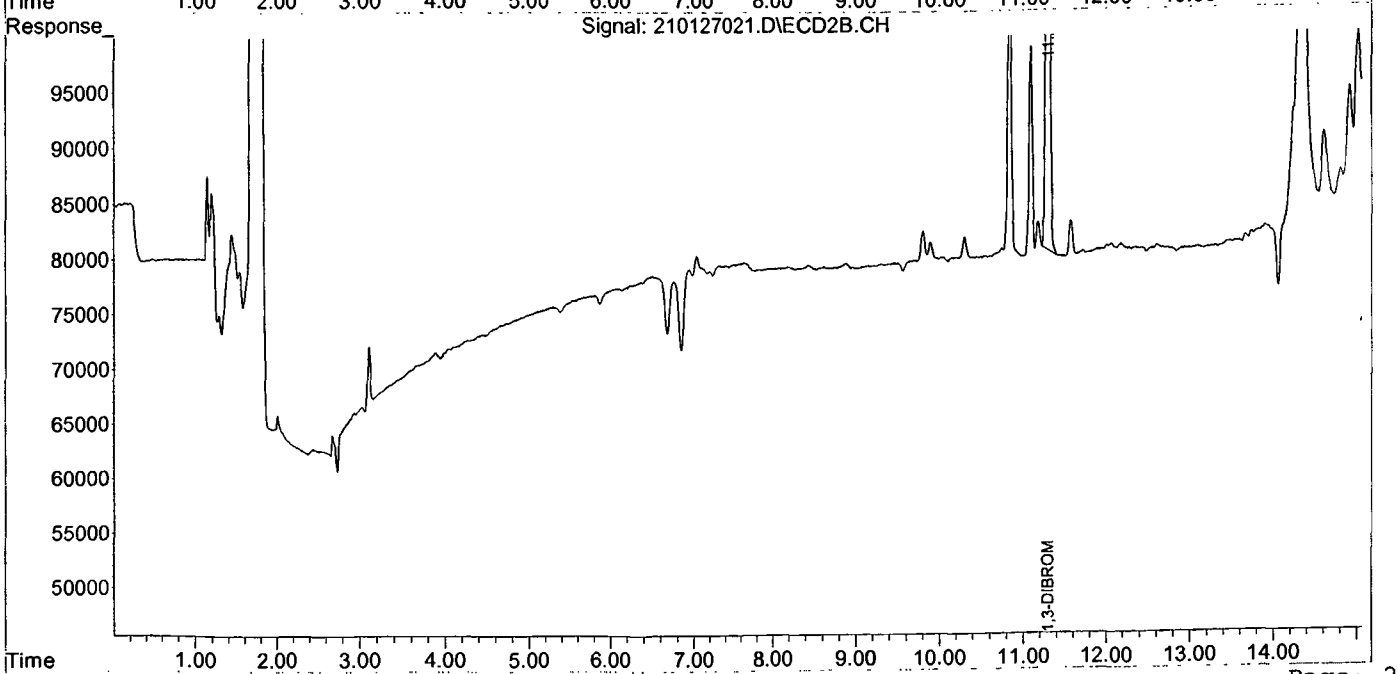
Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127021.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 8:56 pm
Operator : SS
Sample : BA25706W04 2/35.33
Misc : water
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:31:31 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127010.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:12 pm
Operator : SS
Sample : 210127A BLK 2/35.11
Misc : water
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:27:31 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

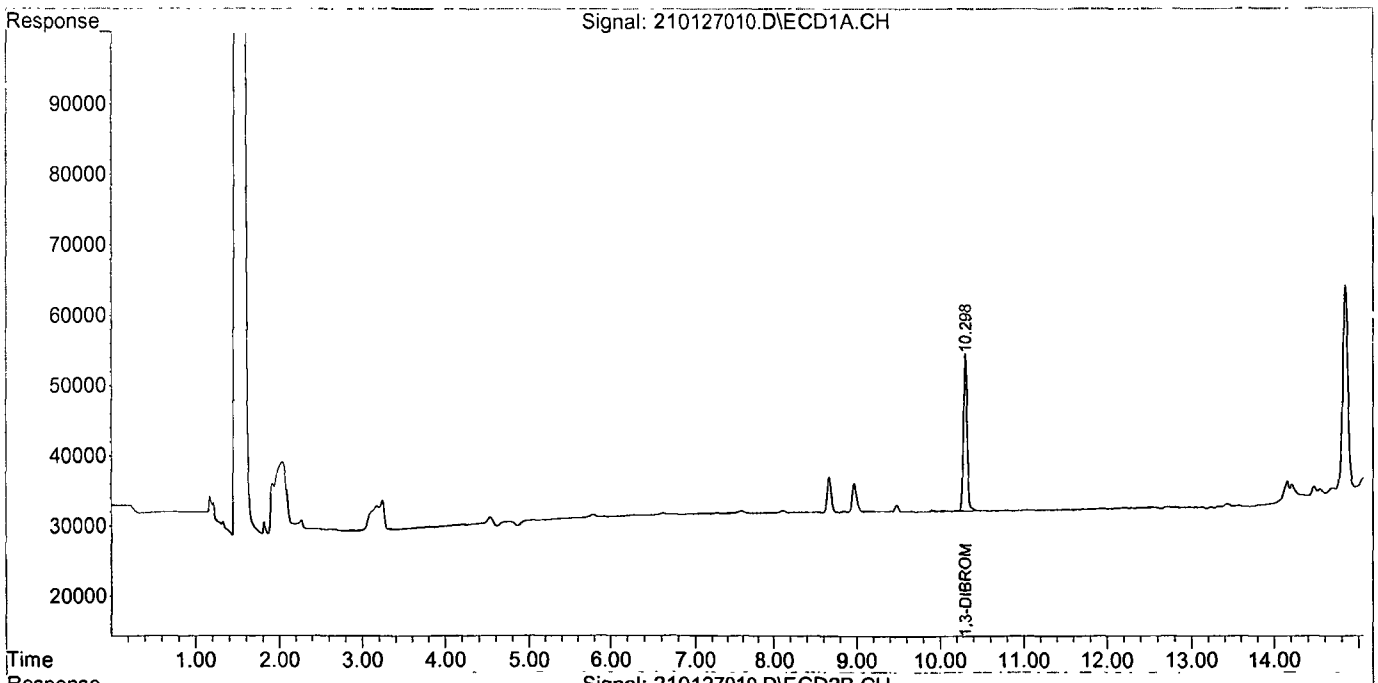
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.298	11.297	22483	72864	0.332	0.325
	Spiked Amount 0.350			Recovery =		94.86%	92.86%
	Target Compounds						
1) TM	EDB	0.000	0.000	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.000	0.000	0	0	N.D. d	N.D. d
4) TM	DBCP	0.000	0.000	0	0	N.D. d	N.D. d

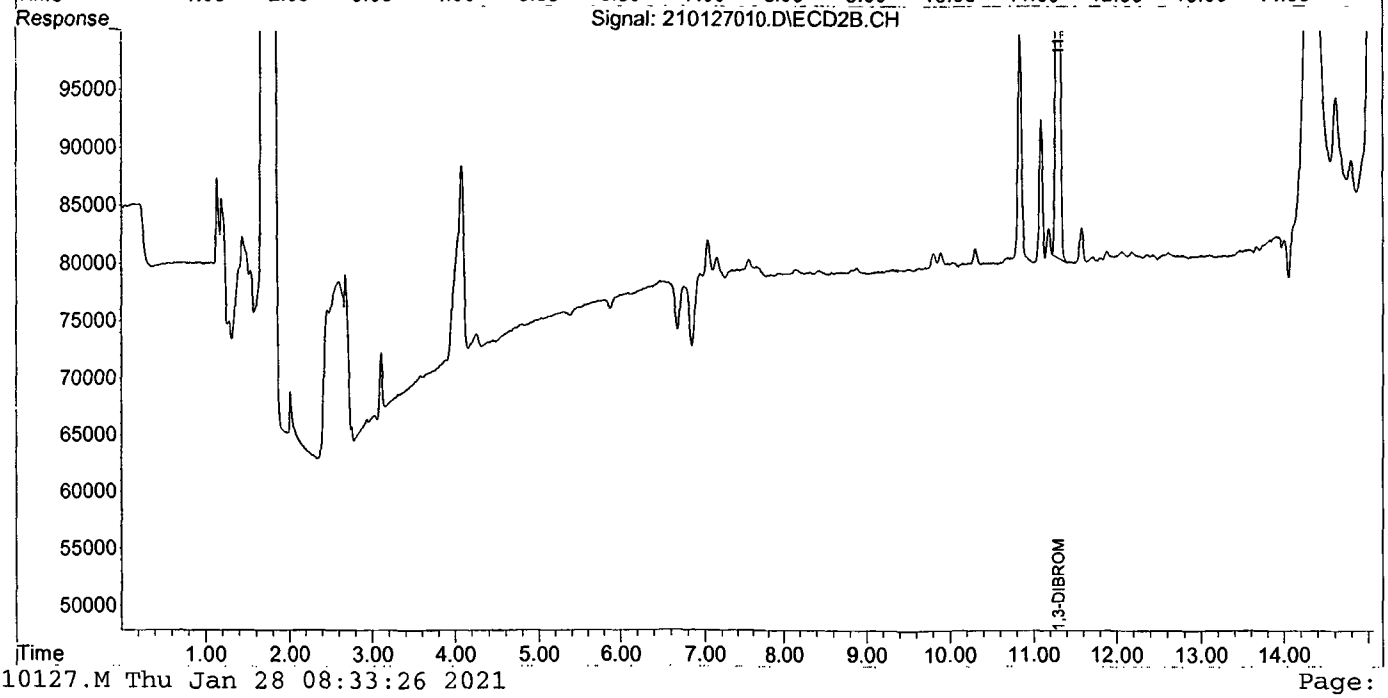
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127010.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:12 pm
Operator : SS
Sample : 210127A BLK 2/35.11
Misc : water
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:27:31 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127011.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:32 pm
Operator : SS
Sample : 210127A LCS-1 2/35.00
Misc : water
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:26:37 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

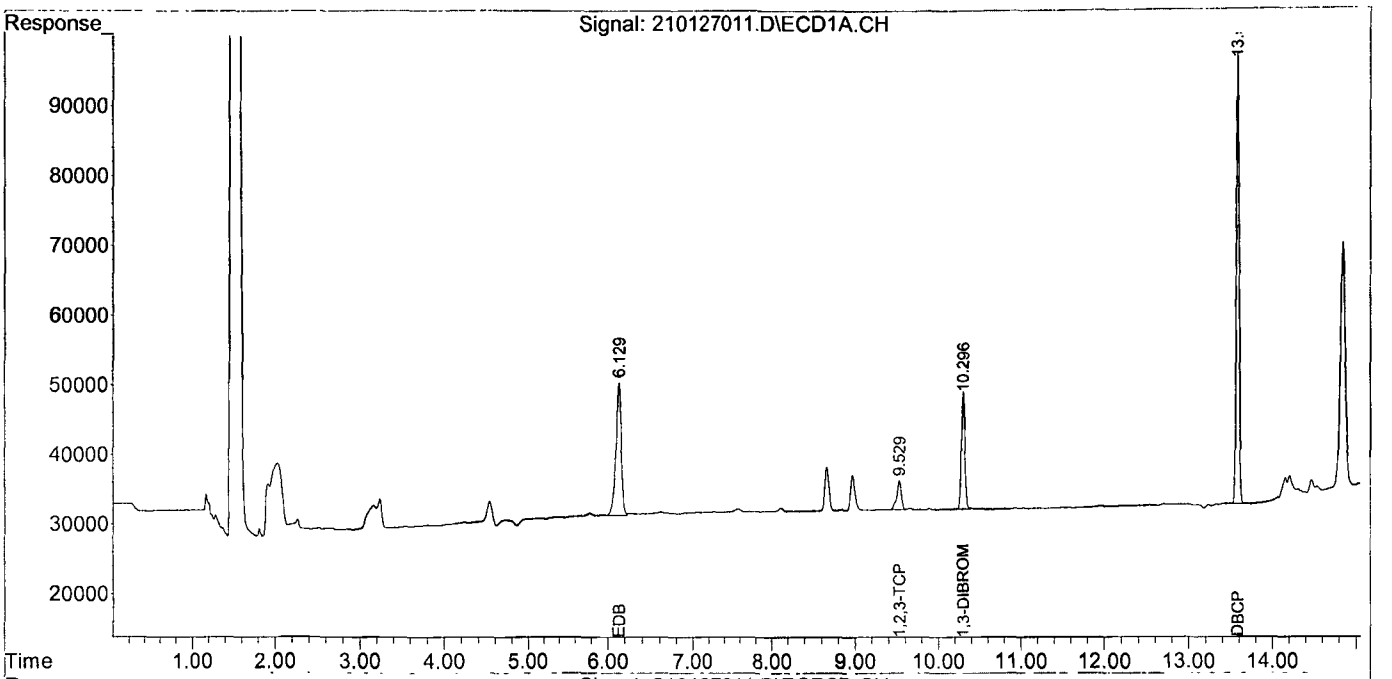
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.296	11.295	16887	55435	0.250	0.247
	Spiked Amount 0.350			Recovery =		71.43%	70.57%
	Target Compounds						
1) TM	EDB	6.129	7.525	19138	76142	0.248	0.240
2) TM	1,2,3-TCP	9.529	10.705	4155	14068	0.266	0.245
4) TM	DBCP	13.579	14.235	64593	272816	0.245	0.244

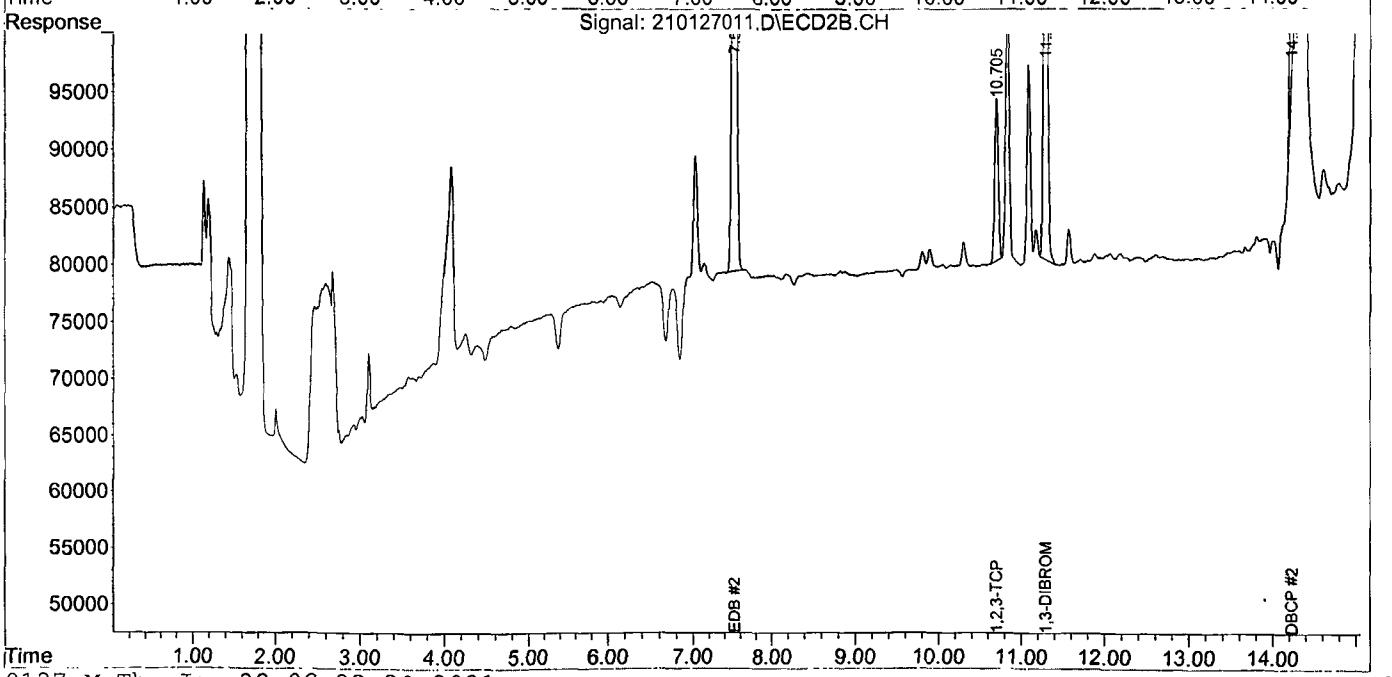
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127011.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:32 pm
Operator : SS
Sample : 210127A LCS-1 2/35.00
Misc : water
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:26:37 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50





Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127012.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:52 pm
Operator : SS
Sample : 210127A LCSD-1 2/35.52
Misc : water
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:26:40 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBRO...	10.297	11.297	16640	54643	0.246	0.244
	Spiked Amount 0.350			Recovery =		70.29%	69.71%
	Target Compounds						
1) TM	EDB	6.130	7.527	18660	74210	0.242	0.234
2) TM	1,2,3-TCP	9.530	10.703	4066	13849	0.260	0.241
4) TM	DBCP	13.580	14.233	64014	261846	0.243	0.234

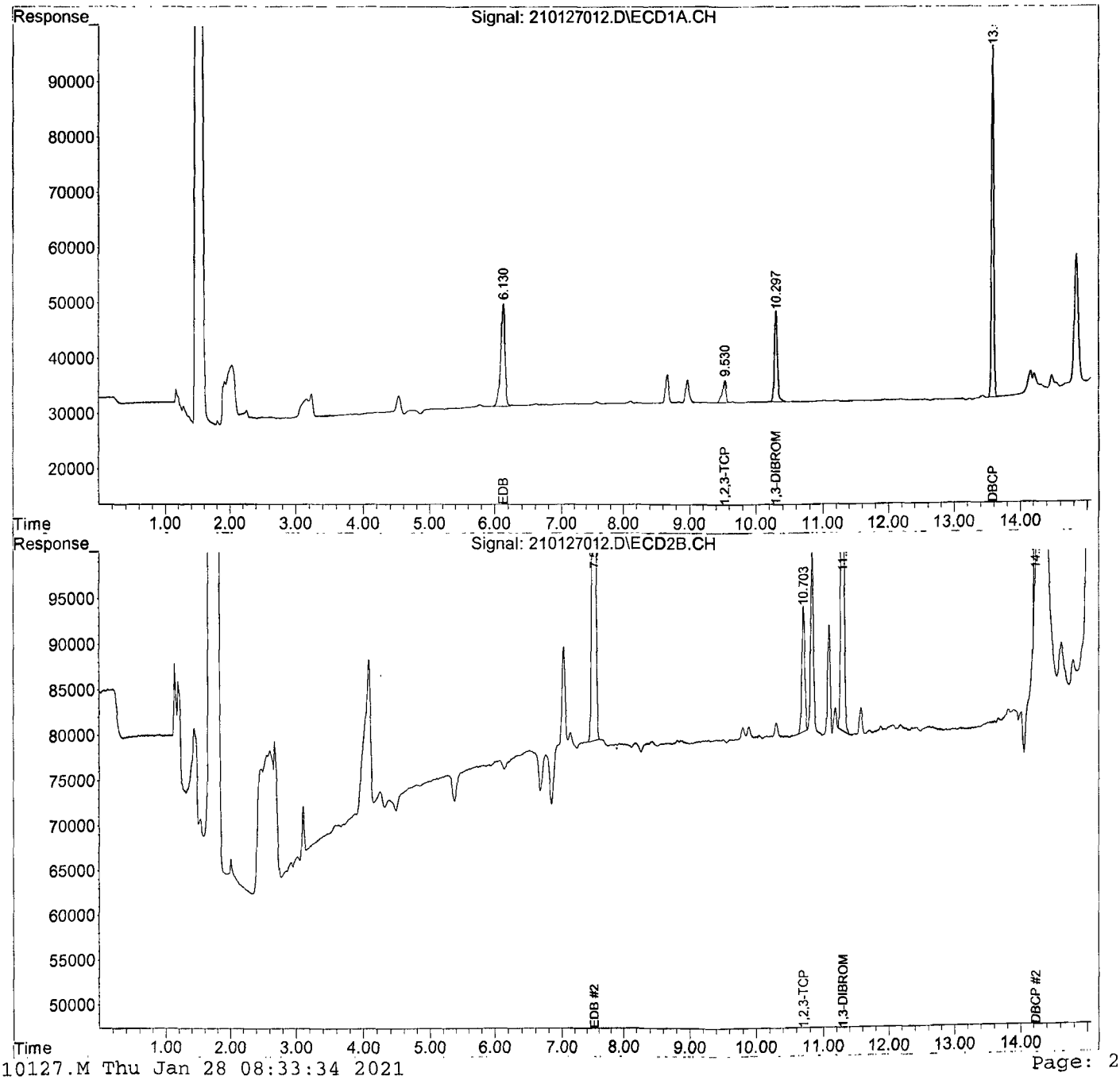
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : G:\HERBIE\DATA\210127\
Data File : 210127012.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 27 Jan 2021 5:52 pm
Operator : SS
Sample : 210127A LCSD-1 2/35.52
Misc : water
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Jan 28 08:26:40 2021
Quant Method : G:\HERBIE\DATA\210127\80110127.M
Quant Title : 504.1 OR 8011
QLast Update : Thu Jan 28 08:22:40 2021
Response via : Initial Calibration
Integrator: RTE 6890 Scale Mode: Small noise peaks clipped

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50



Name of Final Standard 504/8011 SS SPK **Prep'd By (Initials)** SS

Prep Date 04/27/20

Exp Date 04/27/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0.35 ug/mL	**04/27/20**	**04/27/21**	1000 uL	10 mL	**Methanol #042317C**	0.035 ug/mL

Name of Final Standard 504/8011 SS Stock **Prep'd By (Initials)** SS

Prep Date 04/27/20

Exp Date 04/27/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
EDB TCP DBCP	Absolute	30096	200 ug/mL	**031218-49750**	**03/12/23**	44 uL	25 mL	**Methanol #042317C**	0.35 ug/mL

Name of Final Standard 504/8011 Surrogate **Prep'd By (Initials)** SS

Prep Date 10/19/20

Exp Date 01/07/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	35 uL	10 mL	Methanol #0235140	0.35ug/ml

Name of Final Standard 504/8011 Spike **Prep'd By (Initials)** SS

Prep Date 10/19/20

Exp Date 01/07/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	06/17/20	01/07/21	1000 uL	10 mL	Methanol #0235140	0.035 ug/mL

Name of Final Standard 504/8011 SS SPK **Prep'd By (Initials)** SS

Prep Date 10/19/20

Exp Date 02/19/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0.35 ug/mL	04/27/20	04/27/21	1000 uL	10 mL	Methanol #0235140	0.035 ug/mL

Name of Final Standard: **1,3-DBP Stock** Prep'd By (Initials): **SS**

Prep Date: **01/14/21**

Exp Date: **01/14/22**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Manufacturer Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP	Absolute	71326	1000 ug/mL	051319-40828	**05/13/22**	1000 uL	10 mL	**Methanol #0234140**	100 ug/mL

Name of Final Standard: **504/DOHS Stock** Prep'd By (Initials): **SS**

Prep Date: **01/14/21**

Exp Date: **01/14/22**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Manufacturer Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
EPA 504.1 Analytes	Absolute	30096	200ug/mL	**040517-37775**	**04/05/22**	1 mL	10 mL	**Methanol #0234140**	20 ug/mL

Name of Final Standard: **DOHS M Std.** Prep'd By (Initials): **SS**

Prep Date: **01/14/21**

Exp Date: **01/14/22**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/DOHS Stock	APPL	504/DOHS Stock	20 ug/mL	**01/14/21**	**01/14/22**	500 uL	10 mL	**Methanol #0234140**	1 ug/mL
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	**01/14/21**	**01/14/22**	100 uL			

Name of Final Standard: **504/8011 Stock** — Prep'd By (Initials): **SS**

Prep Date: **01/15/21**

Exp Date: **01/14/22**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Manufacturer Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/DOHS Stock	APPL	504/DOHS Stock	20 ug/mL	**01/14/21**	**01/14/22**	438 uL	25 mL	**Methanol #0234140**	0.35 ug/mL
1,3 DBP Stock		1,3 DBP Stock	100 ug/mL			88 uL			

Name of Final Standard: **504/8011 Spike** — Prep'd By (Initials): **SS**

Prep Date: **01/15/21**

Exp Date: **05/15/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Manufacturer Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	**01/15/21**	**01/14/22**	1 mL	10 mL	**Methanol #0234140**	0.035 ug/mL

Name of Final Standard: **504/8011 Surrogate** — Prep'd By (Initials): **SS**

Prep Date: **01/15/21**

Exp Date: **05/15/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	**01/14/21**	**01/14/22**	35 uL	10 mL	**Methanol #0234140**	0.35 ug/mL

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	210127A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 1-15-21 1-15-22		Surrogate ID 1	504.1 Surrogate 1-15-21 5-15-21	
Spiked ID 2	504.1 SS Spike 10-19-20 2-19-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 9:35	
Spiked ID 8			Ext. End Time:	01/27/21 9:40	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** CFM **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127A Blk				0.035	1 equip	35.11	2	7	01/27/21 9:35	
2	210127A LCS-1		0.250	1	NA	NA equip	35.00	2	7	01/27/21 9:35	
3	210127A LCSD-1		0.250	1	NA	NA equip	35.52	2	7	01/27/21 9:35	
4	BA25232	BA25232W01	0.019	1	NA	NA equip	35.18	2	7	01/27/21 9:35	94792
5	BA25689	BA25689W06			0.035	1 equip	35.11	2	7	01/27/21 9:35	94863
6	BA25690	BA25690W05			0.035	1 equip	35.29	2	7	01/27/21 9:35	94863
7	BA25698	BA25698W07			0.035	1 equip	35.75	2	7	01/27/21 9:35	94863
8	BA25699	BA25699W06			0.035	1 equip	35.19	2	7	01/27/21 9:35	94863
9	BA25701	BA25701W05			0.035	1 equip	35.38	2	7	01/27/21 9:35	94863
10	BA25703	BA25703W04			0.035	1 equip	35.59	2	7	01/27/21 9:35	94863
11	BA25704	BA25704W04			0.035	1 equip	35.52	2	7	01/27/21 9:35	94863
12	BA25706	BA25706W04			0.035	1 equip	35.33	2	7	01/27/21 9:35	94863
13	M STD 1		0.020	1	NA	NA equip	35.68	2	7	01/27/21 9:35	
14	M STD 2		0.100	1	NA	NA equip	35.14	2	7	01/27/21 9:35	
15	M STD 3		0.250	1	NA	NA equip	35.08	2	7	01/27/21 9:35	
16	M STD 4		0.500	1	NA	NA equip	35.11	2	7	01/27/21 9:35	

Solvent and Lot#	
Scale Blance ID	eb1
pH strip	hc025486
NaCL	19L315204
GC2 Hexane (2mLs)	dy768

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/27/21
Time	13:00
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	KY
Concentration	KY

Modified	01/27/21 9:44:31 AM

Reviewed By: SS **Date** 01/28/21

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	210127A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 1-15-21 1-15-22		Surrogate ID 1	504.1 Surrogate 1-15-21 5-15-21	
Spiked ID 2	504.1 SS Spike 10-19-20 2-19-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 9:35	
Spiked ID 8			Ext. End Time:	01/27/21 9:40	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** CFM **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	M STD 5		0.750	1	NA	NA equip	35.09	2	7	01/27/21 9:35	
18	M STD 6		1	1	NA	NA equip	35.20	2	7	01/27/21 9:35	
19	SS		0.100	2	0.035	NA equip	35.15	2	7	01/27/21 9:35	

Solvent and Lot#	
Scale Blance ID	cb1
pH strip	hc025486
NaCL	19L315204
GC2 Hexane (2mLs)	dy768

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	
Time	
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	KY
Concentration	KY

Modified	01/27/21 9:44:31 AM

Reviewed By: SS **Date** 01/28/21

Injection Log

Directory: G:\HERBIE\DATA\210127\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	210127002.[	1	8011-1 1/27/21	water	1/27/21 14:29
2	3	210127003.[	1	8011-2 1/27/21	water	1/27/21 14:49
3	4	210127004.[	1	8011-3 1/27/21	water	1/27/21 15:10
4	5	210127005.[	1	8011-4 1/27/21	water	1/27/21 15:30
5	6	210127006.[	1	8011-5 1/27/21	water	1/27/21 15:50
6	7	210127007.[	1	8011-6 1/27/21	water	1/27/21 16:11
7	8	210127008.[	1	8011-SS 1/27/21	water	1/27/21 16:31
8	9	210127009.[	1	8011-3 1/27/21	water	1/27/21 16:51
9	10	210127010.[	1	210127A BLK 2/35.11	water	1/27/21 17:12
10	11	210127011.[	1	210127A LCS-1 2/35.00	water	1/27/21 17:32
11	12	210127012.[	1	210127A LCSD-1 2/35.52	water	1/27/21 17:52
12	14	210127014.[	1	BA25689W06 2/35.11	water	1/27/21 18:33
13	15	210127015.[	1	BA25690W05 2/35.29	water	1/27/21 18:54
14	16	210127016.[	1	BA25698W07 2/35.75	water	1/27/21 19:14
15	17	210127017.[	1	BA25699W06 2/35.19	water	1/27/21 19:34
16	18	210127018.[	1	BA25701W05 2/35.38	water	1/27/21 19:55
17	19	210127019.[	1	BA25703W04 2/35.59	water	1/27/21 20:15
18	20	210127020.[	1	BA25704W04 2/35.52	water	1/27/21 20:35
19	21	210127021.[	1	BA25706W04 2/35.33	water	1/27/21 20:56
20	22	210127022.[	1	8011-3 1/27/21	water	1/27/21 21:16

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/TW

			1218004.D	1218005.D	1218006.D	1218007.D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
6																	
7																	
8																	
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1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

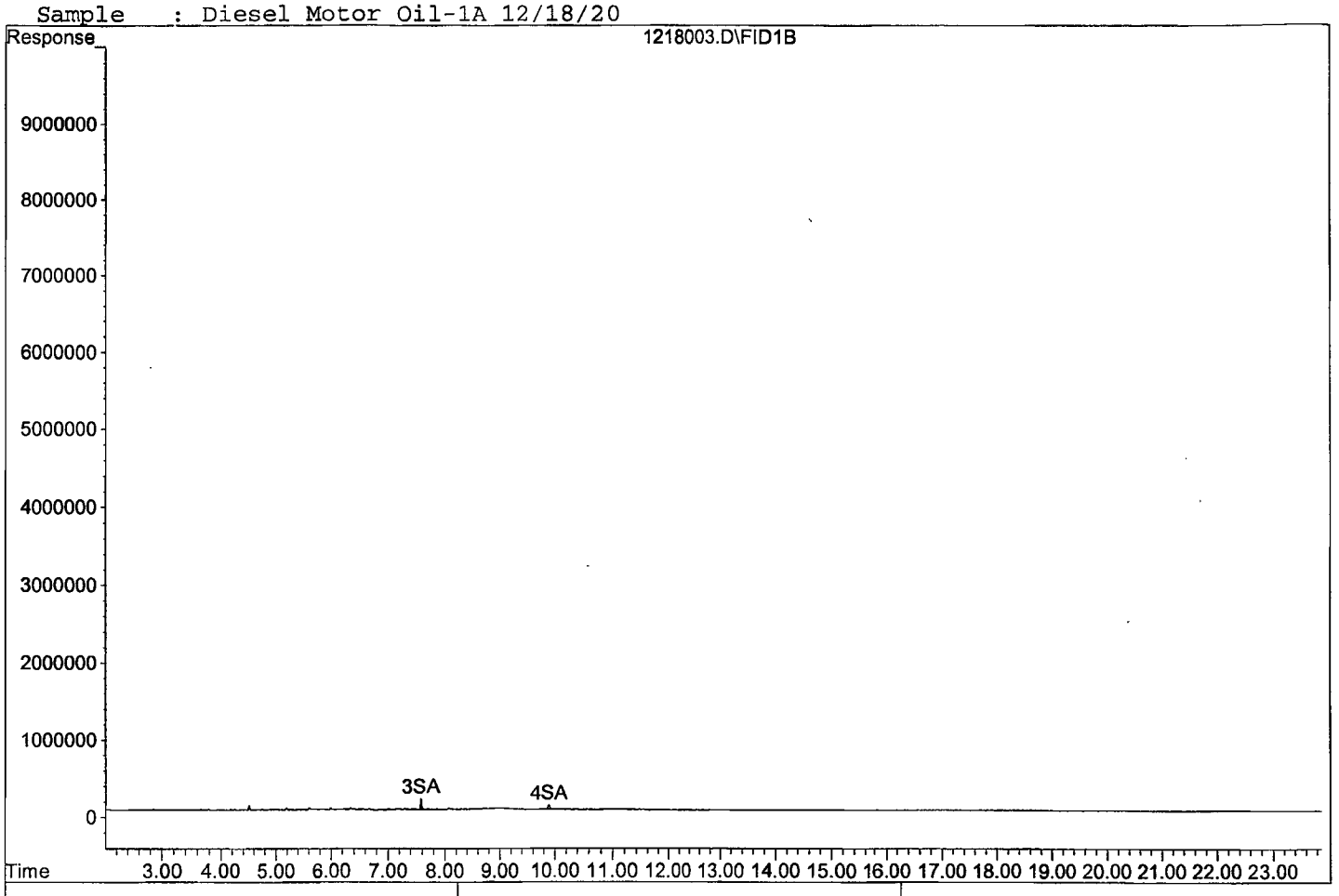
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

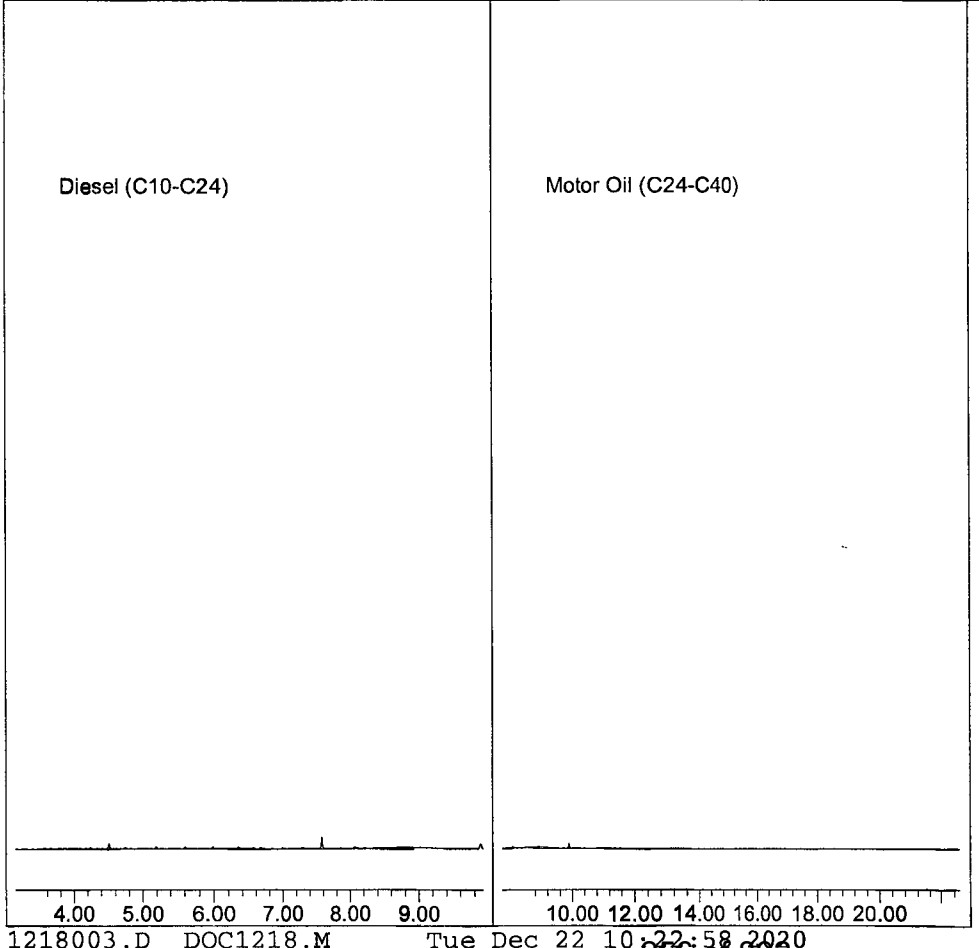
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

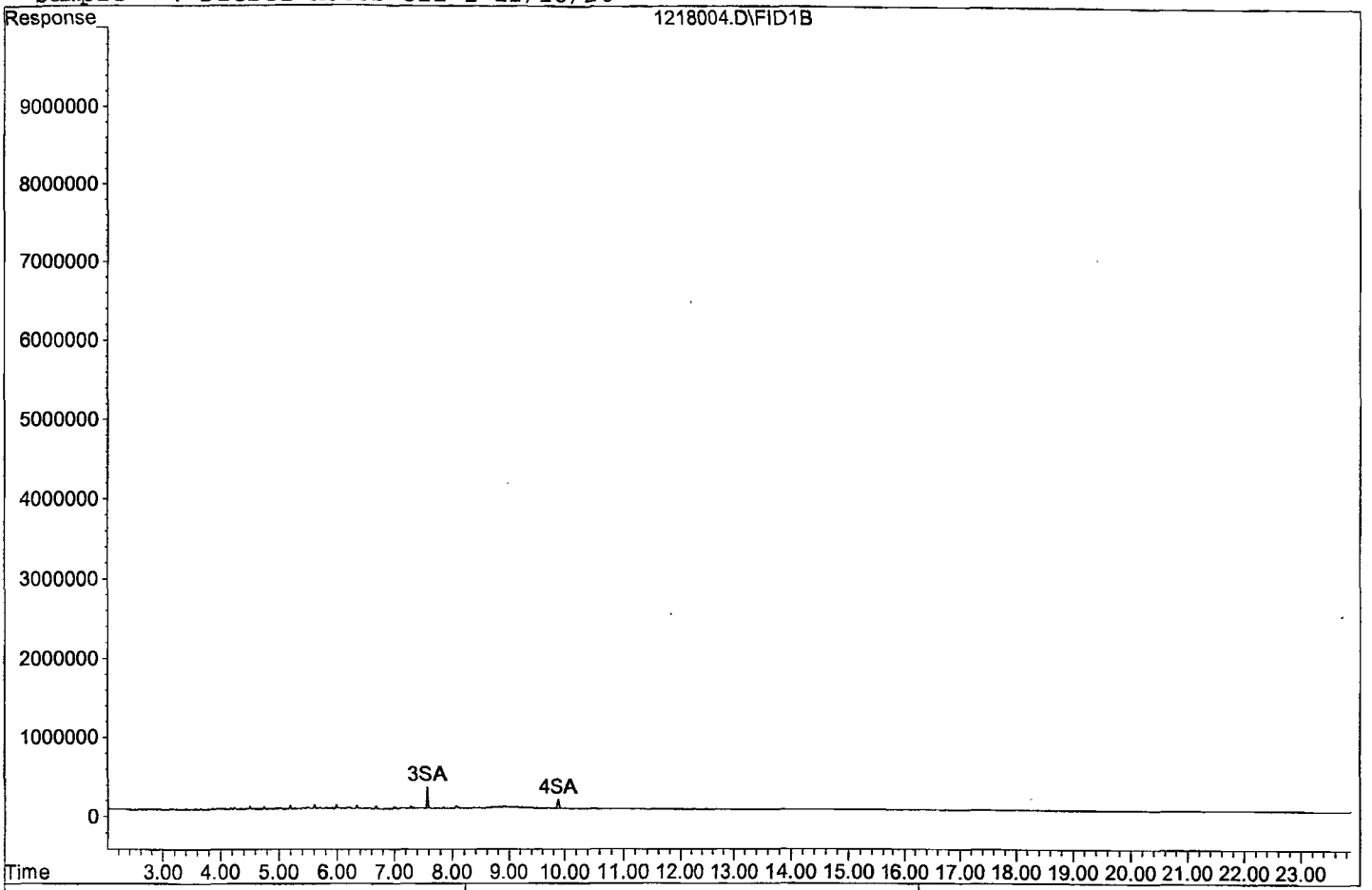
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

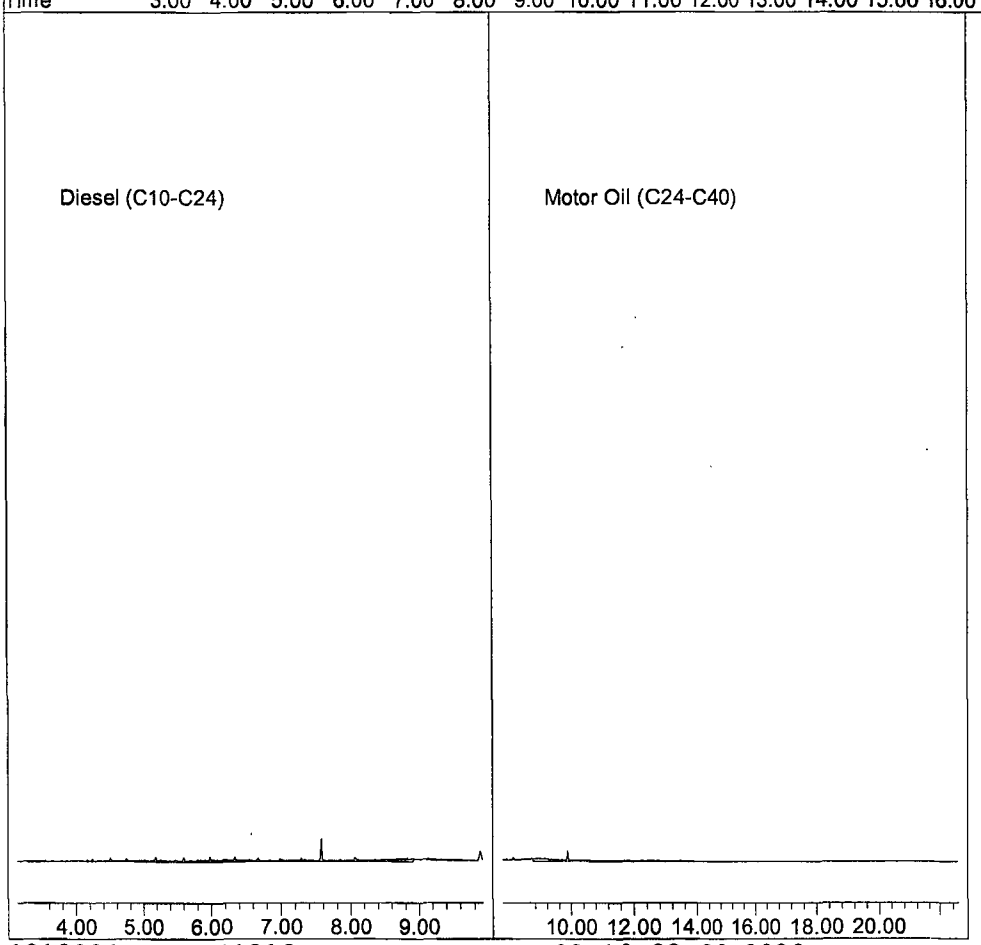
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery =		1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery =		1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

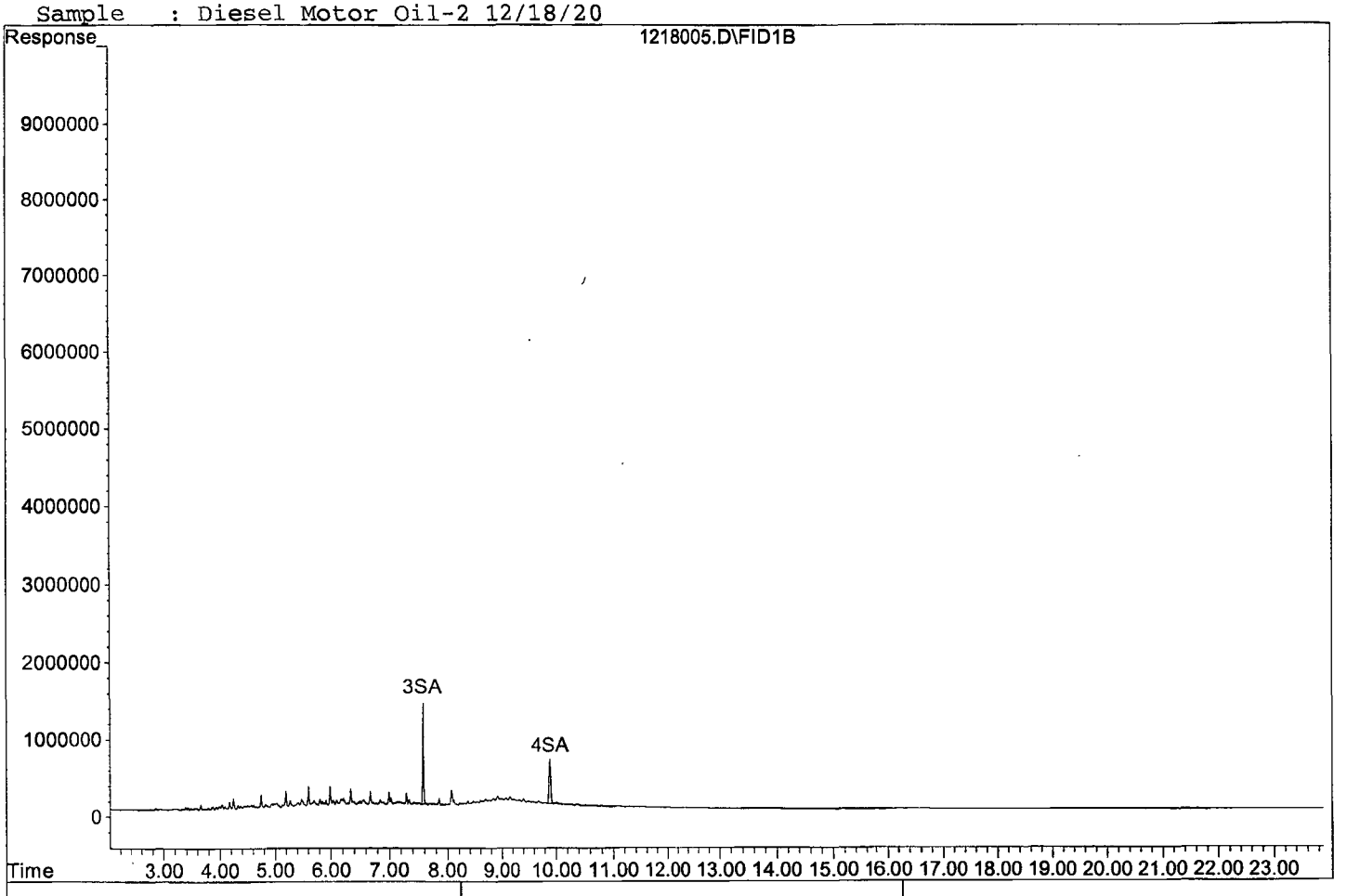
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

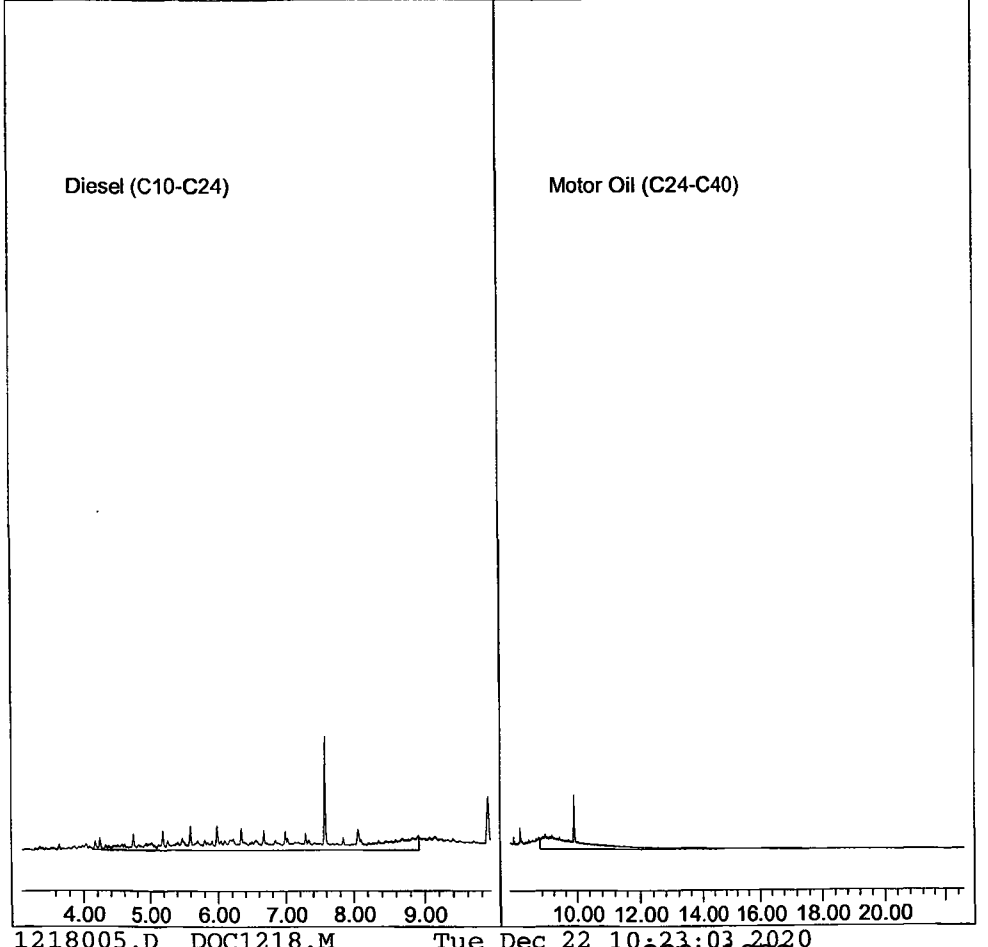
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

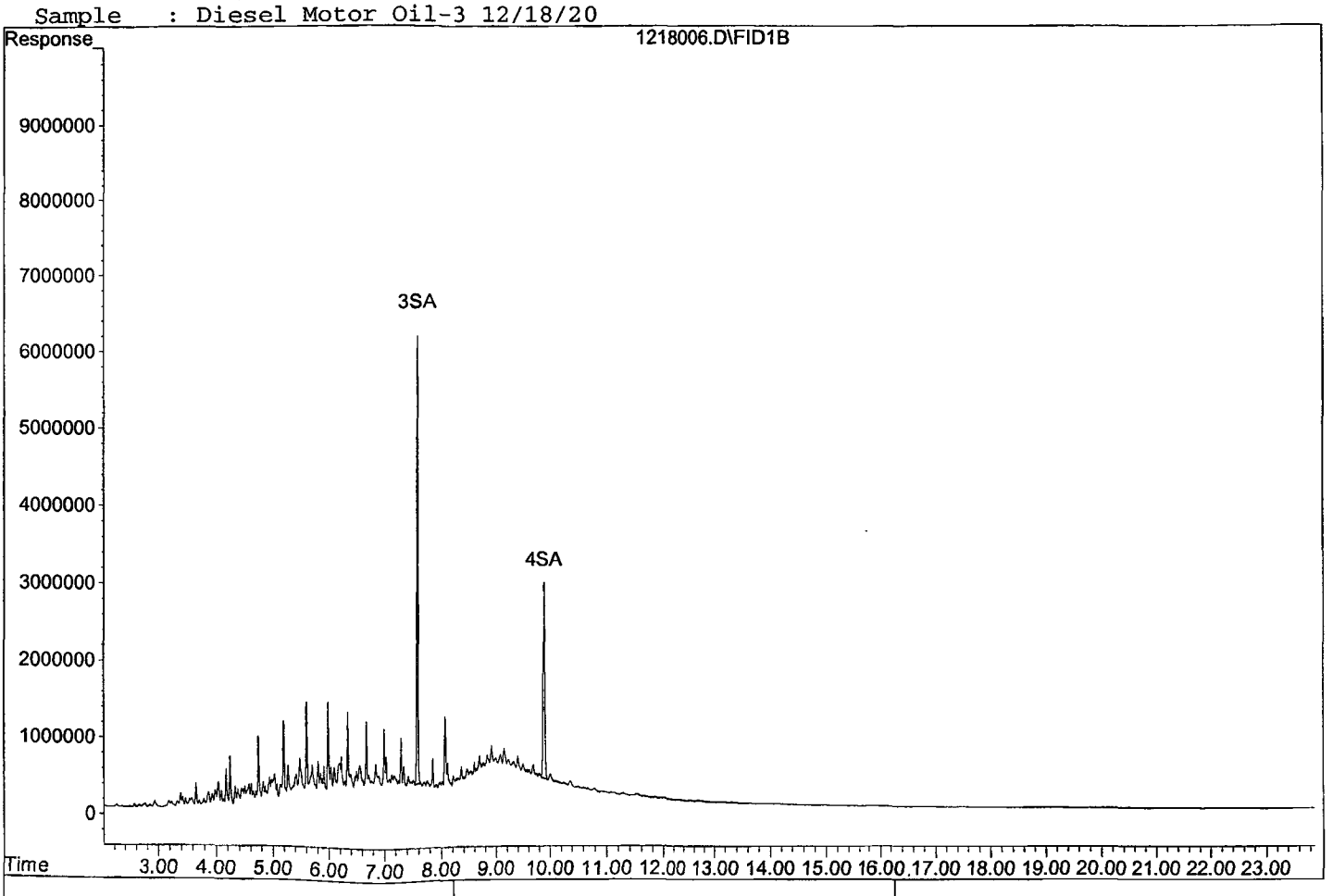
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000	Recovery =		40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000	Recovery =		40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb

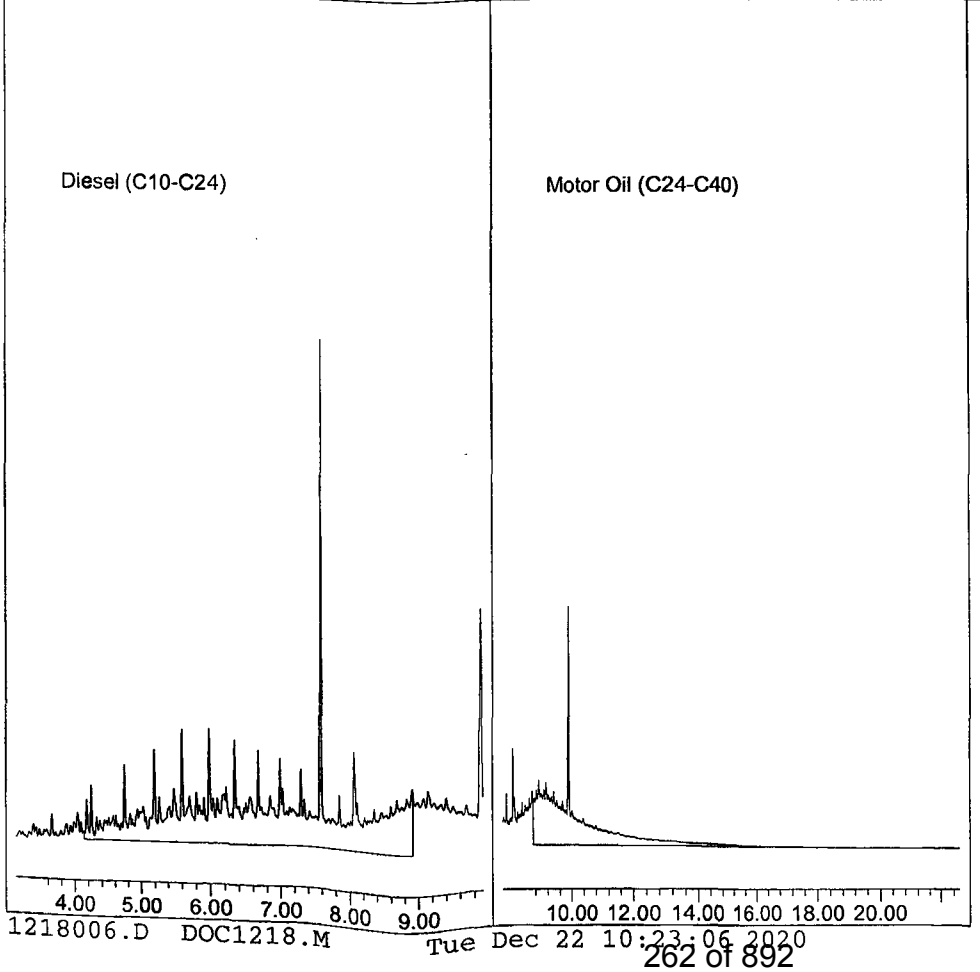
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

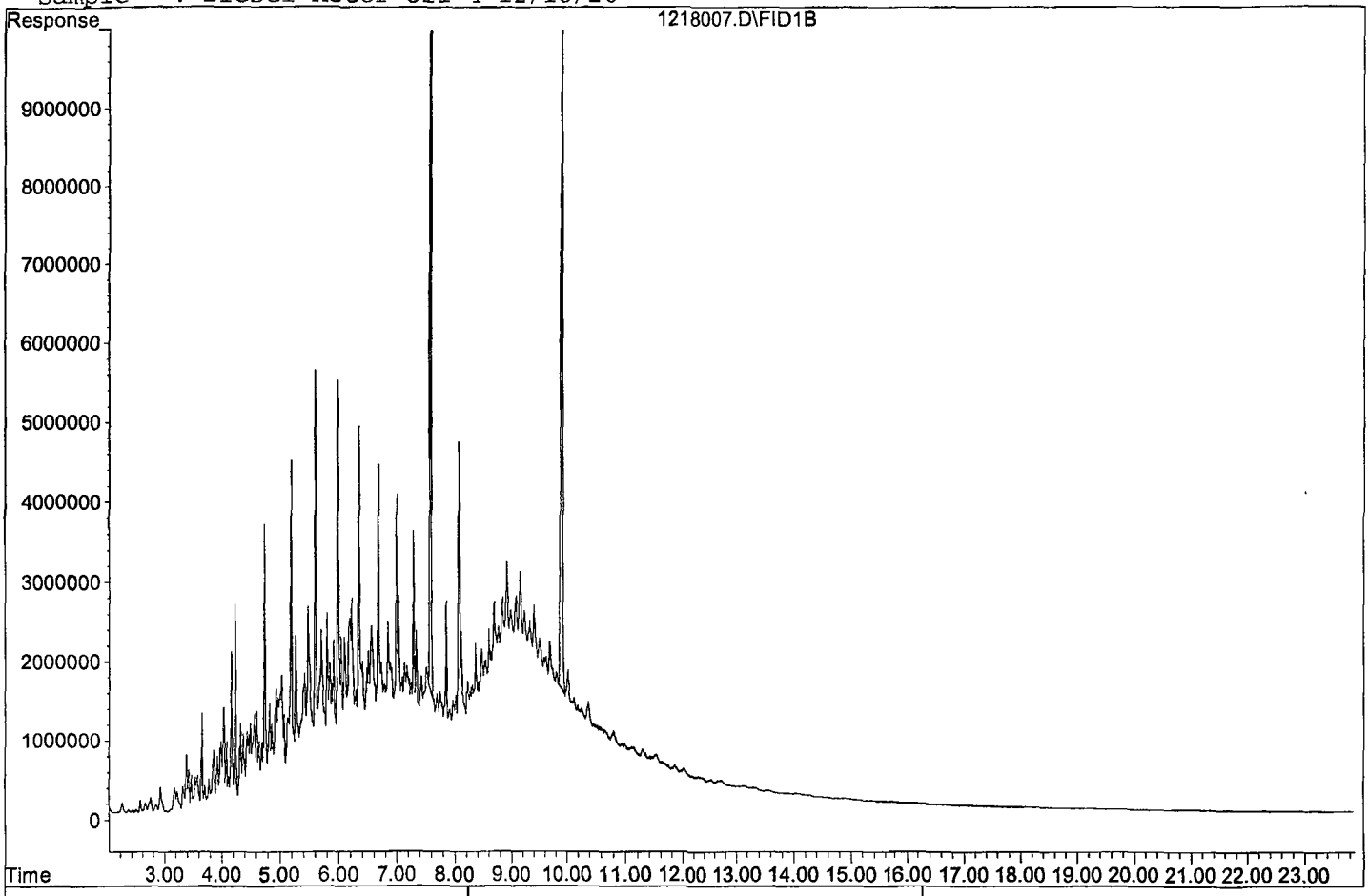
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb

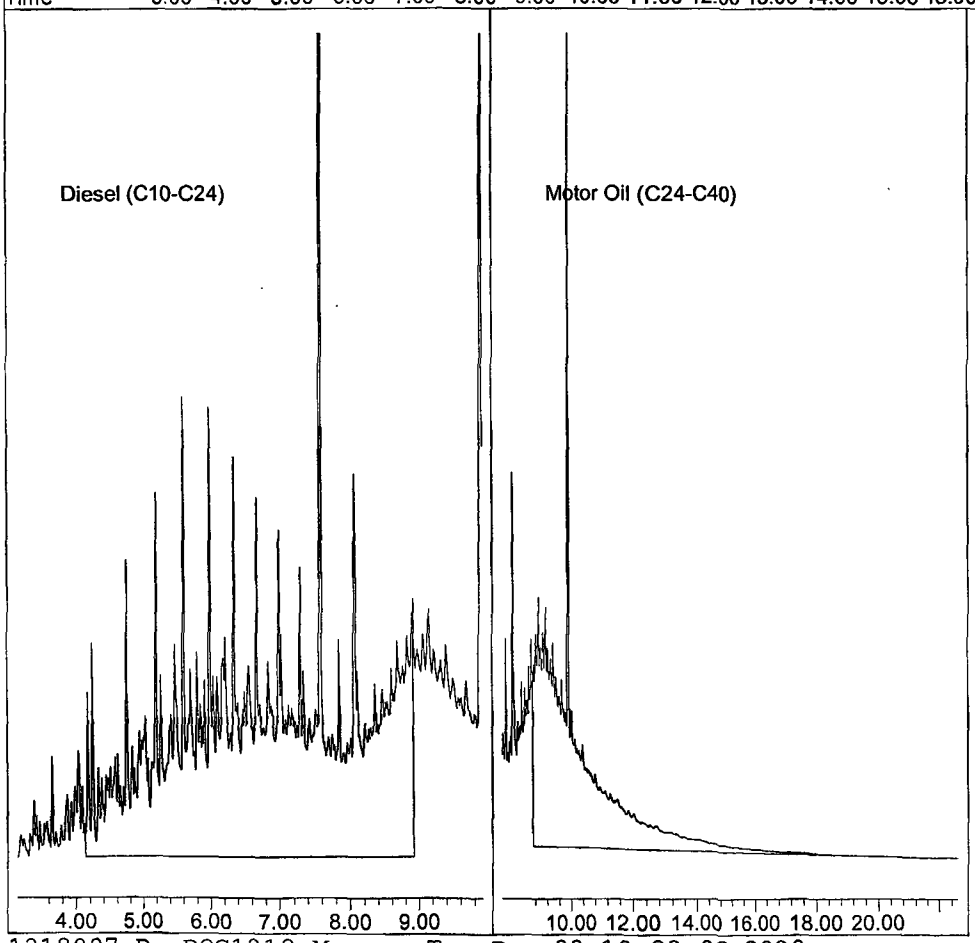
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

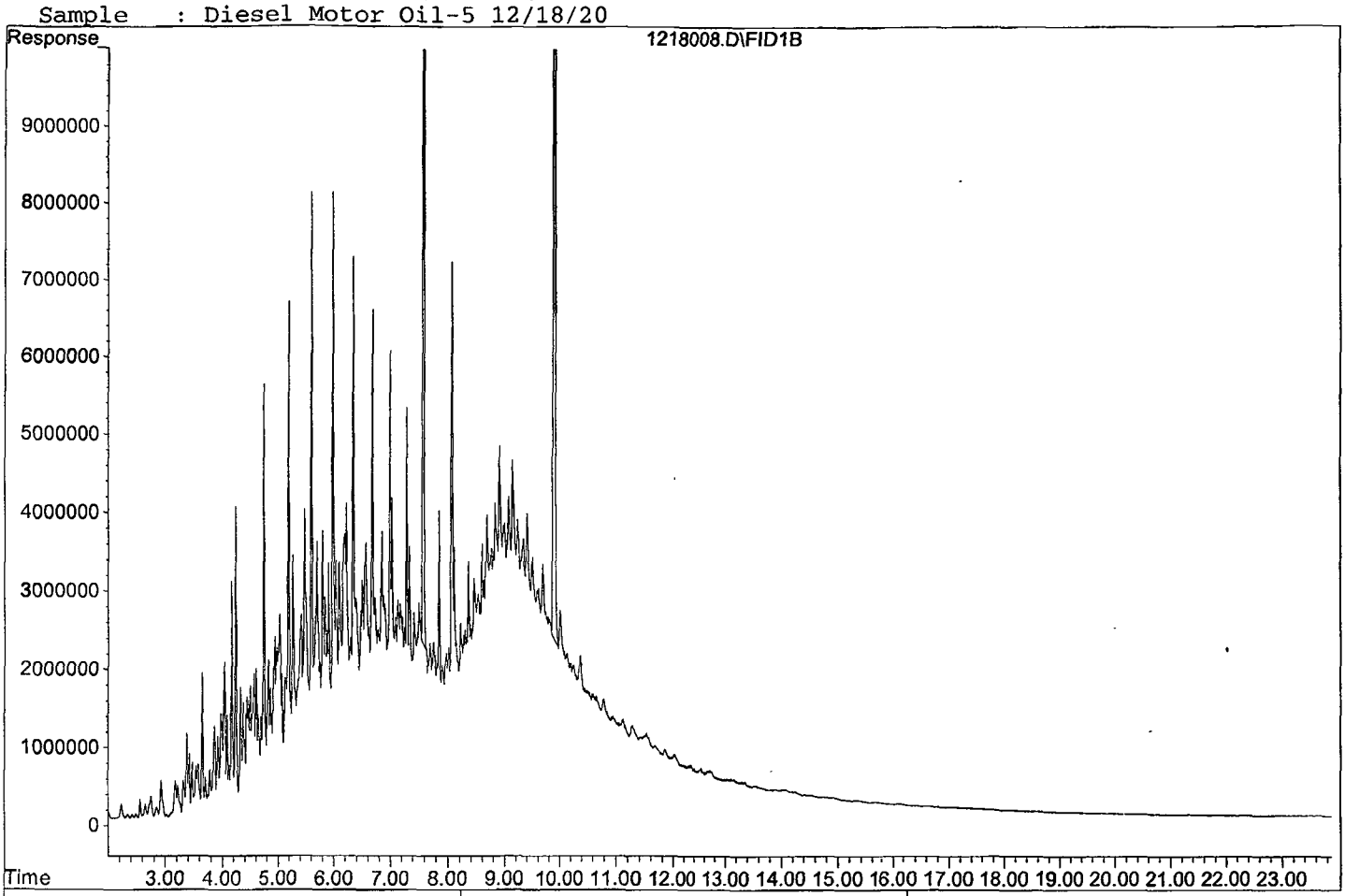
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431	ppb
Surrogate Spike 30.000	Recovery =		224.77%	
4) SA Octacosane(S)	9.91	323635971	71.254	ppb
Surrogate Spike 30.000	Recovery =		237.51%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746	ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286	ppb

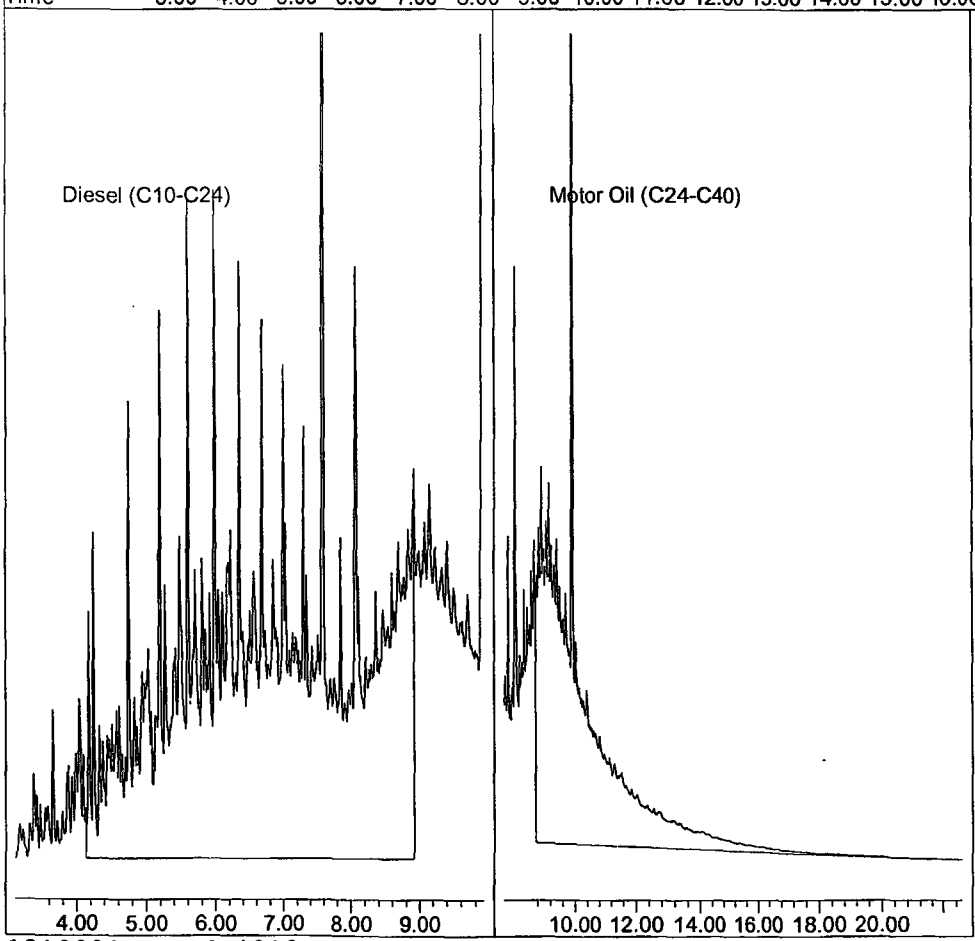
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

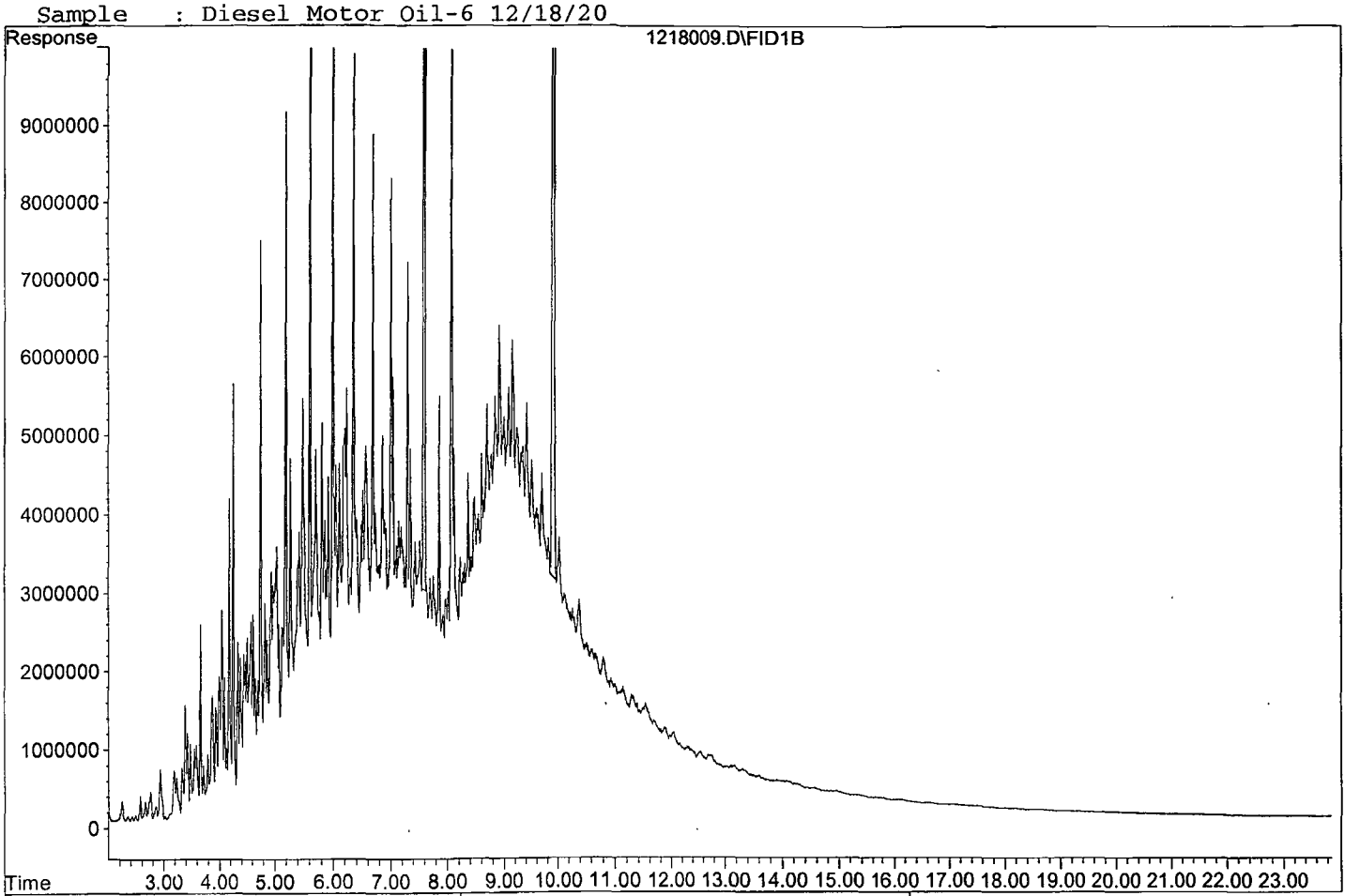
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

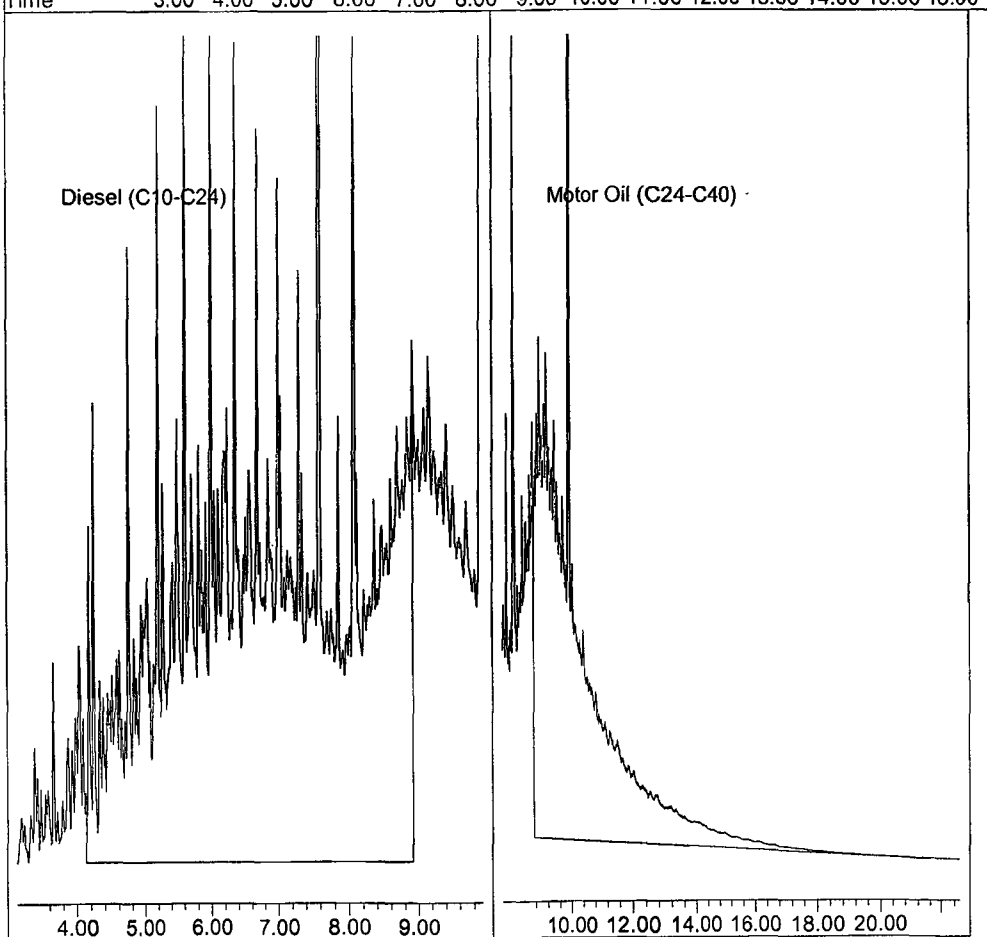
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572	ppb
Surrogate Spike 30.000		Recovery =	311.91%	
4) SA Octacosane(S)	9.91	438795924	96.608	ppb
Surrogate Spike 30.000		Recovery =	322.03%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330	ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739	ppb

Target Compounds

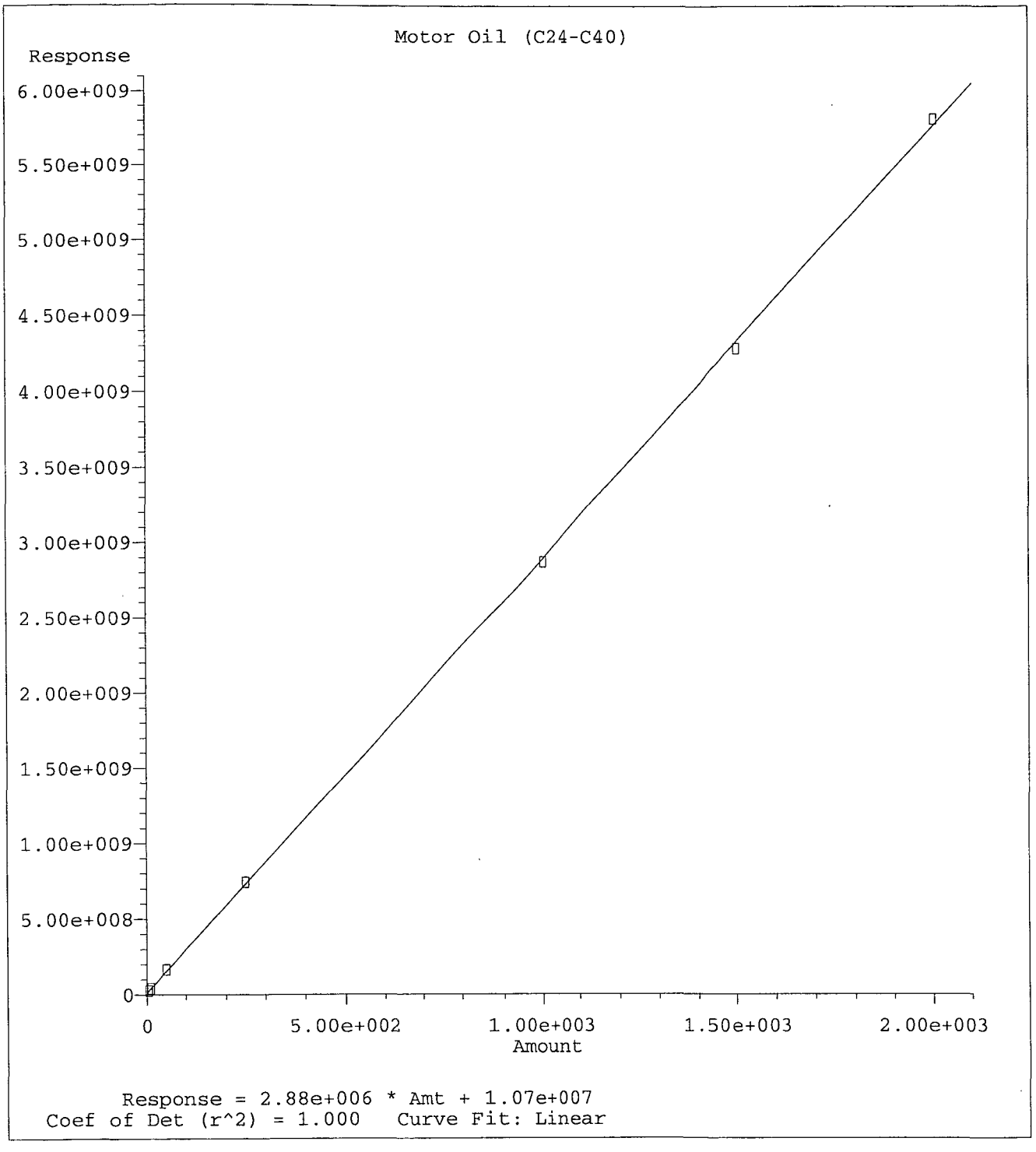
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20





1218009.D DOC1218.M Tue Dec 22 10:23:13 2020



Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
3							
4							
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

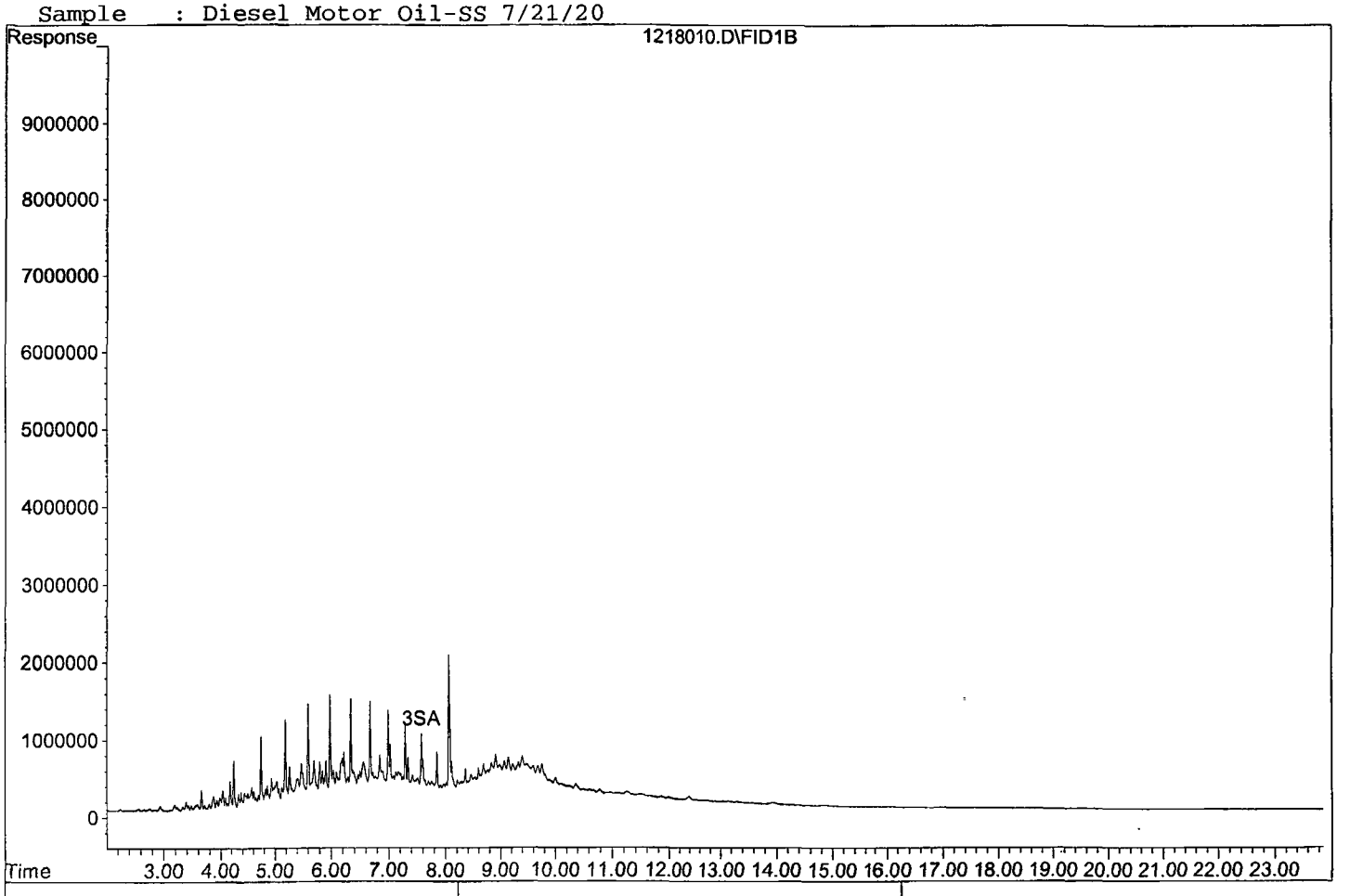
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

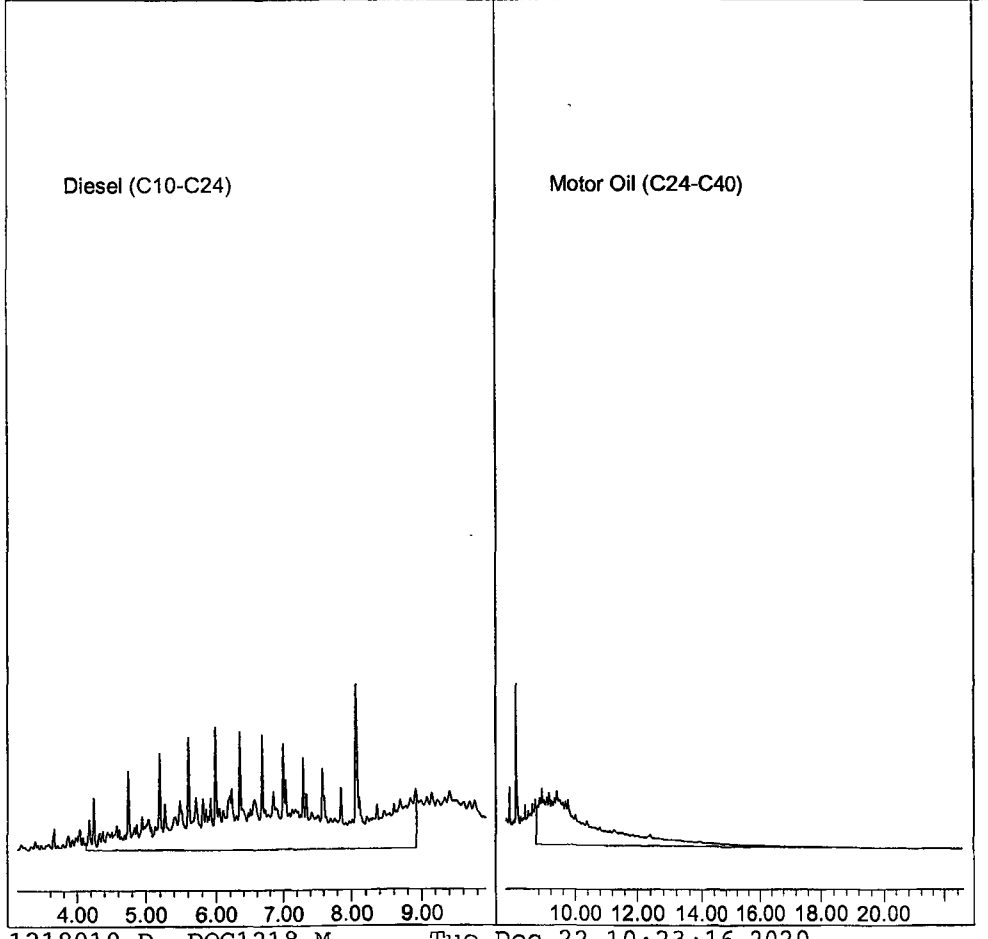
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000	Recovery =		2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000	Recovery =		0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107133.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2497740	1.9	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1587980	8.0	HBTML	8.9
3	SA	Ortho-Terphenyl(S)	2953720	3153820	6.8	SA	
4	SA	Octacosane(S)	2271000	2435320	7.2	SA	
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		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107133.D Vial: 33
Acq On : 1-27-21 19:19:05 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

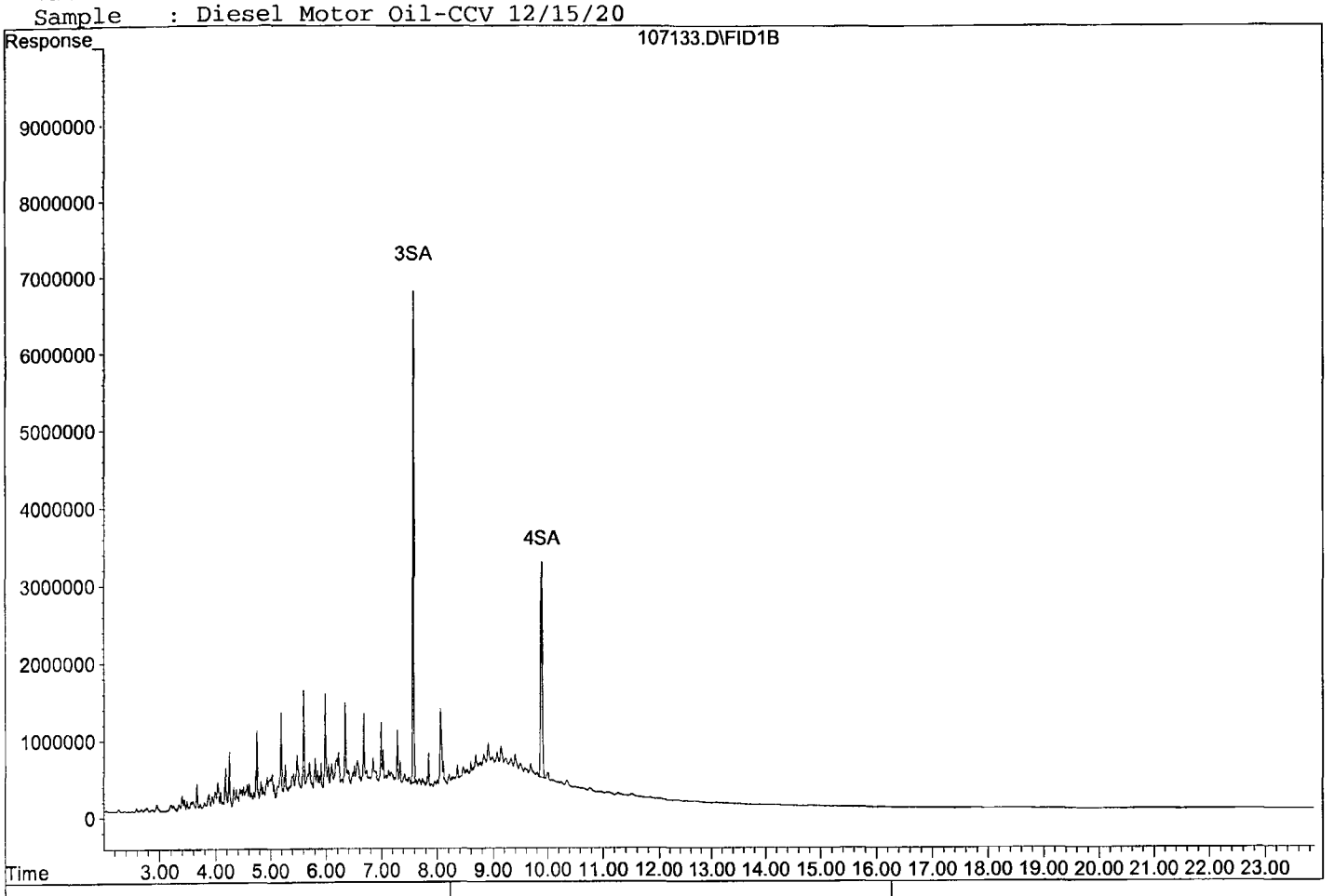
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

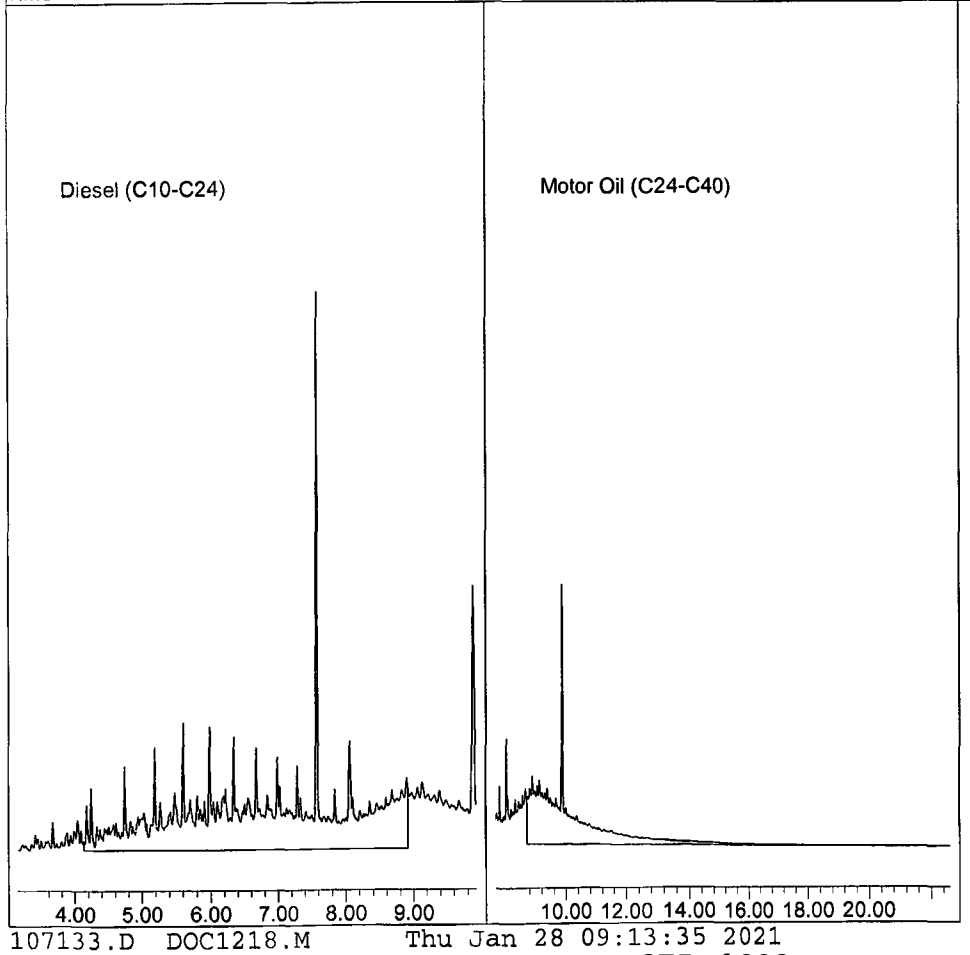
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	78845468	13.347 ppb
Surrogate Spike 30.000	Recovery =		44.49%
4) SA Octacosane(S)	9.88	60883048	13.404 ppb
Surrogate Spike 30.000	Recovery =		44.68%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1248868238	254.666 ppb
2) HBTM Motor Oil (C24-C40)	15.16	793991978	272.142 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107133.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/28/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107144.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2727550	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1722560	0.25	HBTML	18
3	SA	Ortho-Terphenyl(S)	2953720	3429530	16	SA	
4	SA	Octacosane(S)	2271000	2659560	17	SA	
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		Average			11.1		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107144.D Vial: 44
Acq On : 1-28-21 0:27:43 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

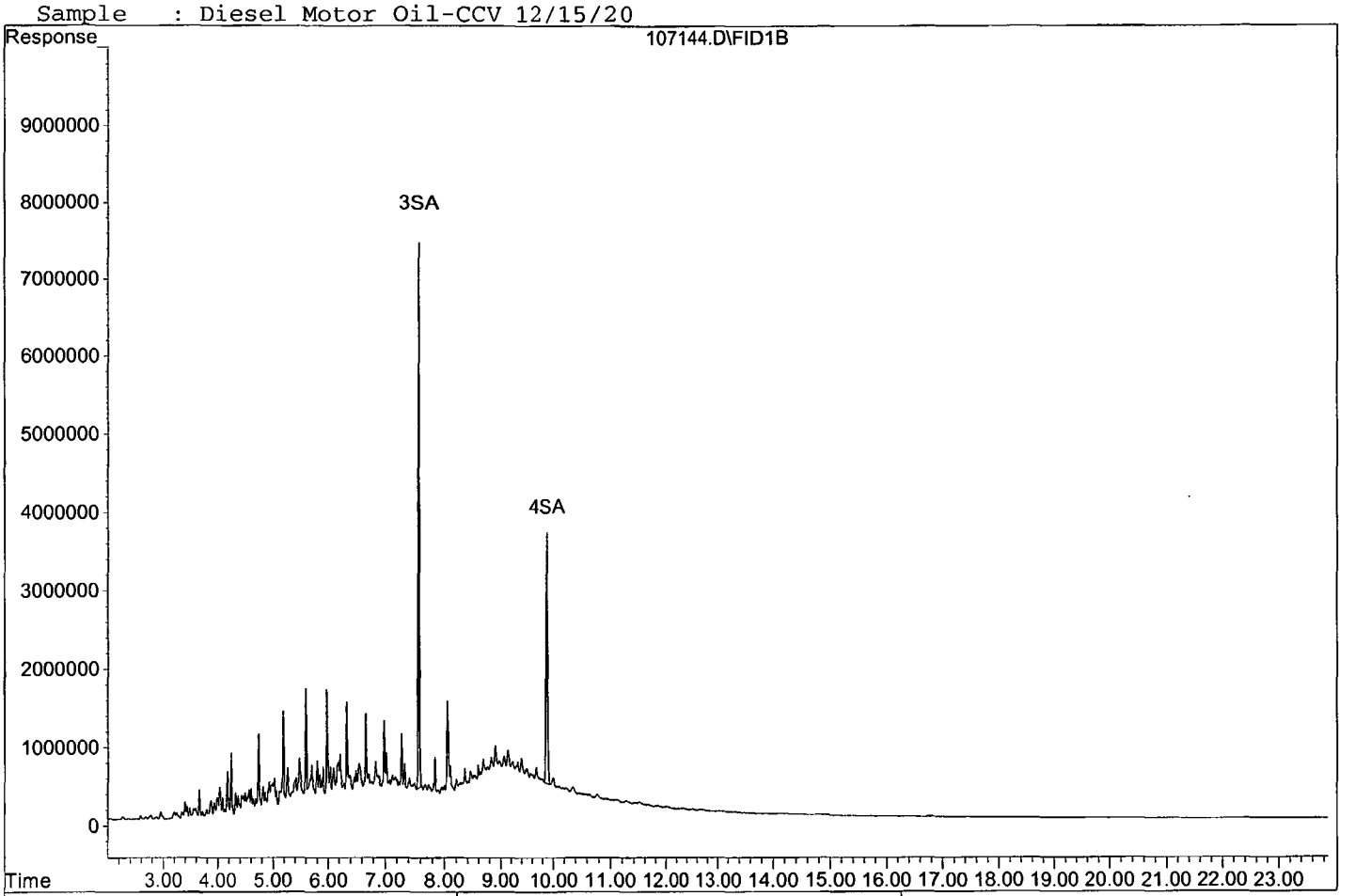
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

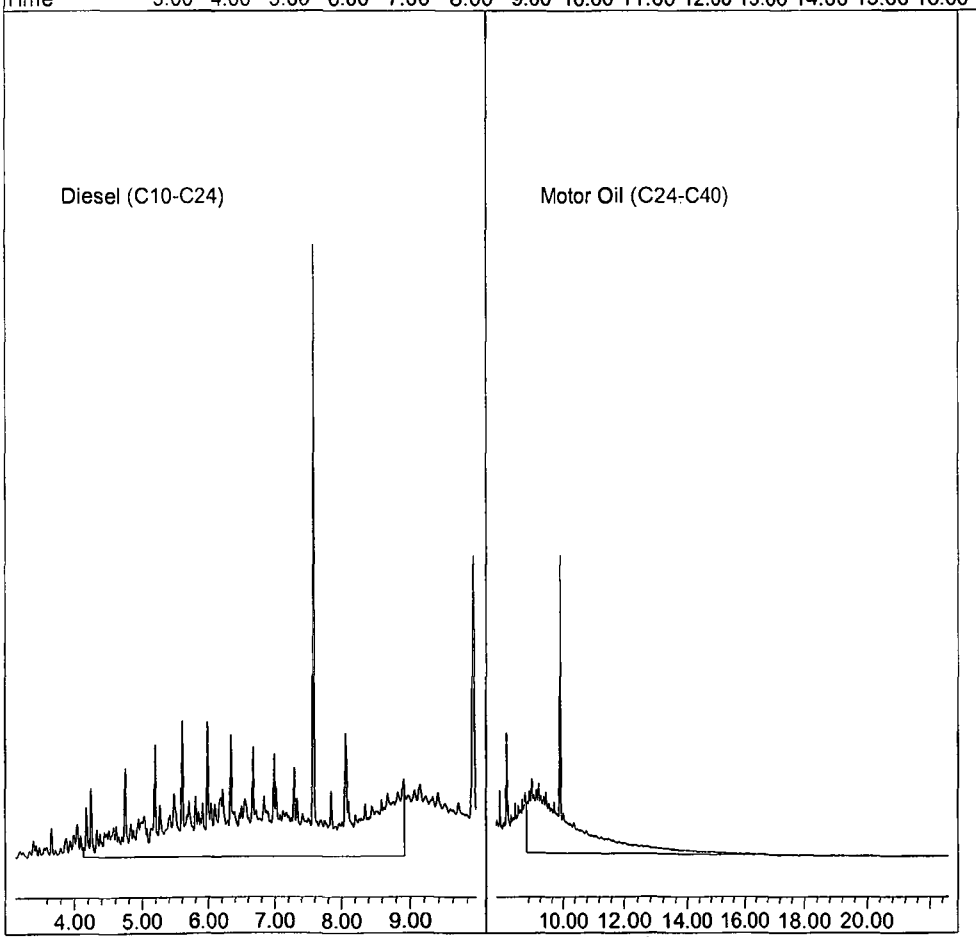
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	85738203	14.514 ppb
Surrogate Spike 30.000	Recovery =		48.38%
4) SA Octacosane(S)	9.88	66488915	14.639 ppb
Surrogate Spike 30.000	Recovery =		48.80%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1363774513	278.097 ppb
2) HBTM Motor Oil (C24-C40)	15.16	861281756	295.521 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107144.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/29/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107211.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2273470	7.3	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1431410	17	HBTML	2.0
3	SA	Ortho-Terphenyl(S)	2953720	2869680	2.8	SA	
4	SA	Octacosane(S)	2271000	2203460	3.0	SA	
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		Average			7.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107211.D Vial: 11
Acq On : 1-29-21 9:54:09 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 29 10:18 2021 Quant Results File: DOC1218.RES

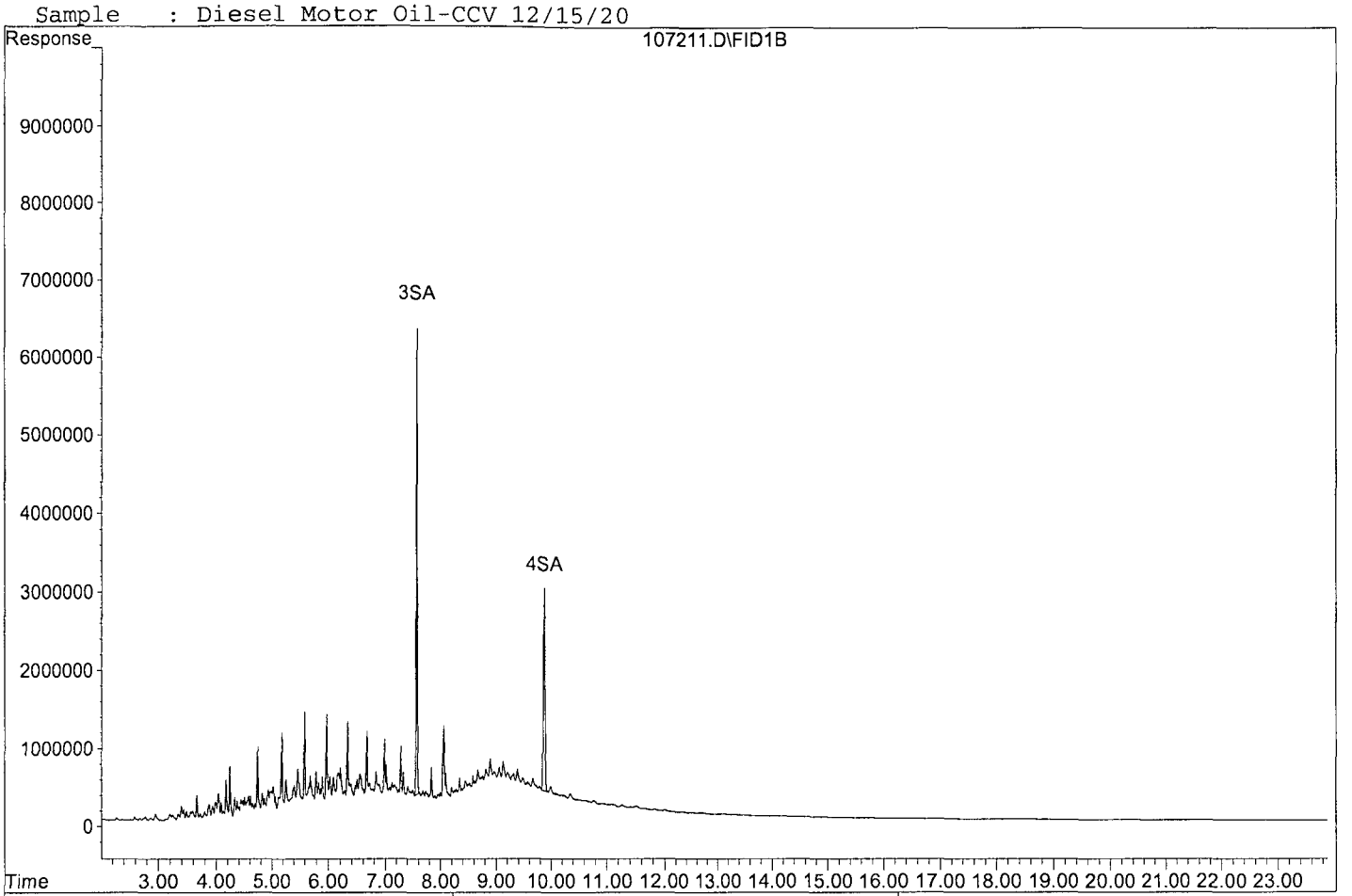
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

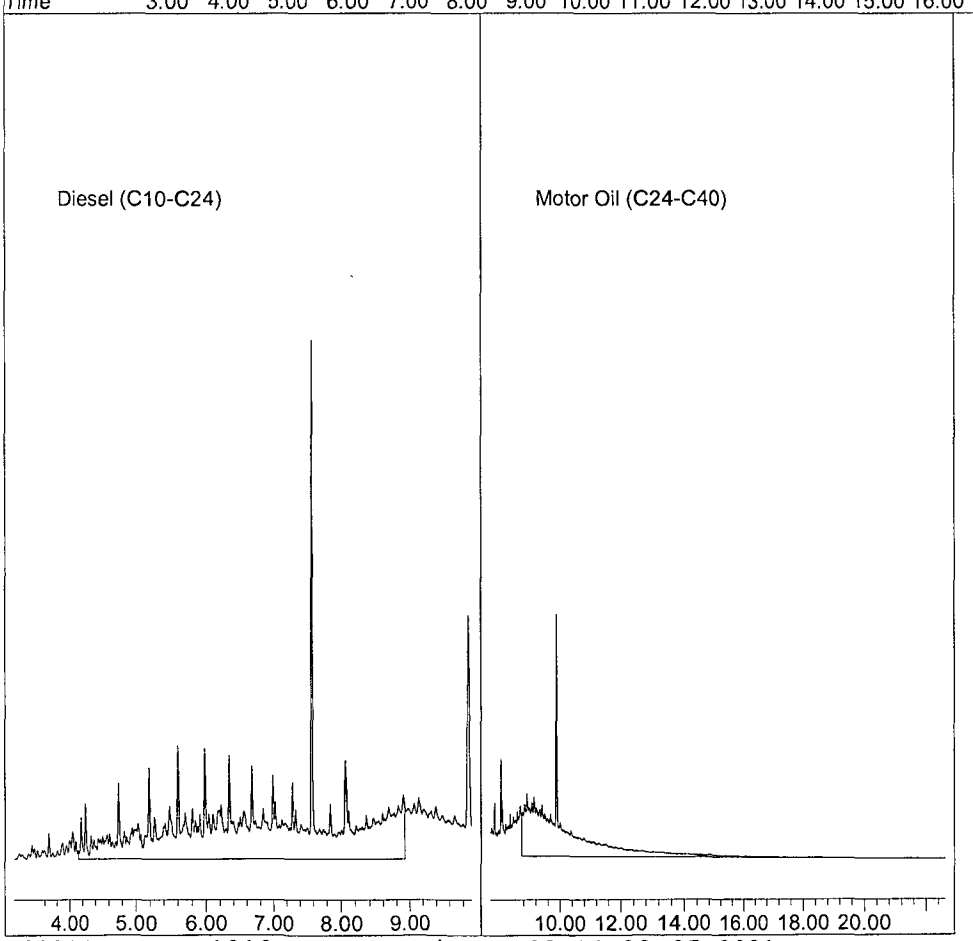
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	71742068	12.144 ppb
Surrogate Spike 30.000	Recovery =		40.48%
4) SA Octacosane(S)	9.88	55086398	12.128 ppb
Surrogate Spike 30.000	Recovery =		40.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1136733472	231.800 ppb
2) HBTM Motor Oil (C24-C40)	15.16	715702618	244.942 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107211.D
Sample : Diesel Motor Oil-CCV 12/15/20





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/29/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107220.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2339570	4.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1476620	14	HBTML	1.1
3	SA	Ortho-Terphenyl(S)	2953720	2950870	0.10	SA	
4	SA	Octacosane(S)	2271000	2269750	0.06	SA	
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		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107220.D Vial: 20
Acq On : 1-29-21 14:07:42 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 29 14:34 2021 Quant Results File: DOC1218.RES

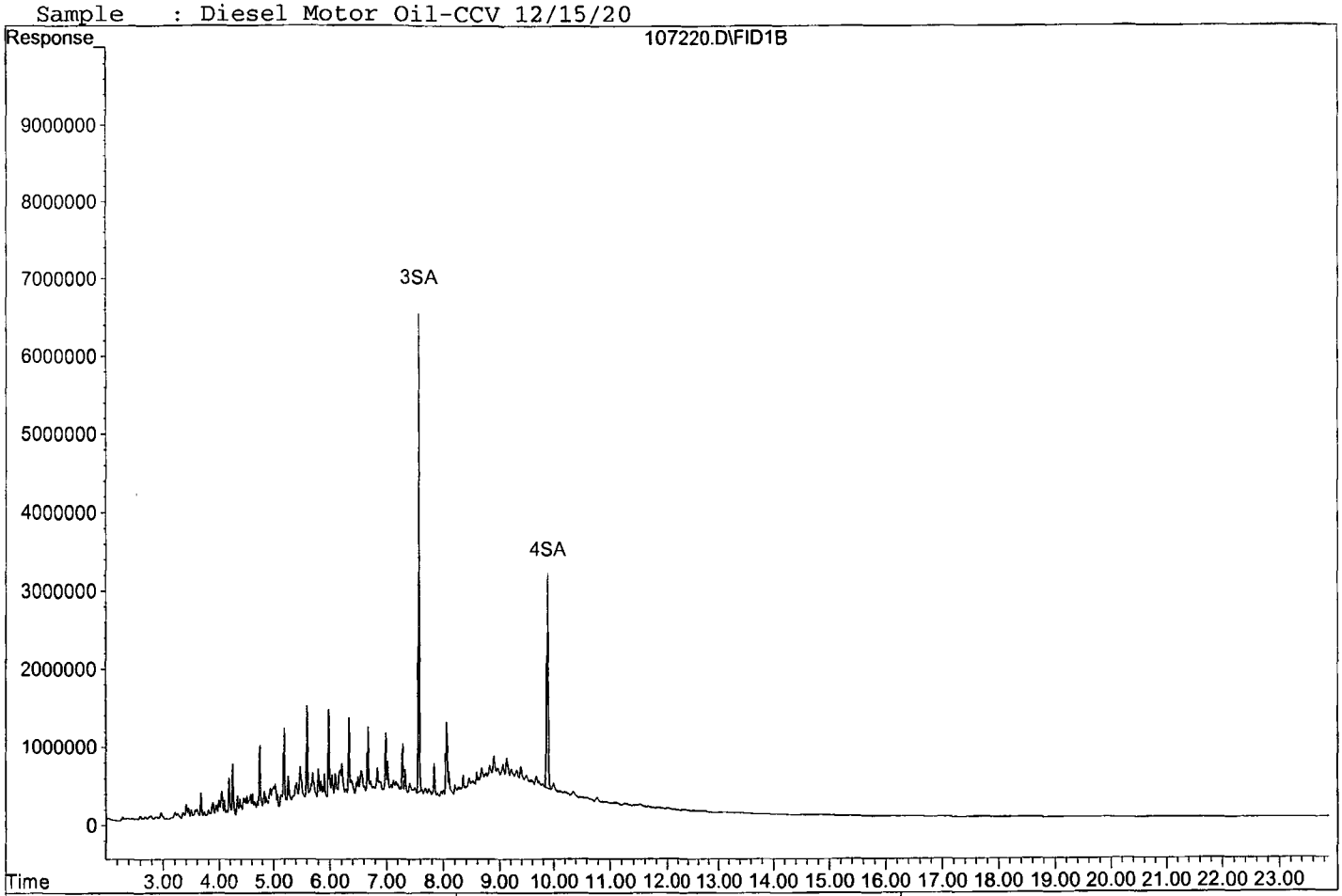
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

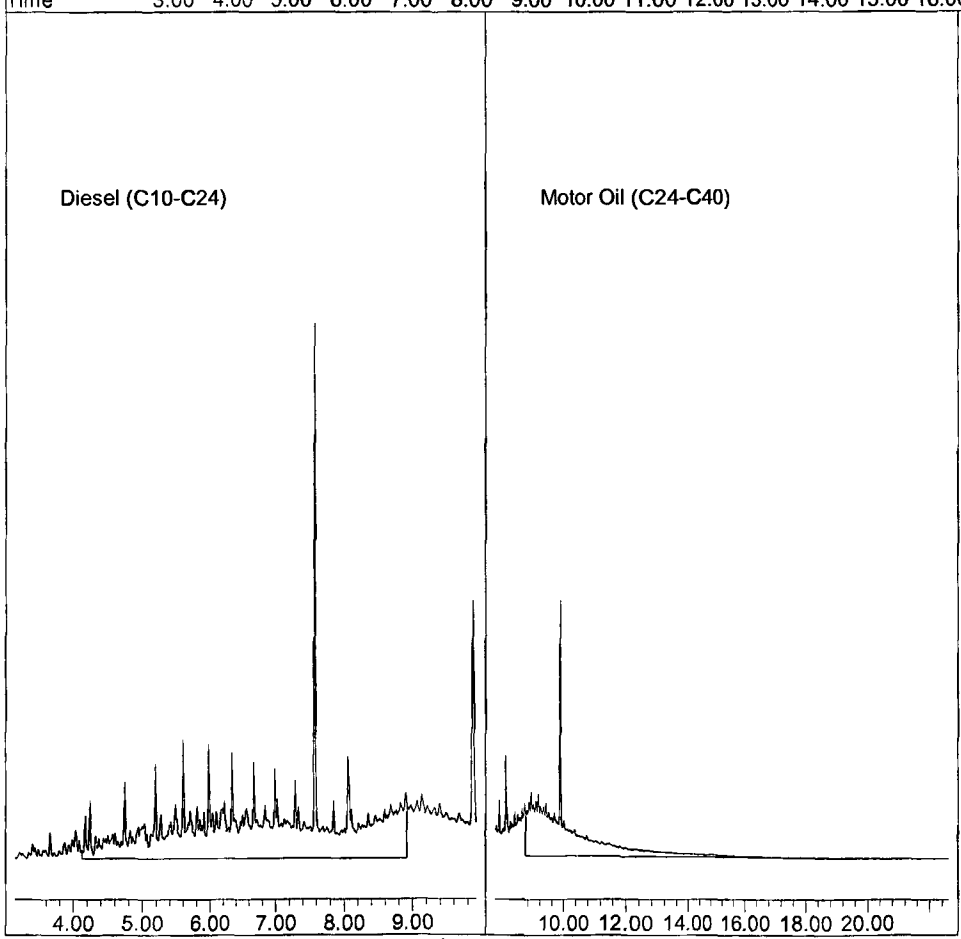
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	73771687	12.488 ppb
Surrogate Spike 30.000		Recovery =	41.63%
4) SA Octacosane(S)	9.88	56743875	12.493 ppb
Surrogate Spike 30.000		Recovery =	41.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1169782903	238.539 ppb
2) HBTM Motor Oil (C24-C40)	15.16	738308491	252.796 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107220.D
Sample : Diesel Motor Oil-CCV 12/15/20





ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107140.D Vial: 40
Acq On : 1-27-21 22:35:30 Operator:
Sample : BA25690W19 5/1040 Inst : Apollo
Misc : water Multiplr: 4.81
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

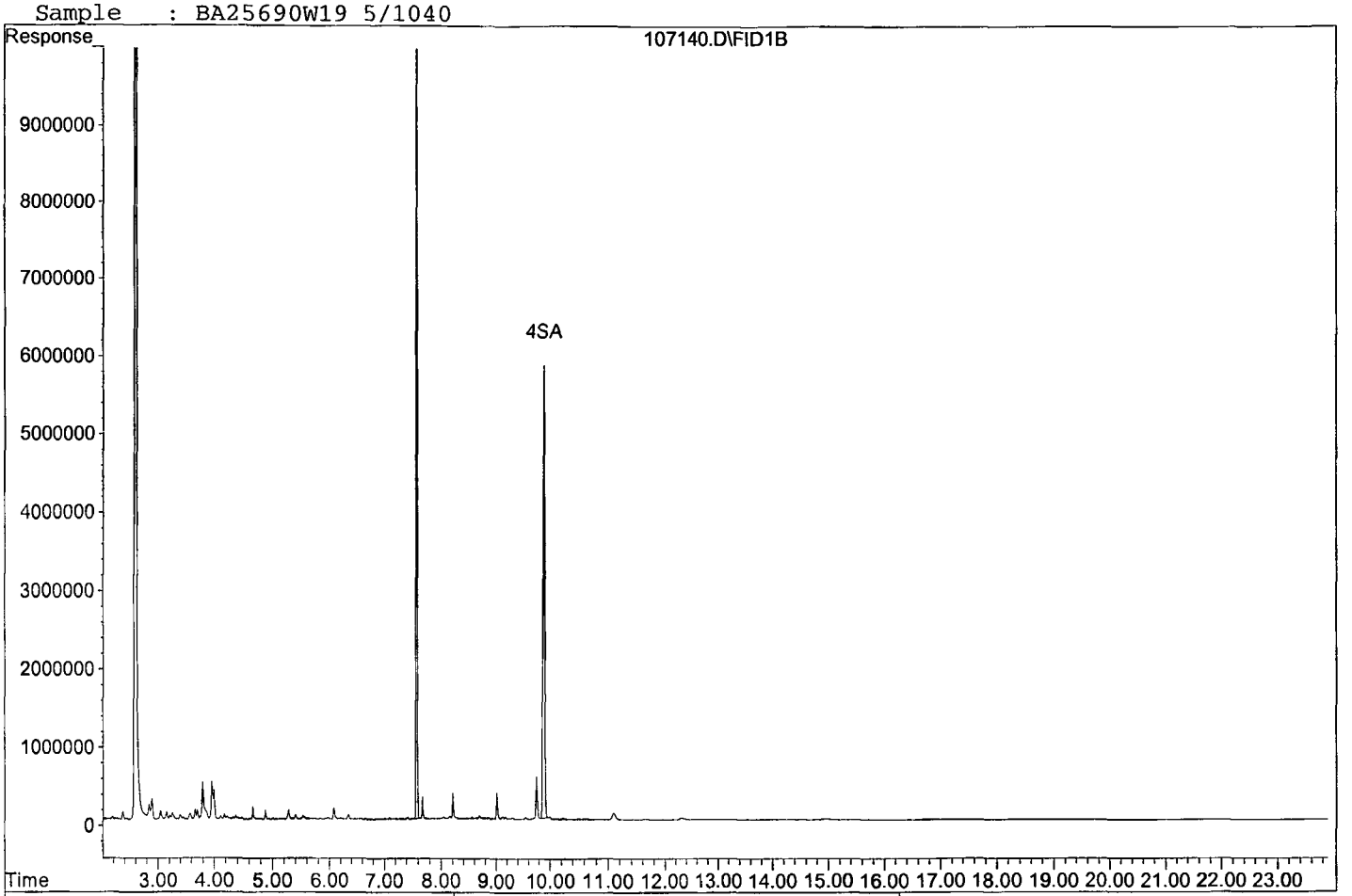
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

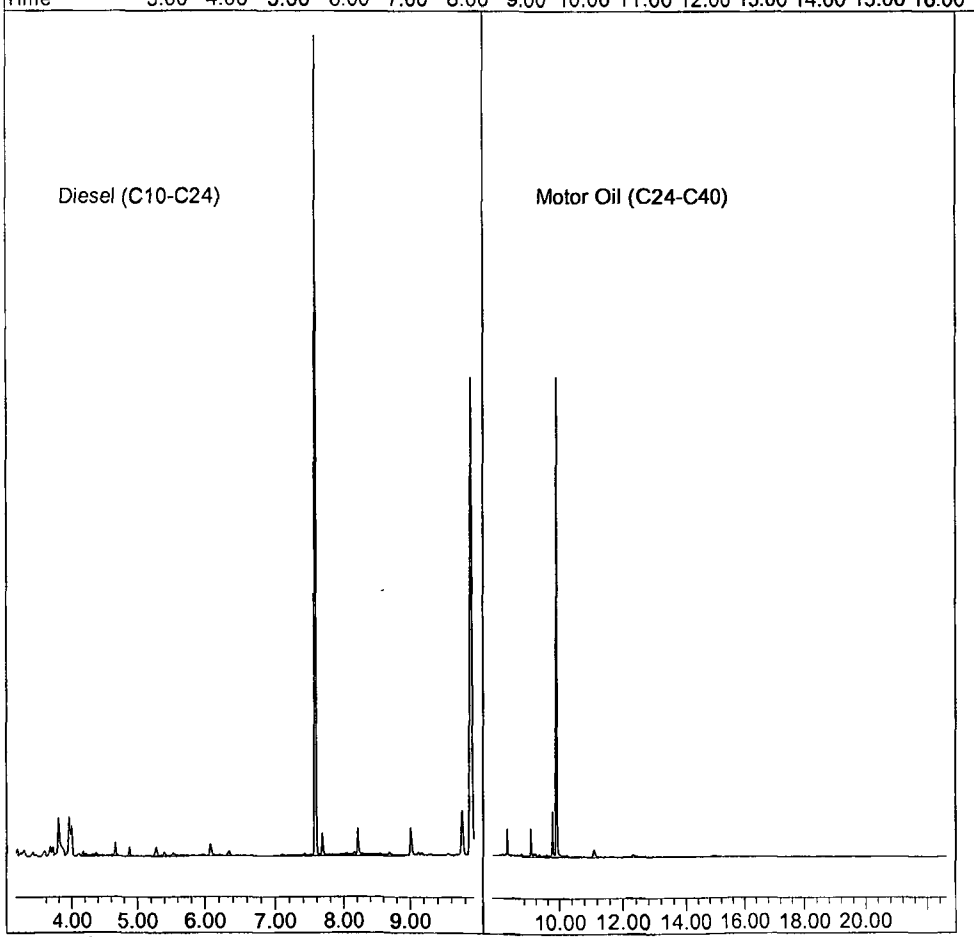
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	138839231	112.992 ppb
Surrogate Spike 144.231		Recovery =	78.34%
4) SA Octacosane(S)	9.88	120078989	127.103 ppb
Surrogate Spike 144.231		Recovery =	88.12%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	53961297	52.902 ppb
2) HBTM Motor Oil (C24-C40)	15.16	59084603	80.812 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107140.D
Sample : BA25690W19 5/1040





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107141.D Vial: 41
Acq On : 1-27-21 23:03:32 Operator:
Sample : BA25693W16 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

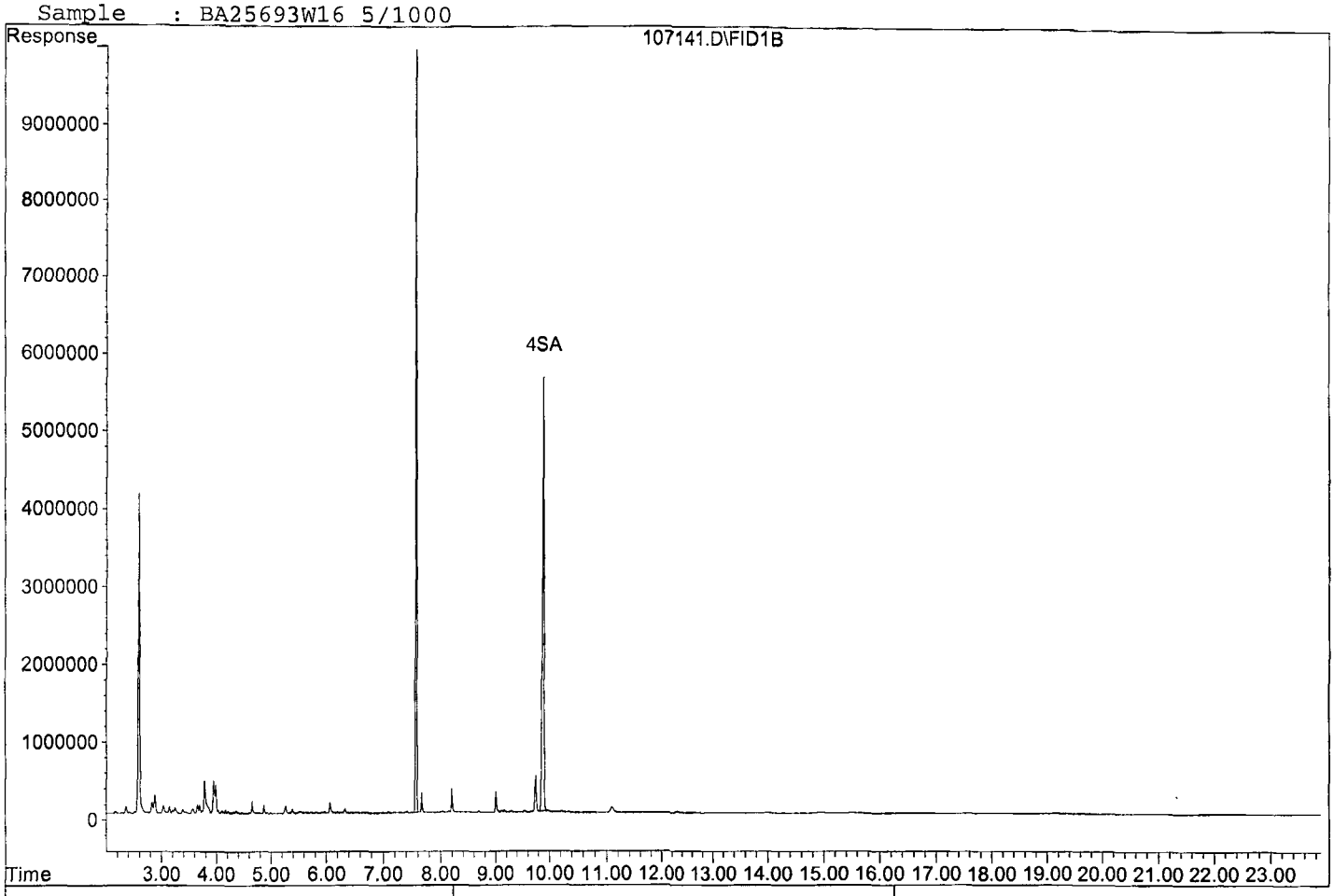
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

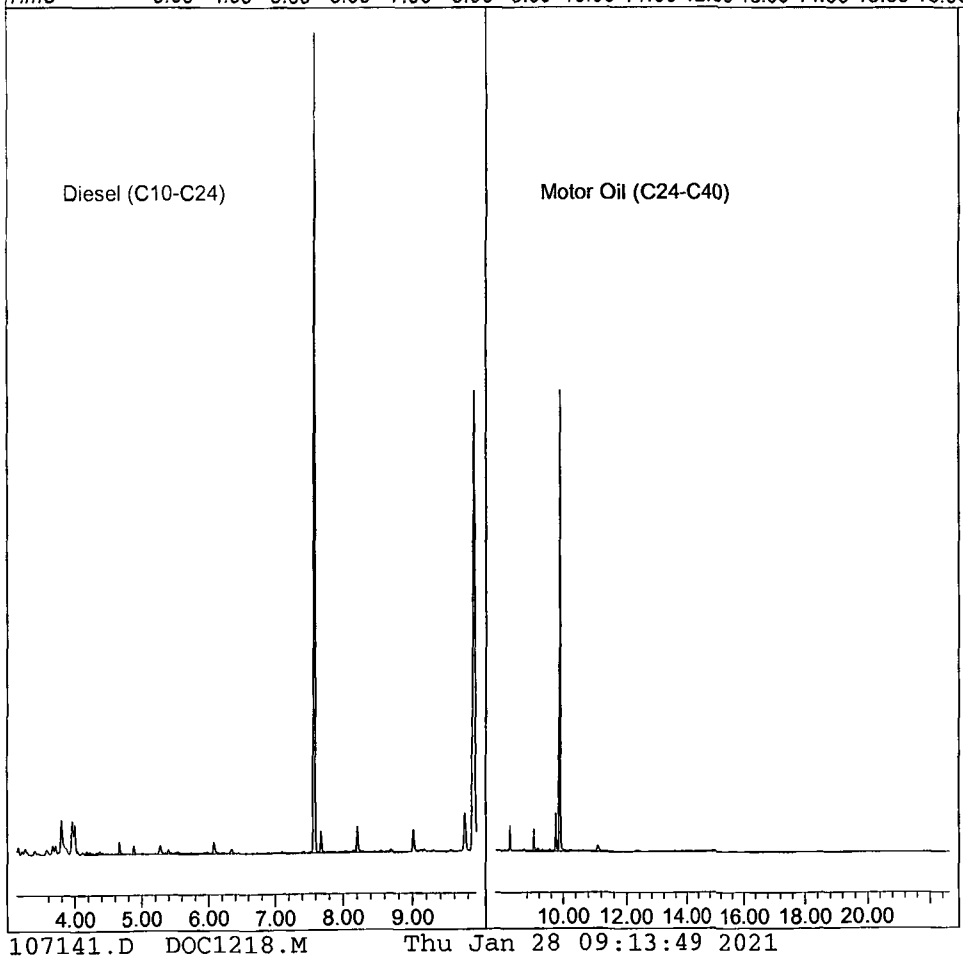
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	131562513	111.353 ppb
Surrogate Spike 150.000		Recovery =	74.24%
4) SA Octacosane(S)	9.89	113714207	125.181 ppb
Surrogate Spike 150.000		Recovery =	83.45%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	44656195	45.531 ppb
2) HBTM Motor Oil (C24-C40)	15.16	47638296	64.160 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107141.D
Sample : BA25693W16 5/1000





107141.D DOC1218.M Thu Jan 28 09:13:49 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107142.D Vial: 42
Acq On : 1-27-21 23:31:34 Operator:
Sample : BA25696W16 5/980 Inst : Apollo
Misc : water Multiplr: 5.10
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

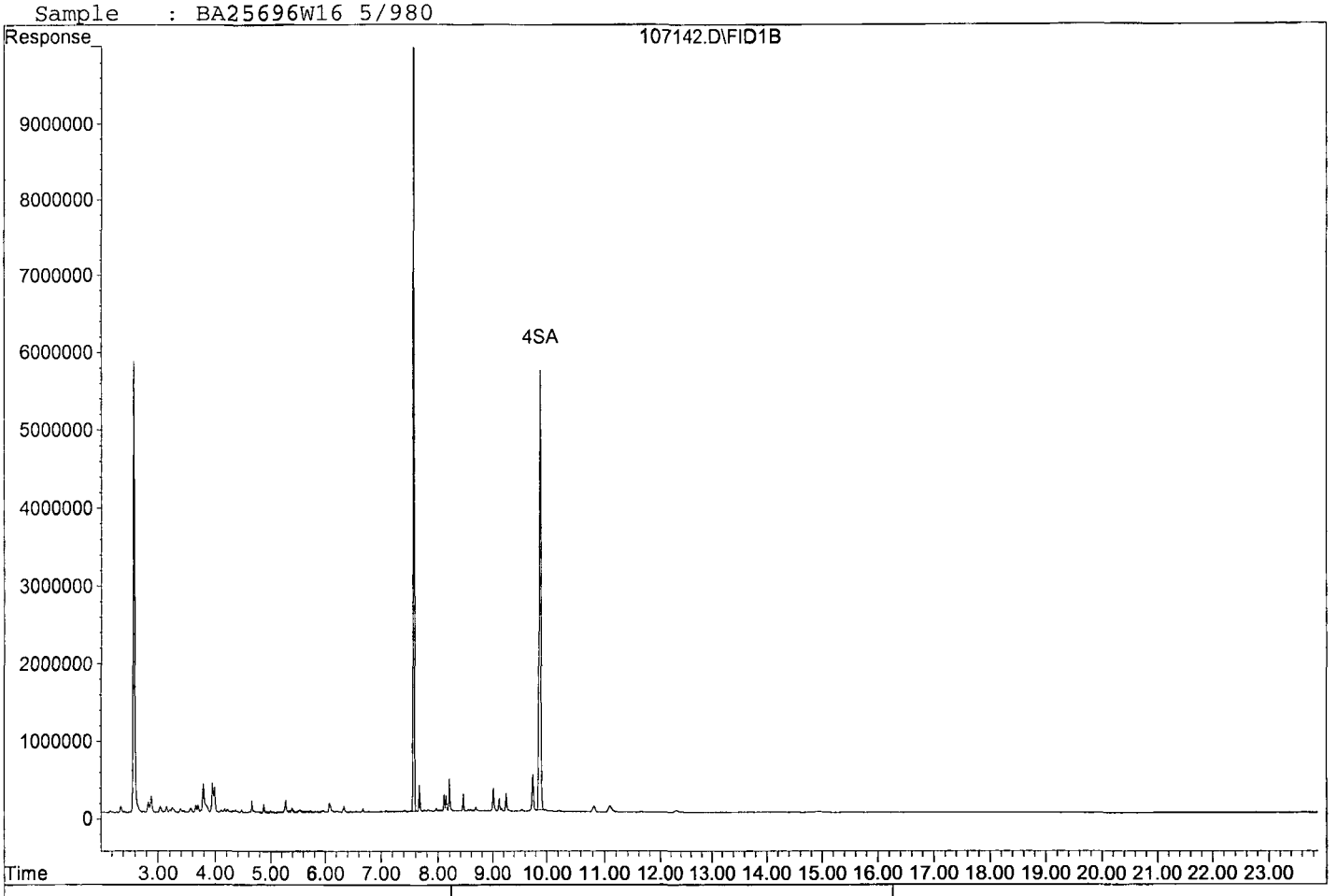
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

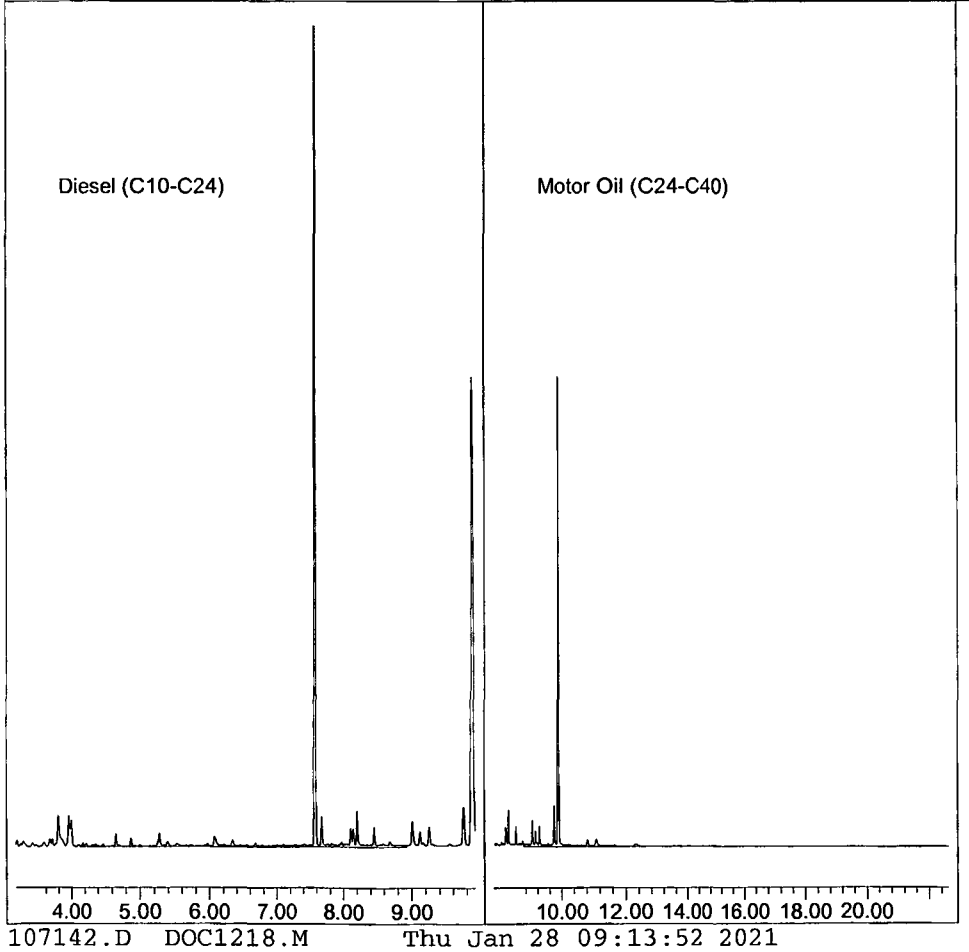
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	137177103	118.475 ppb
Surrogate Spike 153.061		Recovery =	77.40%
4) SA Octacosane(S)	9.88	119599105	134.346 ppb
Surrogate Spike 153.061		Recovery =	87.77%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	79807471	83.031 ppb
2) HBTM Motor Oil (C24-C40)	15.16	72256161	109.108 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107142.D
Sample : BA25696W16 5/980





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107143.D Vial: 43
Acq On : 1-27-21 23:59:38 Operator:
Sample : BA25699W19 5/980 Inst : Apollo
Misc : water Multiplr: 5.10
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

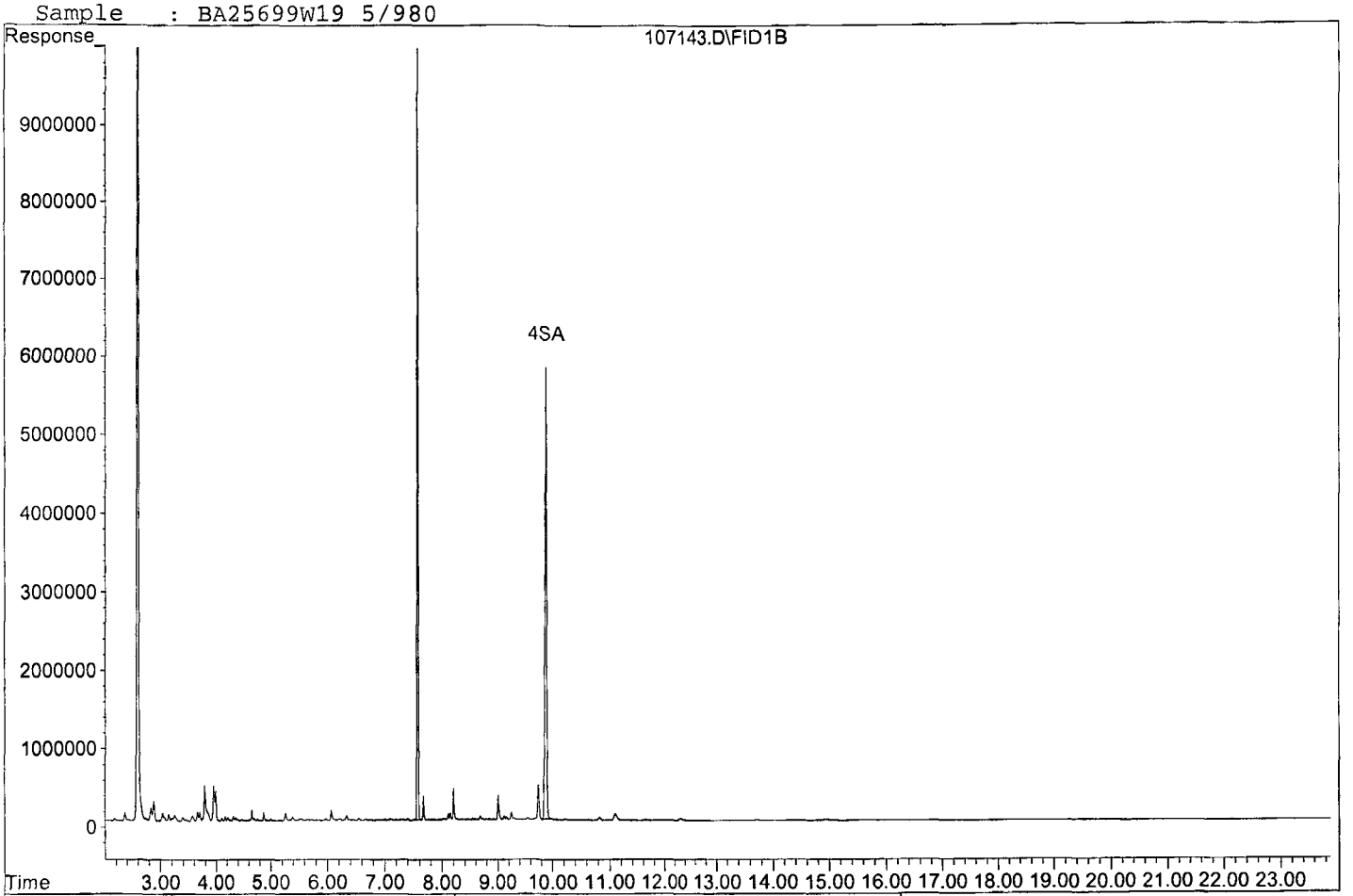
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

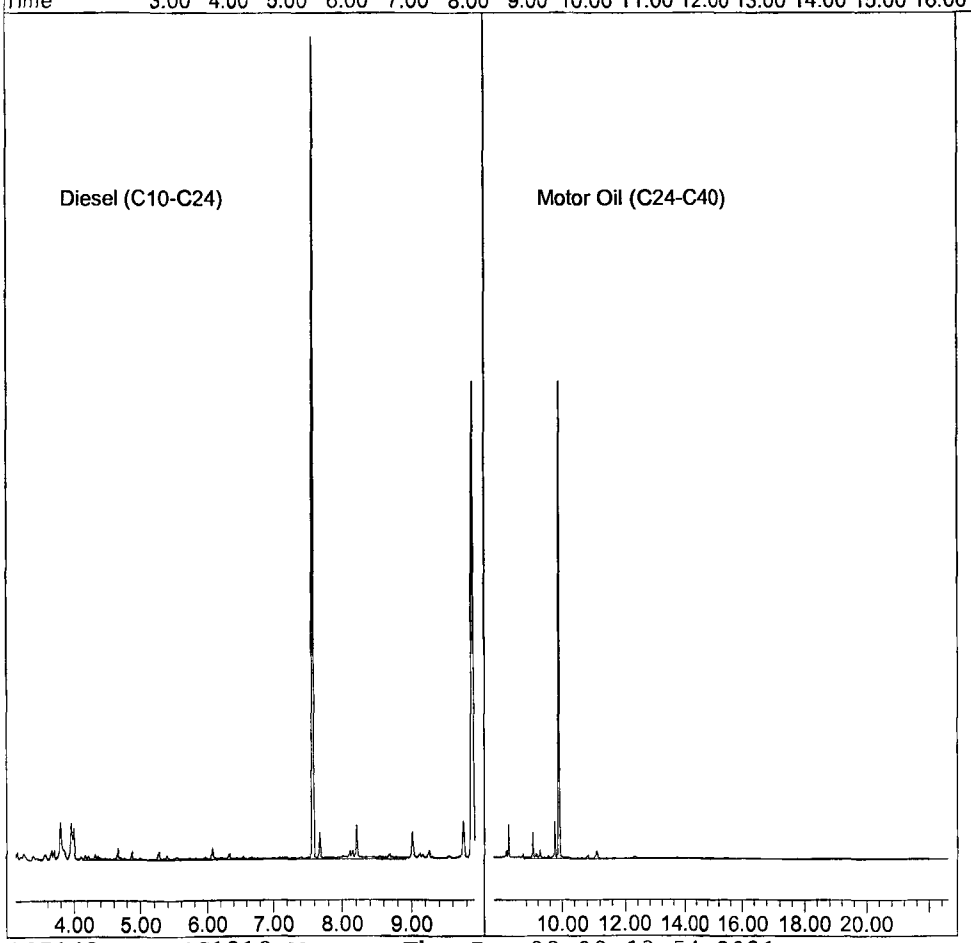
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	138651577	119.748 ppb
Surrogate Spike 153.061		Recovery =	78.24%
4) SA Octacosane(S)	9.88	119664828	134.420 ppb
Surrogate Spike 153.061		Recovery =	87.82%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	65783088	68.440 ppb
2) HBTM Motor Oil (C24-C40)	15.16	61540029	90.112 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107143.D
Sample : BA25699W19 5/980





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107215.D Vial: 15
Acq On : 1-29-21 11:47:19 Operator:
Sample : BA25701W14 5/1030 Inst : Apollo
Misc : water Multiplr: 4.85
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

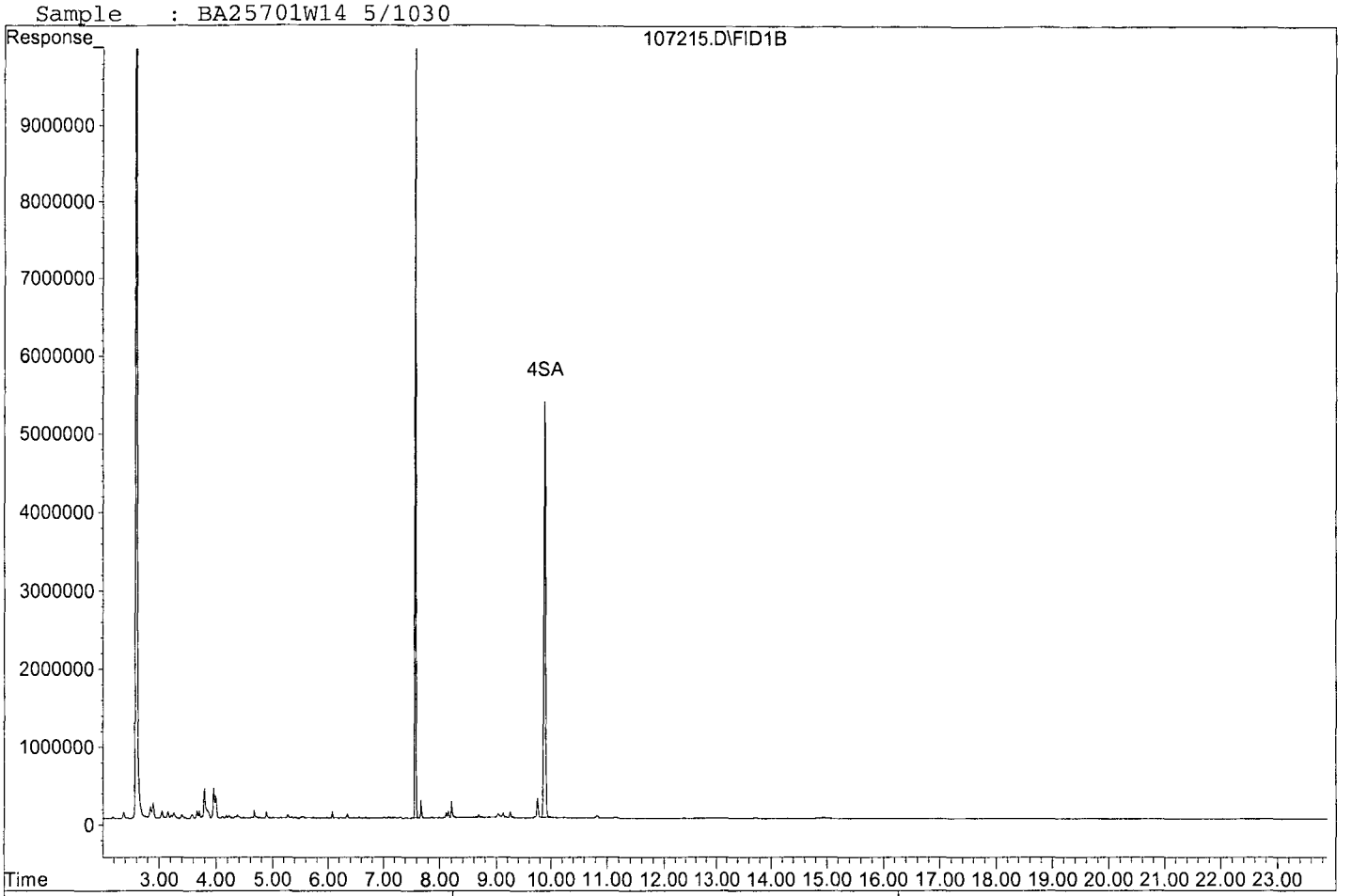
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

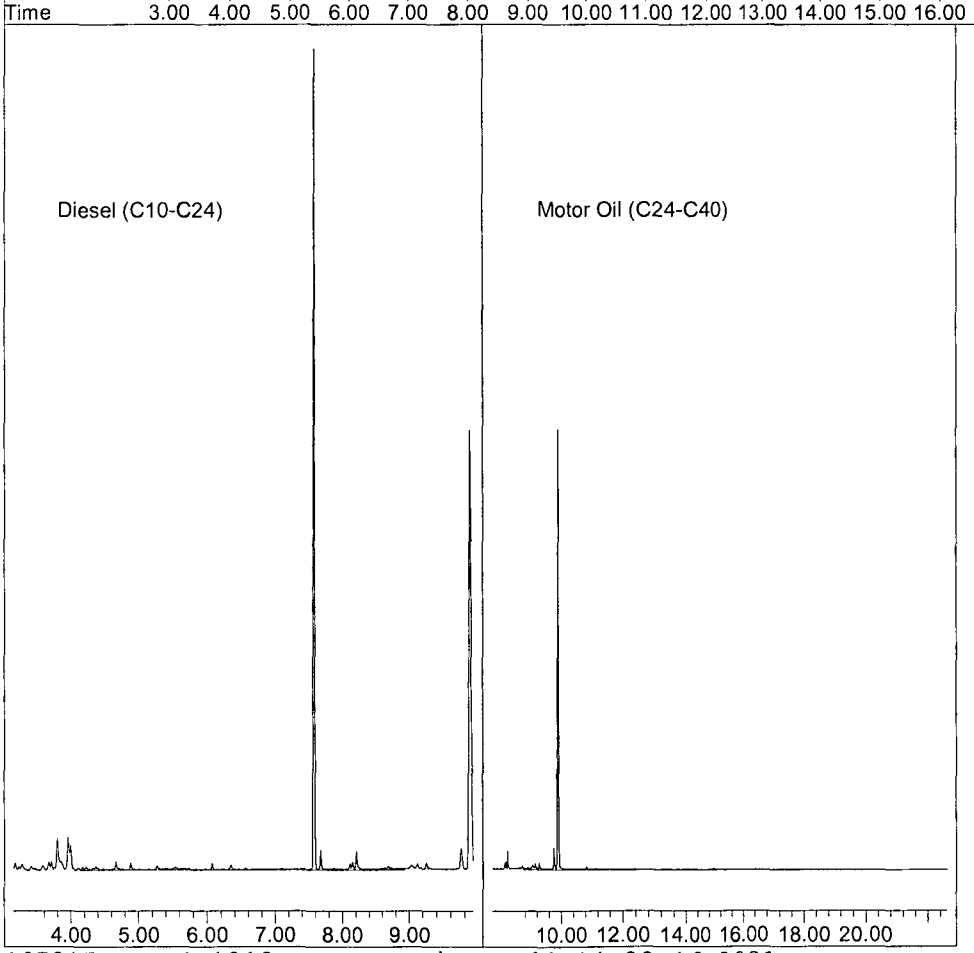
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	132604542	108.966 ppb
Surrogate Spike 145.631		Recovery =	74.82%
4) SA Octacosane(S)	9.88	115018224	122.928 ppb
Surrogate Spike 145.631		Recovery =	84.41%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	46162829	45.696 ppb
2) HBTM Motor Oil (C24-C40)	15.16	43880780	55.954 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107215.D
Sample : BA25701W14 5/1030





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107216.D Vial: 16
Acq On : 1-29-21 12:15:24 Operator:
Sample : BA25704W13 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

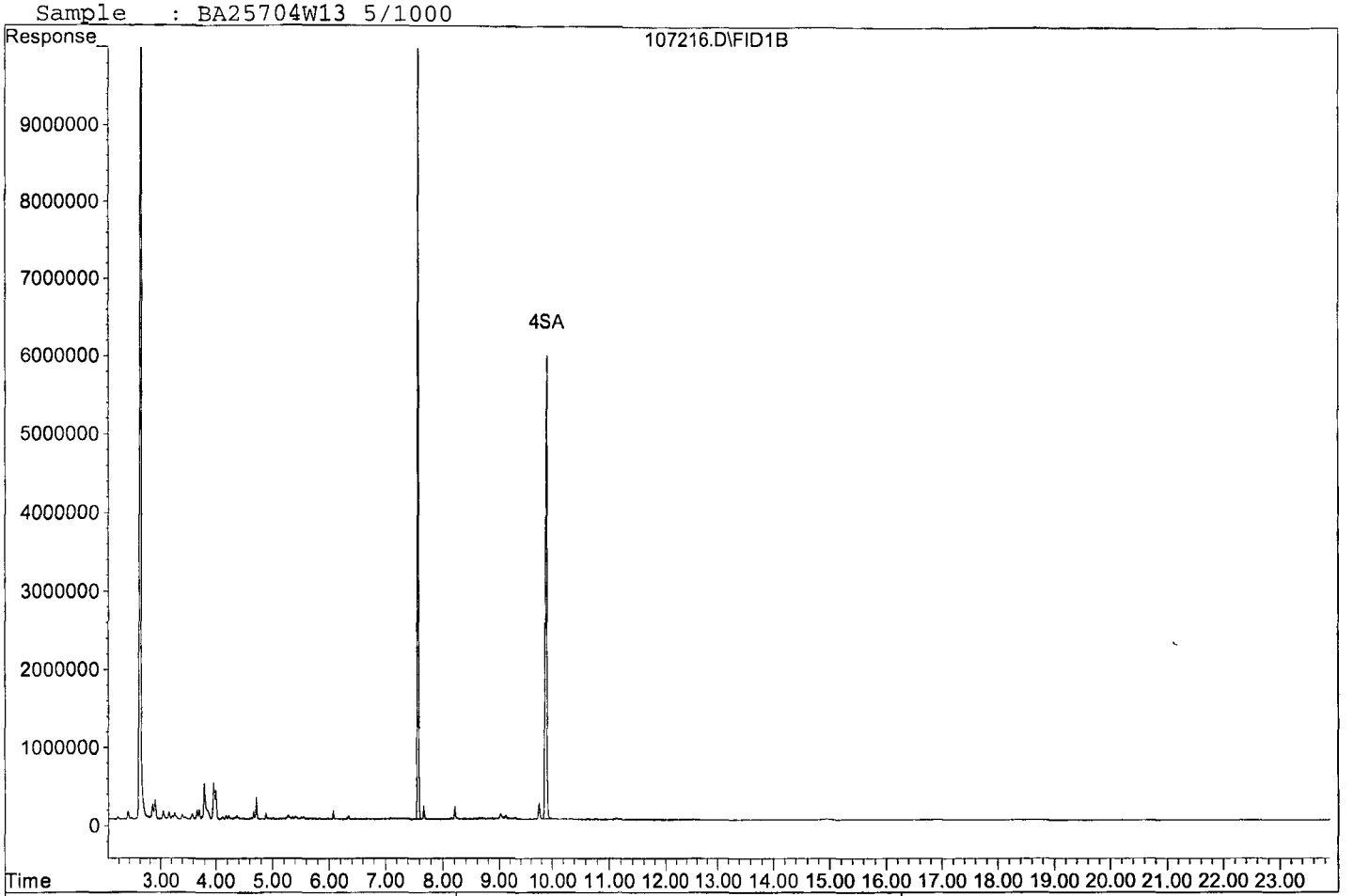
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

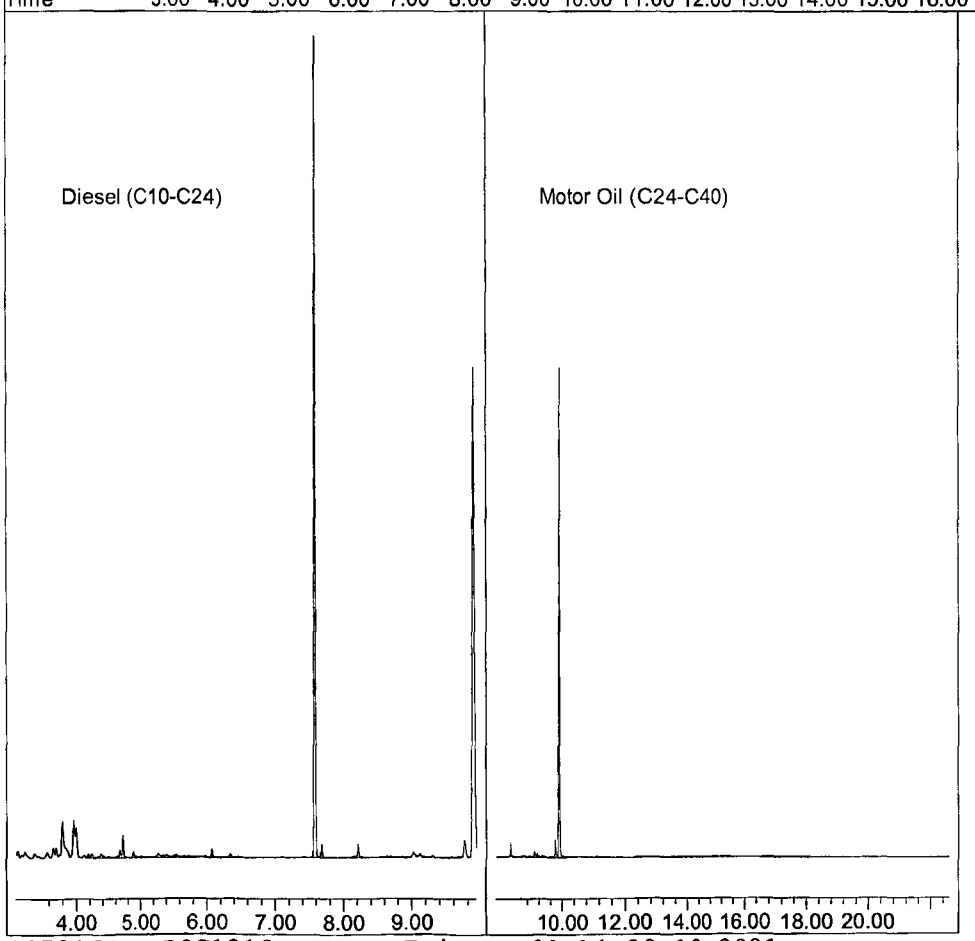
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	140189605	118.655 ppb
Surrogate Spike 150.000		Recovery =	79.10%
4) SA Octacosane(S)	9.88	121401430	133.643 ppb
Surrogate Spike 150.000		Recovery =	89.10%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	37324290	38.055 ppb
2) HBTM Motor Oil (C24-C40)	15.16	29960325	33.450 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107216.D
Sample : BA25704W13 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107217.D Vial: 17
Acq On : 1-29-21 12:43:29 Operator:
Sample : BA25706W14 5/1020 Inst : Apollo
Misc : water Multiplr: 4.90
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

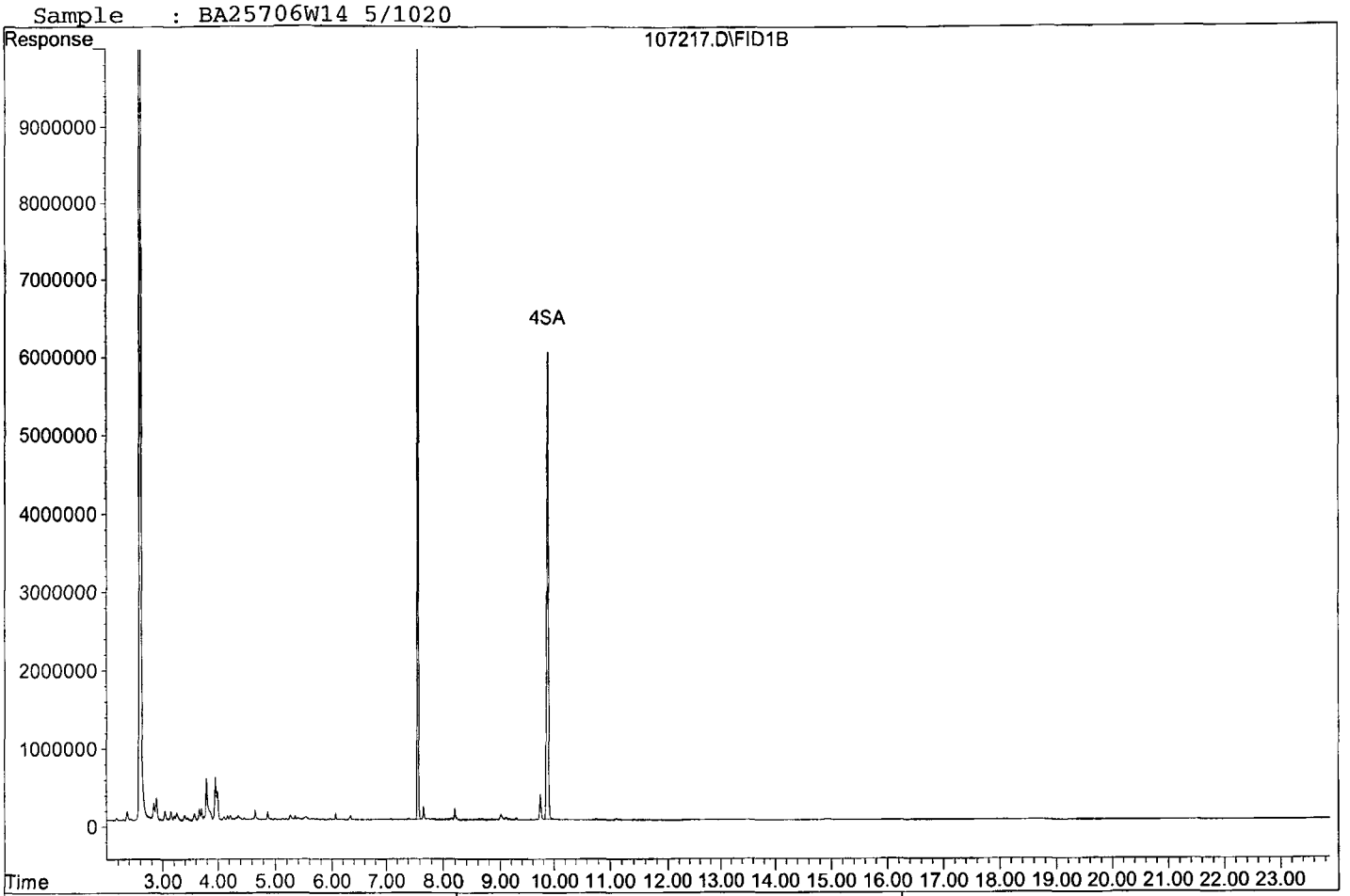
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

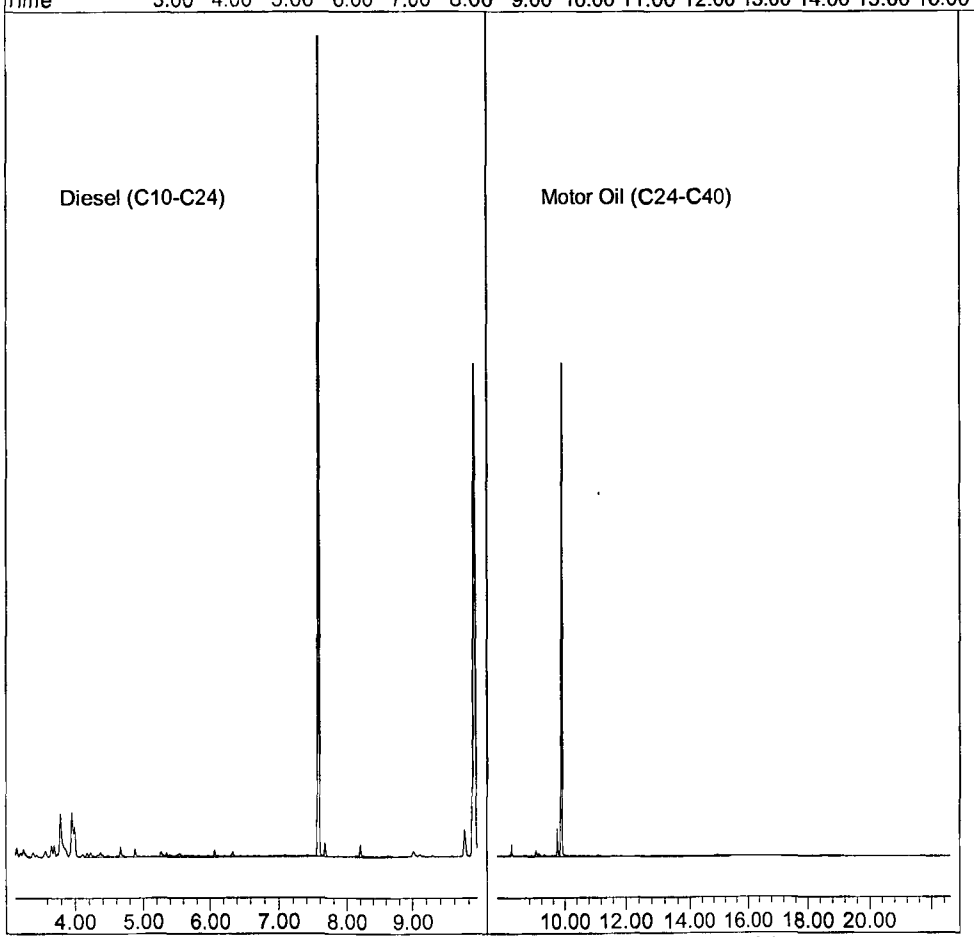
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	143148554	118.784 ppb
Surrogate Spike 147.059		Recovery =	80.77%
4) SA Octacosane(S)	9.88	123803484	133.615 ppb
Surrogate Spike 147.059		Recovery =	90.86%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	35721971	35.707 ppb
2) HBTM Motor Oil (C24-C40)	15.16	33506079	38.833 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107217.D
Sample : BA25706W14 5/1020





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107134.D Vial: 34
Acq On : 1-27-21 19:47:07 Operator:
Sample : 210126A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

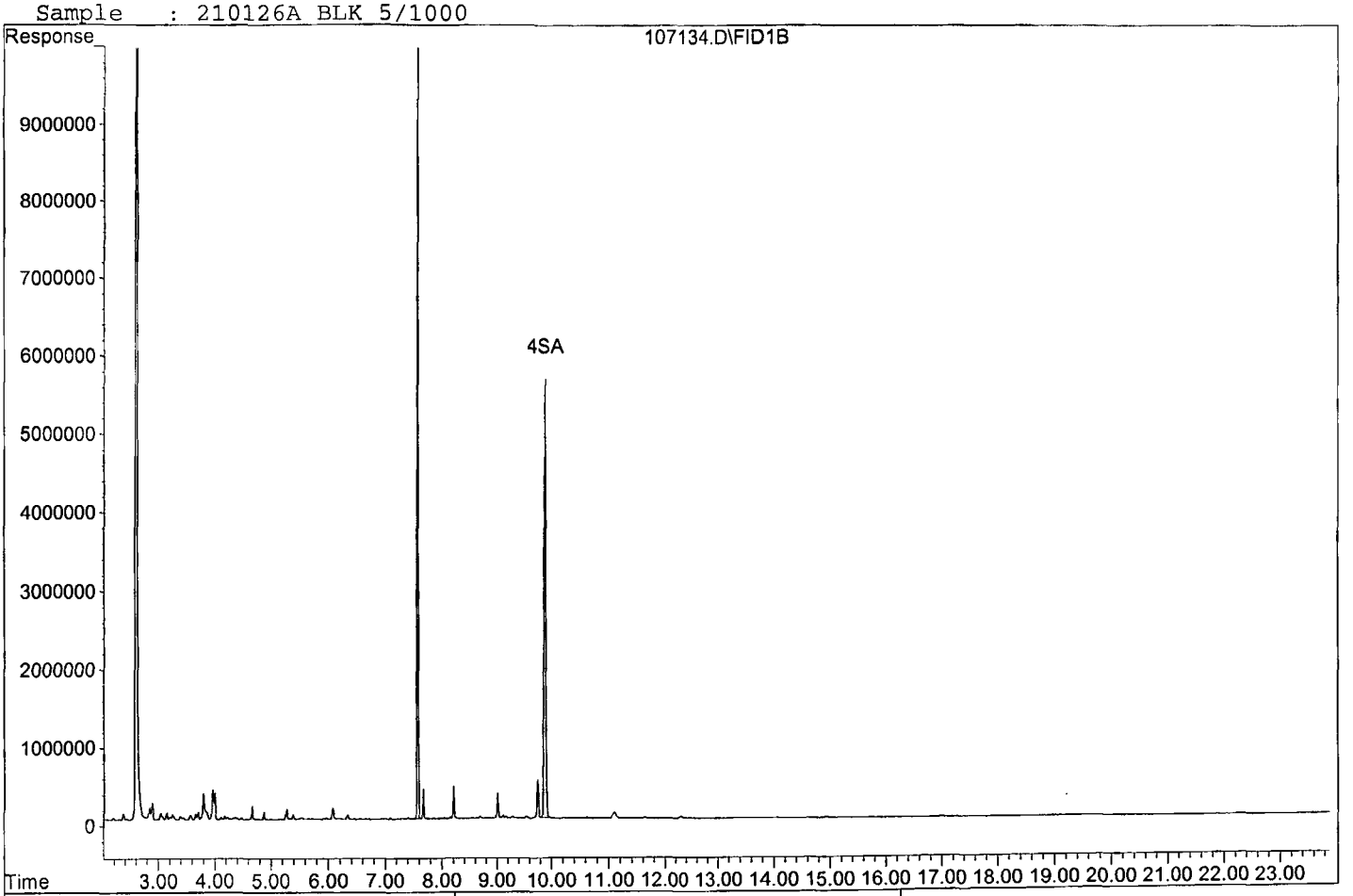
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

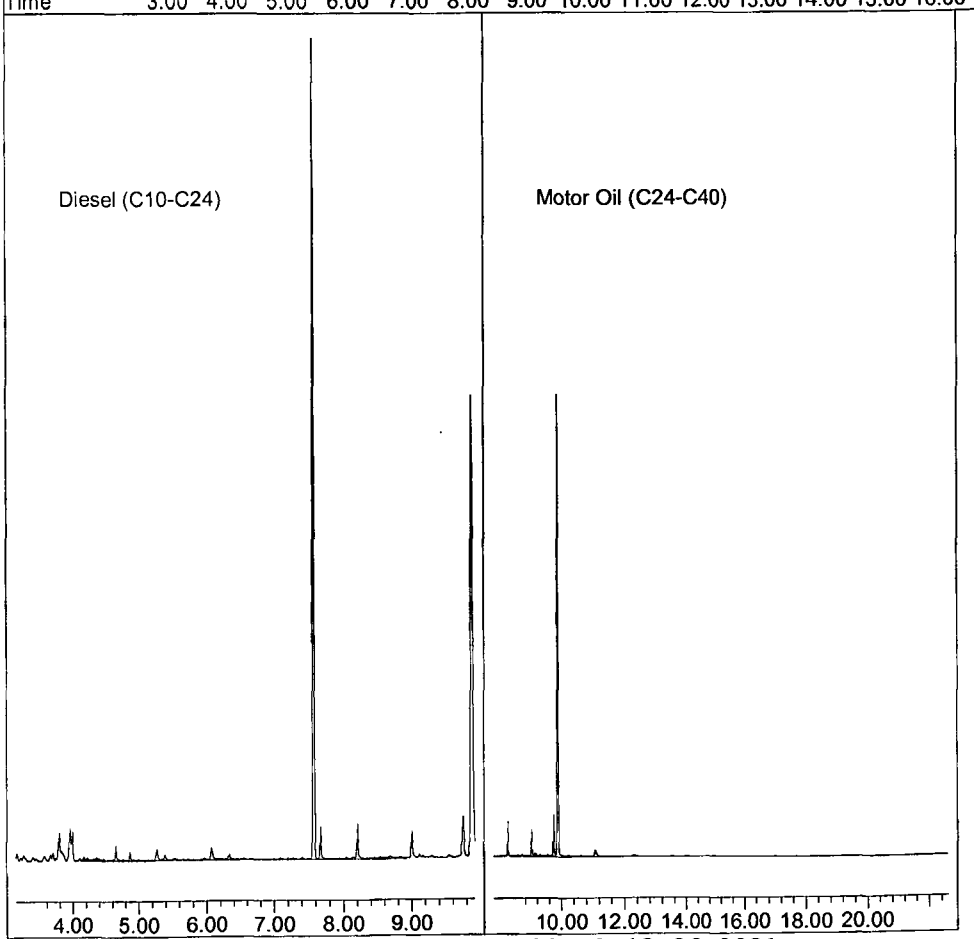
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	138454275	117.186 ppb
Surrogate Spike 150.000		Recovery =	78.12%
4) SA Octacosane(S)	9.88	120098534	132.209 ppb
Surrogate Spike 150.000		Recovery =	88.14%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	50864037	51.860 ppb
2) HBTM Motor Oil (C24-C40)	15.16	57254152	80.864 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107134.D
Sample : 210126A BLK 5/1000





107134.D DOC1218.M Thu Jan 28 09:13:38 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107212.D Vial: 12
Acq On : 1-29-21 10:23:07 Operator:
Sample : 210127B BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

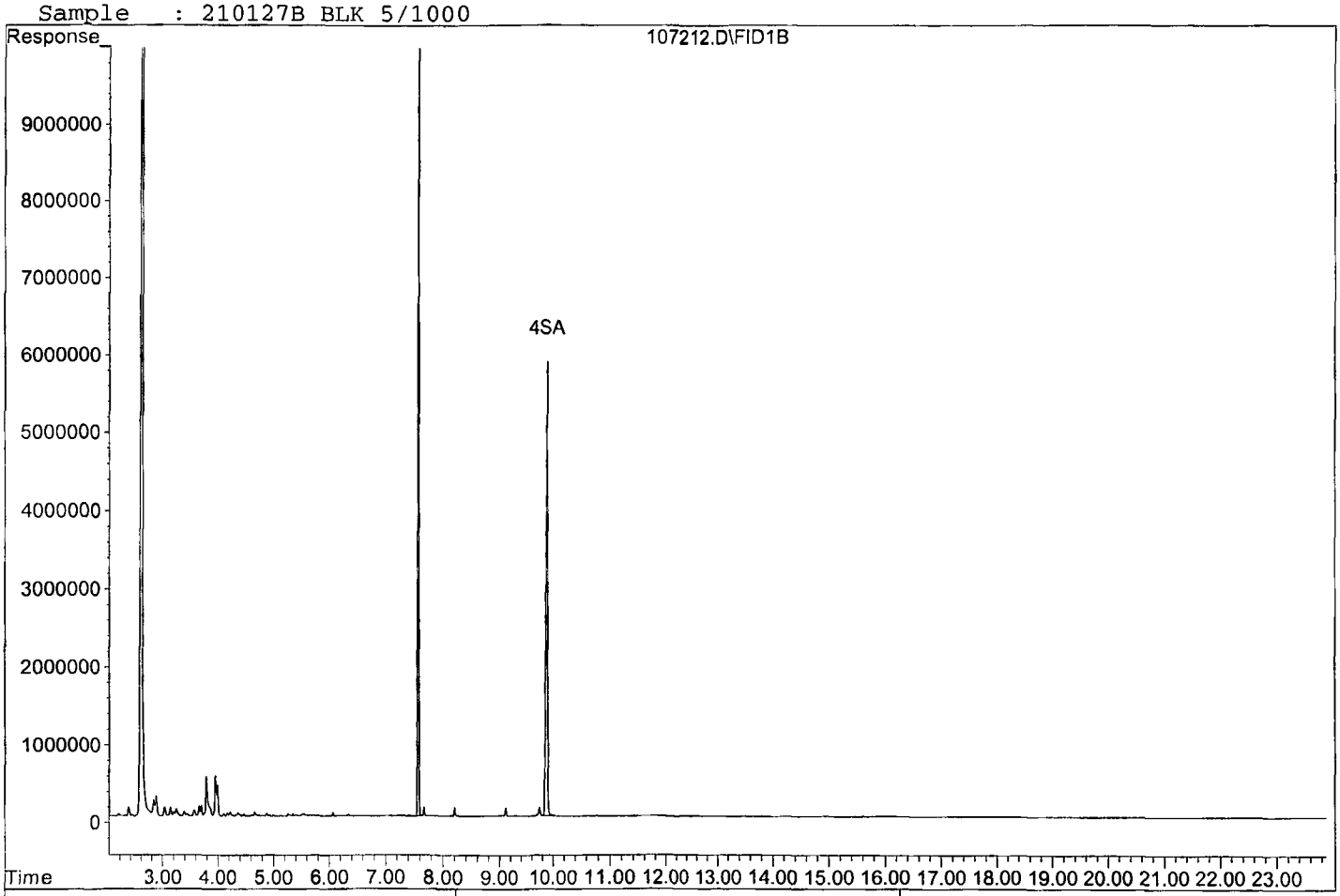
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

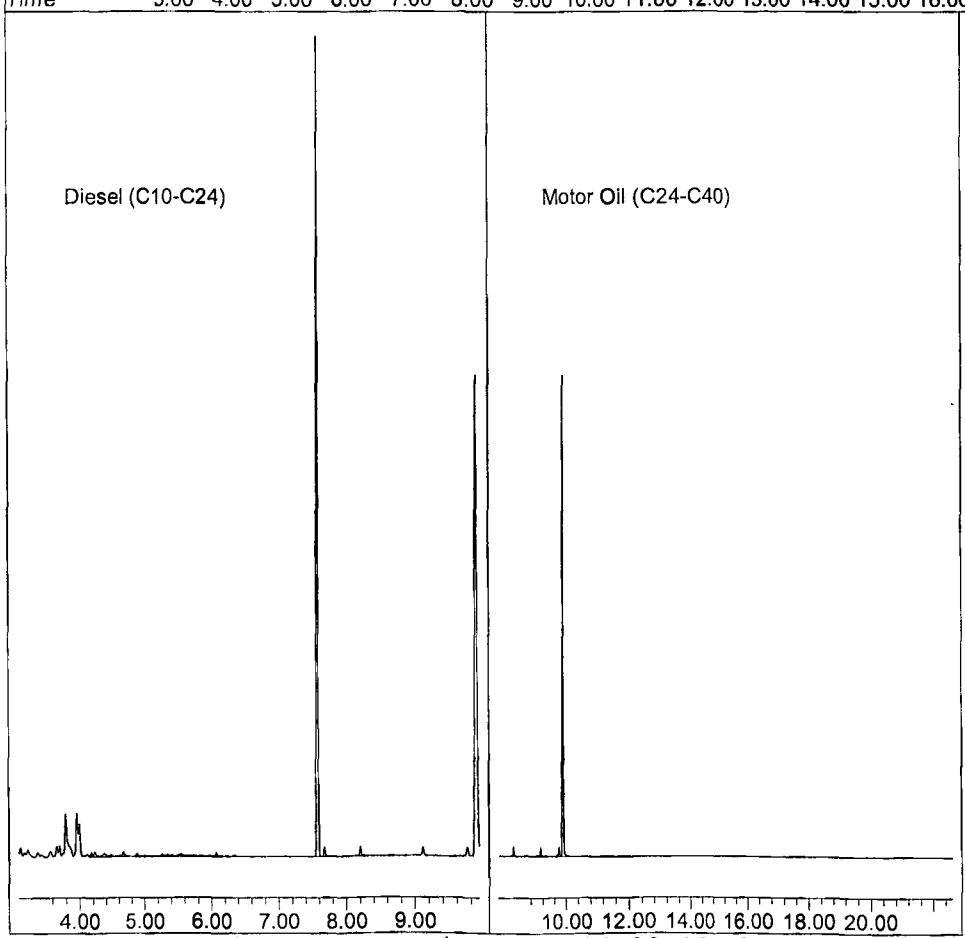
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	142758224	120.829 ppb
Surrogate Spike 150.000		Recovery =	80.55%
4) SA Octacosane(S)	9.88	123160950	135.580 ppb
Surrogate Spike 150.000		Recovery =	90.39%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	24852399	25.339 ppb
2) HBTM Motor Oil (C24-C40)	15.16	27865910	29.812 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107212.D
Sample : 210127B BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107135.D Vial: 35
Acq On : 1-27-21 20:15:11 Operator:
Sample : 210126A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

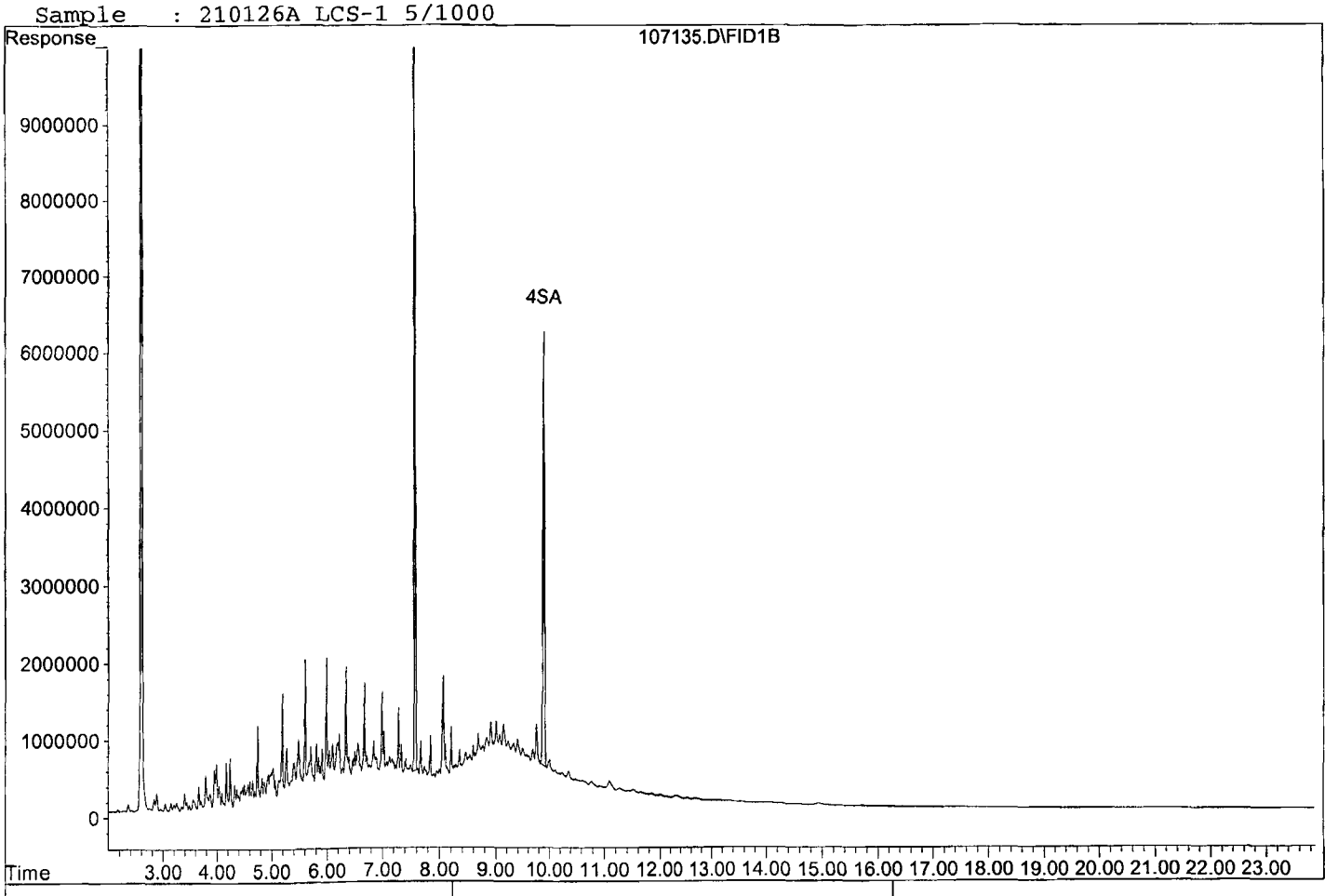
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

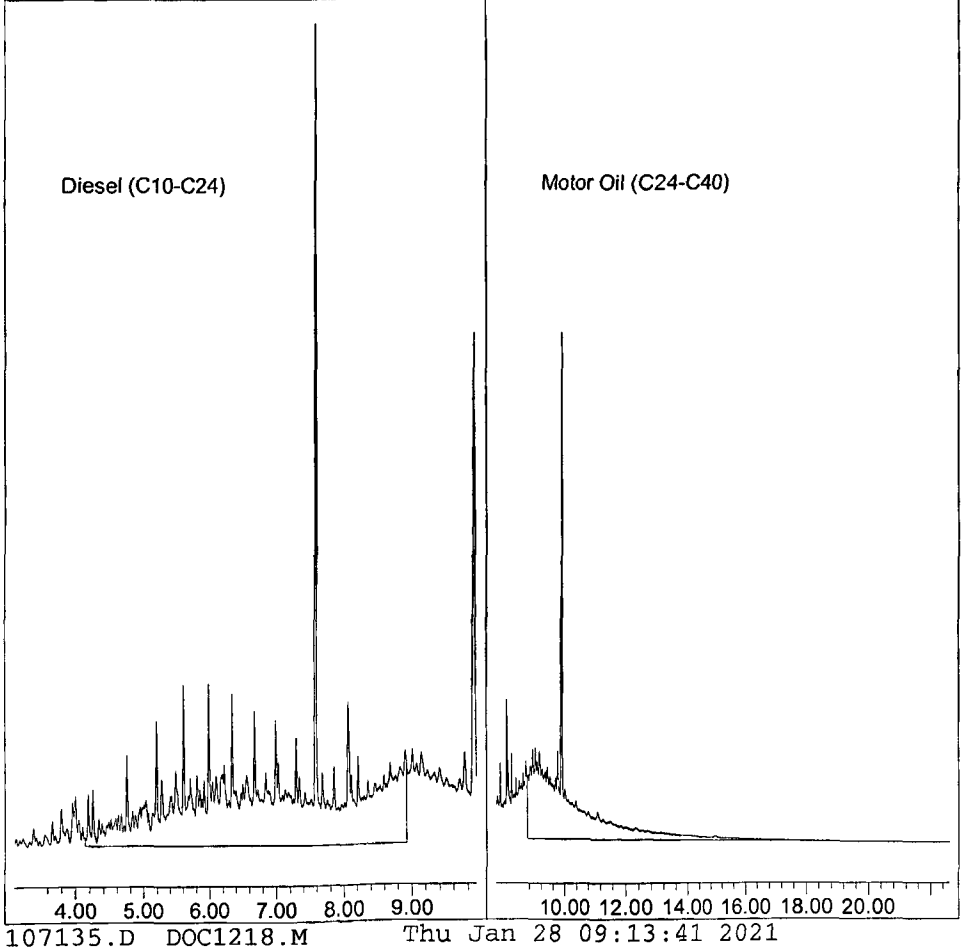
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	147984280	125.252 ppb
Surrogate Spike 150.000		Recovery =	83.50%
4) SA Octacosane(S)	9.89	118716815	130.688 ppb
Surrogate Spike 150.000		Recovery =	87.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1637494186	1669.568 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1068251166	1837.149 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107135.D
Sample : 210126A LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107136.D Vial: 36
Acq On : 1-27-21 20:43:15 Operator:
Sample : 210126A LCSD-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 28 7:54 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

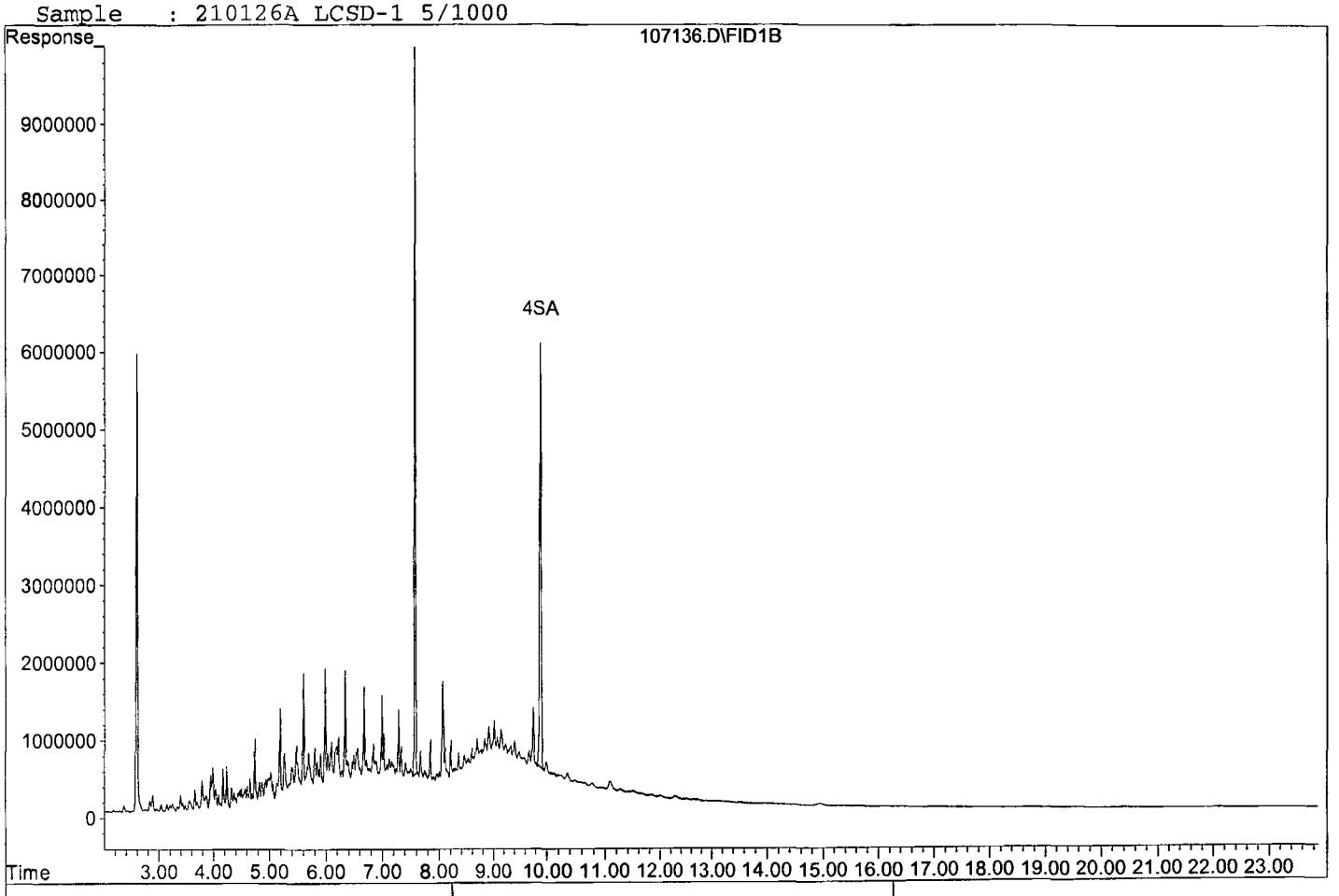
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

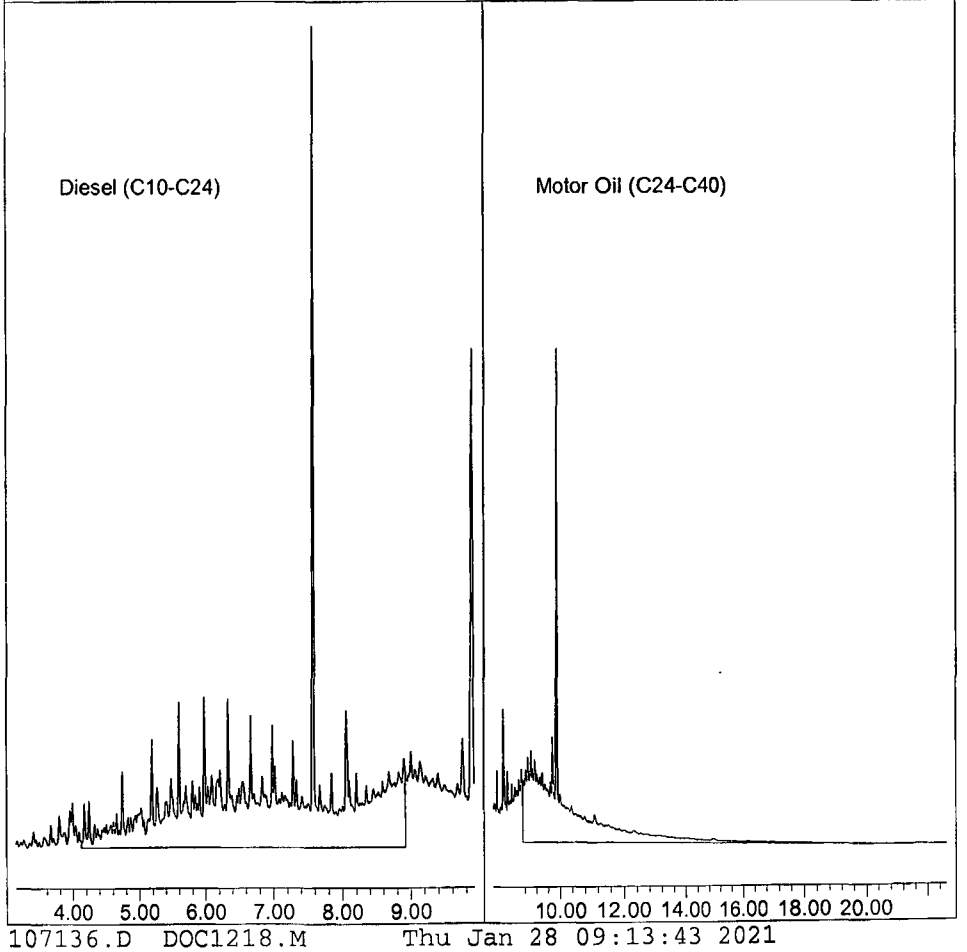
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	141877510	120.084 ppb
Surrogate Spike 150.000		Recovery =	80.06%
4) SA Octacosane(S)	9.89	112859251	124.239 ppb
Surrogate Spike 150.000		Recovery =	82.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1547549135	1577.861 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1042939344	1793.177 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\210107\107136.D
Sample : 210126A LCSD-1 5/1000





107136.D DOC1218.M Thu Jan 28 09:13:43 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107213.D Vial: 13
Acq On : 1-29-21 10:51:11 Operator:
Sample : 210127B LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

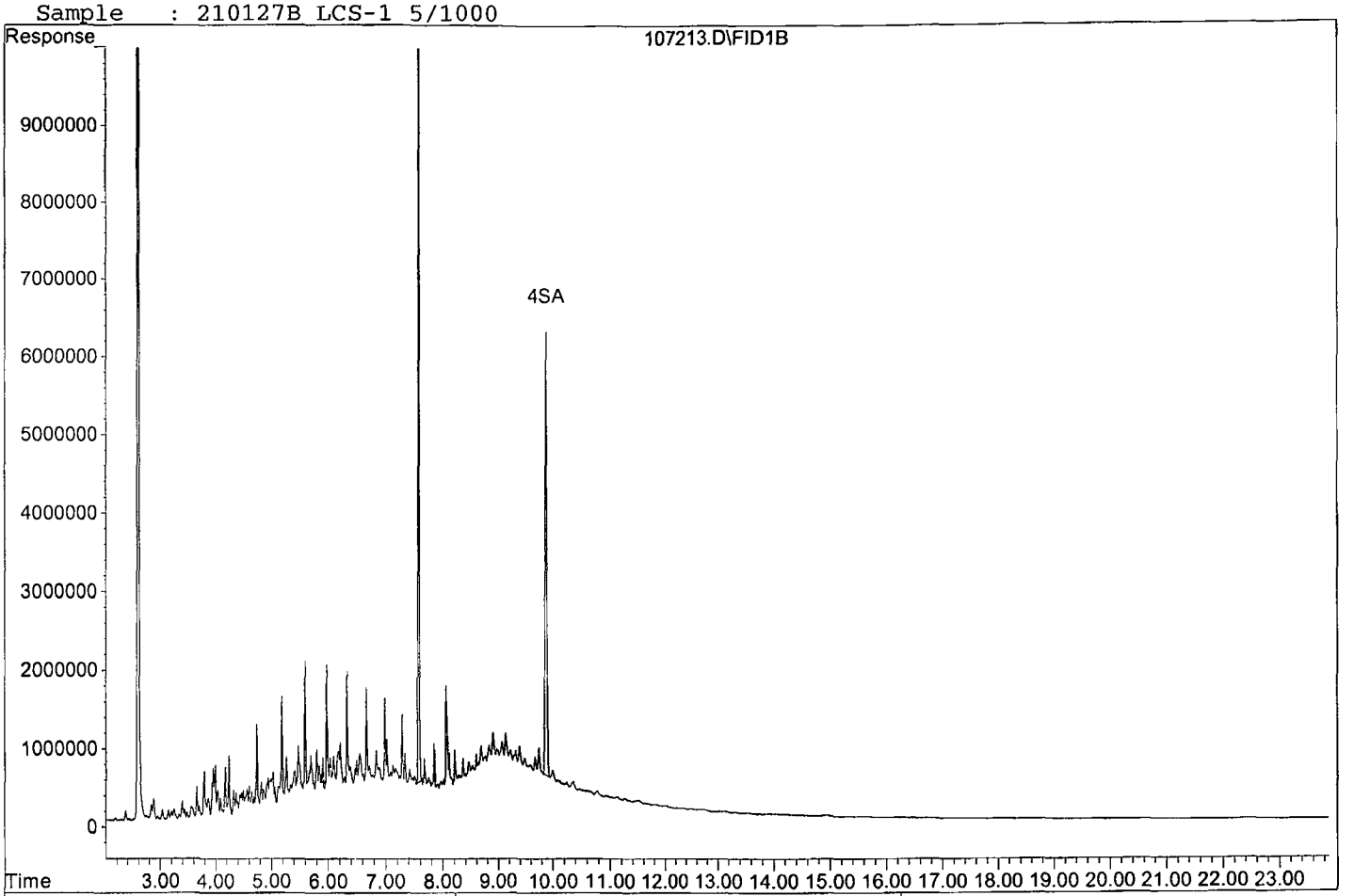
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

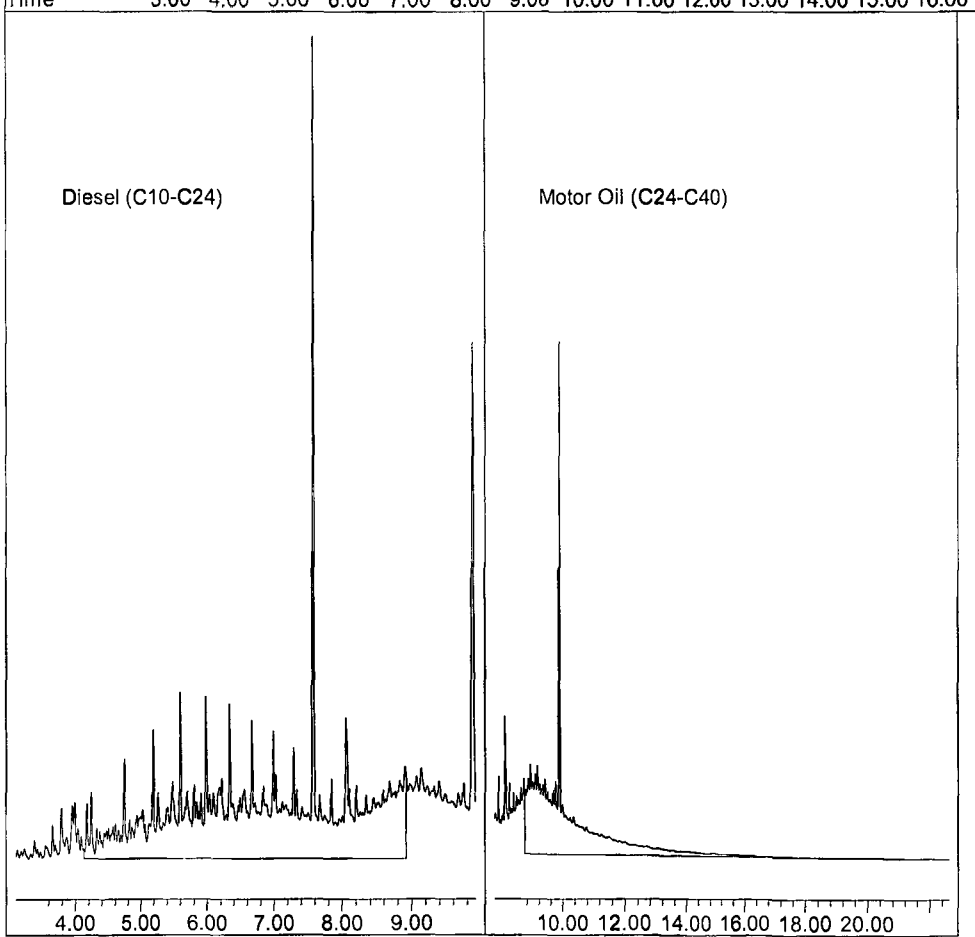
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	149804939	126.793 ppb
Surrogate Spike 150.000		Recovery =	84.53%
4) SA Octacosane(S)	9.88	118226086	130.148 ppb
Surrogate Spike 150.000		Recovery =	86.77%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1655282851	1687.705 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1060942003	1824.451 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107213.D
Sample : 210127B LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107214.D Vial: 14
Acq On : 1-29-21 11:19:16 Operator:
Sample : 210127B LCSD-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

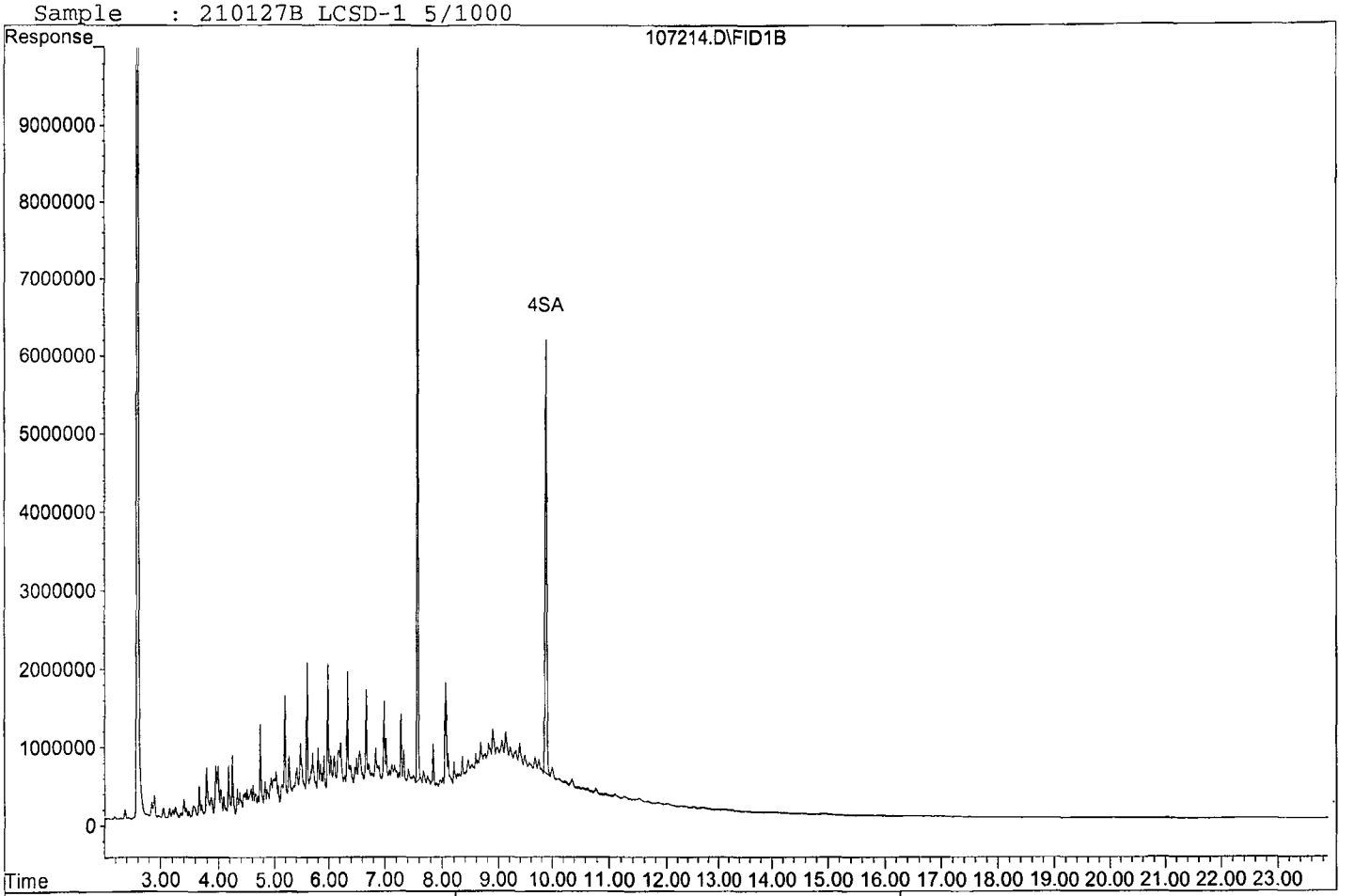
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

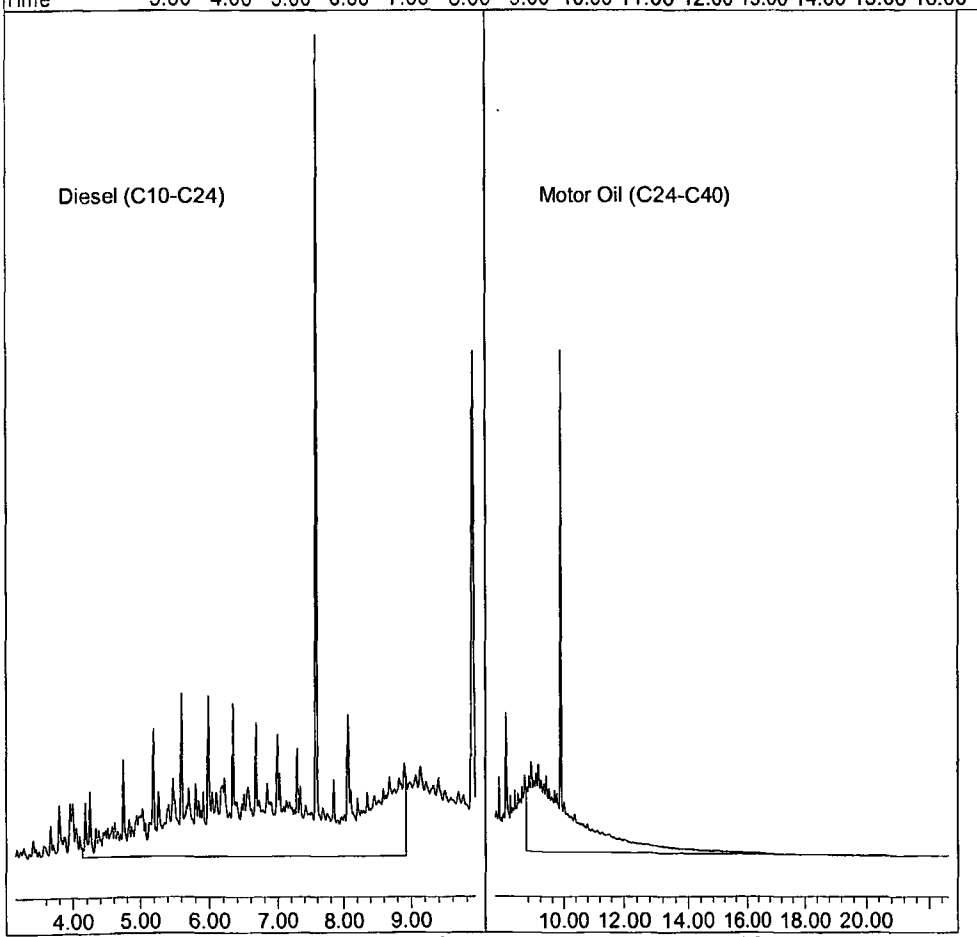
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	151259913	128.025 ppb
Surrogate Spike 150.000		Recovery =	85.35%
4) SA Octacosane(S)	9.88	119230484	131.253 ppb
Surrogate Spike 150.000		Recovery =	87.50%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1640014158	1672.137 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1066465090	1834.046 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107214.D
Sample : 210127B LCSD-1 5/1000





Diesel Motor Oil Mix

Prepared: 01/26/21 **Prepared By (Initials): MA**

Expires: 12/08/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50525**	**01/26/22**	**11/30/26**	1 mL	2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0155668-50521**	**12/08/21**	**01/31/27**	1 mL			25,000

THC Surrogate

Prepared: 01/26/21 **Prepared By (Initials): DL**

Expires: 01/26/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15902-50951**	**01/26/22**	**06/30/25**	N/A	N/A	N/A	600

Diesel / Motor Oil CCV

Prepared: 12/15/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd. 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	1250uL	10mL	MC	250

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	**08/11/21**	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0155668-50515,50518,50519**	**08/11/21**	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	**08/05/21**	**06/30/25**	1666uL			100

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

_LIQ005

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210126A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-26-21 1-26-22		Surrogate ID 1	THC Surrogate 1-26-21 1-26-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/26/21 13:00	
Spiked ID 8			Ext. End Time:	01/27/21 7:00	
			GC Requires Extract By:		

pH1	2	01/26/21 11:45	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: DL **Date** 01/26/21 **Witnessed By:** CFM **Date** 01/26/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210126A Blk				0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP51 E-WB1				
2	210126A LCS-1		0.080	1	0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP50 E-WB2				
3	210126A LCSD-1		0.080	1	0.250	1	1000	5	2	01/26/21 11:50	
						equip	E-HP49 E-WB3				
4	BA25532	BA25532W17			0.250	1	990	5	2	01/26/21 11:50	94826
						equip	E-HP48 E-WB1				
5	BA25535	BA25535W17			0.250	1	1040	5	2	01/26/21 11:50	94826
						equip	E-HP47 E-WB2				
6	BA25538	BA25538W17			0.250	1	1030	5	2	01/26/21 11:50	94826
						equip	E-HP25 E-WB3				
7	BA25690	BA25690W19			0.250	1	1040	5	2	01/26/21 11:50	94863
						equip	E-HP26 E-WB1				
8	BA25693	BA25693W16			0.250	1	1000	5	2	01/26/21 11:50	94863
						equip	E-HP27 E-WB2				
9	BA25696	BA25696W16			0.250	1	980	5	2	01/26/21 11:50	94863
						equip	E-HP28 E-WB3				
10	BA25699	BA25699W19			0.250	1	980	5	2	01/26/21 11:50	94863
						equip	E-HP29 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs) AMBER	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/27/21
Time	13:00
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	01/27/21 11:02:46 AM

Reviewed By: SS **Date** 01/28/21

_LIQ005

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210127B	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-26-21 1-26-22		Surrogate ID 1	THC Surrogate 1-26-21 1-26-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 13:20	
Spiked ID 8			Ext. End Time:	01/29/21 9:00	
			GC Requires Extract By:		

pH1	2	01/27/21 13:00	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 01/27/21 **Witnessed By:** DL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127B Blk				0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP51 E-WB1				
2	210127B LCS-1		0.080	1	0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP50 E-WB2				
3	210127B LCSD-1		0.080	1	0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP49 E-WB3				
4	BA25701	BA25701W14			0.250	1	1030	5	2	01/27/21 13:20	94863
						equip	E-HP48 E-WB1				
5	BA25704	BA25704W13			0.250	1	1000	5	2	01/27/21 13:20	94863
						equip	E-HP47 E-WB2				
6	BA25706	BA25706W14			0.250	1	1020	5	2	01/27/21 13:20	94863
						equip	E-HP25 E-WB3				
7	BA25867	BA25867W16			0.250	1	1000	5	2	01/27/21 13:20	94883
						equip	E-HP26 E-WB1				
8	BA25870	BA25870W16			0.250	1	1050	5	2	01/27/21 13:20	94883
						equip	E-HP27 E-WB2				

Solvent and Lot#	
1+1 HCL (5mLs) AMBER	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/29/21
Time	9:15
Refrigerator	HPBART

	Technician's Initials
Scanned By	KY
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	01/29/21 3:04:12 PM

Reviewed By: SS **Date** 01/29/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	33	107133.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-27-21 19:19:05
10	34	107134.D	5	210126A BLK 5/1000	water	1-27-21 19:47:07
11	35	107135.D	5	210126A LCS-1 5/1000	water	1-27-21 20:15:11
12	36	107136.D	5	210126A LCSD-1 5/1000	water	1-27-21 20:43:15
13	40	107140.D	4.80769	BA25690W19 5/1040	water	1-27-21 22:35:30
14	41	107141.D	5	BA25693W16 5/1000	water	1-27-21 23:03:32
15	42	107142.D	5.10204	BA25696W16 5/980	water	1-27-21 23:31:34
16	43	107143.D	5.10204	BA25699W19 5/980	water	1-27-21 23:59:38
17	44	107144.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-28-21 0:27:43
18	11	107211.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-29-21 9:54:09
19	12	107212.D	5	210127B BLK 5/1000	water	1-29-21 10:23:07
20	13	107213.D	5	210127B LCS-1 5/1000	water	1-29-21 10:51:11
21	14	107214.D	5	210127B LCSD-1 5/1000	water	1-29-21 11:19:16
22	15	107215.D	4.85437	BA25701W14 5/1030	water	1-29-21 11:47:19
23	16	107216.D	5	BA25704W13 5/1000	water	1-29-21 12:15:24
24	17	107217.D	4.90196	BA25706W14 5/1020	water	1-29-21 12:43:29
25	20	107220.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-29-21 14:07:42

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
			0105Y003.D	0105Y004 D	0105Y005.D	0105Y006 D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

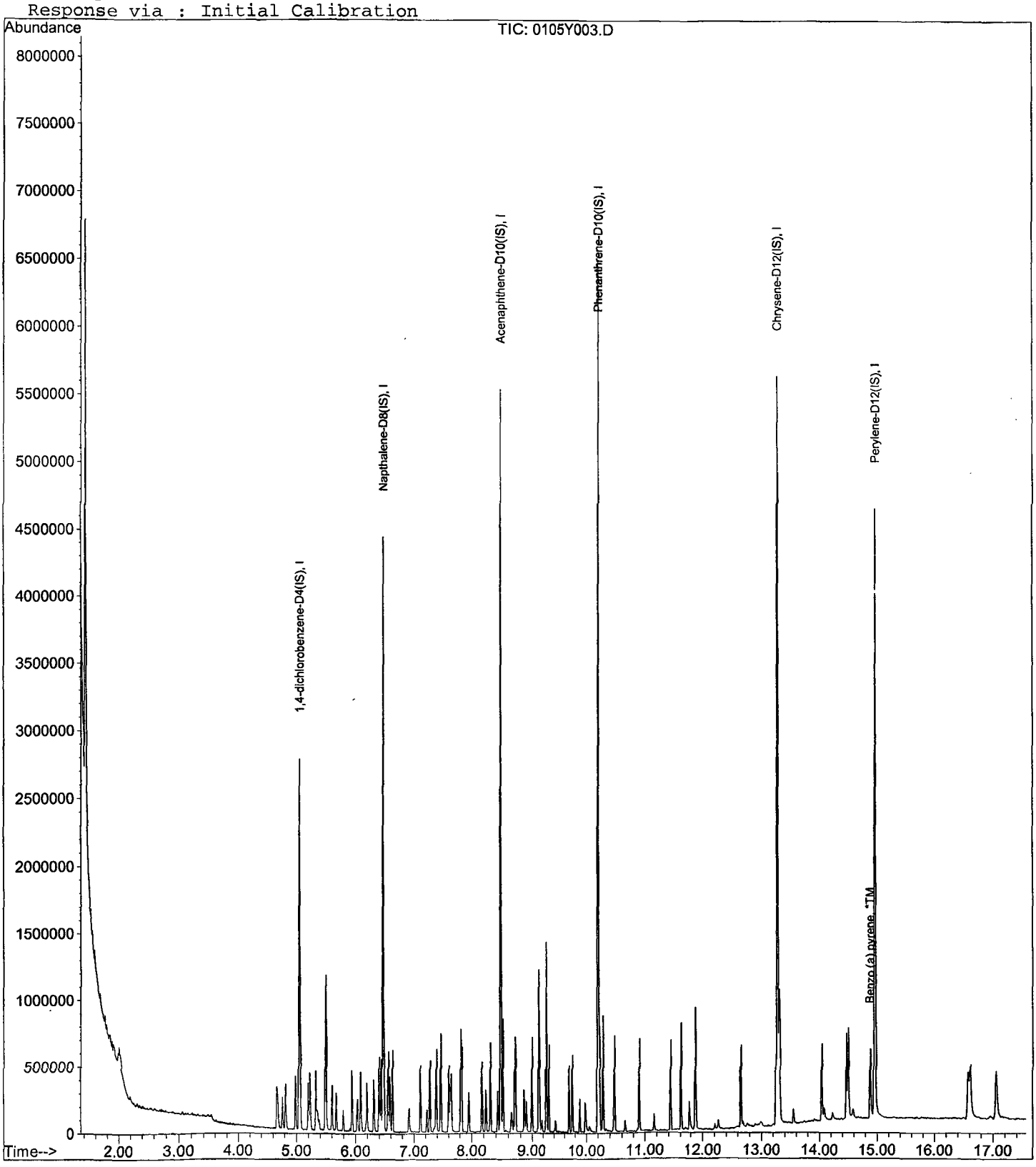
Data File : M:\YODA\DATA\Y210105\0105Y003.D
Acq On : 5 Jan 21 11:25
Sample : 4ug/mL 8270 01/05/21
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 17:45 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037 #	1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

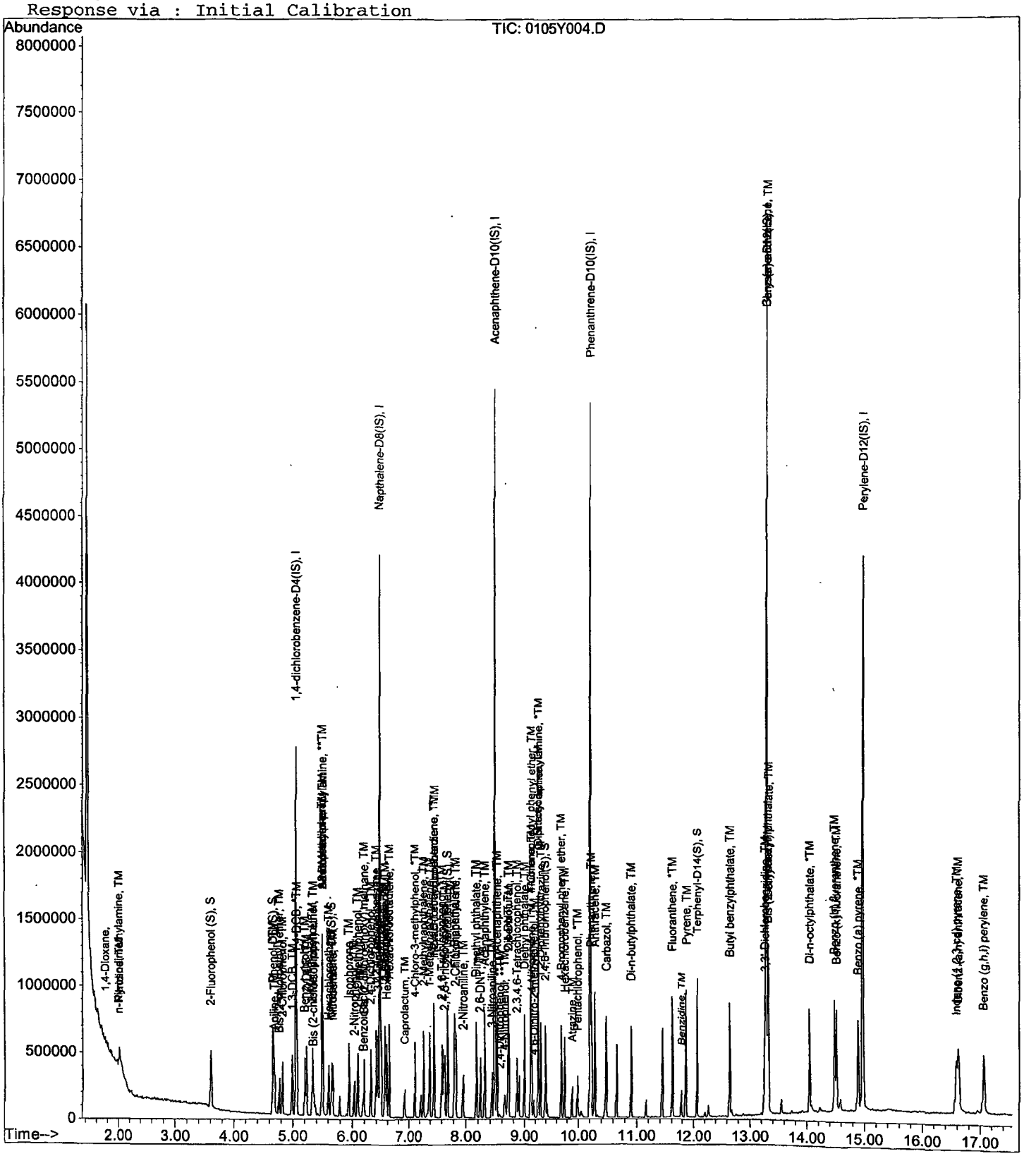
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411	ppb		0.00
Spiked Amount 200.000			Recovery = 10.247%				
6) Phenol-D6 (S)	4.66	99	492275	20.31208	ppb		0.00
Spiked Amount 200.000			Recovery = 10.156%				
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036	ppb		0.00
Spiked Amount 100.000			Recovery = 10.550%				
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840	ppb		0.00
Spiked Amount 100.000			Recovery = 10.108%				
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194	ppb		0.00
Spiked Amount 200.000			Recovery = 9.171%				
82) Terphenyl-D14(S)	12.07	244	719678	9.80130	ppb		0.00
Spiked Amount 100.000			Recovery = 9.801%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713			91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743	ppb		80
4) Pyridine	2.00	79	159922	10.10773	ppb		95
7) Phenol	4.67	94	284850	9.94852	ppb		94
8) Aniline	4.69	93	215040	10.28244	ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288	ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397	ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890	ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580	ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889	ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913	ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047	ppb		96
17) Acetophenone	5.49	105	301622	9.93857	ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173	ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080	ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192	ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780	ppb		91
24) Isophorone	5.95	82	433948	9.99676	ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219	ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036	ppb		99
27) Benzoic acid	6.19	105	96995	12.03014	ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695	ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390	ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216	ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228	ppb		98
32) Naphthalene	6.49	128	626299	10.16177	ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495	ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280	ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411	ppb		94
37) Caprolactum	6.93	55	62259	10.01107	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

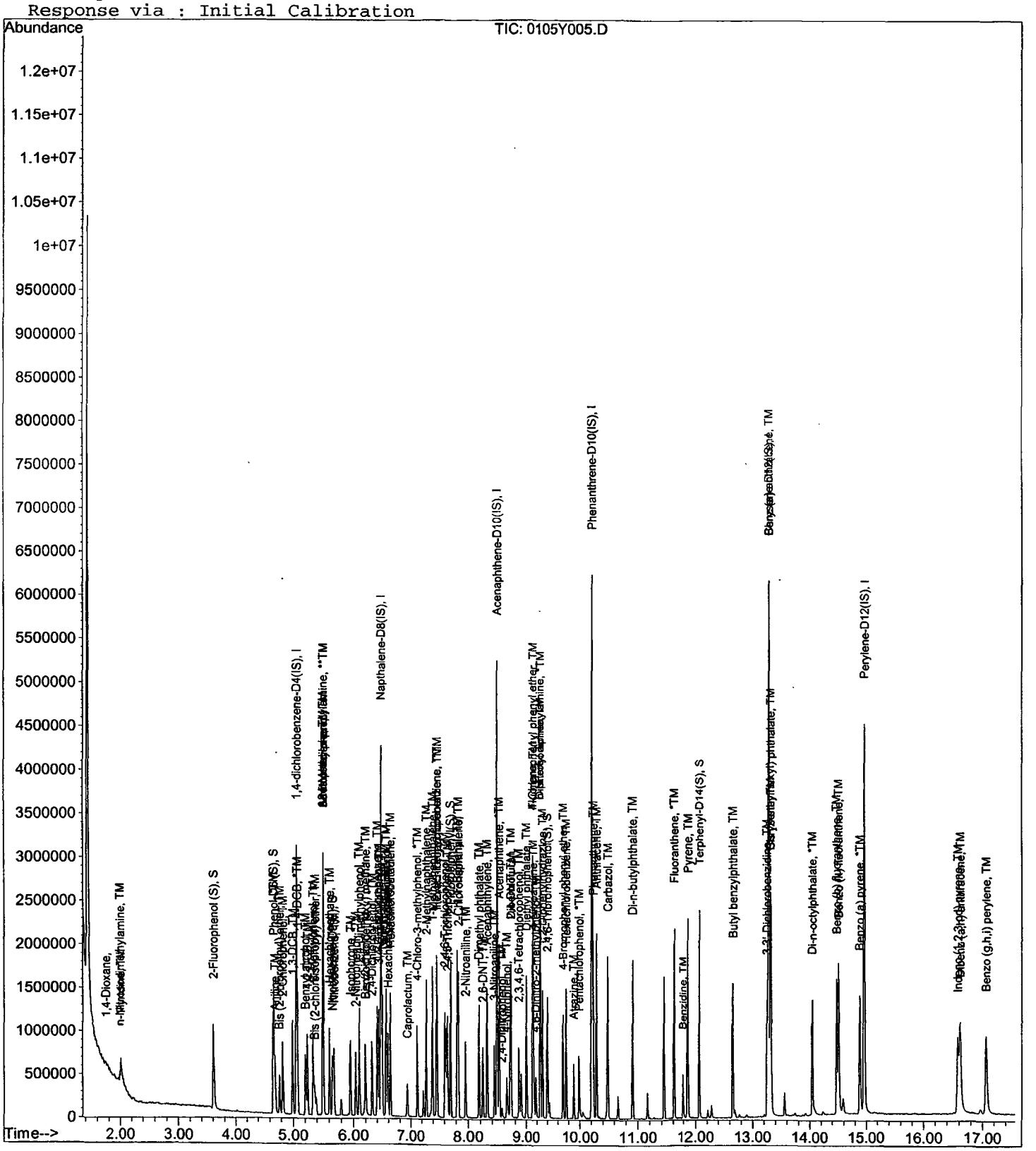
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery =	20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery =	20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery =	20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery =	19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery =	19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery =	20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

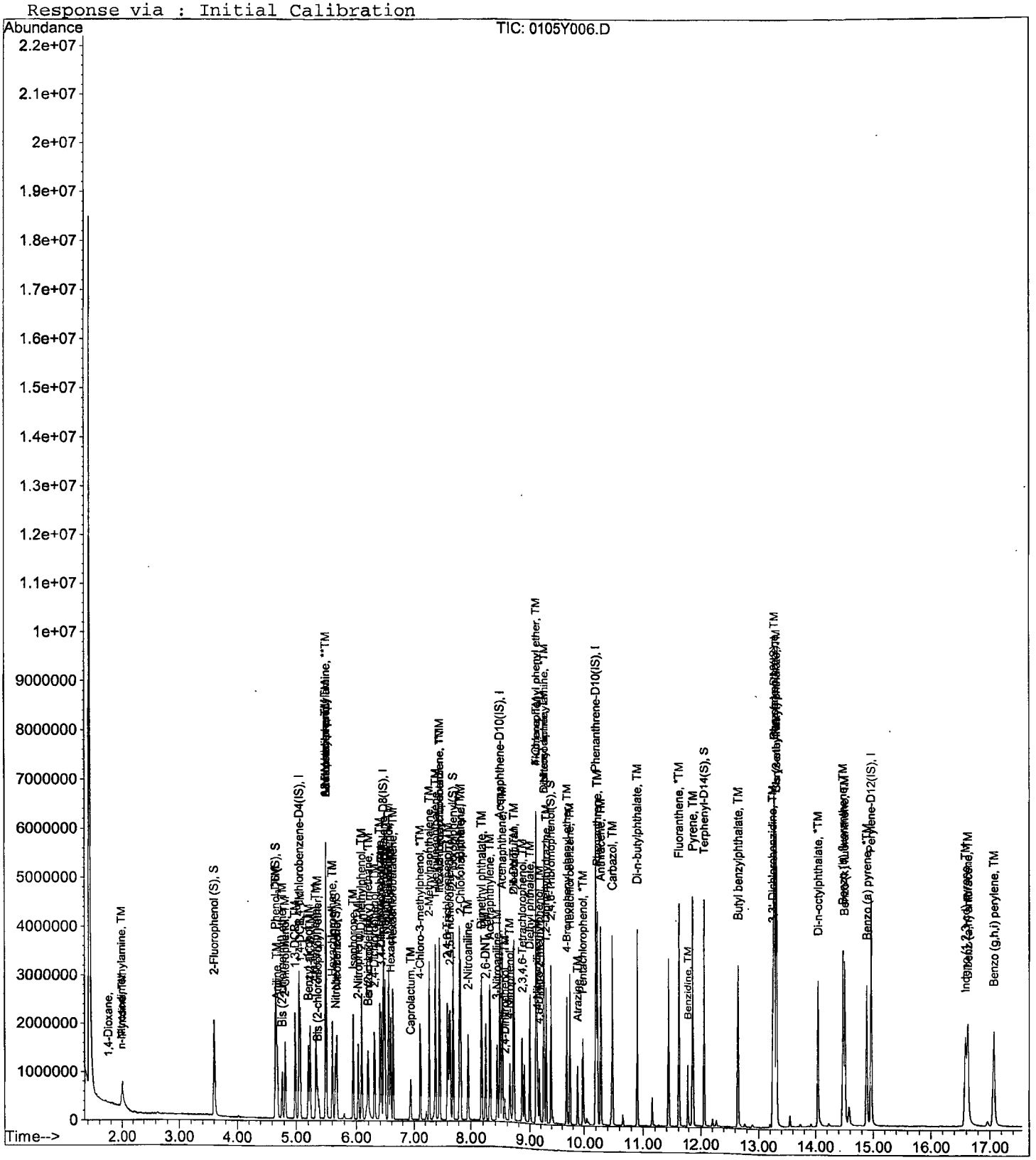
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967 ppb	0.00
Spiked Amount 200.000			Recovery =	40.315%	
6) Phenol-D6 (S)	4.67	99	2073058	80.33420 ppb	0.00
Spiked Amount 200.000			Recovery =	40.167%	
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156 ppb	0.00
Spiked Amount 100.000			Recovery =	39.782%	
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219 ppb	0.00
Spiked Amount 100.000			Recovery =	39.422%	
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158 ppb	0.00
Spiked Amount 200.000			Recovery =	39.906%	
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922 ppb	0.00
Spiked Amount 100.000			Recovery =	40.089%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747	54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850 ppb	93
4) Pyridine	1.99	79	710577	42.17927 ppb	100
7) Phenol	4.68	94	1249780	40.99379 ppb	96
8) Aniline	4.69	93	852672	38.29141 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360 ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826 ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439 ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338 ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093 ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316 ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142 ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767 ppb	98
17) Acetophenone	5.49	105	1298420	40.18079 ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972 ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083 ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355 ppb	99
24) Isophorone	5.95	82	1929574	40.57653 ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009 ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262 ppb	95
27) Benzoic acid	6.22	105	694050	39.13552 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698 ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676 ppb	97
32) Naphthalene	6.49	128	2700428	39.99560 ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681 ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710 ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202 ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790 ppb	96
37) Caprolactum	6.96	55	275073	40.37550 ppb	97

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran ~	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

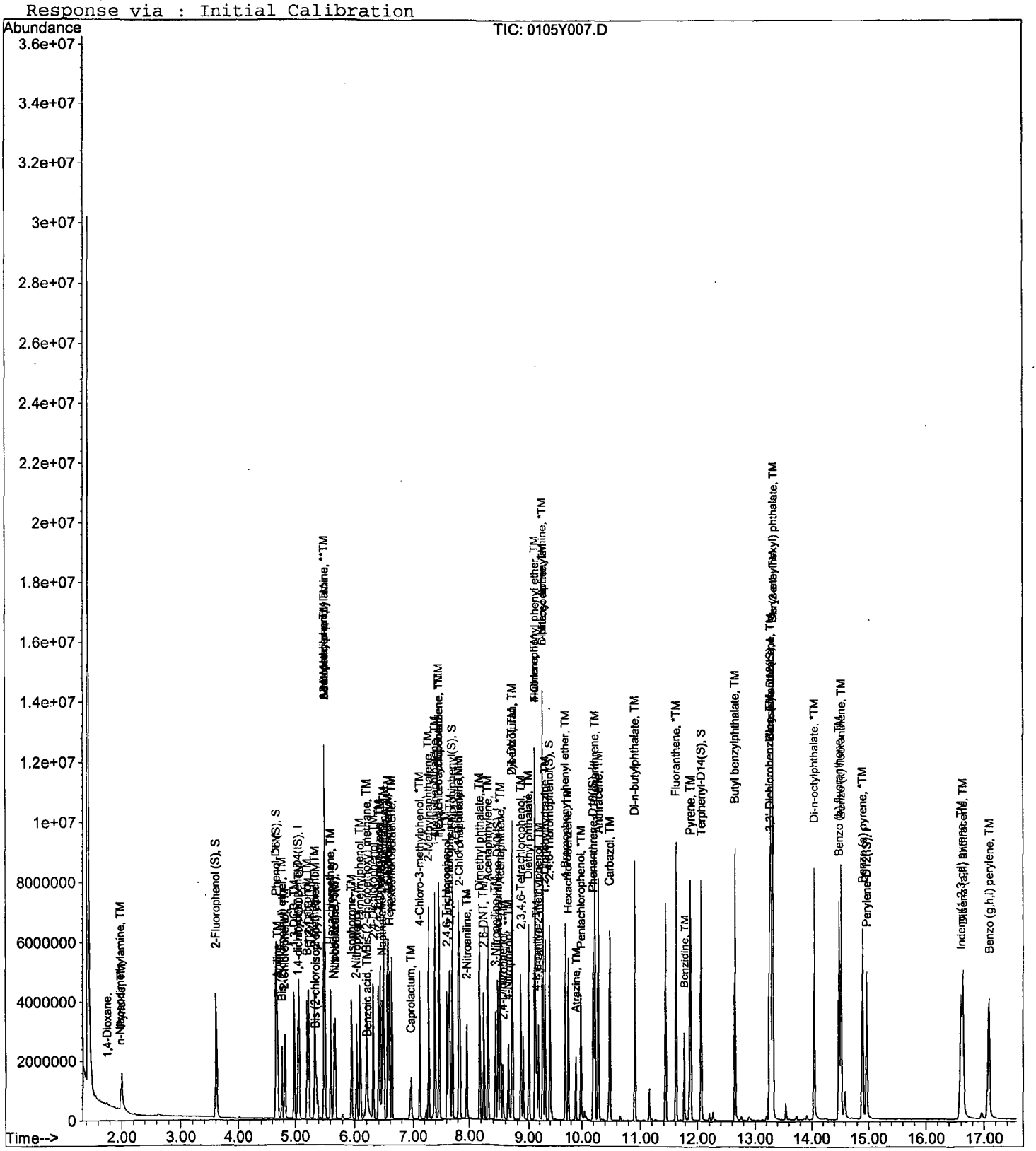
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501 ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827 ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678 ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033 ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973 ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691 ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290 ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584 ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983 ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022 ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174 ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741 ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990 ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046 ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381 ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245 ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395 ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389 ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069 ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506 ppb	100
62)	Fluorene	9.11	166	2868571	49.36863 ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128 ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785 ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785 ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089 ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978 ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367 ppb	100
72)	Atrazine	9.89	200	418889	26.25754 ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356 ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640 ppb	100
75)	Anthracene	10.29	178	4512131	51.82540 ppb	100
76)	Carbazol	10.49	167	4021683	52.16528 ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661 ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724 ppb	100
80)	Benzidine	11.78	184	1334887	54.03870 ppb	100
81)	Pyrene	11.88	202	5487771	52.99187 ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593 ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347 ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761 ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599 ppb	100
87)	Chrysene	13.31	228	5235913	52.38491 ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495 ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338 ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646 ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782 ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159 ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960 ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590 ppb	100

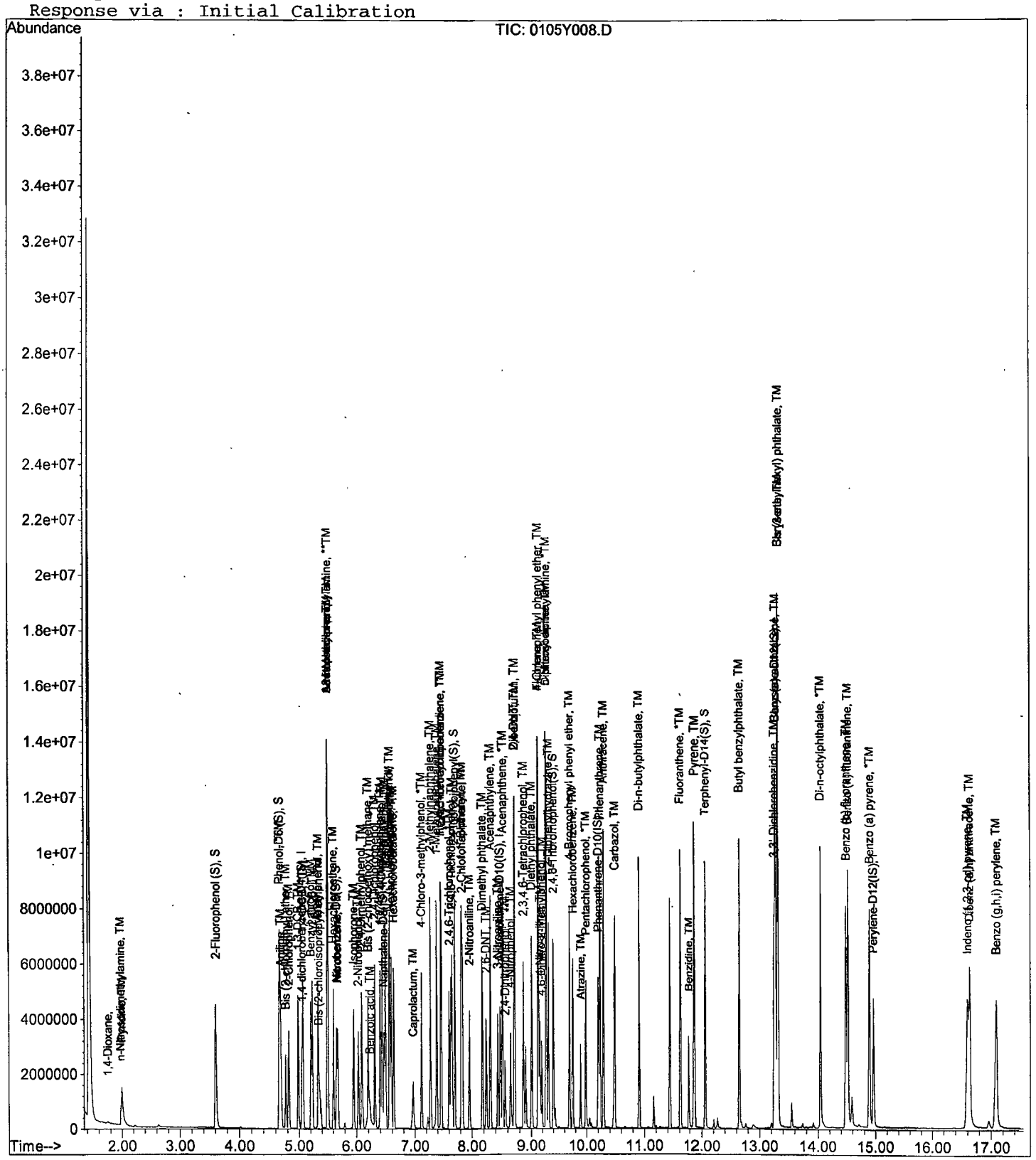
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382 ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%			
6) Phenol-D6 (S)	4.67	99	2714982	119.91052 ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%			
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297 ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%			
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223 ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868 ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%			
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361 ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380		95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310 ppb		92
4) Pyridine	1.99	79	901311	60.97669 ppb		97
7) Phenol	4.68	94	1606167	60.04495 ppb		96
8) Aniline	4.69	93	1200640	61.45164 ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145 ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776 ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182 ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978 ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043 ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365 ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897 ppb		96
17) Acetophenone	5.50	105	1702308	60.04028 ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638 ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425 ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967 ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951 ppb		89
24) Isophorone	5.96	82	2504820	59.55758 ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859 ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930 ppb		99
27) Benzoic acid	6.23	105	965560	57.47534 ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945 ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990 ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563 ppb		100
32) Naphthalene	6.49	128	3532998	59.16571 ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729 ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808 ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347 ppb		98
37) Caprolactum	6.98	55	354905	58.90188 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38) 4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb		97
39) 2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb		99
40) 1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb		100
42) Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb		99
43) 1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb		98
44) 2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb		100
45) 2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb		95
47) 1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb		99
48) 2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb		98
49) 2-Nitroaniline	7.96	65	841116	62.54367	ppb		91
50) Dimethyl phthalate	8.18	163	3194891	61.80917	ppb		97
51) 2,6-DNT	8.25	165	721094	63.77204	ppb		92
52) Acenaphthylene	8.31	152	3958165	61.50568	ppb		100
53) 3-Nitroaniline	8.44	138	660556	62.57113	ppb		99
54) Acenaphthene	8.52	154	2630476	61.47248	ppb		99
55) 2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb		93
56) 4-Nitrophenol	8.65	65	649860	62.38635	ppb		93
57) Dibenzofuran	8.71	168	3822801	60.02938	ppb		98
58) 2,4-DNT	8.71	165	1037342	63.85086	ppb		97
59) 2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb		98
60) Diethyl phthalate	9.01	149	3210549	60.76914	ppb		95
61) 4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb		98
62) Fluorene	9.11	166	3228662	60.22935	ppb		100
63) 4-Nitroaniline	9.15	138	700111	60.96860	ppb		95
66) 4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb	#	85
67) Diphenyl amine	9.27	169	5280666	121.05178	ppb		100
68) n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb		100
69) 1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb		96
70) 4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb		96
71) Hexachlorobenzene	9.75	284	1086377	59.88631	ppb		96
72) Atrazine	9.89	200	456257	29.70998	ppb		98
73) Pentachlorophenol	9.99	266	735018	61.16679	ppb		99
74) Phenanthrene	10.24	178	4886948	60.82438	ppb		99
75) Anthracene	10.29	178	5016441	59.85415	ppb		100
76) Carbazol	10.49	167	4476193	60.31428	ppb		98
77) Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb		99
78) Fluoranthene	11.62	202	5746073	61.28713	ppb	#	97
80) Benzidine	11.78	184	1491099	63.17340	ppb		99
81) Pyrene	11.88	202	6087066	61.51608	ppb		100
83) Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb		99
84) 3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb		99
85) Benz (a) anthracene	13.27	228	5978879	58.96028	ppb		100
86) Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb		98
87) Chrysene	13.32	228	5981915	62.63562	ppb		99
88) Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb		99
90) Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb		100
91) Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb	#	97
92) Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb		99
93) Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb		100
94) Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb		98
95) Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb		97

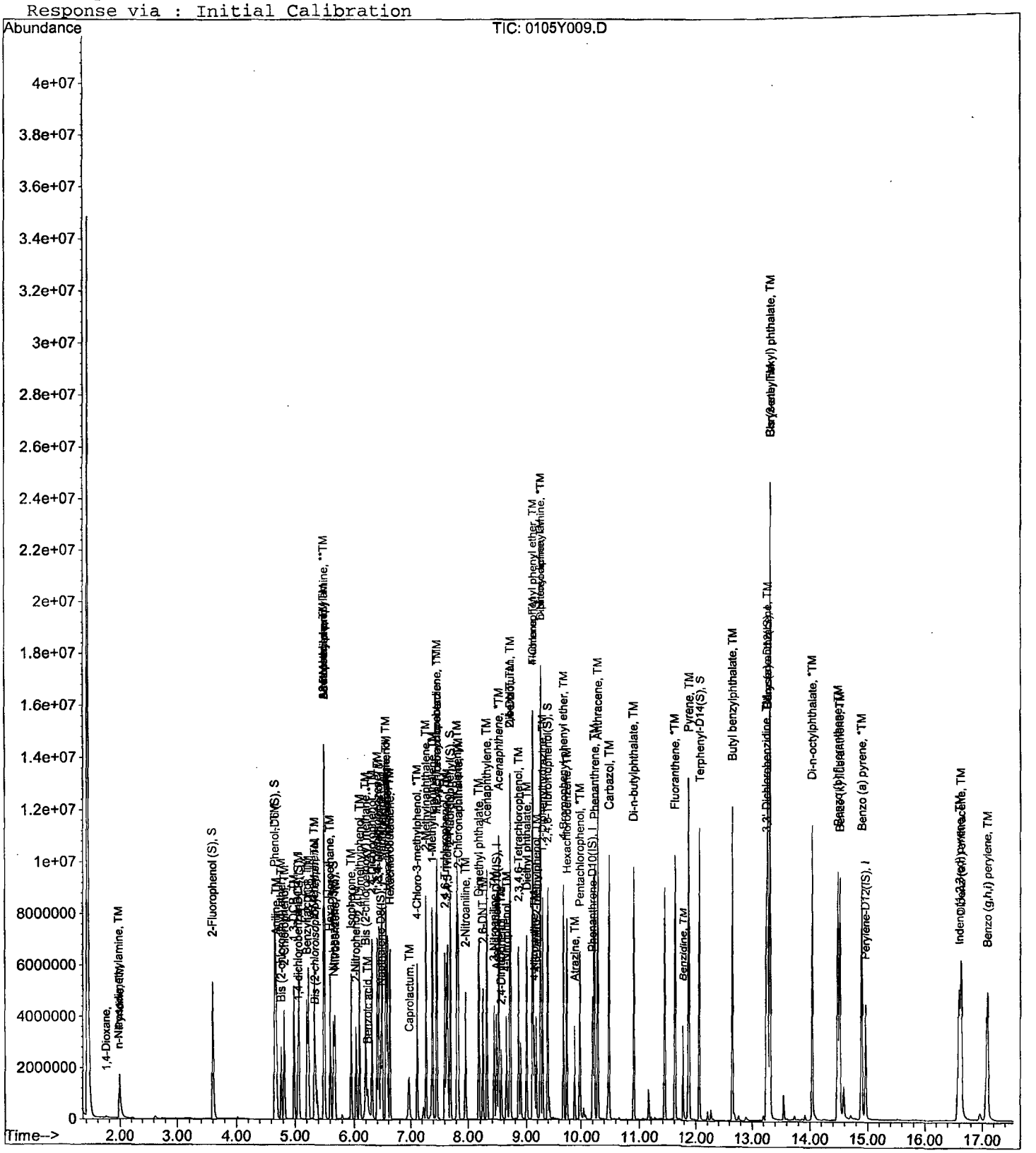
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery	= 80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery	= 80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery	= 81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery	= 82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery	= 87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery	= 83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

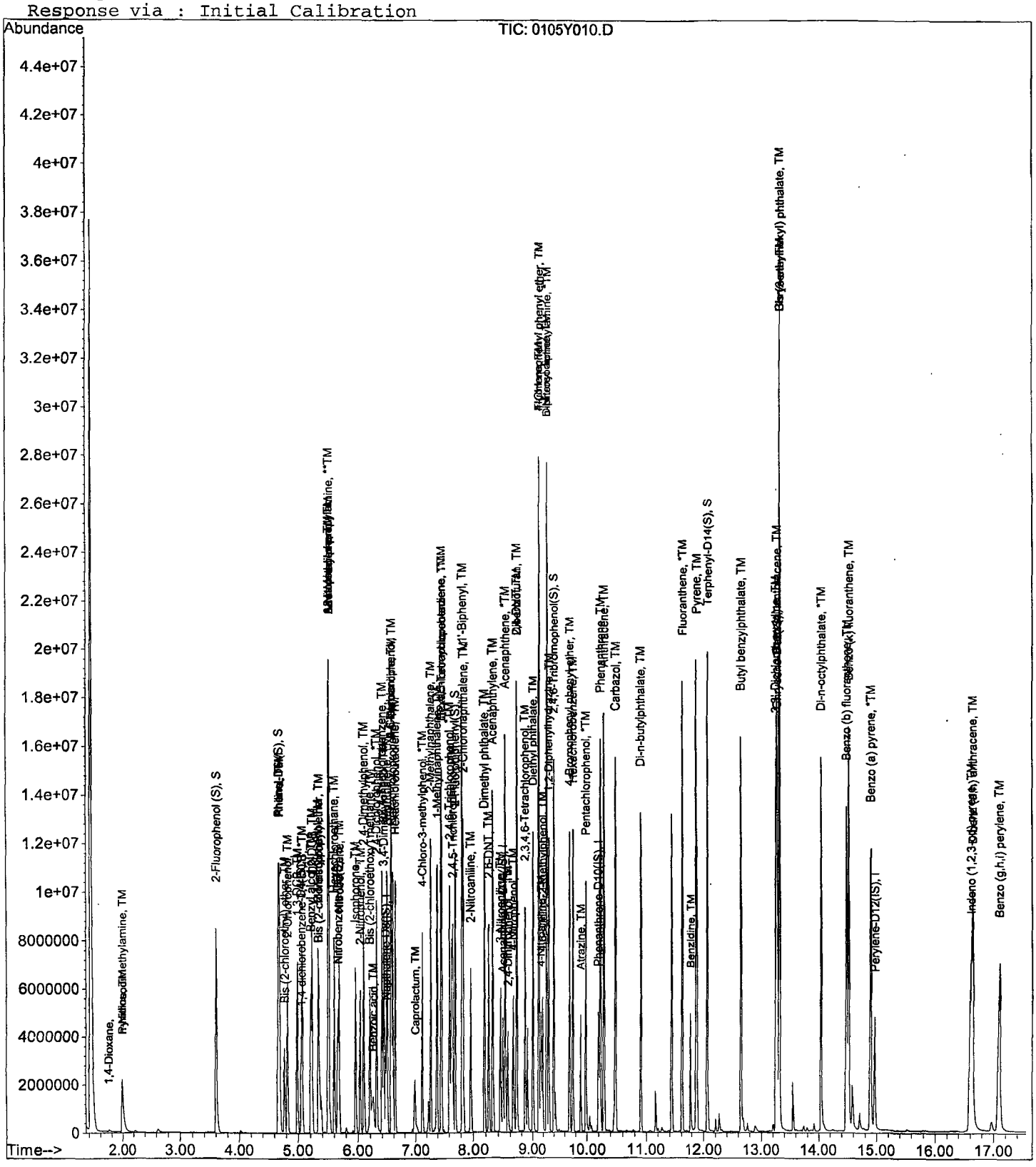
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery	= 98.576%		
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery	= 98.825%		
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery	= 100.359%		
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery	= 102.036%		
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery	= 113.815%		
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery	= 101.251%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

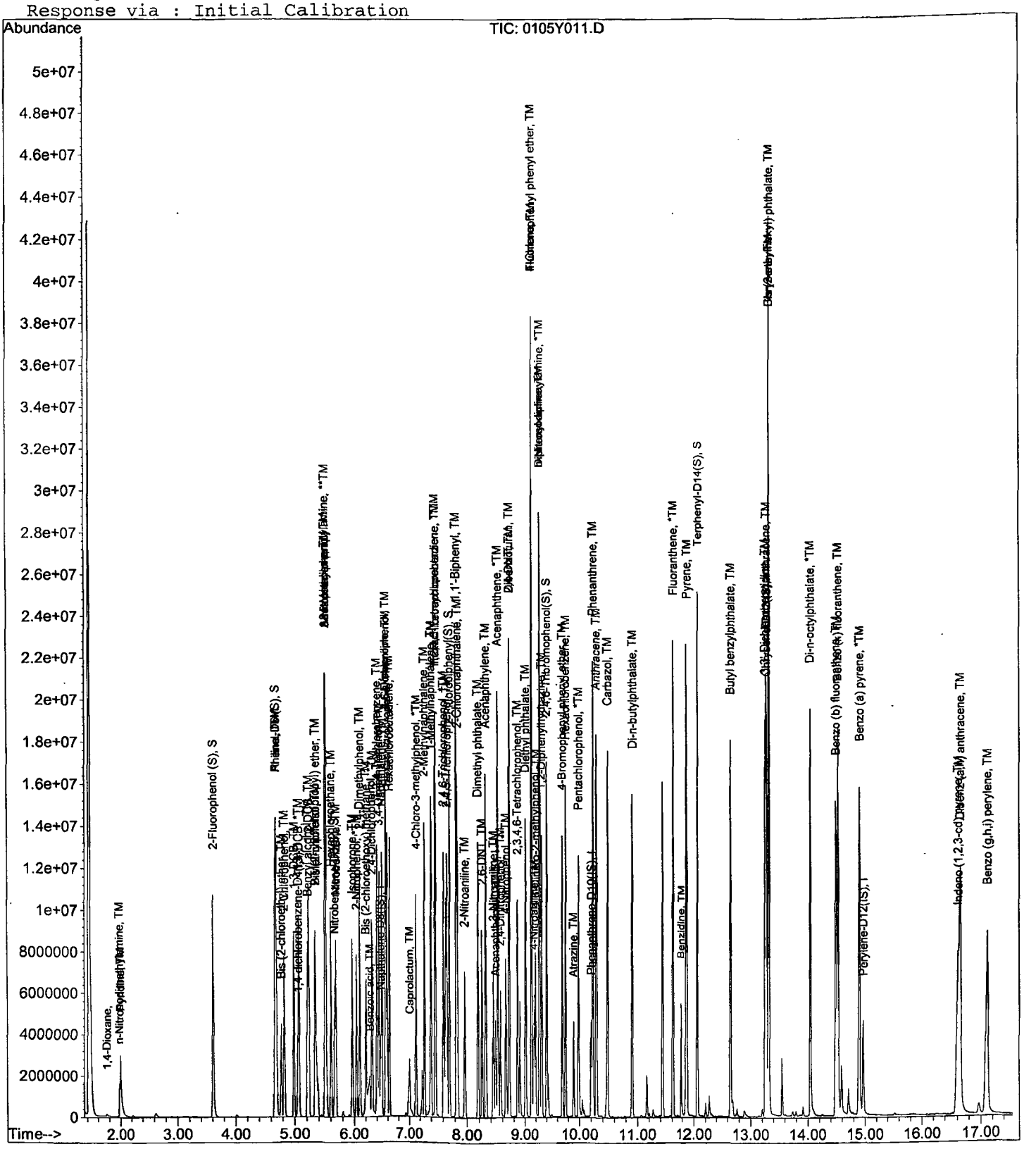
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery	= 0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery	= 6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery	= 0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery	= 0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery	= 0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

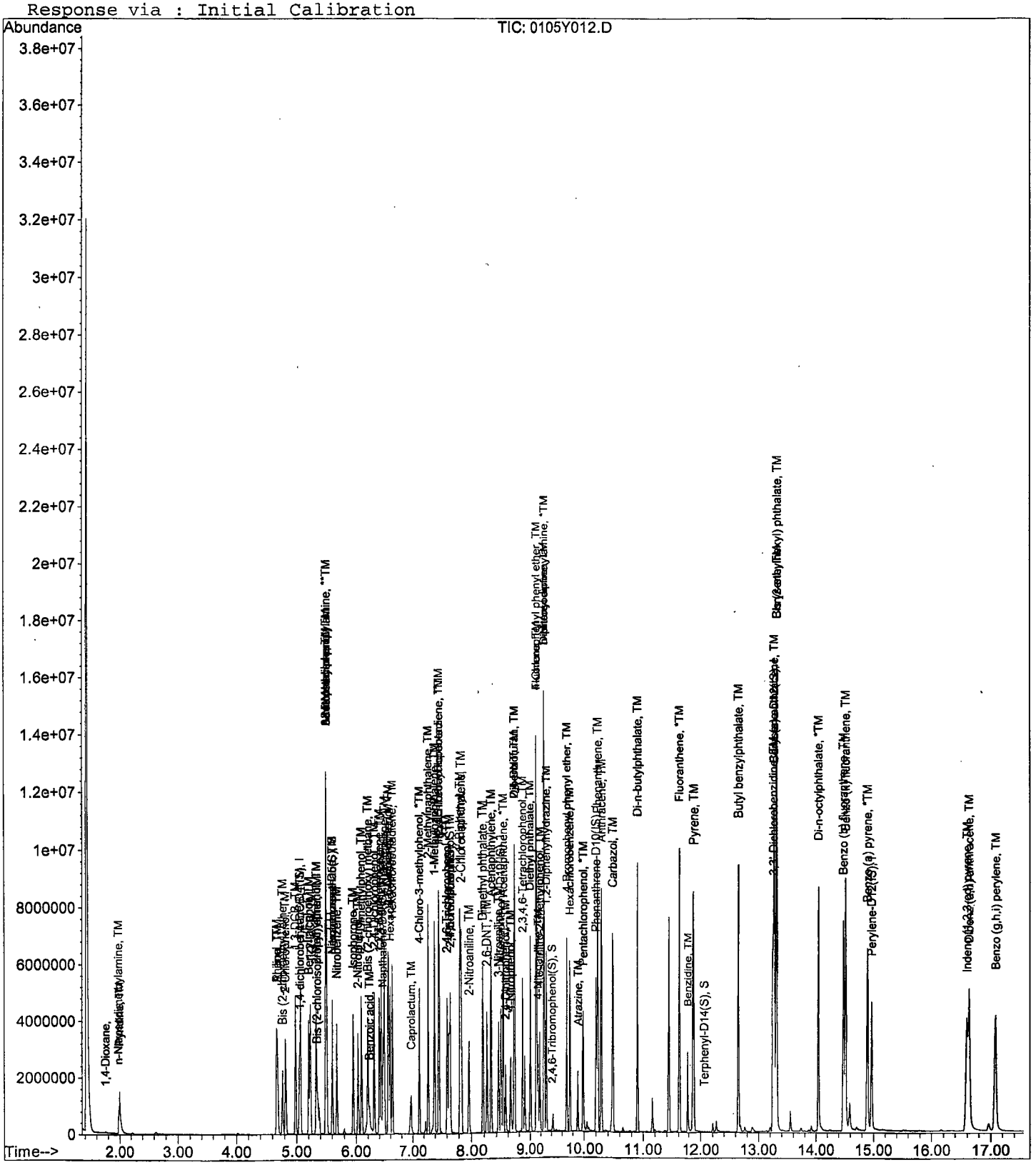
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/28/21
Matrix: Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y118.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2846	11			
3	TM	n-Nitrosodimethylamine	0.6105	0.5659	7.3	TM		
4	TM	Pyridine	1.336	1.246	6.7	TM		
5	S	2-Fluorophenol (S)	1.601	1.691	5.7	S		
6	S	Phenol-D6 (S)	2.046	2.253	10	S		
7	*TM	Phenol	2.418	2.731	13	*TM		
8	TM	Aniline	1.766	1.918	8.6	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.155	12	TM		
10	TM	2-Chlorophenol	1.829	1.966	7.5	TM		
11	TM	1,3-DCB	2.107	2.069	1.8	TM		
12	*TM	1,4-DCB	2.122	2.142	0.93	*TM		
13	TM	Benzyl alcohol	1.073	1.180	10	TM		
14	TM	1,2-DCB	1.992	2.011	0.95	TM		
15	TM	2-Methylphenol	1.401	1.527	9.0	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.140	17	TM		
17	TM	Acetophenone	2.563	2.850	11	TM		
18	TM	3&4-Methylphenol	1.892	2.150	14	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.715	15	**TM		
20	TM	Hexachloroethane	0.8684	0.8908	2.6	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5877	0.36	S		
23	TM	Nitrobenzene	0.6068	0.6107	0.65	TM		
24	TM	Isophorone	0.9746	0.9936	2.0	TM		
25	*TM	2-Nitrophenol	0.2562	0.2561	0.04	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4186	1.2	TM		
27	TML	Benzoic acid	0.3484	0.2659	24	TML	26	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5646	2.5	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4308	1.8	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5016	1.9	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6723	0.58	TM		
32	TM	Naphthalene	1.384	1.395	0.84	TM		
33	TM	4-Chloroaniline	0.5189	0.5711	10	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4338	1.7	TM		
35	TM	Hexachloropropene	0.4576	0.4339	5.2	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3488	3.5	*TM		
37	TM	Caprolactum	0.1396	0.1442	3.3	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4635	1.1	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9168	0.79	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9625	2.6	TM		
		Average			6.0			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y118.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5913	3.8	**TML	4.4
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.9049	0.52	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5628	0.47	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6152	0.54	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.860	0.80	S	
47	TM	1,1'-Biphenyl	2.012	2.088	3.8	TM	
48	TM	2-Chloronaphthalene	1.564	1.609	2.9	TM	
49	TM	2-Nitroaniline	0.4979	0.5172	3.9	TM	
50	TM	Dimethyl phthalate	1.914	1.913	0.04	TM	
51	TM	2,6-DNT	0.4186	0.4260	1.8	TM	
52	TM	Acenaphthylene	2.382	2.382	0.00	TM	
53	TM	3-Nitroaniline	0.3908	0.4070	4.1	TM	
54	*TM	Acenaphthene	1.584	1.600	1.0	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.1870	16	**TML	14
56	**TM	4-Nitrophenol	0.3856	0.3699	4.1	**TM	
57	TM	Dibenzofuran	2.358	2.386	1.2	TM	
58	TM	2,4-DNT	0.6015	0.6207	3.2	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4667	3.7	TM	
60	TM	Diethyl phthalate	1.956	1.958	0.13	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.110	2.7	TM	
62	TM	Fluorene	1.985	2.087	5.2	TM	
63	TM	4-Nitroaniline	0.4251	0.4447	4.6	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2920	3.2	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1802	6.1	TM	
67	TM	Diphenyl amine	0.7523	0.7862	4.5	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7862	4.5	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9695	1.7	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2979	2.2	TM	
71	TM	Hexachlorobenzene	0.3129	0.3150	0.68	TM	
72	TM	Atrazine	0.2649	0.2551	3.7	TM	
73	*TM	Pentachlorophenol	0.2072	0.2025	2.3	*TM	
74	TM	Phenanthrene	1.386	1.458	5.2	TM	
75	TM	Anthracene	1.445	1.477	2.2	TM	
76	TM	Carbazol	1.280	1.288	0.63	TM	
77	TM	Di-n-butylphthalate	1.570	1.661	5.8	TM	
78	*TM	Fluoranthene	1.617	1.663	2.8	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3817	4.0	TM	
		Average			3.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y118.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.700	2.0	TM	
82	S	Terphenyl-D14(S)	1.201	1.204	0.27	S	
83	TM	Butyl benzylphthalate	0.7149	0.7412	3.7	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6073	9.5	TM	
85	TM	Benz (a) anthracene	1.709	1.740	1.8	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.151	12	TM	
87	TM	Chrysene	1.610	1.723	7.1	TM	
88	*TM	Di-n-octylphthalate	1.686	1.750	3.8	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.634	4.0	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.655	9.1	TM	
92	*TM	Benzo (a) pyrene	1.467	1.570	7.1	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.661	1.7	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.467	0.81	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.389	3.9	TM	
96							
97							
98							
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117							
118							
119							
120							
		Average			4.8		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y118.D Vial: 18
Acq On : 28 Jan 21 10:44 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 10:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	615888	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2552413	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1609774	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3252296	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	3318016	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	3043175	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2603942	105.66587 ppb	0.00
Spiked Amount 200.000			Recovery =	52.833%	
6) Phenol-D6 (S)	4.67	99	3469007	110.09258 ppb	0.00
Spiked Amount 200.000			Recovery =	55.046%	
22) Nitrobenzene-D5(S)	5.67	82	1874931	49.81792 ppb	0.00
Spiked Amount 100.000			Recovery =	49.818%	
46) 2-Fluorobiphenyl(S)	7.71	172	3742345	49.59777 ppb	0.00
Spiked Amount 100.000			Recovery =	49.598%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1175138	96.83942 ppb	0.00
Spiked Amount 200.000			Recovery =	48.420%	
82) Terphenyl-D14(S)	12.08	244	4992772	50.13337 ppb	0.00
Spiked Amount 100.000			Recovery =	50.133%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	21911	4.45871	98
3) n-Nitrosodimethylamine	1.97	42	435632	46.34319 ppb	76
4) Pyridine	1.99	79	959177	46.62840 ppb	94
7) Phenol	4.69	94	2102727	56.48475 ppb	88
8) Aniline	4.69	93	1476608	54.30608 ppb	95
9) Bis (2-chloroethyl) ether	4.77	63	889273	55.97540 ppb	93
10) 2-Chlorophenol	4.82	128	1513464	53.73648 ppb	99
11) 1,3-DCB	4.98	146	1592552	49.10084 ppb	99
12) 1,4-DCB	5.07	146	1648697	50.46277 ppb	99
13) Benzyl alcohol	5.21	108	908409	55.00737 ppb	95
14) 1,2-DCB	5.23	146	1548085	50.47635 ppb	98
15) 2-Methylphenol	5.34	107	1175732	54.52119 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	877970	58.47903 ppb	94
17) Acetophenone	5.50	105	2193897	55.60110 ppb	98
18) 3&4-Methylphenol	5.51	107	3310010	113.64035 ppb	95
19) n-Nitrosodi-n-propylamine	5.51	70	1320333	57.34705 ppb	95
20) Hexachloroethane	5.60	117	685775	51.28726 ppb	92
23) Nitrobenzene	5.69	77	1948576	50.32491 ppb	95
24) Isophorone	5.96	82	3170251	50.97917 ppb	93
25) 2-Nitrophenol	6.04	139	816966	49.98169 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1335411	49.39767 ppb	97
27) Benzoic acid	6.25	105	848381	36.96544 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1801458	51.22601 ppb	98
29) 2,4-Dichlorophenol	6.31	162	1374599	49.12347 ppb	93
30) 1,2,4-Trichlorobenzene	6.40	180	1600436	49.07002 ppb	99
31) 3,4-Dimethylphenol	6.43	107	2145124	49.71178 ppb	98
32) Naphthalene	6.49	128	4451878	50.42067 ppb	100
33) 4-Chloroaniline	6.56	127	1822017	55.02964 ppb	94
34) 2,6-Dichlorophenol	6.57	162	1384094	50.85861 ppb	94
35) Hexachloropropene	6.59	213	1384237	47.40289 ppb	99
36) Hexachlorobutadiene	6.63	225	1112864	48.22733 ppb	98
37) Caprolactum	7.00	55	460096	51.64213 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y118.D Vial: 18
Acq On : 28 Jan 21 10:44 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 10:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1478689	50.54155	ppb		94
39)	2-Methylnaphthalene	7.28	142	2924971	50.39517	ppb		98
40)	1-Methylnaphthalene	7.40	142	3070872	51.31919	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1189888	47.82227	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1820898	50.26137	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1132410	50.23605	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1237978	50.26994	ppb		95
47)	1,1'-Biphenyl	7.82	154	4201547	51.89321	ppb		99
48)	2-Chloronaphthalene	7.84	162	3238003	51.42877	ppb		98
49)	2-Nitroaniline	7.96	65	1040675	51.93818	ppb		85
50)	Dimethyl phthalate	8.19	163	3849059	49.97992	ppb		98
51)	2,6-DNT	8.25	165	857217	50.88308	ppb	#	67
52)	Acenaphthylene	8.32	152	4793936	49.99859	ppb		99
53)	3-Nitroaniline	8.45	138	818999	52.07052	ppb		92
54)	Acenaphthene	8.52	154	3220287	50.51091	ppb		99
55)	2,4-Dinitrophenol	8.57	184	376193	43.19653	ppb		91
56)	4-Nitrophenol	8.66	65	744359	47.96190	ppb		92
57)	Dibenzofuran	8.72	168	4800379	50.59433	ppb		92
58)	2,4-DNT	8.71	165	1248948	51.59805	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	939043	48.15516	ppb		91
60)	Diethyl phthalate	9.01	149	3940638	50.06272	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2233349	51.36118	ppb		98
62)	Fluorene	9.12	166	4200285	52.59065	ppb		100
63)	4-Nitroaniline	9.16	138	894806	52.30129	ppb		98
66)	4,6-Dinitro-2-methylphenol	9.20	198	732538	46.96314	ppb		97
67)	Diphenyl amine	9.27	169	6392774	104.50616	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	6392774	104.50616	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3941551	50.83217	ppb		92
70)	4-Bromophenyl phenyl ether	9.70	248	1211228	48.88884	ppb	#	82
71)	Hexachlorobenzene	9.75	284	1280525	50.33906	ppb	#	86
72)	Atrazine	9.89	200	518634	24.08373	ppb		95
73)	Pentachlorophenol	9.99	266	823354	48.86236	ppb		98
74)	Phenanthrene	10.24	178	5926183	52.59992	ppb		99
75)	Anthracene	10.29	178	6003327	51.08114	ppb		99
76)	Carbazol	10.49	167	5236174	50.31477	ppb		96
77)	Di-n-butylphthalate	10.91	149	6751236	52.87818	ppb		100
78)	Fluoranthene	11.62	202	6759066	51.41086	ppb		98
80)	Benzidine	11.79	184	1583138	47.97719	ppb		98
81)	Pyrene	11.88	202	7052735	50.98313	ppb		99
83)	Butyl benzylphthalate	12.65	149	3073976	51.83594	ppb		93
84)	3,3'-Dichlorobenzidine	13.25	252	2518868	54.77322	ppb	#	98
85)	Benz (a) anthracene	13.27	228	7216138	50.90177	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4773159	55.94861	ppb	#	92
87)	Chrysene	13.32	228	7147465	53.53298	ppb		99
88)	Di-n-octylphthalate	14.04	149	7259735	51.90681	ppb		97
90)	Benzo (b) fluoranthene	14.50	252	6214516	51.98646	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	6294548	54.56283	ppb		99
92)	Benzo (a) pyrene	14.91	252	5973794	53.53247	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	6319090	49.13823	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5581833	49.59667	ppb		99
95)	Benzo (g,h,i) perylene	17.11	276	5284749	48.06616	ppb		98

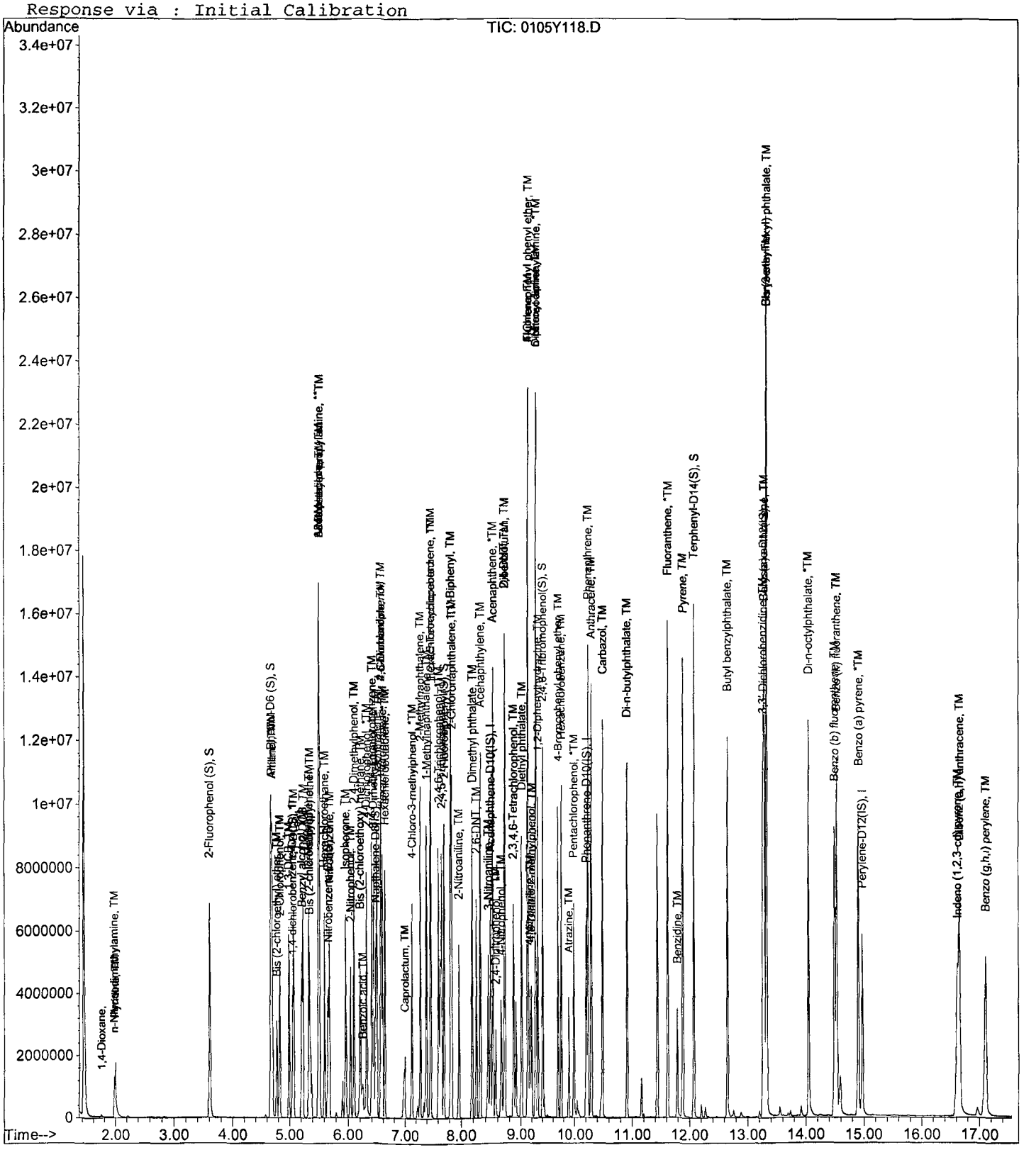
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y118.D Vial: 18
Acq On : 28 Jan 21 10:44 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 10:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y129.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2716	15		
3	TM	n-Nitrosodimethylamine	0.6105	0.6036	1.1	TM	
4	TM	Pyridine	1.336	1.338	0.15	TM	
5	S	2-Fluorophenol (S)	1.601	1.684	5.2	S	
6	S	Phenol-D6 (S)	2.046	2.214	8.2	S	
7	*TM	Phenol	2.418	2.602	7.6	*TM	
8	TM	Aniline	1.766	1.923	8.9	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.124	9.0	TM	
10	TM	2-Chlorophenol	1.829	1.916	4.8	TM	
11	TM	1,3-DCB	2.107	2.167	2.9	TM	
12	*TM	1,4-DCB	2.122	2.204	3.9	*TM	
13	TM	Benzyl alcohol	1.073	1.127	5.1	TM	
14	TM	1,2-DCB	1.992	2.012	0.99	TM	
15	TM	2-Methylphenol	1.401	1.488	6.2	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.099	13	TM	
17	TM	Acetophenone	2.563	2.722	6.2	TM	
18	TM	3&4-Methylphenol	1.892	2.036	7.6	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.669	12	**TM	
20	TM	Hexachloroethane	0.8684	0.9036	4.1	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6082	3.1	S	
23	TM	Nitrobenzene	0.6068	0.6291	3.7	TM	
24	TM	Isophorone	0.9746	0.9939	2.0	TM	
25	*TM	2-Nitrophenol	0.2562	0.2696	5.2	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4351	2.7	TM	
27	TML	Benzoic acid	0.3484	0.4080	17	TML	5.9
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5661	2.7	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4379	0.14	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5093	0.36	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6784	0.32	TM	
32	TM	Naphthalene	1.384	1.397	0.95	TM	
33	TM	4-Chloroaniline	0.5189	0.5482	5.6	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4318	1.2	TM	
35	TM	Hexachloropropene	0.4576	0.4483	2.0	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3578	1.1	*TM	
37	TM	Caprolactum	0.1396	0.1475	5.6	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4765	3.9	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9249	1.7	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9772	4.2	TM	
		Average			4.9		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y129.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5555	2.5	**TML	9.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8986	0.18	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5805	3.6	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6192	1.2	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.879	0.23	S	
47	TM	1,1'-Biphenyl	2.012	2.091	3.9	TM	
48	TM	2-Chloronaphthalene	1.564	1.613	3.1	TM	
49	TM	2-Nitroaniline	0.4979	0.5264	5.7	TM	
50	TM	Dimethyl phthalate	1.914	1.959	2.4	TM	
51	TM	2,6-DNT	0.4186	0.4418	5.5	TM	
52	TM	Acenaphthylene	2.382	2.405	0.93	TM	
53	TM	3-Nitroaniline	0.3908	0.4172	6.8	TM	
54	*TM	Acenaphthene	1.584	1.585	0.05	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2231	0.01	**TML	2.2
56	**TM	4-Nitrophenol	0.3856	0.4001	3.7	**TM	
57	TM	Dibenzofuran	2.358	2.398	1.7	TM	
58	TM	2,4-DNT	0.6015	0.6336	5.3	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4784	1.3	TM	
60	TM	Diethyl phthalate	1.956	1.986	1.6	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.121	3.8	TM	
62	TM	Fluorene	1.985	2.105	6.1	TM	
63	TM	4-Nitroaniline	0.4251	0.4404	3.6	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2918	3.2	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1867	2.7	TM	
67	TM	Diphenyl amine	0.7523	0.8024	6.7	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.8024	6.7	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9820	3.0	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2989	1.9	TM	
71	TM	Hexachlorobenzene	0.3129	0.3067	2.0	TM	
72	TM	Atrazine	0.2649	0.2495	5.8	TM	
73	*TM	Pentachlorophenol	0.2072	0.2005	3.3	*TM	
74	TM	Phenanthrene	1.386	1.430	3.2	TM	
75	TM	Anthracene	1.445	1.494	3.3	TM	
76	TM	Carbazol	1.280	1.316	2.8	TM	
77	TM	Di-n-butylphthalate	1.570	1.645	4.7	TM	
78	*TM	Fluoranthene	1.617	1.689	4.5	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3604	9.4	TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/28/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y129.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.778	6.6	TM	
82	S	Terphenyl-D14(S)	1.201	1.269	5.7	S	
83	TM	Butyl benzylphthalate	0.7149	0.7722	8.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6035	8.9	TM	
85	TM	Benz (a) anthracene	1.709	1.795	5.0	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.155	12	TM	
87	TM	Chrysene	1.610	1.734	7.7	TM	
88	*TM	Di-n-octylphthalate	1.686	1.828	8.4	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.678	6.8	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.649	8.8	TM	
92	*TM	Benzo (a) pyrene	1.467	1.585	8.0	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.690	0.05	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.487	0.52	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.424	1.5	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y129.D Vial: 29
Acq On : 28 Jan 21 15:35 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:35 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	524123	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2073205	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1311382	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2685017	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2621288	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2442069	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2207075	105.24199 ppb	0.00
Spiked Amount 200.000			Recovery	= 52.621%	
6) Phenol-D6 (S)	4.67	99	2900791	108.17773 ppb	0.00
Spiked Amount 200.000			Recovery	= 54.089%	
22) Nitrobenzene-D5(S)	5.66	82	1576113	51.55804 ppb	0.00
Spiked Amount 100.000			Recovery	= 51.558%	
46) 2-Fluorobiphenyl(S)	7.71	172	3080523	50.11624 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.116%	
64) 2,4,6-Tribromophenol(S)	9.40	330	956706	96.77820 ppb	0.00
Spiked Amount 200.000			Recovery	= 48.389%	
82) Terphenyl-D14(S)	12.07	244	4158396	52.85363 ppb	0.00
Spiked Amount 100.000			Recovery	= 52.854%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.74	58	17797	4.25561	57
3) n-Nitrosodimethylamine	1.97	42	395466	49.43606 ppb	84
4) Pyridine	1.99	79	876602	50.07520 ppb	93
7) Phenol	4.68	94	1704473	53.80306 ppb	87
8) Aniline	4.69	93	1260032	54.45445 ppb	97
9) Bis (2-chloroethyl) ether	4.77	63	736494	54.47533 ppb	93
10) 2-Chlorophenol	4.82	128	1255564	52.38471 ppb	97
11) 1,3-DCB	4.99	146	1419692	51.43491 ppb	96
12) 1,4-DCB	5.07	146	1444168	51.94173 ppb	99
13) Benzyl alcohol	5.21	108	738529	52.55034 ppb	90
14) 1,2-DCB	5.23	146	1317908	50.49481 ppb	97
15) 2-Methylphenol	5.33	107	974552	53.10440 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	720009	56.35428 ppb	95
17) Acetophenone	5.50	105	1783562	53.11582 ppb	90
18) 3&4-Methylphenol	5.51	107	2667495	107.61564 ppb	96
19) n-Nitrosodi-n-propylamine	5.50	70	1093324	55.80139 ppb	98
20) Hexachloroethane	5.60	117	591998	52.02554 ppb	94
23) Nitrobenzene	5.69	77	1630320	51.83787 ppb	92
24) Isophorone	5.96	82	2575757	50.99325 ppb	96
25) 2-Nitrophenol	6.04	139	698603	52.61943 ppb	82
26) 2,4-Dimethylphenol	6.10	122	1127593	51.35144 ppb	99
27) Benzoic acid	6.24	105	1057373	52.95557 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	1466925	51.35503 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1134830	49.92896 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1319840	49.82048 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1758147	50.16153 ppb	98
32) Naphthalene	6.49	128	3619861	50.47379 ppb	99
33) 4-Chloroaniline	6.56	127	1420574	52.82224 ppb	93
34) 2,6-Dichlorophenol	6.56	162	1118935	50.61887 ppb	98
35) Hexachloropropene	6.59	213	1161745	48.97945 ppb	100
36) Hexachlorobutadiene	6.63	225	927256	49.47200 ppb	97
37) Caprolactum	6.99	55	382207	52.81570 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y129.D Vial: 29
Acq On : 28 Jan 21 15:35 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:35 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1234980	51.96852	ppb		95
39)	2-Methylnaphthalene	7.27	142	2396852	50.84138	ppb		99
40)	1-Methylnaphthalene	7.40	142	2532443	52.10345	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	910656	45.26662	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1472992	49.90968	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	951649	51.82321	ppb		98
45)	2,4,5-Trichlorophenol	7.66	196	1015014	50.59448	ppb		94
47)	1,1'-Biphenyl	7.82	154	3428015	51.97323	ppb		99
48)	2-Chloronaphthalene	7.84	162	2644288	51.55530	ppb		99
49)	2-Nitroaniline	7.96	65	862899	52.86488	ppb		86
50)	Dimethyl phthalate	8.18	163	3211658	51.19246	ppb		98
51)	2,6-DNT	8.25	165	724140	52.76438	ppb	#	76
52)	Acenaphthylene	8.31	152	3941588	50.46293	ppb		99
53)	3-Nitroaniline	8.44	138	683948	53.37862	ppb		87
54)	Acenaphthene	8.52	154	2598203	50.02641	ppb		100
55)	2,4-Dinitrophenol	8.57	184	365771	48.87630	ppb		89
56)	4-Nitrophenol	8.66	65	655782	51.86915	ppb		90
57)	Dibenzofuran	8.72	168	3930232	50.84875	ppb		92
58)	2,4-DNT	8.71	165	1038576	52.66995	ppb		91
59)	2,3,4,6-Tetrachlorophenol	8.87	232	784128	49.36055	ppb		93
60)	Diethyl phthalate	9.01	149	3255888	50.77537	ppb		96
61)	4-Chlorophenyl phenyl ethe	9.12	204	1838037	51.88817	ppb		96
62)	Fluorene	9.12	166	3451239	53.04452	ppb		100
63)	4-Nitroaniline	9.16	138	721907	51.79650	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.19	198	626515	48.65209	ppb	#	65
67)	Diphenyl amine	9.27	169	5386070	106.65165	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5386070	106.65165	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3295939	51.48654	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1003193	49.04688	ppb		90
71)	Hexachlorobenzene	9.75	284	1029482	49.02063	ppb	#	82
72)	Atrazine	9.89	200	418651	23.54821	ppb		96
73)	Pentachlorophenol	9.99	266	672874	48.36872	ppb		99
74)	Phenanthrene	10.24	178	4801114	51.61728	ppb		99
75)	Anthracene	10.29	178	5013067	51.66723	ppb		99
76)	Carbazol	10.49	167	4417014	51.41066	ppb		97
77)	Di-n-butylphthalate	10.90	149	5520073	52.36982	ppb		99
78)	Fluoranthene	11.62	202	5670252	52.24125	ppb		98
80)	Benzidine	11.79	184	1180755	45.29388	ppb		98
81)	Pyrene	11.88	202	5825019	53.30034	ppb		99
83)	Butyl benzylphthalate	12.65	149	2530248	54.00791	ppb		93
84)	3,3'-Dichlorobenzidine	13.25	252	1977418	54.42834	ppb	#	97
85)	Benz (a) anthracene	13.27	228	5880441	52.50512	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	3783843	56.14101	ppb	#	92
87)	Chrysene	13.32	228	5681365	53.86242	ppb		99
88)	Di-n-octylphthalate	14.04	149	5988376	54.19714	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	5122862	53.40287	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	5033904	54.37588	ppb		100
92)	Benzo (a) pyrene	14.91	252	4837197	54.01692	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5157365	49.97603	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	4539059	50.25861	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4346075	49.25851	ppb		99

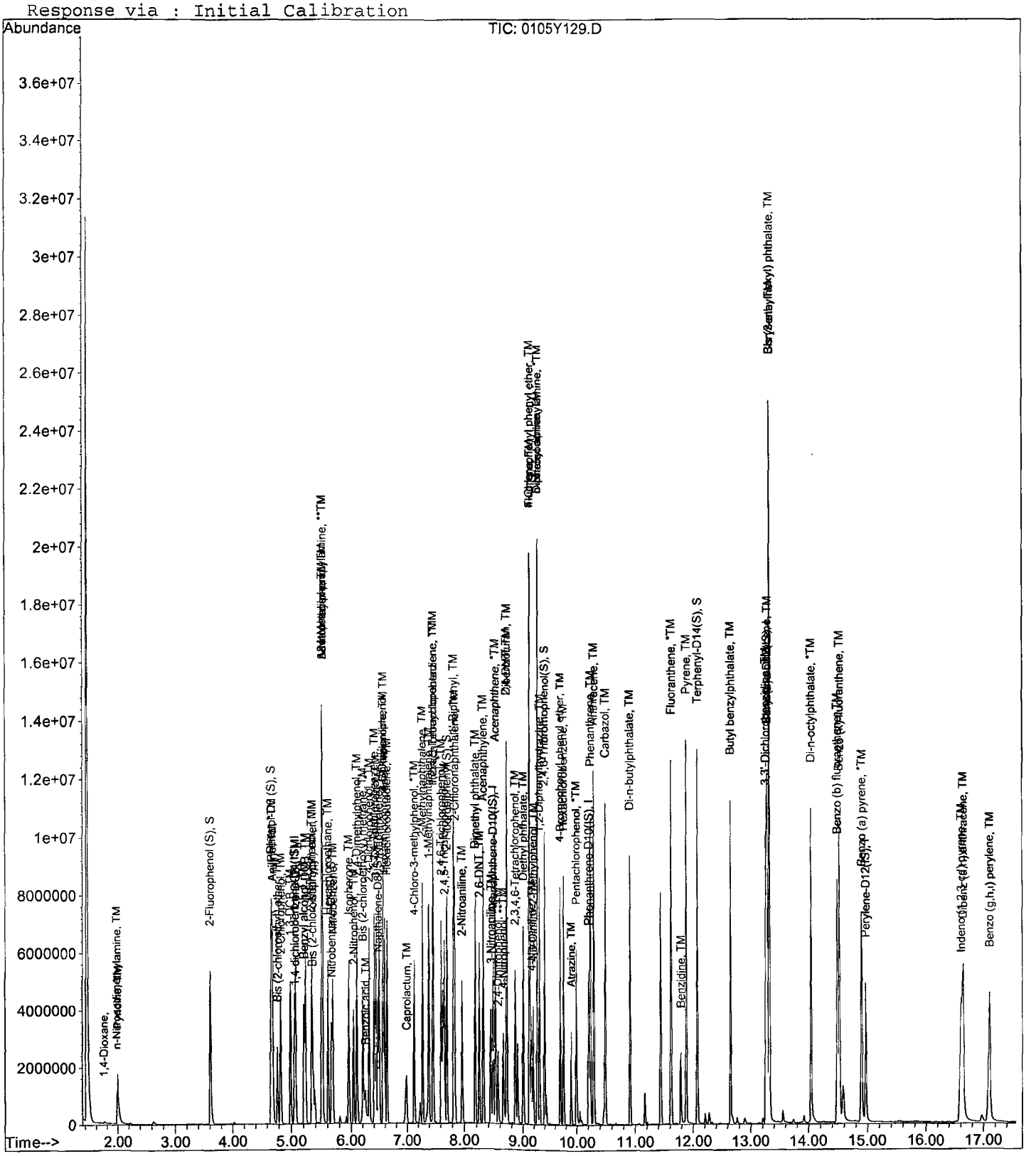
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y129.D Vial: 29
Acq On : 28 Jan 21 15:35 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:35 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y122.D Vial: 22
Acq On : 28 Jan 21 12:37 Operator: MA
Sample : BA25690W16 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:13 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	401037	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1567251	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	968816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	1986272	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1819814	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1729191	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2652466	165.29912 ppb	0.00
Spiked Amount 200.000			Recovery =	82.650%	
6) Phenol-D6 (S)	4.66	99	3552363	173.13606 ppb	0.00
Spiked Amount 200.000			Recovery =	86.568%	
22) Nitrobenzene-D5(S)	5.66	82	2037413	88.16411 ppb	0.00
Spiked Amount 100.000			Recovery =	88.164%	
46) 2-Fluorobiphenyl(S)	7.70	172	3839609	84.55299 ppb	0.00
Spiked Amount 100.000			Recovery =	84.553%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1286547	176.16215 ppb	0.00
Spiked Amount 200.000			Recovery =	88.081%	
82) Terphenyl-D14(S)	12.07	244	6033381	110.45806 ppb	0.00
Spiked Amount 100.000			Recovery =	110.458%	

Target Compounds Qvalue

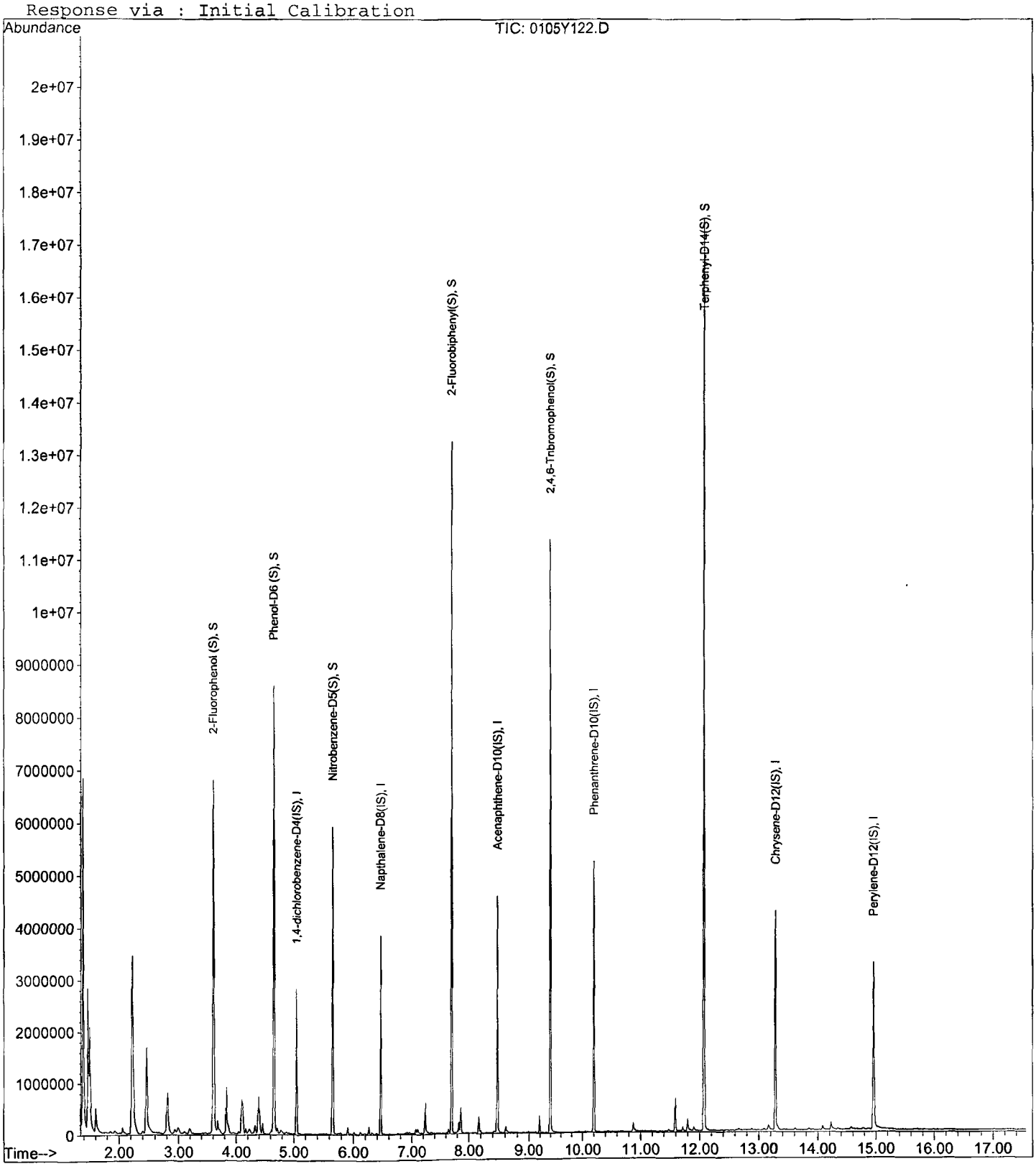
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y122.D Vial: 22
Acq On : 28 Jan 21 12:37 Operator: MA
Sample : BA25690W16 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:13 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y123.D Vial: 23
Acq On : 28 Jan 21 13:03 Operator: MA
Sample : BA25693W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:13 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	420456	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1638640	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	998473	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2112713	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1879834	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1740925	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2784879	165.53542 ppb	0.00
Spiked Amount 200.000			Recovery =	82.768%	
6) Phenol-D6 (S)	4.67	99	3672393	170.71954 ppb	0.00
Spiked Amount 200.000			Recovery =	85.360%	
22) Nitrobenzene-D5(S)	5.66	82	2095302	86.71902 ppb	0.00
Spiked Amount 100.000			Recovery =	86.719%	
46) 2-Fluorobiphenyl(S)	7.70	172	3830545	81.84789 ppb	0.00
Spiked Amount 100.000			Recovery =	81.848%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1304197	173.27468 ppb	0.00
Spiked Amount 200.000			Recovery =	86.638%	
82) Terphenyl-D14(S)	12.07	244	6140186	108.82426 ppb	0.00
Spiked Amount 100.000			Recovery =	108.824%	

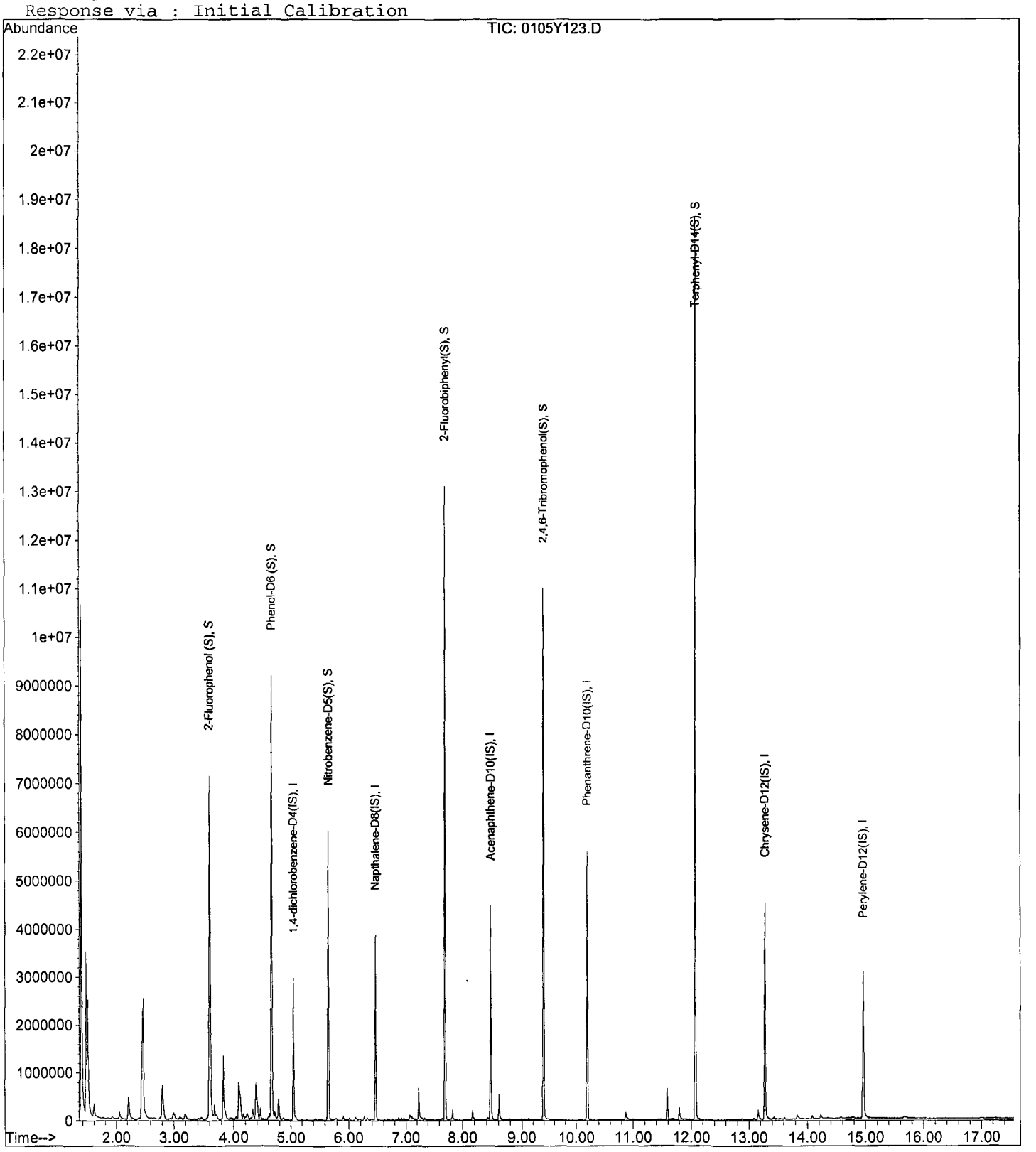
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y123.D Vial: 23
Acq On : 28 Jan 21 13:03 Operator: MA
Sample : BA25693W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:13 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y124.D Vial: 24
Acq On : 28 Jan 21 13:28 Operator: MA
Sample : BA25696W14 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	397998	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1580581	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	988814	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2054371	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1828598	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1721262	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2826317	177.47825 ppb	0.00
Spiked Amount 200.000			Recovery =	88.739%	
6) Phenol-D6 (S)	4.67	99	3658390	179.66511 ppb	0.00
Spiked Amount 200.000			Recovery =	89.833%	
22) Nitrobenzene-D5(S)	5.66	82	2131254	91.44706 ppb	0.00
Spiked Amount 100.000			Recovery =	91.447%	
46) 2-Fluorobiphenyl(S)	7.70	172	4001377	86.33326 ppb	0.00
Spiked Amount 100.000			Recovery =	86.333%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1361497	182.65448 ppb	0.00
Spiked Amount 200.000			Recovery =	91.327%	
82) Terphenyl-D14(S)	12.08	244	6376357	116.17644 ppb	0.00
Spiked Amount 100.000			Recovery =	116.176%	

Target Compounds Qvalue

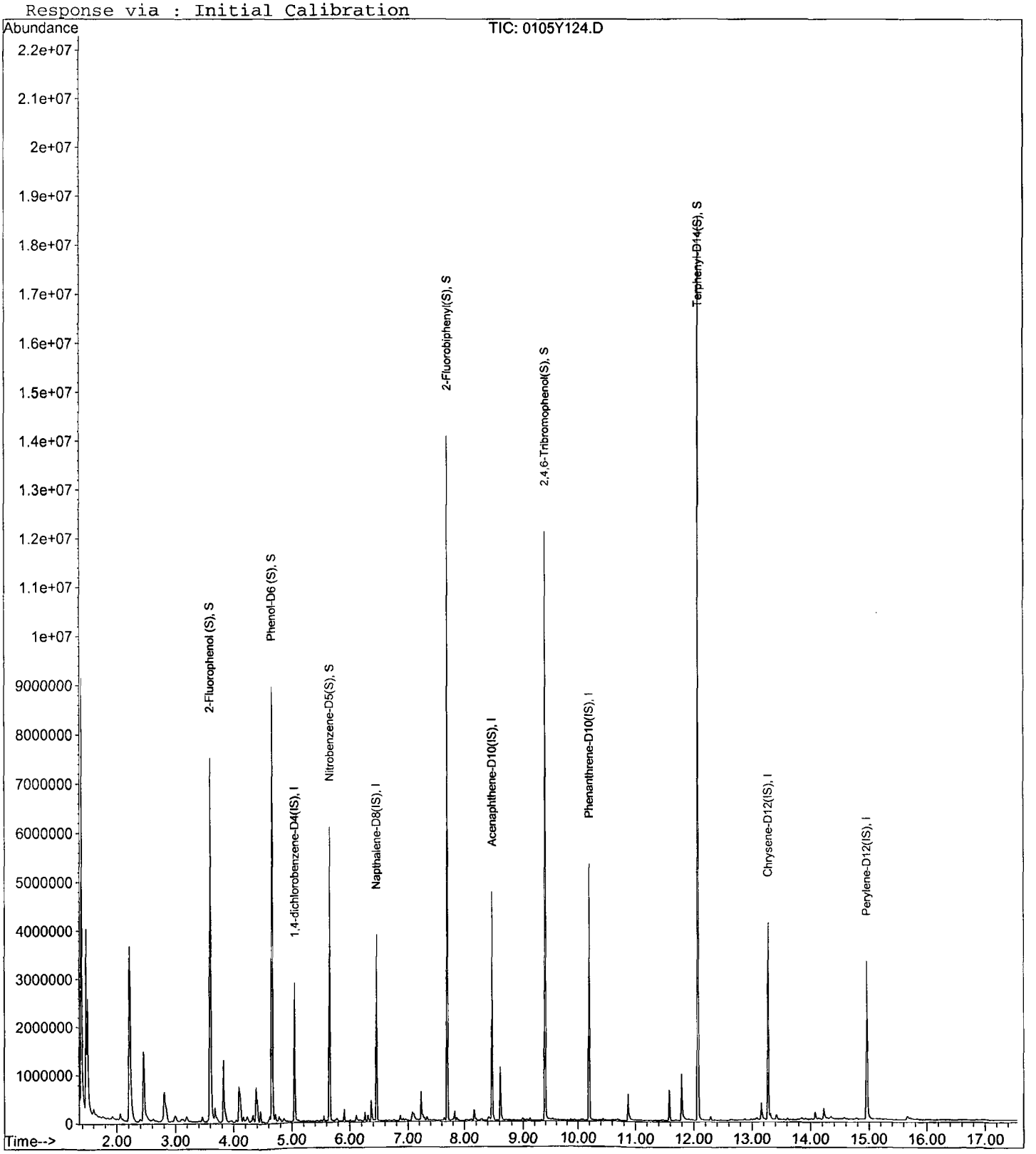
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y124.D Vial: 24
Acq On : 28 Jan 21 13:28 Operator: MA
Sample : BA25696W14 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:15 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y125.D Vial: 25
Acq On : 28 Jan 21 13:53 Operator: MA
Sample : BA25699W16 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415404	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1644072	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1011565	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2135498	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1908891	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	1812914	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2814920	169.35598	ppb	0.00
Spiked Amount 200.000			Recovery =	84.678%		
6) Phenol-D6 (S)	4.66	99	3717019	174.89554	ppb	0.00
Spiked Amount 200.000			Recovery =	87.448%		
22) Nitrobenzene-D5(S)	5.66	82	2110609	87.06393	ppb	0.00
Spiked Amount 100.000			Recovery =	87.064%		
46) 2-Fluorobiphenyl(S)	7.70	172	3999114	84.34381	ppb	0.00
Spiked Amount 100.000			Recovery =	84.344%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1357087	177.96809	ppb	0.00
Spiked Amount 200.000			Recovery =	88.984%		
82) Terphenyl-D14(S)	12.08	244	6468452	112.89713	ppb	0.00
Spiked Amount 100.000			Recovery =	112.897%		

Target Compounds Qvalue

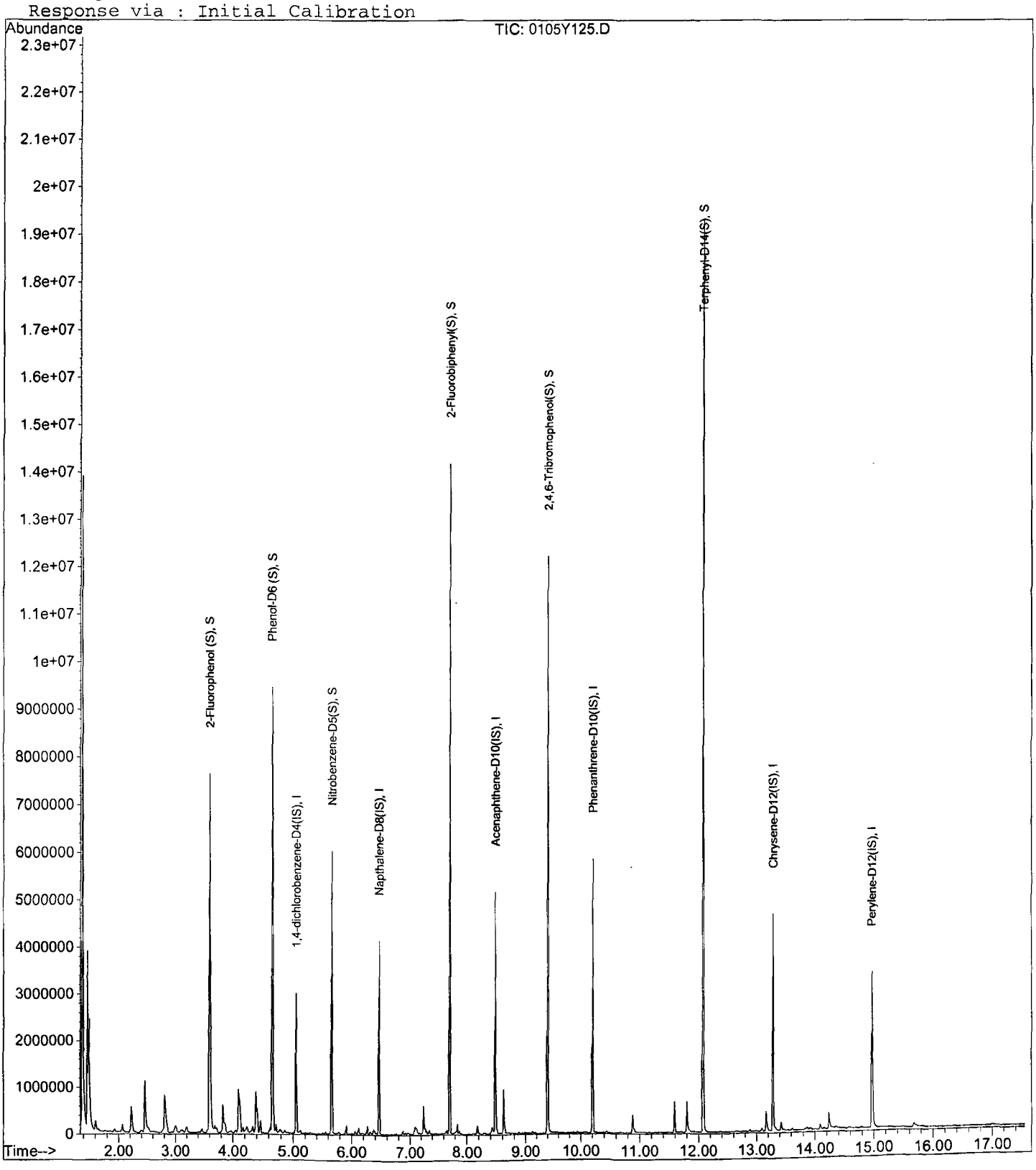
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y125.D Vial: 25
Acq On : 28 Jan 21 13:53 Operator: MA
Sample : BA25699W16 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:16 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y126.D Vial: 26
Acq On : 28 Jan 21 14:19 Operator: MA
Sample : BA25701W13 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:17 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415119	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1610154	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1016038	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2069418	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1874282	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1695090	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2842442	171.12921 ppb	0.00
Spiked Amount 200.000			Recovery =	85.565%	
6) Phenol-D6 (S)	4.66	99	3700233	174.22525 ppb	0.00
Spiked Amount 200.000			Recovery =	87.113%	
22) Nitrobenzene-D5(S)	5.66	82	2128477	89.65053 ppb	0.00
Spiked Amount 100.000			Recovery =	89.651%	
46) 2-Fluorobiphenyl(S)	7.70	172	3924262	82.40077 ppb	0.00
Spiked Amount 100.000			Recovery =	82.401%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1390794	181.58547 ppb	0.00
Spiked Amount 200.000			Recovery =	90.793%	
82) Terphenyl-D14(S)	12.07	244	6420239	114.12478 ppb	0.00
Spiked Amount 100.000			Recovery =	114.125%	

Target Compounds Qvalue

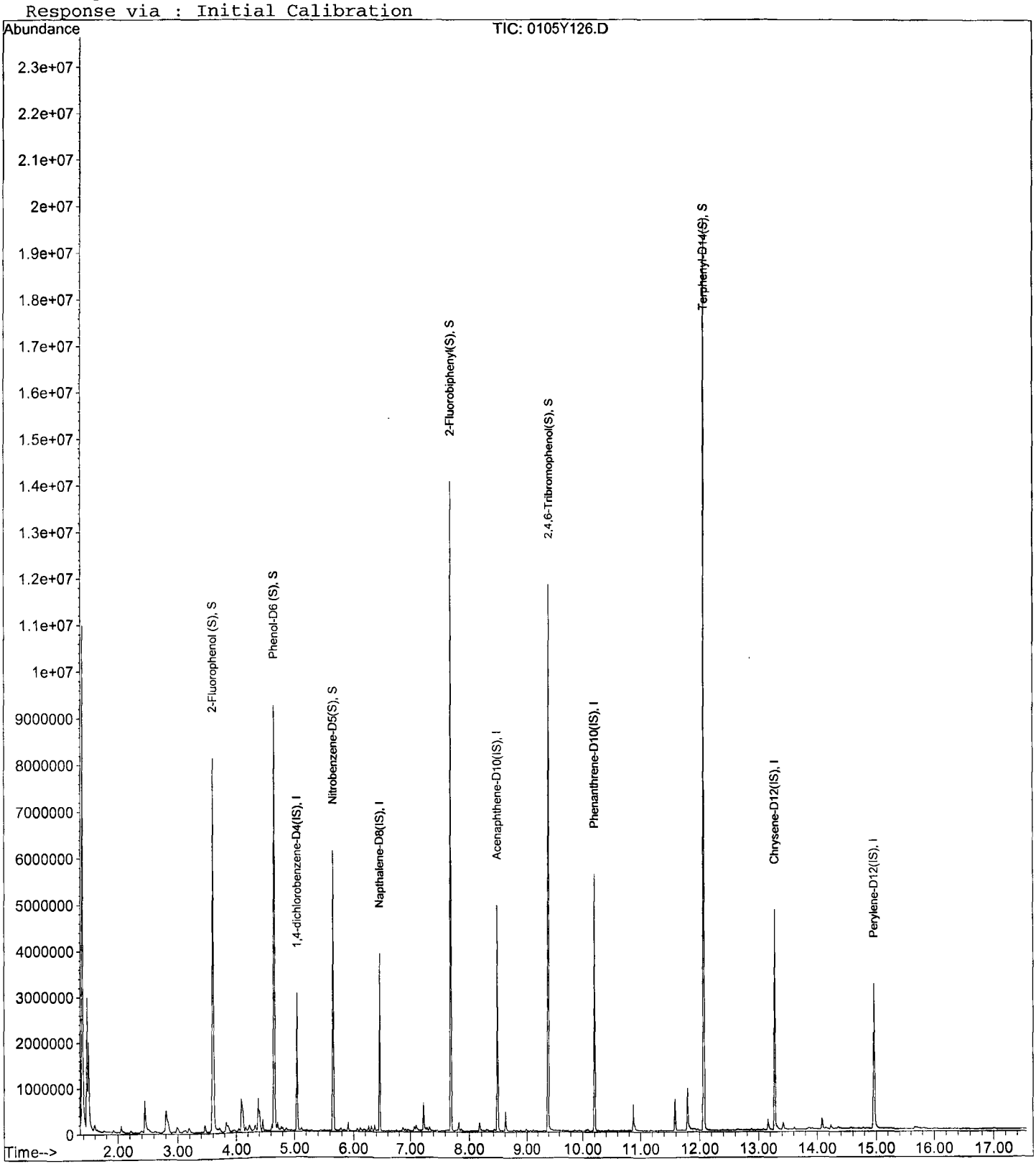
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y126.D Vial: 26
Acq On : 28 Jan 21 14:19 Operator: MA
Sample : BA25701W13 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:17 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y127.D Vial: 27
Acq On : 28 Jan 21 14:44 Operator: MA
Sample : BA25704W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:18 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	416736	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1611856	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1021523	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2115321	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1839284	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1814498	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2786321	167.09955 ppb	0.00
Spiked Amount 200.000			Recovery =	83.550%	
6) Phenol-D6 (S)	4.66	99	3614492	169.52778 ppb	0.00
Spiked Amount 200.000			Recovery =	84.764%	
22) Nitrobenzene-D5(S)	5.66	82	2122270	89.29470 ppb	0.00
Spiked Amount 100.000			Recovery =	89.295%	
46) 2-Fluorobiphenyl(S)	7.70	172	4034326	84.25702 ppb	0.00
Spiked Amount 100.000			Recovery =	84.257%	
64) 2,4,6-Tribromophenol(S)	9.39	330	1302479	169.14175 ppb	0.00
Spiked Amount 200.000			Recovery =	84.571%	
82) Terphenyl-D14(S)	12.08	244	6399387	115.91864 ppb	0.00
Spiked Amount 100.000			Recovery =	115.919%	

Target Compounds Qvalue

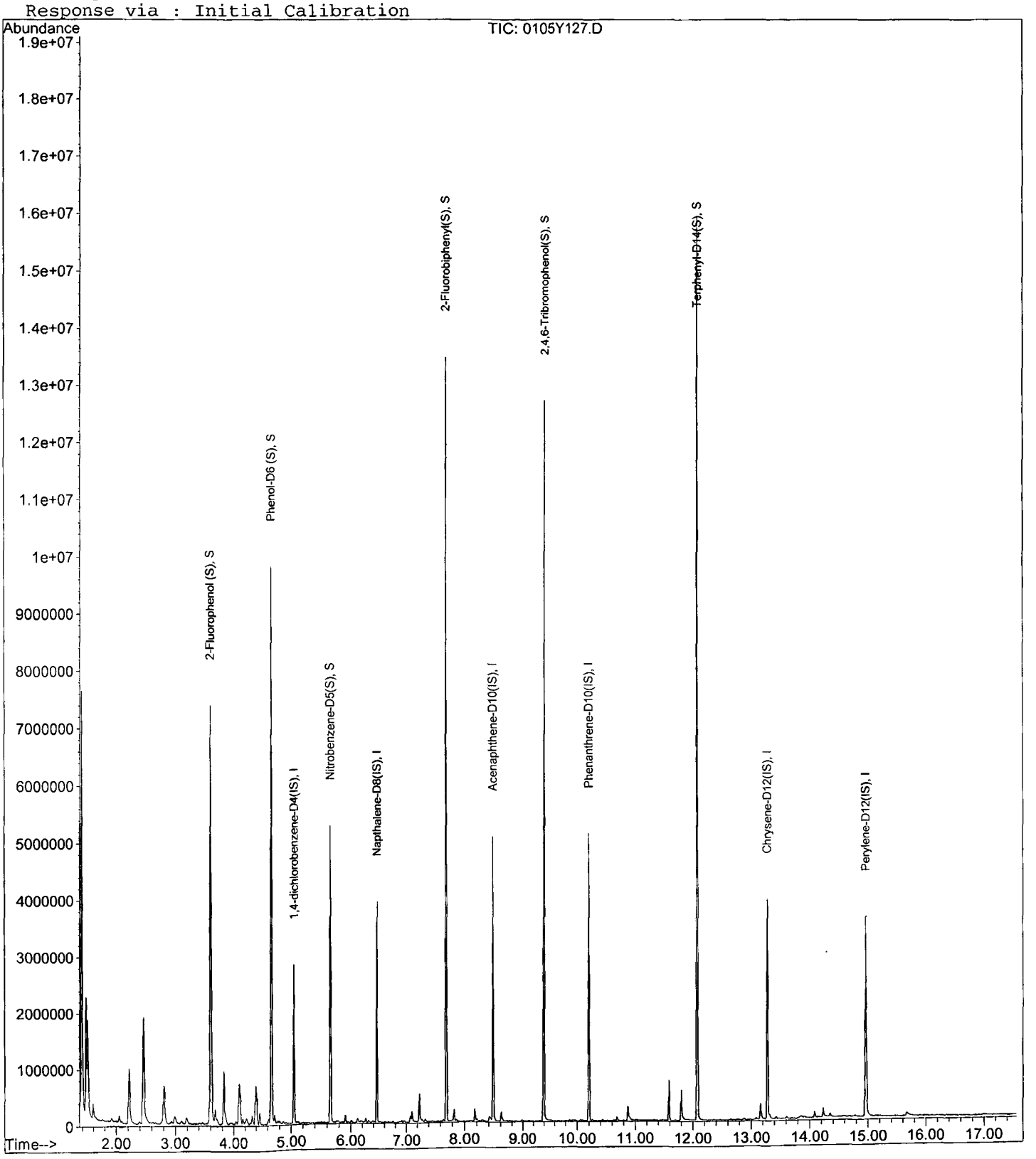
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y127.D Vial: 27
Acq On : 28 Jan 21 14:44 Operator: MA
Sample : BA25704W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:18 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y128.D Vial: 28
Acq On : 28 Jan 21 15:09 Operator: MA
Sample : BA25706W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:19 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	435798	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1673285	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1055628	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2184748	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	1934949	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1857617	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	3038424	174.24820 ppb	0.00
Spiked Amount 200.000			Recovery =	87.124%	
6) Phenol-D6 (S)	4.66	99	4051606	181.71744 ppb	0.00
Spiked Amount 200.000			Recovery =	90.859%	
22) Nitrobenzene-D5(S)	5.66	82	2309214	93.59347 ppb	0.00
Spiked Amount 100.000			Recovery =	93.593%	
46) 2-Fluorobiphenyl(S)	7.70	172	4410656	89.14060 ppb	0.00
Spiked Amount 100.000			Recovery =	89.141%	
64) 2,4,6-Tribromophenol(S)	9.39	330	1447270	181.87244 ppb	0.00
Spiked Amount 200.000			Recovery =	90.936%	
82) Terphenyl-D14(S)	12.08	244	6884346	118.53780 ppb	0.00
Spiked Amount 100.000			Recovery =	118.538%	

Target Compounds Qvalue

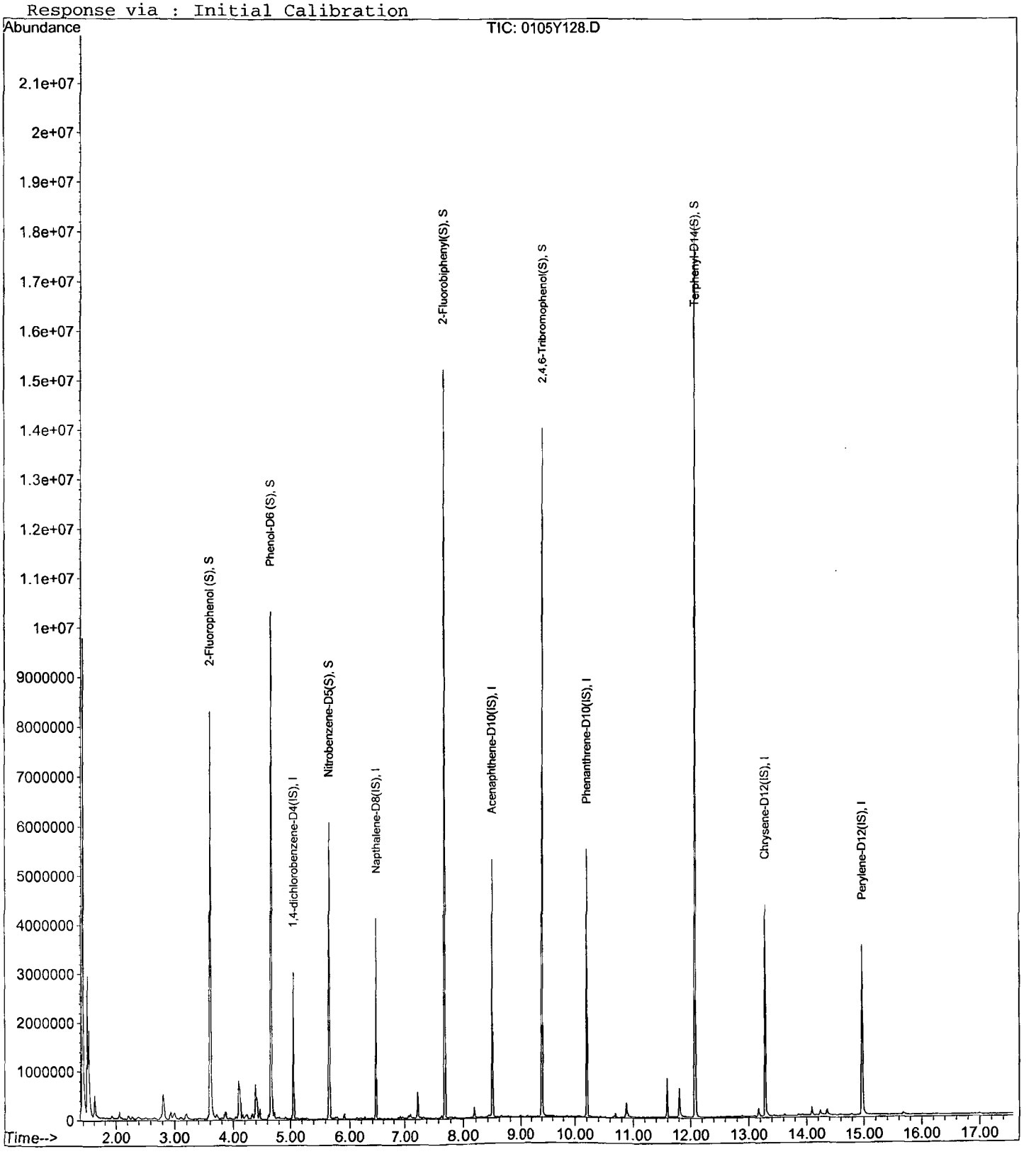
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y128.D Vial: 28
Acq On : 28 Jan 21 15:09 Operator: MA
Sample : BA25706W12 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:19 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y119.D Vial: 19
Acq On : 28 Jan 21 11:21 Operator: MA
Sample : 210125A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:11 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	420597	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1585641	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	982185	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2070226	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1833921	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1731651	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2738345	162.71484 ppb	0.00
Spiked Amount 200.000			Recovery =	81.358%	
6) Phenol-D6 (S)	4.66	99	3644312	169.35733 ppb	0.00
Spiked Amount 200.000			Recovery =	84.679%	
22) Nitrobenzene-D5(S)	5.66	82	2004000	85.71250 ppb	0.00
Spiked Amount 100.000			Recovery =	85.712%	
46) 2-Fluorobiphenyl(S)	7.70	172	3568725	77.51809 ppb	0.00
Spiked Amount 100.000			Recovery =	77.518%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1299370	175.49622 ppb	0.00
Spiked Amount 200.000			Recovery =	87.748%	
82) Terphenyl-D14(S)	12.08	244	6113450	111.06301 ppb	0.00
Spiked Amount 100.000			Recovery =	111.063%	

Target Compounds Qvalue

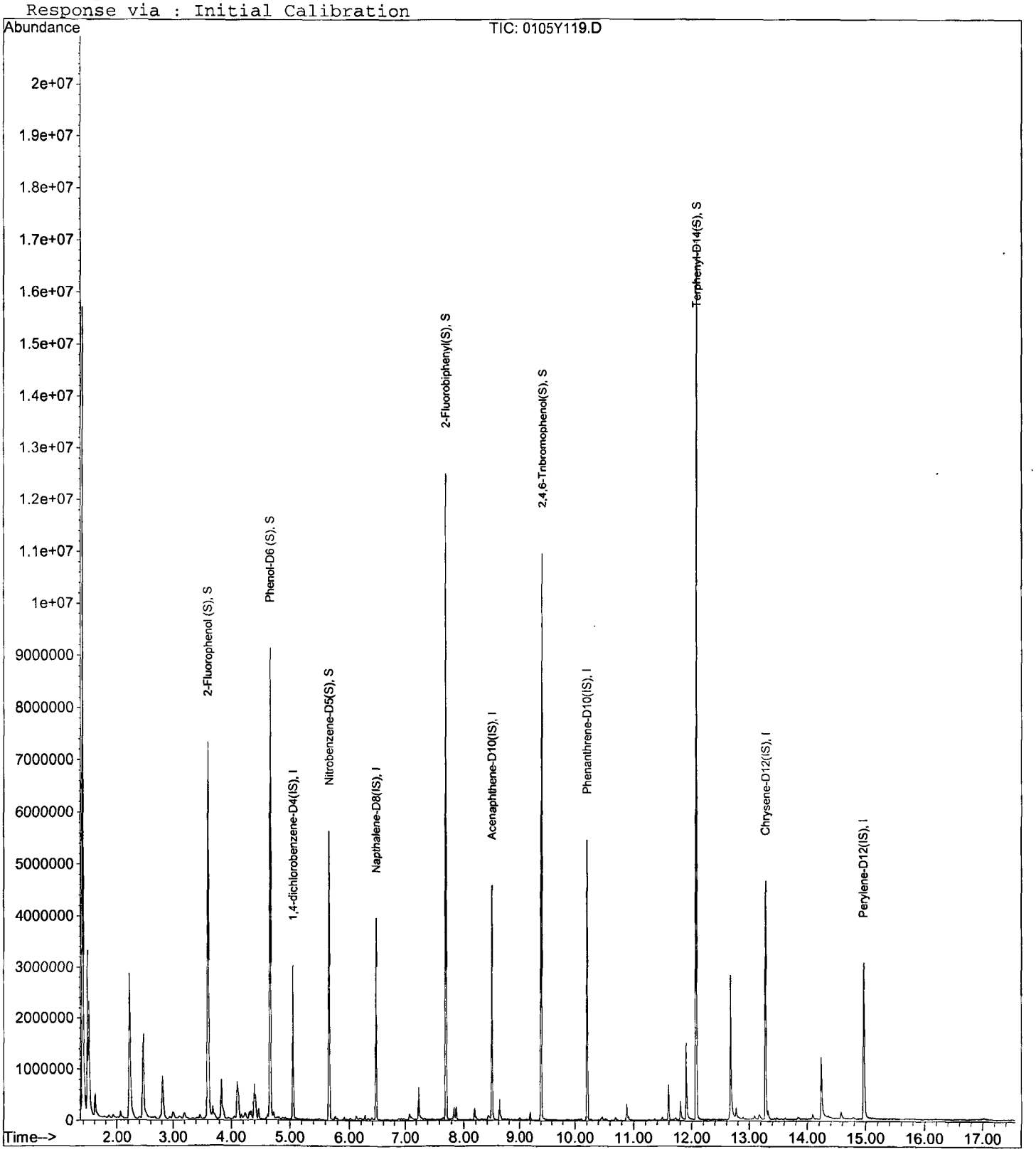
(#) = qualifier out of range (m) = manual integration
0105Y119.D Y0105.M Thu Jan 28 16:55:44 2021 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y119.D Vial: 19
Acq On : 28 Jan 21 11:21 Operator: MA
Sample : 210125A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:11 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y120.D Vial: 20
Acq On : 28 Jan 21 11:46 Operator: MA
Sample : 210125A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	410779	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1605315	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	997251	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2057067	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1952302	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1765491	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.62	112	3031991	184.46961	ppb		0.00
Spiked Amount 200.000			Recovery = 92.235%				
6) Phenol-D6 (S)	4.67	99	3923877	186.70751	ppb		0.00
Spiked Amount 200.000			Recovery = 93.354%				
22) Nitrobenzene-D5(S)	5.66	82	2210187	93.37273	ppb		0.00
Spiked Amount 100.000			Recovery = 93.373%				
46) 2-Fluorobiphenyl(S)	7.70	172	4100881	87.73158	ppb		0.00
Spiked Amount 100.000			Recovery = 87.732%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1400907	186.35157	ppb		0.00
Spiked Amount 200.000			Recovery = 93.176%				
82) Terphenyl-D14(S)	12.07	244	6499735	110.92063	ppb		0.00
Spiked Amount 100.000			Recovery = 110.921%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	12556	3.83082			93
3) n-Nitrosodimethylamine	1.97	42	264668	42.21445	ppb		99
4) Pyridine	2.00	79	244692	17.83467	ppb		93
7) Phenol	4.68	94	1073805	43.24812	ppb		90
8) Aniline	4.69	93	133253	7.34774	ppb	#	56
9) Bis (2-chloroethyl) ether	4.77	63	494993	46.71482	ppb		98
10) 2-Chlorophenol	4.82	128	823168	43.82068	ppb		99
11) 1,3-DCB	4.98	146	810701	37.47568	ppb		99
12) 1,4-DCB	5.07	146	822424	37.74153	ppb		100
13) Benzyl alcohol	5.20	108	463146	42.04853	ppb		94
14) 1,2-DCB	5.23	146	795336	38.88099	ppb		99
15) 2-Methylphenol	5.33	107	640817	44.55378	ppb		100
16) Bis (2-chloroisopropyl) et	5.35	45	485001	48.43470	ppb		94
17) Acetophenone	5.49	105	1176023	44.68651	ppb		96
18) 3&4-Methylphenol	5.51	107	1725794	88.83533	ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	725448	47.24190	ppb		96
20) Hexachloroethane	5.60	117	304463	34.13940	ppb		99
23) Nitrobenzene	5.69	77	1081091	44.39342	ppb		88
24) Isophorone	5.95	82	1699116	43.44230	ppb		93
25) 2-Nitrophenol	6.03	139	440970	42.89500	ppb		97
26) 2,4-Dimethylphenol	6.10	122	717692	42.21048	ppb		99
27) Benzoic acid	6.24	105	678951	45.11697	ppb		99
28) Bis (2-chloroethoxy) metha	6.20	93	852533	38.54502	ppb		99
29) 2,4-Dichlorophenol	6.31	162	738696	41.97295	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	768614	37.46942	ppb		99
31) 3,4-Dimethylphenol	6.43	107	1174561	43.27860	ppb		98
32) Naphthalene	6.49	128	2343631	42.20319	ppb		100
33) 4-Chloroaniline	6.55	127	88119	4.23160	ppb		93
34) 2,6-Dichlorophenol	6.56	162	730742	42.69270	ppb		97
35) Hexachloropropene	6.59	213	376957	20.52470	ppb		98
36) Hexachlorobutadiene	6.62	225	471232	32.46957	ppb		97
37) Caprolactum	6.96	55	205684	36.70683	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y120.D Vial: 20
Acq On : 28 Jan 21 11:46 Operator: MA
Sample : 210125A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	801282	43.54595	ppb		98
39)	2-Methylnaphthalene	7.27	142	1556921	42.65055	ppb		98
40)	1-Methylnaphthalene	7.39	142	1542696	40.99106	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	217344	18.04887	ppb		96
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	871650	38.83750	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	610103	43.68933	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	642571	42.11889	ppb		98
47)	1,1'-Biphenyl	7.81	154	2125044	42.36719	ppb	#	96
48)	2-Chloronaphthalene	7.83	162	1675919	42.96772	ppb		94
49)	2-Nitroaniline	7.95	65	333812	26.89267	ppb		80
50)	Dimethyl phthalate	8.18	163	2286372	47.92348	ppb		100
51)	2,6-DNT	8.25	165	464030	44.46201	ppb		94
52)	Acenaphthylene	8.31	152	2468165	41.55278	ppb		99
53)	3-Nitroaniline	8.44	138	14869	1.52599	ppb		96
54)	Acenaphthene	8.52	154	1679266	42.51777	ppb		97
55)	2,4-Dinitrophenol	8.56	184	222356	41.84976	ppb		97
56)	4-Nitrophenol	8.65	65	417248	43.39789	ppb		84
57)	Dibenzofuran	8.71	168	2495743	42.46065	ppb		98
58)	2,4-DNT	8.70	165	658216	43.89528	ppb		80
59)	2,3,4,6-Tetrachlorophenol	8.86	232	513936	42.54288	ppb		99
60)	Diethyl phthalate	9.00	149	2195203	45.01767	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1177377	43.70734	ppb		98
62)	Fluorene	9.11	166	2135624	43.16333	ppb		100
63)	4-Nitroaniline	9.14	138	32815	3.09611	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.18	198	345026	34.97200	ppb	#	65
67)	Diphenyl amine	9.26	169	1705308	44.07547	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1705308	44.07547	ppb		98
69)	1,2-Diphenylhydrazine	9.31	77	1653519	33.71493	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	638517	40.74722	ppb		99
71)	Hexachlorobenzene	9.75	284	654892	40.70318	ppb		99
73)	Pentachlorophenol	9.99	266	430813	40.42204	ppb		96
74)	Phenanthrene	10.23	178	3067930	43.05237	ppb		100
75)	Anthracene	10.29	178	3115083	41.90635	ppb		99
76)	Carbazol	10.48	167	1987834	30.19974	ppb		95
77)	Di-n-butylphthalate	10.90	149	3708641	45.92505	ppb		100
78)	Fluoranthene	11.61	202	3634695	43.70969	ppb		98
81)	Pyrene	11.88	202	3805612	46.75466	ppb		100
83)	Butyl benzylphthalate	12.65	149	1673167	47.95140	ppb		100
85)	Benz (a) anthracene	13.27	228	3494979	41.89904	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2403175	47.87406	ppb		99
87)	Chrysene	13.32	228	3639227	46.32442	ppb		98
88)	Di-n-octylphthalate	14.04	149	4012706	48.76097	ppb		100
90)	Benzo (b) fluoranthene	14.49	252	3491015	50.33802	ppb		99
91)	Benzo (k) fluoranthene	14.53	252	3218571	48.09023	ppb		98
92)	Benzo (a) pyrene	14.90	252	2785588	43.02743	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	3114262	41.74279	ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	2855953	43.74094	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	2705988	42.42310	ppb		98

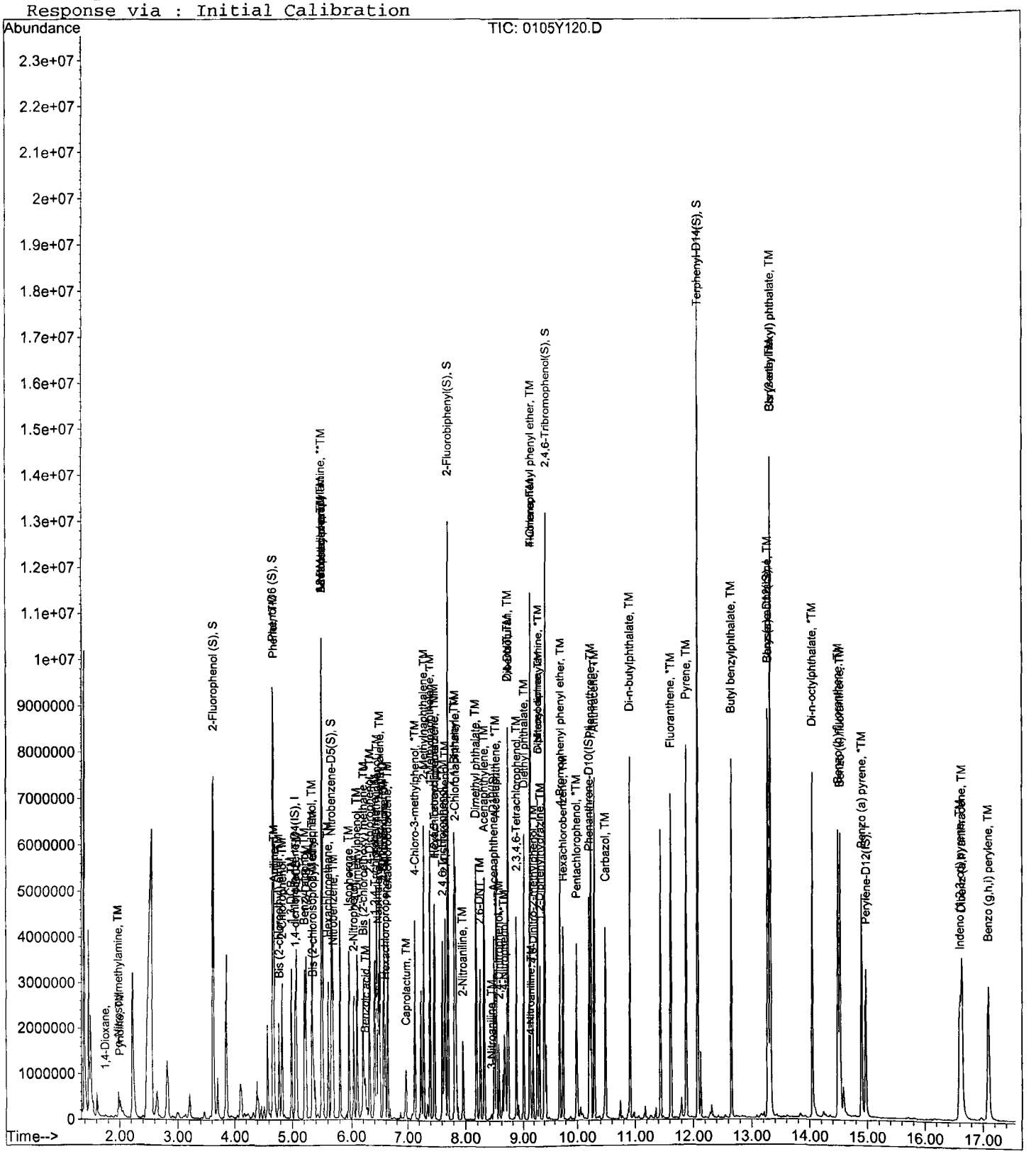
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y120.D Vial: 20
Acq On : 28 Jan 21 11:46 Operator: MA
Sample : 210125A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y121.D Vial: 21
Acq On : 28 Jan 21 12:12 Operator: MA
Sample : 210125A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	390596	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1519709	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	954124	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	1982391	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1850758	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	1648587	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	2850481	182.38769 ppb		0.00
Spiked Amount 200.000			Recovery = 91.194%			
6) Phenol-D6 (S)	4.67	99	3644388	182.36918 ppb		0.00
Spiked Amount 200.000			Recovery = 91.185%			
22) Nitrobenzene-D5(S)	5.66	82	2064449	92.12872 ppb		0.00
Spiked Amount 100.000			Recovery = 92.129%			
46) 2-Fluorobiphenyl(S)	7.70	172	3738910	83.60330 ppb		0.00
Spiked Amount 100.000			Recovery = 83.603%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1319685	183.48210 ppb		0.00
Spiked Amount 200.000			Recovery = 91.741%			
82) Terphenyl-D14(S)	12.08	244	6091427	109.65617 ppb		0.00
Spiked Amount 100.000			Recovery = 109.656%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.74	58	10482	3.36329		82
3) n-Nitrosodimethylamine	1.98	42	229922	38.56743 ppb		76
4) Pyridine	2.00	79	227270	17.42079 ppb		88
7) Phenol	4.68	94	1029418	43.60277 ppb		93
8) Aniline	4.69	93	123779	7.17801 ppb	#	1
9) Bis (2-chloroethyl) ether	4.77	63	474552	47.09989 ppb		99
10) 2-Chlorophenol	4.83	128	774835	43.37908 ppb		96
11) 1,3-DCB	4.98	146	782868	38.05904 ppb		98
12) 1,4-DCB	5.07	146	791770	38.21230 ppb		98
13) Benzyl alcohol	5.21	108	447347	42.71279 ppb		99
14) 1,2-DCB	5.24	146	768622	39.51663 ppb		98
15) 2-Methylphenol	5.34	107	617953	45.18418 ppb		97
16) Bis (2-chloroisopropyl) et	5.36	45	458033	48.10511 ppb		97
17) Acetophenone	5.50	105	1118488	44.69639 ppb		99
18) 3&4-Methylphenol	5.50	107	1649411	89.29067 ppb		93
19) n-Nitrosodi-n-propylamine	5.50	70	678048	46.43677 ppb		95
20) Hexachloroethane	5.61	117	313154	36.92834 ppb		89
23) Nitrobenzene	5.68	77	1002124	43.46880 ppb		99
24) Isophorone	5.95	82	1618347	43.70804 ppb		95
25) 2-Nitrophenol	6.03	139	423195	43.48485 ppb		93
26) 2,4-Dimethylphenol	6.09	122	668645	41.54107 ppb		95
27) Benzoic acid	6.23	105	650520	45.57752 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	863325	41.23170 ppb		99
29) 2,4-Dichlorophenol	6.31	162	694566	41.68858 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	743510	38.28735 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1095114	42.62425 ppb		95
32) Naphthalene	6.49	128	2237158	42.55519 ppb		99
33) 4-Chloroaniline	6.55	127	75315	3.82047 ppb		93
34) 2,6-Dichlorophenol	6.56	162	695730	42.93684 ppb		96
35) Hexachloropropene	6.59	213	302467	17.39654 ppb		99
36) Hexachlorobutadiene	6.63	225	467070	33.99567 ppb		99
37) Caprolactum	6.96	55	219079	41.29970 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y121.D Vial: 21
Acq On : 28 Jan 21 12:12 Operator: MA
Sample : 210125A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	759830	43.61930 ppb		99
39)	2-Methylnaphthalene	7.28	142	1473523	42.63977 ppb		99
40)	1-Methylnaphthalene	7.39	142	1480849	41.56420 ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	169856	15.76853 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	824103	38.37870 ppb		95
44)	2,4,6-Trichlorophenol	7.60	196	574251	42.98072 ppb		97
45)	2,4,5-Trichlorophenol	7.66	196	611309	41.88093 ppb		93
47)	1,1'-Biphenyl	7.82	154	2006515	41.81228 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	1563061	41.88561 ppb		96
49)	2-Nitroaniline	7.96	65	399516	33.64077 ppb		83
50)	Dimethyl phthalate	8.18	163	2109283	46.21000 ppb		99
51)	2,6-DNT	8.24	165	434102	43.47449 ppb	#	66
52)	Acenaphthylene	8.31	152	2330322	41.00545 ppb		99
53)	3-Nitroaniline	8.43	138	16256	1.74374 ppb		99
54)	Acenaphthene	8.51	154	1550796	41.03981 ppb		99
55)	2,4-Dinitrophenol	8.56	184	216051	42.28556 ppb		92
56)	4-Nitrophenol	8.65	65	403160	43.82798 ppb		89
57)	Dibenzofuran	8.72	168	2363998	42.03718 ppb		95
58)	2,4-DNT	8.71	165	618475	43.10932 ppb		90
59)	2,3,4,6-Tetrachlorophenol	8.87	232	482304	41.72903 ppb		95
60)	Diethyl phthalate	9.00	149	2064115	44.24273 ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1098372	42.61750 ppb		92
62)	Fluorene	9.12	166	2013120	42.52649 ppb		99
63)	4-Nitroaniline	9.14	138	98513	9.71487 ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	333583	35.08582 ppb	#	83
67)	Diphenyl amine	9.26	169	1925025	51.62852 ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	1925025	51.62852 ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	1715863	36.30403 ppb		91
70)	4-Bromophenyl phenyl ether	9.69	248	607910	40.25538 ppb		89
71)	Hexachlorobenzene	9.75	284	610789	39.39209 ppb	#	76
72)	Atrazine	9.89	200	26225	1.99792 ppb		92
73)	Pentachlorophenol	9.99	266	408421	39.76460 ppb		100
74)	Phenanthrene	10.23	178	2893599	42.13560 ppb		100
75)	Anthracene	10.29	178	2857243	39.88564 ppb		99
76)	Carbazol	10.48	167	2067117	32.58721 ppb		97
77)	Di-n-butylphthalate	10.91	149	3642739	46.80821 ppb		99
78)	Fluoranthene	11.61	202	3397530	42.39672 ppb		99
81)	Pyrene	11.87	202	3532607	45.78182 ppb		99
83)	Butyl benzylphthalate	12.65	149	1594298	48.19798 ppb		91
85)	Benz (a) anthracene	13.27	228	3288180	41.58268 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2278626	47.88343 ppb		97
87)	Chrysene	13.31	228	3340683	44.85734 ppb		99
88)	Di-n-octylphthalate	14.05	149	3710308	47.56006 ppb		97
90)	Benzo (b) fluoranthene	14.49	252	2912350	44.97194 ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3217116	51.47711 ppb		99
92)	Benzo (a) pyrene	14.90	252	2610020	43.17437 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2910829	41.78272 ppb		98
94)	Dibenz (a,h) anthracene	16.64	278	2663112	43.67975 ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	2558728	42.95901 ppb		99

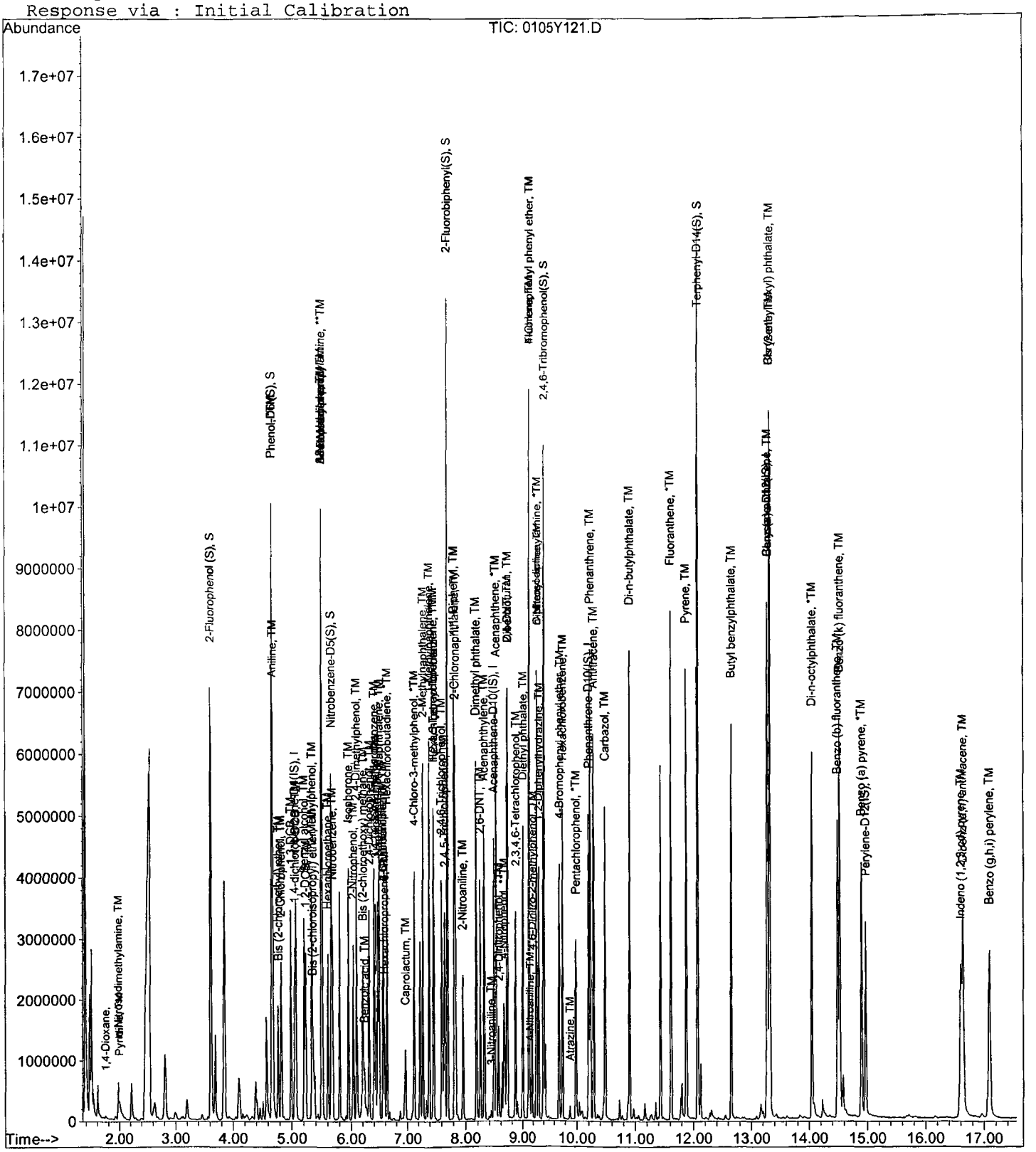
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y121.D Vial: 21
Acq On : 28 Jan 21 12:12 Operator: MA
Sample : 210125A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:42 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration

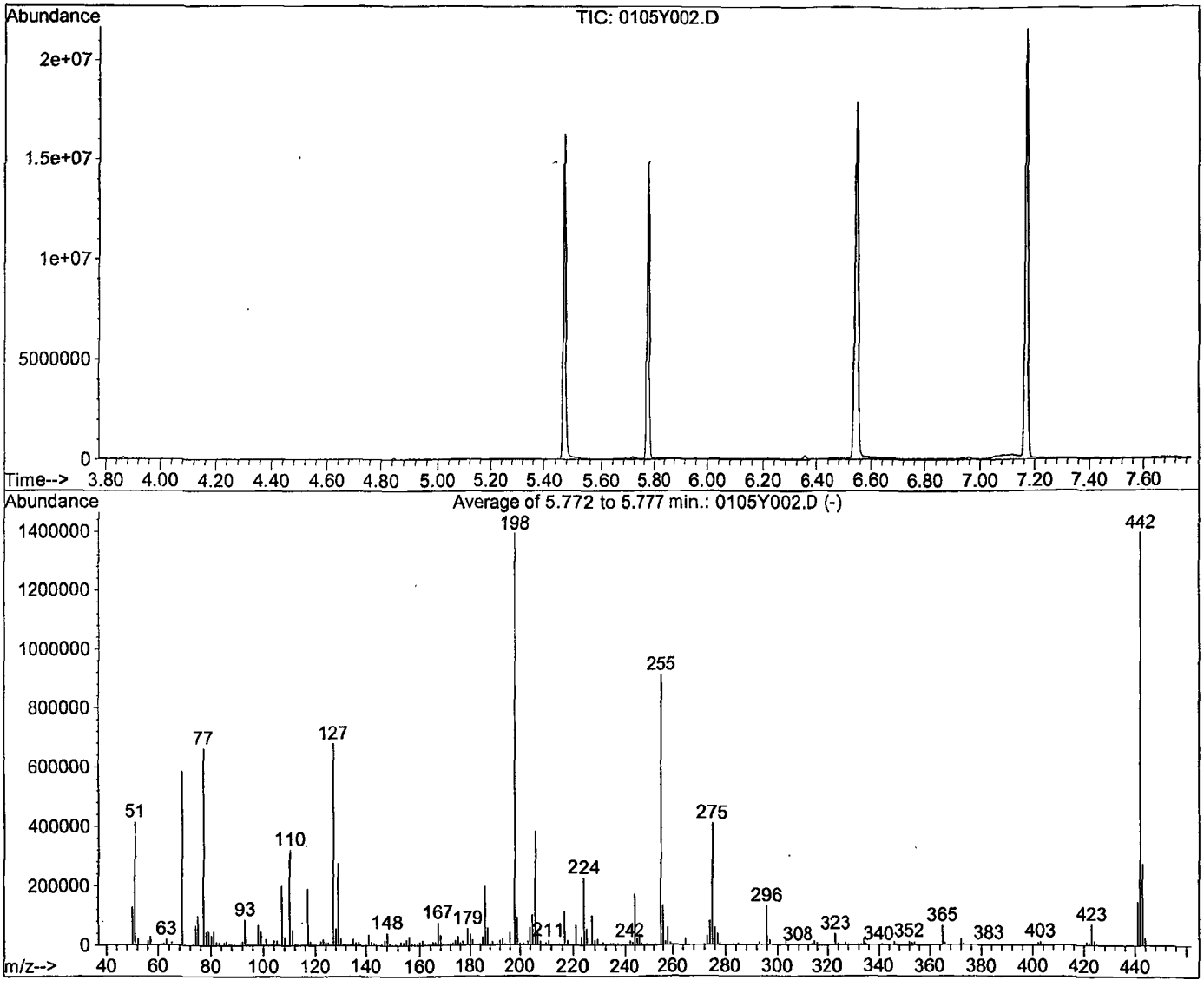


DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D
Acq On : 5 Jan 21 11:04
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

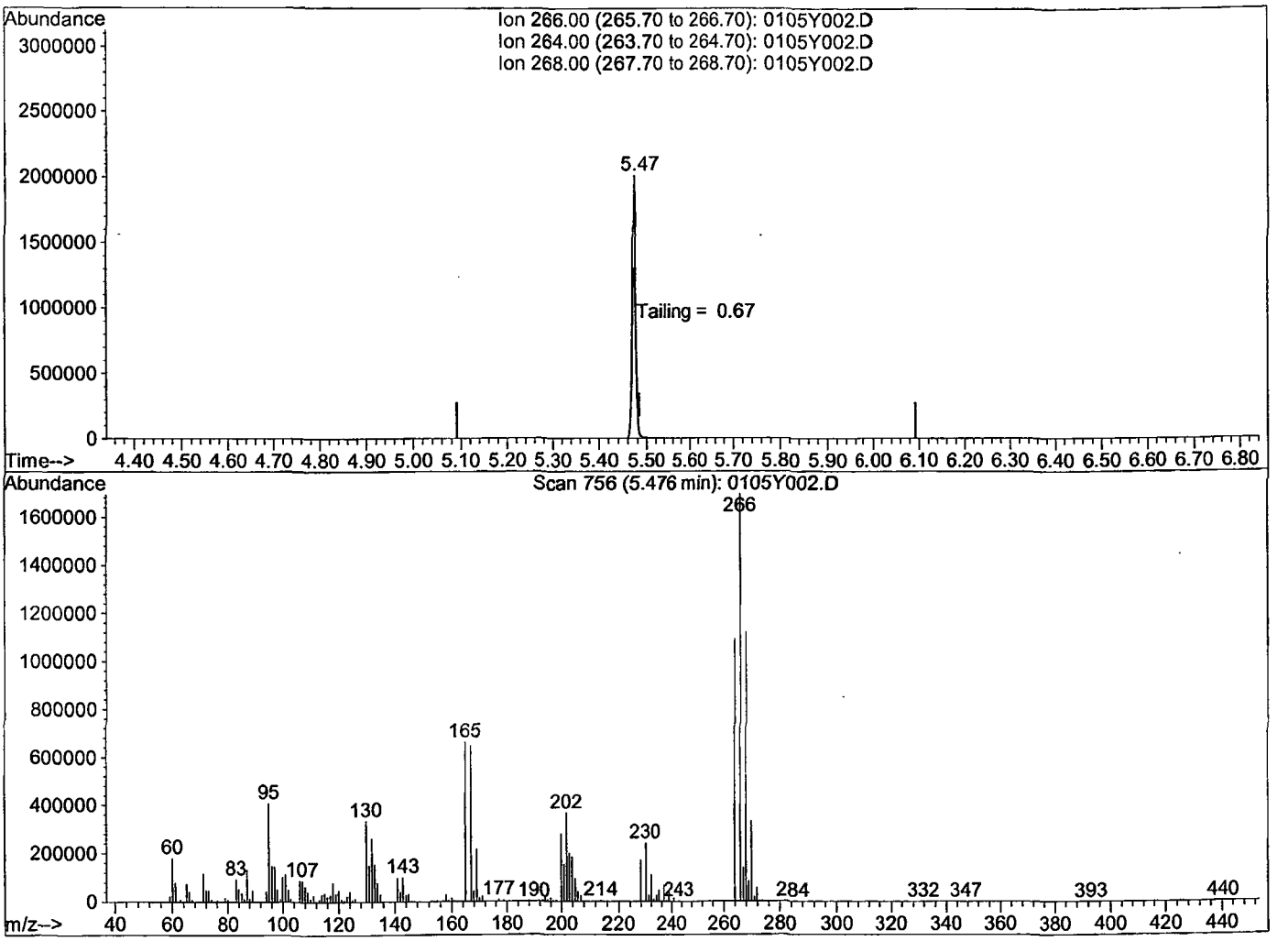
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

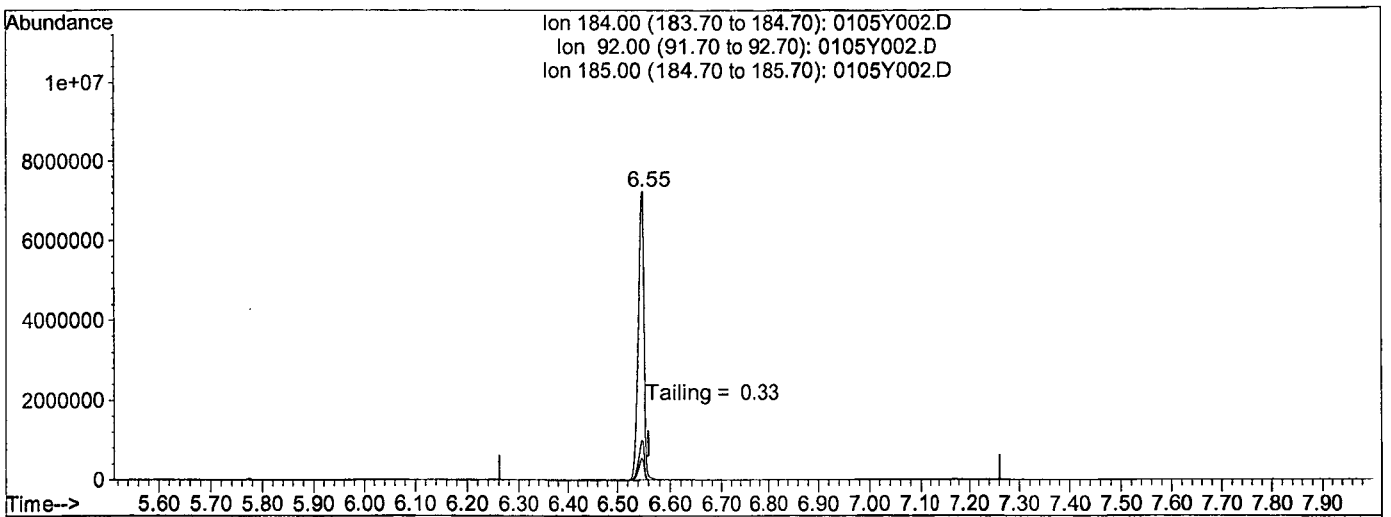
response 10909057

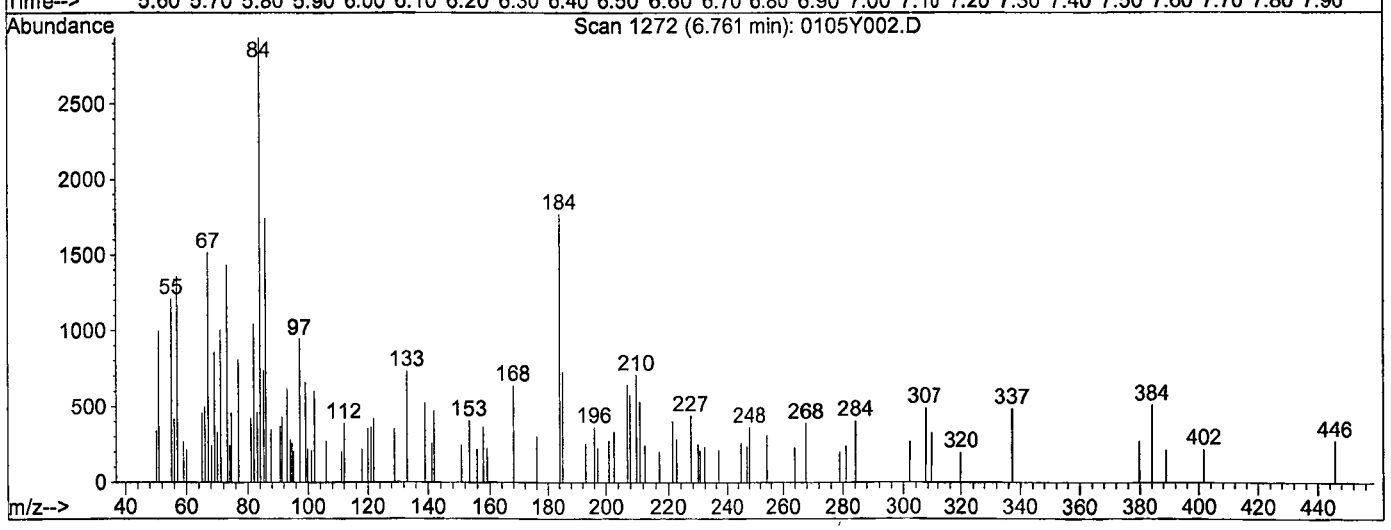
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

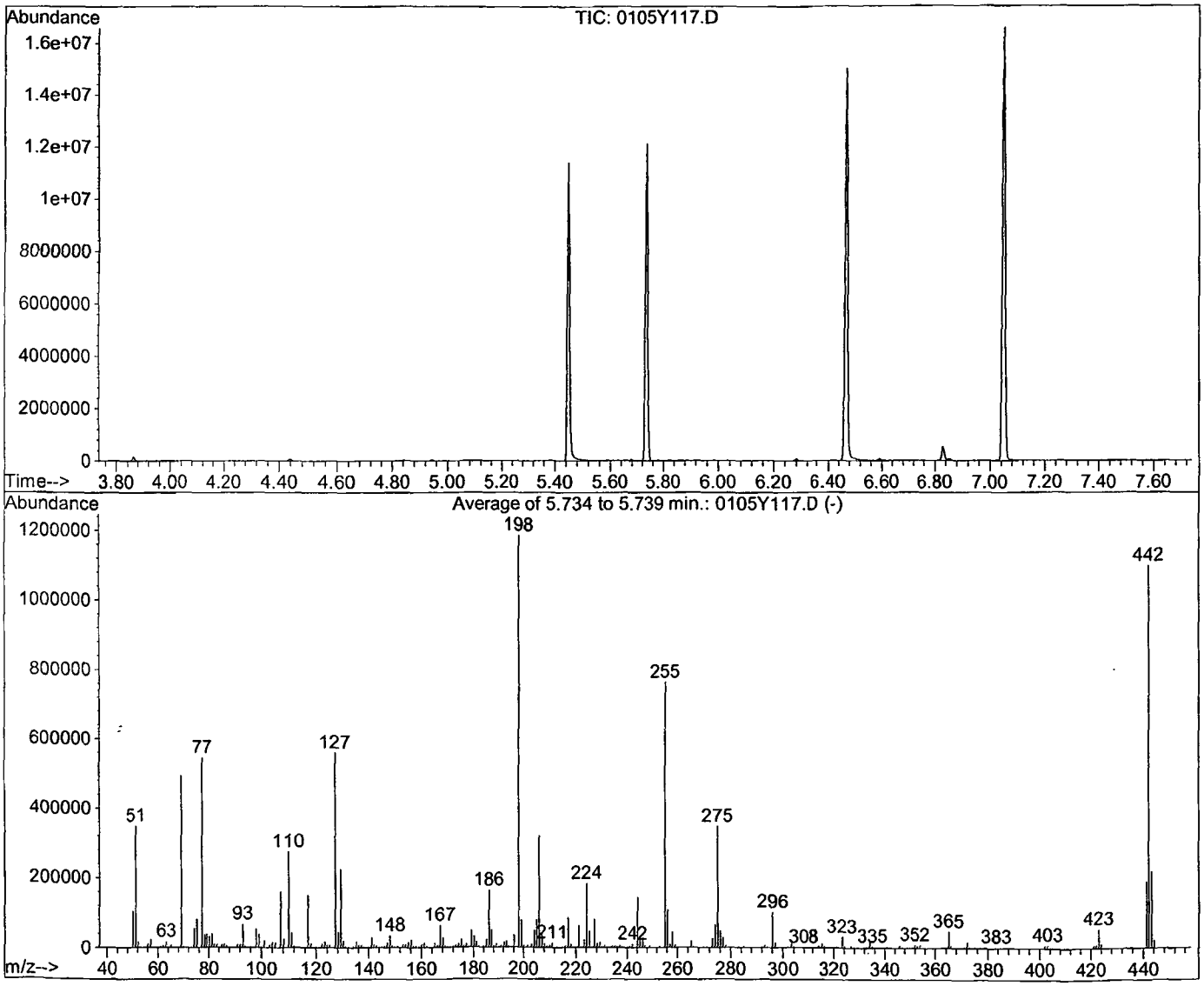
6.76min 0.0000

response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y210105\0105Y117.D Vial: 17
Acq On : 28 Jan 21 10:28 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 859, 860, 861; Background Corrected with Scan 850

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.4	348736	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2692	PASS
127	198	10	80	47.2	560491	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1186816	PASS
199	198	5	9	6.6	78499	PASS
275	198	10	60	29.3	347413	PASS
365	198	1	100	4.0	47736	PASS
441	442	0.01	24	17.3	190123	PASS
442	198	50	500	92.5	1098347	PASS
443	442	15	24	19.9	218155	PASS

0105Y117.D Y0105.M Thu Jan 28 10:45:31 2021

Data File Name:	**0105Y117.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**28 Jan 2021 10:28**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**17**
Instrument Name:	**Yoda**

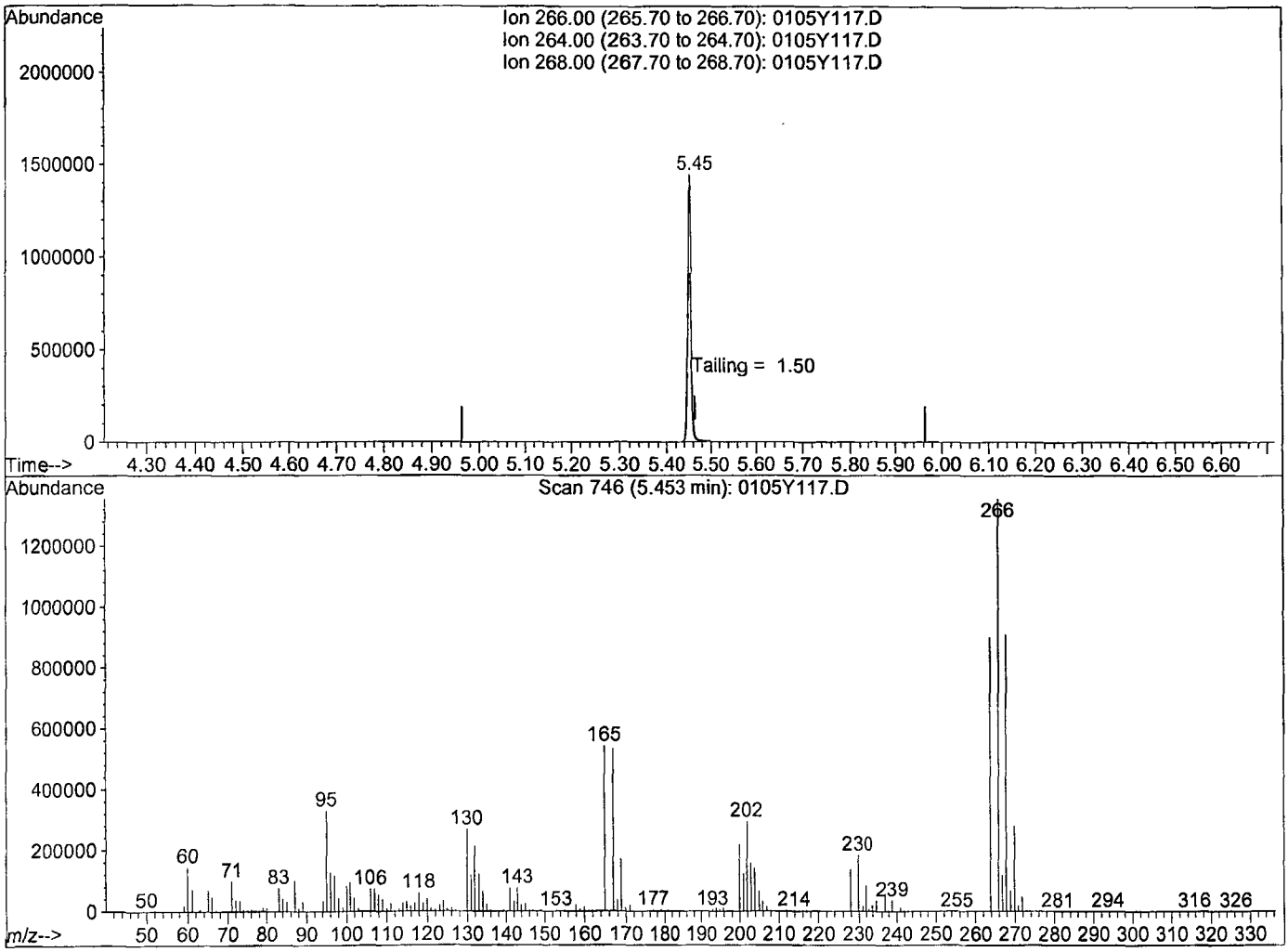
#	Name	Ret Time	Target Response
1)	DDT	7.12	109158000
2)	DDD	6.84	3599220
3)	DDE	5.89	0

Breakdown **3.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y117.D Vial: 17
Acq On : 28 Jan 21 10:28 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:47 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y117.D

(5) Pentachlorophenol

5.45min 0.0000

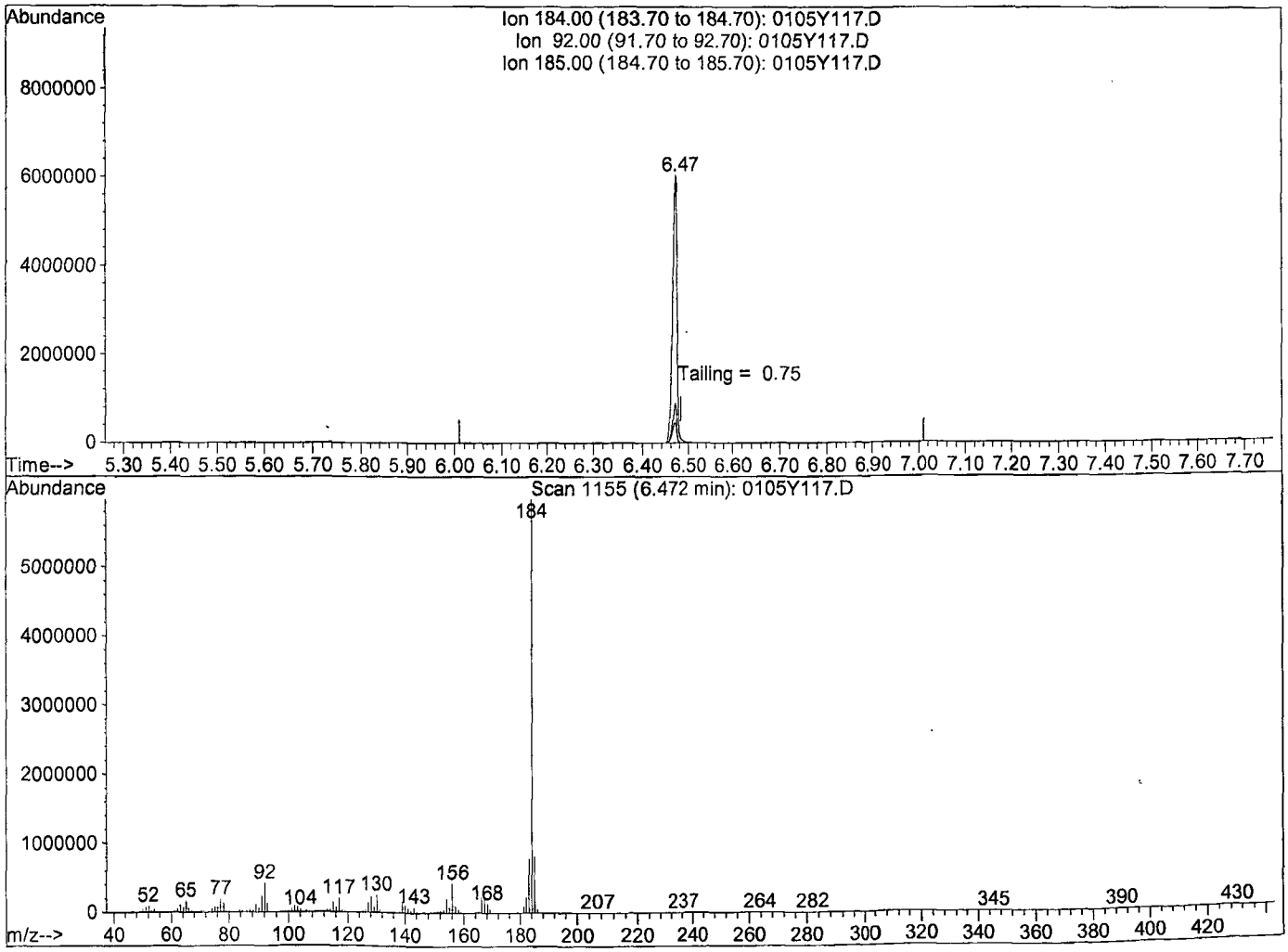
response 8052333

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	62.31
268.00	64.30	62.47
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y117.D Vial: 17
Acq On : 28 Jan 21 10:28 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:47 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y117.D

(6) Benzidine

6.47min 0.0000

response 41666837

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.43
185.00	14.10	14.03
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL			1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	**(4)**
Prep Date	**05/29/20**
Exp Date	**12/31/25**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210125A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 1-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-21 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/25/21 14:00	
Spiked ID 8			Ext. End Time:	01/26/21 8:00	
			GC Requires Extract By:		

pH1	2	01/25/21 13:35	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/26/21 12:05	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/25/21 **Witnessed By:** YL **Date** 01/25/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210125A Blk				0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP14 E-WB6				
2	210125A LCS-1		1	1	0.2	1	1000	1	2/1	01/25/21 13:27	
						equip	E-HP13 E-WB6				
3	210125A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP11 E-WB6				
4	210125A LCSD-1		1	1	0.2	1	1000	1	2/1	01/25/21 13:27	
						equip	E-HP30 E-WB6				
5	210125A LCSD-2		0.125	2	0.05	2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP12 E-WB6				
6	BA25690	BA25690W16			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP15 E-WB6				
7	BA25693	BA25693W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP9 E-WB6				
8	BA25696	BA25696W14			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP16 E-WB6				
9	BA25699	BA25699W16			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP8 E-WB6				
10	BA25701	BA25701W13			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP7 E-WB6				
11	BA25704	BA25704W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP10 E-WB6				
12	BA25706	BA25706W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863 Acid extraction only lost Base redo ID:69827
						equip	E-HP6 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	
GC analyst's initials	MA
Date	1/28/21
Time	10:00
Refrigerator	6C_C

	Technician's Initials
Scanned By	YL
Sample Preparation	YL,KY
Extraction	YL,KY,DL
Concentration	YL,KY,DL

Modified	01/27/21 12:40:42 PM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
2	3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
3	4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
4	5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
5	6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
6	7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
7	8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
8	9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
9	10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
10	11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
11	12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
12	17	0105Y117.D	1	SV TUNE 10/02/20		28 Jan 21 10:28
13	18	0105Y118.D	1	50ug/mL 8270 01/05/21 (1)		28 Jan 21 10:44
14	19	0105Y119.D	1	210125A BLK 1/1000		28 Jan 21 11:21
15	20	0105Y120.D	1	210125A LCS-1 1/1000		28 Jan 21 11:46
16	21	0105Y121.D	1	210125A LCSD-1 1/1000		28 Jan 21 12:12
17	22	0105Y122.D	1	BA25690W16 1/1000		28 Jan 21 12:37
18	23	0105Y123.D	1	BA25693W12 1/1000		28 Jan 21 13:03
19	24	0105Y124.D	1	BA25696W14 1/1000		28 Jan 21 13:28
20	25	0105Y125.D	1	BA25699W16 1/1000		28 Jan 21 13:53
21	26	0105Y126.D	1	BA25701W13 1/1000		28 Jan 21 14:19
22	27	0105Y127.D	1	BA25704W12 1/1000		28 Jan 21 14:44
23	28	0105Y128.D	1	BA25706W12 1/1000		28 Jan 21 15:09
24	29	0105Y129.D	1	50ug/mL 8270 01/05/21 (1)		28 Jan 21 15:35

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus
Initials: HA/AM

			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

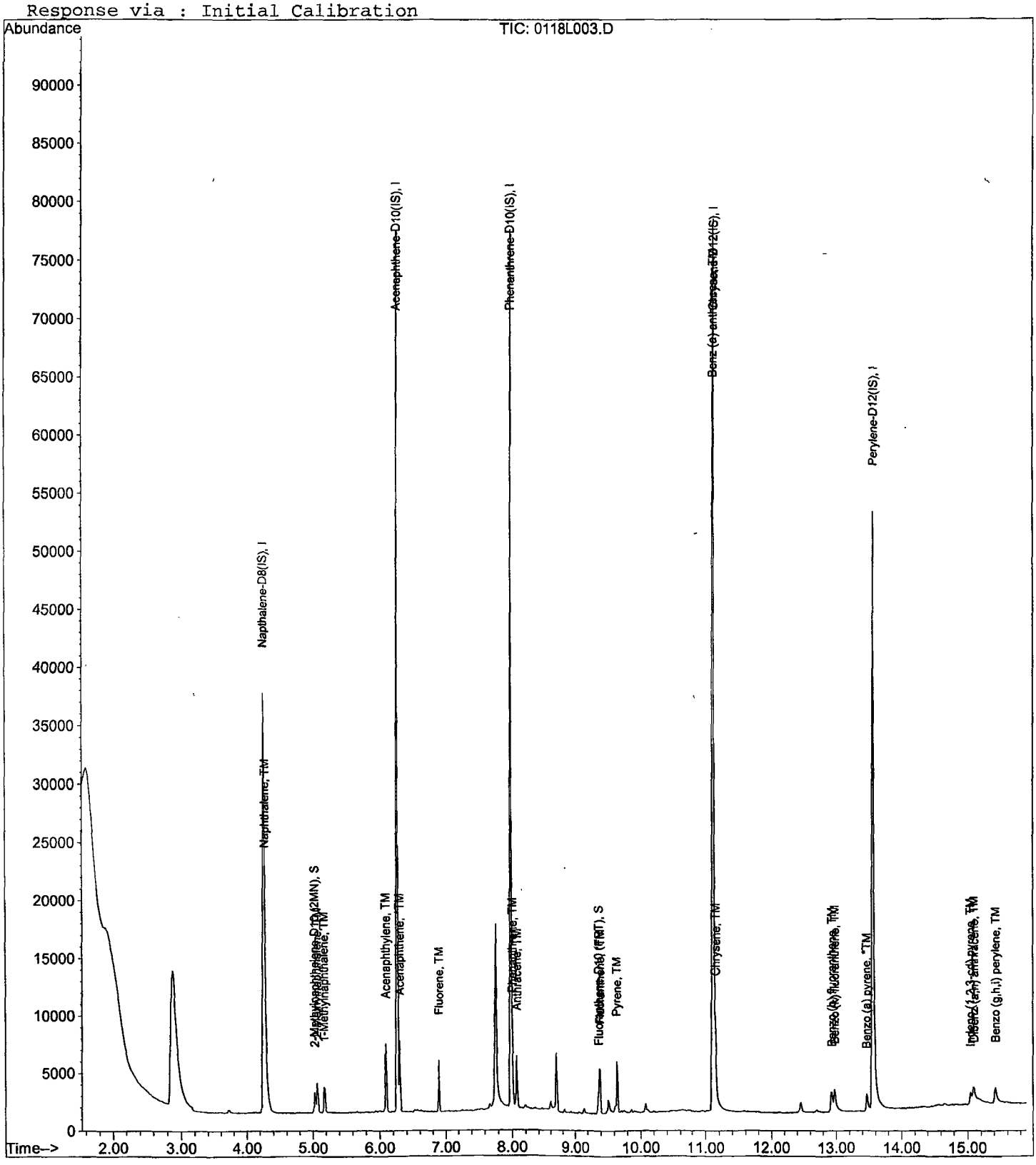
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562	ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%			
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183	ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	6554	0.21427	ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578	ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723	ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472	ppb		99
8) Acenaphthene	6.29	154	3730	0.21987	ppb		98
9) Fluorene	6.89	166	4201	0.21236	ppb		99
11) Phenanthrene	8.00	178	6614	0.21709	ppb		99
12) Anthracene	8.06	178	5555	0.20337	ppb		100
14) Fluoranthene	9.38	202	8388	0.20768	ppb	#	84
16) Pyrene	9.64	202	8654	0.21194	ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097	ppb		96
18) Chrysene	11.15	228	7901	0.21470	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777	ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570	ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787	ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285	ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333	ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832	ppb		97

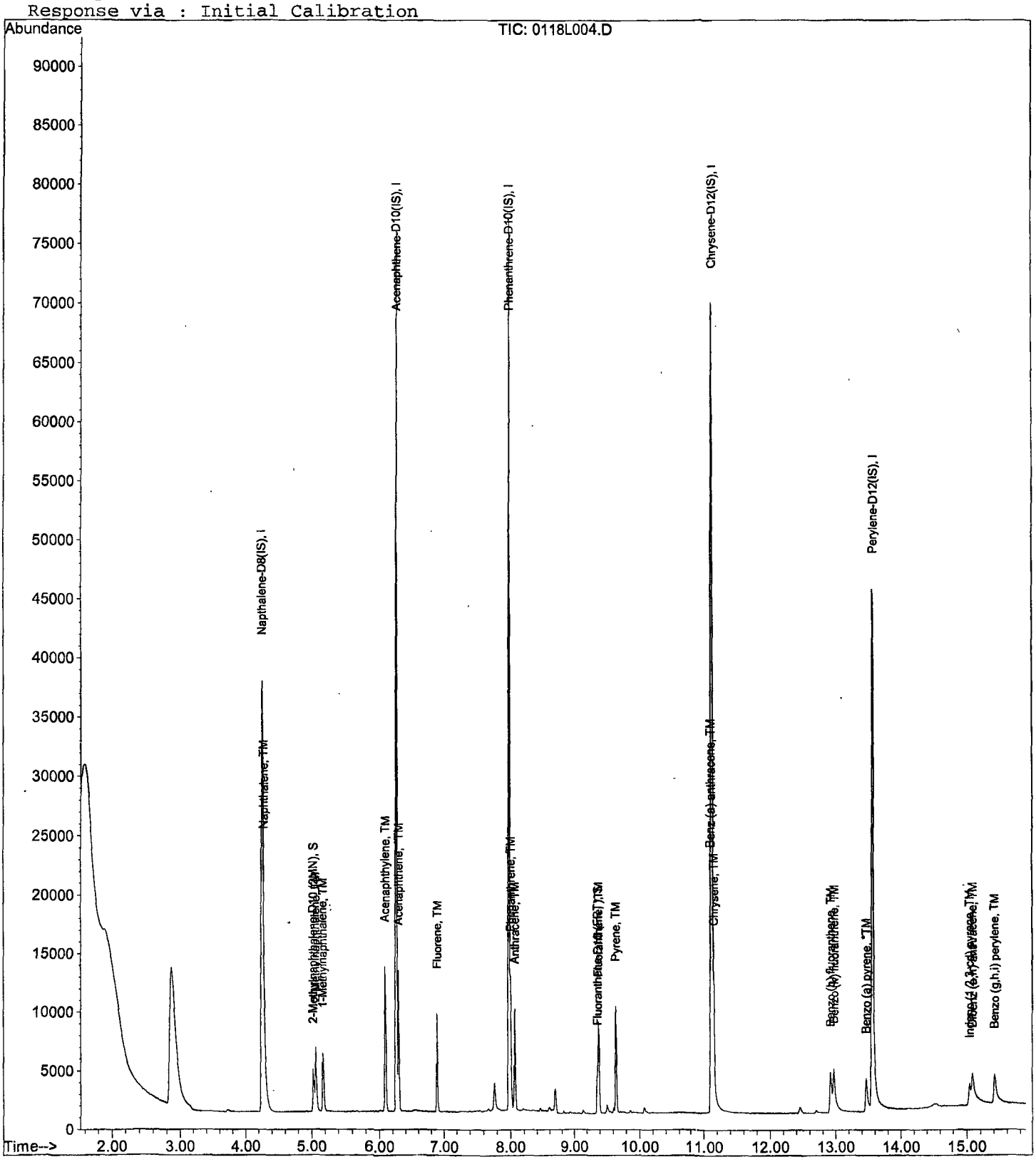
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979 ppb		0.00
Spiked Amount 5.000			Recovery = 5.200%			
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727 ppb		0.00
Spiked Amount 5.000			Recovery = 4.940%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	15152	0.53197 ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641 ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883 ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452 ppb		99
8) Acenaphthene	6.29	154	8507	0.53809 ppb		99
9) Fluorene	6.89	166	9747	0.52871 ppb		100
11) Phenanthrene	8.00	178	15220	0.53650 ppb		99
12) Anthracene	8.06	178	13445	0.52863 ppb		99
14) Fluoranthene	9.39	202	19405	0.51598 ppb		97
16) Pyrene	9.64	202	19829	0.52483 ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713 ppb		97
18) Chrysene	11.15	228	17766	0.52174 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842 ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592 ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124 ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285 ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279 ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408 ppb		92

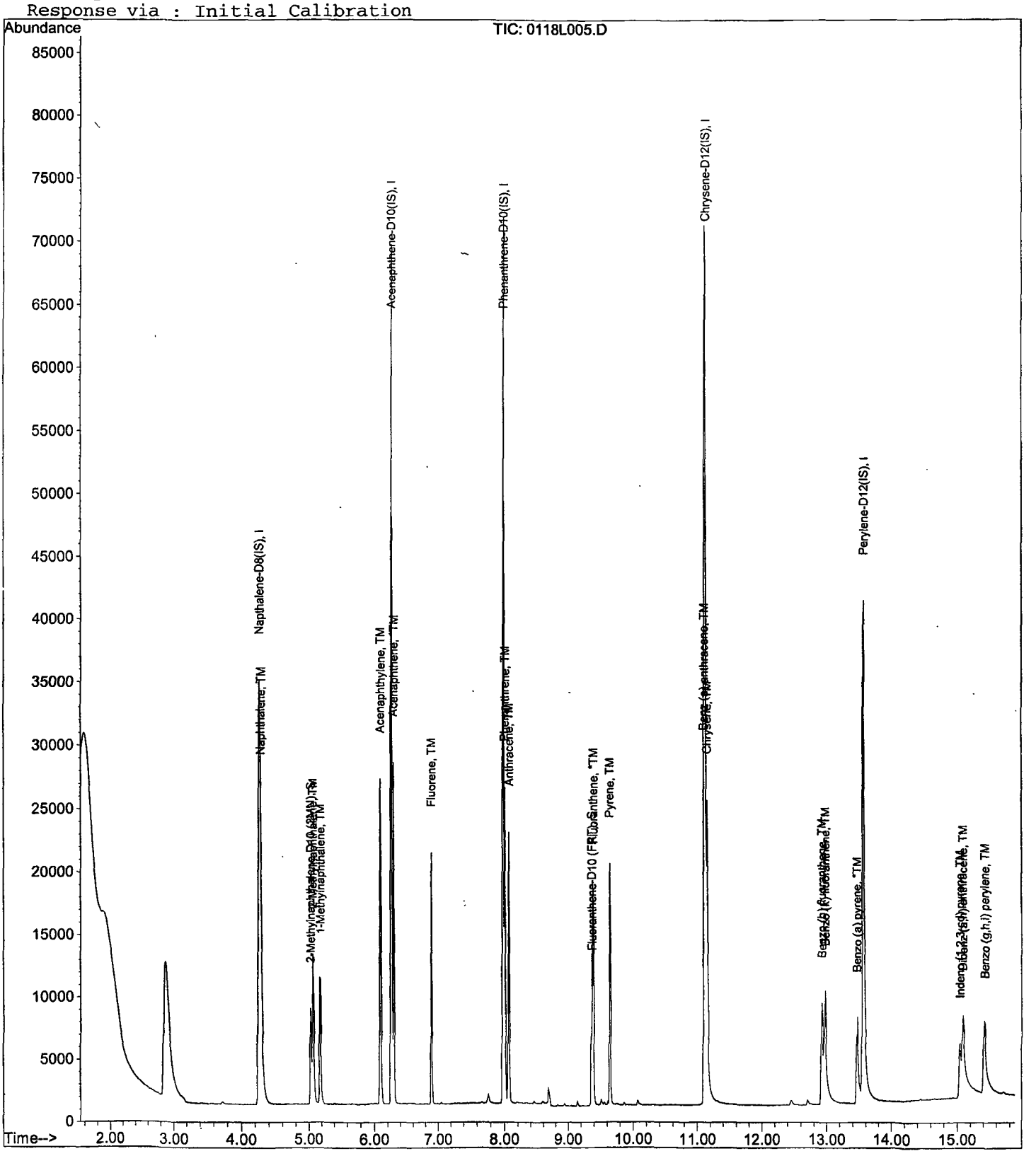
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779 ppb		0.00
Spiked Amount 5.000			Recovery = 10.160%			
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272 ppb		0.00
Spiked Amount 5.000			Recovery = 10.060%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	29158	1.03706 ppb		100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438 ppb		99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359 ppb		99
7) Acenaphthylene	6.08	152	55396	1.05240 ppb		99
8) Acenaphthene	6.29	154	16277	1.05847 ppb		100
9) Fluorene	6.89	166	18901	1.05405 ppb		99
11) Phenanthrene	8.00	178	29034	1.07377 ppb		100
12) Anthracene	8.06	178	25745	1.06201 ppb		100
14) Fluoranthene	9.39	202	38564	1.07584 ppb		98
16) Pyrene	9.65	202	38462	1.03286 ppb		100
17) Benz (a) anthracene	11.11	228	30159	0.95752 ppb		99
18) Chrysene	11.15	228	33925	1.01080 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864 ppb	#	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514 ppb		99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606 ppb		99
23) Benzo (a) pyrene	13.46	252	22522	0.92324 ppb		98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684 ppb		98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232 ppb		94

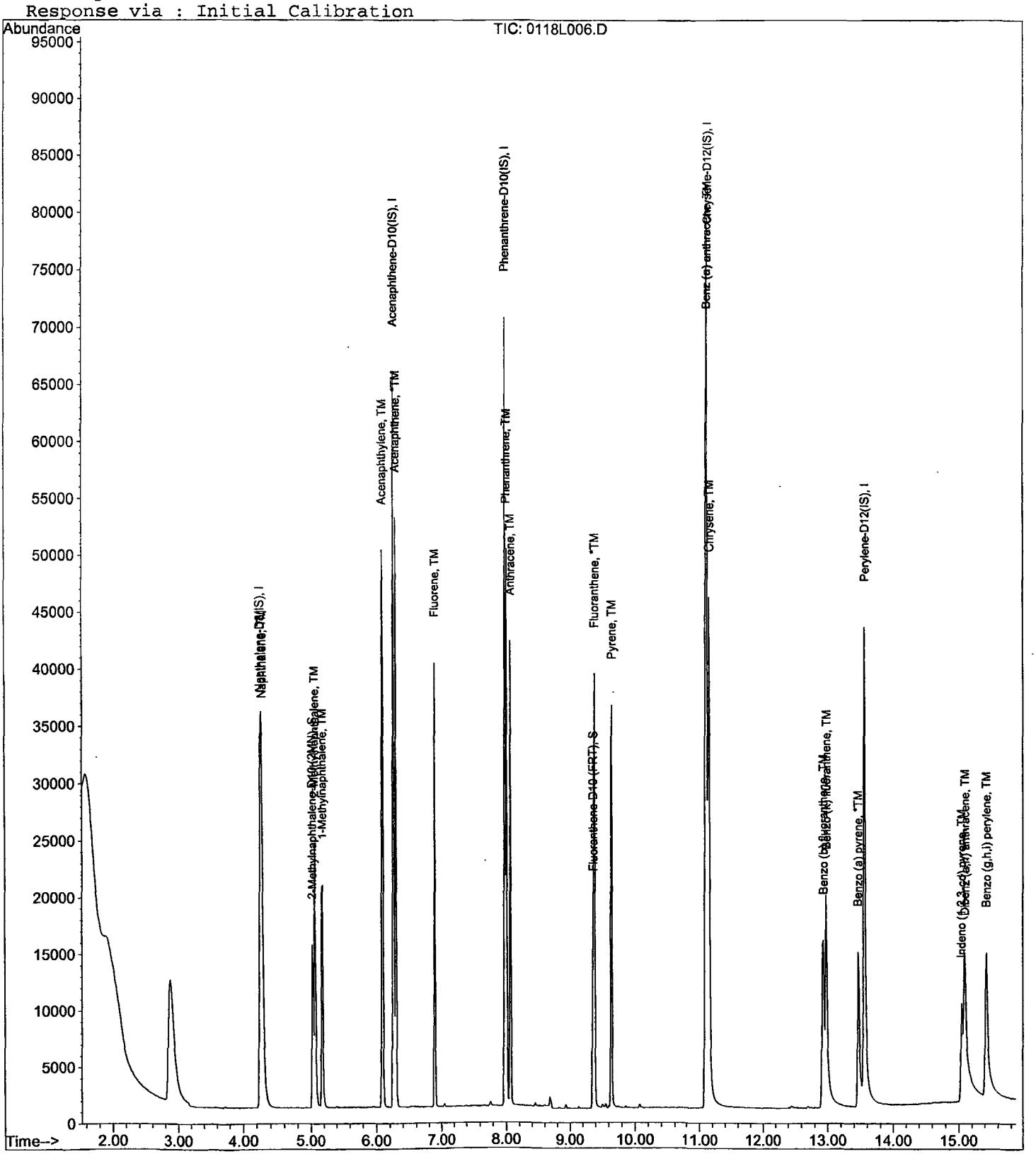
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.300%		
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.280%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	134538	4.98585 ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293 ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401 ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969 ppb		100
8) Acenaphthene	6.29	154	75592	5.12022 ppb		100
9) Fluorene	6.89	166	91323	5.30474 ppb		100
11) Phenanthrene	8.00	178	136722	5.27514 ppb		100
12) Anthracene	8.06	178	124850	5.37298 ppb		100
14) Fluoranthene	9.39	202	188170	5.47654 ppb		100
16) Pyrene	9.65	202	189979	5.19874 ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636 ppb		100
18) Chrysene	11.15	228	168073	5.10305 ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112 ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853 ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449 ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925 ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274 ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602 ppb		100

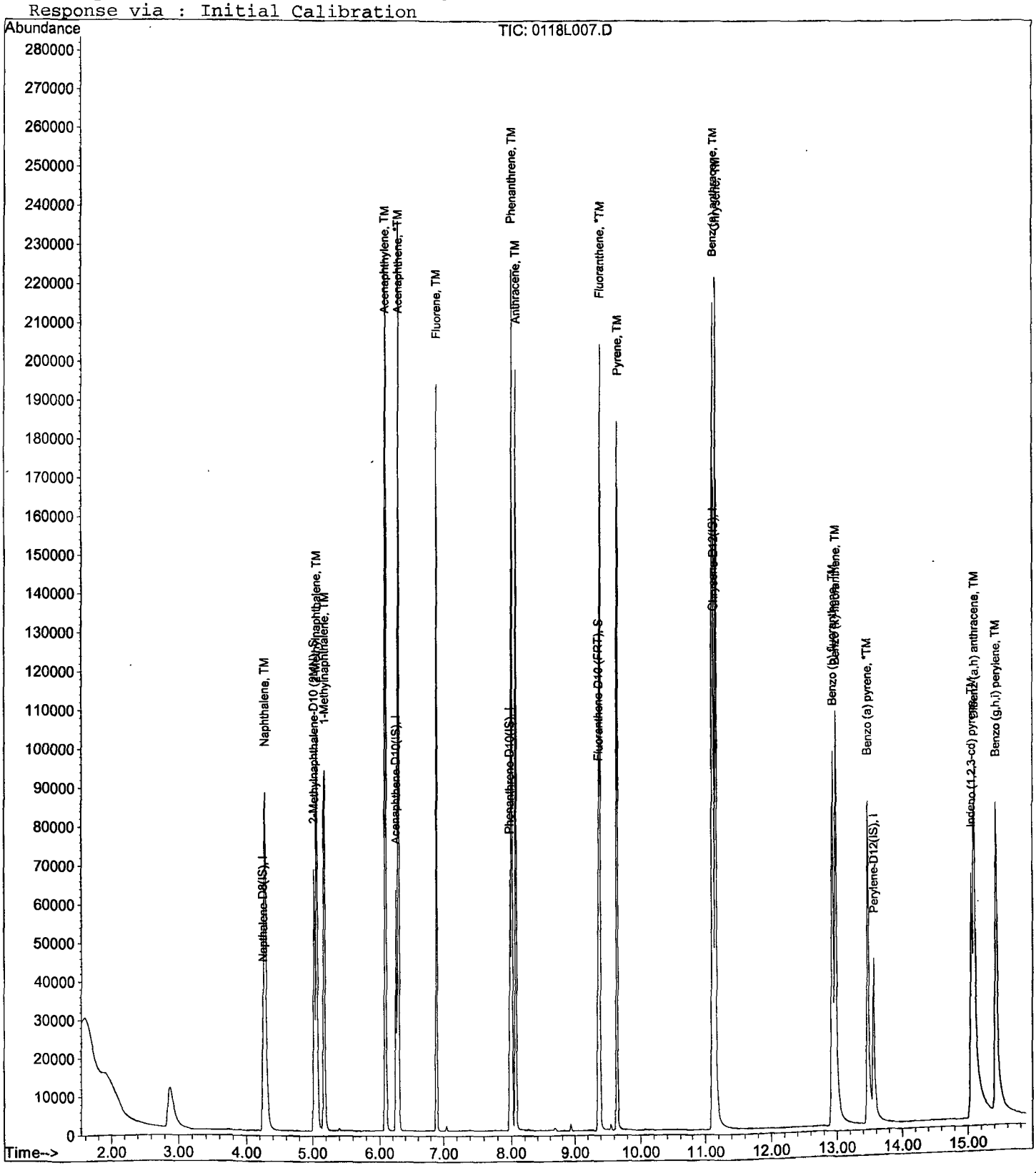
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897	ppb		0.00
Spiked Amount 5.000			Recovery = 98.180%				
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763	ppb		0.00
Spiked Amount 5.000			Recovery = 101.560%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	268559	9.44564	ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736	ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451	ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932	ppb		100
8) Acenaphthene	6.29	154	143677	9.22655	ppb		99
9) Fluorene	6.89	166	175331	9.65565	ppb		99
11) Phenanthrene	8.00	178	252445	9.28323	ppb		99
12) Anthracene	8.06	178	235818	9.67255	ppb		99
14) Fluoranthene	9.39	202	356187	9.88031	ppb		97
16) Pyrene	9.65	202	358384	9.35054	ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203	ppb		99
18) Chrysene	11.16	228	320451	9.27660	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742	ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043	ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132	ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641	ppb	#	90

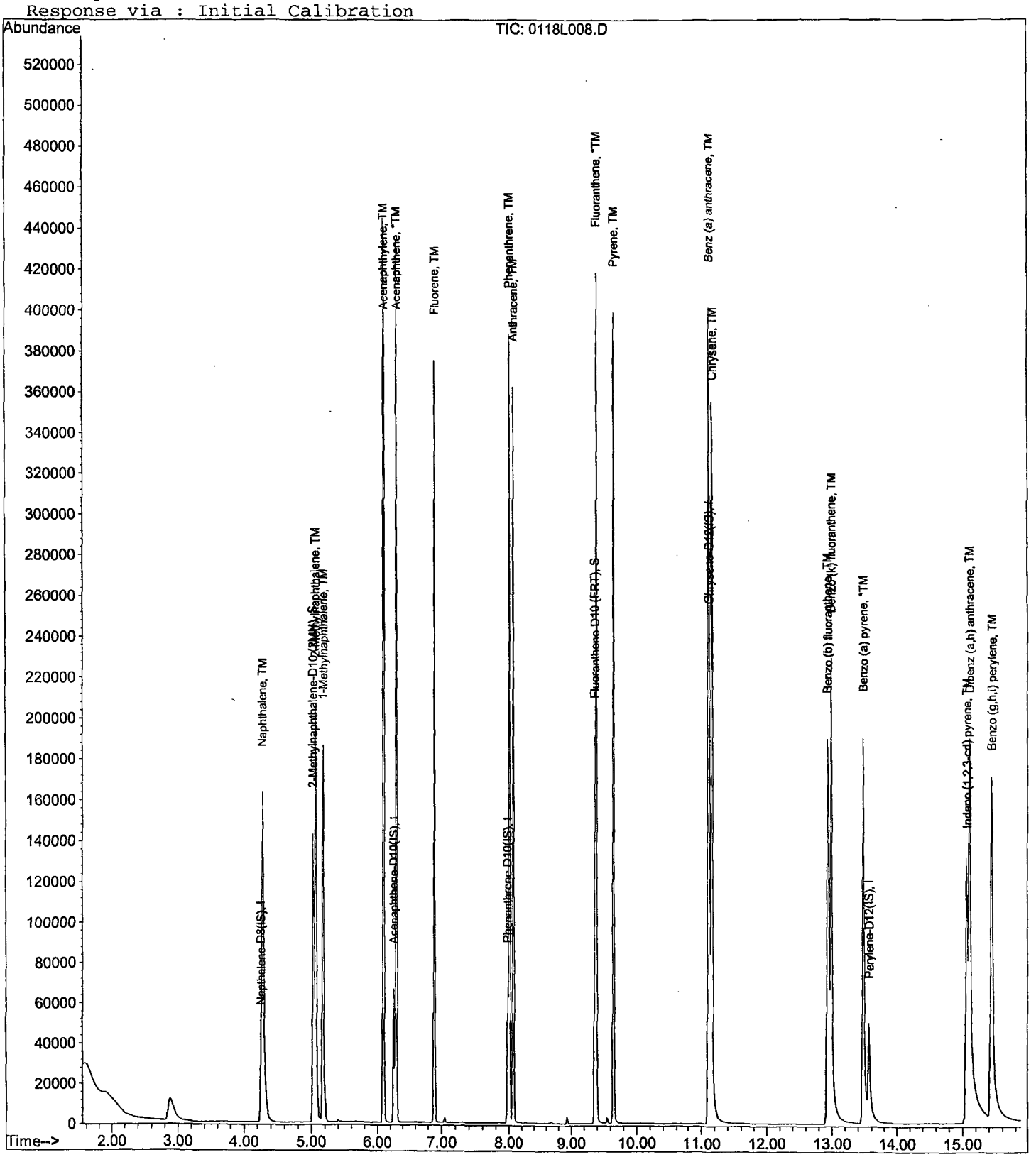
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000 ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275 ppb		0.00
Spiked Amount 5.000			Recovery	= 467.860%		
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323 ppb		0.01
Spiked Amount 5.000			Recovery	= 485.860%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	1196891	46.08087 ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476 ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633 ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017 ppb		97
8) Acenaphthene	6.30	154	631316	43.96491 ppb		89
9) Fluorene	6.89	166	764075	45.63163 ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079 ppb		98
12) Anthracene	8.08	178	1010706	44.13554 ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367 ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458 ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809 ppb		97
18) Chrysene	11.17	228	1338368	43.66618 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600 ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049 ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551 ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246 ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934 ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

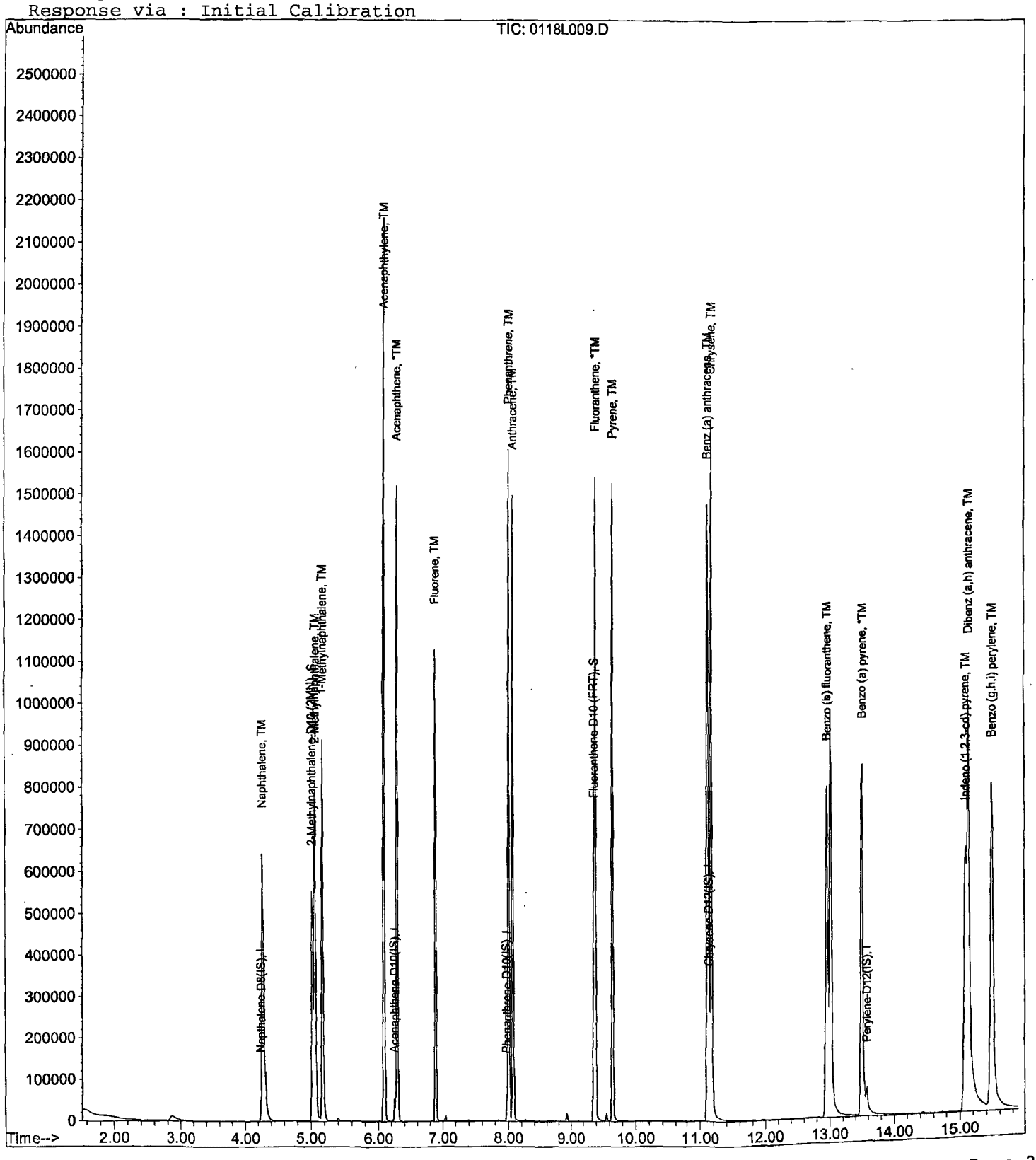
Data File : M:\LINUS\DATA\L210118\0118L009.D
Acq On : 18 Jan 21 13:45
Sample : 50 SIM 01/15/21
Misc :

Vial: 9
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000	ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000	ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000	ppb		0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210	ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%				
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423	ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	2224048	88.96172	ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956	ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247	ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934	ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300	ppb		96
9) Fluorene	6.90	166	1390953	82.59956	ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367	ppb		97
12) Anthracene	8.09	178	2040467	89.58105	ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099	ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549	ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522	ppb		96
18) Chrysene	11.19	228	2703165	90.38960	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219	ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732	ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829	ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873	ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705	ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621	ppb		99

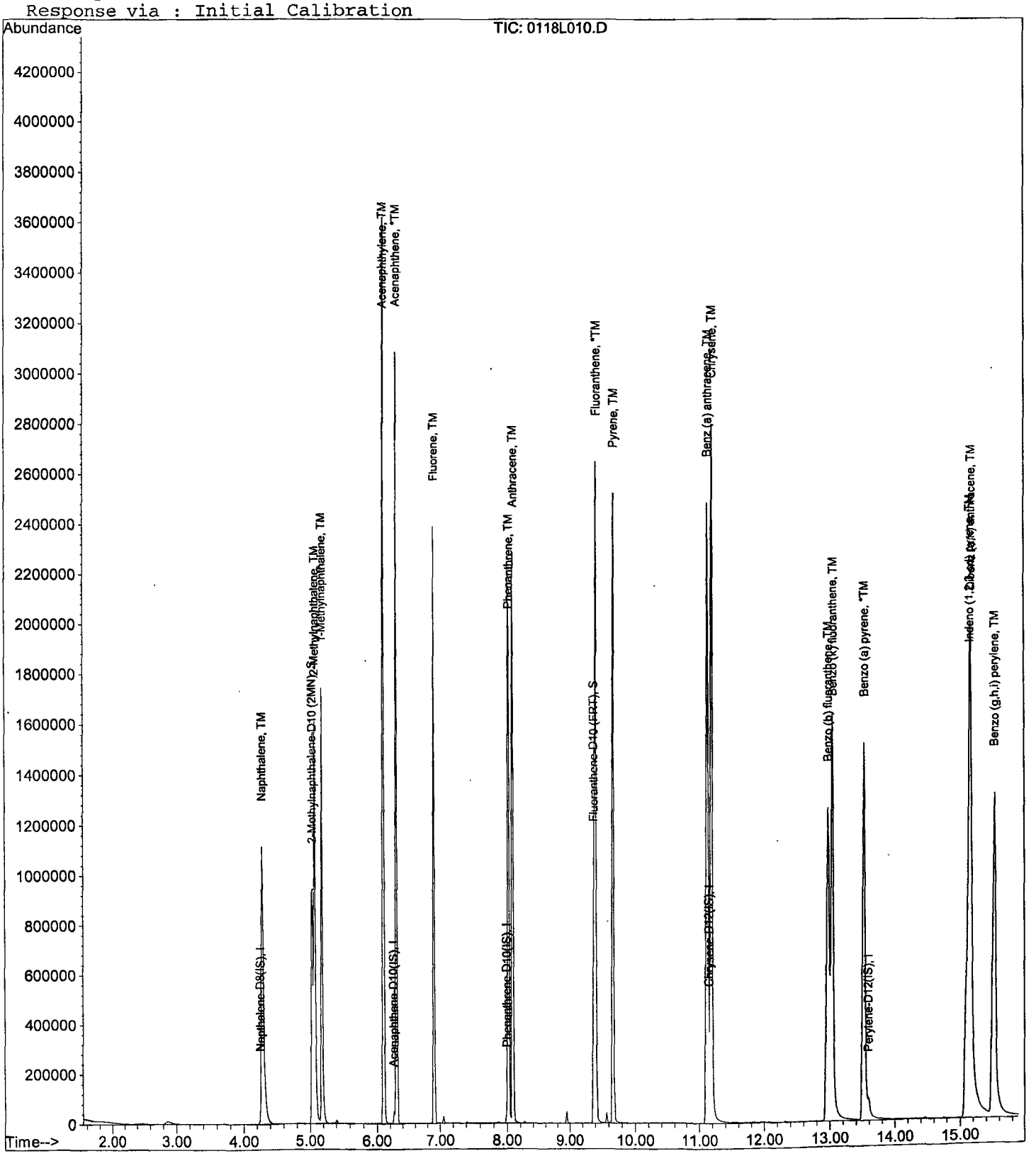
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069	ppb		0.00
Spiked Amount 5.000			Recovery =	0.020%			
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132	ppb		0.00
Spiked Amount 5.000			Recovery =	0.220%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	137423	5.27705	ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831	ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437	ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224	ppb		100
8) Acenaphthene	6.29	154	77645	5.22665	ppb		99
9) Fluorene	6.89	166	92294	5.32787	ppb		100
11) Phenanthrene	8.00	178	132877	5.01426	ppb		100
12) Anthracene	8.06	178	132921	5.59477	ppb		99
14) Fluoranthene	9.39	202	184979	5.26550	ppb		100
16) Pyrene	9.65	202	190804	5.11487	ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082	ppb		100
18) Chrysene	11.15	228	165836	4.93766	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773	ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329	ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901	ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275	ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374	ppb		93

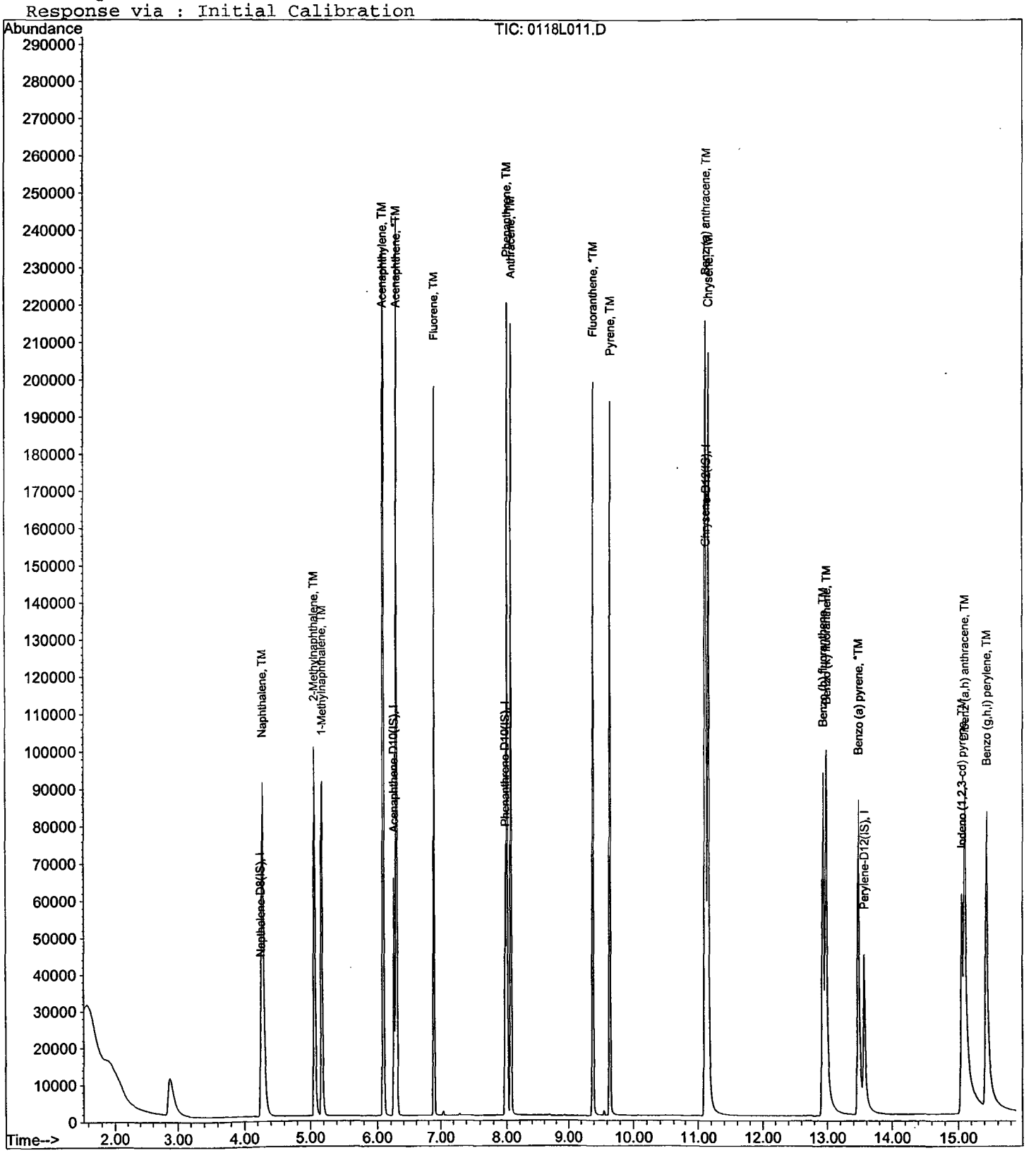
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L049.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.054	3.6	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.046	2.6	S	
4	TM	2-Methylnaphthalene	0.6368	0.6831	7.3	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6764	6.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.180	2.8	TM	
8	*TM	Acenaphthene	1.188	1.214	2.2	*TM	
9	TM	Fluorene	1.385	1.447	4.4	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.188	2.5	TM	
12	TM	Anthracene	1.039	1.084	4.4	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.353	0.12	S	
14	*TM	Fluoranthene	1.536	1.650	7.4	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.359	0.15	TM	
17	TM	Benz (a) anthracene	1.150	1.112	3.3	TM	
18	TM	Chrysene	1.226	1.172	4.4	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.075	0.99	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.042	6.4	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.371	8.2	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.062	12	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9495	7.3	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.090	8.0	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L049.D Vial: 49
Acq On : 28 Jan 21 10:28 Operator: MA
Sample : 5 SIM 01/15/21 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 10:46 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66975	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32486	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58989	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	71500	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	65746	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	70025	2.43591 ppb		0.00
Spiked Amount 5.000			Recovery	= 48.720%		
13) Fluoranthene-D10 (FRT)	9.37	212	79807	2.50300 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.060%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	141203	5.18167 ppb		99
4) 2-Methylnaphthalene	5.06	142	91498	5.36328 ppb		97
5) 1-Methylnaphthalene	5.17	142	90601	5.33094 ppb		95
7) Acenaphthylene	6.08	152	271563	5.13971 ppb		100
8) Acenaphthene	6.29	154	78896	5.11125 ppb		99
9) Fluorene	6.89	166	93998	5.22229 ppb		99
11) Phenanthrene	8.00	178	140118	5.12508 ppb		100
12) Anthracene	8.06	178	127913	5.21859 ppb		100
14) Fluoranthene	9.39	202	194686	5.37158 ppb		98
16) Pyrene	9.65	202	194400	4.99261 ppb		98
17) Benz (a) anthracene	11.11	228	159083	4.83544 ppb		98
18) Chrysene	11.16	228	167615	4.78123 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.06	276	153788	4.95048 ppb		99
21) Benzo (b) fluoranthene	12.94	252	136955	5.31832 ppb		99
22) Benzo (k) fluoranthene	12.99	252	180217	5.41152 ppb		99
23) Benzo (a) pyrene	13.48	252	139669	5.62473 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	124851	5.36374 ppb		100
25) Benzo (g,h,i) perylene	15.44	276	143358	5.40127 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

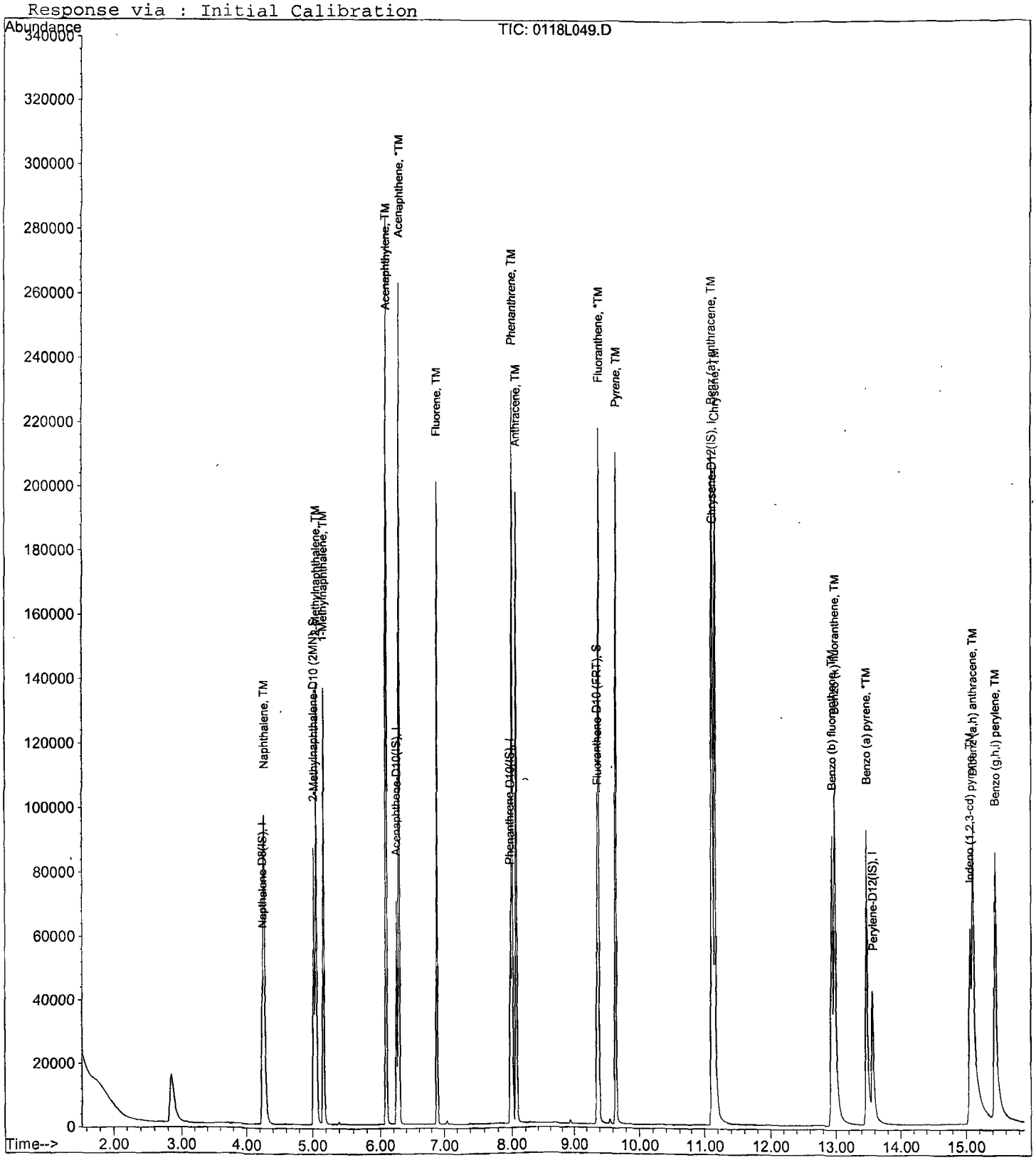
Data File : M:\LINUS\DATA\L210118\0118L049.D
Acq On : 28 Jan 21 10:28
Sample : 5 SIM 01/15/21 (1)
Misc :

Vial: 49
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 28 10:46 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L060.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	0.9994	1.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.067	0.54	S	
4	TM	2-Methylnaphthalene	0.6368	0.6491	1.9	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6350	0.10	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.176	2.7	TM	
8	*TM	Acenaphthene	1.188	1.187	0.05	*TM	
9	TM	Fluorene	1.385	1.439	3.9	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.206	4.1	TM	
12	TM	Anthracene	1.039	1.130	8.8	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.361	0.70	S	
14	*TM	Fluoranthene	1.536	1.657	7.9	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.384	1.7	TM	
17	TM	Benz (a) anthracene	1.150	1.128	2.0	TM	
18	TM	Chrysene	1.226	1.245	1.6	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.193	9.8	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.088	11	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.333	5.3	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.085	15	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.022	15	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.102	9.1	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L060.D Vial: 60
Acq On : 28 Jan 21 15:06 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:31 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71151	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.27	164	33541	2.50000	ppb		0.01
10) Phenanthrene-D10(IS)	7.99	188	60245	2.50000	ppb		0.01
15) Chrysene-D12(IS)	11.13	240	72901	2.50000	ppb		0.01
20) Perylene-D12(IS)	13.58	264	70435	2.50000	ppb		0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.03	152	75936	2.48649	ppb		0.01
Spiked Amount 5.000			Recovery = 49.720%				
13) Fluoranthene-D10 (FRT)	9.38	212	81981	2.51758	ppb		0.01
Spiked Amount 5.000			Recovery = 50.360%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	142219	4.91264	ppb		100
4) 2-Methylnaphthalene	5.07	142	92372	5.09672	ppb		94
5) 1-Methylnaphthalene	5.18	142	90366	5.00504	ppb		99
7) Acenaphthylene	6.10	152	280141	5.13529	ppb		98
8) Acenaphthene	6.30	154	79645	4.99748	ppb		90
9) Fluorene	6.89	166	96530	5.19428	ppb		95
11) Phenanthrene	8.01	178	145307	5.20408	ppb		99
12) Anthracene	8.08	178	136131	5.43808	ppb		99
14) Fluoranthene	9.40	202	199631	5.39318	ppb		96
16) Pyrene	9.65	202	201842	5.08411	ppb	#	79
17) Benz (a) anthracene	11.12	228	164417	4.90153	ppb		99
18) Chrysene	11.16	228	181579	5.08002	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.07	276	173922	5.49101	ppb		95
21) Benzo (b) fluoranthene	12.95	252	153258	5.55521	ppb		100
22) Benzo (k) fluoranthene	13.00	252	187804	5.26392	ppb		100
23) Benzo (a) pyrene	13.49	252	152851	5.74580	ppb		100
24) Dibenz (a,h) anthracene	15.12	278	143998	5.77448	ppb		98
25) Benzo (g,h,i) perylene	15.45	276	155170	5.45711	ppb		94

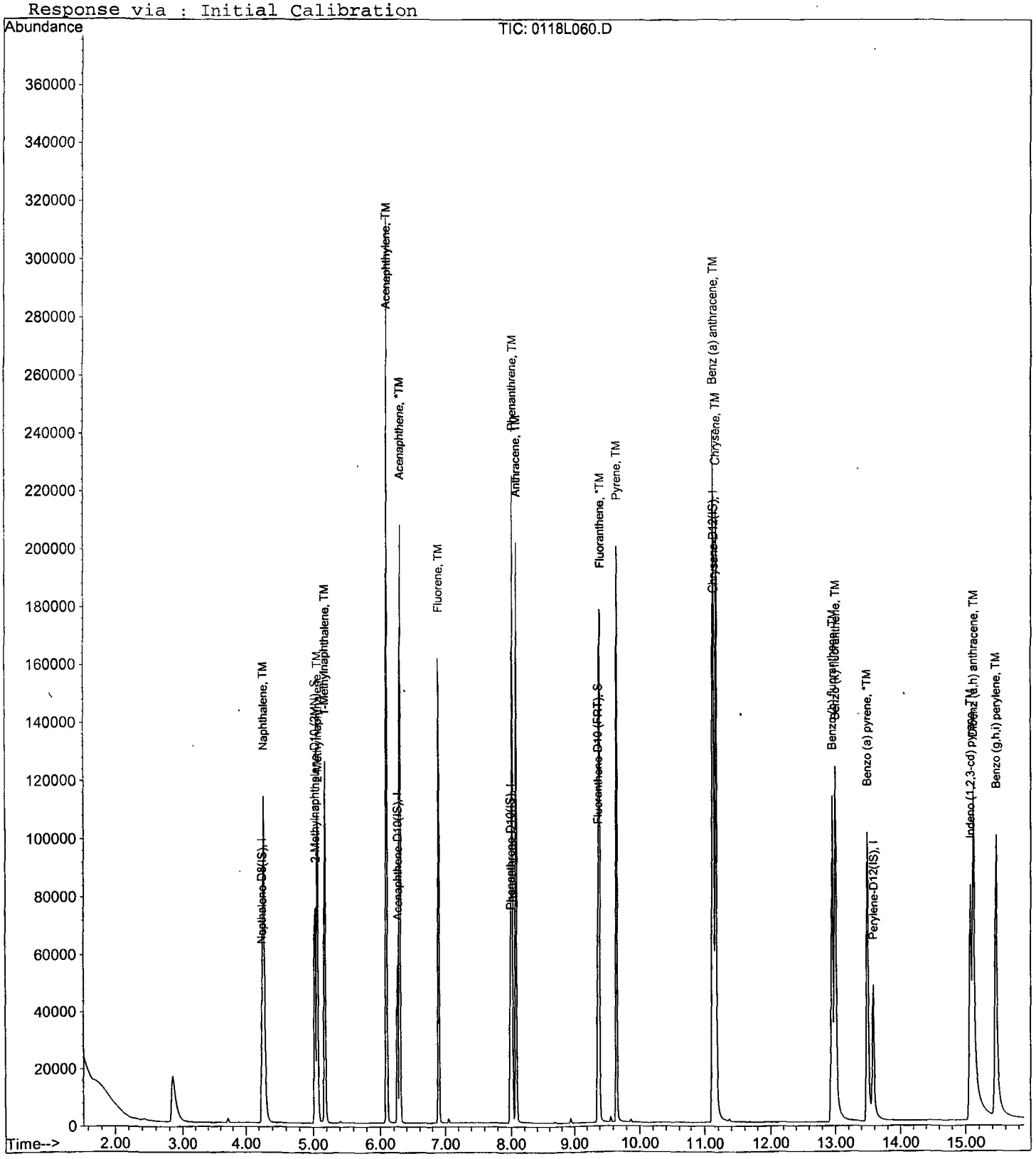
(#) = qualifier out of range (m) = manual integration
0118L060.D L0118.M Thu Jan 28 15:31:36 2021

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L060.D Vial: 60
Acq On : 28 Jan 21 15:06 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:31 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L053.D Vial: 53
Acq On : 28 Jan 21 12:09 Operator: MA
Sample : BA25690W16 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:07 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	62441	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30165	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	55805	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	66893	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	62399	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	122074	4.55484	ppb	0.00
Spiked Amount 5.000			Recovery =	91.100%		
13) Fluoranthene-D10 (FRT)	9.37	212	149721	4.96365	ppb	0.00
Spiked Amount 5.000			Recovery =	99.280%		

Target Compounds	Qvalue

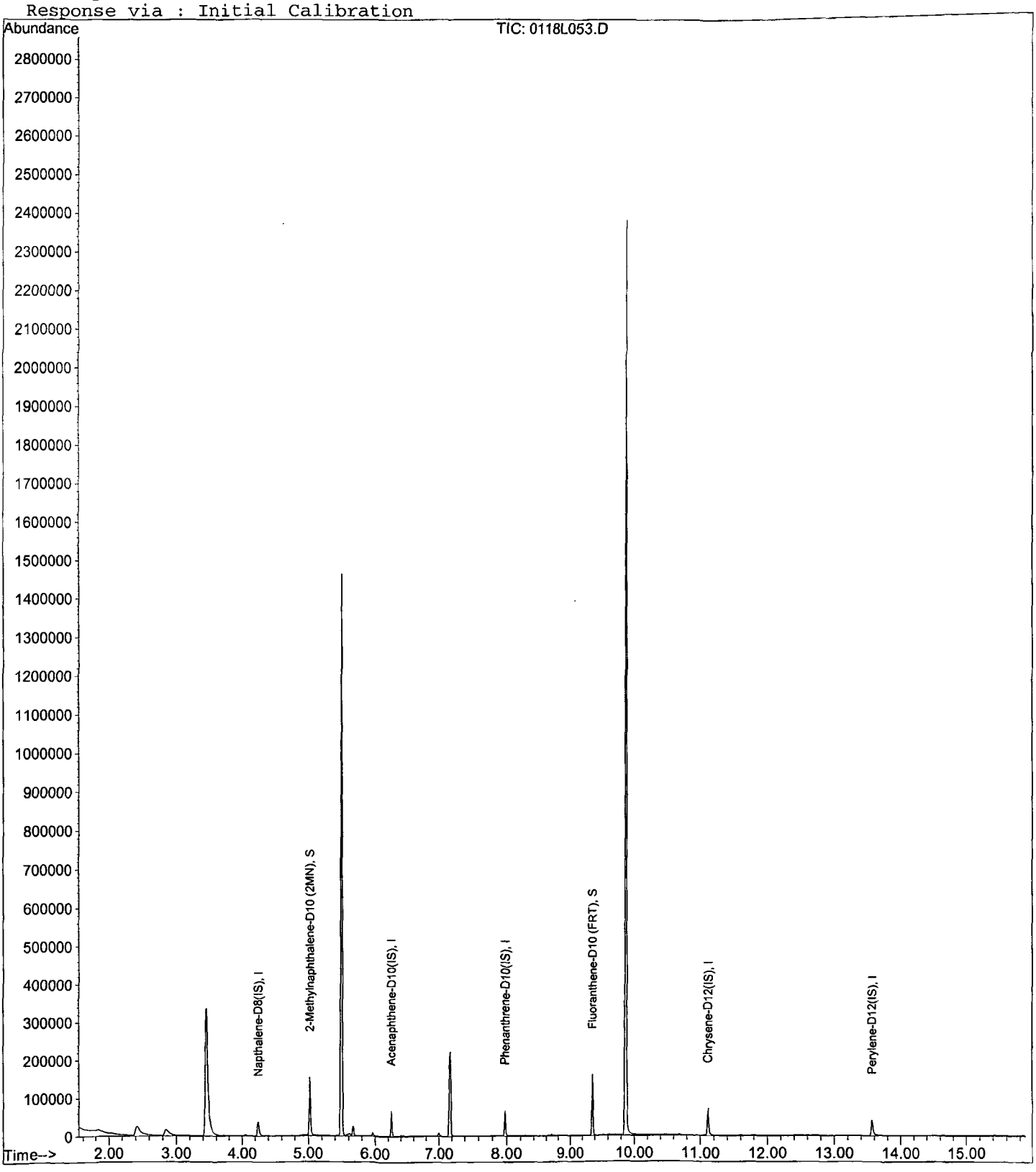
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L053.D Vial: 53
Acq On : 28 Jan 21 12:09 Operator: MA
Sample : BA25690W16 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:07 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L054.D Vial: 54
Acq On : 28 Jan 21 12:31 Operator: MA
Sample : BA25693W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:08 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61176	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	29065	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	53795	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	64442	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	55314	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	122483	4.66460	ppb	0.00
Spiked Amount 5.000			Recovery = 93.300%			
13) Fluoranthene-D10 (FRT)	9.37	212	147089	5.05859	ppb	0.00
Spiked Amount 5.000			Recovery = 101.180%			

Target Compounds Qvalue

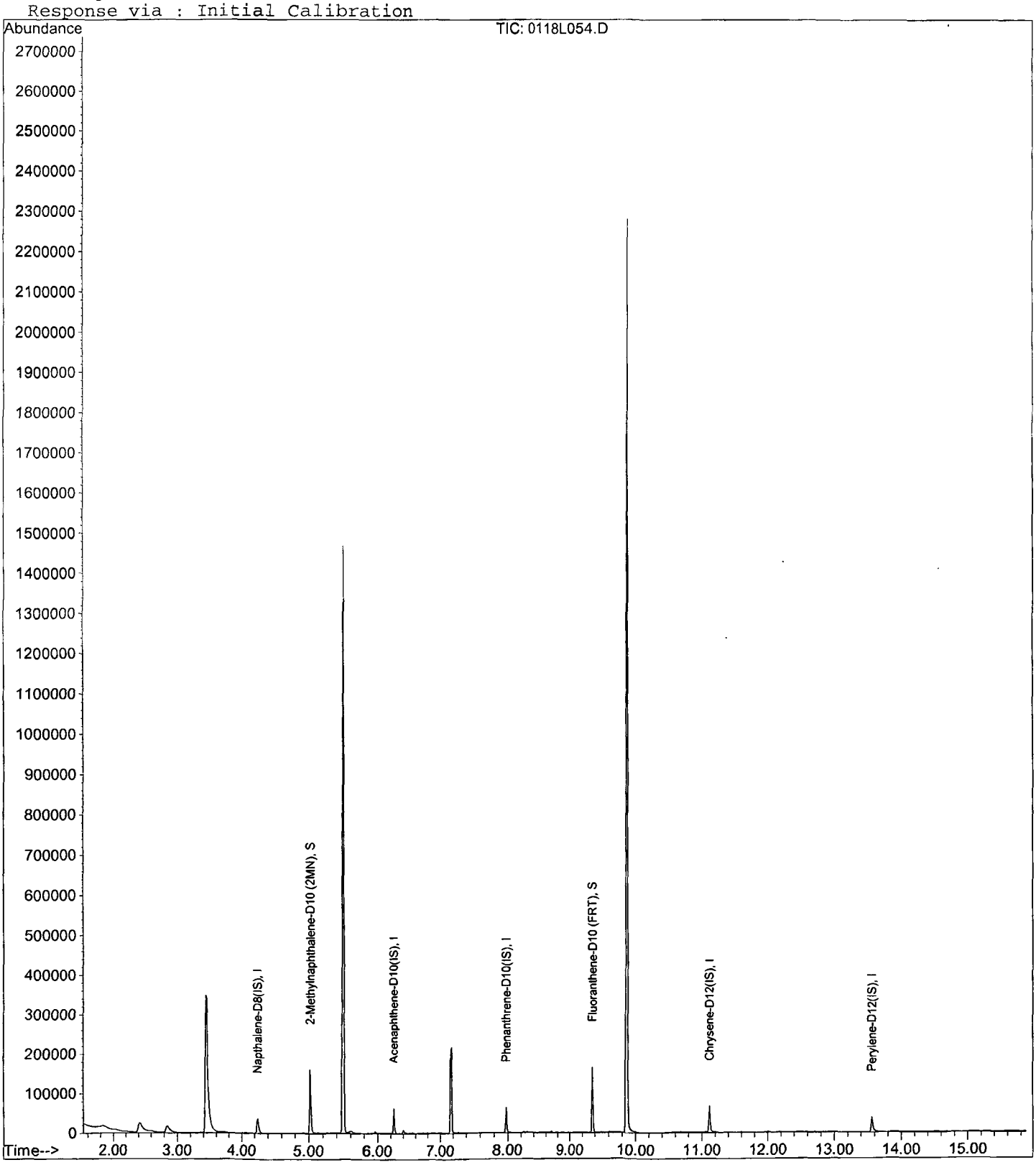
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L054.D Vial: 54
Acq On : 28 Jan 21 12:31 Operator: MA
Sample : BA25693W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:08 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L055.D Vial: 55
Acq On : 28 Jan 21 12:53 Operator: MA
Sample : BA25696W14 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:08 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	62656	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	29785	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	55809	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	67303	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	62939	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	125509	4.66694 ppb	0.00
Spiked Amount 5.000			Recovery =	93.340%	
13) Fluoranthene-D10 (FRT)	9.37	212	150788	4.99867 ppb	0.00
Spiked Amount 5.000			Recovery =	99.980%	

Target Compounds Qvalue

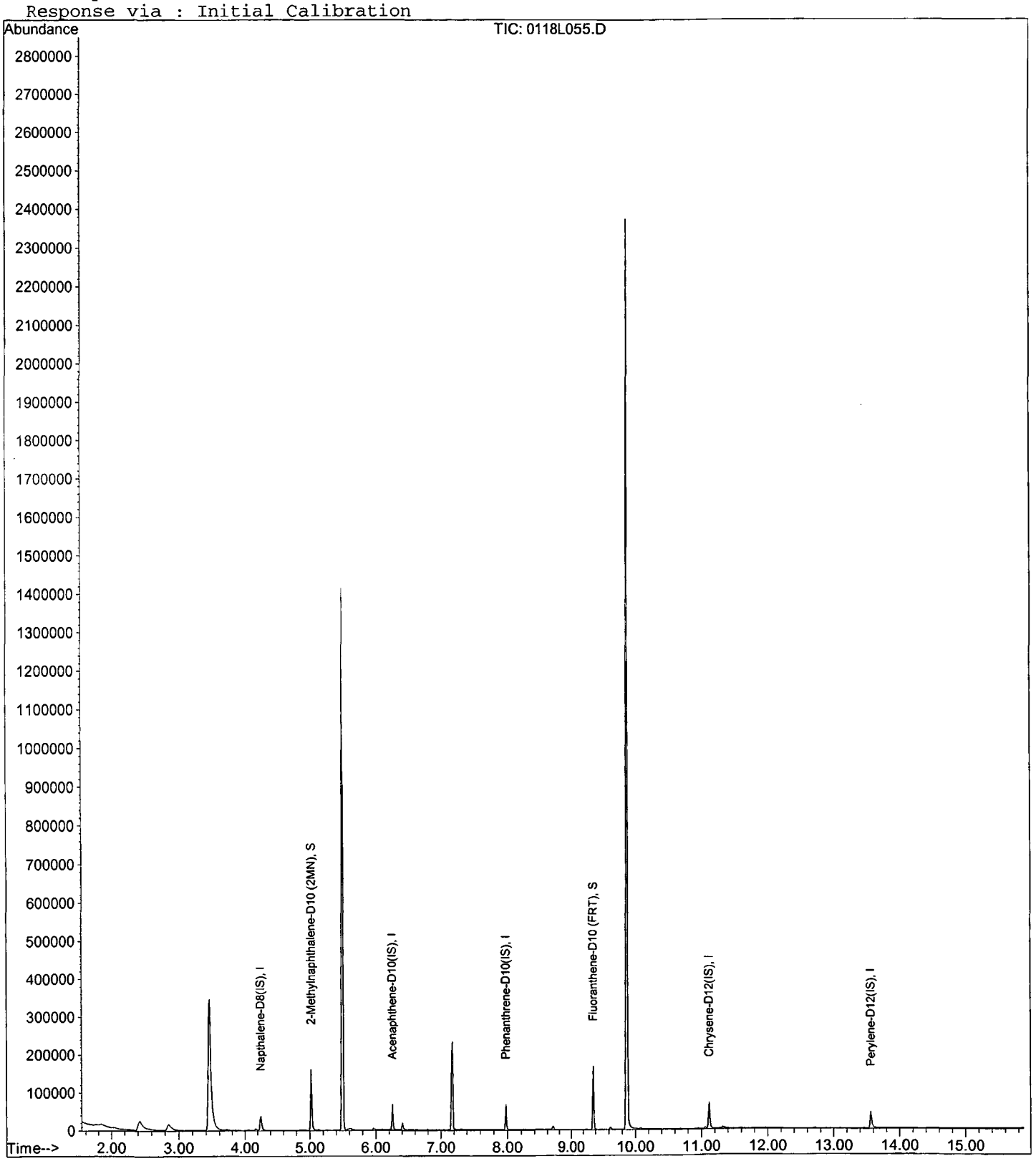
(#) = qualifier out of range (m) = manual integration
0118L055.D L0118.M Thu Jan 28 17:38:43 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L055.D Vial: 55
Acq On : 28 Jan 21 12:53 Operator: MA
Sample : BA25696W14 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:08 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L056.D Vial: 56
Acq On : 28 Jan 21 13:15 Operator: MA
Sample : BA25699W16 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63077	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	29865	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	56583	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	68773	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	64917	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	128125	4.73242	ppb	0.00
Spiked Amount 5.000			Recovery = 94.640%			
13) Fluoranthene-D10 (FRT)	9.37	212	154848	5.06304	ppb	0.00
Spiked Amount 5.000			Recovery = 101.260%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0118L056.D L0118.M Thu Jan 28 17:38:48 2021 Page 1

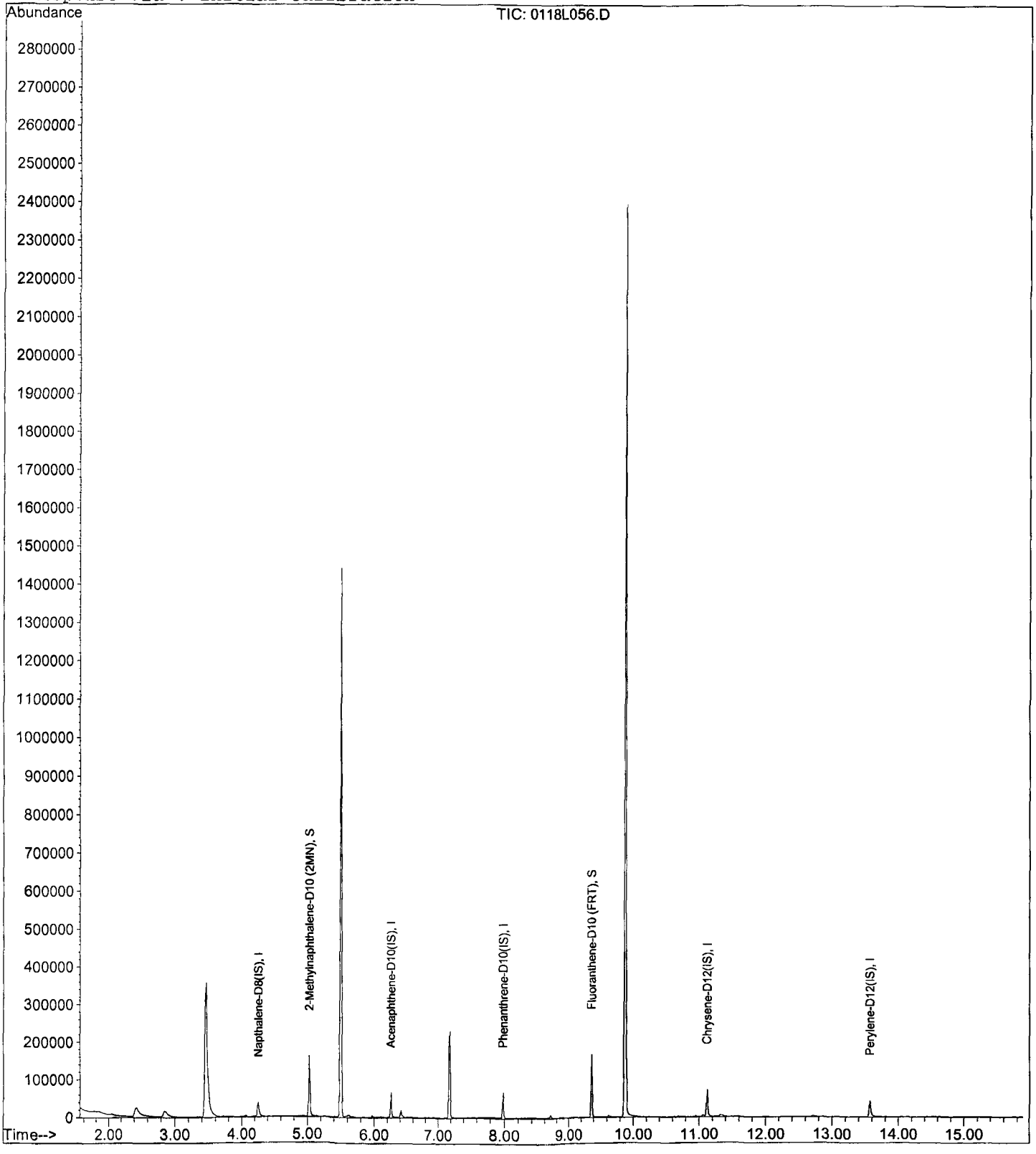
Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L056.D
Acq On : 28 Jan 21 13:15
Sample : BA25699W16 1/1000
Misc :

Vial: 56
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L057.D Vial: 57
Acq On : 28 Jan 21 13:37 Operator: MA
Sample : BA25701W13 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65008	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30737	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	57486	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	69665	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	61312	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	122074	4.37498	ppb	0.00
Spiked Amount 5.000			Recovery =	87.500%		
13) Fluoranthene-D10 (FRT)	9.37	212	151522	4.87647	ppb	0.00
Spiked Amount 5.000			Recovery =	97.520%		

Target Compounds	Qvalue

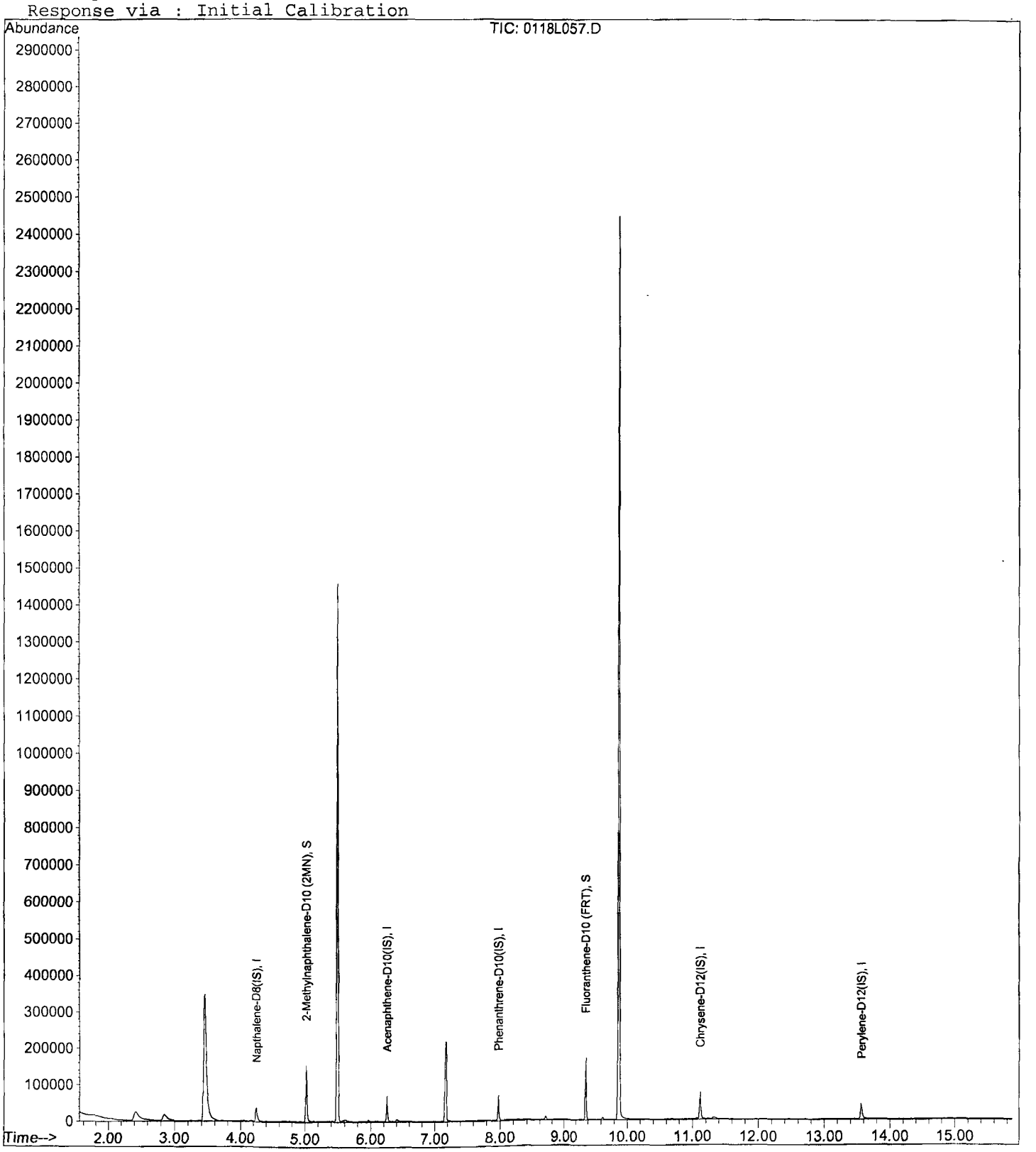
(#) = qualifier out of range (m) = manual integration
0118L057.D L0118.M Thu Jan 28 17:38:54 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L057.D Vial: 57
Acq On : 28 Jan 21 13:37 Operator: MA
Sample : BA25701W13 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L058.D Vial: 58
Acq On : 28 Jan 21 13:59 Operator: MA
Sample : BA25704W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	62866	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30415	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	55623	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	67498	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	64167	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	124510	4.61433	ppb	0.00
Spiked Amount 5.000			Recovery	= 92.280%		
13) Fluoranthene-D10 (FRT)	9.37	212	150625	5.00996	ppb	0.00
Spiked Amount 5.000			Recovery	= 100.200%		

Target Compounds Qvalue

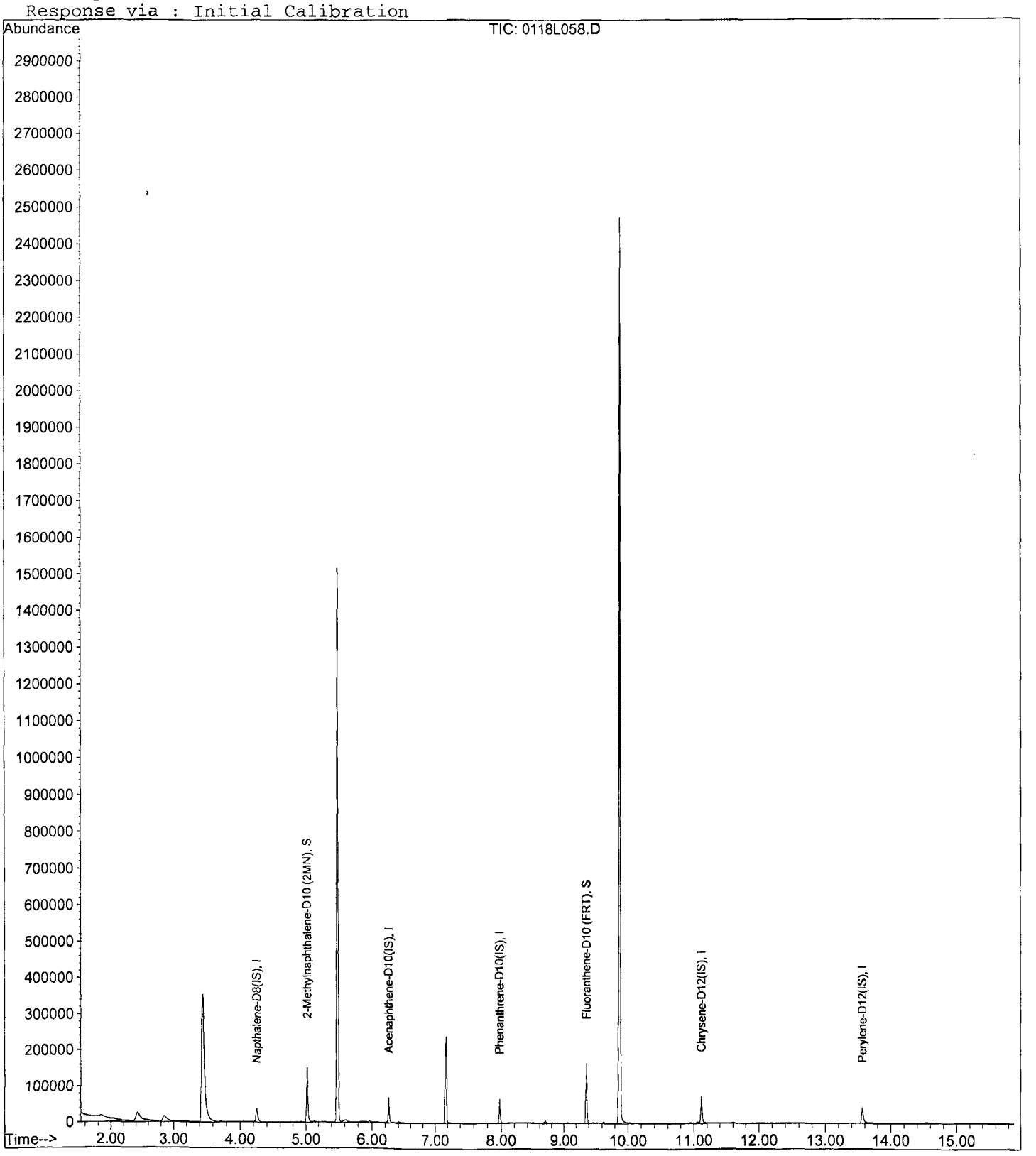
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L058.D Vial: 58
Acq On : 28 Jan 21 13:59 Operator: MA
Sample : BA25704W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:09 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L059.D Vial: 59
Acq On : 28 Jan 21 14:21 Operator: MA
Sample : BA25706W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:10 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64531	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30792	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	56986	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	68547	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	64625	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	132431	4.78125 ppb	0.00
Spiked Amount 5.000			Recovery = 95.620%		
13) Fluoranthene-D10 (FRT)	9.37	212	156125	5.06869 ppb	0.00
Spiked Amount 5.000			Recovery = 101.380%		

Target Compounds	Qvalue

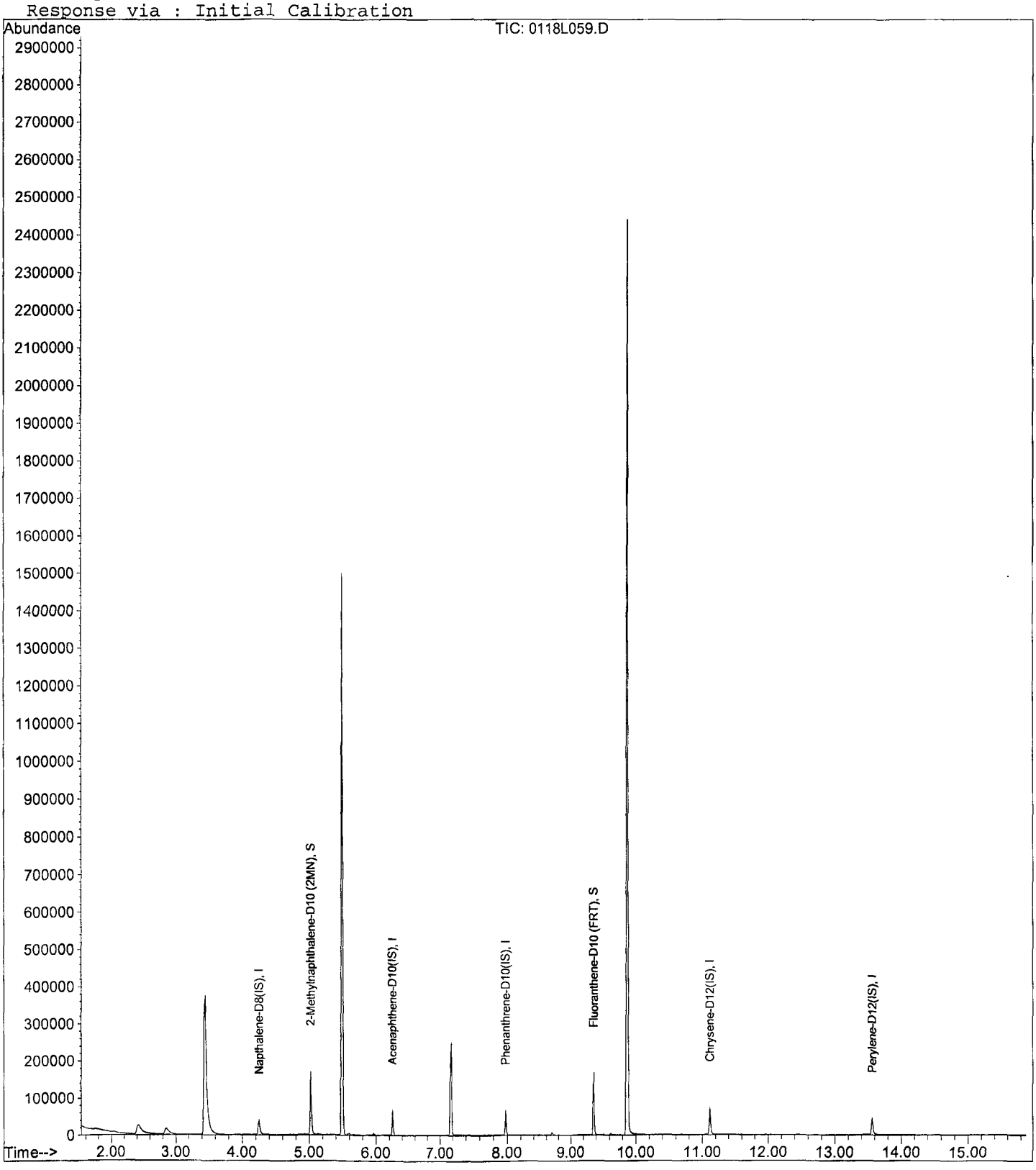
(#) = qualifier out of range (m) = manual integration
0118L059.D L0118.M Thu Jan 28 17:39:04 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L059.D Vial: 59
Acq On : 28 Jan 21 14:21 Operator: MA
Sample : BA25706W12 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:10 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L050.D Vial: 50
Acq On : 28 Jan 21 11:03 Operator: MA
Sample : 210125A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:07 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	60541	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.27	164	28431	2.50000	ppb	0.01
10) Phenanthrene-D10(IS)	7.99	188	51985	2.50000	ppb	0.01
15) Chrysene-D12(IS)	11.13	240	63848	2.50000	ppb	0.01
20) Perylene-D12(IS)	13.57	264	57385	2.50000	ppb	0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	117130	4.50753	ppb	0.00
Spiked Amount 5.000			Recovery = 90.160%			
13) Fluoranthene-D10 (FRT)	9.37	212	144221	5.13265	ppb	0.00
Spiked Amount 5.000			Recovery = 102.660%			

Target Compounds	Qvalue

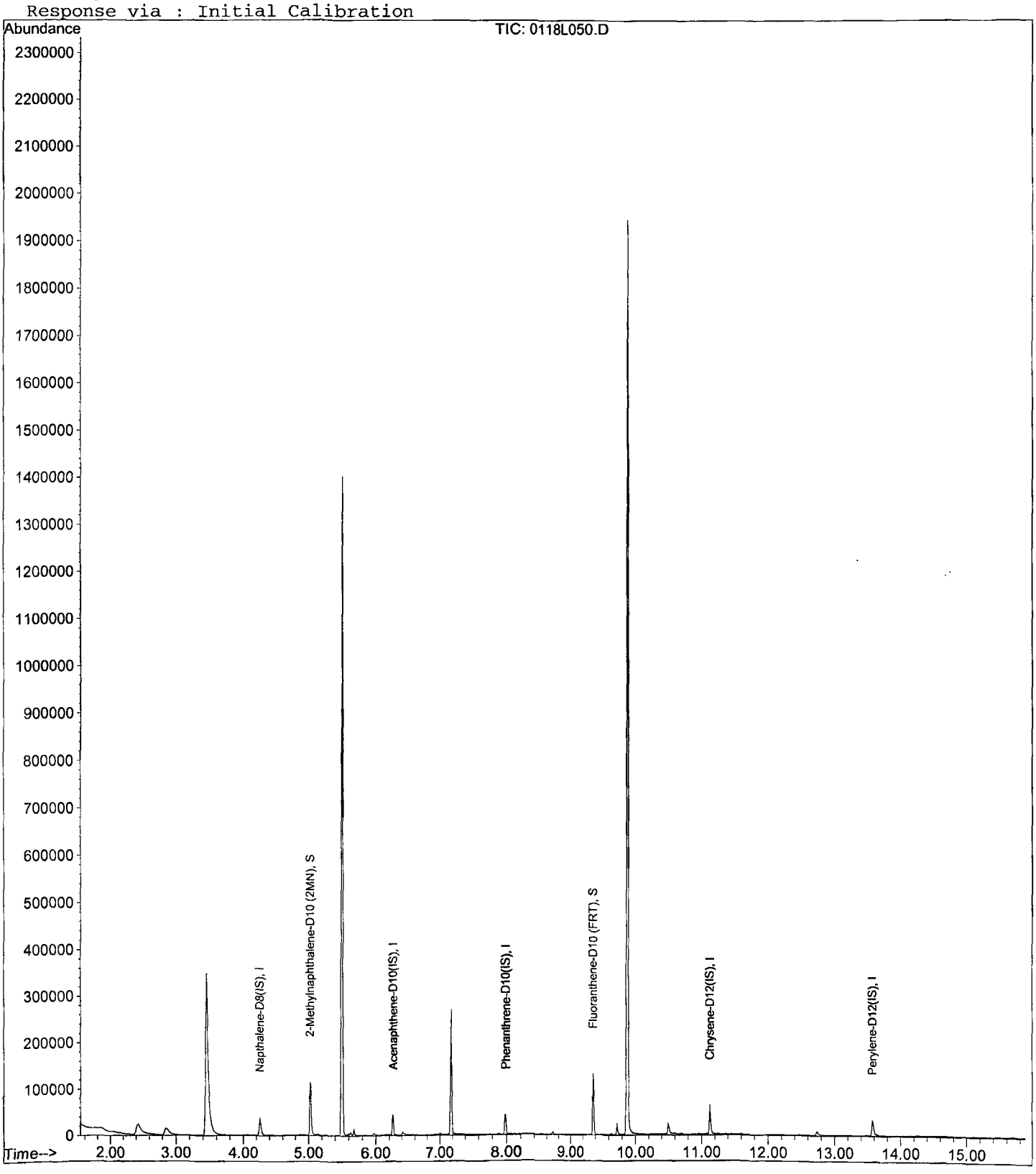
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L050.D Vial: 50
Acq On : 28 Jan 21 11:03 Operator: MA
Sample : 210125A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 15:07 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L051.D Vial: 51
Acq On : 28 Jan 21 11:25 Operator: MA
Sample : 210125A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:43 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	59299	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	27758	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	51510	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	62505	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	59025	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	109190	4.28998	ppb		0.00
Spiked Amount 5.000			Recovery	= 85.800%			
13) Fluoranthene-D10 (FRT)	9.37	212	134819	4.84229	ppb		0.00
Spiked Amount 5.000			Recovery	= 96.840%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	97640	4.04687	ppb		99
4) 2-Methylnaphthalene	5.06	142	61899	4.09796	ppb		98
5) 1-Methylnaphthalene	5.17	142	62077	4.12541	ppb		96
7) Acenaphthylene	6.08	152	201122	4.45488	ppb		99
8) Acenaphthene	6.29	154	58840	4.46121	ppb		96
9) Fluorene	6.89	166	73541	4.78168	ppb		97
11) Phenanthrene	8.00	178	109069	4.56865	ppb		100
12) Anthracene	8.06	178	95084	4.44248	ppb		100
14) Fluoranthene	9.39	202	154108	4.86936	ppb		100
16) Pyrene	9.65	202	155341	4.56361	ppb		100
17) Benz (a) anthracene	11.11	228	126333	4.39259	ppb		99
18) Chrysene	11.15	228	139381	4.54801	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.06	276	128937	4.74782	ppb		97
21) Benzo (b) fluoranthene	12.93	252	122664	5.30575	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	141646	4.73763	ppb		98
23) Benzo (a) pyrene	13.48	252	101186	4.53895	ppb		97
24) Dibenz (a,h) anthracene	15.11	278	106266	5.08514	ppb		98
25) Benzo (g,h,i) perylene	15.43	276	116229	4.87778	ppb		100

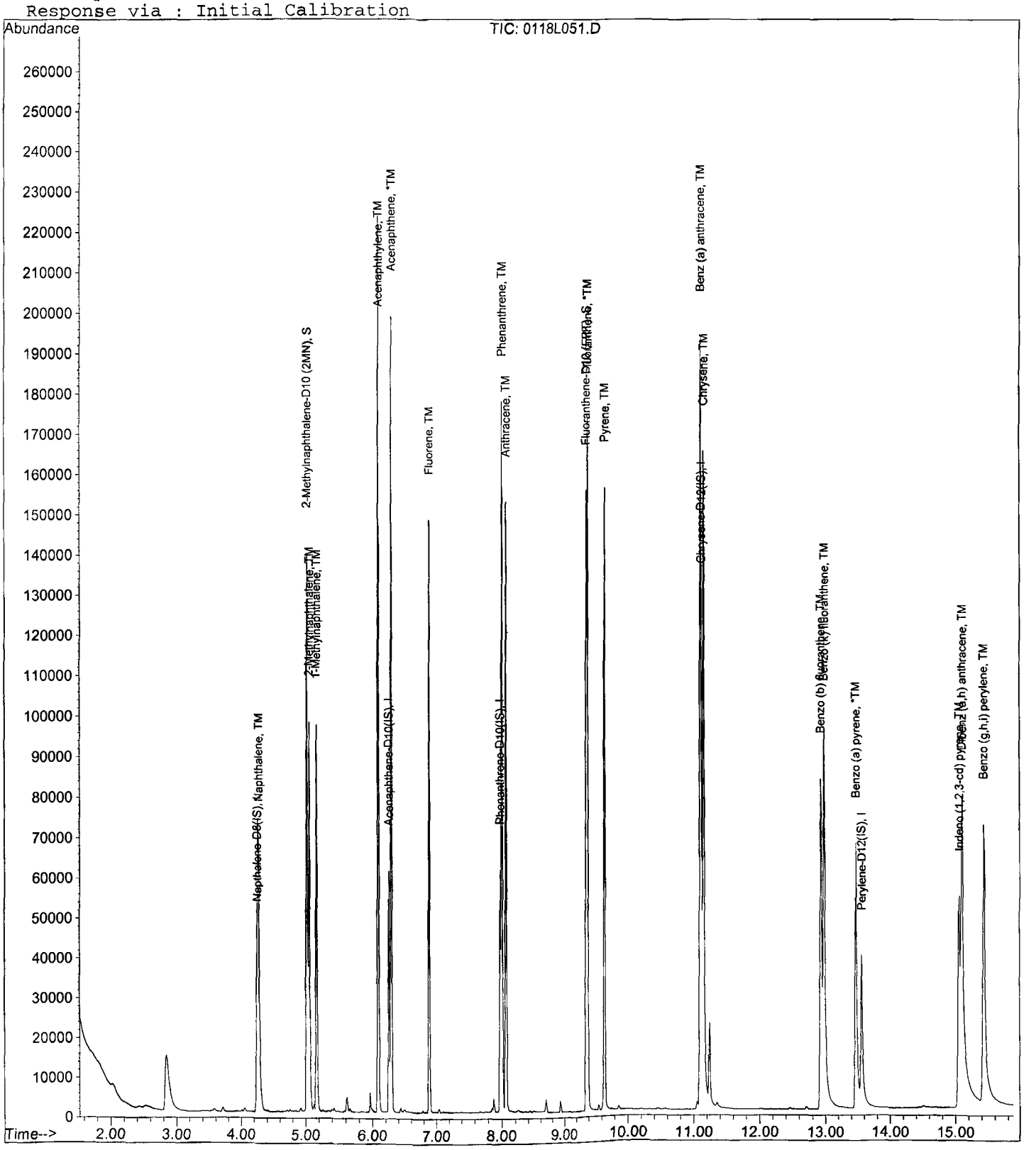
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L051.D Vial: 51
Acq On : 28 Jan 21 11:25 Operator: MA
Sample : 210125A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:43 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L052.D Vial: 52
Acq On : 28 Jan 21 11:47 Operator: MA
Sample : 210125A LCSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:43 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61281	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	28160	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	53056	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	64355	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	44285	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	112792	4.28818 ppb		0.00
Spiked Amount 5.000			Recovery = 85.760%			
13) Fluoranthene-D10 (FRT)	9.37	212	146400	5.10503 ppb		0.00
Spiked Amount 5.000			Recovery = 102.100%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	104199	4.17904 ppb		99
4) 2-Methylnaphthalene	5.06	142	62788	4.02237 ppb		97
5) 1-Methylnaphthalene	5.17	142	64401	4.14143 ppb		95
7) Acenaphthylene	6.08	152	169925	3.71013 ppb		99
8) Acenaphthene	6.29	154	60097	4.49147 ppb		97
9) Fluorene	6.89	166	78149	5.00875 ppb		98
11) Phenanthrene	8.00	178	118537	4.82056 ppb		100
12) Anthracene	8.06	178	69545	3.15458 ppb		100
14) Fluoranthene	9.39	202	167423	5.13593 ppb		99
16) Pyrene	9.65	202	162306	4.63116 ppb		100
17) Benz (a) anthracene	11.11	228	131298	4.43398 ppb		99
18) Chrysene	11.15	228	150314	4.76376 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	139542	4.99061 ppb	#	88
21) Benzo (b) fluoranthene	12.93	252	136084	7.84542 ppb		97
22) Benzo (k) fluoranthene	12.99	252	147588	6.57941 ppb		97
23) Benzo (a) pyrene	13.48	252	92093	5.50606 ppb	#	94
24) Dibenz (a,h) anthracene	15.11	278	117144	7.47151 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	121470	6.79447 ppb		94

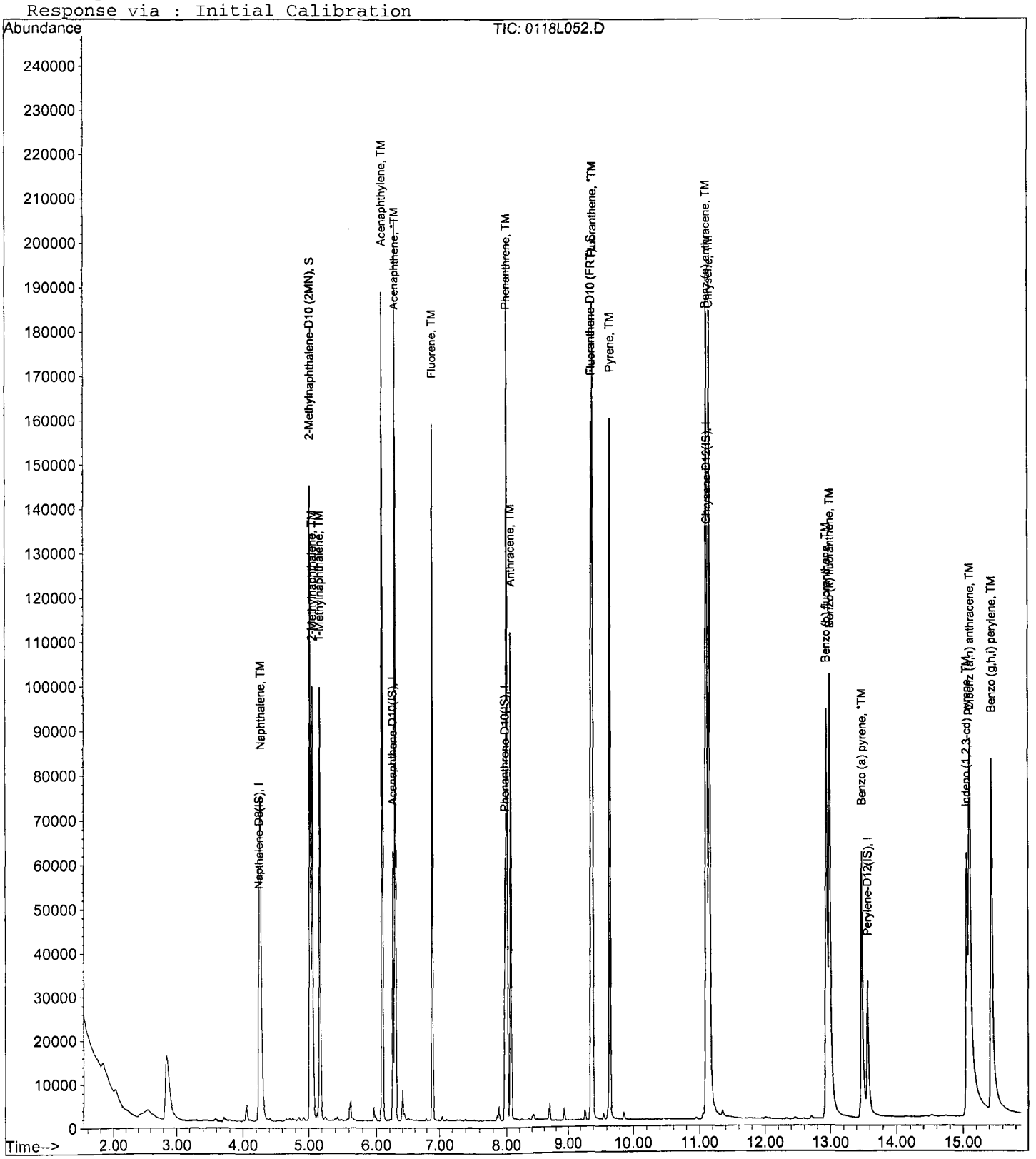
(#) = qualifier out of range (m) = manual integration
0118L052.D L0118.M Thu Jan 28 17:38:28 2021

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L052.D Vial: 52
Acq On : 28 Jan 21 11:47 Operator: MA
Sample : 210125A LCSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 28 12:43 2021 Quant Results File: L0118.RES

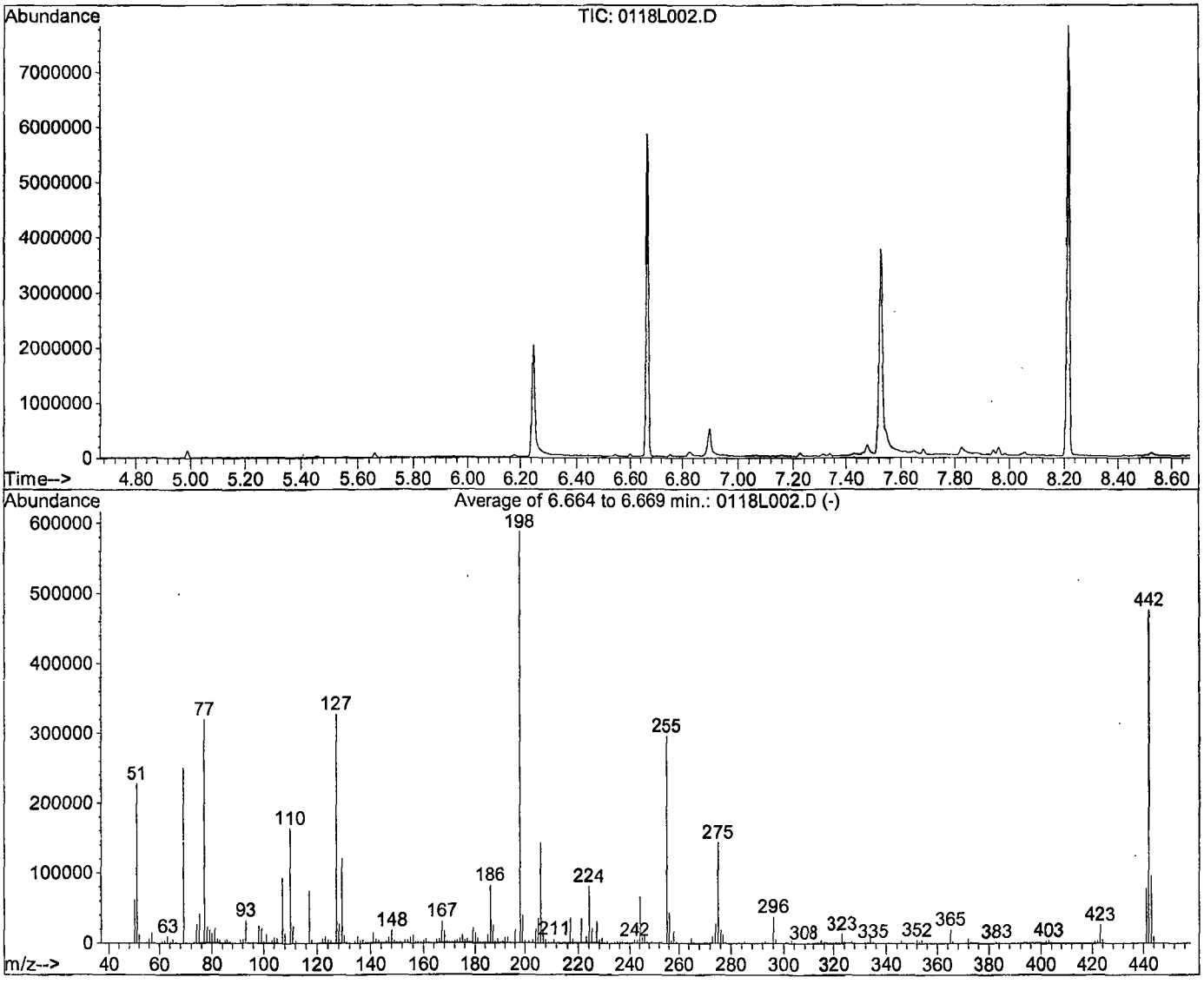
Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L210118\0118L002.D Vial: 2
Acq On : 18 Jan 21 11:17 Operator: MA
Sample : SV Tune 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

0118L002.D L0118.M Mon Jan 18 16:16:32 2021

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

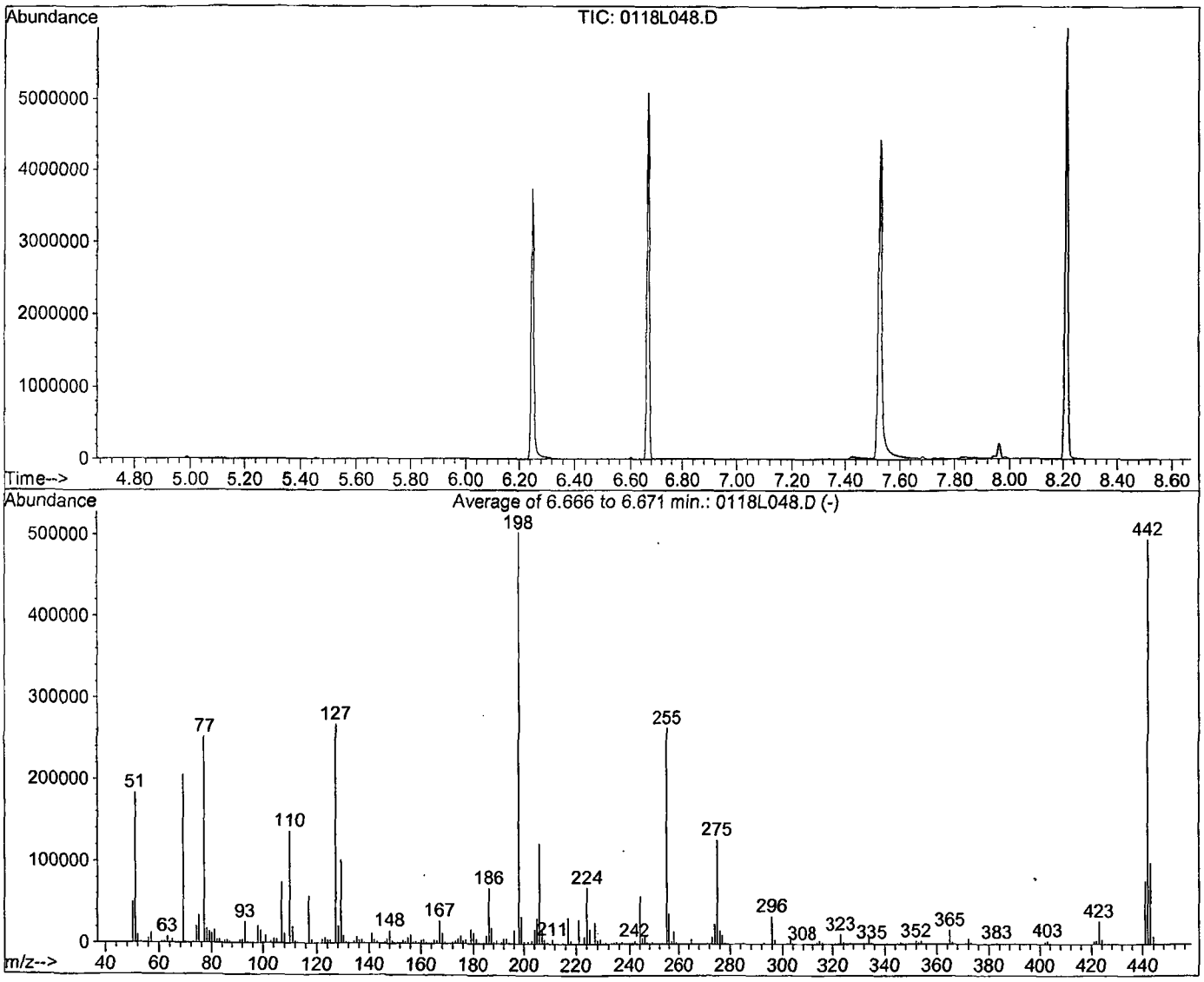
#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

Breakdown **1.63**

DFTPP

Data File : M:\LINUS\DATA\L210118\0118L048.D Vial: 48
Acq On : 28 Jan 21 10:13 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1639, 1640, 1641; Background Corrected with Scan 1630

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.4	183150	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.3	613	PASS
127	198	10	80	53.2	267413	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	502763	PASS
199	198	5	9	6.6	33115	PASS
275	198	10	60	25.2	126907	PASS
365	198	1	100	3.4	17214	PASS
441	442	0.01	24	15.5	76795	PASS
442	198	50	500	98.4	494763	PASS
443	442	15	24	20.1	99656	PASS

0118L048.D L0118.M Thu Jan 28 10:46:29 2021

Data File Name:	**0118L048.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**28 Jan 2021 10:13**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**48**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	39308400
2)	DDD	7.98	162340
3)	DDE	7.69	206353

Breakdown **0.93**

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/21**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/21**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/21**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/21**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (i **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**	**Prep'd By**	**MA**
Prep Date	**01/14/21**		
Exp Date	**01/14/22**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	08/11/20
Exp Date	04/01/21

Prep'd By (Initials) CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**	**Prep'd By (Initials)**	**CD**
Prep Date	**06/19/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Name of Final Standard	**SIM Spike**
Prep Date	**09/11/20**
Exp Date	**09/11/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	**CL13121- 41545 41546 41547 49548**	**12/31/22**	5 mL	25 mL	**Acetone 0246130**	40 ug/mL

Name of Final Standard	SIM Surrogate	Prep'd By (Initials)	LS
Prep Date	11/30/20		
Exp Date	11/30/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-50257, 50258, 50259 A0161454-50790, 50794	10/31/2025 5/31/26	5mL	100 mL	Acetone #246130	100 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210125A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 1-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-21 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/25/21 14:00	
Spiked ID 8			Ext. End Time:	01/26/21 8:00	
			GC Requires Extract By:		

pH1	2	01/25/21 13:35	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/26/21 12:05	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/25/21 **Witnessed By:** YL **Date** 01/25/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210125A Blk				0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP14 E-WB6				
2	210125A LCS-1		1	1	0.2	1	1000	1	2/1	01/25/21 13:27	
						equip	E-HP13 E-WB6				
3	210125A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP11 E-WB6				
4	210125A LCSD-1		1	1	0.2	1	1000	1	2/1	01/25/21 13:27	
						equip	E-HP30 E-WB6				
5	210125A LCSD-2		0.125	2	0.05	2	1000	1	2/1	01/25/21 13:27	
						equip	E-HP12 E-WB6				
6	BA25690	BA25690W16			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP15 E-WB6				
7	BA25693	BA25693W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP9 E-WB6				
8	BA25696	BA25696W14			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP16 E-WB6				
9	BA25699	BA25699W16			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP8 E-WB6				
10	BA25701	BA25701W13			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP7 E-WB6				
11	BA25704	BA25704W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863
						equip	E-HP10 E-WB6				
12	BA25706	BA25706W12			0.2,0.05	1,2	1000	1	2/1	01/25/21 13:27	94863 Acid extraction only lost Base redo ID:69827
						equip	E-HP6 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	
GC analyst's initials	MA
Date	1/28/21
Time	10:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	YL,KY
Extraction	YL,KY,DL
Concentration	YL,KY,DL

Modified	01/27/21 12:40:42 PM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
2	3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
3	4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
4	5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
5	6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
6	7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
7	8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
8	9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
9	10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
10	11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
11	48	0118L048.D	1	SV TUNE 10/02/20		28 Jan 21 10:13
12	49	0118L049.D	1	5 SIM 01/15/21 (1)		28 Jan 21 10:28
13	50	0118L050.D	1	210125A BLK 1/1000		28 Jan 21 11:03
14	51	0118L051.D	1	210125A LCS-2 1/1000		28 Jan 21 11:25
15	52	0118L052.D	1	210125A LCSD-2 1/1000		28 Jan 21 11:47
16	53	0118L053.D	1	BA25690W16 1/1000		28 Jan 21 12:09
17	54	0118L054.D	1	BA25693W12 1/1000		28 Jan 21 12:31
18	55	0118L055.D	1	BA25696W14 1/1000		28 Jan 21 12:53
19	56	0118L056.D	1	BA25699W16 1/1000		28 Jan 21 13:15
20	57	0118L057.D	1	BA25701W13 1/1000		28 Jan 21 13:37
21	58	0118L058.D	1	BA25704W12 1/1000		28 Jan 21 13:59
22	59	0118L059.D	1	BA25706W12 1/1000		28 Jan 21 14:21
23	60	0118L060.D	1	5 SIM 08/21/20		28 Jan 21 15:06

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO

Initials: HA

			0125K004 D	0125K005 D	0125K006.D	0125K007.D	0125K003.D	0125K008 D	0125K009 D	0125K010 D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
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34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

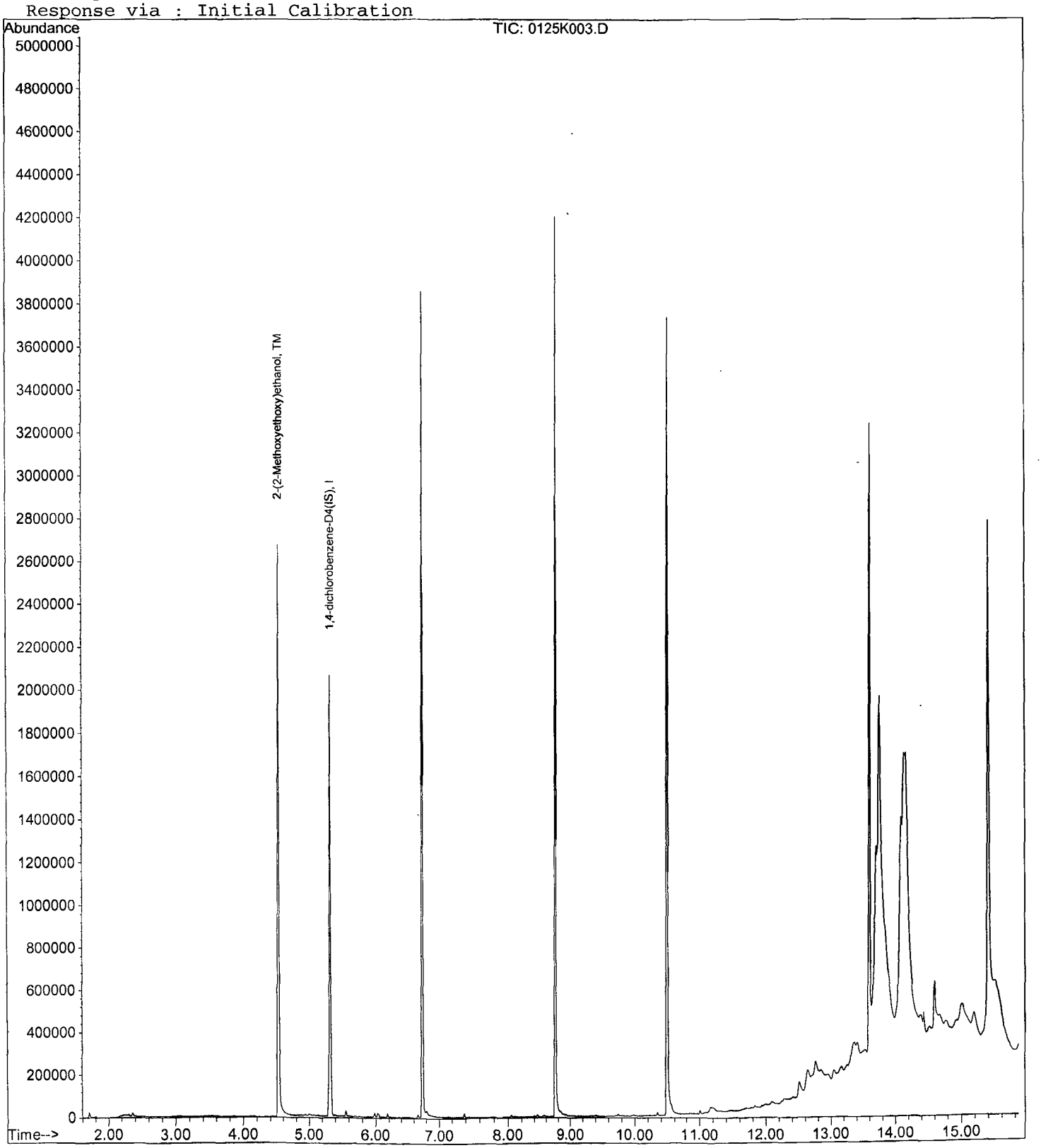
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000 ppb	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379 ppb	99

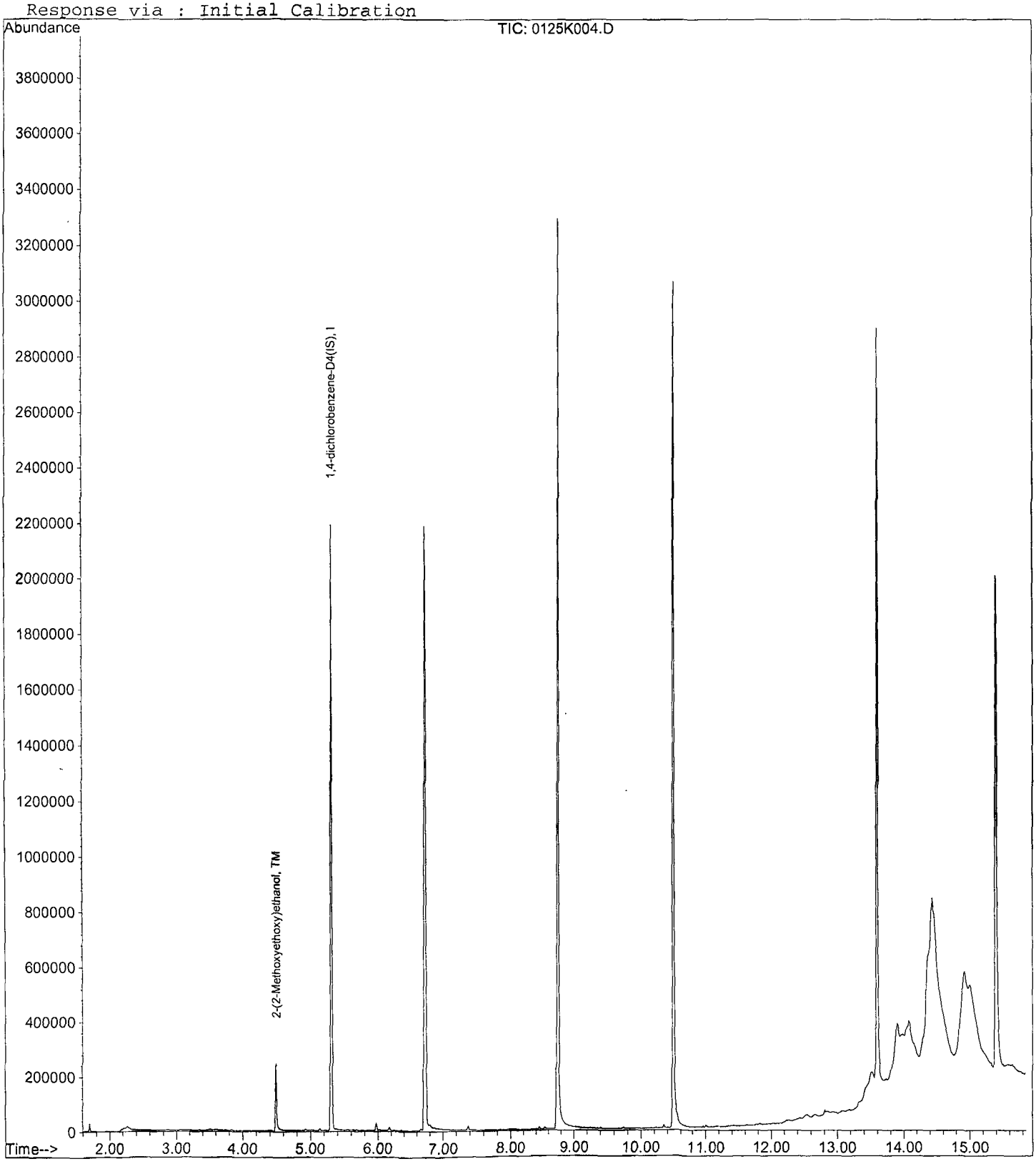
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

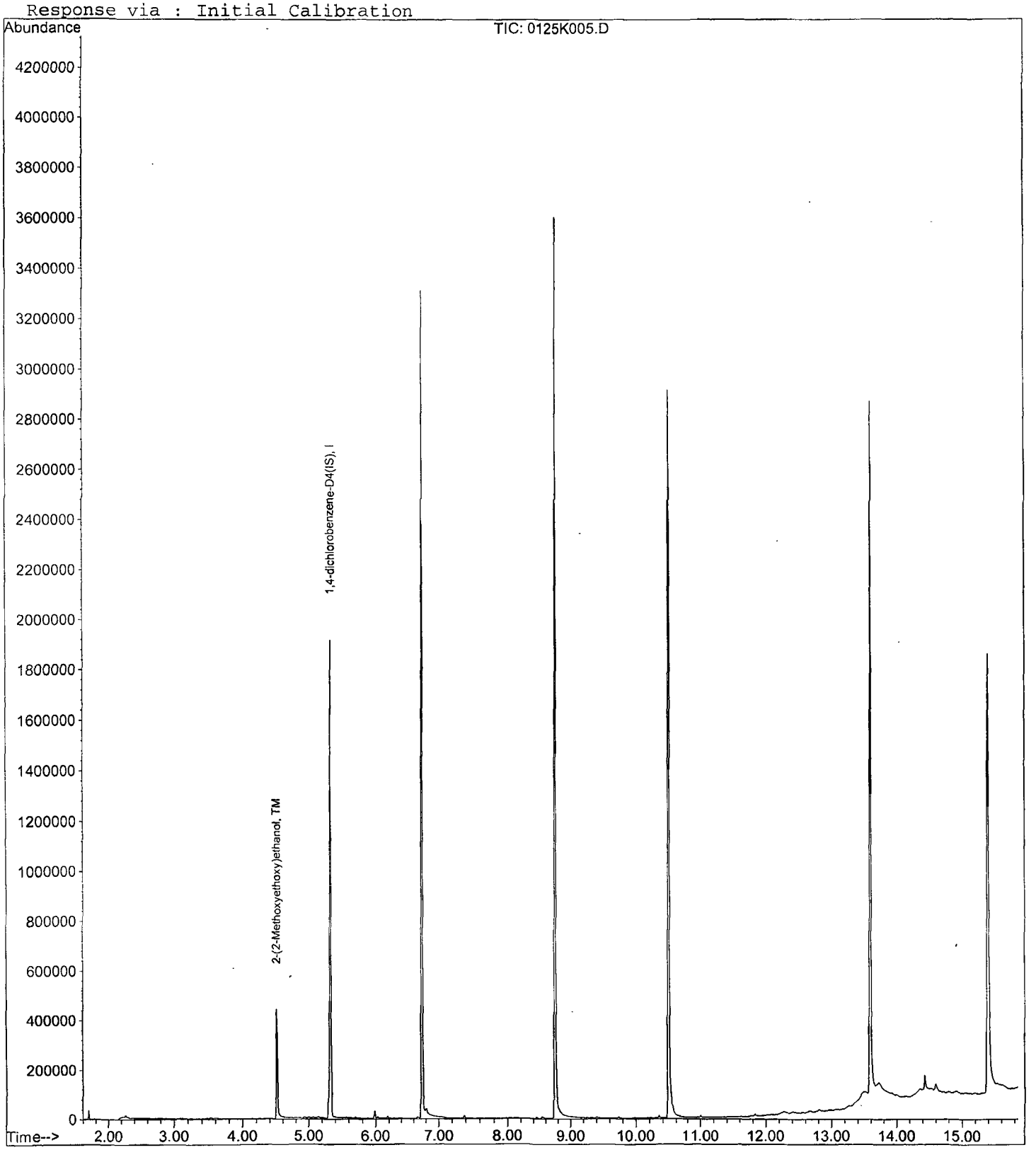
(#) = qualifier out of range (m) = manual integration
0125K005.D KMEE0125.M Tue Jan 26 10:36:31 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000 ppb	-0.03

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948 ppb	100

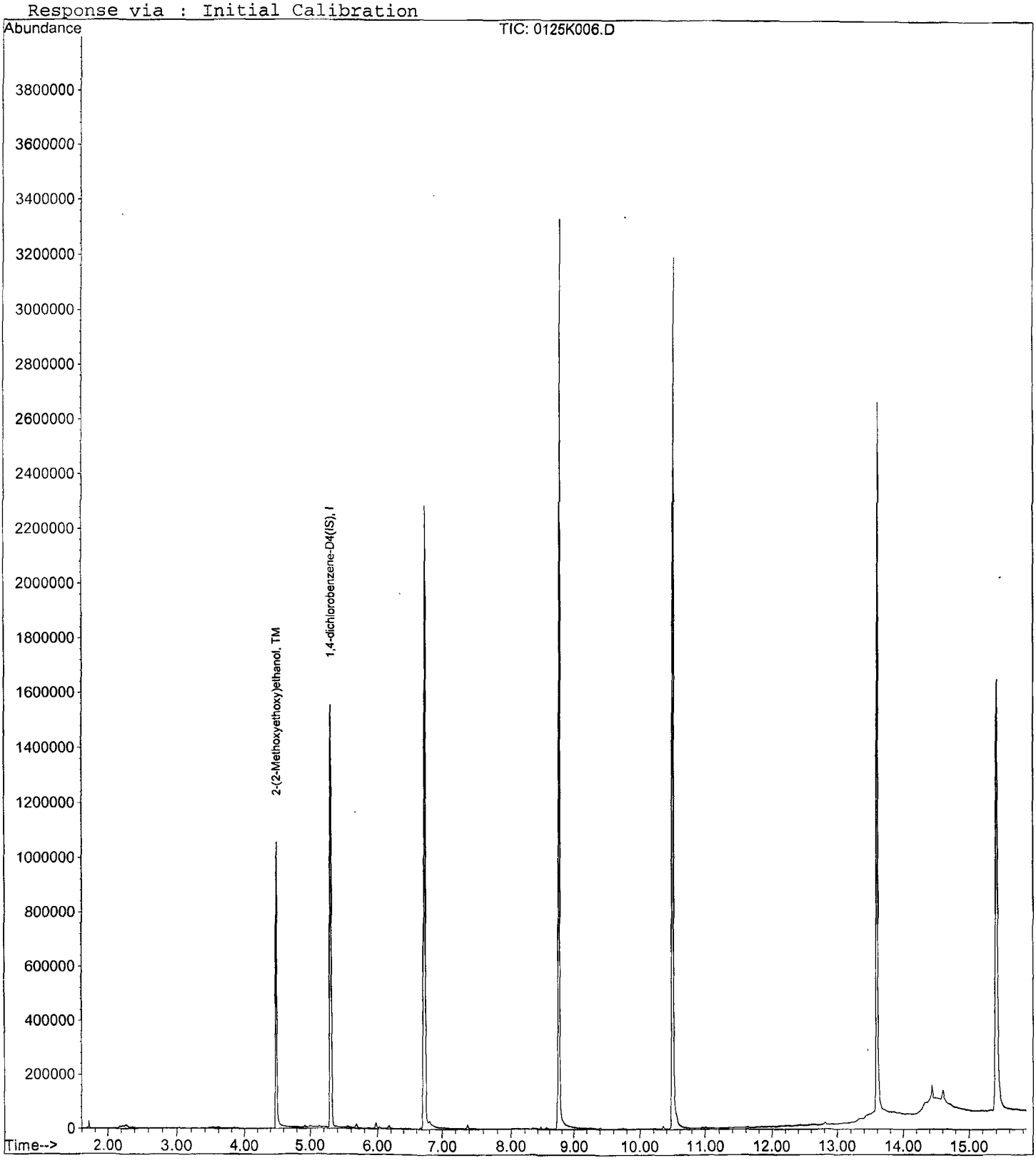
(#) = qualifier out of range (m) = manual integration
0125K006.D KMEE0125.M Tue Jan 26 10:36:35 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

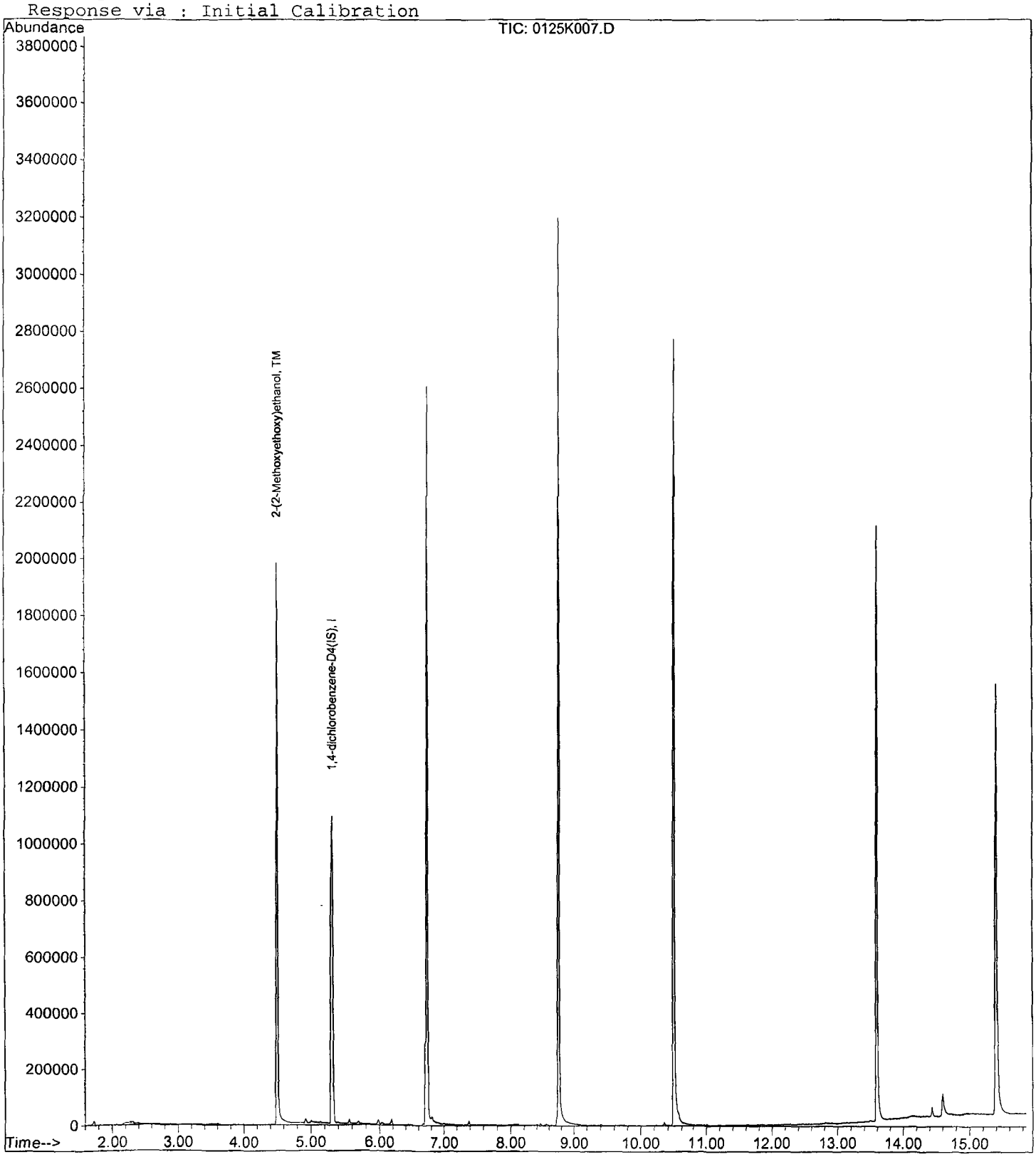
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

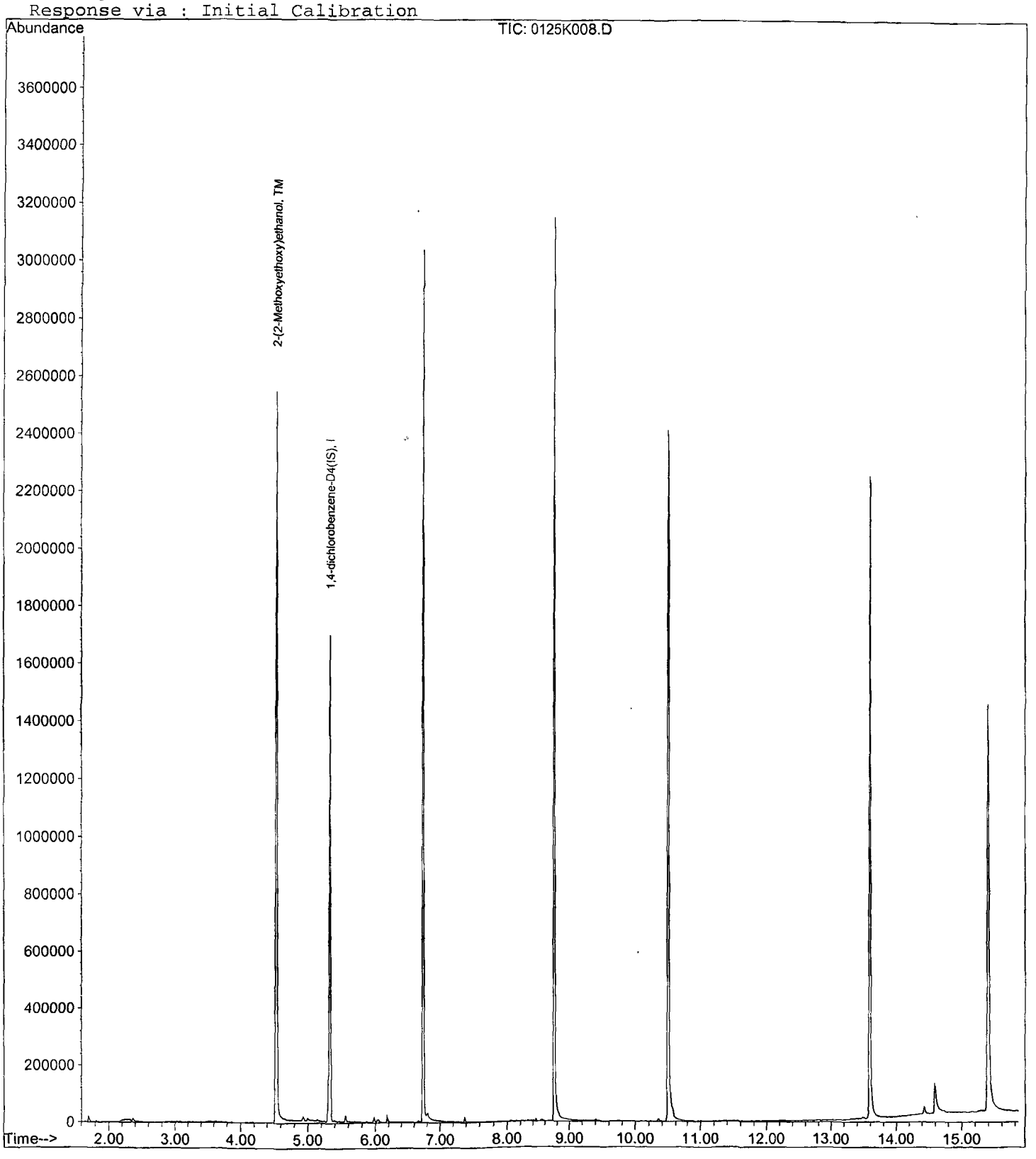
(#) = qualifier out of range (m) = manual integration
0125K008.D KMEE0125.M Tue Jan 26 10:36:44 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

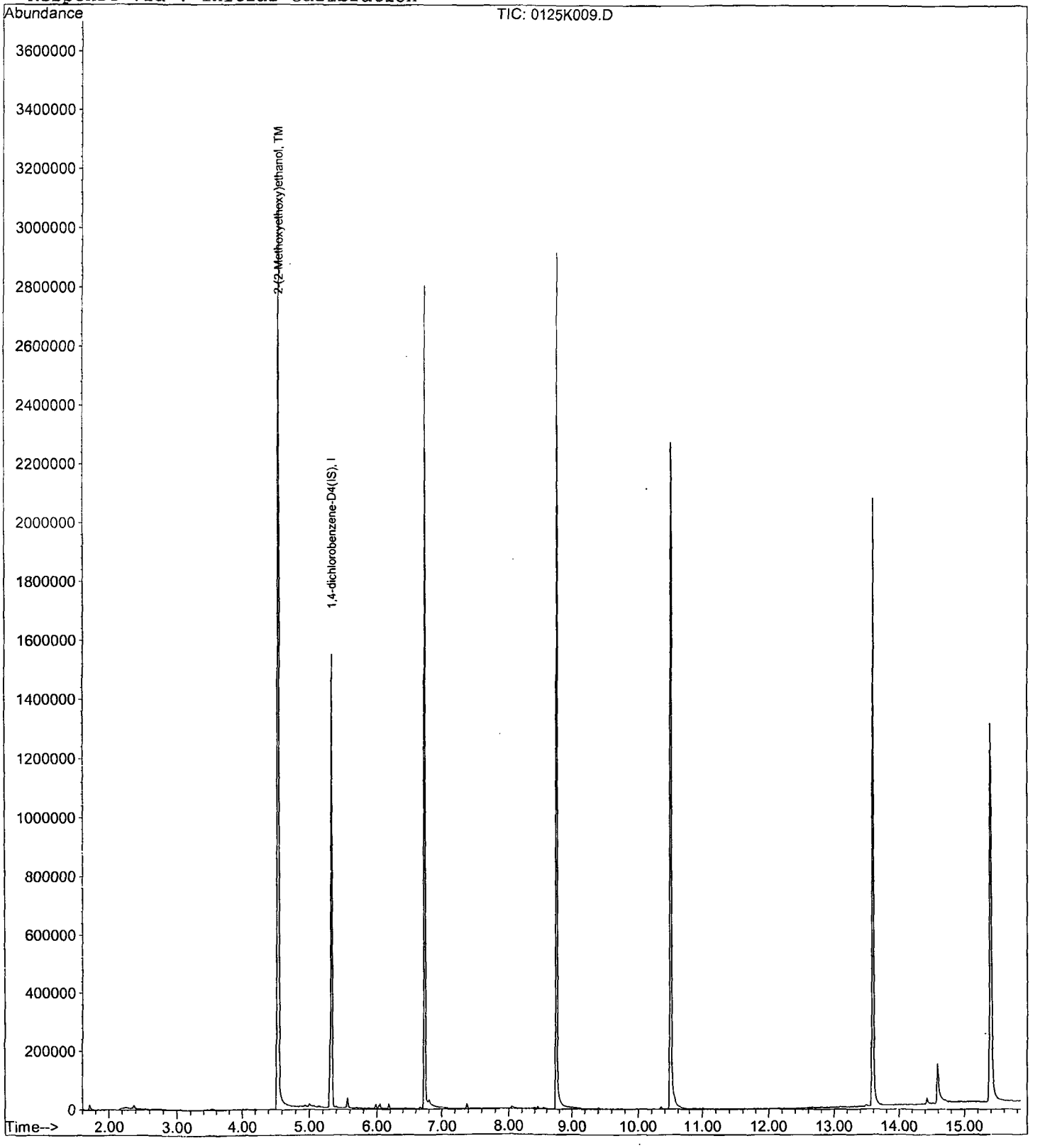
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

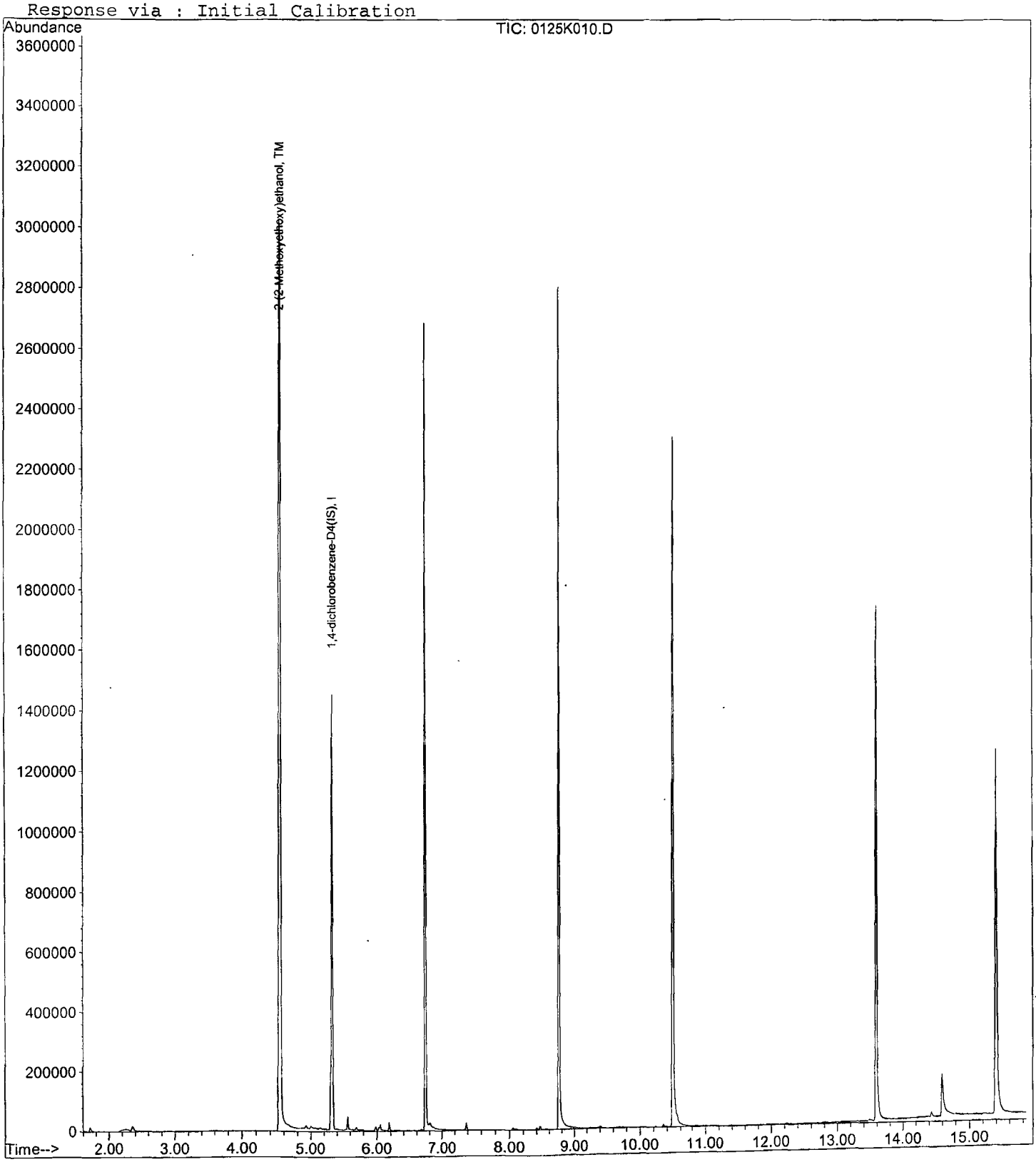
(#) = qualifier out of range (m) = manual integration
0125K010.D KMEE0125.M Tue Jan 26 10:36:53 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

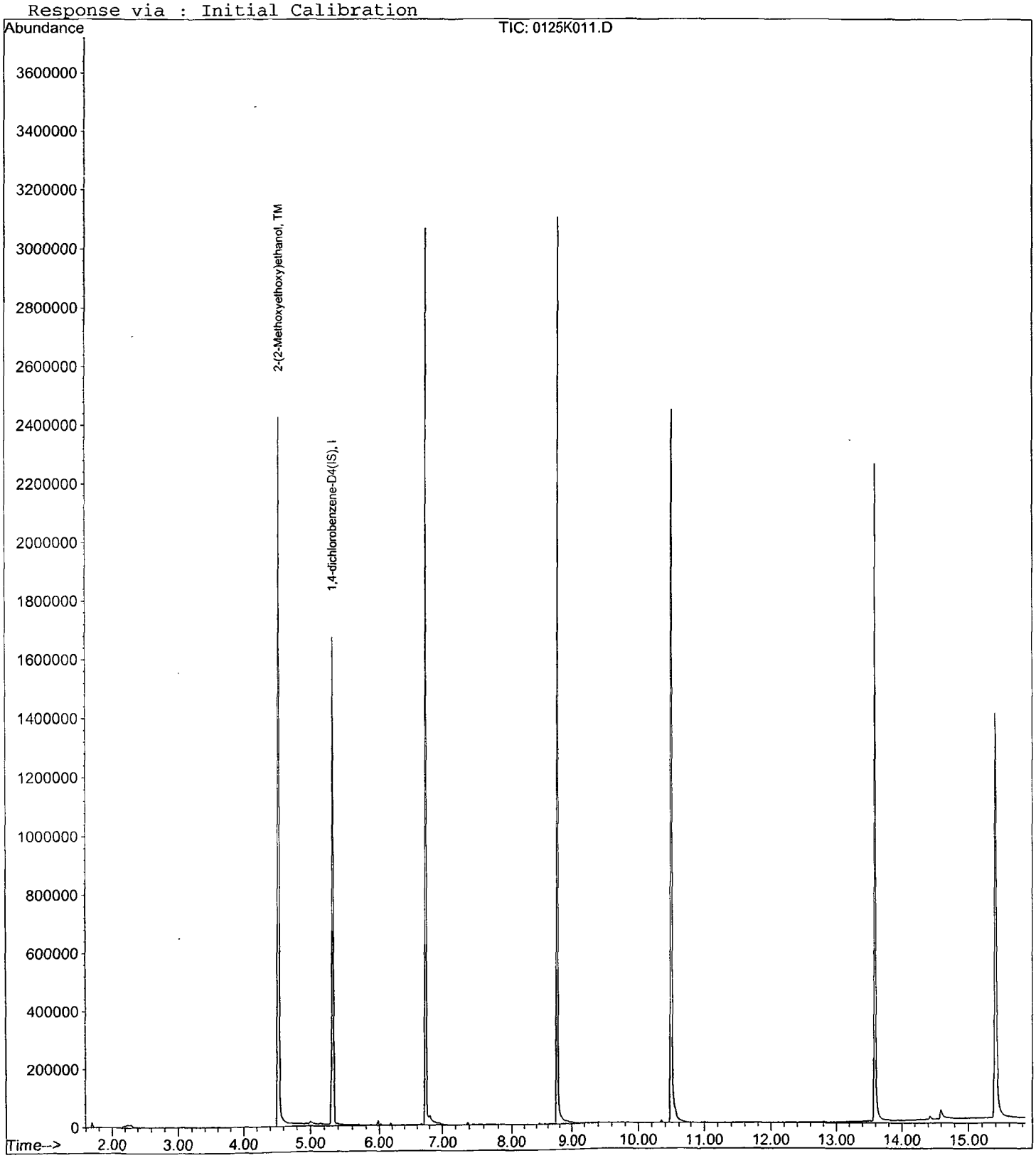
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K032.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2515	2.2	TM	
3							
4							
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.2		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K032.D Vial: 32
Acq On : 28 Jan 21 12:46 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	207359	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.56	45	651775	488.90855	ppb	94

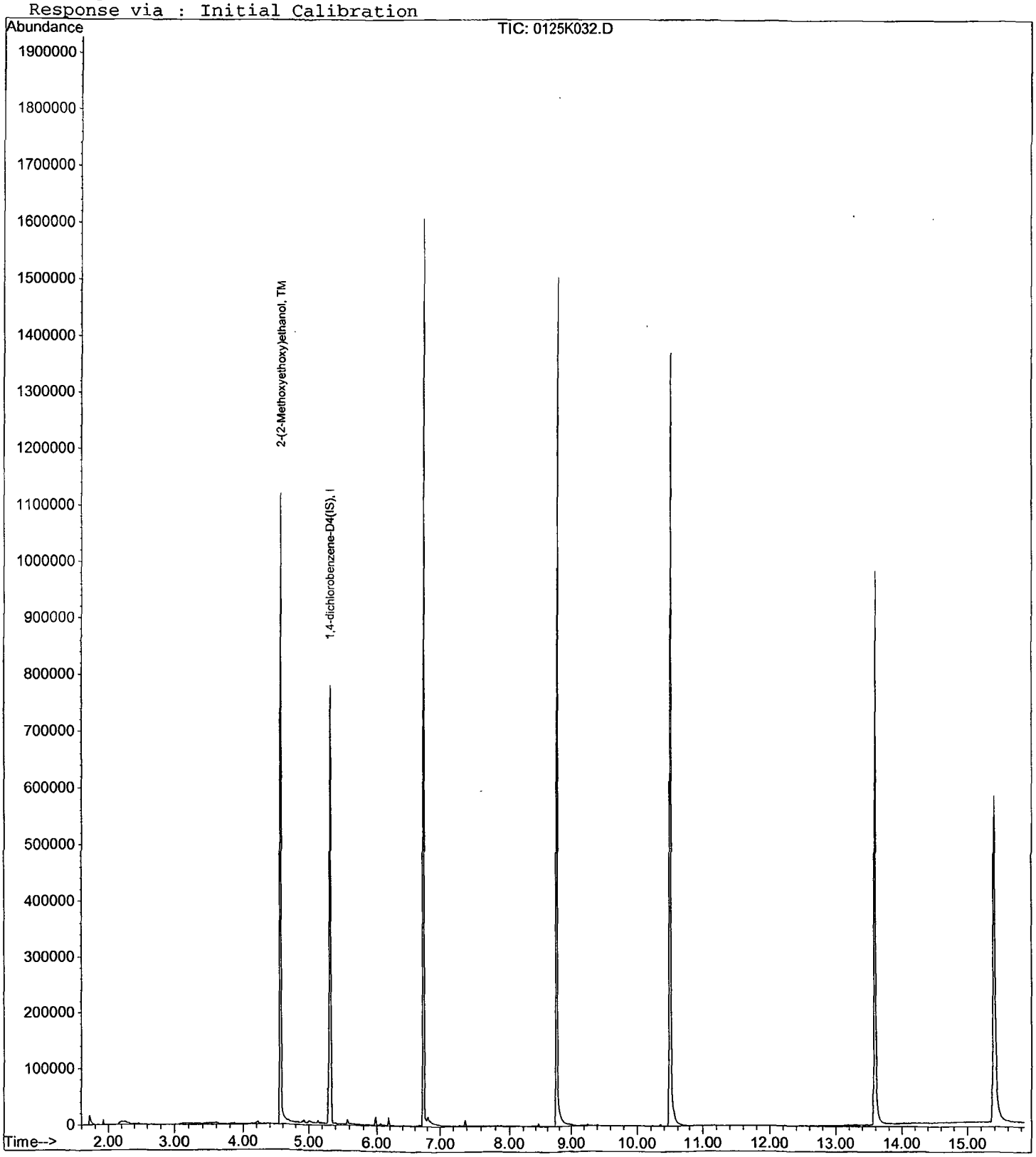
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K032.D Vial: 32
Acq On : 28 Jan 21 12:46 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K047.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2301	11	TM	
3							
4							
5							
6							
7							
8							
9							
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36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K047.D Vial: 47
Acq On : 28 Jan 21 18:20 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	191125	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	549740	447.39658	ppb	100

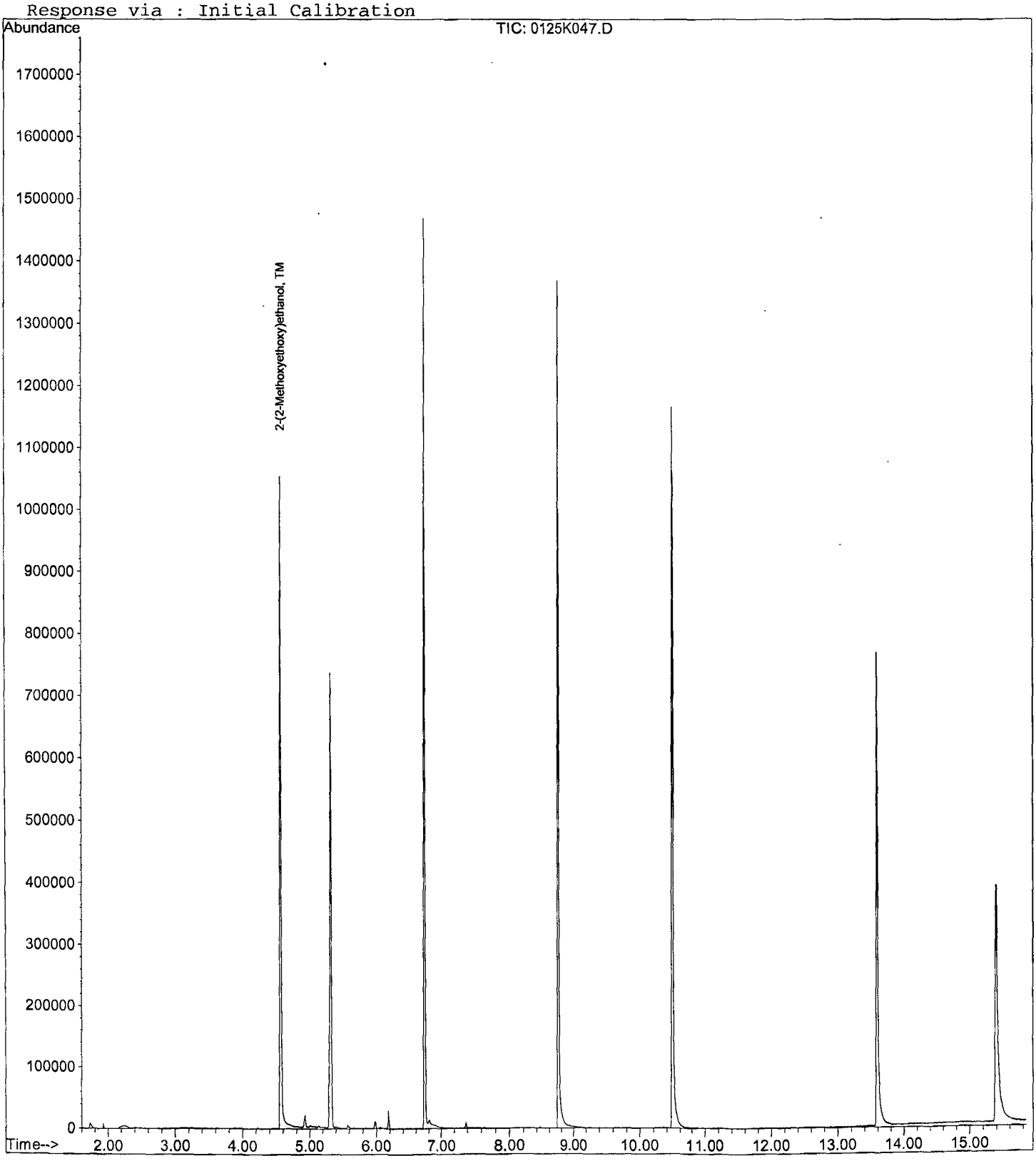
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K047.D Vial: 47
Acq On : 28 Jan 21 18:20 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K038.D Vial: 38
Acq On : 28 Jan 21 14:55 Operator:
Sample : BA25690W14 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:50 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	244882	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125K038.D KMEE0125.M Fri Jan 29 11:05:16 2021 Page 1

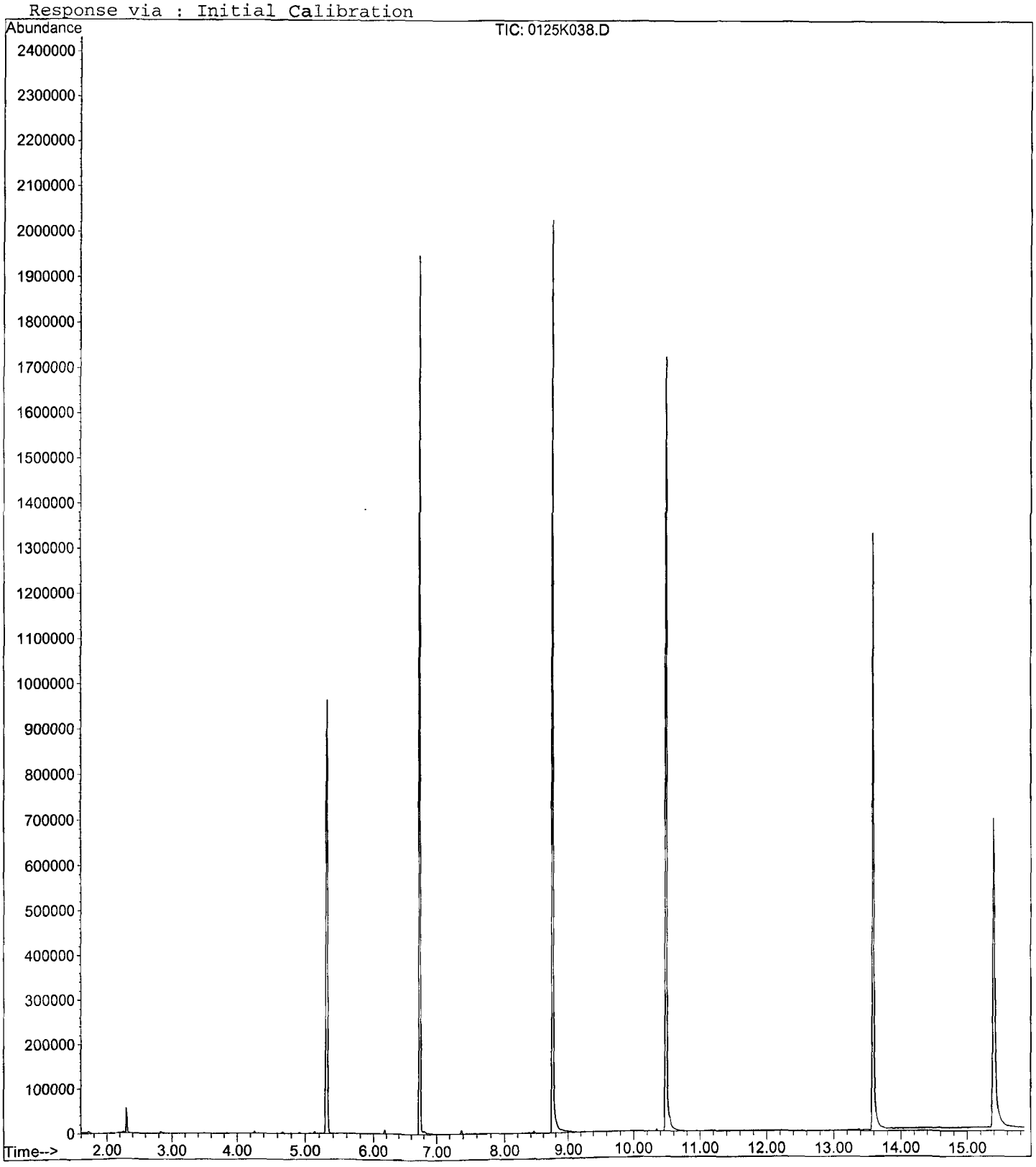
Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K038.D
Acq On : 28 Jan 21 14:55
Sample : BA25690W14 5/500
Misc :

Vial: 38
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 28 16:50 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K039.D Vial: 39
Acq On : 28 Jan 21 15:16 Operator:
Sample : BA25693W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:50 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	188297	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

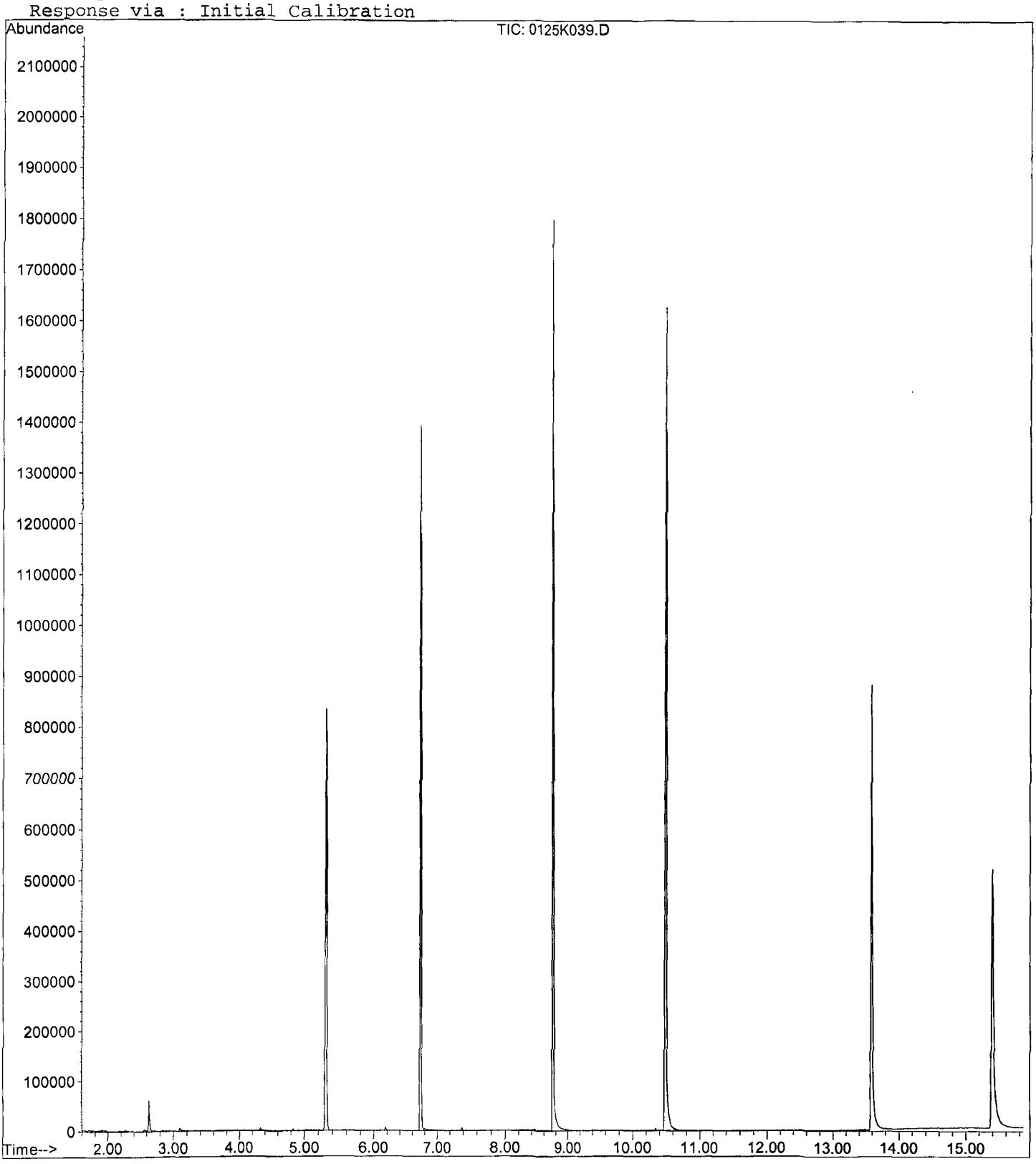
(#) = qualifier out of range (m) = manual integration
0125K039.D KMEE0125.M Fri Jan 29 11:05:21 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K039.D Vial: 39
Acq On : 28 Jan 21 15:16 Operator:
Sample : BA25693W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:50 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : *EPA 8270C*
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K040.D Vial: 40
Acq On : 28 Jan 21 15:37 Operator:
Sample : BA25696W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:51 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	209694	40.00000 ppb	-0.02

System Monitoring Compounds

Target Compounds Qvalue

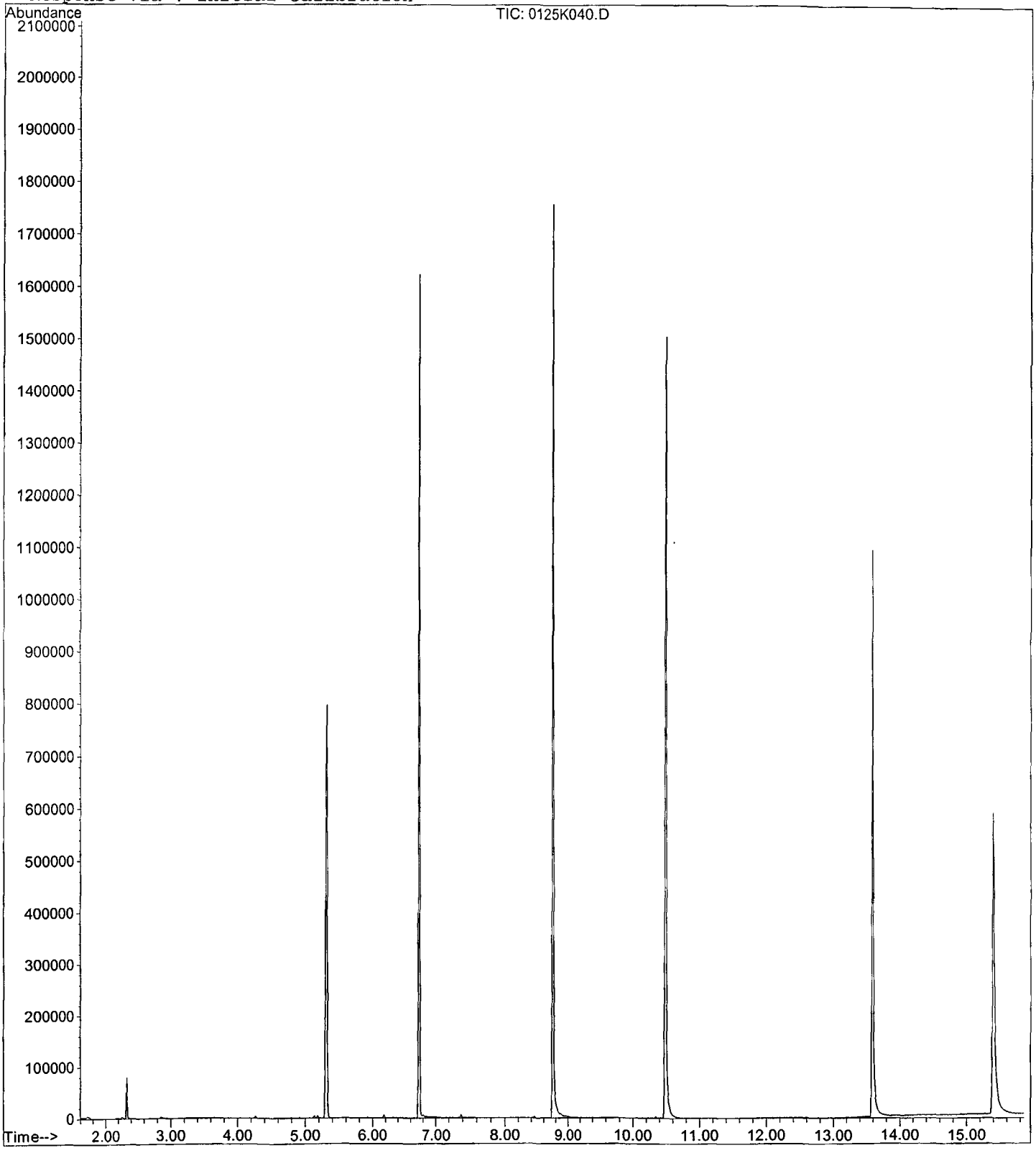
(#) = qualifier out of range (m) = manual integration
0125K040.D KMEE0125.M Fri Jan 29 11:05:26 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K040.D Vial: 40
Acq On : 28 Jan 21 15:37 Operator:
Sample : BA25696W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:51 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K041.D Vial: 41
Acq On : 28 Jan 21 15:58 Operator:
Sample : BA25699W13 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:51 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	195289	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

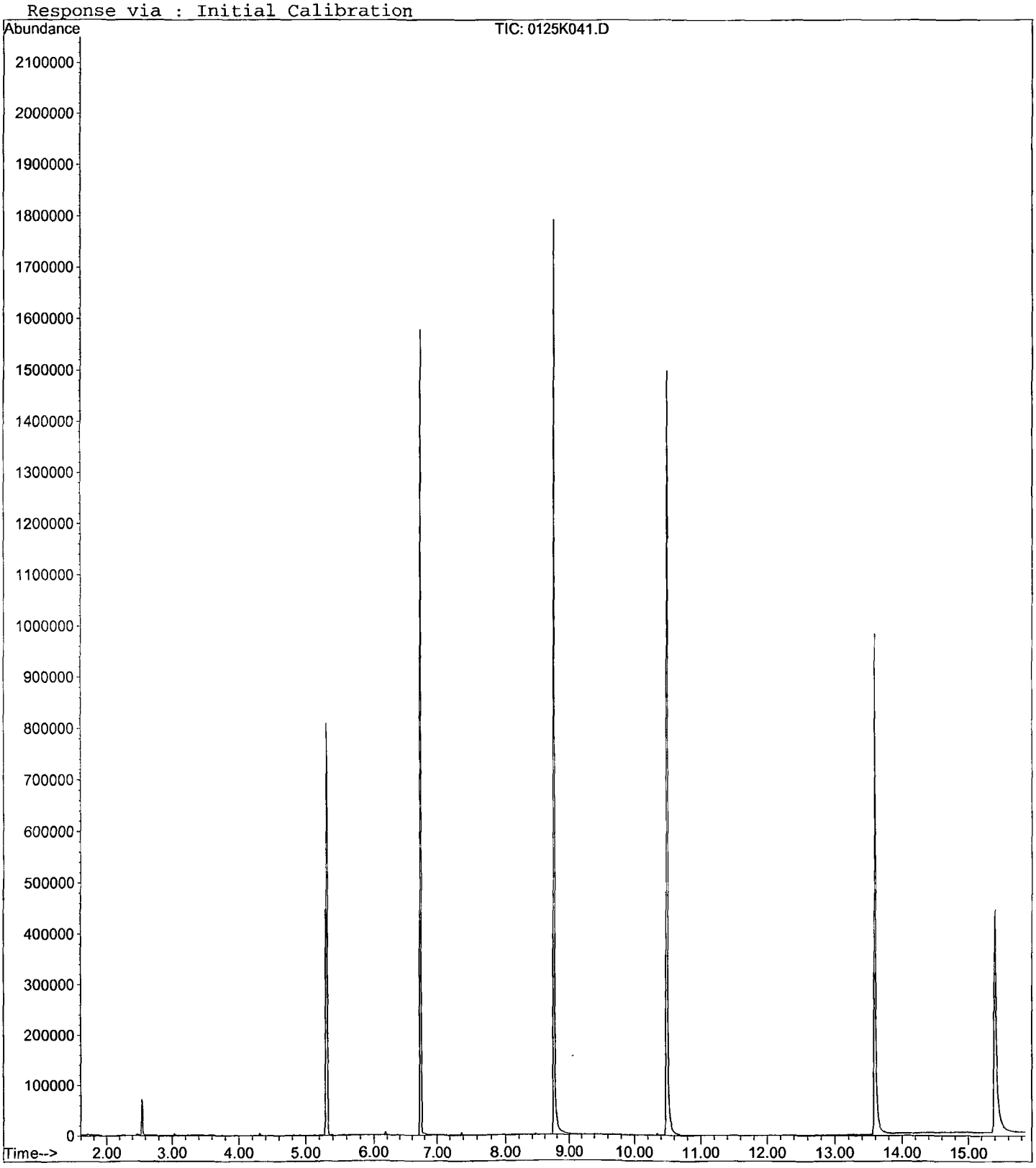
(#) = qualifier out of range (m) = manual integration
0125K041.D KMEE0125.M Fri Jan 29 11:05:31 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K041.D Vial: 41
Acq On : 28 Jan 21 15:58 Operator:
Sample : BA25699W13 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:51 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K042.D Vial: 42
Acq On : 28 Jan 21 16:18 Operator:
Sample : BA25701W08 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 16:51 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	210794	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

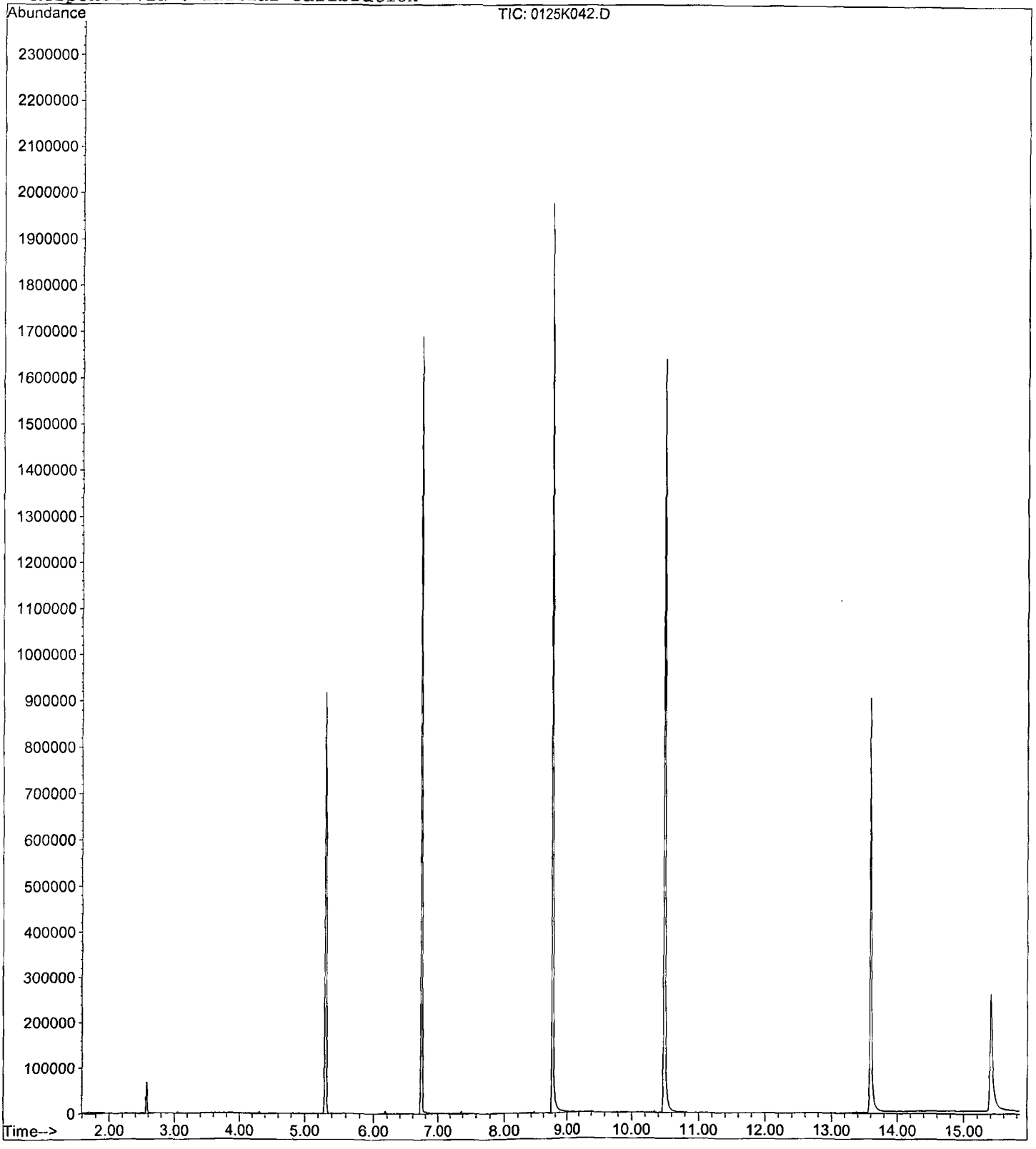
Data File : M:\KYLO\DATA\210125M\0125K042.D
Acq On : 28 Jan 21 16:18
Sample : BA25701W08 5/500
Misc :

Vial: 42
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 28 16:51 2021

Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K043.D Vial: 43
Acq On : 28 Jan 21 16:39 Operator:
Sample : BA25704W07 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 17:49 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	215180	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

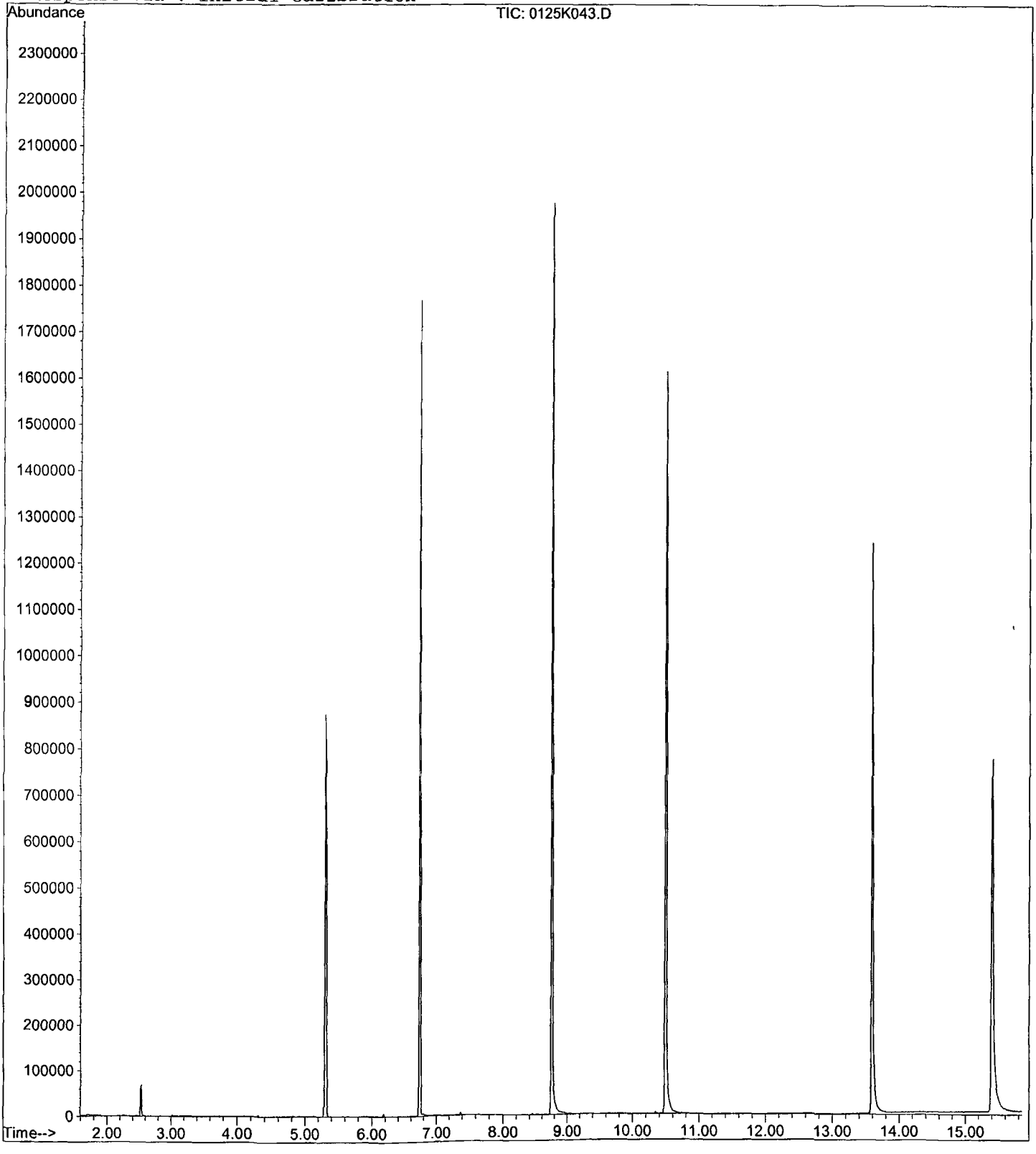
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K043.D Vial: 43
Acq On : 28 Jan 21 16:39 Operator:
Sample : BA25704W07 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 17:49 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K044.D Vial: 44
Acq On : 28 Jan 21 17:00 Operator:
Sample : BA25706W07 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 17:49 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	214535	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds Qvalue

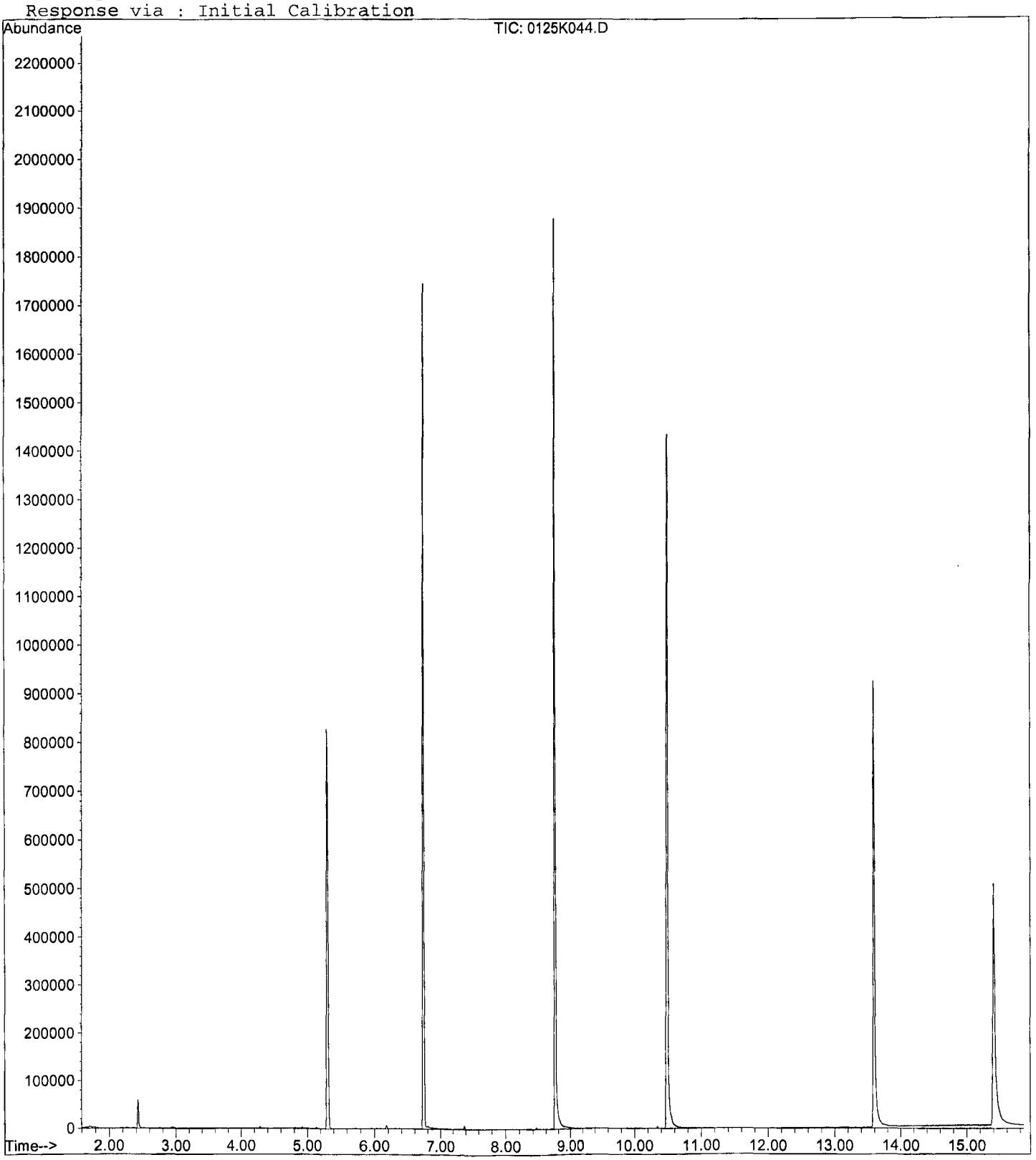
(#) = qualifier out of range (m) = manual integration
0125K044.D KMEE0125.M Fri Jan 29 11:05:47 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K044.D Vial: 44
Acq On : 28 Jan 21 17:00 Operator:
Sample : BA25706W07 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 17:49 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K035.D Vial: 35
Acq On : 28 Jan 21 13:52 Operator:
Sample : 210127A BLK 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:16 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	231854	40.00000 ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

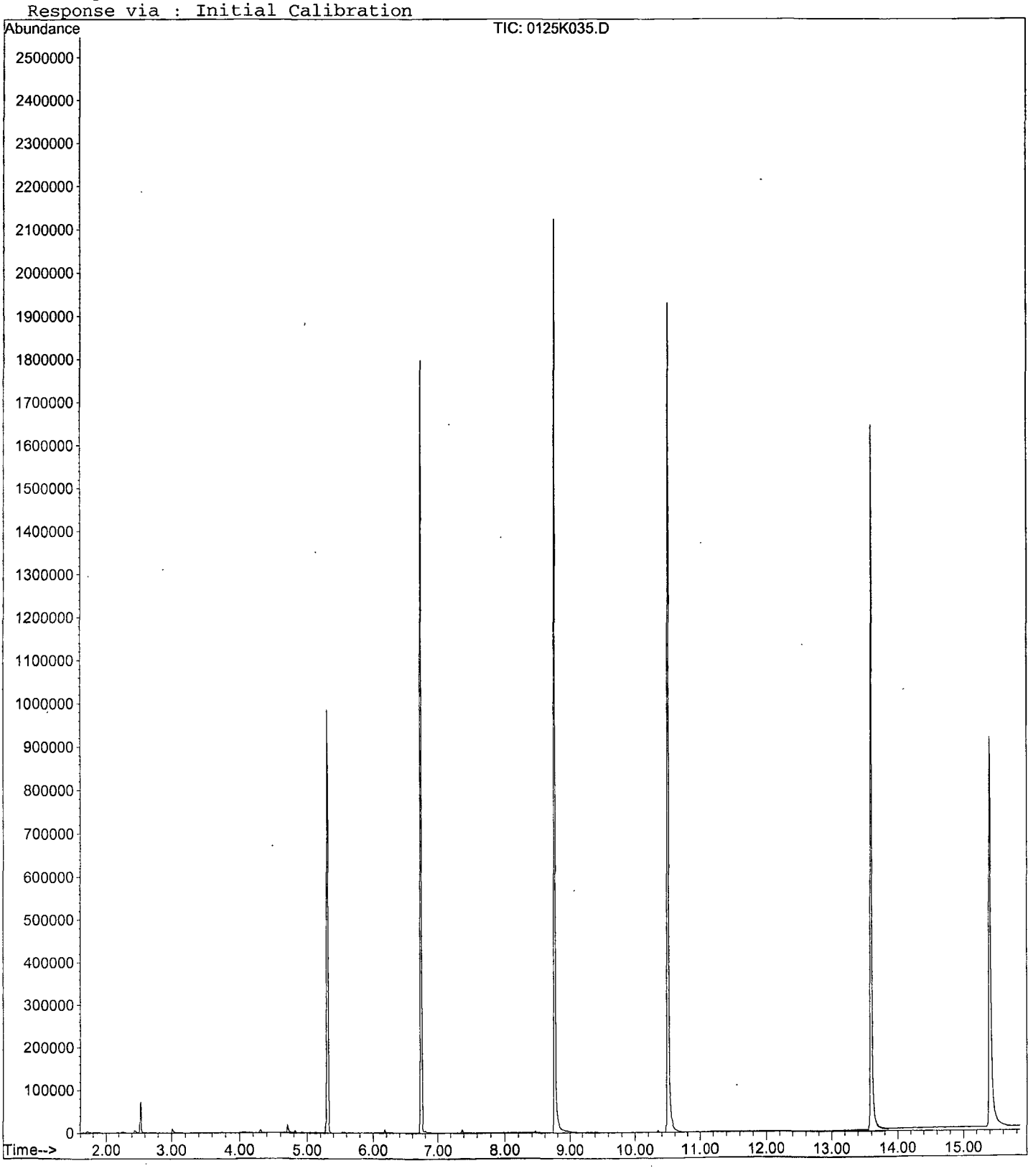
(#) = qualifier out of range (m) = manual integration
0125K035.D KMEE0125.M Fri Jan 29 11:05:00 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K035.D Vial: 35
Acq On : 28 Jan 21 13:52 Operator:
Sample : 210127A BLK 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:16 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K036.D Vial: 36
Acq On : 28 Jan 21 14:13 Operator:
Sample : 210127A LCS-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:47 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	200500	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.70	45	115561	89.64988	ppb	100

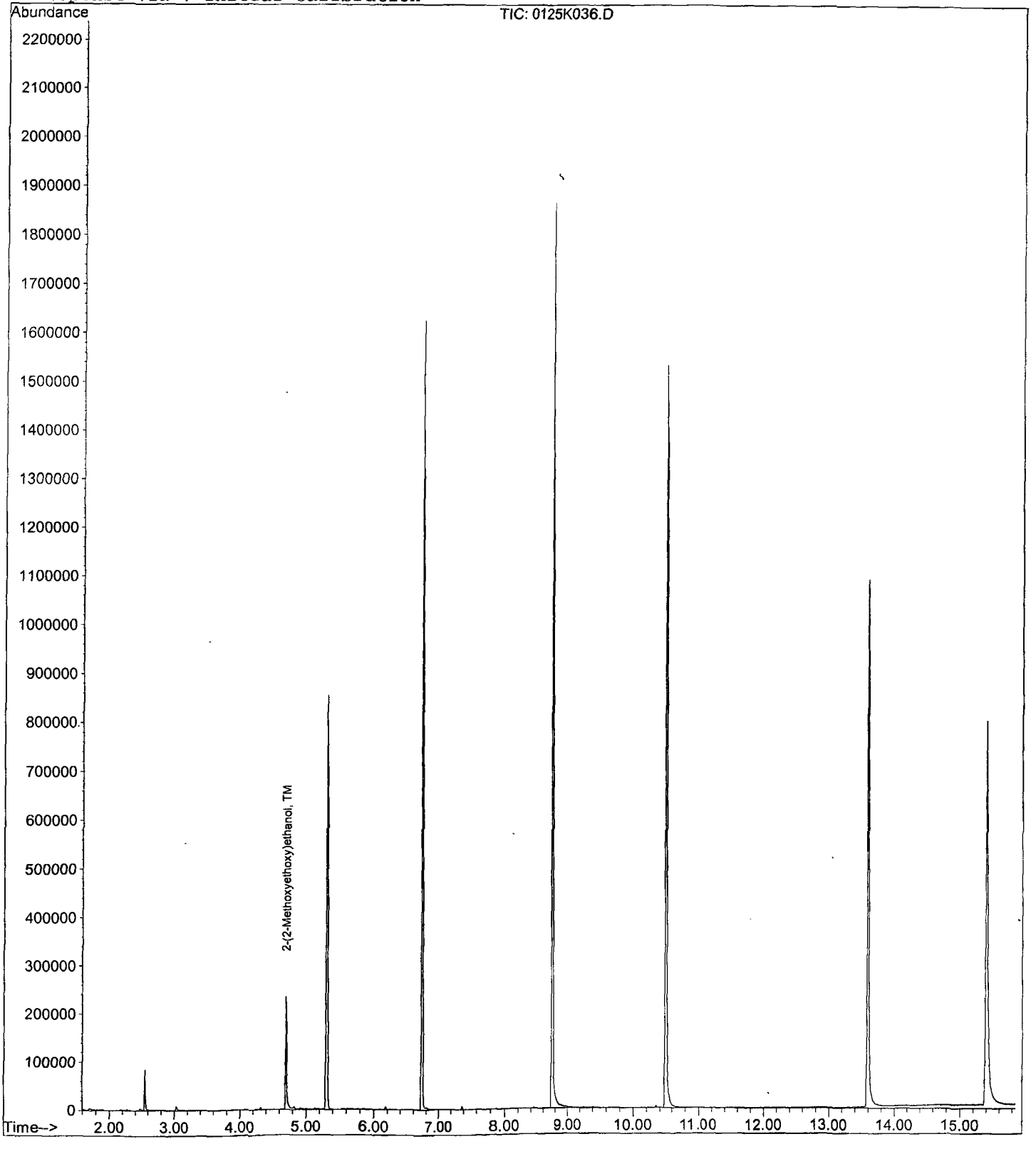
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K036.D Vial: 36
Acq On : 28 Jan 21 14:13 Operator:
Sample : 210127A LCS-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:47 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K037.D Vial: 37
Acq On : 28 Jan 21 14:34 Operator:
Sample : 210127A LCSD-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	191564	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.73	45	104222	84.62493	ppb	97

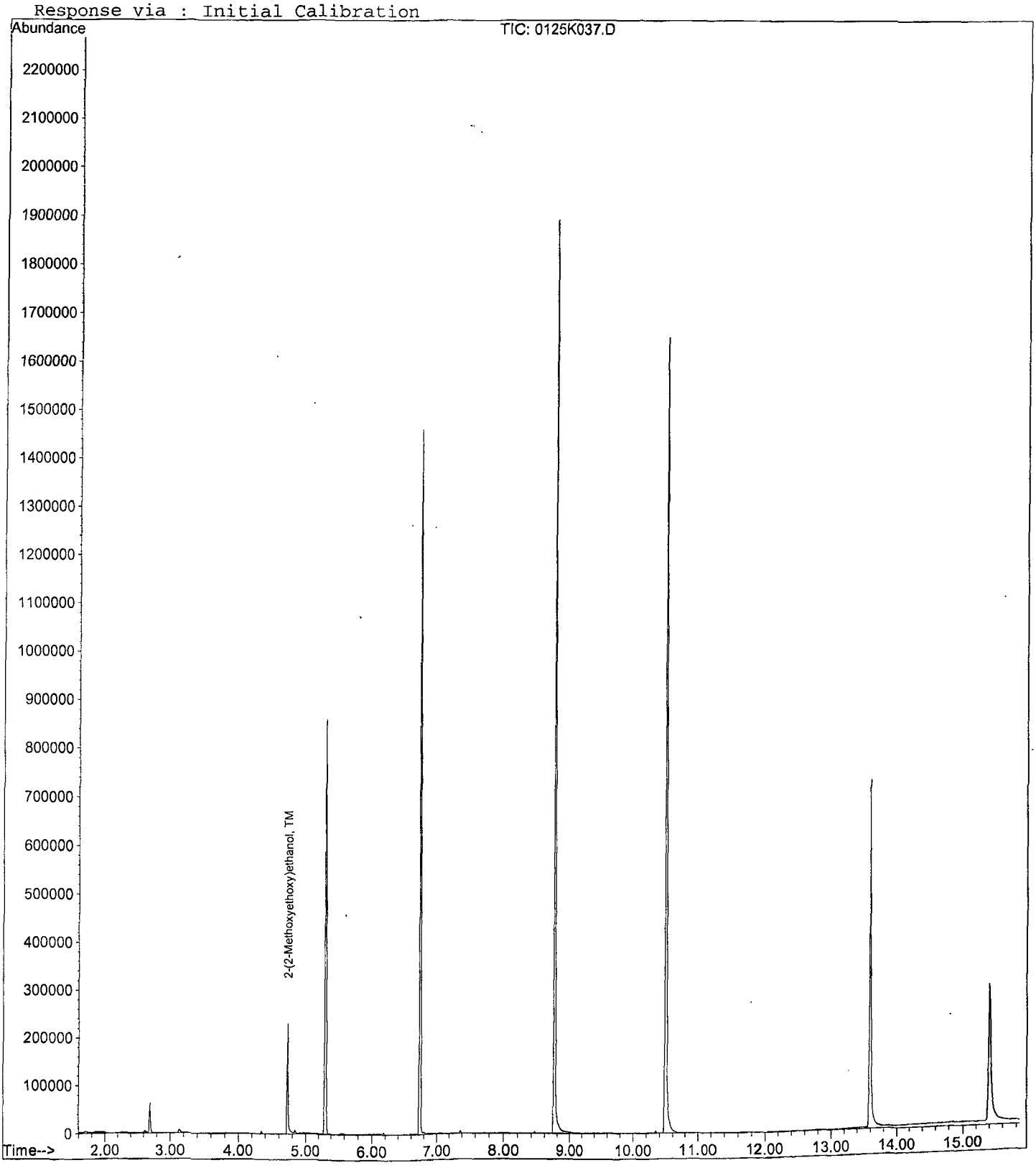
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K037.D Vial: 37
Acq On : 28 Jan 21 14:34 Operator:
Sample : 210127A LCSD-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:54 2021 Quant Results File: KMEE0125.RES

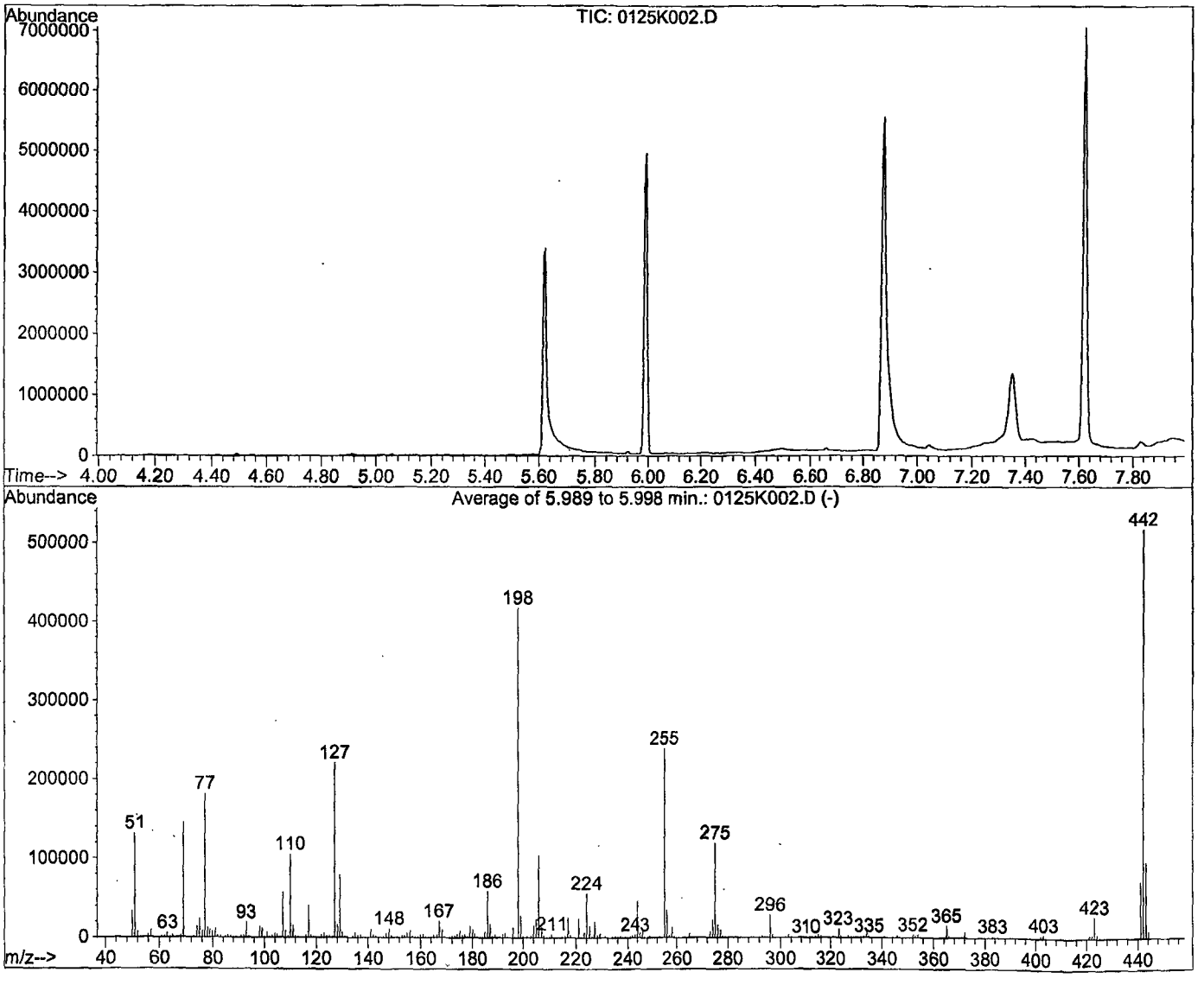
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



DFTPP

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

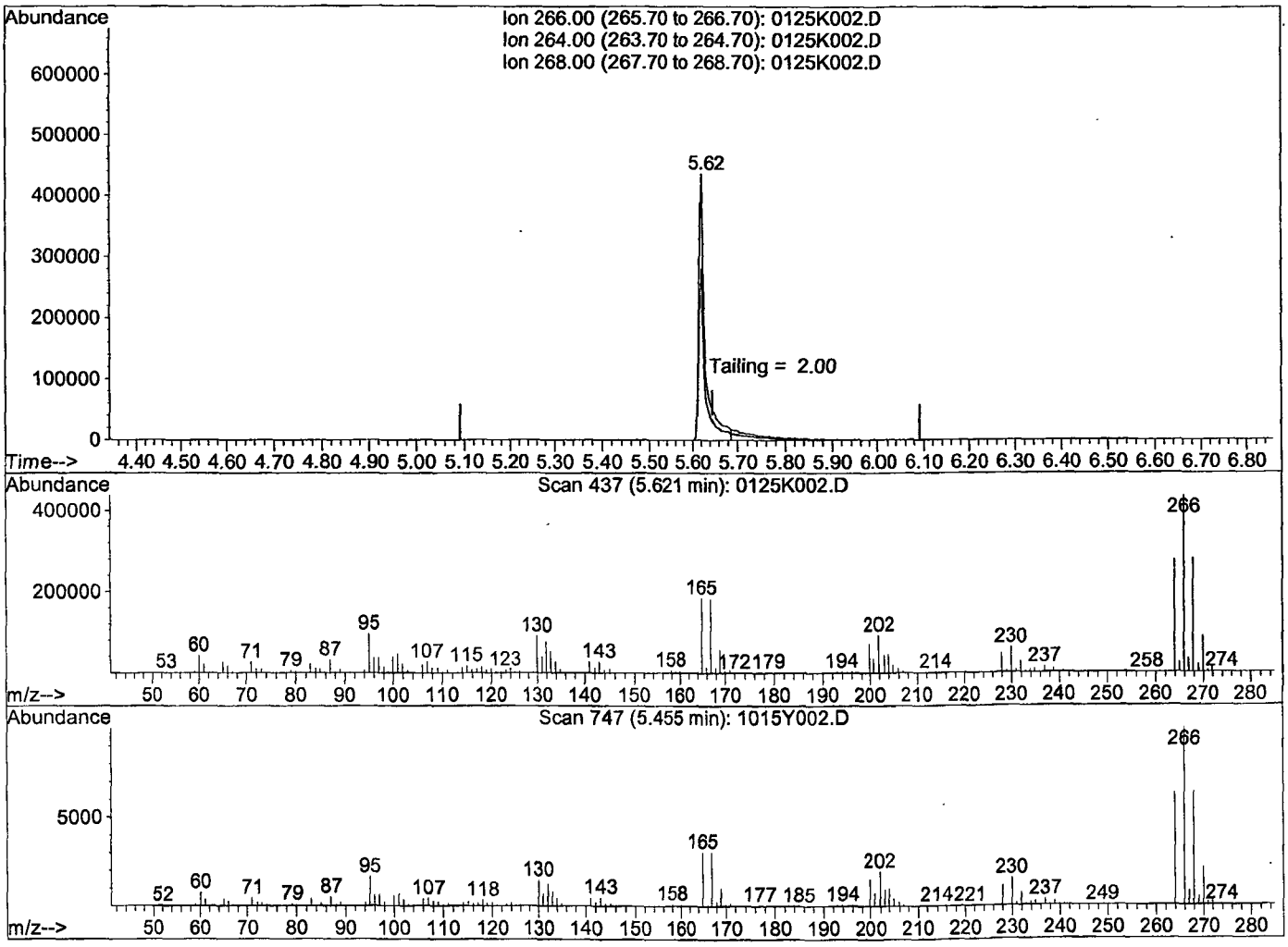
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

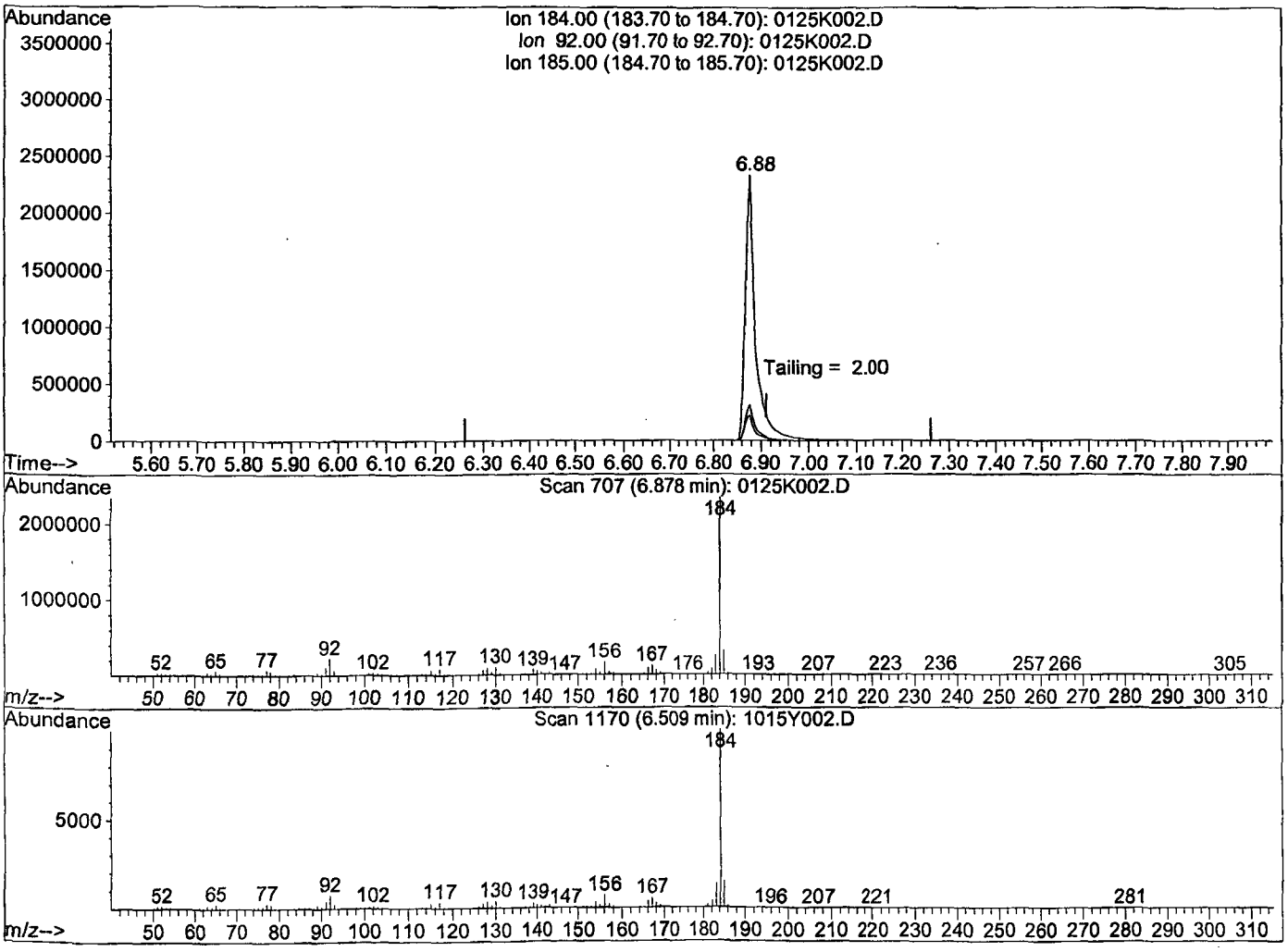
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

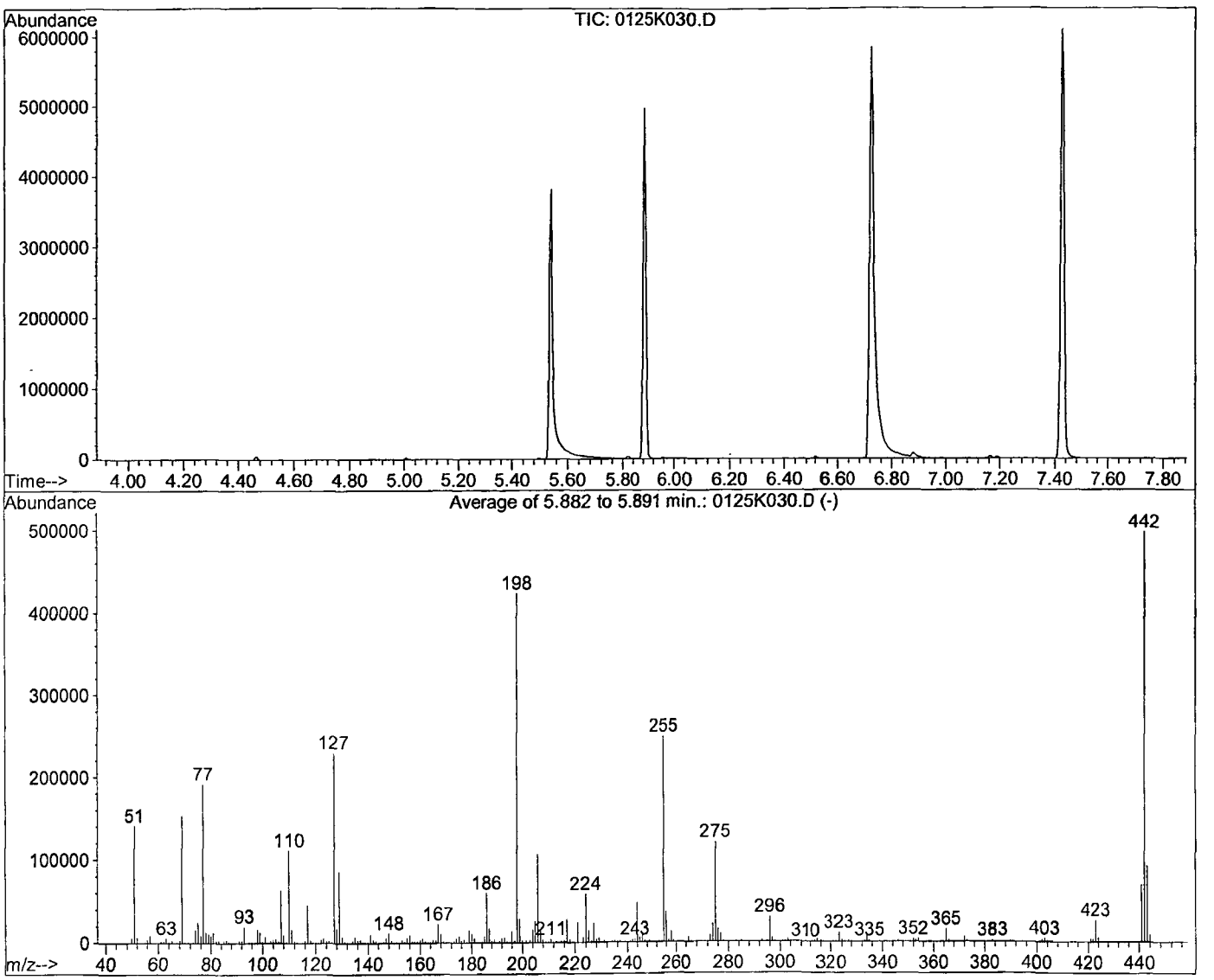
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 493, 494, 495; Background Corrected with Scan 487

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.4	141392	PASS
68	69	0.00	2	1.9	2913	PASS
70	69	0.00	2	0.5	809	PASS
127	198	10	80	54.3	229973	PASS
197	198	0.00	2	0.5	2303	PASS
198	198	100	100	100.0	423317	PASS
199	198	5	9	6.7	28176	PASS
275	198	10	60	28.3	119981	PASS
365	198	1	100	3.6	15196	PASS
441	442	0.01	24	14.0	69381	PASS
442	198	50	500	117.4	497003	PASS
443	442	15	24	18.5	91971	PASS

Data File Name:	**0125K030.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**28 Jan 2021 11:40**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**30**
Instrument Name:	**KYLO**

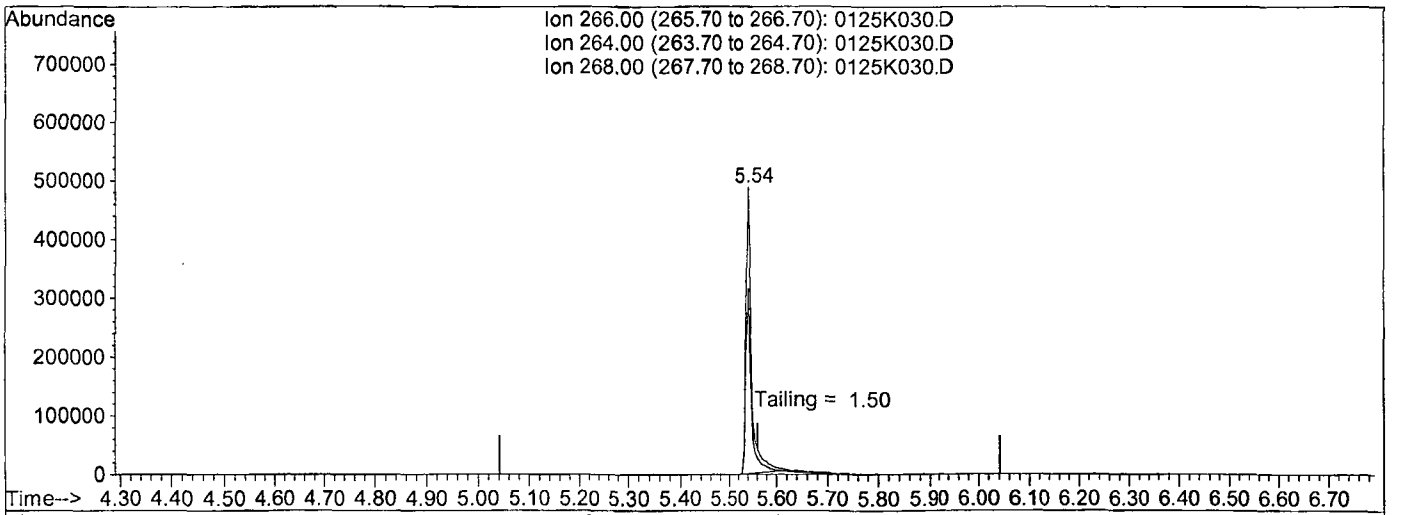
#	Name	Ret Time	Target Response
1)	DDT	7.43	57425700
2)	DDD	7.19	190243
3)	DDE	6.09	0

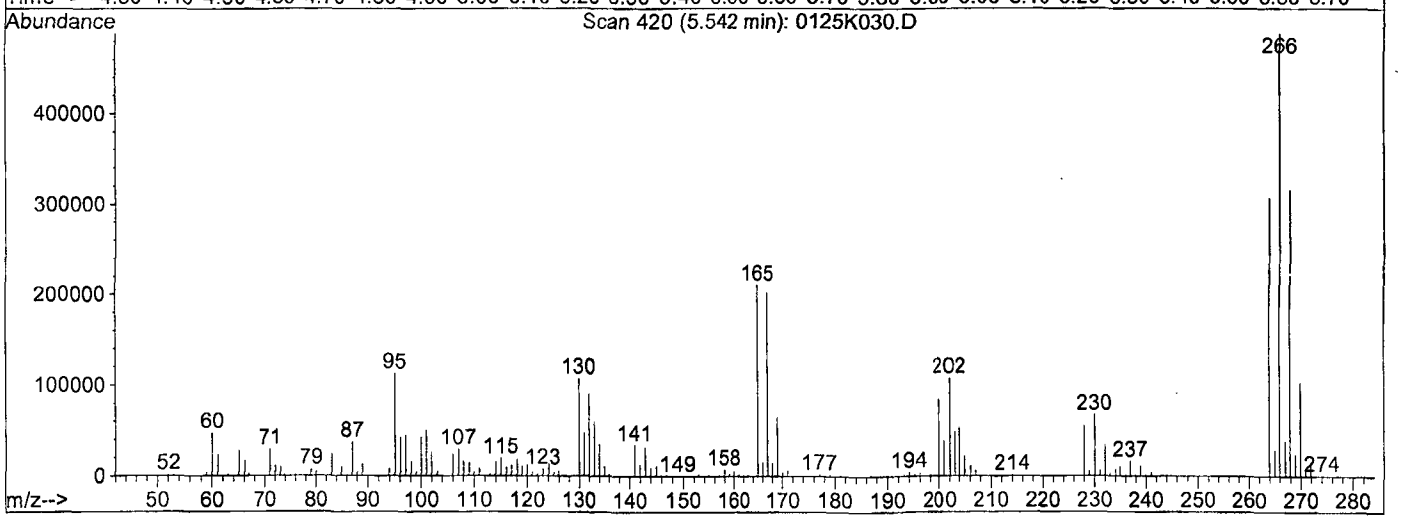
Breakdown **0.33**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:54 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K030.D

(5) Pentachlorophenol

5.54min 0.0000

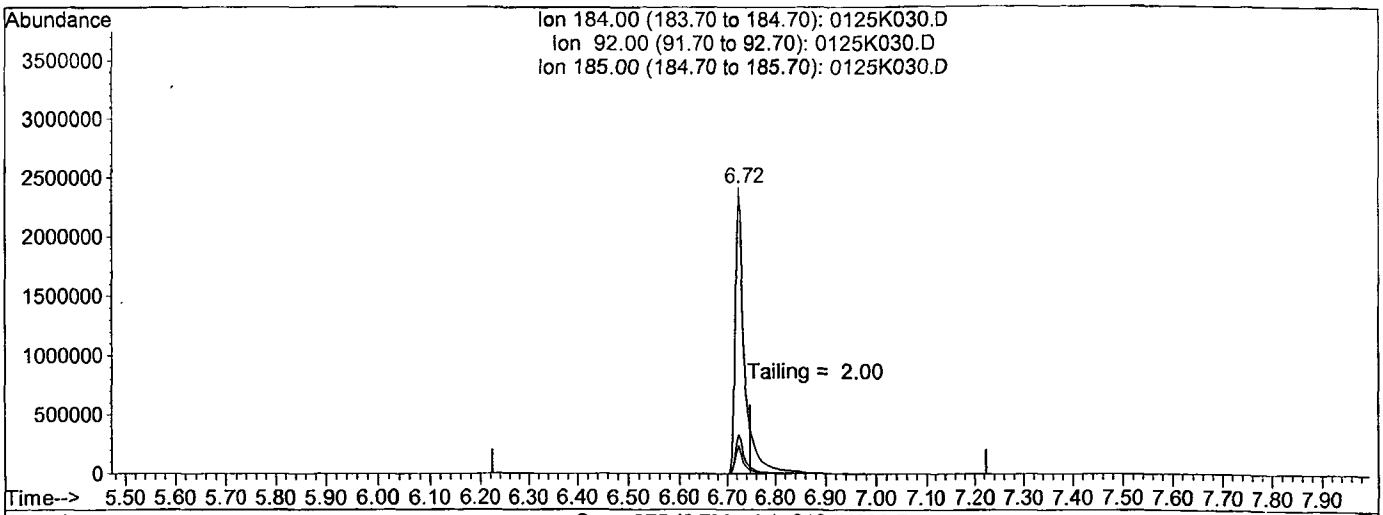
response 4166616

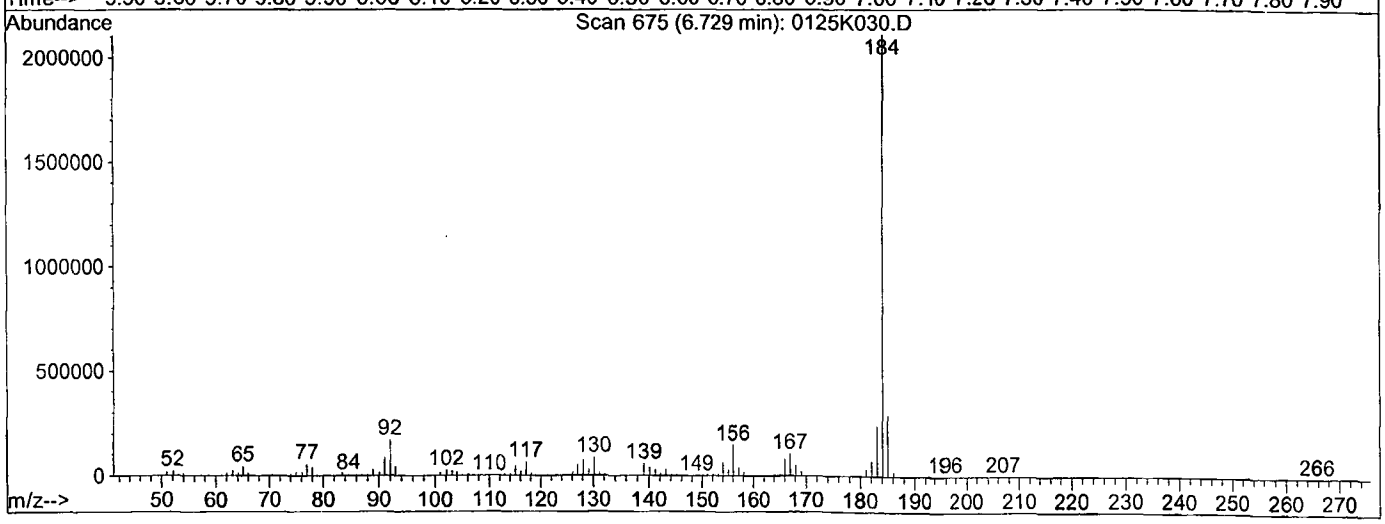
Ion	Exp%	Act%
266.00	100	100
264.00	62.70	67.70
268.00	65.00	68.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:54 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K030.D

(6) Benzidine

6.73min 0.0000

response 32734938

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	9.23
185.00	13.40	14.14
0.00	0.00	0.00

Name of Final Standard **2MEE Second Source Stock** **Prep'd By (Initials)** **JP**

Prep Date **10/28/19**
Exp Date **10/28/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard	Diethylene Glycol
Prep Date	11/05/19
Exp Date	04/25/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of *Final* Standard: **MEE Curve** Prep'd By (Initials): CD

Prep Date: **05/01/20**

Exp Date: **03/03/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	5 uL	200uL	**Methanol 195uL Lot# 235140**	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	5 uL	100uL	**Methanol 95uL Lot# 235140**	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	10 uL	100uL	**Methanol 90uL Lot# 235140**	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	20 uL	100uL	**Methanol 80 uL Lot# 235140**	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	50 uL	200 uL	**Methanol 150 uL Lot# 235140**	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	30 uL	100uL	**Methanol 70 uL Lot# 235140**	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	40 uL	100uL	**Methanol 60 uL Lot# 235140**	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	50 uL	100uL	**Methanol 50uL Lot# 235140**	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*

Name of Final Standard: **MEE Second Source** Prep'd By (Initials): MA

Prep Date: **05/01/20**

Exp Date: **03/03/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	**11/06/19**	**10/28/21**	50 uL	200uL	**Methanol 150uL Lot# 235140**	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	MA
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	AO157142-49871,872,873	07/31/25	3mL	3 mL	NA	2000ug/mL

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210127A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01-20-21 01-20-22		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 10:15	
Spiked ID 8			Ext. End Time:		
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** YL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127A Blk				NA	NA equip	500	5	7	01/27/21 10:15	
2	210127A LCS-1		0.040	1	NA	NA equip	500	5	7	01/27/21 10:15	80ug/L
3	210127A LCSD-1		0.040	1	NA	NA equip	500	5	7	01/27/21 10:15	80ug/L (ARF 94793 BA25248)
4	BA25690	BA25690W14			NA	NA equip	500	5	7	01/27/21 10:15	94863
5	BA25693	BA25693W10			NA	NA equip	500	5	7	01/27/21 10:15	94863
6	BA25696	BA25696W10			NA	NA equip	500	5	7	01/27/21 10:15	94863
7	BA25699	BA25699W13			NA	NA equip	500	5	7	01/27/21 10:15	94863
8	BA25701	BA25701W08			NA	NA equip	500	5	7	01/27/21 10:15	94863
9	BA25704	BA25704W07			NA	NA equip	500	5	7	01/27/21 10:15	94863
10	BA25706	BA25706W07			NA	NA equip	500	5	7	01/27/21 10:15	94863
11	BA25867	BA25867W10			NA	NA equip	500	5	7	01/27/21 10:15	94883
12	BA25870	BA25870W10			NA	NA equip	500	5	7	01/27/21 10:15	94883

Solvent and Lot#	
ENVIRO-CLEAN CARTRIDGES	47266-EY
PH Strip	HC025486
Di Water	1-27-21
Methanol:DCM 80:20 PREP	1-27-21

Extraction COC Transfer	
Extraction lab employee Initials	
GC analyst's initials	NA
Date	1/28/21
Time	10:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	
Sample Preparation	
Extraction	
Concentration	

Modified	01/27/21 11:10:09 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
30	0125K030.D	1	SV TUNE 10/02/20		28 Jan 21 11:40
32	0125K032.D	1	2 MEE 500 1/26/21 (2)		28 Jan 21 12:46
35	0125K035.D	1	210127A BLK 5/500		28 Jan 21 13:52
36	0125K036.D	1	210127A LCS-1 5/500		28 Jan 21 14:13
37	0125K037.D	1	210127A LCSD-1 5/500		28 Jan 21 14:34
38	0125K038.D	1	BA25690W14 5/500		28 Jan 21 14:55
39	0125K039.D	1	BA25693W10 5/500		28 Jan 21 15:16
40	0125K040.D	1	BA25696W10 5/500		28 Jan 21 15:37
41	0125K041.D	1	BA25699W13 5/500		28 Jan 21 15:58
42	0125K042.D	1	BA25701W08 5/500		28 Jan 21 16:18
43	0125K043.D	1	BA25704W07 5/500		28 Jan 21 16:39
44	0125K044.D	1	BA25706W07 5/500		28 Jan 21 17:00
47	0125K047.D	1	2 MEE 500 1/26/21 (1)		28 Jan 21 18:20

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0125Z24.D	0125Z25.D	0125Z26.D	0125Z27 D	0125Z29.D	0125Z30 D	0125Z31 D	0125Z32.D			Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane	0.0934	0.1172	0.1363	0.1304	0.1350	0.1383	0.1381	0.1343			0.13	12	TM			
4	TM	Freon 114	0.0532	0.0810	0.0910	0.0871	0.0722	0.0743	0.0765	0.0709			0.08	15	TM			
5	TM**L	Chloromethane	0.2273	0.1390	0.0989	0.0615	0.0541	0.0501	0.0503	0.0487			0.09	70	TM**	1.000		
6	TM*	Vinyl chloride	0.0967	0.1157	0.1262	0.1253	0.1225	0.1213	0.1175	0.1136			0.12	8.1	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0819	0.0432	0.0412	0.0314	0.0310	0.0293	0.0266			0.04	47	TM	0.998		
10	TML	Chloroethane	0.0559	0.0565	0.0553	0.0377	0.0335	0.0284	0.0261				0.04	32	TM	0.996		
11	TM	Dichlorofluoromethane	0.2011	0.2277	0.2422	0.2409	0.2329	0.2184	0.1979				0.22	8.1	TM			
12	TM	Trichlorofluoromethane	0.1621	0.2106	0.2320	0.2287	0.2313	0.2288	0.2186	0.1682			0.21	14	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein													TM			
17	TM	Acetone	0.0404	0.0337	0.0331	0.0322	0.0293	0.0285	0.0278	0.0277			0.03	14	TM			
18	TM	Freon-113	0.0582	0.0640	0.0656	0.0608	0.0571	0.0586	0.0556	0.0538			0.06	6.8	TM			
19	TM*	1,1-DCE	0.1228	0.1466	0.1584	0.1534	0.1564	0.1521	0.1519	0.1465			0.15	7.5	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile													TM			
22	TM	t-Butanol													TM			
23	TM	Methyl Acetate	0.0863	0.0799	0.0840	0.0815	0.0685	0.0686	0.0671	0.0692			0.08	11	TM			
24	TML	Iodomethane	0.2418	0.1698	0.1371	0.1105	0.0944	0.1103	0.1304	0.1529			0.14	33	TM	0.994		
25	TM	Acrylonitrile		0.0299	0.0362	0.0373	0.0316	0.0316	0.0309	0.0306			0.03	8.9	TM			
26	TML	Methylene chloride	0.1848	0.1332	0.1028	0.0847	0.0691	0.0651	0.0642	0.0547			0.09	47	TM	0.996		
27	TM	Carbon disulfide	0.1528	0.1493	0.1471	0.1478	0.1436	0.1454	0.1459	0.1408			0.15	2.5	TM			
28	TM	Methyl t-butyl ether (MtBE)	0.2059	0.2474	0.2628	0.2628	0.2686	0.2722	0.2762	0.2720			0.26	8.9	TM			
29	TM	Trans-1,2-DCE	0.1305	0.1393	0.1552	0.1495	0.1517	0.1500	0.1466	0.1392			0.15	5.7	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether	0.2257	0.2534	0.2638	0.2745	0.2845	0.2856	0.2867	0.2786			0.27	7.8	TM			
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
33	TM**	1,1-DCA	0.1539	0.1918	0.1925	0.1962	0.1998	0.1895	0.1848	0.1785			0.19	7.8	TM**			
34	TM	Vinyl Acetate	0.0834	0.0698	0.0908	0.0910	0.0820	0.0927	0.1170	0.0860			0.09	15	TM			
35	TM	Ethyl tert Butyl Ether	0.1680	0.2258	0.2423	0.2489	0.2621	0.2701	0.2780	0.2786			0.25	15	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0368	0.0339	0.0379	0.0383	0.0375	0.0389	0.0395	0.0401			0.04	5.1	TM			
37	TM	Cis-1,2-DCE	0.1672	0.1736	0.1773	0.1752	0.1762	0.1687	0.1647	0.1585			0.17	3.9	TM			
38	TM	2,2-Dichloropropane	0.1358	0.1442	0.1516	0.1529	0.1629	0.1614	0.1629	0.1592			0.15	6.4	TM			
39	TML	2-Methylpentane													TM		*	
40	TM	3-Methylpentane													TM			
41	TM*	Chloroform	0.1896	0.2023	0.2108	0.2120	0.2215	0.2125	0.2069	0.2010			0.21	4.6	TM*			
42	TM	Bromochloromethane	0.0651	0.0756	0.0813	0.0832	0.0811	0.0764	0.0736	0.0707			0.08	8.0	TM			
43	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
44	TM	1,1,1-TCA	0.1549	0.1796	0.1968	0.1926	0.2014	0.2025	0.2004	0.1961			0.19	8.5	TM			
45	TM	Cyclohexane	0.1215	0.1607	0.1720	0.1689	0.1581	0.1622	0.1615	0.1560			0.16	9.8	TM			
46	TM	1,1-Dichloropropene	0.1145	0.1388	0.1483	0.1451	0.1483	0.1464	0.1471	0.1406			0.14	8.0	TM			
47	TM	2,2,4-Trimethylpentane	0.2351	0.2899	0.3348	0.3217	0.3055	0.3276	0.3324	0.3225			0.31	11	TM			
48	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
49	TM	Carbon Tetrachloride	0.1359	0.1498	0.1618	0.1706	0.1770	0.1804	0.1830	0.1827			0.17	10	TM			
50	TM	Tert Amyl Methyl Ether	0.1907	0.1989	0.2163	0.2216	0.2401	0.2531	0.2602	0.2646			0.23	12	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA	0.1256	0.1346	0.1555	0.1458	0.1427	0.1347	0.1329	0.1275			0.14	7.3	TM			
53	TM	Benzene	0.4050	0.4452	0.4584	0.4683	0.4612	0.4500	0.4383	0.4165			0.44	5.0	TM			
54	TM	TCE	0.1521	0.1536	0.1587	0.1545	0.1544	0.1551	0.1523	0.1520			0.15	1.4	TM			
55	TM	2-Pentanone													TM			
56	TM*	1,2-Dichloropropane	0.0786	0.0924	0.0996	0.0992	0.1038	0.1000	0.0999	0.0974			0.10	8.2	TM*			
57	TM	Bromodichloromethane	0.0921	0.1001	0.1069	0.1069	0.1253	0.1299	0.1349	0.1410			0.12	15	TM			
58	TM	Methyl Cyclohexane	0.1472	0.1682	0.1750	0.1929	0.1811	0.1958	0.1974	0.1910			0.18	9.5	TM			
59	TM	Dibromomethane	0.0834	0.0965	0.1047	0.1068	0.1098	0.1077	0.1071	0.1079			0.10	8.6	TM			
60	TM	MIBK (methyl isobutyl ketone	0.0538	0.0559	0.0644	0.0670	0.0662	0.0703	0.0738	0.0769			0.07	12	TM			
61	TM	1-Bromo-2-chloroethane		0.0224	0.0233	0.0204	0.0215	0.0217	0.0220	0.0221			0.02	4.0	TM			
62	TM	2-Chloroethyl vinyl ether													TM			
63	TM	Cis-1,3-Dichloropropene		0.1068	0.1260	0.1315	0.1476	0.1533	0.1583	0.1628			0.14	14	TM			
64	TM*	Toluene	0.3986	0.4732	0.4990	0.4994	0.4972	0.4969	0.4938	0.4746			0.48	7.1	TM*			
65	TML	Trans-1,3-Dichloropropene	0.0887	0.0991	0.1020	0.1055	0.1243	0.1313	0.1408	0.1457			0.12	18	TM	1.000		
66	TM	1,1,2-TCA	0.0691	0.0848	0.0938	0.0932	0.0952	0.0953	0.0971	0.0987			0.09	11	TM			
67	TML	2-Hexanone	0.0189	0.0205	0.0259	0.0258	0.0267	0.0279	0.0302	0.0297			0.03	16	TM	0.997		
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
70	TM	1,2-EDB	0.0953	0.1014	0.1163	0.1177	0.1337	0.1374	0.1364	0.1338			0.12	14	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene	0.2337	0.2557	0.2628	0.2638	0.2598	0.2595	0.2507	0.2377			0.25	4.5	TM			
72	TM	1-Chlorohexane	0.1472	0.1816	0.2084	0.2077	0.2052	0.2153	0.2112	0.2022			0.20	11	TM			
73	TM	1,1,1,2-Tetrachloroethane		0.1295	0.1223	0.1289	0.1512	0.1599	0.1635	0.1628			0.15	12	TM			
74	TM	m&p-Xylene	0.3960	0.4739	0.5151	0.5266	0.5423	0.5475	0.5381	0.4974			0.50	10.0	TM			
75	TM	o-Xylene	0.4077	0.4600	0.4915	0.5051	0.5399	0.5515	0.5496	0.5283			0.50	9.9	TM			
76	TML	Styrene	0.2661	0.3028	0.3287	0.3693	0.4365	0.4565	0.4661	0.4573			0.39	21	TM	1.000		
77	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
78	TM	1,3-Dichloropropane	0.1585	0.1708	0.1902	0.1836	0.1942	0.1988	0.1951	0.1889			0.19	7.4	TM			
79	TML	Dibromochloromethane	0.0793	0.0932	0.1092	0.1120	0.1314	0.1413	0.1535	0.1596			0.12	23	TM	0.999		
80	TM**	Chlorobenzene	0.4055	0.4428	0.4648	0.4825	0.4630	0.4663	0.4564	0.4376			0.45	5.2	TM**			
81	TM*	Ethylbenzene	0.5485	0.6267	0.7022	0.6913	0.7137	0.7201	0.7006	0.6647			0.67	8.6	TM*			
82	TM**L	Bromoform	0.0644	0.0729	0.0762	0.0759	0.1013	0.1117	0.1270	0.1404			0.10	29	TM**	0.998		
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene		1.621	1.785	1.954	1.973	2.035	2.107	2.014			1.9	8.7	TM			
85	TM**	1,1,2,2-Tetrachloroethane		0.2940	0.3345	0.3733	0.3576	0.3795	0.4156	0.3987			0.36	11	TM**			
86	TM	1,2,3-Trichloropropane		0.1404	0.1430	0.1489	0.1403	0.1484	0.1537	0.1493			0.15	3.5	TM			
87	TML	t-1,4-Dichloro-2-Butene		0.0537	0.0479	0.0572	0.0564	0.0696	0.0786	0.0829			0.06	21	TM	0.999		
88	TM	Bromobenzene	0.5915	0.5664	0.6039	0.6289	0.6008	0.6148	0.6413	0.6279			0.61	3.9	TM			
89	TML	n-Propylbenzene		1.790	1.997	2.091	2.149	2.239	2.289	2.149			2.1	7.9	TM	0.999		
90	TM	4-Ethyltoluene		1.645	1.778	1.965	1.902	1.994	2.020	1.924			1.9	7.1	TM			
91	TML	2-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
92	TML	1,3,5-Trimethylbenzene		1.299	1.394	1.593	1.597	1.650	1.700	1.613			1.5	9.4	TM	1.000		
93	TML	4-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
94	TM	Tert-Butylbenzene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
95	TM	1,2,4-Trimethylbenzene		1.205	1.465	1.558	1.595	1.673	1.725	1.679			1.6	11	TM			
96	TM	Sec-Butylbenzene		1.743	1.926	2.124	2.120	2.242	2.332	2.217			2.1	9.6	TM			
97	TM	p-Isopropyltoluene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
98	TML	Benzyl Chloride	0.3605	0.4063	0.4316	0.4673	0.5414	0.6613	0.7649	0.8335			0.56	31	TM	0.998		
99	TM	1,3-DCB	1.003	1.115	1.191	1.246	1.167	1.182	1.202	1.164			1.2	6.3	TM			
100	TM	1,4-DCB	1.067	1.188	1.231	1.250	1.174	1.192	1.207	1.158			1.2	4.7	TM			
101	TML	n-Butylbenzene	1.097	1.139	1.334	1.439	1.506	1.635	1.702	1.635			1.4	16	TM	1.000		
102	TM	1,2-DCB	1.013	1.033	1.084	1.106	1.083	1.088	1.111	1.062			1.1	3.2	TM			
103	TML	Hexachloroethane	0.1598	0.2028	0.2300	0.2455	0.2962	0.3496	0.3993	0.4447			0.29	34	TM	0.997		
104	TML	1,2-Dibromo-3-chloropropane	0.0694	0.0657	0.0808	0.0809	0.0991	0.1090	0.1210	0.1269			0.09	25	TM	0.999		
105	TM	1,2,4-Trichlorobenzene	0.8552	0.9091	0.9500	0.9954	0.9570	1.019	1.019	0.9545			0.96	5.8	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene	0.4433	0.4384	0.4934	0.4968	0.4817	0.5229	0.5205	0.4686			0.48	6.6	TM			
107	TML	Naphthalene		1.069	1.179	1.273	1.416	1.571	1.590	1.459			1.4	15	TM	0.999		
108	TM	1,2,3-Trichlorobenzene	0.6814	0.6455	0.6688	0.7212	0.6765	0.7277	0.7196	0.6632			0.69	4.5	TM			
109																		
110																		
111																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb		0.00
Spiked Amount 25.000			Recovery =	15.912%			
48) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb		0.00
Spiked Amount 25.000			Recovery =	16.508%			
69) Toluene-D8(S)	8.03	98	555650	4.08	ppb		0.00
Spiked Amount 25.000			Recovery =	16.312%			
77) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb		0.00
Spiked Amount 25.000			Recovery =	21.764%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	4219	0.22	ppb	#	81
4) Freon 114	1.16	85	2401	0.21	ppb		82
5) Chloromethane	1.20	50	10265	0.40	ppb		97
6) Vinyl chloride	1.28	62	4365	0.25	ppb		93
9) Bromomethane	1.53	94	5445	-0.48	ppb		92
10) Chloroethane	1.61	64	2525	-0.54	ppb		99
11) Dichlorofluoromethane	1.78	67	9079	0.27	ppb		97
12) Trichlorofluoromethane	1.83	101	7319	0.23	ppb		96
17) Acetone	2.36	43	30418	6.40	ppb		99
18) Freon-113	2.32	101	2626	0.29	ppb	#	68
19) 1,1-DCE	2.29	61	5546	0.25	ppb	#	80
23) Methyl Acetate	2.73	43	3897	0.34	ppb		91
24) Iodomethane	2.43	142	10919	2.34	ppb		98
25) Acrylonitrile	3.10	52	1320	0.27	ppb	#	51
26) Methylene chloride	2.81	49	8344	-1.03	ppb		94
27) Carbon disulfide	2.49	76	6898	0.31	ppb		96
28) Methyl t-butyl ether (MtBE	3.19	73	9296	0.24	ppb		92
29) Trans-1,2-DCE	3.15	61	5892	0.27	ppb	#	66
31) Diisopropyl Ether	3.93	45	10193	0.25	ppb		90
33) 1,1-DCA	3.71	63	6947	0.25	ppb		91
34) Vinyl Acetate	3.85	43	3767	0.28	ppb	#	70
35) Ethyl tert Butyl Ether	4.49	59	7584	0.20	ppb	#	85
36) MEK (2-Butanone)	4.67	43	27696	4.86	ppb		97
37) Cis-1,2-DCE	4.60	61	7551	0.29	ppb	#	82
38) 2,2-Dichloropropane	4.60	77	6132	0.26	ppb		95
41) Chloroform	5.09	83	8563	0.27	ppb	#	83
42) Bromochloromethane	4.93	49	2939	0.26	ppb	#	86
44) 1,1,1-TCA	5.30	97	6993	0.24	ppb	#	80
45) Cyclohexane	5.36	56	5488	0.23	ppb	#	75
46) 1,1-Dichloropropene	5.53	75	5171	0.24	ppb	#	78
47) 2,2,4-Trimethylpentane	5.95	57	10616	0.23	ppb		93
49) Carbon Tetrachloride	5.52	117	6138	0.24	ppb	#	80
50) Tert Amyl Methyl Ether	6.01	73	8610	0.25	ppb		93
52) 1,2-DCA	5.81	62	5673	0.27	ppb	#	90
53) Benzene	5.78	78	18288	0.27	ppb		99
54) TCE	6.61	130	6869	0.30	ppb		97
56) 1,2-Dichloropropane	6.87	63	3548	0.24	ppb	#	83
57) Bromodichloromethane	7.21	83	4157	0.24	ppb	#	65
58) Methyl Cyclohexane	6.84	83	6645	0.24	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	3765	0.24	ppb		94
60)	MIBK (methyl isobutyl ket	7.95	43	40492	4.07	ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	499	0.15	ppb	#	71
63)	Cis-1,3-Dichloropropene	7.73	75	4639	0.22	ppb	#	88
64)	Toluene	8.11	91	17996	0.25	ppb		92
65)	Trans-1,3-Dichloropropene	8.36	75	4006	0.97	ppb		92
66)	1,1,2-TCA	8.56	97	3119	0.23	ppb	#	88
67)	2-Hexanone	8.88	43	14256	6.74	ppb		98
70)	1,2-EDB	9.09	107	3239	0.24	ppb	#	77
71)	Tetrachloroethene	8.72	166	7938	0.28	ppb	#	85
72)	1-Chlorohexane	9.67	91	4999	0.22	ppb	#	88
73)	1,1,1,2-Tetrachloroethane	9.75	131	3428	0.21	ppb	#	92
74)	m&p-Xylene	9.92	91	26904	0.47	ppb		95
75)	o-Xylene	10.36	91	13852	0.24	ppb		98
76)	Styrene	10.37	104	9040	0.36	ppb		93
78)	1,3-Dichloropropane	8.73	76	5384	0.26	ppb		92
79)	Dibromochloromethane	8.98	129	2694	1.06	ppb		89
80)	Chlorobenzene	9.65	112	13774	0.27	ppb		89
81)	Ethylbenzene	9.79	91	18635	0.25	ppb		94
82)	Bromoform	10.54	173	2187	1.71	ppb	#	81
84)	Isopropylbenzene	10.76	105	17650	0.22	ppb		95
85)	1,1,2,2-Tetrachloroethane	11.08	83	3333	0.22	ppb	#	87
86)	1,2,3-Trichloropropane	11.12	110	1427	0.23	ppb	#	83
87)	t-1,4-Dichloro-2-Butene	11.14	53	447	1.69	ppb		97
88)	Bromobenzene	11.06	77	7468	0.29	ppb		88
89)	n-Propylbenzene	11.21	91	19115	-0.12	ppb		97
90)	4-Ethyltoluene	11.34	105	17200	0.22	ppb		90
91)	2-Chlorotoluene	11.40	91	13451	-0.09	ppb		89
92)	1,3,5-Trimethylbenzene	11.41	105	13468	-0.00	ppb		90
93)	4-Chlorotoluene	11.40	91	13451	-0.09	ppb		89
94)	Tert-Butylbenzene	11.77	119	13648	0.21	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	14255	0.22	ppb		100
96)	Sec-Butylbenzene	12.00	105	19282	0.22	ppb		93
97)	p-Isopropyltoluene	11.77	119	13648	0.21	ppb		93
98)	Benzyl Chloride	12.35	91	4552	1.78	ppb	#	88
99)	1,3-DCB	12.10	146	12662	0.26	ppb		100
100)	1,4-DCB	12.20	146	13466	0.27	ppb	#	95
101)	n-Butylbenzene	12.61	91	13852	0.32	ppb		100
102)	1,2-DCB	12.59	146	12794	0.28	ppb	#	85
103)	Hexachloroethane	12.89	201	2018	1.82	ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.43	157	876	1.27	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	10798	0.27	ppb		90
106)	Hexachlorobutadiene	14.57	225	5597	0.28	ppb	#	81
107)	Naphthalene	14.62	128	15281	-0.15	ppb		97
108)	1,2,3-Trichlorobenzene	14.88	180	8603	0.30	ppb		96

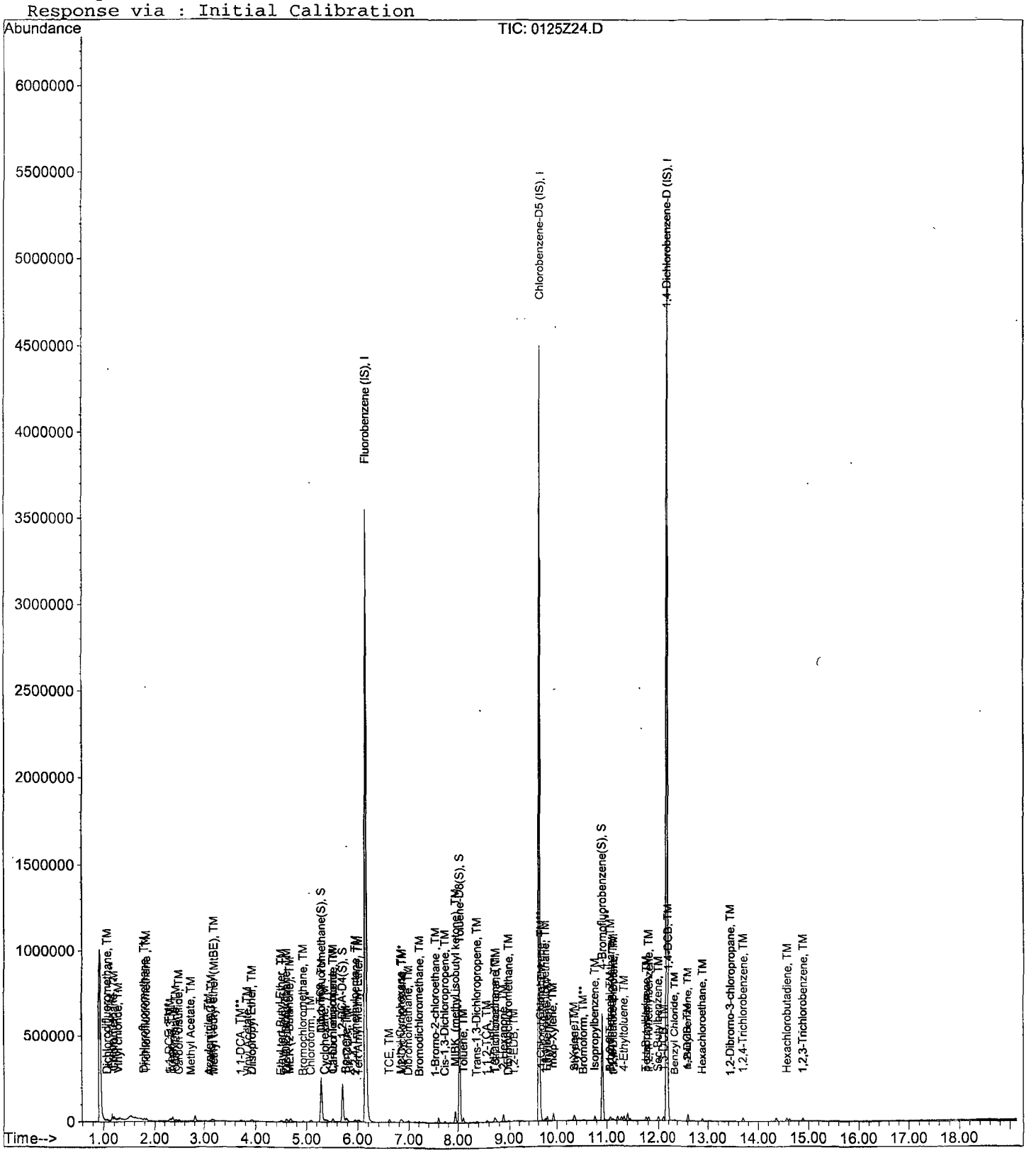
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb		0.00
Spiked Amount 25.000			Recovery = 15.912%				
48) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb		0.00
Spiked Amount 25.000			Recovery = 16.660%				
69) Toluene-D8(S)	8.03	98	538877	4.10	ppb		0.00
Spiked Amount 25.000			Recovery = 16.400%				
77) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb		0.00
Spiked Amount 25.000			Recovery = 21.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	8457	0.46	ppb		91
4) Freon 114	1.16	85	5848	0.53	ppb	#	74
5) Chloromethane	1.20	50	10032	0.43	ppb		90
6) Vinyl chloride	1.28	62	8352	0.49	ppb	#	86
9) Bromomethane	1.53	94	5908	-0.30	ppb		96
10) Chloroethane	1.61	64	4081	-0.09	ppb	#	86
11) Dichlorofluoromethane	1.79	67	16432	0.51	ppb		99
12) Trichlorofluoromethane	1.83	101	15200	0.50	ppb		91
17) Acetone	2.36	43	48606	10.66	ppb		98
18) Freon-113	2.32	101	4621	0.54	ppb		86
19) 1,1-DCE	2.30	61	10579	0.49	ppb		90
23) Methyl Acetate	2.73	43	5765	0.53	ppb	#	87
24) Iodomethane	2.43	142	12255	2.42	ppb		98
25) Acrylonitrile	3.09	52	2158	0.46	ppb	#	53
26) Methylene chloride	2.80	49	9612	-0.83	ppb		94
27) Carbon disulfide	2.49	76	10775	0.51	ppb	#	95
28) Methyl t-butyl ether (MtBE	3.18	73	17855	0.48	ppb	#	88
29) Trans-1,2-DCE	3.15	61	10050	0.48	ppb		95
31) Diisopropyl Ether	3.92	45	18284	0.47	ppb		93
33) 1,1-DCA	3.72	63	13841	0.52	ppb		92
34) Vinyl Acetate	3.86	43	5035	0.39	ppb	#	90
35) Ethyl tert Butyl Ether	4.49	59	16296	0.46	ppb		99
36) MEK (2-Butanone)	4.68	43	48887	8.95	ppb		99
37) Cis-1,2-DCE	4.60	61	12525	0.51	ppb		90
38) 2,2-Dichloropropane	4.60	77	10409	0.47	ppb	#	89
41) Chloroform	5.08	83	14596	0.49	ppb		96
42) Bromochloromethane	4.92	49	5456	0.50	ppb	#	68
44) 1,1,1-TCA	5.30	97	12958	0.47	ppb		92
45) Cyclohexane	5.37	56	11599	0.51	ppb		94
46) 1,1-Dichloropropene	5.53	75	10016	0.49	ppb		96
47) 2,2,4-Trimethylpentane	5.96	57	20920	0.47	ppb		90
49) Carbon Tetrachloride	5.52	117	10809	0.45	ppb		91
50) Tert Amyl Methyl Ether	6.00	73	14351	0.43	ppb		96
52) 1,2-DCA	5.81	62	9715	0.49	ppb		99
53) Benzene	5.78	78	32131	0.50	ppb		97
54) TCE	6.61	130	11087	0.50	ppb		92
56) 1,2-Dichloropropane	6.86	63	6671	0.48	ppb		98
57) Bromodichloromethane	7.20	83	7225	0.43	ppb		93
58) Methyl Cyclohexane	6.84	83	12136	0.46	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	6964	0.47	ppb		86
60)	MIBK (methyl isobutyl ket	7.94	43	80700	8.47	ppb		96
61)	1-Bromo-2-chloroethane	7.53	144	1613	0.51	ppb	#	69
63)	Cis-1,3-Dichloropropene	7.73	75	7705	0.38	ppb		89
64)	Toluene	8.11	91	34146	0.49	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	7150	1.13	ppb		97
66)	1,1,2-TCA	8.56	97	6121	0.47	ppb		87
67)	2-Hexanone	8.88	43	29576	10.33	ppb		98
70)	1,2-EDB	9.09	107	5536	0.42	ppb	#	87
71)	Tetrachloroethene	8.71	166	13968	0.51	ppb		95
72)	1-Chlorohexane	9.67	91	9920	0.46	ppb	#	85
73)	1,1,1,2-Tetrachloroethane	9.75	131	7074	0.45	ppb		88
74)	m&p-Xylene	9.93	91	51763	0.94	ppb		85
75)	o-Xylene	10.35	91	25126	0.46	ppb		94
76)	Styrene	10.37	104	16538	0.51	ppb		94
78)	1,3-Dichloropropane	8.73	76	9326	0.46	ppb		92
79)	Dibromochloromethane	8.98	129	5091	1.20	ppb		100
80)	Chlorobenzene	9.65	112	24182	0.49	ppb		99
81)	Ethylbenzene	9.79	91	34227	0.47	ppb		89
82)	Bromoform	10.54	173	3982	1.83	ppb		88
84)	Isopropylbenzene	10.76	105	33705	0.42	ppb		92
85)	1,1,2,2-Tetrachloroethane	11.08	83	6114	0.40	ppb		93
86)	1,2,3-Trichloropropane	11.11	110	2920	0.48	ppb	#	78
87)	t-1,4-Dichloro-2-Butene	11.14	53	1117	1.88	ppb	#	59
88)	Bromobenzene	11.07	77	11779	0.46	ppb		94
89)	n-Propylbenzene	11.21	91	37232	0.08	ppb		99
90)	4-Ethyltoluene	11.34	105	34212	0.44	ppb		96
91)	2-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
92)	1,3,5-Trimethylbenzene	11.41	105	27021	0.20	ppb		95
93)	4-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
94)	Tert-Butylbenzene	11.76	119	27057	0.43	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	25063	0.39	ppb		96
96)	Sec-Butylbenzene	12.00	105	36250	0.41	ppb		96
97)	p-Isopropyltoluene	11.76	119	27057	0.43	ppb		92
98)	Benzyl Chloride	12.34	91	8450	1.89	ppb	#	87
99)	1,3-DCB	12.10	146	23181	0.48	ppb		95
100)	1,4-DCB	12.20	146	24714	0.50	ppb	#	88
101)	n-Butylbenzene	12.61	91	23698	0.46	ppb		93
102)	1,2-DCB	12.59	146	21490	0.48	ppb		97
103)	Hexachloroethane	12.88	201	4217	1.94	ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.44	157	1366	1.36	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.68	180	18907	0.47	ppb		96
106)	Hexachlorobutadiene	14.57	225	9118	0.45	ppb		94
107)	Naphthalene	14.62	128	22225	-0.03	ppb		95
108)	1,2,3-Trichlorobenzene	14.89	180	13425	0.47	ppb		95

(#) = qualifier out of range (m) = manual integration

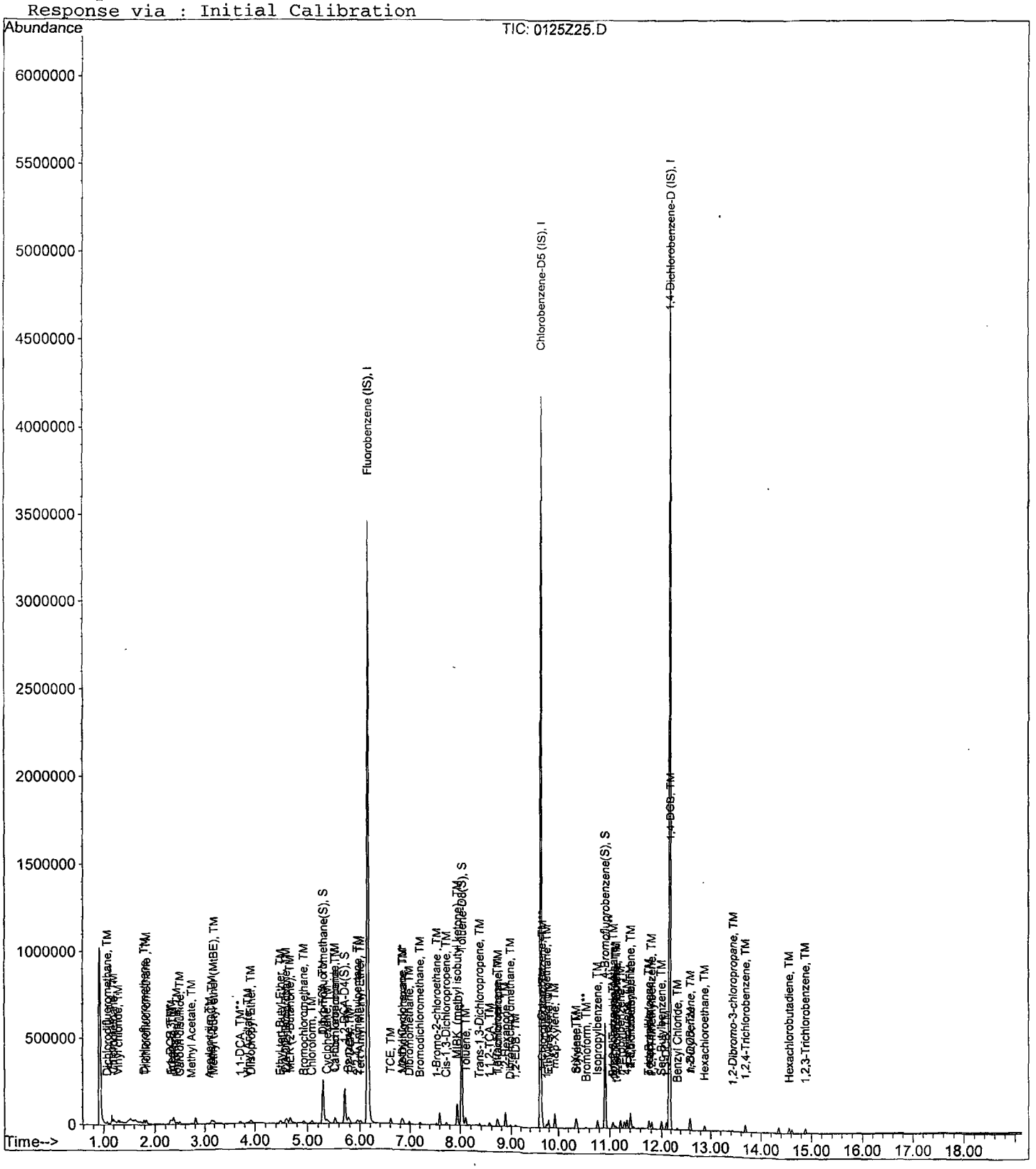
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z25.D
Acq On : 25 Jan 21 16:30
Sample : 0.5ug/L VOC STD 1/25/21
Misc :

Vial: 20
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb		0.00
Spiked Amount 25.000			Recovery =	38.496%			
48) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb		0.00
Spiked Amount 25.000			Recovery =	39.380%			
69) Toluene-D8(S)	8.03	98	1268990	9.81	ppb		0.00
Spiked Amount 25.000			Recovery =	39.236%			
77) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb		0.00
Spiked Amount 25.000			Recovery =	40.312%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	19541	1.07	ppb		95
4) Freon 114	1.16	85	13046	1.20	ppb		81
5) Chloromethane	1.20	50	14183	1.04	ppb		92
6) Vinyl chloride	1.28	62	18100	1.08	ppb		95
9) Bromomethane	1.53	94	6189	-0.22	ppb		94
10) Chloroethane	1.61	64	7923	0.95	ppb		96
11) Dichlorofluoromethane	1.79	67	34720	1.09	ppb		95
12) Trichlorofluoromethane	1.83	101	33260	1.10	ppb		98
17) Acetone	2.36	43	95048	20.98	ppb		96
18) Freon-113	2.33	101	9398	1.11	ppb		95
19) 1,1-DCE	2.30	61	22712	1.07	ppb		99
23) Methyl Acetate	2.73	43	12050	1.11	ppb		96
24) Iodomethane	2.43	142	19655	2.76	ppb		98
25) Acrylonitrile	3.10	52	5186	1.11	ppb	#	63
26) Methylene chloride	2.81	49	14737	-0.17	ppb		97
27) Carbon disulfide	2.49	76	21088	1.00	ppb	#	90
28) Methyl t-butyl ether (MtBE	3.18	73	37683	1.02	ppb	#	88
29) Trans-1,2-DCE	3.15	61	22254	1.07	ppb		91
31) Diisopropyl Ether	3.93	45	37818	0.98	ppb		92
33) 1,1-DCA	3.71	63	27596	1.04	ppb		96
34) Vinyl Acetate	3.85	43	13019	1.02	ppb		95
35) Ethyl tert Butyl Ether	4.49	59	34738	0.98	ppb		91
36) MEK (2-Butanone)	4.67	43	108684	20.02	ppb		91
37) Cis-1,2-DCE	4.60	61	25416	1.04	ppb	#	90
38) 2,2-Dichloropropane	4.59	77	21737	0.99	ppb	#	82
41) Chloroform	5.09	83	30221	1.02	ppb		96
42) Bromochloromethane	4.92	49	11662	1.07	ppb	#	75
44) 1,1,1-TCA	5.31	97	28214	1.03	ppb		96
45) Cyclohexane	5.36	56	24662	1.09	ppb		91
46) 1,1-Dichloropropene	5.53	75	21263	1.05	ppb		94
47) 2,2,4-Trimethylpentane	5.96	57	47997	1.08	ppb		99
49) Carbon Tetrachloride	5.52	117	23201	0.97	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	31015	0.94	ppb	#	87
52) 1,2-DCA	5.80	62	22291	1.13	ppb		95
53) Benzene	5.78	78	65727	1.04	ppb		97
54) TCE	6.61	130	22755	1.03	ppb		94
56) 1,2-Dichloropropane	6.86	63	14276	1.03	ppb	#	93
57) Bromodichloromethane	7.21	83	15324	0.91	ppb		100
58) Methyl Cyclohexane	6.83	83	25092	0.97	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	15013	1.02	ppb		99
60)	MIBK (methyl isobutyl ket	7.94	43	184584	19.50	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	3334	1.06	ppb		86
63)	Cis-1,3-Dichloropropene	7.73	75	18063	0.89	ppb		93
64)	Toluene	8.11	91	71543	1.04	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	14617	1.49	ppb	#	93
66)	1,1,2-TCA	8.56	97	13453	1.03	ppb		83
67)	2-Hexanone	8.88	43	74264	20.54	ppb		99
70)	1,2-EDB	9.09	107	12507	0.96	ppb	#	98
71)	Tetrachloroethene	8.72	166	28259	1.04	ppb		97
72)	1-Chlorohexane	9.67	91	22408	1.06	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	13148	0.84	ppb		90
74)	m&p-Xylene	9.92	91	110759	2.04	ppb		94
75)	o-Xylene	10.35	91	52847	0.97	ppb		94
76)	Styrene	10.37	104	35341	0.90	ppb		96
78)	1,3-Dichloropropane	8.74	76	20446	1.03	ppb		99
79)	Dibromochloromethane	8.98	129	11746	1.60	ppb		86
80)	Chlorobenzene	9.65	112	49975	1.03	ppb		99
81)	Ethylbenzene	9.79	91	75493	1.05	ppb		98
82)	Bromoform	10.54	173	8190	2.12	ppb		89
84)	Isopropylbenzene	10.77	105	73117	0.93	ppb		95
85)	1,1,2,2-Tetrachloroethane	11.07	83	13703	0.92	ppb		96
86)	1,2,3-Trichloropropane	11.11	110	5857	0.98	ppb	#	85
87)	t-1,4-Dichloro-2-Butene	11.15	53	1962	2.13	ppb		98
88)	Bromobenzene	11.06	77	24739	0.99	ppb		91
89)	n-Propylbenzene	11.21	91	81815	0.59	ppb		99
90)	4-Ethyltoluene	11.34	105	72842	0.94	ppb		92
91)	2-Chlorotoluene	11.41	91	56407	0.63	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	57122	0.66	ppb		99
93)	4-Chlorotoluene	11.41	91	56407	0.63	ppb		98
94)	Tert-Butylbenzene	11.76	119	59300	0.95	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	60013	0.94	ppb		94
96)	Sec-Butylbenzene	12.00	105	78921	0.92	ppb		99
97)	p-Isopropyltoluene	11.76	119	59300	0.95	ppb		91
98)	Benzyl Chloride	12.35	91	17683	2.16	ppb		93
99)	1,3-DCB	12.10	146	48784	1.03	ppb		95
100)	1,4-DCB	12.20	146	50417	1.04	ppb		93
101)	n-Butylbenzene	12.61	91	54640	0.93	ppb		92
102)	1,2-DCB	12.60	146	44398	1.01	ppb		95
103)	Hexachloroethane	12.89	201	9422	2.23	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	3312	1.74	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	38921	0.99	ppb		88
106)	Hexachlorobutadiene	14.57	225	20215	1.02	ppb		86
107)	Naphthalene	14.62	128	48314	0.41	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	27400	0.97	ppb		91

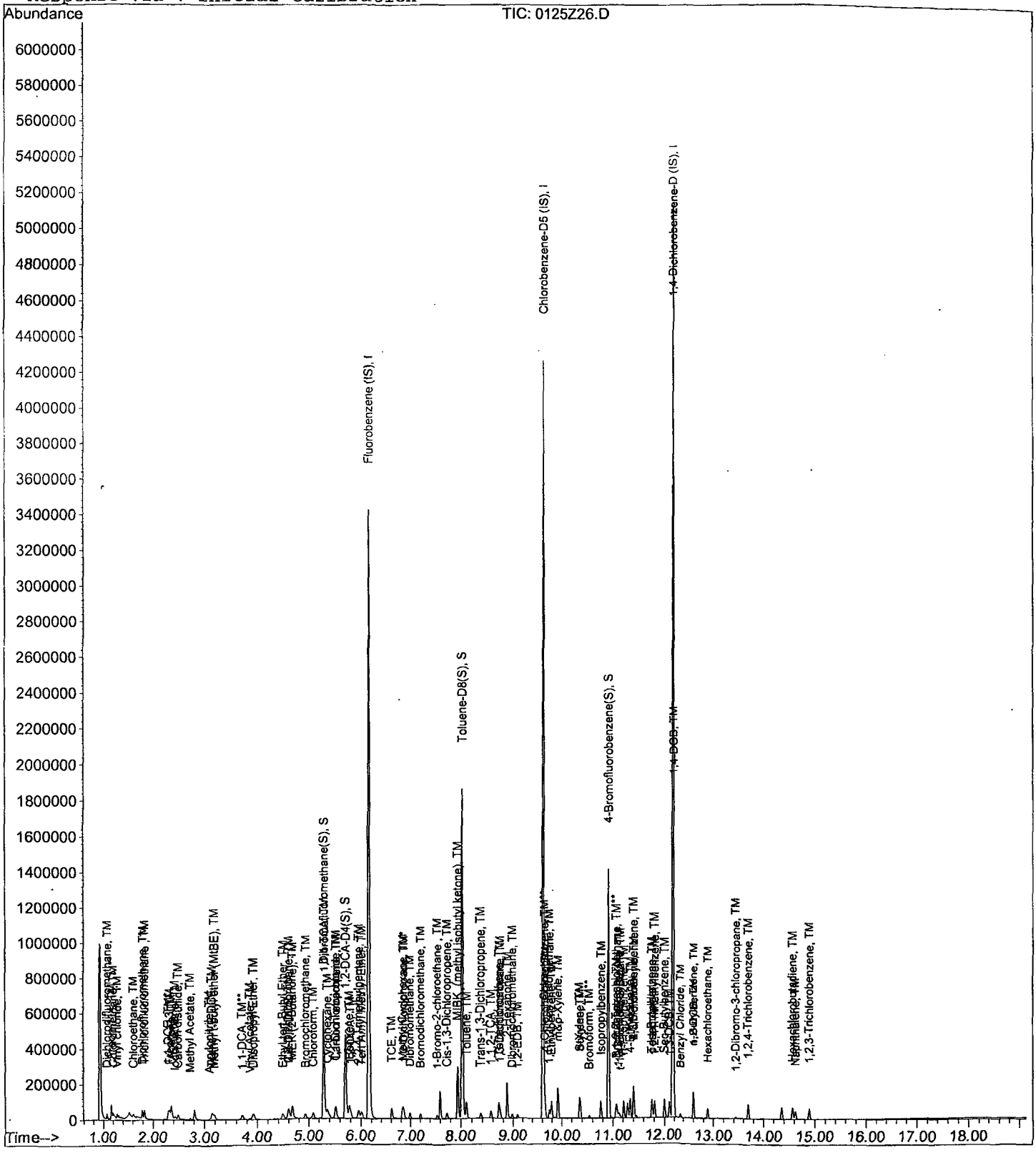
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb		0.00
Spiked Amount 25.000			Recovery = 38.824%				
48) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb		0.00
Spiked Amount 25.000			Recovery = 39.864%				
69) Toluene-D8(S)	8.03	98	1265740	9.83	ppb		0.00
Spiked Amount 25.000			Recovery = 39.308%				
77) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb		0.00
Spiked Amount 25.000			Recovery = 40.020%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	36856	2.04	ppb		95
4) Freon 114	1.16	85	24600	2.30	ppb		91
5) Chloromethane	1.20	50	17391	1.54	ppb		93
6) Vinyl chloride	1.28	62	35409	2.14	ppb		97
9) Bromomethane	1.53	94	11643	1.27	ppb		86
10) Chloroethane	1.61	64	10665	1.73	ppb		93
11) Dichlorofluoromethane	1.78	67	68079	2.16	ppb		97
12) Trichlorofluoromethane	1.83	101	64626	2.18	ppb		96
17) Acetone	2.36	43	136629	30.60	ppb		96
18) Freon-113	2.32	101	17184	2.05	ppb		94
19) 1,1-DCE	2.30	61	43344	2.07	ppb		97
23) Methyl Acetate	2.73	43	23021	2.15	ppb		91
24) Iodomethane	2.43	142	31228	3.31	ppb	#	96
25) Acrylonitrile	3.10	52	10530	2.29	ppb		92
26) Methylene chloride	2.81	49	23936	1.05	ppb		98
27) Carbon disulfide	2.49	76	41776	2.02	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	74273	2.03	ppb		95
29) Trans-1,2-DCE	3.14	61	42236	2.06	ppb		97
31) Diisopropyl Ether	3.93	45	77564	2.04	ppb		98
33) 1,1-DCA	3.71	63	55456	2.11	ppb		98
34) Vinyl Acetate	3.86	43	25718	2.04	ppb		97
35) Ethyl tert Butyl Ether	4.49	59	70337	2.02	ppb		97
36) MEK (2-Butanone)	4.67	43	162442	30.36	ppb		96
37) Cis-1,2-DCE	4.60	61	49511	2.06	ppb		99
38) 2,2-Dichloropropane	4.59	77	43199	1.99	ppb		94
41) Chloroform	5.09	83	59915	2.05	ppb		99
42) Bromochloromethane	4.93	49	23507	2.19	ppb		93
44) 1,1,1-TCA	5.30	97	54440	2.02	ppb		98
45) Cyclohexane	5.37	56	47720	2.14	ppb		92
46) 1,1-Dichloropropene	5.53	75	41012	2.06	ppb		98
47) 2,2,4-Trimethylpentane	5.95	57	90903	2.08	ppb		96
49) Carbon Tetrachloride	5.52	117	48204	2.03	ppb		99
50) Tert Amyl Methyl Ether	6.01	73	62631	1.92	ppb		94
52) 1,2-DCA	5.81	62	41209	2.12	ppb		97
53) Benzene	5.78	78	132344	2.11	ppb		99
54) TCE	6.61	130	43674	2.01	ppb		92
56) 1,2-Dichloropropane	6.86	63	28025	2.06	ppb	#	95
57) Bromodichloromethane	7.20	83	30218	1.83	ppb		90
58) Methyl Cyclohexane	6.84	83	54522	2.13	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

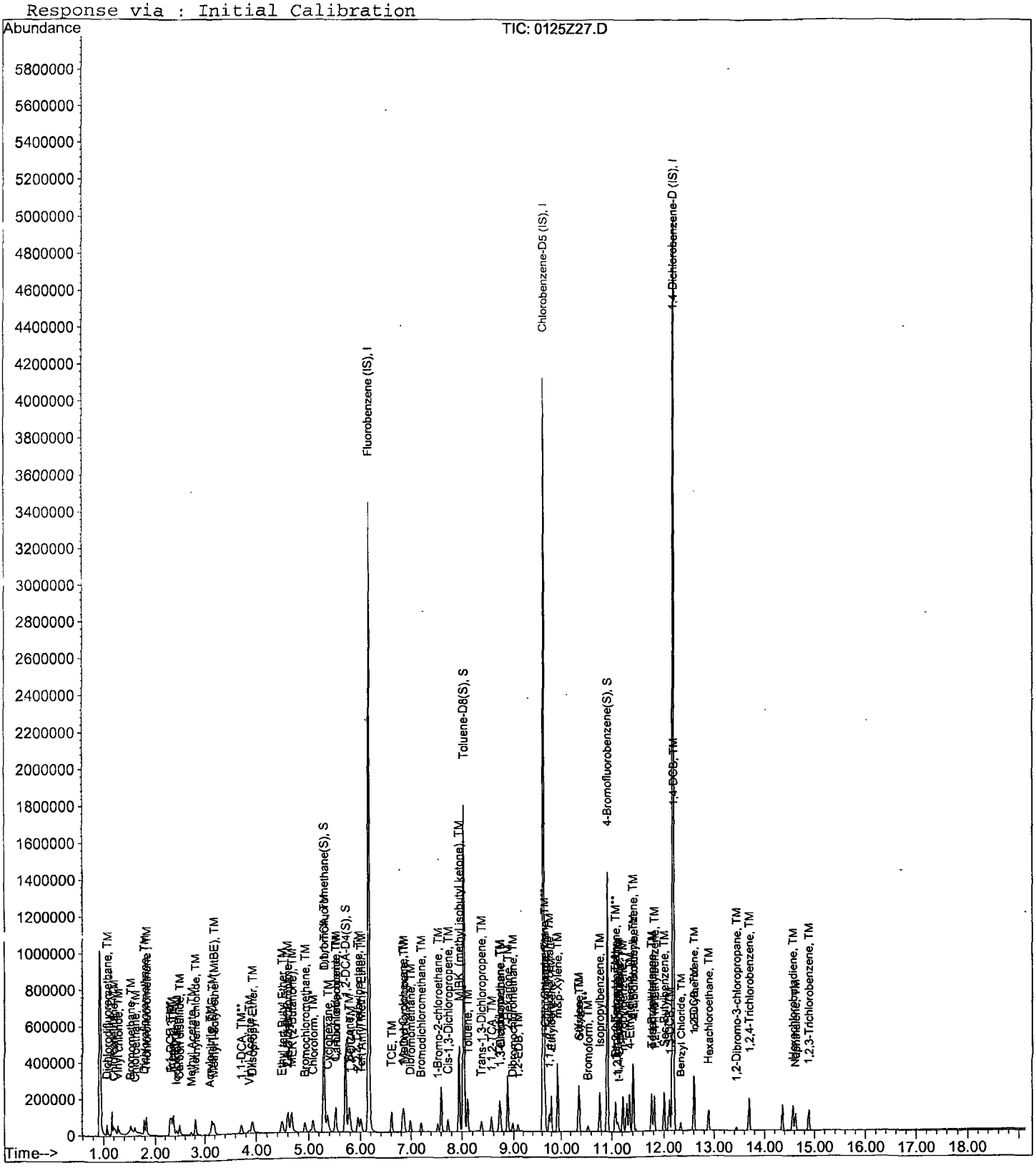
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	30181	2.07	ppb		96
60)	MIBK (methyl isobutyl ket	7.94	43	283847	30.42	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	5763	1.86	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	37163	1.87	ppb		97
64)	Toluene	8.10	91	141133	2.08	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	29817	2.23	ppb		97
66)	1,1,2-TCA	8.56	97	26352	2.05	ppb		95
67)	2-Hexanone	8.88	43	109344	28.89	ppb		97
70)	1,2-EDB	9.09	107	25207	1.94	ppb	#	96
71)	Tetrachloroethene	8.71	166	56473	2.09	ppb		95
72)	1-Chlorohexane	9.66	91	44462	2.10	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	27607	1.77	ppb		99
74)	m&p-Xylene	9.92	91	225502	4.17	ppb		98
75)	o-Xylene	10.35	91	108150	2.00	ppb		97
76)	Styrene	10.37	104	79072	1.79	ppb		97
78)	1,3-Dichloropropane	8.74	76	39314	1.99	ppb		96
79)	Dibromochloromethane	8.98	129	23970	2.31	ppb		93
80)	Chlorobenzene	9.65	112	103295	2.13	ppb		98
81)	Ethylbenzene	9.79	91	148005	2.06	ppb		99
82)	Bromoform	10.54	173	16247	2.66	ppb		94
84)	Isopropylbenzene	10.76	105	152914	2.03	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	29210	2.05	ppb		92
86)	1,2,3-Trichloropropane	11.11	110	11654	2.04	ppb	#	80
87)	t-1,4-Dichloro-2-Butene	11.14	53	4474	2.93	ppb		87
88)	Bromobenzene	11.06	77	49216	2.06	ppb		99
89)	n-Propylbenzene	11.21	91	163657	1.60	ppb		99
90)	4-Ethyltoluene	11.34	105	153756	2.08	ppb		97
91)	2-Chlorotoluene	11.41	91	115840	1.72	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	124685	1.77	ppb		100
93)	4-Chlorotoluene	11.41	91	115840	1.72	ppb		96
94)	Tert-Butylbenzene	11.76	119	121141	2.03	ppb		91
95)	1,2,4-Trimethylbenzene	11.81	105	121921	2.00	ppb		94
96)	Sec-Butylbenzene	12.00	105	166223	2.02	ppb		94
97)	p-Isopropyltoluene	11.76	119	121141	2.03	ppb		99
98)	Benzyl Chloride	12.35	91	36569	2.77	ppb	#	90
99)	1,3-DCB	12.10	146	97482	2.15	ppb		96
100)	1,4-DCB	12.20	146	97787	2.11	ppb		98
101)	n-Butylbenzene	12.61	91	112607	1.87	ppb		94
102)	1,2-DCB	12.59	146	86543	2.06	ppb		97
103)	Hexachloroethane	12.89	201	19210	2.82	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	6332	2.38	ppb	#	76
105)	1,2,4-Trichlorobenzene	13.69	180	77892	2.08	ppb		99
106)	Hexachlorobutadiene	14.57	225	38879	2.06	ppb		94
107)	Naphthalene	14.62	128	99609	1.33	ppb		100
108)	1,2,3-Trichlorobenzene	14.88	180	56436	2.10	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery = 111.184%			
48) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery = 109.020%			
69) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery = 108.292%			
77) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery = 97.020%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	188844	10.55	ppb	100
4) Freon 114	1.16	85	100960	9.52	ppb	100
5) Chloromethane	1.22	50	75630	10.19	ppb	100
6) Vinyl chloride	1.28	62	171421	10.44	ppb	100
9) Bromomethane	1.53	94	43928	10.02	ppb	100
10) Chloroethane	1.60	64	46832	11.77	ppb	100
11) Dichlorofluoromethane	1.78	67	325860	10.44	ppb	100
12) Trichlorofluoromethane	1.82	101	323634	11.01	ppb	100
17) Acetone	2.36	43	205136	46.40	ppb	100
18) Freon-113	2.32	101	79840	9.64	ppb	100
19) 1,1-DCE	2.29	61	218867	10.53	ppb	100
23) Methyl Acetate	2.72	43	95883	9.06	ppb	100
24) Iodomethane	2.43	142	132052	8.06	ppb	100
25) Acrylonitrile	3.10	52	44170	9.69	ppb	100
26) Methylene chloride	2.81	49	96624	10.56	ppb	100
27) Carbon disulfide	2.49	76	200896	9.79	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	375809	10.39	ppb	100
29) Trans-1,2-DCE	3.14	61	212306	10.45	ppb	100
31) Diisopropyl Ether	3.92	45	398013	10.57	ppb	99
33) 1,1-DCA	3.71	63	279601	10.75	ppb	100
34) Vinyl Acetate	3.86	43	114693	9.20	ppb	100
35) Ethyl tert Butyl Ether	4.49	59	366723	10.62	ppb	100
36) MEK (2-Butanone)	4.67	43	262379	49.53	ppb	100
37) Cis-1,2-DCE	4.60	61	246510	10.35	ppb	100
38) 2,2-Dichloropropane	4.59	77	227889	10.59	ppb	100
41) Chloroform	5.09	83	309936	10.70	ppb	100
42) Bromochloromethane	4.93	49	113489	10.69	ppb	100
44) 1,1,1-TCA	5.29	97	281821	10.57	ppb	100
45) Cyclohexane	5.36	56	221224	10.03	ppb	100
46) 1,1-Dichloropropene	5.53	75	207546	10.51	ppb	100
47) 2,2,4-Trimethylpentane	5.95	57	427514	9.90	ppb	100
49) Carbon Tetrachloride	5.52	117	247631	10.56	ppb	100
50) Tert Amyl Methyl Ether	6.01	73	335933	10.41	ppb	100
52) 1,2-DCA	5.80	62	199683	10.39	ppb	100
53) Benzene	5.78	78	645239	10.41	ppb	100
54) TCE	6.61	130	215997	10.02	ppb	100
56) 1,2-Dichloropropane	6.86	63	145288	10.77	ppb	100
57) Bromodichloromethane	7.20	83	175253	10.69	ppb	100
58) Methyl Cyclohexane	6.83	83	253329	10.00	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
59)	Dibromomethane	6.99	174	153666	10.66 ppb	100
60)	MIBK (methyl isobutyl ket	7.94	43	463362	50.15 ppb	100
61)	1-Bromo-2-chloroethane	7.53	144	30133	9.83 ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	206482	10.47 ppb	100
64)	Toluene	8.11	91	695620	10.38 ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	173878	9.30 ppb	100
66)	1,1,2-TCA	8.56	97	133142	10.47 ppb	100
67)	2-Hexanone	8.88	43	187008	47.24 ppb	100
70)	1,2-EDB	9.09	107	142101	11.01 ppb	100
71)	Tetrachloroethene	8.71	166	276097	10.27 ppb	100
72)	1-Chlorohexane	9.67	91	218100	10.40 ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	160706	10.40 ppb	100
74)	m&p-Xylene	9.93	91	1152497	21.49 ppb	100
75)	o-Xylene	10.35	91	573719	10.71 ppb	100
76)	Styrene	10.37	104	463875	9.69 ppb	100
78)	1,3-Dichloropropane	8.74	76	206374	10.50 ppb	100
79)	Dibromochloromethane	8.98	129	139654	9.13 ppb	100
80)	Chlorobenzene	9.65	112	492038	10.24 ppb	100
81)	Ethylbenzene	9.79	91	758435	10.64 ppb	100
82)	Bromoform	10.54	173	107625	8.78 ppb	100
84)	Isopropylbenzene	10.76	105	802990	10.24 ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	145533	9.80 ppb	100
86)	1,2,3-Trichloropropane	11.12	110	57107	9.59 ppb	100
87)	t-1,4-Dichloro-2-Butene	11.14	53	22934	8.31 ppb	100
88)	Bromobenzene	11.06	77	244492	9.86 ppb	100
89)	n-Propylbenzene	11.21	91	874499	9.62 ppb	100
90)	4-Ethyltoluene	11.34	105	774025	10.07 ppb	100
91)	2-Chlorotoluene	11.41	91	587362	9.59 ppb	100
92)	1,3,5-Trimethylbenzene	11.41	105	649801	9.65 ppb	100
93)	4-Chlorotoluene	11.41	91	587362	9.59 ppb	100
94)	Tert-Butylbenzene	11.76	119	623925	10.07 ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	649191	10.24 ppb	100
96)	Sec-Butylbenzene	12.00	105	862906	10.09 ppb	100
97)	p-Isopropyltoluene	11.76	119	623925	10.07 ppb	100
98)	Benzyl Chloride	12.35	91	220322	8.12 ppb	100
99)	1,3-DCB	12.10	146	475041	10.08 ppb	100
100)	1,4-DCB	12.20	146	477849	9.92 ppb	100
101)	n-Butylbenzene	12.61	91	612725	9.27 ppb	100
102)	1,2-DCB	12.60	146	440645	10.10 ppb	100
103)	Hexachloroethane	12.89	201	120536	8.37 ppb	100
104)	1,2-Dibromo-3-chloropropan	13.44	157	40342	8.89 ppb	100
105)	1,2,4-Trichlorobenzene	13.69	180	389459	10.00 ppb	100
106)	Hexachlorobutadiene	14.57	225	196053	9.97 ppb	100
107)	Naphthalene	14.62	128	576261	9.23 ppb	100
108)	1,2,3-Trichlorobenzene	14.89	180	275293	9.83 ppb	100

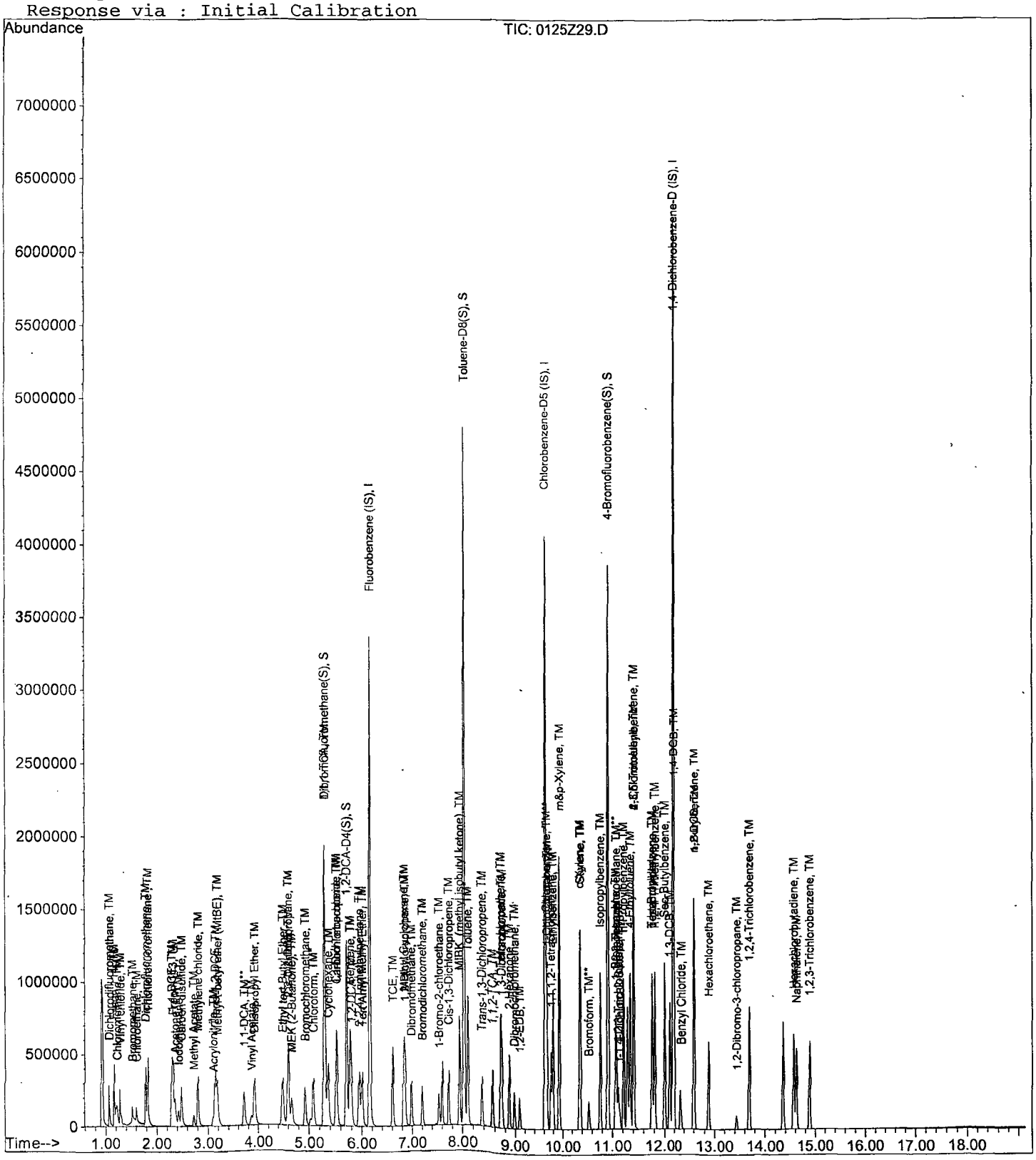
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	2246563	56.58	ppb		0.00
Spiked Amount 25.000			Recovery = 226.332%				
48) 1,2-DCA-D4(S)	5.71	65	2038786	55.19	ppb		0.00
Spiked Amount 25.000			Recovery = 220.772%				
69) Toluene-D8(S)	8.03	98	7511750	57.76	ppb		0.00
Spiked Amount 25.000			Recovery = 231.032%				
77) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07	ppb		0.00
Spiked Amount 25.000			Recovery = 200.300%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	403319	21.64	ppb		100
4) Freon 114	1.16	85	216564	19.61	ppb		91
5) Chloromethane	1.23	50	145979	19.74	ppb		100
6) Vinyl chloride	1.28	62	353729	20.68	ppb		98
9) Bromomethane	1.53	94	90475	21.61	ppb		89
10) Chloroethane	1.60	64	82768	20.79	ppb		99
11) Dichlorofluoromethane	1.78	67	636786	19.59	ppb		100
12) Trichlorofluoromethane	1.82	101	667147	21.79	ppb		100
17) Acetone	2.36	43	249467	54.16	ppb		97
18) Freon-113	2.32	101	170880	19.80	ppb		98
19) 1,1-DCE	2.29	61	443423	20.48	ppb		98
23) Methyl Acetate	2.73	43	199882	18.13	ppb		98
24) Iodomethane	2.43	142	321433	16.36	ppb		98
25) Acrylonitrile	3.11	52	92069	19.39	ppb		94
26) Methylene chloride	2.81	49	189760	21.71	ppb		98
27) Carbon disulfide	2.49	76	423936	19.84	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	793461	21.06	ppb		97
29) Trans-1,2-DCE	3.14	61	437329	20.66	ppb		96
31) Diisopropyl Ether	3.92	45	832520	21.23	ppb		97
33) 1,1-DCA	3.71	63	552522	20.39	ppb		99
34) Vinyl Acetate	3.86	43	270340	20.82	ppb	#	94
35) Ethyl tert Butyl Ether	4.49	59	787540	21.90	ppb		97
36) MEK (2-Butanone)	4.67	43	340311	61.66	ppb		97
37) Cis-1,2-DCE	4.60	61	491718	19.82	ppb		98
38) 2,2-Dichloropropane	4.59	77	470434	20.98	ppb		96
41) Chloroform	5.09	83	619520	20.52	ppb		99
42) Bromochloromethane	4.93	49	222768	20.14	ppb		97
44) 1,1,1-TCA	5.30	97	590280	21.25	ppb		99
45) Cyclohexane	5.36	56	472969	20.59	ppb		98
46) 1,1-Dichloropropene	5.53	75	426675	20.74	ppb		96
47) 2,2,4-Trimethylpentane	5.95	57	955162	21.23	ppb		99
49) Carbon Tetrachloride	5.52	117	526007	21.52	ppb		96
50) Tert Amyl Methyl Ether	6.01	73	737920	21.94	ppb		99
52) 1,2-DCA	5.81	62	392634	19.60	ppb		98
53) Benzene	5.78	78	1311861	20.32	ppb		98
54) TCE	6.61	130	452077	20.13	ppb		95
56) 1,2-Dichloropropane	6.86	63	291674	20.76	ppb		99
57) Bromodichloromethane	7.20	83	378829	22.19	ppb		96
58) Methyl Cyclohexane	6.84	83	570742	21.62	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	313910	20.91	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	615187	63.91	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	63294	19.82	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	446949	21.76	ppb		97
64)	Toluene	8.11	91	1448580	20.74	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	382640	18.76	ppb		98
66)	1,1,2-TCA	8.56	97	277693	20.96	ppb		98
67)	2-Hexanone	8.88	43	243904	58.22	ppb		99
70)	1,2-EDB	9.09	107	296985	22.61	ppb		99
71)	Tetrachloroethene	8.72	166	560903	20.51	ppb		97
72)	1-Chlorohexane	9.67	91	465339	21.82	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	345743	21.99	ppb		99
74)	m&p-Xylene	9.92	91	2367189	43.40	ppb		99
75)	o-Xylene	10.35	91	1192190	21.88	ppb		100
76)	Styrene	10.37	104	986898	20.06	ppb		99
78)	1,3-Dichloropropane	8.74	76	429822	21.49	ppb		99
79)	Dibromochloromethane	8.99	129	305498	18.57	ppb		96
80)	Chlorobenzene	9.65	112	1008069	20.62	ppb		98
81)	Ethylbenzene	9.79	91	1556685	21.46	ppb		97
82)	Bromoform	10.54	173	241387	17.46	ppb		94
84)	Isopropylbenzene	10.76	105	1667013	21.12	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	310985	20.81	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	121580	20.29	ppb		96
87)	t-1,4-Dichloro-2-Butene	11.15	53	56998	18.22	ppb		85
88)	Bromobenzene	11.06	77	503742	20.18	ppb		99
89)	n-Propylbenzene	11.21	91	1834559	20.40	ppb		99
90)	4-Ethyltoluene	11.34	105	1633935	21.11	ppb		97
91)	2-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	1352312	20.16	ppb		96
93)	4-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
94)	Tert-Butylbenzene	11.76	119	1307807	20.96	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	1370905	21.49	ppb		98
96)	Sec-Butylbenzene	12.00	105	1837210	21.35	ppb		98
97)	p-Isopropyltoluene	11.76	119	1307807	20.96	ppb		100
98)	Benzyl Chloride	12.35	91	541868	17.47	ppb		98
99)	1,3-DCB	12.10	146	968244	20.40	ppb		99
100)	1,4-DCB	12.20	146	976761	20.15	ppb		99
101)	n-Butylbenzene	12.61	91	1339630	19.99	ppb		98
102)	1,2-DCB	12.60	146	891700	20.29	ppb		99
103)	Hexachloroethane	12.89	201	286470	17.42	ppb		90
104)	1,2-Dibromo-3-chloropropan	13.44	157	89321	18.24	ppb	#	82
105)	1,2,4-Trichlorobenzene	13.69	180	834868	21.28	ppb		97
106)	Hexachlorobutadiene	14.57	225	428476	21.64	ppb		98
107)	Naphthalene	14.62	128	1287449	20.96	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	596215	21.15	ppb		100

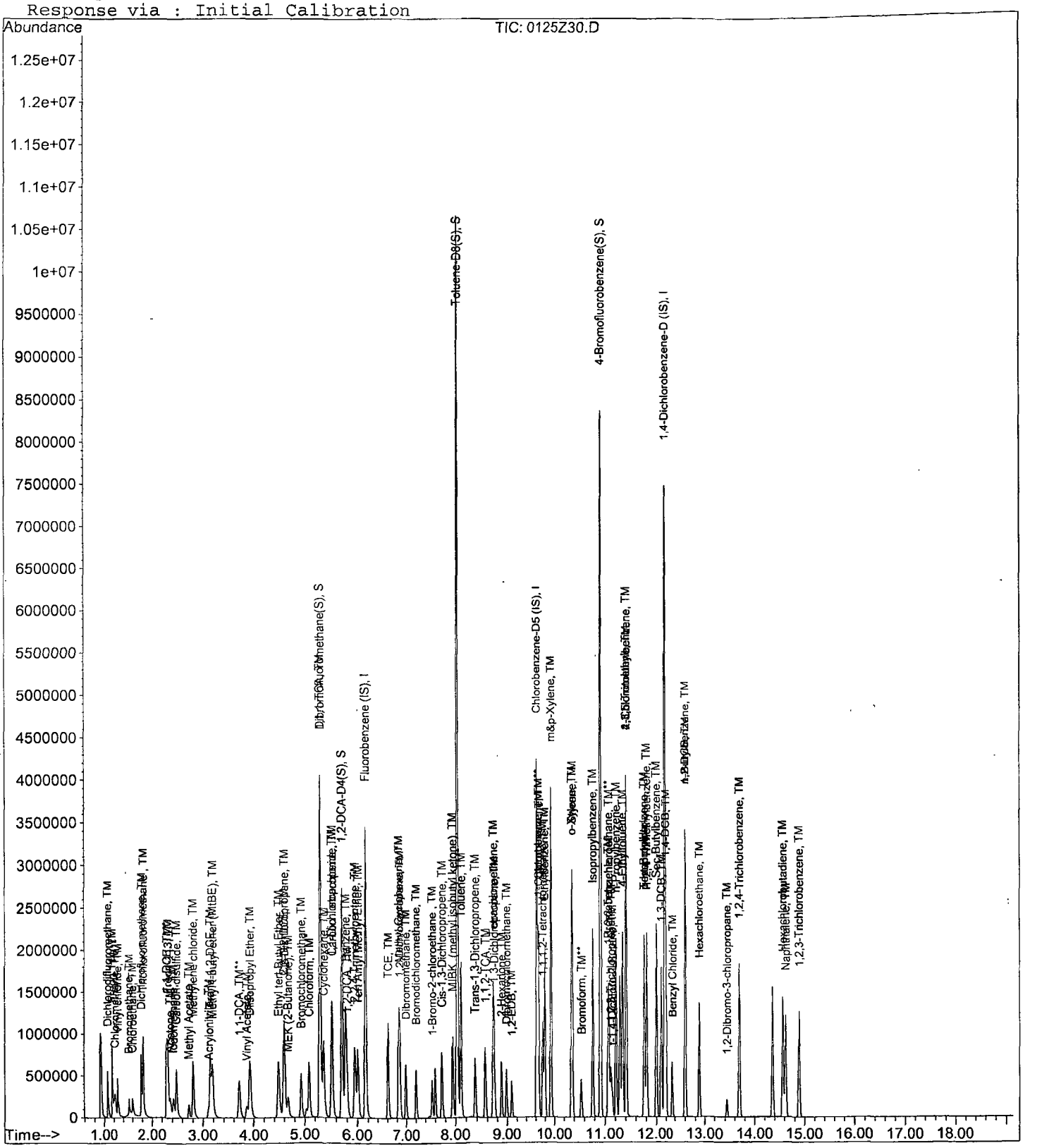
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery =	220.264%		
48) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery =	212.784%		
69) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery =	223.732%		
77) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery =	197.396%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	850845	43.18	ppb	100
4) Freon 114	1.16	85	471713	40.41	ppb	81
5) Chloromethane	1.22	50	310138	40.69	ppb	99
6) Vinyl chloride	1.28	62	723959	40.04	ppb	99
9) Bromomethane	1.53	94	180281	42.36	ppb	92
10) Chloroethane	1.60	64	160723	39.19	ppb	96
11) Dichlorofluoromethane	1.78	67	1219590	35.49	ppb	100
12) Trichlorofluoromethane	1.82	101	1347327	41.63	ppb	99
17) Acetone	2.36	43	342775	70.40	ppb	97
18) Freon-113	2.32	101	342720	37.57	ppb	93
19) 1,1-DCE	2.29	61	935892	40.90	ppb	98
23) Methyl Acetate	2.73	43	413425	35.47	ppb	96
24) Iodomethane	2.42	142	803511	36.15	ppb	97
25) Acrylonitrile	3.10	52	190471	37.95	ppb	97
26) Methylene chloride	2.81	49	395456	44.78	ppb	96
27) Carbon disulfide	2.48	76	899456	39.82	ppb	99
28) Methyl t-butyl ether (MtBE	3.18	73	1702458	42.74	ppb	98
29) Trans-1,2-DCE	3.14	61	903425	40.37	ppb	99
31) Diisopropyl Ether	3.93	45	1766714	42.61	ppb	99
33) 1,1-DCA	3.71	63	1139247	39.78	ppb	98
34) Vinyl Acetate	3.86	43	721227	52.54	ppb	97
35) Ethyl tert Butyl Ether	4.49	59	1713648	45.08	ppb	100
36) MEK (2-Butanone)	4.67	43	487302	83.53	ppb	97
37) Cis-1,2-DCE	4.60	61	1014813	38.71	ppb	95
38) 2,2-Dichloropropane	4.59	77	1003777	42.34	ppb	97
41) Chloroform	5.09	83	1275162	39.97	ppb	100
42) Bromochloromethane	4.93	49	453439	38.79	ppb	98
44) 1,1,1-TCA	5.30	97	1235018	42.07	ppb	97
45) Cyclohexane	5.36	56	995524	40.99	ppb	97
46) 1,1-Dichloropropene	5.53	75	906680	41.69	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	2048913	43.08	ppb	99
49) Carbon Tetrachloride	5.52	117	1127652	43.66	ppb	95
50) Tert Amyl Methyl Ether	6.01	73	1603763	45.12	ppb	96
52) 1,2-DCA	5.81	62	819042	38.68	ppb	99
53) Benzene	5.78	78	2701347	39.59	ppb	99
54) TCE	6.61	130	938486	39.53	ppb	97
56) 1,2-Dichloropropane	6.86	63	616004	41.49	ppb	97
57) Bromodichloromethane	7.20	83	831516	46.07	ppb	99
58) Methyl Cyclohexane	6.84	83	1216748	43.61	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	660236	41.60	ppb		95
60)	MIBK (methyl isobutyl ket	7.94	43	909331	89.37	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	135518	40.16	ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	975719	44.95	ppb		96
64)	Toluene	8.11	91	3043083	41.23	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	868044	39.37	ppb		97
66)	1,1,2-TCA	8.56	97	598299	42.72	ppb		95
67)	2-Hexanone	8.88	43	372224	82.44	ppb		99
70)	1,2-EDB	9.09	107	632935	44.90	ppb		99
71)	Tetrachloroethene	8.71	166	1163392	39.64	ppb		100
72)	1-Chlorohexane	9.67	91	979964	42.80	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	758668	44.96	ppb		97
74)	m&p-Xylene	9.93	91	4994604	85.31	ppb		97
75)	o-Xylene	10.35	91	2550600	43.60	ppb		97
76)	Styrene	10.37	104	2163300	40.77	ppb		96
78)	1,3-Dichloropropane	8.74	76	905531	42.18	ppb		99
79)	Dibromochloromethane	8.98	129	712541	39.28	ppb		94
80)	Chlorobenzene	9.65	112	2118380	40.36	ppb		97
81)	Ethylbenzene	9.79	91	3251491	41.77	ppb		97
82)	Bromoform	10.54	173	589640	37.73	ppb		96
84)	Isopropylbenzene	10.76	105	3577162	43.75	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	705505	45.58	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	260822	42.02	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	133478	39.23	ppb	#	80
88)	Bromobenzene	11.06	77	1088521	42.09	ppb		98
89)	n-Propylbenzene	11.22	91	3884703	42.06	ppb		99
90)	4-Ethyltoluene	11.34	105	3428735	42.76	ppb		98
91)	2-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	2886286	41.75	ppb		97
93)	4-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
94)	Tert-Butylbenzene	11.76	119	2785413	43.10	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	2928711	44.32	ppb		99
96)	Sec-Butylbenzene	12.00	105	3958318	44.40	ppb		99
97)	p-Isopropyltoluene	11.76	119	2785413	43.10	ppb		98
98)	Benzyl Chloride	12.35	91	1298244	38.25	ppb		99
99)	1,3-DCB	12.10	146	2039819	41.49	ppb		99
100)	1,4-DCB	12.20	146	2048086	40.79	ppb		98
101)	n-Butylbenzene	12.61	91	2888608	41.49	ppb		98
102)	1,2-DCB	12.60	146	1886399	41.45	ppb		99
103)	Hexachloroethane	12.89	201	677839	37.60	ppb	#	85
104)	1,2-Dibromo-3-chloropropan	13.44	157	205371	39.13	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	1730023	42.58	ppb		97
106)	Hexachlorobutadiene	14.57	225	883426	43.08	ppb		99
107)	Naphthalene	14.62	128	2698564	42.82	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	1221506	41.84	ppb		99

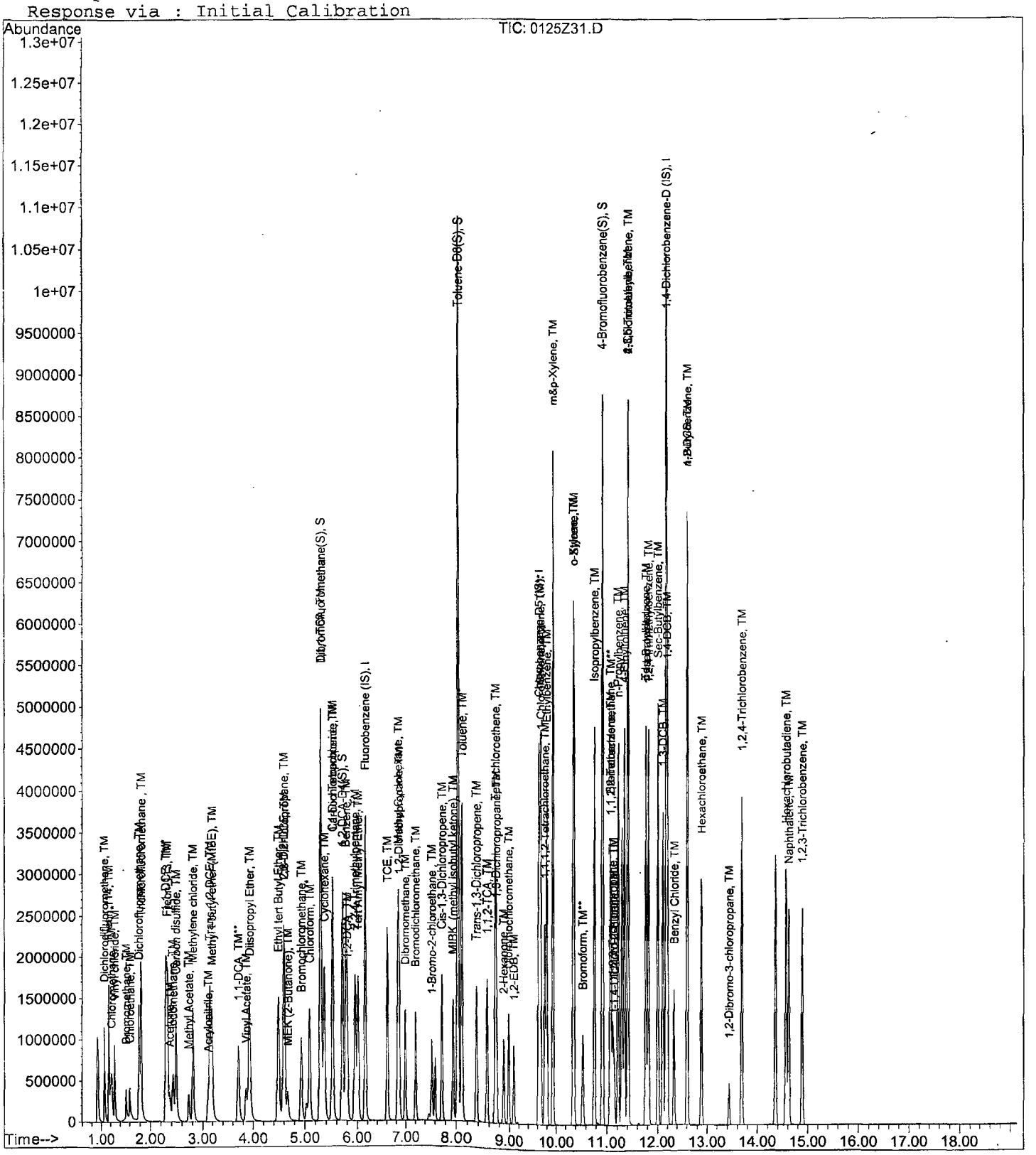
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery =	452.384%		
48) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery =	441.048%		
69) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery =	417.644%		
77) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery =	401.700%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	2142477	105.02	ppb	99
4) Freon 114	1.16	85	1130573	93.54	ppb	86
5) Chloromethane	1.22	50	776119	99.77	ppb	100
6) Vinyl chloride	1.28	62	1812047	96.79	ppb	97
9) Bromomethane	1.52	94	424790	98.76	ppb	93
10) Chloroethane	1.60	64	329613	78.79	ppb	99
11) Dichlorofluoromethane	1.77	67	1768543	49.71	ppb	100
12) Trichlorofluoromethane	1.80	101	2682800	80.07	ppb	99
17) Acetone	2.38	43	441385	87.56	ppb	96
18) Freon-113	2.31	101	858240	90.87	ppb	94
19) 1,1-DCE	2.28	61	2337639	98.67	ppb	99
23) Methyl Acetate	2.73	43	1104464	91.53	ppb	95
24) Iodomethane	2.42	142	2439219	102.40	ppb	95
25) Acrylonitrile	3.11	52	488871	94.07	ppb	96
26) Methylene chloride	2.80	49	872512	97.73	ppb	97
27) Carbon disulfide	2.47	76	2246656	96.07	ppb	100
28) Methyl t-butyl ether (MtBE	3.19	73	4339324	105.23	ppb	98
29) Trans-1,2-DCE	3.14	61	2220503	95.83	ppb	97
31) Diisopropyl Ether	3.93	45	4444765	103.54	ppb	99
33) 1,1-DCA	3.71	63	2847490	96.03	ppb	99
34) Vinyl Acetate	3.86	43	1372264	96.55	ppb	96
35) Ethyl tert Butyl Ether	4.49	59	4444937	112.93	ppb	99
36) MEK (2-Butanone)	4.68	43	638941	105.78	ppb	99
37) Cis-1,2-DCE	4.60	61	2528790	93.16	ppb	96
38) 2,2-Dichloropropane	4.59	77	2539577	103.47	ppb	100
41) Chloroform	5.09	83	3206108	97.05	ppb	99
42) Bromochloromethane	4.93	49	1127669	93.16	ppb	95
44) 1,1,1-TCA	5.30	97	3128191	102.92	ppb	98
45) Cyclohexane	5.36	56	2487897	98.94	ppb	100
46) 1,1-Dichloropropene	5.53	75	2242635	99.60	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	5144591	104.47	ppb	99
49) Carbon Tetrachloride	5.52	117	2914383	108.97	ppb	97
50) Tert Amyl Methyl Ether	6.01	73	4221488	114.71	ppb	94
52) 1,2-DCA	5.81	62	2034029	92.78	ppb	99
53) Benzene	5.78	78	6643693	94.04	ppb	100
54) TCE	6.61	130	2425073	98.65	ppb	96
56) 1,2-Dichloropropane	6.86	63	1553226	101.03	ppb	99
57) Bromodichloromethane	7.20	83	2249058	120.36	ppb	97
58) Methyl Cyclohexane	6.83	83	3046967	105.49	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	1721933	104.80	ppb		96
60)	MIBK (methyl isobutyl ket	7.95	43	1227198	116.48	ppb		100
61)	1-Bromo-2-chloroethane	7.54	144	352361	100.84	ppb		95
63)	Cis-1,3-Dichloropropene	7.73	75	2596344	115.52	ppb		97
64)	Toluene	8.11	91	7571955	99.08	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	2323946	100.55	ppb		97
66)	1,1,2-TCA	8.56	97	1574254	108.57	ppb		94
67)	2-Hexanone	8.88	43	474176	100.60	ppb		98
70)	1,2-EDB	9.09	107	1667762	110.13	ppb		99
71)	Tetrachloroethene	8.71	166	2962882	93.98	ppb		99
72)	1-Chlorohexane	9.67	91	2520576	102.48	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	2028613	111.90	ppb		99
74)	m&p-Xylene	9.93	91	12398749	197.14	ppb		99
75)	o-Xylene	10.35	91	6584991	104.78	ppb		98
76)	Styrene	10.37	104	5699111	99.72	ppb		96
78)	1,3-Dichloropropane	8.74	76	2354438	102.10	ppb		99
79)	Dibromochloromethane	8.98	129	1989350	100.64	ppb		96
80)	Chlorobenzene	9.65	112	5454562	96.74	ppb		96
81)	Ethylbenzene	9.79	91	8285082	99.07	ppb		98
82)	Bromoform	10.54	173	1750422	101.50	ppb		97
84)	Isopropylbenzene	10.76	105	9290802	104.50	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	1839648	109.31	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	688681	102.04	ppb		97
87)	t-1,4-Dichloro-2-Butene	11.14	53	382334	100.80	ppb	#	80
88)	Bromobenzene	11.06	77	2897158	103.03	ppb		93
89)	n-Propylbenzene	11.21	91	9913611	99.15	ppb		99
90)	4-Ethyltoluene	11.34	105	8875825	101.80	ppb		99
91)	2-Chlorotoluene	11.41	91	6692118	99.21	ppb		95
92)	1,3,5-Trimethylbenzene	11.41	105	7444513	99.31	ppb		96
93)	4-Chlorotoluene	11.41	91	6692118	99.21	ppb		95
94)	Tert-Butylbenzene	11.76	119	7359947	104.72	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	7745661	107.80	ppb		100
96)	Sec-Butylbenzene	12.00	105	10228163	105.52	ppb		98
97)	p-Isopropyltoluene	11.76	119	7359947	104.72	ppb		98
98)	Benzyl Chloride	12.35	91	3845812	101.36	ppb		99
99)	1,3-DCB	12.10	146	5368951	100.44	ppb		98
100)	1,4-DCB	12.20	146	5342198	97.85	ppb		98
101)	n-Butylbenzene	12.61	91	7543645	99.48	ppb		100
102)	1,2-DCB	12.59	146	4898650	98.99	ppb		99
103)	Hexachloroethane	12.89	201	2051749	101.60	ppb	#	79
104)	1,2-Dibromo-3-chloropropan	13.44	157	585335	100.79	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	4404077	99.69	ppb		97
106)	Hexachlorobutadiene	14.57	225	2162031	96.97	ppb		98
107)	Naphthalene	14.62	128	6732995	98.78	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	3060243	96.40	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

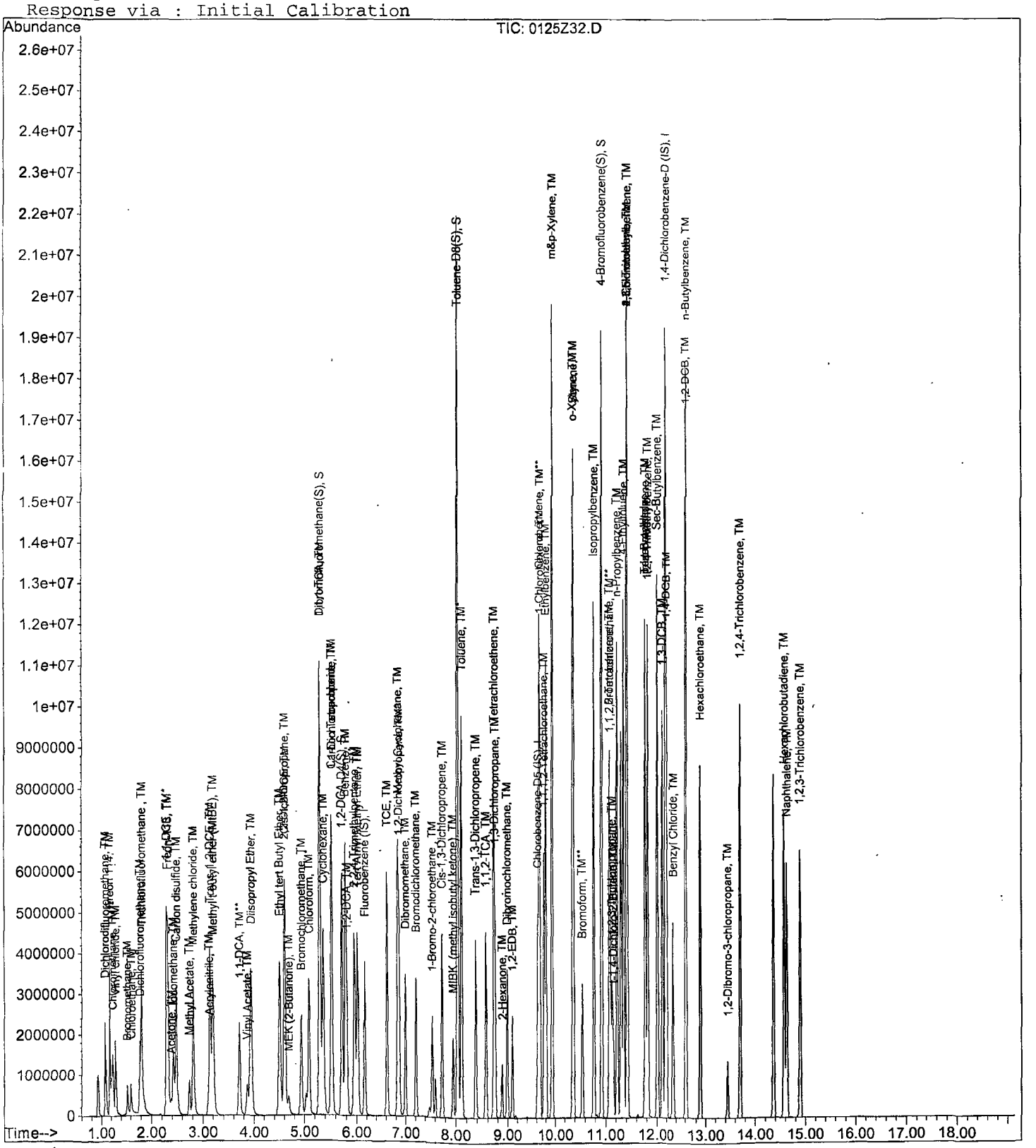
Data File : M:\ZEUS\DATA\210125\0125Z32.D
Acq On : 25 Jan 21 19:10
Sample : 100ug/L VOC STD 1/25/21
Misc :

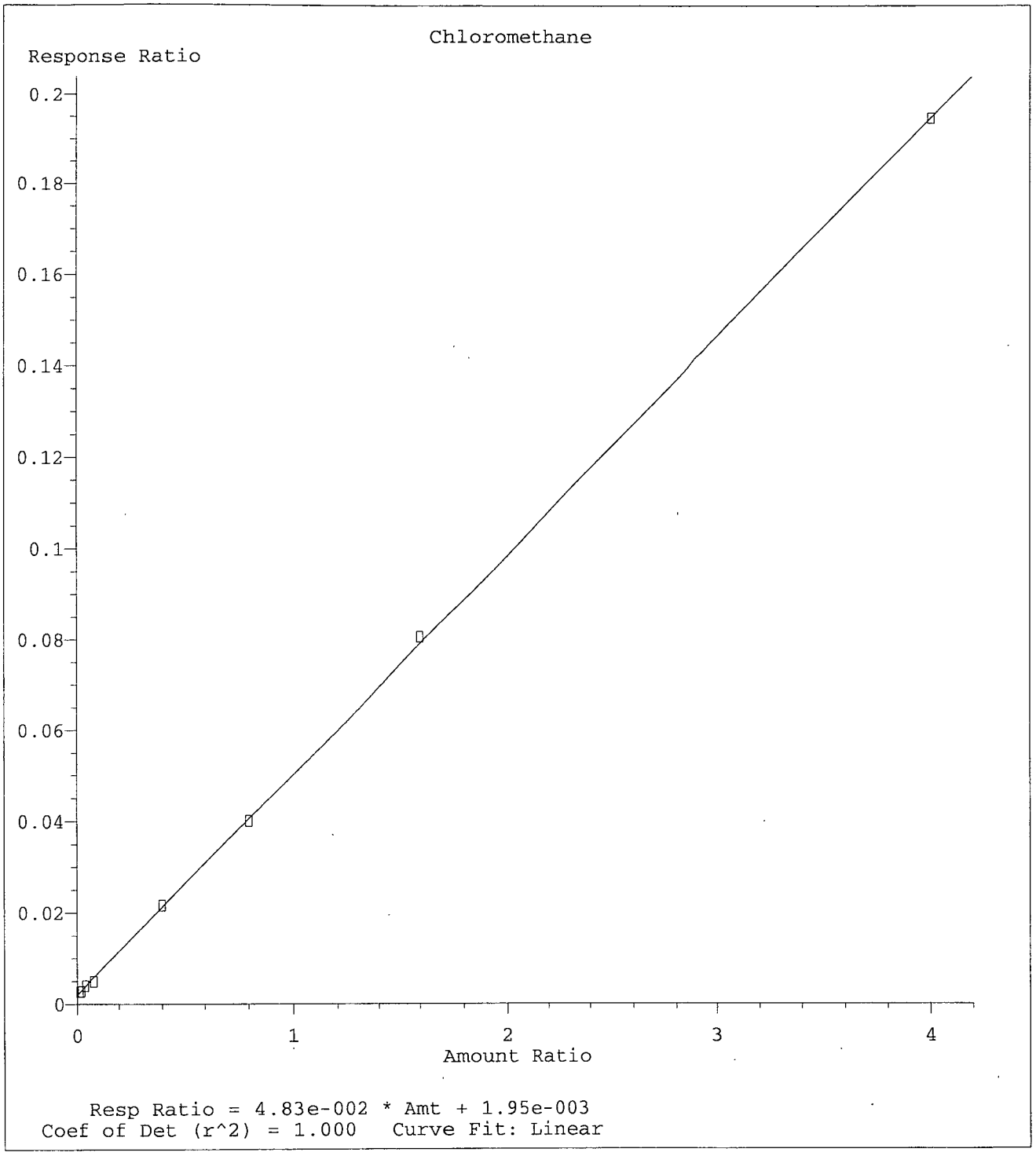
Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021

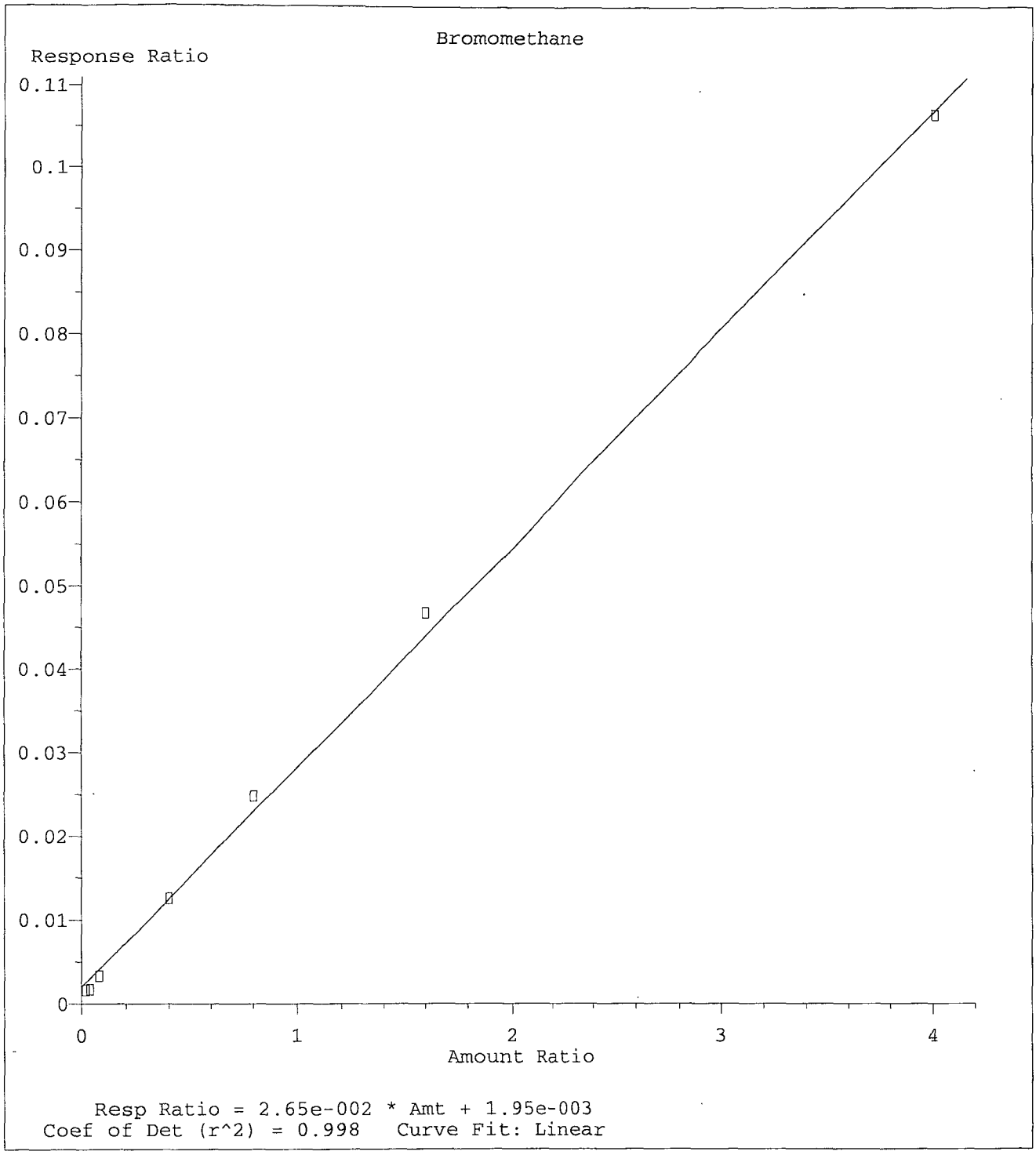
Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration

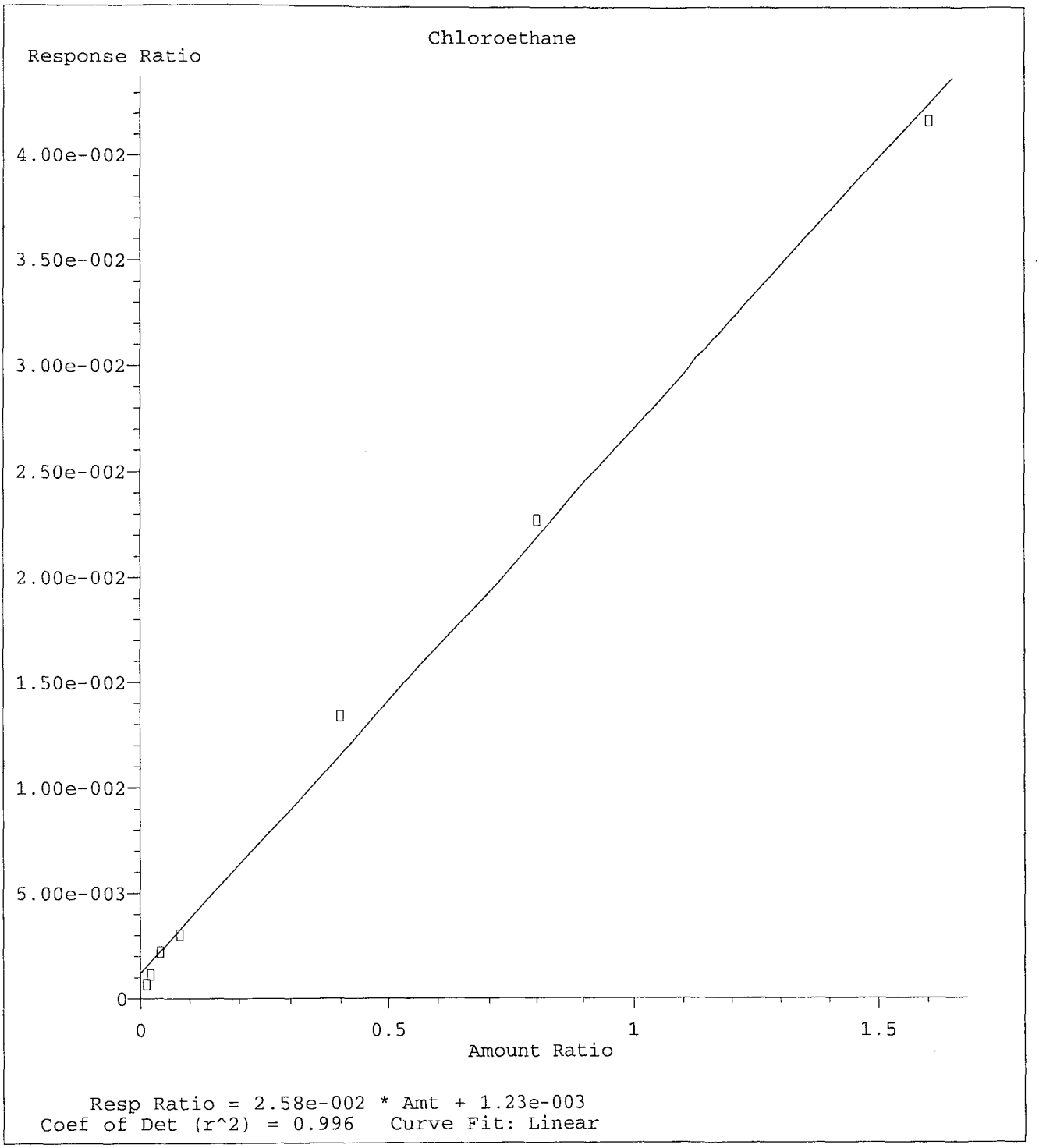




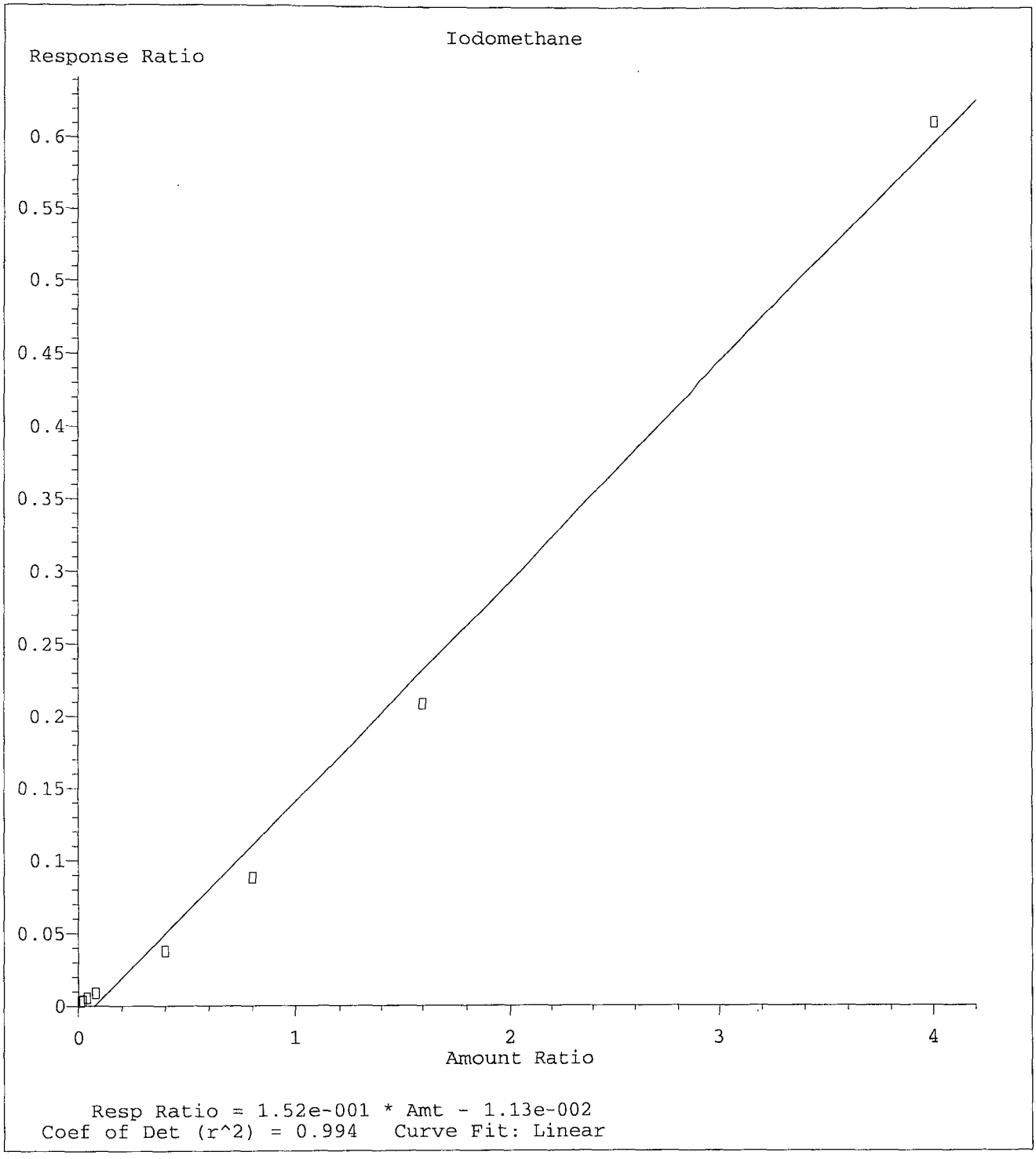
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



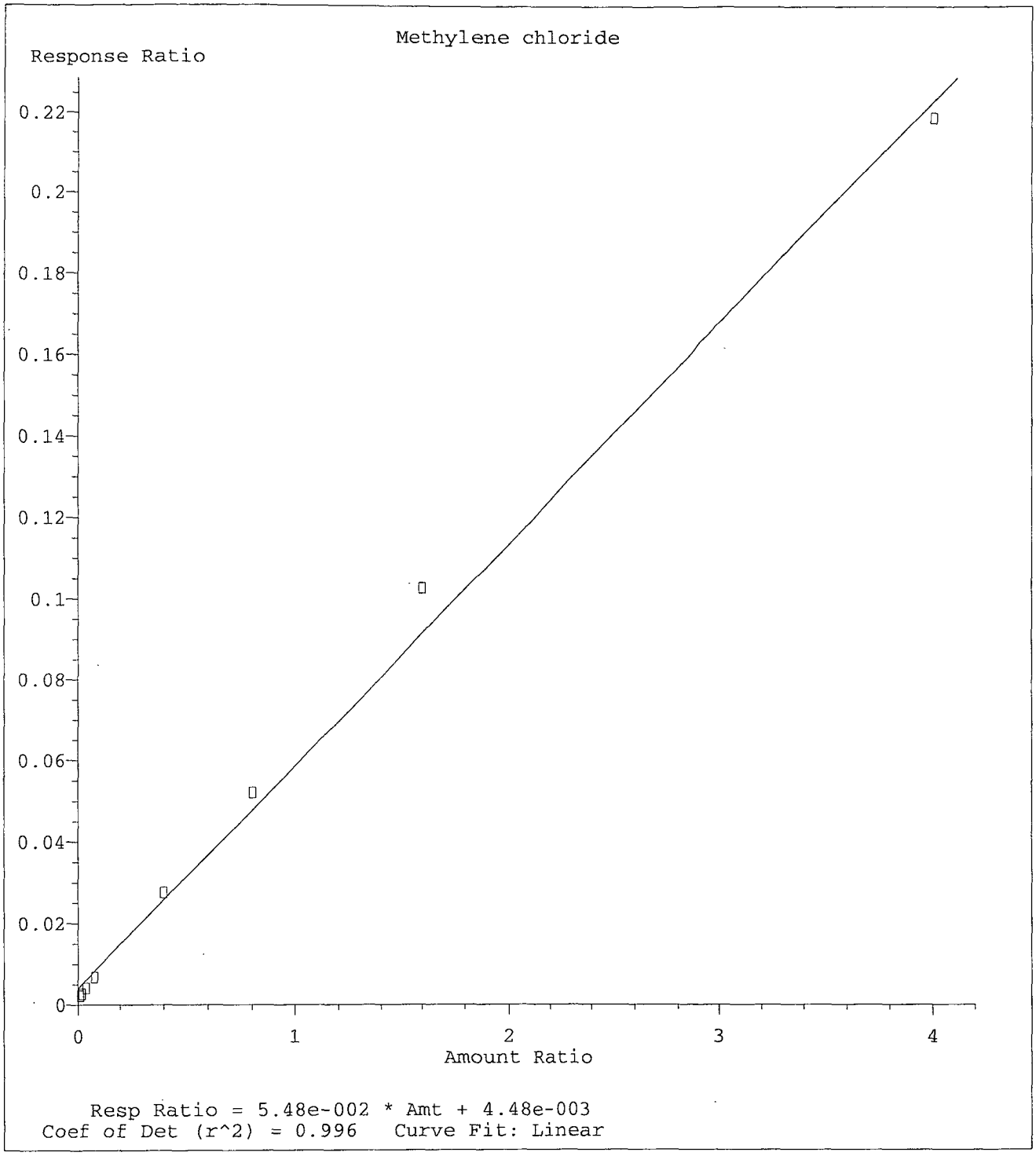
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



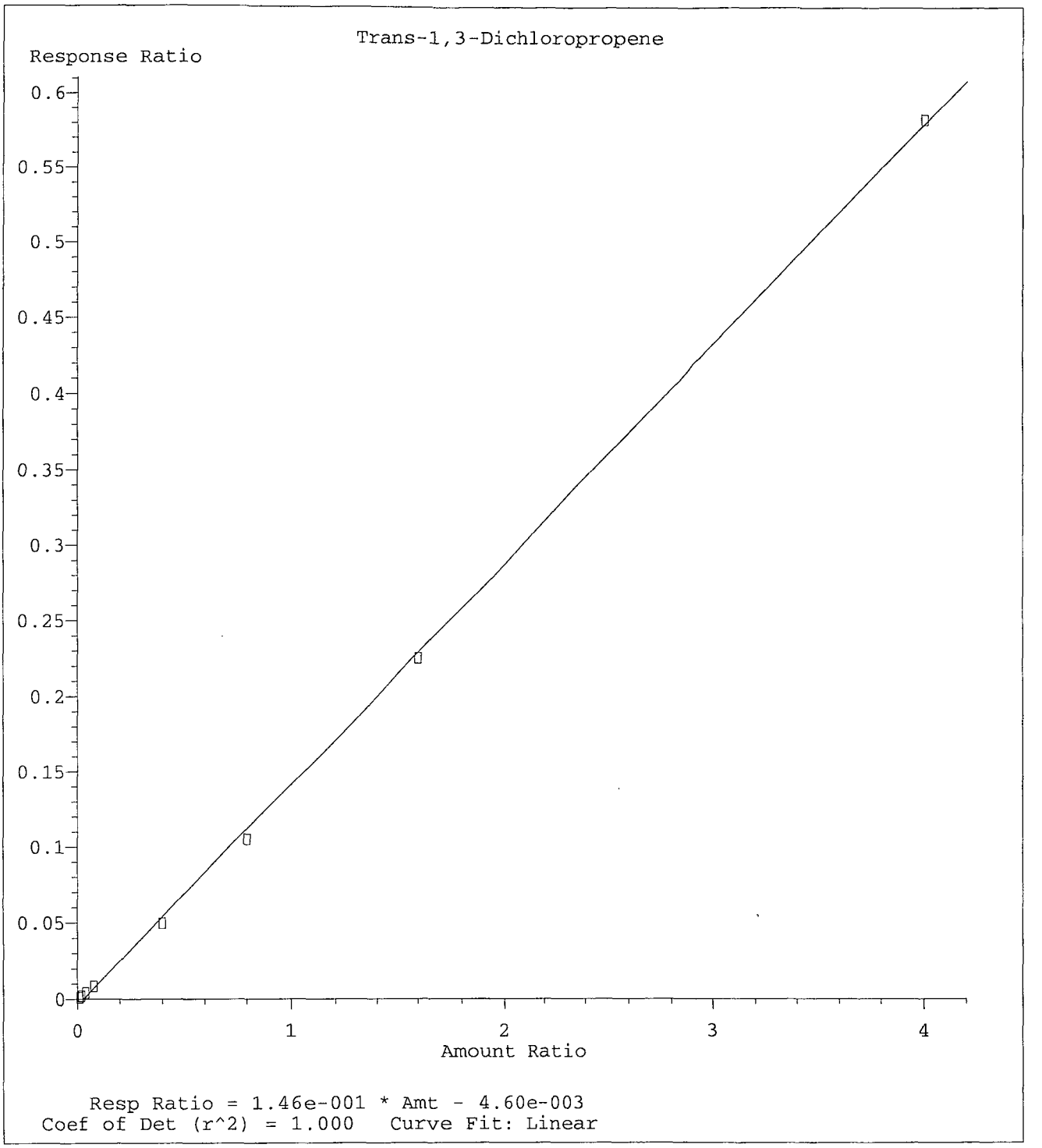
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



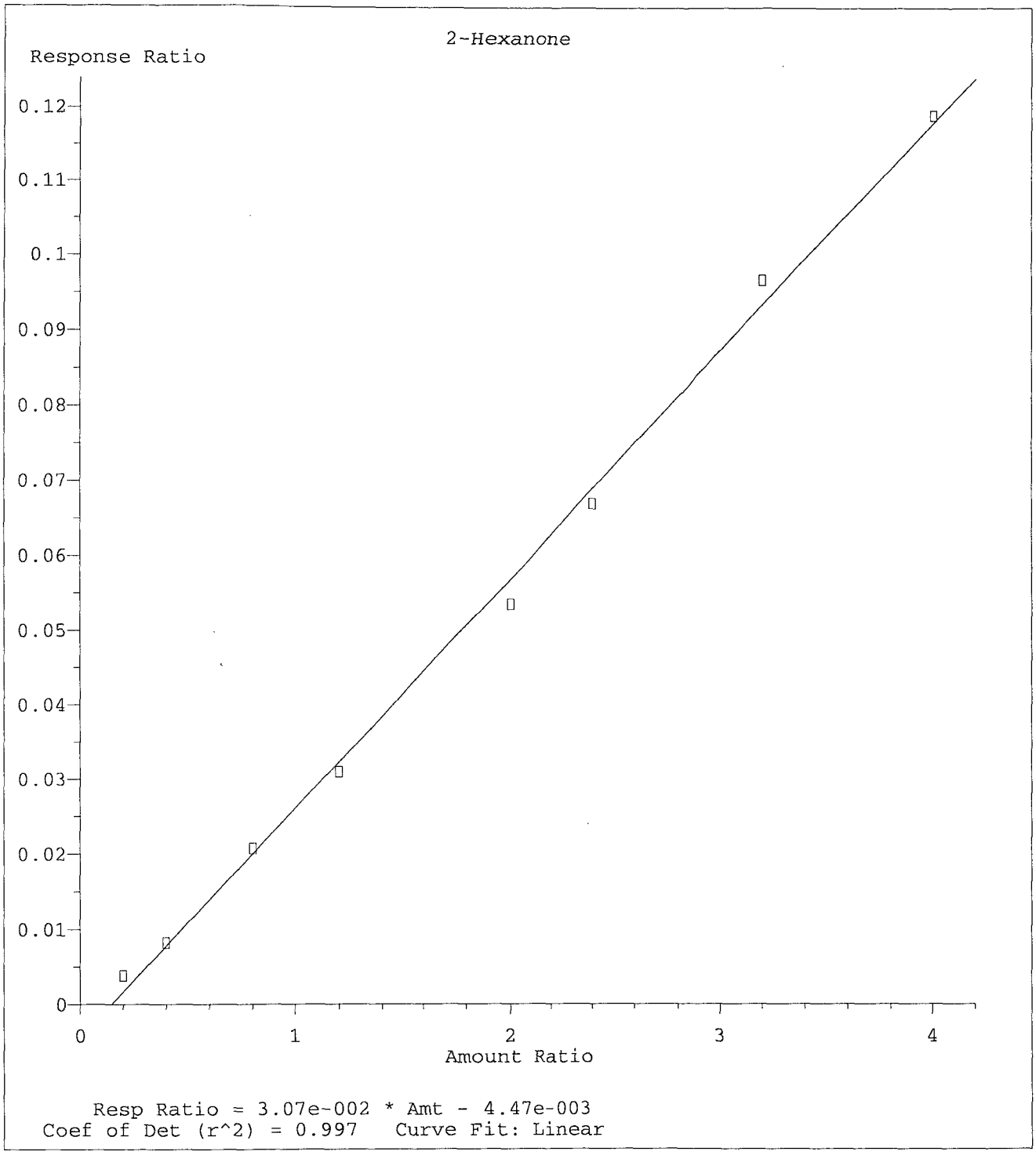
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



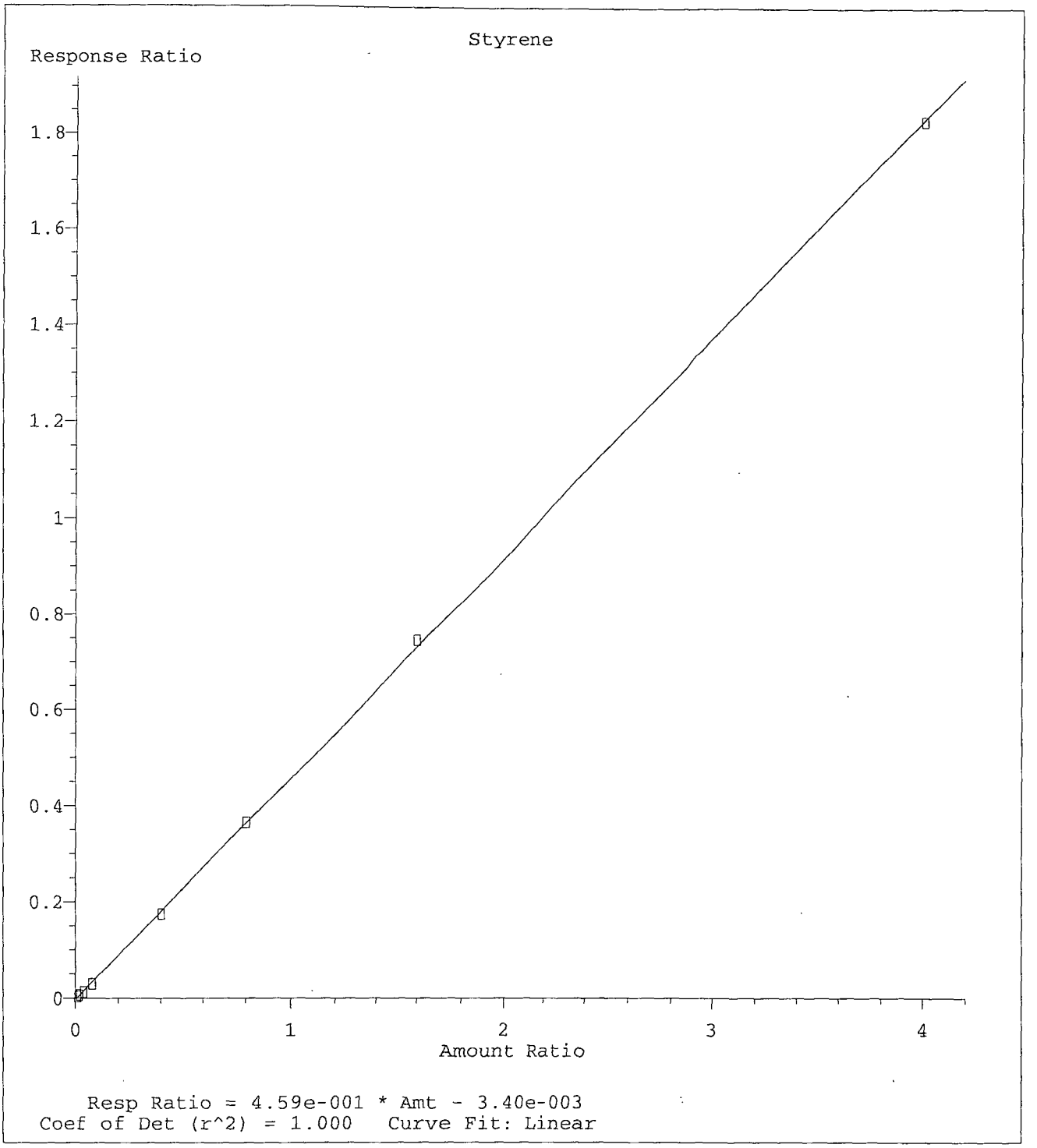
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



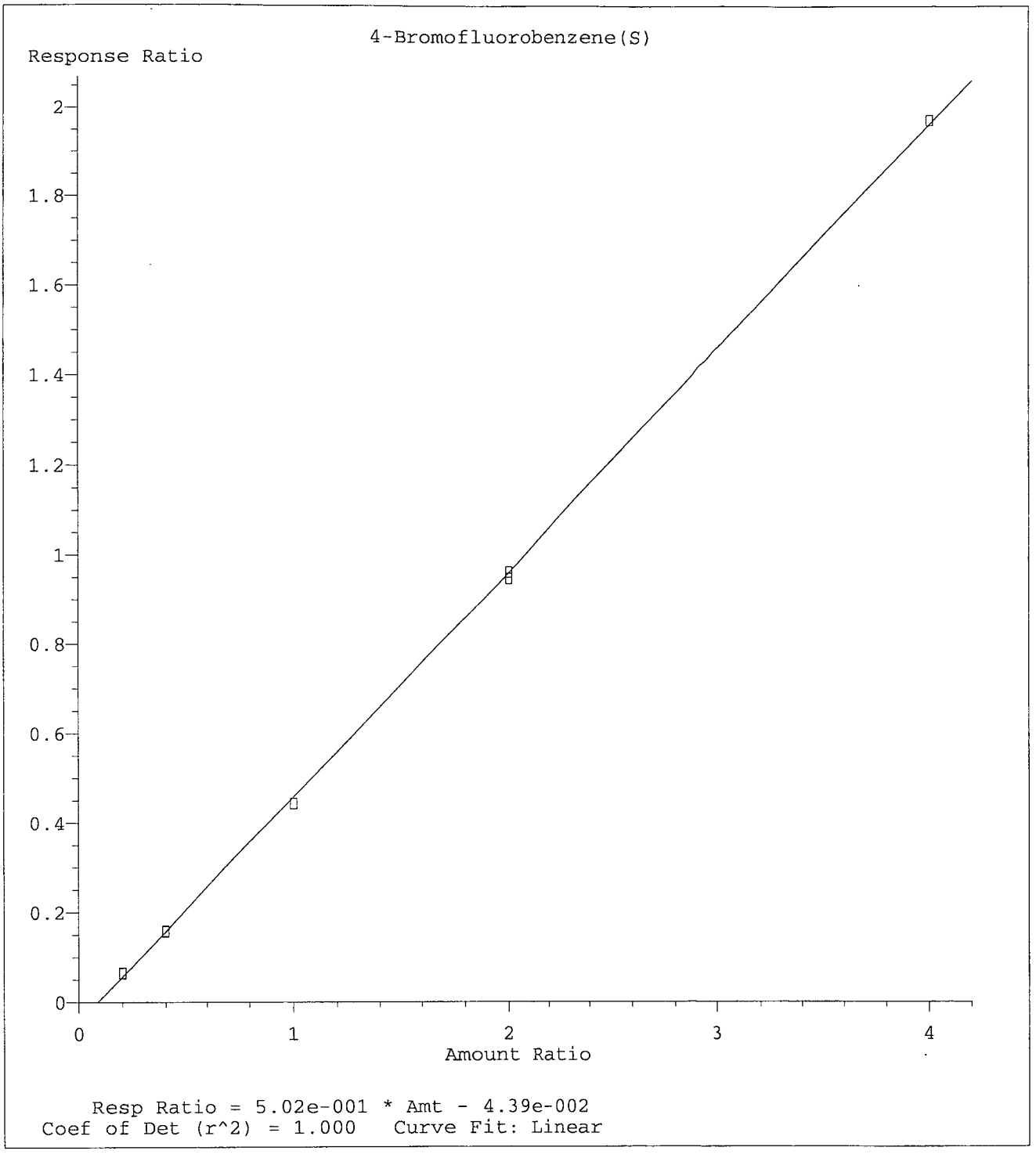
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



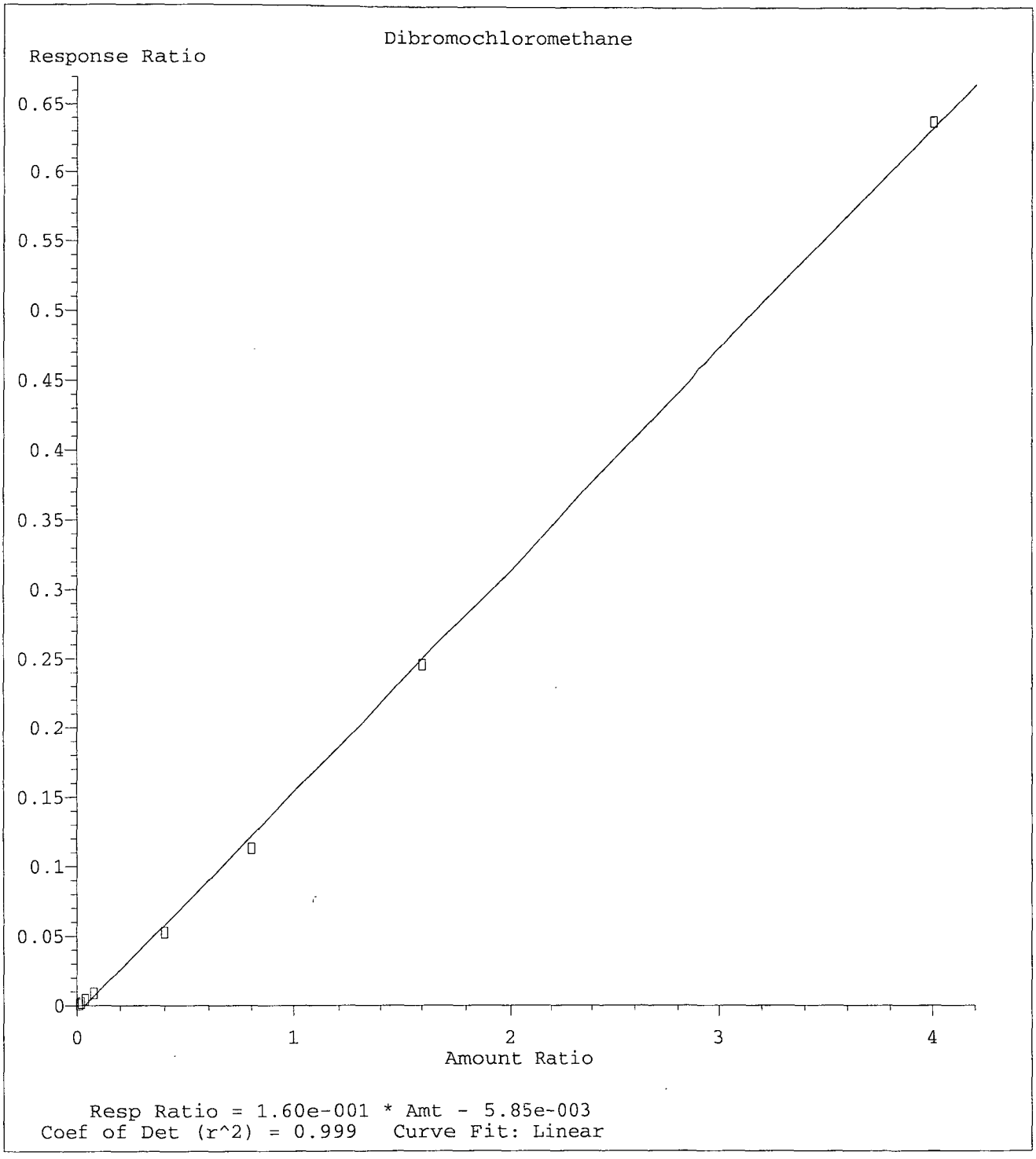
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



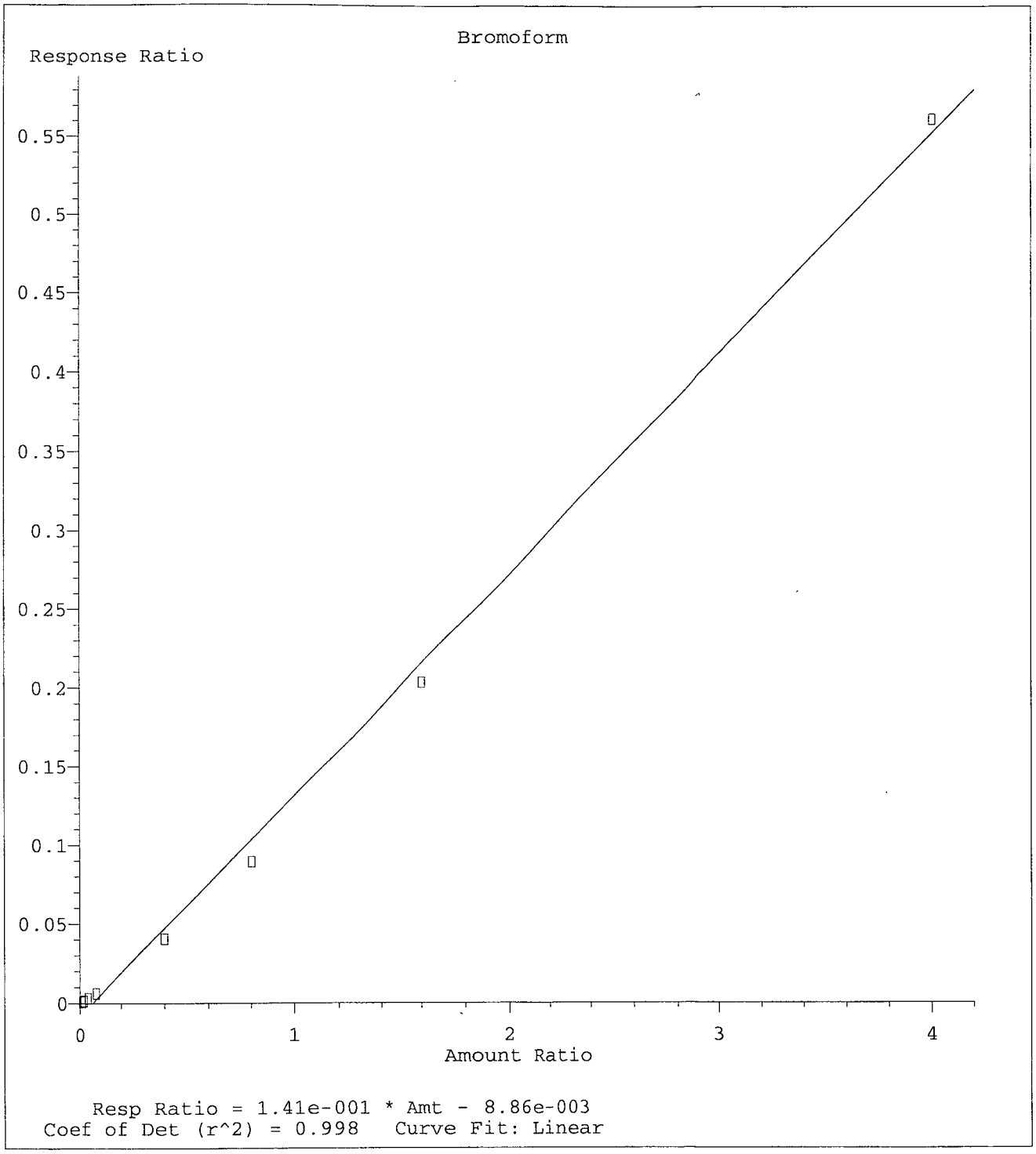
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



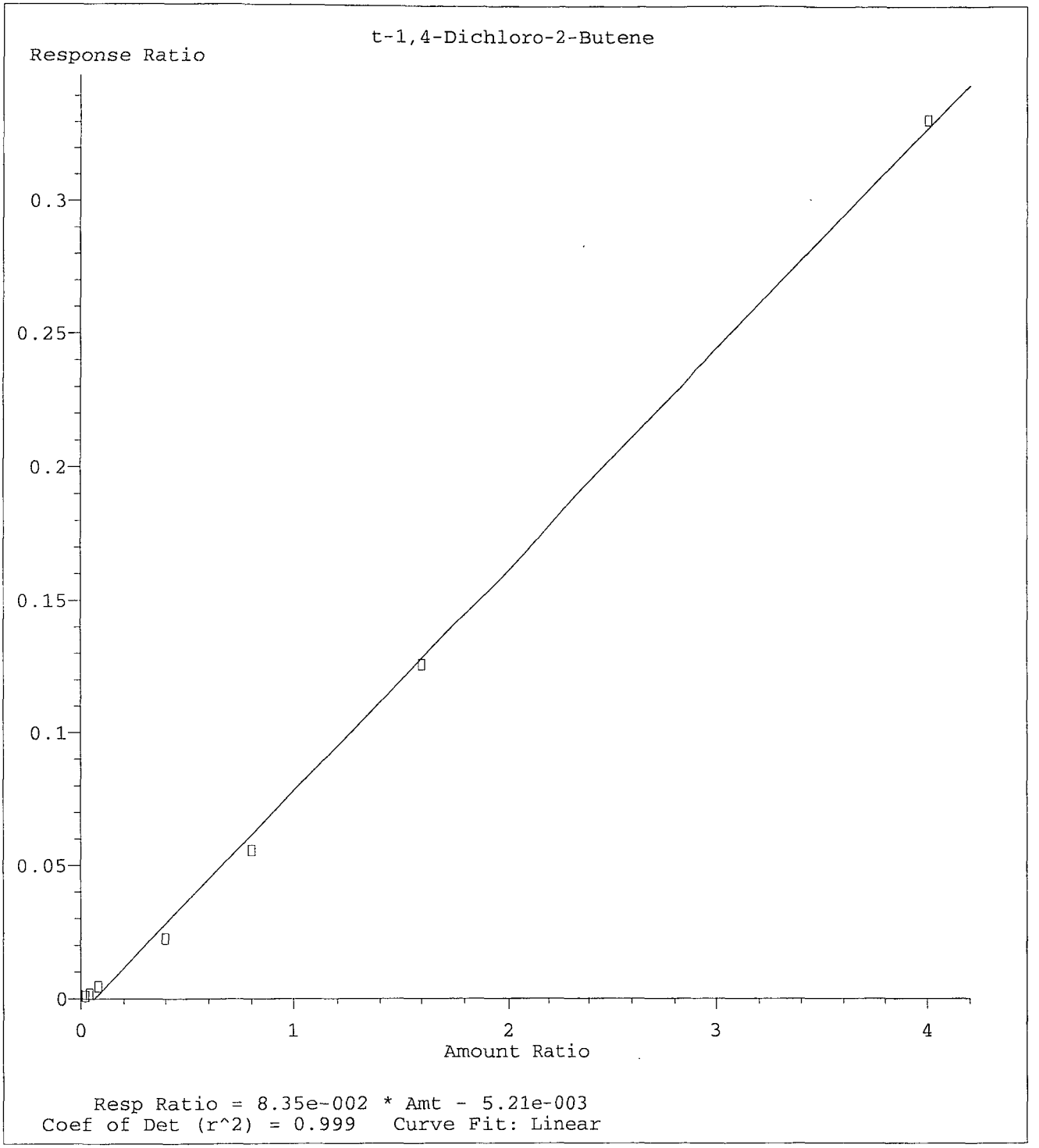
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



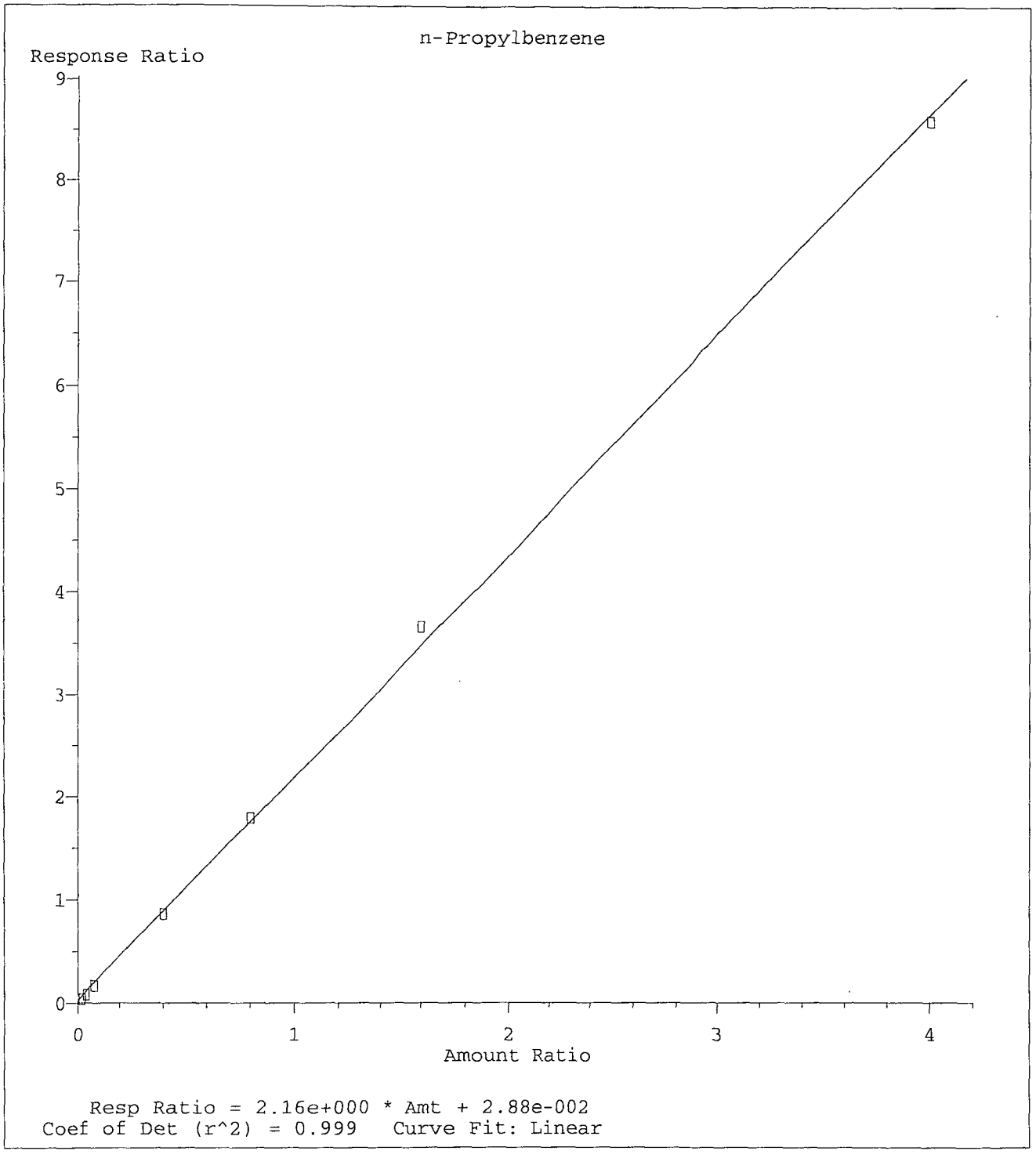
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



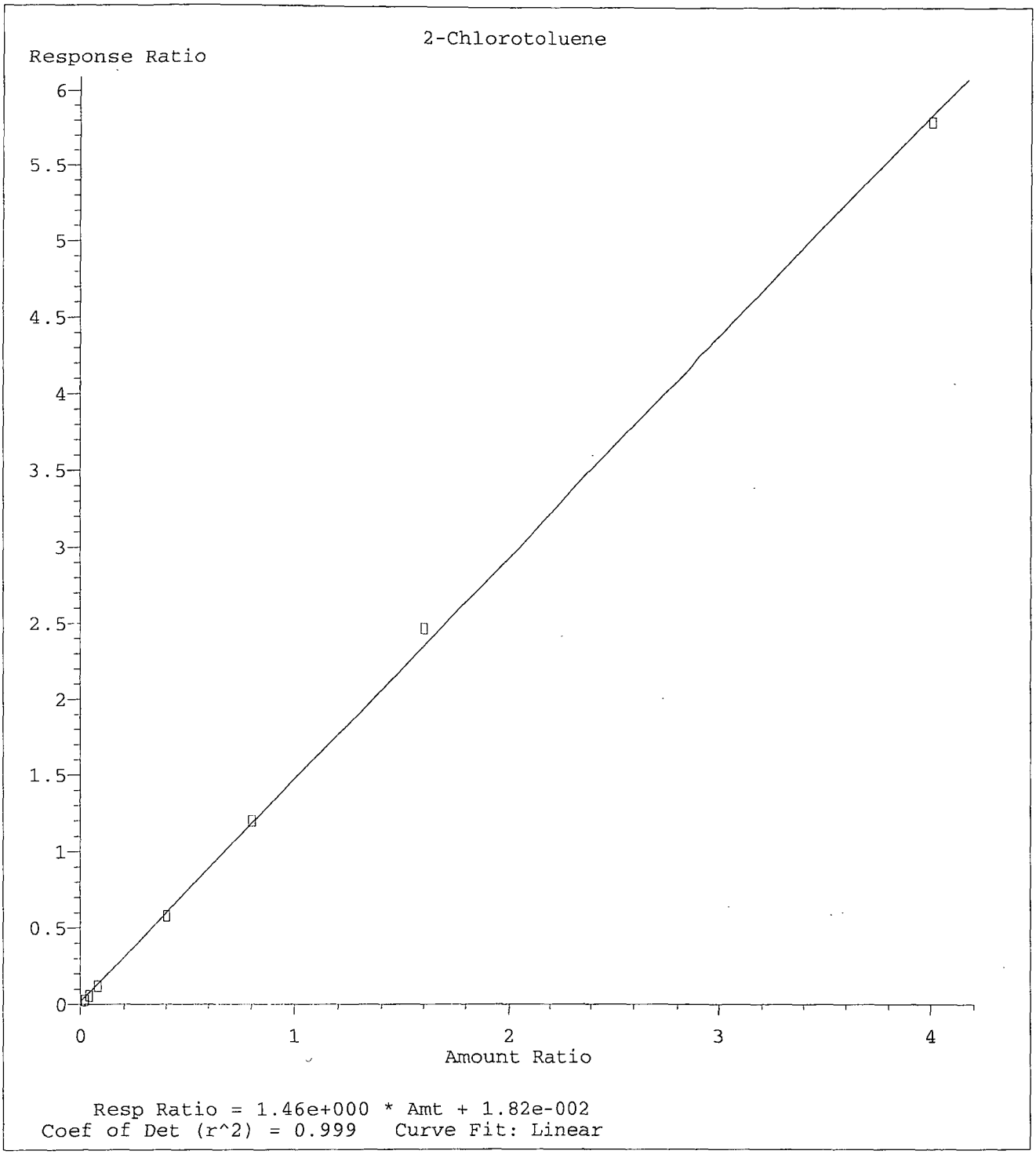
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



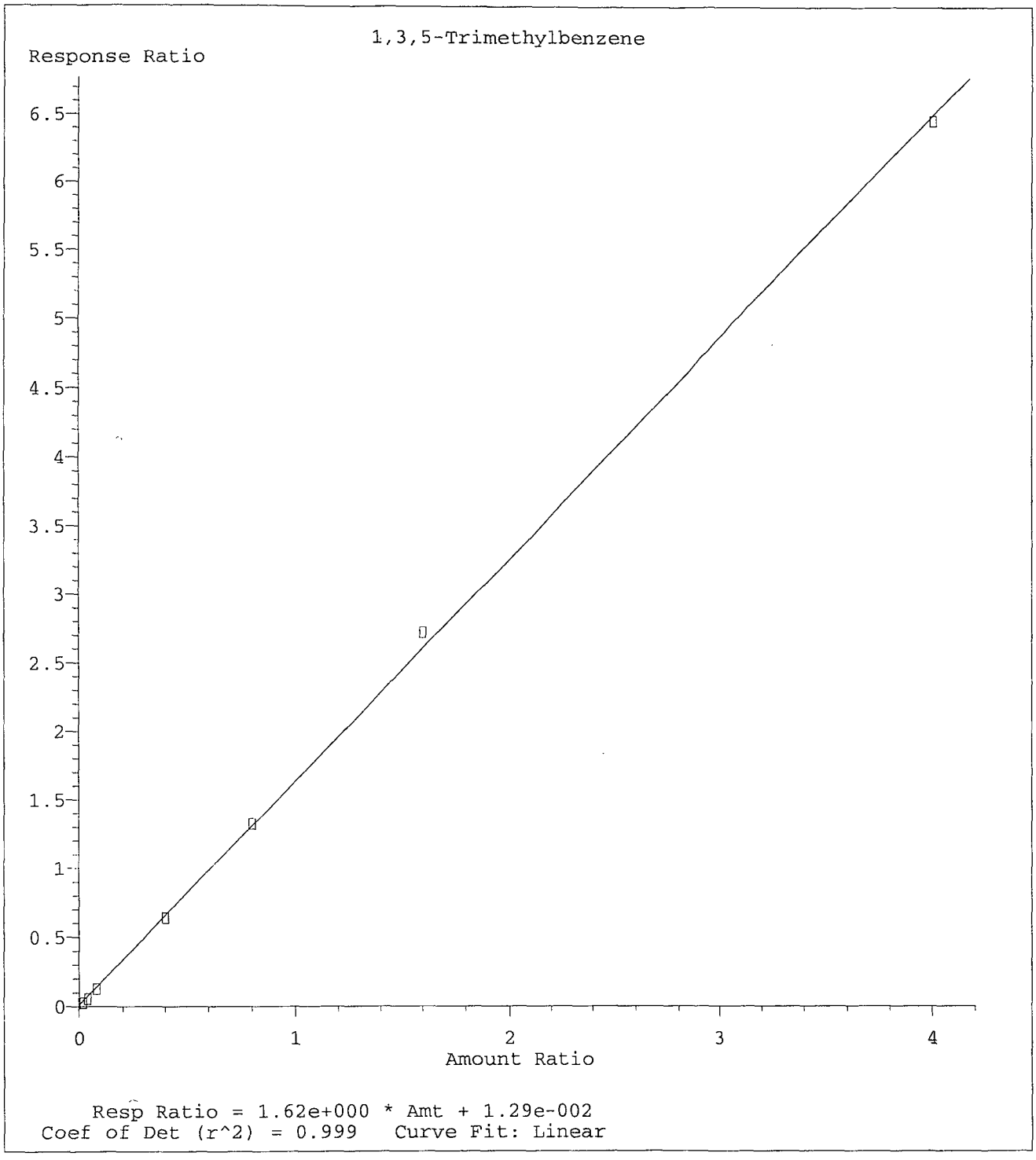
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



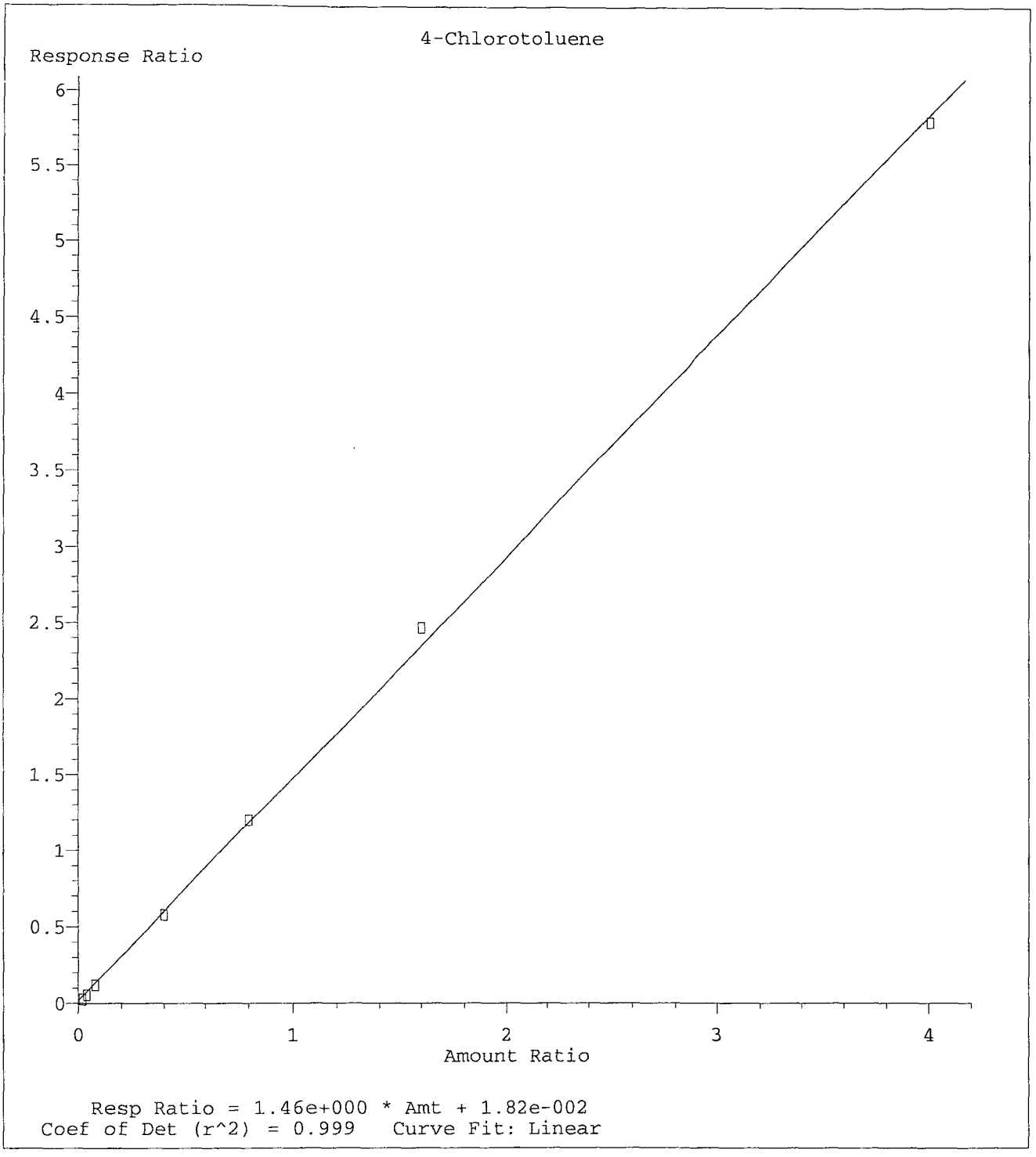
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



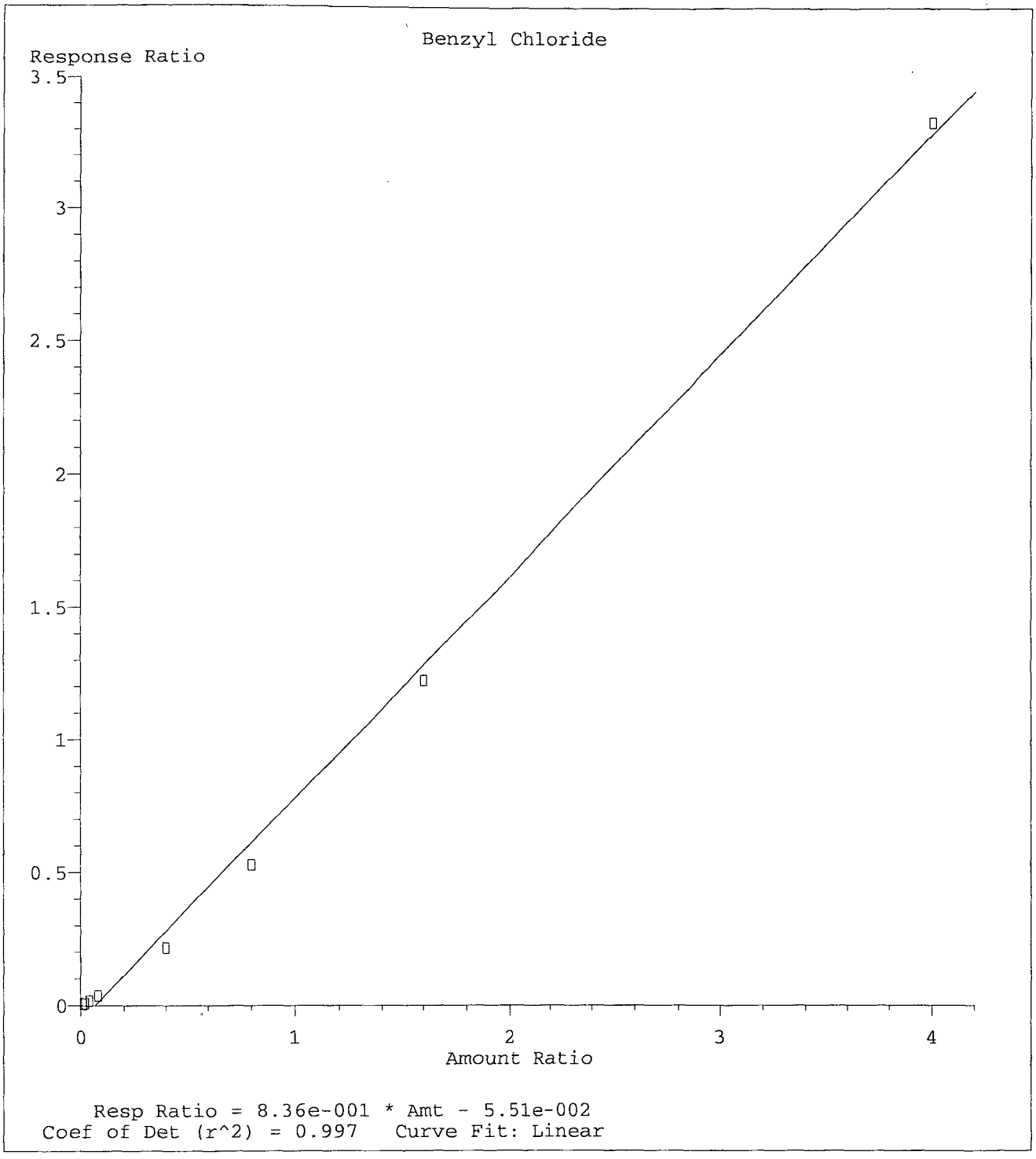
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



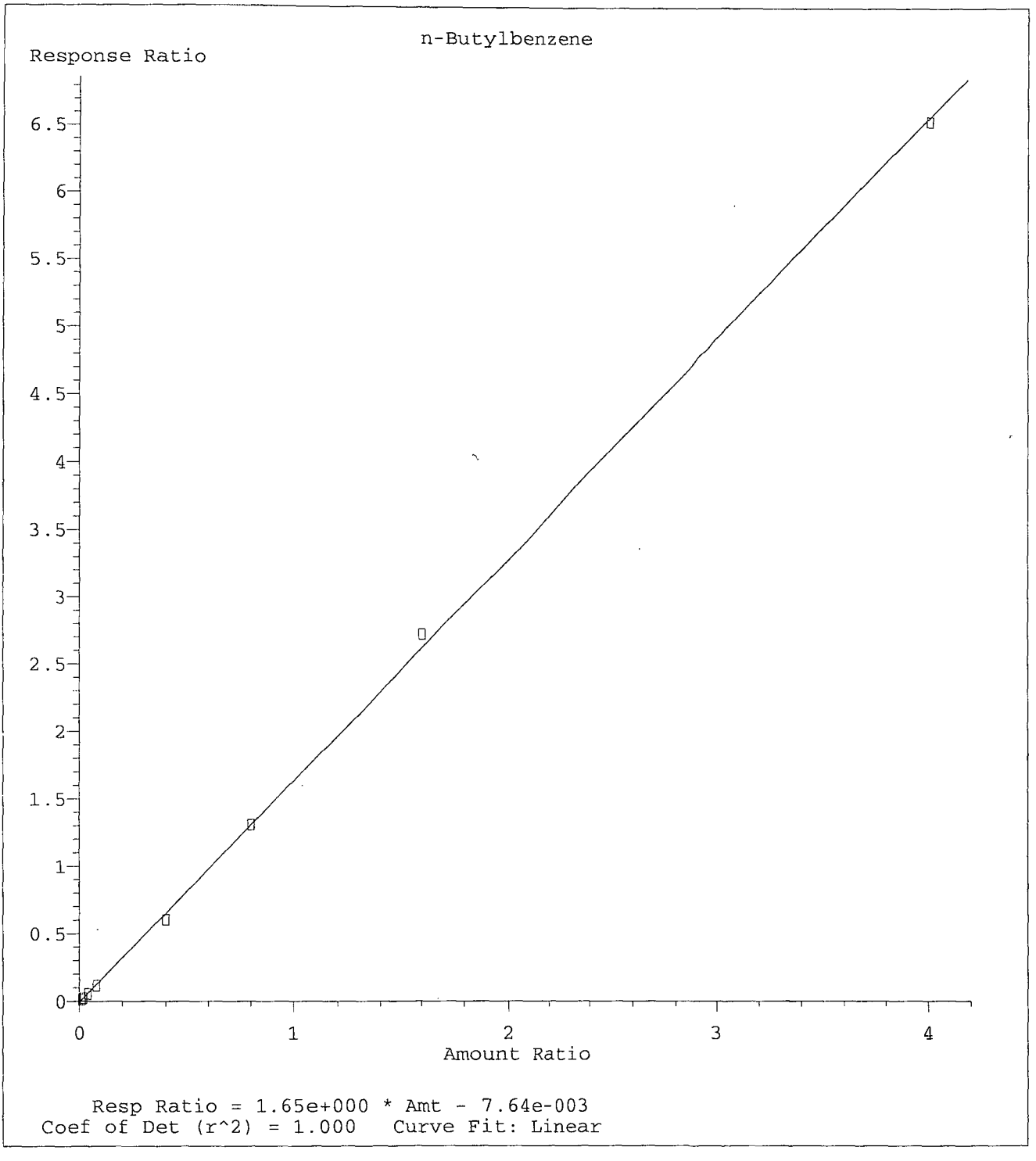
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



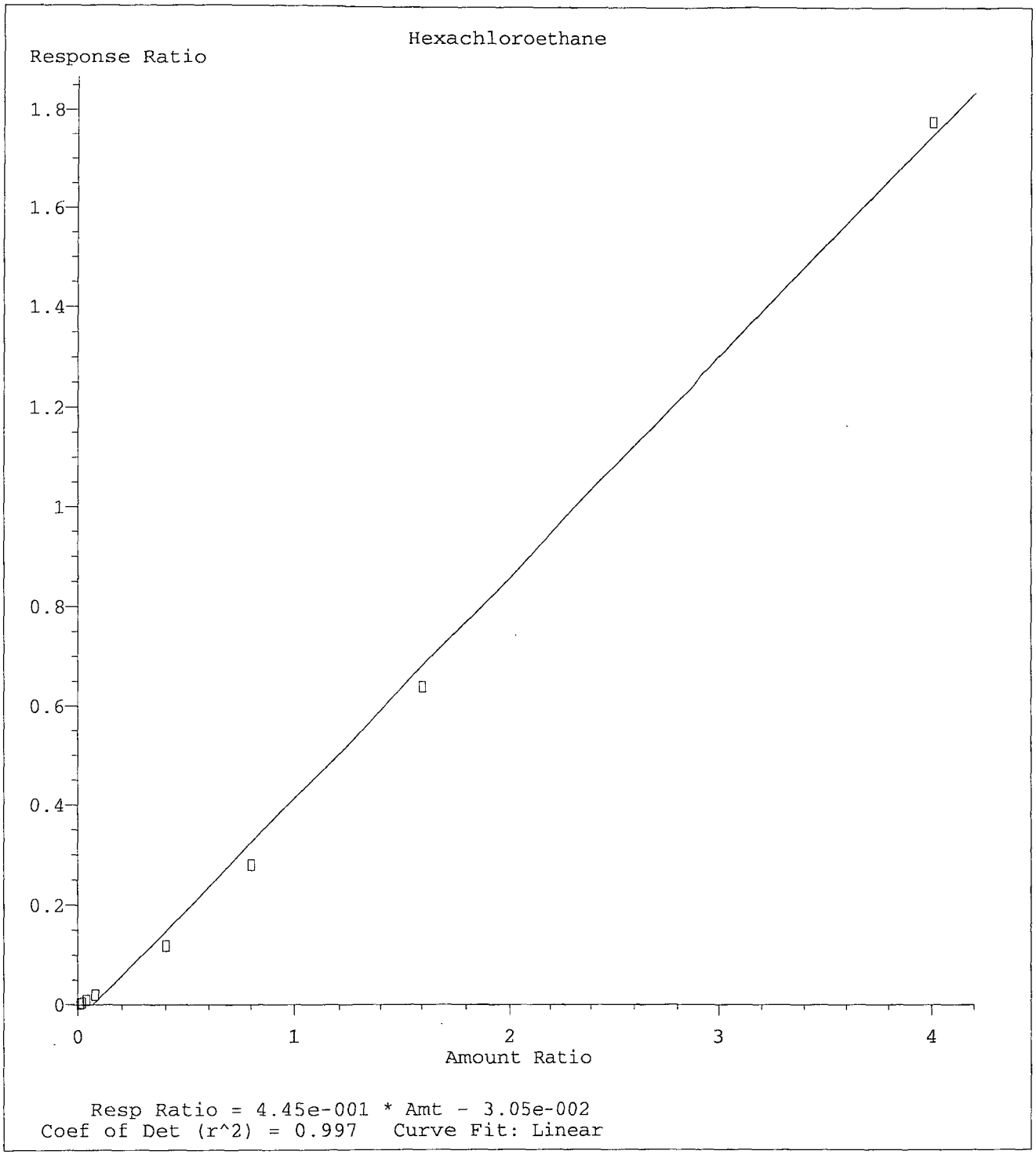
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



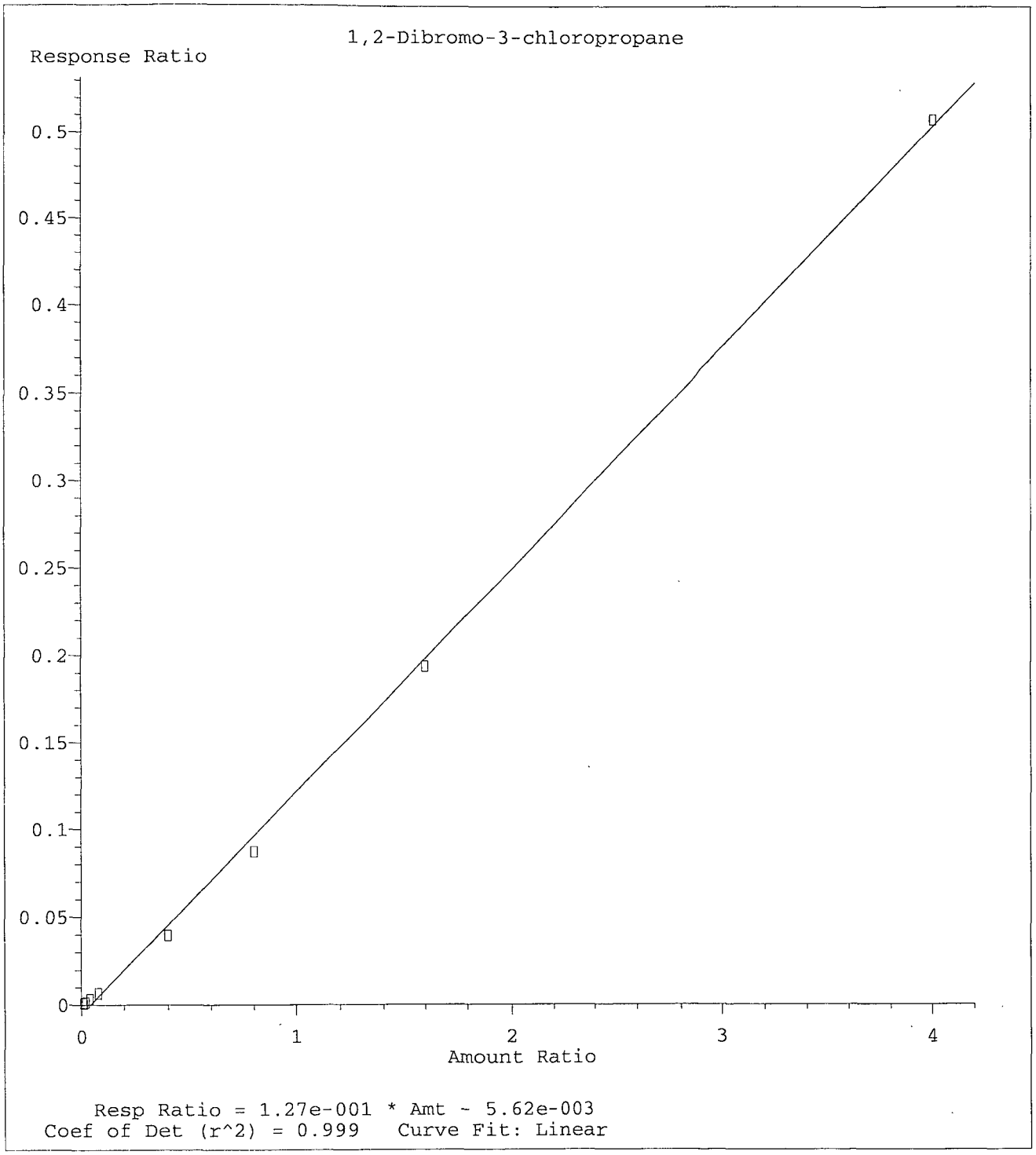
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



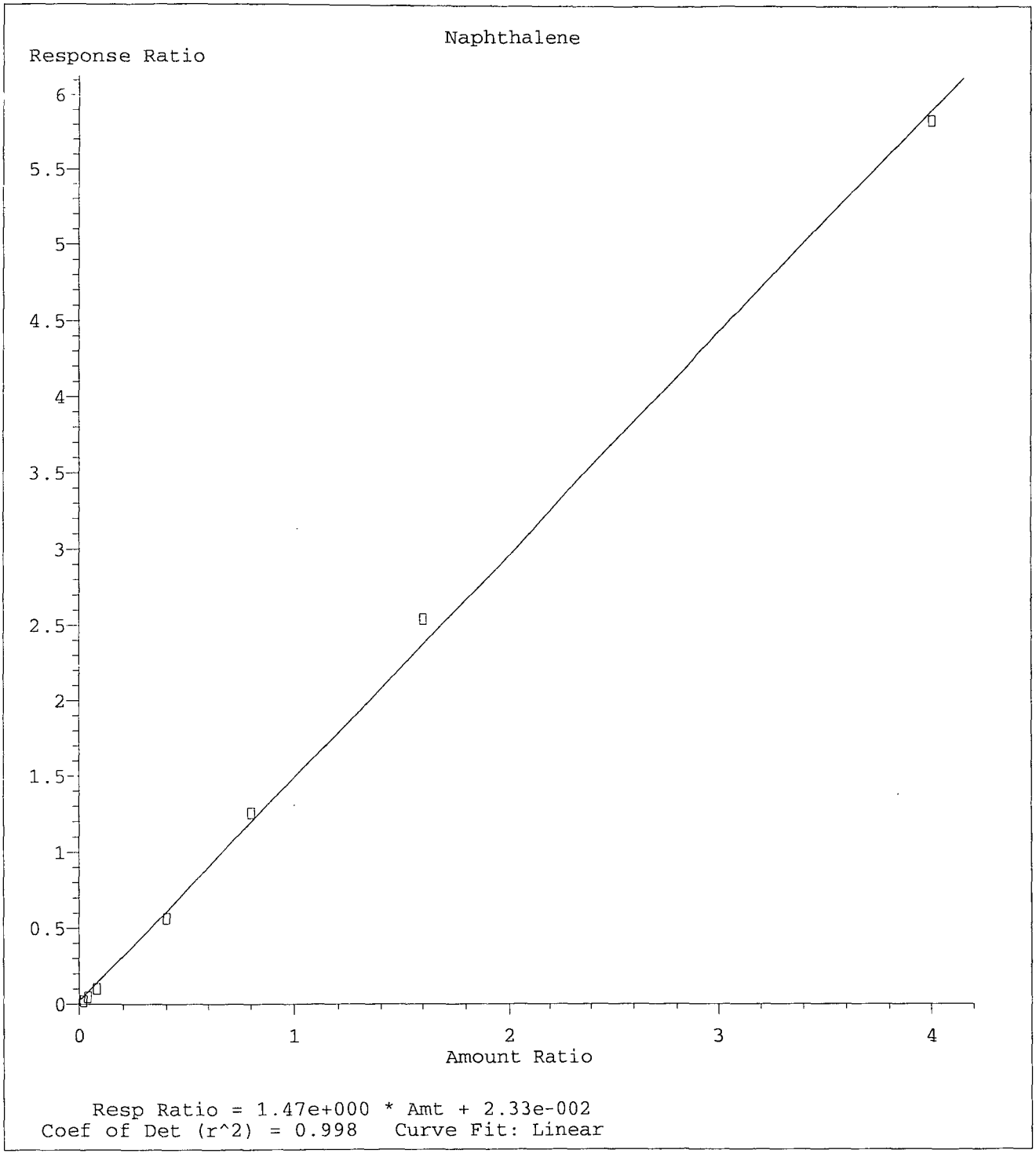
Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM	
2	TM	Dichlorodifluoromethane	0.1279	0.1279	0.06	TM	
3	TM	Freon 114	0.0758	0.0778	2.7	TM	
4	TM**L	Chloromethane	0.0912	0.0534	42	TM**L	0.43
5	TM*	Vinyl chloride	0.1174	0.1204	2.6	TM*	
6		Butane	0.0000	0.0006	0.00		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0406	0.0338	17	TML	9.4
9	TML	Chloroethane	0.0419	0.0273	35	TML	6.2
10	TM	Dichlorofluoromethane	0.2230	0.2281	2.3	TM	
11	TM	Trichlorofluoromethane	0.2100	0.2261	7.6	TM	
12	TM	Pentane	0.0000	0.0006	0.00	TM	
13	TM	Acrolein	0.0000	0.0510	0.00	TM	
14	TM	Acetone	0.0316	0.0320	1.1	TM	
15	TM	Freon-113	0.0592	0.0570	3.6	TM	
16	TM*	1,1-DCE	0.1485	0.1725	16	TM*	
17	TM	2-Propanol	0.0000	0.0012	0.00	TM	
18	TM	Acetonitrile	0.0000	0.0326	0.00	TM	
19	TM	t-Butanol	0.0000	0.0031	0.00	TM	
20	TM	Methyl Acetate	0.0756	0.0766	1.3	TM	
21	TML	Iodomethane	0.1434	0.1481	3.3	TML	16
22	TM	Acrylonitrile	0.0326	0.0343	5.2	TM	
23	TML	Methylene chloride	0.0948	0.0761	20	TML	18
24	TM	Carbon disulfide	0.1466	0.1559	6.3	TM	
25	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2928	13	TM	
26	TM	Trans-1,2-DCE	0.1452	0.1622	12	TM	
27	TM	Hexane	0.0000	0.0001	0.00	TM	
28	TM	Diisopropyl Ether	0.2691	0.2970	10	TM	
29	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**	
30	TM**	1,1-DCA	0.1859	0.2141	15	TM**	
31	TM	Vinyl Acetate	0.0891	0.1003	13	TM	
32	TM	Ethyl tert Butyl Ether	0.2467	0.2811	14	TM	
33	TM	MEK (2-Butanone)	0.0379	0.0409	8.0	TM	
34	TM	Cis-1,2-DCE	0.1702	0.1855	9.0	TM	
35	TM	2,2-Dichloropropane	0.1539	0.1715	11	TM	
36	TM	3-Methylpentane	0.0000	0.0600	0.00	TM	
37	TM*	Chloroform	0.2071	0.2323	12	TM*	
38	TM	Bromochloromethane	0.0759	0.0865	14	TM	
39	TM	1,1,1-TCA	0.1905	0.2172	14	TM	
40	TM	Cyclohexane	0.1576	0.1706	8.3	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1-Dichloropropene	0.1411	0.1671	18	TM	
42	TM	2,2,4-Trimethylpentane	0.3087	0.3314	7.4	TM	
43	TM	Carbon Tetrachloride	0.1676	0.1914	14	TM	
44	TM	Tert Amyl Methyl Ether	0.2307	0.2630	14	TM	
45	TM	Methylcyclopentane	0.0000	0.0161	0.00	TM	
46	TM	1,2-DCA	0.1374	0.1548	13	TM	
47	TM	Benzene	0.4429	0.4954	12	TM	
48	TM	TCE	0.1541	0.1740	13	TM	
49	TM	2-Pentanone	0.0000	0.7081	0.00	TM	
50	TM*	1,2-Dichloropropane	0.0964	0.1084	12	TM*	
51	TM	Bromodichloromethane	0.1171	0.1406	20	TM	
52	TM	Methyl Cyclohexane	0.1811	0.2033	12	TM	
53	TM	Dibromomethane	0.1030	0.1223	19	TM	
54	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0728	10	TM	
55	TM	1-Bromo-2-chloroethane	0.0219	0.0229	4.6	TM	
56	TM	2-Chloroethyl vinyl ether	0.0000	0.0013	0.00	TM	
57	TM	Cis-1,3-Dichloropropene	0.1409	0.1684	20	TM	
58	TM*	Toluene	0.4791	0.5593	17	TM*	
59	TML	Trans-1,3-Dichloropropene	0.1172	0.1432	22	TML	6.0
60	TM	1,1,2-TCA	0.0909	0.1069	18	TM	
61	TML	2-Hexanone	0.0257	0.0293	14	TML	2.7
62	TM	1,2-EDB	0.1215	0.1447	19	TM	
63	TM	Tetrachloroethene	0.2530	0.2758	9.0	TM	
64	TM	1-Chlorohexane	0.1973	0.2190	11	TM	
65	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1664	14	TM	
66	TM	m&p-Xylene	0.5046	0.5928	17	TM	
67	TM	o-Xylene	0.5042	0.5874	16	TM	
68	TML	Styrene	0.3854	0.4794	24	TML	6.2
69	TM	1,3-Dichloropropane	0.1850	0.2189	18	TM	
70	TML	Dibromochloromethane	0.1225	0.1457	19	TML	0.16
71	TM**	Chlorobenzene	0.4524	0.4971	9.9	TM**	
72	TM*	Ethylbenzene	0.6710	0.7745	15	TM*	
73	TM**L	Bromoform	0.0962	0.1080	12	TM**L	7.4
74	TM	Isopropylbenzene	1.927	2.311	20	TM	
75	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.4234	16	TM**	
76	TM	1,2,3-Trichloropropane	0.1463	0.1724	18	TM	
77	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0738	16	TML	4.0
78	TM	Bromobenzene	0.6094	0.7153	17	TM	
79	TML	n-Propylbenzene	2.101	2.545	21	TML	15
80	TM	4-Ethyltoluene	1.890	2.143	13	TM	
		Average			14.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
81	TML	2-Chlorotoluene	1.428	1.724	21	TML	15
82	TML	1,3,5-Trimethylbenzene	1.550	1.879	21	TML	14
83	TML	4-Chlorotoluene	1.428	1.724	21	TML	15
84	TM	Tert-Butylbenzene	1.523	1.804	18	TM	
85	TM	1,2,4-Trimethylbenzene	1.557	1.875	20	TM	
86	TM	Sec-Butylbenzene	2.101	2.526	20	TM	
87	TM	p-Isopropyltoluene	1.523	1.804	18	TM	
88	TML	Benzyl Chloride	0.5584	0.5984	7.2	TML	12
89	TM	1,3-DCB	1.159	1.319	14	TM	
90	TM	1,4-DCB	1.183	1.359	15	TM	
91	TML	n-Butylbenzene	1.436	1.802	25	TML	11
92	TM	1,2-DCB	1.073	1.230	15	TM	
93	TML	Hexachloroethane	0.2910	0.3519	21	TML	3.8
94	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1142	21	TML	0.77
95	TM	1,2,4-Trichlorobenzene	0.9574	1.069	12	TM	
96	TM	Hexachlorobutadiene	0.4832	0.5569	15	TM	
97	TML	Naphthalene	1.365	1.741	28	TML	14
98	TM	1,2,3-Trichlorobenzene	0.6880	0.8166	19	TM	
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			18.4		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3871104	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2965491	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1056256	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1152891	27.34	ppb	0.00
Spiked Amount 25.000			Recovery =	109.340%		
48) 1,2-DCA-D4(S)	5.71	65	1055709	26.90	ppb	0.00
Spiked Amount 25.000			Recovery =	107.616%		
69) Toluene-D8(S)	8.03	98	3905223	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.444%		
77) 4-Bromofluorobenzene(S)	10.91	95	1355508	24.96	ppb	0.00
Spiked Amount 25.000			Recovery =	99.844%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	198117	10.01	ppb	100
4) Freon 114	1.16	85	120488	10.27	ppb	91
5) Chloromethane	1.22	50	82611	10.04	ppb	98
6) Vinyl chloride	1.28	62	186480	10.26	ppb	97
9) Bromomethane	1.53	94	52396	10.94	ppb	94
10) Chloroethane	1.60	64	42256	9.38	ppb	89
11) Dichlorofluoromethane	1.78	67	353273	10.23	ppb	100
12) Trichlorofluoromethane	1.82	101	350072	10.76	ppb	100
17) Acetone	2.36	43	247370	50.56	ppb	97
18) Freon-113	2.32	101	88336	9.64	ppb	92
19) 1,1-DCE	2.30	61	267131	11.62	ppb	100
23) Methyl Acetate	2.73	43	118586	10.13	ppb	95
24) Iodomethane	2.43	142	229292	11.60	ppb	97
25) Acrylonitrile	3.10	52	53066	10.52	ppb	92
26) Methylene chloride	2.81	49	117888	11.85	ppb	96
27) Carbon disulfide	2.49	76	241344	10.63	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	453360	11.33	ppb	99
29) Trans-1,2-DCE	3.14	61	251156	11.17	ppb	91
31) Diisopropyl Ether	3.93	45	459917	11.04	ppb	98
33) 1,1-DCA	3.71	63	331517	11.52	ppb	97
34) Vinyl Acetate	3.86	43	155326	11.26	ppb	95
35) Ethyl tert Butyl Ether	4.49	59	435304	11.39	ppb	100
36) MEK (2-Butanone)	4.67	43	316666	54.01	ppb	98
37) Cis-1,2-DCE	4.60	61	287220	10.90	ppb	97
38) 2,2-Dichloropropane	4.59	77	265506	11.14	ppb	98
41) Chloroform	5.09	83	359662	11.22	ppb	100
42) Bromochloromethane	4.93	49	133919	11.40	ppb	95
44) 1,1,1-TCA	5.30	97	336361	11.40	ppb	99
45) Cyclohexane	5.36	56	264235	10.83	ppb	97
46) 1,1-Dichloropropene	5.53	75	258683	11.84	ppb	98
47) 2,2,4-Trimethylpentane	5.96	57	513141	10.74	ppb	99
49) Carbon Tetrachloride	5.52	117	296343	11.42	ppb	94
50) Tert Amyl Methyl Ether	6.01	73	407189	11.40	ppb	99
52) 1,2-DCA	5.81	62	239643	11.26	ppb	98
53) Benzene	5.78	78	767099	11.19	ppb	98
54) TCE	6.61	130	269410	11.29	ppb	98
56) 1,2-Dichloropropane	6.86	63	167798	11.24	ppb	100
57) Bromodichloromethane	7.21	83	217643	12.00	ppb	97
58) Methyl Cyclohexane	6.84	83	314861	11.23	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
59)	Dibromomethane	6.99	174	189308	11.87 ppb		94
60)	MIBK (methyl isobutyl ket	7.94	43	563958	55.15 ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	35490	10.46 ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	260806	11.96 ppb		96
64)	Toluene	8.11	91	865968	11.67 ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	221786	10.60 ppb		98
66)	1,1,2-TCA	8.56	97	165499	11.76 ppb		96
67)	2-Hexanone	8.88	43	226496	51.36 ppb		98
70)	1,2-EDB	9.09	107	171702	11.91 ppb		97
71)	Tetrachloroethene	8.71	166	327108	10.90 ppb		98
72)	1-Chlorohexane	9.67	91	259736	11.10 ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	197406	11.44 ppb		97
74)	m&p-Xylene	9.93	91	1406440	23.50 ppb		97
75)	o-Xylene	10.35	91	696726	11.65 ppb		97
76)	Styrene	10.37	104	568717	10.62 ppb		100
78)	1,3-Dichloropropane	8.74	76	259709	11.83 ppb		99
79)	Dibromochloromethane	8.98	129	172809	10.02 ppb		100
80)	Chlorobenzene	9.65	112	589695	10.99 ppb		98
81)	Ethylbenzene	9.79	91	918755	11.54 ppb		96
82)	Bromoform	10.54	173	128063	9.26 ppb		96
84)	Isopropylbenzene	10.76	105	976539	12.00 ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	178876	11.61 ppb		99
86)	1,2,3-Trichloropropane	11.12	110	72831	11.78 ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	31181	10.40 ppb		98
88)	Bromobenzene	11.06	77	302201	11.74 ppb		94
89)	n-Propylbenzene	11.21	91	1075385	11.45 ppb		97
90)	4-Ethyltoluene	11.34	105	905253	11.34 ppb		98
91)	2-Chlorotoluene	11.41	91	728223	11.51 ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	794090	11.39 ppb		97
93)	4-Chlorotoluene	11.41	91	728223	11.51 ppb		98
94)	Tert-Butylbenzene	11.76	119	762257	11.85 ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	792106	12.04 ppb		100
96)	Sec-Butylbenzene	12.00	105	1067296	12.03 ppb		99
97)	p-Isopropyltoluene	11.76	119	762257	11.85 ppb		96
98)	Benzyl Chloride	12.34	91	252842	8.81 ppb		98
99)	1,3-DCB	12.10	146	557233	11.38 ppb		98
100)	1,4-DCB	12.20	146	574213	11.49 ppb		99
101)	n-Butylbenzene	12.61	91	761329	11.07 ppb		99
102)	1,2-DCB	12.60	146	519577	11.47 ppb		99
103)	Hexachloroethane	12.89	201	148685	9.62 ppb		98
104)	1,2-Dibromo-3-chloropropan	13.44	157	48244	10.08 ppb	#	83
105)	1,2,4-Trichlorobenzene	13.69	180	451521	11.16 ppb		98
106)	Hexachlorobutadiene	14.57	225	235297	11.53 ppb		93
107)	Naphthalene	14.62	128	735691	11.44 ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	345018	11.87 ppb		100

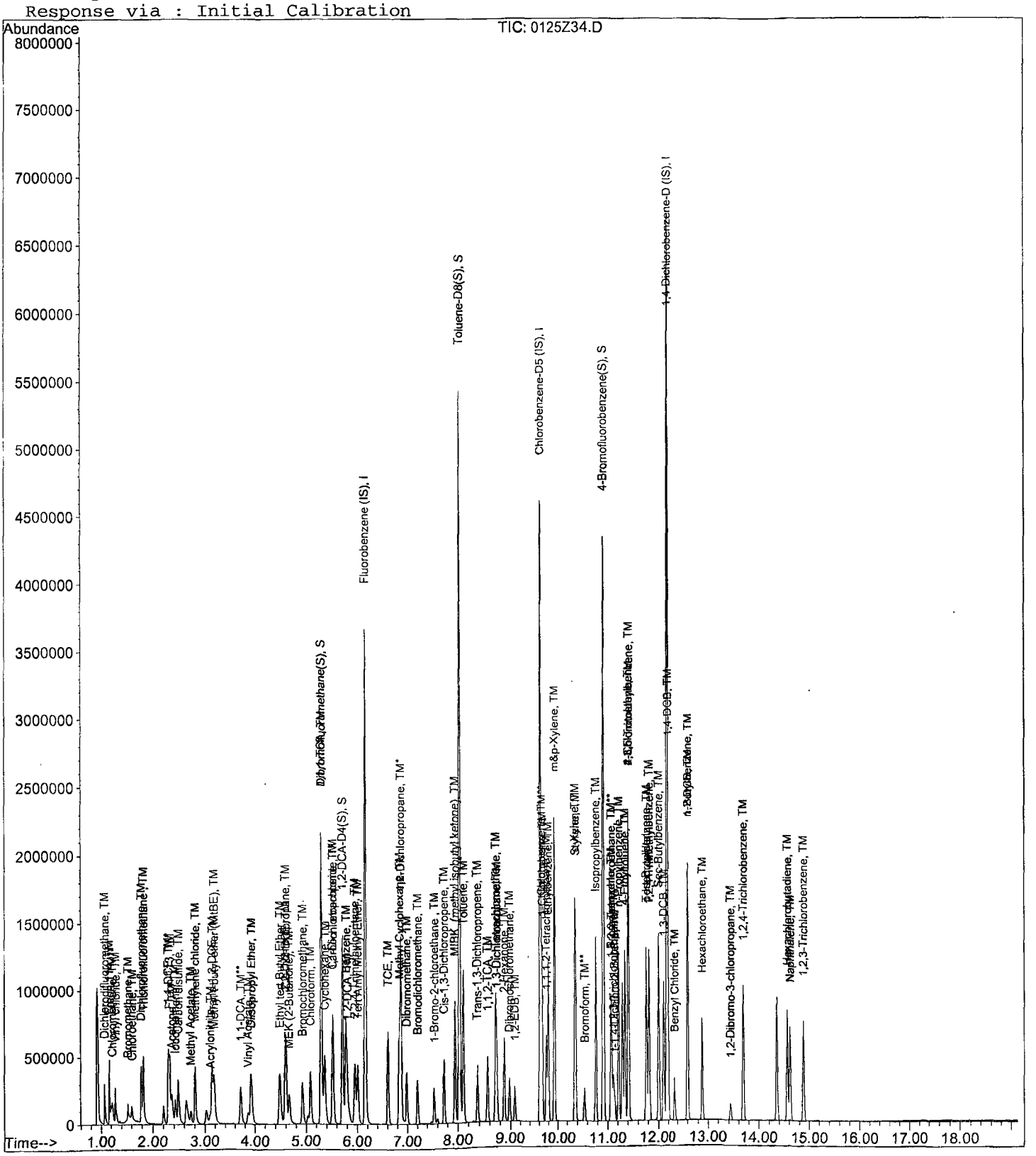
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1279	0.1305	2.0	TM		
4	TM	Freon 114	0.0758	0.0742	2.1	TM		
5	TM**L	Chloromethane	0.0912	0.0524	43	TM**L	1.6	
6	TM*	Vinyl chloride	0.1174	0.1184	0.89	TM*		
7		Butane	0.0000	0.0002	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
9	TML	Bromomethane	0.0406	0.0313	23	TML	0.17	
10	TML	Chloroethane	0.0419	0.0290	31	TML	0.23	
11	TM	Dichlorofluoromethane	0.2230	0.2300	3.1	TM		
12	TM	Trichlorofluoromethane	0.2100	0.2133	1.6	TM		
13	TM	Pentane	0.0000	0.0002	0.00	TM		
14	TM	Diethyl ether	0.0000	0.0001	0.00	TM		
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM		
16	TM	Acrolein	0.0000	0.0010	0.00	TM		
17	TM	Acetone	0.0316	0.0300	5.1	TM		
18	TM	Freon-113	0.0592	0.0581	1.8	TM		
19	TM*	1,1-DCE	0.1485	0.1556	4.8	TM*		
20	TM	2-Propanol	0.0000	0.0010	0.00	TM		
21	TM	Acetonitrile	0.0000	0.0006	0.00	TM		
22	TM	t-Butanol	0.0000	0.0028	0.00	TM		
23	TM	Methyl Acetate	0.0756	0.0704	6.9	TM		
24	TML	Iodomethane	0.1434	0.1343	6.4	TML	6.9	
25	TM	Acrylonitrile	0.0326	0.0315	3.3	TM		
26	TML	Methylene chloride	0.0948	0.0686	28	TML	4.7	
27	TM	Carbon disulfide	0.1466	0.1426	2.7	TM		
28	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2718	5.1	TM		
29	TM	Trans-1,2-DCE	0.1452	0.1532	5.5	TM		
30	TM	Hexane	0.0000	0.0001	0.00	TM		
31	TM	Diisopropyl Ether	0.2691	0.2860	6.3	TM		
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
33	TM**	1,1-DCA	0.1859	0.1937	4.2	TM**		
34	TM	Vinyl Acetate	0.0891	0.0612	31	TM		*NT
35	TM	Ethyl tert Butyl Ether	0.2467	0.2690	9.0	TM		
36	TM	MEK (2-Butanone)	0.0379	0.0384	1.5	TM		
37	TM	Cis-1,2-DCE	0.1702	0.1738	2.1	TM		
38	TM	2,2-Dichloropropane	0.1539	0.1491	3.1	TM		
39	TML	2-Methylpentane	0.0000	0.0009	0.00	TML		
40	TM	3-Methylpentane	0.0000	0.0551	0.00	TM		
		Average			6.0			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	Chloroform	0.2071	0.2193	5.9	TM*	
42	TM	Bromochloromethane	0.0759	0.0815	7.4	TM	
43	S	Dibromofluoromethane(S)	0.2724	0.3006	10	S	
44	TM	1,1,1-TCA	0.1905	0.2032	6.6	TM	
45	TM	Cyclohexane	0.1576	0.1647	4.5	TM	
46	TM	1,1-Dichloropropene	0.1411	0.1474	4.5	TM	
47	TM	2,2,4-Trimethylpentane	0.3087	0.3012	2.4	TM	
48	S	1,2-DCA-D4(S)	0.2534	0.2755	8.7	S	
49	TM	Carbon Tetrachloride	0.1676	0.1765	5.3	TM	
50	TM	Tert Amyl Methyl Ether	0.2307	0.2464	6.8	TM	
51	TM	Methylcyclopentane	0.0000	0.0160	0.00	TM	
52	TM	1,2-DCA	0.1374	0.1443	5.0	TM	
53	TM	Benzene	0.4429	0.4621	4.4	TM	
54	TM	TCE	0.1541	0.1647	6.9	TM	
55	TM	2-Pentanone	0.0000	0.0086	0.00	TM	
56	TM*	1,2-Dichloropropane	0.0964	0.1017	5.5	TM*	
57	TM	Bromodichloromethane	0.1171	0.1295	11	TM	
58	TM	Methyl Cyclohexane	0.1811	0.1912	5.6	TM	
59	TM	Dibromomethane	0.1030	0.1103	7.1	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0682	3.3	TM	
61	TM	1-Bromo-2-chloroethane	0.0219	0.0212	3.3	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0161	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.1409	0.1494	6.0	TM	
64	TM*	Toluene	0.4791	0.5068	5.8	TM*	
65	TML	Trans-1,3-Dichloropropene	0.1172	0.1272	8.6	TML	5.0
66	TM	1,1,2-TCA	0.0909	0.0979	7.8	TM	
67	TML	2-Hexanone	0.0257	0.0283	10	TML	0.26
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.203	1.344	12	S	
70	TM	1,2-EDB	0.1215	0.1346	11	TM	
71	TM	Tetrachloroethene	0.2530	0.2575	1.8	TM	
72	TM	1-Chlorohexane	0.1973	0.2066	4.7	TM	
73	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1521	4.6	TM	
74	TM	m&p-Xylene	0.5046	0.5544	9.9	TM	
75	TM	o-Xylene	0.5042	0.5517	9.4	TM	
76	TML	Styrene	0.3854	0.4348	13	TML	3.5
77	SL	4-Bromofluorobenzene(S)	0.4155	0.4600	11	SL	0.43
78	TM	1,3-Dichloropropane	0.1850	0.2004	8.3	TM	
79	TML	Dibromochloromethane	0.1225	0.1301	6.2	TML	9.6
80	TM**	Chlorobenzene	0.4524	0.4732	4.6	TM**	
		Average			6.4		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/26/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z45.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM*	Ethylbenzene	0.6710	0.7193	7.2	TM*	
82	TM**L	Bromoform	0.0962	0.0983	2.2	TM**L	14
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
84	TM	Isopropylbenzene	1.927	2.078	7.9	TM	
85	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3624	0.65	TM**	
86	TM	1,2,3-Trichloropropane	0.1463	0.1553	6.1	TM	
87	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0667	4.7	TML	4.5
88	TM	Bromobenzene	0.6094	0.6501	6.7	TM	
89	TML	n-Propylbenzene	2.101	2.254	7.3	TML	1.0
90	TM	4-Ethyltoluene	1.890	2.018	6.8	TM	
91	TML	2-Chlorotoluene	1.428	1.558	9.1	TML	3.8
92	TML	1,3,5-Trimethylbenzene	1.550	1.692	9.2	TML	2.3
93	TML	4-Chlorotoluene	1.428	1.558	9.1	TML	3.8
94	TM	Tert-Butylbenzene	1.523	1.635	7.4	TM	
95	TM	1,2,4-Trimethylbenzene	1.557	1.710	9.8	TM	
96	TM	Sec-Butylbenzene	2.101	2.273	8.2	TM	
97	TM	p-Isopropyltoluene	1.523	1.635	7.4	TM	
98	TML	Benzyl Chloride	0.5584	0.5041	9.7	TML	23 *NT
99	TM	1,3-DCB	1.159	1.217	5.0	TM	
100	TM	1,4-DCB	1.183	1.236	4.4	TM	
101	TML	n-Butylbenzene	1.436	1.585	10	TML	2.5
102	TM	1,2-DCB	1.073	1.137	6.0	TM	
103	TML	Hexachloroethane	0.2910	0.3068	5.4	TML	14
104	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1011	7.4	TML	9.5
105	TM	1,2,4-Trichlorobenzene	0.9574	0.9962	4.1	TM	
106	TM	Hexachlorobutadiene	0.4832	0.4989	3.3	TM	
107	TML	Naphthalene	1.365	1.556	14	TML	1.8
108	TM	1,2,3-Trichlorobenzene	0.6880	0.7293	6.0	TM	
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3756224	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831709	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1036736	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1129298	27.59	ppb		0.00
Spiked Amount 25.000			Recovery = 110.380%				
48) 1,2-DCA-D4(S)	5.71	65	1034987	27.18	ppb		0.00
Spiked Amount 25.000			Recovery = 108.732%				
69) Toluene-D8(S)	8.03	98	3807191	27.93	ppb		0.00
Spiked Amount 25.000			Recovery = 111.740%				
77) 4-Bromofluorobenzene(S)	10.91	95	1302656	25.11	ppb		0.00
Spiked Amount 25.000			Recovery = 100.428%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	196039	10.20	ppb		100
4) Freon 114	1.16	85	111416	9.79	ppb		96
5) Chloromethane	1.22	50	78690	9.84	ppb		99
6) Vinyl chloride	1.28	62	177898	10.09	ppb		98
9) Bromomethane	1.53	94	47041	9.98	ppb		93
10) Chloroethane	1.60	64	43516	10.02	ppb	#	89
11) Dichlorofluoromethane	1.78	67	345501	10.31	ppb		99
12) Trichlorofluoromethane	1.82	101	320522	10.16	ppb		99
17) Acetone	2.36	43	225373	47.47	ppb		98
18) Freon-113	2.32	101	87352	9.82	ppb		96
19) 1,1-DCE	2.30	61	233754	10.48	ppb		97
23) Methyl Acetate	2.73	43	105825	9.31	ppb		96
24) Iodomethane	2.43	142	201746	10.69	ppb		97
25) Acrylonitrile	3.10	52	47310	9.67	ppb		95
26) Methylene chloride	2.80	49	103088	10.47	ppb		95
27) Carbon disulfide	2.48	76	214208	9.73	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	408363	10.51	ppb		96
29) Trans-1,2-DCE	3.15	61	230145	10.55	ppb		98
31) Diisopropyl Ether	3.92	45	429684	10.63	ppb		98
33) 1,1-DCA	3.71	63	291085	10.42	ppb		97
34) Vinyl Acetate	3.86	43	91981	6.87	ppb		100
35) Ethyl tert Butyl Ether	4.49	59	404126	10.90	ppb		100
36) MEK (2-Butanone)	4.67	43	288610	50.73	ppb		97
37) Cis-1,2-DCE	4.60	61	261085	10.21	ppb		97
38) 2,2-Dichloropropane	4.60	77	224031	9.69	ppb		94
41) Chloroform	5.09	83	329568	10.59	ppb		97
42) Bromochloromethane	4.93	49	122428	10.74	ppb		93
44) 1,1,1-TCA	5.30	97	305268	10.66	ppb		98
45) Cyclohexane	5.36	56	247420	10.45	ppb		95
46) 1,1-Dichloropropene	5.53	75	221541	10.45	ppb		97
47) 2,2,4-Trimethylpentane	5.96	57	452521	9.76	ppb		98
49) Carbon Tetrachloride	5.52	117	265246	10.53	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	370274	10.68	ppb		97
52) 1,2-DCA	5.81	62	216851	10.50	ppb		97
53) Benzene	5.78	78	694361	10.44	ppb		99
54) TCE	6.61	130	247508	10.69	ppb		97
56) 1,2-Dichloropropane	6.86	63	152791	10.55	ppb		99
57) Bromodichloromethane	7.20	83	194546	11.05	ppb		97
58) Methyl Cyclohexane	6.84	83	287227	10.56	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	165682	10.71	ppb		98
60)	MIBK (methyl isobutyl ket	7.94	43	512369	51.64	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	31813	9.67	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	224423	10.60	ppb		97
64)	Toluene	8.11	91	761446	10.58	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	191168	9.50	ppb		98
66)	1,1,2-TCA	8.56	97	147157	10.78	ppb		90
67)	2-Hexanone	8.88	43	212928	49.87	ppb		97
70)	1,2-EDB	9.09	107	152425	11.07	ppb		97
71)	Tetrachloroethene	8.72	166	291688	10.18	ppb		100
72)	1-Chlorohexane	9.66	91	234017	10.47	ppb		100
73)	1,1,1,2-Tetrachloroethane	9.75	131	172298	10.46	ppb		97
74)	m&p-Xylene	9.92	91	1255992	21.97	ppb		98
75)	o-Xylene	10.35	91	624956	10.94	ppb		100
76)	Styrene	10.37	104	492521	9.65	ppb		96
78)	1,3-Dichloropropane	8.74	76	227002	10.83	ppb		97
79)	Dibromochloromethane	8.98	129	147310	9.04	ppb		94
80)	Chlorobenzene	9.65	112	535936	10.46	ppb		96
81)	Ethylbenzene	9.79	91	814713	10.72	ppb		97
82)	Bromoform	10.54	173	111372	8.57	ppb		96
84)	Isopropylbenzene	10.76	105	861792	10.79	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	150275	9.93	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	64387	10.61	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.14	53	27666	9.55	ppb		97
88)	Bromobenzene	11.06	77	269608	10.67	ppb		97
89)	n-Propylbenzene	11.21	91	934604	10.10	ppb		98
90)	4-Ethyltoluene	11.34	105	836726	10.68	ppb		97
91)	2-Chlorotoluene	11.41	91	646243	10.38	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	701553	10.23	ppb		97
93)	4-Chlorotoluene	11.41	91	646243	10.38	ppb		97
94)	Tert-Butylbenzene	11.76	119	678226	10.74	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	709150	10.98	ppb		99
96)	Sec-Butylbenzene	12.00	105	942569	10.82	ppb		98
97)	p-Isopropyltoluene	11.76	119	678226	10.74	ppb		98
98)	Benzyl Chloride	12.35	91	209042	7.68	ppb		98
99)	1,3-DCB	12.10	146	504629	10.50	ppb		97
100)	1,4-DCB	12.20	146	512479	10.44	ppb		99
101)	n-Butylbenzene	12.61	91	657462	9.75	ppb		97
102)	1,2-DCB	12.60	146	471664	10.60	ppb		99
103)	Hexachloroethane	12.89	201	127238	8.61	ppb		94
104)	1,2-Dibromo-3-chloropropan	13.44	157	41917	9.05	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	413130	10.41	ppb		98
106)	Hexachlorobutadiene	14.57	225	206905	10.33	ppb		98
107)	Naphthalene	14.62	128	645090	10.18	ppb		99
108)	1,2,3-Trichlorobenzene	14.88	180	302422	10.60	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

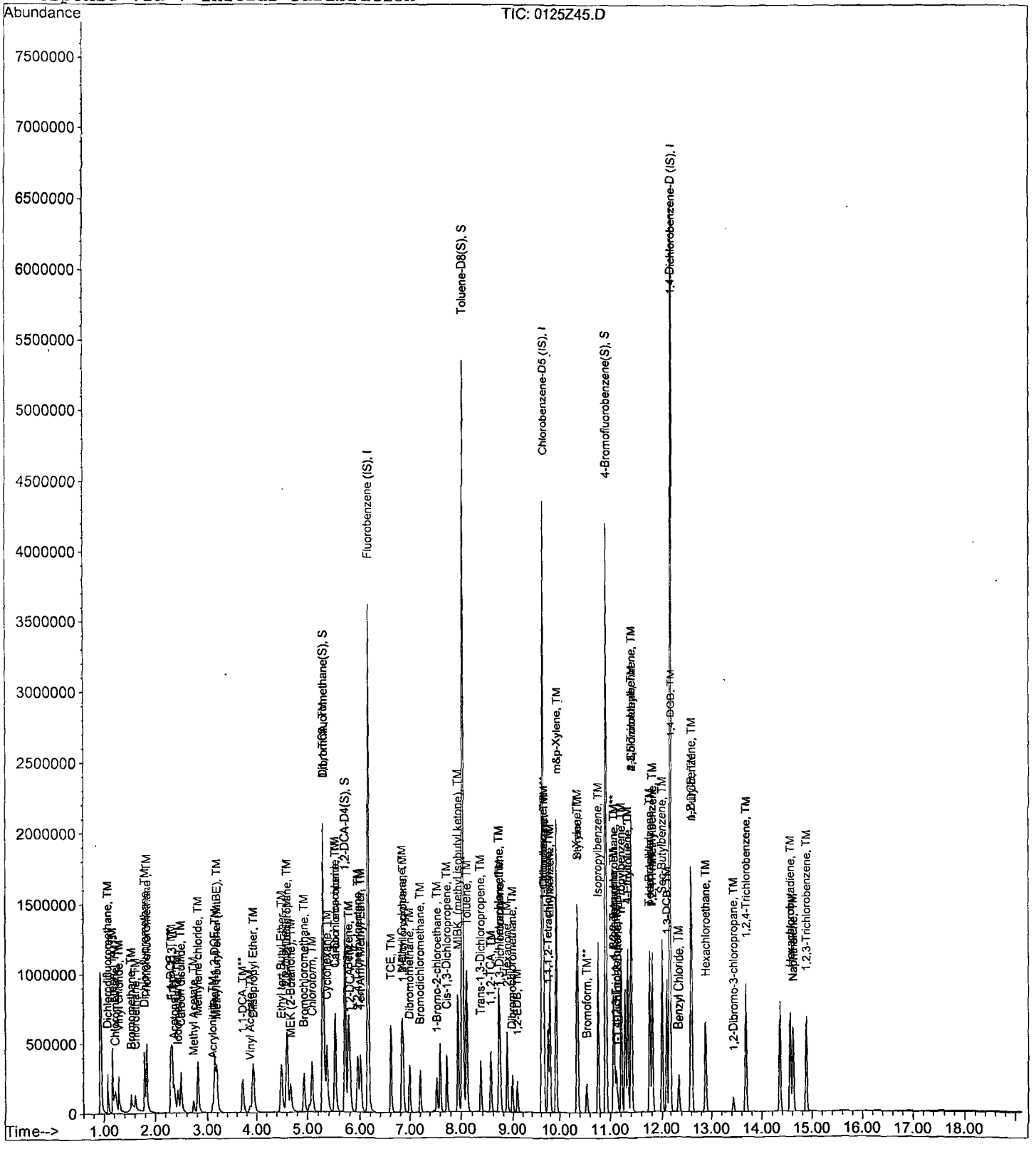
Data File : M:\ZEUS\DATA\210125\0125Z45.D
Acq On : 26 Jan 21 00:10
Sample : 210125A CCV/LCS 10ug/L
Misc :

Vial: 40
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0000	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1279	0.1395	9.1	TM		
4	TM	Freon 114	0.0758	0.0697	8.0	TM		
5	TM**L	Chloromethane	0.0912	0.0569	38	TM**L	7.8	
6	TM*	Vinyl chloride	0.1174	0.1274	8.5	TM*		
7		Butane	0.0000	0.0002	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
9	TML	Bromomethane	0.0406	0.0352	13	TML	15	
10	TML	Chloroethane	0.0419	0.0344	18	TML	21	
11	TM	Dichlorofluoromethane	0.2230	0.2334	4.7	TM		
12	TM	Trichlorofluoromethane	0.2100	0.2340	11	TM		
13	TM	Pentane	0.0000	0.0002	0.00	TM		
14	TM	Diethyl ether	0.0000	0.0005	0.00	TM		
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM		
16	TM	Acrolein	0.0000	0.0010	0.00	TM		
17	TM	Acetone	0.0316	0.0272	14	TM		
18	TM	Freon-113	0.0592	0.0542	8.5	TM		
19	TM*	1,1-DCE	0.1485	0.1524	2.6	TM*		
20	TM	2-Propanol	0.0000	0.0012	0.00	TM		
21	TM	Acetonitrile	0.0000	0.0004	0.00	TM		
22	TM	t-Butanol	0.0000	0.0028	0.00	TM		
23	TM	Methyl Acetate	0.0756	0.0681	10.0	TM		
24	TML	Iodomethane	0.1434	0.1242	13	TML	0.26	
25	TM	Acrylonitrile	0.0326	0.0316	2.9	TM		
26	TML	Methylene chloride	0.0948	0.0707	25	TML	8.6	
27	TM	Carbon disulfide	0.1466	0.1367	6.7	TM		
28	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2608	0.87	TM		
29	TM	Trans-1,2-DCE	0.1452	0.1499	3.2	TM		
30	TM	Hexane	0.0000	0.0001	0.00	TM		
31	TM	Diisopropyl Ether	0.2691	0.2725	1.3	TM		
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
33	TM**	1,1-DCA	0.1859	0.1951	5.0	TM**		
34	TM	Vinyl Acetate	0.0891	0.0391	56	TM		*NT
35	TM	Ethyl tert Butyl Ether	0.2467	0.2505	1.5	TM		
36	TM	MEK (2-Butanone)	0.0379	0.0347	8.5	TM		
37	TM	Cis-1,2-DCE	0.1702	0.1672	1.7	TM		
38	TM	2,2-Dichloropropane	0.1539	0.1258	18	TM		
39	TML	2-Methylpentane	0.0000	0.0003	0.00	TML		
40	TM	3-Methylpentane	0.0000	0.0535	0.00	TM		
		Average			7.4			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	Chloroform	0.2071	0.2133	3.0	TM*	
42	TM	Bromochloromethane	0.0759	0.0810	6.8	TM	
43	S	Dibromofluoromethane(S)	0.2724	0.3020	11	S	
44	TM	1,1,1-TCA	0.1905	0.1919	0.73	TM	
45	TM	Cyclohexane	0.1576	0.1578	0.13	TM	
46	TM	1,1-Dichloropropene	0.1411	0.1421	0.68	TM	
47	TM	2,2,4-Trimethylpentane	0.3087	0.2662	14	TM	
48	S	1,2-DCA-D4(S)	0.2534	0.2777	9.6	S	
49	TM	Carbon Tetrachloride	0.1676	0.1671	0.33	TM	
50	TM	Tert Amyl Methyl Ether	0.2307	0.2273	1.5	TM	
51	TM	Methylcyclopentane	0.0000	0.0180	0.00	TM	
52	TM	1,2-DCA	0.1374	0.1384	0.72	TM	
53	TM	Benzene	0.4429	0.4522	2.1	TM	
54	TM	TCE	0.1541	0.1592	3.3	TM	
55	TM	2-Pentanone	0.0000	0.0087	0.00	TM	
56	TM*	1,2-Dichloropropane	0.0964	0.0990	2.7	TM*	
57	TM	Bromodichloromethane	0.1171	0.1191	1.7	TM	
58	TM	Methyl Cyclohexane	0.1811	0.1692	6.6	TM	
59	TM	Dibromomethane	0.1030	0.1051	2.1	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0615	6.8	TM	
61	TM	1-Bromo-2-chloroethane	0.0219	0.0212	3.3	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0152	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.1409	0.1342	4.7	TM	
64	TM*	Toluene	0.4791	0.4811	0.42	TM*	
65	TML	Trans-1,3-Dichloropropene	0.1172	0.1123	4.1	TML	15
66	TM	1,1,2-TCA	0.0909	0.0942	3.6	TM	
67	TML	2-Hexanone	0.0257	0.0239	7.2	TML	15
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.203	1.309	8.8	S	
70	TM	1,2-EDB	0.1215	0.1271	4.6	TM	
71	TM	Tetrachloroethene	0.2530	0.2487	1.7	TM	
72	TM	1-Chlorohexane	0.1973	0.1885	4.5	TM	
73	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1440	1.0	TM	
74	TM	m&p-Xylene	0.5046	0.5252	4.1	TM	
75	TM	o-Xylene	0.5042	0.5171	2.6	TM	
76	TML	Styrene	0.3854	0.4167	8.1	TML	7.4
77	SL	4-Bromofluorobenzene(S)	0.4155	0.4443	6.9	SL	2.7
78	TM	1,3-Dichloropropane	0.1850	0.1889	2.1	TM	
79	TML	Dibromochloromethane	0.1225	0.1213	0.96	TML	15
80	TM**	Chlorobenzene	0.4524	0.4523	0.01	TM**	
		Average			3.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z70.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM*	Ethylbenzene	0.6710	0.6843	2.0	TM*	
82	TM**L	Bromoform	0.0962	0.0894	7.1	TM**L	21
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
84	TM	Isopropylbenzene	1.927	1.953	1.4	TM	
85	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3390	7.1	TM**	
86	TM	1,2,3-Trichloropropane	0.1463	0.1441	1.5	TM	
87	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0426	33	TML	33
88	TM	Bromobenzene	0.6094	0.6096	0.03	TM	
89	TML	n-Propylbenzene	2.101	2.150	2.4	TML	3.8
90	TM	4-Ethyltoluene	1.890	1.897	0.37	TM	
91	TML	2-Chlorotoluene	1.428	1.427	0.05	TML	5.2
92	TML	1,3,5-Trimethylbenzene	1.550	1.573	1.5	TML	5.0
93	TML	4-Chlorotoluene	1.428	1.427	0.05	TML	5.2
94	TM	Tert-Butylbenzene	1.523	1.521	0.14	TM	
95	TM	1,2,4-Trimethylbenzene	1.557	1.591	2.2	TM	
96	TM	Sec-Butylbenzene	2.101	2.138	1.8	TM	
97	TM	p-Isopropyltoluene	1.523	1.521	0.14	TM	
98	TML	Benzyl Chloride	0.5584	0.3705	34	TML	39
99	TM	1,3-DCB	1.159	1.157	0.16	TM	
100	TM	1,4-DCB	1.183	1.154	2.5	TM	
101	TML	n-Butylbenzene	1.436	1.454	1.3	TML	10
102	TM	1,2-DCB	1.073	1.074	0.10	TM	
103	TML	Hexachloroethane	0.2910	0.2932	0.75	TML	17
104	TML	1,2-Dibromo-3-chloropropane	0.0941	0.0932	0.99	TML	16
105	TM	1,2,4-Trichlorobenzene	0.9574	0.9120	4.7	TM	
106	TM	Hexachlorobutadiene	0.4832	0.4591	5.0	TM	
107	TML	Naphthalene	1.365	1.419	3.9	TML	7.5
108	TM	1,2,3-Trichlorobenzene	0.6880	0.6856	0.34	TM	
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.2		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z70.D Vial: 65
Acq On : 26 Jan 21 09:45 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3363515	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2555062	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	940096	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1015643	27.72	ppb		0.00
Spiked Amount 25.000			Recovery =	110.860%			
48) 1,2-DCA-D4(S)	5.71	65	933945	27.39	ppb		0.00
Spiked Amount 25.000			Recovery =	109.572%			
69) Toluene-D8(S)	8.03	98	3344038	27.19	ppb		0.00
Spiked Amount 25.000			Recovery =	108.772%			
77) 4-Bromofluorobenzene(S)	10.91	95	1135178	24.32	ppb		0.00
Spiked Amount 25.000			Recovery =	97.292%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	187702	10.91	ppb		99
4) Freon 114	1.16	85	93800	9.20	ppb		90
5) Chloromethane	1.22	50	76570	10.78	ppb		100
6) Vinyl chloride	1.28	62	171389	10.85	ppb		99
9) Bromomethane	1.52	94	47368	11.46	ppb		88
10) Chloroethane	1.60	64	46307	12.13	ppb		99
11) Dichlorofluoromethane	1.78	67	314068	10.47	ppb		99
12) Trichlorofluoromethane	1.82	101	314798	11.14	ppb		99
17) Acetone	2.36	43	183232	43.10	ppb		99
18) Freon-113	2.32	101	72912	9.15	ppb		95
19) 1,1-DCE	2.29	61	205026	10.26	ppb		97
23) Methyl Acetate	2.73	43	91619	9.00	ppb		90
24) Iodomethane	2.43	142	167116	10.03	ppb		95
25) Acrylonitrile	3.10	52	42553	9.71	ppb		94
26) Methylene chloride	2.80	49	95184	10.86	ppb		96
27) Carbon disulfide	2.49	76	183936	9.33	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	350817	10.09	ppb		99
29) Trans-1,2-DCE	3.14	61	201733	10.32	ppb		96
31) Diisopropyl Ether	3.92	45	366635	10.13	ppb		97
33) 1,1-DCA	3.71	63	262535	10.50	ppb		97
34) Vinyl Acetate	3.85	43	52621	4.39	ppb	#	91
35) Ethyl tert Butyl Ether	4.49	59	337026	10.15	ppb		96
36) MEK (2-Butanone)	4.67	43	233162	45.77	ppb		99
37) Cis-1,2-DCE	4.60	61	224982	9.83	ppb		95
38) 2,2-Dichloropropane	4.59	77	169279	8.18	ppb		96
41) Chloroform	5.09	83	286932	10.30	ppb		93
42) Bromochloromethane	4.92	49	108986	10.68	ppb		95
44) 1,1,1-TCA	5.30	97	258214	10.07	ppb		96
45) Cyclohexane	5.37	56	212345	10.01	ppb		100
46) 1,1-Dichloropropene	5.53	75	191187	10.07	ppb		94
47) 2,2,4-Trimethylpentane	5.95	57	358129	8.62	ppb		97
49) Carbon Tetrachloride	5.52	117	224820	9.97	ppb		97
50) Tert Amyl Methyl Ether	6.01	73	305767	9.85	ppb		94
52) 1,2-DCA	5.81	62	186206	10.07	ppb		94
53) Benzene	5.78	78	608454	10.21	ppb		98
54) TCE	6.61	130	214218	10.33	ppb		97
56) 1,2-Dichloropropane	6.86	63	133205	10.27	ppb		97
57) Bromodichloromethane	7.21	83	160247	10.17	ppb		99
58) Methyl Cyclohexane	6.84	83	227642	9.34	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z70.D Vial: 65
Acq On : 26 Jan 21 09:45 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
59)	Dibromomethane	6.99	174	141413	10.21	ppb	88
60)	MIBK (methyl isobutyl ket	7.94	43	413888	46.58	ppb	98
61)	1-Bromo-2-chloroethane	7.53	144	28493	9.67	ppb	97
63)	Cis-1,3-Dichloropropene	7.73	75	180555	9.53	ppb	95
64)	Toluene	8.11	91	647258	10.04	ppb	99
65)	Trans-1,3-Dichloropropene	8.37	75	151119	8.48	ppb	98
66)	1,1,2-TCA	8.56	97	126684	10.36	ppb	96
67)	2-Hexanone	8.88	43	160576	42.58	ppb	99
70)	1,2-EDB	9.09	107	129854	10.46	ppb	92
71)	Tetrachloroethene	8.71	166	254142	9.83	ppb	99
72)	1-Chlorohexane	9.67	91	192674	9.55	ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	147140	9.90	ppb	97
74)	m&p-Xylene	9.93	91	1073461	20.81	ppb	100
75)	o-Xylene	10.35	91	528526	10.26	ppb	100
76)	Styrene	10.37	104	425862	9.26	ppb	99
78)	1,3-Dichloropropane	8.74	76	193039	10.21	ppb	99
79)	Dibromochloromethane	8.98	129	123941	8.49	ppb	98
80)	Chlorobenzene	9.65	112	462281	10.00	ppb	100
81)	Ethylbenzene	9.79	91	699378	10.20	ppb	98
82)	Bromoform	10.54	173	91382	7.94	ppb	99
84)	Isopropylbenzene	10.76	105	734574	10.14	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	127488	9.29	ppb	96
86)	1,2,3-Trichloropropane	11.12	110	54198	9.85	ppb	97
87)	t-1,4-Dichloro-2-Butene	11.14	53	16013	6.66	ppb	97
88)	Bromobenzene	11.06	77	229226	10.00	ppb	96
89)	n-Propylbenzene	11.21	91	808445	9.62	ppb	97
90)	4-Ethyltoluene	11.34	105	713233	10.04	ppb	97
91)	2-Chlorotoluene	11.41	91	536756	9.48	ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	591635	9.50	ppb	100
93)	4-Chlorotoluene	11.41	91	536756	9.48	ppb	98
94)	Tert-Butylbenzene	11.76	119	571973	9.99	ppb	97
95)	1,2,4-Trimethylbenzene	11.81	105	598326	10.22	ppb	99
96)	Sec-Butylbenzene	12.00	105	803925	10.18	ppb	99
97)	p-Isopropyltoluene	11.76	119	571973	9.99	ppb	99
98)	Benzyl Chloride	12.35	91	139333	6.08	ppb	98
99)	1,3-DCB	12.10	146	434956	9.98	ppb	95
100)	1,4-DCB	12.20	146	433990	9.75	ppb	99
101)	n-Butylbenzene	12.61	91	546726	8.95	ppb	100
102)	1,2-DCB	12.60	146	403712	10.01	ppb	99
103)	Hexachloroethane	12.89	201	110247	8.30	ppb	92
104)	1,2-Dibromo-3-chloropropan	13.44	157	35034	8.43	ppb	91
105)	1,2,4-Trichlorobenzene	13.69	180	342933	9.53	ppb	99
106)	Hexachlorobutadiene	14.57	225	172654	9.50	ppb	95
107)	Naphthalene	14.62	128	533689	9.25	ppb	98
108)	1,2,3-Trichlorobenzene	14.89	180	257830	9.97	ppb	97

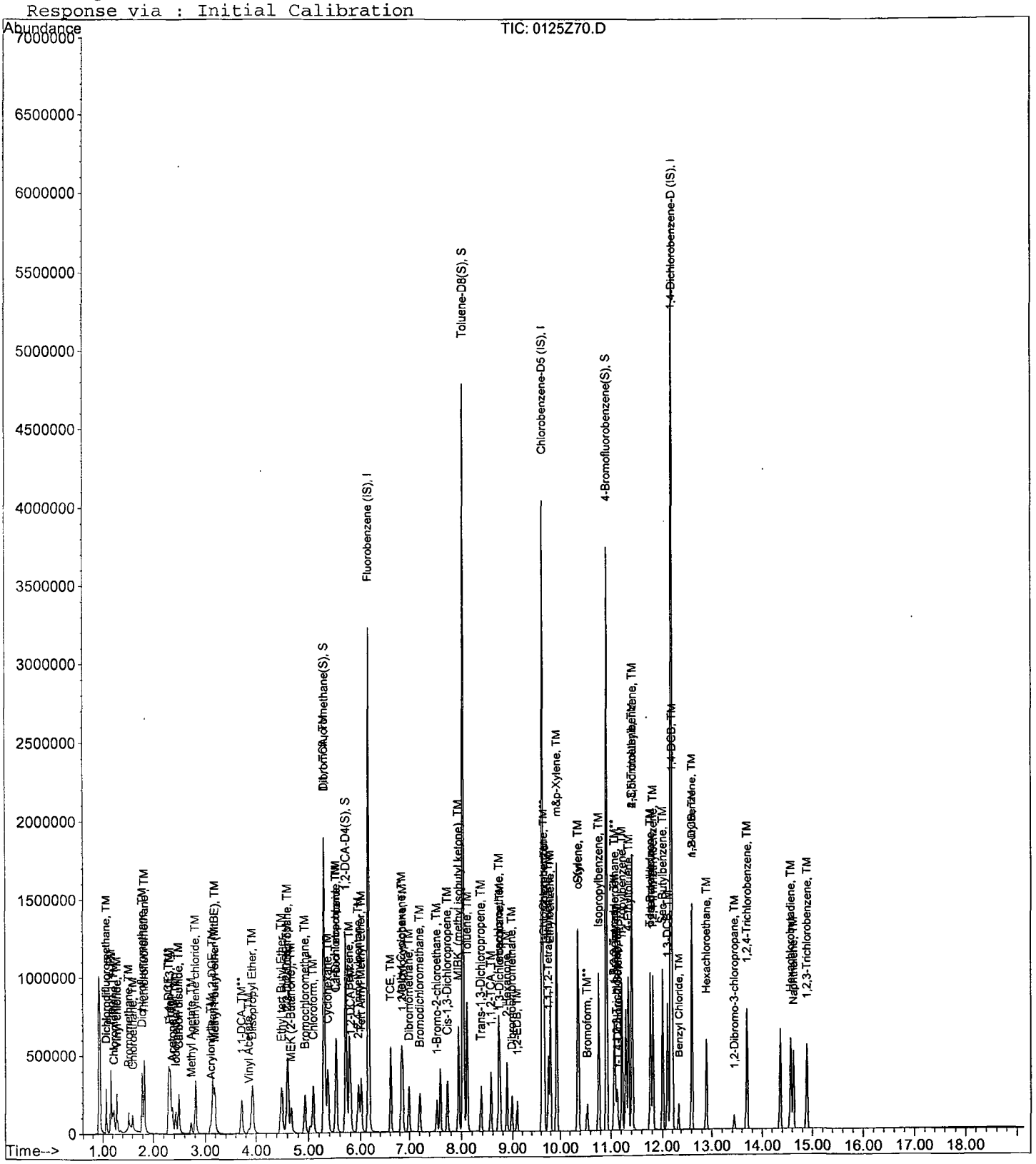
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z70.D Vial: 65
Acq On : 26 Jan 21 09:45 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z03.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM	
3	TM	Dichlorodifluoromethane	0.1279	0.1465	15	TM	
4	TM	Freon 114	0.0758	0.0726	4.1	TM	
5	TM**L	Chloromethane	0.0912	0.0579	36	TM**L	9.9
6	TM*	Vinyl chloride	0.1174	0.1318	12	TM*	
7		Butane	0.0000	0.0003	0.00		
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
9	TML	Bromomethane	0.0406	0.0358	12	TML	17
10	TML	Chloroethane	0.0419	0.0328	22	TML	15
11	TM	Dichlorofluoromethane	0.2230	0.2250	0.91	TM	
12	TM	Trichlorofluoromethane	0.2100	0.2337	11	TM	
13	TM	Pentane	0.0000	0.0003	0.00	TM	
14	TM	Acrolein	0.0000	0.0463	0.00	TM	
15	TM	Acetone	0.0316	0.0315	0.30	TM	
16	TM	Freon-113	0.0592	0.0568	4.1	TM	
17	TM*	1,1-DCE	0.1485	0.1495	0.68	TM*	
18	TM	2-Propanol	0.0000	0.0013	0.00	TM	
19	TM	Acetonitrile	0.0000	0.0350	0.00	TM	
20	TM	t-Butanol	0.0000	0.0031	0.00	TM	
21	TM	Methyl Acetate	0.0756	0.0714	5.6	TM	
22	TML	Iodomethane	0.1434	0.1331	7.2	TML	6.1
23	TM	Acrylonitrile	0.0326	0.0344	5.6	TM	
24	TML	Methylene chloride	0.0948	0.0689	27	TML	5.3
25	TM	Carbon disulfide	0.1466	0.1370	6.5	TM	
26	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2692	4.1	TM	
27	TM	Trans-1,2-DCE	0.1452	0.1472	1.3	TM	
28	TM	Hexane	0.0000	0.0000	0.00	TM	
29	TM	Diisopropyl Ether	0.2691	0.2804	4.2	TM	
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**	
31	TM**	1,1-DCA	0.1859	0.1950	4.9	TM**	
32	TM	Vinyl Acetate	0.0891	0.1003	13	TM	
33	TM	Ethyl tert Butyl Ether	0.2467	0.2557	3.6	TM	
34	TM	MEK (2-Butanone)	0.0379	0.0423	12	TM	
35	TM	Cis-1,2-DCE	0.1702	0.1729	1.6	TM	
36	TM	2,2-Dichloropropane	0.1539	0.1610	4.6	TM	
37	TML	2-Methylpentane	0.0000	0.0003	0.00	TML	
38	TM	3-Methylpentane	0.0000	0.0556	0.00	TM	
39	TM*	Chloroform	0.2071	0.2125	2.6	TM*	
40	TM	Bromochloromethane	0.0759	0.0804	6.0	TM	
		Average			5.8		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0126Z03.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	Dibromofluoromethane(S)	0.2724	0.3009	10	S	
42	TM	1,1,1-TCA	0.1905	0.1867	2.0	TM	
43	TM	Cyclohexane	0.1576	0.1530	3.0	TM	
44	TM	1,1-Dichloropropene	0.1411	0.1402	0.66	TM	
45	TM	2,2,4-Trimethylpentane	0.3087	0.3136	1.6	TM	
46	S	1,2-DCA-D4(S)	0.2534	0.2772	9.4	S	
47	TM	Carbon Tetrachloride	0.1676	0.1585	5.5	TM	
48	TM	Tert Amyl Methyl Ether	0.2307	0.2352	2.0	TM	
49	TM	Methylcyclopentane	0.0000	0.0174	0.00	TM	
50	TM	1,2-DCA	0.1374	0.1414	2.9	TM	
51	TM	Benzene	0.4429	0.4496	1.5	TM	
52	TM	TCE	0.1541	0.1470	4.6	TM	
53	TM	2-Pentanone	0.0000	0.7094	0.00	TM	
54	TM*	1,2-Dichloropropane	0.0964	0.1046	8.6	TM*	
55	TM	Bromodichloromethane	0.1171	0.1197	2.2	TM	
56	TM	Methyl Cyclohexane	0.1811	0.1741	3.9	TM	
57	TM	Dibromomethane	0.1030	0.1066	3.5	TM	
58	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0735	11	TM	
59	TM	1-Bromo-2-chloroethane	0.0219	0.0215	2.0	TM	
60	TM	2-Chloroethyl vinyl ether	0.0000	0.0000	0.00	TM	
61	TM	Cis-1,3-Dichloropropene	0.1409	0.1369	2.8	TM	
62	TM*	Toluene	0.4791	0.4861	1.5	TM*	
63	TML	Trans-1,3-Dichloropropene	0.1172	0.1202	2.6	TML	9.8
64	TM	1,1,2-TCA	0.0909	0.0948	4.3	TM	
65	TML	2-Hexanone	0.0257	0.0302	18	TML	5.9
66	I	Chlorobenzene-D5 (IS)	ISTD			I	
67	S	Toluene-D8(S)	1.203	1.321	9.8	S	
68	TM	1,2-EDB	0.1215	0.1266	4.2	TM	
69	TM	Tetrachloroethene	0.2530	0.2466	2.5	TM	
70	TM	1-Chlorohexane	0.1973	0.1962	0.58	TM	
71	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1455	0.01	TM	
72	TM	m&p-Xylene	0.5046	0.5217	3.4	TM	
73	TM	o-Xylene	0.5042	0.5243	4.0	TM	
74	TML	Styrene	0.3854	0.4156	7.8	TML	7.7
75	SL	4-Bromofluorobenzene(S)	0.4155	0.4488	8.0	SL	1.8
76	TM	1,3-Dichloropropane	0.1850	0.1892	2.2	TM	
77	TML	Dibromochloromethane	0.1225	0.1221	0.28	TML	15
78	TM**	Chlorobenzene	0.4524	0.4553	0.65	TM**	
79	TM*	Ethylbenzene	0.6710	0.6837	1.9	TM*	
80	TM**L	Bromoform	0.0962	0.0915	4.9	TM**L	19
		Average			3.9		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0126Z03.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
82	TM	Isopropylbenzene	1.927	1.972	2.3	TM	
83	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3938	8.0	TM**	
84	TM	1,2,3-Trichloropropane	0.1463	0.1467	0.30	TM	
85	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0558	12	TML	18
86	TM	Bromobenzene	0.6094	0.6242	2.4	TM	
87	TML	n-Propylbenzene	2.101	2.188	4.2	TML	2.0
88	TM	4-Ethyltoluene	1.890	1.945	2.9	TM	
89	TML	2-Chlorotoluene	1.428	1.478	3.5	TML	1.7
90	TML	1,3,5-Trimethylbenzene	1.550	1.627	5.0	TML	1.6
91	TML	4-Chlorotoluene	1.428	1.478	3.5	TML	1.7
92	TM	Tert-Butylbenzene	1.523	1.523	0.01	TM	
93	TM	1,2,4-Trimethylbenzene	1.557	1.627	4.5	TM	
94	TM	Sec-Butylbenzene	2.101	2.165	3.1	TM	
95	TM	p-Isopropyltoluene	1.523	1.523	0.01	TM	
96	TML	Benzyl Chloride	0.5584	0.6796	22	TML	2.2
97	TM	1,3-DCB	1.159	1.189	2.7	TM	
98	TM	1,4-DCB	1.183	1.195	0.96	TM	
99	TML	n-Butylbenzene	1.436	1.558	8.5	TML	4.2
100	TM	1,2-DCB	1.073	1.096	2.2	TM	
101	TML	Hexachloroethane	0.2910	0.3228	11	TML	10
102	TML	1,2-Dibromo-3-chloropropane	0.0941	0.0966	2.6	TML	13
103	TM	1,2,4-Trichlorobenzene	0.9574	0.9620	0.48	TM	
104	TM	Hexachlorobutadiene	0.4832	0.4803	0.59	TM	
105	TML	Naphthalene	1.365	1.454	6.5	TML	5.1
106	TM	1,2,3-Trichlorobenzene	0.6880	0.7047	2.4	TM	
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3328529	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2523913	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	921280	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.29	111	1001646	27.621 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.484%	
48) 1,2-DCA-D4(S)	5.71	65	922661	27.347 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.388%	
69) Toluene-D8(S)	8.03	98	3333896	27.445 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.780%	
77) 4-Bromofluorobenzene(S)	10.91	95	1132815	24.550 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.200%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.06	85	195104	11.460 ppb	99
4) Freon 114	1.16	85	96720	9.588 ppb	94
5) Chloromethane	1.22	50	77146	10.995 ppb	100
6) Vinyl chloride	1.28	62	175480	11.231 ppb	96
9) Bromomethane	1.53	94	47713	11.694 ppb	100
10) Chloroethane	1.60	64	43674	11.509 ppb	99
11) Dichlorofluoromethane	1.78	67	299624	10.091 ppb	97
12) Trichlorofluoromethane	1.82	101	311192	11.128 ppb	99
17) Acetone	2.36	43	209729	49.850 ppb	99
18) Freon-113	2.32	101	75592	9.590 ppb	98
19) 1,1-DCE	2.29	61	199073	10.068 ppb	94
23) Methyl Acetate	2.72	43	95084	9.442 ppb	94
24) Iodomethane	2.43	142	177188	10.610 ppb	97
25) Acrylonitrile	3.10	52	45782	10.556 ppb	90
26) Methylene chloride	2.81	49	91760	10.531 ppb	98
27) Carbon disulfide	2.49	76	182400	9.345 ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	358417	10.414 ppb	100
29) Trans-1,2-DCE	3.15	61	195955	10.133 ppb	97
31) Diisopropyl Ether	3.92	45	373309	10.420 ppb	98
33) 1,1-DCA	3.71	63	259653	10.492 ppb	97
34) Vinyl Acetate	3.86	43	133541	11.258 ppb	96
35) Ethyl tert Butyl Ether	4.48	59	340406	10.362 ppb	99
36) MEK (2-Butanone)	4.67	43	281408	55.824 ppb	98
37) Cis-1,2-DCE	4.60	61	230182	10.160 ppb	95
38) 2,2-Dichloropropane	4.59	77	214333	10.463 ppb	93
41) Chloroform	5.09	83	282890	10.261 ppb	97
42) Bromochloromethane	4.92	49	107039	10.596 ppb	98
44) 1,1,1-TCA	5.30	97	248539	9.798 ppb	99
45) Cyclohexane	5.36	56	203656	9.704 ppb	92
46) 1,1-Dichloropropene	5.53	75	186676	9.934 ppb	97
47) 2,2,4-Trimethylpentane	5.95	57	417581	10.160 ppb	99
49) Carbon Tetrachloride	5.52	117	211025	9.454 ppb	98
50) Tert Amyl Methyl Ether	6.01	73	313162	10.196 ppb	96
52) 1,2-DCA	5.80	62	188257	10.290 ppb	98
53) Benzene	5.78	78	598619	10.152 ppb	97
54) TCE	6.61	130	195686	9.538 ppb	95
56) 1,2-Dichloropropane	6.86	63	139283	10.855 ppb	99
57) Bromodichloromethane	7.21	83	159344	10.217 ppb	99
58) Methyl Cyclohexane	6.84	83	231787	9.615 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	141890	10.347	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	489592	55.682	ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	28567	9.796	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	182321	9.720	ppb		97
64)	Toluene	8.11	91	647173	10.146	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	159970	9.016	ppb		99
66)	1,1,2-TCA	8.56	97	126164	10.425	ppb		93
67)	2-Hexanone	8.88	43	201344	52.972	ppb		99
70)	1,2-EDB	9.09	107	127808	10.419	ppb		99
71)	Tetrachloroethene	8.71	166	248937	9.748	ppb		97
72)	1-Chlorohexane	9.66	91	198067	9.942	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	146861	10.001	ppb		97
74)	m&p-Xylene	9.93	91	1053400	20.678	ppb		100
75)	o-Xylene	10.35	91	529314	10.398	ppb		99
76)	Styrene	10.37	104	419531	9.231	ppb		99
78)	1,3-Dichloropropane	8.73	76	190980	10.225	ppb		98
79)	Dibromochloromethane	8.98	129	123278	8.543	ppb		95
80)	Chlorobenzene	9.65	112	459668	10.065	ppb		97
81)	Ethylbenzene	9.79	91	690205	10.189	ppb		97
82)	Bromoform	10.54	173	92376	8.086	ppb		96
84)	Isopropylbenzene	10.76	105	726624	10.233	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	145130	10.797	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	54067	10.030	ppb		95
87)	t-1,4-Dichloro-2-Butene	11.14	53	20571	8.245	ppb		92
88)	Bromobenzene	11.06	77	230040	10.243	ppb		99
89)	n-Propylbenzene	11.21	91	806456	9.800	ppb		99
90)	4-Ethyltoluene	11.34	105	716717	10.292	ppb		99
91)	2-Chlorotoluene	11.41	91	544730	9.831	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	599650	9.837	ppb		100
93)	4-Chlorotoluene	11.41	91	544730	9.831	ppb		97
94)	Tert-Butylbenzene	11.76	119	561339	10.001	ppb		100
95)	1,2,4-Trimethylbenzene	11.81	105	599404	10.445	ppb		100
96)	Sec-Butylbenzene	12.00	105	797831	10.306	ppb		97
97)	p-Isopropyltoluene	11.76	119	561339	10.001	ppb		97
98)	Benzyl Chloride	12.35	91	250444	9.778	ppb		100
99)	1,3-DCB	12.10	146	438316	10.267	ppb		99
100)	1,4-DCB	12.20	146	440236	10.096	ppb		100
101)	n-Butylbenzene	12.60	91	573997	9.583	ppb		97
102)	1,2-DCB	12.60	146	403840	10.217	ppb		98
103)	Hexachloroethane	12.89	201	118942	8.965	ppb		93
104)	1,2-Dibromo-3-chloropropan	13.44	157	35595	8.695	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.69	180	354518	10.048	ppb		98
106)	Hexachlorobutadiene	14.57	225	177011	9.941	ppb		98
107)	Naphthalene	14.62	128	535820	9.486	ppb		97
108)	1,2,3-Trichlorobenzene	14.89	180	259677	10.242	ppb		96

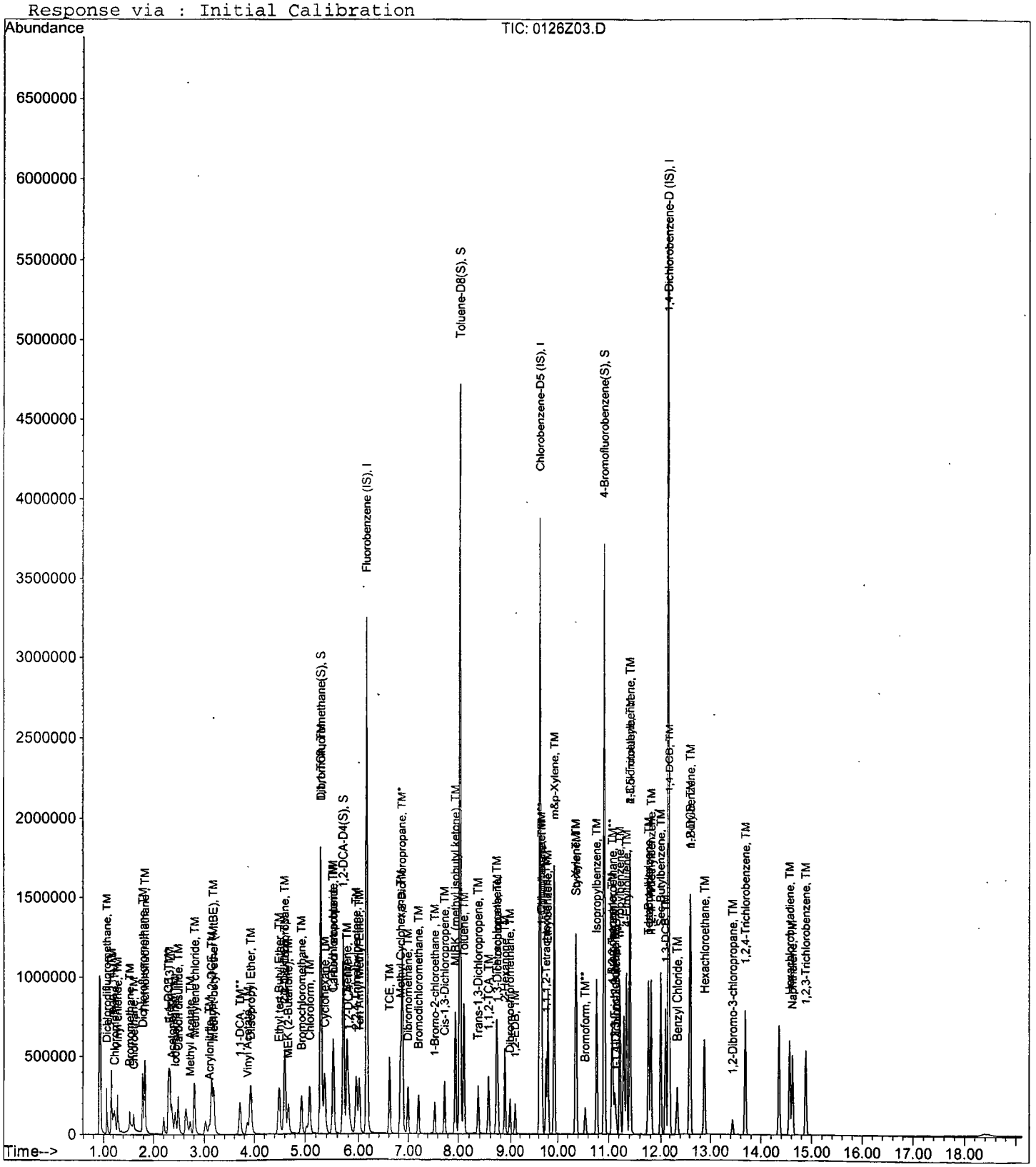
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0003	0.00	TM	
3	TM	Dichlorodifluoromethane	0.1279	0.1406	9.9	TM	
4	TM	Freon 114	0.0758	0.0816	7.7	TM	
5	TM**L	Chloromethane	0.0912	0.0538	41	TM**L	1.5
6	TM*	Vinyl chloride	0.1174	0.1276	8.7	TM*	
7		Butane	0.0000	0.0009	0.00		
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM	
9	TML	Bromomethane	0.0406	0.0381	6.3	TML	25
10	TML	Chloroethane	0.0419	0.0319	24	TML	12
11	TM	Dichlorofluoromethane	0.2230	0.2505	12	TM	
12	TM	Trichlorofluoromethane	0.2100	0.2197	4.6	TM	
13	TM	Pentane	0.0000	0.0009	0.00	TM	
14	TM	Diethyl ether	0.0000	0.0001	0.00	TM	
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0000	0.00	TM	
16	TM	Acrolein	0.0000	0.0556	0.00	TM	
17	TM	Acetone	0.0316	0.0286	9.5	TM	
18	TM	Freon-113	0.0592	0.0570	3.8	TM	
19	TM*	1,1-DCE	0.1485	0.1641	10	TM*	
20	TM	2-Propanol	0.0000	0.0012	0.00	TM	
21	TM	Acetonitrile	0.0000	0.0415	0.00	TM	
22	TM	t-Butanol	0.0000	0.0034	0.00	TM	
23	TM	Methyl Acetate	0.0756	0.0790	4.5	TM	
24	TML	Iodomethane	0.1434	0.1374	4.2	TML	9.0
25	TM	Acrylonitrile	0.0326	0.0359	10	TM	
26	TML	Methylene chloride	0.0948	0.0747	21	TML	16
27	TM	Carbon disulfide	0.1466	0.1476	0.71	TM	
28	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2879	11	TM	
29	TM	Trans-1,2-DCE	0.1452	0.1629	12	TM	
30	TM	Hexane	0.0000	0.0001	0.00	TM	
31	TM	Diisopropyl Ether	0.2691	0.3098	15	TM	
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0002	0.00	TM**	
33	TM**	1,1-DCA	0.1859	0.2167	17	TM**	
34	TM	Vinyl Acetate	0.0891	0.0940	5.5	TM	
35	TM	Ethyl tert Butyl Ether	0.2467	0.2758	12	TM	
36	TM	MEK (2-Butanone)	0.0379	0.0380	0.32	TM	
37	TM	Cis-1,2-DCE	0.1702	0.1863	9.5	TM	
38	TM	2,2-Dichloropropane	0.1539	0.1506	2.1	TM	
39	TML	2-Methylpentane	0.0000	0.0005	0.00	TML	
40	TM	3-Methylpentane	0.0000	0.0607	0.00	TM	
		Average			6.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0126Z29.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	Chloroform	0.2071	0.2358	14	TM*	
42	TM	Bromochloromethane	0.0759	0.0910	20	TM	
43	S	Dibromofluoromethane(S)	0.2724	0.3016	11	S	
44	TM	1,1,1-TCA	0.1905	0.2082	9.3	TM	
45	TM	Cyclohexane	0.1576	0.1646	4.4	TM	
46	TM	1,1-Dichloropropene	0.1411	0.1528	8.2	TM	
47	TM	2,2,4-Trimethylpentane	0.3087	0.3180	3.0	TM	
48	S	1,2-DCA-D4(S)	0.2534	0.2762	9.0	S	
49	TM	Carbon Tetrachloride	0.1676	0.1752	4.5	TM	
50	TM	Tert Amyl Methyl Ether	0.2307	0.2496	8.2	TM	
51	TM	Methylcyclopentane	0.0000	0.0198	0.00	TM	
52	TM	1,2-DCA	0.1374	0.1534	12	TM	
53	TM	Benzene	0.4429	0.5005	13	TM	
54	TM	TCE	0.1541	0.1589	3.1	TM	
55	TM	2-Pentanone	0.0000	0.7727	0.00	TM	
56	TM*	1,2-Dichloropropane	0.0964	0.1129	17	TM*	
57	TM	Bromodichloromethane	0.1171	0.1300	11	TM	
58	TM	Methyl Cyclohexane	0.1811	0.1835	1.3	TM	
59	TM	Dibromomethane	0.1030	0.1159	13	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0665	0.75	TM	
61	TM	1-Bromo-2-chloroethane	0.0219	0.0214	2.3	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0000	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.1409	0.1490	5.7	TM	
64	TM*	Toluene	0.4791	0.5318	11	TM*	
65	TML	Trans-1,3-Dichloropropene	0.1172	0.1268	8.2	TML	5.3
66	TM	1,1,2-TCA	0.0909	0.1020	12	TM	
67	TML	2-Hexanone	0.0257	0.0258	0.44	TML	8.5
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.203	1.335	11	S	
70	TM	1,2-EDB	0.1215	0.1384	14	TM	
71	TM	Tetrachloroethene	0.2530	0.2644	4.5	TM	
72	TM	1-Chlorohexane	0.1973	0.2122	7.5	TM	
73	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1616	11	TM	
74	TM	m&p-Xylene	0.5046	0.5793	15	TM	
75	TM	o-Xylene	0.5042	0.5761	14	TM	
76	TML	Styrene	0.3854	0.4599	19	TML	2.0
77	SL	4-Bromofluorobenzene(S)	0.4155	0.4536	9.2	SL	0.86
78	TM	1,3-Dichloropropane	0.1850	0.2109	14	TM	
79	TML	Dibromochloromethane	0.1225	0.1340	9.4	TML	7.2
80	TM**	Chlorobenzene	0.4524	0.4962	9.7	TM**	
		Average			8.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0126Z29.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM*	Ethylbenzene	0.6710	0.7583	13	TM*	
82	TM**L	Bromoform	0.0962	0.1010	5.0	TM**L	12
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
84	TM	Isopropylbenzene	1.927	2.124	10	TM	
85	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.4152	14	TM**	
86	TM	1,2,3-Trichloropropane	0.1463	0.1631	11	TM	
87	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0524	18	TML	22
88	TM	Bromobenzene	0.6094	0.6836	12	TM	
89	TML	n-Propylbenzene	2.101	2.383	13	TML	7.0
90	TM	4-Ethyltoluene	1.890	2.111	12	TM	
91	TML	2-Chlorotoluene	1.428	1.618	13	TML	7.9
92	TML	1,3,5-Trimethylbenzene	1.550	1.756	13	TML	6.3
93	TML	4-Chlorotoluene	1.428	1.618	13	TML	7.9
94	TM	Tert-Butylbenzene	1.523	1.660	9.0	TM	
95	TM	1,2,4-Trimethylbenzene	1.557	1.758	13	TM	
96	TM	Sec-Butylbenzene	2.101	2.333	11	TM	
97	TM	p-Isopropyltoluene	1.523	1.660	9.0	TM	
98	TML	Benzyl Chloride	0.5584	0.4611	17	TML	28
99	TM	1,3-DCB	1.159	1.298	12	TM	
100	TM	1,4-DCB	1.183	1.292	9.2	TM	
101	TML	n-Butylbenzene	1.436	1.672	16	TML	2.8
102	TM	1,2-DCB	1.073	1.177	9.7	TM	
103	TML	Hexachloroethane	0.2910	0.3007	3.3	TML	15
104	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1027	9.1	TML	8.3
105	TM	1,2,4-Trichlorobenzene	0.9574	1.046	9.3	TM	
106	TM	Hexachlorobutadiene	0.4832	0.5116	5.9	TM	
107	TML	Naphthalene	1.365	1.609	18	TML	5.4
108	TM	1,2,3-Trichlorobenzene	0.6880	0.7713	12	TM	
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			11.5		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z29.D Vial: 29
Acq On : 27 Jan 21 00:34 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/26/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:05 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3246971	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2428268	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	896512	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	979193	27.680 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.720%	
48) 1,2-DCA-D4(S)	5.71	65	896875	27.250 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.000%	
69) Toluene-D8(S)	8.03	98	3241039	27.732 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.928%	
77) 4-Bromofluorobenzene(S)	10.92	95	1101402	24.786 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.144%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.07	85	182588	10.994 ppb	100
4) Freon 114	1.16	85	106024	10.775 ppb	91
5) Chloromethane	1.23	50	69935	10.146 ppb	99
6) Vinyl chloride	1.28	62	165729	10.873 ppb	99
9) Bromomethane	1.53	94	49448	12.539 ppb	90
10) Chloroethane	1.60	64	41405	11.152 ppb	100
11) Dichlorofluoromethane	1.78	67	325324	11.232 ppb	99
12) Trichlorofluoromethane	1.82	101	285396	10.462 ppb	98
17) Acetone	2.36	43	185800	45.272 ppb	100
18) Freon-113	2.32	101	73976	9.621 ppb	92
19) 1,1-DCE	2.29	61	213112	11.048 ppb	98
23) Methyl Acetate	2.72	43	102627	10.447 ppb	91
24) Iodomethane	2.43	142	178495	10.896 ppb	95
25) Acrylonitrile	3.10	52	46668	11.030 ppb	94
26) Methylene chloride	2.81	49	97048	11.590 ppb	93
27) Carbon disulfide	2.49	76	191744	10.071 ppb	99
28) Methyl t-butyl ether (MtBE	3.18	73	373906	11.137 ppb	98
29) Trans-1,2-DCE	3.14	61	211583	11.216 ppb	95
31) Diisopropyl Ether	3.92	45	402338	11.513 ppb	99
33) 1,1-DCA	3.71	63	281483	11.659 ppb	97
34) Vinyl Acetate	3.86	43	122102	10.552 ppb	96
35) Ethyl tert Butyl Ether	4.49	59	358223	11.179 ppb	97
36) MEK (2-Butanone)	4.67	43	246652	50.158 ppb	100
37) Cis-1,2-DCE	4.60	61	241913	10.946 ppb	98
38) 2,2-Dichloropropane	4.59	77	195548	9.786 ppb	94
41) Chloroform	5.09	83	306196	11.385 ppb	94
42) Bromochloromethane	4.93	49	118245	11.999 ppb	92
44) 1,1,1-TCA	5.30	97	270369	10.926 ppb	97
45) Cyclohexane	5.37	56	213716	10.440 ppb	96
46) 1,1-Dichloropropene	5.53	75	198392	10.823 ppb	97
47) 2,2,4-Trimethylpentane	5.96	57	413043	10.302 ppb	100
49) Carbon Tetrachloride	5.52	117	227514	10.449 ppb	93
50) Tert Amyl Methyl Ether	6.01	73	324156	10.819 ppb	91
52) 1,2-DCA	5.81	62	199245	11.164 ppb	98
53) Benzene	5.78	78	650001	11.301 ppb	98
54) TCE	6.61	130	206337	10.310 ppb	93
56) 1,2-Dichloropropane	6.86	63	146598	11.713 ppb	97
57) Bromodichloromethane	7.20	83	168873	11.100 ppb	97
58) Methyl Cyclohexane	6.84	83	238340	10.135 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z29.D Vial: 29
Acq On : 27 Jan 21 00:34 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/26/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:05 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	150584	11.257	ppb		92
60)	MIBK (methyl isobutyl ket	7.94	43	432084	50.376	ppb		96
61)	1-Bromo-2-chloroethane	7.54	144	27788	9.768	ppb		97
63)	Cis-1,3-Dichloropropene	7.73	75	193475	10.573	ppb		98
64)	Toluene	8.11	91	690738	11.101	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	164672	9.470	ppb		100
66)	1,1,2-TCA	8.56	97	132499	11.224	ppb		99
67)	2-Hexanone	8.88	43	167680	45.757	ppb		99
70)	1,2-EDB	9.09	107	134456	11.393	ppb		100
71)	Tetrachloroethene	8.71	166	256844	10.453	ppb		98
72)	1-Chlorohexane	9.67	91	206115	10.753	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	156932	11.108	ppb		99
74)	m&p-Xylene	9.93	91	1125437	22.962	ppb		100
75)	o-Xylene	10.35	91	559571	11.426	ppb		98
76)	Styrene	10.37	104	446715	10.196	ppb		99
78)	1,3-Dichloropropane	8.74	76	204891	11.402	ppb		99
79)	Dibromochloromethane	8.98	129	130123	9.284	ppb		98
80)	Chlorobenzene	9.65	112	481965	10.969	ppb		97
81)	Ethylbenzene	9.79	91	736500	11.301	ppb		98
82)	Bromoform	10.54	173	98130	8.763	ppb		99
84)	Isopropylbenzene	10.76	105	761677	11.023	ppb		97
85)	1,1,2,2-Tetrachloroethane	11.08	83	148908	11.384	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	58481	11.149	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	18805	7.840	ppb	#	82
88)	Bromobenzene	11.06	77	245143	11.217	ppb		95
89)	n-Propylbenzene	11.21	91	854702	10.703	ppb		98
90)	4-Ethyltoluene	11.34	105	757007	11.171	ppb		98
91)	2-Chlorotoluene	11.41	91	580074	10.787	ppb		100
92)	1,3,5-Trimethylbenzene	11.41	105	629846	10.633	ppb		96
93)	4-Chlorotoluene	11.41	91	580074	10.787	ppb		100
94)	Tert-Butylbenzene	11.76	119	595392	10.901	ppb		100
95)	1,2,4-Trimethylbenzene	11.81	105	630526	11.291	ppb		100
96)	Sec-Butylbenzene	12.00	105	836560	11.105	ppb		98
97)	p-Isopropyltoluene	11.76	119	595392	10.901	ppb		97
98)	Benzyl Chloride	12.35	91	165351	7.164	ppb	#	93
99)	1,3-DCB	12.10	146	465311	11.200	ppb		96
100)	1,4-DCB	12.20	146	463402	10.921	ppb		99
101)	n-Butylbenzene	12.61	91	599557	10.278	ppb		97
102)	1,2-DCB	12.60	146	421986	10.972	ppb		96
103)	Hexachloroethane	12.89	201	107826	8.469	ppb		92
104)	1,2-Dibromo-3-chloropropan	13.44	157	36812	9.171	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	375106	10.925	ppb		99
106)	Hexachlorobutadiene	14.57	225	183461	10.587	ppb		98
107)	Naphthalene	14.62	128	576880	10.538	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	276588	11.211	ppb		98

(#) = qualifier out of range (m) = manual integration

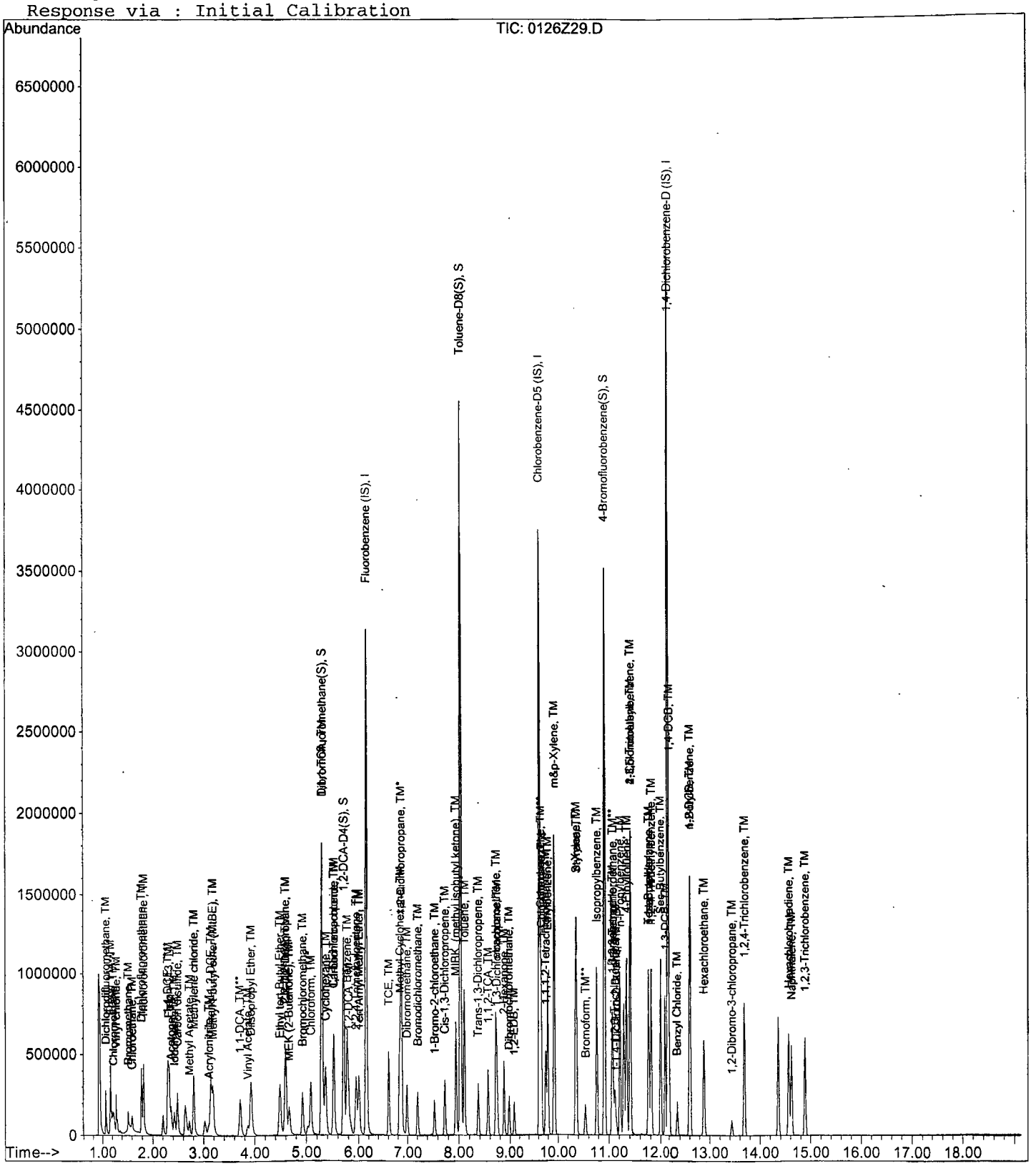
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z29.D
Acq On : 27 Jan 21 00:34
Sample : Ending CCV 10ug/L 1/26/21
Misc :

Vial: 29
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 7:05 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z61.D Vial: 56
Acq On : 26 Jan 21 06:18 Operator: LP,DG,CH
Sample : BA25689W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:11 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3271492	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2494234	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	928256	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1013192	28.4260 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.704%	
48) 1,2-DCA-D4(S)	5.71	65	954401	28.7806 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.124%	
69) Toluene-D8(S)	8.03	98	3252813	27.0962 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.384%	
77) 4-Bromofluorobenzene(S)	10.91	95	1117973	24.5193 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.076%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

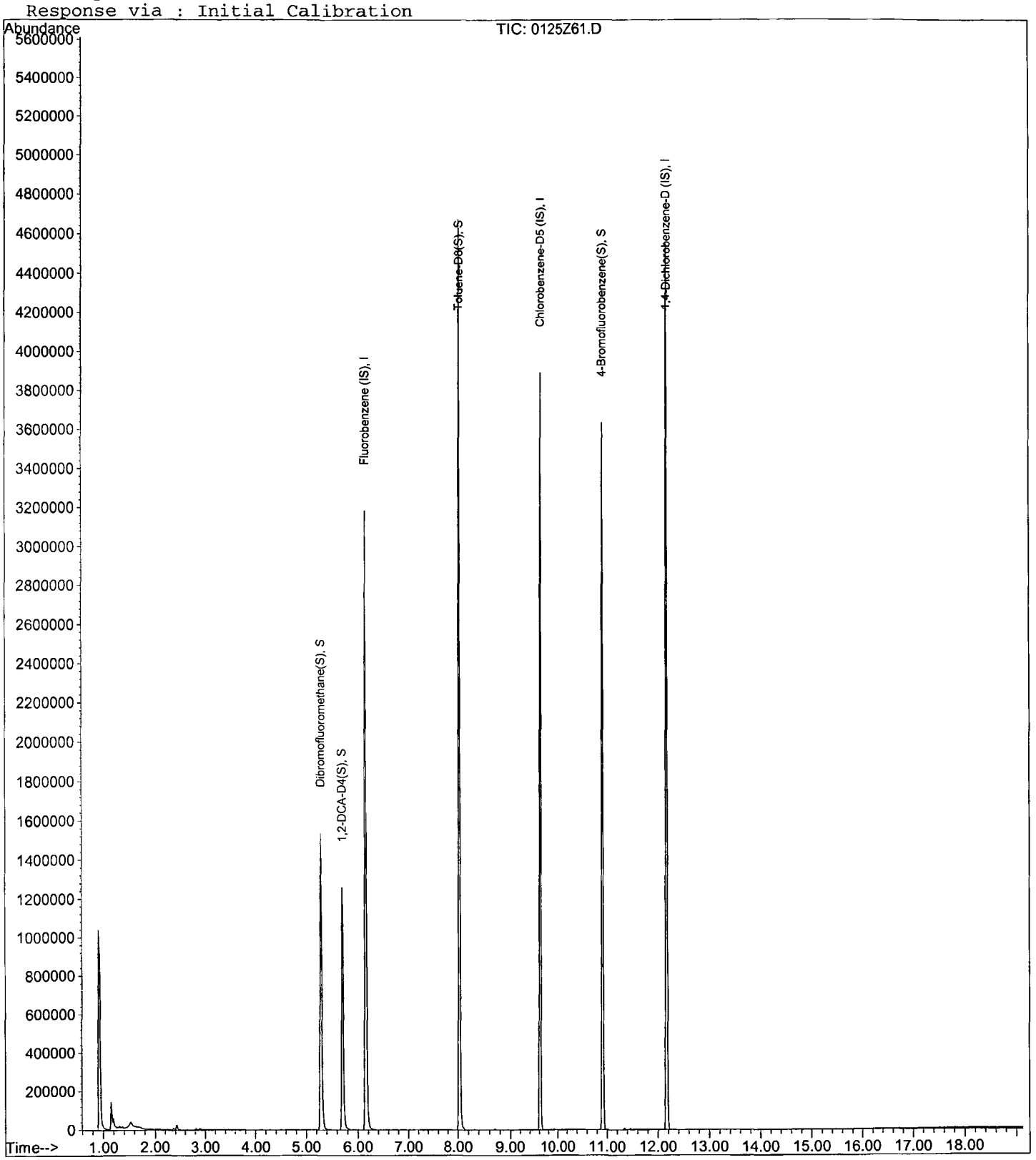
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z61.D
Acq On : 26 Jan 21 06:18
Sample : BA25689W01
Misc :

Vial: 56
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:11 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z62.D Vial: 57
Acq On : 26 Jan 21 06:41 Operator: LP,DG,CH
Sample : BA25690W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:12 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3406938	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2618709	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1007744	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.29	111	1047162	28.2111 ppb	0.00
Spiked Amount 25.000			Recovery = 112.844%		
48) 1,2-DCA-D4(S)	5.71	65	994614	28.8008 ppb	0.00
Spiked Amount 25.000			Recovery = 115.204%		
69) Toluene-D8(S)	8.03	98	3382920	26.8405 ppb	0.00
Spiked Amount 25.000			Recovery = 107.364%		
77) 4-Bromofluorobenzene(S)	10.91	95	1158605	24.2308 ppb	0.00
Spiked Amount 25.000			Recovery = 96.924%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

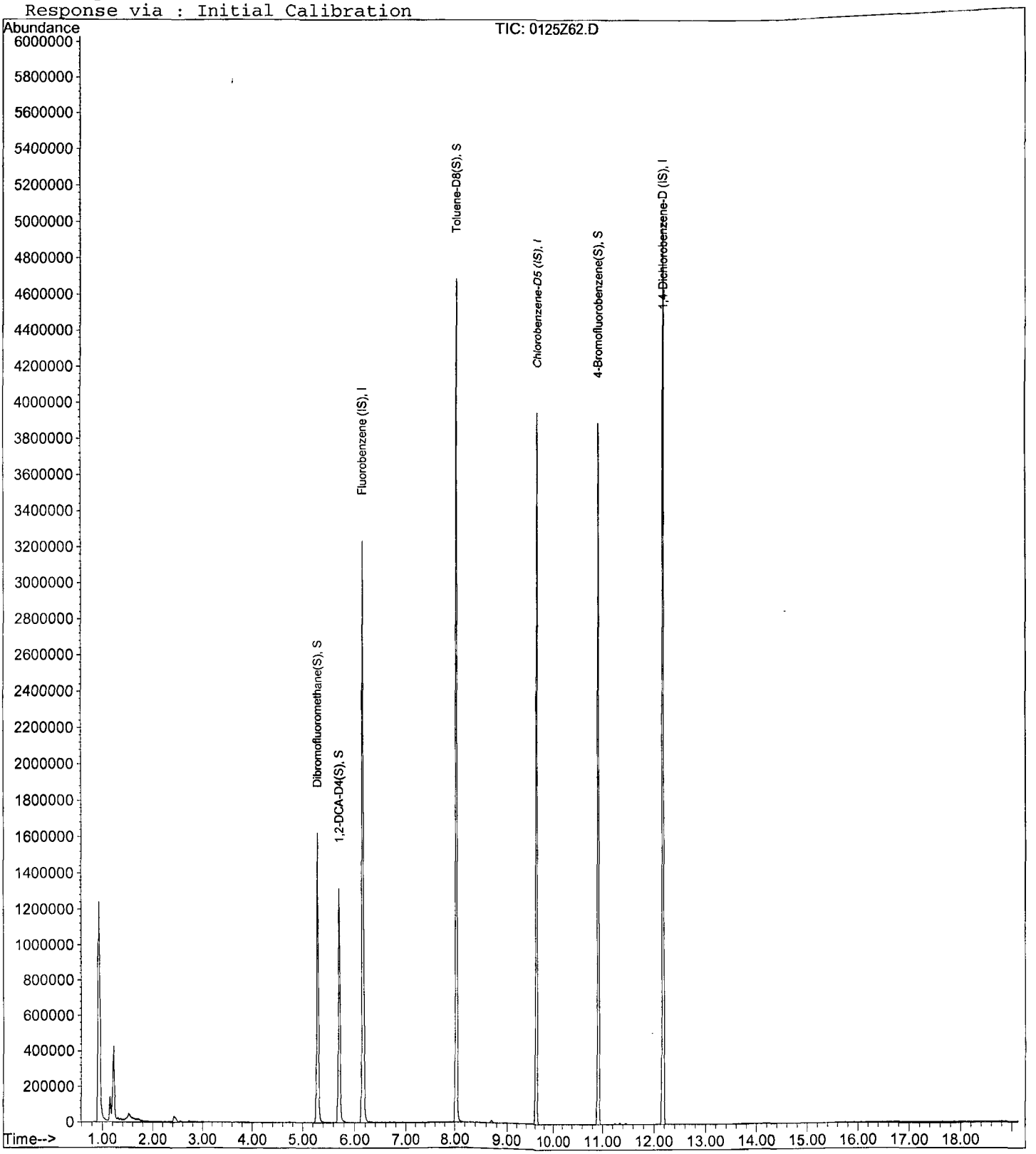
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z62.D
Acq On : 26 Jan 21 06:41
Sample : BA25690W01
Misc :

Vial: 57
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:12 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z69.D Vial: 64
Acq On : 26 Jan 21 09:22 Operator: LP,DG,CH
Sample : BA25692W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:19 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3227174	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2472962	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	934336	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	986273	28.0508 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.204%	
48) 1,2-DCA-D4(S)	5.71	65	928044	28.3701 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.480%	
69) Toluene-D8(S)	8.03	98	3217223	27.0303 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.120%	
77) 4-Bromofluorobenzene(S)	10.91	95	1084004	24.0270 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.108%	

Target Compounds Qvalue

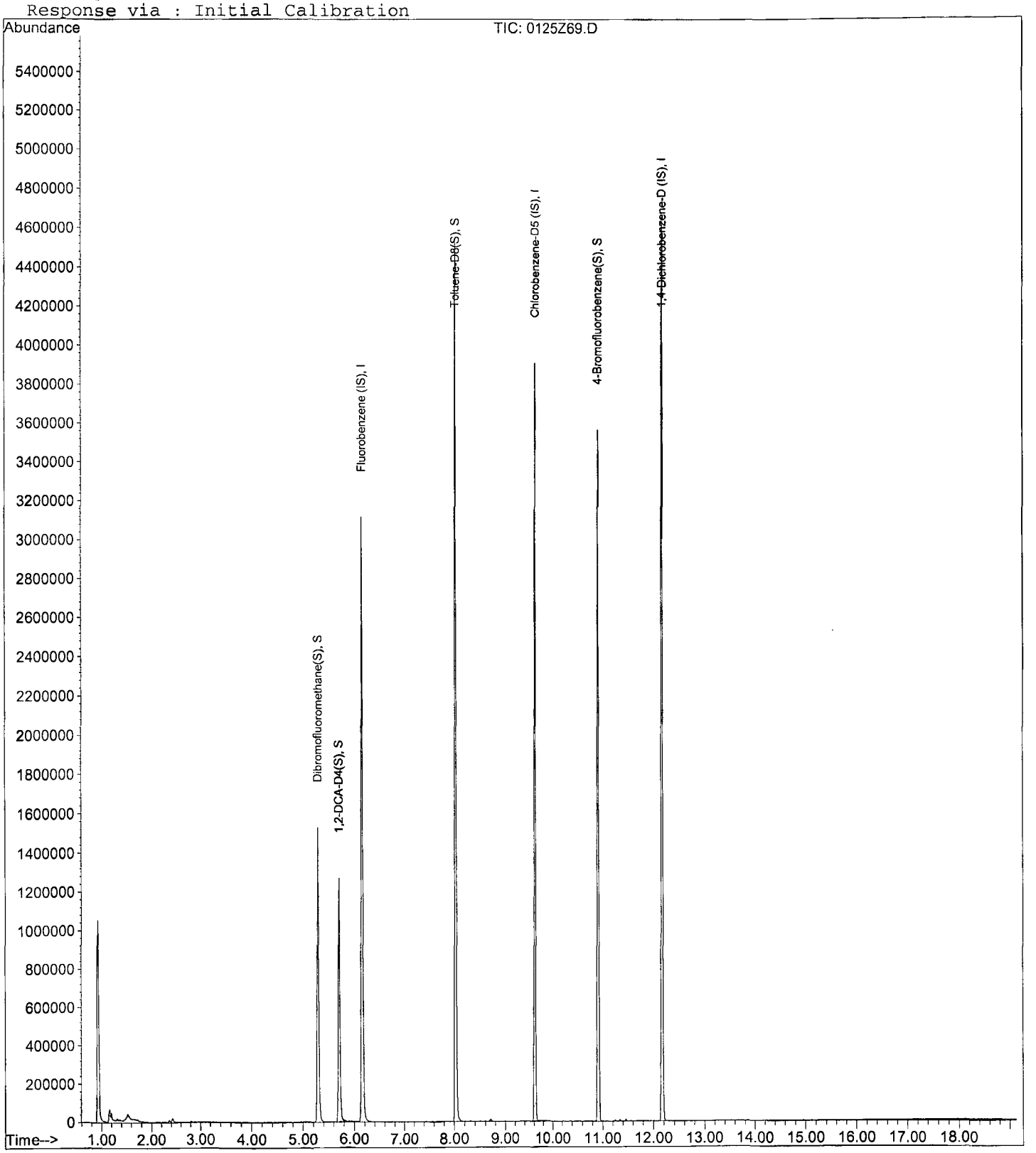
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z69.D
Acq On : 26 Jan 21 09:22
Sample : BA25692W01
Misc :

Vial: 64
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:19 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z14.D Vial: 14
Acq On : 26 Jan 21 18:49 Operator: LP,DG,CH
Sample : BA25693W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:56 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3071804	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2350187	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	867136	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	930953	27.8167 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.268%	
48) 1,2-DCA-D4(S)	5.71	65	889121	28.5550 ppb	0.00
Spiked Amount 25.000			Recovery	= 114.220%	
69) Toluene-D8(S)	8.03	98	3083614	27.2611 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.044%	
77) 4-Bromofluorobenzene(S)	10.92	95	1033596	24.0993 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.396%	

Target Compounds Qvalue

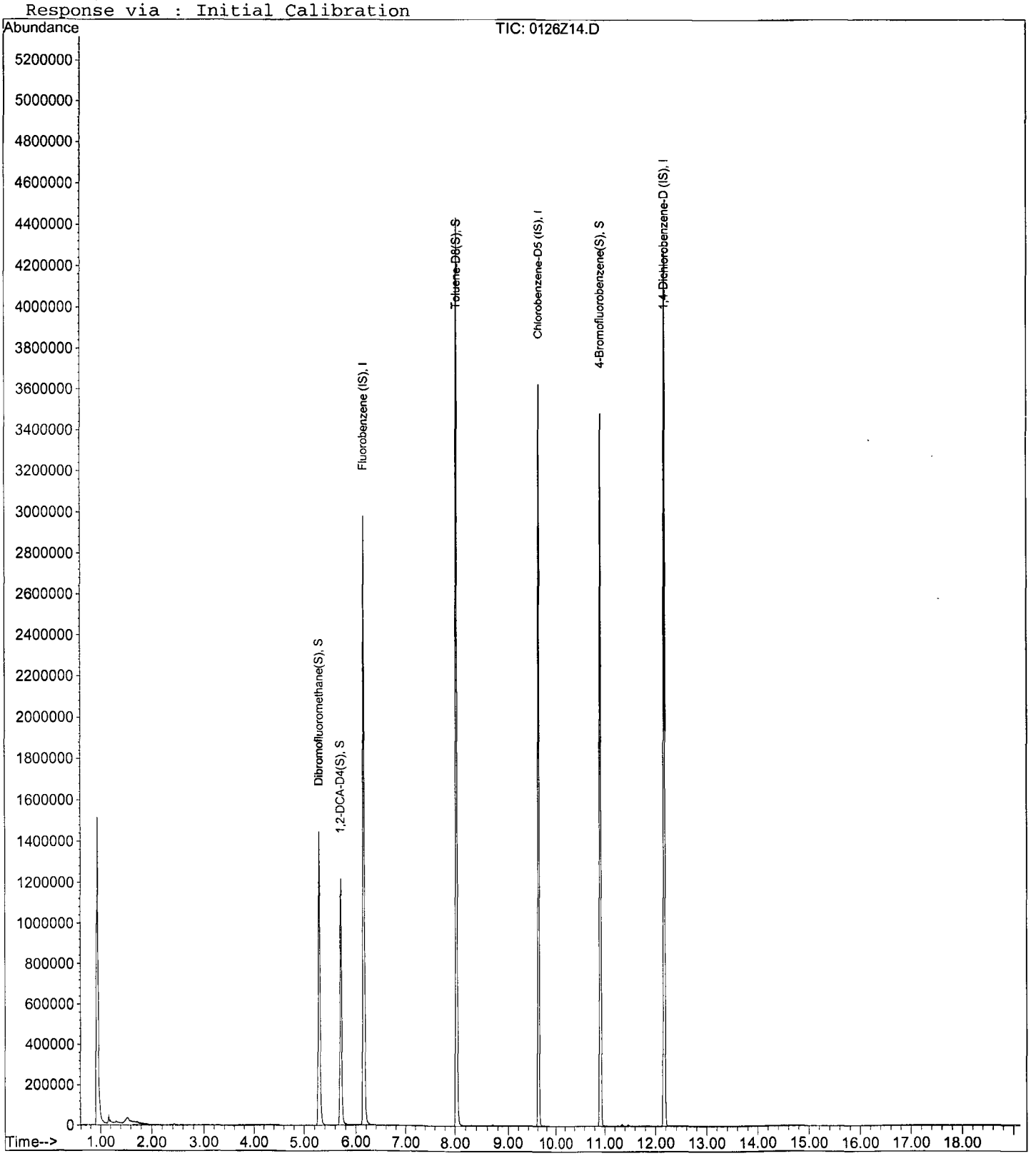
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z14.D Vial: 14
Acq On : 26 Jan 21 18:49 Operator: LP,DG,CH
Sample : BA25693W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:56 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z09.D Vial: 9
Acq On : 26 Jan 21 16:54 Operator: LP,DG,CH
Sample : BA25695W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:23 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3362292	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2560563	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	938112	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1021914	27.8965 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.584%	
48) 1,2-DCA-D4(S)	5.71	65	963626	28.2740 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.096%	
69) Toluene-D8(S)	8.03	98	3340105	27.1026 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.412%	
77) 4-Bromofluorobenzene(S)	10.91	95	1134955	24.2712 ppb	0.00
Spiked Amount 25.000			Recovery	= 97.084%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

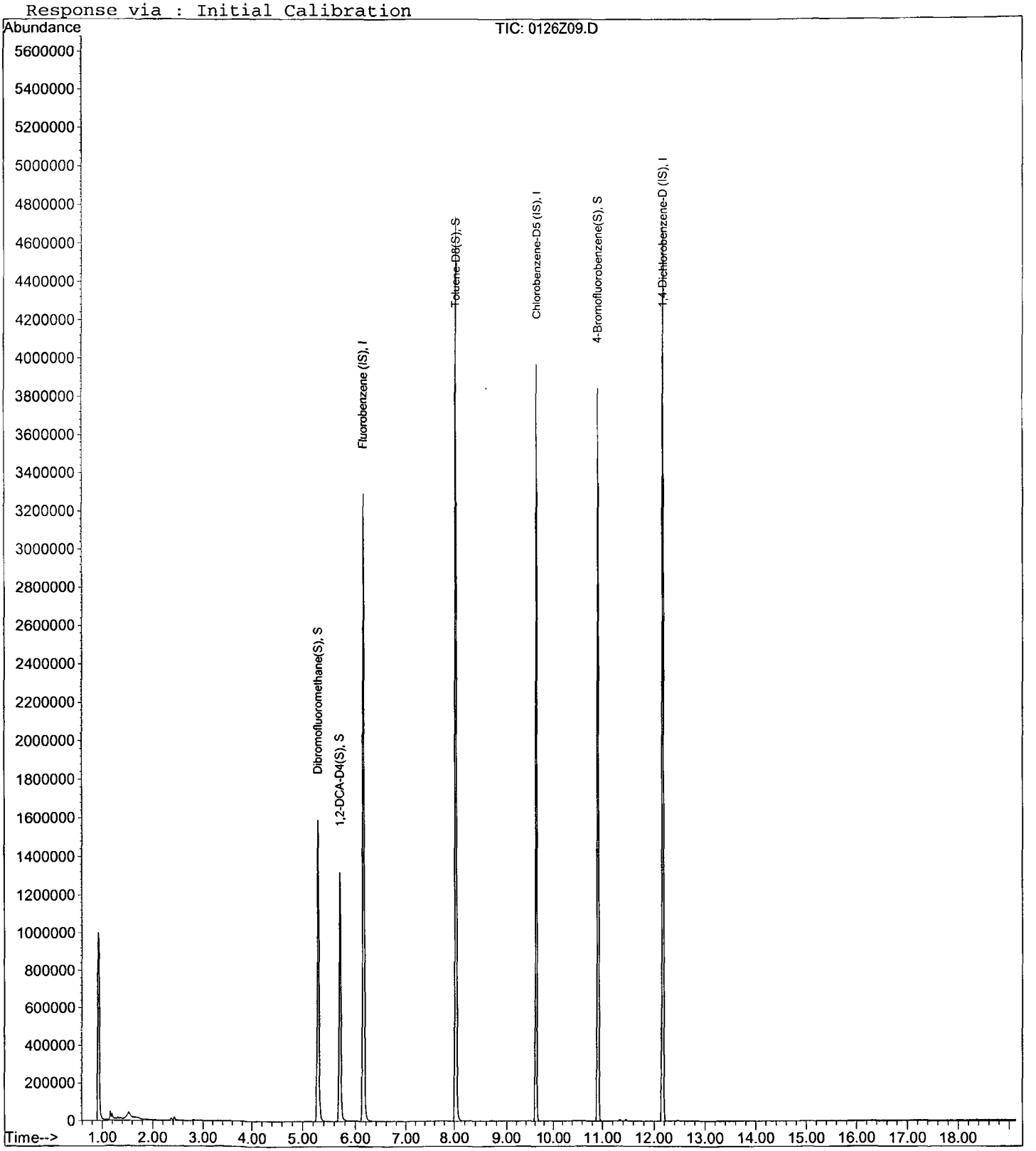
Data File : M:\ZEUS\DATA\210125\0126Z09.D
Acq On : 26 Jan 21 16:54
Sample : BA25695W01
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 9:23 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z15.D Vial: 15
Acq On : 26 Jan 21 19:12 Operator: LP,DG,CH
Sample : BA25696W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 10:05 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3113206	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2375671	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	877824	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	954125	28.1299 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.520%	
48) 1,2-DCA-D4(S)	5.71	65	918116	29.0940 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.376%	
69) Toluene-D8(S)	8.03	98	3151453	27.5620 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.248%	
77) 4-Bromofluorobenzene(S)	10.91	95	1067692	24.5793 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.316%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

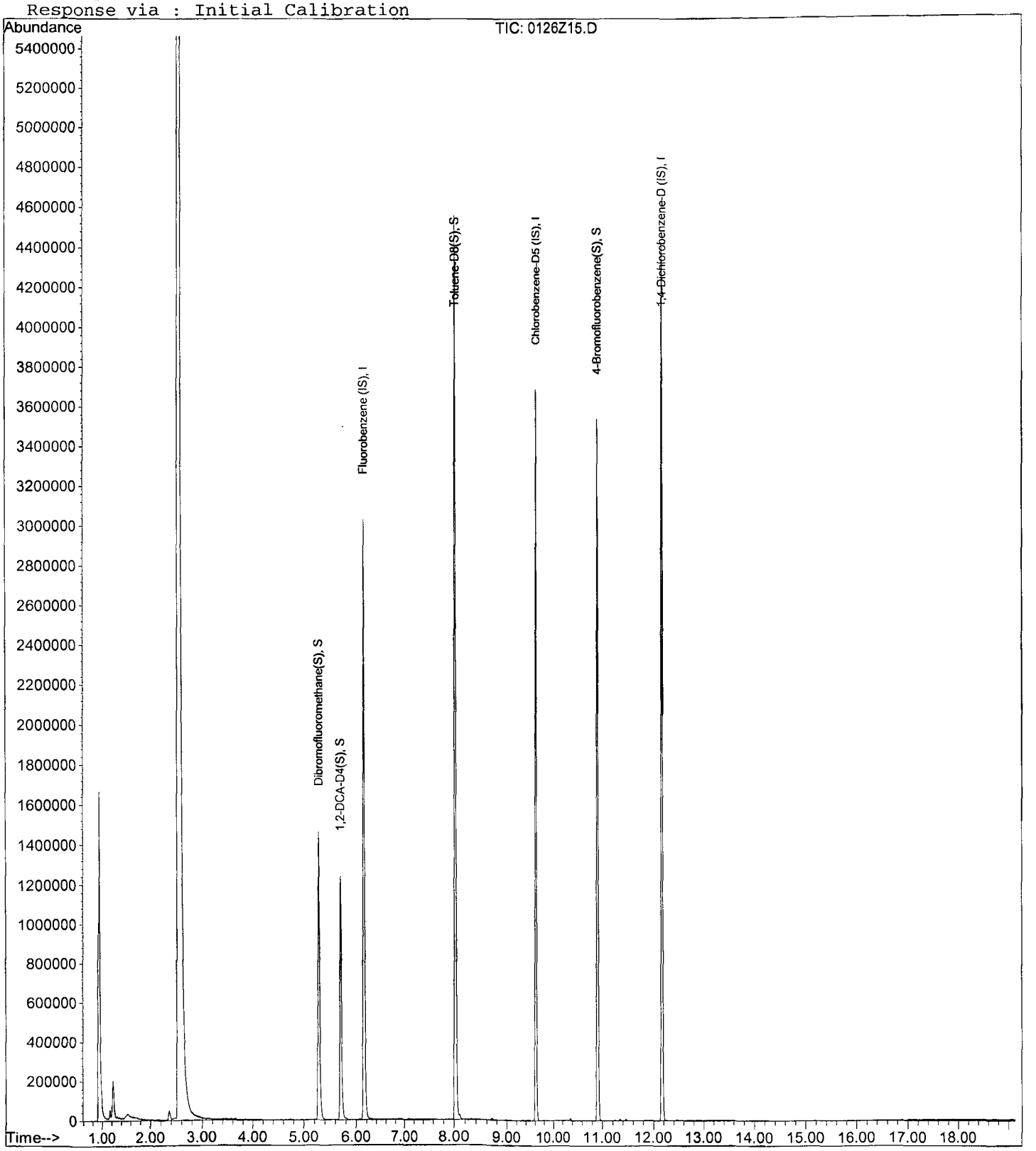
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z15.D
Acq On : 26 Jan 21 19:12
Sample : BA25696W01
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 10:05 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z63.D Vial: 58
Acq On : 26 Jan 21 07:04 Operator: LP,DG,CH
Sample : BA25698W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:13 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3370661	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2595815	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	975552	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1019878	27.7718 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.088%	
48) 1,2-DCA-D4(S)	5.71	65	962952	28.1841 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.736%	
69) Toluene-D8(S)	8.03	98	3368616	26.9628 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.852%	
77) 4-Bromofluorobenzene(S)	10.91	95	1140772	24.0829 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.332%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

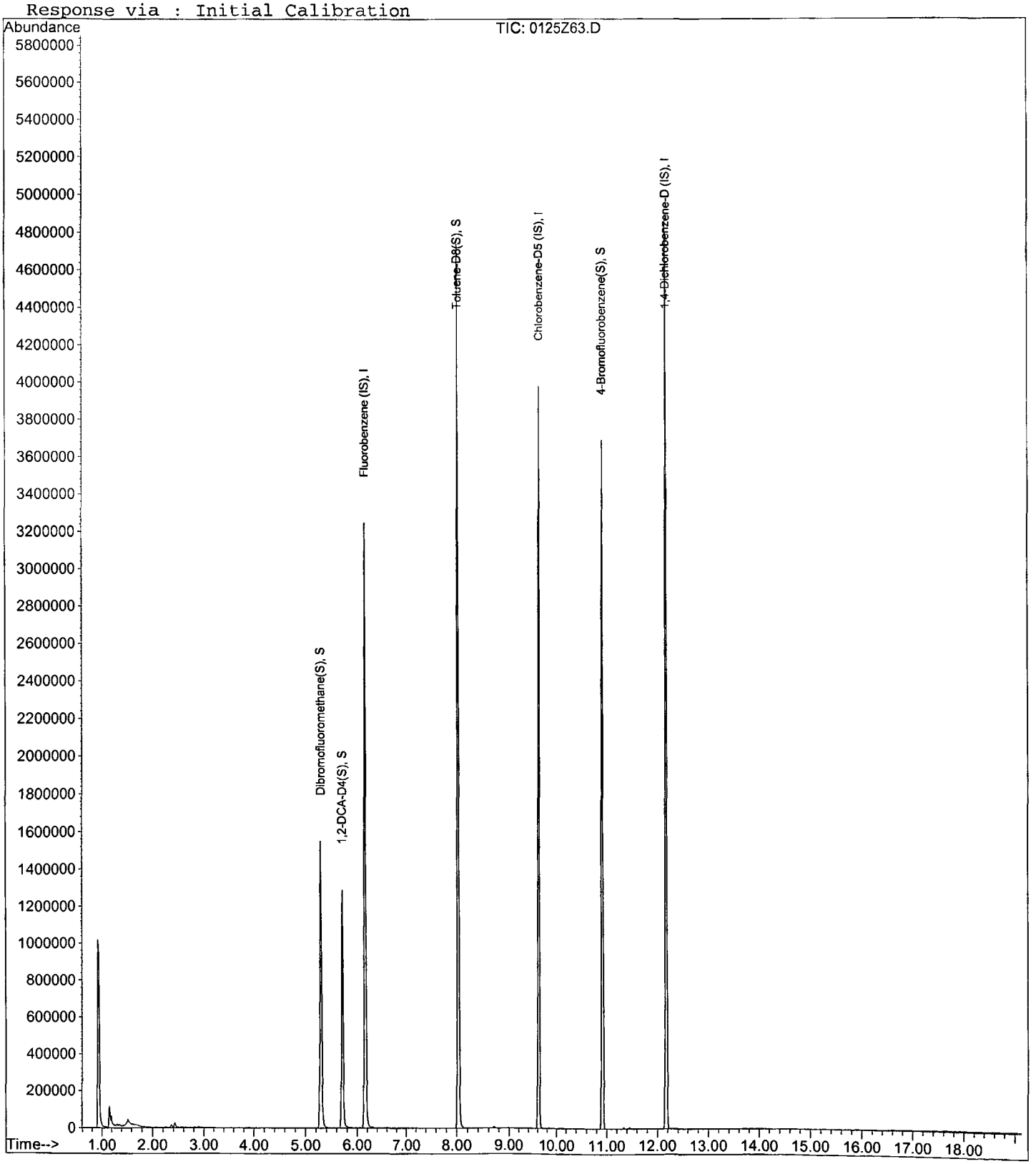
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z63.D
Acq On : 26 Jan 21 07:04
Sample : BA25698W01
Misc :

Vial: 58
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:13 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z64.D Vial: 59
Acq On : 26 Jan 21 07:27 Operator: LP,DG,CH
Sample : BA25699W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:14 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3371317	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2507099	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	950720	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1009485	27.4834 ppb	0.00
Spiked Amount 25.000			Recovery = 109.932%		
48) 1,2-DCA-D4(S)	5.71	65	951568	27.8455 ppb	0.00
Spiked Amount 25.000			Recovery = 111.380%		
69) Toluene-D8(S)	8.03	98	3321152	27.5235 ppb	0.00
Spiked Amount 25.000			Recovery = 110.096%		
77) 4-Bromofluorobenzene(S)	10.91	95	1104645	24.1398 ppb	0.00
Spiked Amount 25.000			Recovery = 96.560%		

Target Compounds Qvalue

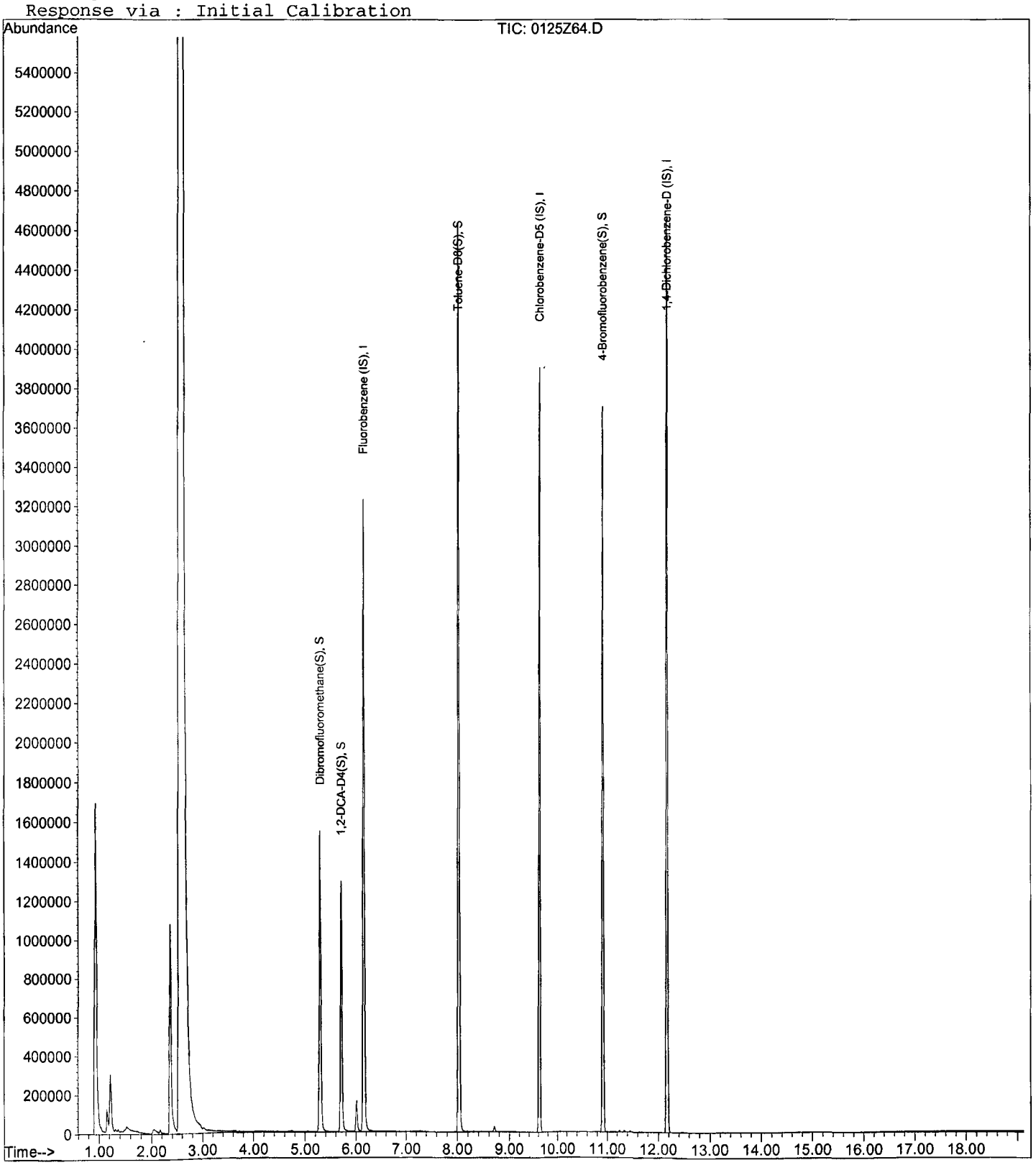
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z64.D Vial: 59
Acq On : 26 Jan 21 07:27 Operator: LP,DG,CH
Sample : BA25699W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:14 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z65.D
Acq On : 26 Jan 21 07:50
Sample : BA25701W01
Misc :

Vial: 60
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:15 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3338226	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2552315	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	934080	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1015906	27.9324 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.728%	
48) 1,2-DCA-D4(S)	5.71	65	951213	28.1110 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.444%	
69) Toluene-D8(S)	8.03	98	3344966	27.2298 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.920%	
77) 4-Bromofluorobenzene(S)	10.91	95	1118922	24.0296 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.120%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

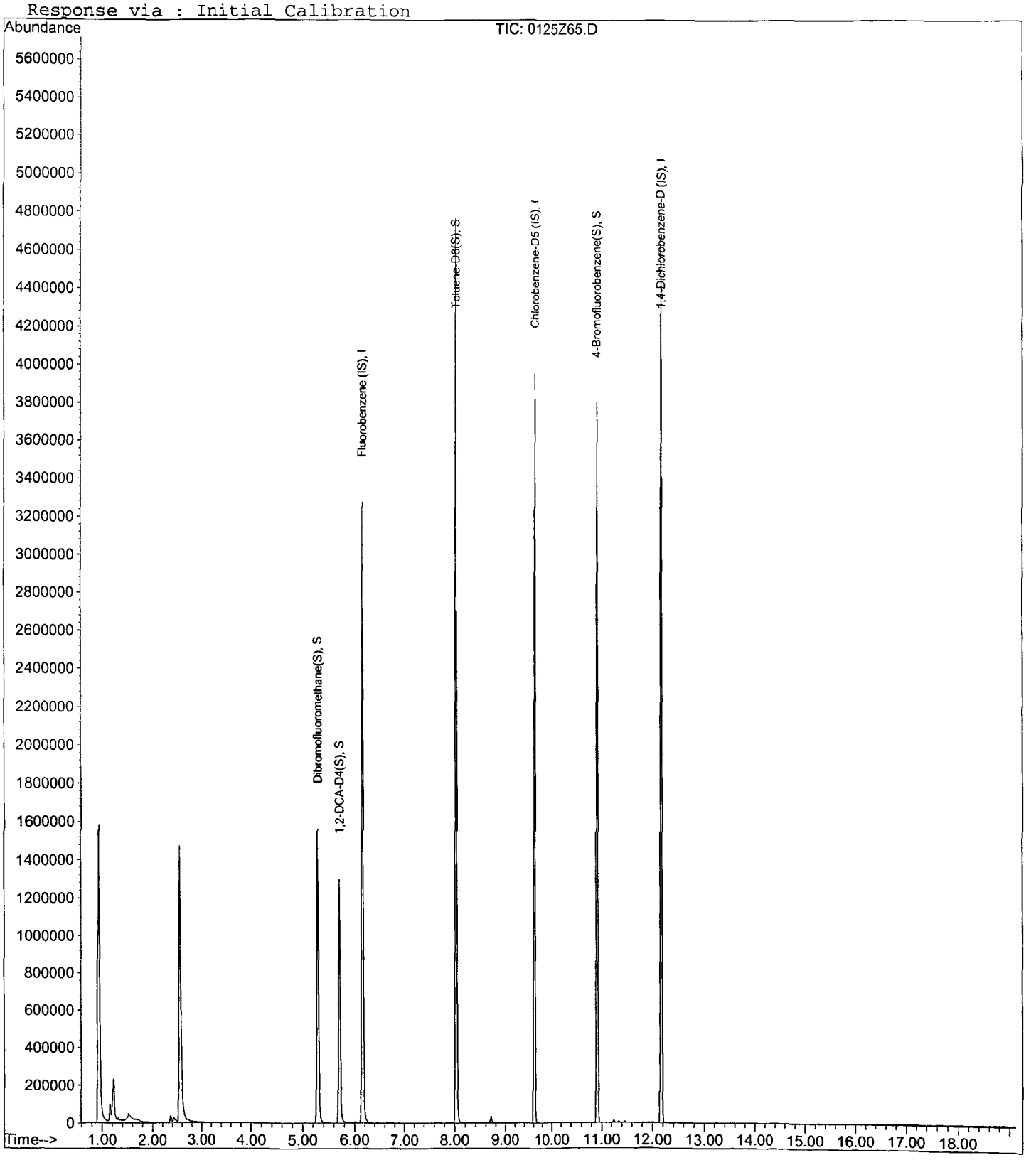
Data File : M:\ZEUS\DATA\210125\0125Z65.D
Acq On : 26 Jan 21 07:50
Sample : BA25701W01
Misc :

Vial: 60
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:15 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z66.D Vial: 61
Acq On : 26 Jan 21 08:13 Operator: LP,DG,CH
Sample : BA25703W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:16 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3156764	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2437213	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	896256	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	957520	27.8405 ppb	0.00
Spiked Amount 25.000			Recovery = 111.360%		
48) 1,2-DCA-D4(S)	5.71	65	906123	28.3178 ppb	0.00
Spiked Amount 25.000			Recovery = 113.272%		
69) Toluene-D8(S)	8.03	98	3170343	27.0271 ppb	0.00
Spiked Amount 25.000			Recovery = 108.108%		
77) 4-Bromofluorobenzene(S)	10.91	95	1073714	24.1370 ppb	0.00
Spiked Amount 25.000			Recovery = 96.548%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

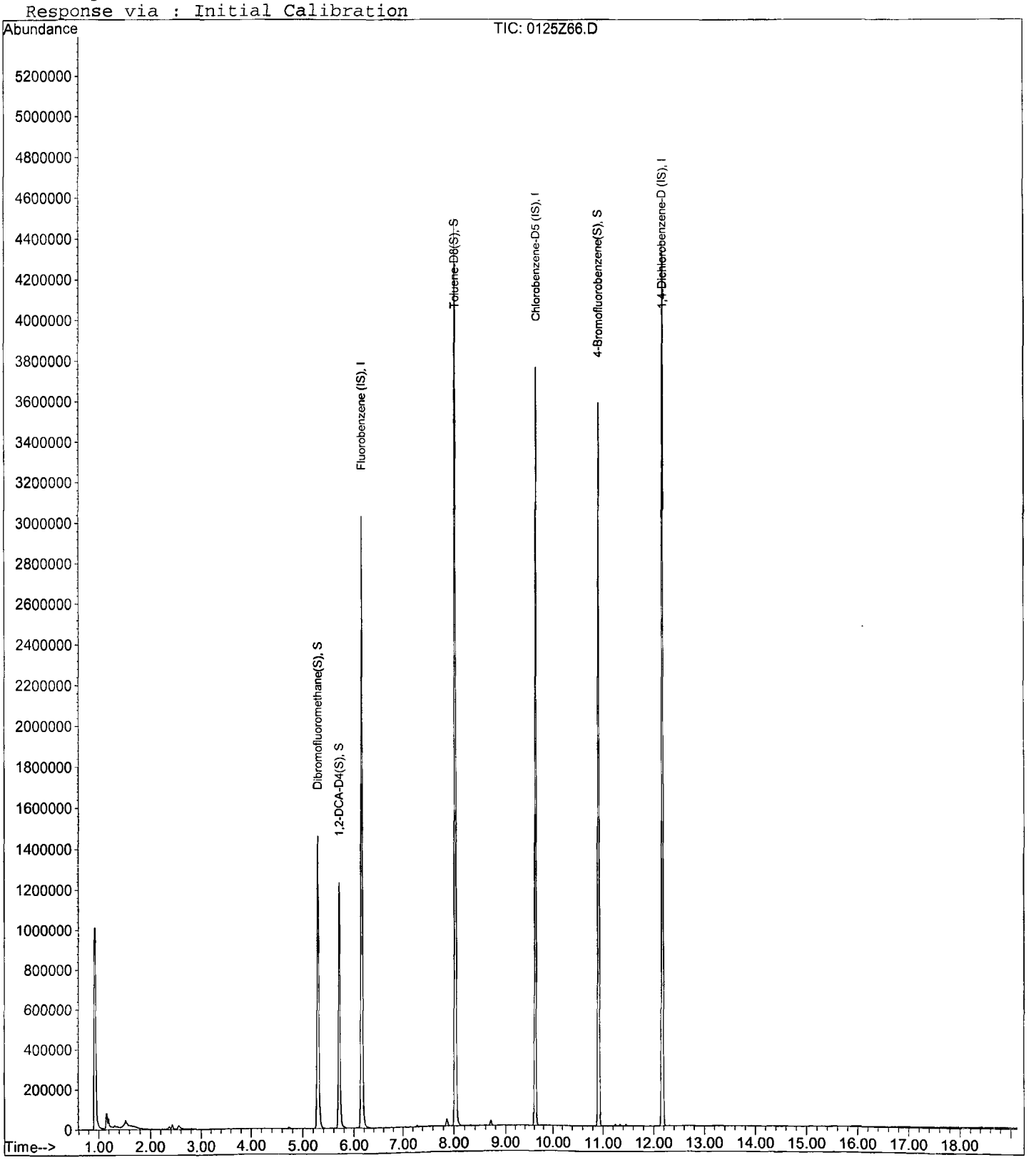
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z66.D
Acq On : 26 Jan 21 08:13
Sample : BA25703W01
Misc :

Vial: 61
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:16 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z67.D
Acq On : 26 Jan 21 08:36
Sample : BA25704W01
Misc :

Vial: 62
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 14:17 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3294051	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2521063	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	912128	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1002688	27.9387 ppb	0.00
Spiked Amount 25.000			Recovery = 111.756%		
48) 1,2-DCA-D4(S)	5.71	65	936983	28.0618 ppb	0.00
Spiked Amount 25.000			Recovery = 112.248%		
69) Toluene-D8(S)	8.03	98	3281083	27.0408 ppb	0.00
Spiked Amount 25.000			Recovery = 108.164%		
77) 4-Bromofluorobenzene(S)	10.91	95	1110371	24.1314 ppb	0.00
Spiked Amount 25.000			Recovery = 96.524%		

Target Compounds Qvalue

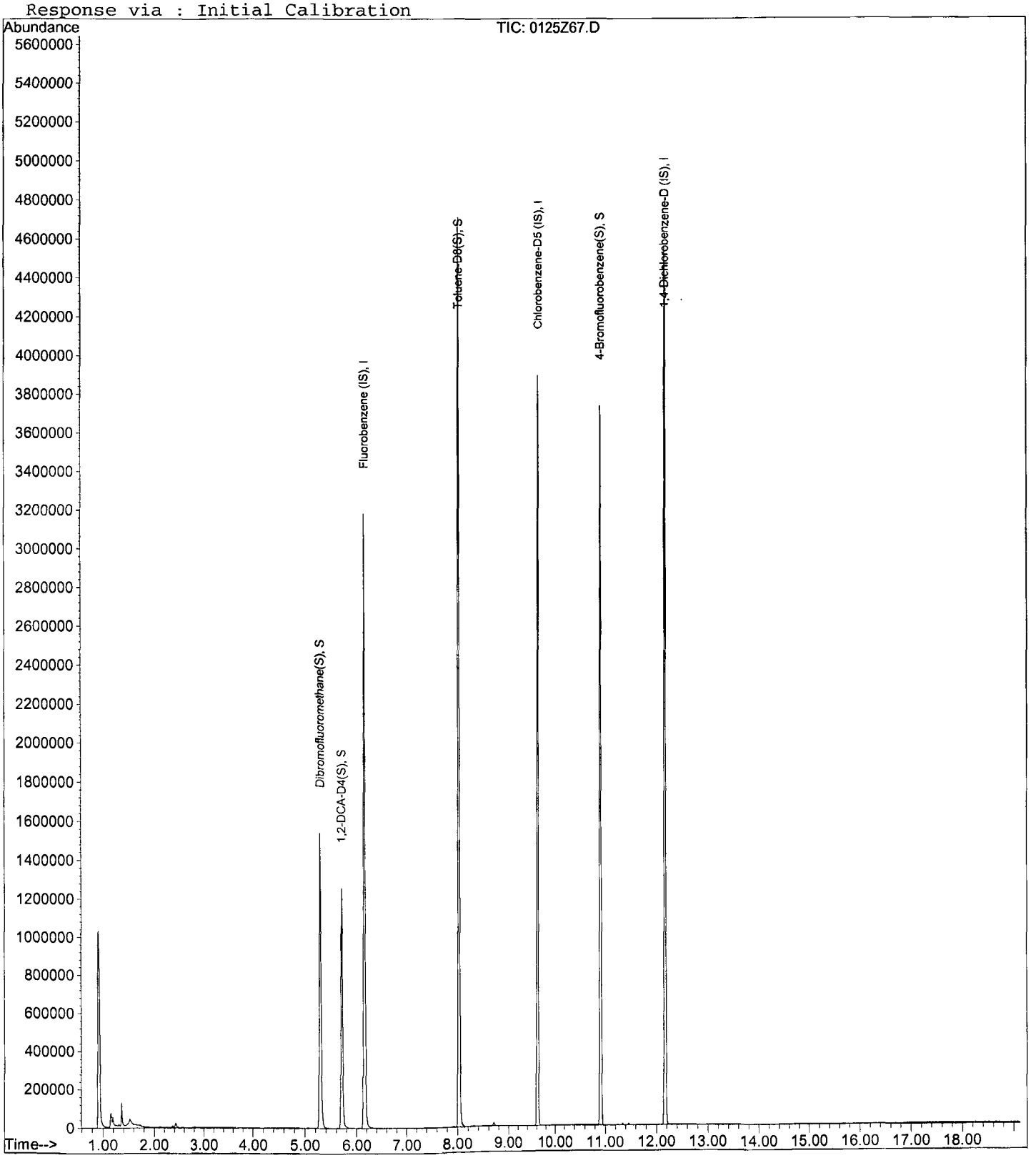
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z67.D Vial: 62
Acq On : 26 Jan 21 08:36 Operator: LP,DG,CH
Sample : BA25704W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:17 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z68.D Vial: 63
Acq On : 26 Jan 21 08:59 Operator: LP,DG,CH
Sample : BA25706W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:18 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3342305	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2554850	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	903296	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1010461	27.7488 ppb	0.00
Spiked Amount 25.000			Recovery = 110.996%		
48) 1,2-DCA-D4(S)	5.71	65	947482	27.9666 ppb	0.00
Spiked Amount 25.000			Recovery = 111.868%		
69) Toluene-D8(S)	8.03	98	3303380	26.8646 ppb	0.00
Spiked Amount 25.000			Recovery = 107.460%		
77) 4-Bromofluorobenzene(S)	10.91	95	1113177	23.8959 ppb	0.00
Spiked Amount 25.000			Recovery = 95.584%		

Target Compounds Qvalue

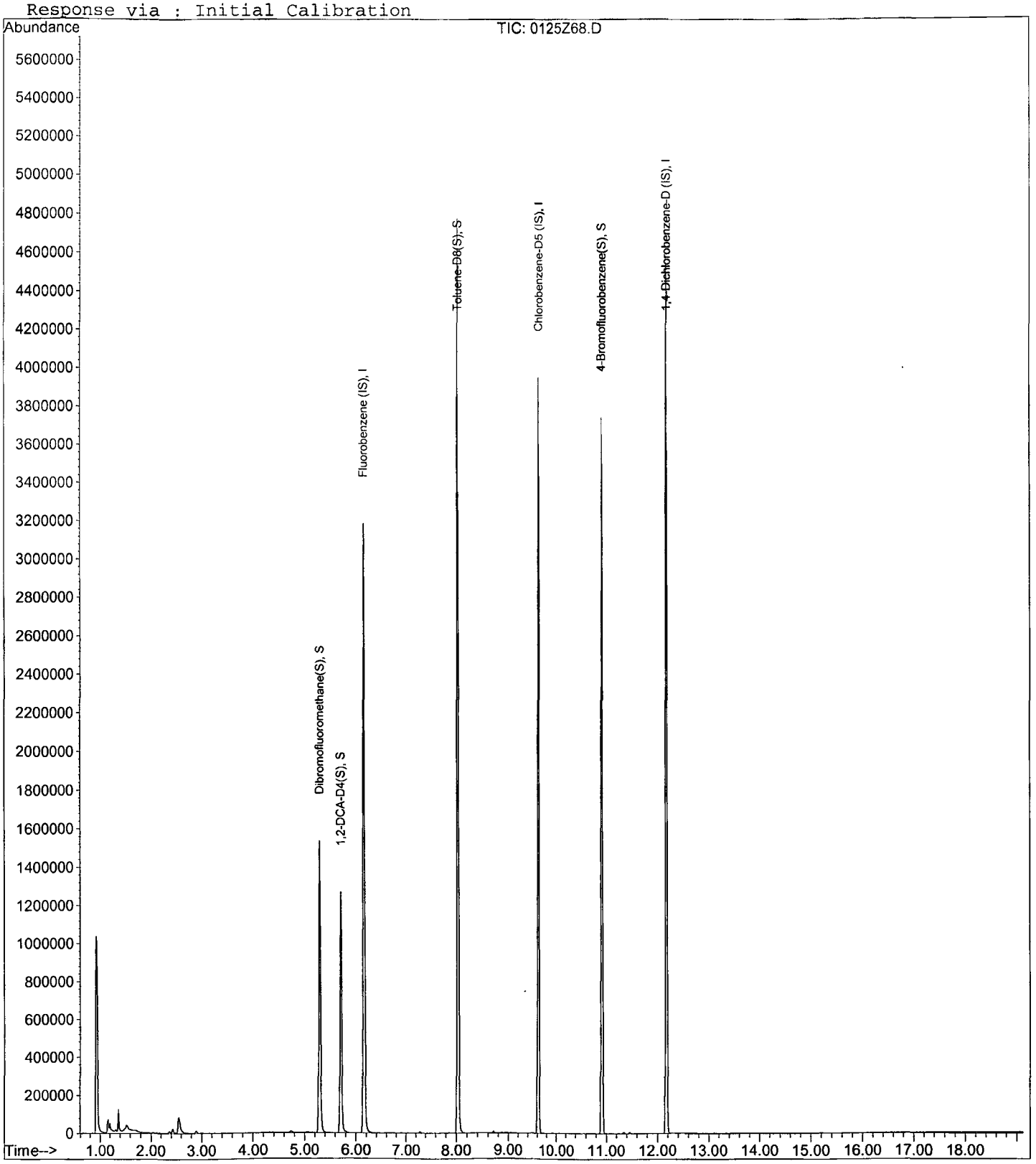
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z68.D Vial: 63
Acq On : 26 Jan 21 08:59 Operator: LP,DG,CH
Sample : BA25706W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 14:18 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:35 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3705409	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2791950	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1050112	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1111099	27.52	ppb	0.00
Spiked Amount 25.000			Recovery =	110.088%		
48) 1,2-DCA-D4(S)	5.71	65	1057353	28.15	ppb	0.00
Spiked Amount 25.000			Recovery =	112.604%		
69) Toluene-D8(S)	8.03	98	3648886	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.616%		
77) 4-Bromofluorobenzene(S)	10.91	95	1244558	24.40	ppb	0.00
Spiked Amount 25.000			Recovery =	97.588%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

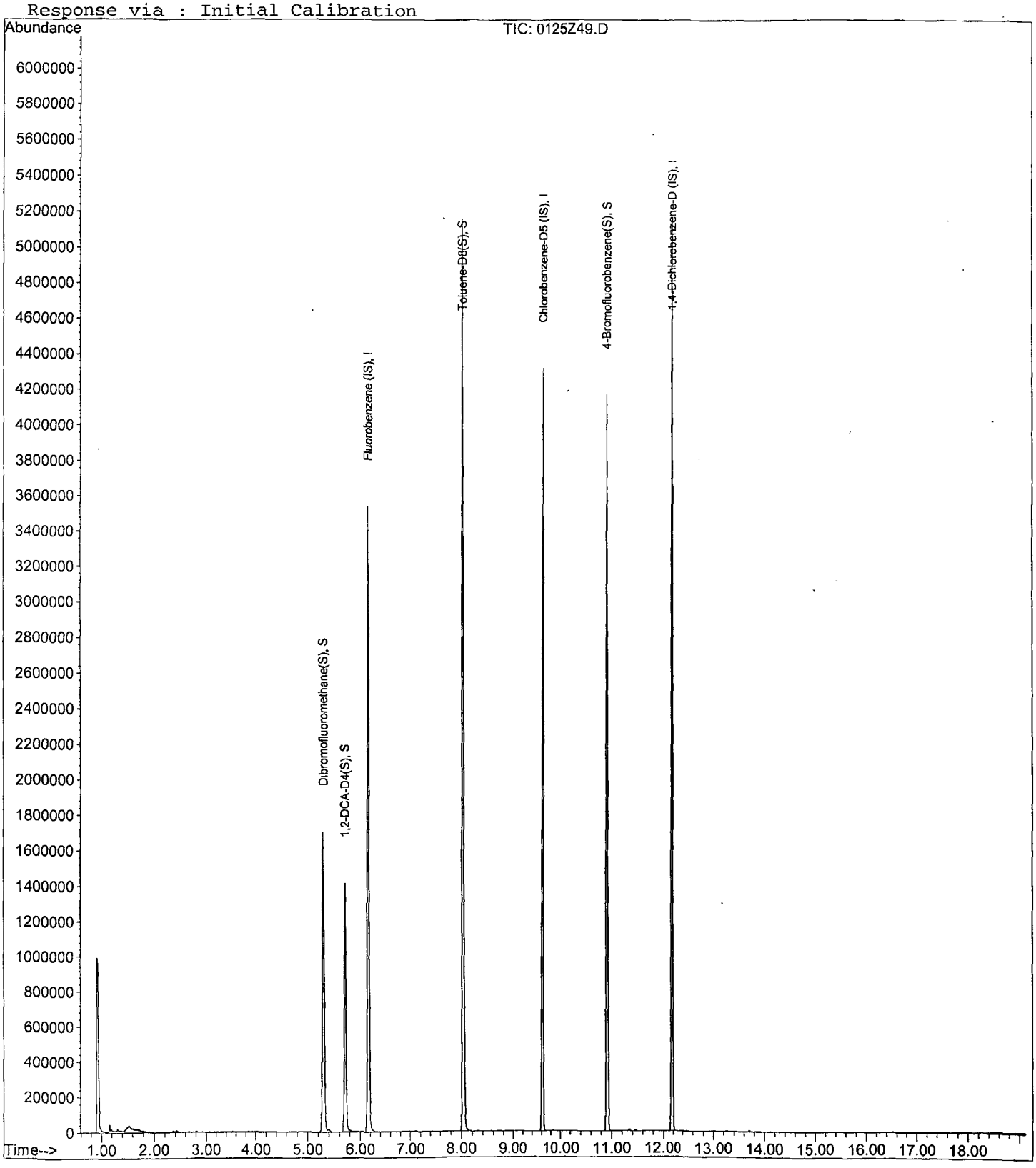
Data File : M:\ZEUS\DATA\210125\0125Z49.D
Acq On : 26 Jan 21 01:42
Sample : 210125A BLK
Misc :

Vial: 44
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:35 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z08.D Vial: 8
Acq On : 26 Jan 21 16:31 Operator: LP,DG,CH
Sample : 210126A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:10 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3140269	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2401009	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	887360	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	962606	28.135 ppb	0.00
Spiked Amount 25.000			Recovery = 112.540%		
48) 1,2-DCA-D4(S)	5.71	65	906838	28.489 ppb	0.00
Spiked Amount 25.000			Recovery = 113.956%		
69) Toluene-D8(S)	8.03	98	3164736	27.386 ppb	0.00
Spiked Amount 25.000			Recovery = 109.544%		
77) 4-Bromofluorobenzene(S)	10.91	95	1069442	24.379 ppb	0.00
Spiked Amount 25.000			Recovery = 97.516%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

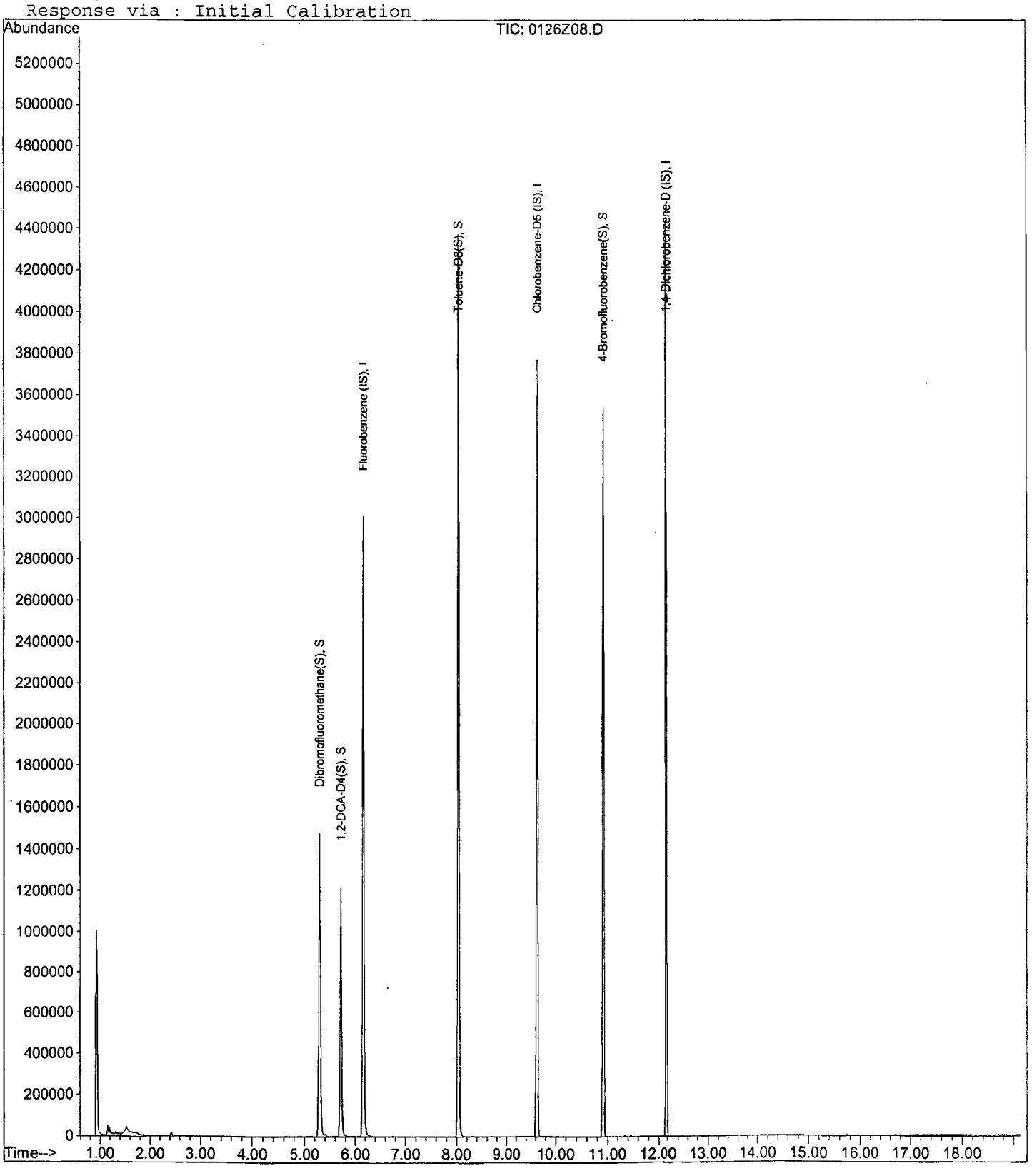
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z08.D
Acq On : 26 Jan 21 16:31
Sample : 210126A BLK
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 7:10 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3756224	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831709	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1036736	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1129298	27.59	ppb		0.00
Spiked Amount 25.000			Recovery =	110.380%			
48) 1,2-DCA-D4(S)	5.71	65	1034987	27.18	ppb		0.00
Spiked Amount 25.000			Recovery =	108.732%			
69) Toluene-D8(S)	8.03	98	3807191	27.93	ppb		0.00
Spiked Amount 25.000			Recovery =	111.740%			
77) 4-Bromofluorobenzene(S)	10.91	95	1302656	25.11	ppb		0.00
Spiked Amount 25.000			Recovery =	100.428%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	196039	10.20	ppb		100
4) Freon 114	1.16	85	111416	9.79	ppb		96
5) Chloromethane	1.22	50	78690	9.84	ppb		99
6) Vinyl chloride	1.28	62	177898	10.09	ppb		98
9) Bromomethane	1.53	94	47041	9.98	ppb		93
10) Chloroethane	1.60	64	43516	10.02	ppb	#	89
11) Dichlorofluoromethane	1.78	67	345501	10.31	ppb		99
12) Trichlorofluoromethane	1.82	101	320522	10.16	ppb		99
17) Acetone	2.36	43	225373	47.47	ppb		98
18) Freon-113	2.32	101	87352	9.82	ppb		96
19) 1,1-DCE	2.30	61	233754	10.48	ppb		97
23) Methyl Acetate	2.73	43	105825	9.31	ppb		96
24) Iodomethane	2.43	142	201746	10.69	ppb		97
25) Acrylonitrile	3.10	52	47310	9.67	ppb		95
26) Methylene chloride	2.80	49	103088	10.47	ppb		95
27) Carbon disulfide	2.48	76	214208	9.73	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	408363	10.51	ppb		96
29) Trans-1,2-DCE	3.15	61	230145	10.55	ppb		98
31) Diisopropyl Ether	3.92	45	429684	10.63	ppb		98
33) 1,1-DCA	3.71	63	291085	10.42	ppb		97
34) Vinyl Acetate	3.86	43	91981	6.87	ppb		100
35) Ethyl tert Butyl Ether	4.49	59	404126	10.90	ppb		100
36) MEK (2-Butanone)	4.67	43	288610	50.73	ppb		97
37) Cis-1,2-DCE	4.60	61	261085	10.21	ppb		97
38) 2,2-Dichloropropane	4.60	77	224031	9.69	ppb		94
41) Chloroform	5.09	83	329568	10.59	ppb		97
42) Bromochloromethane	4.93	49	122428	10.74	ppb		93
44) 1,1,1-TCA	5.30	97	305268	10.66	ppb		98
45) Cyclohexane	5.36	56	247420	10.45	ppb		95
46) 1,1-Dichloropropene	5.53	75	221541	10.45	ppb		97
47) 2,2,4-Trimethylpentane	5.96	57	452521	9.76	ppb		98
49) Carbon Tetrachloride	5.52	117	265246	10.53	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	370274	10.68	ppb		97
52) 1,2-DCA	5.81	62	216851	10.50	ppb		97
53) Benzene	5.78	78	694361	10.44	ppb		99
54) TCE	6.61	130	247508	10.69	ppb		97
56) 1,2-Dichloropropane	6.86	63	152791	10.55	ppb		99
57) Bromodichloromethane	7.20	83	194546	11.05	ppb		97
58) Methyl Cyclohexane	6.84	83	287227	10.56	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z45.D
Acq On : 26 Jan 21 00:10
Sample : 210125A CCV/LCS 10ug/L
Misc :

Vial: 40
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	165682	10.71	ppb		98
60)	MIBK (methyl isobutyl ket	7.94	43	512369	51.64	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	31813	9.67	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	224423	10.60	ppb		97
64)	Toluene	8.11	91	761446	10.58	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	191168	9.50	ppb		98
66)	1,1,2-TCA	8.56	97	147157	10.78	ppb		90
67)	2-Hexanone	8.88	43	212928	49.87	ppb		97
70)	1,2-EDB	9.09	107	152425	11.07	ppb		97
71)	Tetrachloroethene	8.72	166	291688	10.18	ppb		100
72)	1-Chlorohexane	9.66	91	234017	10.47	ppb		100
73)	1,1,1,2-Tetrachloroethane	9.75	131	172298	10.46	ppb		97
74)	m&p-Xylene	9.92	91	1255992	21.97	ppb		98
75)	o-Xylene	10.35	91	624956	10.94	ppb		100
76)	Styrene	10.37	104	492521	9.65	ppb		96
78)	1,3-Dichloropropane	8.74	76	227002	10.83	ppb		97
79)	Dibromochloromethane	8.98	129	147310	9.04	ppb		94
80)	Chlorobenzene	9.65	112	535936	10.46	ppb		96
81)	Ethylbenzene	9.79	91	814713	10.72	ppb		97
82)	Bromoform	10.54	173	111372	8.57	ppb		96
84)	Isopropylbenzene	10.76	105	861792	10.79	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	150275	9.93	ppb		98
86)	1,2,3-Trichloropropane	11.12	110	64387	10.61	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.14	53	27666	9.55	ppb		97
88)	Bromobenzene	11.06	77	269608	10.67	ppb		97
89)	n-Propylbenzene	11.21	91	934604	10.10	ppb		98
90)	4-Ethyltoluene	11.34	105	836726	10.68	ppb		97
91)	2-Chlorotoluene	11.41	91	646243	10.38	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	701553	10.23	ppb		97
93)	4-Chlorotoluene	11.41	91	646243	10.38	ppb		97
94)	Tert-Butylbenzene	11.76	119	678226	10.74	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	709150	10.98	ppb		99
96)	Sec-Butylbenzene	12.00	105	942569	10.82	ppb		98
97)	p-Isopropyltoluene	11.76	119	678226	10.74	ppb		98
98)	Benzyl Chloride	12.35	91	209042	7.68	ppb		98
99)	1,3-DCB	12.10	146	504629	10.50	ppb		97
100)	1,4-DCB	12.20	146	512479	10.44	ppb		99
101)	n-Butylbenzene	12.61	91	657462	9.75	ppb		97
102)	1,2-DCB	12.60	146	471664	10.60	ppb		99
103)	Hexachloroethane	12.89	201	127238	8.61	ppb		94
104)	1,2-Dibromo-3-chloropropan	13.44	157	41917	9.05	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	413130	10.41	ppb		98
106)	Hexachlorobutadiene	14.57	225	206905	10.33	ppb		98
107)	Naphthalene	14.62	128	645090	10.18	ppb		99
108)	1,2,3-Trichlorobenzene	14.88	180	302422	10.60	ppb		100

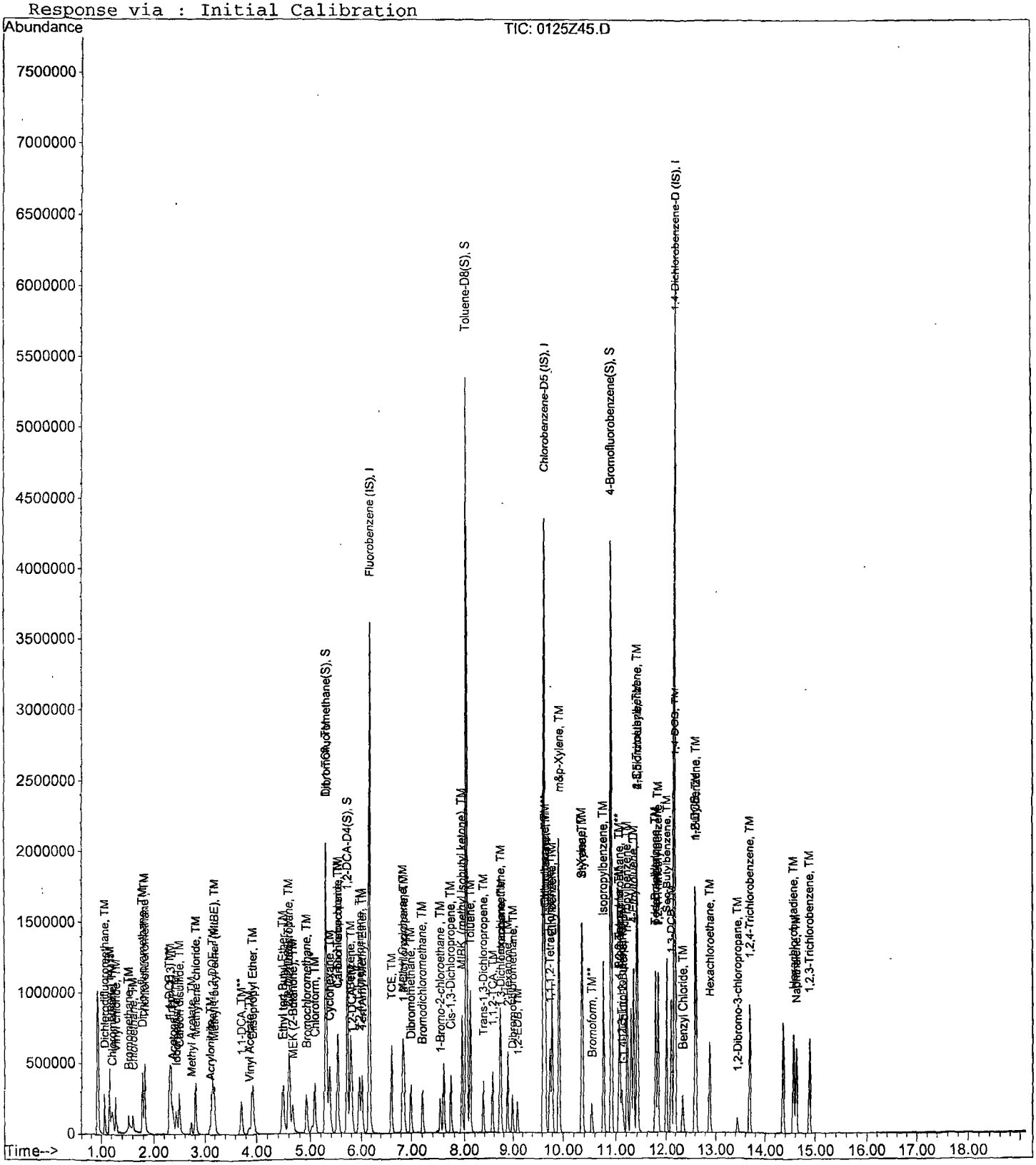
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z45.D Vial: 40
Acq On : 26 Jan 21 00:10 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3779071	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2854072	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1061376	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	1116776	27.12	ppb		0.00
Spiked Amount 25.000			Recovery = 108.496%				
48) 1,2-DCA-D4(S)	5.71	65	1028500	26.85	ppb		0.00
Spiked Amount 25.000			Recovery = 107.396%				
69) Toluene-D8(S)	8.03	98	3770706	27.45	ppb		0.00
Spiked Amount 25.000			Recovery = 109.800%				
77) 4-Bromofluorobenzene(S)	10.91	95	1290497	24.72	ppb		0.00
Spiked Amount 25.000			Recovery = 98.860%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	201869	10.44	ppb		98
4) Freon 114	1.16	85	111840	9.77	ppb		93
5) Chloromethane	1.22	50	78579	9.76	ppb		97
6) Vinyl chloride	1.28	62	178414	10.06	ppb		98
9) Bromomethane	1.53	94	49204	10.45	ppb		93
10) Chloroethane	1.60	64	45288	10.41	ppb		97
11) Dichlorofluoromethane	1.78	67	336577	9.98	ppb		99
12) Trichlorofluoromethane	1.82	101	326807	10.29	ppb		100
17) Acetone	2.36	43	228910	47.92	ppb		99
18) Freon-113	2.32	101	82280	9.19	ppb		96
19) 1,1-DCE	2.30	61	217778	9.70	ppb		99
23) Methyl Acetate	2.72	43	111140	9.72	ppb	#	88
24) Iodomethane	2.43	142	214127	11.17	ppb		98
25) Acrylonitrile	3.10	52	50563	10.27	ppb		94
26) Methylene chloride	2.81	49	101208	10.17	ppb		97
27) Carbon disulfide	2.49	76	215360	9.72	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	419168	10.73	ppb		100
29) Trans-1,2-DCE	3.14	61	213459	9.72	ppb		89
31) Diisopropyl Ether	3.92	45	437483	10.76	ppb		99
33) 1,1-DCA	3.71	63	276515	9.84	ppb		100
34) Vinyl Acetate	3.86	43	93800	6.96	ppb		98
35) Ethyl tert Butyl Ether	4.49	59	409605	10.98	ppb		99
36) MEK (2-Butanone)	4.67	43	298189	52.10	ppb		98
37) Cis-1,2-DCE	4.60	61	246740	9.59	ppb		92
38) 2,2-Dichloropropane	4.59	77	210178	9.04	ppb		98
41) Chloroform	5.09	83	306115	9.78	ppb		100
42) Bromochloromethane	4.93	49	114781	10.01	ppb		98
44) 1,1,1-TCA	5.30	97	282065	9.79	ppb		96
45) Cyclohexane	5.36	56	248347	10.42	ppb		97
46) 1,1-Dichloropropene	5.53	75	211480	9.91	ppb		99
47) 2,2,4-Trimethylpentane	5.95	57	459589	9.85	ppb		99
49) Carbon Tetrachloride	5.52	117	245856	9.70	ppb		95
50) Tert Amyl Methyl Ether	6.01	73	378362	10.85	ppb		100
52) 1,2-DCA	5.81	62	203368	9.79	ppb		98
53) Benzene	5.78	78	653215	9.76	ppb		98
54) TCE	6.61	130	227305	9.76	ppb		94
56) 1,2-Dichloropropane	6.86	63	149022	10.23	ppb		98
57) Bromodichloromethane	7.20	83	182273	10.29	ppb		95
58) Methyl Cyclohexane	6.84	83	284070	10.38	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

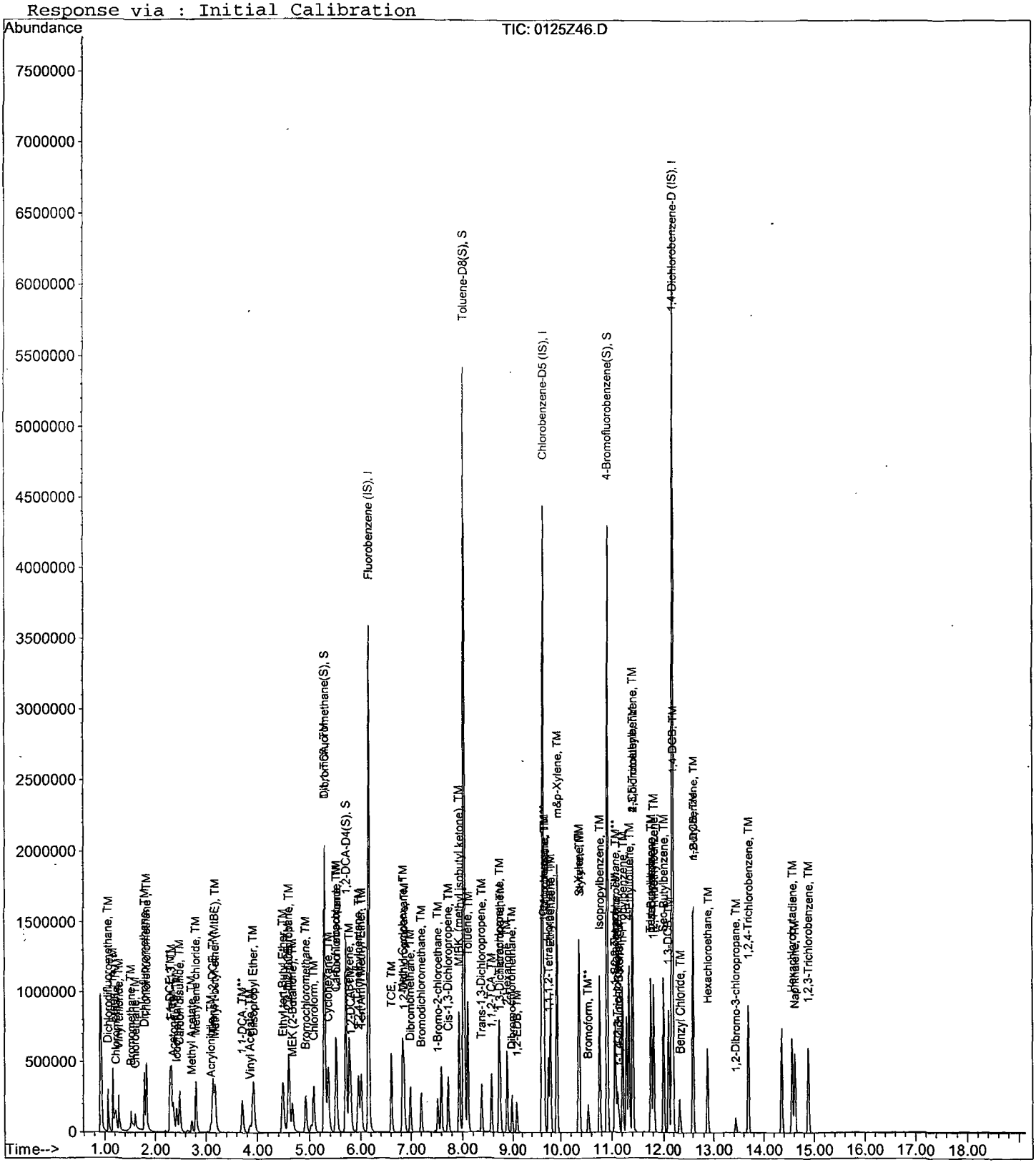
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	153534	9.86	ppb		92
60)	MIBK (methyl isobutyl ket	7.94	43	526580	52.75	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	34655	10.47	ppb		90
63)	Cis-1,3-Dichloropropene	7.73	75	211741	9.94	ppb		98
64)	Toluene	8.11	91	726129	10.03	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	179656	8.93	ppb		98
66)	1,1,2-TCA	8.56	97	139317	10.14	ppb		95
67)	2-Hexanone	8.88	43	213568	49.73	ppb		99
70)	1,2-EDB	9.09	107	144176	10.39	ppb		95
71)	Tetrachloroethene	8.72	166	270622	9.37	ppb		96
72)	1-Chlorohexane	9.66	91	236087	10.48	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	161181	9.71	ppb		97
74)	m&p-Xylene	9.93	91	1174916	20.40	ppb		98
75)	o-Xylene	10.35	91	587055	10.20	ppb		97
76)	Styrene	10.37	104	461101	8.98	ppb		96
78)	1,3-Dichloropropane	8.74	76	215399	10.20	ppb		97
79)	Dibromochloromethane	8.98	129	141354	8.65	ppb		93
80)	Chlorobenzene	9.65	112	501995	9.72	ppb		96
81)	Ethylbenzene	9.79	91	768241	10.03	ppb		100
82)	Bromoform	10.54	173	103376	8.02	ppb		99
84)	Isopropylbenzene	10.76	105	814669	9.96	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	148195	9.57	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	59182	9.53	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.15	53	28305	9.54	ppb		89
88)	Bromobenzene	11.06	77	252979	9.78	ppb		95
89)	n-Propylbenzene	11.21	91	882144	9.29	ppb		99
90)	4-Ethyltoluene	11.34	105	843255	10.51	ppb		96
91)	2-Chlorotoluene	11.41	91	607319	9.50	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	657322	9.35	ppb		96
93)	4-Chlorotoluene	11.41	91	607319	9.50	ppb		97
94)	Tert-Butylbenzene	11.76	119	626295	9.69	ppb		98
95)	1,2,4-Trimethylbenzene	11.81	105	653226	9.88	ppb		99
96)	Sec-Butylbenzene	12.00	105	873578	9.80	ppb		98
97)	p-Isopropyltoluene	11.76	119	626295	9.69	ppb		99
98)	Benzyl Chloride	12.35	91	194595	7.13	ppb		99
99)	1,3-DCB	12.10	146	474189	9.64	ppb		98
100)	1,4-DCB	12.20	146	480348	9.56	ppb		97
101)	n-Butylbenzene	12.61	91	619846	8.99	ppb		99
102)	1,2-DCB	12.60	146	444772	9.77	ppb		98
103)	Hexachloroethane	12.89	201	119451	8.03	ppb		95
104)	1,2-Dibromo-3-chloropropan	13.44	157	39438	8.40	ppb	#	79
105)	1,2,4-Trichlorobenzene	13.69	180	411234	10.12	ppb		98
106)	Hexachlorobutadiene	14.57	225	192291	9.37	ppb		97
107)	Naphthalene	14.62	128	602249	9.25	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	277075	9.49	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z46.D Vial: 41
Acq On : 26 Jan 21 00:33 Operator: LP,DG,CH
Sample : 210125A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3328529	25.000	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2523913	25.000	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	921280	25.000	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.29	111	1001646	27.621	ppb	0.00
Spiked Amount 25.000			Recovery = 110.484%			
48) 1,2-DCA-D4(S)	5.71	65	922661	27.347	ppb	0.00
Spiked Amount 25.000			Recovery = 109.388%			
69) Toluene-D8(S)	8.03	98	3333896	27.445	ppb	0.00
Spiked Amount 25.000			Recovery = 109.780%			
77) 4-Bromofluorobenzene(S)	10.91	95	1132815	24.550	ppb	0.00
Spiked Amount 25.000			Recovery = 98.200%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	195104	11.460	ppb	99
4) Freon 114	1.16	85	96720	9.588	ppb	94
5) Chloromethane	1.22	50	77146	10.995	ppb	100
6) Vinyl chloride	1.28	62	175480	11.231	ppb	96
9) Bromomethane	1.53	94	47713	11.694	ppb	100
10) Chloroethane	1.60	64	43674	11.509	ppb	99
11) Dichlorofluoromethane	1.78	67	299624	10.091	ppb	97
12) Trichlorofluoromethane	1.82	101	311192	11.128	ppb	99
17) Acetone	2.36	43	209729	49.850	ppb	99
18) Freon-113	2.32	101	75592	9.590	ppb	98
19) 1,1-DCE	2.29	61	199073	10.068	ppb	94
23) Methyl Acetate	2.72	43	95084	9.442	ppb	94
24) Iodomethane	2.43	142	177188	10.610	ppb	97
25) Acrylonitrile	3.10	52	45782	10.556	ppb	90
26) Methylene chloride	2.81	49	91760	10.531	ppb	98
27) Carbon disulfide	2.49	76	182400	9.345	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	358417	10.414	ppb	100
29) Trans-1,2-DCE	3.15	61	195955	10.133	ppb	97
31) Diisopropyl Ether	3.92	45	373309	10.420	ppb	98
33) 1,1-DCA	3.71	63	259653	10.492	ppb	97
34) Vinyl Acetate	3.86	43	133541	11.258	ppb	96
35) Ethyl tert Butyl Ether	4.48	59	340406	10.362	ppb	99
36) MEK (2-Butanone)	4.67	43	281408	55.824	ppb	98
37) Cis-1,2-DCE	4.60	61	230182	10.160	ppb	95
38) 2,2-Dichloropropane	4.59	77	214333	10.463	ppb	93
41) Chloroform	5.09	83	282890	10.261	ppb	97
42) Bromochloromethane	4.92	49	107039	10.596	ppb	98
44) 1,1,1-TCA	5.30	97	248539	9.798	ppb	99
45) Cyclohexane	5.36	56	203656	9.704	ppb	92
46) 1,1-Dichloropropene	5.53	75	186676	9.934	ppb	97
47) 2,2,4-Trimethylpentane	5.95	57	417581	10.160	ppb	99
49) Carbon Tetrachloride	5.52	117	211025	9.454	ppb	98
50) Tert Amyl Methyl Ether	6.01	73	313162	10.196	ppb	96
52) 1,2-DCA	5.80	62	188257	10.290	ppb	98
53) Benzene	5.78	78	598619	10.152	ppb	97
54) TCE	6.61	130	195686	9.538	ppb	95
56) 1,2-Dichloropropane	6.86	63	139283	10.855	ppb	99
57) Bromodichloromethane	7.21	83	159344	10.217	ppb	99
58) Methyl Cyclohexane	6.84	83	231787	9.615	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	141890	10.347	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	489592	55.682	ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	28567	9.796	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	182321	9.720	ppb		97
64)	Toluene	8.11	91	647173	10.146	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	159970	9.016	ppb		99
66)	1,1,2-TCA	8.56	97	126164	10.425	ppb		93
67)	2-Hexanone	8.88	43	201344	52.972	ppb		99
70)	1,2-EDB	9.09	107	127808	10.419	ppb		99
71)	Tetrachloroethene	8.71	166	248937	9.748	ppb		97
72)	1-Chlorohexane	9.66	91	198067	9.942	ppb		96
73)	1,1,1,2-Tetrachloroethane	9.75	131	146861	10.001	ppb		97
74)	m&p-Xylene	9.93	91	1053400	20.678	ppb		100
75)	o-Xylene	10.35	91	529314	10.398	ppb		99
76)	Styrene	10.37	104	419531	9.231	ppb		99
78)	1,3-Dichloropropane	8.73	76	190980	10.225	ppb		98
79)	Dibromochloromethane	8.98	129	123278	8.543	ppb		95
80)	Chlorobenzene	9.65	112	459668	10.065	ppb		97
81)	Ethylbenzene	9.79	91	690205	10.189	ppb		97
82)	Bromoform	10.54	173	92376	8.086	ppb		96
84)	Isopropylbenzene	10.76	105	726624	10.233	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	145130	10.797	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	54067	10.030	ppb		95
87)	t-1,4-Dichloro-2-Butene	11.14	53	20571	8.245	ppb		92
88)	Bromobenzene	11.06	77	230040	10.243	ppb		99
89)	n-Propylbenzene	11.21	91	806456	9.800	ppb		99
90)	4-Ethyltoluene	11.34	105	716717	10.292	ppb		99
91)	2-Chlorotoluene	11.41	91	544730	9.831	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	599650	9.837	ppb		100
93)	4-Chlorotoluene	11.41	91	544730	9.831	ppb		97
94)	Tert-Butylbenzene	11.76	119	561339	10.001	ppb		100
95)	1,2,4-Trimethylbenzene	11.81	105	599404	10.445	ppb		100
96)	Sec-Butylbenzene	12.00	105	797831	10.306	ppb		97
97)	p-Isopropyltoluene	11.76	119	561339	10.001	ppb		97
98)	Benzyl Chloride	12.35	91	250444	9.778	ppb		100
99)	1,3-DCB	12.10	146	438316	10.267	ppb		99
100)	1,4-DCB	12.20	146	440236	10.096	ppb		100
101)	n-Butylbenzene	12.60	91	573997	9.583	ppb		97
102)	1,2-DCB	12.60	146	403840	10.217	ppb		98
103)	Hexachloroethane	12.89	201	118942	8.965	ppb		93
104)	1,2-Dibromo-3-chloropropan	13.44	157	35595	8.695	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.69	180	354518	10.048	ppb		98
106)	Hexachlorobutadiene	14.57	225	177011	9.941	ppb		98
107)	Naphthalene	14.62	128	535820	9.486	ppb		97
108)	1,2,3-Trichlorobenzene	14.89	180	259677	10.242	ppb		96

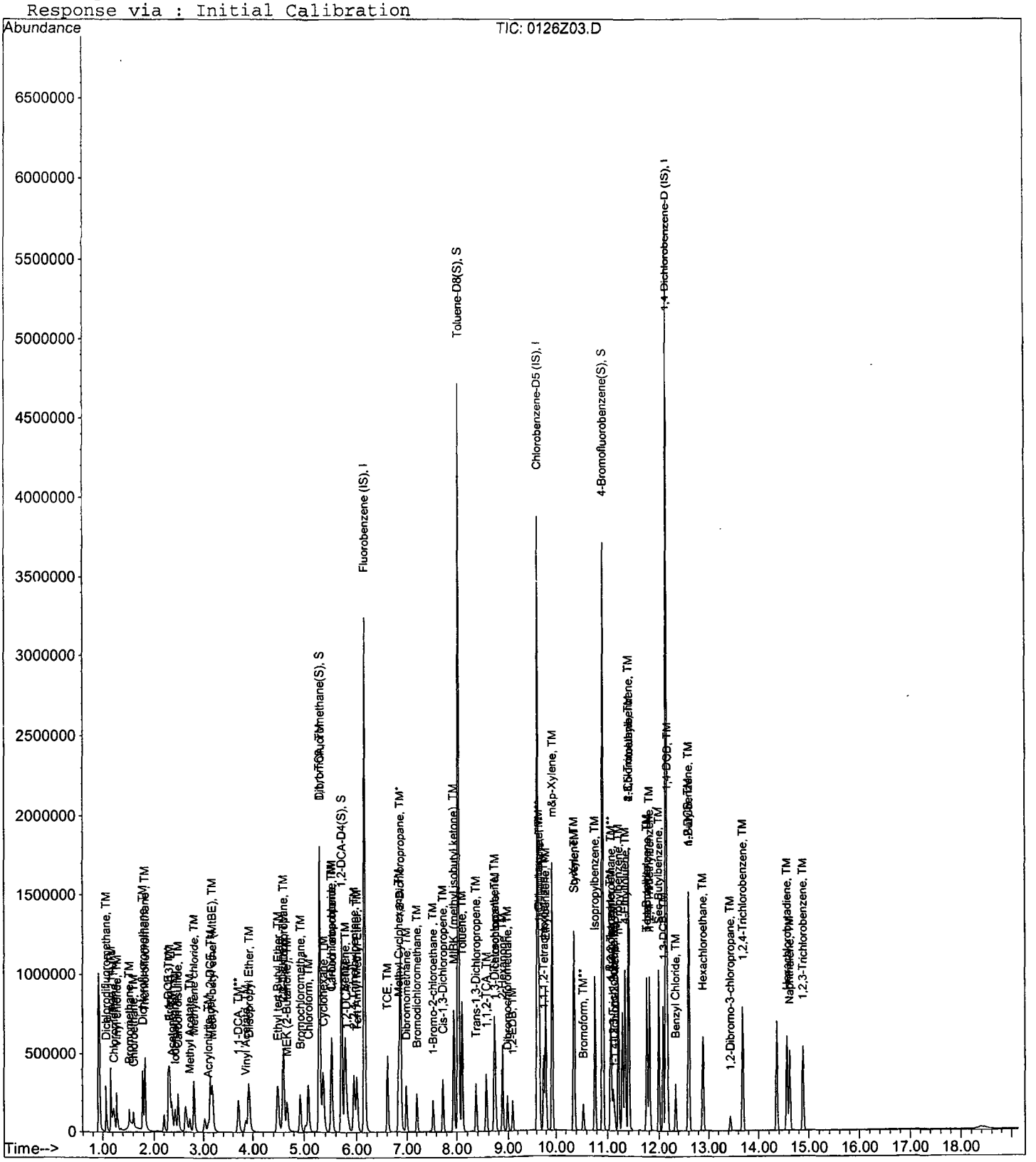
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z03.D Vial: 3
Acq On : 26 Jan 21 14:36 Operator: LP,DG,CH
Sample : 210126A CCV/LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z04.D Vial: 4
Acq On : 26 Jan 21 14:59 Operator: LP,DG,CH
Sample : 210126A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3378709	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2534716	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	928000	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1025895	27.869 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.476%	
48) 1,2-DCA-D4(S)	5.71	65	933865	27.268 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.072%	
69) Toluene-D8(S)	8.03	98	3372646	27.646 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.584%	
77) 4-Bromofluorobenzene(S)	10.91	95	1153083	24.853 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.412%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.07	85	186352	10.783 ppb	97
4) Freon 114	1.16	85	120448	11.763 ppb	84
5) Chloromethane	1.23	50	77578	10.883 ppb	92
6) Vinyl chloride	1.28	62	171326	10.802 ppb	100
9) Bromomethane	1.53	94	49813	12.080 ppb	95
10) Chloroethane	1.60	64	41829	10.792 ppb	99
11) Dichlorofluoromethane	1.78	67	321545	10.669 ppb	99
12) Trichlorofluoromethane	1.82	101	297796	10.491 ppb	99
17) Acetone	2.36	43	188301	44.092 ppb	99
18) Freon-113	2.32	101	82832	10.352 ppb	96
19) 1,1-DCE	2.30	61	221431	11.032 ppb	96
23) Methyl Acetate	2.73	43	93775	9.174 ppb	92
24) Iodomethane	2.43	142	189500	11.079 ppb	98
25) Acrylonitrile	3.10	52	44055	10.006 ppb	94
26) Methylene chloride	2.81	49	98472	11.250 ppb	97
27) Carbon disulfide	2.49	76	196800	9.933 ppb	98
28) Methyl t-butyl ether (MtBE	3.18	73	363176	10.396 ppb	100
29) Trans-1,2-DCE	3.15	61	216063	11.007 ppb	94
31) Diisopropyl Ether	3.92	45	384641	10.577 ppb	99
33) 1,1-DCA	3.71	63	276441	11.004 ppb	99
34) Vinyl Acetate	3.86	43	134516	11.172 ppb	99
35) Ethyl tert Butyl Ether	4.49	59	349945	10.494 ppb	98
36) MEK (2-Butanone)	4.67	43	248548	48.573 ppb	97
37) Cis-1,2-DCE	4.60	61	244405	10.628 ppb	99
38) 2,2-Dichloropropane	4.60	77	235276	11.315 ppb	96
41) Chloroform	5.09	83	300603	10.741 ppb	99
42) Bromochloromethane	4.92	49	112903	11.010 ppb	93
44) 1,1,1-TCA	5.30	97	279039	10.837 ppb	98
45) Cyclohexane	5.36	56	229018	10.751 ppb	97
46) 1,1-Dichloropropene	5.53	75	205450	10.771 ppb	98
47) 2,2,4-Trimethylpentane	5.96	57	465993	11.170 ppb	99
49) Carbon Tetrachloride	5.52	117	238390	10.522 ppb	91
50) Tert Amyl Methyl Ether	6.01	73	320449	10.278 ppb	93
52) 1,2-DCA	5.81	62	188175	10.132 ppb	97
53) Benzene	5.78	78	639362	10.682 ppb	97
54) TCE	6.61	130	208188	9.997 ppb	99
56) 1,2-Dichloropropane	6.86	63	143801	11.041 ppb	98
57) Bromodichloromethane	7.21	83	170204	10.752 ppb	94
58) Methyl Cyclohexane	6.84	83	265175	10.836 ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0126Z04.D Vial: 4
Acq On : 26 Jan 21 14:59 Operator: LP,DG,CH
Sample : 210126A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
59)	Dibromomethane	6.99	174	147791	10.617 ppb	98
60)	MIBK (methyl isobutyl ket	7.94	43	432529	48.461 ppb	98
61)	1-Bromo-2-chloroethane	7.53	144	29041	9.811 ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	193115	10.142 ppb	97
64)	Toluene	8.11	91	691415	10.679 ppb	99
65)	Trans-1,3-Dichloropropene	8.37	75	170405	9.422 ppb	96
66)	1,1,2-TCA	8.56	97	132938	10.822 ppb	93
67)	2-Hexanone	8.88	43	172352	45.243 ppb	99
70)	1,2-EDB	9.09	107	131766	10.696 ppb	99
71)	Tetrachloroethene	8.72	166	267826	10.443 ppb	97
72)	1-Chlorohexane	9.67	91	221135	11.052 ppb	97
73)	1,1,1,2-Tetrachloroethane	9.75	131	154208	10.457 ppb	99
74)	m&p-Xylene	9.93	91	1132887	22.143 ppb	96
75)	o-Xylene	10.35	91	555424	10.865 ppb	99
76)	Styrene	10.37	104	439929	9.630 ppb	100
78)	1,3-Dichloropropane	8.74	76	200808	10.705 ppb	97
79)	Dibromochloromethane	8.98	129	130835	8.976 ppb	97
80)	Chlorobenzene	9.65	112	488164	10.644 ppb	99
81)	Ethylbenzene	9.79	91	743107	10.923 ppb	96
82)	Bromoform	10.54	173	94601	8.214 ppb	95
84)	Isopropylbenzene	10.76	105	790418	11.051 ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	145022	10.711 ppb	96
86)	1,2,3-Trichloropropane	11.11	110	56319	10.372 ppb	92
87)	t-1,4-Dichloro-2-Butene	11.14	53	21129	8.376 ppb	93
88)	Bromobenzene	11.06	77	240997	10.653 ppb	97
89)	n-Propylbenzene	11.21	91	871890	10.543 ppb	97
90)	4-Ethyltoluene	11.34	105	767753	10.945 ppb	99
91)	2-Chlorotoluene	11.41	91	581495	10.437 ppb	97
92)	1,3,5-Trimethylbenzene	11.41	105	635690	10.363 ppb	100
93)	4-Chlorotoluene	11.41	91	581495	10.437 ppb	97
94)	Tert-Butylbenzene	11.76	119	612422	10.832 ppb	99
95)	1,2,4-Trimethylbenzene	11.81	105	639944	11.071 ppb	99
96)	Sec-Butylbenzene	12.00	105	869056	11.145 ppb	98
97)	p-Isopropyltoluene	11.76	119	612422	10.832 ppb	98
98)	Benzyl Chloride	12.34	91	223670	8.857 ppb	99
99)	1,3-DCB	12.10	146	464367	10.798 ppb	98
100)	1,4-DCB	12.20	146	463903	10.562 ppb	99
101)	n-Butylbenzene	12.61	91	623192	10.320 ppb	100
102)	1,2-DCB	12.60	146	420529	10.563 ppb	98
103)	Hexachloroethane	12.89	201	113970	8.612 ppb	94
104)	1,2-Dibromo-3-chloropropan	13.44	157	35380	8.594 ppb	89
105)	1,2,4-Trichlorobenzene	13.69	180	377742	10.629 ppb	98
106)	Hexachlorobutadiene	14.57	225	194490	10.843 ppb	97
107)	Naphthalene	14.62	128	541165	9.513 ppb	100
108)	1,2,3-Trichlorobenzene	14.88	180	262249	10.269 ppb	97

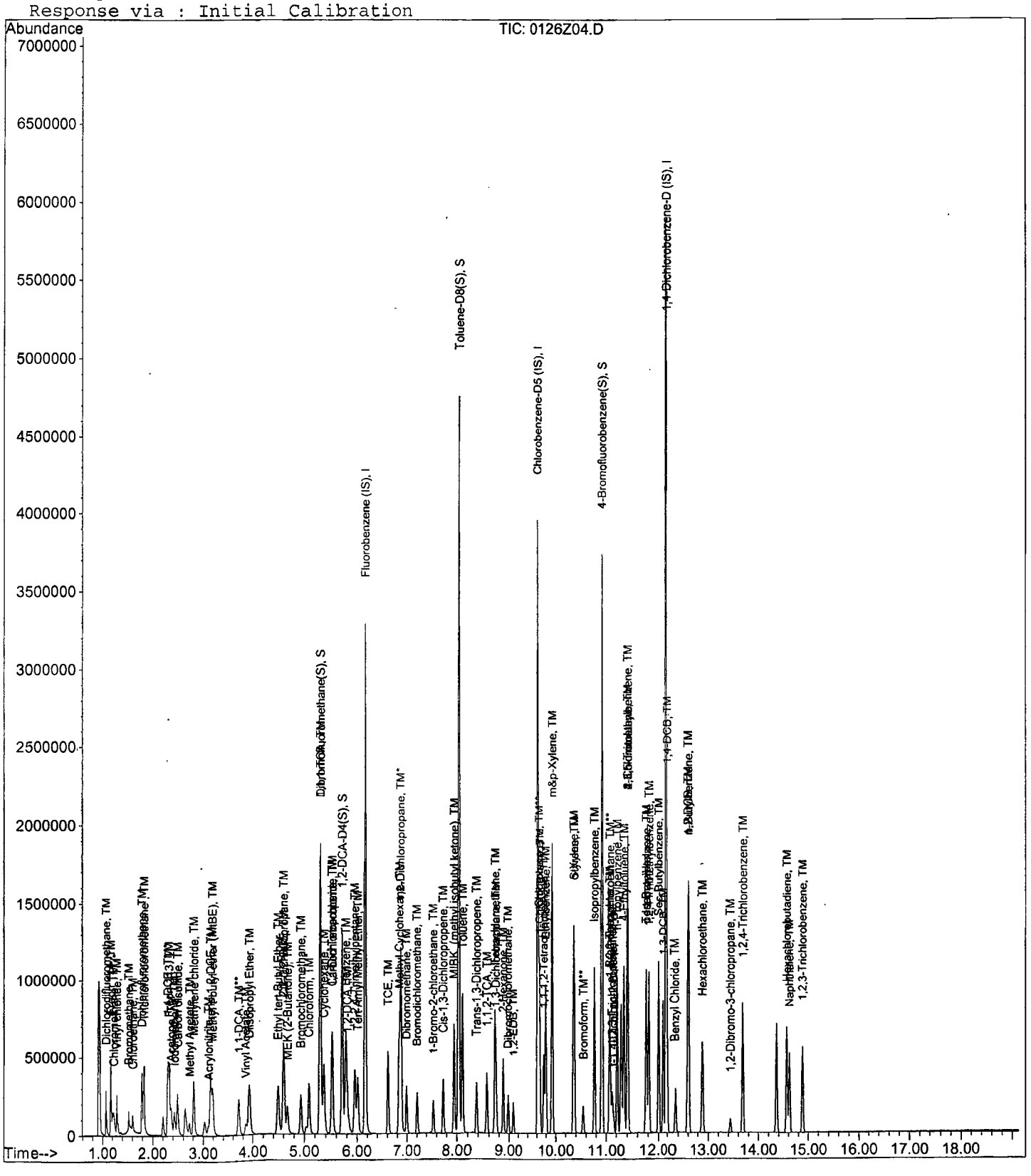
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z04.D Vial: 4
Acq On : 26 Jan 21 14:59 Operator: LP,DG,CH
Sample : 210126A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 7:04 2021 Quant Results File: Z0125W.RES

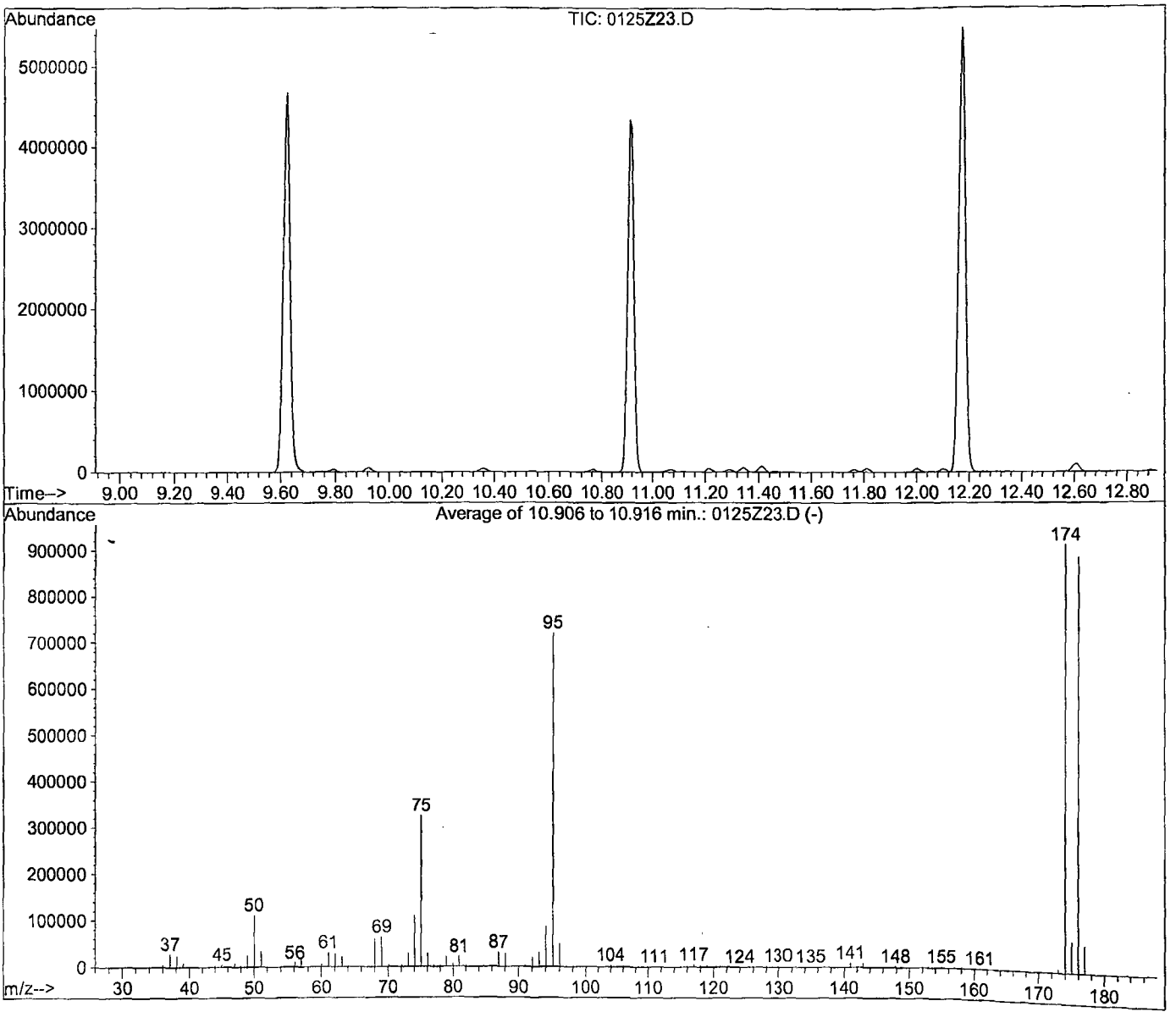
Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Data File : M:\ZEUS\DATA\210125\0125Z23.D
Acq On : 25 Jan 21 15:44
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125S.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1958

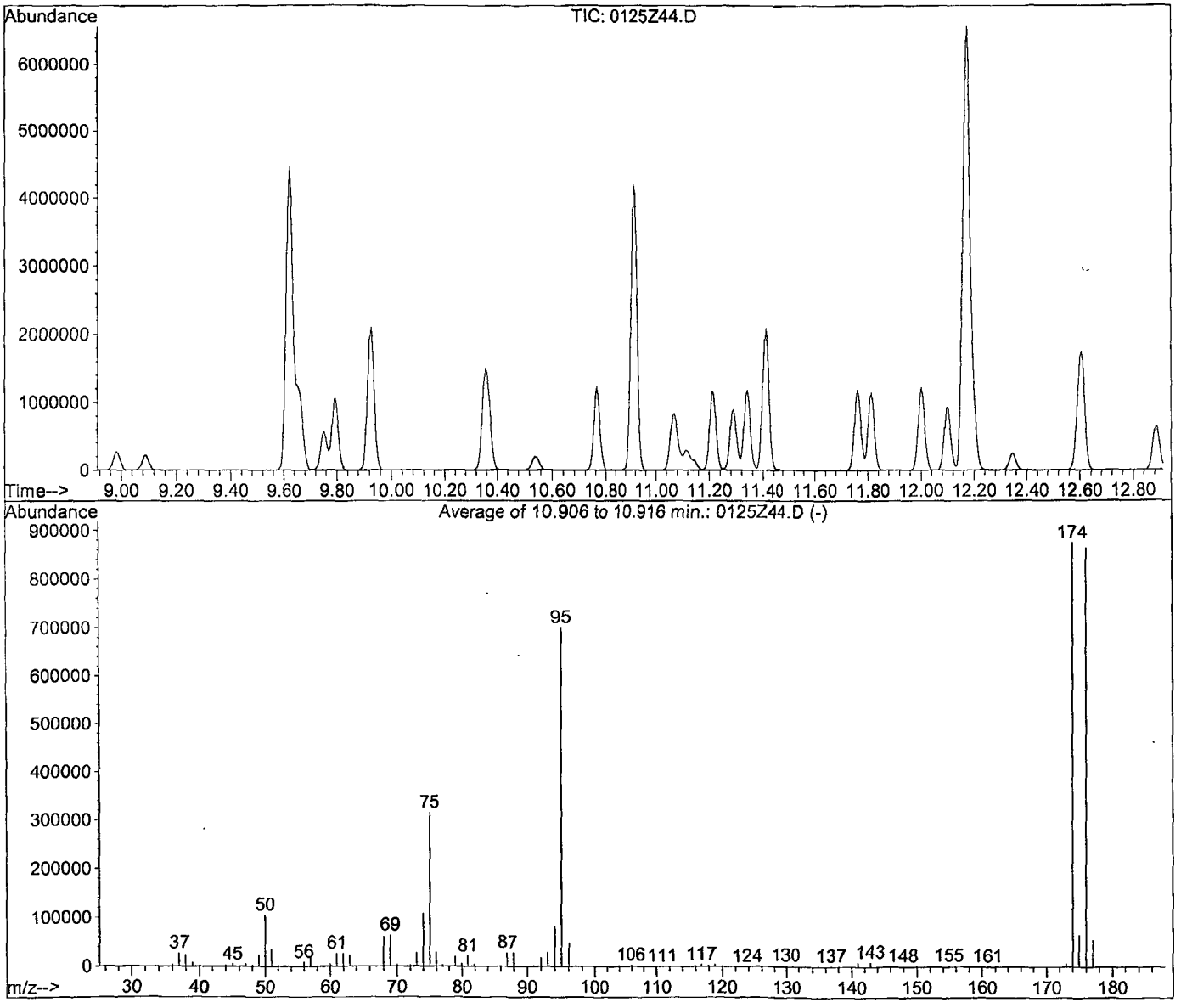
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	110717	PASS
75	95	30	60	45.0	324181	PASS
95	95	100	100	100.0	719808	PASS
96	95	5	9	6.9	49611	PASS
173	174	0.00	2	0.7	6674	PASS
174	95	50	200	126.6	911531	PASS
175	174	5	9	7.2	65973	PASS
176	174	95	100	97.2	885717	PASS
177	176	5	9	6.7	58992	PASS

0125Z23.D Z0125S.M Tue Jan 26 10:36:29 2021

Data File : M:\ZEUS\DATA\210125\0125Z44.D
Acq On : 25 Jan 21 23:47
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 39
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1957

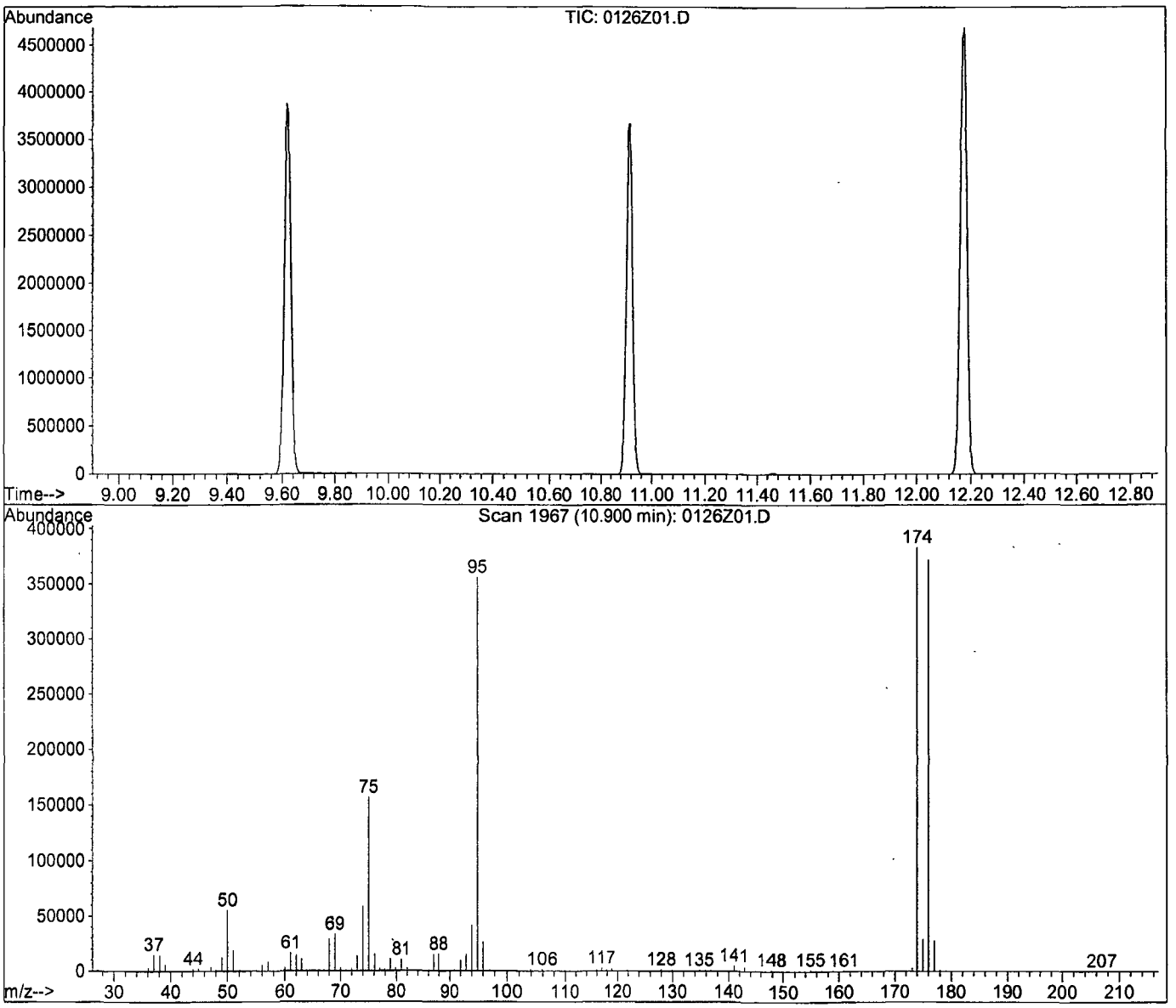
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	105629	PASS
75	95	30	60	45.1	316020	PASS
95	95	100	100	100.0	700949	PASS
96	95	5	9	6.9	48413	PASS
173	174	0.00	2	0.7	6246	PASS
174	95	50	200	124.7	873813	PASS
175	174	5	9	7.4	64259	PASS
176	174	95	101	98.8	863125	PASS
177	176	5	9	6.4	55253	PASS

0125Z44.D Z0125W.M Tue Jan 26 11:42:14 2021

Data File : M:\ZEUS\DATA\210125\0126Z01.D
Acq On : 26 Jan 21 13:50
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 1
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Scan 1967

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.5	55376	PASS
75	95	30	60	43.9	156544	PASS
95	95	100	100	100.0	356352	PASS
96	95	5	9	7.4	26312	PASS
173	174	0.00	2	0.8	2987	PASS
174	95	50	200	107.5	383232	PASS
175	174	5	9	7.6	29008	PASS
176	174	95	101	97.2	372416	PASS
177	176	5	9	7.4	27616	PASS

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 01/18/21 A
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	219061767-50972	01/18/22	06/28/29	200uL			50
Benzyl Chloride	Absolute	70037	1,000	082720-51148	01/04/22	08/27/21	200uL			50

VOA STD 8

Prepared: 01/18/21 B
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-51043	01/04/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16071-51542	01/04/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16248-51598	01/04/22	01/27/21	100uL			50

VOA STD TBA

Prepared: 01/18/21 C
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL15725-51578	01/04/22	09/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16253-51600	01/04/22	01/27/21	100uL			250

VOA STD 1

Prepared: 01/18/21 D
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-51156	01/04/22	11/14/22	50	2mL	Methanol	50

VOA STD 2

Prepared: 01/18/21 E
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16074-51593	01/04/22	11/30/30	100	4mL	Methanol	50

VOA STD 9

Prepared: 01/18/21 F
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 01/18/21	01/04/22	N/A	200uL			5

VOA STD. 10

Prepared: 01/18/21 G
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 01/18/21 H
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 01/18/21 I
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16067-51588	01/04/22	11/30/30	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 01/18/21 J
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 01/18/21 K
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14381-51056	01/04/22	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16187-51524	01/04/22	01/13/22	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	091818-51617	1/18//2022	09/18/23	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-51625	12/22/21	12/25/21	500uL			50

VOA STD. TBA

Prepared: 01/18/21 L
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL16012-51128	01/04/22	11/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16193-51526	01/04/22	01/13/22	50uL			250

VOA STD. 0

Prepared: 01/18/21 M
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-51568	01/04/22	09/30/22	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 01/18/21 N
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-51151	01/04/22	12/11/22	50uL	2mL	Methanol	50

ZEUS 8260 Standard Prep

ZEUS 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/18/21	03/19/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/18/21	03/19/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/18/21	03/19/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	40uL			200

ZEUS 8260 Water Second Source (SS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/18/21	03/19/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/18/21	01/18/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/18/21	03/19/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/18/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0125Z23.D	1	25ug/L BFB STD 12/22/20		25 Jan 21 15:44
2	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
3	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
4	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
5	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
6	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
7	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
8	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
9	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
10	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
11	29	0125Z34.D	1	(SS) 10ug/L VOC STD 1/25/21		25 Jan 21 19:57
12	39	0125Z44.D	1	25ug/L BFB STD 12/22/20		25 Jan 21 23:47
13	40	0125Z45.D	1	210125A CCV/LCS 10ug/L		26 Jan 21 00:10
14	41	0125Z46.D	1	210125A LCSD 10ug/L		26 Jan 21 00:33
15	44	0125Z49.D	1	210125A BLK		26 Jan 21 01:42
16	56	0125Z61.D	1	BA25689W01		26 Jan 21 06:18
17	57	0125Z62.D	1	BA25690W01		26 Jan 21 06:41
18	58	0125Z63.D	1	BA25698W01		26 Jan 21 07:04
19	59	0125Z64.D	1	BA25699W01		26 Jan 21 07:27
20	60	0125Z65.D	1	BA25701W01		26 Jan 21 07:50
21	61	0125Z66.D	1	BA25703W01		26 Jan 21 08:13
22	62	0125Z67.D	1	BA25704W01		26 Jan 21 08:36
23	63	0125Z68.D	1	BA25706W01		26 Jan 21 08:59
24	64	0125Z69.D	1	BA25692W01		26 Jan 21 09:22
25	65	0125Z70.D	1	Ending CCV 10ug/L 1/25/21		26 Jan 21 09:45
26	1	0126Z01.D	1	25ug/L BFB STD 12/22/20		26 Jan 21 13:50
27	3	0126Z03.D	1	210126A CCV/LCS 10ug/L		26 Jan 21 14:36
28	4	0126Z04.D	1	210126A LCSD 10ug/L		26 Jan 21 14:59
29	8	0126Z08.D	1	210126A BLK		26 Jan 21 16:31
30	9	0126Z09.D	1	BA25695W01		26 Jan 21 16:54
31	14	0126Z14.D	1	BA25693W01		26 Jan 21 18:49
32	15	0126Z15.D	1	BA25696W01		26 Jan 21 19:12
33	29	0126Z29.D	1	Ending CCV 10ug/L 1/26/21		27 Jan 21 00:34

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0125Z24.D	0125Z25.D	0125Z26.D	0125Z27.D	0125Z29.D	0125Z30.D	0125Z31.D	0125Z32.D			Avg	%RSD	Type	r^2	Q	MRF
			1	2	3	4	5	6	7	8								
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
3	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
6	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb	0.00
Spiked Amount 25.000			Recovery =	16.508%		
5) Toluene-D8(S)	8.03	98	555650	4.08	ppb	0.00
Spiked Amount 25.000			Recovery =	16.312%		
6) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb	0.00
Spiked Amount 25.000			Recovery =	21.764%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

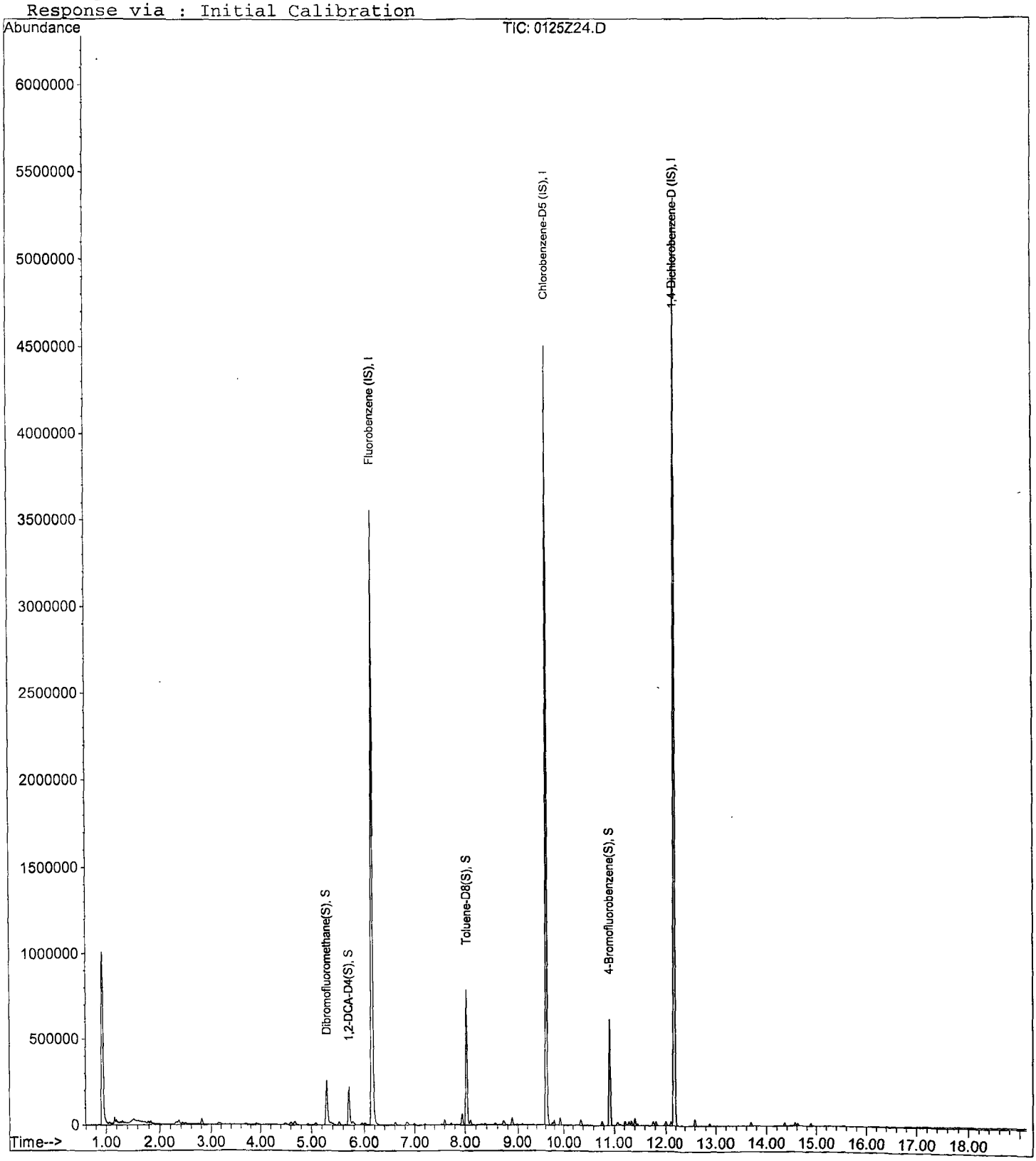
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D
Acq On : 25 Jan 21 16:07
Sample : 0.3ug/L VOC STD 1/25/21
Misc :

Vial: 19
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb	0.00
Spiked Amount 25.000			Recovery =	16.660%		
5) Toluene-D8(S)	8.03	98	538877	4.10	ppb	0.00
Spiked Amount 25.000			Recovery =	16.400%		
6) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb	0.00
Spiked Amount 25.000			Recovery =	21.484%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

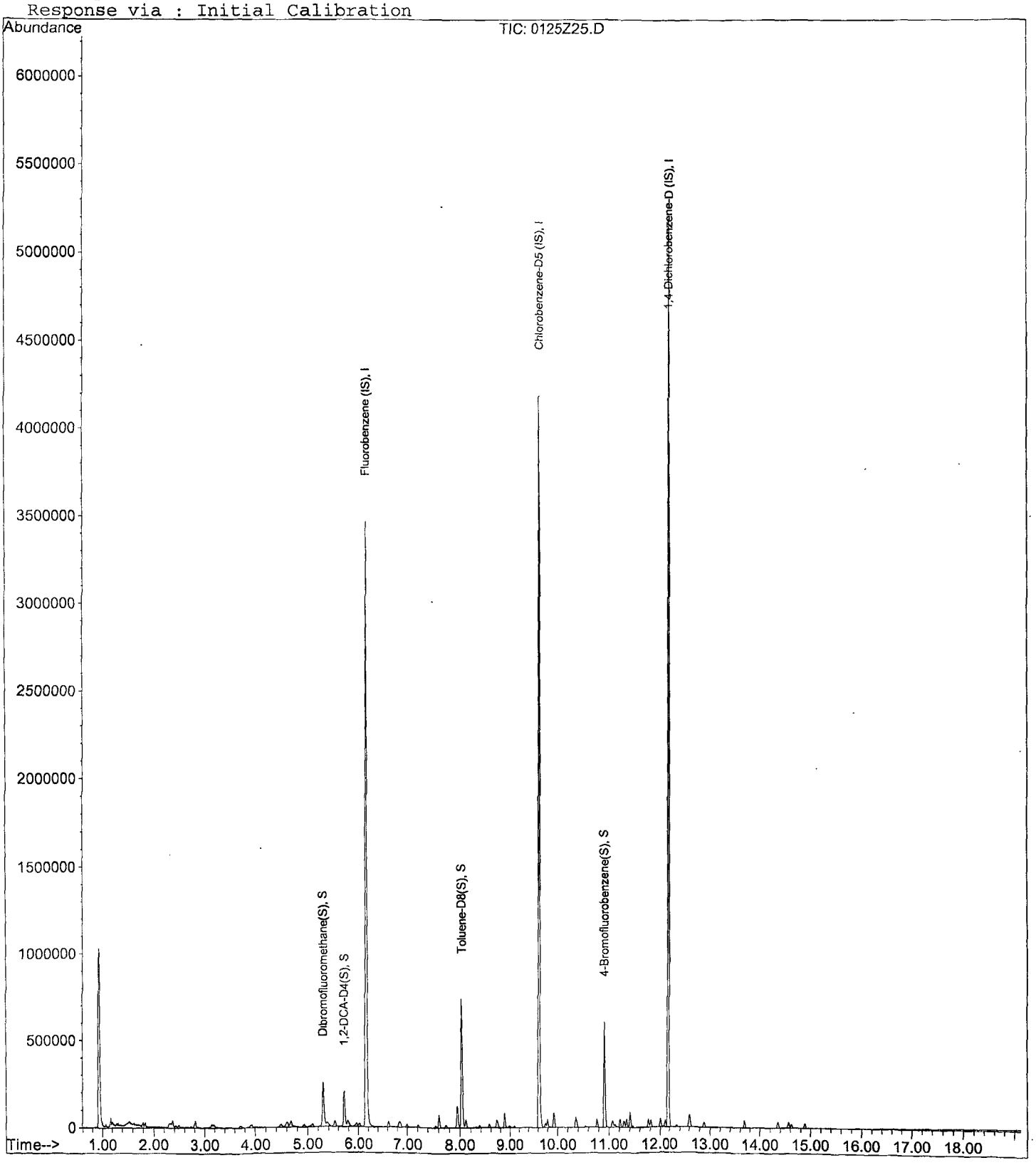
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z25.D
Acq On : 25 Jan 21 16:30
Sample : 0.5ug/L VOC STD 1/25/21
Misc :

Vial: 20
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb	0.00
Spiked Amount 25.000			Recovery =	38.496%		
3) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb	0.00
Spiked Amount 25.000			Recovery =	39.380%		
5) Toluene-D8(S)	8.03	98	1268990	9.81	ppb	0.00
Spiked Amount 25.000			Recovery =	39.236%		
6) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb	0.00
Spiked Amount 25.000			Recovery =	40.312%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

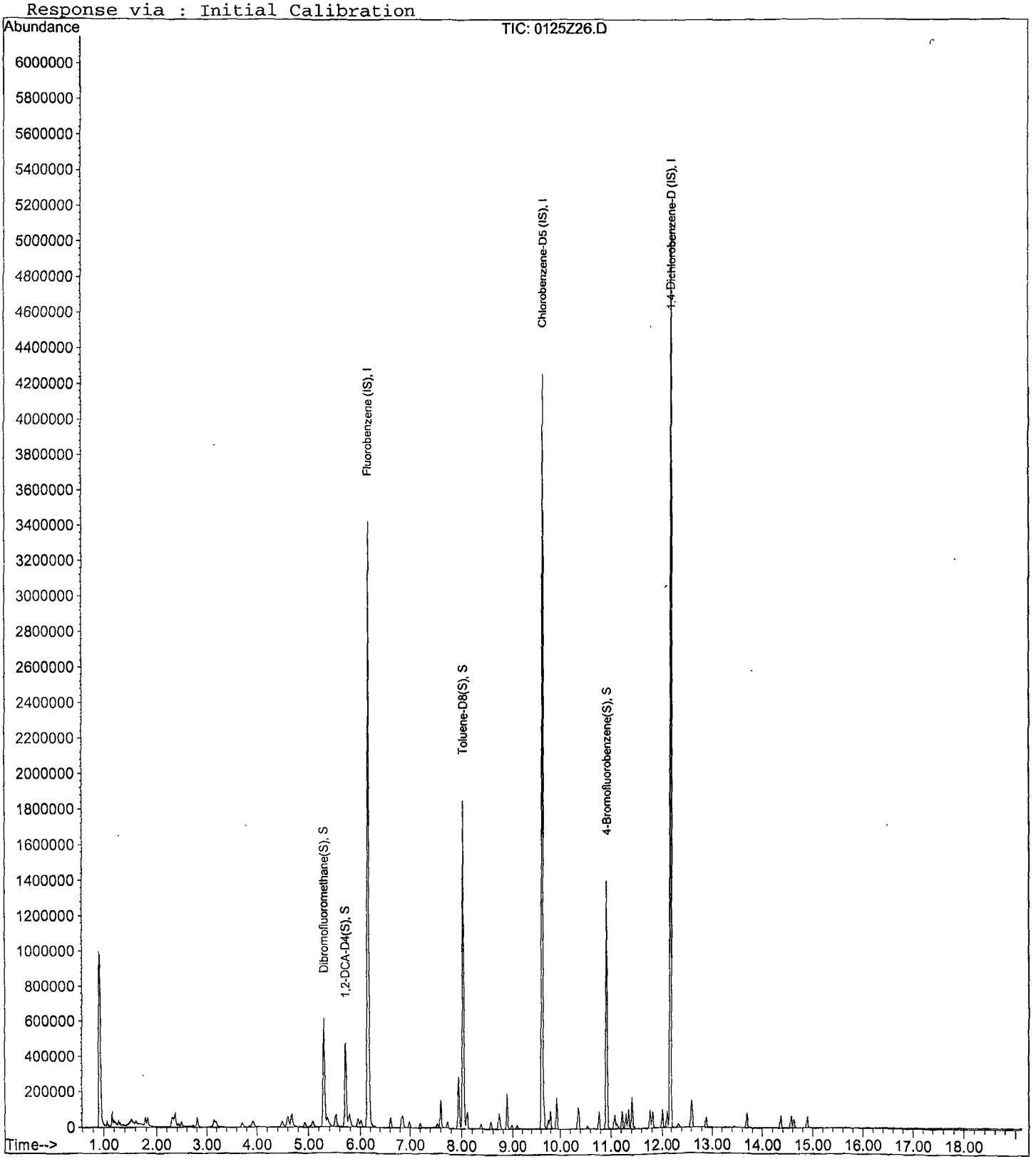
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z26.D
Acq On : 25 Jan 21 16:53
Sample : 1ug/L VOC STD 1/25/21
Misc :

Vial: 21
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb	0.00
Spiked Amount 25.000			Recovery =	38.824%		
3) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb	0.00
Spiked Amount 25.000			Recovery =	39.864%		
5) Toluene-D8(S)	8.03	98	1265740	9.83	ppb	0.00
Spiked Amount 25.000			Recovery =	39.308%		
6) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb	0.00
Spiked Amount 25.000			Recovery =	40.020%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

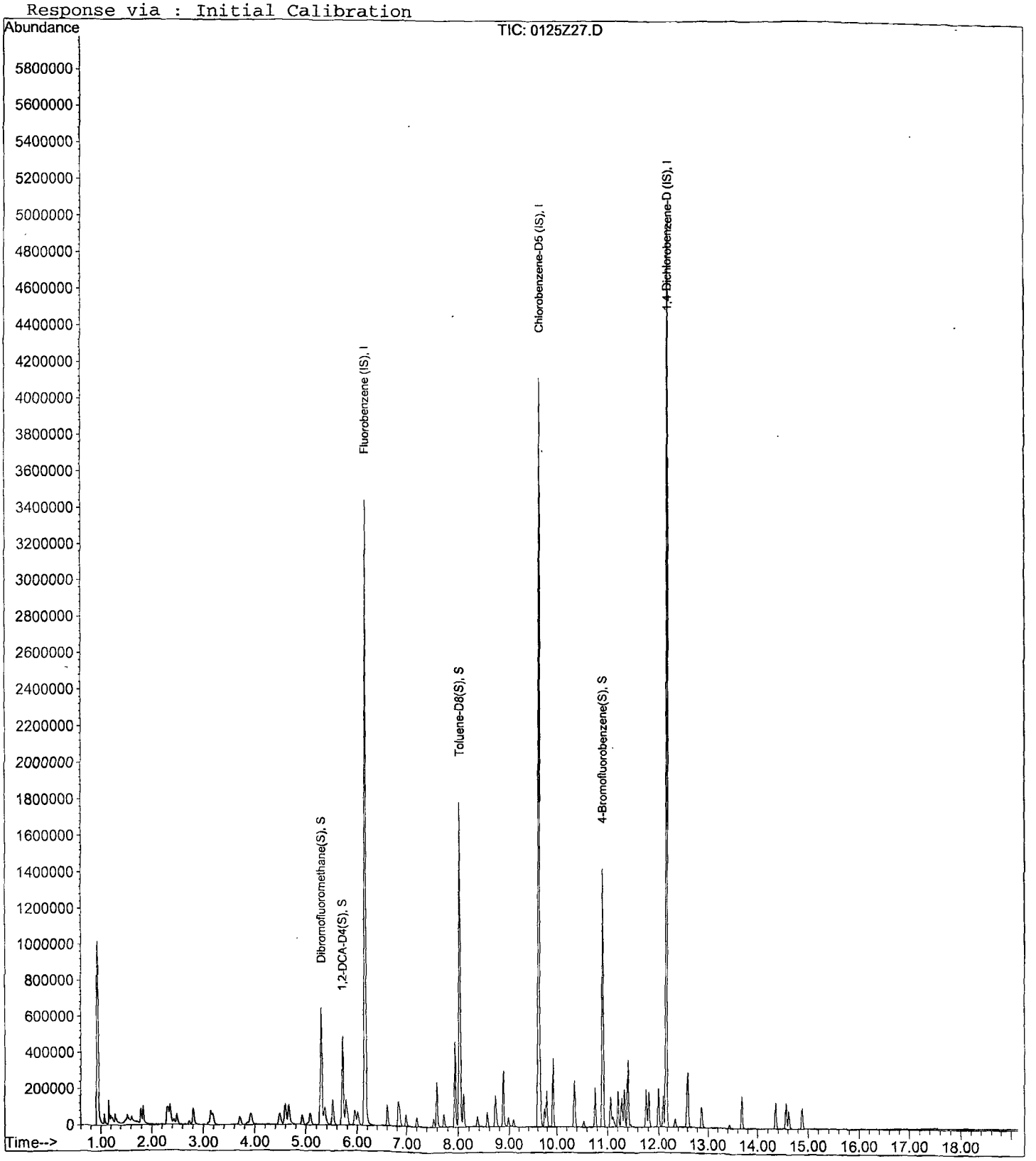
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z27.D
Acq On : 25 Jan 21 17:16
Sample : 2ug/L VOC STD 1/25/21
Misc :

Vial: 22
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery = 111.184%			
3) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery = 109.020%			
5) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery = 108.292%			
6) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery = 97.020%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

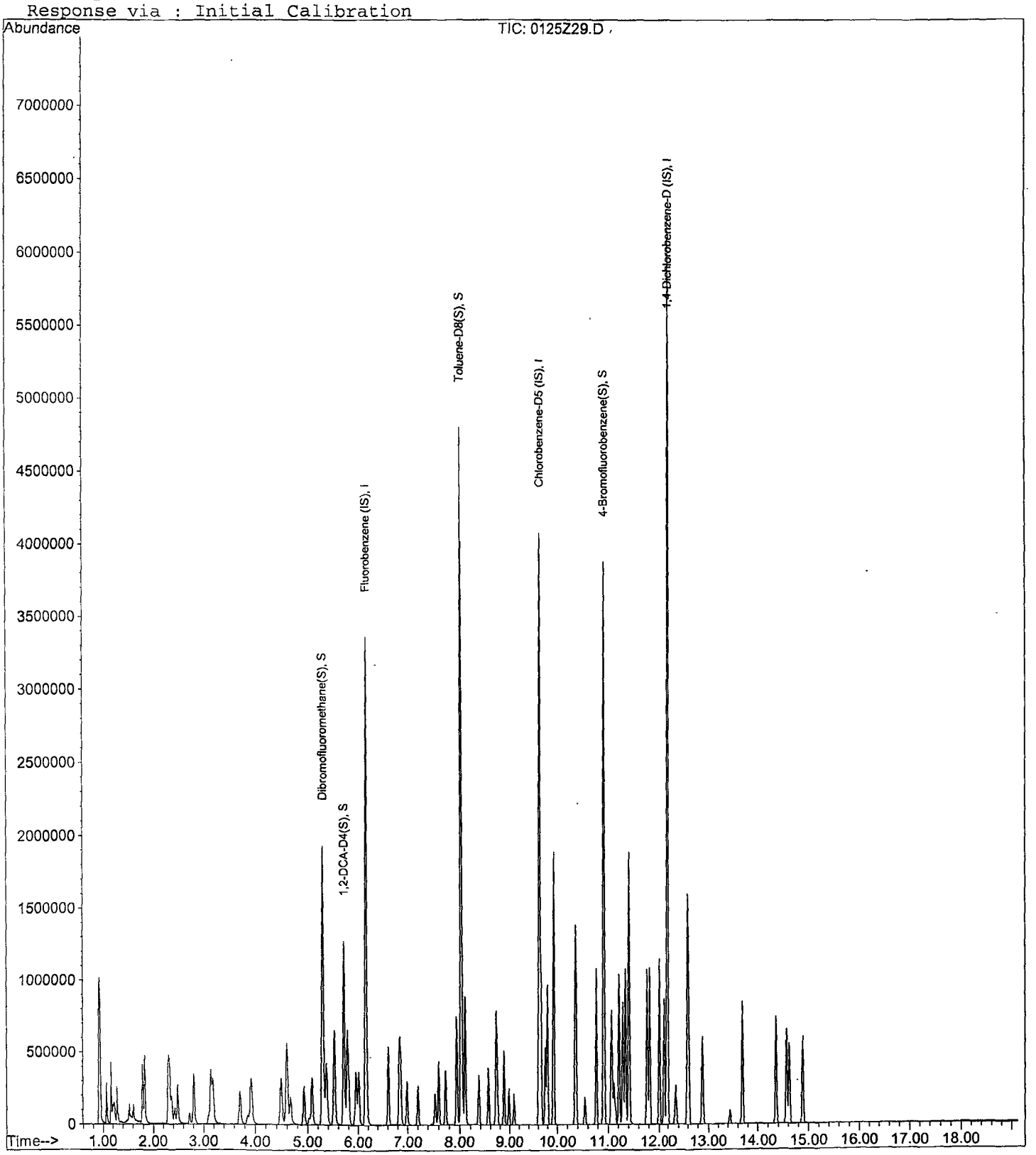
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z29.D
Acq On : 25 Jan 21 18:02
Sample : 10ug/L VOC STD 1/25/21
Misc :

Vial: 24
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2246563	56.58	ppb	0.00
Spiked Amount 25.000			Recovery =	226.332%		
3) 1,2-DCA-D4(S)	5.71	65	2038786	55.19	ppb	0.00
Spiked Amount 25.000			Recovery =	220.772%		
5) Toluene-D8(S)	8.03	98	7511750	57.76	ppb	0.00
Spiked Amount 25.000			Recovery =	231.032%		
6) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07	ppb	0.00
Spiked Amount 25.000			Recovery =	200.300%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

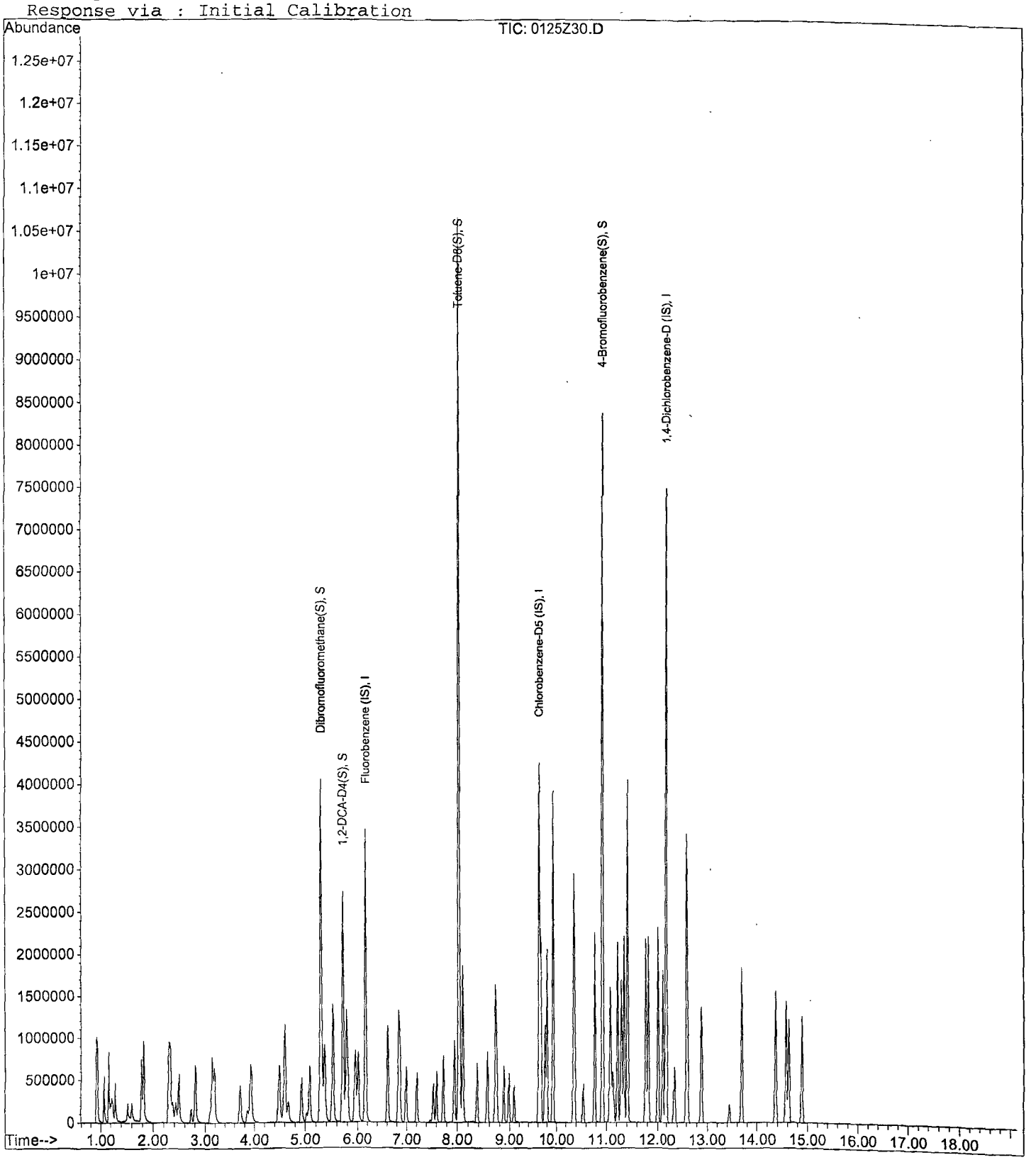
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z30.D
Acq On : 25 Jan 21 18:25
Sample : 20ug/L VOC STD 1/25/21
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery =	220.264%		
3) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery =	212.784%		
5) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery =	223.732%		
6) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery =	197.396%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

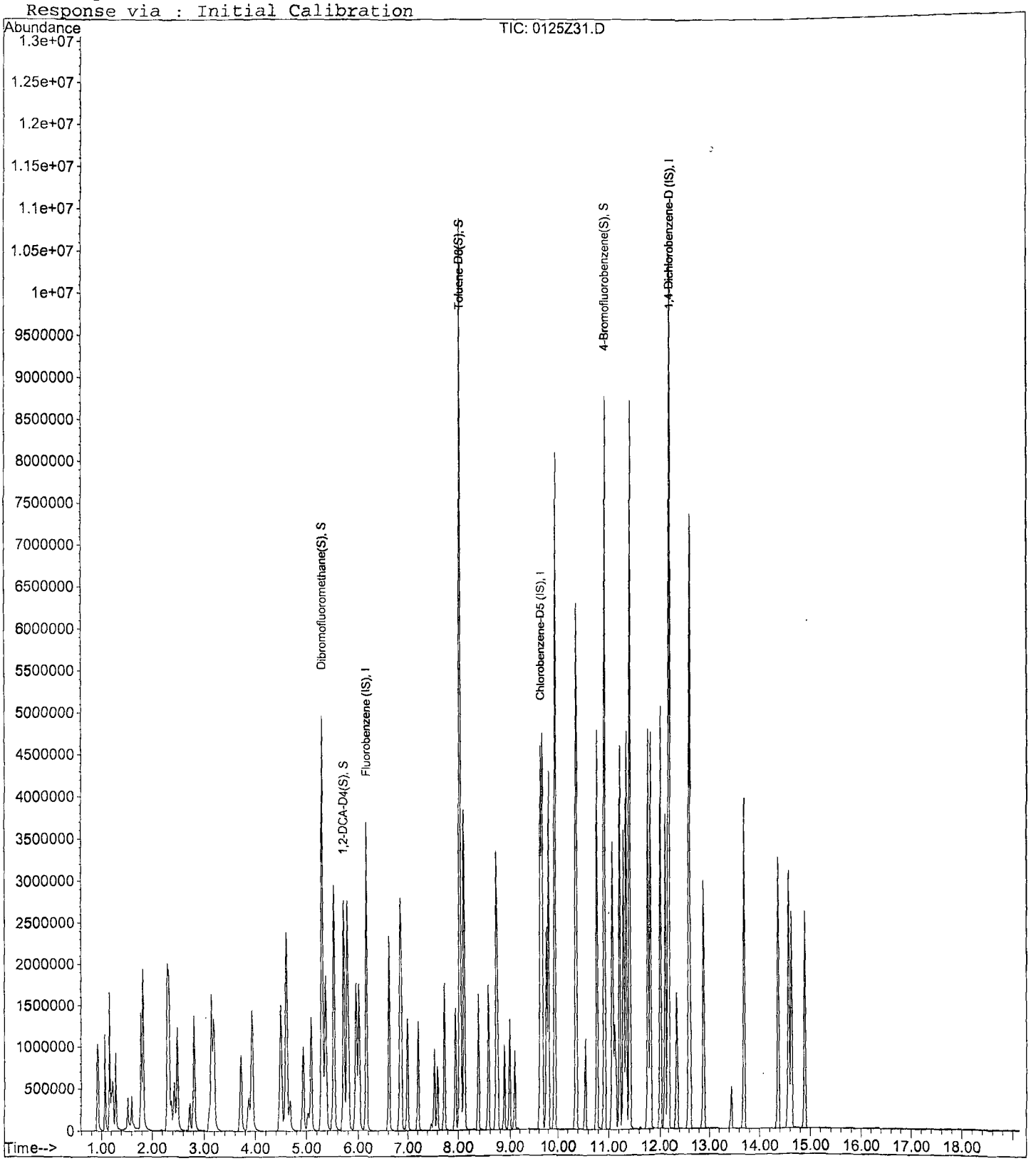
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z31.D
Acq On : 25 Jan 21 18:47
Sample : 40ug/L VOC STD 1/25/21
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery = 452.384%			
3) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery = 441.048%			
5) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery = 417.644%			
6) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery = 401.700%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

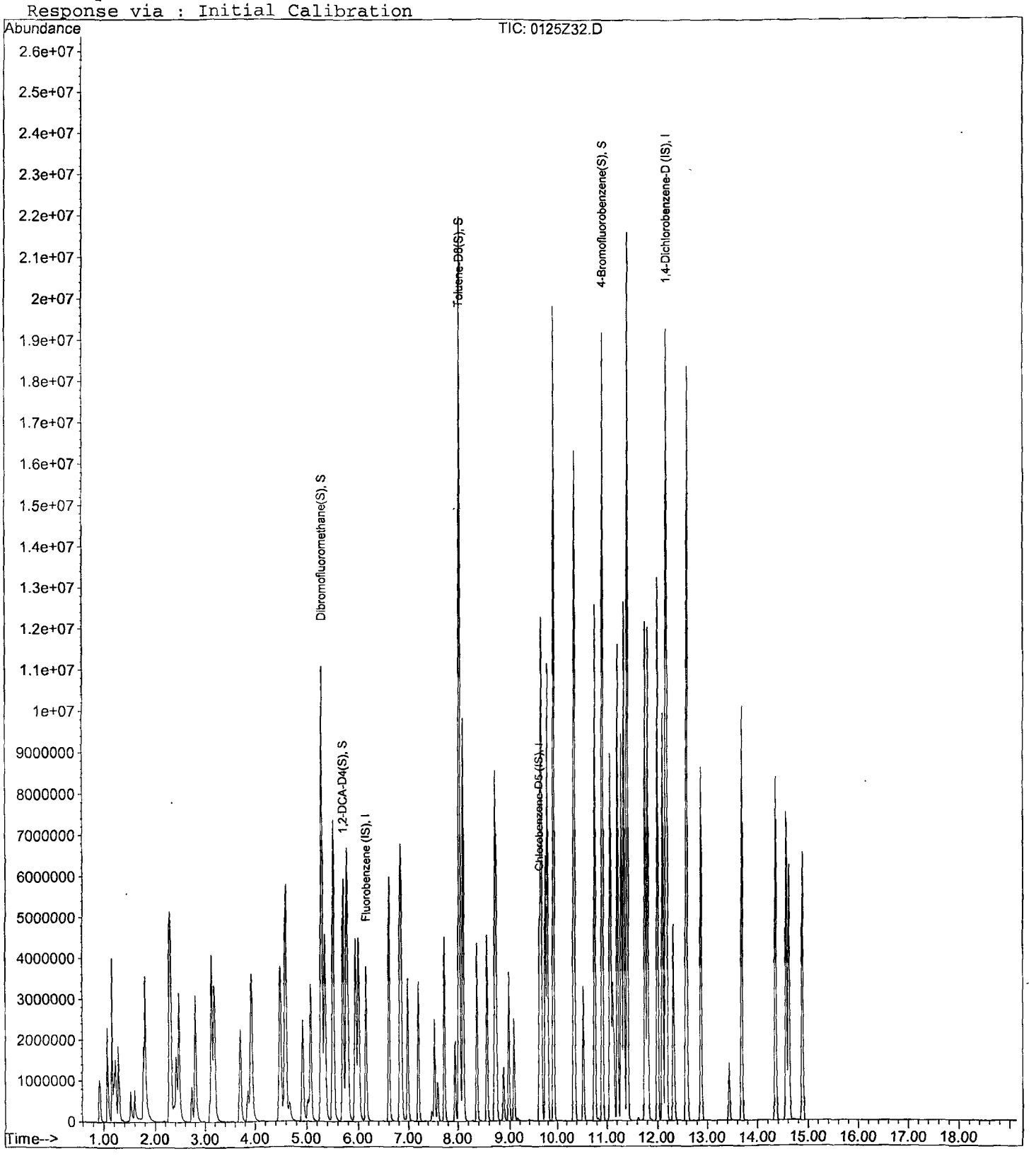
Quantitation Report

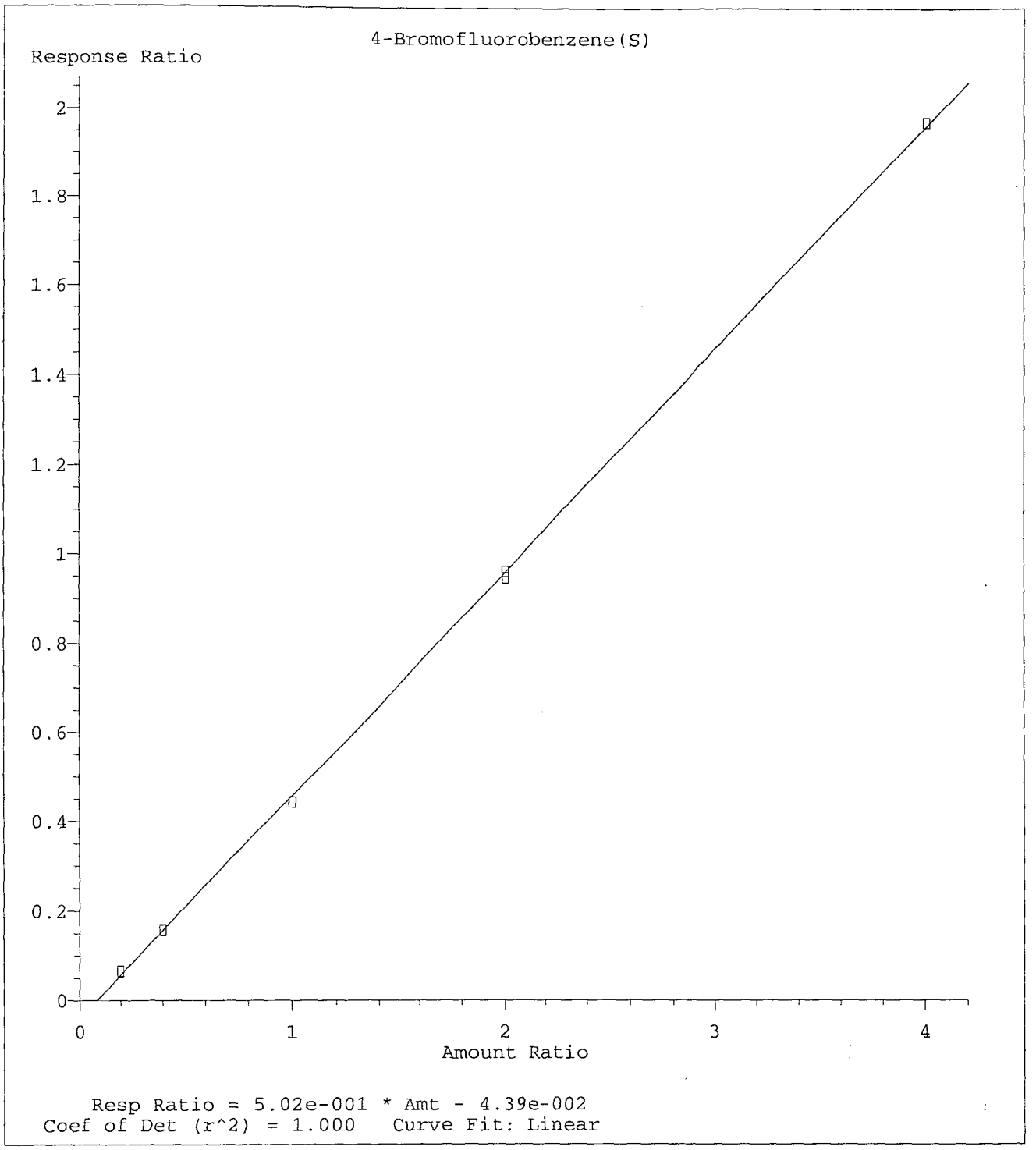
Data File : M:\ZEUS\DATA\210125\0125Z32.D
Acq On : 25 Jan 21 19:10
Sample : 100ug/L VOC STD 1/25/21
Misc :

Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\Z0125SUR.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

			0125Z36.D	0125Z37.D	0125Z38.D	0125Z39.D	0125Z40.D	0125Z41.D	0125Z42.D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.0	5.943	3.222	1.423	1.019	0.9015	0.8455				3.9	123	TMHB	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
8																		
9																		
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35																		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z36.D Vial: 31
Acq On : 25 Jan 21 20:43 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3473573	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5054482	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4196316	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	38845899m	17.67 ppb	100

(#) = qualifier out of range (m) = manual integration

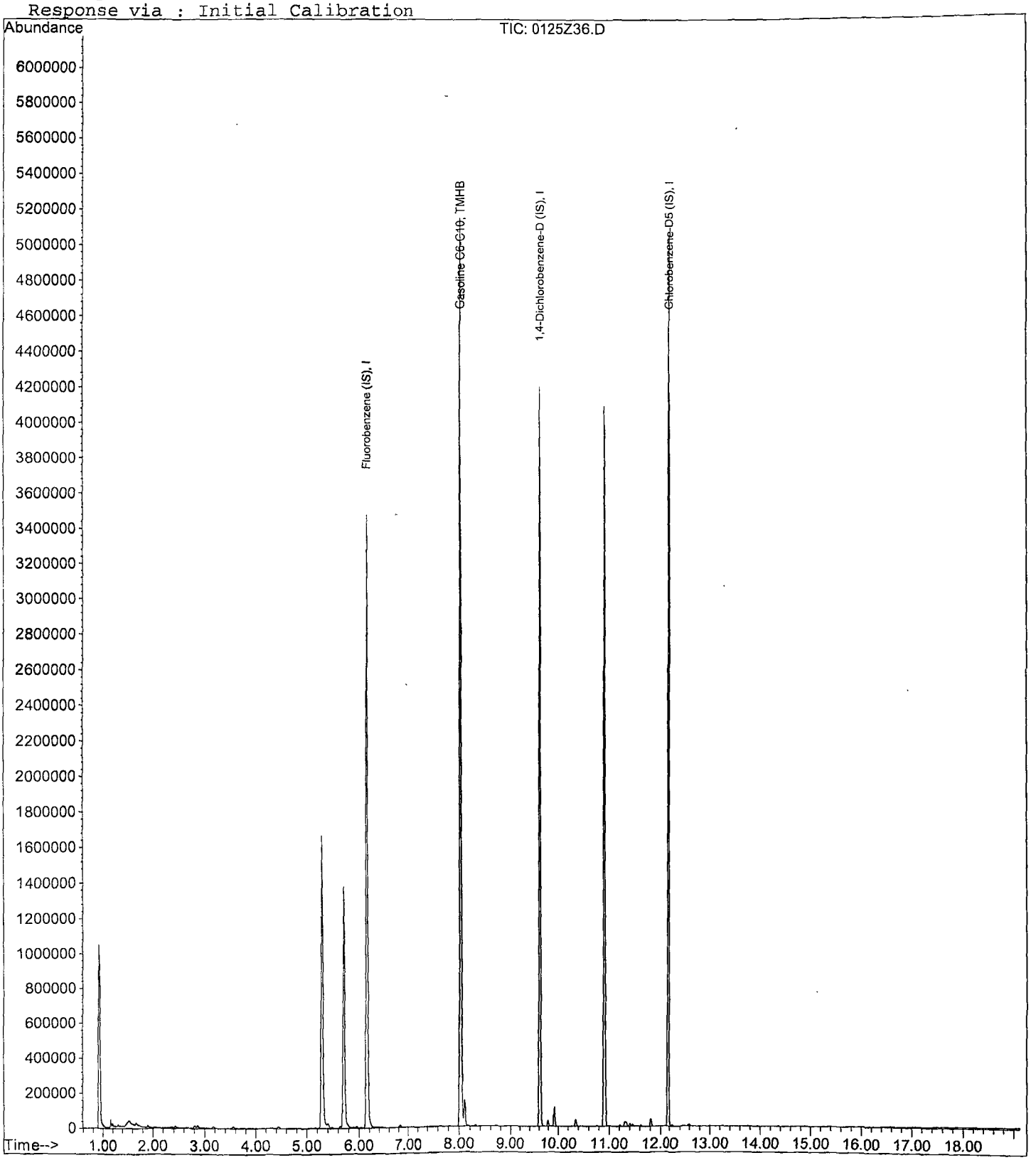
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z36.D
Acq On : 25 Jan 21 20:43
Sample : 20ug/L GAS STD 1/25/21
Misc :

Vial: 31
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z37.D
Acq On : 25 Jan 21 21:06
Sample : 50ug/L GAS STD 1/25/21
Misc :

Vial: 32
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3453271	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5130542	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4275409	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	41043942m	45.92	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

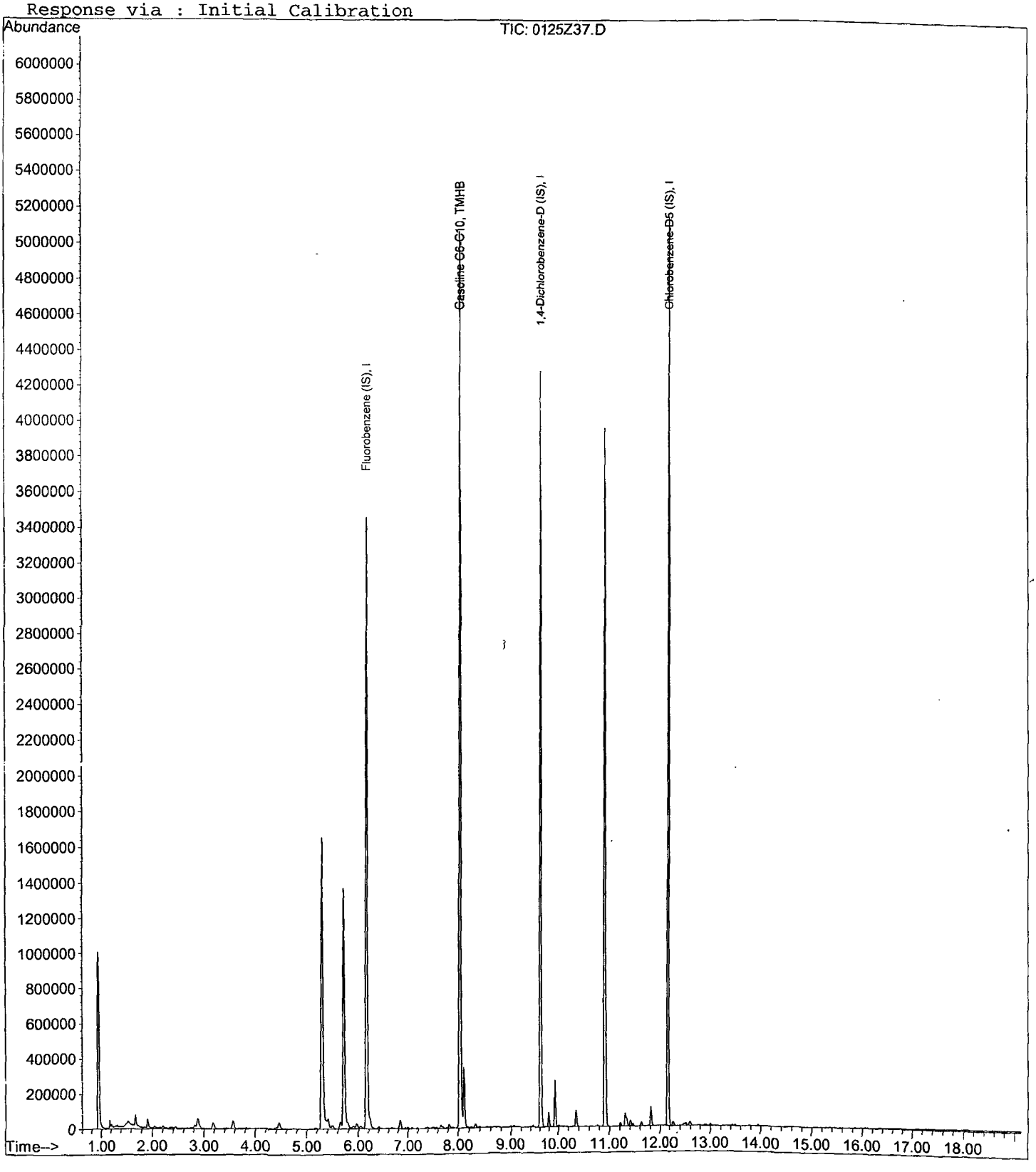
Data File : M:\ZEUS\DATA\210125\0125Z37.D
Acq On : 25 Jan 21 21:06
Sample : 50ug/L GAS STD 1/25/21
Misc :

Vial: 32
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z38.D
Acq On : 25 Jan 21 21:29
Sample : 100ug/L GAS STD 1/25/21
Misc :

Vial: 33
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3372890	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4802768	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4140552	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	43466644m	86.21	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z38.D ZGAS0125.M Tue Jan 26 11:50:08 2021 Page 1

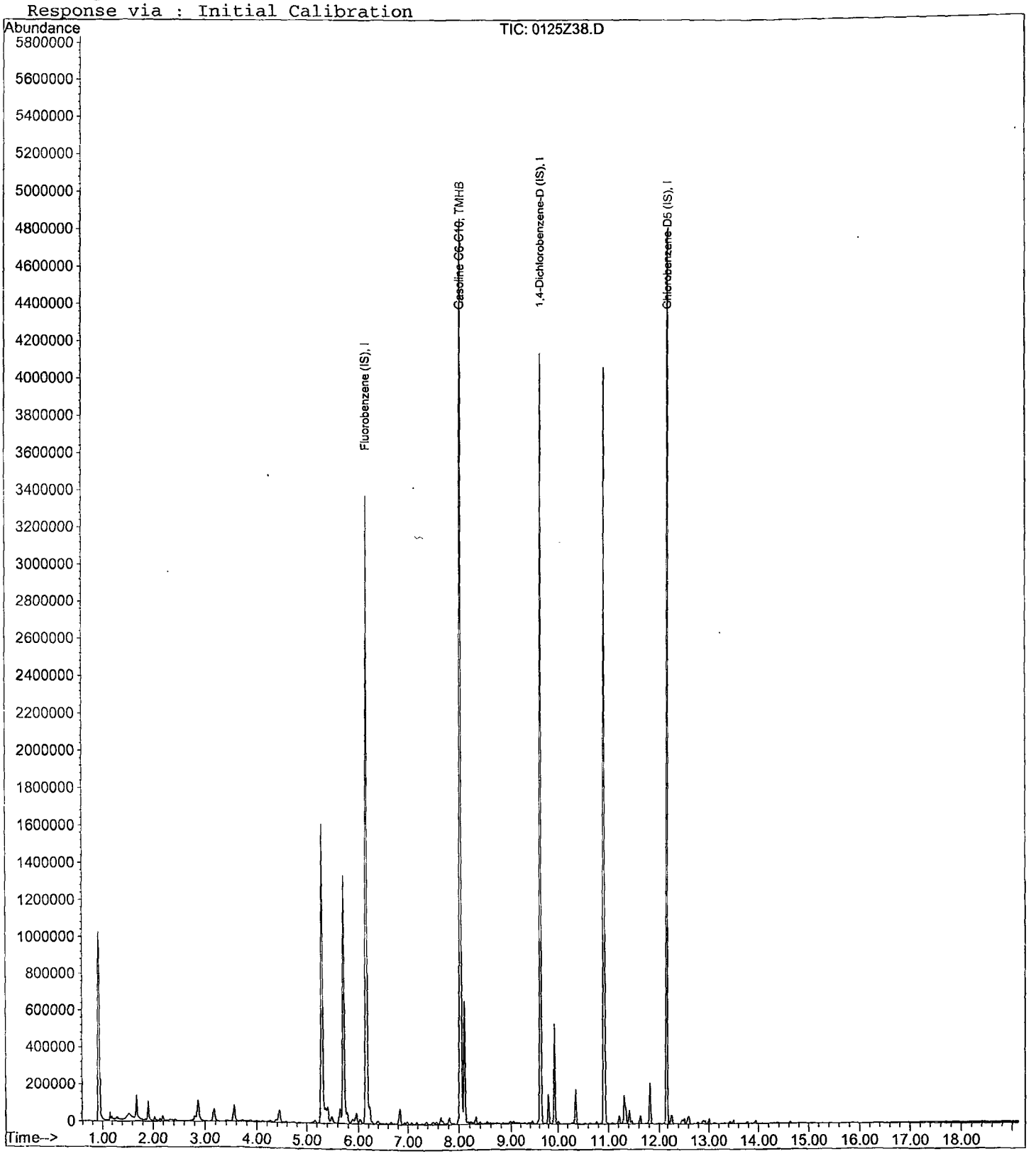
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z38.D
Acq On : 25 Jan 21 21:29
Sample : 100ug/L GAS STD 1/25/21
Misc :

Vial: 33
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z39.D
Acq On : 25 Jan 21 21:52
Sample : 300ug/L GAS STD 1/25/21
Misc :

Vial: 34
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:14 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3429087	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4818669	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4159957	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	58556434m	254.73	ppb	100

(#) = qualifier out of range (m) = manual integration

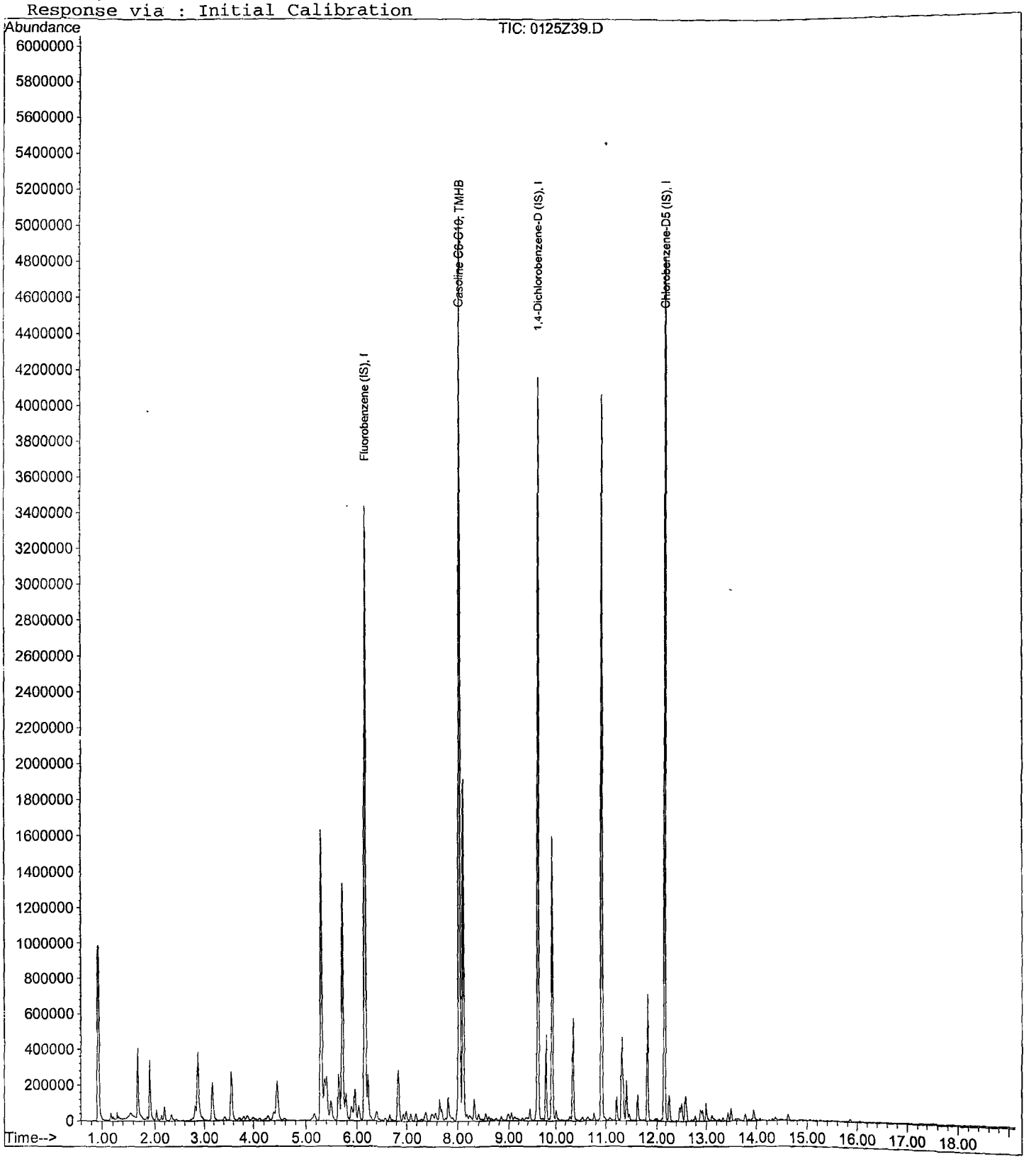
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z39.D
Acq On : 25 Jan 21 21:52
Sample : 300ug/L GAS STD 1/25/21
Misc :

Vial: 34
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:14 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z40.D
Acq On : 25 Jan 21 22:15
Sample : 600ug/L GAS STD 1/25/21
Misc :

Vial: 35
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3512382	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5118079	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4192540	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	85903188m	551.65	ppb	100

(#) = qualifier out of range (m) = manual integration

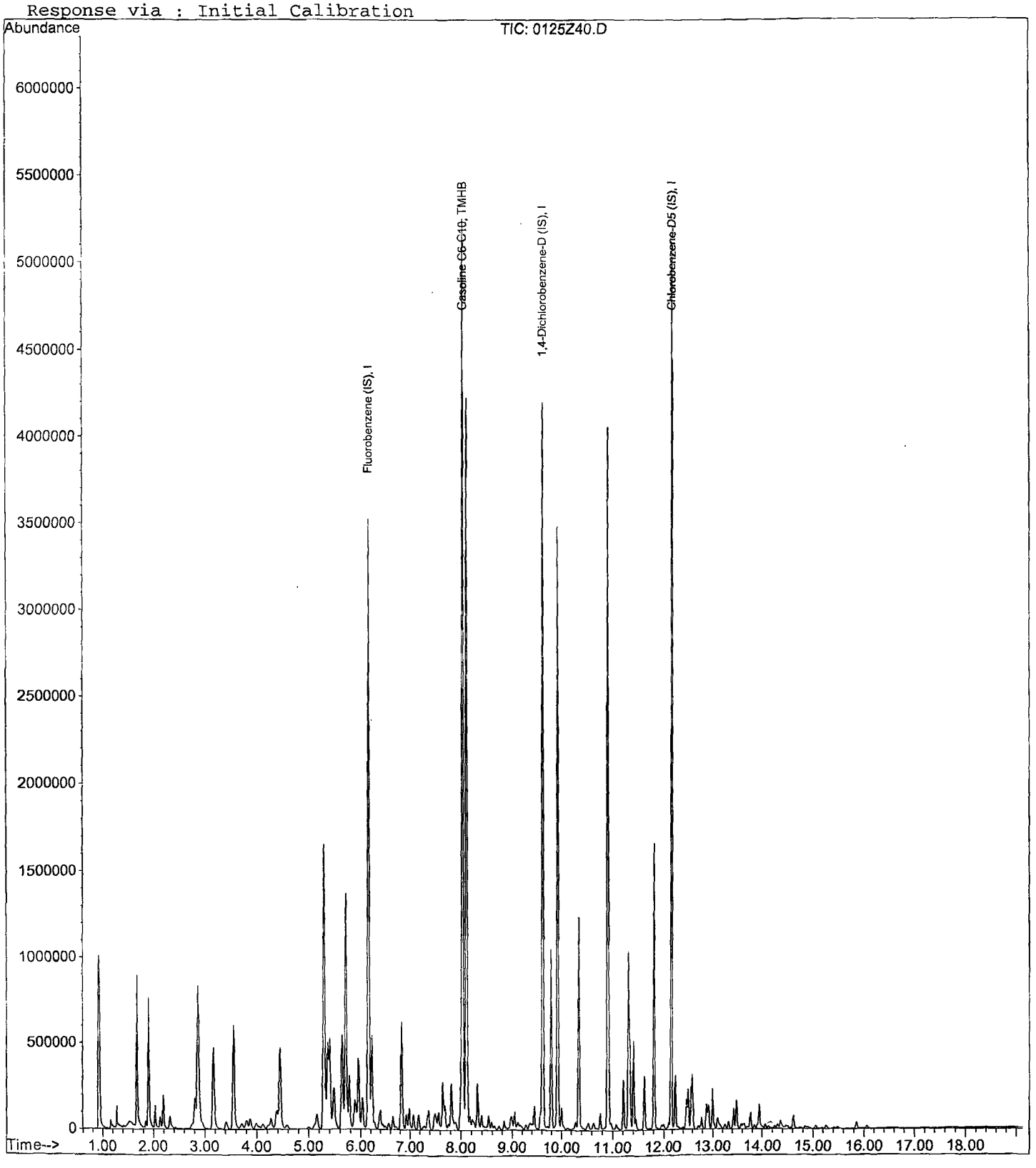
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z40.D
Acq On : 25 Jan 21 22:15
Sample : 600ug/L GAS STD 1/25/21
Misc :

Vial: 35
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z41.D Vial: 36
Acq On : 25 Jan 21 22:38 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3620807	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5252263	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4492752	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	104457487m	728.32	ppb	100

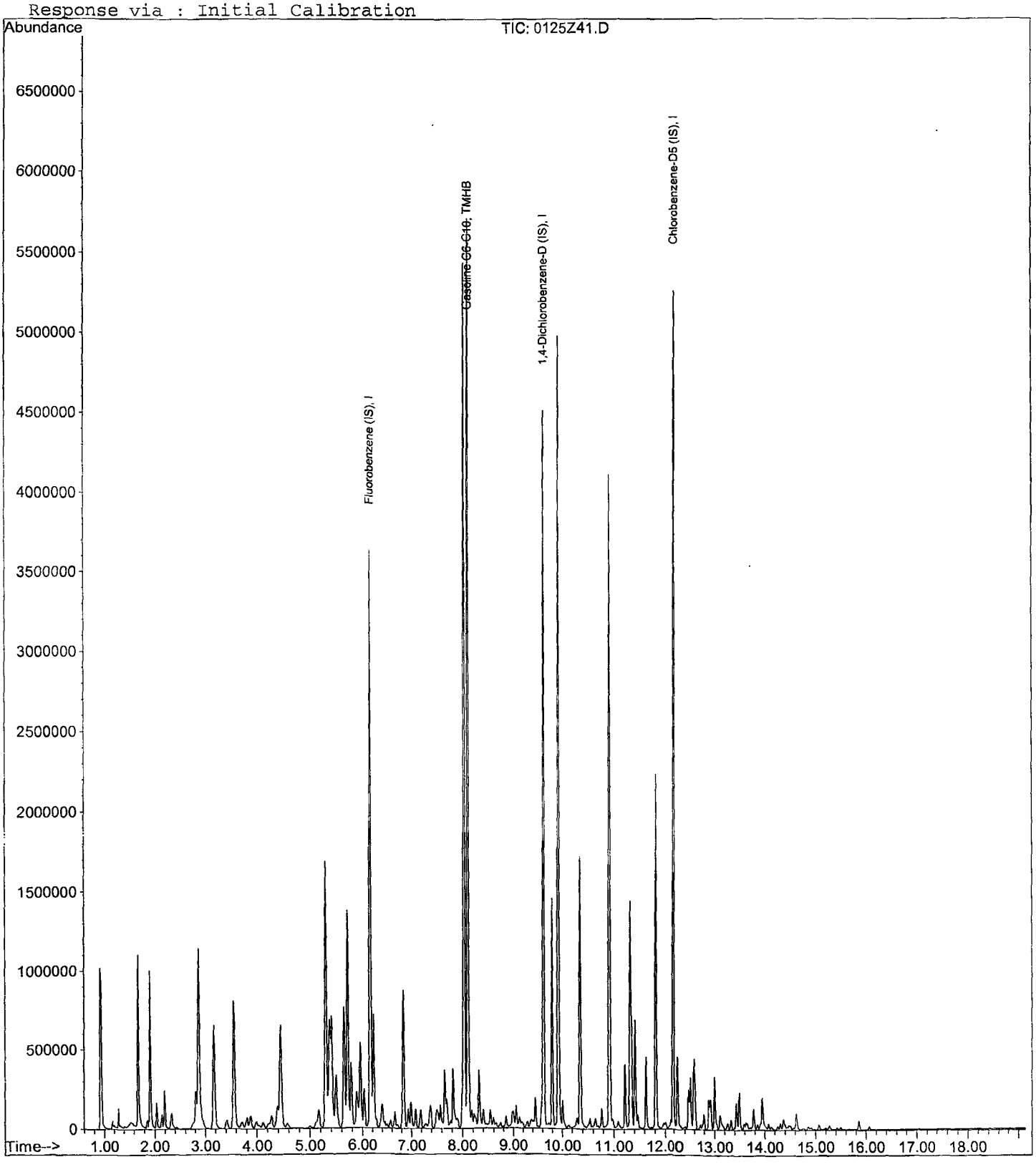
(#) = qualifier out of range (m) = manual integration
0125Z41.D ZGAS0125.M Tue Jan 26 11:50:13 2021 Page 1

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z41.D Vial: 36
Acq On : 25 Jan 21 22:38 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z42.D Vial: 37
Acq On : 25 Jan 21 23:01 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3619634	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5399873	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4370383	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	122414748m	928.27	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z42.D ZGAS0125.M Tue Jan 26 11:50:15 2021 Page 1

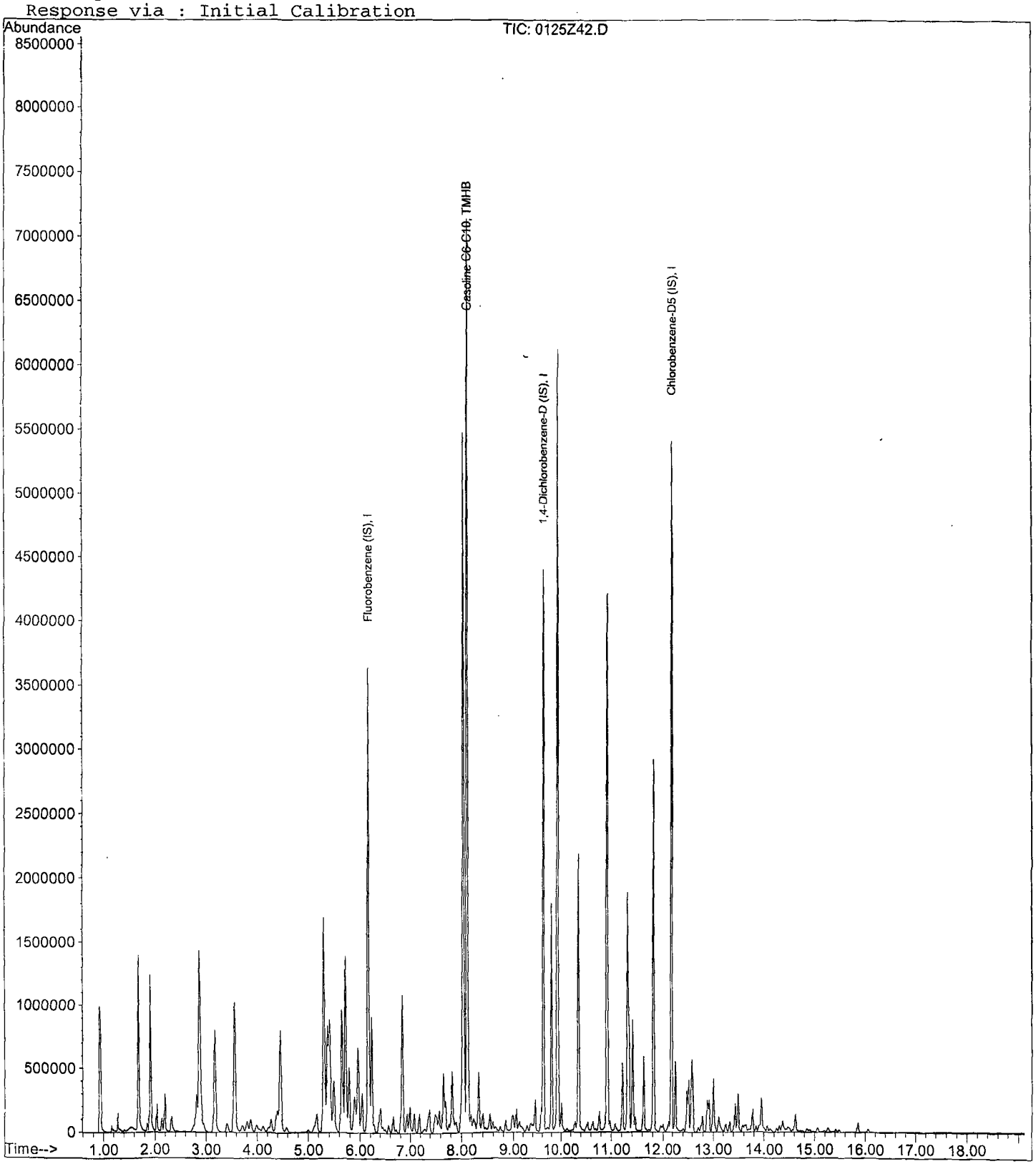
Quantitation Report

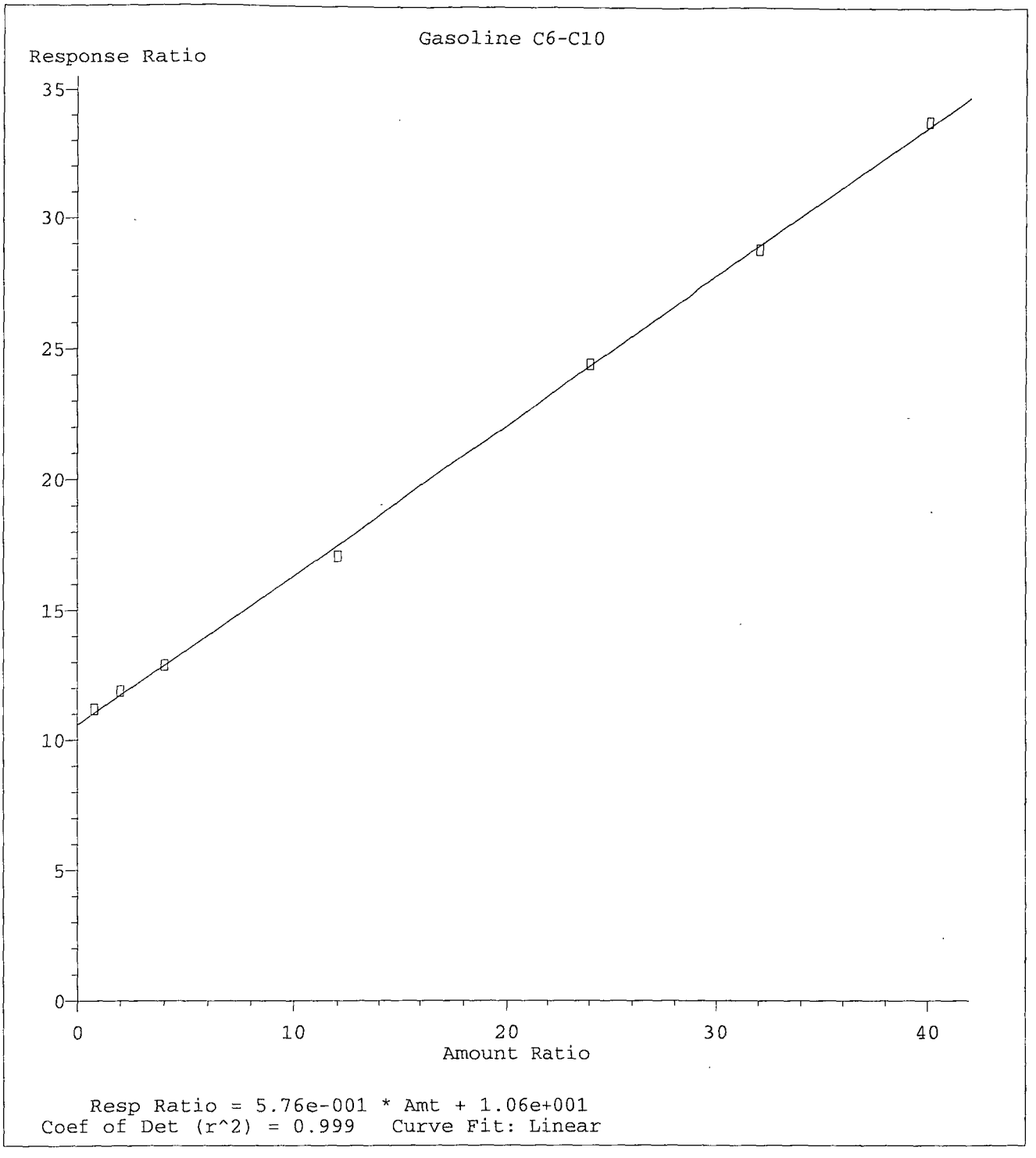
Data File : M:\ZEUS\DATA\210125\0125Z42.D
Acq On : 25 Jan 21 23:01
Sample : 1000ug/L GAS STD 1/25/21
Misc :

Vial: 37
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\ZGAS0125.M
Calibration Table Last Updated: Tue Jan 26 10:16:41 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z43.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.905	1.468	62	TMHBL	1.8
2							
3							
4							
5							
6							
7							
8							
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35							
36							
37							
38							
39							
40							
		Average			62.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z43.D Vial: 38
Acq On : 25 Jan 21 23:24 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3601969	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5185513	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4579228	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63434795m	305.33	ppb	100

(#) = qualifier out of range (m) = manual integration

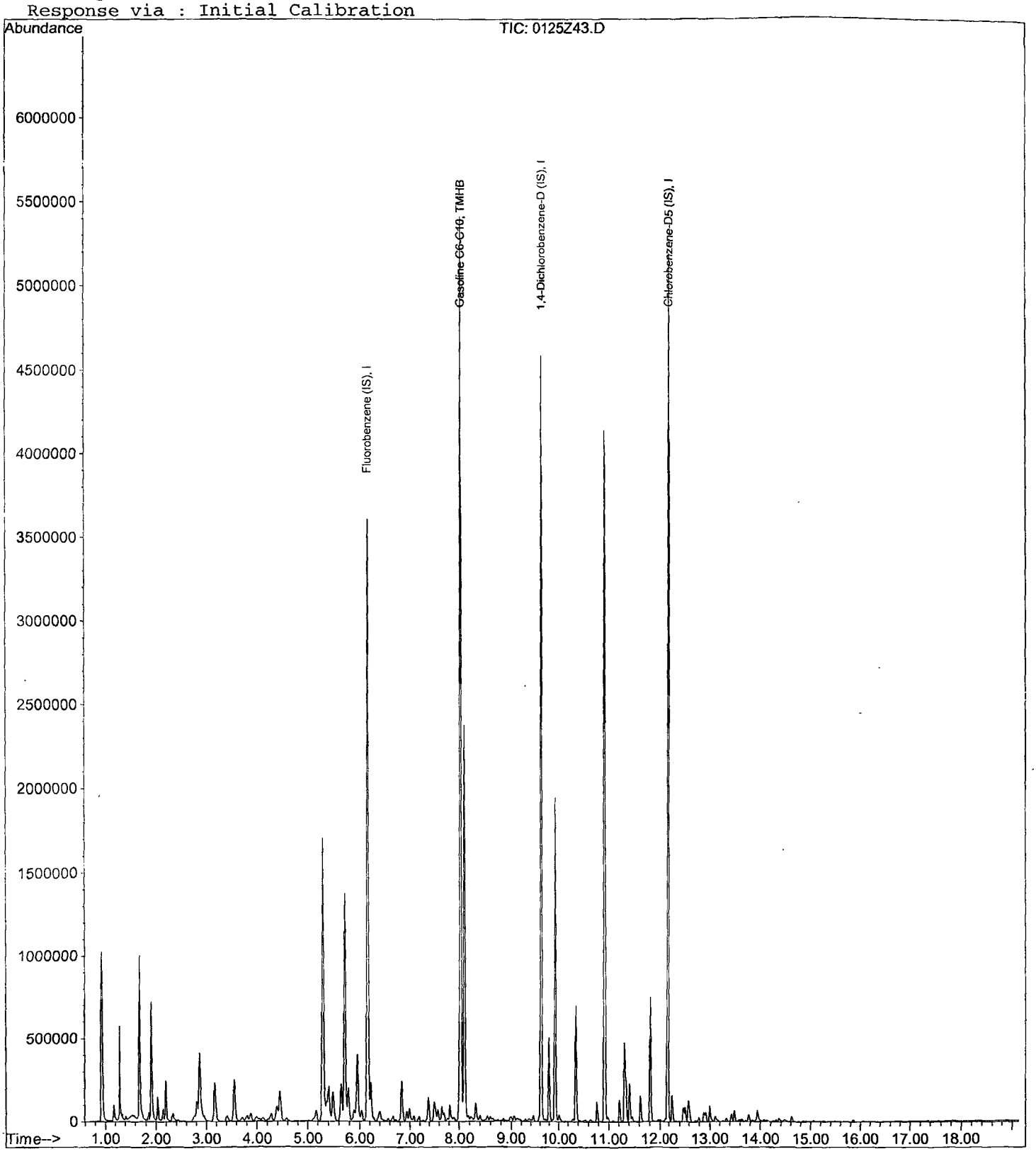
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z43.D
Acq On : 25 Jan 21 23:24
Sample : (SS) 300ug/L GAS STD 1/25/21
Misc :

Vial: 38
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z47.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.458	63	TMHBL	0.06
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z47.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2916	7.1	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2736	8.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.317	9.5	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4482	7.8	SL	1.9
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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		Average			8.1		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D
Acq On : 26 Jan 21 00:56
Sample : 210125A CCV/LCS 300ug/L
Misc :

Vial: 42
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3586677	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5267318	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4271466	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	62741336m	300.19	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D Vial: 42
Acq On : 26 Jan 21 00:56 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3764447	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2821076	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1054720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1097732	26.76	ppb	0.00
Spiked Amount 25.000			Recovery =	107.060%		
3) 1,2-DCA-D4(S)	5.71	65	1029931	26.99	ppb	0.00
Spiked Amount 25.000			Recovery =	107.964%		
5) Toluene-D8(S)	8.03	98	3716281	27.37	ppb	0.00
Spiked Amount 25.000			Recovery =	109.480%		
6) 4-Bromofluorobenzene(S)	10.91	95	1264305	24.52	ppb	0.00
Spiked Amount 25.000			Recovery =	98.064%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

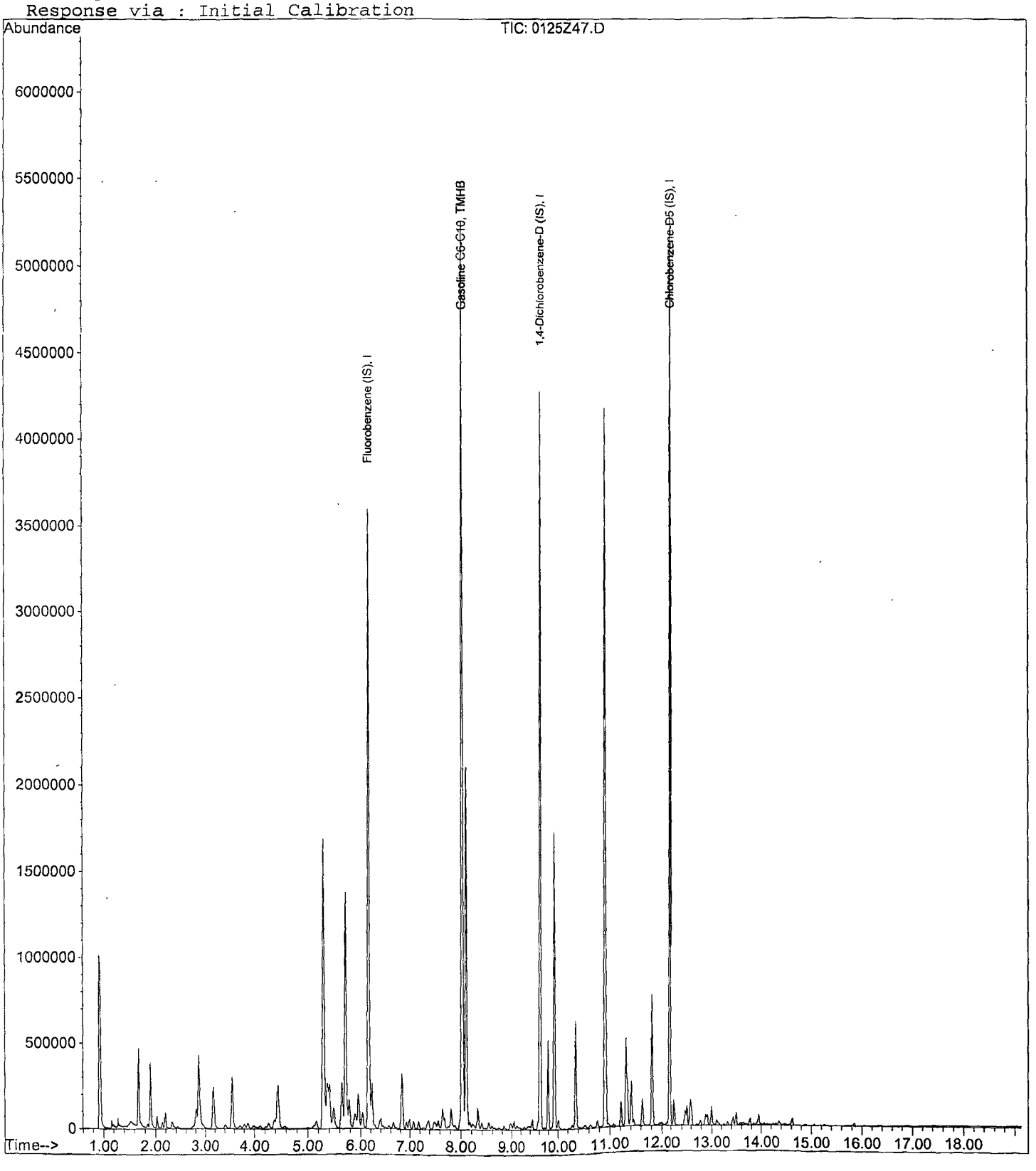
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z47.D
Acq On : 26 Jan 21 00:56
Sample : 210125A CCV/LCS 300ug/L
Misc :

Vial: 42
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z71.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.416	64	TMHBL	7.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z71.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2900	6.5	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2763	9.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.308	8.7	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4395	5.8	SL	3.7
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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		Average			7.5		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z71.D
Acq On : 26 Jan 21 10:08
Sample : Ending CCV 300ug/L 1/25/21
Misc :

Vial: 66
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:49 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3269671	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4787693	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3988304	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	55570023m	278.61	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z71.D ZGAS0125.M Tue Jan 26 11:50:28 2021

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z71.D Vial: 66
Acq On : 26 Jan 21 10:08 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3428865	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2568953	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	960128	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	994338	26.62	ppb	0.00
Spiked Amount 25.000			Recovery =	106.468%		
3) 1,2-DCA-D4(S)	5.71	65	947534	27.26	ppb	0.00
Spiked Amount 25.000			Recovery =	109.048%		
5) Toluene-D8(S)	8.03	98	3360201	27.18	ppb	0.00
Spiked Amount 25.000			Recovery =	108.708%		
6) 4-Bromofluorobenzene(S)	10.92	95	1129043	24.08	ppb	0.00
Spiked Amount 25.000			Recovery =	96.336%		

Target Compounds Qvalue

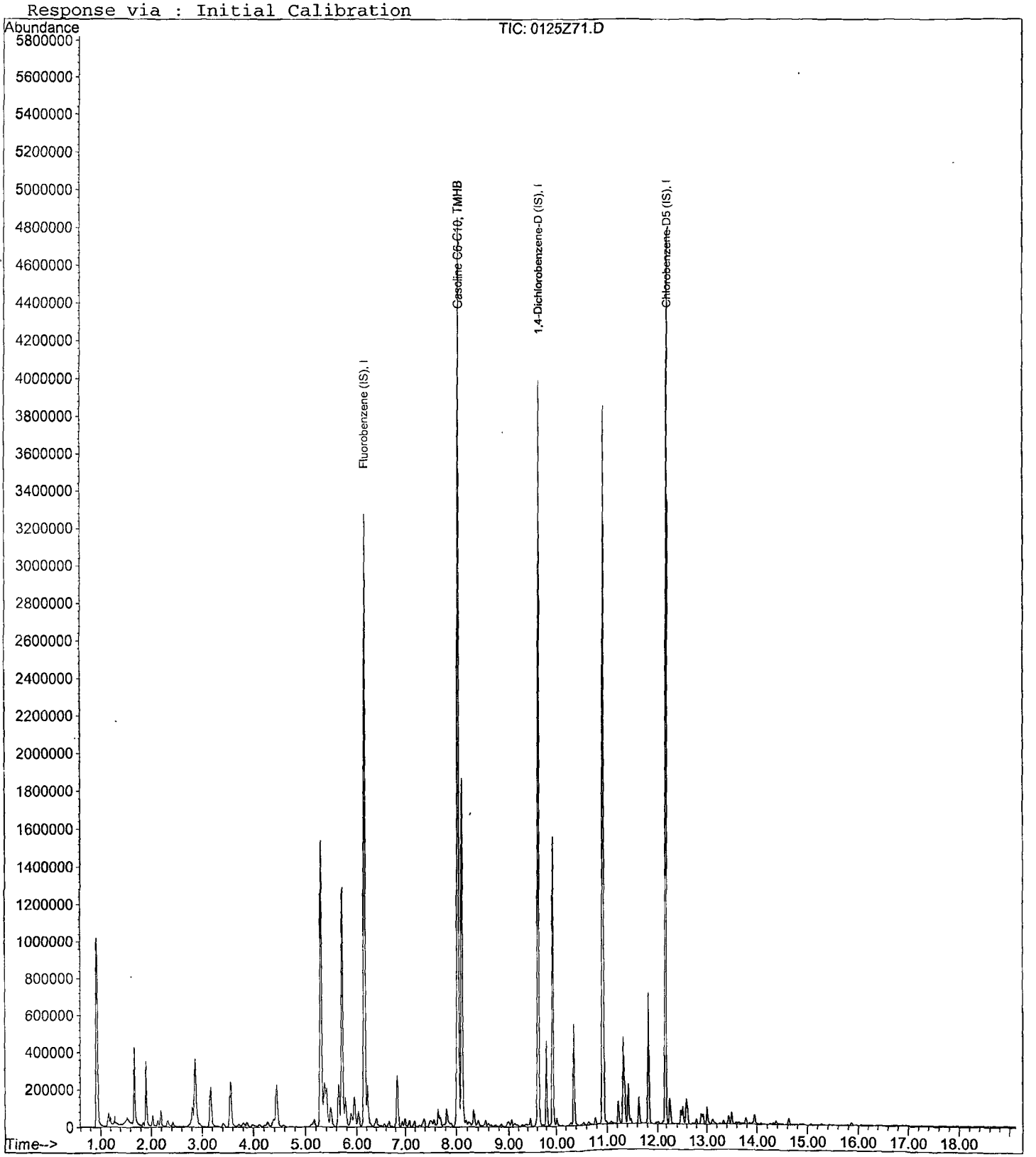
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z71.D Vial: 66
Acq On : 26 Jan 21 10:08 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:49 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z05.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.427	63	TMHBL	5.2
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/26/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2962	8.7	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2786	10.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.326	10	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4427	6.5	SL	3.0
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
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40							
		Average			8.8		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z05.D Vial: 5
Acq On : 26 Jan 21 15:22 Operator: LP,DG,CH
Sample : 210126A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:12 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3201912	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4502063	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3841874	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	54842003m	284.3509	ppb	100

(#) = qualifier out of range (m) = manual integration
0126Z05.D ZGAS0125.M Tue Feb 02 09:12:49 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z05.D Vial: 5
Acq On : 26 Jan 21 15:22 Operator: LP,DG,CH
Sample : 210126A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3357944	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2526108	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	912704	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.29	111	994631	27.1869 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.748%	
3) 1,2-DCA-D4(S)	5.71	65	935611	27.4876 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.952%	
5) Toluene-D8(S)	8.03	98	3349690	27.5511 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.204%	
6) 4-Bromofluorobenzene(S)	10.91	95	1118341	24.2448 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.980%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

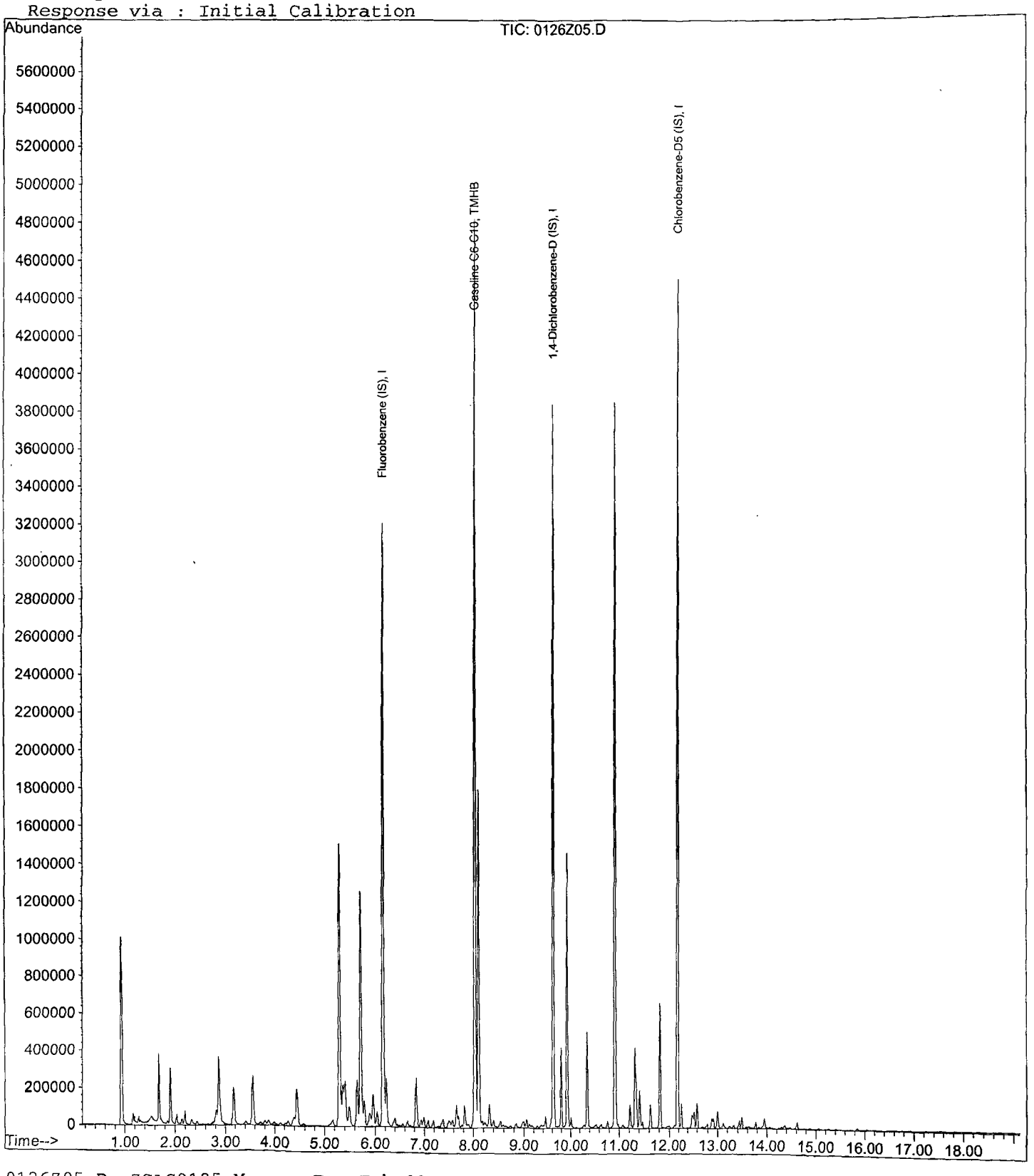
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z05.D
Acq On : 26 Jan 21 15:22
Sample : 210126A CCV 300ug/L
Misc :

Vial: 5
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 9:12 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z30.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.396	64	TMHBL	11
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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39							
40							
		Average			64.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0126Z30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.2925	7.4	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2759	8.9	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.318	9.6	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4425	6.5	SL	3.1
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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		Average			8.1		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z30.D Vial: 30
Acq On : 27 Jan 21 00:57 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/26/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:11 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3238233	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4516671	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3847737	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	54242077m	267.9706	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z30.D Vial: 30
Acq On : 27 Jan 21 00:57 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/26/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:13 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3348481	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2488414	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	896704	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	979307	26.8437 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.376%	
3) 1,2-DCA-D4(S)	5.71	65	923991	27.2229 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.892%	
5) Toluene-D8(S)	8.03	98	3280831	27.3935 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.576%	
6) 4-Bromofluorobenzene(S)	10.91	95	1101088	24.2334 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.932%	

Target Compounds Qvalue

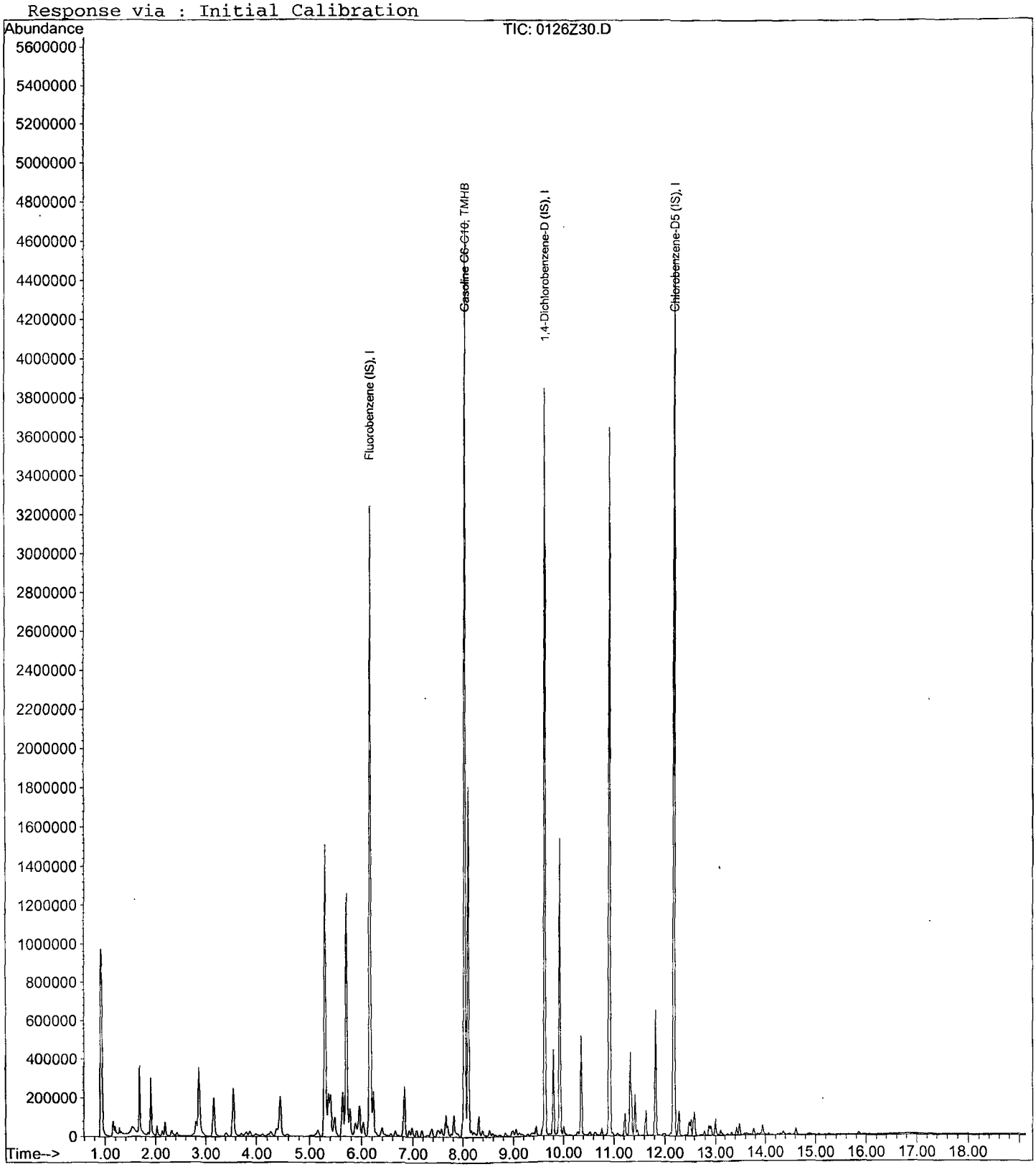
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z30.D Vial: 30
Acq On : 27 Jan 21 00:57 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/26/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:11 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z61.D Vial: 56
Acq On : 26 Jan 21 06:18 Operator: LP,DG,CH
Sample : BA25689W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3182364	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4548830	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3888670	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z61.D Vial: 56
Acq On : 26 Jan 21 06:18 Operator: LP,DG,CH
Sample : BA25689W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3271492	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2494234	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	928256	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1013192	28.4260 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.704%	
3) 1,2-DCA-D4(S)	5.71	65	954401	28.7806 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.124%	
5) Toluene-D8(S)	8.03	98	3252813	27.0962 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.384%	
6) 4-Bromofluorobenzene(S)	10.91	95	1117973	24.5193 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.076%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

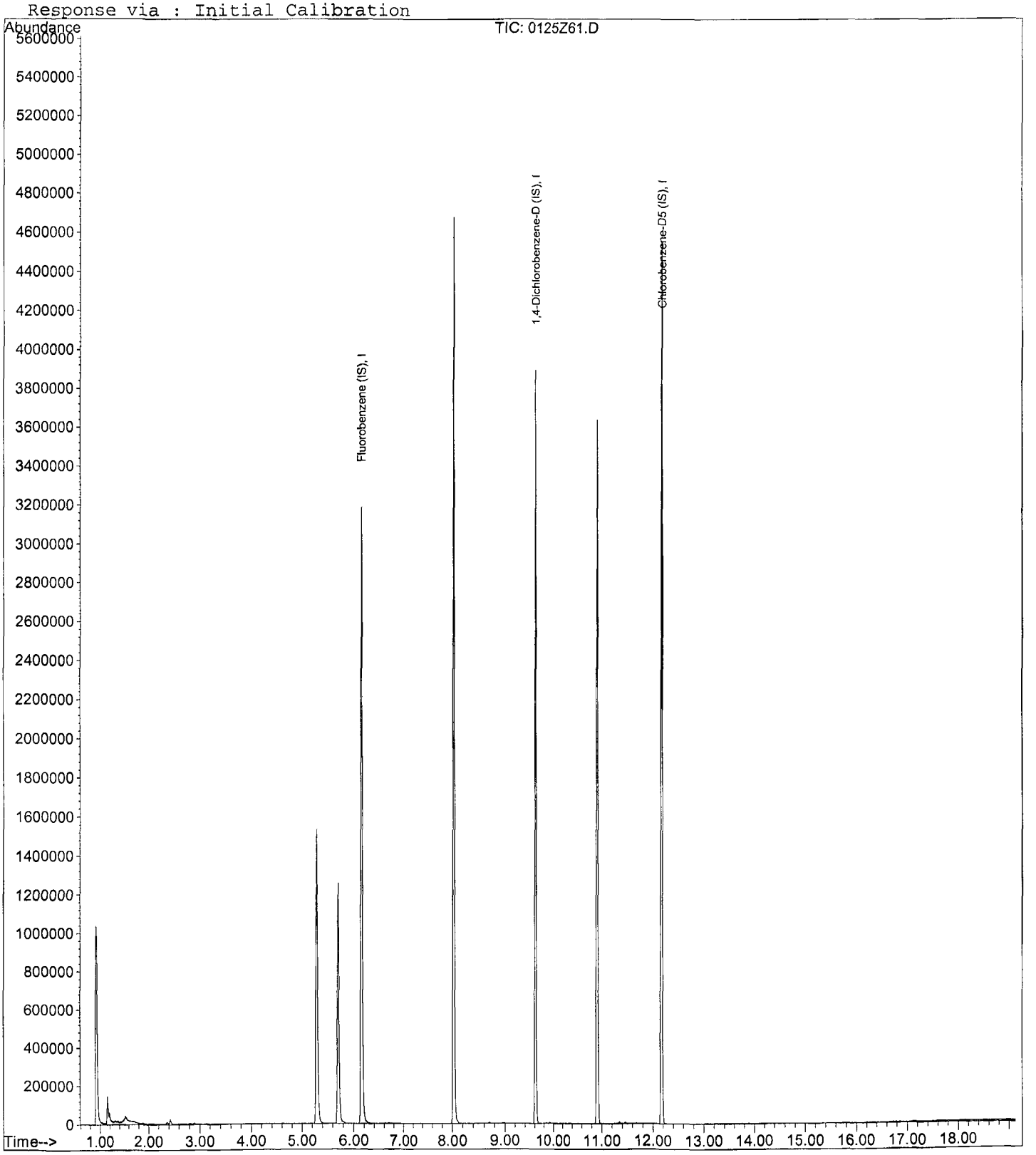
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z61.D
Acq On : 26 Jan 21 06:18
Sample : BA25689W01
Misc :

Vial: 56
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z62.D Vial: 57
Acq On : 26 Jan 21 06:41 Operator: LP,DG,CH
Sample : BA25690W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3233858	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5023571	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3947682	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z62.D Vial: 57
Acq On : 26 Jan 21 06:41 Operator: LP,DG,CH
Sample : BA25690W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3406938	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2618709	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1007744	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.29	111	1047162	28.2111 ppb	0.00
Spiked Amount 25.000			Recovery = 112.844%		
3) 1,2-DCA-D4(S)	5.71	65	994614	28.8008 ppb	0.00
Spiked Amount 25.000			Recovery = 115.204%		
5) Toluene-D8(S)	8.03	98	3382920	26.8405 ppb	0.00
Spiked Amount 25.000			Recovery = 107.364%		
6) 4-Bromofluorobenzene(S)	10.91	95	1158605	24.2308 ppb	0.00
Spiked Amount 25.000			Recovery = 96.924%		

Target Compounds Qvalue

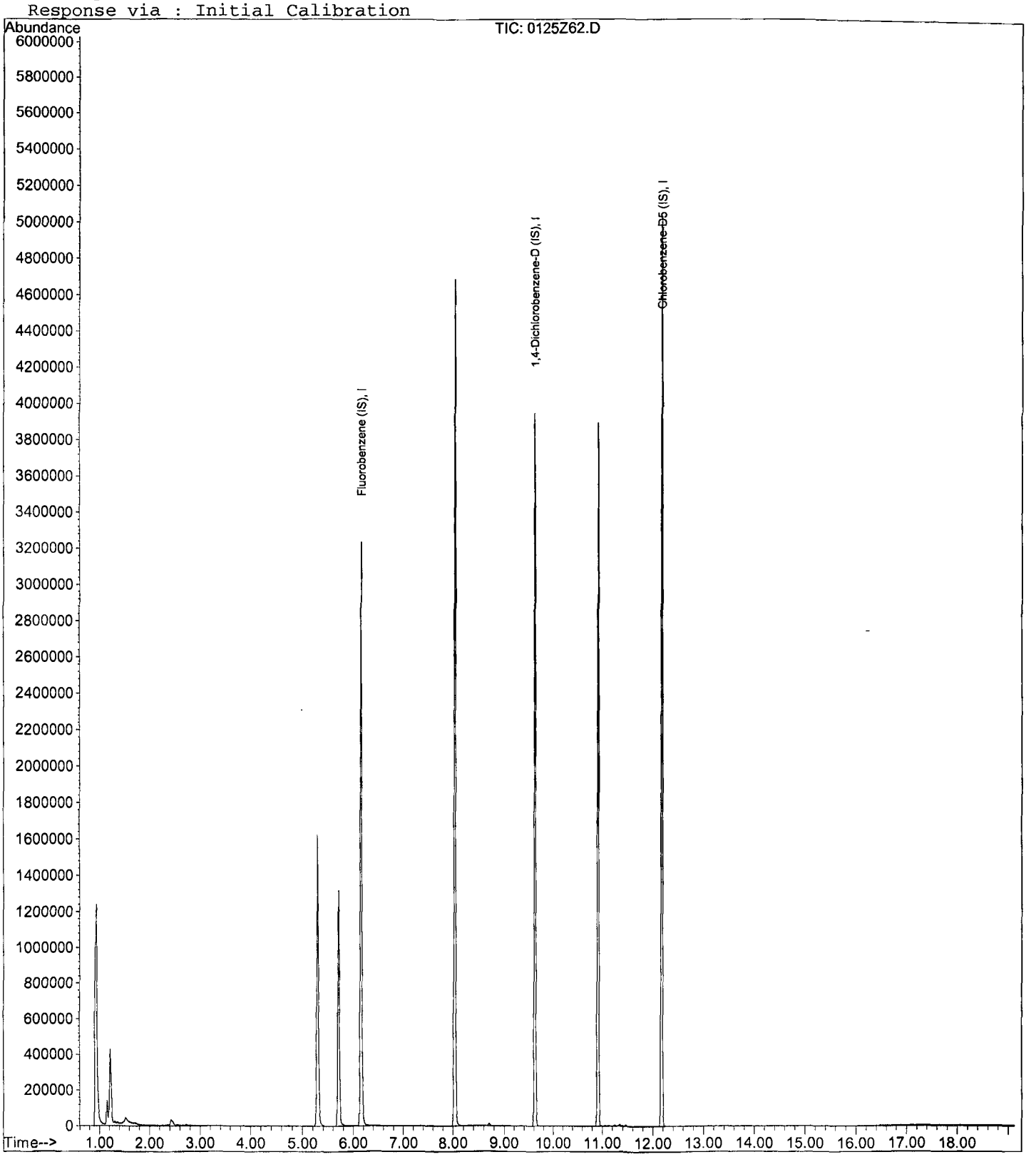
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z62.D Vial: 57
Acq On : 26 Jan 21 06:41 Operator: LP,DG,CH
Sample : BA25690W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z69.D Vial: 64
Acq On : 26 Jan 21 09:22 Operator: LP,DG,CH
Sample : BA25692W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3111806	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4654250	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3905350	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z69.D Vial: 64
Acq On : 26 Jan 21 09:22 Operator: LP,DG,CH
Sample : BA25692W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3227174	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2472962	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	934336	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	986273	28.0508 ppb	0.00
Spiked Amount 25.000			Recovery = 112.204%		
3) 1,2-DCA-D4(S)	5.71	65	928044	28.3701 ppb	0.00
Spiked Amount 25.000			Recovery = 113.480%		
5) Toluene-D8(S)	8.03	98	3217223	27.0303 ppb	0.00
Spiked Amount 25.000			Recovery = 108.120%		
6) 4-Bromofluorobenzene(S)	10.91	95	1084004	24.0270 ppb	0.00
Spiked Amount 25.000			Recovery = 96.108%		

Target Compounds Qvalue

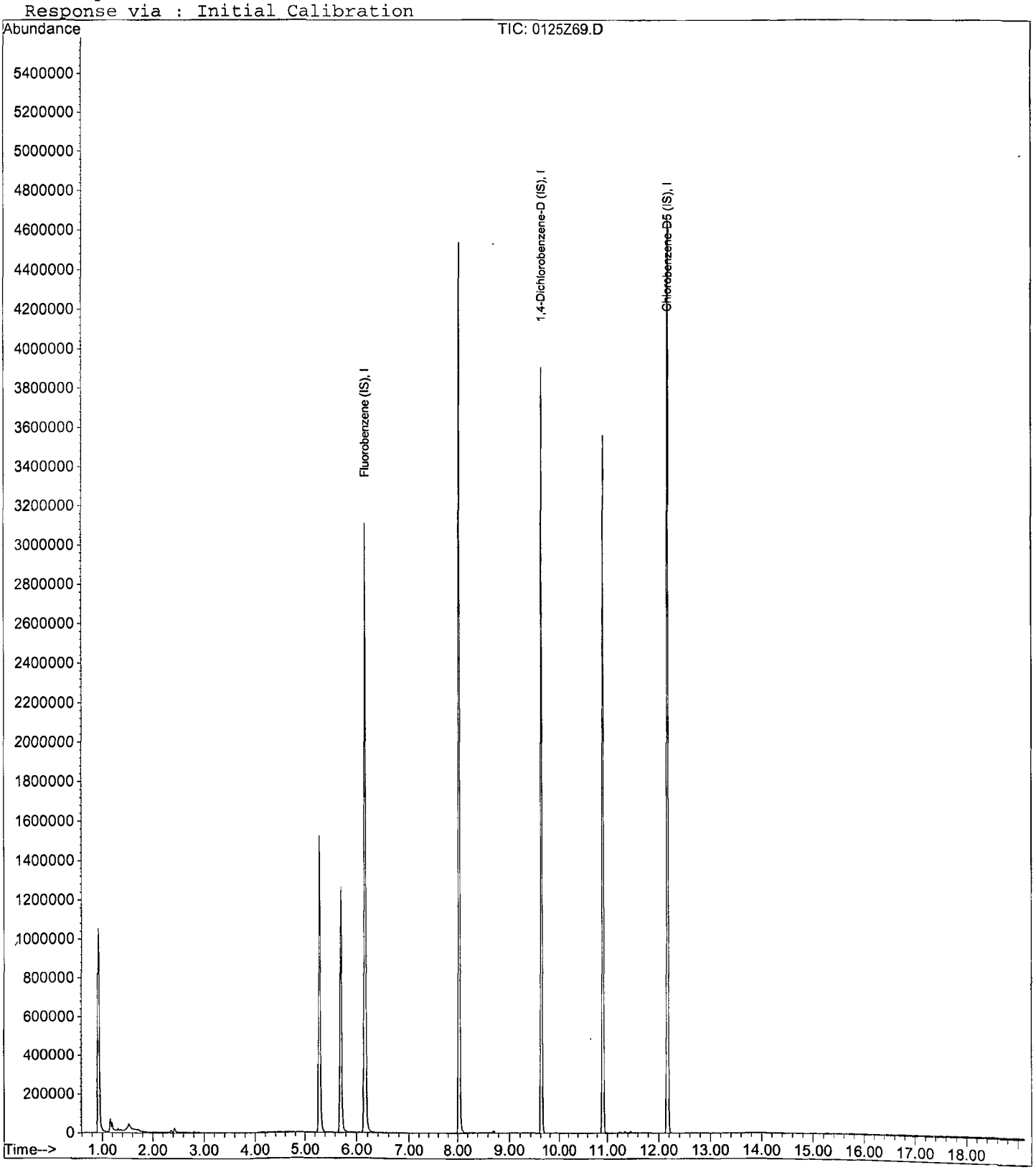
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z69.D Vial: 64
Acq On : 26 Jan 21 09:22 Operator: LP,DG,CH
Sample : BA25692W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z14.D Vial: 14
Acq On : 26 Jan 21 18:49 Operator: LP,DG,CH
Sample : BA25693W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:49 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	2976131	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4275819	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3621808	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z14.D Vial: 14
Acq On : 26 Jan 21 18:49 Operator: LP,DG,CH
Sample : BA25693W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3071804	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2350187	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	867136	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	930953	27.8167 ppb	0.00
Spiked Amount 25.000			Recovery = 111.268%		
3) 1,2-DCA-D4(S)	5.71	65	889121	28.5550 ppb	0.00
Spiked Amount 25.000			Recovery = 114.220%		
5) Toluene-D8(S)	8.03	98	3083614	27.2611 ppb	0.00
Spiked Amount 25.000			Recovery = 109.044%		
6) 4-Bromofluorobenzene(S)	10.92	95	1033596	24.0993 ppb	0.00
Spiked Amount 25.000			Recovery = 96.396%		

Target Compounds Qvalue

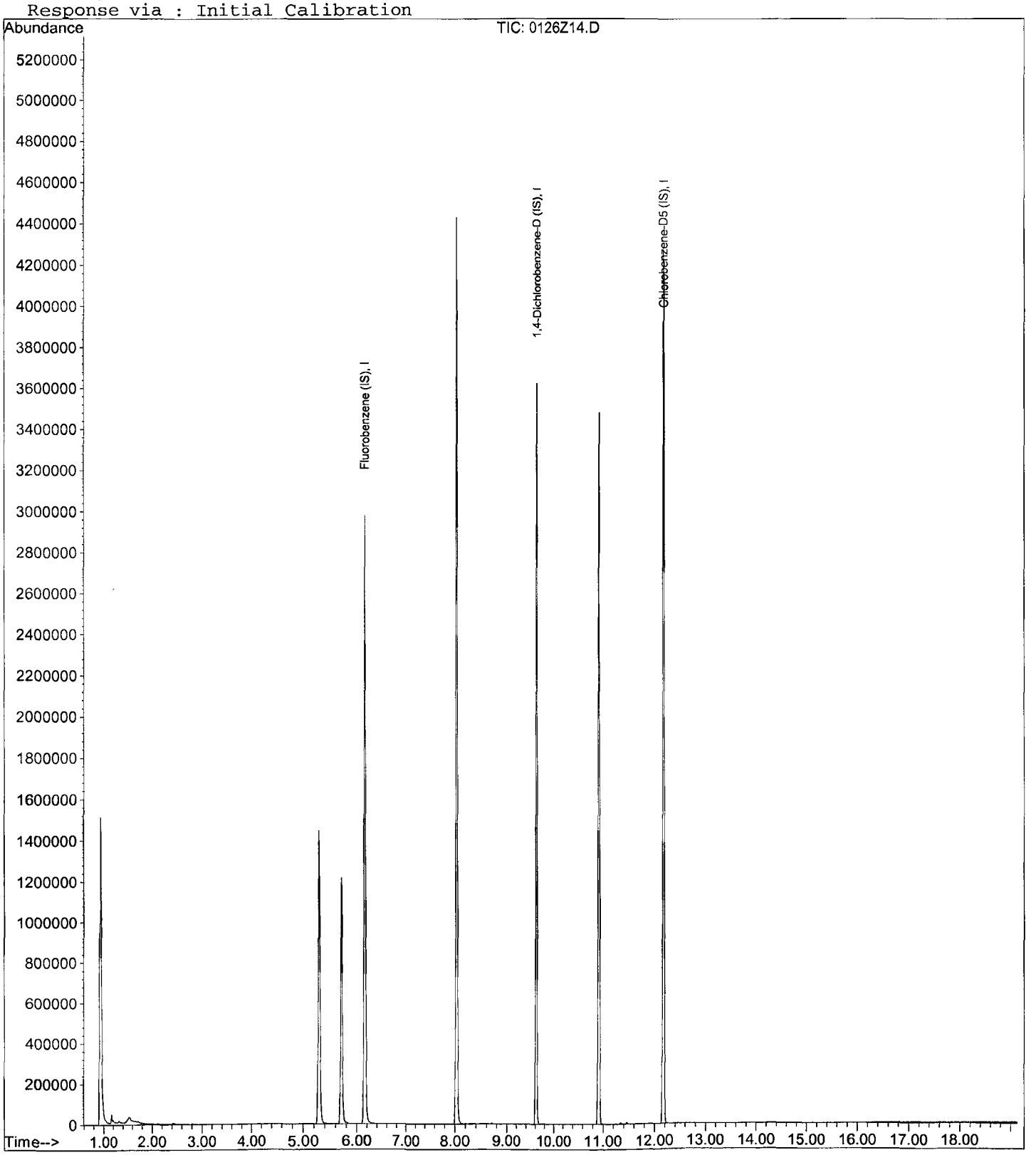
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z14.D Vial: 14
Acq On : 26 Jan 21 18:49 Operator: LP,DG,CH
Sample : BA25693W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:49 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z09.D Vial: 9
Acq On : 26 Jan 21 16:54 Operator: LP,DG,CH
Sample : BA25695W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:49 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3290171	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4697744	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3967412	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z09.D Vial: 9
Acq On : 26 Jan 21 16:54 Operator: LP,DG,CH
Sample : BA25695W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3362292	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2560563	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	938112	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1021914	27.8965 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.584%	
3) 1,2-DCA-D4(S)	5.71	65	963626	28.2740 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.096%	
5) Toluene-D8(S)	8.03	98	3340105	27.1026 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.412%	
6) 4-Bromofluorobenzene(S)	10.91	95	1134955	24.2712 ppb	0.00
Spiked Amount 25.000			Recovery	= 97.084%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

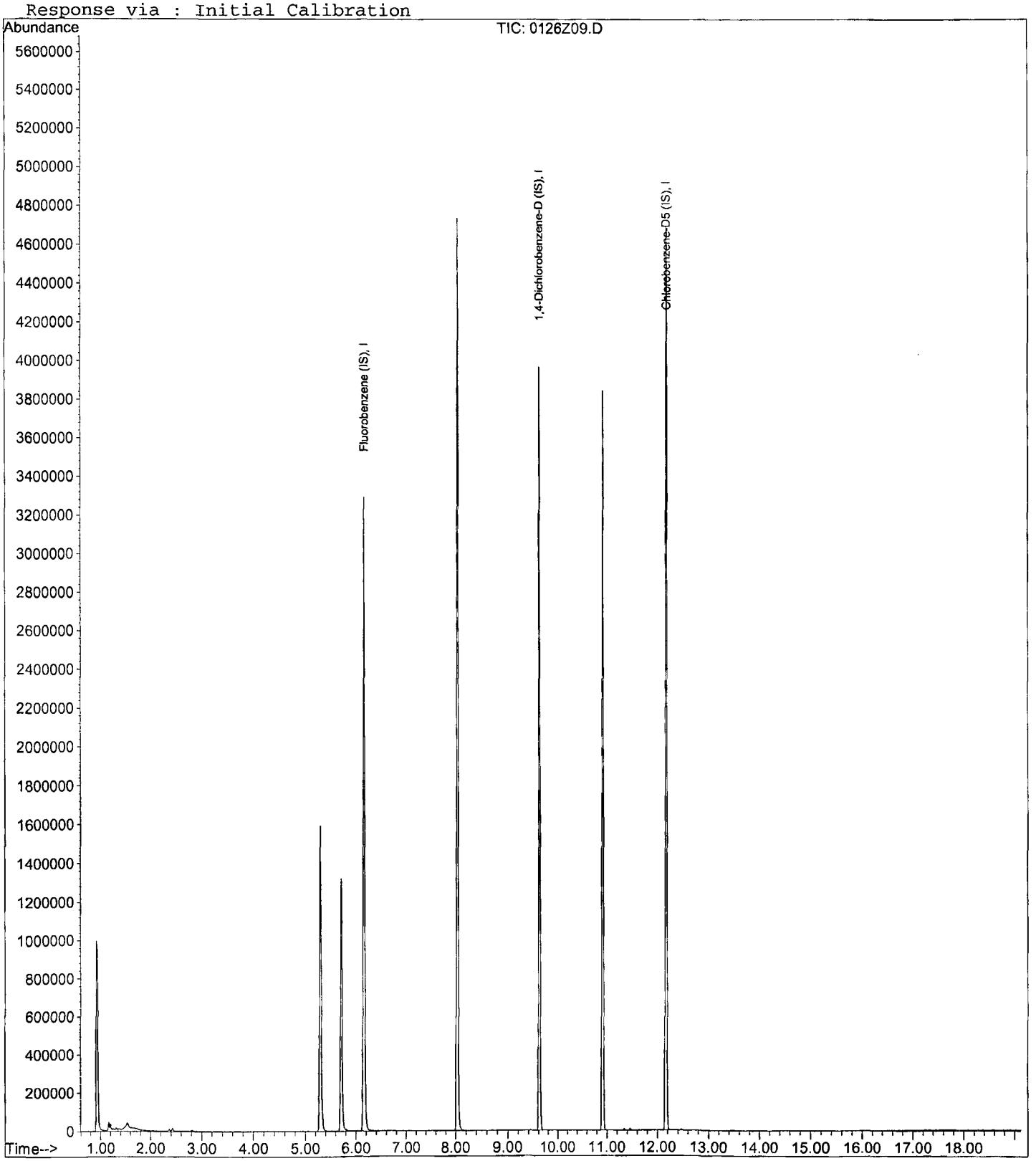
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z09.D
Acq On : 26 Jan 21 16:54
Sample : BA25695W01
Misc :

Vial: 9
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:49 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z15.D Vial: 15
Acq On : 26 Jan 21 19:12 Operator: LP,DG,CH
Sample : BA25696W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:50 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3026697	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4414425	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3681746	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0126Z15.D ZGAS0125.M Tue Feb 02 09:12:58 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z15.D Vial: 15
Acq On : 26 Jan 21 19:12 Operator: LP,DG,CH
Sample : BA25696W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3113206	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2375671	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	877824	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	954125	28.1299 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.520%	
3) 1,2-DCA-D4(S)	5.71	65	918116	29.0940 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.376%	
5) Toluene-D8(S)	8.03	98	3151453	27.5620 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.248%	
6) 4-Bromofluorobenzene(S)	10.91	95	1067692	24.5793 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.316%	

Target Compounds Qvalue

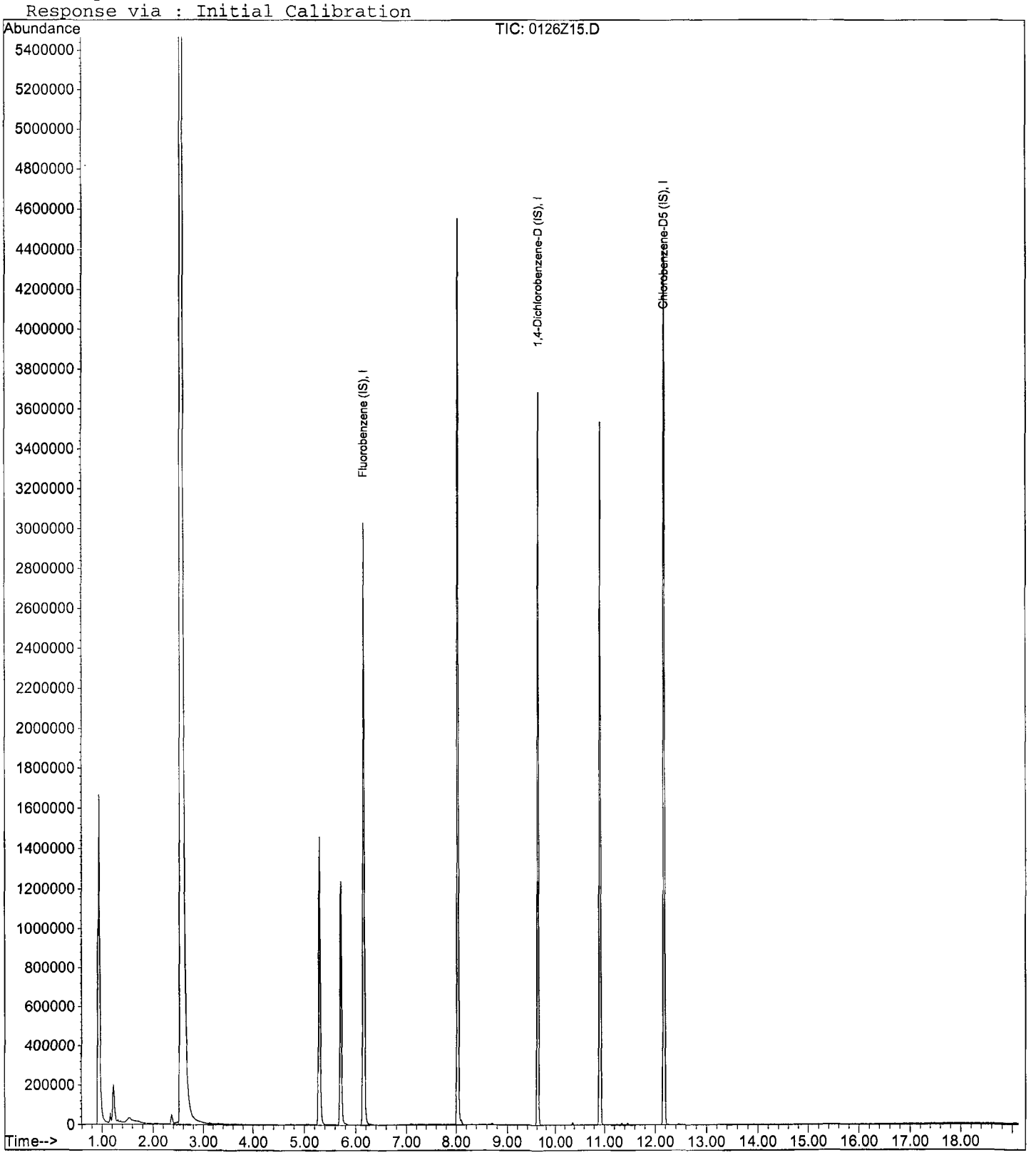
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z15.D Vial: 15
Acq On : 26 Jan 21 19:12 Operator: LP,DG,CH
Sample : BA25696W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:50 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z63.D Vial: 58
Acq On : 26 Jan 21 07:04 Operator: LP,DG,CH
Sample : BA25698W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3245086	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4876634	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3975484	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z63.D Vial: 58
Acq On : 26 Jan 21 07:04 Operator: LP,DG,CH
Sample : BA25698W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3370661	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2595815	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	975552	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1019878	27.7718 ppb	0.00
Spiked Amount 25.000			Recovery = 111.088%		
3) 1,2-DCA-D4(S)	5.71	65	962952	28.1841 ppb	0.00
Spiked Amount 25.000			Recovery = 112.736%		
5) Toluene-D8(S)	8.03	98	3368616	26.9628 ppb	0.00
Spiked Amount 25.000			Recovery = 107.852%		
6) 4-Bromofluorobenzene(S)	10.91	95	1140772	24.0829 ppb	0.00
Spiked Amount 25.000			Recovery = 96.332%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125Z63.D Z0125SUR.M Tue Feb 02 09:28:30 2021 Page 1

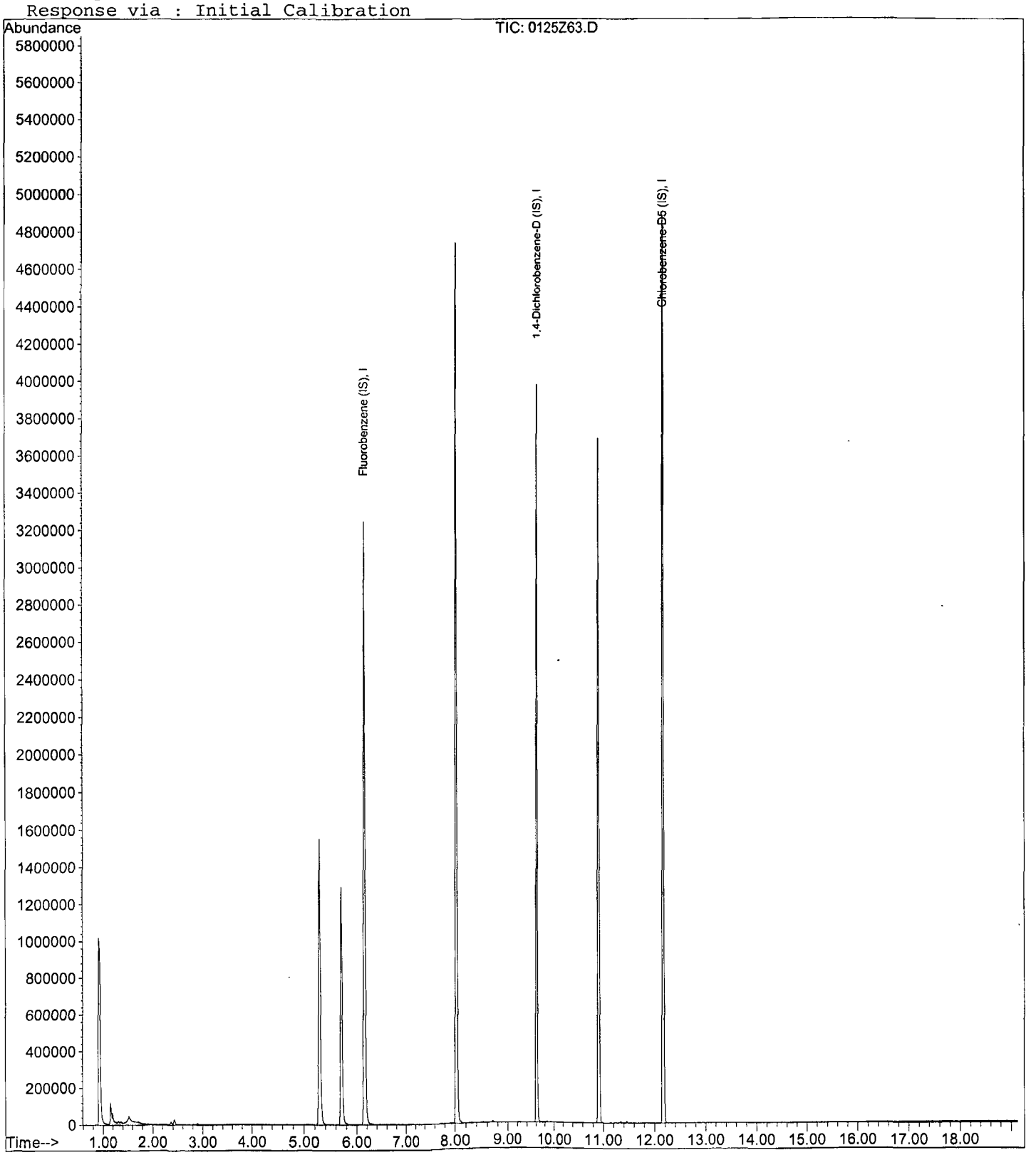
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z63.D
Acq On : 26 Jan 21 07:04
Sample : BA25698W01
Misc :

Vial: 58
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z64.D Vial: 59
Acq On : 26 Jan 21 07:27 Operator: LP,DG,CH
Sample : BA25699W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3224451	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4654873	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3900020	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125Z64.D ZGAS0125.M Tue Feb 02 09:29:05 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z64.D Vial: 59
Acq On : 26 Jan 21 07:27 Operator: LP,DG,CH
Sample : BA25699W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3371317	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2507099	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	950720	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1009485	27.4834 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.932%	
3) 1,2-DCA-D4(S)	5.71	65	951568	27.8455 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.380%	
5) Toluene-D8(S)	8.03	98	3321152	27.5235 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.096%	
6) 4-Bromofluorobenzene(S)	10.91	95	1104645	24.1398 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.560%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

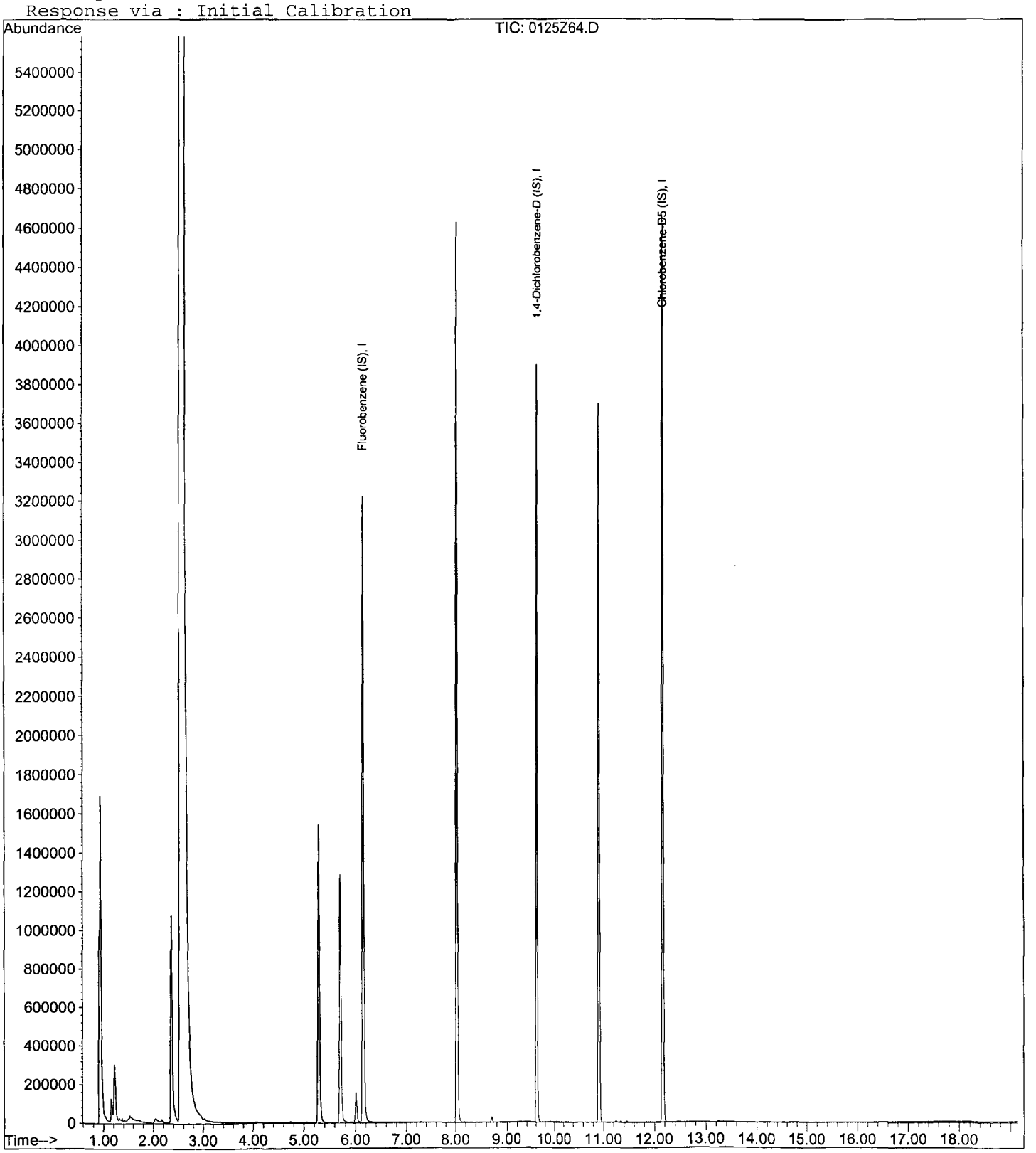
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z64.D
Acq On : 26 Jan 21 07:27
Sample : BA25699W01
Misc :

Vial: 59
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:35 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z65.D Vial: 60
Acq On : 26 Jan 21 07:50 Operator: LP,DG,CH
Sample : BA25701W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:36 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3268696	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4666572	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3948656	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125Z65.D ZGAS0125.M Tue Feb 02 09:29:07 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z65.D Vial: 60
Acq On : 26 Jan 21 07:50 Operator: LP,DG,CH
Sample : BA25701W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3338226	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2552315	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	934080	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1015906	27.9324 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.728%	
3) 1,2-DCA-D4(S)	5.71	65	951213	28.1110 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.444%	
5) Toluene-D8(S)	8.03	98	3344966	27.2298 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.920%	
6) 4-Bromofluorobenzene(S)	10.91	95	1118922	24.0296 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.120%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

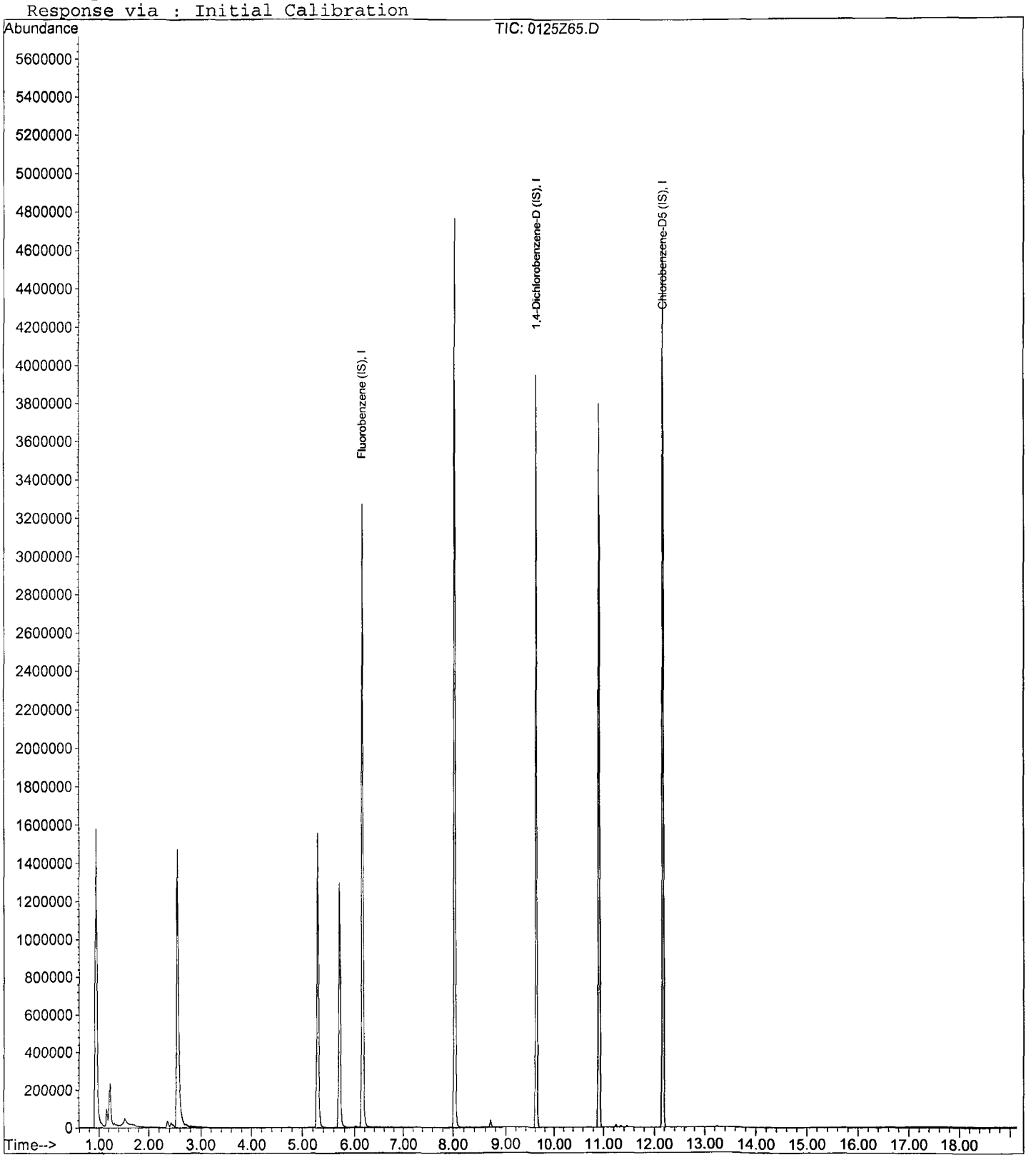
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z65.D
Acq On : 26 Jan 21 07:50
Sample : BA25701W01
Misc :

Vial: 60
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:36 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z66.D Vial: 61
Acq On : 26 Jan 21 08:13 Operator: LP,DG,CH
Sample : BA25703W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:36 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3027707	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4380687	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3758815	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z66.D Vial: 61
Acq On : 26 Jan 21 08:13 Operator: LP,DG,CH
Sample : BA25703W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3156764	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2437213	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	896256	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	957520	27.8405 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.360%	
3) 1,2-DCA-D4(S)	5.71	65	906123	28.3178 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.272%	
5) Toluene-D8(S)	8.03	98	3170343	27.0271 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.108%	
6) 4-Bromofluorobenzene(S)	10.91	95	1073714	24.1370 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.548%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

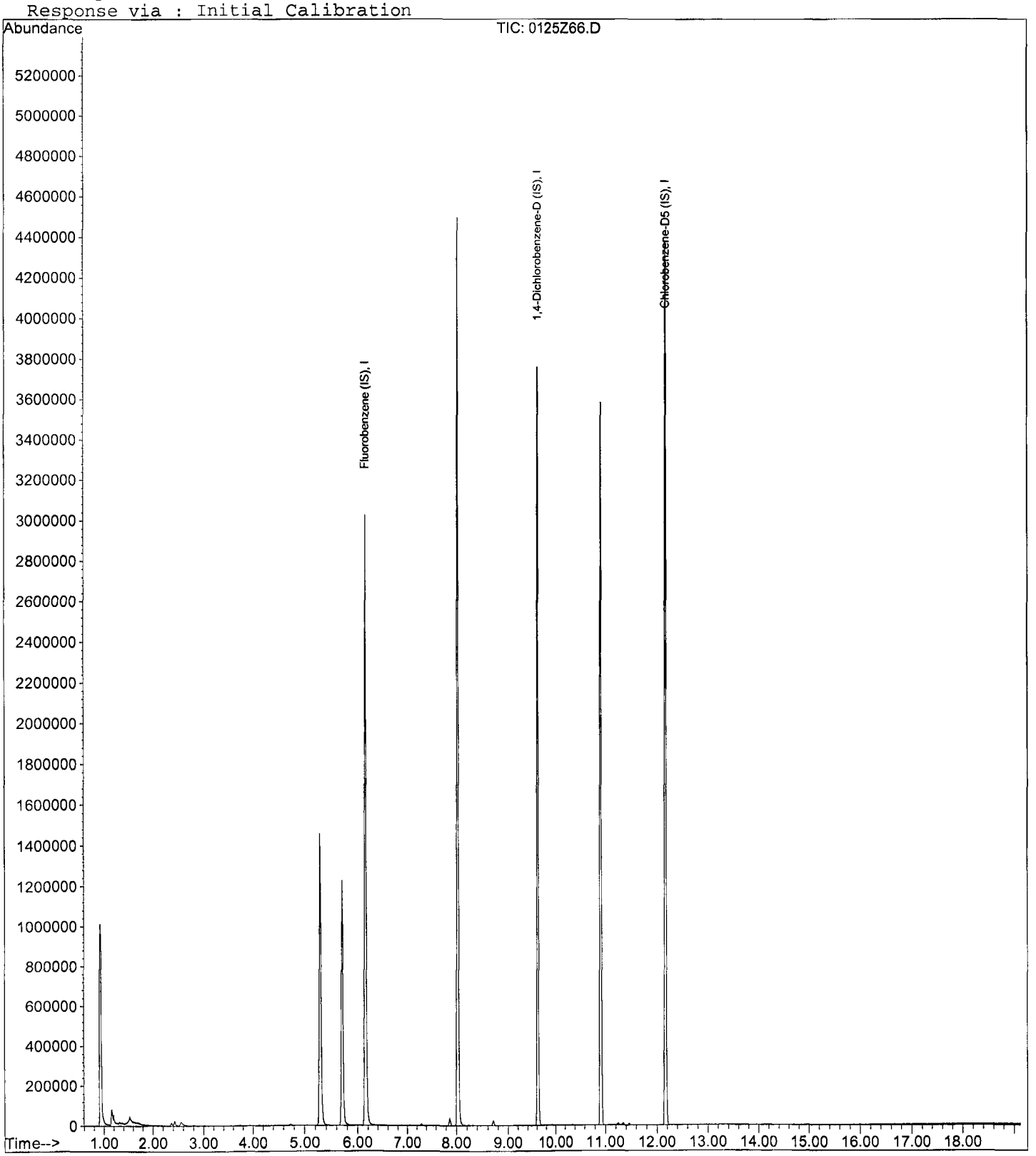
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z66.D
Acq On : 26 Jan 21 08:13
Sample : BA25703W01
Misc :

Vial: 61
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:36 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z67.D
Acq On : 26 Jan 21 08:36
Sample : BA25704W01
Misc :

Vial: 62
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3177478	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4548005	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3890890	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0125Z67.D ZGAS0125.M Tue Feb 02 09:29:10 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z67.D Vial: 62
Acq On : 26 Jan 21 08:36 Operator: LP,DG,CH
Sample : BA25704W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3294051	25.0000	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2521063	25.0000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	912128	25.0000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1002688	27.9387	ppb	0.00
Spiked Amount 25.000			Recovery = 111.756%			
3) 1,2-DCA-D4(S)	5.71	65	936983	28.0618	ppb	0.00
Spiked Amount 25.000			Recovery = 112.248%			
5) Toluene-D8(S)	8.03	98	3281083	27.0408	ppb	0.00
Spiked Amount 25.000			Recovery = 108.164%			
6) 4-Bromofluorobenzene(S)	10.91	95	1110371	24.1314	ppb	0.00
Spiked Amount 25.000			Recovery = 96.524%			

Target Compounds Qvalue

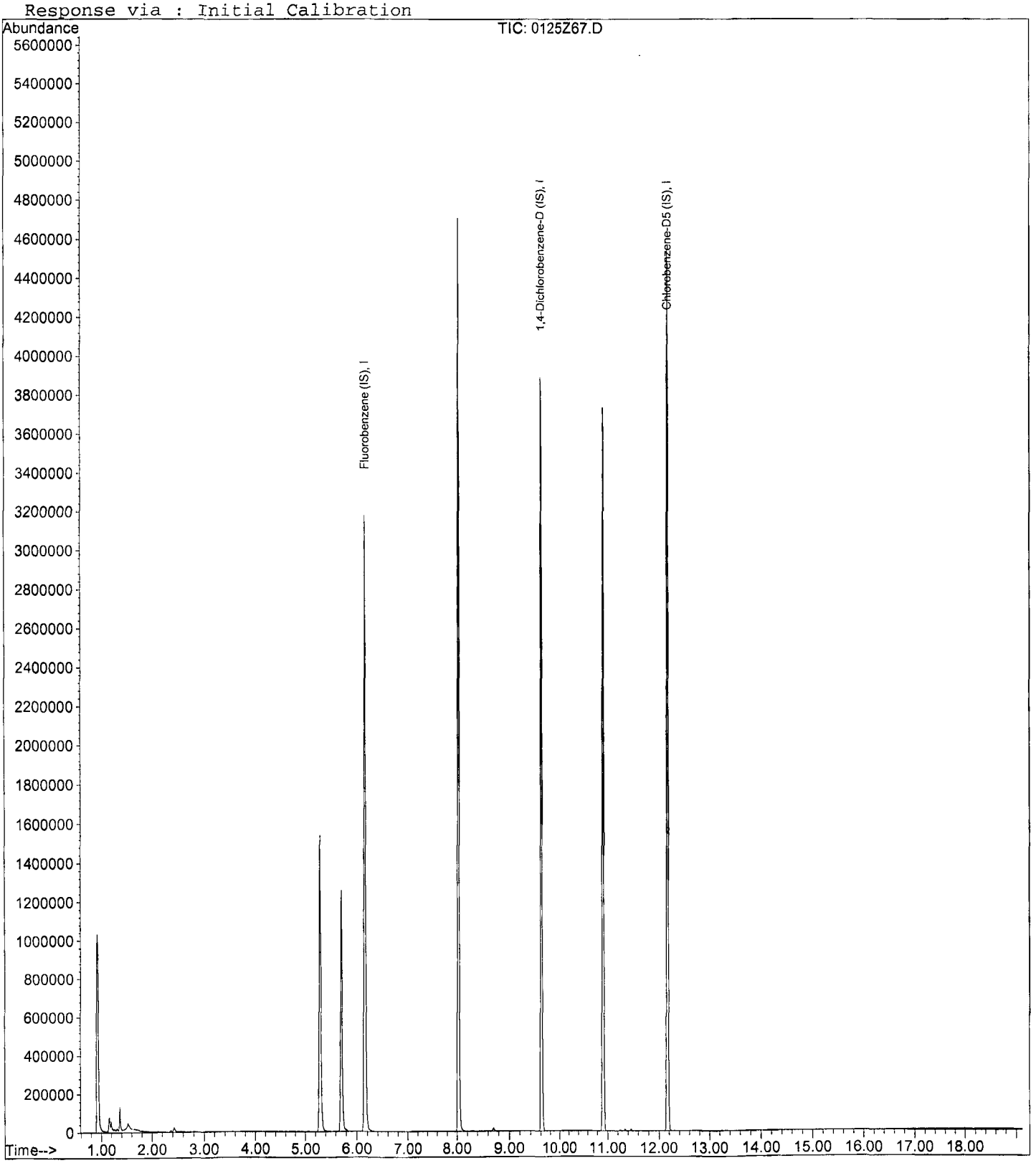
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z67.D Vial: 62
Acq On : 26 Jan 21 08:36 Operator: LP,DG,CH
Sample : BA25704W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z68.D Vial: 63
Acq On : 26 Jan 21 08:59 Operator: LP,DG,CH
Sample : BA25706W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3186547	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4544391	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3948003	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z68.D Vial: 63
Acq On : 26 Jan 21 08:59 Operator: LP,DG,CH
Sample : BA25706W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3342305	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2554850	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	903296	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1010461	27.7488 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.996%	
3) 1,2-DCA-D4(S)	5.71	65	947482	27.9666 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.868%	
5) Toluene-D8(S)	8.03	98	3303380	26.8646 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.460%	
6) 4-Bromofluorobenzene(S)	10.91	95	1113177	23.8959 ppb	0.00
Spiked Amount 25.000			Recovery	= 95.584%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

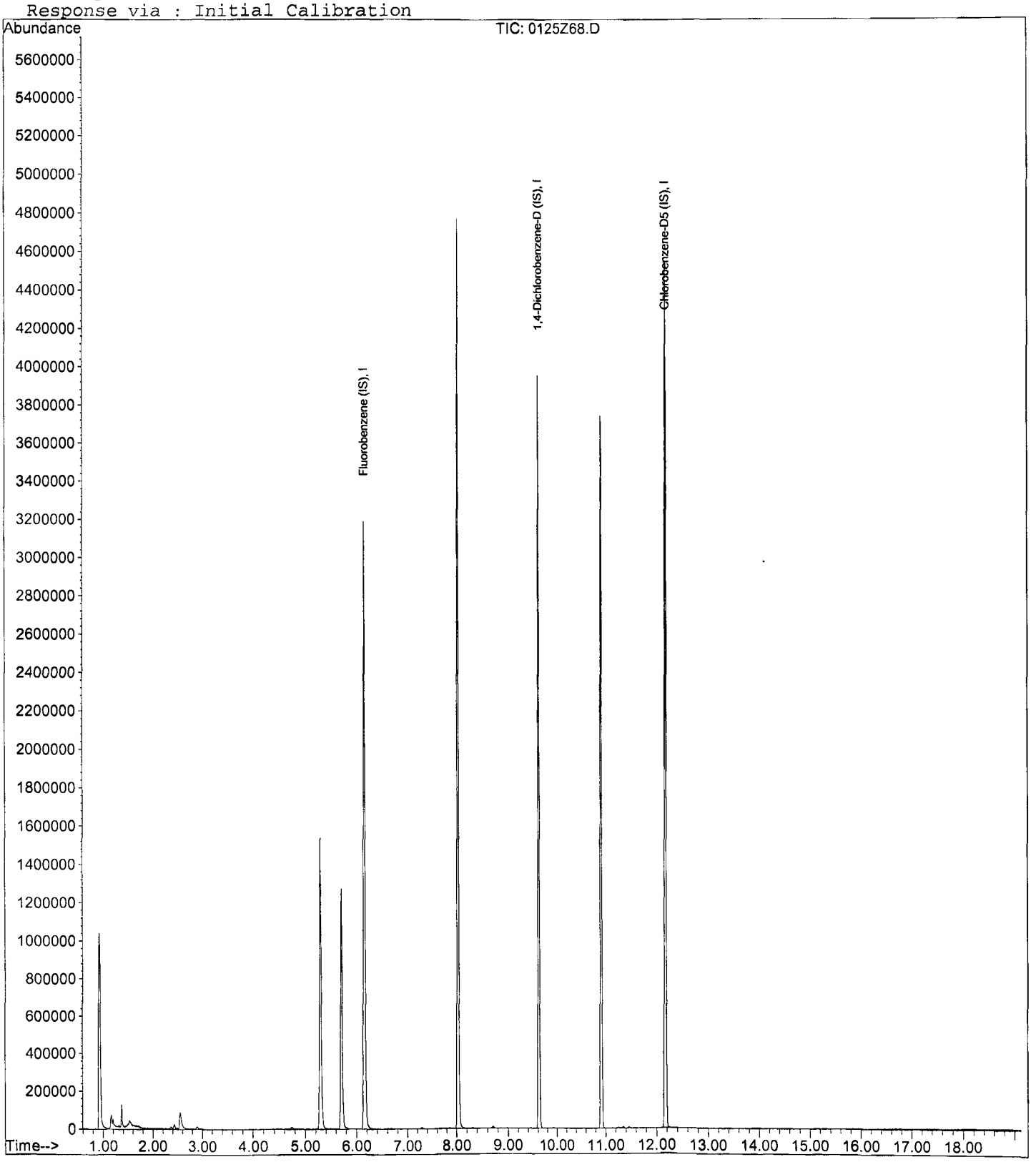
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z68.D
Acq On : 26 Jan 21 08:59
Sample : BA25706W01
Misc :

Vial: 63
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:37 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:46 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3535456	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5143233	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4310097	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z49.D Vial: 44
Acq On : 26 Jan 21 01:42 Operator: LP,DG,CH
Sample : 210125A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3705409	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2791950	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1050112	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1111099	27.52	ppb	0.00
Spiked Amount 25.000			Recovery =	110.088%		
3) 1,2-DCA-D4(S)	5.71	65	1057353	28.15	ppb	0.00
Spiked Amount 25.000			Recovery =	112.604%		
5) Toluene-D8(S)	8.03	98	3648886	27.15	ppb	0.00
Spiked Amount 25.000			Recovery =	108.616%		
6) 4-Bromofluorobenzene(S)	10.91	95	1244558	24.40	ppb	0.00
Spiked Amount 25.000			Recovery =	97.588%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

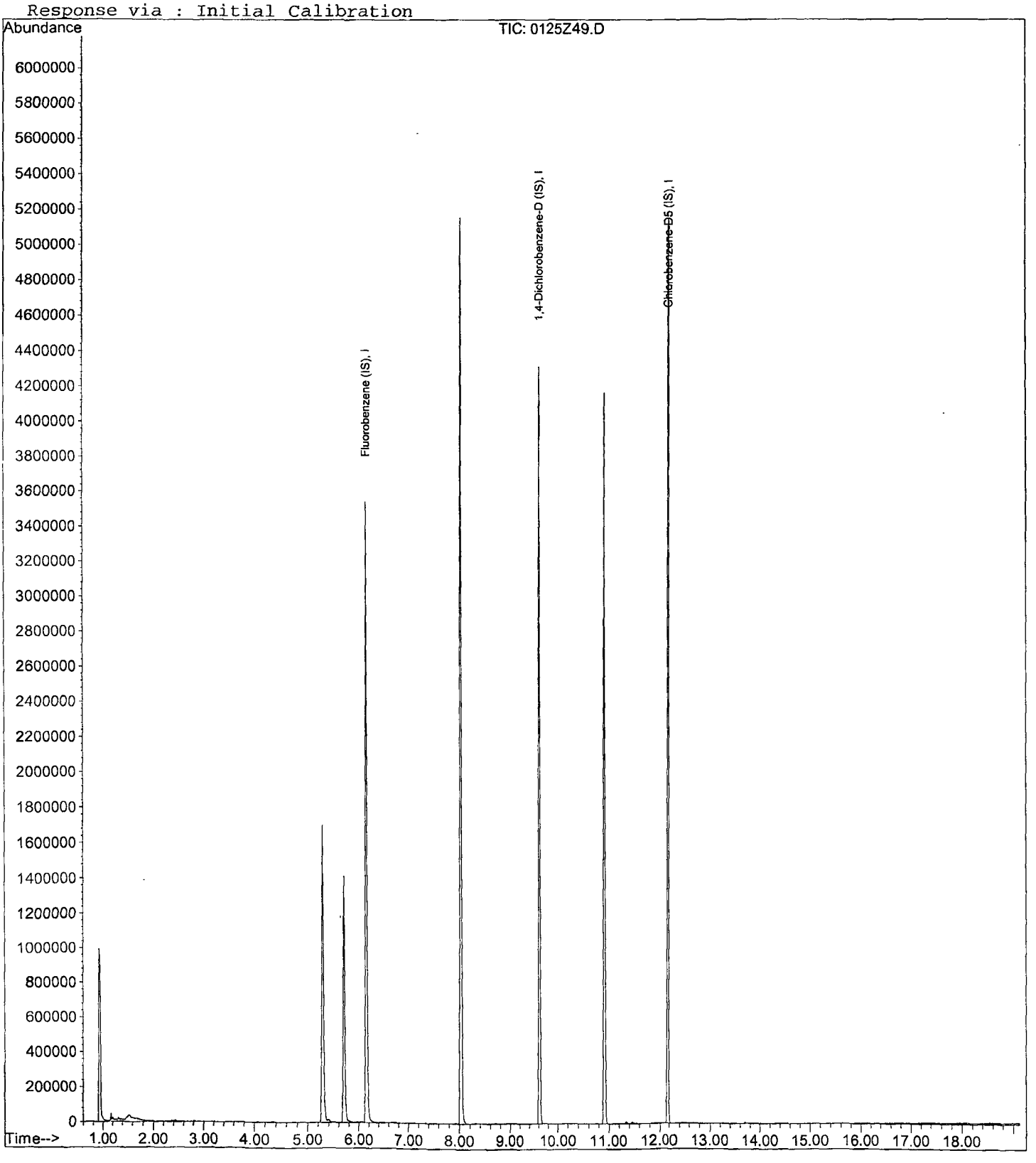
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z49.D
Acq On : 26 Jan 21 01:42
Sample : 210125A BLK
Misc :

Vial: 44
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:46 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z08.D Vial: 8
Acq On : 26 Jan 21 16:31 Operator: LP,DG,CH
Sample : 210126A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:46 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3008196	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4439931	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3771448	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z08.D Vial: 8
Acq On : 26 Jan 21 16:31 Operator: LP,DG,CH
Sample : 210126A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3140269	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2401009	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	887360	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	962606	28.1354 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.540%	
3) 1,2-DCA-D4(S)	5.71	65	906838	28.4890 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.956%	
5) Toluene-D8(S)	8.03	98	3164736	27.3861 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.544%	
6) 4-Bromofluorobenzene(S)	10.91	95	1069442	24.3793 ppb	0.00
Spiked Amount 25.000			Recovery	= 97.516%	

Target Compounds Qvalue

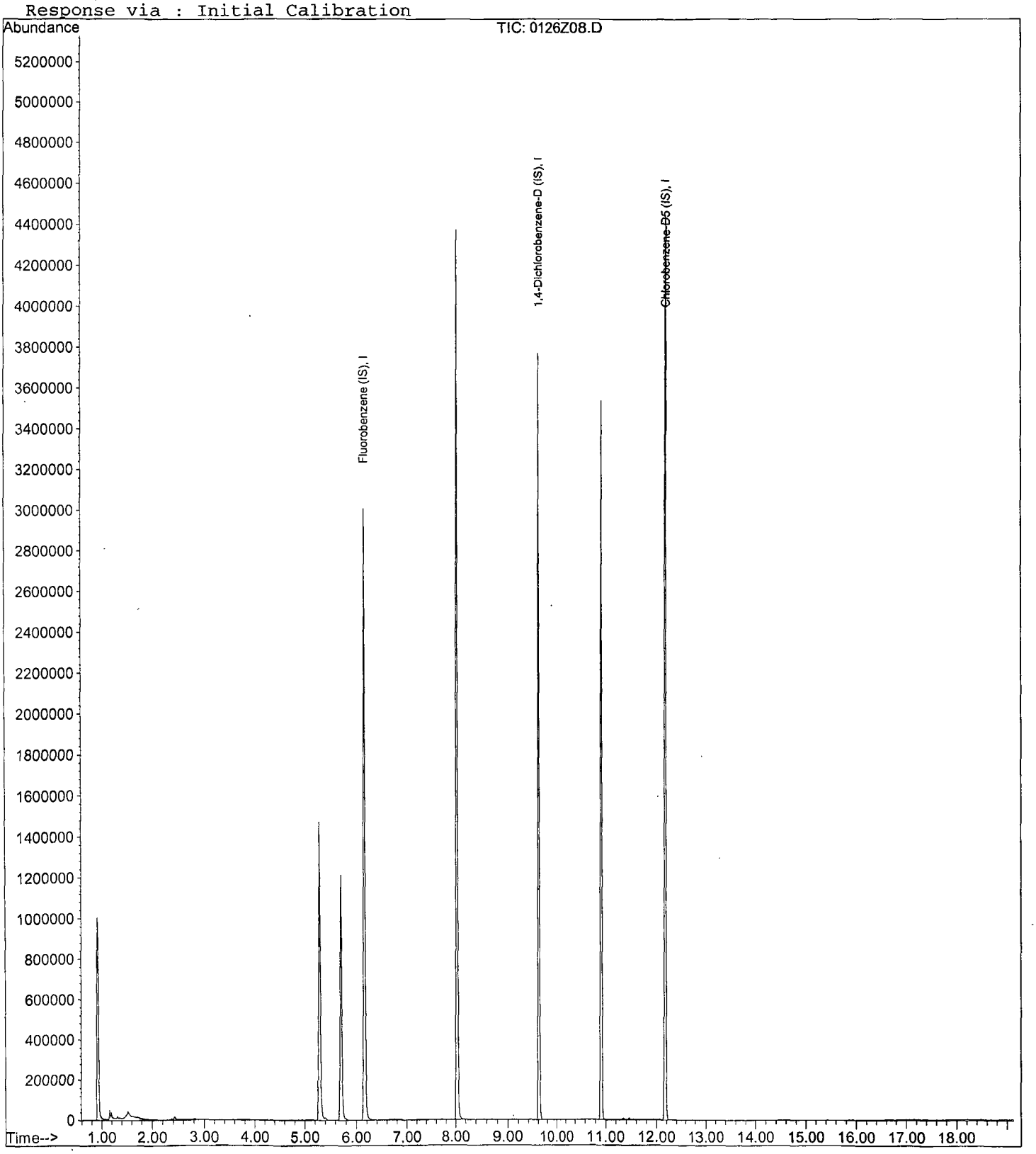
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z08.D Vial: 8
Acq On : 26 Jan 21 16:31 Operator: LP,DG,CH
Sample : 210126A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:46 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D Vial: 42
Acq On : 26 Jan 21 00:56 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3586677	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5267318	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4271466	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	62741336m	300.19	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z47.D Vial: 42
Acq On : 26 Jan 21 00:56 Operator: LP,DG,CH
Sample : 210125A CCV/LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3764447	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2821076	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1054720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1097732	26.76	ppb	0.00
Spiked Amount 25.000			Recovery = 107.060%			
3) 1,2-DCA-D4(S)	5.71	65	1029931	26.99	ppb	0.00
Spiked Amount 25.000			Recovery = 107.964%			
5) Toluene-D8(S)	8.03	98	3716281	27.37	ppb	0.00
Spiked Amount 25.000			Recovery = 109.480%			
6) 4-Bromofluorobenzene(S)	10.91	95	1264305	24.52	ppb	0.00
Spiked Amount 25.000			Recovery = 98.064%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

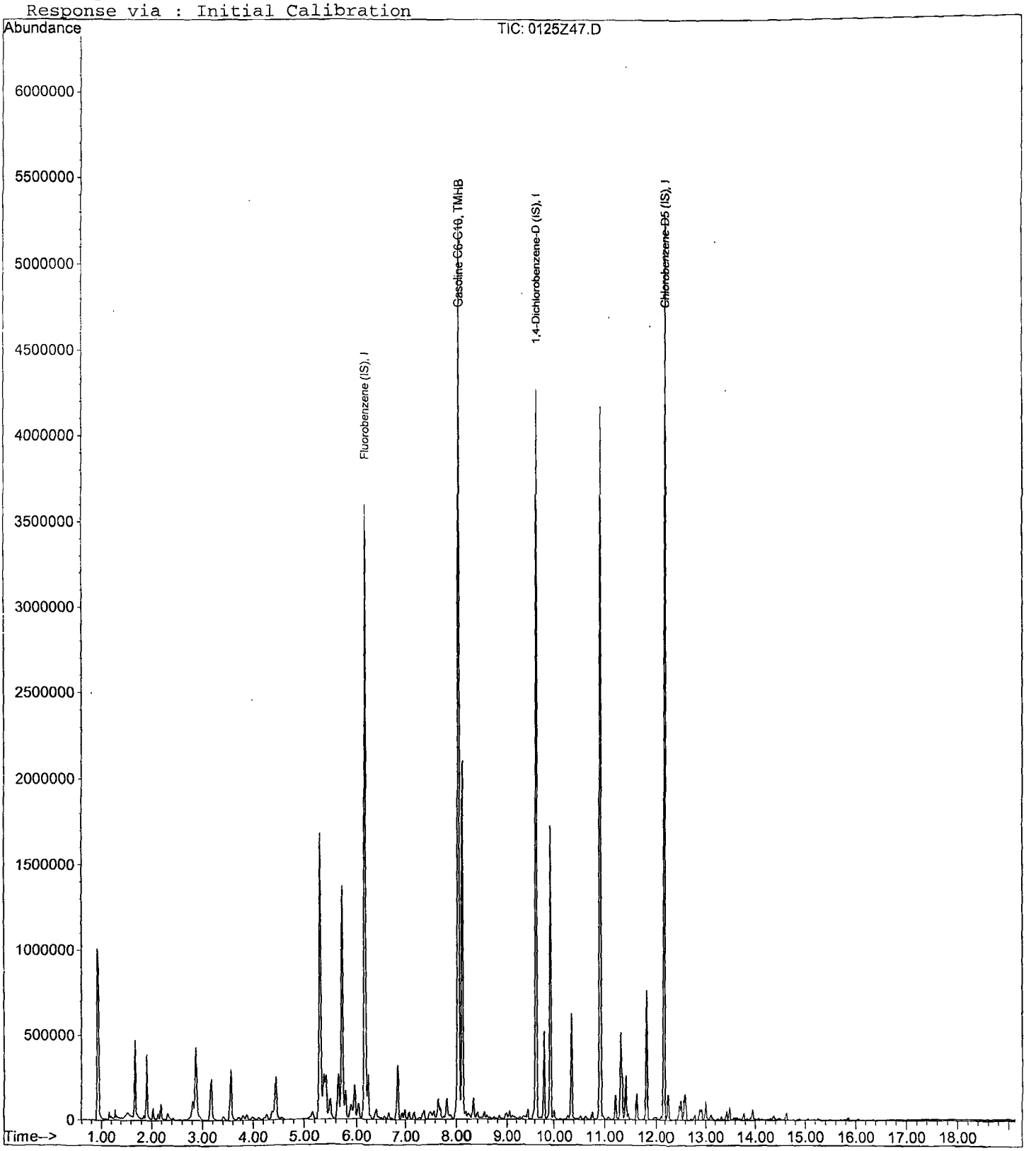
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z47.D
Acq On : 26 Jan 21 00:56
Sample : 210125A CCV/LCS 300ug/L
Misc :

Vial: 42
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z48.D Vial: 43
Acq On : 26 Jan 21 01:19 Operator: LP,DG,CH
Sample : 210125A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3481513	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5053729	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4312374	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	60868944m	299.79	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z48.D ZGAS0125.M Tue Jan 26 11:50:21 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z48.D Vial: 43
Acq On : 26 Jan 21 01:19 Operator: LP,DG,CH
Sample : 210125A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3677445	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2775968	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1084678	27.07	ppb	0.00
Spiked Amount 25.000			Recovery =	108.288%		
3) 1,2-DCA-D4(S)	5.71	65	1015296	27.24	ppb	0.00
Spiked Amount 25.000			Recovery =	108.948%		
5) Toluene-D8(S)	8.03	98	3655942	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.452%		
6) 4-Bromofluorobenzene(S)	10.92	95	1250767	24.64	ppb	0.00
Spiked Amount 25.000			Recovery =	98.544%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

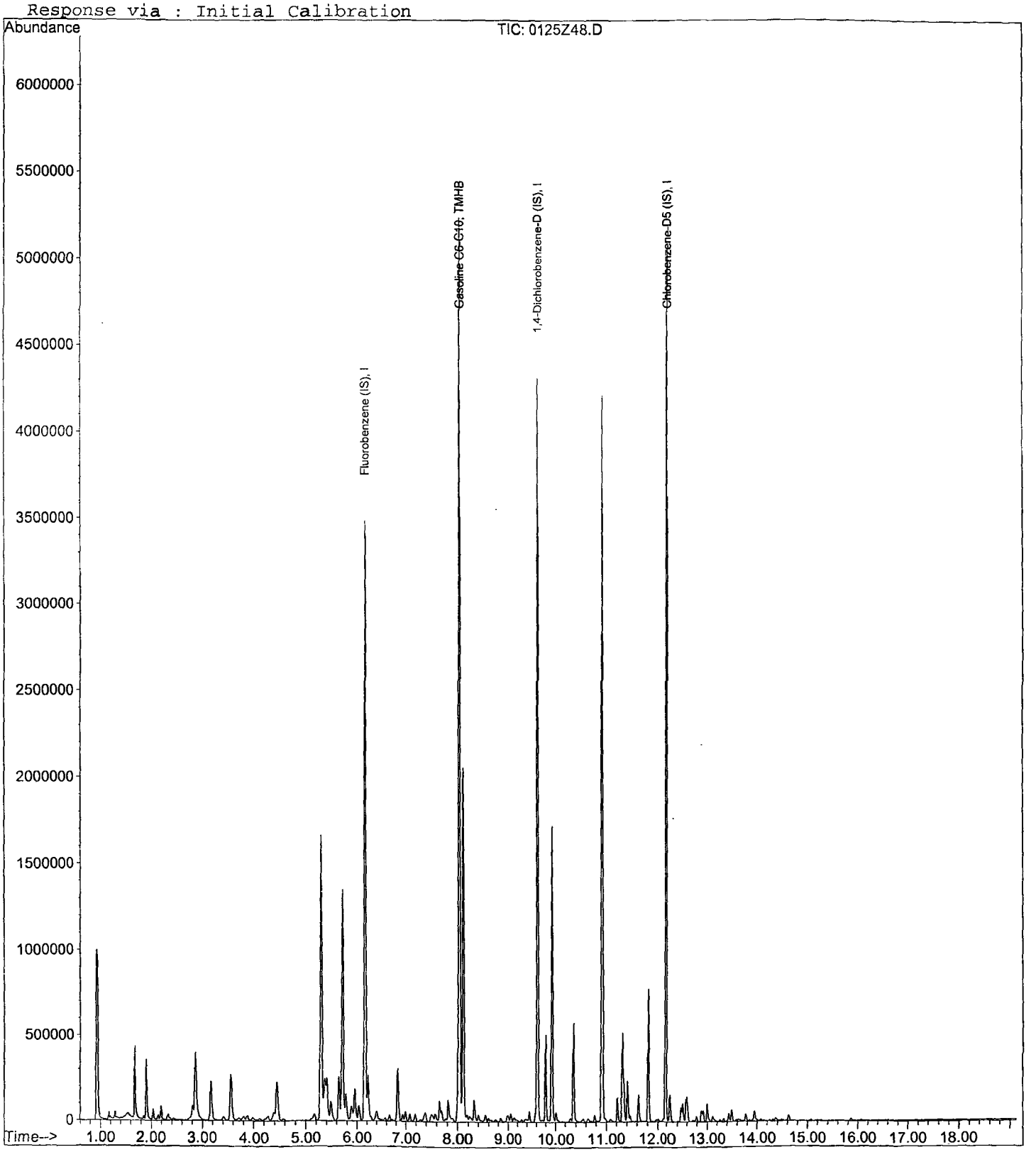
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z48.D
Acq On : 26 Jan 21 01:19
Sample : 210125A LCSD 300ug/L
Misc :

Vial: 43
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:22 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z06.D Vial: 6
Acq On : 26 Jan 21 15:45 Operator: LP,DG,CH
Sample : 210126A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:54 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3167903	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4575382	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3834326	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	55940886m	307.3890	ppb	100

(#) = qualifier out of range (m) = manual integration
0126Z06.D ZGAS0125.M Tue Feb 02 09:12:50 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z06.D Vial: 6
Acq On : 26 Jan 21 15:45 Operator: LP,DG,CH
Sample : 210126A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3363181	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2520732	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	924352	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	995099	27.1573 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.628%	
3) 1,2-DCA-D4(S)	5.71	65	936118	27.4596 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.840%	
5) Toluene-D8(S)	8.03	98	3346052	27.5799 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.320%	
6) 4-Bromofluorobenzene(S)	10.91	95	1116063	24.2468 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.988%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

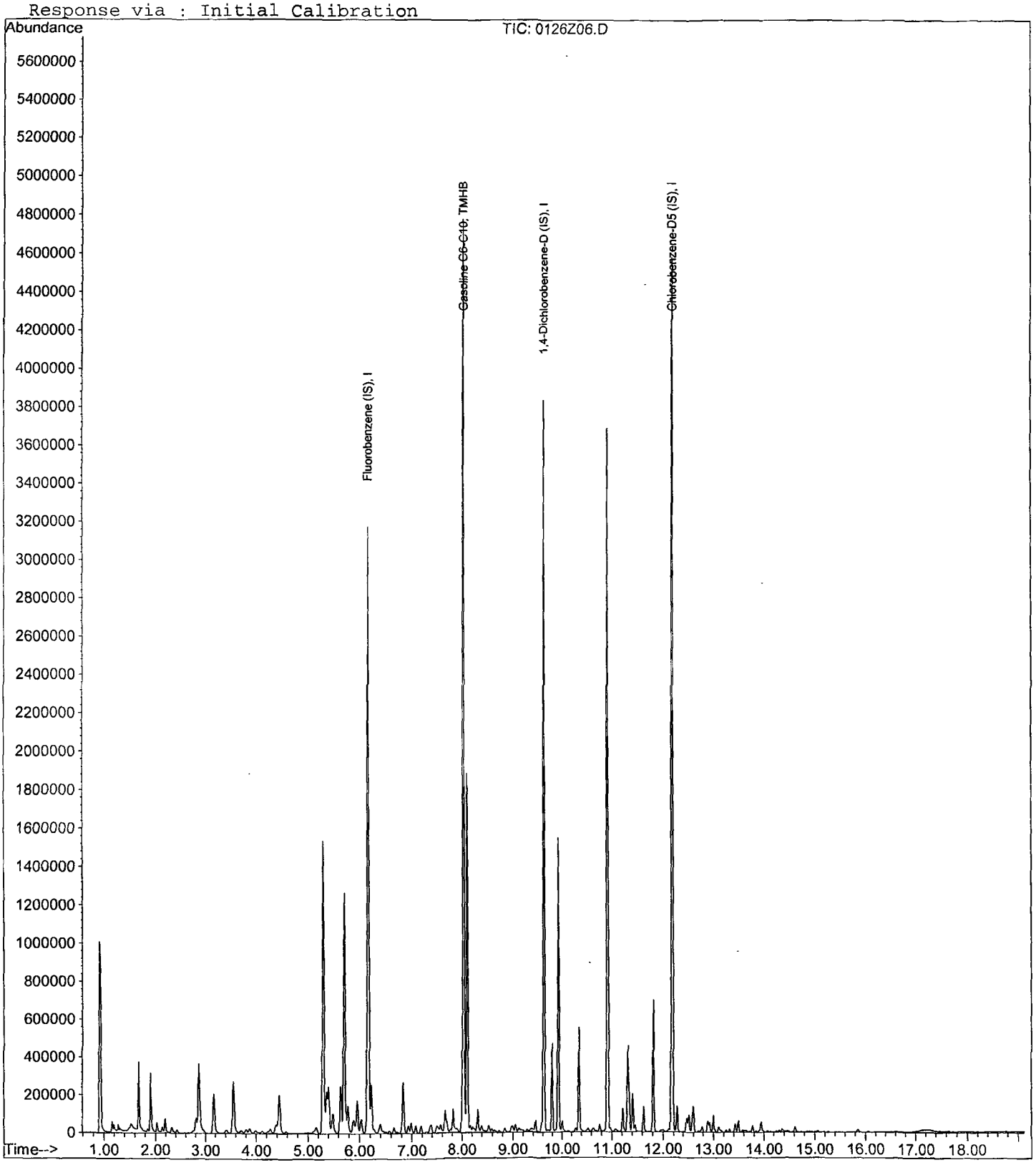
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z06.D
Acq On : 26 Jan 21 15:45
Sample : 210126A LCS 300ug/L
Misc :

Vial: 6
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 29 15:54 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z07.D Vial: 7
Acq On : 26 Jan 21 16:08 Operator: LP,DG,CH
Sample : 210126A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:55 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3191496	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4557400	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3912920	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	56189451m	305.1034	ppb	100

(#) = qualifier out of range (m) = manual integration
0126Z07.D ZGAS0125.M Tue Feb 02 09:12:52 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0126Z07.D Vial: 7
Acq On : 26 Jan 21 16:08 Operator: LP,DG,CH
Sample : 210126A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:52 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3322545	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2503223	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	909568	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	990153	27.3528 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.412%	
3) 1,2-DCA-D4(S)	5.71	65	931193	27.6492 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.596%	
5) Toluene-D8(S)	8.03	98	3367553	27.9513 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.804%	
6) 4-Bromofluorobenzene(S)	10.91	95	1133979	24.7577 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.032%	

Target Compounds Qvalue

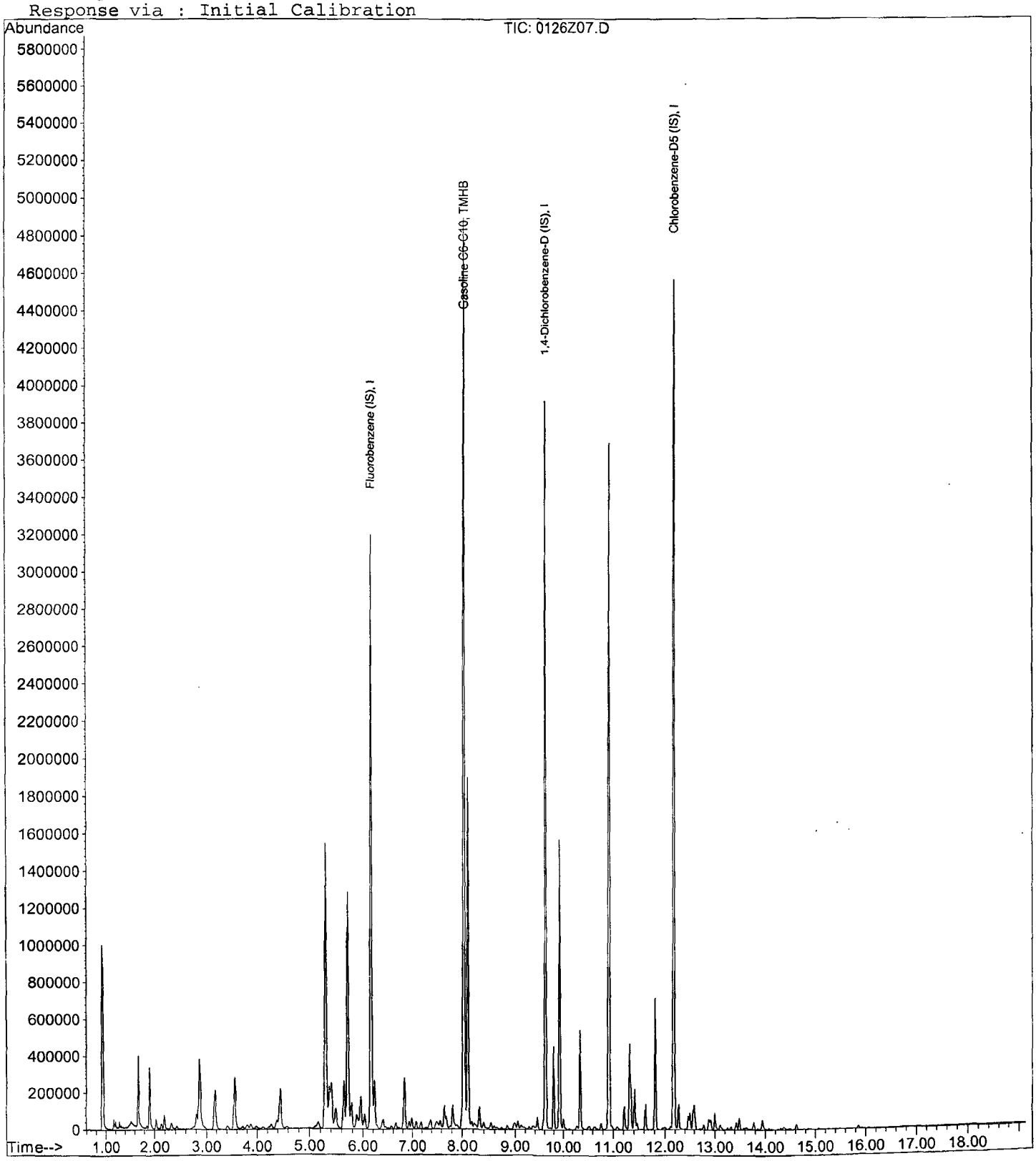
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0126Z07.D Vial: 7
Acq On : 26 Jan 21 16:08 Operator: LP,DG,CH
Sample : 210126A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 29 15:55 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Zeus Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 **Prepared By (Initials):** CH
Expires: 01/04/22
Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 **Prepared By (Initials):** CH
Expires: 01/31/30
Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

Zeus Gas Calibration Curve

Prepared: 01/25/21 **Prepared By (Initials):** CH
Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/25/21 **Prepared By (Initials):** CH
Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

Zeus Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/25/21 **Prepared By (Initials):** CH
Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
2	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
3	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
4	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
5	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
6	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
7	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
8	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
9	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
10	31	0125Z36.D	1	20ug/L GAS STD 1/25/21		25 Jan 21 20:43
11	32	0125Z37.D	1	50ug/L GAS STD 1/25/21		25 Jan 21 21:06
12	33	0125Z38.D	1	100ug/L GAS STD 1/25/21		25 Jan 21 21:29
13	34	0125Z39.D	1	300ug/L GAS STD 1/25/21		25 Jan 21 21:52
14	35	0125Z40.D	1	600ug/L GAS STD 1/25/21		25 Jan 21 22:15
15	36	0125Z41.D	1	800ug/L GAS STD 1/25/21		25 Jan 21 22:38
16	37	0125Z42.D	1	1000ug/L GAS STD 1/25/21		25 Jan 21 23:01
17	38	0125Z43.D	1	(SS) 300ug/L GAS STD 1/25/21		25 Jan 21 23:24
18	42	0125Z47.D	1	210125A CCV/LCS 300ug/L		26 Jan 21 00:56
19	43	0125Z48.D	1	210125A LCSD 300ug/L		26 Jan 21 01:19
20	44	0125Z49.D	1	210125A BLK		26 Jan 21 01:42
21	56	0125Z61.D	1	BA25689W01		26 Jan 21 06:18
22	57	0125Z62.D	1	BA25690W01		26 Jan 21 06:41
23	58	0125Z63.D	1	BA25698W01		26 Jan 21 07:04
24	59	0125Z64.D	1	BA25699W01		26 Jan 21 07:27
25	60	0125Z65.D	1	BA25701W01		26 Jan 21 07:50
26	61	0125Z66.D	1	BA25703W01		26 Jan 21 08:13
27	62	0125Z67.D	1	BA25704W01		26 Jan 21 08:36
28	63	0125Z68.D	1	BA25706W01		26 Jan 21 08:59
29	64	0125Z69.D	1	BA25692W01		26 Jan 21 09:22
30	66	0125Z71.D	1	Ending CCV 300ug/L 1/25/21		26 Jan 21 10:08
31	5	0126Z05.D	1	210126A CCV 300ug/L		26 Jan 21 15:22
32	6	0126Z06.D	1	210126A LCS 300ug/L		26 Jan 21 15:45
33	7	0126Z07.D	1	210126A LCSD 300ug/L		26 Jan 21 16:08
34	8	0126Z08.D	1	210126A BLK		26 Jan 21 16:31
35	9	0126Z09.D	1	BA25695W01		26 Jan 21 16:54
36	14	0126Z14.D	1	BA25693W01		26 Jan 21 18:49
37	15	0126Z15.D	1	BA25696W01		26 Jan 21 19:12
38	30	0126Z30.D	1	Ending CCV 300ug/L 1/26/21		27 Jan 21 00:57

ORGANICS

Calibration Data

RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 09/14/20
Instrument: 7890
Initials: CD/

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
			0914R07.D	0914R08.D	0914R09.D	0914R10.D	0914R11.D	0914R12.D	0914R13.D								
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
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0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

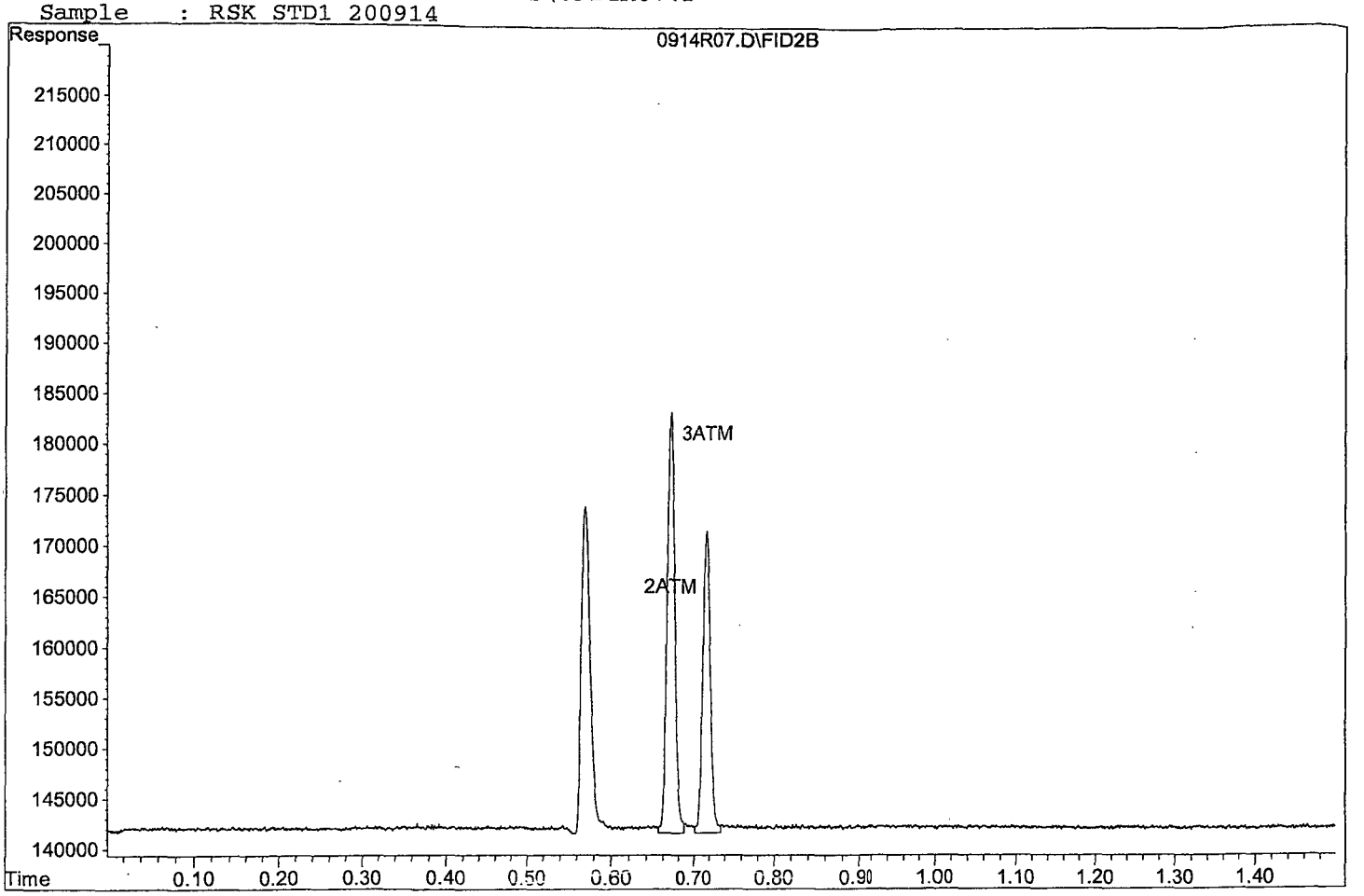
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	41762	102628.492	ppb
3) ATM Ethene	0.72	29966	4.139	ppb
Target Compounds				
1) ATM Methane	0.57	32423	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

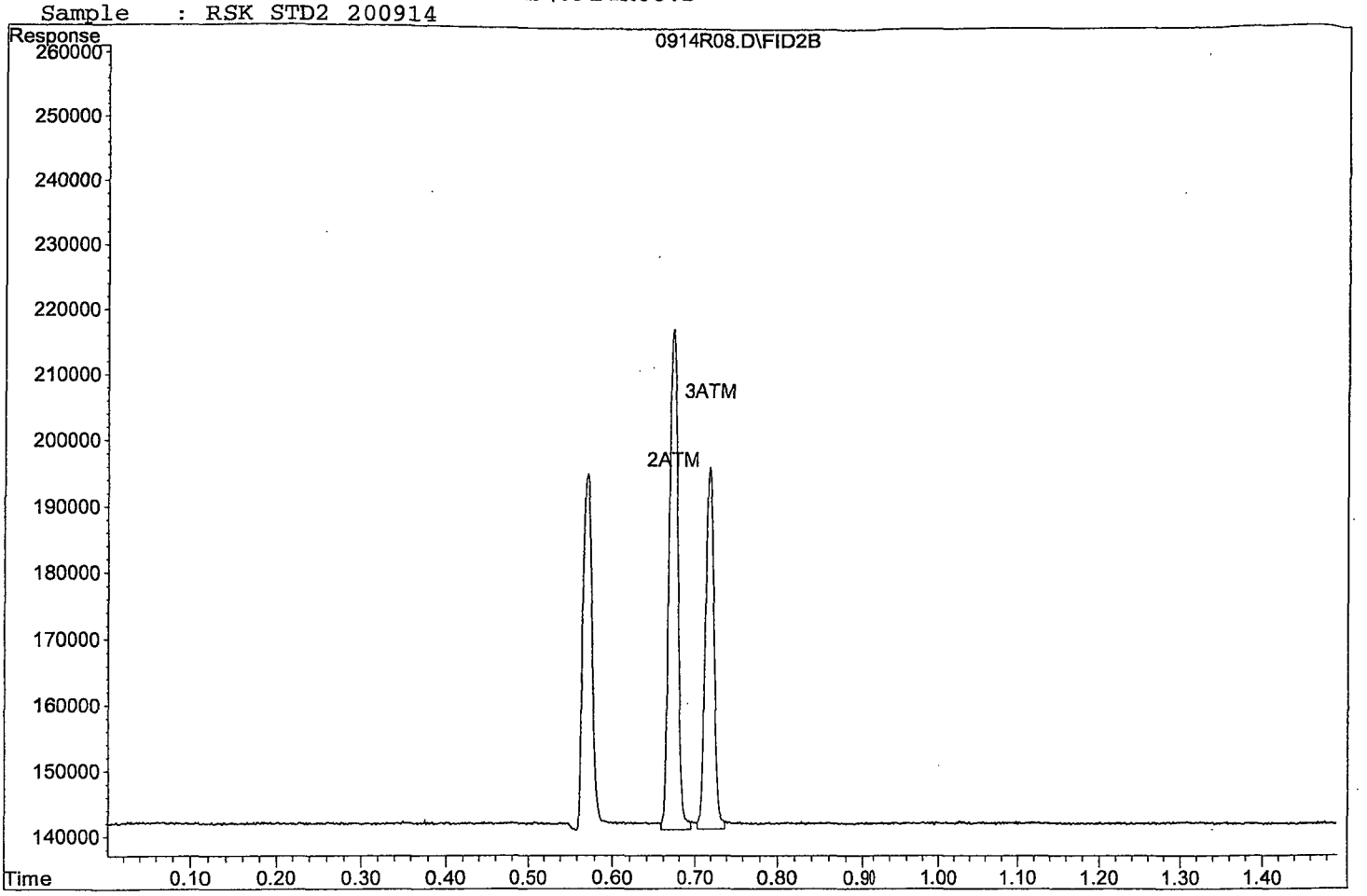
Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	76271	190289.144	ppb
3) ATM Ethene	0.72	54983	7.686	ppb
Target Compounds				
1) ATM Methane	0.57	54196	N.D.	ppb

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

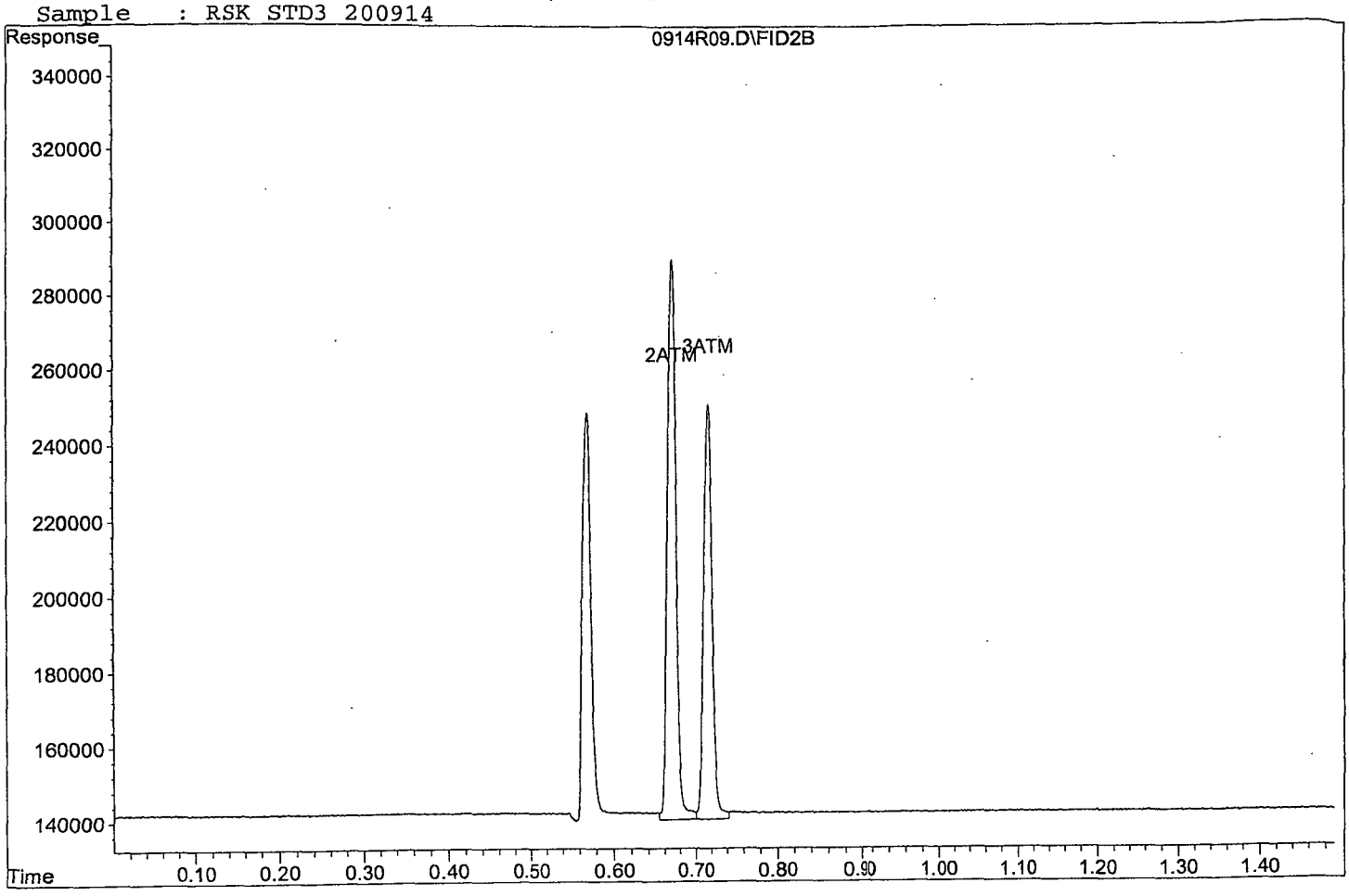
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

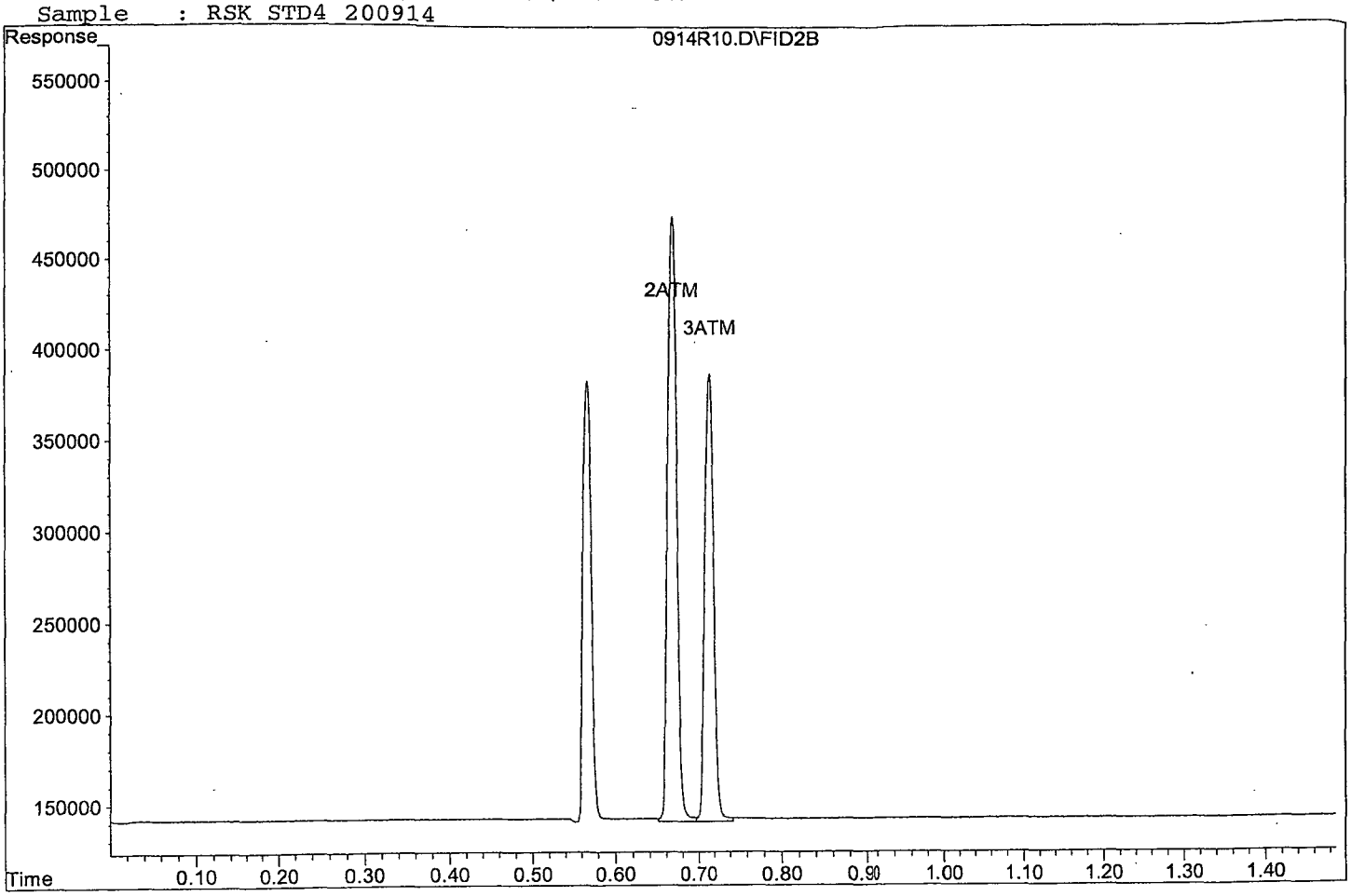
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	333873	844667.853	ppb
3) ATM Ethene	0.71	246286	34.810	ppb
Target Compounds				
1) ATM Methane	0.57	242197	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

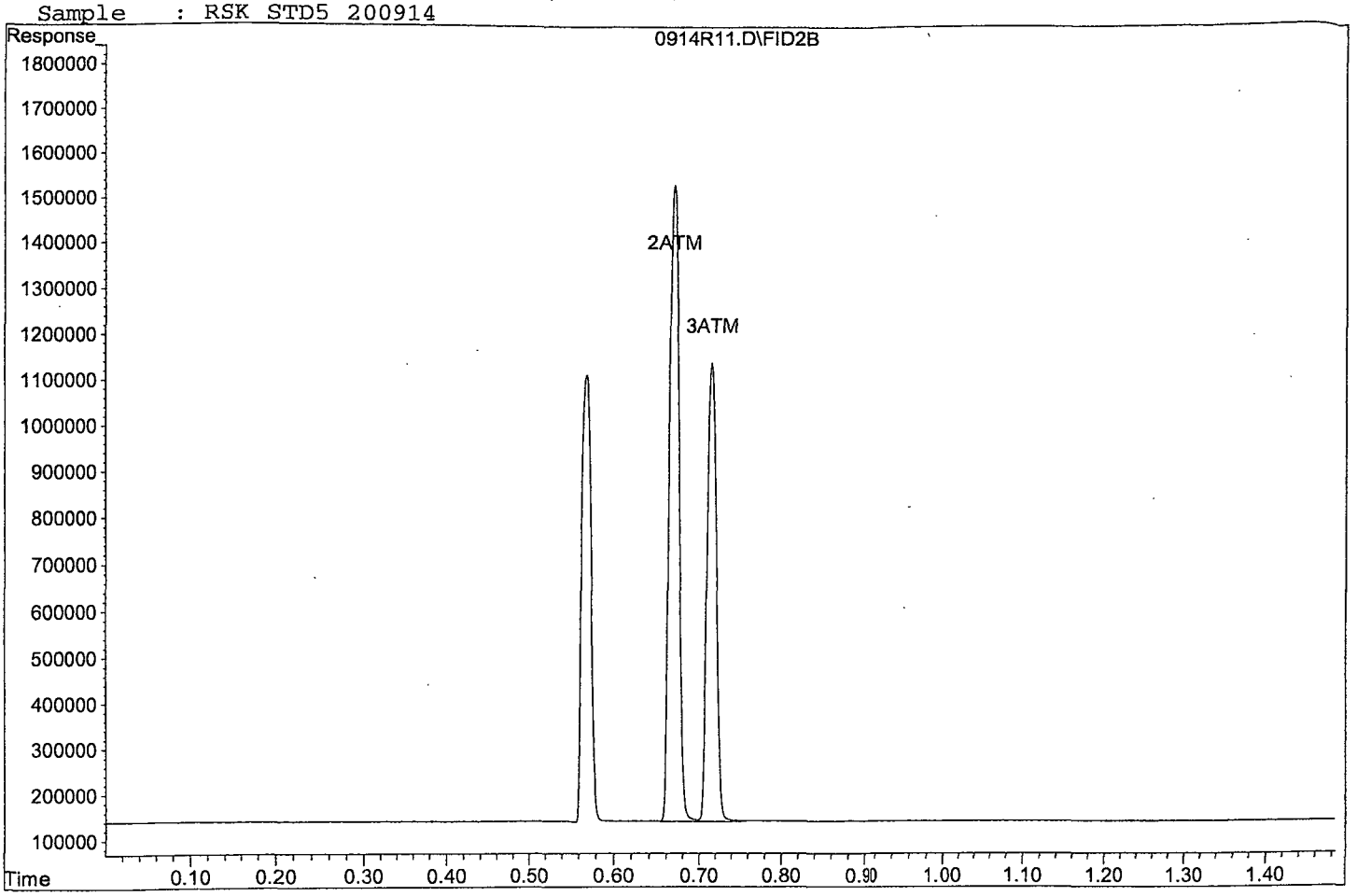
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	1392673	3534302.847	ppb
3) ATM Ethene	0.71	999836	141.654	ppb
Target Compounds				
1) ATM Methane	0.57	973152	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

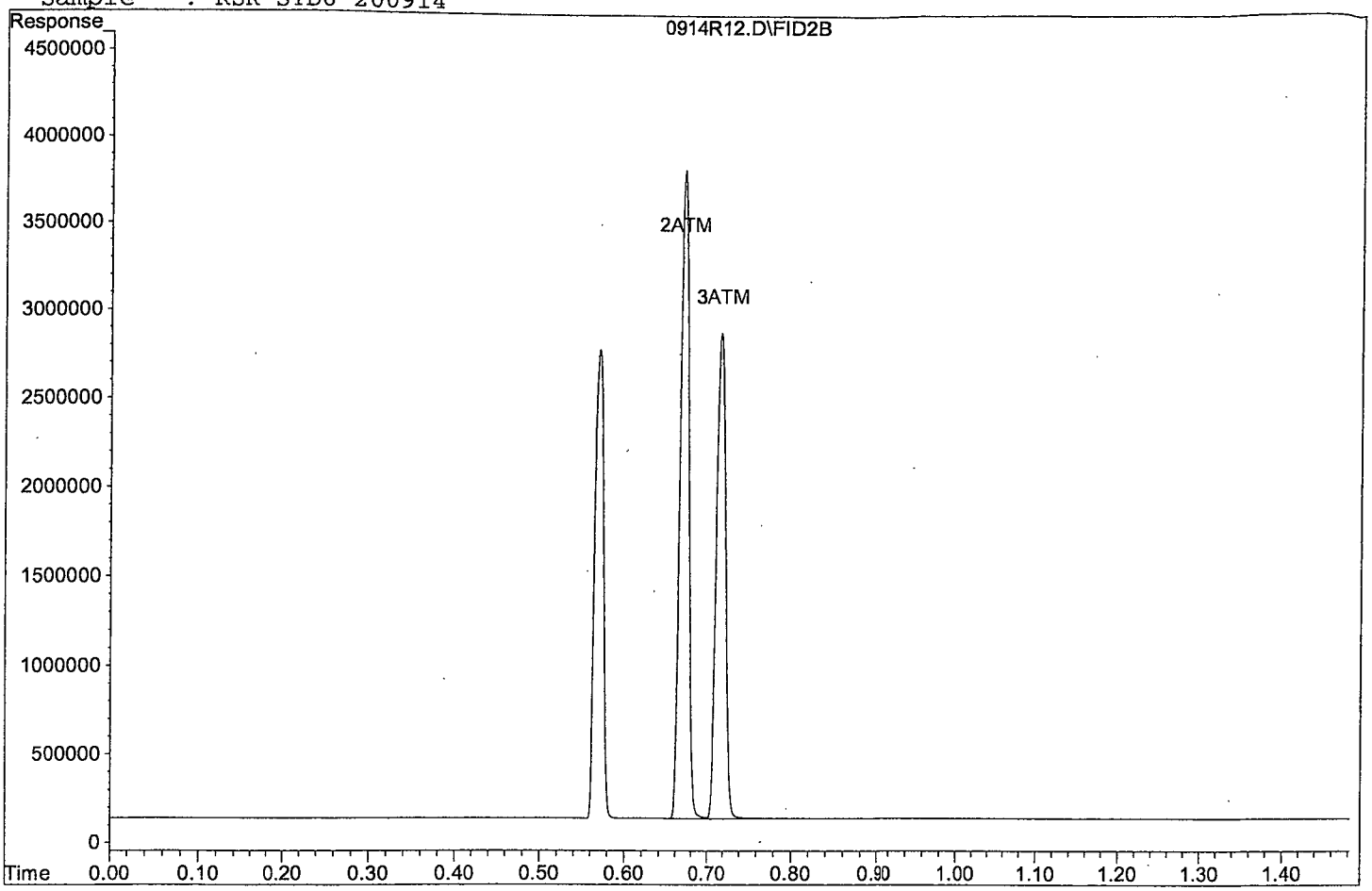
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	3684845	9357031.284 ppb
3) ATM Ethene	0.72	2745673	389.192 ppb
Target Compounds			
1) ATM Methane	0.57	2643568	N.D. ppb

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

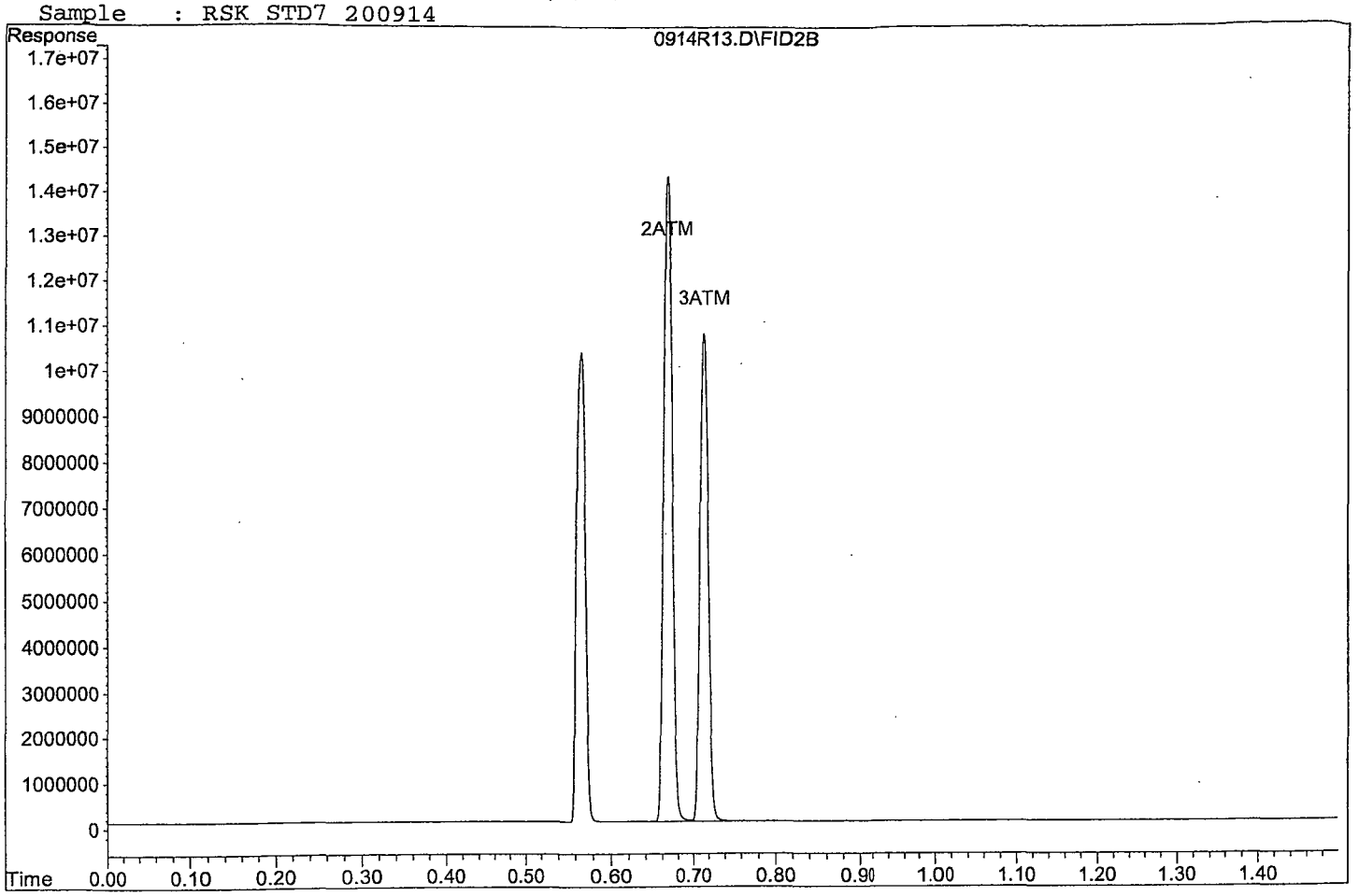
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

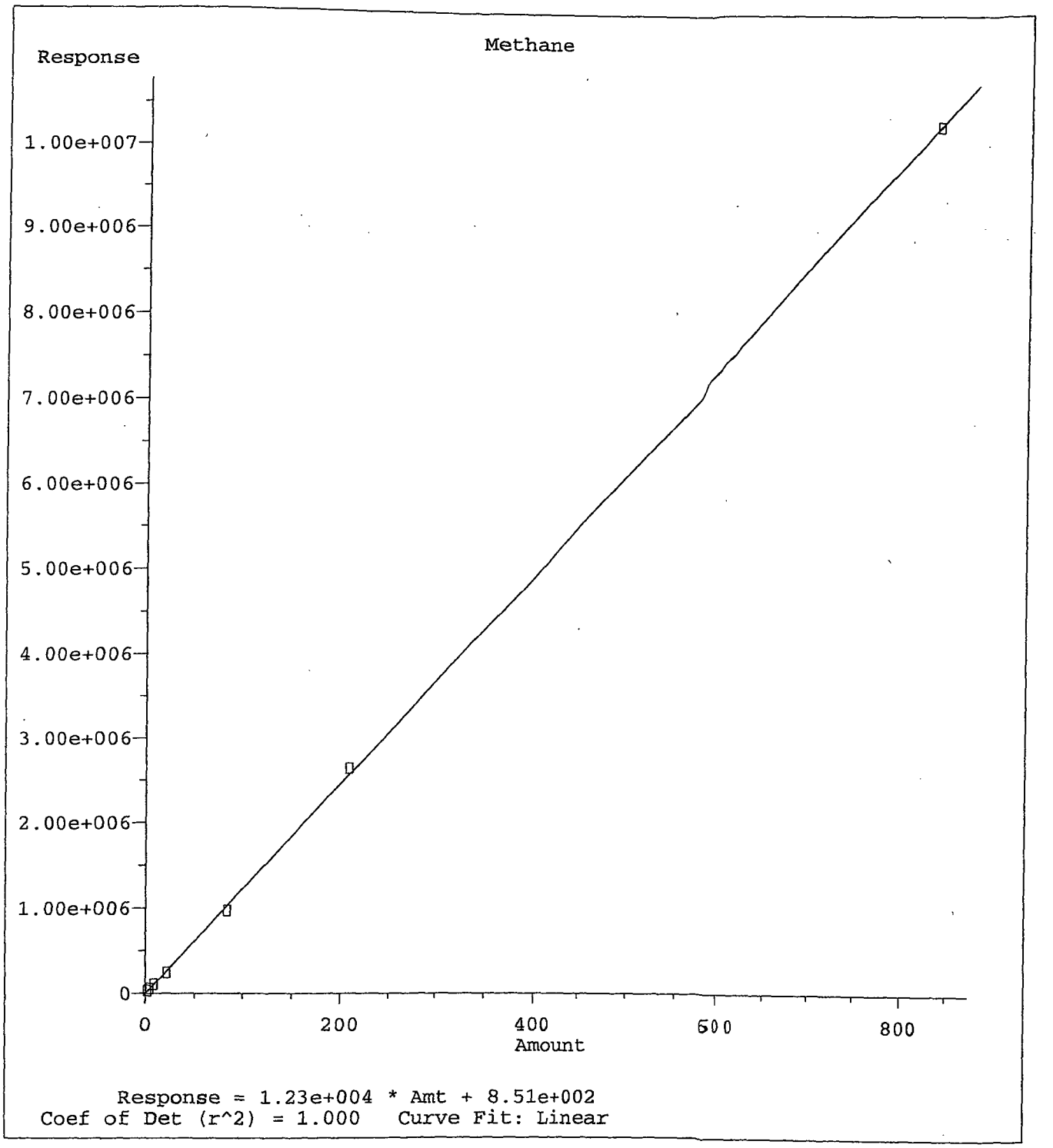
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	36168407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

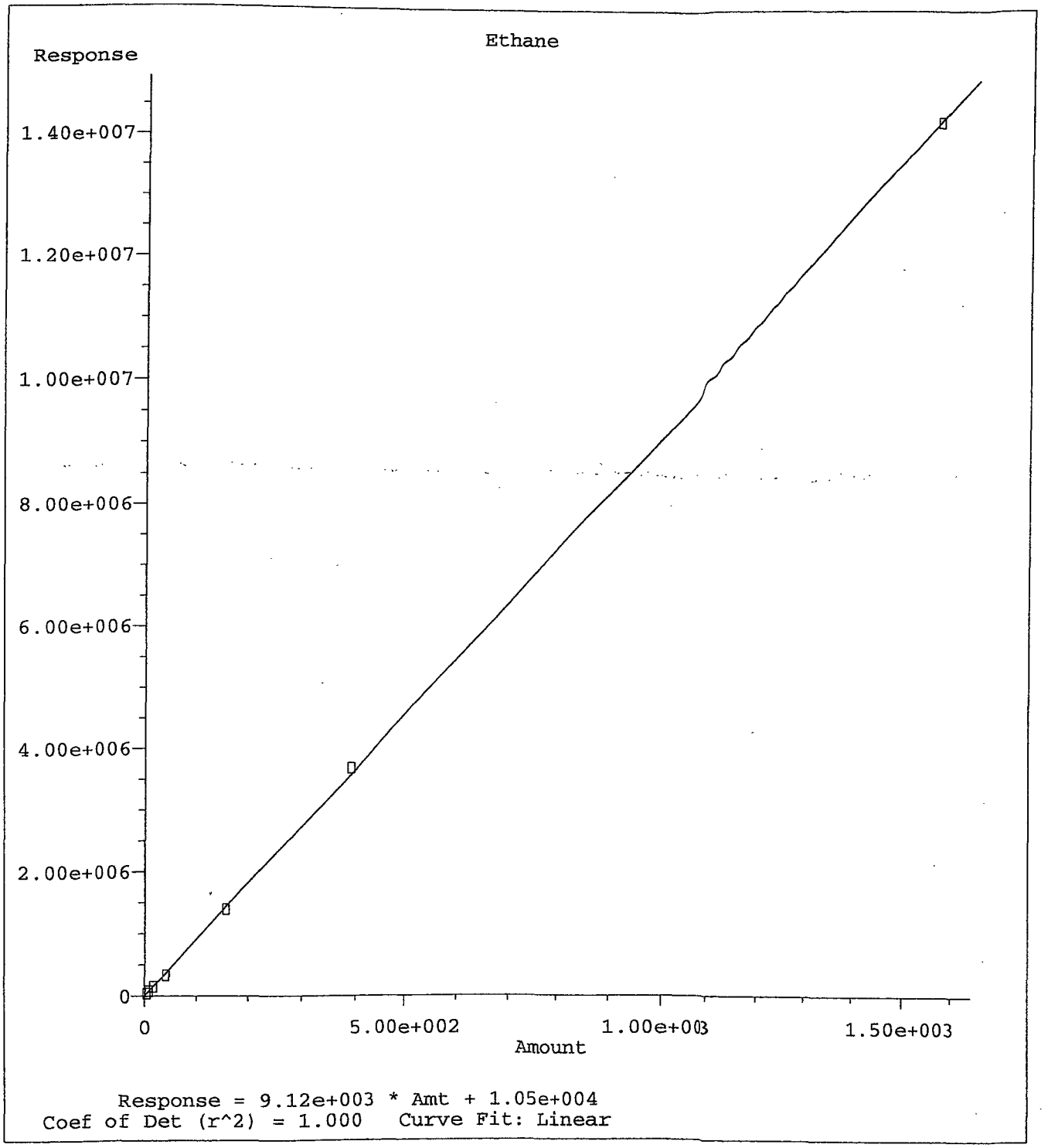
Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

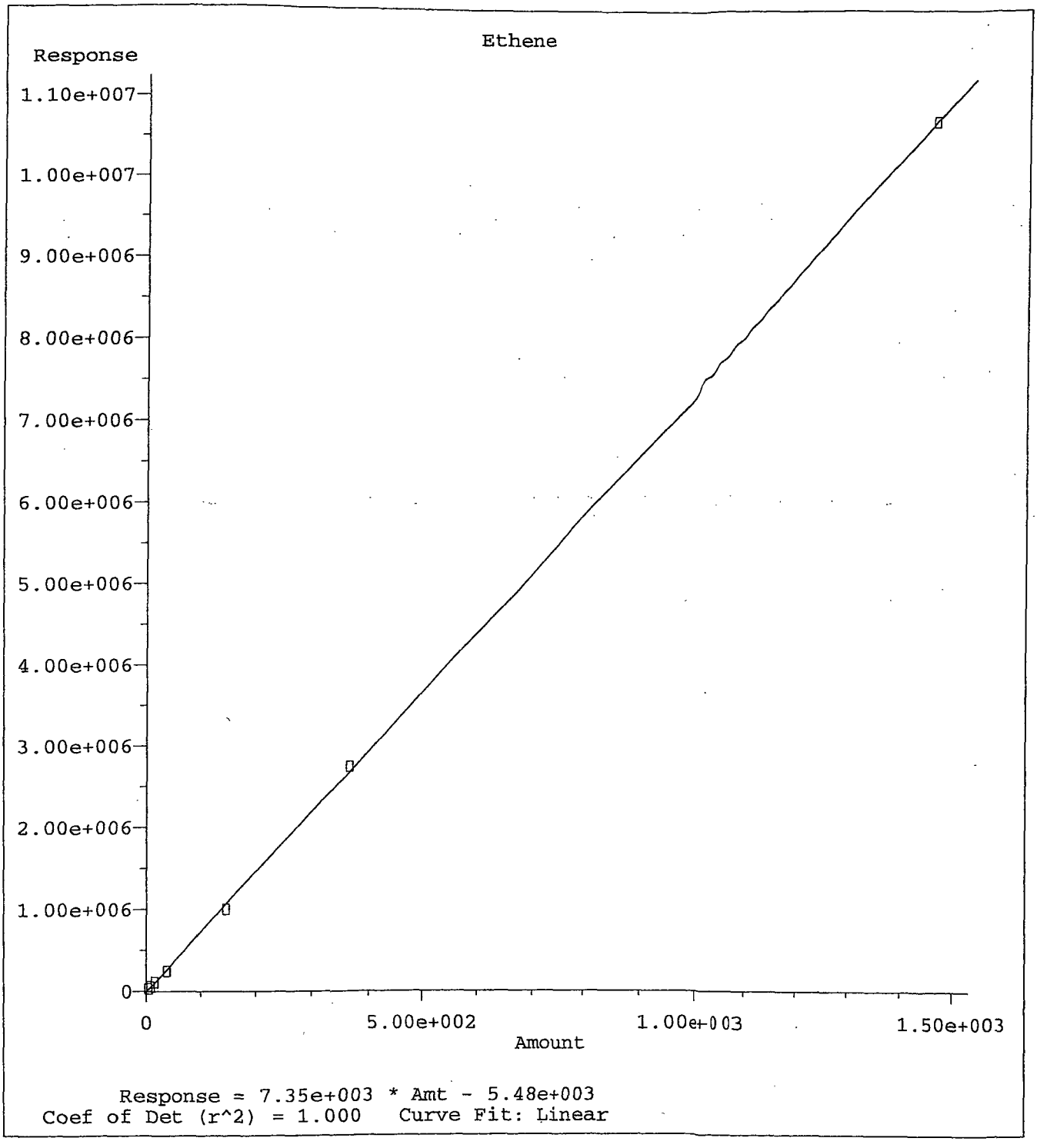




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
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40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

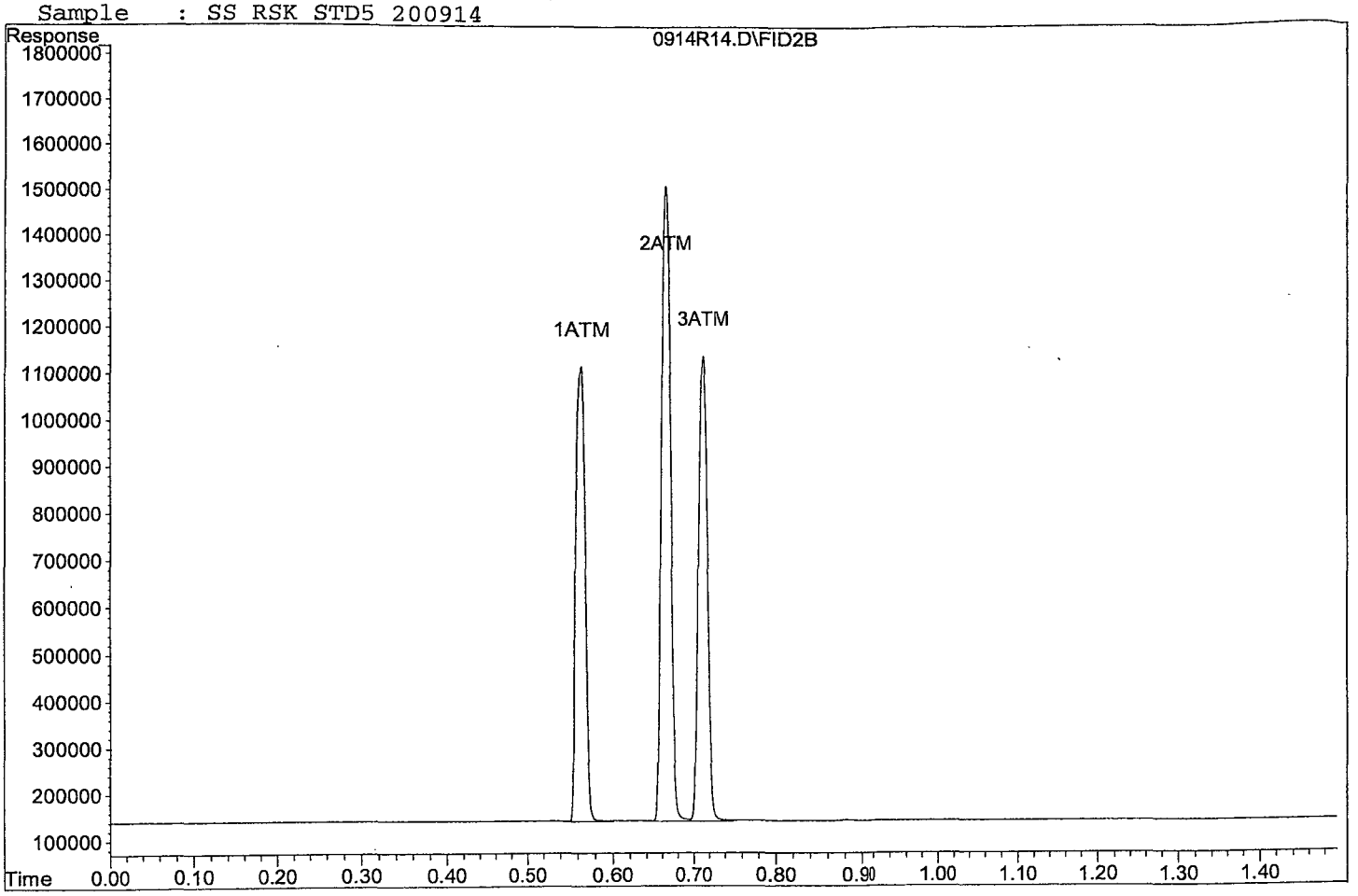
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0127R07.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	28105	9.4	ATML	14
2	ATML	Ethane	18863	21387	13	ATML	17
3	ATML	Ethene	14798	18020	22	ATML	23
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40							
		Average			14.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R07.D Vial: 7
Acq On : 27 Jan 21 12:23 Operator: LS
Sample : 210127A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 12:25 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

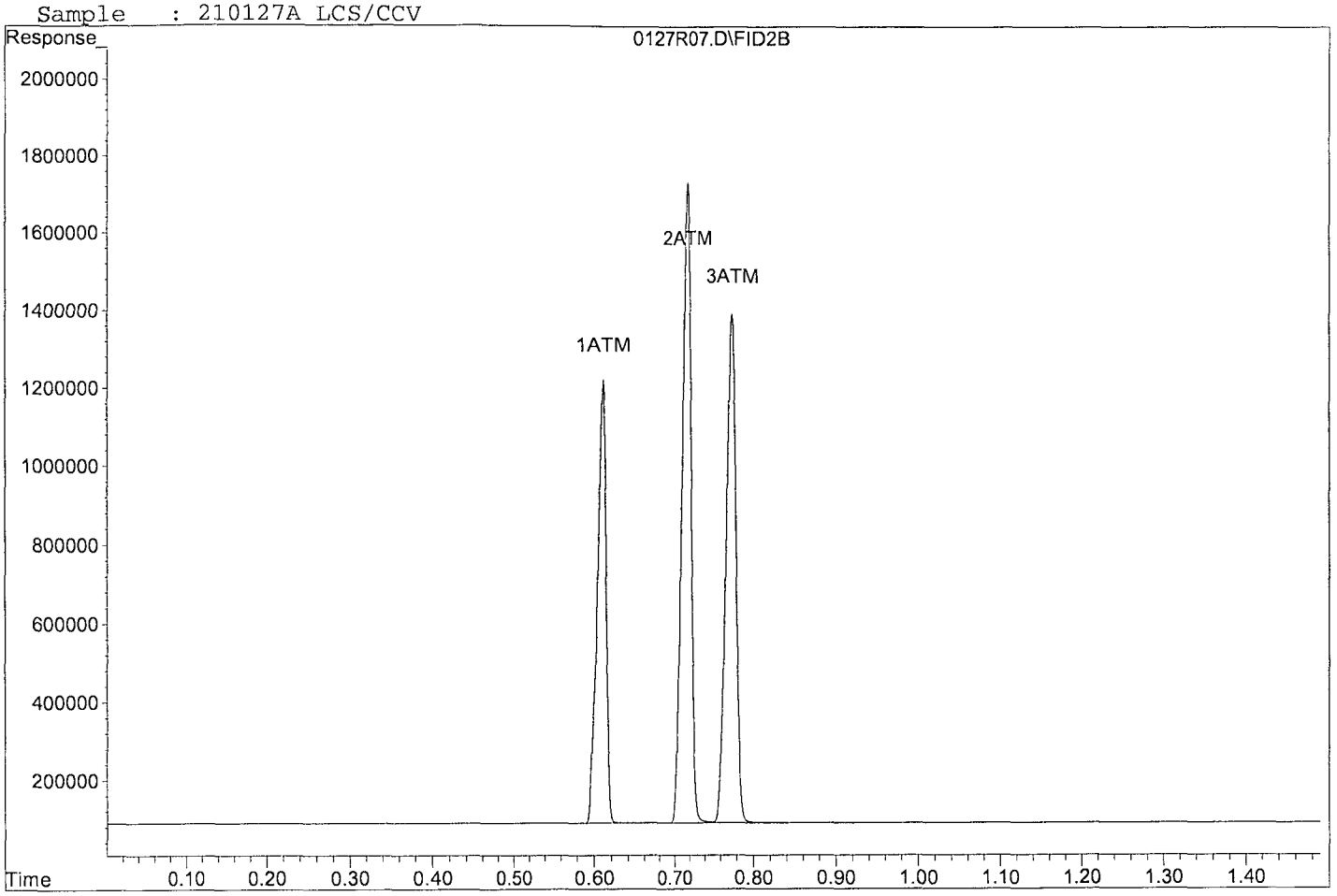
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1171977	94.959 ppb
2) ATM Ethane	0.72	1671910	182.273 ppb
3) ATM Ethene	0.77	1313980	179.431 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R07.D
Sample : 210127A LCS/CCV



RSK 175

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0127R42.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	27524	7.2	ATML	12
2	ATML	Ethane	18863	20500	8.7	ATML	12
3	ATML	Ethene	14798	16267	9.9	ATML	11
4							
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36							
37							
38							
39							
40							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R42.D Vial: 42
Acq On : 27 Jan 21 15:29 Operator: LS
Sample : 210127A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 15:31 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

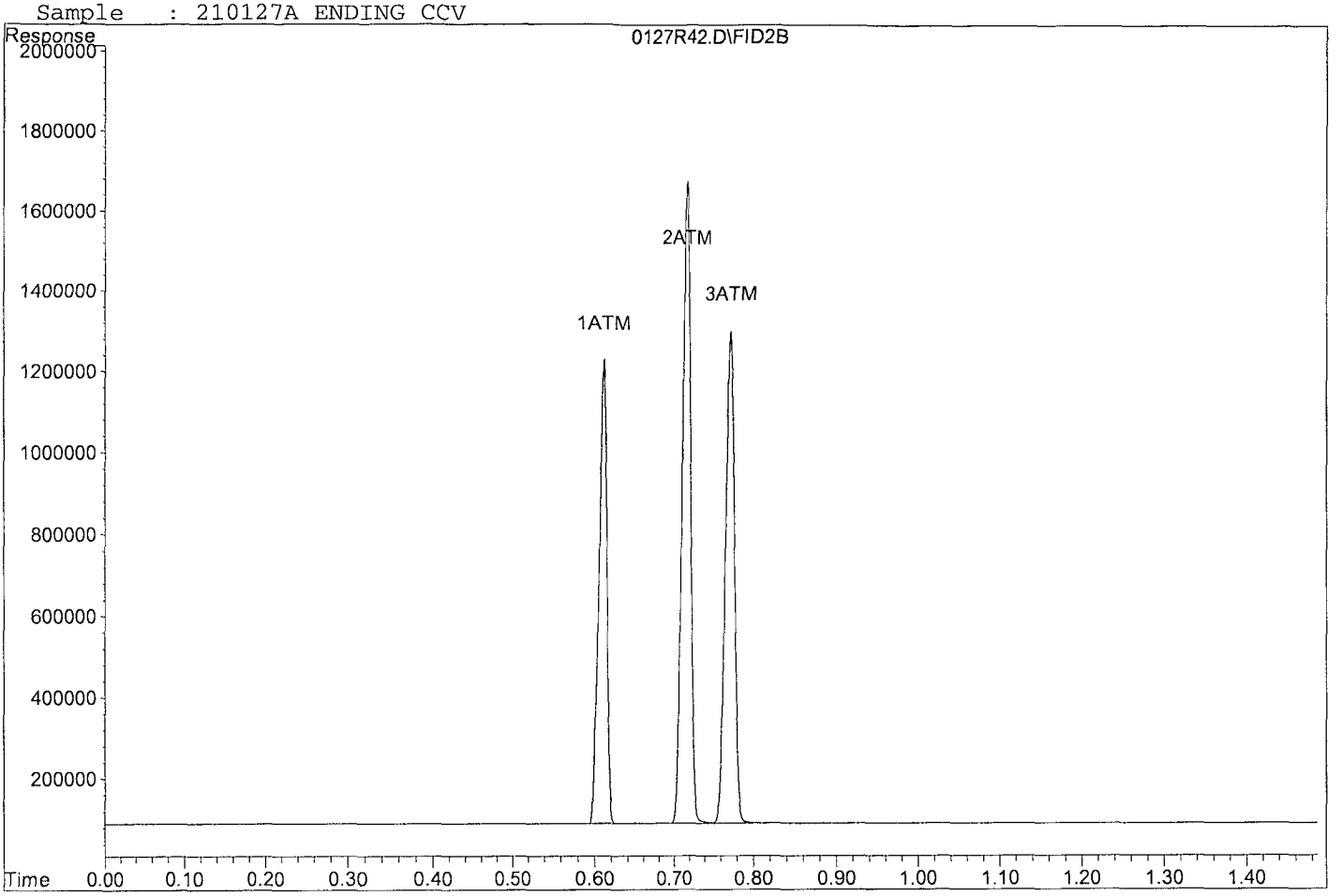
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1147740	92.993	ppb
2) ATM Ethane	0.72	1602556	174.664	ppb
3) ATM Ethene	0.77	1186157	162.049	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R42.D
Sample : 210127A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R33.D Vial: 33
Acq On : 27 Jan 21 14:51 Operator: LS
Sample : BA25689W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 14:53 2021 Quant Results File: RSK0914A.RES

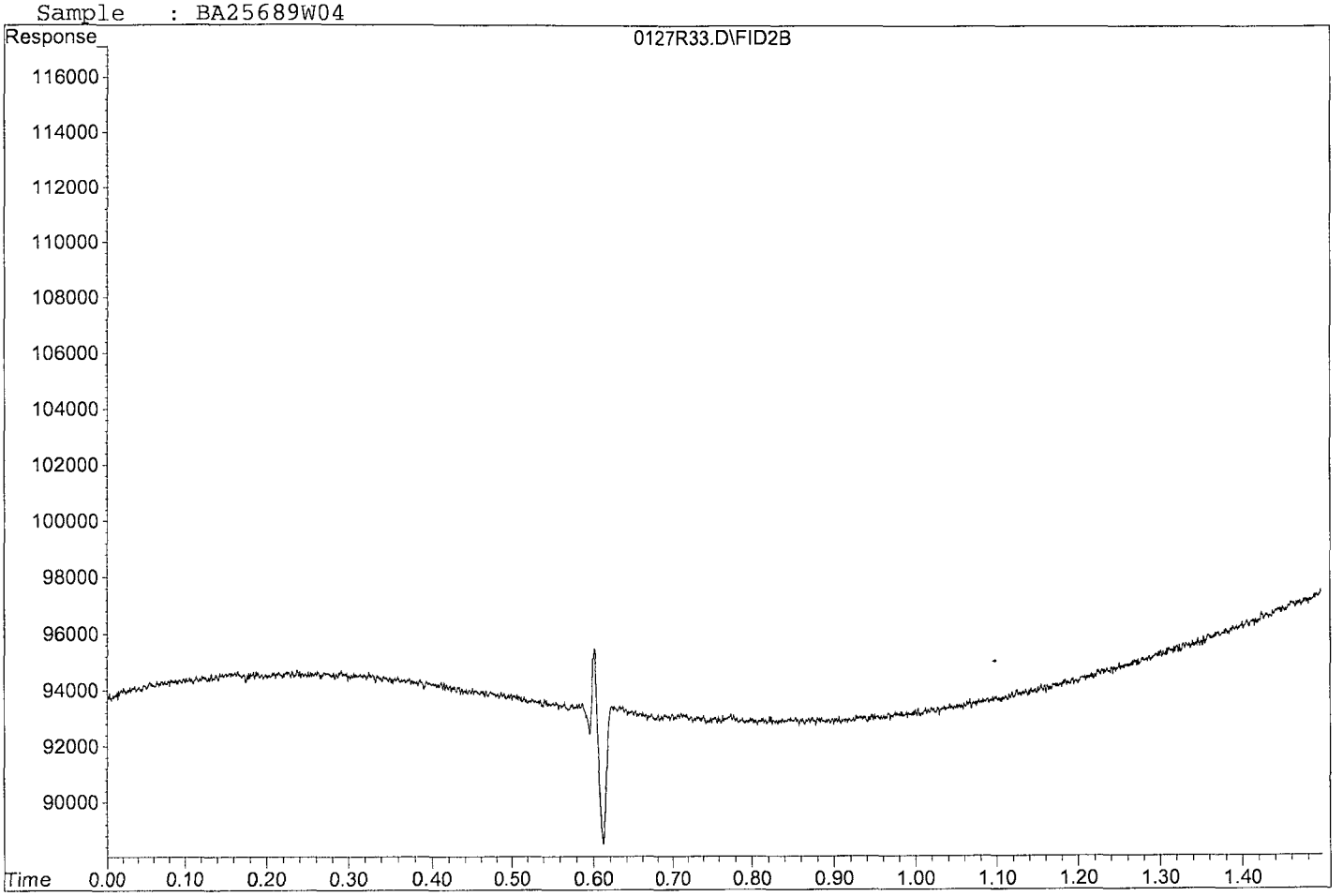
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R33.D
Sample : BA25689W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R34.D Vial: 34
Acq On : 27 Jan 21 14:54 Operator: LS
Sample : BA25690W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 28 14:15 2021 Quant Results File: RSK0914A.RES

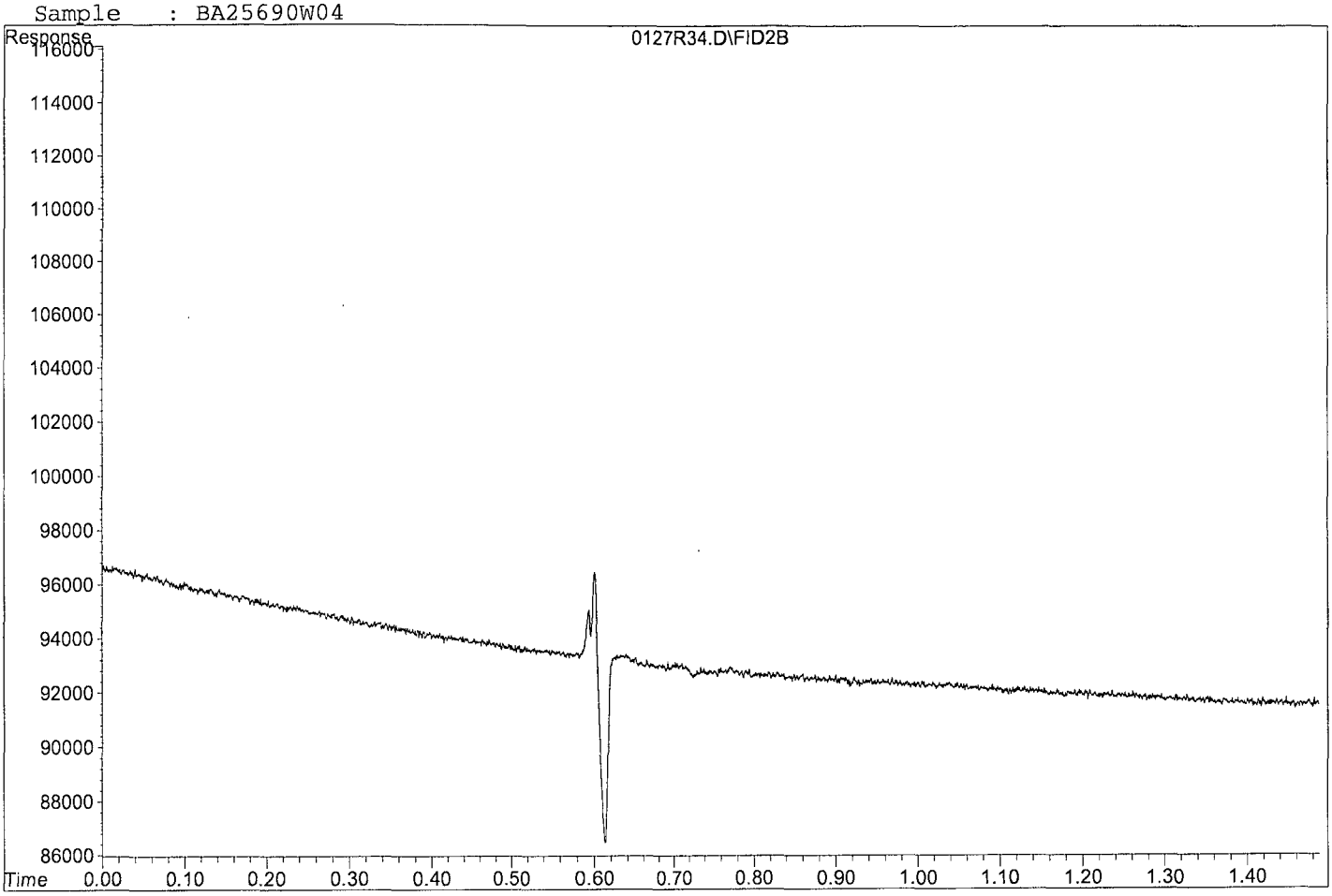
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R34.D
Sample : BA25690W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R35.D Vial: 35
Acq On : 27 Jan 21 14:57 Operator: LS
Sample : BA25692W03 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 14:59 2021 Quant Results File: RSK0914A.RES

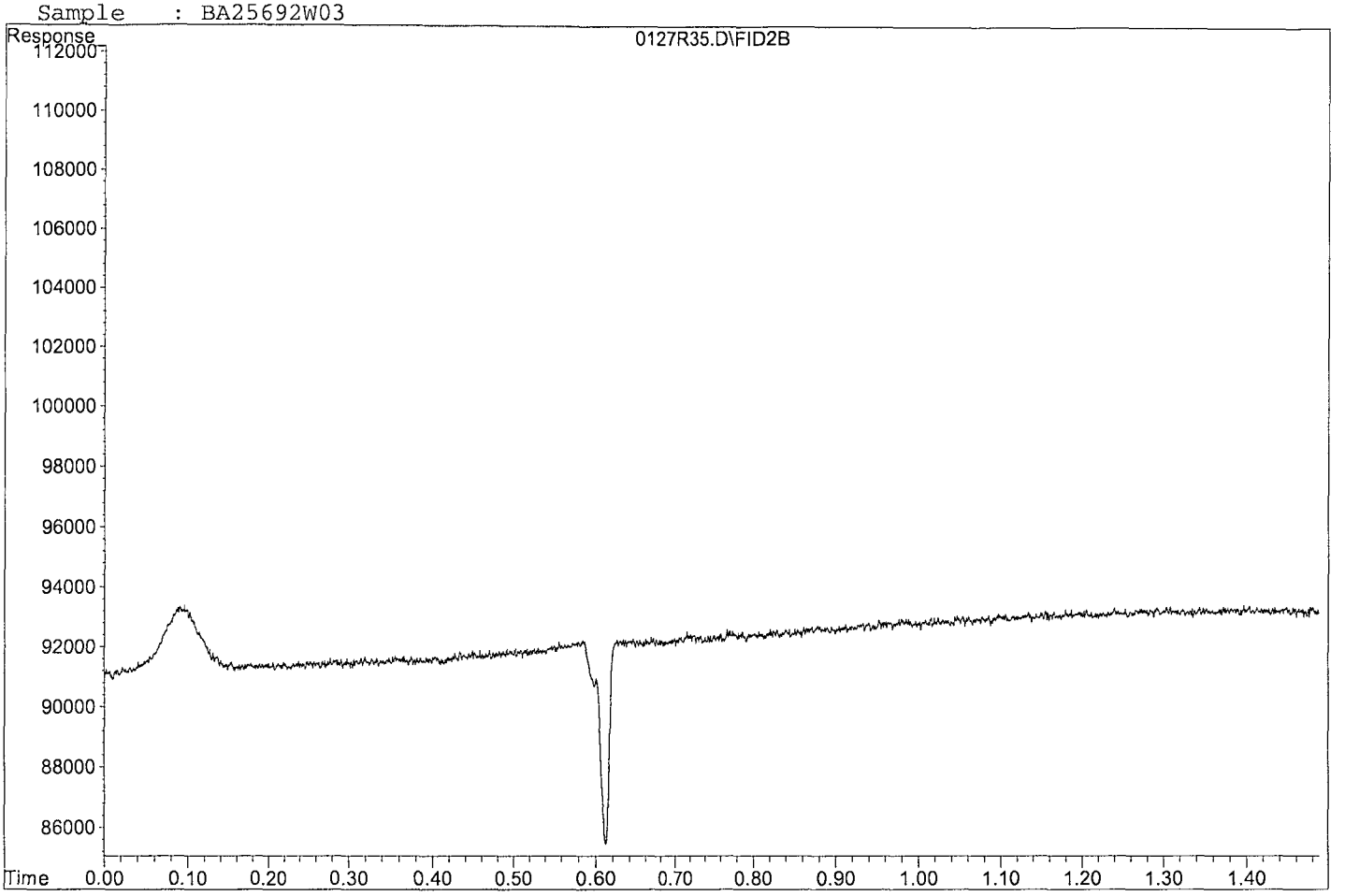
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R35.D
Sample : BA25692W03



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R36.D Vial: 36
Acq On : 27 Jan 21 14:59 Operator: LS
Sample : BA25693W03 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 15:02 2021 Quant Results File: RSK0914A.RES

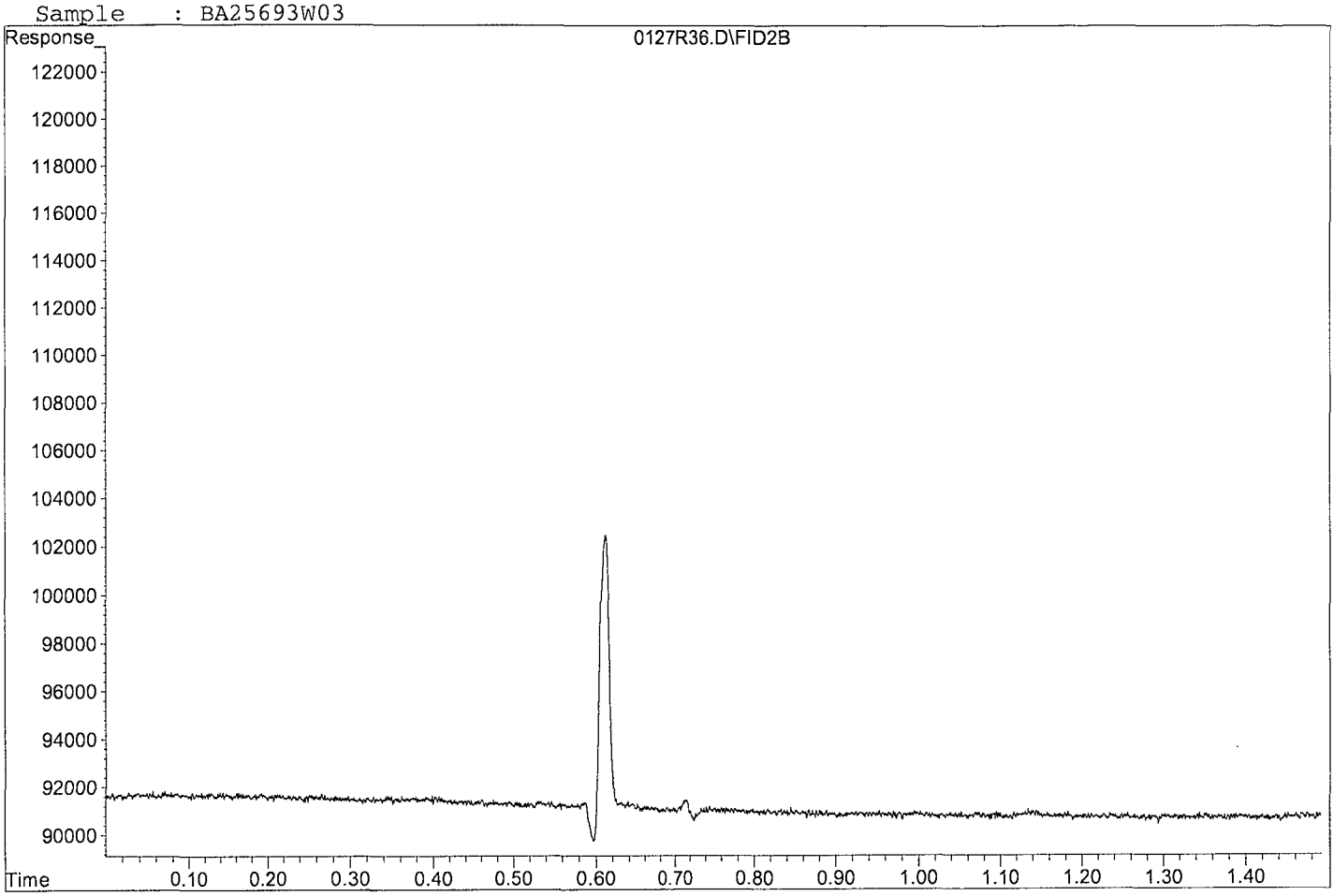
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R36.D
Sample : BA25693W03



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R37.D Vial: 37
Acq On : 27 Jan 21 15:03 Operator: LS
Sample : BA25695W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 15:06 2021 Quant Results File: RSK0914A.RES

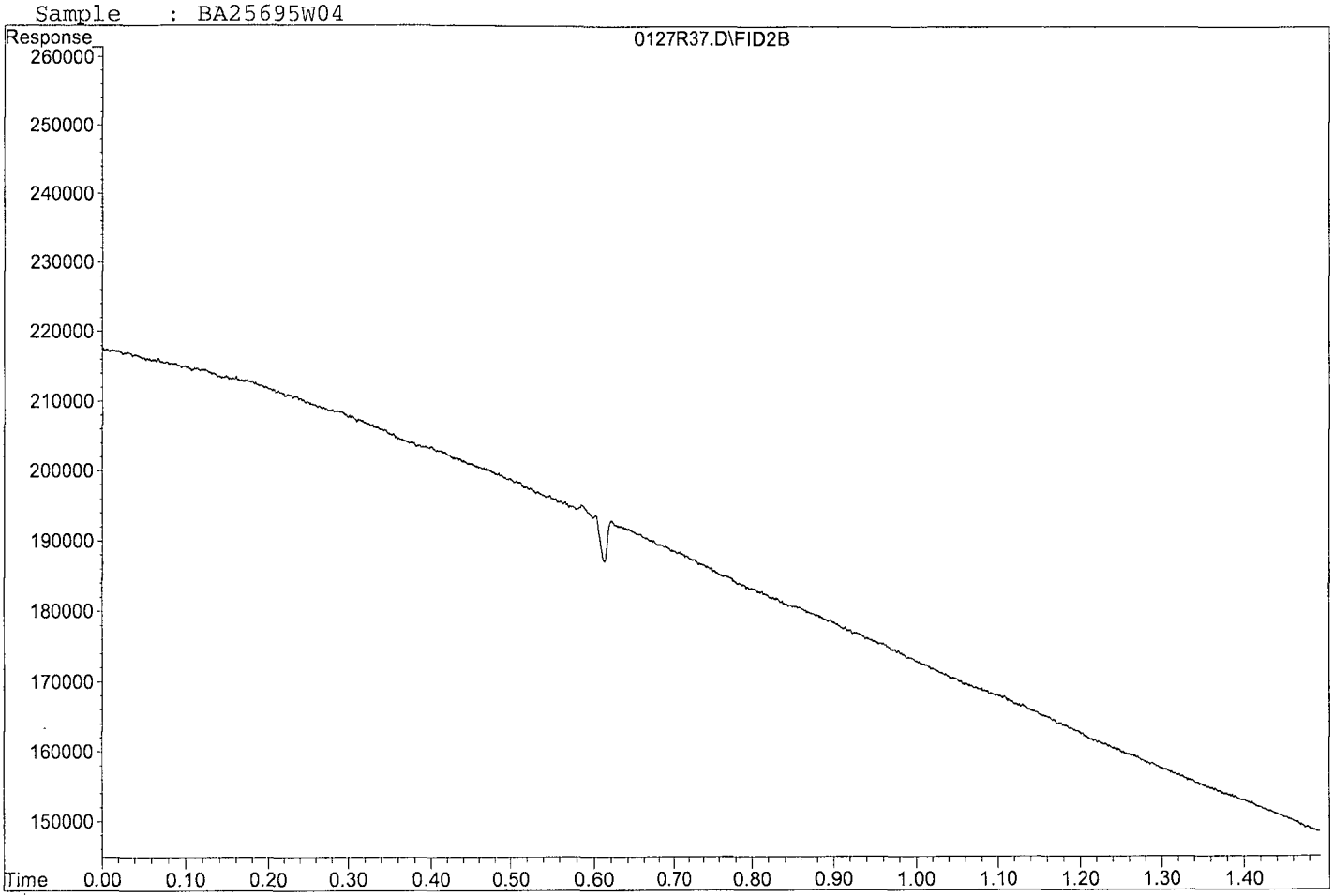
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R37.D
Sample : BA25695W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R38.D Vial: 38
Acq On : 27 Jan 21 15:12 Operator: LS
Sample : BA25696W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 15:14 2021 Quant Results File: RSK0914A.RES

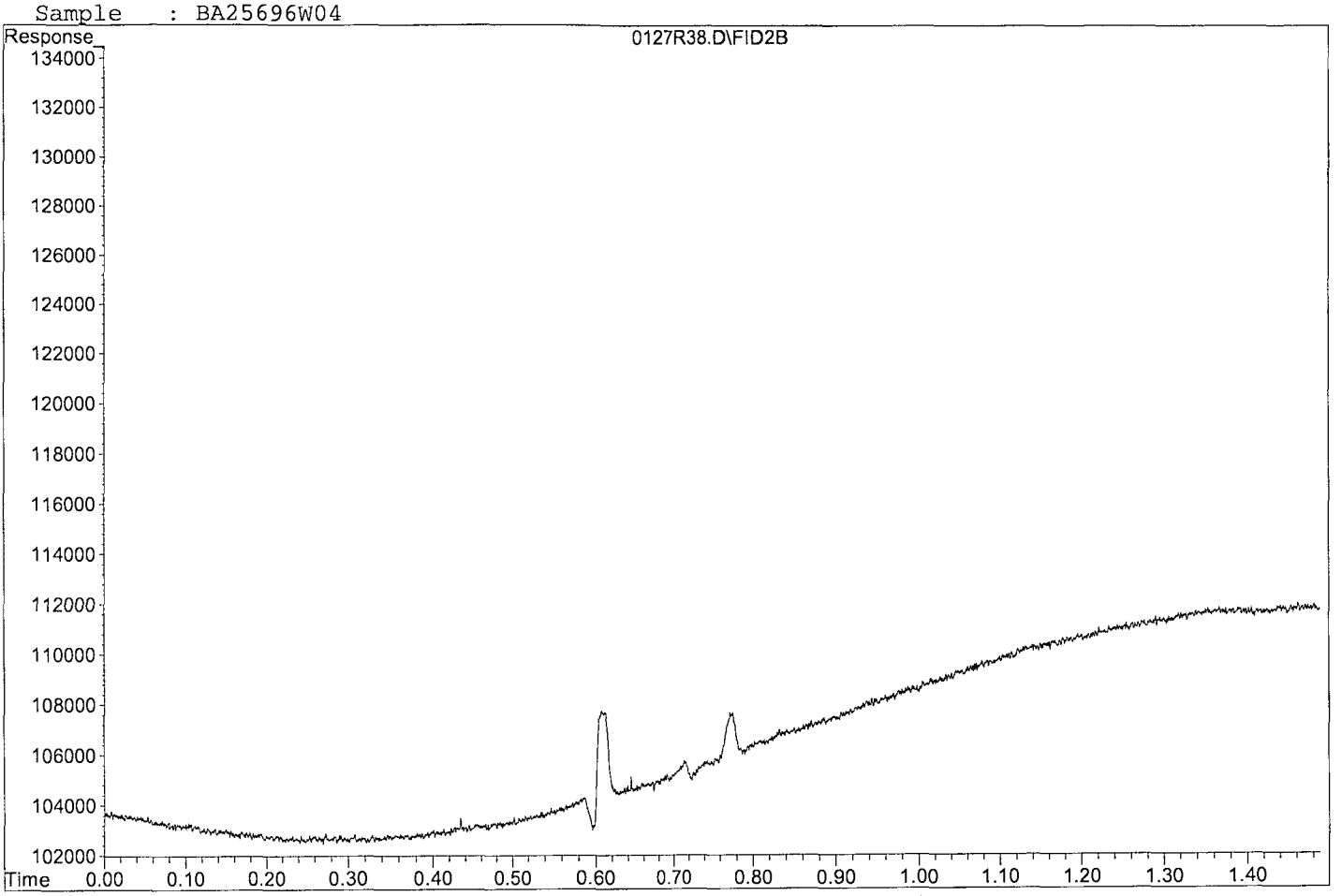
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R38.D
Sample : BA25696W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R39.D Vial: 39
Acq On : 27 Jan 21 15:15 Operator: LS
Sample : BA25698W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 28 14:16 2021 Quant Results File: RSK0914A.RES

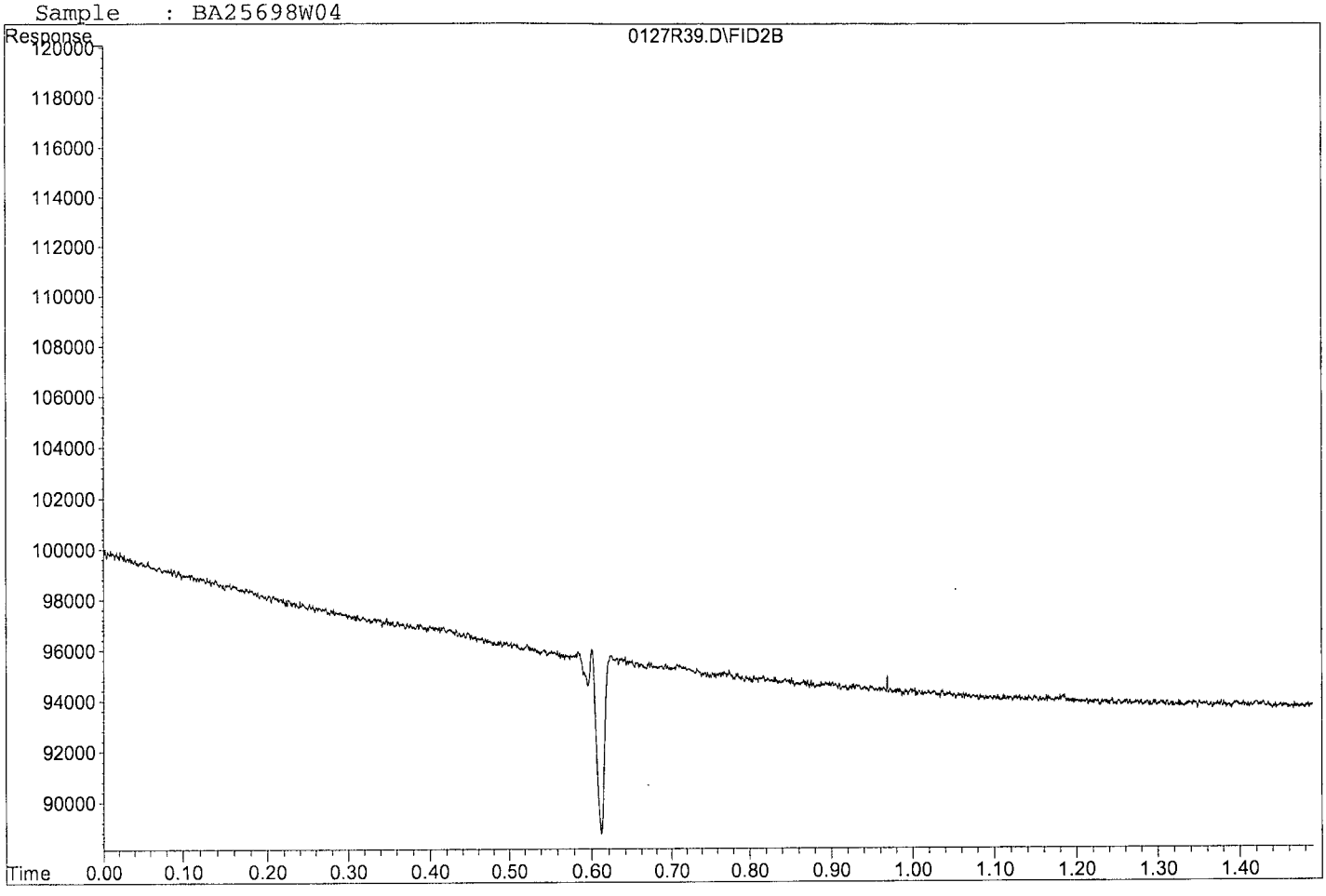
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R39.D
Sample : BA25698W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R40.D Vial: 40
Acq On : 27 Jan 21 15:18 Operator: LS
Sample : BA25699W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : *autoint1.e*
Quant Time: Jan 27 15:25 2021 Quant Results File: RSK0914A.RES

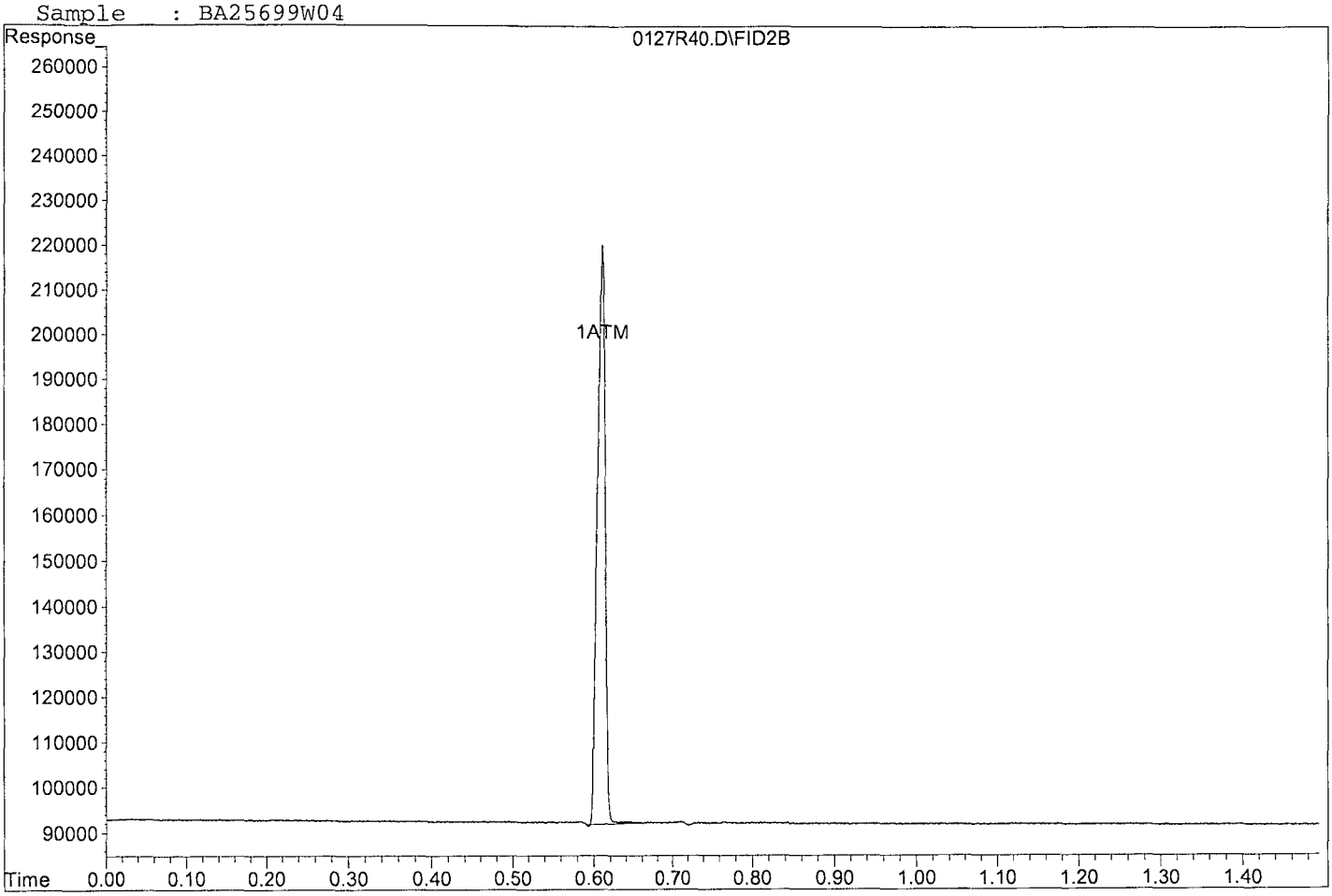
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	119369	9.610	ppb
Target Compounds				
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R40.D
Sample : BA25699W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R13.D Vial: 13
Acq On : 27 Jan 21 12:46 Operator: LS
Sample : 210127A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 12:49 2021 Quant Results File: RSK0914A.RES

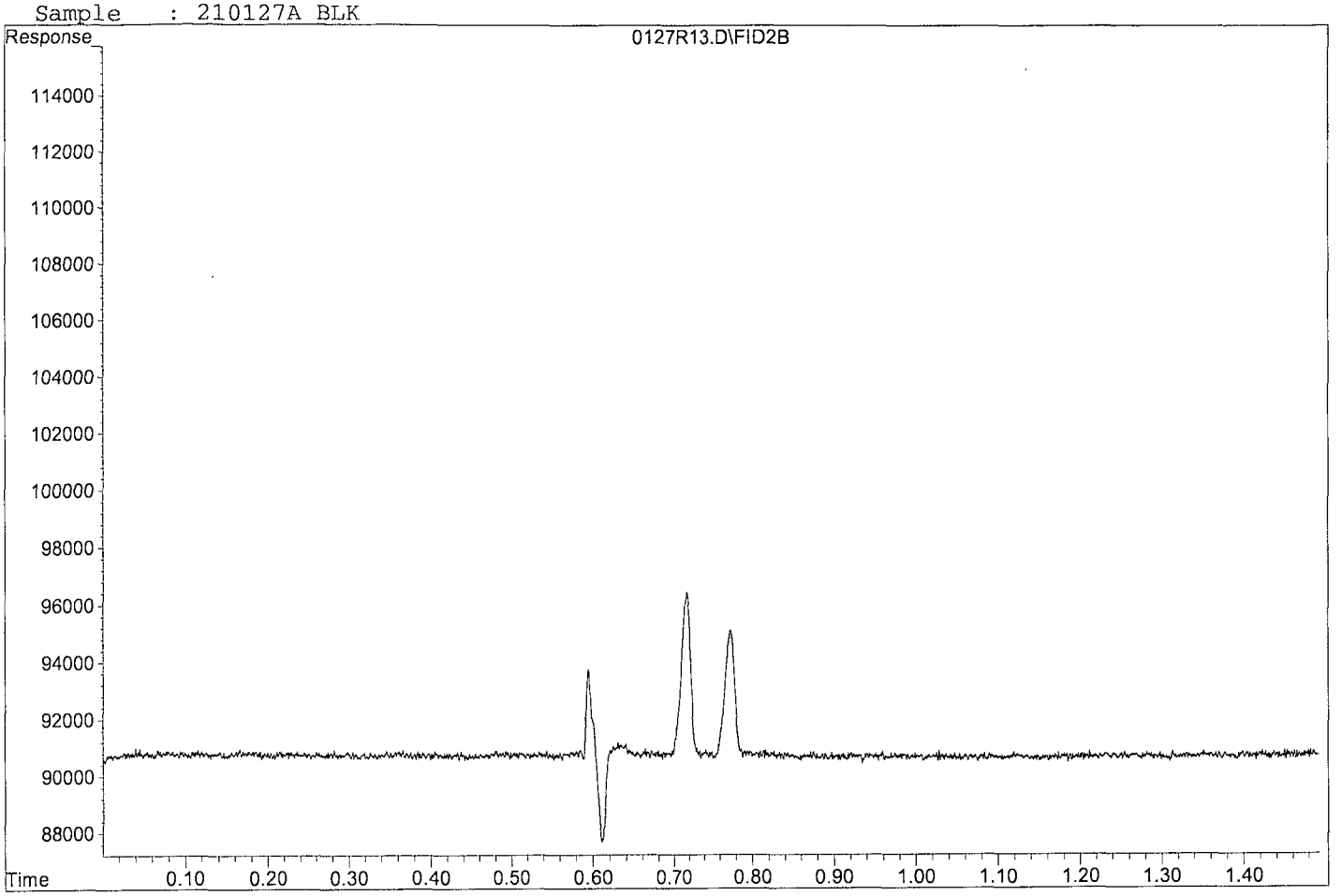
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R13.D
Sample : 210127A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R07.D Vial: 7
Acq On : 27 Jan 21 12:23 Operator: LS
Sample : 210127A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 12:25 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

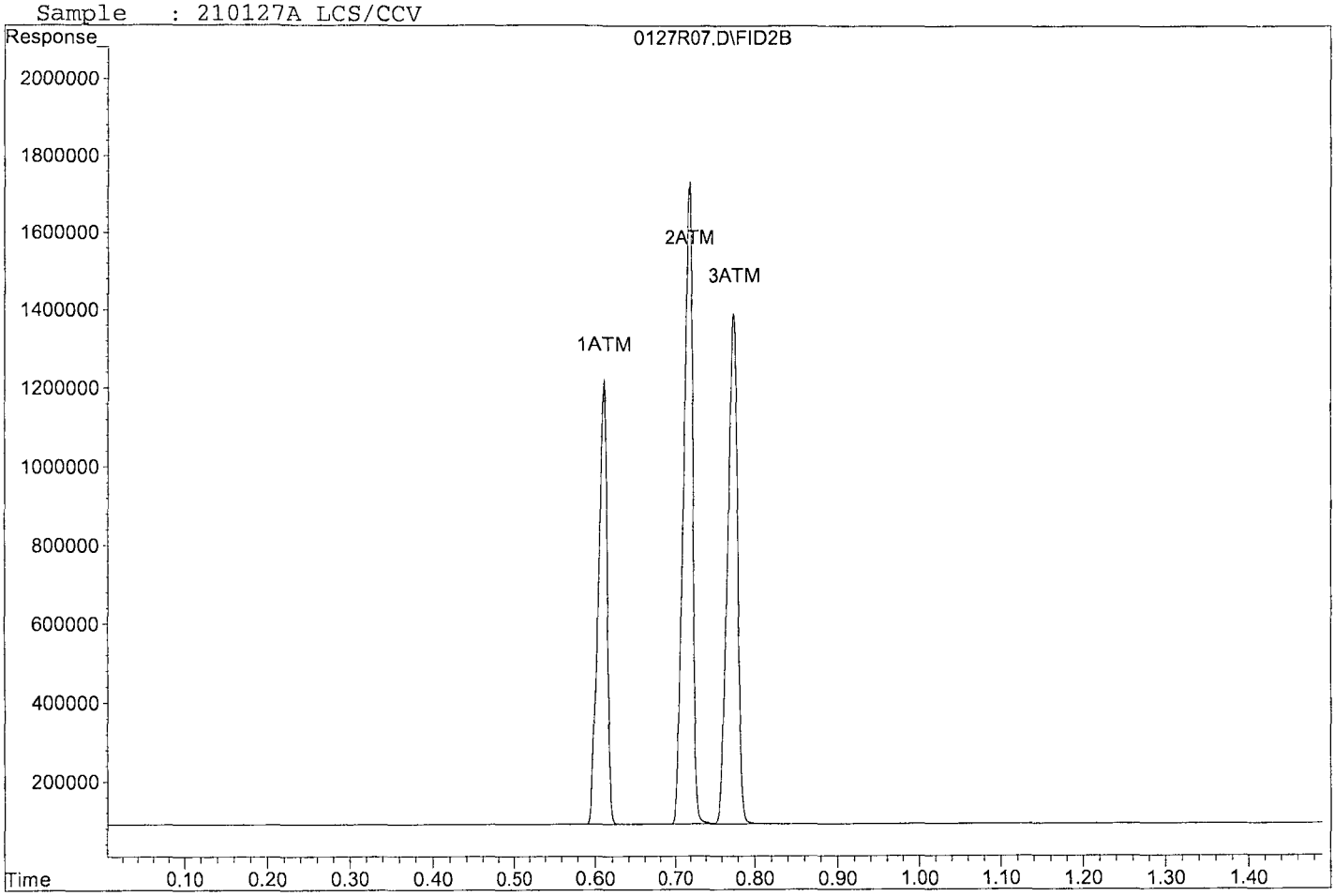
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1171977	94.959	ppb
2) ATM Ethane	0.72	1671910	182.273	ppb
3) ATM Ethene	0.77	1313980	179.431	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R07.D
Sample : 210127A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0127R12.D Vial: 12
Acq On : 27 Jan 21 12:42 Operator: LS
Sample : 210127A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 27 12:46 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

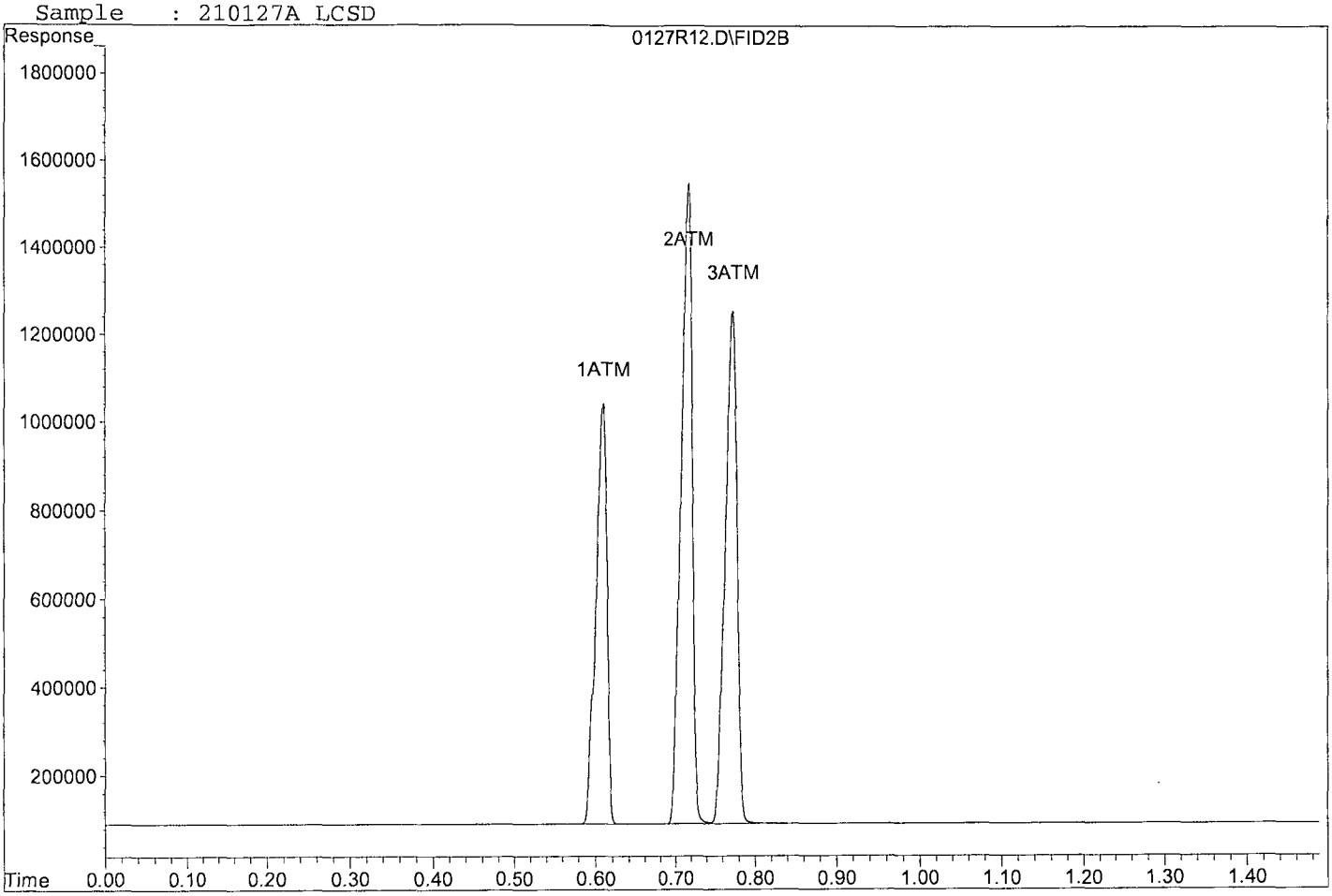
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	925007	74.934	ppb
2) ATM Ethane	0.72	1436601	156.457	ppb
3) ATM Ethene	0.77	1147601	156.806	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0127R12.D
Sample : 210127A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 12/03/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	7	0127R07.D	1	210127A LCS/CCV		27 Jan 21 12:23
2	12	0127R12.D	1	210127A LCSD		27 Jan 21 12:42
3	13	0127R13.D	1	210127A BLK		27 Jan 21 12:46
4	33	0127R33.D	1	BA25689W04		27 Jan 21 14:51
5	34	0127R34.D	1	BA25690W04		27 Jan 21 14:54
6	35	0127R35.D	1	BA25692W03		27 Jan 21 14:57
7	36	0127R36.D	1	BA25693W03		27 Jan 21 14:59
8	37	0127R37.D	1	BA25695W04		27 Jan 21 15:03
9	38	0127R38.D	1	BA25696W04		27 Jan 21 15:12
10	39	0127R39.D	1	BA25698W04		27 Jan 21 15:15
11	40	0127R40.D	1	BA25699W04		27 Jan 21 15:18
12	42	0127R42.D	1	210127A ENDING CCV		27 Jan 21 15:29
13	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
14	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
15	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
16	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
17	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
18	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
19	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
20	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

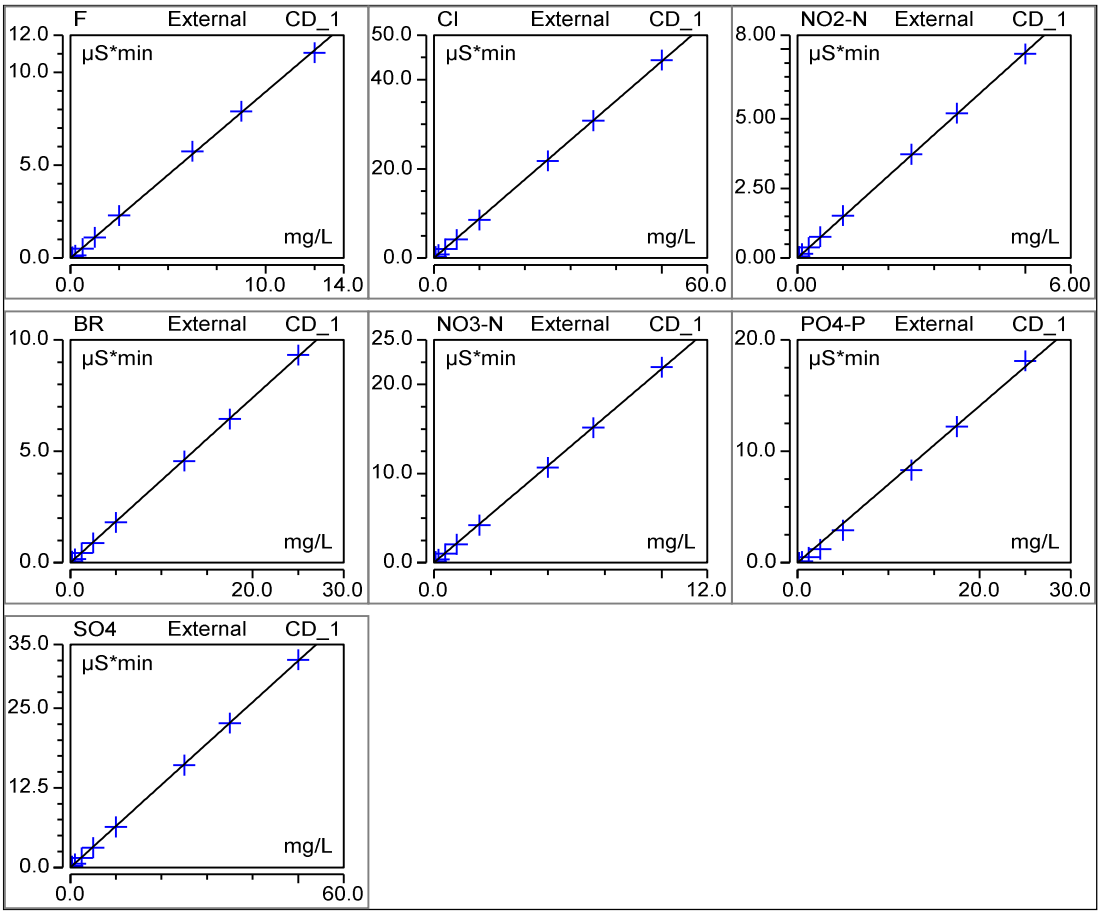
Calibration Batch Report

Sequence:	**201229**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.895	0.000	99.9560
Cl	Area	Lin	9.000	0.000	0.883	0.000	99.9833
NO2-N	Area	Lin	9.000	0.000	1.476	0.000	99.9867
BR	Area	Lin	9.000	0.000	0.370	0.000	99.9857
NO3-N	Area	Lin	9.000	0.000	2.175	0.000	99.9776
PO4-P	Area	Lin	8.000	0.000	0.704	0.000	99.5670
SO4	Area	Lin	9.000	0.000	0.649	0.000	99.9894

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.12.29	0.030	0.1952	0.0206	0.0879	0.0399	n.a.	0.2546
Cal 2 2020.12.29	0.065	0.3660	0.0382	0.1779	0.0685	0.0484	0.3350
Cal 3 2020.12.29	0.165	0.8899	0.1058	0.4441	0.1794	0.1725	0.8705
Cal 4 2020.12.29	0.569	2.3118	0.2547	1.1840	0.4620	0.7043	2.2914
Cal 5 2020.12.29	1.241	4.7003	0.5172	2.3974	0.9491	1.7211	4.7702
Cal 6 2020.12.29	2.562	9.6722	1.0305	4.8975	1.9393	4.1390	9.8124
Cal 7 2020.12.29	6.421	24.6930	2.5228	12.3317	4.9143	11.8093	24.7570
Cal 8 2020.12.29	8.827	34.9228	3.5216	17.4201	6.9681	17.3586	34.9246
Cal 9 2020.12.29	12.354	50.3149	4.9653	25.1755	10.0848	25.7294	50.2481

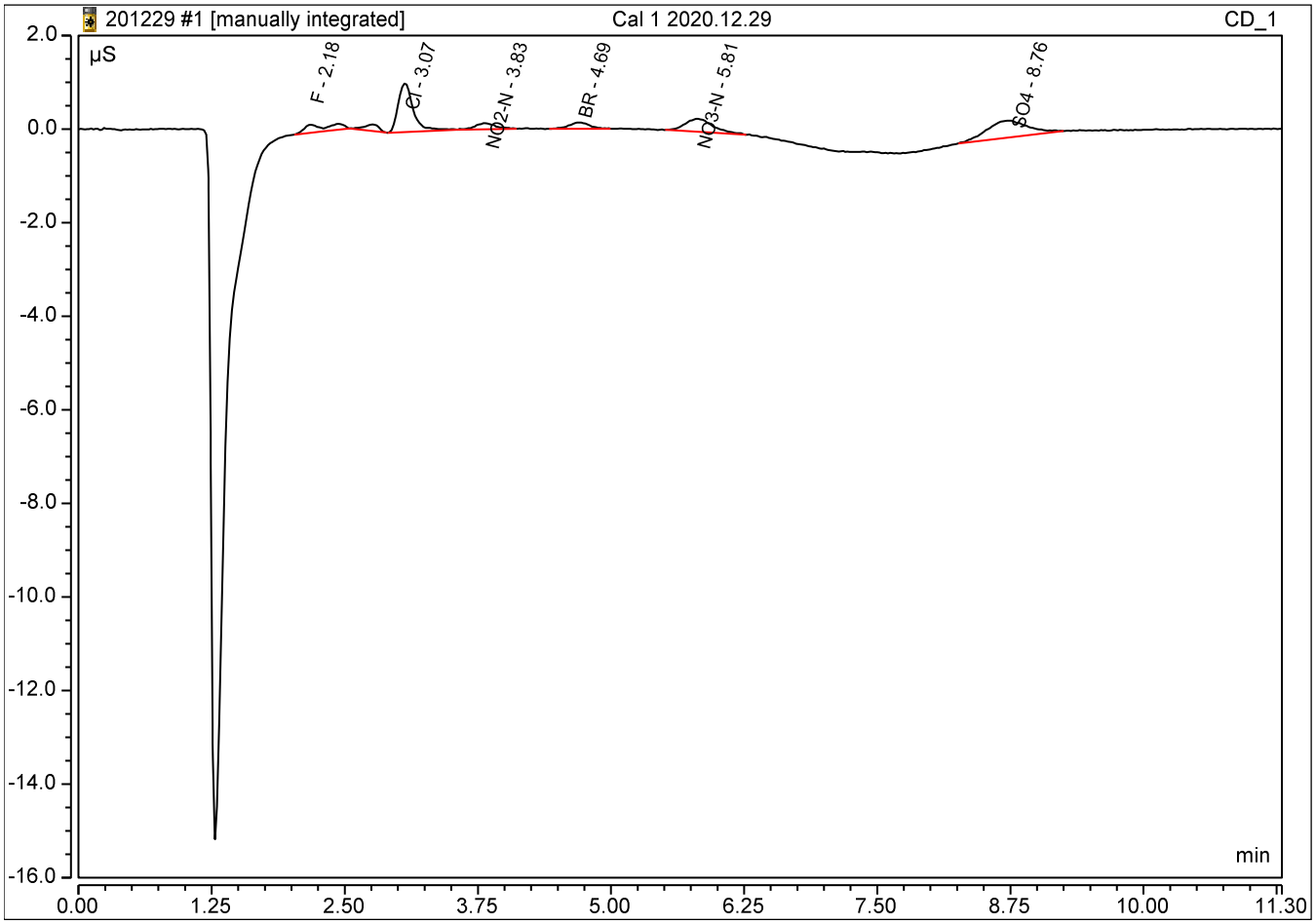


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.027	0.170	0.03	0.05	60.9%
4	3.07	**Cl**	BMB	0.172	1.041	0.20	0.2	97.6%
5	3.83	**NO2-N**	BMB	0.030	0.136	0.02	0.02	103.2%
6	4.69	**BR**	BMB*	0.033	0.142	0.09	0.1	87.9%
7	5.81	**NO3-N**	BMB	0.087	0.279	0.04	0.04	99.6%
8	8.76	**SO4**	BMB*	0.165	0.356	0.25	0.2	127.3%

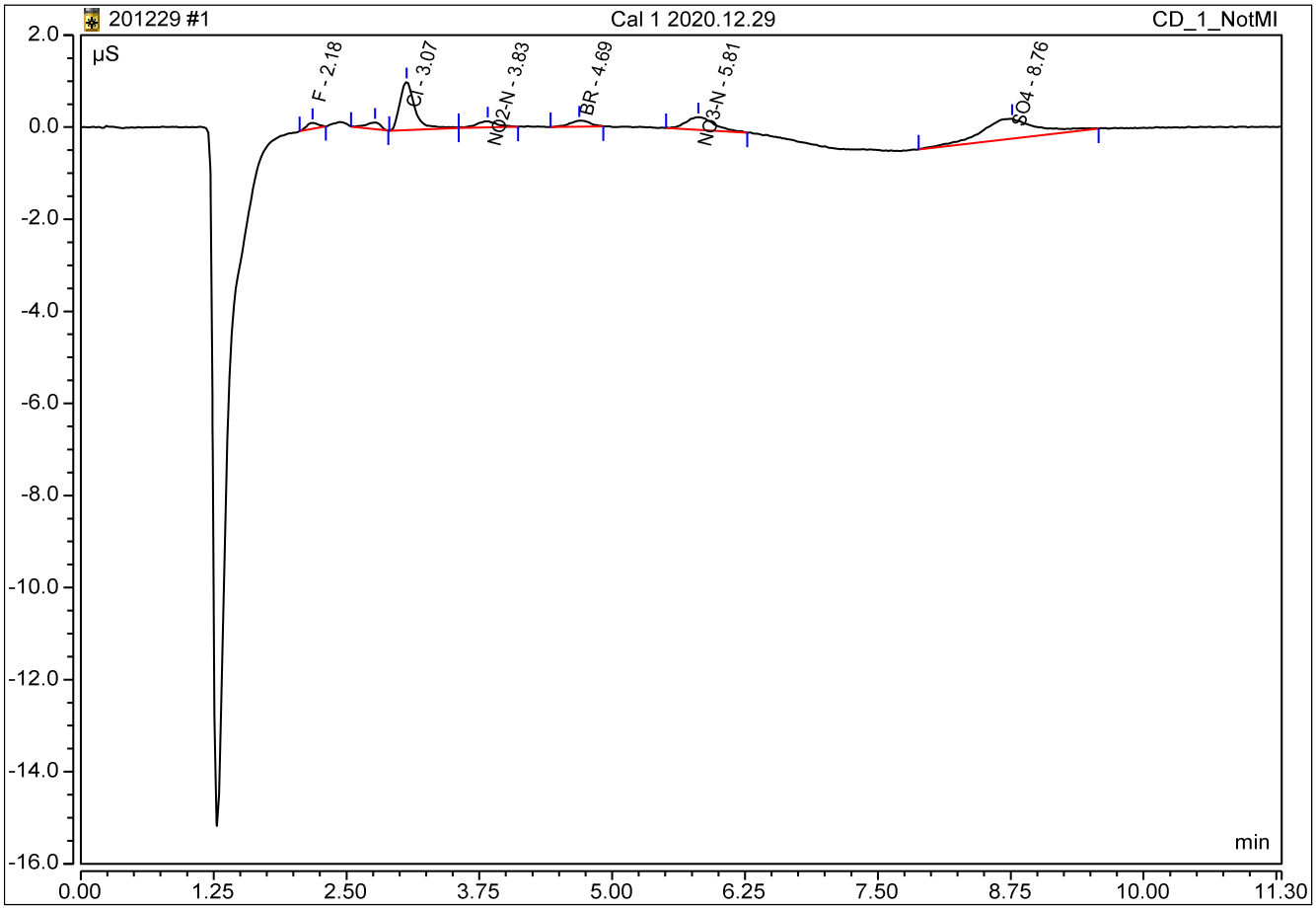


MI 5 F Br SO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.017	0.127	0.0188
4	3.07	**Cl**	BMB	0.172	1.041	0.1952
5	3.83	**NO2-N**	BMB	0.030	0.136	0.0206
6	4.69	**BR**	BMB*	0.029	0.136	0.0777
7	5.81	**NO3-N**	BMB	0.087	0.279	0.0399
8	8.76	**SO4**	BMB*	0.271	0.433	0.4316

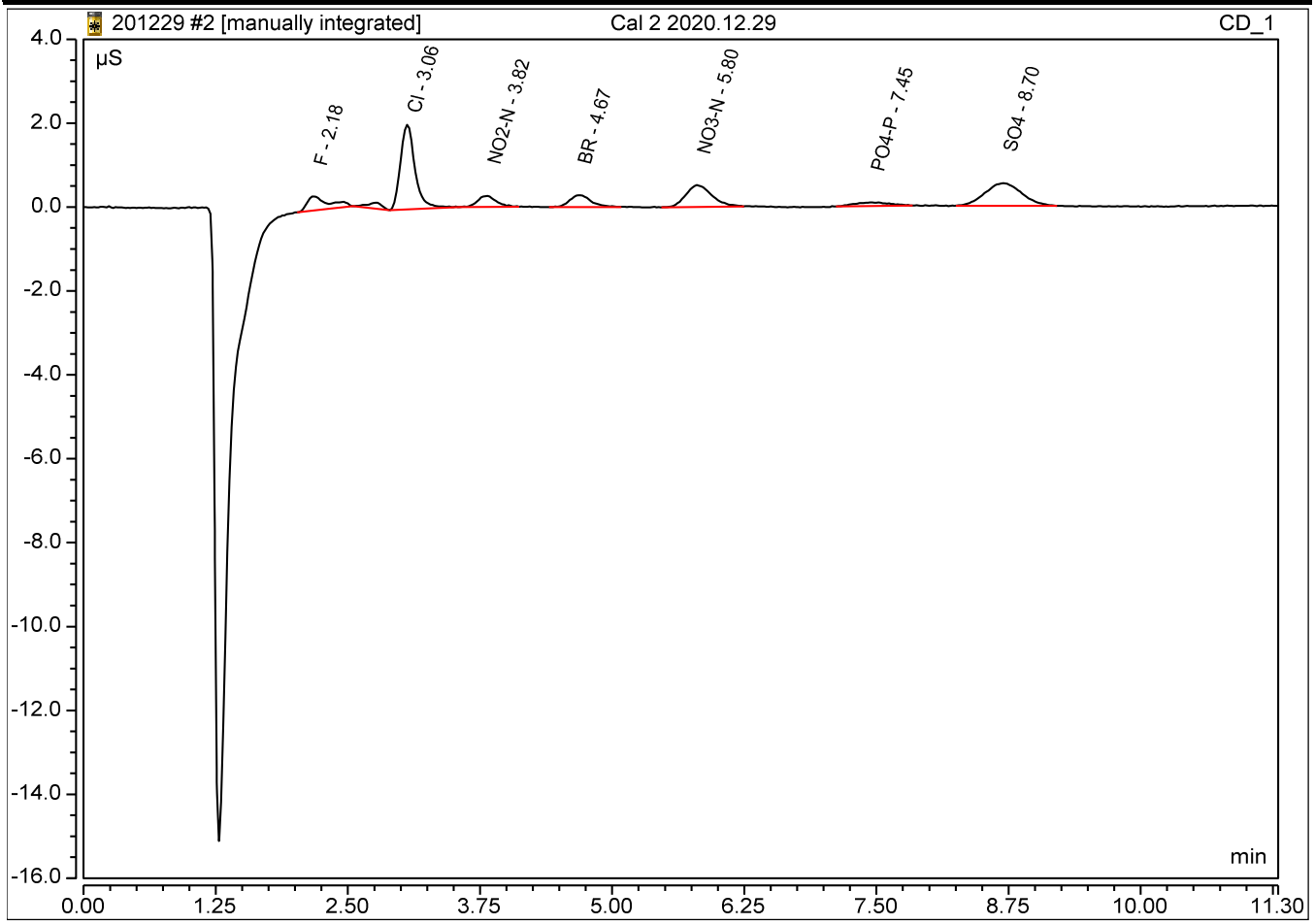


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BM *	0.058	0.338	0.06	0.1	64.6%
4	3.06	**Cl**	BMB	0.323	2.016	0.37	0.4	91.5%
5	3.82	**NO2-N**	BMB	0.056	0.268	0.04	0.04	95.6%
6	4.67	**BR**	BMB	0.066	0.282	0.18	0.2	89.0%
7	5.80	**NO3-N**	BMB	0.149	0.521	0.07	0.08	85.6%
8	7.45	**PO4-P**	BMB	0.034	0.096	0.05	0.2	24.2%
9	8.70	**SO4**	BMB	0.217	0.542	0.33	0.4	83.7%

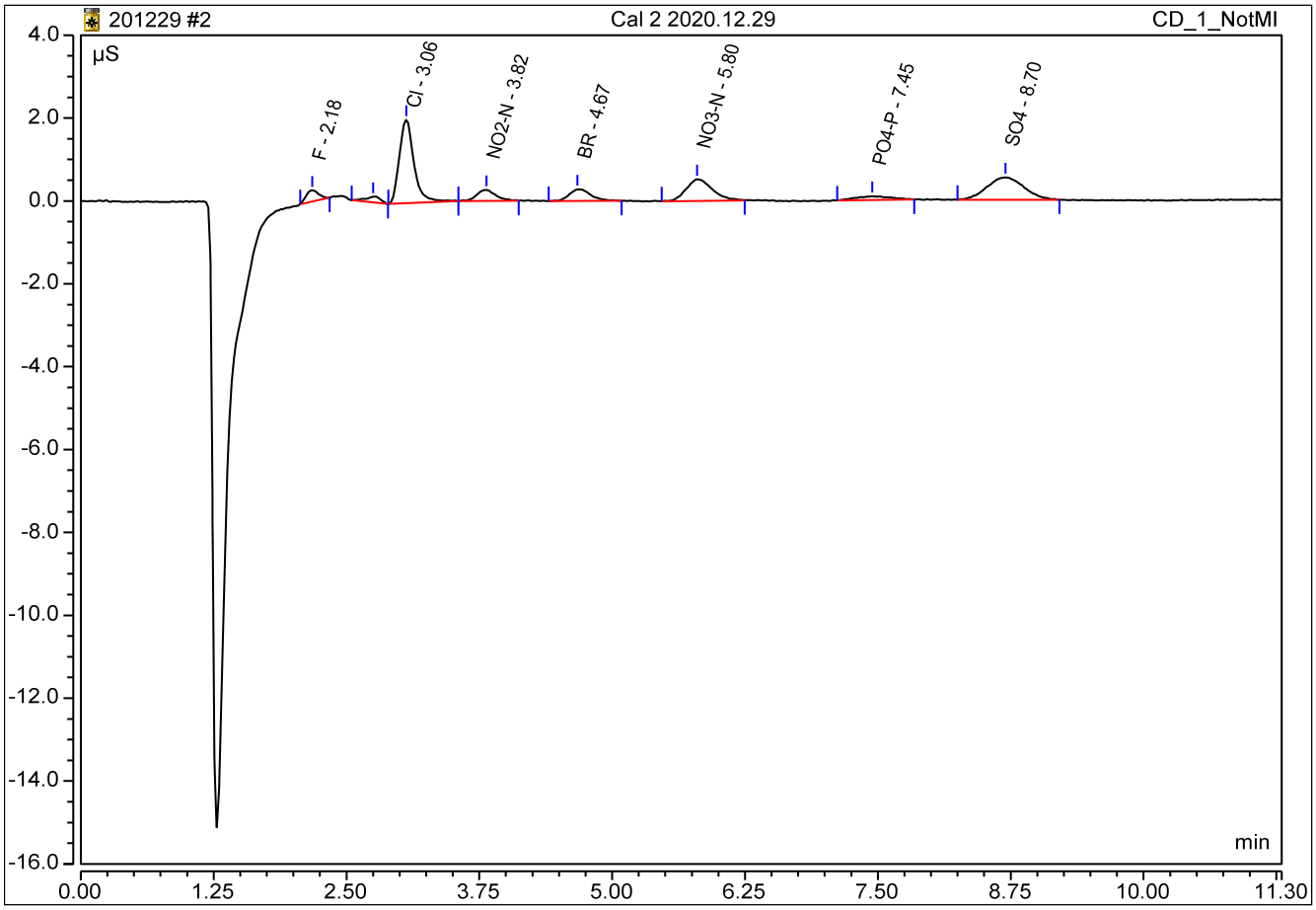


MI 5 F GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:39**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BM *	0.037	0.268	0.0419
4	3.06	**Cl**	BMB	0.323	2.016	0.3660
5	3.82	**NO2-N**	BMB	0.056	0.268	0.0382
6	4.67	**BR**	BMB	0.066	0.282	0.1779
7	5.80	**NO3-N**	BMB	0.149	0.521	0.0685
8	7.45	**PO4-P**	BMB	0.034	0.096	0.0504
9	8.70	**SO4**	BMB	0.217	0.542	0.3465

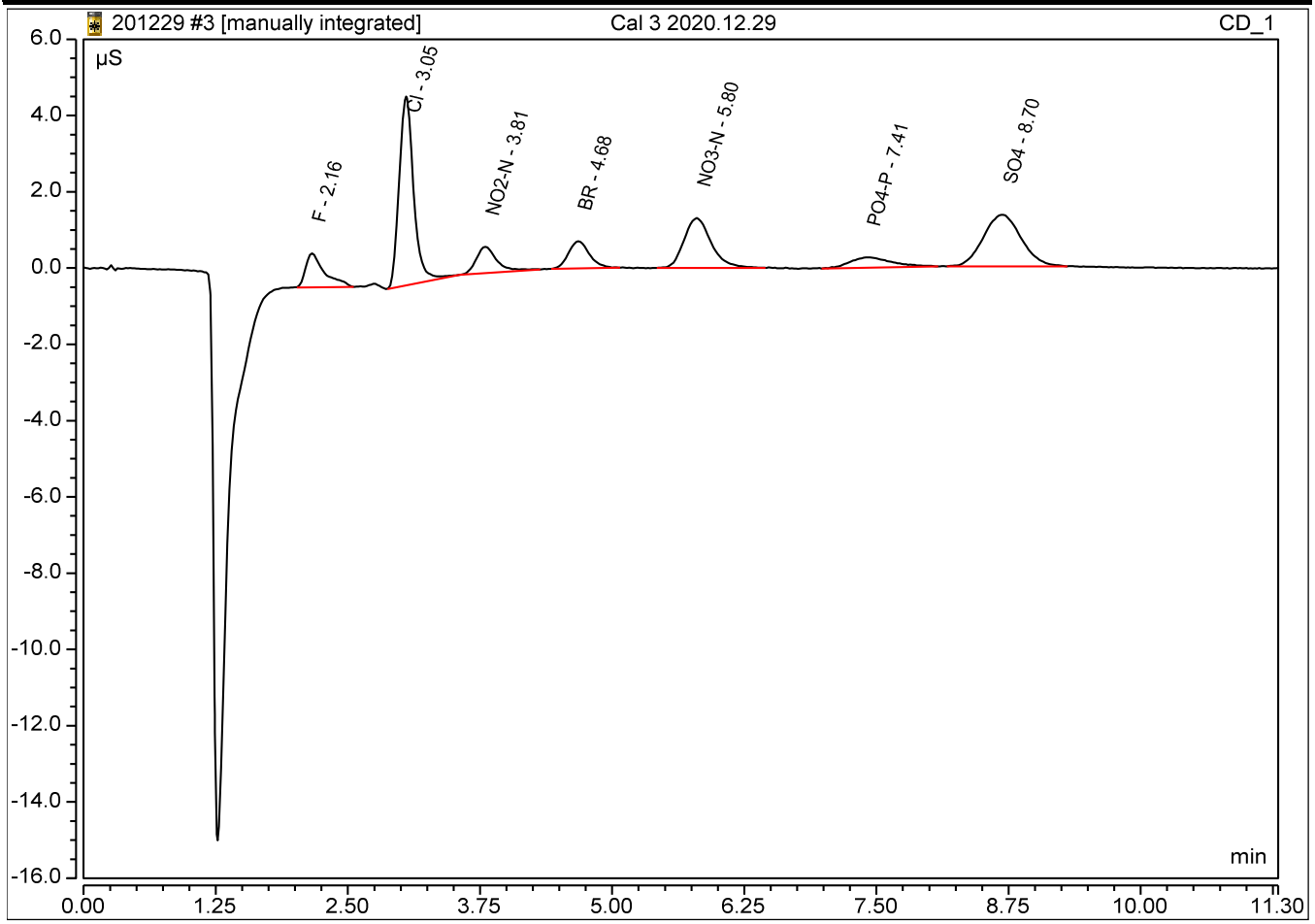


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BM *	0.147	0.890	0.16	0.25	65.8%
3	3.05	**Cl**	BMB	0.785	4.952	0.89	1	89.0%
4	3.81	**NO2-N**	BMB	0.156	0.689	0.11	0.1	105.8%
5	4.68	**BR**	BMB	0.164	0.714	0.44	0.5	88.8%
6	5.80	**NO3-N**	BMB	0.390	1.313	0.18	0.2	89.7%
7	7.41	**PO4-P**	BMB*	0.121	0.273	0.17	0.5	34.5%
8	8.70	**SO4**	BMB	0.565	1.354	0.87	1	87.1%

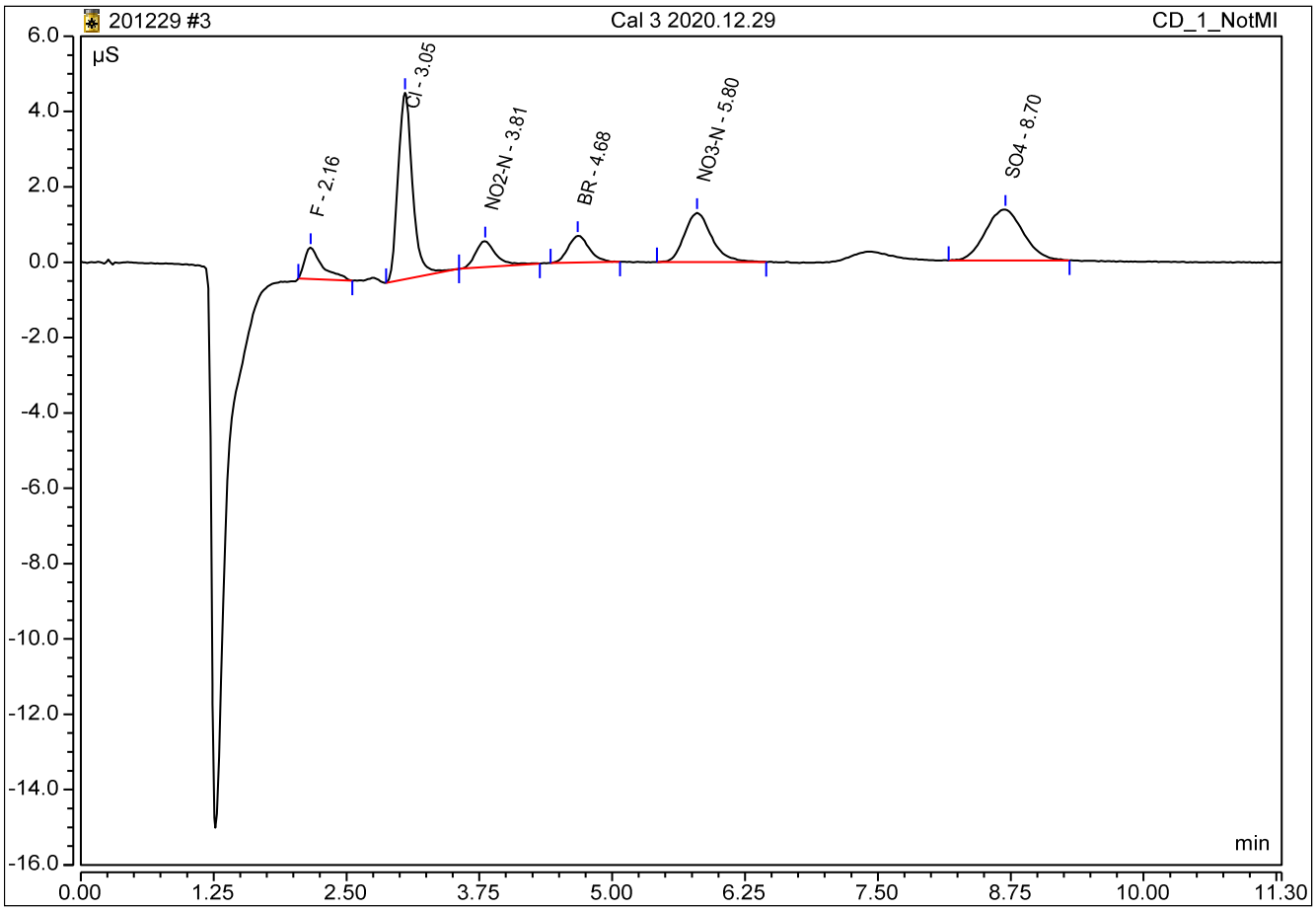


MI 5 F PO4 GA 12/29/20

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 11:53**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BM *	0.163	0.830	0.1851
3	3.05	**Cl**	BMB	0.785	4.952	0.8899
4	3.81	**NO2-N**	BMB	0.156	0.689	0.1058
5	4.68	**BR**	BMB	0.164	0.714	0.4441
6	5.80	**NO3-N**	BMB	0.390	1.313	0.1794
7	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
8	8.70	**SO4**	BMB	0.565	1.354	0.9004

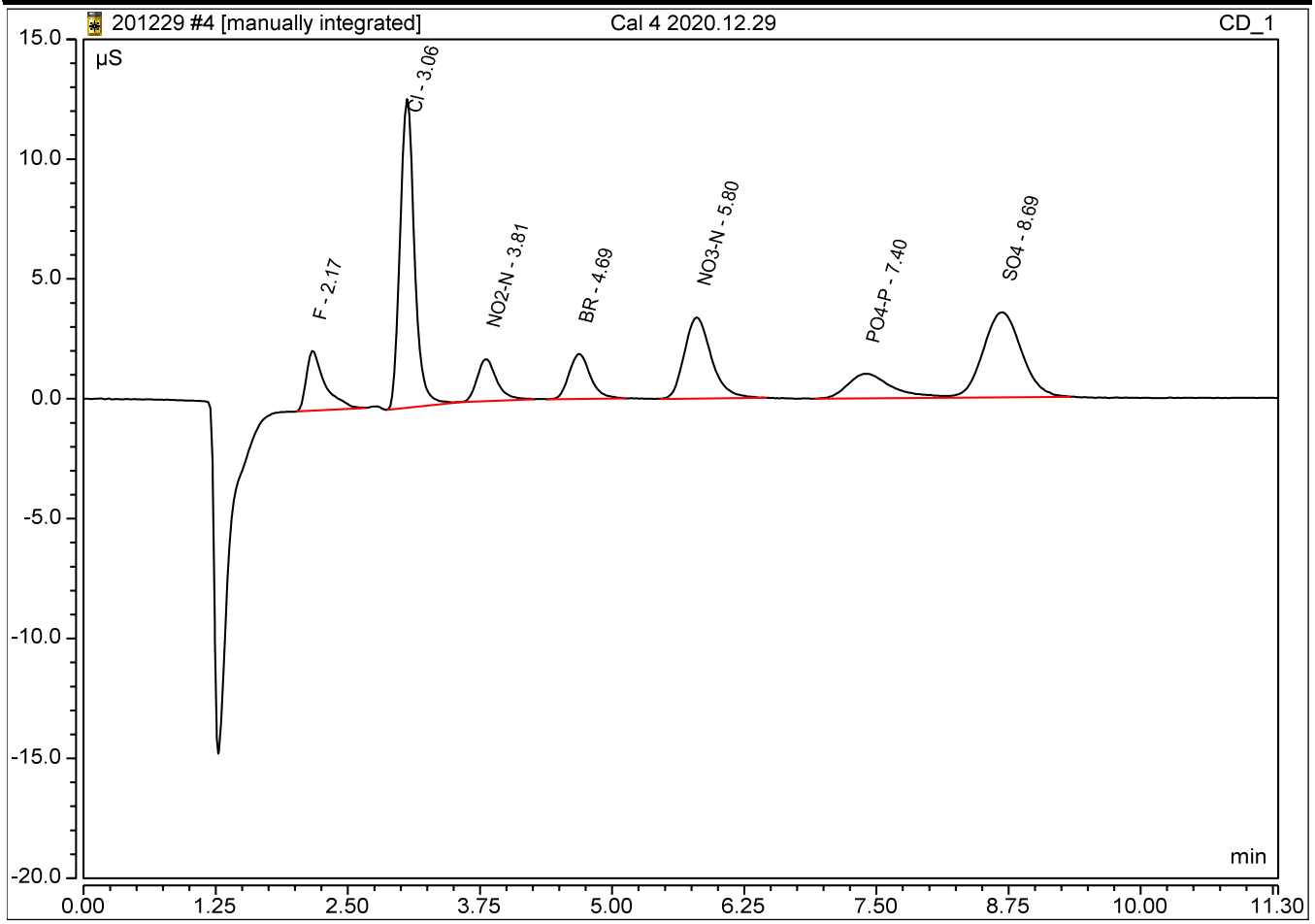


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB*	0.510	2.511	0.57	0.625	91.1%
2	3.06	**Cl**	BMB	2.040	12.880	2.31	2.5	92.5%
3	3.81	**NO2-N**	BMB	0.376	1.749	0.25	0.25	101.9%
4	4.69	**BR**	BMB	0.438	1.879	1.18	1.25	94.7%
5	5.80	**NO3-N**	BMB	1.005	3.393	0.46	0.5	92.4%
6	7.40	**PO4-P**	BM *	0.496	1.023	0.70	1.25	56.3%
7	8.69	**SO4**	MB*	1.487	3.545	2.29	2.5	91.7%



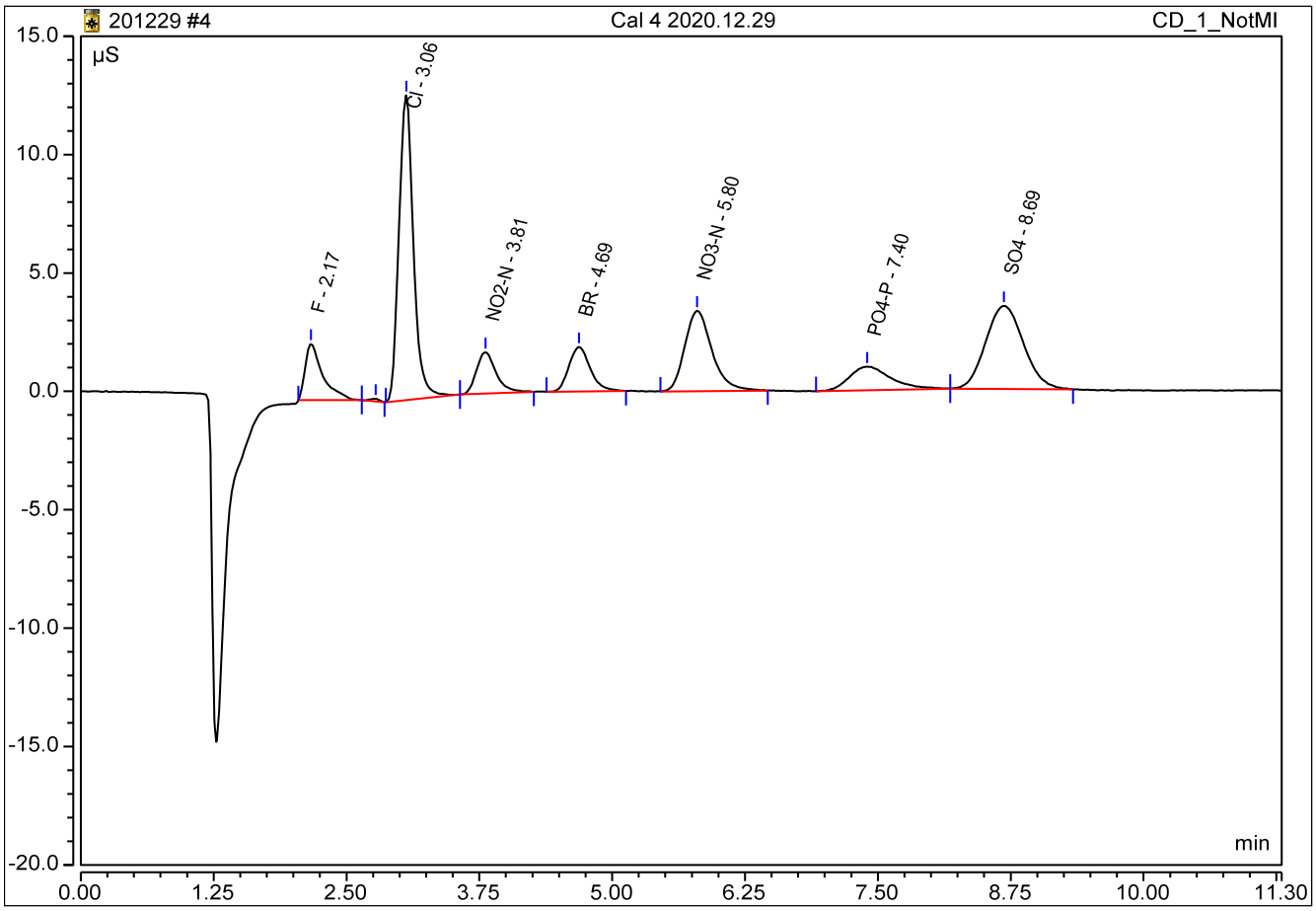
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:08**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB*	0.454	2.383	0.5138
2	3.06	**Cl**	BMB	2.040	12.880	2.3118
3	3.81	**NO2-N**	BMB	0.376	1.749	0.2547
4	4.69	**BR**	BMB	0.438	1.879	1.1840
5	5.80	**NO3-N**	BMB	1.005	3.393	0.4620
6	7.40	**PO4-P**	BM *	0.451	0.996	0.6677
7	8.69	**SO4**	MB*	1.446	3.505	2.3045

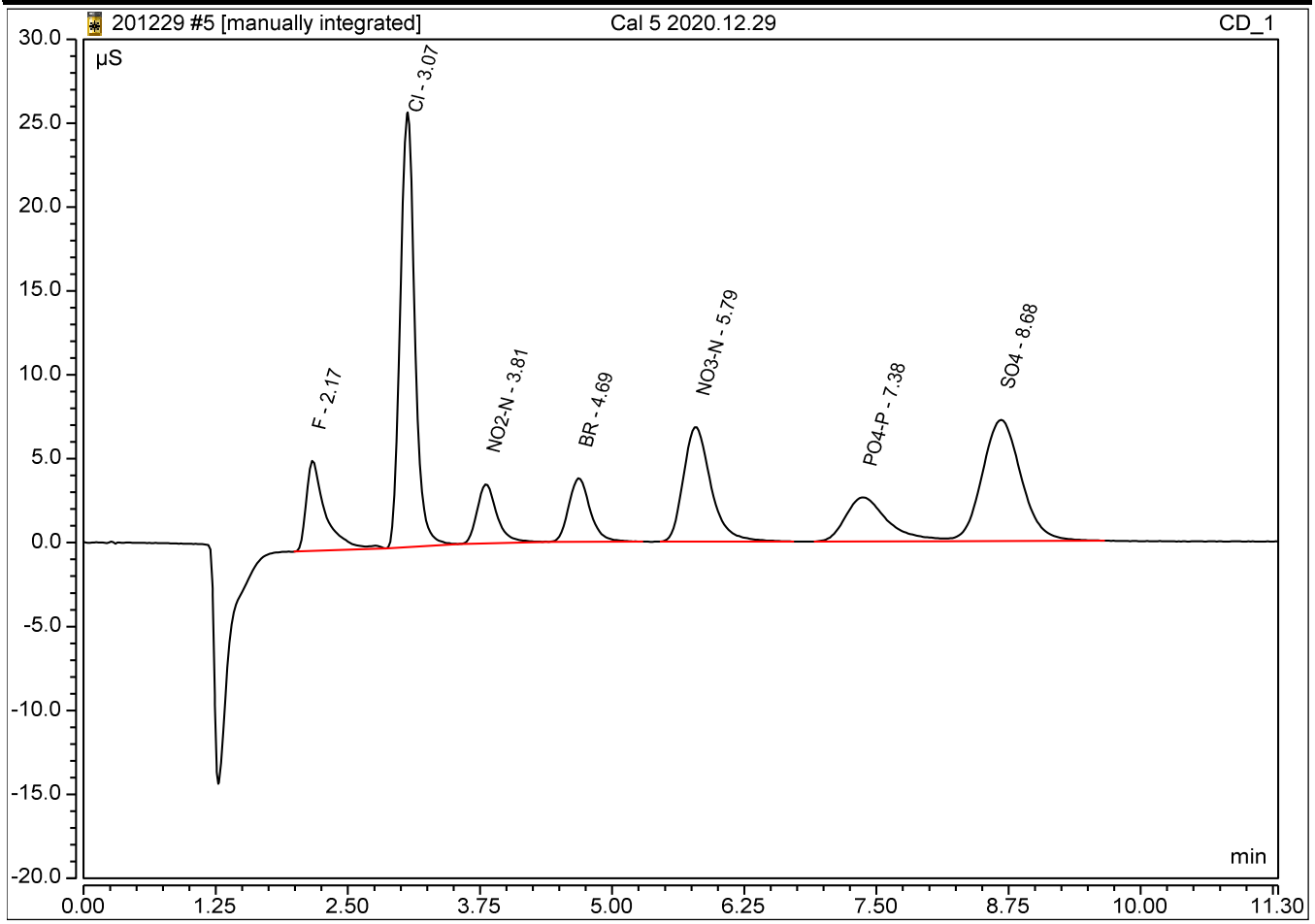


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	1.110	5.384	1.24	1.25	99.3%
3	3.07	**Cl**	bMB*	4.148	25.916	4.70	5	94.0%
4	3.81	**NO2-N**	BMB	0.763	3.513	0.52	0.5	103.4%
5	4.69	**BR**	BMB	0.887	3.786	2.40	2.5	95.9%
6	5.79	**NO3-N**	BMB	2.064	6.848	0.95	1	94.9%
7	7.38	**PO4-P**	BM *	1.211	2.626	1.72	2.5	68.8%
8	8.68	**SO4**	MB*	3.095	7.217	4.77	5	95.4%



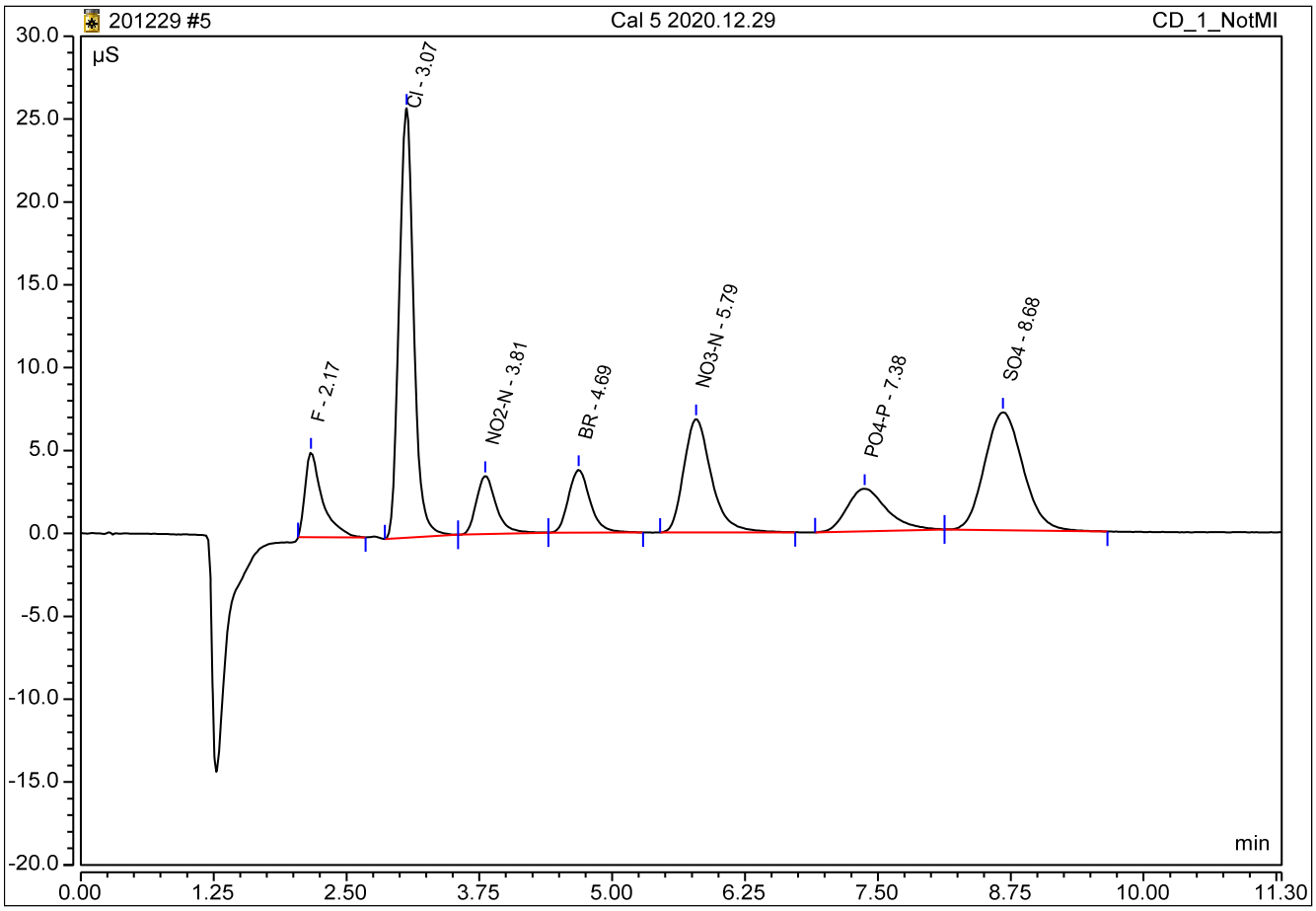
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	0.966	5.118	1.0941
3	3.07	**Cl**	bMB*	4.148	25.916	4.7003
4	3.81	**NO2-N**	BMB	0.763	3.513	0.5172
5	4.69	**BR**	BMB	0.887	3.786	2.3974
6	5.79	**NO3-N**	BMB	2.064	6.848	0.9491
7	7.38	**PO4-P**	BM *	1.118	2.567	1.6557
8	8.68	**SO4**	MB*	2.978	7.119	4.7469

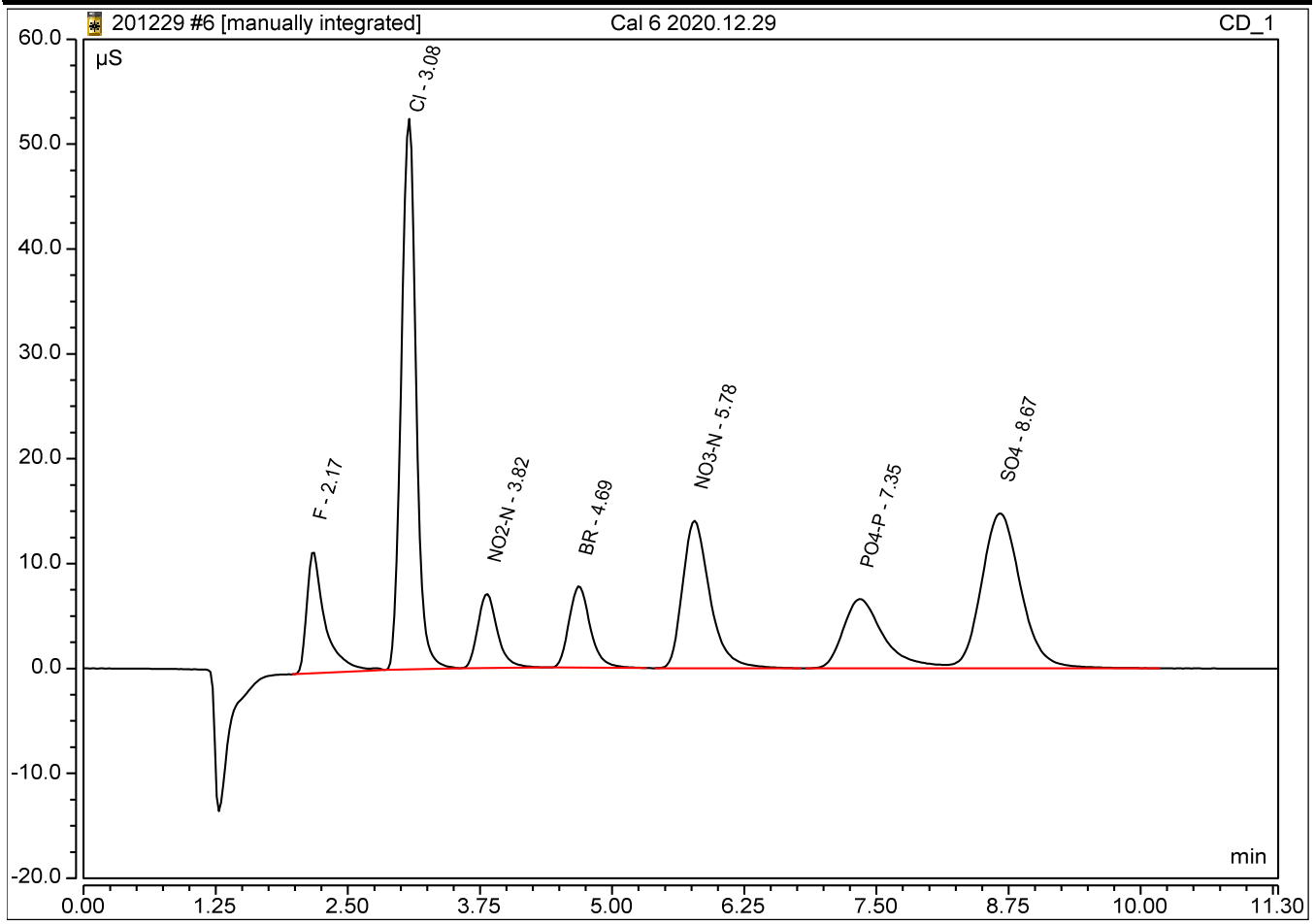


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	2.292	11.657	2.56	2.5	102.5%
3	3.08	**Cl**	bMB*	8.536	52.533	9.67	10	96.7%
4	3.82	**NO2-N**	BMB	1.521	7.071	1.03	1	103.1%
5	4.69	**BR**	BMB	1.813	7.778	4.90	5	98.0%
6	5.78	**NO3-N**	BMB	4.218	14.063	1.94	2	97.0%
7	7.35	**PO4-P**	BM *	2.913	6.594	4.14	5	82.8%
8	8.67	**SO4**	MB*	6.367	14.783	9.81	10	98.1%



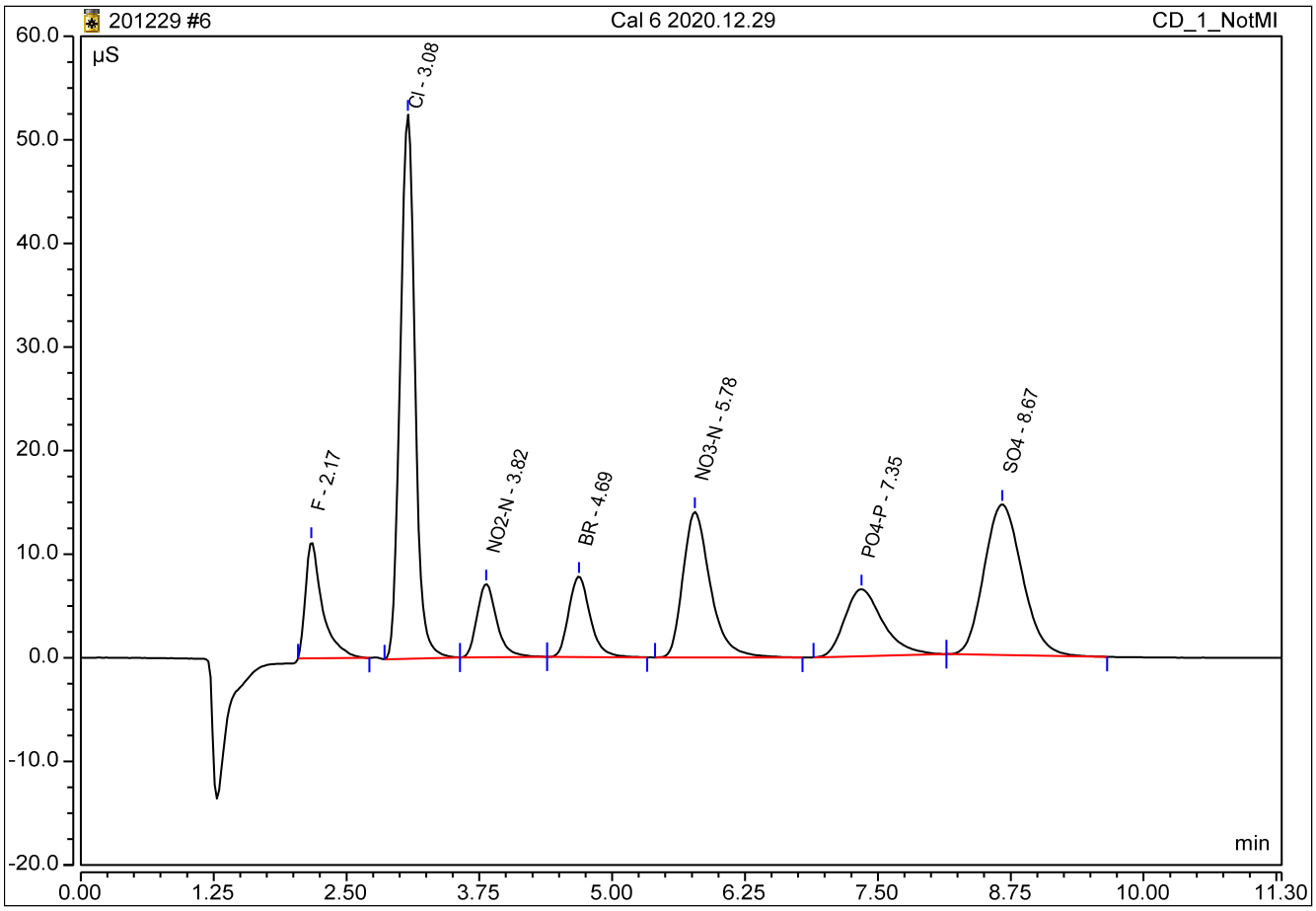
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:37**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	2.075	11.256	2.3510
3	3.08	**Cl**	bMB*	8.536	52.533	9.6722
4	3.82	**NO2-N**	BMB	1.521	7.071	1.0305
5	4.69	**BR**	BMB	1.813	7.778	4.8975
6	5.78	**NO3-N**	BMB	4.218	14.063	1.9393
7	7.35	**PO4-P**	BM *	2.699	6.468	3.9983
8	8.67	**SO4**	MB*	6.057	14.547	9.6546

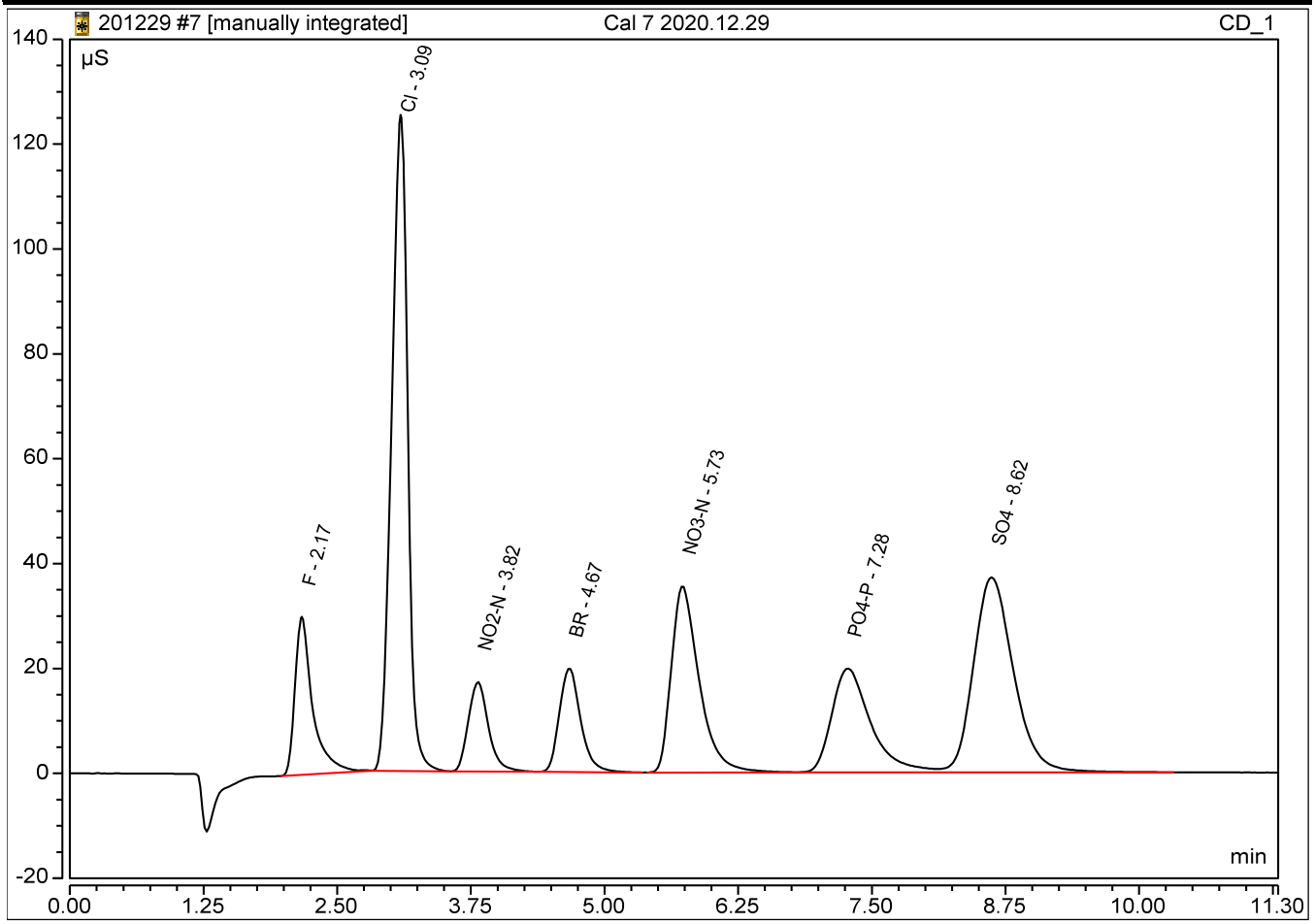


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BM *	5.745	30.169	6.42	6.25	102.7%
3	3.09	**Cl**	BMB	21.792	125.137	24.69	25	98.8%
4	3.82	**NO2-N**	BMB	3.723	17.070	2.52	2.5	100.9%
5	4.67	**BR**	BMB	4.564	19.790	12.33	12.5	98.7%
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.91	5	98.3%
7	7.28	**PO4-P**	bM *	8.312	19.803	11.81	12.5	94.5%
8	8.62	**SO4**	MB*	16.064	37.197	24.76	25	99.0%



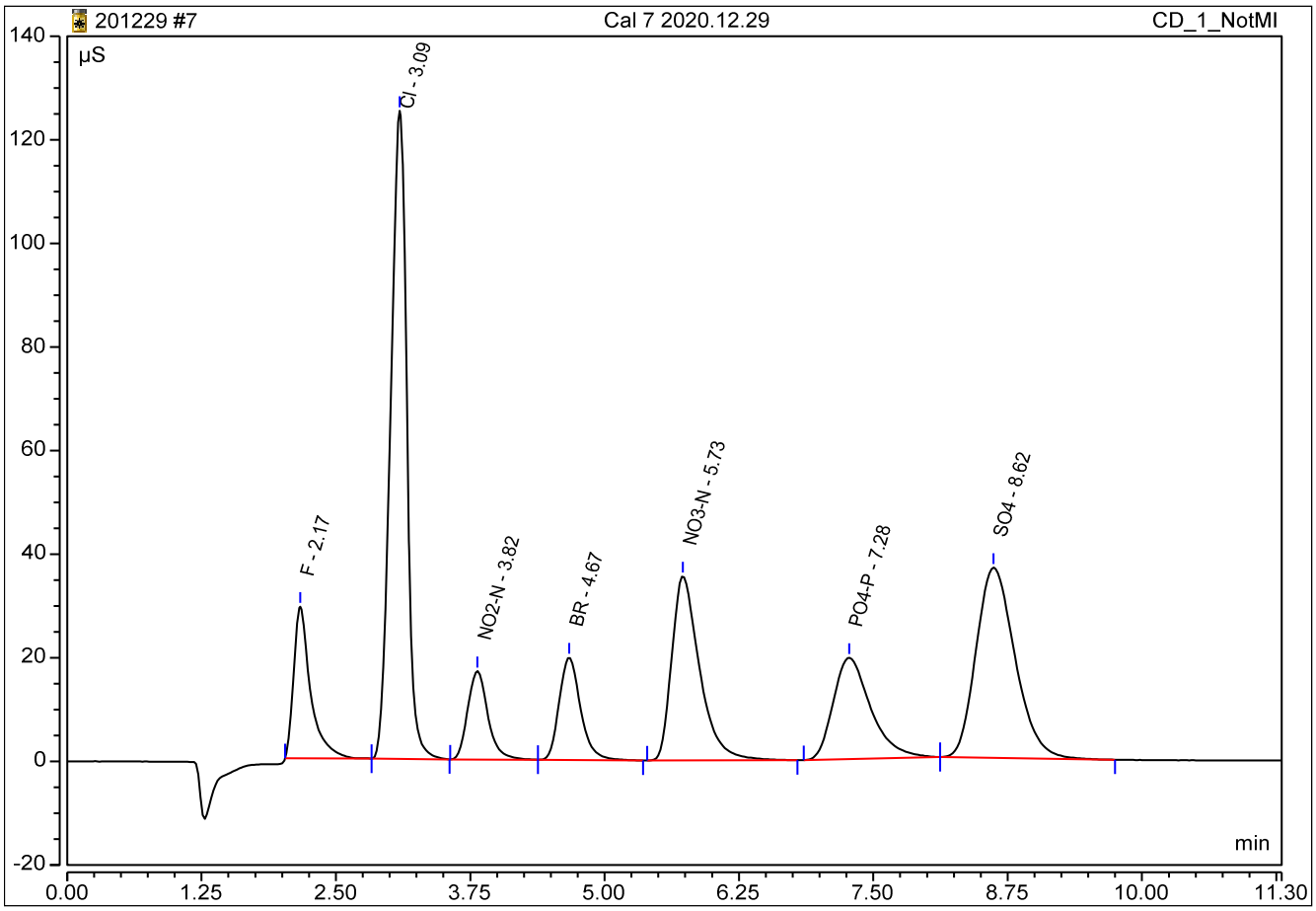
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 12:52**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BM *	5.326	29.299	6.0342
3	3.09	**Cl**	BMB	21.792	125.137	24.6930
4	3.82	**NO2-N**	BMB	3.723	17.070	2.5228
5	4.67	**BR**	BMB	4.564	19.790	12.3317
6	5.73	**NO3-N**	BMb*	10.688	35.570	4.9143
7	7.28	**PO4-P**	bM *	7.897	19.579	11.6959
8	8.62	**SO4**	MB*	15.439	36.724	24.6109

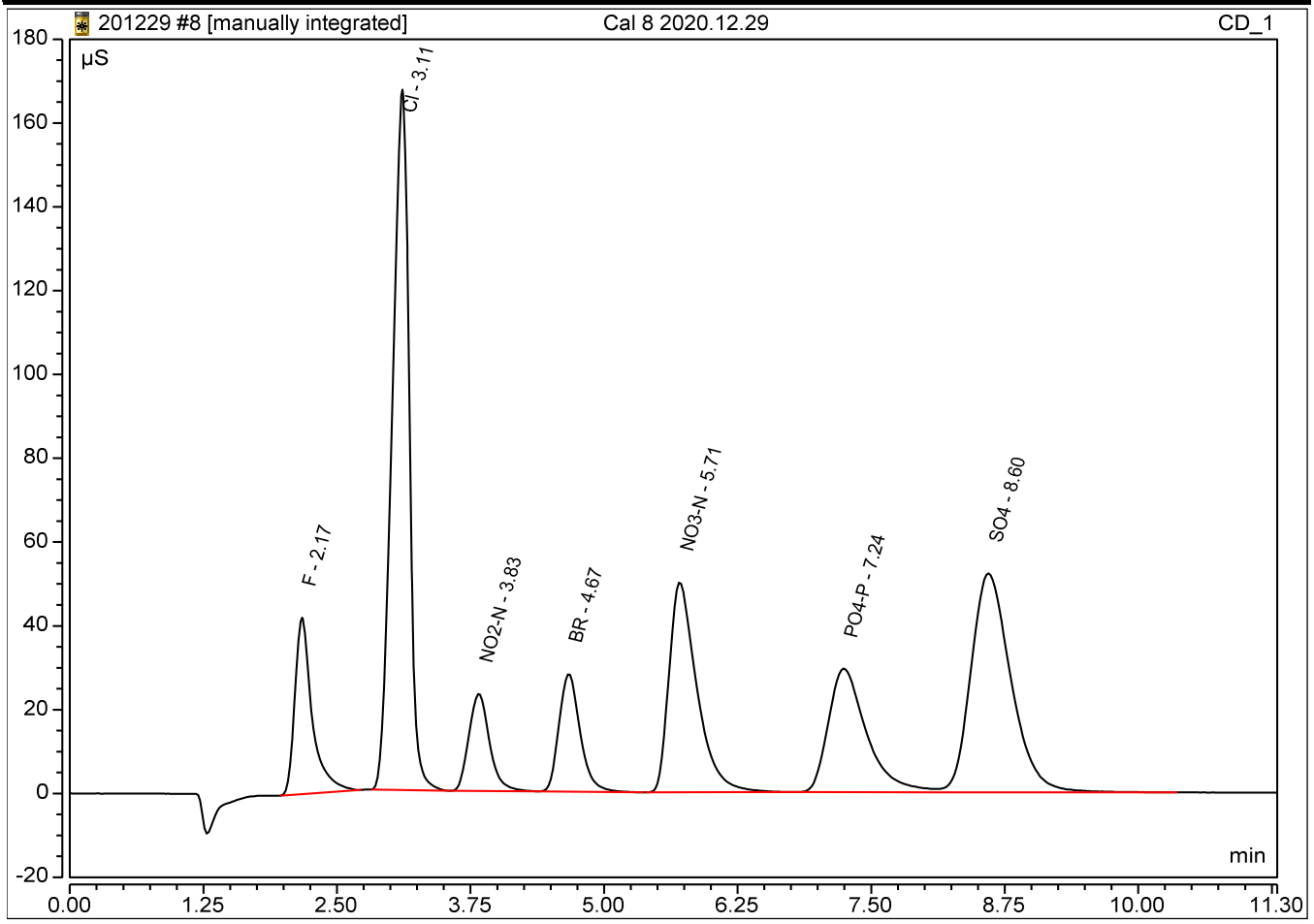


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	7.898	42.129	8.83	8.75	100.9%
2	3.11	**Cl**	BMB	30.820	167.162	34.92	35	99.8%
3	3.83	**NO2-N**	BMB	5.198	23.244	3.52	3.5	100.6%
4	4.67	**BR**	BMB	6.447	28.118	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.97	7	99.5%
6	7.24	**PO4-P**	bM *	12.218	29.486	17.36	17.5	99.2%
7	8.60	**SO4**	MB*	22.662	52.231	34.92	35	99.8%



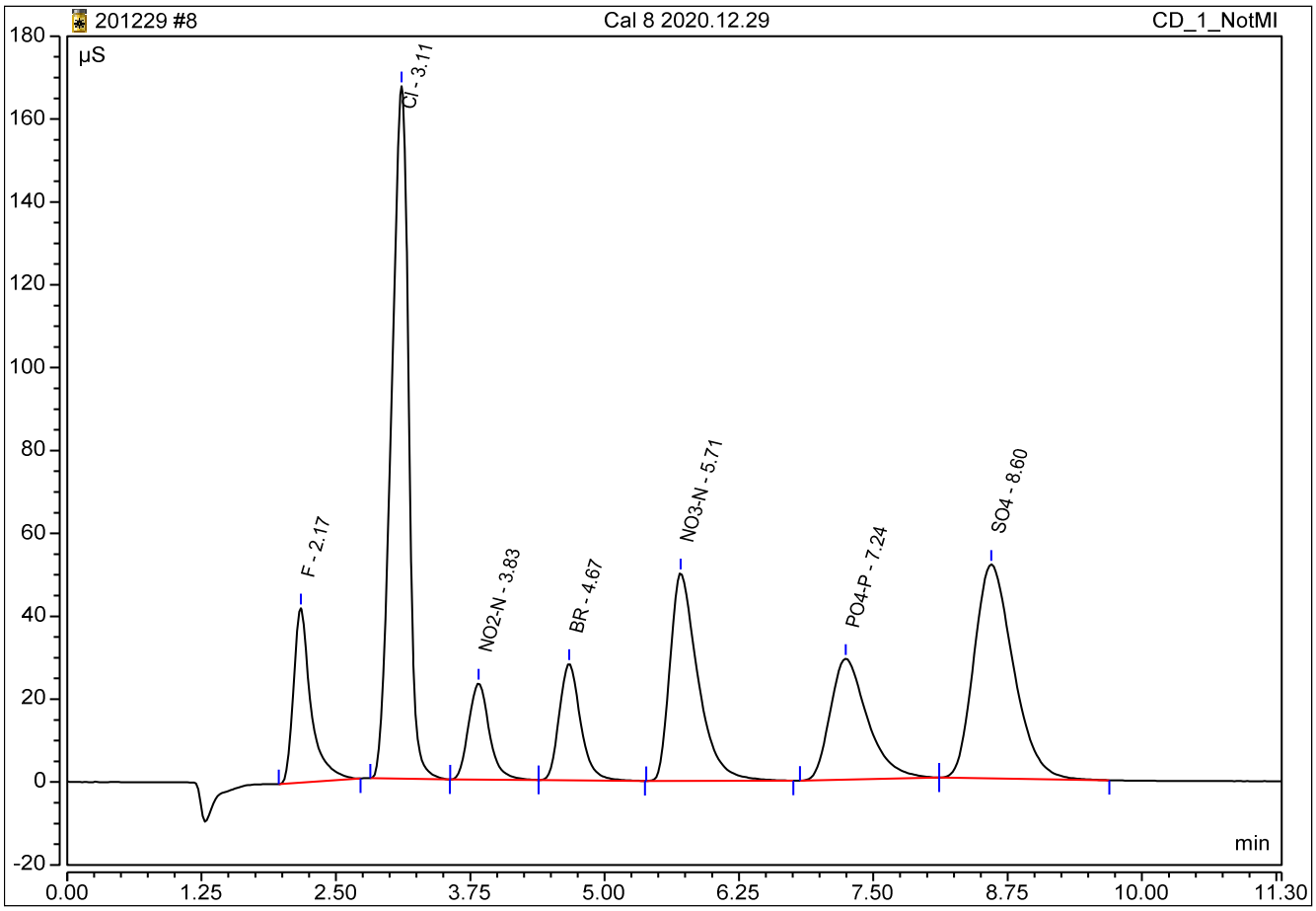
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:07**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.17	**F**	BMB	7.898	42.129	8.9476
2	3.11	**Cl**	BMB	30.820	167.162	34.9228
3	3.83	**NO2-N**	BMB	5.198	23.244	3.5216
4	4.67	**BR**	BMB	6.447	28.118	17.4201
5	5.71	**NO3-N**	BMb*	15.155	50.151	6.9681
6	7.24	**PO4-P**	bM *	11.697	29.216	17.3256
7	8.60	**SO4**	MB*	21.877	51.638	34.8732

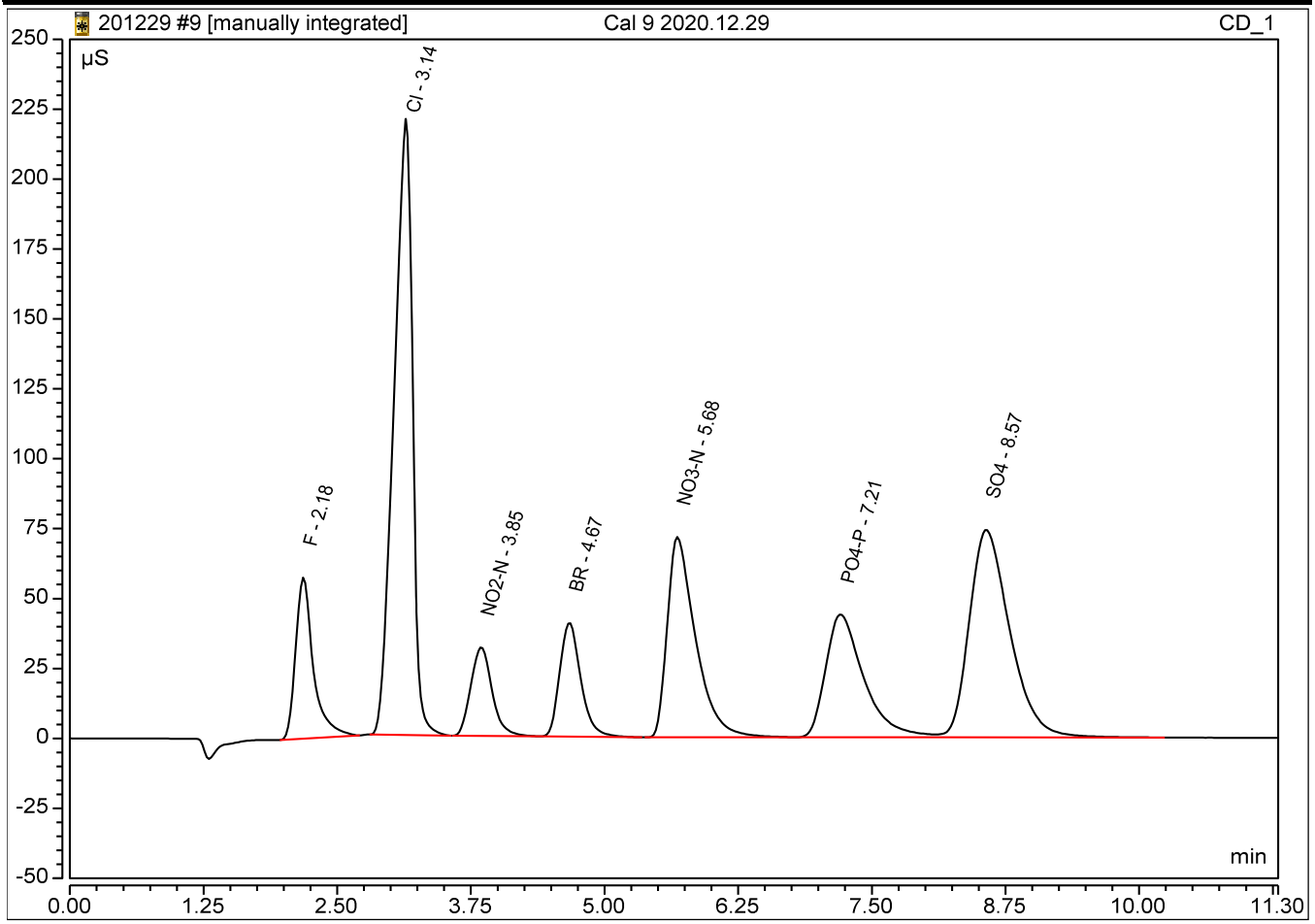


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	11.054	57.647	12.35	12.5	98.8%
2	3.14	**Cl**	BMB	44.404	220.347	50.31	50	100.6%
3	3.85	**NO2-N**	BMB	7.328	31.750	4.97	5	99.3%
4	4.67	**BR**	BMB	9.318	40.765	25.18	25	100.7%
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.08	10	100.8%
6	7.21	**PO4-P**	bM *	18.109	43.974	25.73	25	102.9%
7	8.57	**SO4**	MB*	32.605	74.256	50.25	50	100.5%



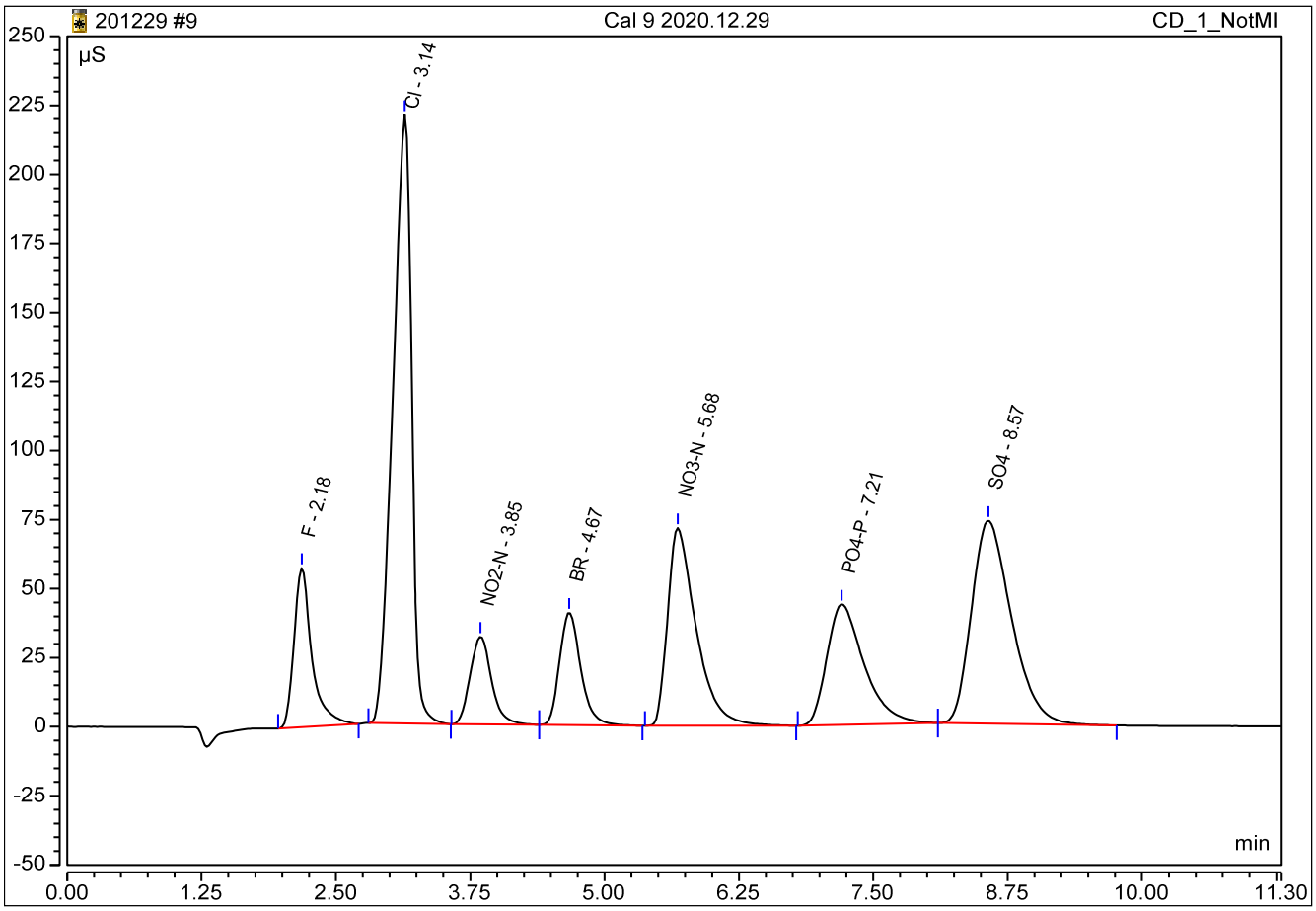
MI 5 F PO4 SO4 GA 12/29/20

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2020.12.29**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Contro**
Inj. Date / Time:	**29-Dec-2020 / 13:21**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.18	**F**	BMB	11.054	57.647	12.5224
2	3.14	**Cl**	BMB	44.404	220.347	50.3149
3	3.85	**NO2-N**	BMB	7.328	31.750	4.9653
4	4.67	**BR**	BMB	9.318	40.765	25.1755
5	5.68	**NO3-N**	BMb*	21.933	71.604	10.0848
6	7.21	**PO4-P**	bM *	17.446	43.647	25.8392
7	8.57	**SO4**	MB*	31.610	73.494	50.3889

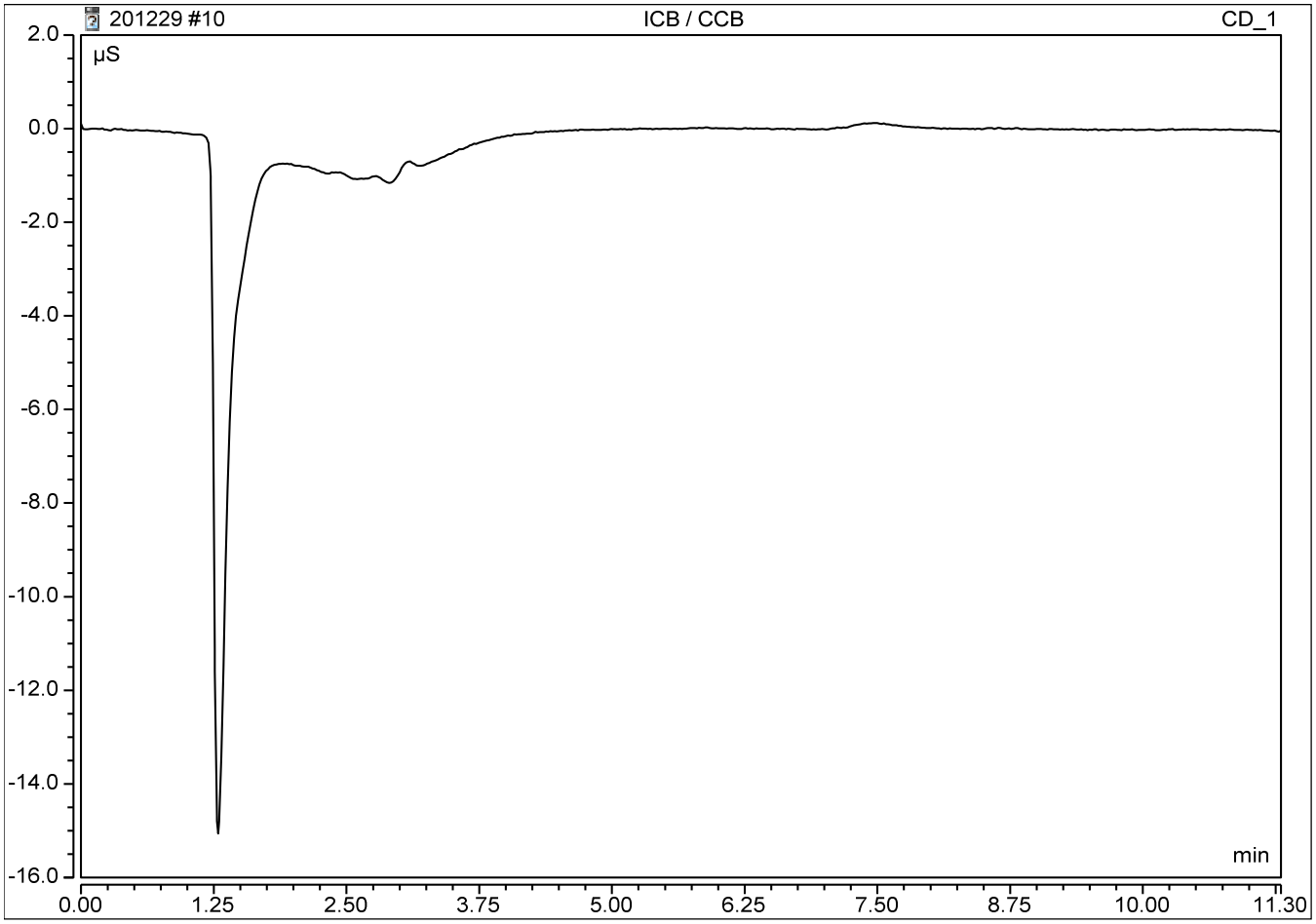


Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



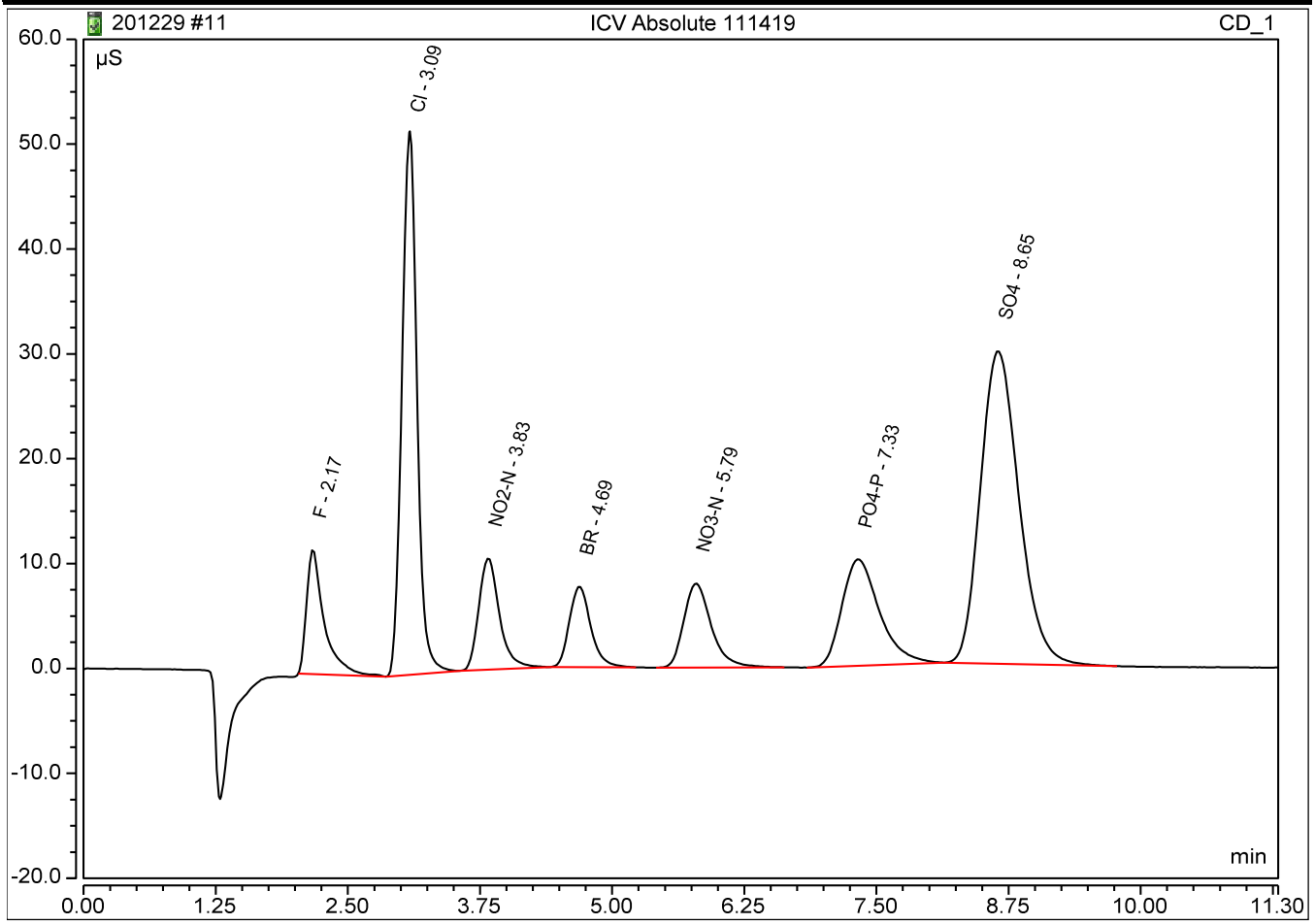
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 201229

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**29-Dec-2020 / 13:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	2.283	11.892	2.55	2.5	102.0%
2	3.09	**Cl**	BMB	8.560	51.822	9.70	10	97.0%
3	3.83	**NO2-N**	BMB	2.410	10.631	1.63	1.522334	107.3%
4	4.69	**BR**	BMB	1.802	7.686	4.87	5	97.4%
5	5.79	**NO3-N**	BMB	2.430	8.038	1.12	1.129525	98.9%
6	7.33	**PO4-P**	BMB	4.179	10.161	5.94	6.522	91.0%
7	8.65	**SO4**	BMB	12.629	29.844	19.46	20	97.3%



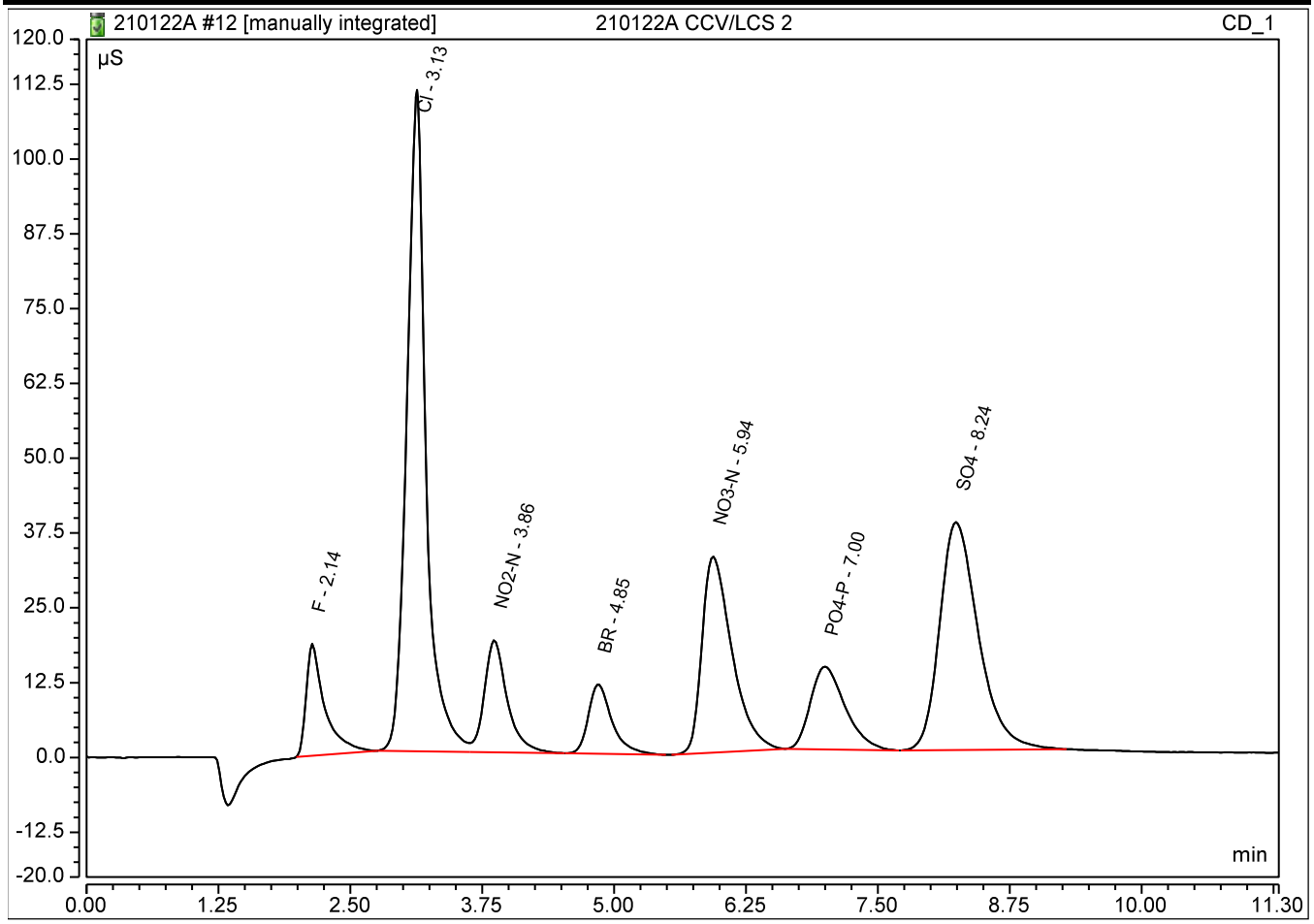
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 15:28**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMb*	3.797	18.704	4.24	5	84.9%
2	3.13	**Cl**	bM *	23.053	110.487	26.12	25	104.5%
3	3.86	**NO2-N**	MB*	4.709	18.733	3.19	3.04	105.0%
4	4.85	**BR**	BMB	3.015	11.633	8.15	10	81.5%
5	5.94	**NO3-N**	BMB	10.796	32.756	4.96	5	99.3%
6	7.00	**PO4-P**	BMB	5.262	13.801	7.48	10	74.8%
7	8.24	**SO4**	BMB	16.203	38.075	24.97	25	99.9%



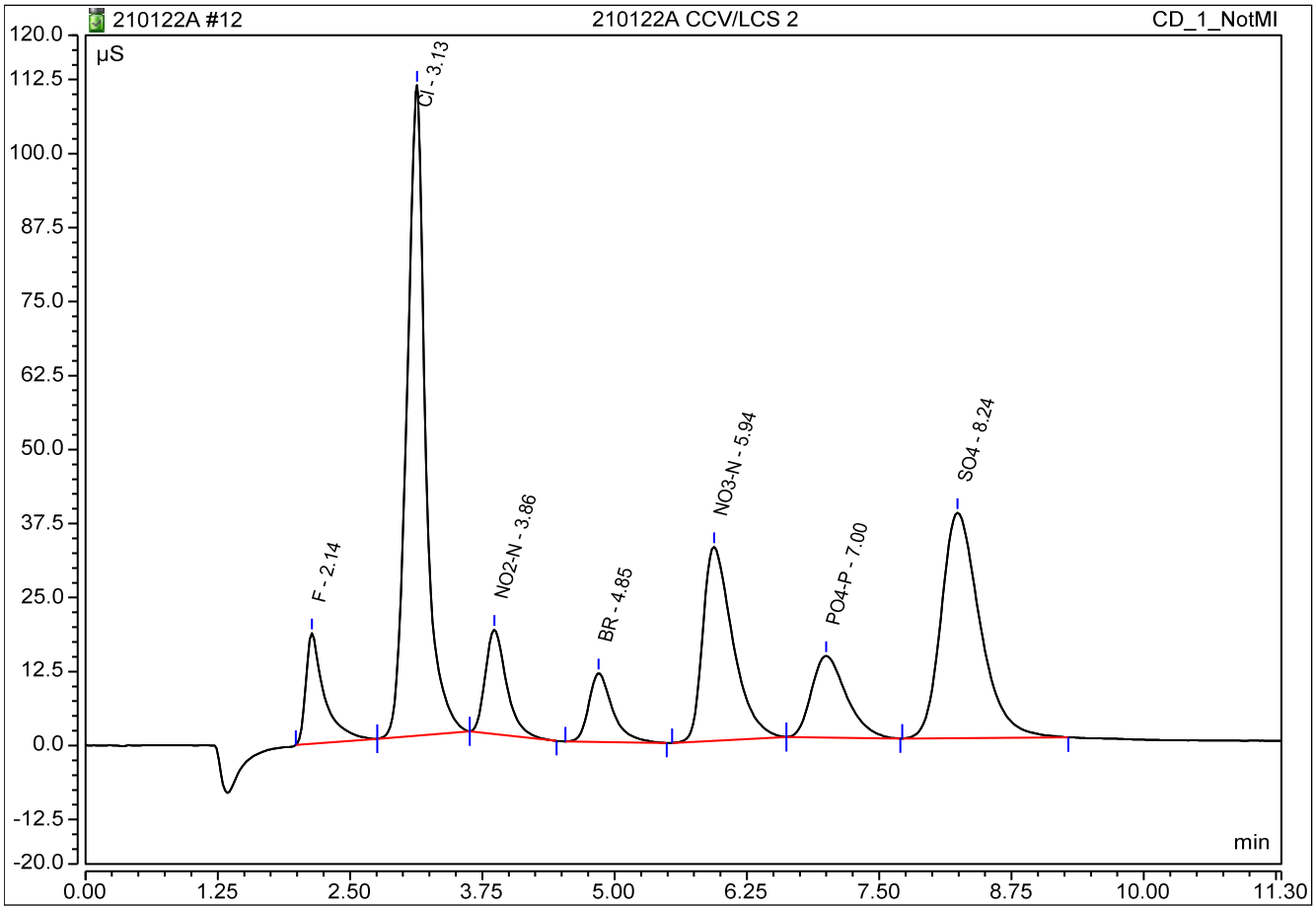
MI 1 Cl NO2 GA KS 01/25/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**210122A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 15:28**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMb*	3.797	18.704	4.3012
2	3.13	**Cl**	bM *	22.404	109.857	25.3863
3	3.86	**NO2-N**	MB*	4.085	17.662	2.7677
4	4.85	**BR**	BMB	3.015	11.633	8.1466
5	5.94	**NO3-N**	BMB	10.796	32.756	4.9639
6	7.00	**PO4-P**	BMB	5.262	13.801	7.7932
7	8.24	**SO4**	BMB	16.203	38.075	25.8292

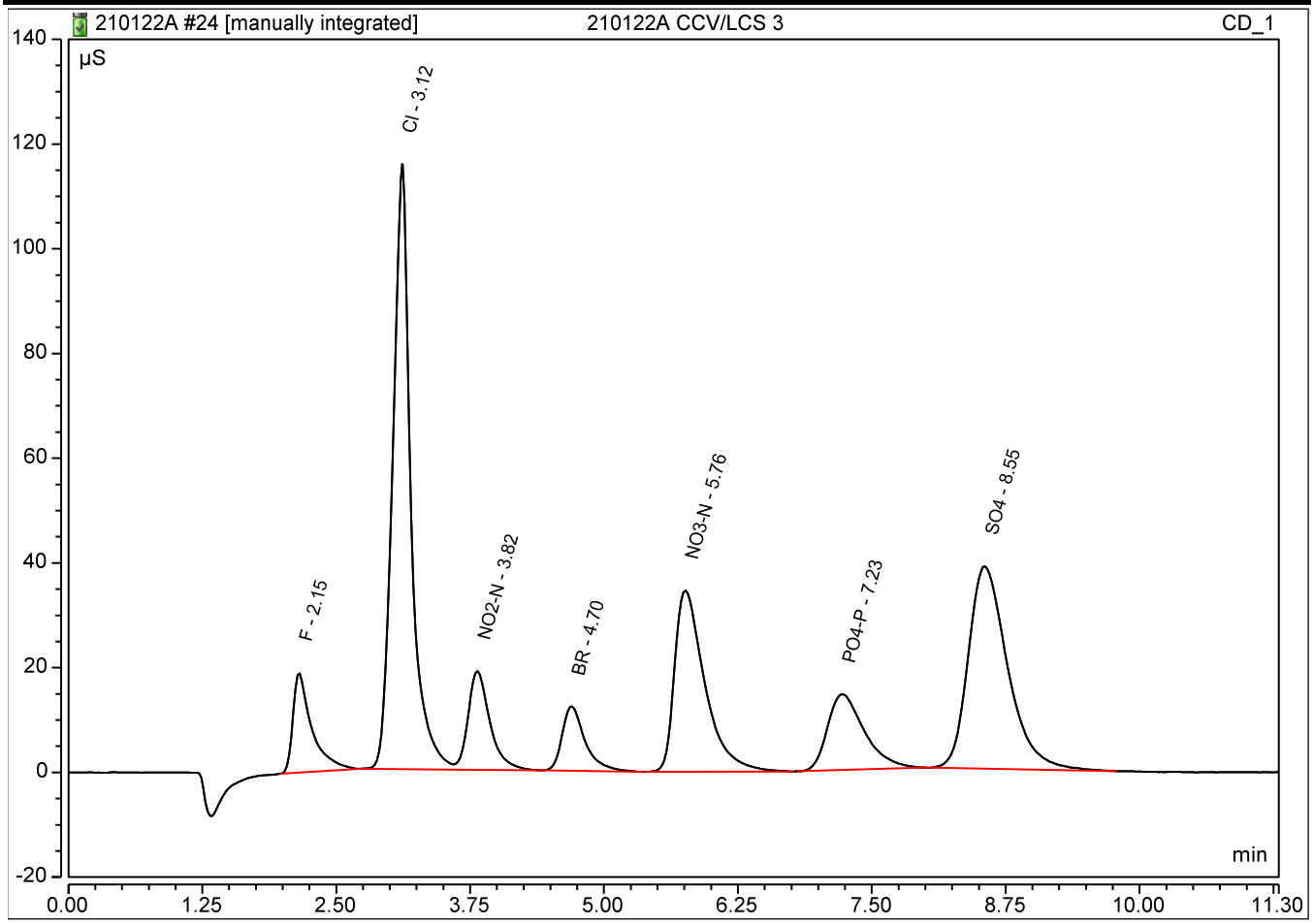


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:23**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	3.886	19.120	4.34	5	86.9%
2	3.12	**Cl**	bM *	22.665	115.565	25.68	25	102.7%
3	3.82	**NO2-N**	Mb*	4.461	18.900	3.02	3.04	99.4%
4	4.70	**BR**	bMB*	3.070	12.334	8.30	10	83.0%
5	5.76	**NO3-N**	BMB	11.340	34.662	5.21	5	104.3%
6	7.23	**PO4-P**	BMB	5.769	14.469	8.20	10	82.0%
7	8.55	**SO4**	BMB	16.498	38.682	25.43	25	101.7%

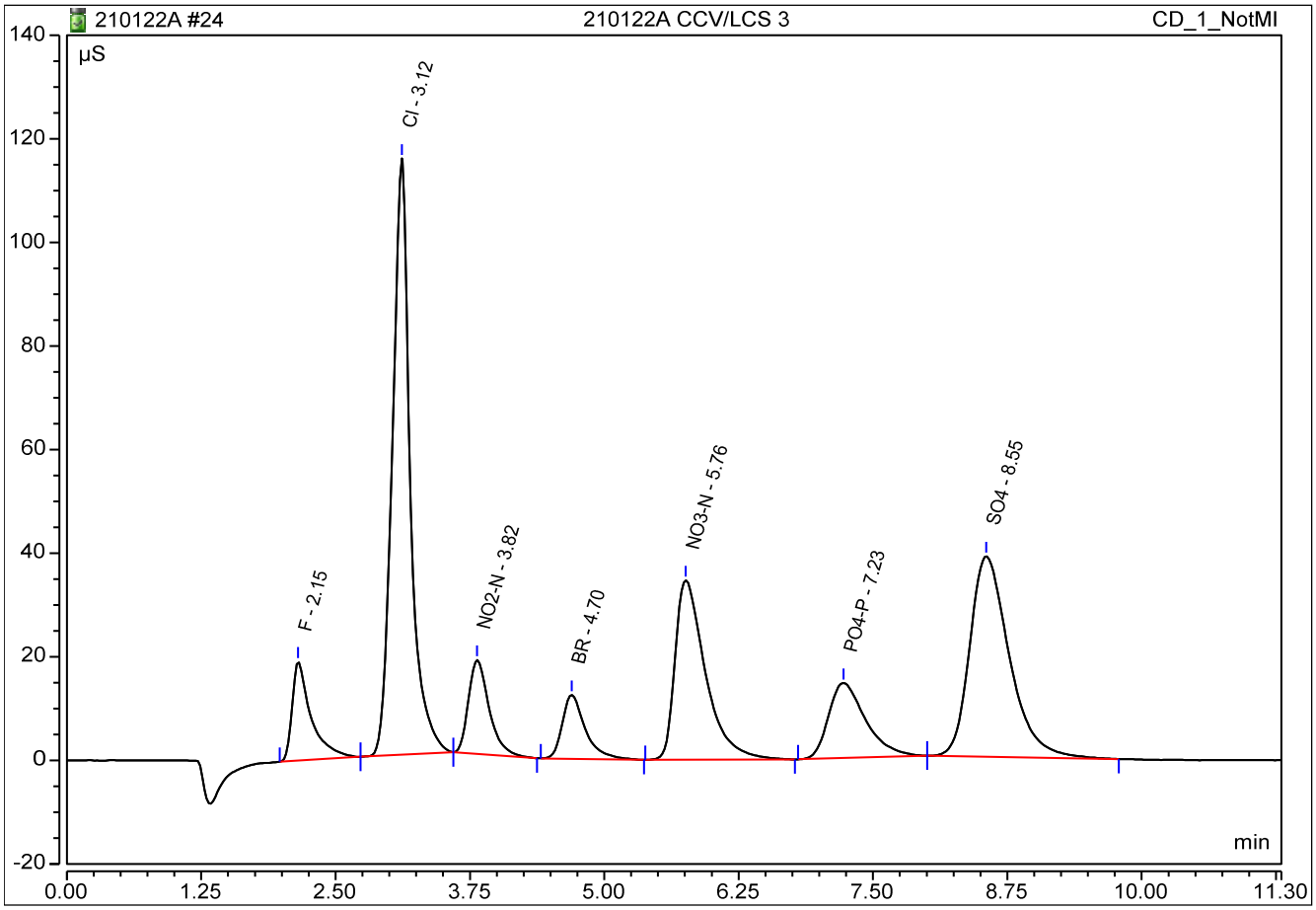


MI 1 Cl NO2 GA KS 01/25/21

Not Manipulated Peak Integration Report

Sample Name:	**210122A CCV/LCS 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:23**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	3.886	19.120	4.4028
2	3.12	**Cl**	bM *	22.217	115.107	25.1740
3	3.82	**NO2-N**	Mb*	4.048	18.150	2.7427
4	4.70	**BR**	bMB*	3.070	12.334	8.2951
5	5.76	**NO3-N**	BMB	11.340	34.662	5.2143
6	7.23	**PO4-P**	BMB	5.769	14.469	8.5454
7	8.55	**SO4**	BMB	16.498	38.682	26.2985

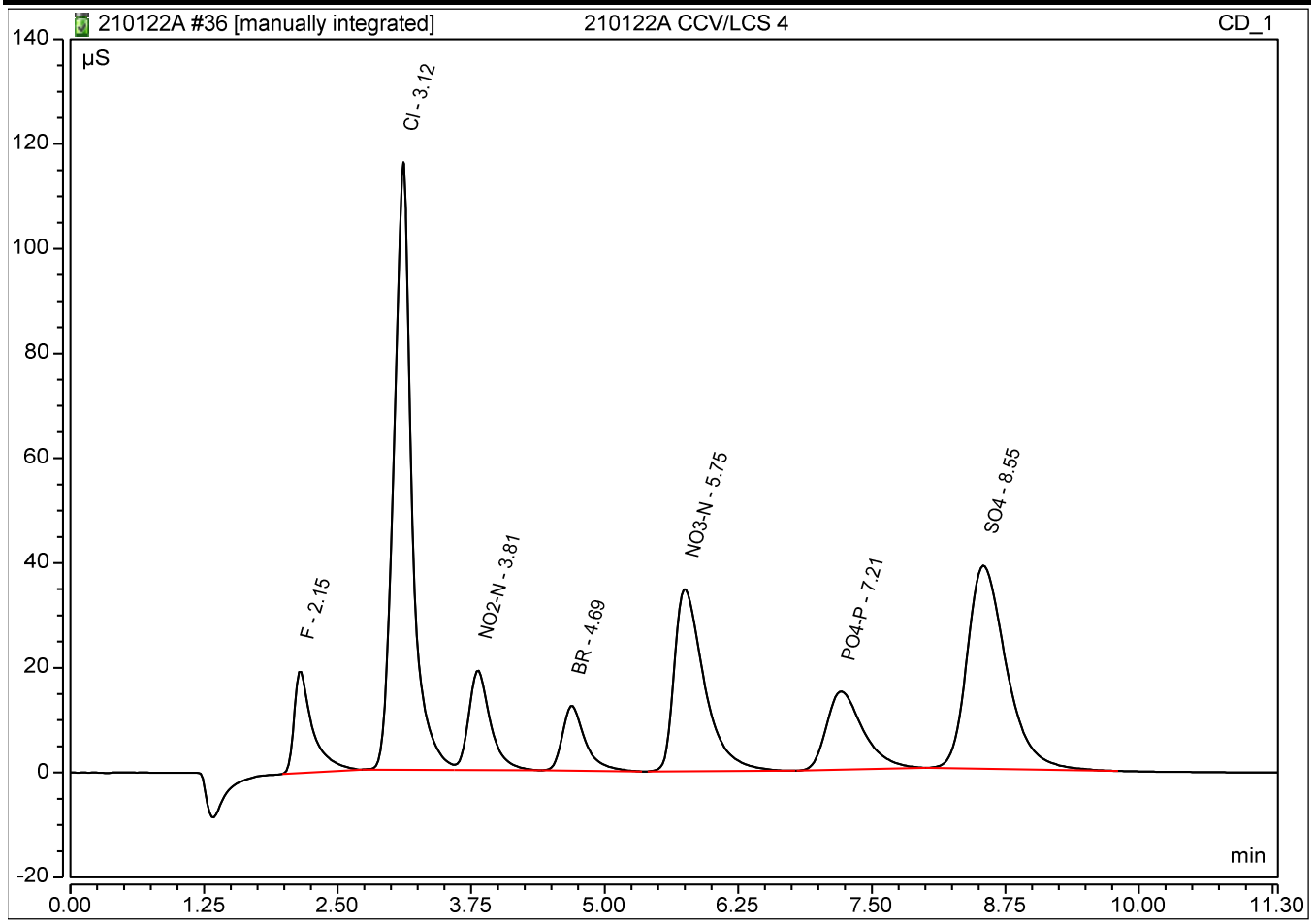


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCV/LCS 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:19**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	3.888	19.577	4.35	5	86.9%
2	3.12	**Cl**	bM *	22.662	115.975	25.68	25	102.7%
3	3.81	**NO2-N**	Mb*	4.492	19.053	3.04	3.04	100.1%
4	4.69	**BR**	bMB*	3.065	12.398	8.28	10	82.8%
5	5.75	**NO3-N**	BMB	11.343	34.871	5.22	5	104.3%
6	7.21	**PO4-P**	BMB	5.923	14.930	8.41	10	84.1%
7	8.55	**SO4**	BMB	16.512	38.823	25.45	25	101.8%



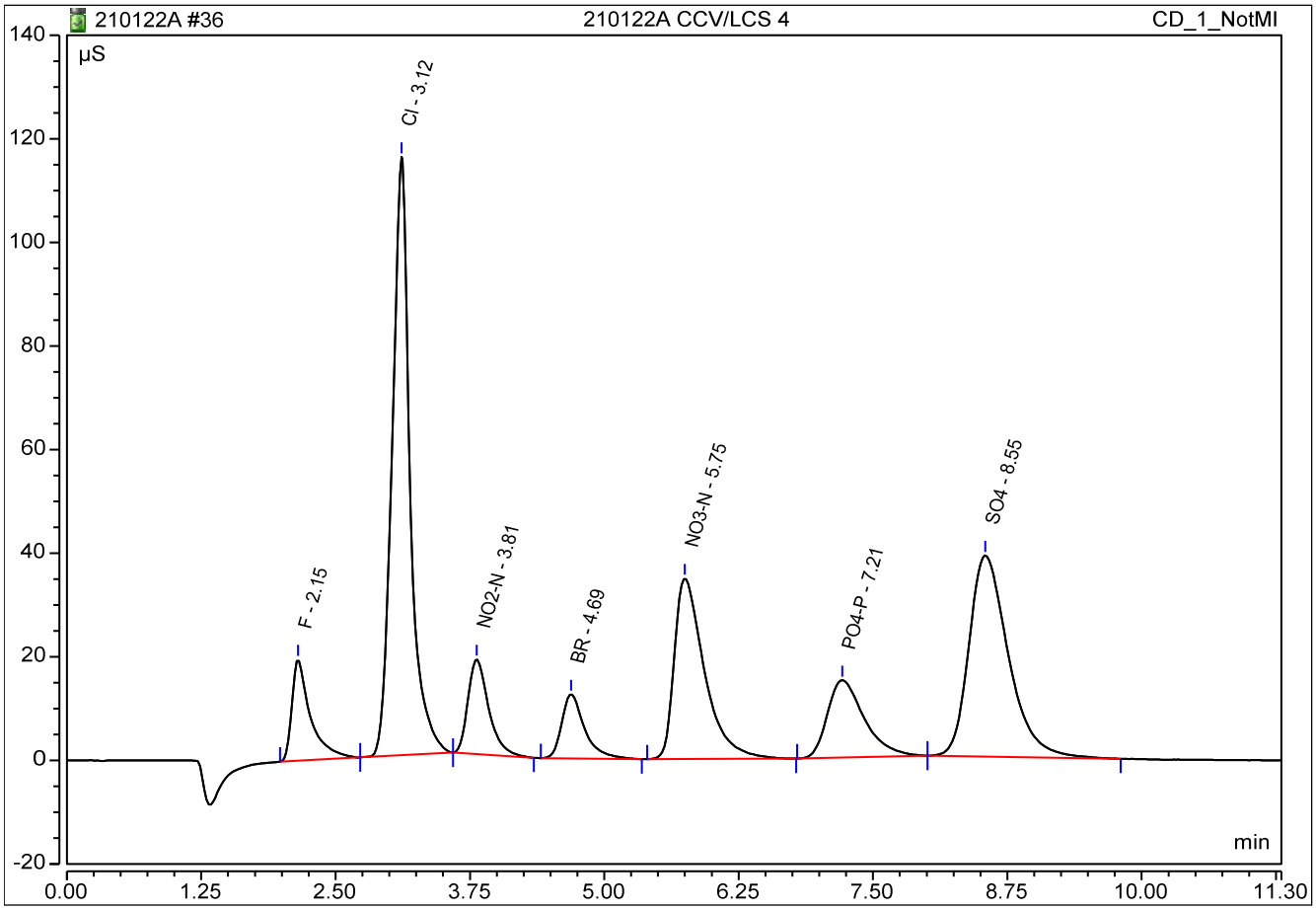
MI 1 Cl NO2 GA KS 01/25/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**210122A CCV/LCS 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:19**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	3.888	19.577	4.4048
2	3.12	**Cl**	bM *	22.233	115.530	25.1921
3	3.81	**NO2-N**	Mb*	4.092	18.332	2.7725
4	4.69	**BR**	bMB*	3.065	12.398	8.2817
5	5.75	**NO3-N**	BMB	11.343	34.871	5.2155
6	7.21	**PO4-P**	BMB	5.923	14.930	8.7721
7	8.55	**SO4**	BMB	16.512	38.823	26.3218

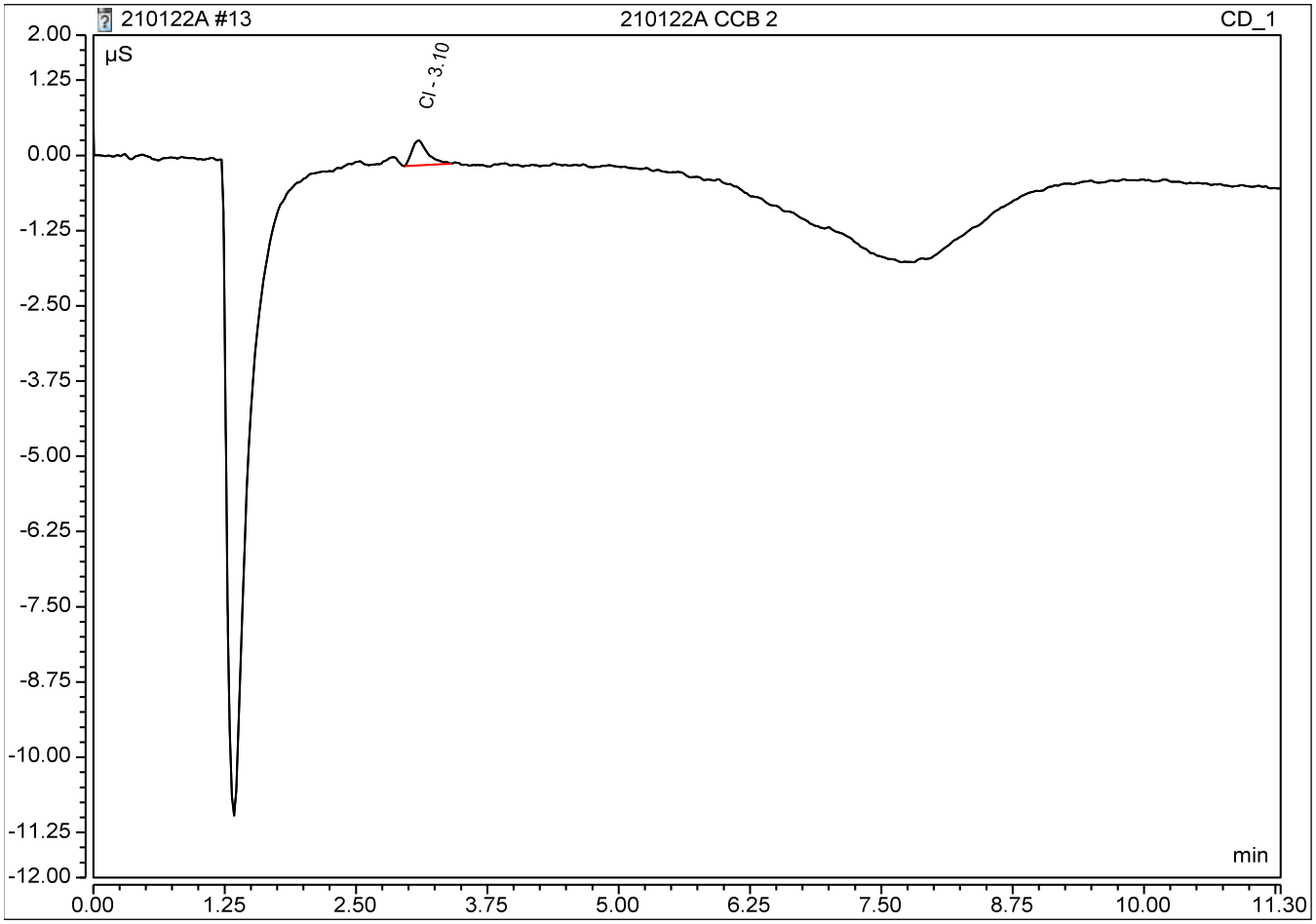


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCB 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 15:42**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.10	**Cl**	BMB	0.073	0.417	0.08		

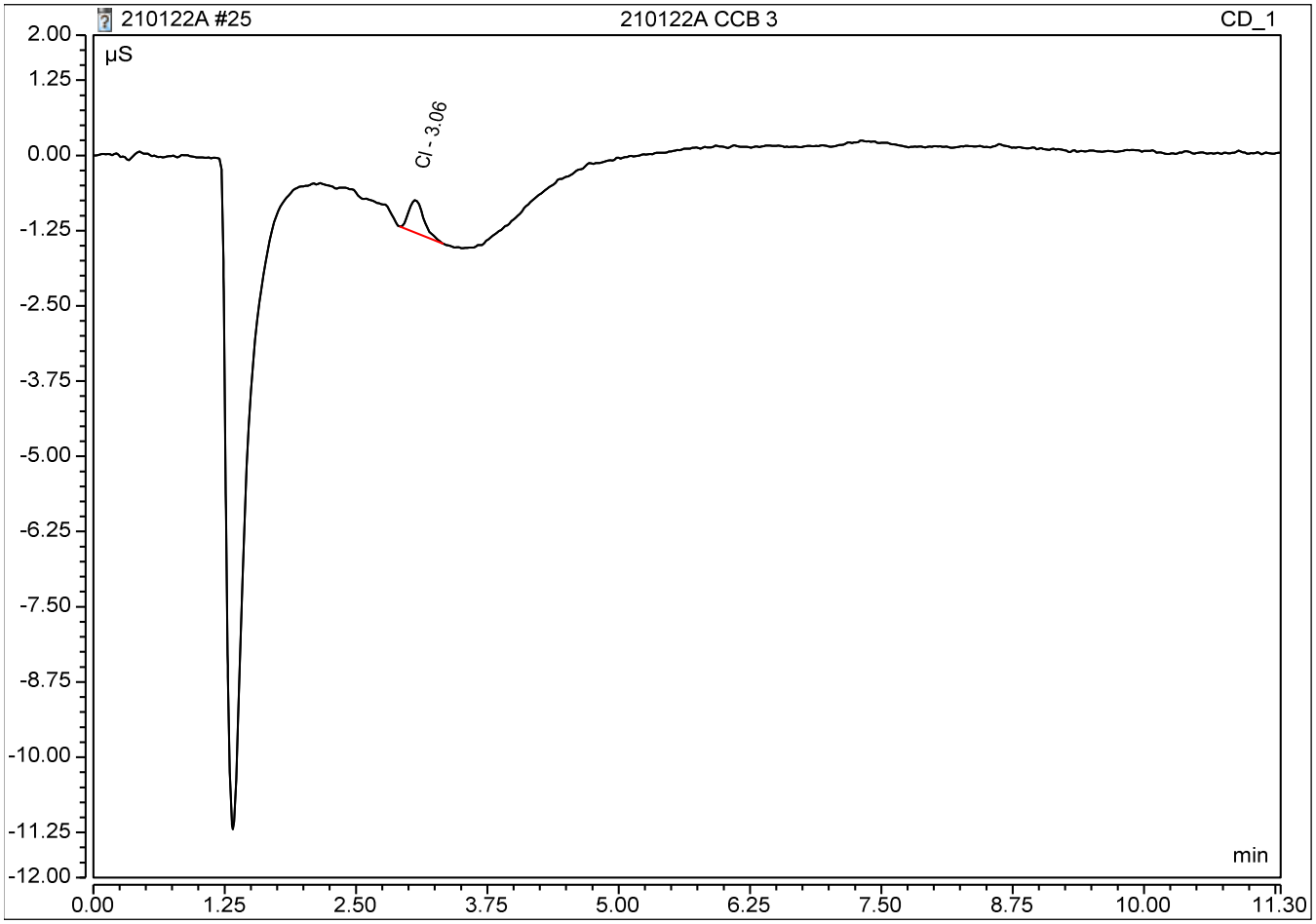


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCB 3**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 18:38**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.06	**Cl**	BMB	0.091	0.540	0.10		

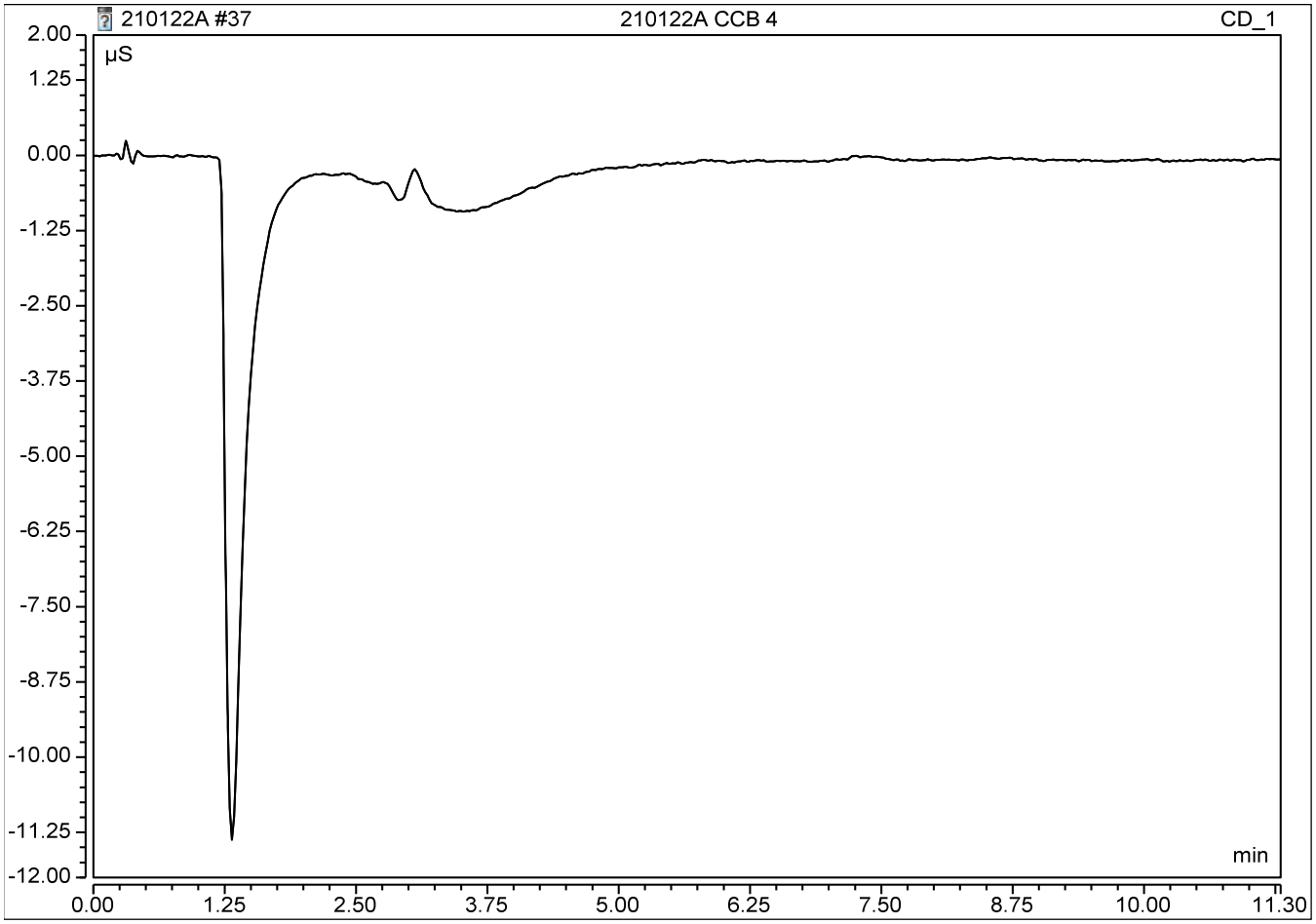


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**210122A CCB 4**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 21:34**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



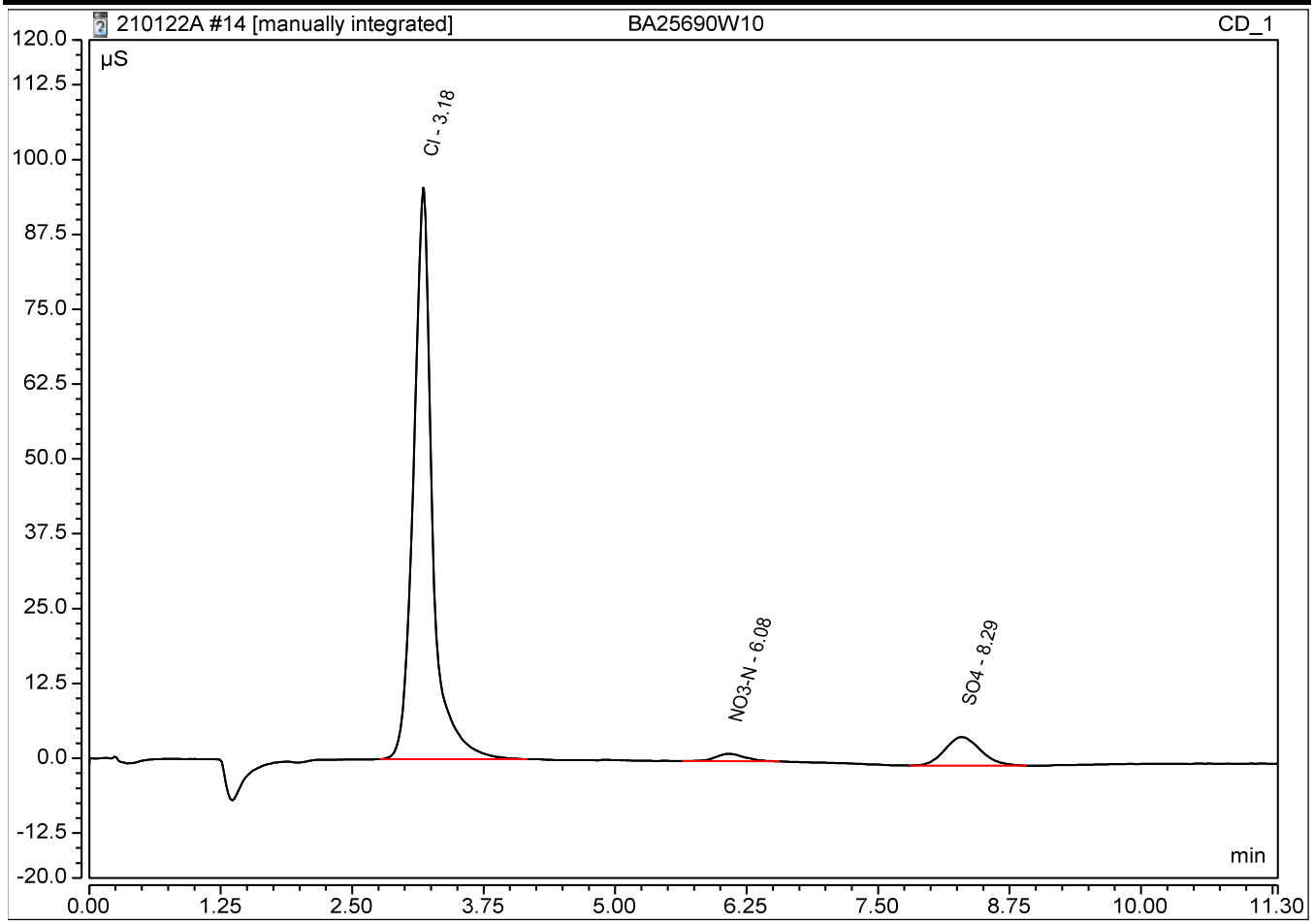
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25690W10**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 15:57**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**Cl**	BMB	19.792	95.493	22.43		
2	6.08	**NO3-N**	BMB*	0.412	1.254	0.19		
3	8.29	**SO4**	BMB	1.891	4.779	2.91		

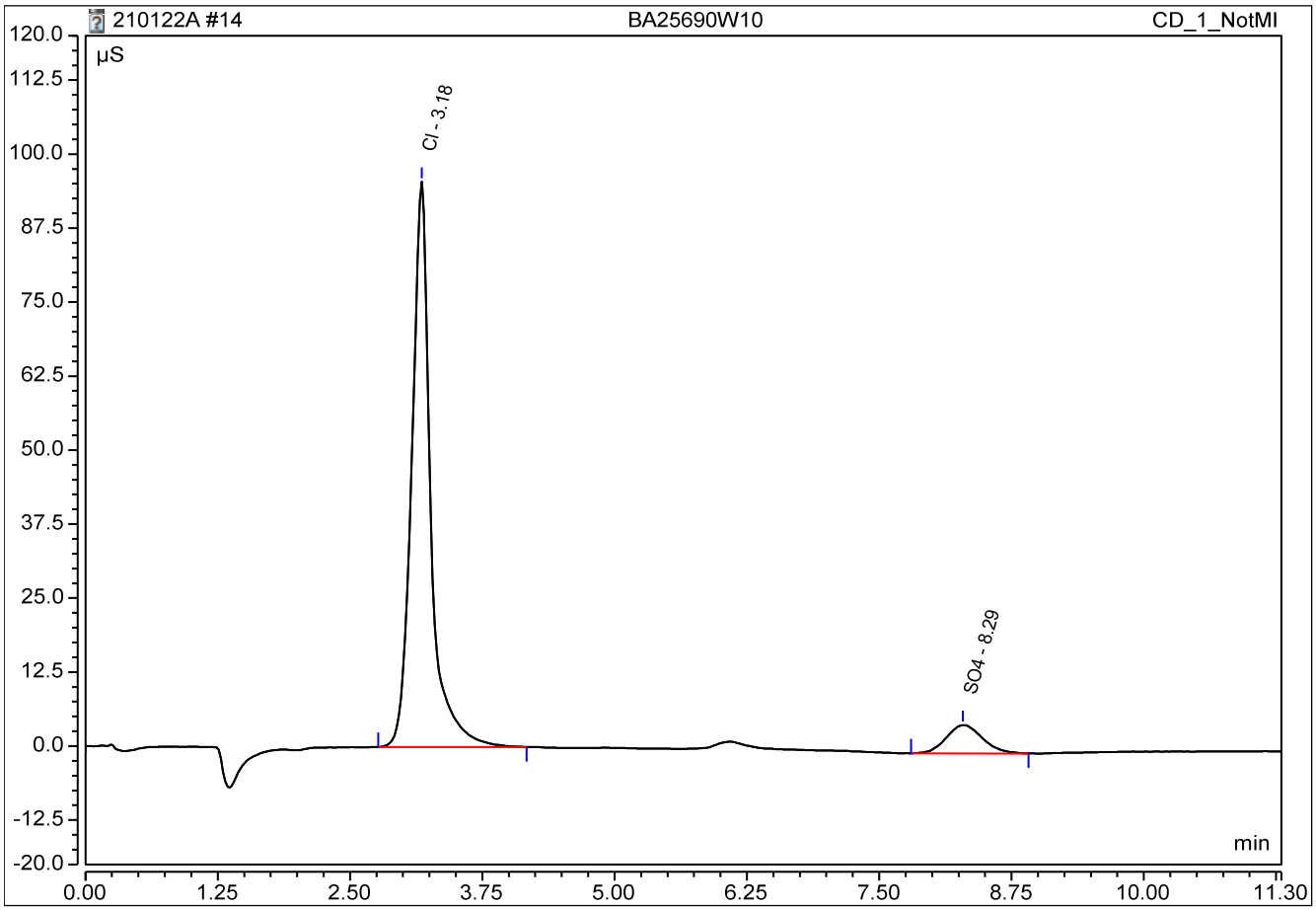


MI 5 NO3 GA 01/22/21

Not Manipulated Peak Integration Report

Sample Name:	**BA25690W10**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 15:57**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	3.18	**Cl**	BMB	19.792	95.493	22.4262
2	n.a.	**NO3-N**	BMB*	n.a.	n.a.	n.a.
3	8.29	**SO4**	BMB	1.891	4.779	3.0147

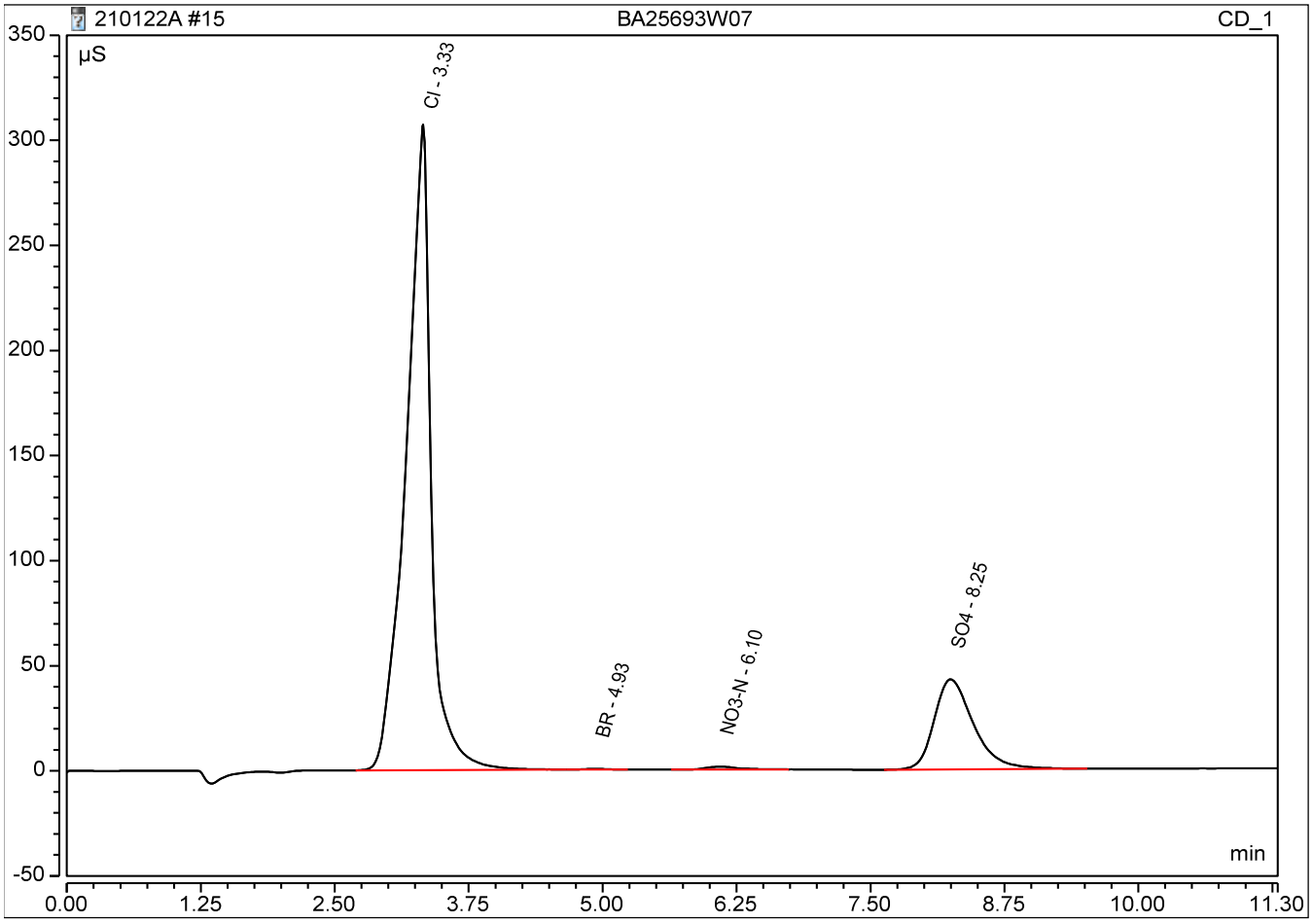


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25693W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 16:12**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.33	**Cl**	BMB	82.461	307.110	93.44		
2	4.93	**BR**	BMB	0.085	0.363	0.23		
3	6.10	**NO3-N**	BMB	0.462	1.383	0.21		
4	8.25	**SO4**	BMB	18.291	42.885	28.19		



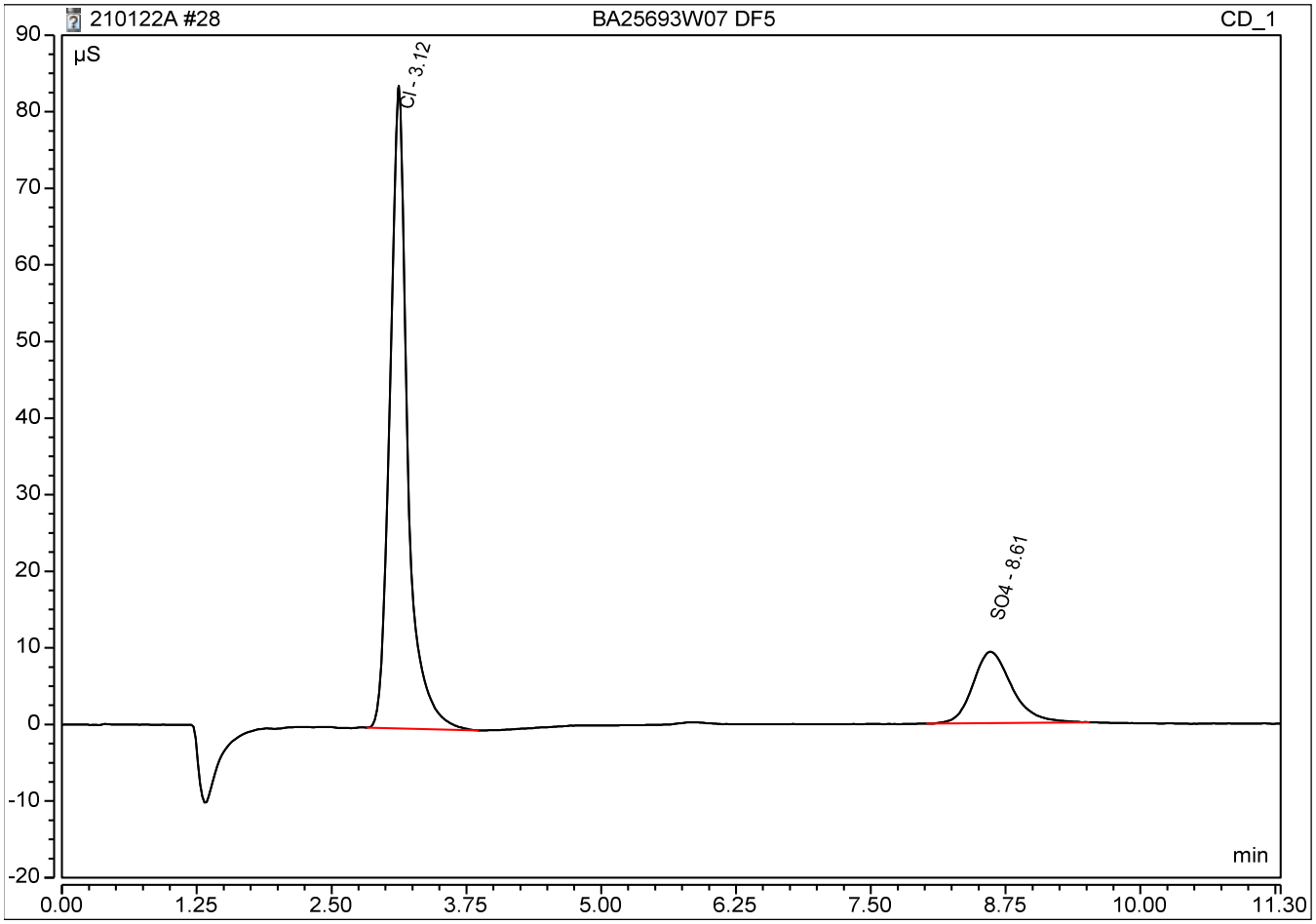
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25693W07 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 19:22**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.12	**Cl**	BMB	15.877	83.910	89.95		
2	8.61	**SO4**	BMB	3.930	9.338	30.28		

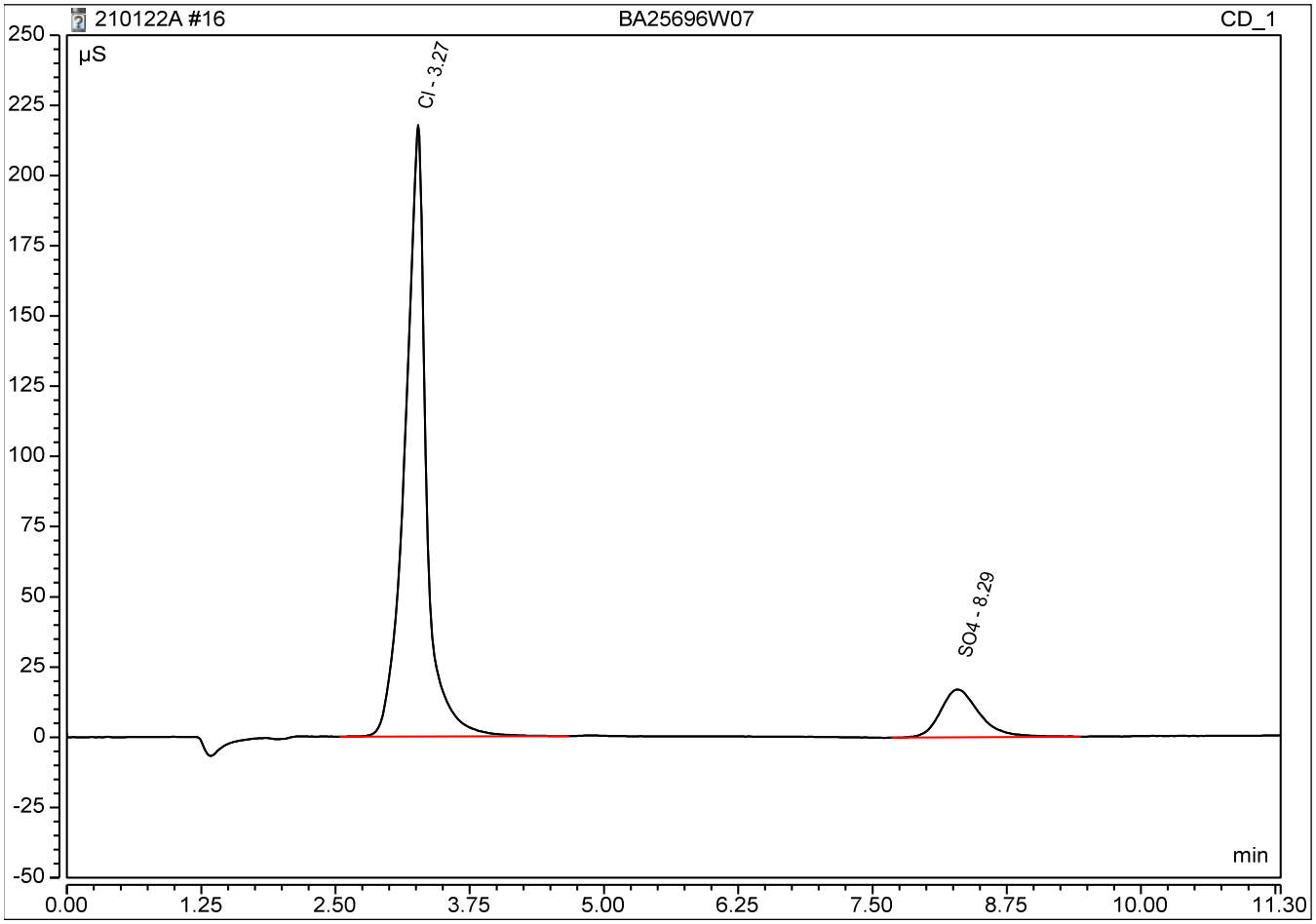


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25696W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 16:26**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.27	**Cl**	BMB	49.771	217.667	56.40		
2	8.29	**SO4**	BMB	7.244	17.043	11.16		



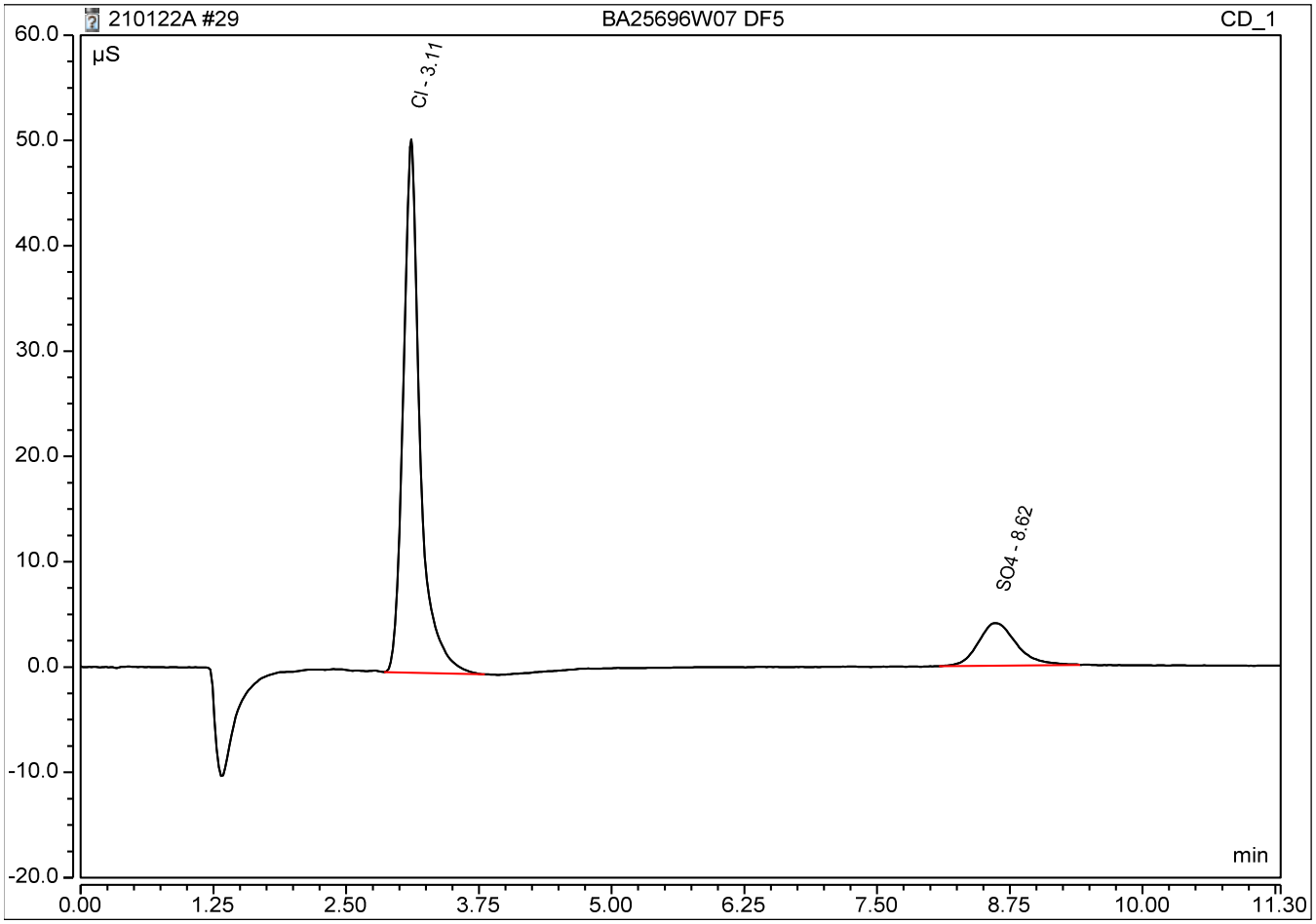
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25696W07 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 19:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.11	**Cl**	BMB	9.302	50.644	52.70		
2	8.62	**SO4**	BMB	1.693	4.046	13.04		



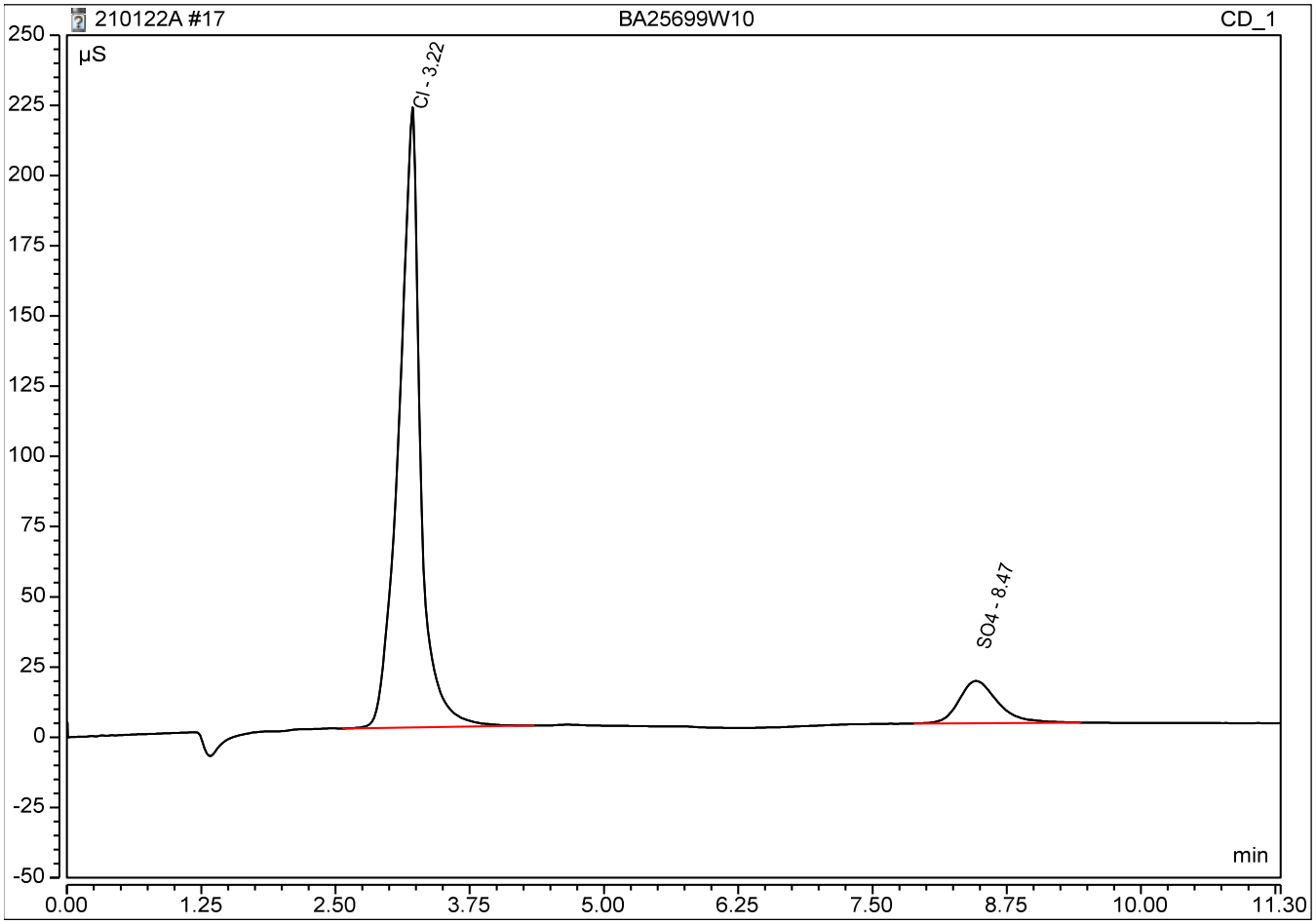
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25699W10**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 16:41**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.22	**Cl**	BMB	51.414	220.830	58.26		
2	8.47	**SO4**	BMB	6.314	15.057	9.73		



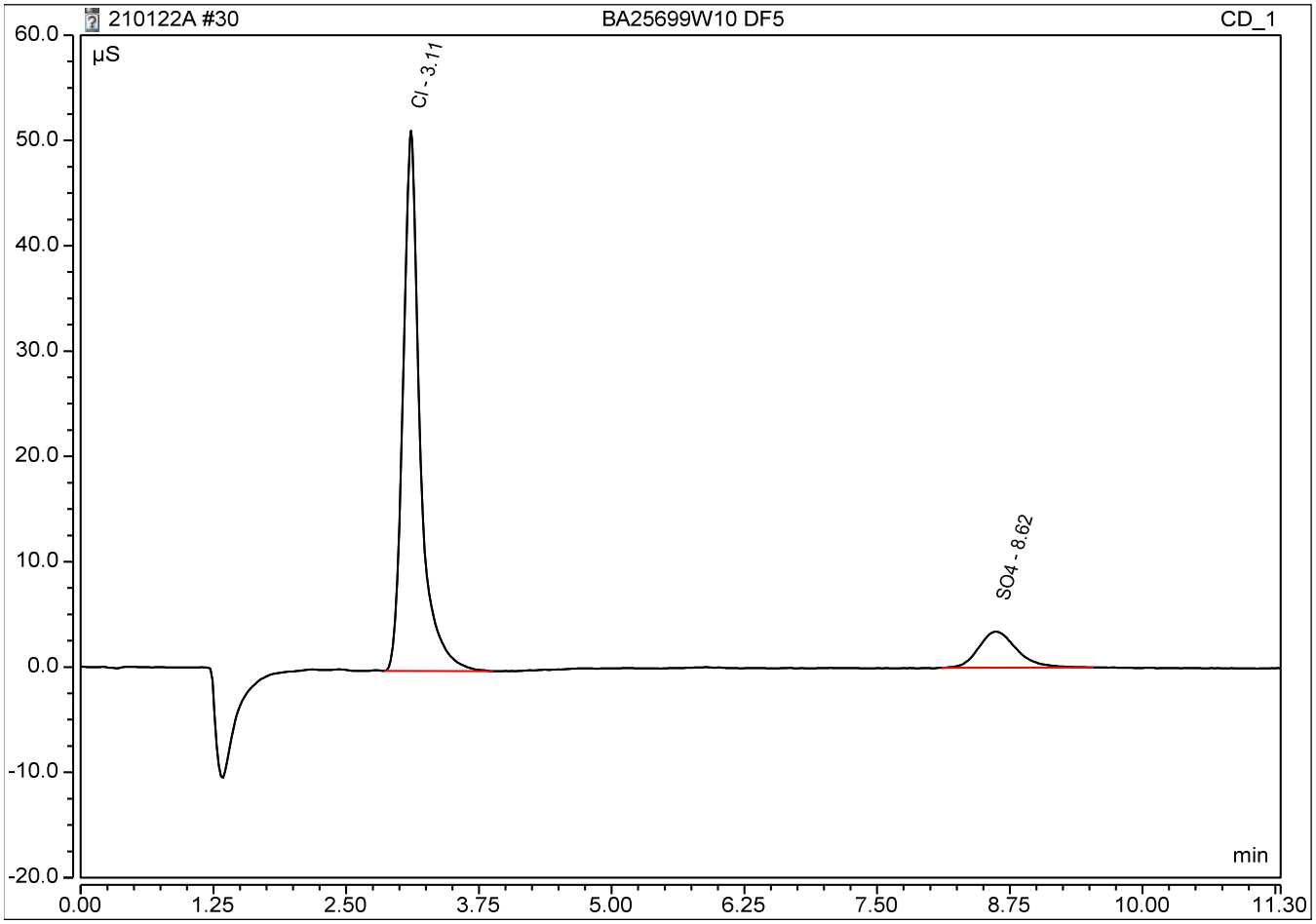
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210122A

Peak Integration Report

Sample Name:	**BA25699W10 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2020.12.29**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**22-Jan-2021 / 19:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.11	**Cl**	BMB	9.523	51.304	53.95		
2	8.62	**SO4**	BMB	1.443	3.444	11.12		



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Anion Chromatography Working Standard

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 12/29/20

Exp Date: 12/30/20

Prep'd By (Initials): KS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 12/29/20	12/30/20	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 12/29/20	12/30/20	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 12/29/20	12/30/20	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 12/29/20	12/30/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 12/29/20	12/30/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 12/29/20	12/30/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 12/29/20	12/30/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 12/29/20	12/30/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 12/29/20	12/30/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**N2-NOX672889**	**01/15/23**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	RC6	Cal 1 2020.12.29	29/Dec/2020	11:24	Calibration Standard	
2	RC7	Cal 2 2020.12.29	29/Dec/2020	11:39	Calibration Standard	
3	RC8	Cal 3 2020.12.29	29/Dec/2020	11:53	Calibration Standard	
4	RD1	Cal 4 2020.12.29	29/Dec/2020	12:08	Calibration Standard	
5	RD2	Cal 5 2020.12.29	29/Dec/2020	12:23	Calibration Standard	
6	RD3	Cal 6 2020.12.29	29/Dec/2020	12:37	Calibration Standard	
7	RD4	Cal 7 2020.12.29	29/Dec/2020	12:52	Calibration Standard	
8	RD5	Cal 8 2020.12.29	29/Dec/2020	13:07	Calibration Standard	
9	RD6	Cal 9 2020.12.29	29/Dec/2020	13:21	Calibration Standard	
10	R1	ICB / CCB	29/Dec/2020	13:36	Unknown	
11	RD7	ICV Absolute 111419	29/Dec/2020	13:51	Check Standard	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210122A CCV/LCS 1	22/Jan/2021	12:42	Check Standard	F Br PO4 fail
2	R1	210122A CCB 1	22/Jan/2021	13:01	Unknown	
3	BA1	BA25672W01	22/Jan/2021	13:16	Unknown	80.03R ARF 94834
4	BA2	BA25661W01	22/Jan/2021	13:30	Unknown	48.97L ARF 94835
5	BA3	BA25662W01	22/Jan/2021	13:45	Unknown	58.28L ARF 94835
6	BA4	BA25663W01	22/Jan/2021	14:00	Unknown	79.12R ARF 94835
7	BA5	BA25664W01	22/Jan/2021	14:14	Unknown	79.13R ARF 94835
8	BA6	BA25665W01	22/Jan/2021	14:29	Unknown	79.13L ARF 94835
9	BA7	BA25666W01	22/Jan/2021	14:44	Unknown	79.60L ARF 94835
10	BA8	BA25667W01	22/Jan/2021	14:58	Unknown	80.03L ARF 94835
11	BC4	BA25661W01 DF5	22/Jan/2021	15:13	Unknown	48.97L ARF 94835 DF5
12	R2	210122A CCV/LCS 2	22/Jan/2021	15:28	Check Standard	F Br PO4 fail
13	R1	210122A CCB 2	22/Jan/2021	15:42	Unknown	
14	BB8	BA25690W10	22/Jan/2021	15:57	Unknown	94863 ERH 1212
15	BC1	BA25693W07	22/Jan/2021	16:12	Unknown	94863 ERH 1234
16	BC2	BA25696W07	22/Jan/2021	16:26	Unknown	94863 ERH 1242
17	BC3	BA25699W10	22/Jan/2021	16:41	Unknown	94863 ERH 1244
18	BA1	BA25672W01 DF5	22/Jan/2021	16:56	Unknown	80.03R ARF 94834 DF5
19	BA2	BA25662W01 DF5	22/Jan/2021	17:10	Unknown	58.28L ARF 94835 DF5
20	BA3	BA25663W01 DF5	22/Jan/2021	17:25	Unknown	79.12R ARF 94835 DF5
21	BA4	BA25664W01 DF5	22/Jan/2021	17:40	Unknown	79.13R ARF 94835 DF5
22	BA5	BA25664W01 DF20	22/Jan/2021	17:54	Unknown	79.13R ARF 94835 DF20
23	BA6	BA25665W01 DF5	22/Jan/2021	18:09	Unknown	79.13L ARF 94835 DF5
24	R2	210122A CCV/LCS 3	22/Jan/2021	18:23	Check Standard	F Br PO4 fail
25	R1	210122A CCB 3	22/Jan/2021	18:38	Unknown	
26	BA7	BA25666W01 DF5	22/Jan/2021	18:53	Unknown	79.60L ARF 94835 DF5
27	BA8	BA25667W01 DF10	22/Jan/2021	19:07	Unknown	80.03L ARF 94835 DF10
28	BC5	BA25693W07 DF5	22/Jan/2021	19:22	Unknown	94863 ERH 1234 DF5
29	BC6	BA25696W07 DF5	22/Jan/2021	19:37	Unknown	94863 ERH 1242 DF5
30	BC7	BA25699W10 DF5	22/Jan/2021	19:51	Unknown	94863 ERH 1244 DF5
31	BC8	BA25324W08 DF50	22/Jan/2021	20:06	Unknown	
32	BD1	BA25346W08 DF80	22/Jan/2021	20:21	Unknown	
33	BD2	BA25347W08 DF80	22/Jan/2021	20:35	Unknown	
34	BD3	BA25529W07 DF10	22/Jan/2021	20:50	Unknown	
35	BD4	BA25535W07 DF10	22/Jan/2021	21:04	Unknown	
36	R2	210122A CCV/LCS 4	22/Jan/2021	21:19	Check Standard	F Br PO4 fail
37	R1	210122A CCB 4	22/Jan/2021	21:34	Unknown	
38	BB1	BA25621W04	22/Jan/2021	21:48	Unknown	01EB ARF 94845
39	BB2	01EB ARF 94845XXX	22/Jan/2021	22:03	Unknown	WRONG VIAL
40	BB2	BA25623W04 DF200	22/Jan/2021	22:18	Unknown	MW1-6 ARF 94845 DF200
41	BB3	BA25624W04 DF200	22/Jan/2021	22:32	Unknown	MW1-9 ARF 94845 DF200
42	BB4	BA25625W04 DF200	22/Jan/2021	22:47	Unknown	MW-9-D ARF 94845 DF200
43	BB5	BA25626W04 DF200	22/Jan/2021	23:02	Unknown	MW1-7 ARF 94845 DF200
44	BB6	BA25627W04 DF200	22/Jan/2021	23:16	Unknown	MW1-10 ARF 94845 DF200
45	BB7	BA25628W04 DF200	22/Jan/2021	23:31	Unknown	MW1-8 ARF 94845 DF200
46	R2	210122A CCV/LCS 5	22/Jan/2021	23:46	Check Standard	F Br PO4 fail
47	R1	210122A CCB 5	23/Jan/2021	00:00	Unknown	
48	BD5	BA25462 DF500	23/Jan/2021	00:15	Unknown	
49	BD6	BA25464 DF500	23/Jan/2021	00:30	Unknown	
50	BD7	BA25465 DF400	23/Jan/2021	00:44	Unknown	
51	BD8	BA25466 DF200	23/Jan/2021	00:59	Unknown	
52	BE1	BA25467 DF500	23/Jan/2021	01:13	Unknown	
53	BE2	BA25468 DF250	23/Jan/2021	01:28	Unknown	
54	BE3	BA25469 DF200	23/Jan/2021	01:43	Unknown	
55	BE4	BA25470 DF200	23/Jan/2021	01:57	Unknown	
56	R2	210122A CCV/LCS 6	23/Jan/2021	02:12	Check Standard	F Br PO4 fail
57	R1	210122A CCB 6	23/Jan/2021	02:27	Unknown	
58	R2	STOP	23/Jan/2021	02:38	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
210125A LCSD	2021-01-25 18:21:39 UTC-8	Alkalinity	0.226	6.242	0.00	17.90	229.28	247.18	mg/L	25 mL	0.0198	210125A	AR
210125A BLK	2021-01-25 18:08:26 UTC-8	Alkalinity	0.000	0.080	0.00	0.00	3.17	3.17	mg/L	25 mL	0.0198	210125A	AR
BA25699W10	2021-01-25 17:50:57 UTC-8	Alkalinity	0.000	2.424	0.00	0.00	95.99	95.99	mg/L	25 mL	0.0198	210125A	AR
BA25696W07	2021-01-25 17:46:00 UTC-8	Alkalinity	0.000	2.778	0.00	0.00	110.01	110.01	mg/L	25 mL	0.0198	210125A	AR
BA25693W07	2021-01-25 17:41:38 UTC-8	Alkalinity	0.000	1.190	0.00	0.00	47.12	47.12	mg/L	25 mL	0.0198	210125A	AR
BA25690W10	2021-01-25 17:37:02 UTC-8	Alkalinity	0.000	1.682	0.00	0.00	66.61	66.61	mg/L	25 mL	0.0198	210125A	AR
210125A LCS	2021-01-25 17:19:57 UTC-8	Alkalinity	0.272	6.394	0.00	21.54	231.66	253.20	mg/L	25 mL	0.0198	210125A	AR

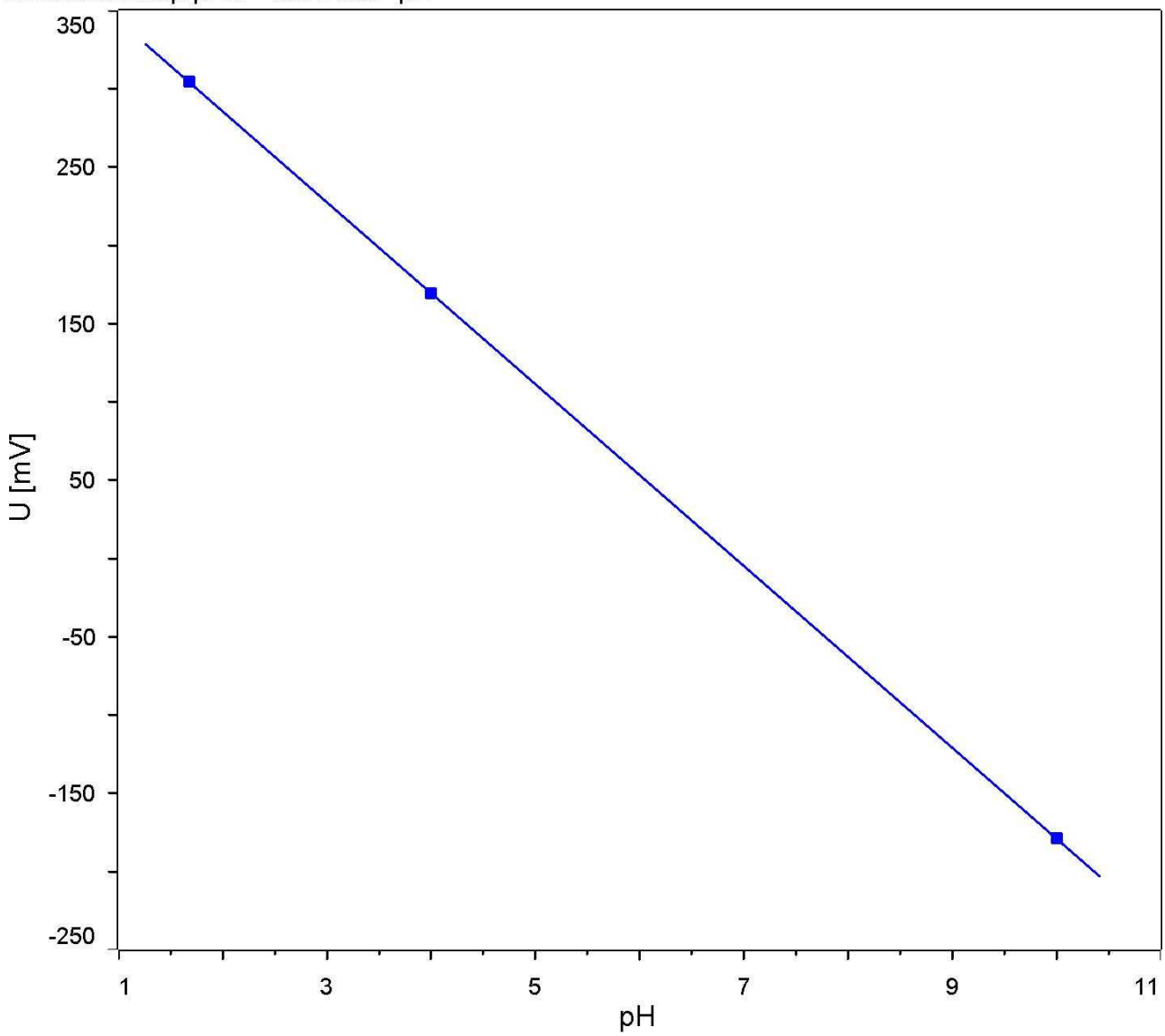
Timao Calibration Curve

2021-01-25 15:16:22

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0434	
Slope	99.80	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.8	
pH(as)	6.92	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.919	
Res19	20.2	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	20.1698	

Calibration loop pH.1 - CAL LOOP pH



Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210126 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

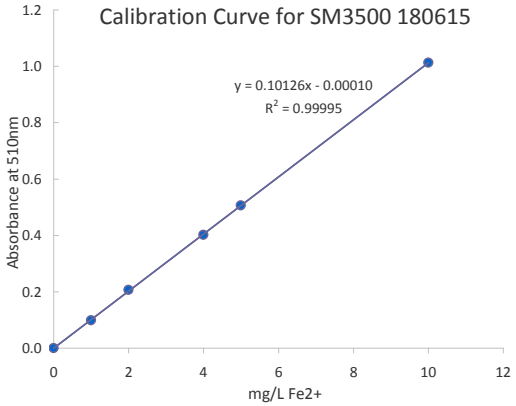
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210126	0.299	2.95

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	01/26/21	2.95



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
01/26/21	0:31	CCV 4.0 A210126	1	0.390	25mL		3.85	3.85	4.00	96.3%
01/26/21	0:31	Blk/ CCB A210126	1	0.000	25mL		0.00	0.00		
01/26/21	0:31	LCS A210126	1	0.299	25mL		2.95	2.95	3.00	98.5%
01/26/21	0:31	LCSD A210126	1	0.301	25mL		2.97	2.97	3.00	99.1%
01/26/21	0:32	BA25690W12	1	0.005	25mL		0.05	0.05		
01/26/21	0:32	BA25693W09	1	0.078	25mL		0.77	0.77		
01/26/21	0:33	BA25696W09	1	0.008	25mL		0.08	0.08		
01/26/21	0:33	BA25699W12	1	0.010	25mL		0.10	0.10		
01/26/21	0:34	BA25867W09	1	0.037	25mL		0.37	0.37		
01/26/21	0:35	BA25870W09	1	0.002	25mL		0.02	0.02		
01/26/21	0:35	BA25870W09 MS	1	0.290	25mL		2.87	2.87		
01/26/21	0:36	BA25870W09 MSD	1	0.289	25mL		2.86	2.86		
01/26/21	0:36	CCV 4.0 A210126	1	0.401	25mL		3.96	3.96	4.00	99.0%
01/26/21	0:36	Blk/ CCB A210126	1	0.002	25mL		0.02	0.02		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

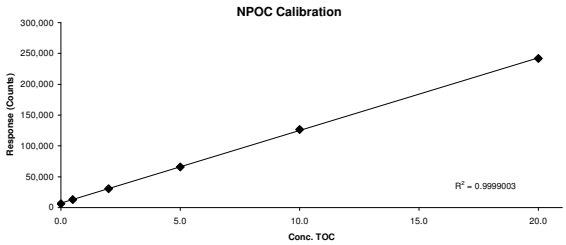
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210125A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-25	06:10 PM	QCB	1	2846	40mL	0.000	0	0.00	0.00		
2021-01-25	06:50 PM	CCV	1	69534	40mL	0.000	5.661	5.66	0.10	5.00	113.2%
2021-01-25	07:30 PM	CCB	1	2059	40mL	0.000	0	0.00	0.00		
2021-01-25	08:09 PM	210125A LCS	1	60315	40mL	0.000	4.878	4.88	0.01	5.00	97.6%
2021-01-25	08:50 PM	210125A LCSD	1	60721	40mL	0.000	4.913	4.91	0.02	5.00	98.3%
2021-01-25	09:30 PM	BA25690W09	1	2723	40mL	0.000	0.088	0.09	0.02		
2021-01-25	10:06 PM	BA25693W05	1	3156	40mL	0.000	0.125	0.13	0.02		
2021-01-25	10:42 PM	BA25696W05	1	163558	40mL	0.000	13.74	13.74	0.57		
2021-01-25	11:21 PM	BA25699W08	1	14684	40mL	0.000	1.103	1.10	0.05		
2021-01-25	11:58 PM	CCV	1	58831	40mL	0.000	4.752	4.75	0.03	5.00	95.0%
2021-01-26	12:38 AM	CCB	1	1798	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**6465171-49409**	**06/30/21**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_MS/MSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**sample**	5 ppm

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94863 SDG: 94863
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/25/21

Analyte	Calibration Verification									M
	True ICV	Found 21:45	%R(1)	True CCV1	Found 22:36	%R(1)	True CCV1	Found 23:04	%R(1)	
TOXN	3	3.0502	102	3	3.1184	104	3	3.233	108	

(1) Control Limits: 90-110

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94863 SDG: 94863
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/26/21

Analyte	Calibration Verification									M
	True CCV1	Found 11:54	%R(1)	True ICV	Found 11:58	%R(1)	True CCV1	Found 12:17	%R(1)	
TOXN	3	2.7899	93.0	3	3.2919	110	3	2.881	96.0	

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94863 SDG: 94863

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 01/25/21 21:48	C	CCB 01/25/21 22:38	C	CCB 01/25/21 23:06	C		C		C	
TOXN	.100	U	.100	U	.100	U					

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94863 SDG: 94863

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 01/26/21 11:56	C	ICB 01/26/21 12:00	C	CCB 01/26/21 12:18	C		C		C	
TOXN	.100	U	.100	U	.100	U					

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 14:21:23
Tray Number:	2
Tray Name:	210125A NO2 NO3 TOXN PT

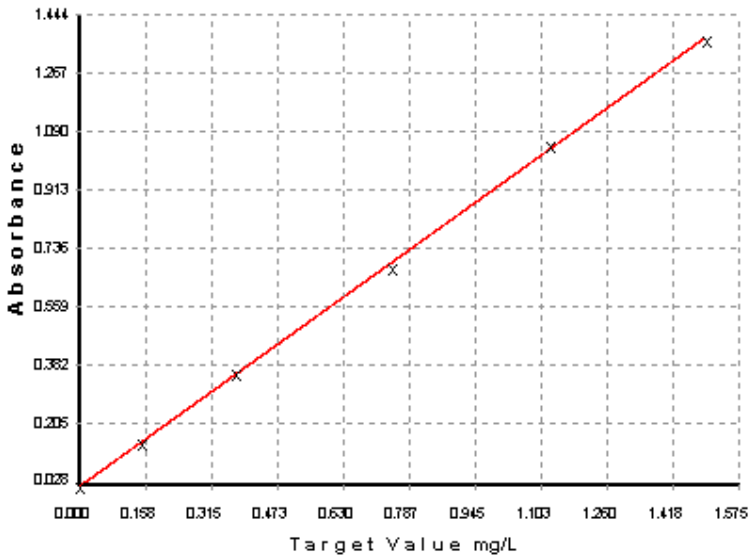
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0284	0.0005	0.0000	
S90	0.1625	0.1492	0.1500	-0.54
S91	0.3706	0.3799	0.3750	1.32
S92	0.6902	0.7344	0.7500	-2.08
S93	1.0579	1.1422	1.1250	1.53
S94	1.3749	1.4937	1.5000	-0.42
S0	0.0384	0.0116	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9998
Carryover(%):	0.7
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-3.101574E-002
b =:	1.108986E+000
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 20:01:06

Calibration Graph



Test Results

Cup Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
S1	Standard 1	0.0284			0.028434			ERR	2021-01-25 19:53:45
S1	Standard 1	0.0279			0.027917			ERR	2021-01-25 19:08:06
S1	Standard 1	0.0270			0.026971			ERR	2021-01-25 18:36:44
S90	Standard 90	0.1625			0.162497			ERR	2021-01-25 19:54:58
S90	Standard 90	0.1843			0.184284			ERR	2021-01-25 19:09:19
S90	Standard 90	0.1852			0.185231			ERR	2021-01-25 18:37:58
S91	Standard 91	0.3706			0.370564			ERR	2021-01-25 19:56:11
S91	Standard 91	0.4272			0.427209			ERR	2021-01-25 19:10:33
S91	Standard 91	0.4237			0.423696			ERR	2021-01-25 18:39:11
S92	Standard 92	0.6902			0.690216			ERR	2021-01-25 19:57:25
S92	Standard 92	0.8171			0.817072			ERR	2021-01-25 19:11:46
S92	Standard 92	0.8306			0.830618			ERR	2021-01-25 18:40:25
S93	Standard 93	1.0579			1.057907			ERR	2021-01-25 19:58:39
S93	Standard 93	1.2275			1.227511			ERR	2021-01-25 19:13:00
S93	Standard 93	1.2596			1.259574			ERR	2021-01-25 18:41:38
S94	Standard 94	1.3749			1.374914			ERR	2021-01-25 19:59:52
S94	Standard 94	1.6100			1.610047			ERR	2021-01-25 19:14:13
S94	Standard 94	1.5814			1.581402			ERR	2021-01-25 18:42:52
S0	Standard 0	0.0384			0.038450			ERR	2021-01-25 20:01:06
S0	Standard 0	0.0406			0.040558			ERR	2021-01-25 19:15:27
S0	Standard 0	0.0396			0.039613			ERR	2021-01-25 18:44:05
CCV	CCV .75	0.7553	mg/L		0.709018			ERR	2021-01-25 20:02:20
CCV	CCV .75	0.6409	mg/L		0.705998			ERR	2021-01-25 19:16:40
CCV	CCV .75	0.6297	mg/L		0.696527			ERR	2021-01-25 18:45:19

	CCB	CCB	0.0065	mg/L	0.033842	ERR	2021-01-25 20:03:33
	CCB	CCB	0.0058	mg/L	0.033973	ERR	2021-01-25 19:17:54
	CCB	CCB	-0.0001	mg/L	0.032549	ERR	2021-01-25 18:46:33
3	U1	ICV NO2	0.7446	mg/L	0.699414	ERR	2021-01-25 20:04:47
3	U1	ICV NO2	0.6145	mg/L	0.678119	ERR	2021-01-25 19:19:08
3	U1	ICV NO2	0.6199	mg/L	0.686146	ERR	2021-01-25 18:47:47
4	U2	ICV NO3 TOXN	0.0065	mg/L	0.033871	ERR	2021-01-25 20:06:01
4	U2	ICV NO3 TOXN	0.0057	mg/L	0.033915	ERR	2021-01-25 19:20:22
5	U3	ICB NO2 NO3 TOXN	-0.0002ELL	mg/L	0.027760	ERR	2021-01-25 20:07:14
5	U3	ICB NO2 NO3 TOXN	-0.0003	mg/L	0.027516	ERR	2021-01-25 19:21:35
6	U4	210125A Blk NO2 NO3 TOXN	0.0005ELL	mg/L	0.028420	ERR	2021-01-25 20:08:30
6	U4	210125A Blk NO2 NO3 TOXN	0.0005	mg/L	0.028391	ERR	2021-01-25 19:22:51
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0002ELL	mg/L	0.028190	ERR	2021-01-25 20:09:43
7	U5	210125A1 Blk NO2 NO3 TOXN	0.0001	mg/L	0.027932	ERR	2021-01-25 19:24:04
8	U6	210125A LCS NO2	0.7340	mg/L	0.689821	ERR	2021-01-25 20:10:58
8	U6	210125A LCS NO2	0.6225	mg/L	0.686604	ERR	2021-01-25 19:25:19
9	U7	210125A LCS NO3 TOXN	0.0055	mg/L	0.032898	ERR	2021-01-25 20:12:12
9	U7	210125A LCS NO3 TOXN	0.0045	mg/L	0.032622	ERR	2021-01-25 19:26:33
10	U8	210125A LCSD NO2	0.7531	mg/L	0.707025	ERR	2021-01-25 20:13:26
10	U8	210125A LCSD NO2	0.6341	mg/L	0.698808	ERR	2021-01-25 19:27:47
11	U9	210125A LCSD NO3 TOXN	0.0060	mg/L	0.033333	ERR	2021-01-25 20:14:40
11	U9	210125A LCSD NO3 TOXN	0.0045	mg/L	0.032564	ERR	2021-01-25 19:29:01
12	U10	1 ppm NO2	0.0105	mg/L	0.037466	ERR	2021-01-25 20:15:55
	CCV	CCV .75	0.7377	mg/L	0.693128	ERR	2021-01-25 20:17:09
	CCB	CCB	0.0058	mg/L	0.033173	ERR	2021-01-25 20:18:24
13	U11	1 ppm NO3	0.0048	mg/L	0.032332	ERR	2021-01-25 20:19:38
14	U12	BA25605W03 pH 6.07	0.0076	mg/L	0.034833	ERR	2021-01-25 20:20:52
15	U13	BA25606W03 pH 7.47	0.0064	mg/L	0.033770	ERR	2021-01-25 20:22:06
16	U14	BA25607W03 pH 6.99	0.0072	mg/L	0.034454	ERR	2021-01-25 20:23:21
17	U15	BA25608W03 pH 5.98	0.0070	mg/L	0.034264	ERR	2021-01-25 20:24:35
18	U16	BA25609W03 pH 5.30	0.0067	mg/L	0.034002	ERR	2021-01-25 20:25:49
19	U17	BA25610W06 pH 6.98	0.0065	mg/L	0.033828	ERR	2021-01-25 20:27:02
20	U18	BA25611W04 pH 6.45	0.0113	mg/L	0.038126	ERR	2021-01-25 20:28:16
21	U19	BA25612W04 pH 5.63	0.0101	mg/L	0.037040	ERR	2021-01-25 20:29:29
22	U20	BA25613W02 pH 5.58	0.0091	mg/L	0.036206	ERR	2021-01-25 20:30:42
	CCV	CCV .75	0.7557	mg/L	0.709431	ERR	2021-01-25 20:31:55
	CCB	CCB	0.0060	mg/L	0.033333	ERR	2021-01-25 20:33:10
23	U21	BA25614W02 pH 6.34	0.0067	mg/L	0.034031	ERR	2021-01-25 20:34:25
24	U22	BA25615W02 pH 6.95	0.0075	mg/L	0.034774	ERR	2021-01-25 20:35:38
25	U23	BA25616W02 pH 7.67	0.0056	mg/L	0.033028	ERR	2021-01-25 20:36:52
26	U24	BA25617W02 pH 6.34	0.0077	mg/L	0.034906	ERR	2021-01-25 20:38:07
27	U25	BA25618W02 pH 6.24	0.0058	mg/L	0.033173	ERR	2021-01-25 20:39:21
28	U26	BA25619W05 pH 6.07	0.0004ELL	mg/L	0.028363	ERR	2021-01-25 20:40:35
40	U38	BA25600W06	0.0067	mg/L	0.034002	ERR	2021-01-25 20:41:49
41	U39	BA25600W07 pH 6.01	0.0023	mg/L	0.030076	ERR	2021-01-25 20:43:03
42	U40	BA25601W06	0.0037	mg/L	0.031260	ERR	2021-01-25 20:44:16
43	U41	BA25601W07 pH 6.27	0.0015	mg/L	0.029341	ERR	2021-01-25 20:45:32
	CCV	CCV .75	0.7357	mg/L	0.691339	ERR	2021-01-25 20:46:45
	CCB	CCB	0.0061	mg/L	0.033508	ERR	2021-01-25 20:48:02
44	U42	BA25602W06	0.0031	mg/L	0.030783	ERR	2021-01-25 20:48:42
45	U43	BA25602W07 pH 8.28	0.0012	mg/L	0.029024	ERR	2021-01-25 20:49:47
46	U44	BA25215 PT	1.0767	mg/L	0.998898	ERR	2021-01-25 20:50:43
47	U45	BA25214 PT	0.0082	mg/L	0.035343	ERR	2021-01-25 20:51:39
	CCV	CCV .75	0.7507	mg/L	0.704905	ERR	2021-01-25 20:52:35
	CCB	CCB	0.0058	mg/L	0.033159	ERR	2021-01-25 20:53:33
	CCV	CCV .75	0.7490	mg/L	0.703339		2021-01-25 19:51:15
	CCB	CCB	0.0051	mg/L	0.032578		2021-01-25 19:52:29
	CCV	CCV .75	0.7469	mg/L	0.701508		2021-01-25 20:54:31
	CCB	CCB	0.0062	mg/L	0.033595		2021-01-25 20:55:29

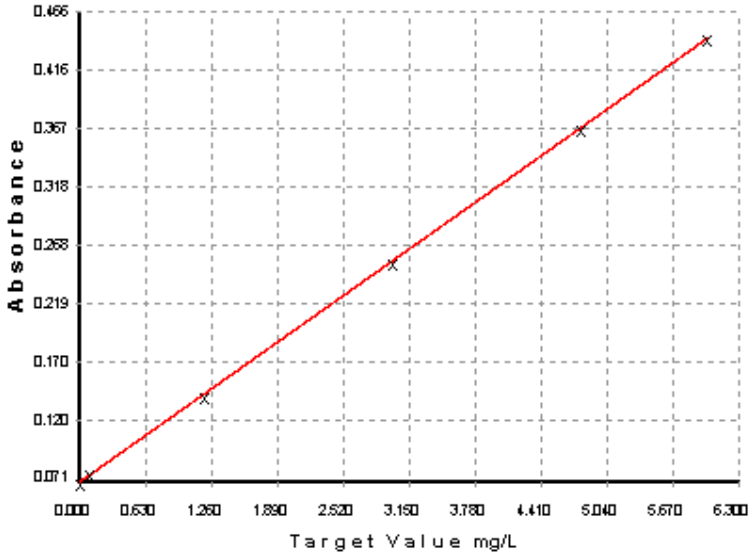
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0710	0.0080	0.0000	
S90	0.0785	0.1297	0.1000	29.72
S91	0.1427	1.1661	1.2000	-2.83
S92	0.2553	2.9823	3.0000	-0.59
S93	0.3675	4.7942	4.8000	-0.12
S94	0.4435	6.0198	6.0000	0.33
S0	0.0794	0.1443	0.0000	

Polynomial Order:	1
Correlation Coefficient:	1.0000
Carryover(%):	2.3
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-1.137157E+000
b =:	1.613783E+001
Date & Time:	2021-01-26 07:45:58
Original Date & Time:	2021-01-25 21:38:54

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0710		0.070958			ERR	2021-01-25 21:25:07
	S90	Standard 90	0.0785		0.078503			ERR	2021-01-25 21:27:24
	S91	Standard 91	0.1427		0.142723			ERR	2021-01-25 21:29:42
	S92	Standard 92	0.2553		0.255264			ERR	2021-01-25 21:32:00
	S93	Standard 93	0.3675		0.367542			ERR	2021-01-25 21:34:18
	S94	Standard 94	0.4435		0.443491			ERR	2021-01-25 21:36:36
	S0	Standard 0	0.0794		0.079407			ERR	2021-01-25 21:38:54
	CCV	CCV	3.0207	mg/L	0.257645			ERR	2021-01-25 21:41:13
	CCB	CCB	-0.0196	mg/L	0.069250			ERR	2021-01-25 21:43:31
4	U2	ICV NO3 TOXN	3.0502	mg/L	0.259476			ERR	2021-01-25 21:45:50
5	U3	ICB NO2 NO3 TOXN	0.0028ELL	mg/L	0.070641			ERR	2021-01-25 21:48:08
6	U4	210125A Blk NO2 NO3 TOXN	-0.0303ELL	mg/L	0.068587			ERR	2021-01-25 21:50:27
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0247ELL	mg/L	0.068934			ERR	2021-01-25 21:52:46
9	U7	210125A LCS NO3 TOXN	2.9363	mg/L	0.252415			ERR	2021-01-25 21:55:04
11	U9	210125A LCSD NO3 TOXN	2.9014	mg/L	0.250254			ERR	2021-01-25 21:57:23
13	U11	1 ppm NO3	0.0092	mg/L	0.071037			ERR	2021-01-25 21:59:42
14	U12	BA25605W03 pH 6.07	0.0585	mg/L	0.074091			ERR	2021-01-25 22:02:01
15	U13	BA25606W03 pH 7.47	0.0745	mg/L	0.075082			ERR	2021-01-25 22:04:20
16	U14	BA25607W03 pH 6.99	0.0282	mg/L	0.072212			ERR	2021-01-25 22:06:38
	CCV	CCV	3.0621	mg/L	0.260210			ERR	2021-01-25 22:08:57
	CCB	CCB	-0.0148	mg/L	0.069550			ERR	2021-01-25 22:11:16
17	U15	BA25608W03 pH 5.98	0.0325	mg/L	0.072482			ERR	2021-01-25 22:13:35
18	U16	BA25609W03 pH 5.30	0.0498	mg/L	0.073549			ERR	2021-01-25 22:15:53
19	U17	BA25610W06 pH 6.98	0.0601	mg/L	0.074187			ERR	2021-01-25 22:18:12
20	U18	BA25611W04 pH 6.45	0.2677	mg/L	0.087053			ERR	2021-01-25 22:20:30
21	U19	BA25612W04 pH 5.63	0.2563	mg/L	0.086346			ERR	2021-01-25 22:22:49
22	U20	BA25613W02 pH 5.58	0.1146	mg/L	0.077569			ERR	2021-01-25 22:25:07
23	U21	BA25614W02 pH 6.34	0.0900	mg/L	0.076043			ERR	2021-01-25 22:27:25
24	U22	BA25615W02 pH 6.95	0.0952	mg/L	0.076364			ERR	2021-01-25 22:29:43
25	U23	BA25616W02 pH 7.67	0.0565	mg/L	0.073964			ERR	2021-01-25 22:32:00
26	U24	BA25617W02 pH 6.34	0.0916	mg/L	0.076139			ERR	2021-01-25 22:34:18
	CCV	CCV	3.1184	mg/L	0.263704			ERR	2021-01-25 22:36:36
	CCB	CCB	-0.0461	mg/L	0.067611			ERR	2021-01-25 22:38:54
27	U25	BA25618W02 pH 6.24	0.1053	mg/L	0.076990			ERR	2021-01-25 22:41:13
28	U26	BA25619W05 pH 6.07	-0.0567ELL	mg/L	0.066951			ERR	2021-01-25 22:43:32
29	U27	BA25526W08 pH 8.10	0.3728	mg/L	0.093565			ERR	2021-01-25 22:45:51
30	U28	BA25529W08 pH 6.26	0.5989	mg/L	0.107578			ERR	2021-01-25 22:48:09
31	U29	BA25532W08 pH 7.05	1.3644	mg/L	0.155010			ERR	2021-01-25 22:50:26
32	U30	BA25535W08 pH 7.62	1.0767	mg/L	0.137187			ERR	2021-01-25 22:52:44
33	U31	BA25538W08 pH 6.35	0.4087	mg/L	0.095791			ERR	2021-01-25 22:55:02

34	U32	BA25591W02 pH 6.16	7.6305	mg/L	0.117749	x10.0000	ERR	2021-01-25 23:57:41
34	U32	BA25591W02 pH 6.16	6.0234	mg/L	0.443715		ERR	2021-01-25 22:57:19
35	U33	BA25592W02 pH 7.61	0.7429	mg/L	0.116497		ERR	2021-01-25 22:59:37
36	U34	BA25690W11 pH 6.32	0.3936	mg/L	0.094852		ERR	2021-01-25 23:01:54
	CCV	CCV	3.2330	mg/L	0.270801		ERR	2021-01-25 23:04:12
	CCB	CCB	-0.0450	mg/L	0.067674		ERR	2021-01-25 23:06:30
37	U35	BA25693W08 pH 8.53	0.1712	mg/L	0.081075		ERR	2021-01-25 23:08:49
38	U36	BA25696W08 pH 6.45	-0.0293ELL	mg/L	0.068650		ERR	2021-01-25 23:11:07
39	U37	BA25699W11 pH 6.24	0.0269	mg/L	0.072132		ERR	2021-01-25 23:13:27
40	U38	BA25600W06	220.6245	mg/L	0.298320	x60.0000	ERR	2021-01-26 00:32:22
40	U38	BA25600W06	172.1695	mg/L	1.137335	x10.0000	ERR	2021-01-25 23:58:37
40	U38	BA25600W06	52.6451	mg/L	3.332681		ERR	2021-01-25 23:15:44
41	U39	BA25600W07 pH 6.01	223.9008	mg/L	0.301703	x60.0000	ERR	2021-01-26 00:33:19
41	U39	BA25600W07 pH 6.01	169.5951	mg/L	1.121382	x10.0000	ERR	2021-01-25 23:59:33
41	U39	BA25600W07 pH 6.01	52.6451	mg/L	3.332681		ERR	2021-01-25 23:18:02
42	U40	BA25601W06	1258.1431ELH	mg/L	1.369838	x60.0000	ERR	2021-01-26 00:34:15
42	U40	BA25601W06	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:00:30
42	U40	BA25601W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:20:22
43	U41	BA25601W07 pH 6.27	1180.5591ELH	mg/L	1.289712	x60.0000	ERR	2021-01-26 00:35:11
43	U41	BA25601W07 pH 6.27	526.4506	mg/L	3.332681	x10.0000	ERR	2021-01-26 00:01:26
43	U41	BA25601W07 pH 6.27	60.3448	mg/L	3.809802		ERR	2021-01-25 23:21:29
44	U42	BA25602W06	1158.3044ELH	mg/L	1.266728	x60.0000	ERR	2021-01-26 00:36:07
44	U42	BA25602W06	536.4799	mg/L	3.394829	x10.0000	ERR	2021-01-26 00:02:22
44	U42	BA25602W06	55.4868	mg/L	3.508772		ERR	2021-01-25 23:22:26
45	U43	BA25602W07 pH 8.28	1279.7607ELH	mg/L	1.392164	x60.0000	ERR	2021-01-26 00:37:04
45	U43	BA25602W07 pH 8.28	531.2860	mg/L	3.362644	x10.0000	ERR	2021-01-26 00:03:18
45	U43	BA25602W07 pH 8.28	60.3448	mg/L	3.809802		ERR	2021-01-25 23:23:22
46	U44	BA25215 PT	2.7372	mg/L	0.240077		ERR	2021-01-25 23:24:18
	CCV	CCV	3.5657	mg/L	0.291420		ERR	2021-01-25 23:25:15
	CCB	CCB	0.3138	mg/L	0.089908		ERR	2021-01-25 23:26:12
47	U45	BA25214 PT	4.5484	mg/L	0.352314		ERR	2021-01-25 23:27:10
	CCV	CCV	3.4140	mg/L	0.282018		ERR	2021-01-25 23:28:06
	CCB	CCB	0.1446	mg/L	0.079424		ERR	2021-01-25 23:29:04
	CCV	CCV	3.1878	mg/L	0.267998			2021-01-25 23:54:10
	CCB	CCB	0.1261	mg/L	0.078278			2021-01-25 23:56:31
	CCV	CCV	4.0923	mg/L	0.324052			2021-01-26 00:04:15
	CCB	CCB	0.3612	mg/L	0.092848			2021-01-26 00:05:13
	CCV	CCV	3.3696	mg/L	0.279269			2021-01-26 00:30:14
	CCB	CCB	0.2290	mg/L	0.084658			2021-01-26 00:31:24
	CCV	CCV	3.7972	mg/L	0.305766			2021-01-26 00:38:00
	CCB	CCB	0.2871	mg/L	0.088255			2021-01-26 00:38:58

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.0437	mg/L		0.000000			ERR	2021-01-26 07:45:58
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN	0.0031	mg/L		0.000000			ERR	2021-01-26 07:45:58
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN	-0.0308	mg/L		0.000000			ERR	2021-01-26 07:45:58
6	U4	210125A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN	-0.0250	mg/L		0.000000			ERR	2021-01-26 07:45:58
7	U5	210125A1 Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN	2.9308	mg/L		0.000000			ERR	2021-01-26 07:45:58
9	U7	210125A LCS NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN	2.8955	mg/L		0.000000			ERR	2021-01-26 07:45:58
11	U9	210125A LCSD NO3 TOXN				0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3	0.0044	mg/L		0.000000			ERR	2021-01-26 07:45:58
13	U11	1 ppm NO3				0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07	0.0509	mg/L		0.000000			ERR	2021-01-26 07:45:58
14	U12	BA25605W03 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47	0.0681	mg/L		0.000000			ERR	2021-01-26 07:45:58
15	U13	BA25606W03 pH 7.47				0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99	0.0210	mg/L		0.000000			ERR	2021-01-26 07:45:58
16	U14	BA25607W03 pH 6.99				0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98	0.0256	mg/L		0.000000			ERR	2021-01-26 07:45:58
17	U15	BA25608W03 pH 5.98				0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30	0.0431	mg/L		0.000000			ERR	2021-01-26 07:45:58
18	U16	BA25609W03 pH 5.30				0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98	0.0536	mg/L		0.000000			ERR	2021-01-26 07:45:58
19	U17	BA25610W06 pH 6.98				0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45	0.2564	mg/L		0.000000			ERR	2021-01-26 07:45:58
20	U18	BA25611W04 pH 6.45				0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63	0.2462	mg/L		0.000000			ERR	2021-01-26 07:45:58
21	U19	BA25612W04 pH 5.63				0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58	0.1055	mg/L		0.000000			ERR	2021-01-26 07:45:58
22	U20	BA25613W02 pH 5.58				0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34	0.0833	mg/L		0.000000			ERR	2021-01-26 07:45:58
23	U21	BA25614W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95	0.0876	mg/L		0.000000			ERR	2021-01-26 07:45:58
24	U22	BA25615W02 pH 6.95				0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67	0.0508	mg/L		0.000000			ERR	2021-01-26 07:45:58
25	U23	BA25616W02 pH 7.67				0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34	0.0839	mg/L		0.000000			ERR	2021-01-26 07:45:58
26	U24	BA25617W02 pH 6.34				0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24	0.0995	mg/L		0.000000			ERR	2021-01-26 07:45:58
27	U25	BA25618W02 pH 6.24				0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07	-0.0571	mg/L		0.000000			ERR	2021-01-26 07:45:58
28	U26	BA25619W05 pH 6.07				0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06	220.6178	mg/L		0.000000			ERR	2021-01-26 07:45:58
40	U38	BA25600W06				0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01	223.8985	mg/L		0.000000			ERR	2021-01-26 07:45:58
41	U39	BA25600W07 pH 6.01				0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06	1258.1394	mg/L		0.000000			ERR	2021-01-26 07:45:58
42	U40	BA25601W06				0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27	1180.5576	mg/L		0.000000			ERR	2021-01-26 07:45:58
43	U41	BA25601W07 pH 6.27				0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06	1158.3013	mg/L		0.000000			ERR	2021-01-26 07:45:58
44	U42	BA25602W06				0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28	1279.7595	mg/L		0.000000			ERR	2021-01-26 07:45:58
45	U43	BA25602W07 pH 8.28				0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT	1.6604	mg/L		0.000000			ERR	2021-01-26 07:45:58
46	U44	BA25215 PT				0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT	4.5402	mg/L		0.000000			ERR	2021-01-26 07:45:58
47	U45	BA25214 PT				0.000000			ERR	2021-01-26 07:45:58

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 12:54:13
Tray Number:	3
Tray Name:	210126B NO2 NO3 TOXN

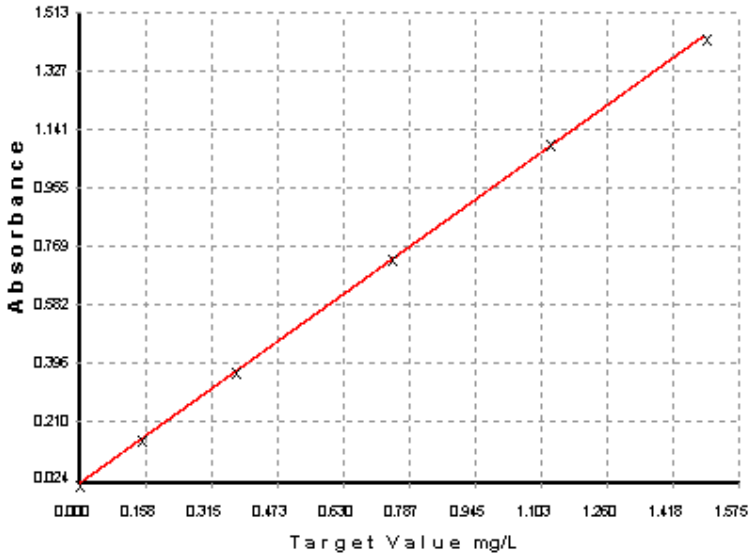
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0244	-0.0027	0.0000	
S90	0.1681	0.1490	0.1500	-0.69
S91	0.3822	0.3749	0.3750	-0.04
S92	0.7404	0.7528	0.7500	0.38
S93	1.1019	1.1343	1.1250	0.83
S94	1.4406	1.4917	1.5000	-0.55
S0	0.0350	0.0085	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	0.8
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-2.845079E-002
b =:	1.055256E+000
Date & Time:	2021-01-26 12:48:53
Original Date & Time:	2021-01-26 10:56:23

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0244			0.024401			ERR	2021-01-26 10:49:03
	S90	Standard 90	0.1681			0.168130			ERR	2021-01-26 10:50:16
	S91	Standard 91	0.3822			0.382186			ERR	2021-01-26 10:51:30
	S92	Standard 92	0.7404			0.740356			ERR	2021-01-26 10:52:43
	S93	Standard 93	1.1019			1.101891			ERR	2021-01-26 10:53:57
	S94	Standard 94	1.4406			1.440586			ERR	2021-01-26 10:55:10
	S0	Standard 0	0.0350			0.035037			ERR	2021-01-26 10:56:23
	CCV	CCV .75	0.0068	mg/L		0.033377			ERR	2021-01-26 10:57:36
	CCB	CCB	-0.0016	mg/L		0.025484			ERR	2021-01-26 10:58:50
3	U1	ICV NO2	0.8170	mg/L		0.801202			ERR	2021-01-26 11:00:04
4	U2	ICV NO3 TOXN	0.0070	mg/L		0.033610			ERR	2021-01-26 11:01:18
5	U3	ICB NO2 NO3 TOXN	0.0007	mg/L		0.027645			ERR	2021-01-26 11:02:31
6	U4	210125A Blk NO2 NO3 TOXN	0.0017	mg/L		0.028607			ERR	2021-01-26 11:03:46
8	U5	210125A LCS NO2	0.7751	mg/L		0.761438			ERR	2021-01-26 11:05:00
9	U6	210125A LCS NO3 TOXN	0.0079	mg/L		0.034410			ERR	2021-01-26 11:06:13
37	U7	BA25693W08 pH 8.53	0.0031	mg/L		0.029946			ERR	2021-01-26 11:07:27
38	U8	BA25696W08 pH 6.45	0.0039	mg/L		0.030682			ERR	2021-01-26 11:08:40
39	U9	BA25699W11 pH 6.24	0.0026	mg/L		0.029470			ERR	2021-01-26 11:09:54
40	U10	BA25600W06	-0.0018	mg/L		0.025228			ERR	
	CCV	CCV .75	0.6854	mg/L		0.676519			ERR	2021-01-26 11:12:22
	CCB	CCB	0.0028	mg/L		0.029643			ERR	2021-01-26 11:13:38
41	U11	BA25600W07 pH 6.01	-0.0026	mg/L		0.024543			ERR	
42	U12	BA25601W06	-0.0014	mg/L		0.025641			ERR	
43	U13	BA25601W07 pH 6.27	-0.0007	mg/L		0.026299			ERR	

44	U14	BA25602W06	-0.0009	mg/L	0.026113	ERR	
45	U15	BA25602W07 pH 8.28	-0.0019	mg/L	0.025128	ERR	
47	U16	BA25214 PT	0.0016	mg/L	0.028492	ERR	2021-01-26 11:25:35
	CCV	CCV .75	0.6693	mg/L	0.661199	ERR	2021-01-26 11:27:53
	CCB	CCB	0.0039	mg/L	0.030682	ERR	2021-01-26 11:30:07

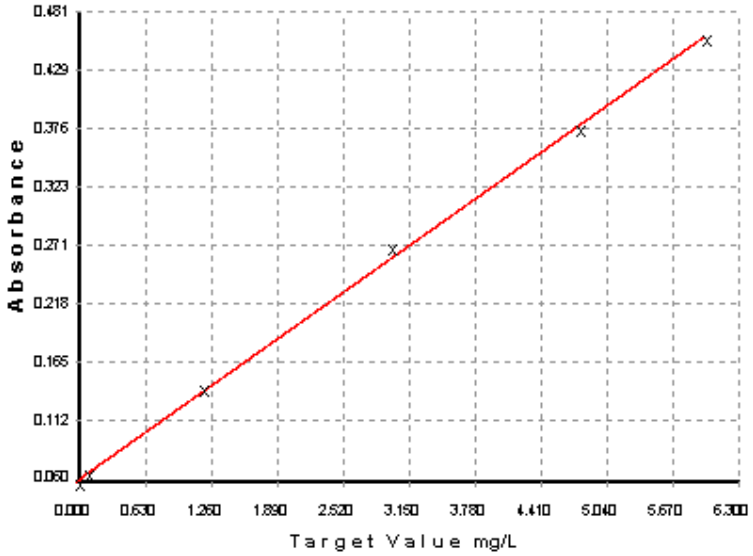
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0598	-0.0454	0.0000	
S90	0.0676	0.0722	0.1000	-27.80
S91	0.1436	1.2203	1.2000	1.69
S92	0.2704	3.1332	3.0000	4.44
S93	0.3775	4.7498	4.8000	-1.05
S94	0.4583	5.9700	6.0000	-0.50
S0	0.0637	0.0138	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9996
Carryover(%):	1.0
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-9.478600E-001
b =:	1.509410E+001
Date & Time:	2021-01-26 12:48:53
Original Date & Time:	2021-01-26 11:52:05

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0598			0.059788			ERR	2021-01-26 11:38:55
	S90	Standard 90	0.0676			0.067580			ERR	2021-01-26 11:41:07
	S91	Standard 91	0.1436			0.143640			ERR	2021-01-26 11:43:19
	S92	Standard 92	0.2704			0.270375			ERR	2021-01-26 11:45:31
	S93	Standard 93	0.3775			0.377474			ERR	2021-01-26 11:47:42
	S94	Standard 94	0.4583			0.458315			ERR	2021-01-26 11:49:54
	S0	Standard 0	0.0637			0.063713			ERR	2021-01-26 11:52:05
	CCV	CCV	2.7899	mg/L		0.247628			ERR	2021-01-26 11:54:16
	CCB	CCB	-0.0099	mg/L		0.062142			ERR	2021-01-26 11:56:28
4	U2	ICV NO3 TOXN	3.2919	mg/L		0.280885			ERR	2021-01-26 11:58:39
5	U3	ICB NO2 NO3 TOXN	-0.0239	mg/L		0.061211			ERR	2021-01-26 12:00:51
6	U4	210125A Blk NO2 NO3 TOXN	-0.0333	mg/L		0.060592			ERR	2021-01-26 12:03:04
9	U6	210125A LCS NO3 TOXN	3.0680	mg/L		0.266057			ERR	2021-01-26 12:05:15
37	U7	BA25693W08 pH 8.53	0.2264	mg/L		0.077794			ERR	2021-01-26 12:07:26
38	U8	BA25696W08 pH 6.45	-0.0120	mg/L		0.062002			ERR	2021-01-26 12:09:37
39	U9	BA25699W11 pH 6.24	0.0249	mg/L		0.064446			ERR	2021-01-26 12:11:48
40	U10	BA25600W06	155.3339	mg/L		0.234314		x60.0000	ERR	
41	U11	BA25600W07 pH 6.01	137.7930	mg/L		0.214946		x60.0000	ERR	2021-01-26 12:16:12
42	U12	BA25601W06	877.7513	mg/L		0.208177		x400.0000	ERR	2021-01-26 12:16:50
	CCV	CCV	2.8810	mg/L		0.253668			ERR	2021-01-26 12:17:55
	CCB	CCB	-0.0101	mg/L		0.062126			ERR	2021-01-26 12:18:51
43	U13	BA25601W07 pH 6.27	820.5052	mg/L		0.198695		x400.0000	ERR	2021-01-26 12:19:48
44	U14	BA25602W06	861.3977	mg/L		0.205468		x400.0000	ERR	2021-01-26 12:20:44
45	U15	BA25602W07 pH 8.28	809.8693	mg/L		0.196933		x400.0000	ERR	2021-01-26 12:21:40
47	U16	BA25214 PT	4.3472	mg/L		0.350802			ERR	2021-01-26 12:22:36
	CCV	CCV	2.6957	mg/L		0.241389			ERR	2021-01-26 12:23:32
	CCB	CCB	-0.0207	mg/L		0.061428			ERR	2021-01-26 12:24:29

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.2848	mg/L		0.000000			ERR	2021-01-26 12:48:53
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
5	U3	ICB NO2 NO3 TOXN	-0.0247	mg/L		0.000000			ERR	2021-01-26 12:48:53
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
6	U4	210125A Blk NO2 NO3 TOXN	-0.0350	mg/L		0.000000			ERR	2021-01-26 12:48:53
6	U4	210125A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
9	U6	210125A LCS NO3 TOXN	3.0602	mg/L		0.000000			ERR	2021-01-26 12:48:53
9	U6	210125A LCS NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
37	U7	BA25693W08 pH 8.53	0.2232	mg/L		0.000000			ERR	2021-01-26 12:48:53
37	U7	BA25693W08 pH 8.53				0.000000			ERR	2021-01-26 12:48:53
38	U8	BA25696W08 pH 6.45	-0.0159	mg/L		0.000000			ERR	2021-01-26 12:48:53
38	U8	BA25696W08 pH 6.45				0.000000			ERR	2021-01-26 12:48:53
39	U9	BA25699W11 pH 6.24	0.0222	mg/L		0.000000			ERR	2021-01-26 12:48:53
39	U9	BA25699W11 pH 6.24				0.000000			ERR	2021-01-26 12:48:53
40	U10	BA25600W06	155.3358	mg/L		0.000000		x60.0000	ERR	2021-01-26 12:49:31
40	U10	BA25600W06				0.000000		x60.0000	ERR	2021-01-26 12:49:31
41	U11	BA25600W07 pH 6.01	137.7956	mg/L		0.000000		x60.0000	ERR	2021-01-26 12:49:31
41	U11	BA25600W07 pH 6.01				0.000000		x60.0000	ERR	2021-01-26 12:49:31
42	U12	BA25601W06	877.7527	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
42	U12	BA25601W06				0.000000		x400.0000	ERR	2021-01-26 12:49:31
43	U13	BA25601W07 pH 6.27	820.5059	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
43	U13	BA25601W07 pH 6.27				0.000000		x400.0000	ERR	2021-01-26 12:49:31
44	U14	BA25602W06	861.3986	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
44	U14	BA25602W06				0.000000		x400.0000	ERR	2021-01-26 12:49:31
45	U15	BA25602W07 pH 8.28	809.8713	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
45	U15	BA25602W07 pH 8.28				0.000000		x400.0000	ERR	2021-01-26 12:49:31
47	U16	BA25214 PT	4.3456	mg/L		0.000000			ERR	2021-01-26 12:48:53
47	U16	BA25214 PT				0.000000			ERR	2021-01-26 12:48:53

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 11, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94883

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Four water samples were received January 26, 2021. Written results for the requested analyses are being provided on this February 11, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package

for

60571032 CV18F0126 Red Hill Fuel Storage

APPL SDG 94883

TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	7
Sample Results	14
QC Forms	39
Method 8015B Calibration Data	109
Method 8015B Raw Data	135
Method 8270D Calibration Data	154
Method 8270D Raw Data	202
Method 8270D SIM Calibration Data	230
Method 8270D SIM Raw Data	257
APPL SOP 2-MEE Calibration Data	282
APPL SOP 2-MEE Raw Data	309
Method 8260B Calibration Data	334
Method 8260B Raw Data	402
Method 8260B GRO Calibration Data	426
Method 8260B GRO Raw Data	474
Method RSK-175 Calibration Data	498
Method RSK-175 Raw Data	526
Method 300 Calibration Data	543
Method 300 Raw Data	587
Inorganic Analyses and Calibration Raw Data	596

CASE NARRATIVE

Case Narrative

ARF: 94883

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Four water samples were received January 26, 2021 at 3.5°C and 2.0°C. The sample group was assigned Analytical Request Form (ARF) number 94883.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8260B: One surrogate recovered above the upper control limit in one sample. No target analytes were detected in the associated samples.

One surrogate recovered above the upper control limit in the LCS. All spike recoveries of target analytes are within the control limits.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94883	01/26/21	ERH1216	BA25866	01/25/21 8:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94883	01/26/21	ERH1216	BA25866	01/25/21 8:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94883	01/26/21	ERH1216	BA25866	01/25/21 8:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	SM3500FeB	Ferrous Iron
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94883	01/26/21	ERH1217	BA25867	01/25/21 9:00:00 AM	WATER	SW846 9060A	9060A TOC
94883	01/26/21	ERH1223	BA25869	01/25/21 10:58:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94883	01/26/21	ERH1223	BA25869	01/25/21 10:58:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94883	01/26/21	ERH1223	BA25869	01/25/21 10:58:00 AM	WATER	RSK 175	METHANE BY RSK 175
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	SM3500FeB	Ferrous Iron
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	RSK 175	METHANE BY RSK 175
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94883	01/26/21	ERH1224	BA25870	01/25/21 11:38:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

94883

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Brooke Gottmeier
Phone: 808-954-4536 Fax: 808-523-8950
Job: 60571032 CV18F0126 Red Hill Fuel Storage
PO #: 18S-22209-HI27 PO# 102604
Chain of Custody (Y/N): Y # 202105,202109
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: AAR
Date Received: 01/26/21 Time: 10:45
Delivered by: FEDEX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 3.5,2.0°C
Color: VFRG/M-PurplePink
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 02/02/21

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com
EDD: AECOM EQuIS EDD 2.5.3 Red Hill 87DMEE->3535A to brooke.gottmeier@, Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 2-$87DC53W5, 2-$87DMEEW5, 2-$DOC53W5LIQ, 2-$SIM53LIQ51
Extractions: 2-_LIQ003, 2-_LIQ005, 2-_MWE2MEE
VOA: 4-$86BTOTXDOD5W, 4-$GASBL, 4-$GRO86BW, 4-$RSKMETH
Wetlab: 2-$232W(HCO3,CO3,ALK), 2-$300W, 2-$353TOXNW, 2-$35FE, 2-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID		APPL ID	Sampled		Analyses Requested
1.	ERH1216	LCSD	BA25866W	01/25/21	08:30	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1217	LCSD	BA25867W	01/25/21	09:00	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
3.	ERH1223	LCSD	BA25869W	01/25/21	10:58	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH1224	LCSD BA25870W	01/25/21	11:38	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments

APPL Sample Receipt Form

ARF# **94883**

Sample	Container Type	Count	p
BA25866	[13] VOAs - HCL	4	NA
BA25867	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	1	1.3
	[40] 500mL Amber, unprsrvd	2	NA
BA25869	[13] VOAs - HCL	4	NA
BA25870	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA

Sample	Container Type	Count	p

94883

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202105

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): KL, MM, AM
Sampler (Signature):

Date Shipped: 1/25/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1216	Trip Blank	1/25/21	0830	HST	4	X			X							X						
ERH1217	RHMW01	1/25/21	0900	HST	17	X			X		X	X	X	X	X	X	X	X	X		X	

1/25/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: 3.5/3.5 2.0/2.0

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date 1/25/21	Time 13:30	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 1/26/21	Time 1045	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202109

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM, RS, JV

Sampler (Signature):

Date Shipped: 1/25/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1223	Trip Blank	1/25/21	10:58	HST	4	X			X							X						
ERH1224	RHMW04	1/25/21	11:38	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

1/25/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/25/21	13:30					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1/26/21	1045	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94883**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/26/21

2) Coolers: Number of Coolers: 2

3) YES Were custody seals present and intact?
How many? 4 Name/Date on seal? NOT SALVAGEABLE

4) YES Was there a shipping slip? Carrier name: HAND

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R5 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 3.5/3.5 2: 2.0/2.0 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA25866all, BA25869all
Smaller than a pea: BA25867w04, BA25870w04

Preservation Hold time:

18) ~~No~~Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate: ____

Notes/Deficiencies:
Some Ferrous Iron samples arrived out of hold time. AA

Personnel receiving samples: AA Second reviewer: AA
Personnel labeling samples: MS
Project manager notified: AA Date/Time of notification 01/26/21
Name of client notified: ____ Date/Time of notification ____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #DOC53-210127B-260718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	88.8	60-142			%	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	79.3	56-125			%	01/27/21	01/29/21

Quant Method:	DOC1218.M
Run #:	107218
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/29/21 2:57:01 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #DOC53-210127B-260718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	88.0	60-142			%	01/27/21	01/29/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	78.8	56-125			%	01/27/21	01/29/21

Quant Method:	DOC1218.M
Run #:	107219
Instrument:	Apollo
Sequence:	210107
Dilution Factor:	1
Initials:	SSE

Printed: 01/29/21 2:57:01 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #87DC5-210127A-260753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	88.2	43-140			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	85.7	44-119			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	84.7	19-119			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	89.1	44-120			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	88.4	10-115			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	109	50-134			%	01/27/21	01/29/21

Quant Method: Y0105.M
Run #: 0105Y136
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 02/01/21 10:33:32 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #87DC5-210127A-260753

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	95.3	43-140			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	89.0	44-119			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	101	19-119			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	105	44-120			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	102	10-115			%	01/27/21	01/29/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	121	50-134			%	01/27/21	01/29/21

Quant Method: Y0105.M
Run #: 0105Y137
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 02/01/21 10:33:32 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #SIM53-210127A-260754

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	92.8	39-114			%	01/27/21	01/29/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	98.1	58-120			%	01/27/21	01/29/21

Quant Method: L0118.M
Run #: 0118L067
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/01/21 12:36:55 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #SIM53-210127A-260754

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	86.2	39-114			%	01/27/21	01/29/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	92.5	58-120			%	01/27/21	01/29/21

Quant Method: L0118.M
Run #: 0118L068
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/01/21 12:36:56 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1217

Sample Collection Date: 01/25/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94883

APPL ID: BA25867

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K045
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 12:36:09 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1224

Sample Collection Date: 01/25/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94883

APPL ID: BA25870

QCG: #87DME-210127A-260697

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:	KMEE0125.M
Run #:	0125K046
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 01/29/21 12:36:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1216

APPL ID: BA25866

Sample Collection Date: 01/25/21

QCG: #86BTO-210127AZ-260806

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/27/21	01/27/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	111	81-118			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.0	85-114			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	110	80-119			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/27/21	01/27/21

Quant Method: Z0125W.M
Run #: 0127Z10
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: SSE

Printed: 02/02/21 3:53:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #86BTO-210127AZ-260806

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/27/21	01/27/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	116	81-118			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.4	85-114			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	115	80-119			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	113 #	89-112			%	01/27/21	01/27/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	Z0125W.M
Run #:	0127Z14
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	SSE

Printed: 02/02/21 3:53:05 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1223

APPL ID: BA25869

Sample Collection Date: 01/25/21

QCG: #86BTO-210127AZ-260806

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/27/21	01/27/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	111	81-118			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.7	85-114			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	109	80-119			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/27/21	01/27/21

Quant Method: Z0125W.M
Run #: 0127Z11
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: SSE

Printed: 02/02/21 3:53:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #86BTO-210127AZ-260806

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/27/21	01/27/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	114	81-118			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	01/27/21	01/27/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/27/21	01/27/21

Quant Method: Z0125W.M
Run #: 0127Z15
Instrument: ZEUS
Sequence: 210125
Dilution Factor: 1
Initials: SSE

Printed: 02/02/21 3:53:05 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1216

APPL ID: BA25866

Sample Collection Date: 01/25/21

QCG: #GRO86-210127AZ-260809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.0	85-114			%	01/27/21	01/27/21

Quant Method:	ZGAS0125.M
Run #:	0127Z10
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	SSE

Printed: 02/02/21 3:56:43 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #GRO86-210127AZ-260809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.4	85-114			%	01/27/21	01/27/21

Quant Method:	ZGAS0125.M
Run #:	0127Z14
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	SSE

Printed: 02/02/21 3:56:43 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1223

APPL ID: BA25869

Sample Collection Date: 01/25/21

QCG: #GRO86-210127AZ-260809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.7	85-114			%	01/27/21	01/27/21

Quant Method:	ZGAS0125.M
Run #:	0127Z11
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	SSE

Printed: 02/02/21 3:56:43 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #GRO86-210127AZ-260809

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/27/21	01/27/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.1	85-114			%	01/27/21	01/27/21

Quant Method:	ZGAS0125.M
Run #:	0127Z15
Instrument:	ZEUS
Sequence:	210125
Dilution Factor:	1
Initials:	SSE

Printed: 02/02/21 3:56:43 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1216

APPL ID: BA25866

Sample Collection Date: 01/25/21

QCG: #RSKME-210129A-260760

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/29/21	01/29/21

Quant Method:	RSK0914A.M
Run #:	0129R19
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 11:05:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

QCG: #RSKME-210129A-260760

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	560	5.0	1.00	0.25	ug/L	01/29/21	01/29/21

Quant Method:	RSK0914A.M
Run #:	0129R20
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 11:05:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1223

APPL ID: BA25869

Sample Collection Date: 01/25/21

QCG: #RSKME-210129A-260760

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/29/21	01/29/21

Quant Method:	RSK0914A.M
Run #:	0129R21
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 11:05:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94883

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

QCG: #RSKME-210129A-260760

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/29/21	01/29/21

Quant Method:	RSK0914A.M
Run #:	0129R22
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 11:05:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

ARF: 94883

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	42.7	1.0	0.20	0.08	mg/L	1	01/26/21	01/26/21
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	1	01/26/21	01/26/21
EPA 300.0	SULFATE	4.9	1.0	0.20	0.09	mg/L	1	01/26/21	01/26/21

Printed: 02/04/21 2:34:56 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

ARF: 94883

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	72.8	5.0	1.00	0.40	mg/L	5	02/03/21	02/03/21
EPA 300.0	NITRATE	2.1	0.5	0.18	0.04	mg/L	1	01/26/21	01/26/21
EPA 300.0	SULFATE	9.2	1.0	0.20	0.09	mg/L	1	01/26/21	01/26/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1217

APPL ID: BA25867

Sample Collection Date: 01/25/21

ARF: 94883

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.090 U	0.10	0.090	0.028	mg/L	1	01/26/21	01/26/21
SM 2320B	BICARBONATE AS CACO3	81.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	81.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.37 J	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	0.45 J	0.93	0.350	0.130	mg/L	1	01/26/21	01/26/21

J = Estimated value.

Printed: 02/03/21 11:49:45 AM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1224

APPL ID: BA25870

Sample Collection Date: 01/25/21

ARF: 94883

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.49	0.10	0.090	0.028	mg/L	1	01/26/21	01/26/21
SM 2320B	BICARBONATE AS CACO3	76.6	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	76.6	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	01/26/21	01/26/21
SW846 9060A	TOTAL ORGANIC CARBON	0.22 J	0.93	0.350	0.130	mg/L	1	01/26/21	01/26/21

J = Estimated value.

Printed: 02/03/21 11:49:45 AM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127B-BLK	Blank	60-142	90.4		56-125	80.6	
210127B-LCS	Lab Control Spike	60-142	86.7		56-125	84.7	
210127B-LCSD	Lab Control SpikeD	60-142	87.3		56-125	85.3	
BA25867	ERH1217	60-142	88.8		56-125	79.3	
BA25870	ERH1224	60-142	88.0		56-125	78.8	

Comments: Batch: #DOC53-210127B

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210127B-BLK	Time Analyzed:	1023

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127B-BLK	Blank	107212	01/29/21 1023
210127B-LCS	Lab Control Spike	107213	01/29/21 1051
210127B-LCSD	Lab Control SpikeD	107214	01/29/21 1119
BA25867	ERH1217	107218	01/29/21 1311
BA25870	ERH1224	107219	01/29/21 1339

Comments: Batch: #DOC53-210127B

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210127W-25701 - 260718**
Batch ID: #DOC53-210127B

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	01/27/21	01/29/21
BLANK	SURROGATE: OCTACOSANE (S)	90.4	60-142			%	01/27/21	01/29/21
BLANK	SURROGATE: ORTHO-TERPHEN	80.6	56-125			%	01/27/21	01/29/21

Quant Method: DOC1218.M
Run #: 107212
Instrument: Apollo
Sequence: 210107
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 2:57:06 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210127B-LCS	Time Analyzed:	1051

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127B-BLK	Blank	107212	01/29/21 1023
210127B-LCS	Lab Control Spike	107213	01/29/21 1051
210127B-LCSD	Lab Control SpikeD	107214	01/29/21 1119
BA25867	ERH1217	107218	01/29/21 1311
BA25870	ERH1224	107219	01/29/21 1339

Comments: Batch: #DOC53-210127B

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210127W-25701 LCS - 260718**
Batch ID: #DOC53-210127B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	1690	1670	84.5	83.5	36-132	1.2	30
OIL (C24-C40)	2000	1820	1830	91.0	91.5	41-113	0.55	30
SURROGATE: OCTACOSANE (S)	150	130	131	86.7	87.3	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	127	128	84.7	85.3	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Apollo	Apollo
Run :	107213	107214
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127A-BLK	Blank	43-140	95.5		44-119	91.9	
210127A-LCS	Lab Control Spike	43-140	95.5		44-119	87.3	
210127A-LCSD	Lab Control SpikeD	43-140	85.5		44-119	80.2	
BA25867	ERH1217	43-140	88.2		44-119	85.7	
BA25870	ERH1224	43-140	95.3		44-119	89.0	

Comments: Batch: #87DC5-210127A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127A-BLK	Blank	19-119	88.8		44-120	96.0	
210127A-LCS	Lab Control Spike	19-119	89.0		44-120	93.1	
210127A-LCSD	Lab Control SpikeD	19-119	76.5		44-120	88.8	
BA25867	ERH1217	19-119	84.7		44-120	89.1	
BA25870	ERH1224	19-119	101		44-120	105	

Comments: Batch: #87DC5-210127A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127A-BLK	Blank	10-115	87.2		50-134	117	
210127A-LCS	Lab Control Spike	10-115	89.0		50-134	111	
210127A-LCSD	Lab Control SpikeD	10-115	77.5		50-134	103	
BA25867	ERH1217	10-115	88.4		50-134	109	
BA25870	ERH1224	10-115	102		50-134	121	

Comments: Batch: #87DC5-210127A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Yoda
Blank ID:	210127A-BLK	Time Analyzed:	1222

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0105Y133	01/29/21 1222
210127A-LCS	Lab Control Spike	0105Y134	01/29/21 1247
210127A-LCSD	Lab Control SpikeD	0105Y135	01/29/21 1313
BA25867	ERH1217	0105Y136	01/29/21 1338
BA25870	ERH1224	0105Y137	01/29/21 1403

Comments: Batch: #87DC5-210127A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210127W-25867 - 260753**
Batch ID: #87DC5-210127A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/27/21	01/29/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	95.5	43-140			%	01/27/21	01/29/21
BLANK	SURROGATE: 2-FLUORBIPHENY	91.9	44-119			%	01/27/21	01/29/21
BLANK	SURROGATE: 2-FLUOROPHENO	88.8	19-119			%	01/27/21	01/29/21
BLANK	SURROGATE: NITROBENZENE-	96.0	44-120			%	01/27/21	01/29/21
BLANK	SURROGATE: PHENOL-D6 (S)	87.2	10-115			%	01/27/21	01/29/21
BLANK	SURROGATE: TERPHENYL-D14 (	117	50-134			%	01/27/21	01/29/21

Quant Method: Y0105.M
Run #: 0105Y133
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
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Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **210127W-25867 LCS - 260753**
Batch ID: #87DC5-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	46.4	41.2	92.8	82.4	10-115	11.9	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	191	171	95.5	85.5	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	87.3	80.2	87.3	80.2	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	178	153	89.0	76.5	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	93.1	88.8	93.1	88.8	44-120		
SURROGATE: PHENOL-D6 (S)	200	178	155	89.0	77.5	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	111	103	111	103	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y0105.M	Y0105.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Yoda	Yoda
Run :	0105Y134	0105Y135
Initials :	MA	

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210127A-LCS	Time Analyzed:	1247

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0105Y133	01/29/21 1222
210127A-LCS	Lab Control Spike	0105Y134	01/29/21 1247
210127A-LCSD	Lab Control SpikeD	0105Y135	01/29/21 1313
BA25867	ERH1217	0105Y136	01/29/21 1338
BA25870	ERH1224	0105Y137	01/29/21 1403

Comments: Batch: #87DC5-210127A

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/05/21
Matrix: Water Instrument: Yoda
ID: 0105Y002.D Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94883
Case No: 94883 Date Analyzed: 01/29/21
Matrix: Water Instrument: Yoda
ID: 0105Y131.D Time Analyzed: 10:49

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y132.D	01/29/21 11:04
2	Blank	210127A BLK 1/1000	0105Y133.D	01/29/21 12:22
3	Lab Control Spike	210127A LCS-1 1/1000	0105Y134.D	01/29/21 12:47
4	Lab Control SpikeD	210127A LCSD-1 1/100	0105Y135.D	01/29/21 13:13
5	ERH1217	BA25867W12 1/800	0105Y136.D	01/29/21 13:38
6	ERH1224	BA25870W12 1/1050	0105Y137.D	01/29/21 14:03
7		50ug/mL 8270 08/12/2	0105Y138.D	01/29/21 14:29
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	30.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	47.8
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	28.6
365	1 - 100% of mass 198	4.0
441	0.01 - 24% of mass 442	17.5
442	50 - 500% of mass 198	87.1
443	15 - 24% of mass 442	20.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y132.D Date Analyzed: 01/29/21

Instrument ID: Yoda Time Analyzed: 11:04

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	534312	5.05	2117520	6.47	1340260	8.48
	UPPER LIMIT	1068624	5.22	4235040	6.64	2680520	8.65
	LOWER LIMIT	267156	4.88	1058760	6.30	670130	8.31
	SAMPLE NO.						
01	210127A BLK 1/1000	415219	5.05	1591200	6.46	979140	8.47
02	210127A LCS-1 1/1000	401868	5.05	1532690	6.46	959138	8.47
03	210127A LCSD-1 1/100	395752	5.05	1542000	6.46	976215	8.48
04	BA25867W12 1/800	400345	5.05	1551820	6.46	979433	8.47
05	BA25870W12 1/1050	344838	5.05	1339080	6.46	912915	8.47
06	50ug/mL 8270 08/12/20	532387	5.05	2192170	6.47	1374180	8.48
07							
08							
09							
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16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y132.D Date Analyzed: 01/29/21

Instrument ID: Yoda Time Analyzed: 11:04

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2727690	10.20	2738850	13.29	2539220	14.97
	UPPER LIMIT	5455380	10.37	5477700	13.46	5078440	15.14
	LOWER LIMIT	1363845	10.03	1369425	13.12	1269610	14.80
	SAMPLE NO.						
01	210127A BLK 1/1000	2003250	10.20	1831920	13.28	1688410	14.97
02	210127A LCS-1 1/1000	1983830	10.20	1871910	13.28	1795920	14.96
03	210127A LCSD-1 1/100	2012430	10.20	1905970	13.29	1797160	14.97
04	BA25867W12 1/800	2038540	10.20	1836580	13.28	1767260	14.96
05	BA25870W12 1/1050	1968230	10.20	1729690	13.28	1571200	14.96
06	50ug/mL 8270 08/12/20	2825300	10.21	2801320	13.29	2619630	14.97
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127A-BLK	Blank	39-114	97.3		58-120	102	
210127A-LCS	Lab Control Spike	39-114	91.0		58-120	94.6	
210127A-LCSD	Lab Control SpikeD	39-114	93.2		58-120	101	
BA25867	ERH1217	39-114	92.8		58-120	98.1	
BA25870	ERH1224	39-114	86.2		58-120	92.5	

Comments: Batch: #SIM53-210127A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Linus

Blank ID: 210127A-BLK Time Analyzed: 1159

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0118L064	01/29/21 1159
210127A-LCS	Lab Control Spike	0118L065	01/29/21 1221
210127A-LCSD	Lab Control SpikeD	0118L066	01/29/21 1243
BA25867	ERH1217	0118L067	01/29/21 1305
BA25870	ERH1224	0118L068	01/29/21 1327

Comments: Batch: #SIM53-210127A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **210127W-25867 - 260754**
Batch ID: #SIM53-210127A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/27/21	01/29/21
BLANK	SURROGATE: 2-METHYLNAPHT	97.3	39-114			%	01/27/21	01/29/21
BLANK	SURROGATE: FLUORANTHENE-	102	58-120			%	01/27/21	01/29/21

Quant Method:L0118.M
Run #:0118L064
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/01/21 12:36:59 PM

Laboratory Control Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **210127W-25867 LCS - 260754**
Batch ID: #SIM53-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	4.49	4.69	89.8	93.8	41-115	4.4	20
2-METHYLNAPHTHALENE	5.00	4.48	4.68	89.6	93.6	39-114	4.4	20
NAPHTHALENE	5.00	4.43	4.65	88.6	93.0	43-114	4.8	20
SURROGATE: 2-METHYLNAPHTHALEN	5.00	4.55	4.66	91.0	93.2	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	5.00	4.73	5.04	94.6	101	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0118.M	L0118.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Linus	Linus
Run :	0118L065	0118L066
Initials :	MA	

8270D-SIM

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Linus

LCS ID: 210127A-LCS Time Analyzed: 1221

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0118L064	01/29/21 1159
210127A-LCS	Lab Control Spike	0118L065	01/29/21 1221
210127A-LCSD	Lab Control SpikeD	0118L066	01/29/21 1243
BA25867	ERH1217	0118L067	01/29/21 1305
BA25870	ERH1224	0118L068	01/29/21 1327

Comments: Batch: #SIM53-210127A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
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14				
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17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94883
Case No: 94883 Date Analyzed: 01/29/21
Matrix: Water Instrument: Linus
ID: 0118L062.D Time Analyzed: 10:24

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21	0118L063.D	01/29/21 10:40
2	Blank	210127A BLK 1/1000	0118L064.D	01/29/21 11:59
3	Lab Control Spike	210127A LCS-2 1/1000	0118L065.D	01/29/21 12:21
4	Lab Control SpikeD	210127A LCSD-2 1/100	0118L066.D	01/29/21 12:43
5	ERH1217	BA25867W12 1/800	0118L067.D	01/29/21 13:05
6	ERH1224	BA25870W12 1/1050	0118L068.D	01/29/21 13:27
7		5 SIM 08/21/20	0118L069.D	01/29/21 13:49
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10				
11				
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16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	39.9
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	54.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.4
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	15.5
442	50 - 500% of mass 198	92.1
443	15 - 24% of mass 442	19.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L063.D Date Analyzed: 01/29/21

Instrument ID: Linus Time Analyzed: 10:40

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	77524	11.12	72787	13.57		
	UPPER LIMIT	155048	11.29	145574	13.74		
	LOWER LIMIT	38762	10.95	36394	13.40		
	SAMPLE NO.						
01	210127A BLK 1/1000	64431	11.13	54575	13.58		
02	210127A LCS-2 1/1000	67746	11.12	64507	13.57		
03	210127A LCSD-2 1/100	68934	11.12	65419	13.56		
04	BA25867W12 1/800	65197	11.12	62025	13.56		
05	BA25870W12 1/1050	51325	11.12	42884	13.56		
06	5 SIM 08/21/20	70656	11.12	67239	13.56		
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12							
13							
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21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L063.D Date Analyzed: 01/29/21

Instrument ID: Linus Time Analyzed: 10:40

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	71643	4.25	35378	6.25	63555	7.98
	UPPER LIMIT	143286	4.42	70756	6.42	127110	8.15
	LOWER LIMIT	35822	4.08	17689	6.08	31778	7.81
	SAMPLE NO.						
01	210127A BLK 1/1000	64902	4.25	30746	6.27	55845	7.99
02	210127A LCS-2 1/1000	63739	4.25	30228	6.25	56382	7.98
03	210127A LCSD-2 1/100	65009	4.25	30353	6.25	56624	7.98
04	BA25867W12 1/800	61767	4.25	29621	6.25	54944	7.98
05	BA25870W12 1/1050	50114	4.25	23395	6.25	43489	7.98
06	5 SIM 08/21/20	67868	4.25	32078	6.25	58193	7.98
07							
08							
09							
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17							
18							
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20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/28/21

Matrix: WATER Instrument: KYLO

Blank ID: 210127A-BLK Time Analyzed: 1352

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0125K035	01/28/21 1352
210127A-LCS	Lab Control Spike	0125K036	01/28/21 1413
210127A-LCSD	Lab Control SpikeD	0125K037	01/28/21 1434
BA25867	ERH1217	0125K045	01/28/21 1738
BA25870	ERH1224	0125K046	01/28/21 1759

Comments: Batch: #87DME-210127A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **210127W-25690 - 260697**
Batch ID: #87DME-210127A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	01/27/21	01/28/21

Quant Method:KMEE0125.M
Run #:0125K035
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 01/29/21 12:36:17 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210127A-LCS	Time Analyzed:	1413

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127A-BLK	Blank	0125K035	01/28/21 1352
210127A-LCS	Lab Control Spike	0125K036	01/28/21 1413
210127A-LCSD	Lab Control SpikeD	0125K037	01/28/21 1434
BA25867	ERH1217	0125K045	01/28/21 1738
BA25870	ERH1224	0125K046	01/28/21 1759

Comments: Batch: #87DME-210127A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **210127W-25690 LCS - 260697**
Batch ID: #87DME-210127A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	89.6	84.6	112	106	30-130	5.7	20

Comments:

Primary	SPK	DUP
Quant Method :	KMEE0125.M	KMEE0125.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/28/21	01/28/21
Instrument :	KYLO	KYLO
Run :	0125K036	0125K037
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
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19				
20				
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22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94883
Case No: 94883 Date Analyzed: 01/28/21
Matrix: Water Instrument: KYLO
ID: 0125K030.D Time Analyzed: 11:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2 MEE 500 1/26/21 (2	0125K032.D	01/28/21 12:46
2	Blank	210127A BLK 5/500	0125K035.D	01/28/21 13:52
3	Lab Control Spike	210127A LCS-1 5/500	0125K036.D	01/28/21 14:13
4	Lab Control SpikeD	210127A LCSD-1 5/500	0125K037.D	01/28/21 14:34
5	ERH1217	BA25867W10 5/500	0125K045.D	01/28/21 17:38
6	ERH1224	BA25870W10 5/500	0125K046.D	01/28/21 17:59
7		2 MEE 500 1/26/21 (1	0125K047.D	01/28/21 18:20
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16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	33.4
68	0 - 2.04% of mass 69	1.9
70	0 - 2.04% of mass 69	0.5
127	10 - 80% of mass 198	54.3
197	0 - 2% of mass 198	0.5
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	28.3
365	1 - 100% of mass 198	3.6
441	0.01 - 24% of mass 442	14.0
442	50 - 500% of mass 198	117.4
443	15 - 24% of mass 442	18.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K032.D Date Analyzed: 01/28/21

Instrument ID: KYLO Time Analyzed: 12:46

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	207359	5.33					
	UPPER LIMIT	414718	5.50					
	LOWER LIMIT	103680	5.16					
	SAMPLE NO.							
01	210127A BLK 5/500	231854	5.31					
02	210127A LCS-1 5/500	200500	5.31					
03	210127A LCSD-1 5/500	191564	5.31					
04	BA25867W10 5/500	170863	5.31					
05	BA25870W10 5/500	165507	5.31					
06	2 MEE 500 1/26/21 (1)	191125	5.33					
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/27/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127AZ-LCS	Lab Control Spike	81-118	111		85-114	100	
210127AZ-LCSD	Lab Control SpikeD	81-118	110		85-114	99.2	
210127AZ-BLK	Blank	81-118	111		85-114	95.1	
BA25866	ERH1216	81-118	111		85-114	96.0	
BA25869	ERH1223	81-118	111		85-114	94.7	
BA25867	ERH1217	81-118	116		85-114	98.4	
BA25870	ERH1224	81-118	114		85-114	96.1	

Comments: Batch: #86BTO-210127AZ

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/27/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127AZ-LCS	Lab Control Spike	80-119	111		89-112	113	*
210127AZ-LCSD	Lab Control SpikeD	80-119	112		89-112	112	
210127AZ-BLK	Blank	80-119	109		89-112	108	
BA25866	ERH1216	80-119	110		89-112	109	
BA25869	ERH1223	80-119	109		89-112	108	
BA25867	ERH1217	80-119	115		89-112	113	#
BA25870	ERH1224	80-119	112		89-112	108	

Comments: Batch: #86BTO-210127AZ

* = Recovery outside of Control Limits on QC Sample.

= Recovery outside of Control Limits on Sample.

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/27/21

Matrix: WATER Instrument: ZEUS

Blank ID: 210127AZ-BLK Time Analyzed: 1059

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127AZ-LCS	Lab Control Spike	0127Z03	01/27/21 0904
210127AZ-LCSD	Lab Control SpikeD	0127Z04	01/27/21 0927
210127AZ-BLK	Blank	0127Z08	01/27/21 1059
BA25866	ERH1216	0127Z10	01/27/21 1145
BA25869	ERH1223	0127Z11	01/27/21 1208
BA25867	ERH1217	0127Z14	01/27/21 1317
BA25870	ERH1224	0127Z15	01/27/21 1340

Comments: Batch: #86BTO-210127AZ

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210127W-25866 - 260806**
Batch ID: #86BTO-210127AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/27/21	01/27/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/27/21	01/27/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/27/21	01/27/21
BLANK	SURROGATE: 1,2-DICHLOROET	111	81-118			%	01/27/21	01/27/21
BLANK	SURROGATE: 4-BROMOFLUORO	95.1	85-114			%	01/27/21	01/27/21
BLANK	SURROGATE: DIBROMOFLUOR	109	80-119			%	01/27/21	01/27/21
BLANK	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/27/21	01/27/21

Quant Method:Z0125W.M
Run #:0127Z08
Instrument:ZEUS
Sequence:210125
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 3:53:21 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210127AZ-LCS	Time Analyzed:	0904

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127AZ-LCS	Lab Control Spike	0127Z03	01/27/21 0904
210127AZ-LCSD	Lab Control SpikeD	0127Z04	01/27/21 0927
210127AZ-BLK	Blank	0127Z08	01/27/21 1059
BA25866	ERH1216	0127Z10	01/27/21 1145
BA25869	ERH1223	0127Z11	01/27/21 1208
BA25867	ERH1217	0127Z14	01/27/21 1317
BA25870	ERH1224	0127Z15	01/27/21 1340

Comments: Batch: #86BTO-210127AZ

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210127W-25866 LCS - 260806**
Batch ID: #86BTO-210127AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	10.5	10.8	105	108	79-120	2.8	20
ETHYLBENZENE	10.00	10.6	10.9	106	109	79-121	2.8	20
TOLUENE	10.00	10.4	10.7	104	107	80-121	2.8	20
XYLENES (TOTAL)	30.0	32.3	32.8	108	109	79-121	1.5	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	27.7	27.4	111	110	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.0	24.8	100	99.2	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	27.8	28.0	111	112	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	28.3	28.0	113 #	112	89-112		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	Z0125W.M	Z0125W.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/27/21	01/27/21
Instrument :	ZEUS	ZEUS
Run :	0127Z03	0127Z04
Initials :	SSE	

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Water Instrument: ZEUS
ID: 0125Z23.D Time Analyzed: 15:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/25	0125Z24.D	01/25/21 16:07
2		0.5ug/L VOC STD 1/25	0125Z25.D	01/25/21 16:30
3		1ug/L VOC STD 1/25/2	0125Z26.D	01/25/21 16:53
4		2ug/L VOC STD 1/25/2	0125Z27.D	01/25/21 17:16
5		5ug/L VOC STD 1/25/2	0125Z28.D	01/25/21 17:39
6		10ug/L VOC STD 1/25/	0125Z29.D	01/25/21 18:02
7		20ug/L VOC STD 1/25/	0125Z30.D	01/25/21 18:25
8		40ug/L VOC STD 1/25/	0125Z31.D	01/25/21 18:47
9		100ug/L VOC STD 1/25	0125Z32.D	01/25/21 19:10
10		(SS) 10ug/L VOC STD	0125Z34.D	01/25/21 19:57
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 60.0% of mas 95	45.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.7
174	50.0 - 200.0% of mass 95	126.6
175	5.0 - 9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.2
177	5.0 - 9.0% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94883
Case No: 94883 Date Analyzed: 01/27/21
Matrix: Water Instrument: ZEUS
ID: 0127Z01.D Time Analyzed: 8:18

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		210127A CCV 10ug/L	0127Z02.D	01/27/21 8:41
2	Lab Control Spike	210127A LCS 10ug/L	0127Z03.D	01/27/21 9:04
3	Lab Control SpikeD	210127A LCSD 10ug/L	0127Z04.D	01/27/21 9:27
4	Blank	210127A BLK	0127Z08.D	01/27/21 10:59
5	ERH1216	BA25866W01	0127Z10.D	01/27/21 11:45
6	ERH1223	BA25869W01	0127Z11.D	01/27/21 12:08
7	ERH1217	BA25867W01	0127Z14.D	01/27/21 13:17
8	ERH1224	BA25870W01	0127Z15.D	01/27/21 13:40
9		Ending CCV 10ug/L 1/	0127Z29.D	01/27/21 19:02
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.4
75	30 - 60% of mass 95	46.3
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.1
173	0 - 2.05% of mass 174	0.8
174	50 - 200% of mass 95	117.2
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	98.8
177	5 - 9% of mass 176	6.6

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0127Z02.D Date Analyzed: 01/27/21

Instrument ID: ZEUS Time Analyzed: 8:41

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	3222910	6.16	2435440	9.62	899328	12.17
	UPPER LIMIT	6445820	6.33	4870880	9.79	1798656	12.34
	LOWER LIMIT	1611455	5.99	1217720	9.45	449664	12.00
	SAMPLE NO.						
01	210127A LCS 10ug/L	3288360	6.16	2464680	9.62	877952	12.17
02	210127A LCSD 10ug/L	3317980	6.16	2500750	9.62	921408	12.17
03	210127A BLK	3268870	6.16	2446700	9.62	944832	12.17
04	BA25866W01	3100410	6.16	2341180	9.62	848192	12.17
05	BA25869W01	3023400	6.16	2272540	9.62	840576	12.17
06	BA25867W01	2969250	6.16	2237170	9.62	815872	12.17
07	BA25870W01	3062810	6.16	2319650	9.62	852480	12.17
08	Ending CCV 10ug/L 1/27	3758310	6.16	3170790	9.62	1175550	12.17
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/27/21

Matrix: WATER Instrument: ZEUS

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210127AZ-LCS	Lab Control Spike	85-114	97.6				
210127AZ-LCSD	Lab Control SpikeD	85-114	98.8				
210127AZ-BLK	Blank	85-114	95.1				
BA25866	ERH1216	85-114	96.0				
BA25869	ERH1223	85-114	94.7				
BA25867	ERH1217	85-114	98.4				
BA25870	ERH1224	85-114	96.1				

Comments: Batch: #GRO86-210127AZ

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	ZEUS
Blank ID:	210127AZ-BLK	Time Analyzed:	1059

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127AZ-LCS	Lab Control Spike	0127Z06	01/27/21 1013
210127AZ-LCSD	Lab Control SpikeD	0127Z07	01/27/21 1036
210127AZ-BLK	Blank	0127Z08	01/27/21 1059
BA25866	ERH1216	0127Z10	01/27/21 1145
BA25869	ERH1223	0127Z11	01/27/21 1208
BA25867	ERH1217	0127Z14	01/27/21 1317
BA25870	ERH1224	0127Z15	01/27/21 1340

Comments: Batch: #GRO86-210127AZ

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **210127W-25866 - 260809**
Batch ID: #GRO86-210127AZ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/27/21	01/27/21
BLANK	SURROGATE: 4-BROMOFLUORO	95.1	85-114			%	01/27/21	01/27/21

Quant Method:ZGAS0125.M
Run #:0127Z08
Instrument:ZEUS
Sequence:210125
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 3:56:49 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	ZEUS
LCS ID:	210127AZ-LCS	Time Analyzed:	1013

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210127AZ-LCS	Lab Control Spike	0127Z06	01/27/21 1013
210127AZ-LCSD	Lab Control SpikeD	0127Z07	01/27/21 1036
210127AZ-BLK	Blank	0127Z08	01/27/21 1059
BA25866	ERH1216	0127Z10	01/27/21 1145
BA25869	ERH1223	0127Z11	01/27/21 1208
BA25867	ERH1217	0127Z14	01/27/21 1317
BA25870	ERH1224	0127Z15	01/27/21 1340

Comments: Batch: #GRO86-210127AZ

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210127W-25866 LCS - 260809**
Batch ID: #GRO86-210127AZ

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	297	297	99.0	99.0	78-122	0.0	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.4	24.7	97.6	98.8	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	ZGAS0125.M	ZGAS0125.M
Extraction Date :	01/27/21	01/27/21
Analysis Date :	01/27/21	01/27/21
Instrument :	ZEUS	ZEUS
Run :	0127Z06	0127Z07
Initials :	SSE	

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Rocky

Blank ID: 210129A-BLK Time Analyzed: 1209

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-LCS	Lab Control Spike	0129R02	01/29/21 1203
210129A-LCSD	Lab Control SpikeD	0129R03	01/29/21 1206
210129A-BLK	Blank	0129R04	01/29/21 1209
BA25866	ERH1216	0129R19	01/29/21 1340
BA25867	ERH1217	0129R20	01/29/21 1343
BA25869	ERH1223	0129R21	01/29/21 1346
BA25870	ERH1224	0129R22	01/29/21 1349

Comments: Batch: #RSKME-210129A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-25866 - 260760**
Batch ID: #RSKME-210129A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	01/29/21	01/29/21

Quant Method: RSK0914A.M
Run #: 0129R04
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 02/01/21 11:05:55 AM

RSK 175

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Rocky
LCS ID:	210129A-LCS	Time Analyzed:	1203

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-LCS	Lab Control Spike	0129R02	01/29/21 1203
210129A-LCSD	Lab Control SpikeD	0129R03	01/29/21 1206
210129A-BLK	Blank	0129R04	01/29/21 1209
BA25866	ERH1216	0129R19	01/29/21 1340
BA25867	ERH1217	0129R20	01/29/21 1343
BA25869	ERH1223	0129R21	01/29/21 1346
BA25870	ERH1224	0129R22	01/29/21 1349

Comments: Batch: #RSKME-210129A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210129W-25866 LCS - 260760**
Batch ID: #RSKME-210129A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	73.9	84.0	88.6	101	72-125	12.8	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	01/29/21	01/29/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Rocky	Rocky
Run :	0129R02	0129R03
Initials :	LSI	

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Charlie

Blank ID: 210126A-BLK Time Analyzed: 2019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA25867	ERH1217	13	01/26/21 1935
BA25870	ERH1224	14	01/26/21 1950
210126A-LCS	Lab Control Spike	15	01/26/21 2005
210126A-BLK	Blank	16	01/26/21 2019
210126A-LCSD	Lab Control SpikeD	8	01/26/21 1422

Comments: Batch: #300W-210126A

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210203A-BLK	Time Analyzed:	1552

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210203A-BLK	Blank	13	02/03/21 1552
BA25870	ERH1224	20	02/03/21 1745
210203A-LCSD	Lab Control SpikeD	22	02/03/21 1815
210203A-LCS	Lab Control Spike	23	02/03/21 1830

Comments: Batch: #300WD-210203A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	01/26/21	01/26/21	#300W-210126A-BA25867
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/26/21	01/26/21	#300W-210126A-BA25867
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/26/21	01/26/21	#300W-210126A-BA25867
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	02/03/21	02/03/21	#300WD-210203A-BA25870

Wetlab SC-Blank-REG MDLs
Printed: 02/04/21 2:42:51 PM

EPA 300.0

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Charlie

LCS ID: 210126A-LCS Time Analyzed: 2005

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA25867	ERH1217	13	01/26/21 1935
BA25870	ERH1224	14	01/26/21 1950
210126A-LCS	Lab Control Spike	15	01/26/21 2005
210126A-BLK	Blank	16	01/26/21 2019
210126A-LCSD	Lab Control SpikeD	8	01/26/21 1422

Comments: Batch: #300W-210126A

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210203A-LCS	Time Analyzed:	1830

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210203A-BLK	Blank	13	02/03/21 1552
BA25870	ERH1224	20	02/03/21 1745
210203A-LCSD	Lab Control SpikeD	22	02/03/21 1815
210203A-LCS	Lab Control Spike	23	02/03/21 1830

Comments: Batch: #300WD-210203A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	24.8	26.0	99.2	104	4.7	20	90-110	01/26/21	01/26/21	01/26/21	01/26/21	#300W-210126A-BA25867
EPA 300.0	NITRATE	22.1	20.4	21.8	92.3	98.6	6.6	20	90-110	01/26/21	01/26/21	01/26/21	01/26/21	#300W-210126A-BA25867
EPA 300.0	SULFATE	25.0	23.5	24.3	94.0	97.2	3.3	20	90-110	01/26/21	01/26/21	01/26/21	01/26/21	#300W-210126A-BA25867

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	25.9	25.9	104	104	0.0	20	90-110	02/03/21	02/03/21	02/03/21	02/03/21	#300WD-210203A-BA2587

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: EVE

Blank ID: 210126A-BLK Time Analyzed: 1308

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	3	01/26/21 1308
210126A-LCS	Lab Control Spike	4	01/26/21 1309
210126A-LCSD	Lab Control SpikeD	5	01/26/21 1310
BA25867	ERH1217	6	01/26/21 1311
BA25870	ERH1224	7	01/26/21 1312

Comments: Batch: #353TO-210126A

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Tiamo

Blank ID: 210201A-BLK Time Analyzed: 1713

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726
BA25867	ERH1217	4	02/01/21 1734
BA25870	ERH1224	5	02/01/21 1739

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Manual Spec

Blank ID: A210126-BLK Time Analyzed: 0031

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210126-BLK	Blank	19	01/26/21 0031
A210126-LCSD	Lab Control SpikeD	20	01/26/21 0031
A210126-LCS	Lab Control Spike	21	01/26/21 0031
BA25867	ERH1217	27	01/26/21 0034
BA25870	ERH1224	28	01/26/21 0035
A210126-MS	Matrix Spike	29	01/26/21 0035
A210126-MSD	Matrix SpikeD	31	01/26/21 0036

Comments: Batch: #35FE-A210126

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210126A-BLK Time Analyzed: 1821

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	32	01/26/21 1821
210126A-LCS	Lab Control Spike	33	01/26/21 1900
210126A-LCSD	Lab Control SpikeD	34	01/26/21 1941
BA25870	ERH1224	35	01/26/21 2021
BA25867	ERH1217	36	01/26/21 2057

Comments: Batch: #TOCW5-210126A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
EPA 353.2	NITRATE-NITRITE A	0.090 U	0.10	0.090	0.028	mg/L	01/26/21	01/26/21	#353TO-210126A-BA25867
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/26/21	01/26/21	#TOCW5-210126A-BA25867
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	01/26/21	01/26/21	#35FE-A210126-BA25870

Wetlab SC-Blank-REG MDLs
Printed: 02/03/21 11:48:30 AM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210126A-LCS	Time Analyzed:	1309

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	3	01/26/21 1308
210126A-LCS	Lab Control Spike	4	01/26/21 1309
210126A-LCSD	Lab Control SpikeD	5	01/26/21 1310
BA25867	ERH1217	6	01/26/21 1311
BA25870	ERH1224	7	01/26/21 1312

Comments: Batch: #353TO-210126A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210201A-LCS	Time Analyzed:	1716

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726
BA25867	ERH1217	4	02/01/21 1734
BA25870	ERH1224	5	02/01/21 1739

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94883

Case No: 94883 Date Analyzed: 01/26/21

Matrix: WATER Instrument: Manual Spec

LCS ID: A210126-LCS Time Analyzed: 0031

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210126-BLK	Blank	19	01/26/21 0031
A210126-LCSD	Lab Control SpikeD	20	01/26/21 0031
A210126-LCS	Lab Control Spike	21	01/26/21 0031
BA25867	ERH1217	27	01/26/21 0034
BA25870	ERH1224	28	01/26/21 0035
A210126-MS	Matrix Spike	29	01/26/21 0035
A210126-MSD	Matrix SpikeD	31	01/26/21 0036

Comments: Batch: #35FE-A210126

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94883
Case No:	94883	Date Analyzed:	01/26/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210126A-LCS	Time Analyzed:	1900

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210126A-BLK	Blank	32	01/26/21 1821
210126A-LCS	Lab Control Spike	33	01/26/21 1900
210126A-LCSD	Lab Control SpikeD	34	01/26/21 1941
BA25870	ERH1224	35	01/26/21 2021
BA25867	ERH1217	36	01/26/21 2057

Comments: Batch: #TOCW5-210126A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	3.19	3.25	106	108	1.9	20	90-110	01/26/21	01/26/21	01/26/21	01/26/21	#353TO-210126A-BA2586
SM 2320B	BICARBONATE AS CACO3	250	236	230	94.4	92.0	2.6	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY AS CA	250	258	252	103	101	2.4	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SW846 90	TOTAL ORGANIC CARBO	5.00	4.81	4.78	96.2	95.6	0.63	20	80-120	01/26/21	01/26/21	01/26/21	01/26/21	#TOCW5-210126A-BA258

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM3500Fe	FERROUS IRON	3.00	2.95	2.97	98.3	99.0	0.68	20	80-120	01/26/21	01/26/21	01/26/21	01/26/21	#35FE-A210126-BA25870

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **210126W-25870 MS - 260655**

Sample ID: BA25870

Client ID: ERH1224

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	0.021	2.87	2.86	95.0	94.6	0.35	20	80-120	01/26/21	01/26/21	01/26/21	01/26/21	260655	BA25870

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/[illegible]

			1218004.D	1218005.D	1218006.D	1218007.D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
6																	
7																	
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1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

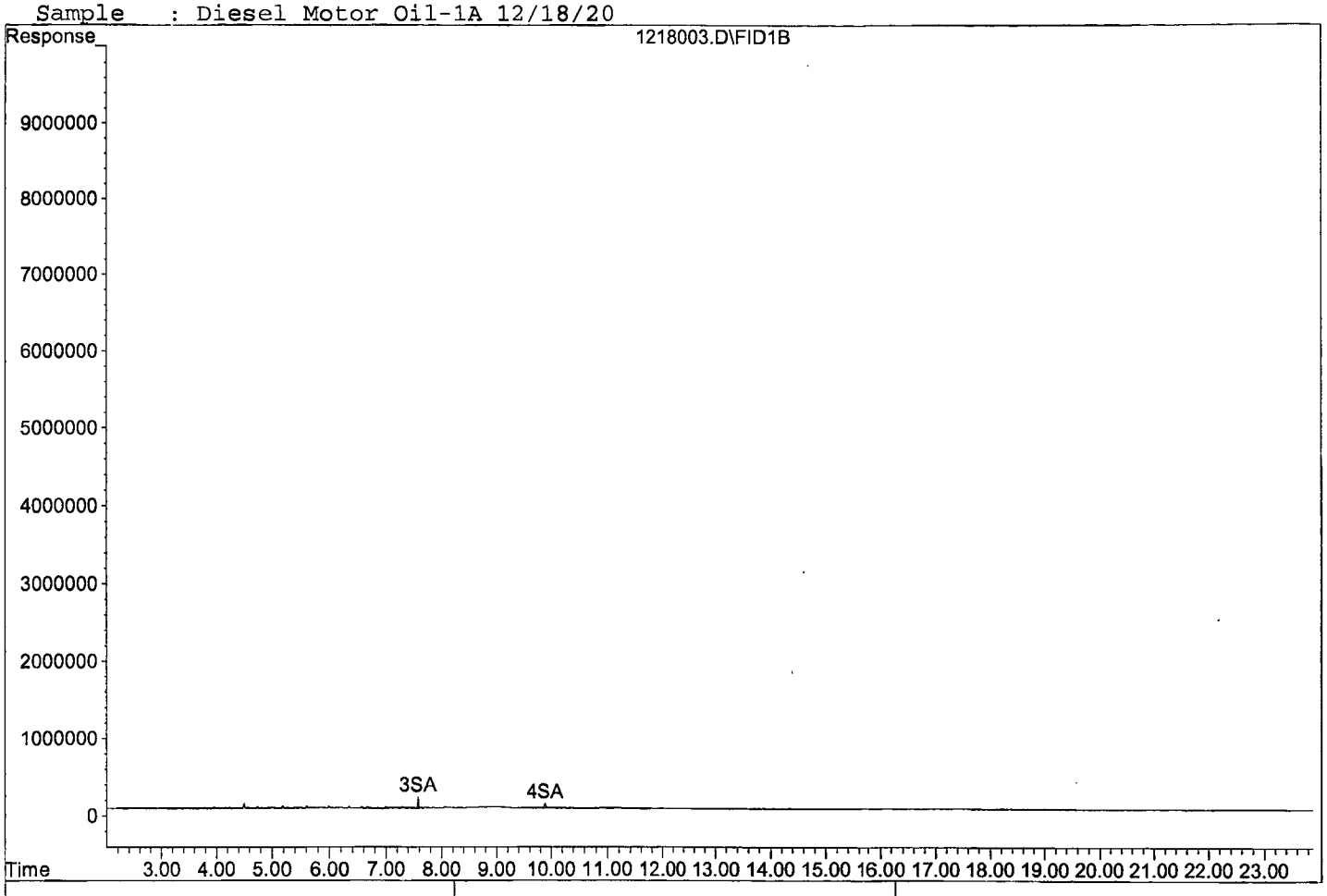
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

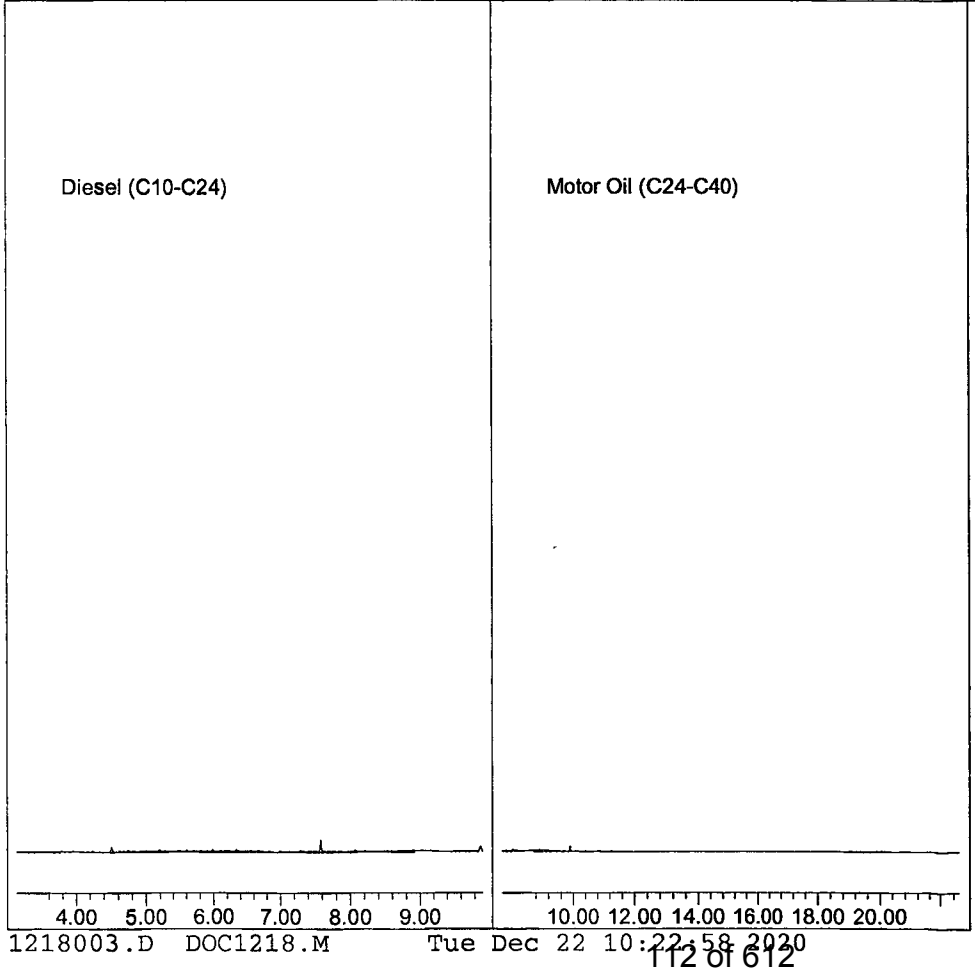
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

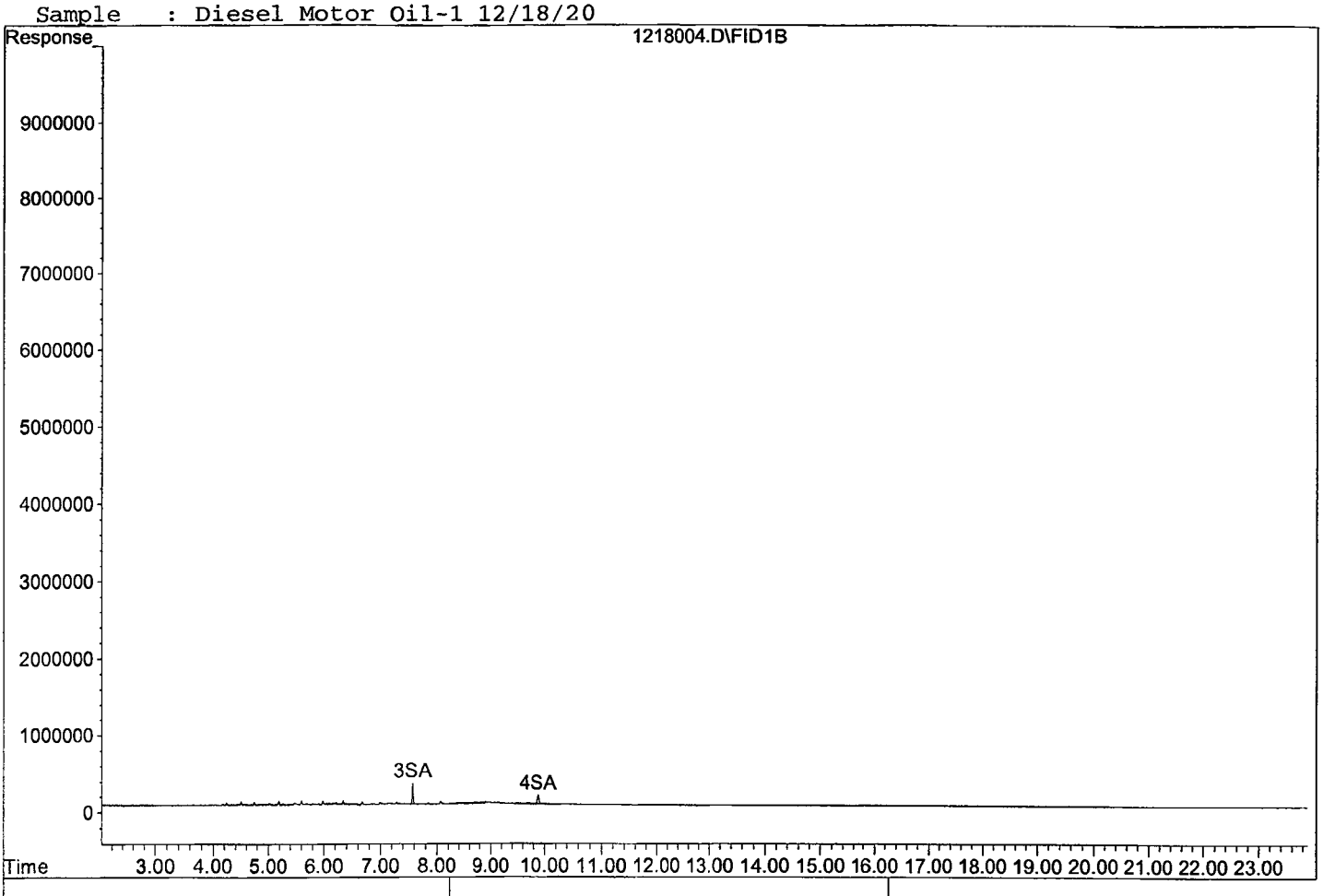
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

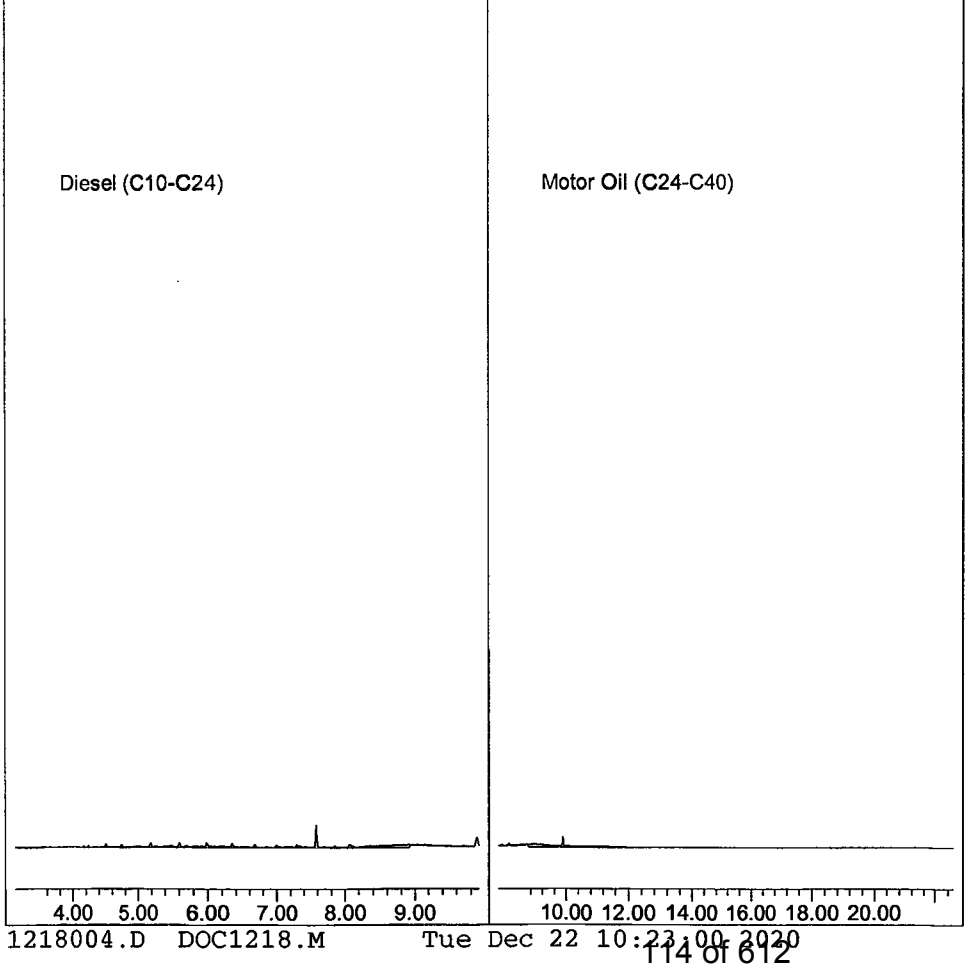
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery	=	1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery	=	1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

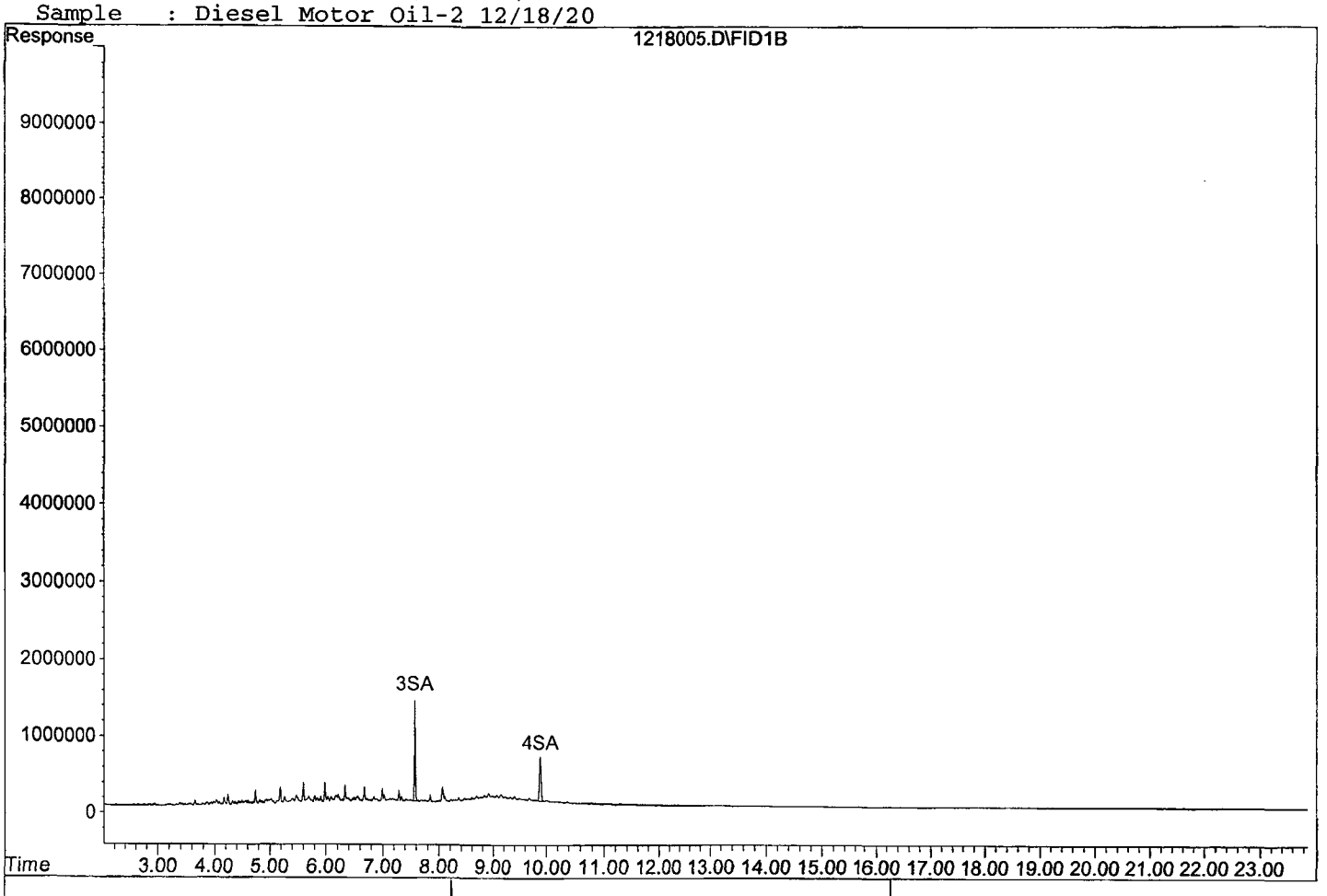
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

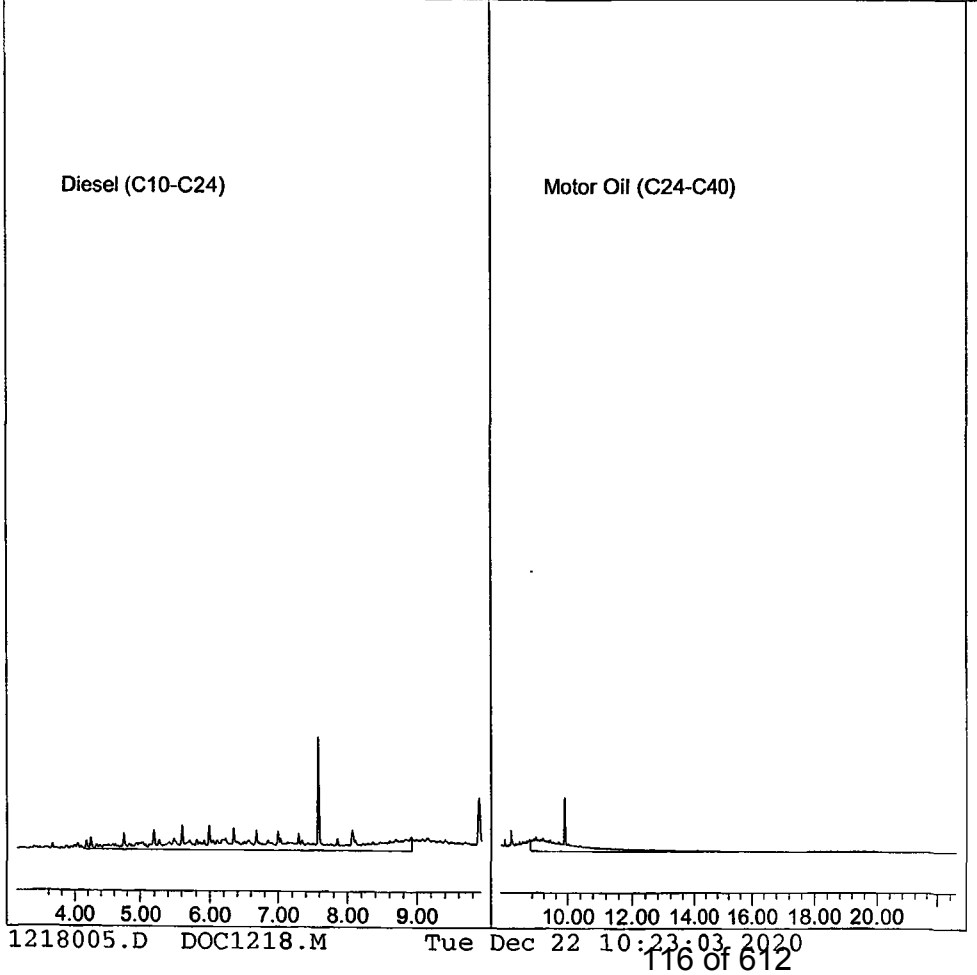
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





1218005.D DOC1218.M Tue Dec 22 10:23:03 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

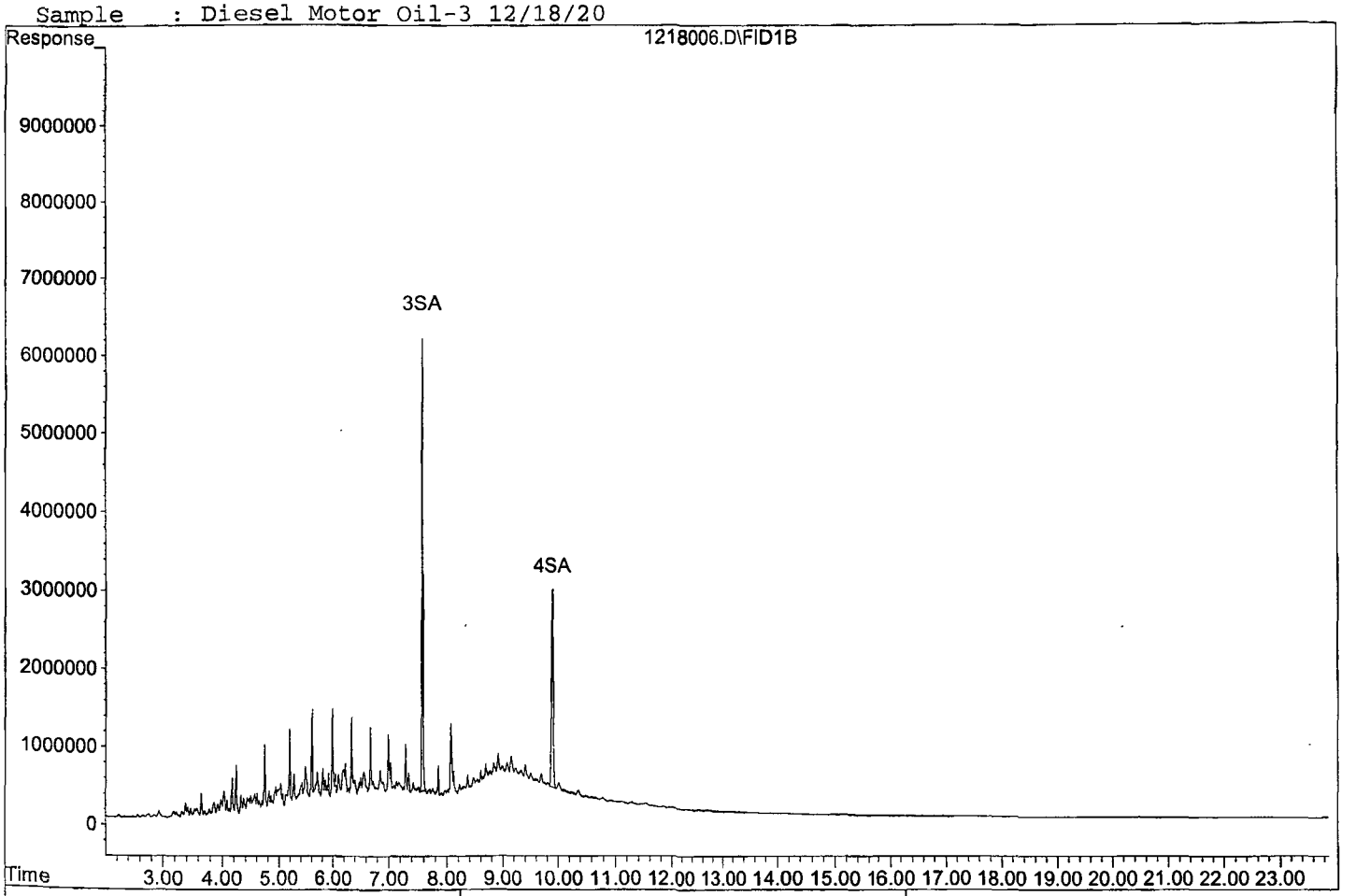
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

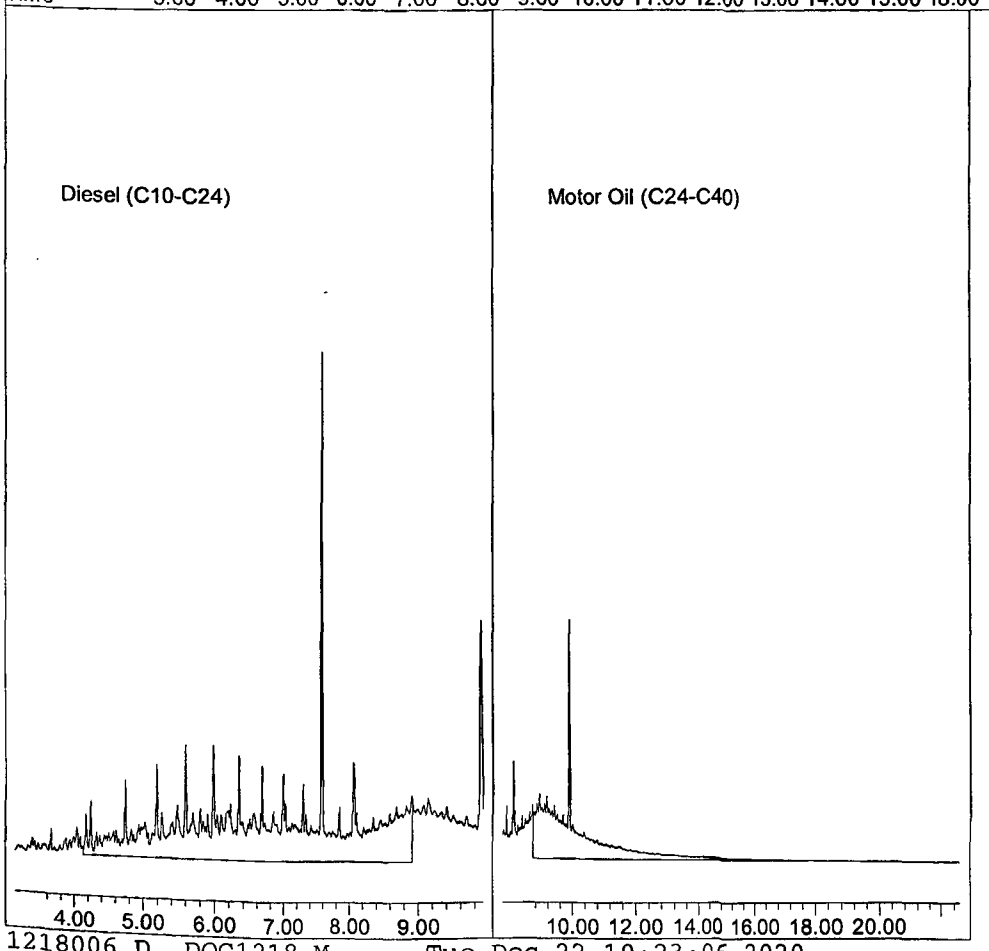
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000		Recovery =	40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000		Recovery =	40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

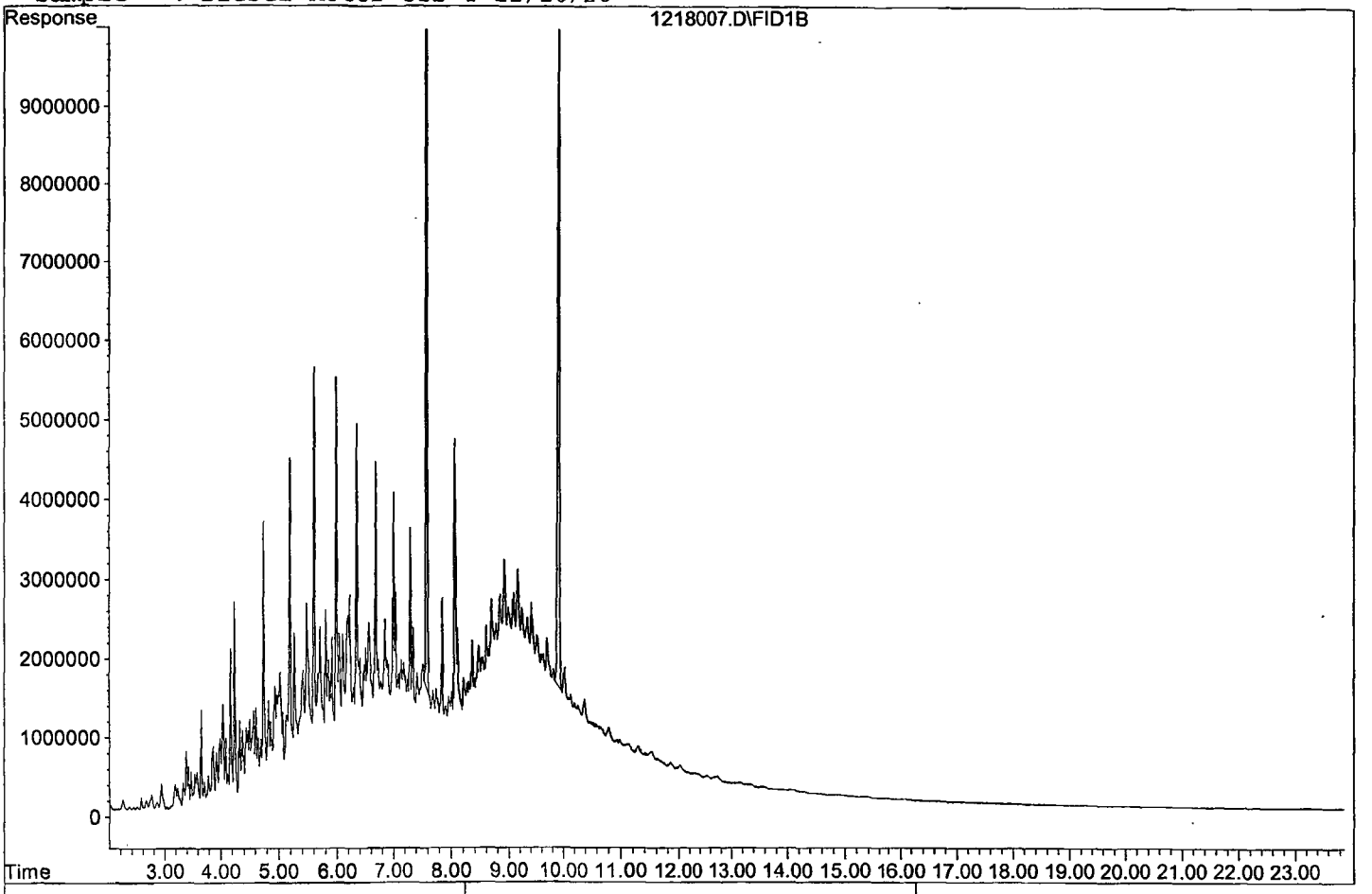
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

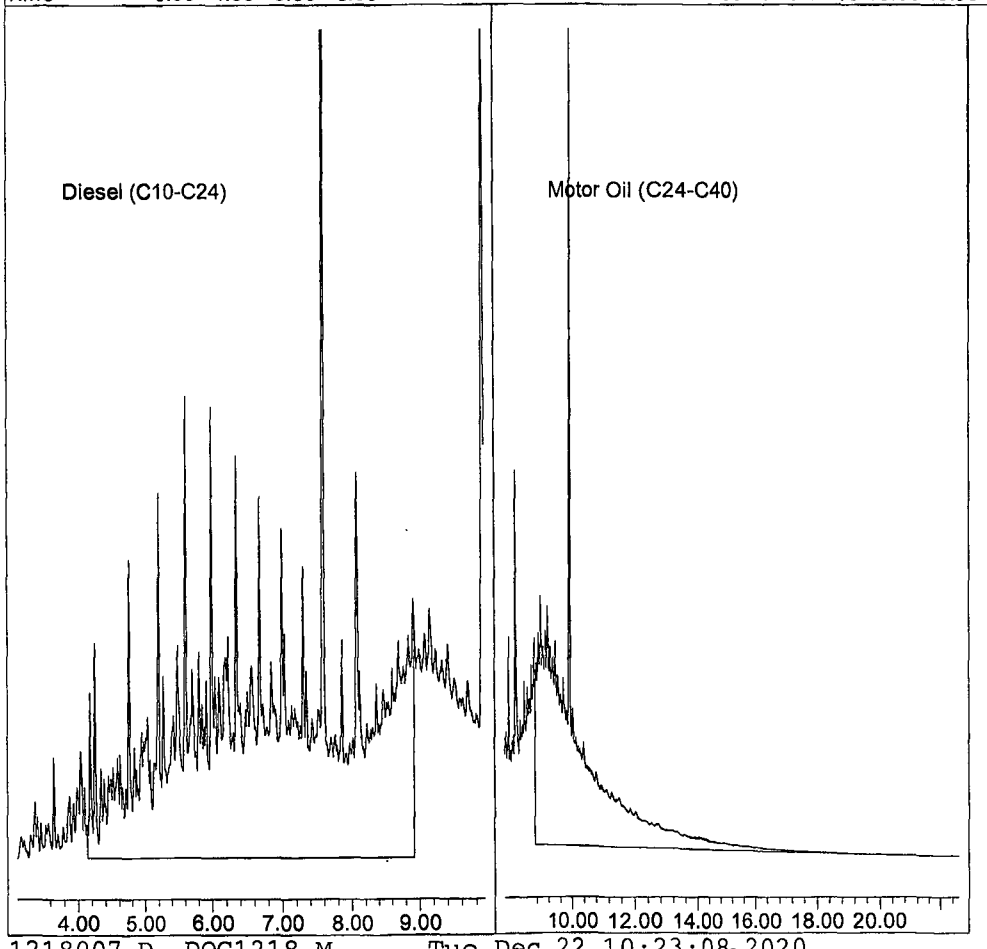
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb

Target Compounds

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

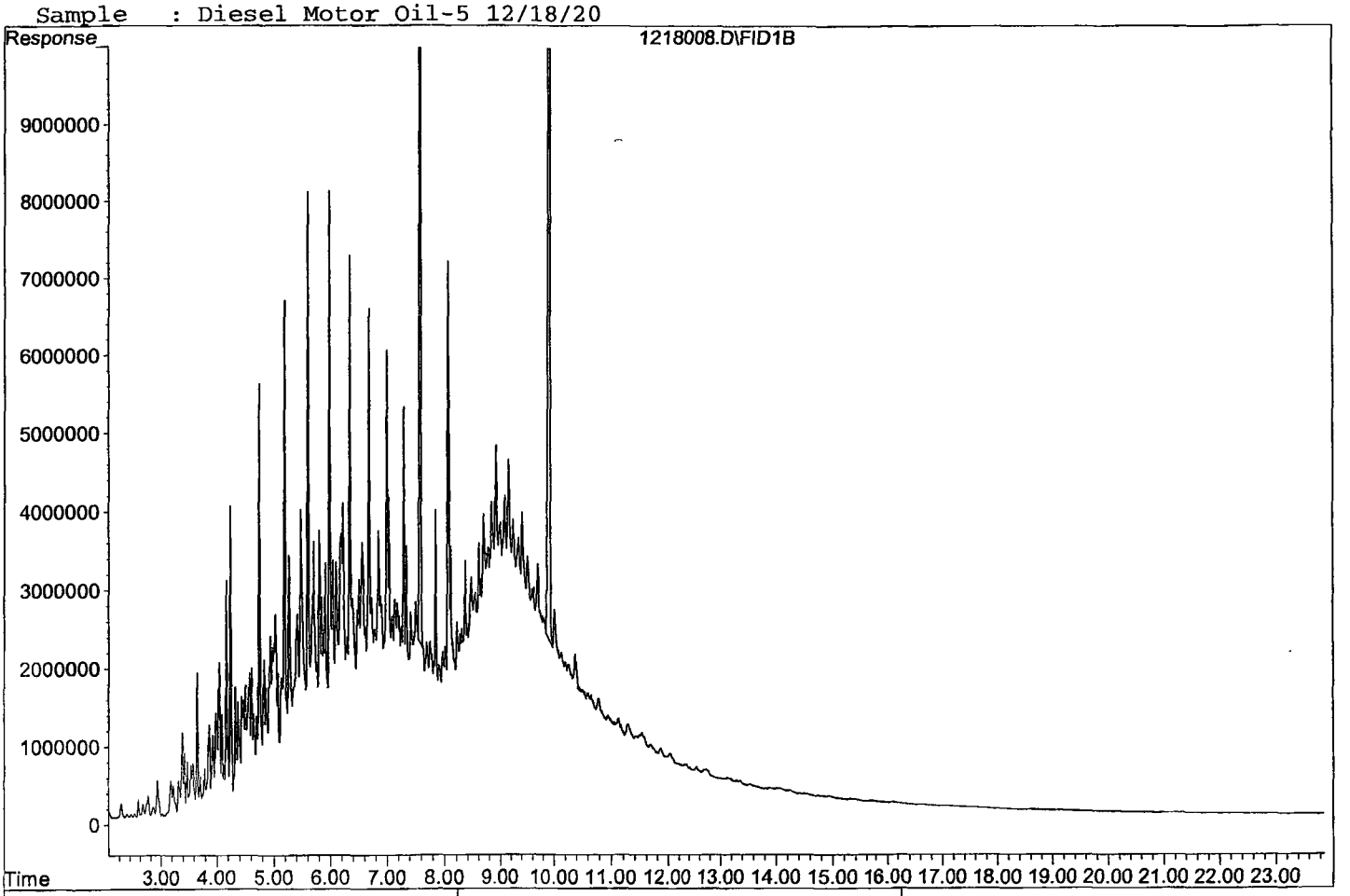
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

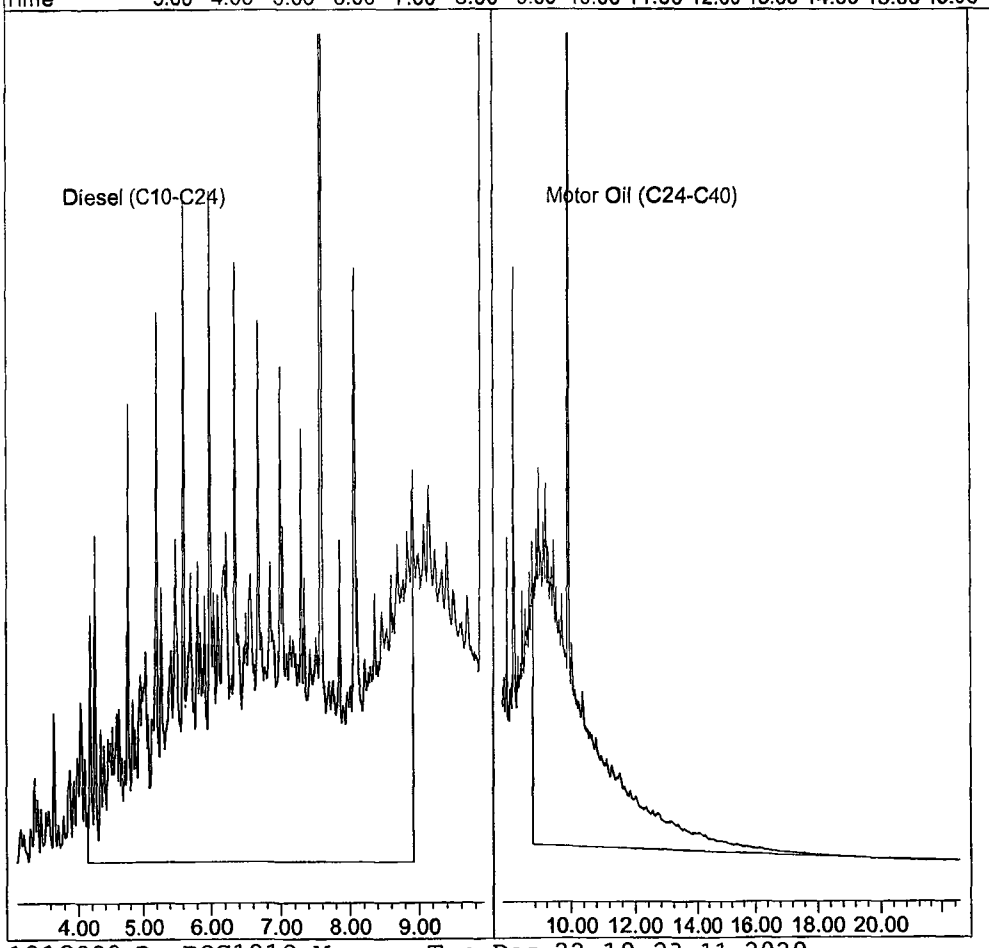
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000	Recovery =		224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000	Recovery =		237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

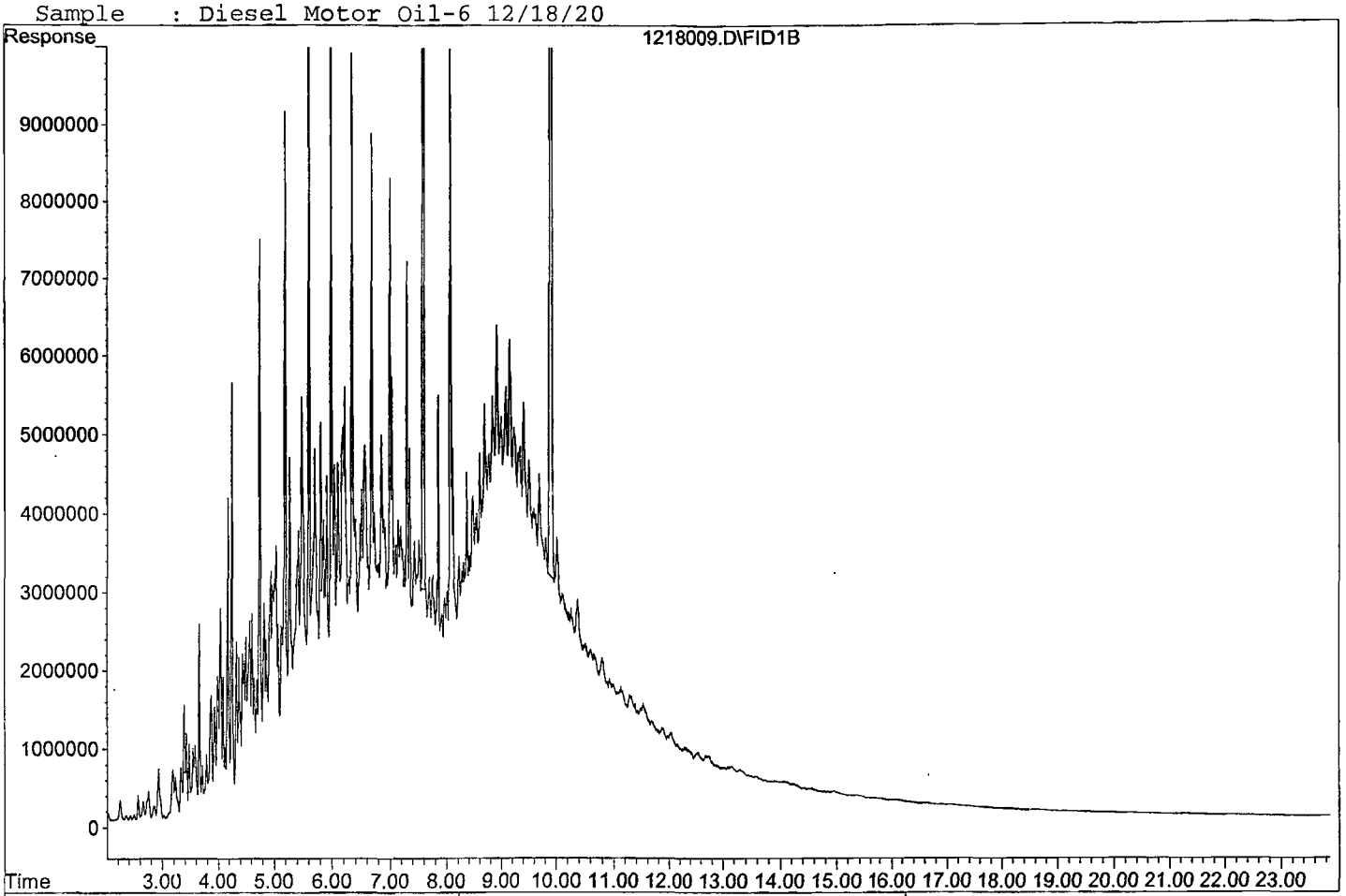
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

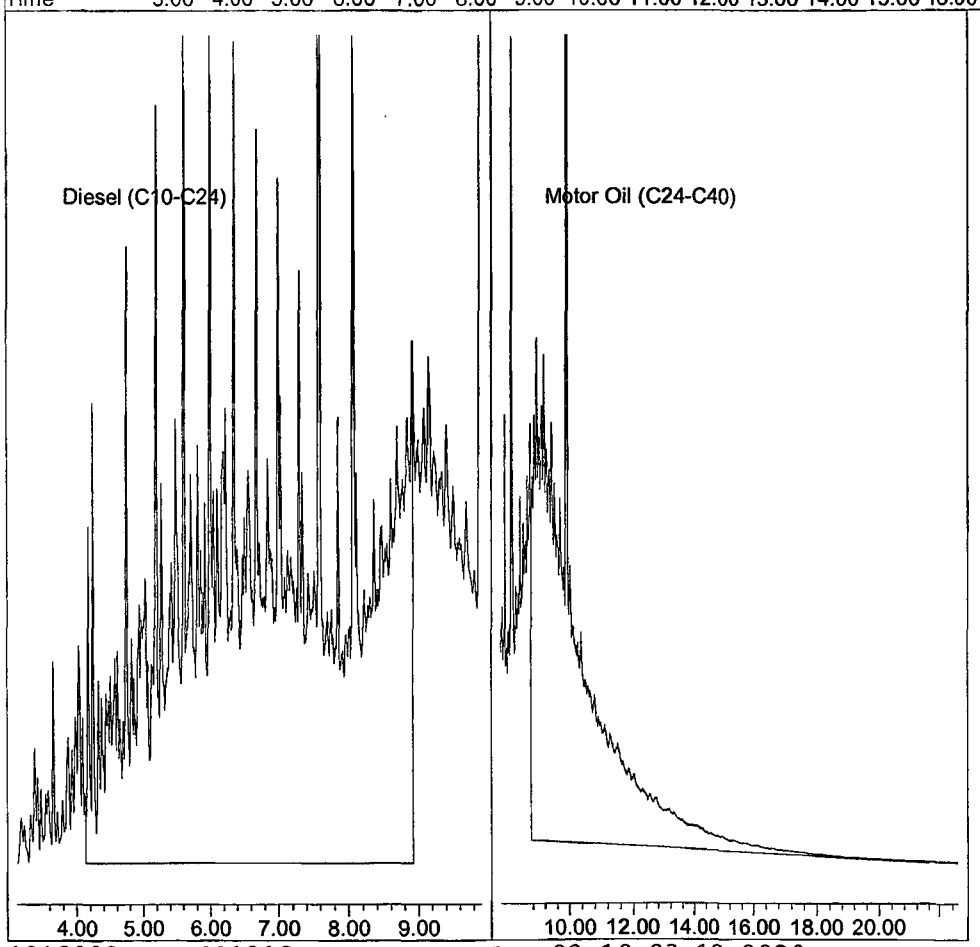
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572	ppb
Surrogate Spike 30.000		Recovery =	311.91%	
4) SA Octacosane(S)	9.91	438795924	96.608	ppb
Surrogate Spike 30.000		Recovery =	322.03%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330	ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739	ppb

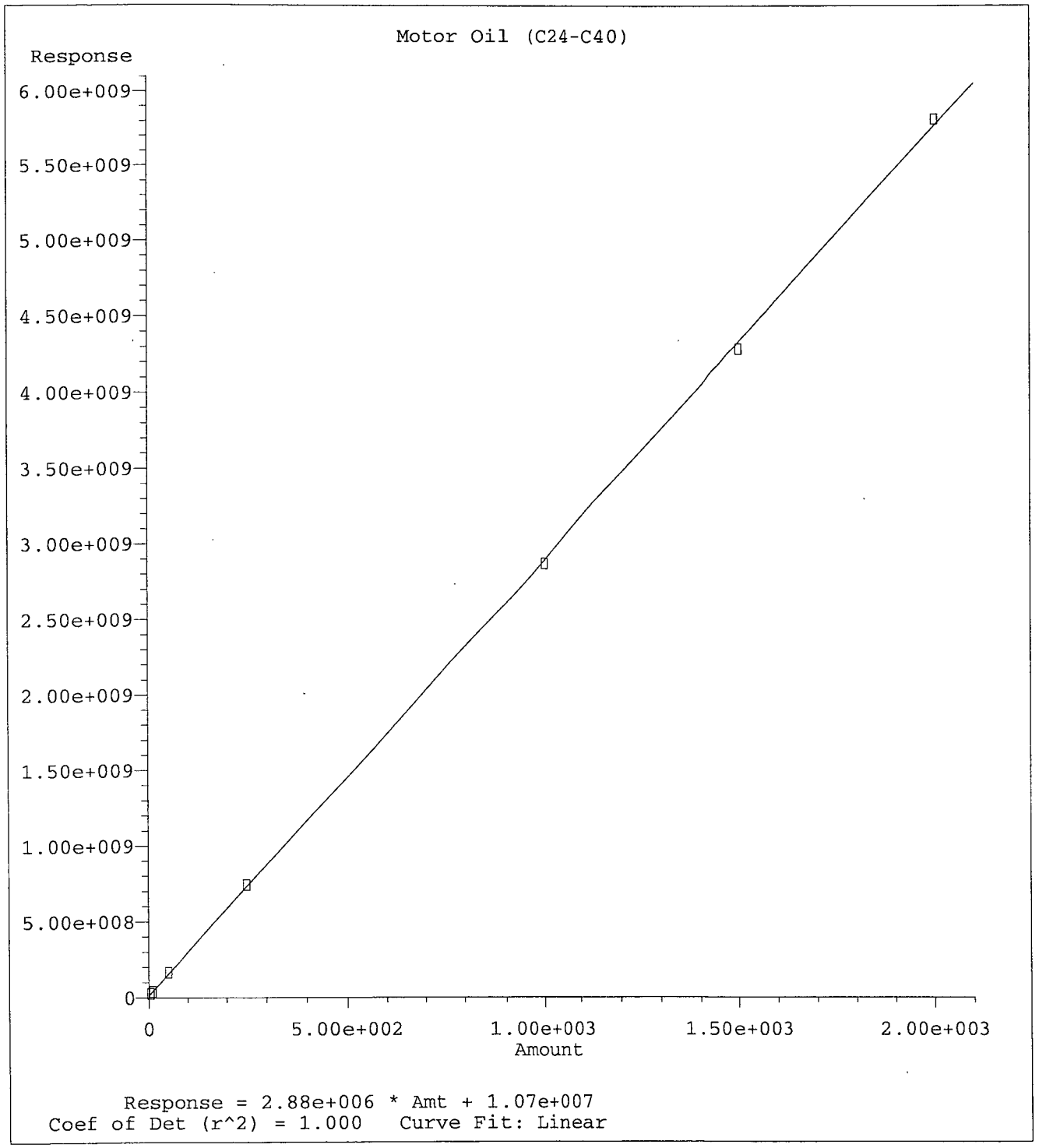
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20







Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
3							
4							
5							
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

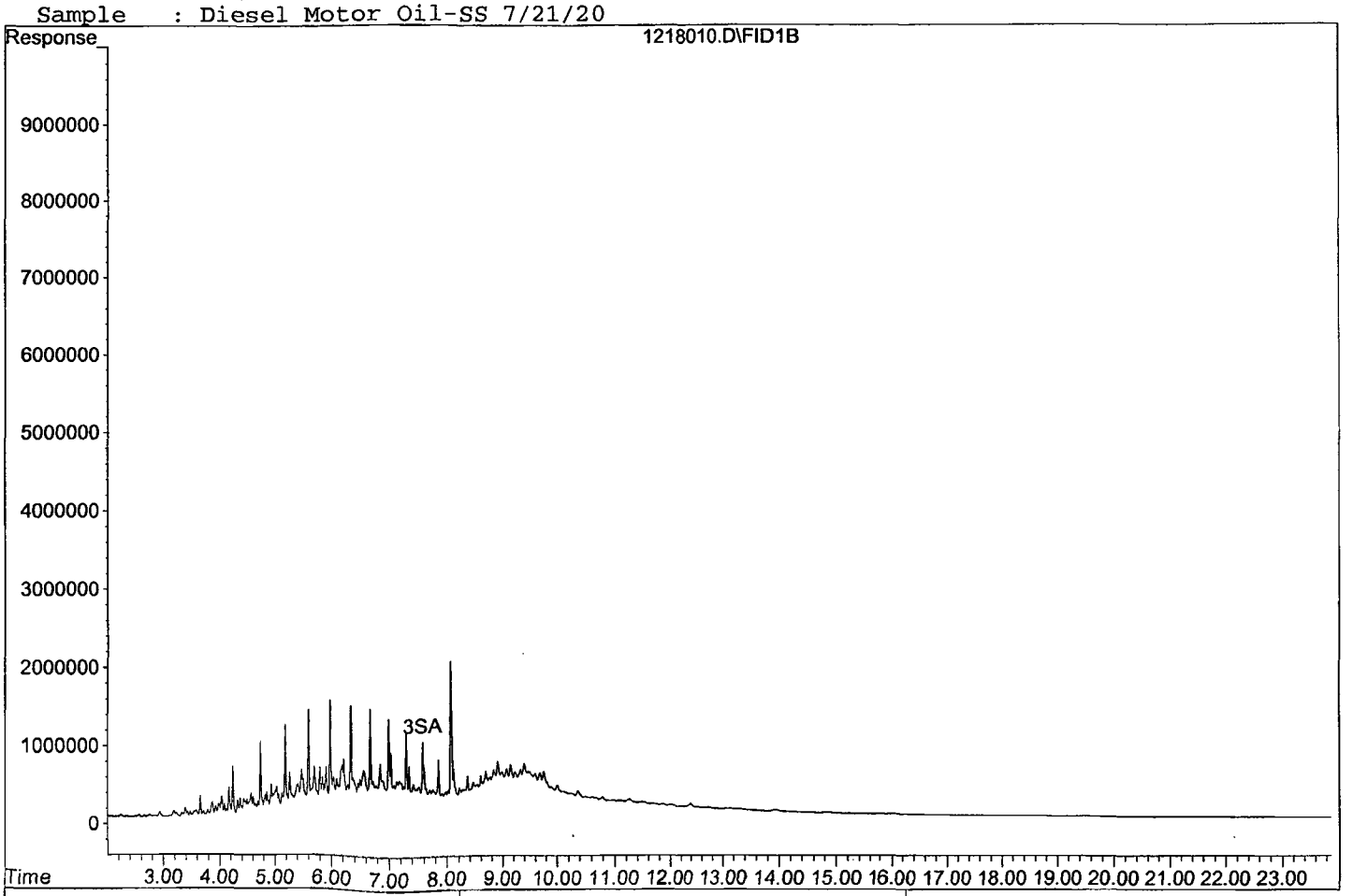
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

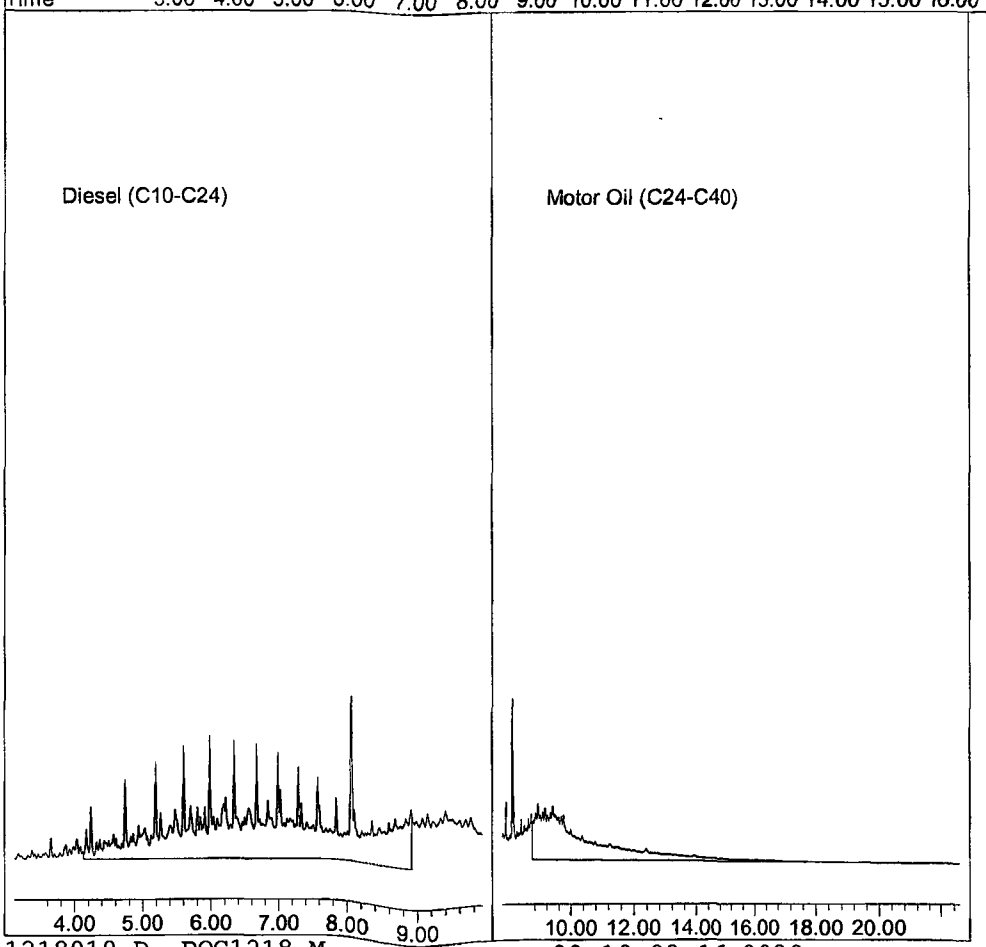
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000		Recovery =	2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000		Recovery =	0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





1218010.D DOC1218.M Tue Dec 22 10:23:16 2020

TPH Extractables
DOC1218

Form 7
Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/29/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107211.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2273470	7.3	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1431410	17	HBTML	2.0
3	SA	Ortho-Terphenyl(S)	2953720	2869680	2.8	SA	
4	SA	Octacosane(S)	2271000	2203460	3.0	SA	
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		Average			7.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107211.D Vial: 11
Acq On : 1-29-21 9:54:09 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 29 10:18 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

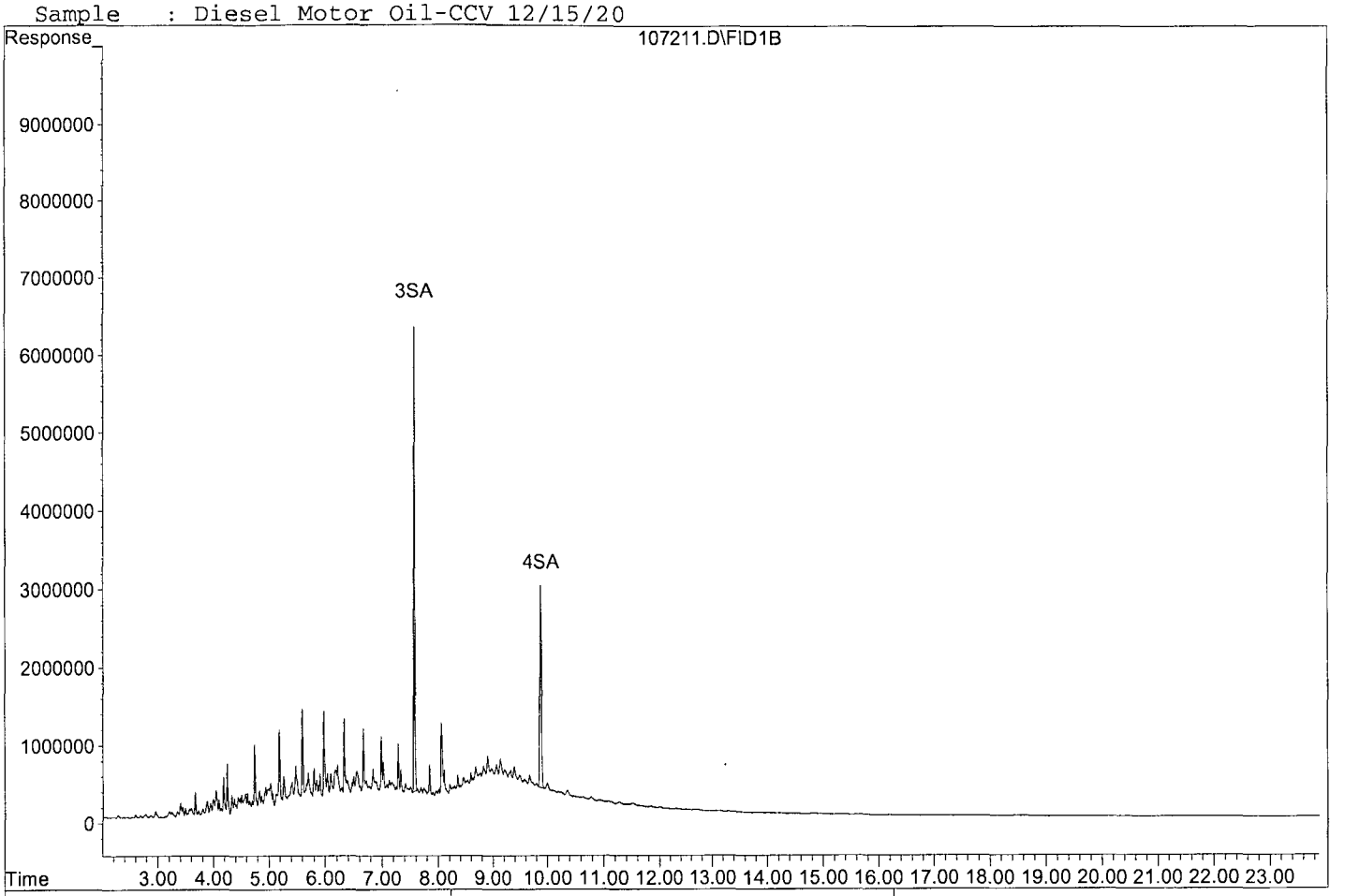
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

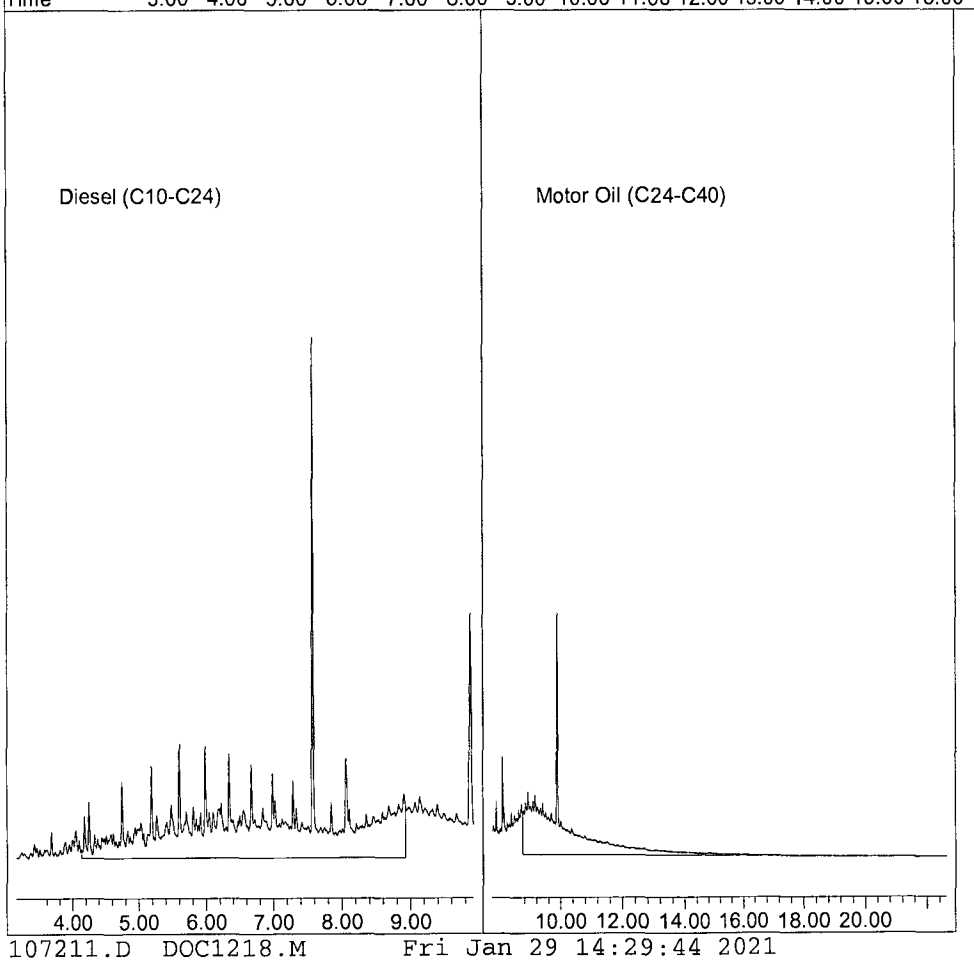
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	71742068	12.144 ppb
Surrogate Spike 30.000	Recovery =		40.48%
4) SA Octacosane(S)	9.88	55086398	12.128 ppb
Surrogate Spike 30.000	Recovery =		40.43%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1136733472	231.800 ppb
2) HBTM Motor Oil (C24-C40)	15.16	715702618	244.942 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107211.D
Sample : Diesel Motor Oil-CCV 12/15/20





107211.D DOC1218.M Fri Jan 29 14:29:44 2021

TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/29/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 107220.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2339570	4.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1476620	14	HBTML	1.1
3	SA	Ortho-Terphenyl(S)	2953720	2950870	0.10	SA	
4	SA	Octacosane(S)	2271000	2269750	0.06	SA	
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		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210107\107220.D Vial: 20
Acq On : 1-29-21 14:07:42 Operator:
Sample : Diesel Motor Oil-CCV 12/15/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Jan 29 14:34 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

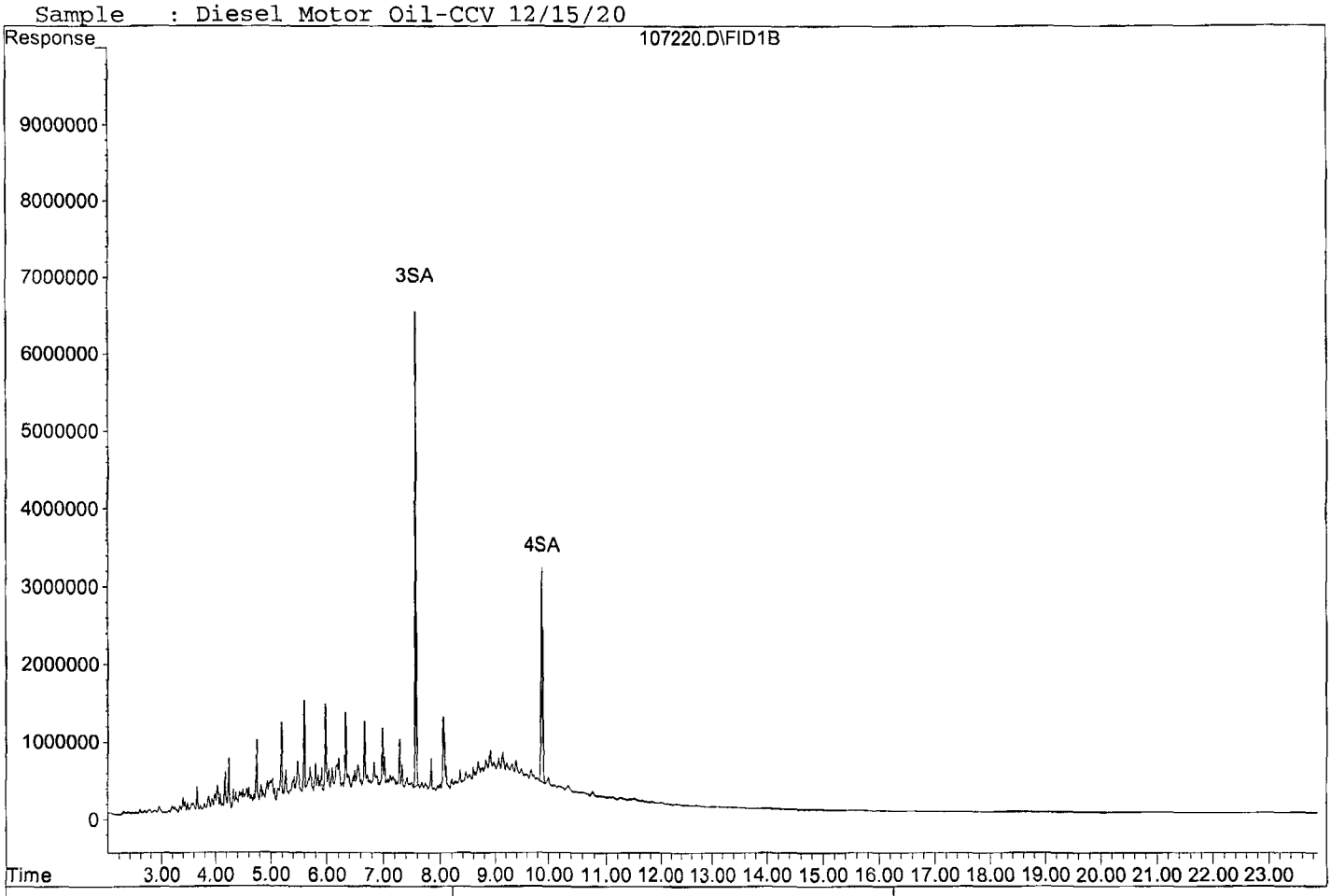
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

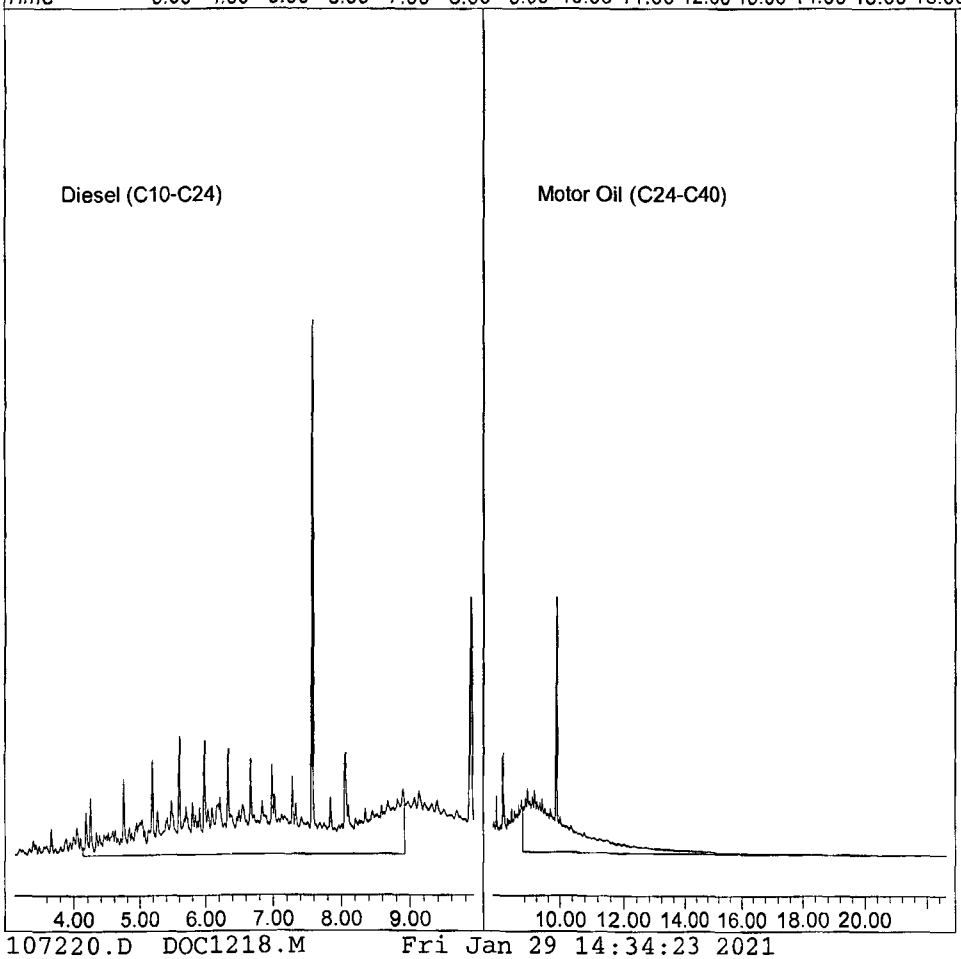
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	73771687	12.488 ppb
Surrogate Spike 30.000	Recovery =		41.63%
4) SA Octacosane(S)	9.88	56743875	12.493 ppb
Surrogate Spike 30.000	Recovery =		41.64%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1169782903	238.539 ppb
2) HBTM Motor Oil (C24-C40)	15.16	738308491	252.796 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107220.D
Sample : Diesel Motor Oil-CCV 12/15/20





107220.D DOC1218.M Fri Jan 29 14:34:23 2021

ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107218.D Vial: 18
Acq On : 1-29-21 13:11:32 Operator:
Sample : BA25867W16 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

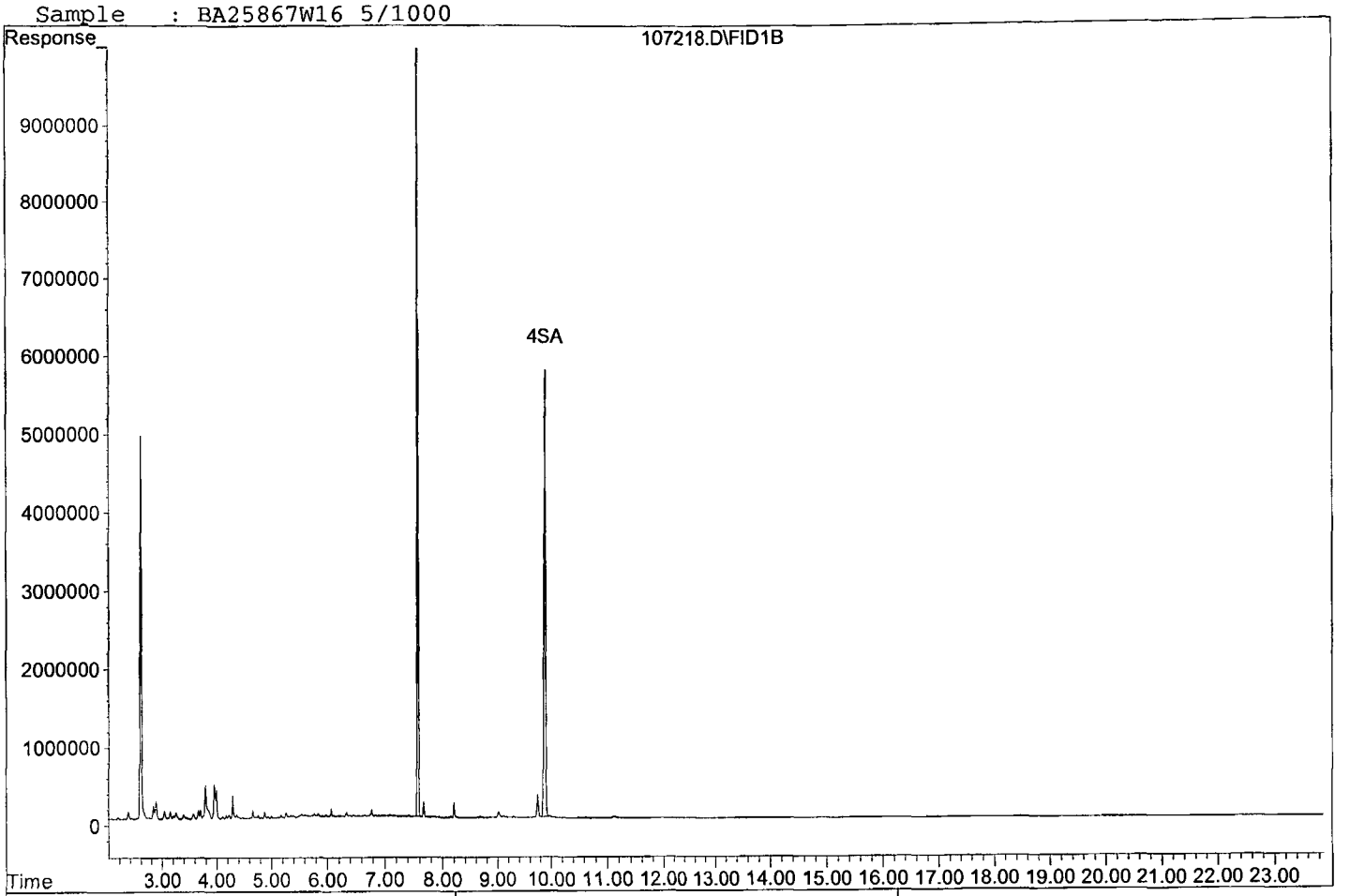
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

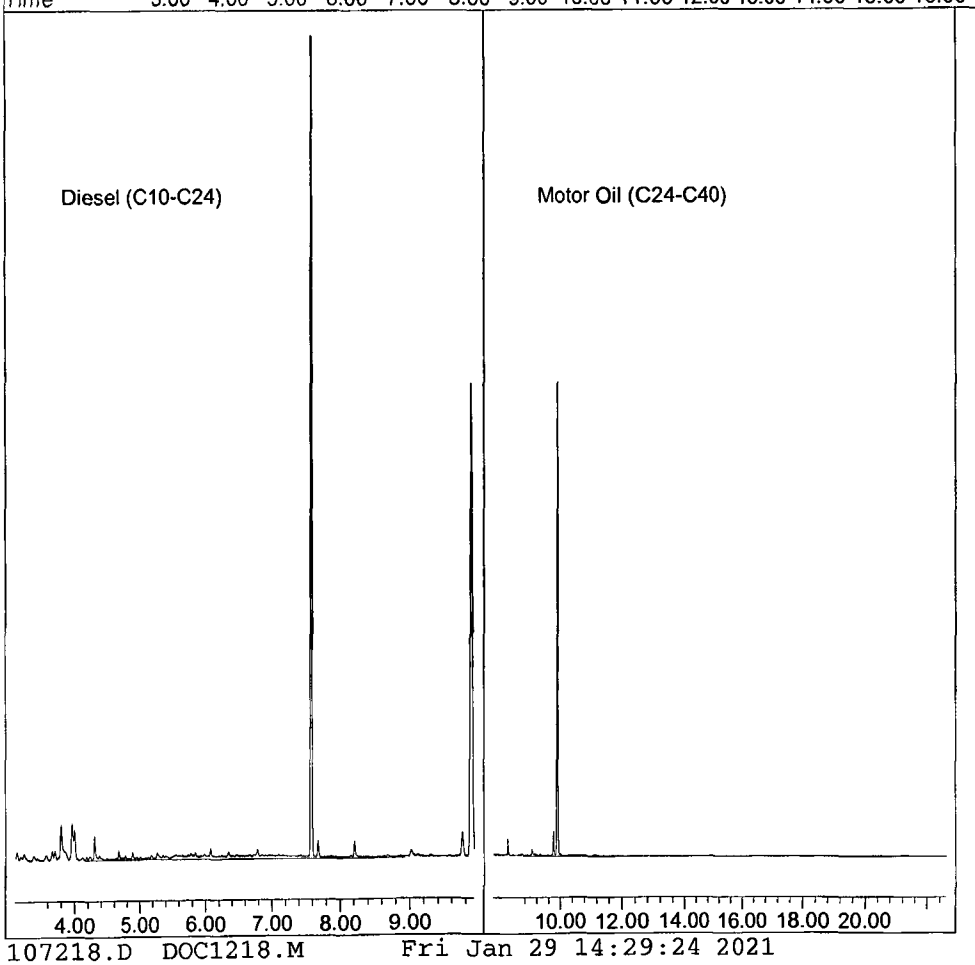
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	140527558	118.941 ppb
Surrogate Spike 150.000		Recovery =	79.29%
4) SA Octacosane(S)	9.88	121040192	133.245 ppb
Surrogate Spike 150.000		Recovery =	88.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	95252872	97.119 ppb
2) HBTM Motor Oil (C24-C40)	15.16	39659602	50.300 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107218.D
Sample : BA25867W16 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107219.D Vial: 19
Acq On : 1-29-21 13:39:36 Operator:
Sample : BA25870W16 5/1050 Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

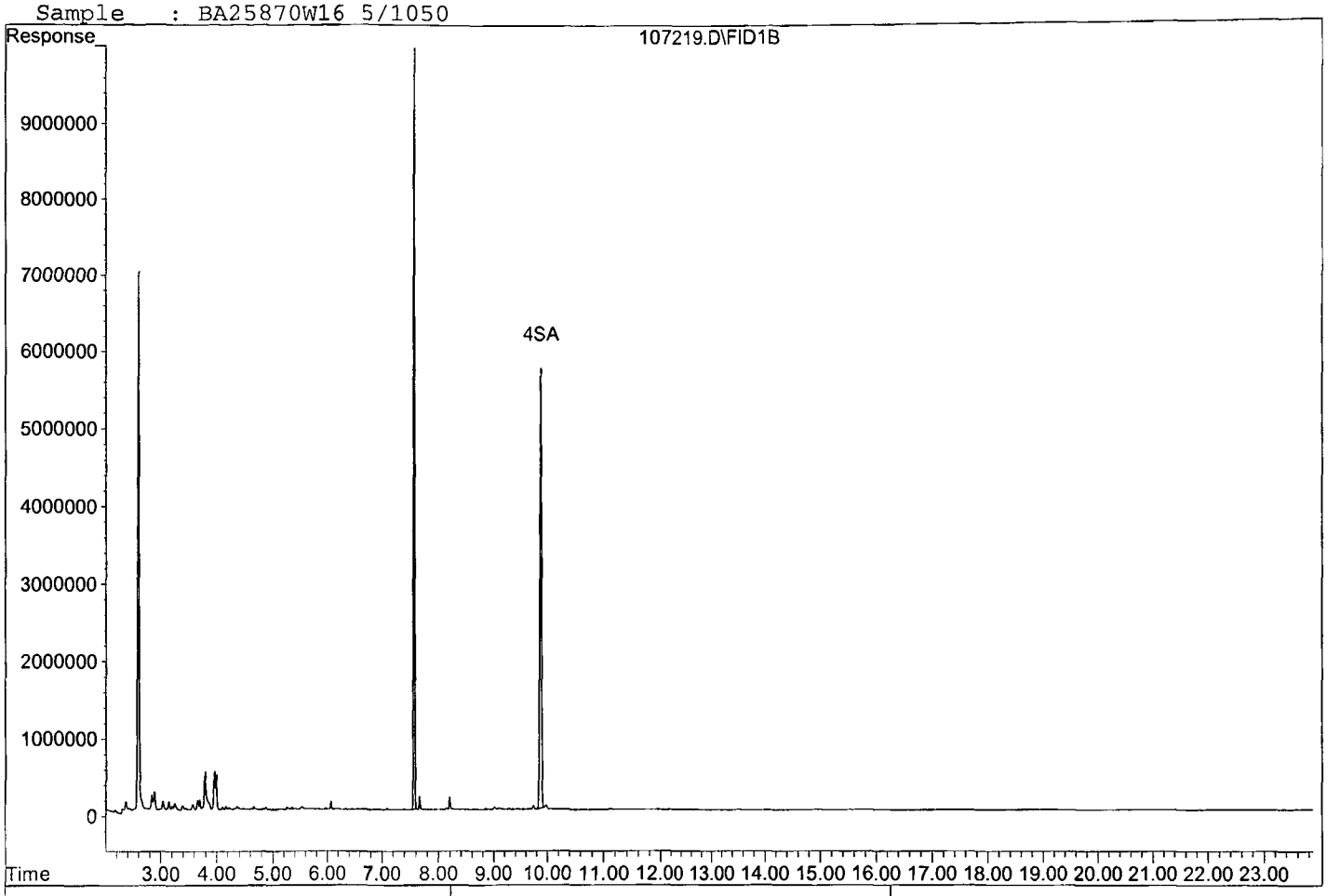
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

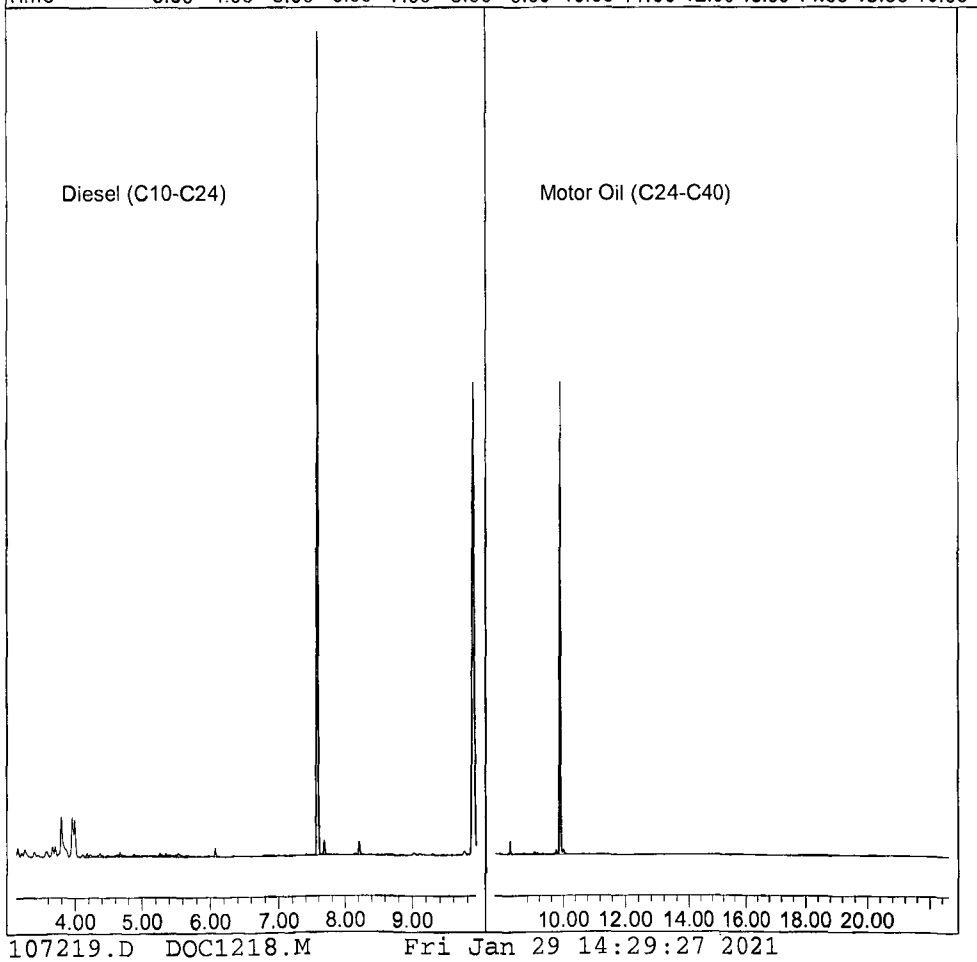
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	139672845	112.588 ppb
Surrogate Spike 142.857		Recovery =	78.81%
4) SA Octacosane(S)	9.88	119908812	125.714 ppb
Surrogate Spike 142.857		Recovery =	88.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	28211229	27.394 ppb
2) HBTM Motor Oil (C24-C40)	15.16	23594744	21.326 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107219.D
Sample : BA25870W16 5/1050





107219.D DOC1218.M Fri Jan 29 14:29:27 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107212.D Vial: 12
Acq On : 1-29-21 10:23:07 Operator:
Sample : 210127B BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

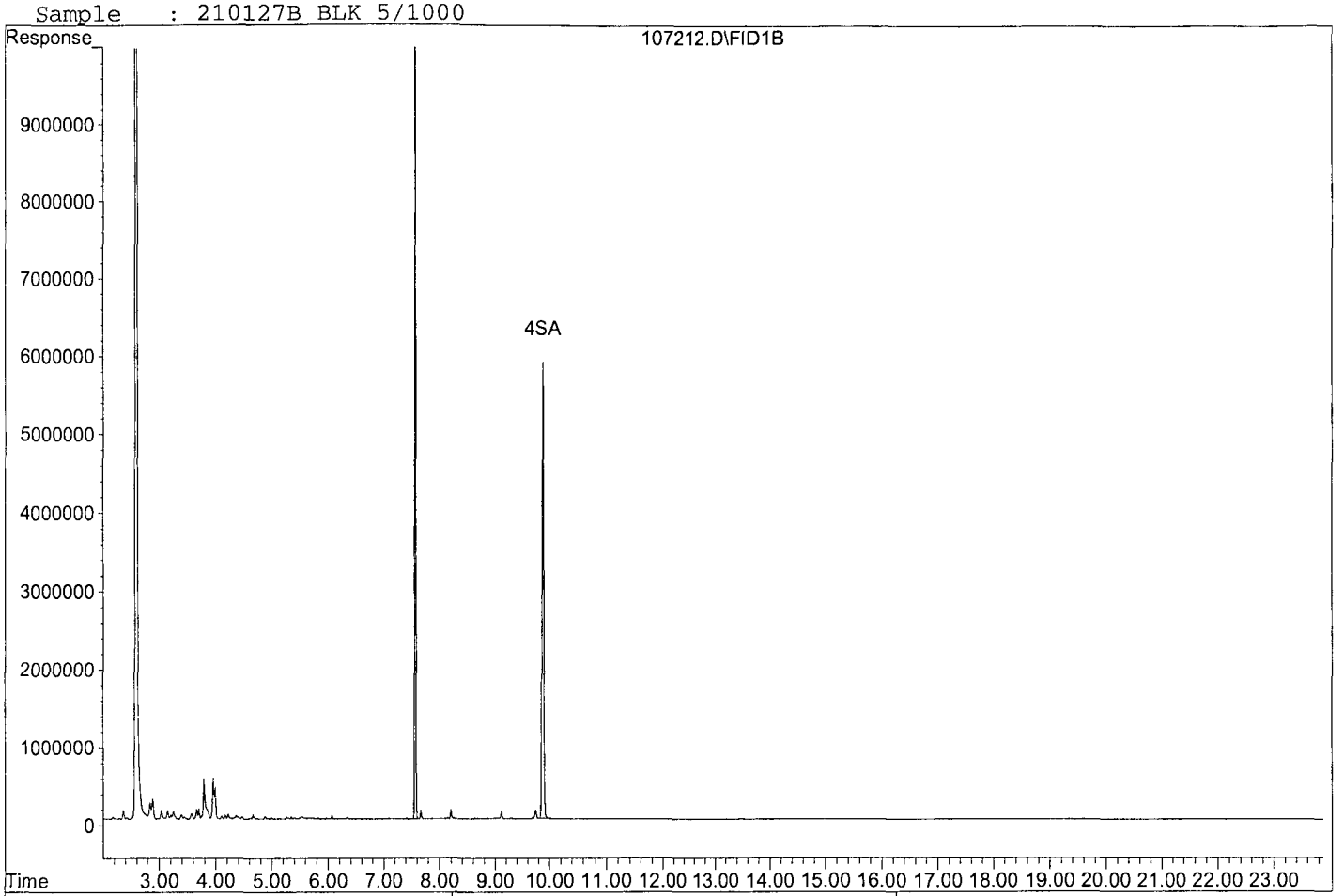
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

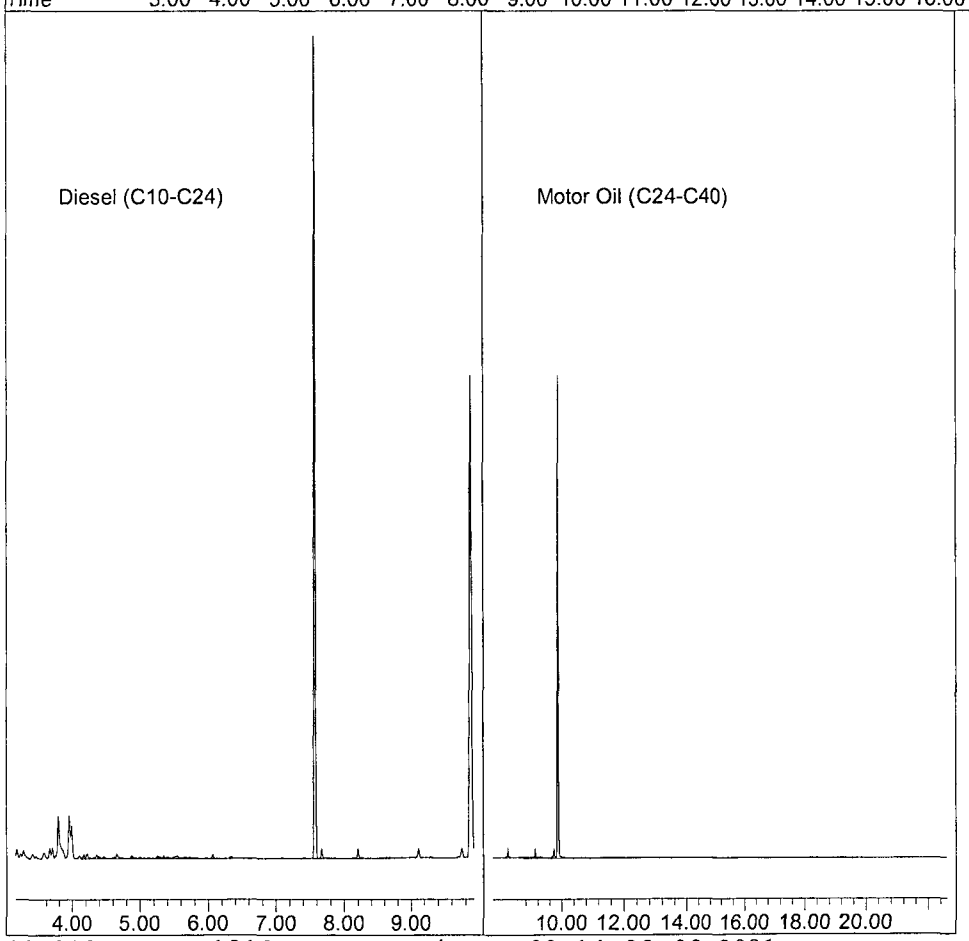
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	142758224	120.829 ppb
Surrogate Spike 150.000		Recovery =	80.55%
4) SA Octacosane(S)	9.88	123160950	135.580 ppb
Surrogate Spike 150.000		Recovery =	90.39%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	24852399	25.339 ppb
2) HBTM Motor Oil (C24-C40)	15.16	27865910	29.812 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107212.D
Sample : 210127B BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107213.D Vial: 13
Acq On : 1-29-21 10:51:11 Operator:
Sample : 210127B LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

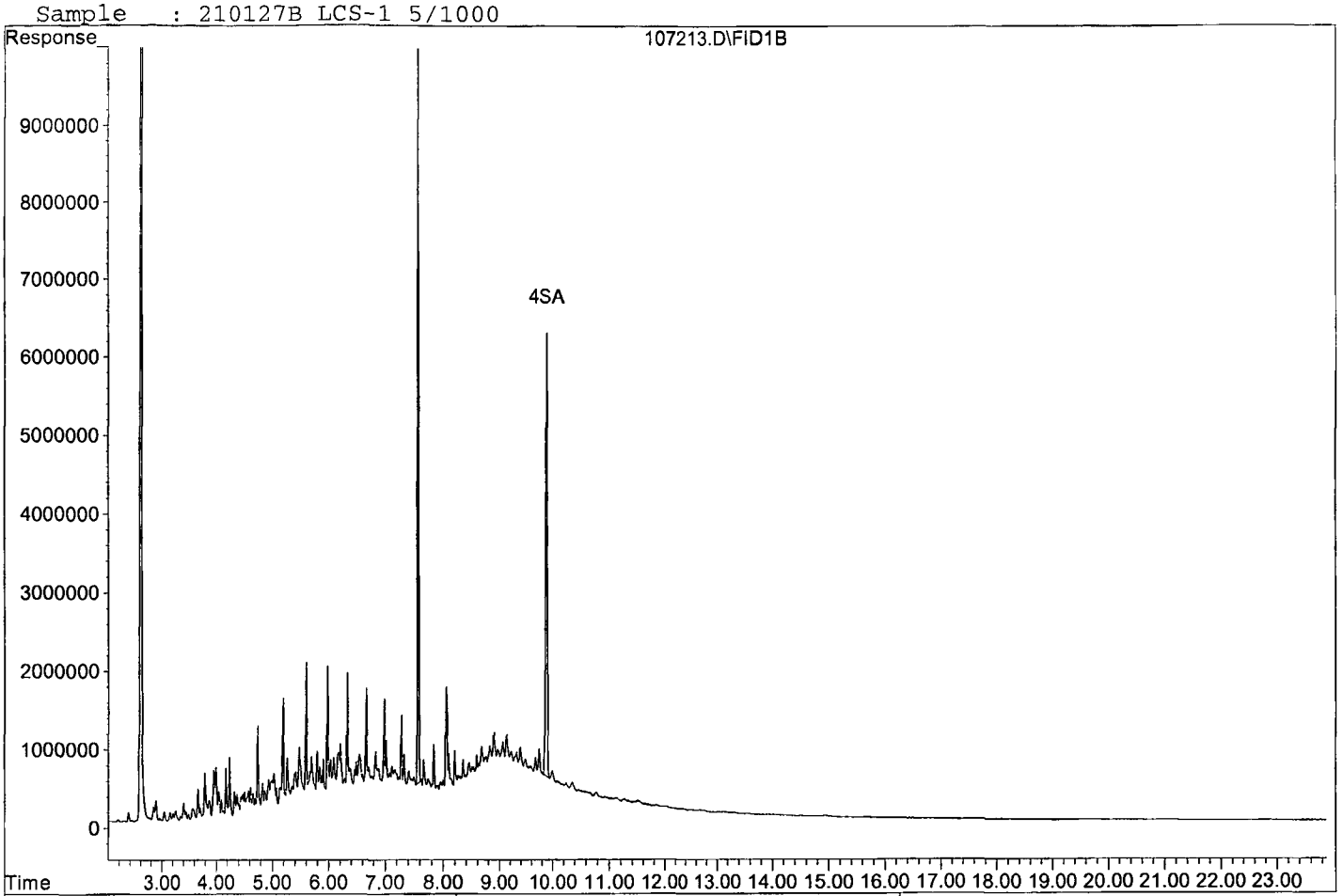
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

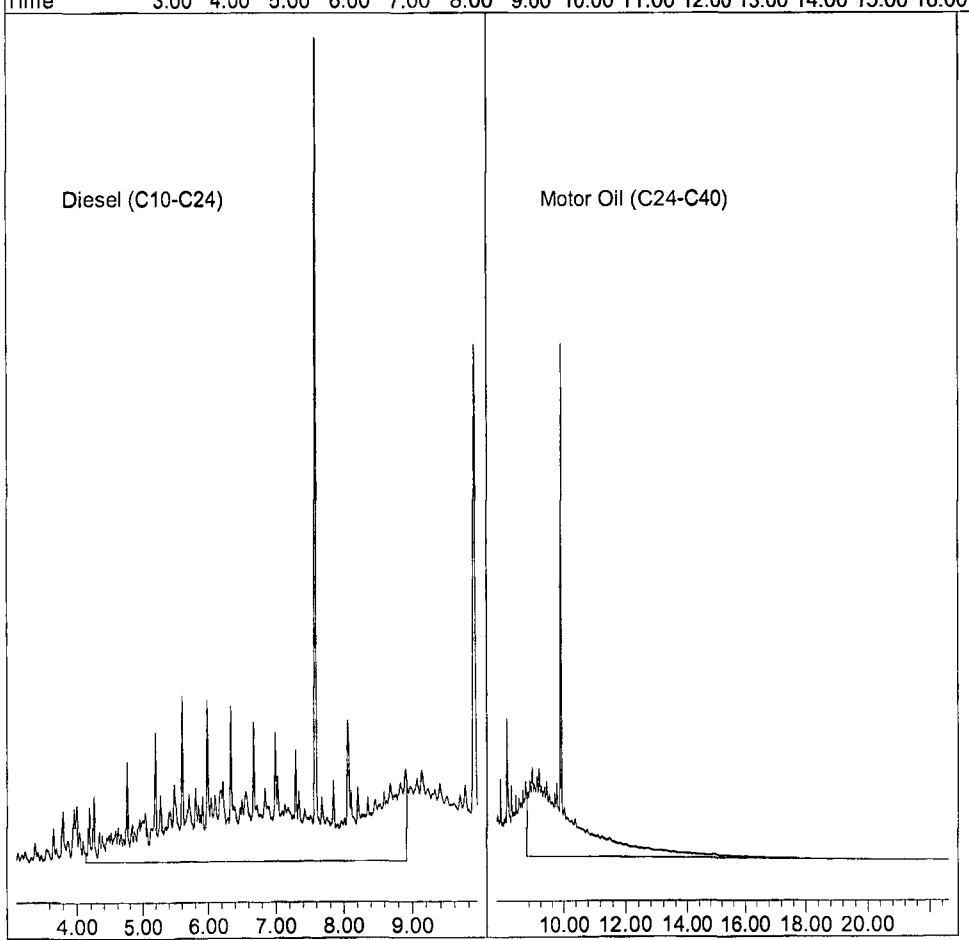
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	149804939	126.793 ppb
Surrogate Spike 150.000		Recovery =	84.53%
4) SA Octacosane(S)	9.88	118226086	130.148 ppb
Surrogate Spike 150.000		Recovery =	86.77%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1655282851	1687.705 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1060942003	1824.451 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107213.D
Sample : 210127B LCS-1 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210107\107214.D Vial: 14
Acq On : 1-29-21 11:19:16 Operator:
Sample : 210127B LCSD-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Jan 29 14:19 2021 Quant Results File: DOC1218.RES

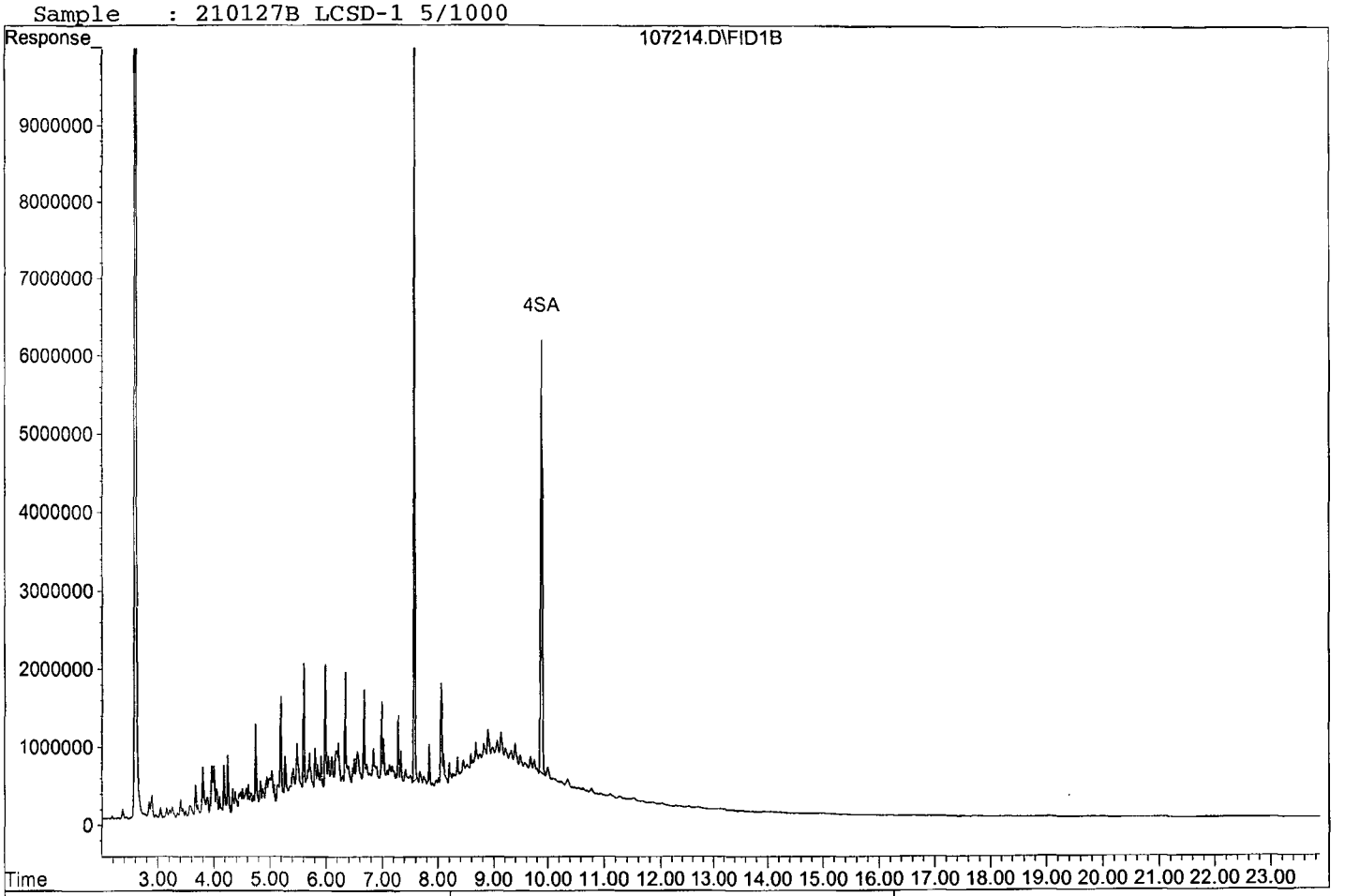
Method : G:\APOLLO\DATA\210107\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Thu Jan 14 11:00:44 2021
Response via : Multiple Level Calibration

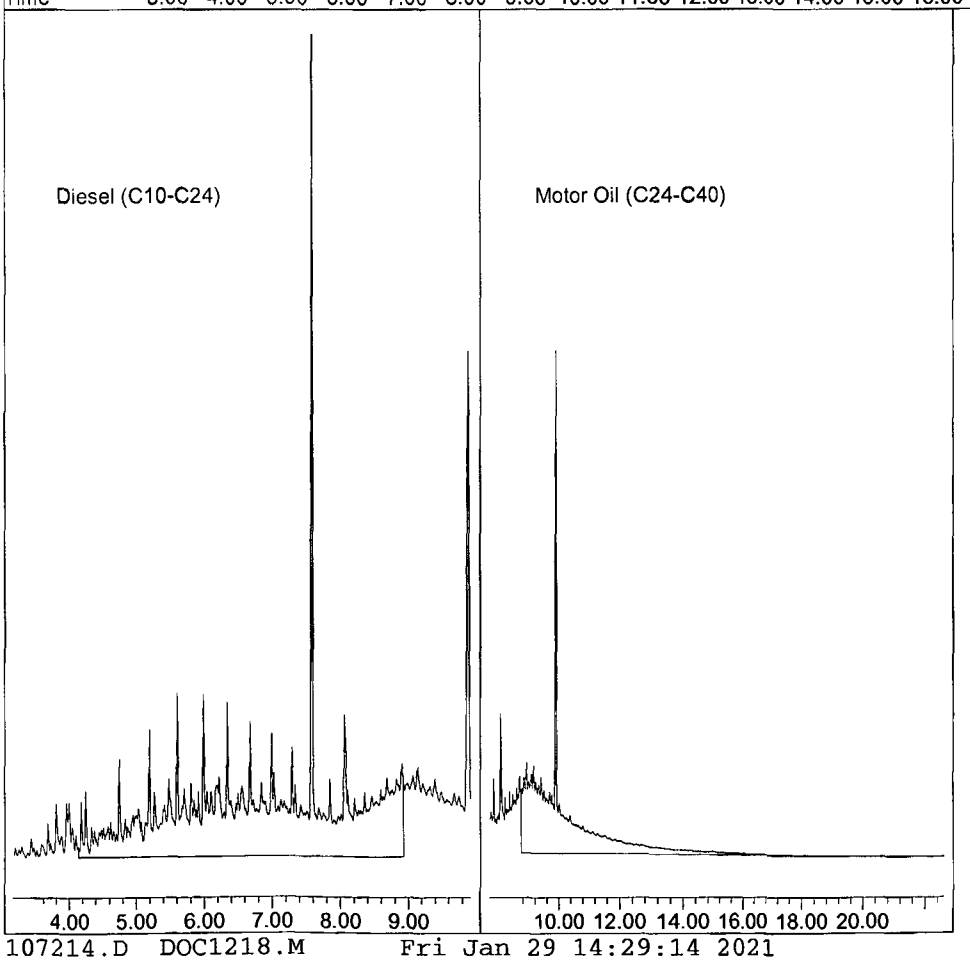
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	151259913	128.025 ppb
Surrogate Spike 150.000		Recovery =	85.35%
4) SA Octacosane(S)	9.88	119230484	131.253 ppb
Surrogate Spike 150.000		Recovery =	87.50%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1640014158	1672.137 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1066465090	1834.046 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210107\107214.D
Sample : 210127B LCSD-1 5/1000





107214.D DOC1218.M Fri Jan 29 14:29:14 2021

Diesel Motor Oil Mix

Prepared: 01/26/21

Expires: 12/08/21

Prepared By (Initials): MA

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50525**	**01/26/22**	**11/30/26**	1 mL	2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0155668-50521**	**12/08/21**	**01/31/27**	1 mL			25,000

THC Surrogate

Prepared: 01/26/21 **Prepared By (Initials): DL**

Expires: 01/26/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15902-50951**	**01/26/22**	**06/30/25**	N/A	N/A	N/A	600

Diesel / Motor Oil CCV

Prepared: 12/15/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	**06/30/25**	1250uL	10mL	MC	250

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Methylene Chloride Lot No. 58059

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	08/11/21	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0155668-50515,50518,50519**	08/11/21	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	**08/05/21**	**06/30/25**	1666uL			100

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210127B	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-26-21 1-26-22		Surrogate ID 1	THC Surrogate 1-26-21 1-26-22	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 13:20	
Spiked ID 8			Ext. End Time:	01/29/21 9:00	
			GC Requires Extract By:		

pH1	2	01/27/21 13:00	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 01/27/21 **Witnessed By:** DL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127B Blk				0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP51 E-WB1				
2	210127B LCS-1		0.080	1	0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP50 E-WB2				
3	210127B LCSD-1		0.080	1	0.250	1	1000	5	2	01/27/21 13:20	
						equip	E-HP49 E-WB3				
4	BA25701	BA25701W14			0.250	1	1030	5	2	01/27/21 13:20	94863
						equip	E-HP48 E-WB1				
5	BA25704	BA25704W13			0.250	1	1000	5	2	01/27/21 13:20	94863
						equip	E-HP47 E-WB2				
6	BA25706	BA25706W14			0.250	1	1020	5	2	01/27/21 13:20	94863
						equip	E-HP25 E-WB3				
7	BA25867	BA25867W16			0.250	1	1000	5	2	01/27/21 13:20	94883
						equip	E-HP26 E-WB1				
8	BA25870	BA25870W16			0.250	1	1050	5	2	01/27/21 13:20	94883
						equip	E-HP27 E-WB2				

Solvent and Lot#	
1+1 HCL (5mLs) AMBER	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	1/29/21
Time	9:15
Refrigerator	HPBART

	Technician's Initials
Scanned By	KY
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	01/29/21 3:04:12 PM

Reviewed By: SS **Date** 01/29/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	11	107211.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-29-21 9:54:09
10	12	107212.D	5	210127B BLK 5/1000	water	1-29-21 10:23:07
11	13	107213.D	5	210127B LCS-1 5/1000	water	1-29-21 10:51:11
12	14	107214.D	5	210127B LCSD-1 5/1000	water	1-29-21 11:19:16
13	18	107218.D	5	BA25867W16 5/1000	water	1-29-21 13:11:32
14	19	107219.D	4.7619	BA25870W16 5/1050	water	1-29-21 13:39:36
15	20	107220.D	1	Diesel Motor Oil-CCV 12/15/20	water	1-29-21 14:07:42

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

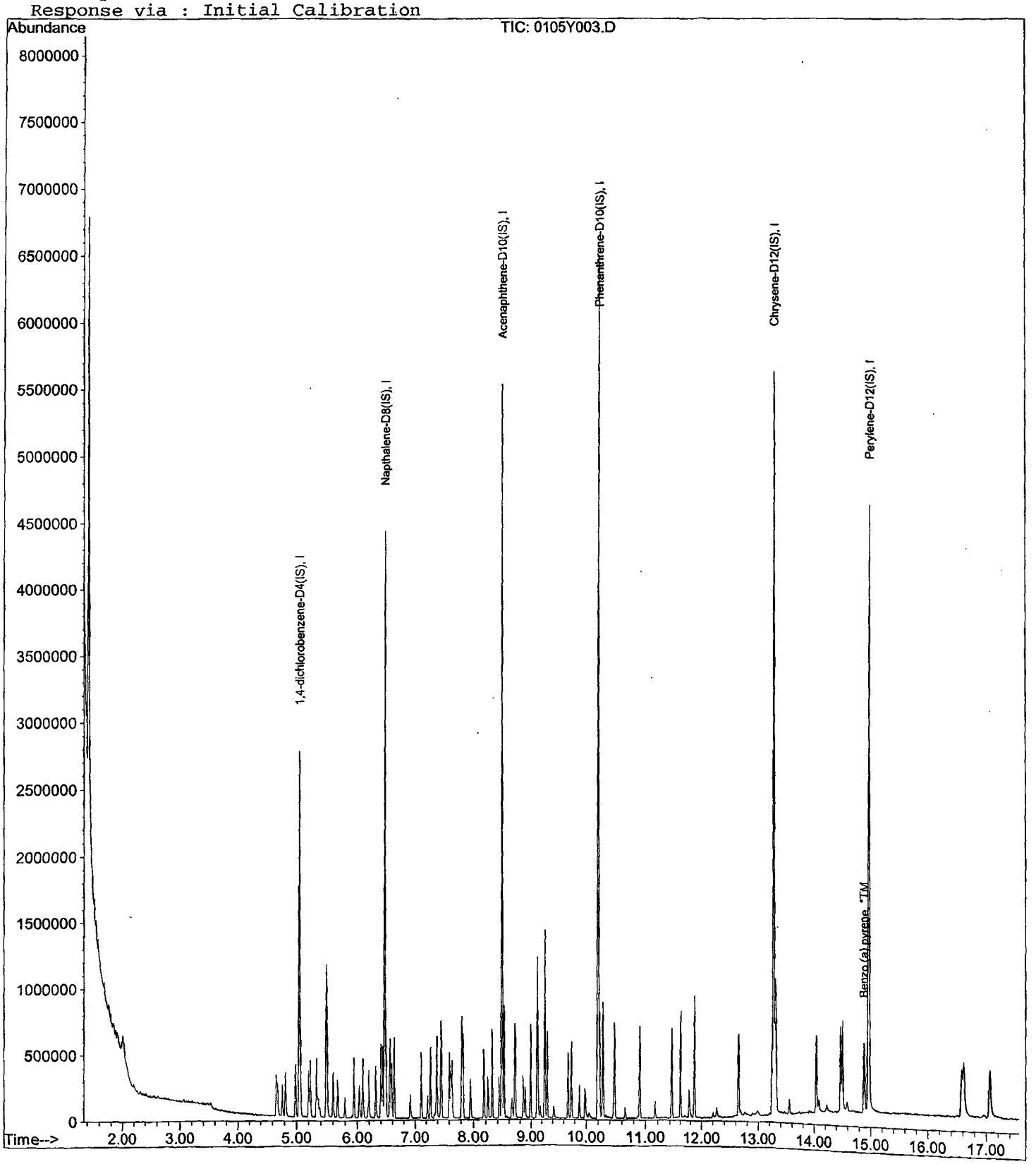
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037	# 1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686 ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596 ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455 ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248 ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028 ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646 ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868 ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546 ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540 ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821 ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500 ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714 ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485 ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032 ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186 ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066 ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455 ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956 ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225 ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553 ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311 ppb		94
62)	Fluorene	9.11	166	261083	4.52567 ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382 ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412 ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899 ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899 ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113 ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496 ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590 ppb		89
72)	Atrazine	9.89	200	33683	2.11185 ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371 ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240 ppb		99
75)	Anthracene	10.29	178	396737	4.55787 ppb		99
76)	Carbazol	10.48	167	354948	4.60507 ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361 ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599 ppb		98
80)	Benzidine	11.78	184	98403	4.15791 ppb		97
81)	Pyrene	11.87	202	471275	4.75000 ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441 ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037 ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858 ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904 ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620 ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302 ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768 ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451 ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733 ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012 ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766 ppb		98

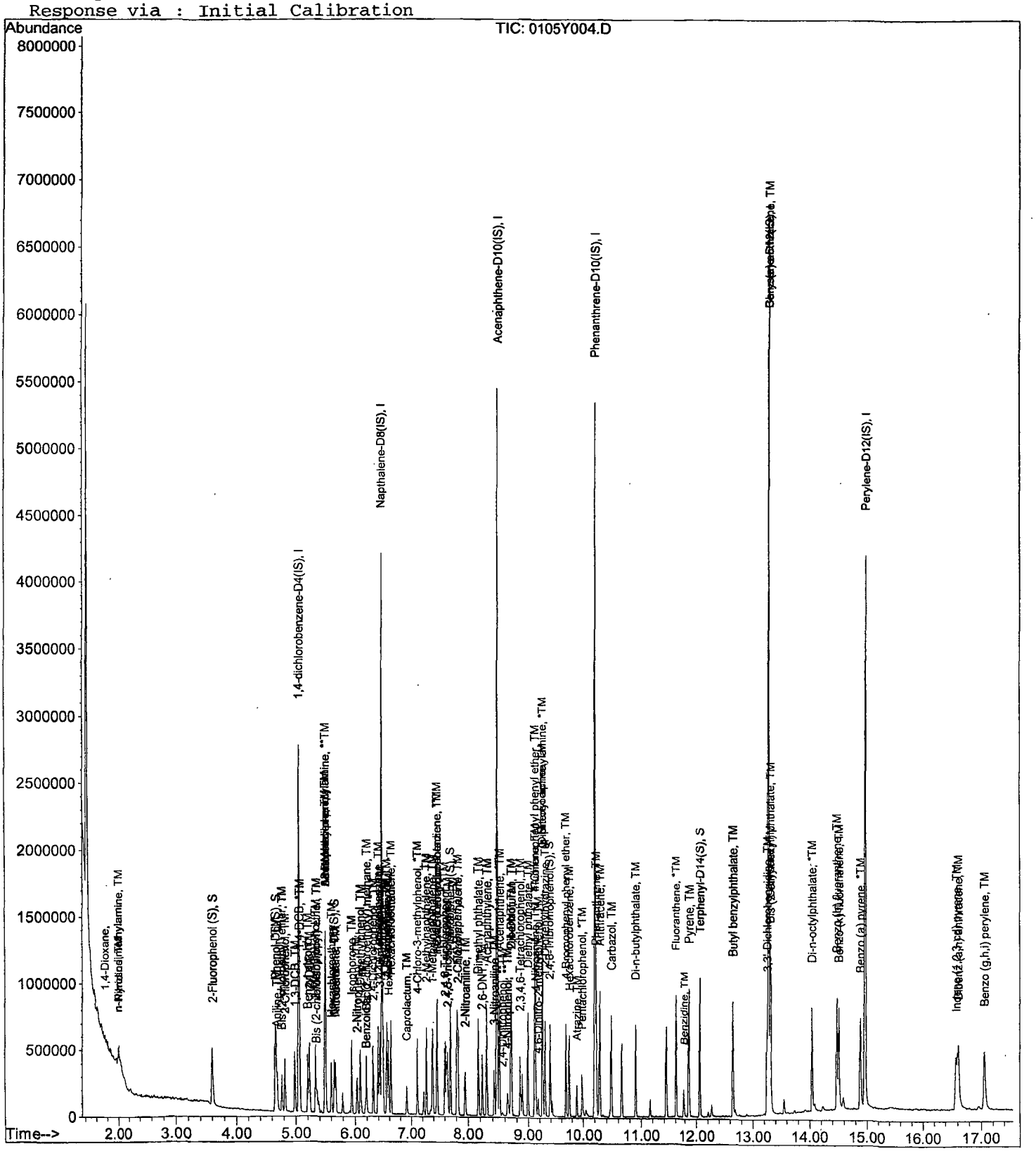
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411 ppb	0.00
Spiked Amount 200.000			Recovery =	10.247%	
6) Phenol-D6 (S)	4.66	99	492275	20.31208 ppb	0.00
Spiked Amount 200.000			Recovery =	10.156%	
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036 ppb	0.00
Spiked Amount 100.000			Recovery =	10.550%	
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840 ppb	0.00
Spiked Amount 100.000			Recovery =	10.108%	
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194 ppb	0.00
Spiked Amount 200.000			Recovery =	9.171%	
82) Terphenyl-D14(S)	12.07	244	719678	9.80130 ppb	0.00
Spiked Amount 100.000			Recovery =	9.801%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713	91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743 ppb	80
4) Pyridine	2.00	79	159922	10.10773 ppb	95
7) Phenol	4.67	94	284850	9.94852 ppb	94
8) Aniline	4.69	93	215040	10.28244 ppb	92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288 ppb	96
10) 2-Chlorophenol	4.82	128	214545	9.90397 ppb	94
11) 1,3-DCB	4.98	146	250935	10.05890 ppb	98
12) 1,4-DCB	5.07	146	251185	9.99580 ppb	99
13) Benzyl alcohol	5.21	108	124972	9.83889 ppb	89
14) 1,2-DCB	5.23	146	243420	10.31913 ppb	95
15) 2-Methylphenol	5.33	107	162405	9.79152 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047 ppb	96
17) Acetophenone	5.49	105	301622	9.93857 ppb	80
18) 3&4-Methylphenol	5.50	107	444511	19.84173 ppb	99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080 ppb	99
20) Hexachloroethane	5.60	117	101321	9.85192 ppb	88
23) Nitrobenzene	5.68	77	272922	10.09780 ppb	91
24) Isophorone	5.95	82	433948	9.99676 ppb	99
25) 2-Nitrophenol	6.03	139	109329	9.58219 ppb	90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036 ppb	99
27) Benzoic acid	6.19	105	96995	12.03014 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695 ppb	98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216 ppb	98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228 ppb	98
32) Naphthalene	6.49	128	626299	10.16177 ppb	99
33) 4-Chloroaniline	6.55	127	217799	9.42372 ppb #	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495 ppb	92
35) Hexachloropropene	6.59	213	191664	9.40280 ppb	98
36) Hexachlorobutadiene	6.63	225	157919	9.80411 ppb	94
37) Caprolactum	6.93	55	62259	10.01107 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140	ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527	ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336	ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419	ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080	ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556	ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652	ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275	ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712	ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781	ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017	ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977	ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081	ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113	ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192	ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657	ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145	ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698	ppb		92
62)	Fluorene	9.11	166	544214	9.62094	ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611	ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027	ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157	ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887	ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023	ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959	ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855	ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313	ppb		100
75)	Anthracene	10.28	178	836112	9.77106	ppb		98
76)	Carbazol	10.48	167	736110	9.71477	ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566	ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374	ppb		97
80)	Benzidine	11.78	184	208309	8.56218	ppb		99
81)	Pyrene	11.87	202	997155	9.77669	ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749	ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353	ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583	ppb		98
87)	Chrysene	13.31	228	929904	9.44644	ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708	ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542	ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249	ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197	ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392	ppb		99

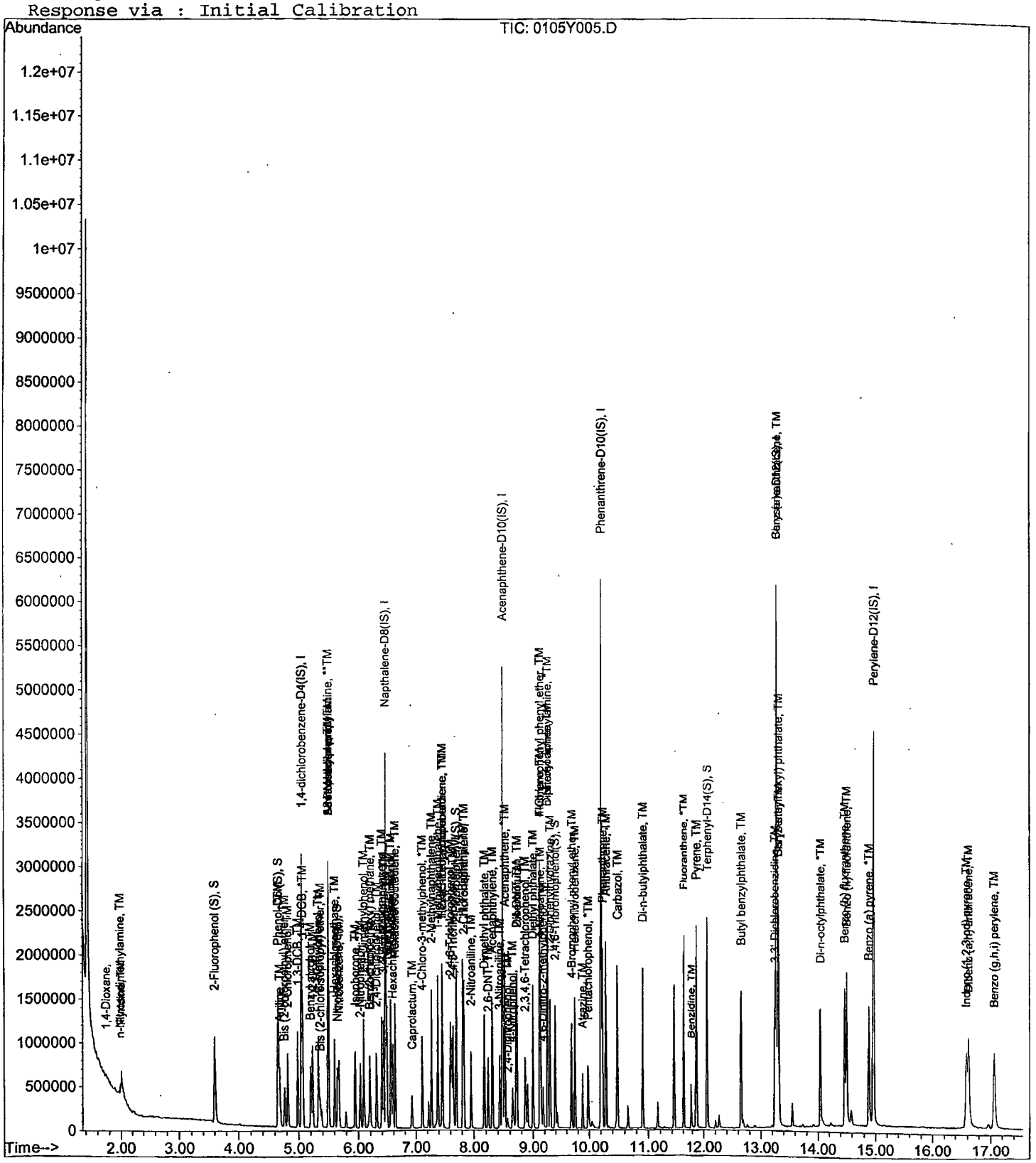
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery	= 20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery	= 19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery	= 19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery	= 20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

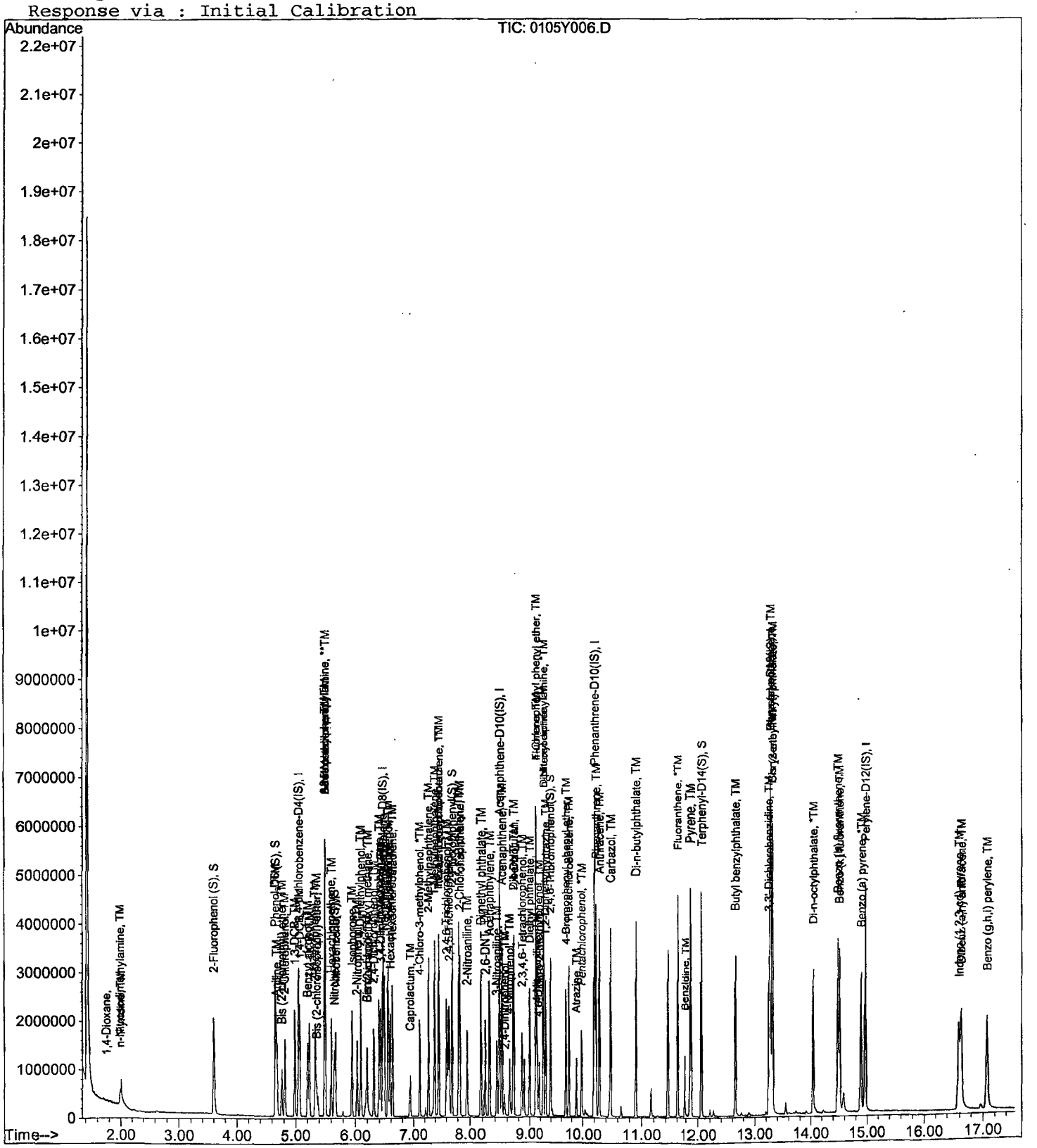
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967	ppb	0.00
Spiked Amount 200.000			Recovery = 40.315%			
6) Phenol-D6 (S)	4.67	99	2073058	80.33420	ppb	0.00
Spiked Amount 200.000			Recovery = 40.167%			
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156	ppb	0.00
Spiked Amount 100.000			Recovery = 39.782%			
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219	ppb	0.00
Spiked Amount 100.000			Recovery = 39.422%			
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158	ppb	0.00
Spiked Amount 200.000			Recovery = 39.906%			
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922	ppb	0.00
Spiked Amount 100.000			Recovery = 40.089%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747		54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850	ppb	93
4) Pyridine	1.99	79	710577	42.17927	ppb	100
7) Phenol	4.68	94	1249780	40.99379	ppb	96
8) Aniline	4.69	93	852672	38.29141	ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360	ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826	ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439	ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338	ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093	ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316	ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142	ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767	ppb	98
17) Acetophenone	5.49	105	1298420	40.18079	ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017	ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972	ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083	ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355	ppb	99
24) Isophorone	5.95	82	1929574	40.57653	ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009	ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262	ppb	95
27) Benzoic acid	6.22	105	694050	39.13552	ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698	ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706	ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464	ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676	ppb	97
32) Naphthalene	6.49	128	2700428	39.99560	ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681	ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710	ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202	ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790	ppb	96
37) Caprolactum	6.96	55	275073	40.37550	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925 ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465 ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391 ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293 ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613 ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070 ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849 ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115 ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240 ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742 ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066 ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653 ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521 ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683 ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490 ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865 ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417 ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283 ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927 ppb		96
62)	Fluorene	9.11	166	2466397	40.07148 ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960 ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010 ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844 ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612 ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787 ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043 ppb		98
72)	Atrazine	9.89	200	360501	20.83169 ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667 ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330 ppb		99
75)	Anthracene	10.29	178	3844090	40.70216 ppb		99
76)	Carbazol	10.49	167	3390343	40.53968 ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439 ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705 ppb		99
80)	Benzidine	11.78	184	1136122	43.10981 ppb		99
81)	Pyrene	11.88	202	4593979	41.58081 ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753 ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970 ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974 ppb		99
87)	Chrysene	13.31	228	4433612	41.57786 ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468 ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011 ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066 ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452 ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731 ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304 ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248 ppb		99

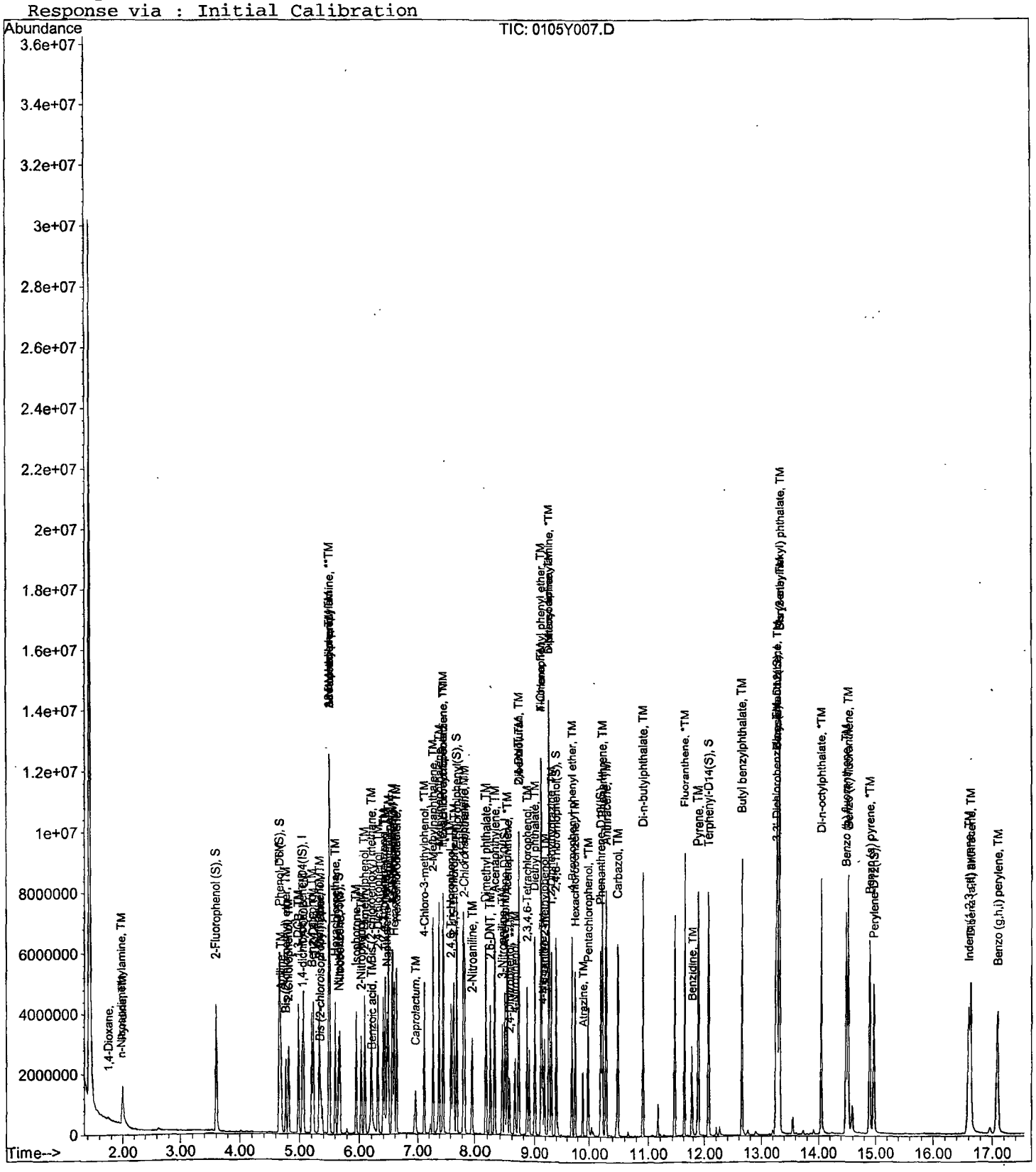
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



171 of 212

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery = 49.223%		
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery = 48.816%		
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery = 49.331%		
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery = 48.752%		
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery = 50.367%		
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery = 50.179%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501	ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827	ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033	ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691	ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290	ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584	ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983	ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022	ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174	ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741	ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990	ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046	ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381	ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245	ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395	ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389	ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069	ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506	ppb	100
62)	Fluorene	9.11	166	2868571	49.36863	ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128	ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089	ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978	ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367	ppb	100
72)	Atrazine	9.89	200	418889	26.25754	ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356	ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640	ppb	100
75)	Anthracene	10.29	178	4512131	51.82540	ppb	100
76)	Carbazol	10.49	167	4021683	52.16528	ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661	ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724	ppb	100
80)	Benzidine	11.78	184	1334887	54.03870	ppb	100
81)	Pyrene	11.88	202	5487771	52.99187	ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593	ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347	ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599	ppb	100
87)	Chrysene	13.31	228	5235913	52.38491	ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495	ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646	ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782	ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159	ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960	ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590	ppb	100

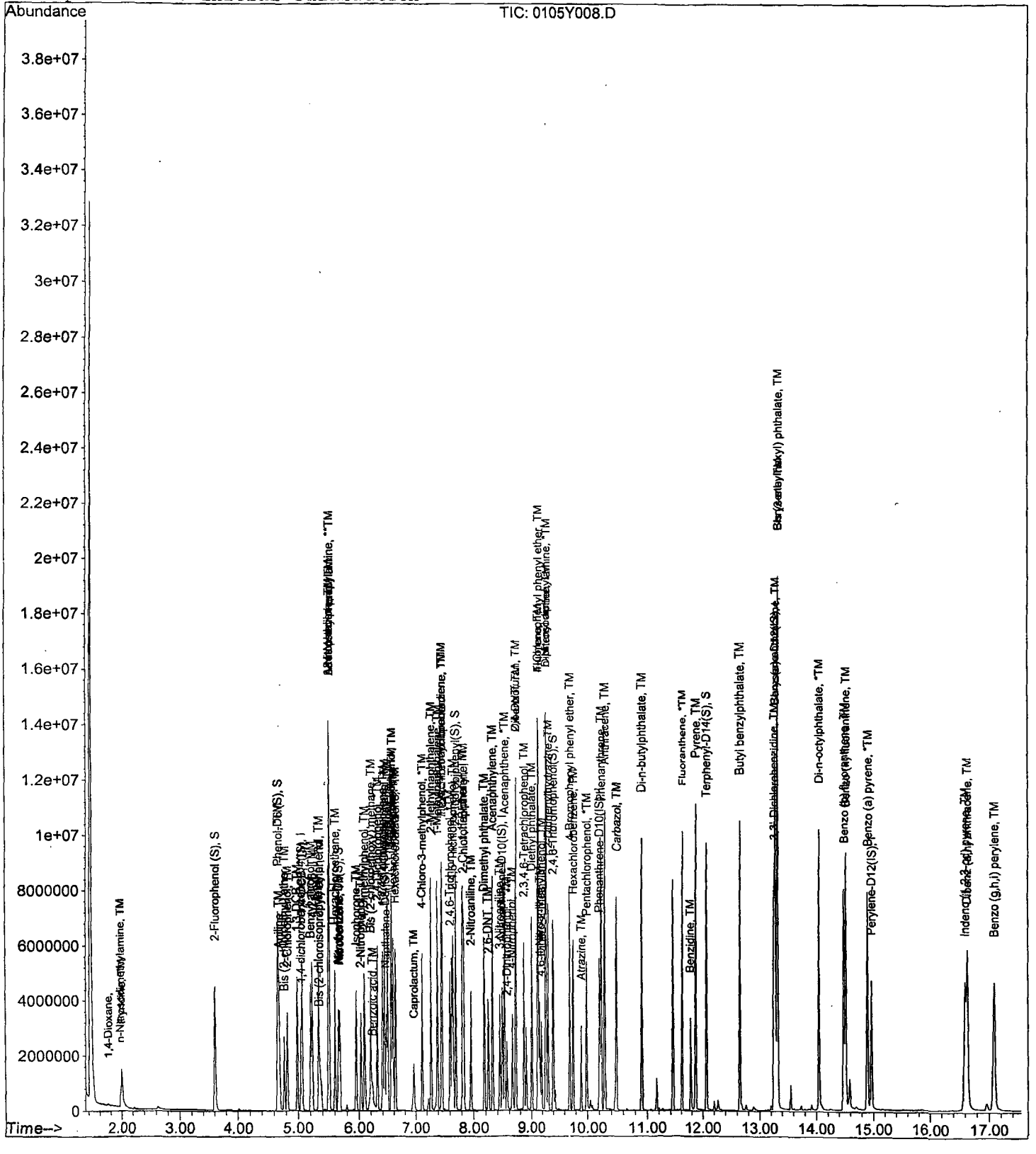
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382 ppb		-0.01
Spiked Amount 200.000			Recovery =	60.067%		
6) Phenol-D6 (S)	4.67	99	2714982	119.91052 ppb		0.00
Spiked Amount 200.000			Recovery =	59.956%		
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297 ppb		0.00
Spiked Amount 100.000			Recovery =	59.053%		
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223 ppb		0.00
Spiked Amount 100.000			Recovery =	60.072%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868 ppb		0.00
Spiked Amount 200.000			Recovery =	62.039%		
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361 ppb		0.00
Spiked Amount 100.000			Recovery =	59.274%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380		95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310 ppb		92
4) Pyridine	1.99	79	901311	60.97669 ppb		97
7) Phenol	4.68	94	1606167	60.04495 ppb		96
8) Aniline	4.69	93	1200640	61.45164 ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145 ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776 ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182 ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978 ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043 ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365 ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897 ppb		96
17) Acetophenone	5.50	105	1702308	60.04028 ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638 ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425 ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967 ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951 ppb		89
24) Isophorone	5.96	82	2504820	59.55758 ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859 ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930 ppb		99
27) Benzoic acid	6.23	105	965560	57.47534 ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945 ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990 ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563 ppb		100
32) Naphthalene	6.49	128	3532998	59.16571 ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729 ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808 ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347 ppb		98
37) Caprolactum	6.98	55	354905	58.90188 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb	97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb	99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb	98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb	95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb	99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb	98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb	91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb	97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb	92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb	100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb	99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb	99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb	93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb	93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb	98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb	97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb	98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb	95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb	98
62)	Fluorene	9.11	166	3228662	60.22935	ppb	100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb	95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb #	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb	96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb	96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb	96
72)	Atrazine	9.89	200	456257	29.70998	ppb	98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb	99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb	99
75)	Anthracene	10.29	178	5016441	59.85415	ppb	100
76)	Carbazol	10.49	167	4476193	60.31428	ppb	98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb	99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb #	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb	99
81)	Pyrene	11.88	202	6087066	61.51608	ppb	100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb	99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb	99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb	98
87)	Chrysene	13.32	228	5981915	62.63562	ppb	99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb	99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb #	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb	99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb	100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb	98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb	97

(#) = qualifier out of range (m) = manual integration

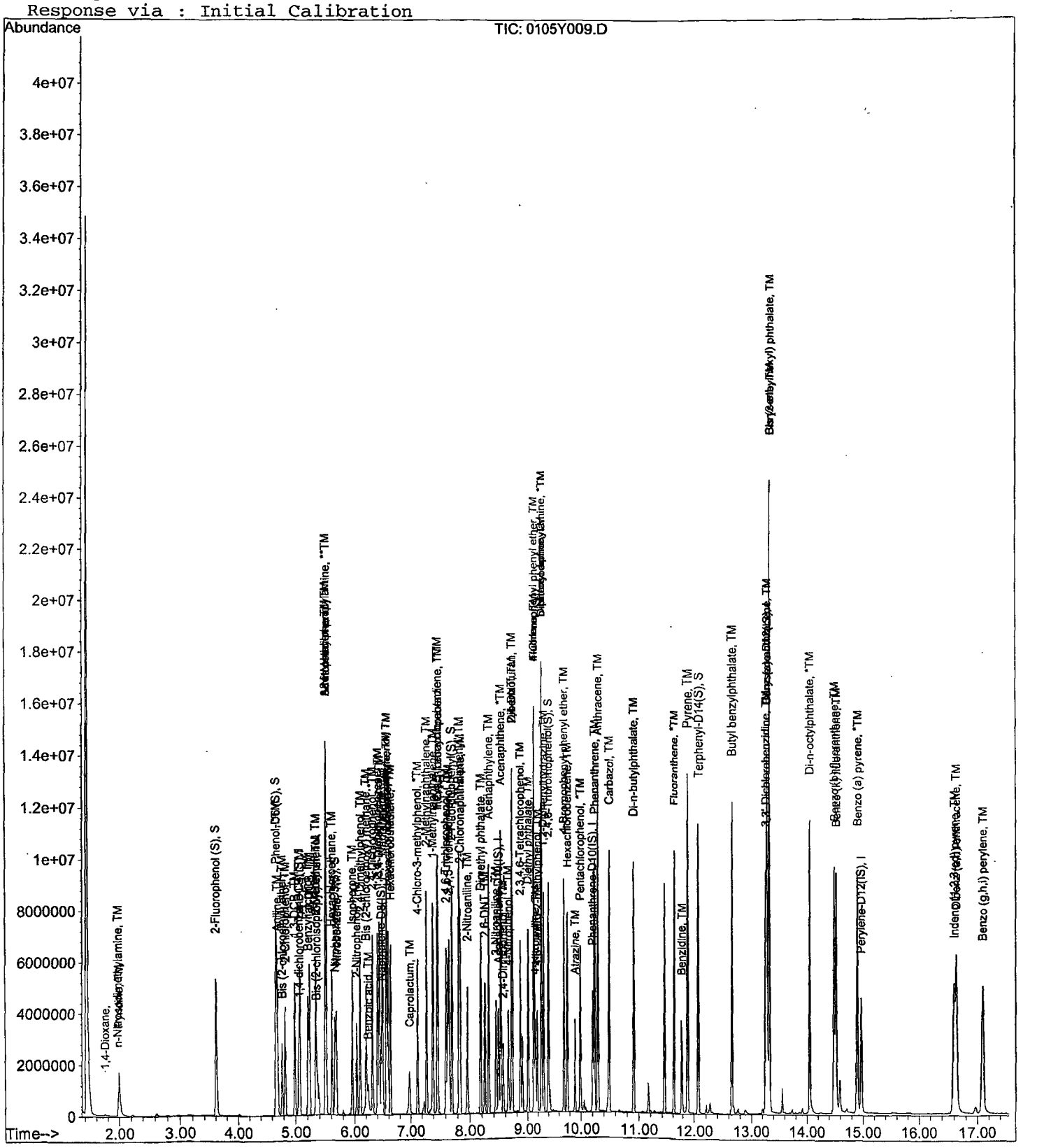
Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D
Acq On : 5 Jan 21 13:56
Sample : 60ug/mL 8270 01/05/21
Misc :

Vial: 9
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery	= 80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery	= 80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery	= 81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery	= 82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery	= 87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery	= 83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014 ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655 ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416 ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015 ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611 ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077 ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644 ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172 ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202 ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890 ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896 ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682 ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683 ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516 ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648 ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538 ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107 ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525 ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517 ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100 ppb		98
62)	Fluorene	9.12	166	5047941	86.20009 ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506 ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370 ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254 ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237 ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840 ppb		91
72)	Atrazine	9.89	200	691470	41.73525 ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636 ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693 ppb		100
75)	Anthracene	10.29	178	7347310	81.25757 ppb		99
76)	Carbazol	10.49	167	6600362	82.43582 ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116 ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048 ppb		96
80)	Benzidine	11.78	184	2104059	81.98313 ppb		99
81)	Pyrene	11.88	202	8540731	79.38062 ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628 ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581 ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065 ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264 ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893 ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361 ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885 ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416 ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513 ppb		99

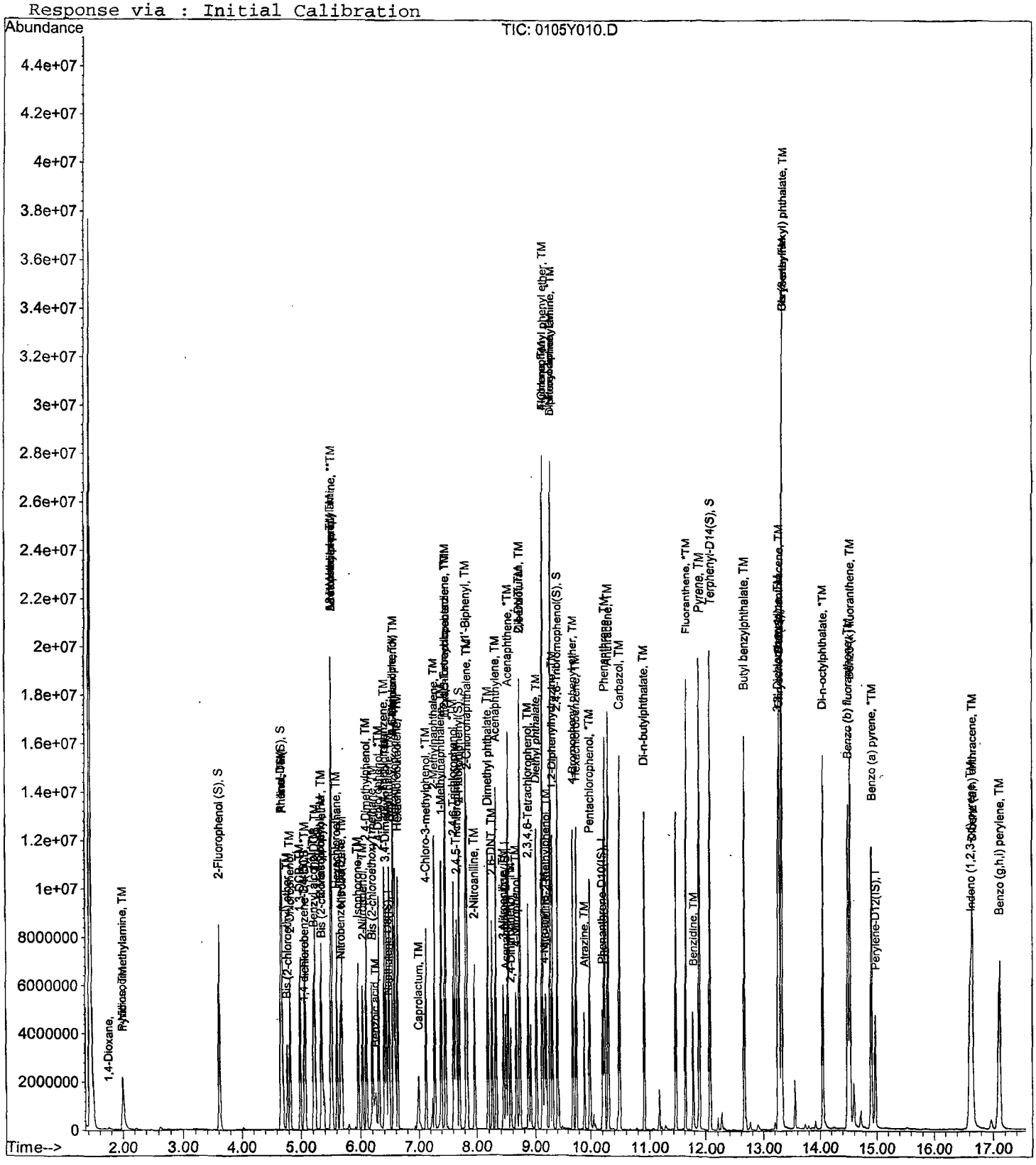
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%			
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%			
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%			
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%			
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%			
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

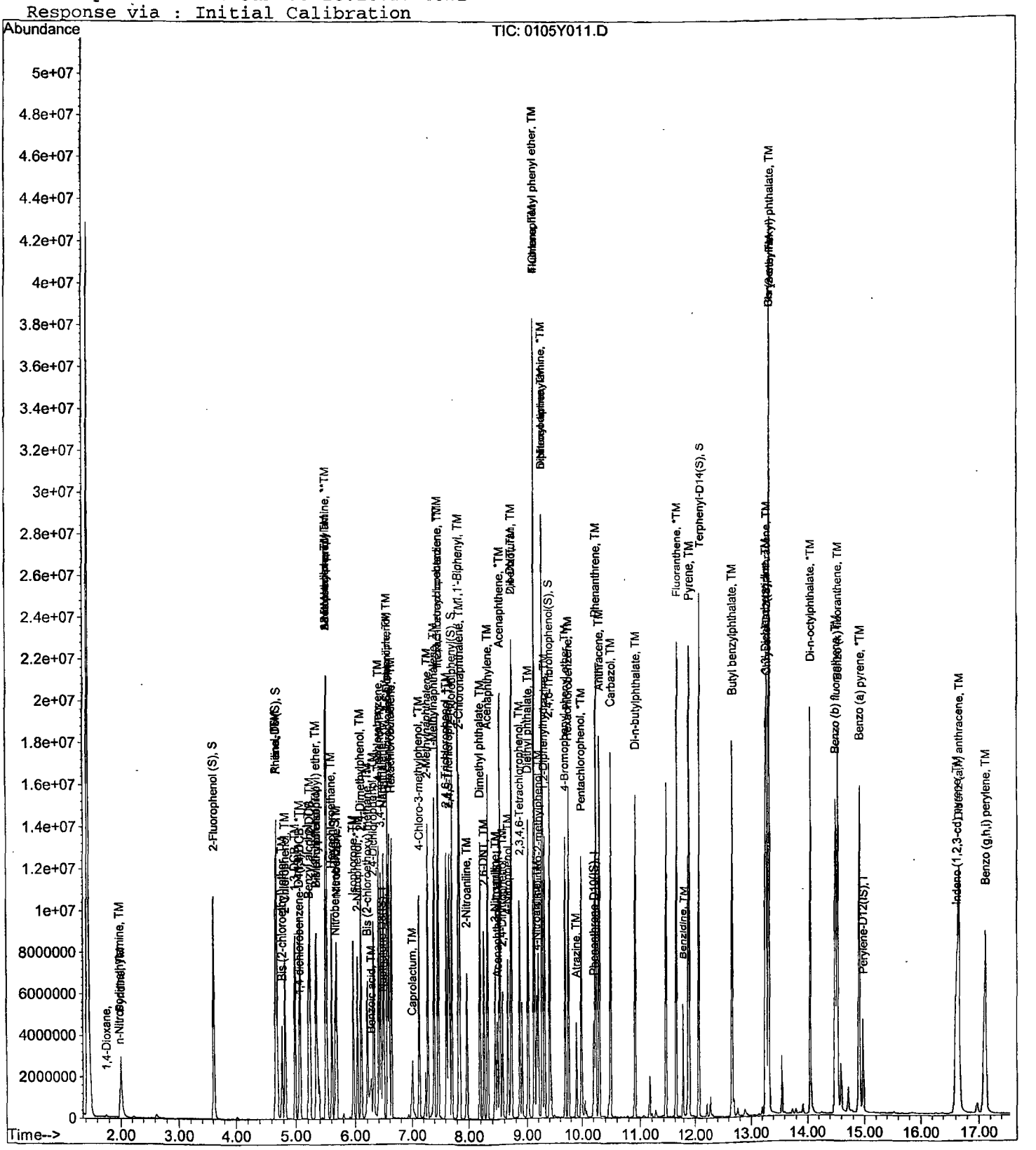
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 5 Jan 21 15:11
Matrix: Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb		
Spiked Amount 200.000			Recovery	=	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000	ppb		
Spiked Amount 200.000			Recovery	=	0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068	ppb		-0.05
Spiked Amount 100.000			Recovery	=	6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376	ppb		-0.05
Spiked Amount 100.000			Recovery	=	0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008	ppb		0.00
Spiked Amount 200.000			Recovery	=	0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782	ppb		0.00
Spiked Amount 100.000			Recovery	=	0.008%		
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714			89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434	ppb		91
4) Pyridine	1.99	79	735710	52.57161	ppb		96
7) Phenol	4.68	94	1293943	51.09241	ppb		98
8) Aniline	4.69	93	1003200	54.23301	ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820	ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455	ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903	ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548	ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516	ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525	ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681	ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723	ppb		98
17) Acetophenone	5.49	105	1339909	49.91549	ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572	ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872	ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564	ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285	ppb		97
24) Isophorone	5.95	82	2061471	51.58112	ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174	ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498	ppb		93
27) Benzoic acid	6.23	105	812071	51.60901	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322	ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988	ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292	ppb		98
32) Naphthalene	6.49	128	2835600	49.97177	ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826	ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500	ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132	ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264	ppb		98
37) Caprolactum	6.97	55	280159	48.92994	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

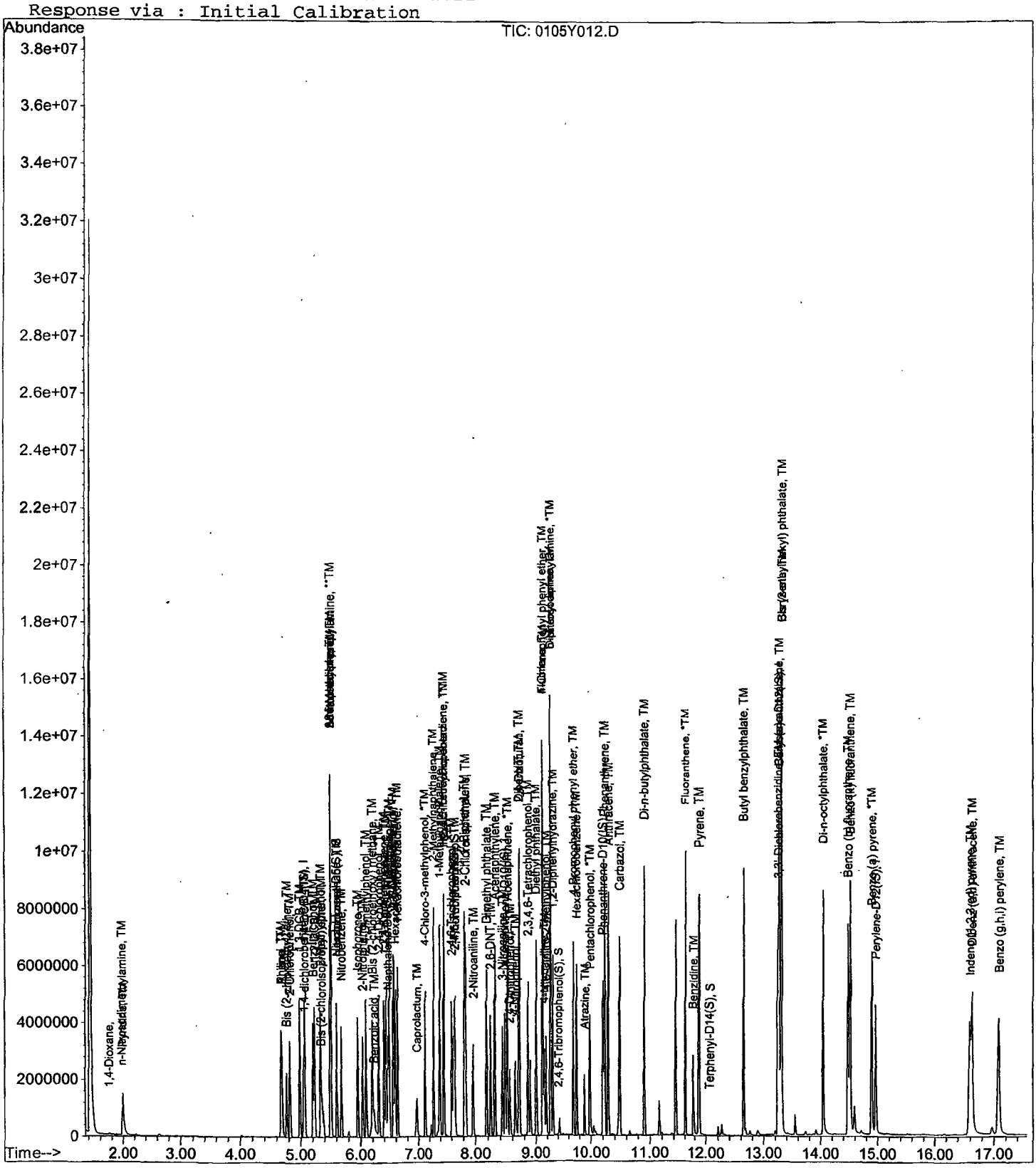
Data File : M:\YODA\DATA\Y210105\0105Y012.D
Acq On : 5 Jan 21 15:11
Sample : SS 50ug/mL 8270 01/05/21
Misc :

Vial: 12
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 18:25 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y132.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2779	13		
3	TM	n-Nitrosodimethylamine	0.6105	0.5859	4.0	TM	
4	TM	Pyridine	1.336	1.308	2.1	TM	
5	S	2-Fluorophenol (S)	1.601	1.676	4.7	S	
6	S	Phenol-D6 (S)	2.046	2.179	6.5	S	
7	*TM	Phenol	2.418	2.609	7.9	*TM	
8	TM	Aniline	1.766	1.744	1.2	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.136	10	TM	
10	TM	2-Chlorophenol	1.829	1.933	5.7	TM	
11	TM	1,3-DCB	2.107	2.139	1.5	TM	
12	*TM	1,4-DCB	2.122	2.195	3.5	*TM	
13	TM	Benzyl alcohol	1.073	1.114	3.8	TM	
14	TM	1,2-DCB	1.992	2.053	3.1	TM	
15	TM	2-Methylphenol	1.401	1.481	5.7	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.114	14	TM	
17	TM	Acetophenone	2.563	2.754	7.5	TM	
18	TM	3&4-Methylphenol	1.892	2.041	7.9	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.656	11	**TM	
20	TM	Hexachloroethane	0.8684	0.9168	5.6	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6101	3.4	S	
23	TM	Nitrobenzene	0.6068	0.6270	3.3	TM	
24	TM	Isophorone	0.9746	0.9985	2.5	TM	
25	*TM	2-Nitrophenol	0.2562	0.2601	1.5	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4326	2.1	TM	
27	TML	Benzoic acid	0.3484	0.3719	6.7	TML	2.2
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5669	2.9	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4423	0.86	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5141	0.58	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6802	0.59	TM	
32	TM	Naphthalene	1.384	1.416	2.3	TM	
33	TM	4-Chloroaniline	0.5189	0.5590	7.7	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4311	1.1	TM	
35	TM	Hexachloropropene	0.4576	0.4438	3.0	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3547	1.9	*TM	
37	TM	Caprolactum	0.1396	0.1456	4.3	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4770	4.0	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9327	2.5	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9601	2.4	TM	
		Average			4.5		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y132.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5693	0.05	**TML	7.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.9099	1.1	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5732	2.3	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6116	0.05	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.886	0.60	S	
47	TM	1,1'-Biphenyl	2.012	2.083	3.6	TM	
48	TM	2-Chloronaphthalene	1.564	1.616	3.3	TM	
49	TM	2-Nitroaniline	0.4979	0.5234	5.1	TM	
50	TM	Dimethyl phthalate	1.914	1.972	3.0	TM	
51	TM	2,6-DNT	0.4186	0.4331	3.5	TM	
52	TM	Acenaphthylene	2.382	2.433	2.1	TM	
53	TM	3-Nitroaniline	0.3908	0.4160	6.4	TM	
54	*TM	Acenaphthene	1.584	1.626	2.6	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2052	8.0	**TML	7.9
56	**TM	4-Nitrophenol	0.3856	0.3827	0.77	**TM	
57	TM	Dibenzofuran	2.358	2.415	2.4	TM	
58	TM	2,4-DNT	0.6015	0.6371	5.9	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4657	3.9	TM	
60	TM	Diethyl phthalate	1.956	1.980	1.3	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.113	3.0	TM	
62	TM	Fluorene	1.985	2.071	4.3	TM	
63	TM	4-Nitroaniline	0.4251	0.4368	2.8	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2950	2.2	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1787	6.9	TM	
67	TM	Diphenyl amine	0.7523	0.8025	6.7	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.8025	6.7	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	1.000	4.9	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2944	3.4	TM	
71	TM	Hexachlorobenzene	0.3129	0.3138	0.29	TM	
72	TM	Atrazine	0.2649	0.2511	5.2	TM	
73	*TM	Pentachlorophenol	0.2072	0.2018	2.6	*TM	
74	TM	Phenanthrene	1.386	1.471	6.2	TM	
75	TM	Anthracene	1.445	1.488	2.9	TM	
76	TM	Carbazol	1.280	1.329	3.8	TM	
77	TM	Di-n-butylphthalate	1.570	1.654	5.3	TM	
78	*TM	Fluoranthene	1.617	1.704	5.4	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3845	3.3	TM	
		Average			3.6		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y132.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.747	4.7	TM	
82	S	Terphenyl-D14(S)	1.201	1.255	4.5	S	
83	TM	Butyl benzylphthalate	0.7149	0.7652	7.0	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6011	8.4	TM	
85	TM	Benz (a) anthracene	1.709	1.773	3.7	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.138	11	TM	
87	TM	Chrysene	1.610	1.730	7.5	TM	
88	*TM	Di-n-octylphthalate	1.686	1.786	5.9	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.667	6.1	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.666	9.8	TM	
92	*TM	Benzo (a) pyrene	1.467	1.592	8.5	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.686	0.23	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.482	0.17	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.417	2.0	TM	
96							
97							
98							
99							
100							
101							
102							
103							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.7		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y132.D Vial: 32
Acq On : 29 Jan 21 11:04 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 11:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	534312	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	2117515	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1340256	40.00000 ppb		0.01
65) Phenanthrene-D10(IS)	10.20	188	2727685	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2738849	40.00000 ppb		0.01
89) Perylene-D12(IS)	14.97	264	2539217	40.00000 ppb		0.01
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2238746	104.71648 ppb		0.00
Spiked Amount 200.000			Recovery =	52.358%		
6) Phenol-D6 (S)	4.67	99	2910043	106.45329 ppb		0.00
Spiked Amount 200.000			Recovery =	53.227%		
22) Nitrobenzene-D5(S)	5.66	82	1614869	51.72043 ppb		0.00
Spiked Amount 100.000			Recovery =	51.720%		
46) 2-Fluorobiphenyl(S)	7.70	172	3159974	50.30128 ppb		0.00
Spiked Amount 100.000			Recovery =	50.301%		
64) 2,4,6-Tribromophenol(S)	9.40	330	988513	97.84145 ppb		0.00
Spiked Amount 200.000			Recovery =	48.921%		
82) Terphenyl-D14(S)	12.08	244	4295642	52.25450 ppb		0.00
Spiked Amount 100.000			Recovery =	52.254%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.74	58	18563	4.35413		98
3) n-Nitrosodimethylamine	1.98	42	391326	47.98569 ppb		80
4) Pyridine	1.99	79	873656	48.95522 ppb		92
7) Phenol	4.69	94	1742252	53.94686 ppb		79
8) Aniline	4.70	93	1164800	49.37890 ppb		99
9) Bis (2-chloroethyl) ether	4.77	63	758582	55.03912 ppb		94
10) 2-Chlorophenol	4.83	128	1290771	52.82666 ppb		99
11) 1,3-DCB	4.98	146	1428497	50.76700 ppb		99
12) 1,4-DCB	5.07	146	1466250	51.73030 ppb		99
13) Benzyl alcohol	5.21	108	743750	51.91265 ppb		91
14) 1,2-DCB	5.23	146	1371305	51.53877 ppb		99
15) 2-Methylphenol	5.34	107	988881	52.85765 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	744060	57.12619 ppb		96
17) Acetophenone	5.50	105	1839603	53.74005 ppb		88
18) 3&4-Methylphenol	5.51	107	2726487	107.89802 ppb		97
19) n-Nitrosodi-n-propylamine	5.50	70	1106222	55.38303 ppb		99
20) Hexachloroethane	5.61	117	612302	52.78376 ppb		97
23) Nitrobenzene	5.69	77	1659485	51.66107 ppb		91
24) Isophorone	5.96	82	2642889	51.22742 ppb		96
25) 2-Nitrophenol	6.04	139	688334	50.76106 ppb	#	81
26) 2,4-Dimethylphenol	6.10	122	1145078	51.05650 ppb		97
27) Benzoic acid	6.25	105	984324	48.88951 ppb		96
28) Bis (2-chloroethoxy) metha	6.20	93	1500403	51.42790 ppb		99
29) 2,4-Dichlorophenol	6.31	162	1170685	50.42868 ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1360743	50.28964 ppb		100
31) 3,4-Dimethylphenol	6.43	107	1800537	50.29600 ppb		99
32) Naphthalene	6.49	128	3746730	51.14960 ppb		99
33) 4-Chloroaniline	6.56	127	1479609	53.86611 ppb	#	93
34) 2,6-Dichlorophenol	6.56	162	1140982	50.53615 ppb		97
35) Hexachloropropene	6.59	213	1174628	48.48631 ppb		99
36) Hexachlorobutadiene	6.64	225	938866	49.04325 ppb		97
37) Caprolactum	6.99	55	385406	52.14331 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y132.D Vial: 32
Acq On : 29 Jan 21 11:04 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 11:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1262566	52.01759	ppb		91
39)	2-Methylnaphthalene	7.28	142	2468831	51.27235	ppb		99
40)	1-Methylnaphthalene	7.39	142	2541216	51.18988	ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	953792	46.25052	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1524303	50.53557	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	960315	51.16850	ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1024630	49.97348	ppb		92
47)	1,1'-Biphenyl	7.82	154	3490332	51.77799	ppb		99
48)	2-Chloronaphthalene	7.84	162	2706564	51.63264	ppb		99
49)	2-Nitroaniline	7.96	65	876940	52.56766	ppb		88
50)	Dimethyl phthalate	8.19	163	3303319	51.51915	ppb		98
51)	2,6-DNT	8.25	165	725657	51.73580	ppb	#	78
52)	Acenaphthylene	8.32	152	4076103	51.06082	ppb		100
53)	3-Nitroaniline	8.45	138	696995	53.22496	ppb		83
54)	Acenaphthene	8.52	154	2723865	51.31606	ppb		100
55)	2,4-Dinitrophenol	8.57	184	343718	46.05529	ppb		81
56)	4-Nitrophenol	8.66	65	641096	49.61513	ppb		96
57)	Dibenzofuran	8.72	168	4045869	51.21714	ppb		90
58)	2,4-DNT	8.72	165	1067362	52.96364	ppb		93
59)	2,3,4,6-Tetrachlorophenol	8.86	232	780225	48.05675	ppb		92
60)	Diethyl phthalate	9.00	149	3317952	50.62852	ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1864701	51.50682	ppb		100
62)	Fluorene	9.11	166	3469190	52.17170	ppb		100
63)	4-Nitroaniline	9.16	138	731822	51.37669	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.19	198	609157	46.56419	ppb	#	68
67)	Diphenyl amine	9.27	169	5472283	106.66377	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5472283	106.66377	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3409928	52.43395	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	1003757	48.30680	ppb		92
71)	Hexachlorobenzene	9.75	284	1069807	50.14393	ppb		92
72)	Atrazine	9.89	200	428154	23.70602	ppb		96
73)	Pentachlorophenol	9.99	266	687931	48.67753	ppb		98
74)	Phenanthrene	10.24	178	5016944	53.09396	ppb		99
75)	Anthracene	10.29	178	5071844	51.45533	ppb		99
76)	Carbazol	10.49	167	4529943	51.90031	ppb		97
77)	Di-n-butylphthalate	10.91	149	5638442	52.65604	ppb		100
78)	Fluoranthene	11.62	202	5808373	52.67670	ppb		98
80)	Benzidine	11.79	184	1316473	48.33240	ppb		97
81)	Pyrene	11.88	202	5979387	52.36438	ppb		99
83)	Butyl benzylphthalate	12.65	149	2619681	53.51670	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	2057769	54.20881	ppb	#	97
85)	Benz (a) anthracene	13.27	228	6070321	51.87404	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	3897163	55.34041	ppb	#	92
87)	Chrysene	13.32	228	5921606	53.73031	ppb		99
88)	Di-n-octylphthalate	14.04	149	6113916	52.95822	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	5290340	53.03880	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	5286892	54.92371	ppb		99
92)	Benzo (a) pyrene	14.91	252	5051752	54.25456	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.62	276	5352585	49.88335	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	4703299	50.08473	ppb		99
95)	Benzo (g,h,i) perylene	17.11	276	4497097	49.02013	ppb		99

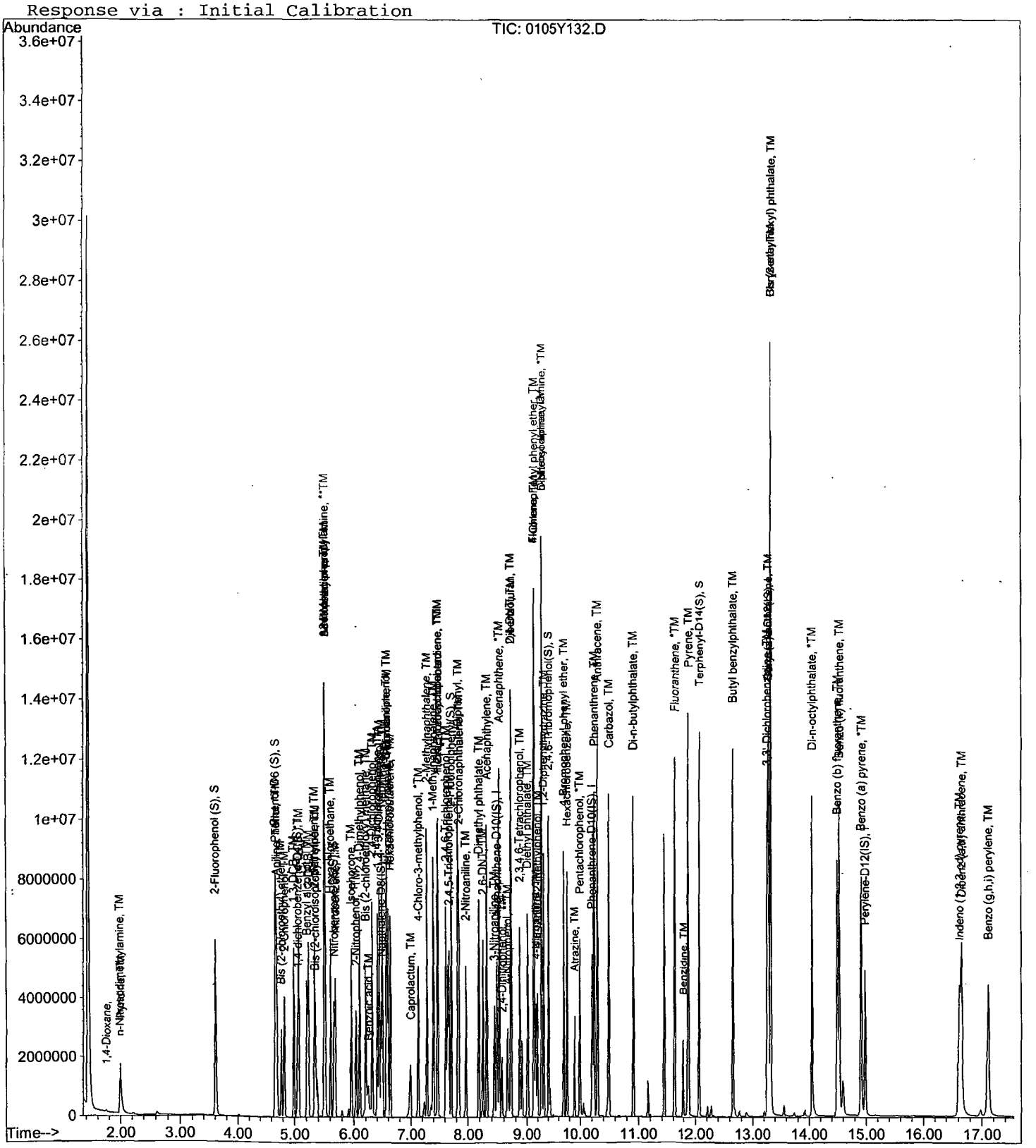
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y132.D Vial: 32
Acq On : 29 Jan 21 11:04 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 11:14 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y138.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2756	14		
3	TM	n-Nitrosodimethylamine	0.6105	0.5955	2.5	TM	
4	TM	Pyridine	1.336	1.278	4.3	TM	
5	S	2-Fluorophenol (S)	1.601	1.678	4.8	S	
6	S	Phenol-D6 (S)	2.046	2.223	8.6	S	
7	*TM	Phenol	2.418	2.652	9.7	*TM	
8	TM	Aniline	1.766	2.020	14	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.132	9.7	TM	
10	TM	2-Chlorophenol	1.829	1.940	6.0	TM	
11	TM	1,3-DCB	2.107	2.027	3.8	TM	
12	*TM	1,4-DCB	2.122	2.099	1.1	*TM	
13	TM	Benzyl alcohol	1.073	1.167	8.8	TM	
14	TM	1,2-DCB	1.992	1.978	0.69	TM	
15	TM	2-Methylphenol	1.401	1.502	7.2	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.098	13	TM	
17	TM	Acetophenone	2.563	2.786	8.7	TM	
18	TM	3&4-Methylphenol	1.892	2.102	11	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.676	12	**TM	
20	TM	Hexachloroethane	0.8684	0.8745	0.70	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.5888	0.18	S	
23	TM	Nitrobenzene	0.6068	0.6145	1.3	TM	
24	TM	Isophorone	0.9746	0.9828	0.84	TM	
25	*TM	2-Nitrophenol	0.2562	0.2566	0.16	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4302	1.6	TM	
27	TML	Benzoic acid	0.3484	0.4049	16	TML	5.2
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5554	0.77	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4308	1.8	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.4949	3.2	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6763	0.00	TM	
32	TM	Naphthalene	1.384	1.374	0.70	TM	
33	TM	4-Chloroaniline	0.5189	0.5692	9.7	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4298	0.78	TM	
35	TM	Hexachloropropene	0.4576	0.4276	6.6	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3451	4.6	*TM	
37	TM	Caprolactum	0.1396	0.1425	2.1	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4697	2.4	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9172	0.84	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9379	0.02	TM	
		Average			5.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y138.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5857	2.8	**TML	5.2
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8935	0.75	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5769	3.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6105	0.23	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.842	1.7	S	
47	TM	1,1'-Biphenyl	2.012	2.081	3.4	TM	
48	TM	2-Chloronaphthalene	1.564	1.606	2.7	TM	
49	TM	2-Nitroaniline	0.4979	0.5273	5.9	TM	
50	TM	Dimethyl phthalate	1.914	1.975	3.2	TM	
51	TM	2,6-DNT	0.4186	0.4311	3.0	TM	
52	TM	Acenaphthylene	2.382	2.419	1.5	TM	
53	TM	3-Nitroaniline	0.3908	0.4243	8.6	TM	
54	*TM	Acenaphthene	1.584	1.605	1.3	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.2256	1.1	**TML	1.5
56	**TM	4-Nitrophenol	0.3856	0.3893	0.94	**TM	
57	TM	Dibenzofuran	2.358	2.360	0.10	TM	
58	TM	2,4-DNT	0.6015	0.6259	4.1	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4703	2.9	TM	
60	TM	Diethyl phthalate	1.956	1.970	0.71	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.122	3.8	TM	
62	TM	Fluorene	1.985	2.053	3.5	TM	
63	TM	4-Nitroaniline	0.4251	0.4388	3.2	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2863	5.0	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1872	2.4	TM	
67	TM	Diphenyl amine	0.7523	0.7827	4.0	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7827	4.0	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9728	2.0	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2995	1.7	TM	
71	TM	Hexachlorobenzene	0.3129	0.3079	1.6	TM	
72	TM	Atrazine	0.2649	0.2507	5.4	TM	
73	*TM	Pentachlorophenol	0.2072	0.1995	3.7	*TM	
74	TM	Phenanthrene	1.386	1.453	4.9	TM	
75	TM	Anthracene	1.445	1.483	2.6	TM	
76	TM	Carbazol	1.280	1.301	1.7	TM	
77	TM	Di-n-butylphthalate	1.570	1.635	4.1	TM	
78	*TM	Fluoranthene	1.617	1.683	4.1	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3576	10	TM	
		Average			3.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/29/21
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y138.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.732	3.9	TM	
82	S	Terphenyl-D14(S)	1.201	1.246	3.8	S	
83	TM	Butyl benzylphthalate	0.7149	0.7596	6.2	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6206	12	TM	
85	TM	Benz (a) anthracene	1.709	1.769	3.5	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.139	11	TM	
87	TM	Chrysene	1.610	1.706	6.0	TM	
88	*TM	Di-n-octylphthalate	1.686	1.810	7.3	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.627	3.6	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.640	8.1	TM	
92	*TM	Benzo (a) pyrene	1.467	1.556	6.1	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.661	1.8	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.469	0.68	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.399	3.2	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y138.D Vial: 38
Acq On : 29 Jan 21 14:29 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 14:27 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	532387	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2192167	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1374176	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2825300	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2801318	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2619627	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2233240	104.83664 ppb	0.00
Spiked Amount 200.000			Recovery =	52.419%	
6) Phenol-D6 (S)	4.67	99	2958424	108.61445 ppb	0.00
Spiked Amount 200.000			Recovery =	54.307%	
22) Nitrobenzene-D5(S)	5.66	82	1613304	49.91072 ppb	0.00
Spiked Amount 100.000			Recovery =	49.911%	
46) 2-Fluorobiphenyl(S)	7.71	172	3164382	49.12808 ppb	0.00
Spiked Amount 100.000			Recovery =	49.128%	
64) 2,4,6-Tribromophenol(S)	9.40	330	983588	94.95090 ppb	0.00
Spiked Amount 200.000			Recovery =	47.476%	
82) Terphenyl-D14(S)	12.07	244	4361951	51.87786 ppb	0.00
Spiked Amount 100.000			Recovery =	51.878%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	18344	4.31832	94
3) n-Nitrosodimethylamine	1.97	42	396262	48.76665 ppb	87
4) Pyridine	1.99	79	850737	47.84333 ppb	93
7) Phenol	4.68	94	1765111	54.85228 ppb	88
8) Aniline	4.69	93	1344000	57.18167 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	753433	54.86319 ppb	93
10) 2-Chlorophenol	4.82	128	1290914	53.02354 ppb	99
11) 1,3-DCB	4.99	146	1348880	48.11084 ppb	96
12) 1,4-DCB	5.07	146	1396888	49.46136 ppb	99
13) Benzyl alcohol	5.20	108	776835	54.41799 ppb	94
14) 1,2-DCB	5.23	146	1316431	49.65529 ppb	98
15) 2-Methylphenol	5.33	107	999298	53.60759 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	730693	56.30277 ppb	95
17) Acetophenone	5.50	105	1853953	54.35508 ppb	93
18) 3&4-Methylphenol	5.51	107	2797756	111.11876 ppb	97
19) n-Nitrosodi-n-propylamine	5.51	70	1115516	56.05027 ppb	95
20) Hexachloroethane	5.60	117	581978	50.35107 ppb	94
23) Nitrobenzene	5.69	77	1683904	50.63610 ppb	93
24) Isophorone	5.96	82	2692988	50.42093 ppb	95
25) 2-Nitrophenol	6.04	139	703043	50.08021 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1178948	50.77659 ppb	99
27) Benzoic acid	6.24	105	1109617	52.60946 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1521817	50.38557 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1180569	49.12264 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1356233	48.41607 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1853072	50.00075 ppb	99
32) Naphthalene	6.49	128	3765018	49.64891 ppb	100
33) 4-Chloroaniline	6.56	127	1559755	54.85016 ppb	94
34) 2,6-Dichlorophenol	6.57	162	1177736	50.38765 ppb	95
35) Hexachloropropene	6.59	213	1171667	46.71710 ppb	99
36) Hexachlorobutadiene	6.63	225	945708	47.71836 ppb	99
37) Caprolactum	6.99	55	390470	51.02942 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y138.D Vial: 38
Acq On : 29 Jan 21 14:29 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 14:27 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1287060	51.22097	ppb		94
39)	2-Methylnaphthalene	7.27	142	2513425	50.42090	ppb		99
40)	1-Methylnaphthalene	7.40	142	2570121	50.00909	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1006016	47.41797	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1534773	49.62670	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	990982	51.49916	ppb		97
45)	2,4,5-Trichlorophenol	7.66	196	1048676	49.88377	ppb		94
47)	1,1'-Biphenyl	7.82	154	3574072	51.71150	ppb		99
48)	2-Chloronaphthalene	7.84	162	2758564	51.32565	ppb		98
49)	2-Nitroaniline	7.96	65	905688	52.95083	ppb		85
50)	Dimethyl phthalate	8.18	163	3392669	51.60658	ppb		98
51)	2,6-DNT	8.25	165	740557	51.49483	ppb	#	74
52)	Acenaphthylene	8.31	152	4155603	50.77175	ppb		100
53)	3-Nitroaniline	8.44	138	728771	54.27779	ppb		85
54)	Acenaphthene	8.52	154	2756175	50.64306	ppb		99
55)	2,4-Dinitrophenol	8.57	184	387499	49.26136	ppb		87
56)	4-Nitrophenol	8.66	65	668677	50.47228	ppb		98
57)	Dibenzofuran	8.72	168	4053820	50.05107	ppb		92
58)	2,4-DNT	8.71	165	1075092	52.03040	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.87	232	807828	48.52872	ppb	#	90
60)	Diethyl phthalate	9.01	149	3383617	50.35605	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1926733	51.90659	ppb		97
62)	Fluorene	9.11	166	3526918	51.73062	ppb		100
63)	4-Nitroaniline	9.16	138	753808	51.61391	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.19	198	661140	48.79170	ppb	#	62
67)	Diphenyl amine	9.27	169	5528480	104.03603	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5528480	104.03603	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3435408	51.00060	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1057864	49.15177	ppb		92
71)	Hexachlorobenzene	9.75	284	1087517	49.21286	ppb	#	87
72)	Atrazine	9.89	200	442656	23.66218	ppb		95
73)	Pentachlorophenol	9.99	266	704489	48.12686	ppb		98
74)	Phenanthrene	10.24	178	5132091	52.43604	ppb		100
75)	Anthracene	10.29	178	5238322	51.30814	ppb		100
76)	Carbazol	10.49	167	4595779	50.83537	ppb		96
77)	Di-n-butylphthalate	10.90	149	5773205	52.05179	ppb		100
78)	Fluoranthene	11.62	202	5943751	52.04204	ppb		98
80)	Benzidine	11.79	184	1252167	44.94634	ppb		98
81)	Pyrene	11.88	202	6064548	51.92583	ppb		99
83)	Butyl benzylphthalate	12.65	149	2659785	53.12429	ppb		92
84)	3,3'-Dichlorobenzidine	13.25	252	2172981	55.96737	ppb	#	97
85)	Benz (a) anthracene	13.27	228	6193337	51.74505	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3989886	55.39364	ppb		99
87)	Chrysene	13.32	228	5973338	52.99105	ppb		99
88)	Di-n-octylphthalate	14.04	149	6336718	53.66412	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	5328636	51.78291	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	5369819	54.07287	ppb		100
92)	Benzo (a) pyrene	14.91	252	5096091	53.05077	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5437875	49.12263	ppb		100
94)	Dibenz (a,h) anthracene	16.65	278	4811283	49.66198	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	4581510	48.40734	ppb		99

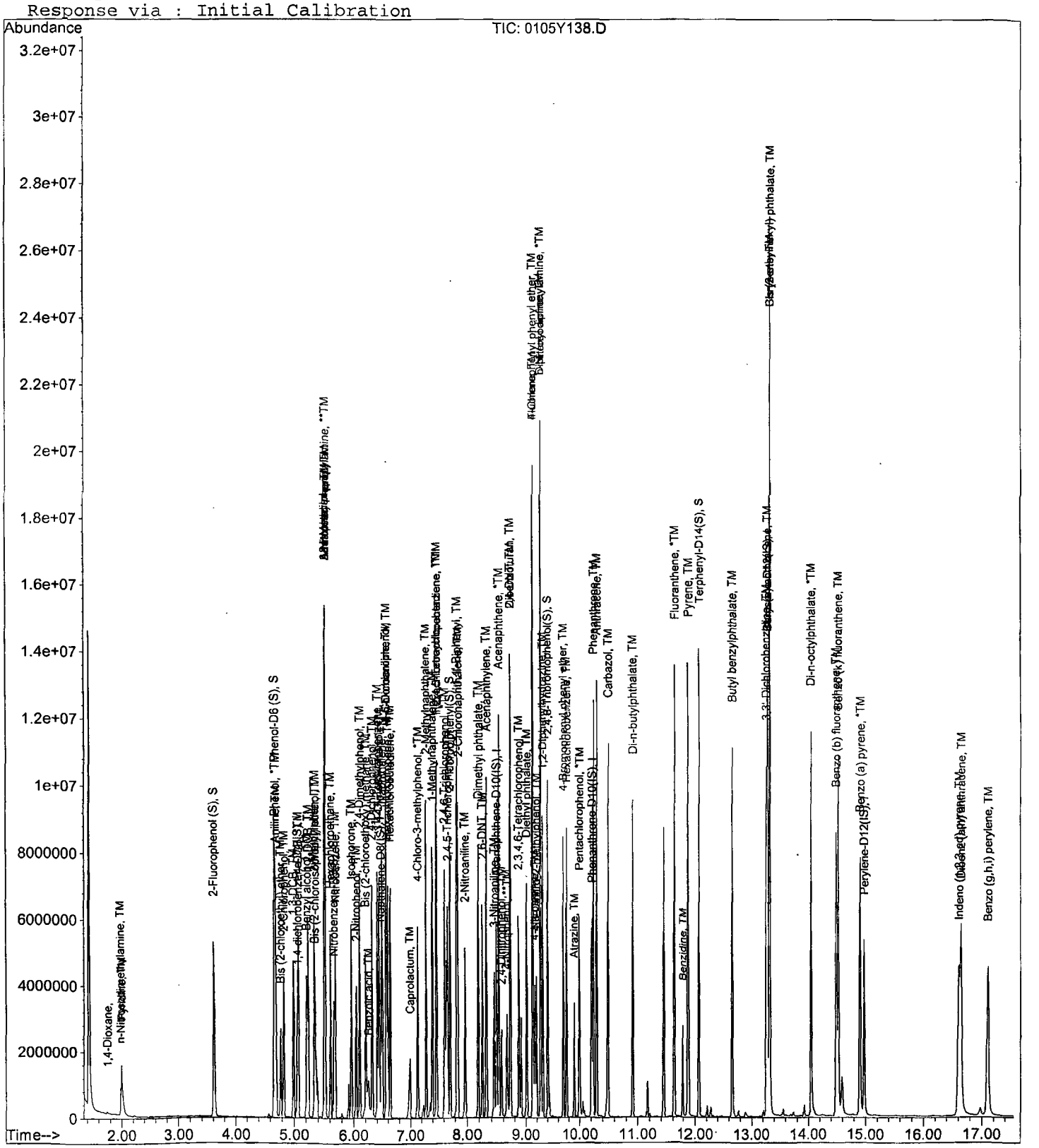
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y138.D Vial: 38
Acq On : 29 Jan 21 14:29 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 14:27 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y136.D Vial: 36
Acq On : 29 Jan 21 13:38 Operator: MA
Sample : BA25867W12 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 29 14:01 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	400345	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1551824	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	979433	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2038538	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1836583	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	1767262	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	2713927	211.77706	ppb	0.00
Spiked Amount 250.000			Recovery =	84.711%		
6) Phenol-D6 (S)	4.67	99	3620124	220.92948	ppb	0.00
Spiked Amount 250.000			Recovery =	88.372%		
22) Nitrobenzene-D5(S)	5.66	82	2039613	111.42089	ppb	0.00
Spiked Amount 125.000			Recovery =	89.137%		
46) 2-Fluorobiphenyl(S)	7.70	172	3936594	107.18627	ppb	0.00
Spiked Amount 125.000			Recovery =	85.749%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1301955	220.42431	ppb	0.00
Spiked Amount 250.000			Recovery =	88.170%		
82) Terphenyl-D14(S)	12.07	244	6021948	136.55265	ppb	0.00
Spiked Amount 125.000			Recovery =	109.242%		

Target Compounds Qvalue

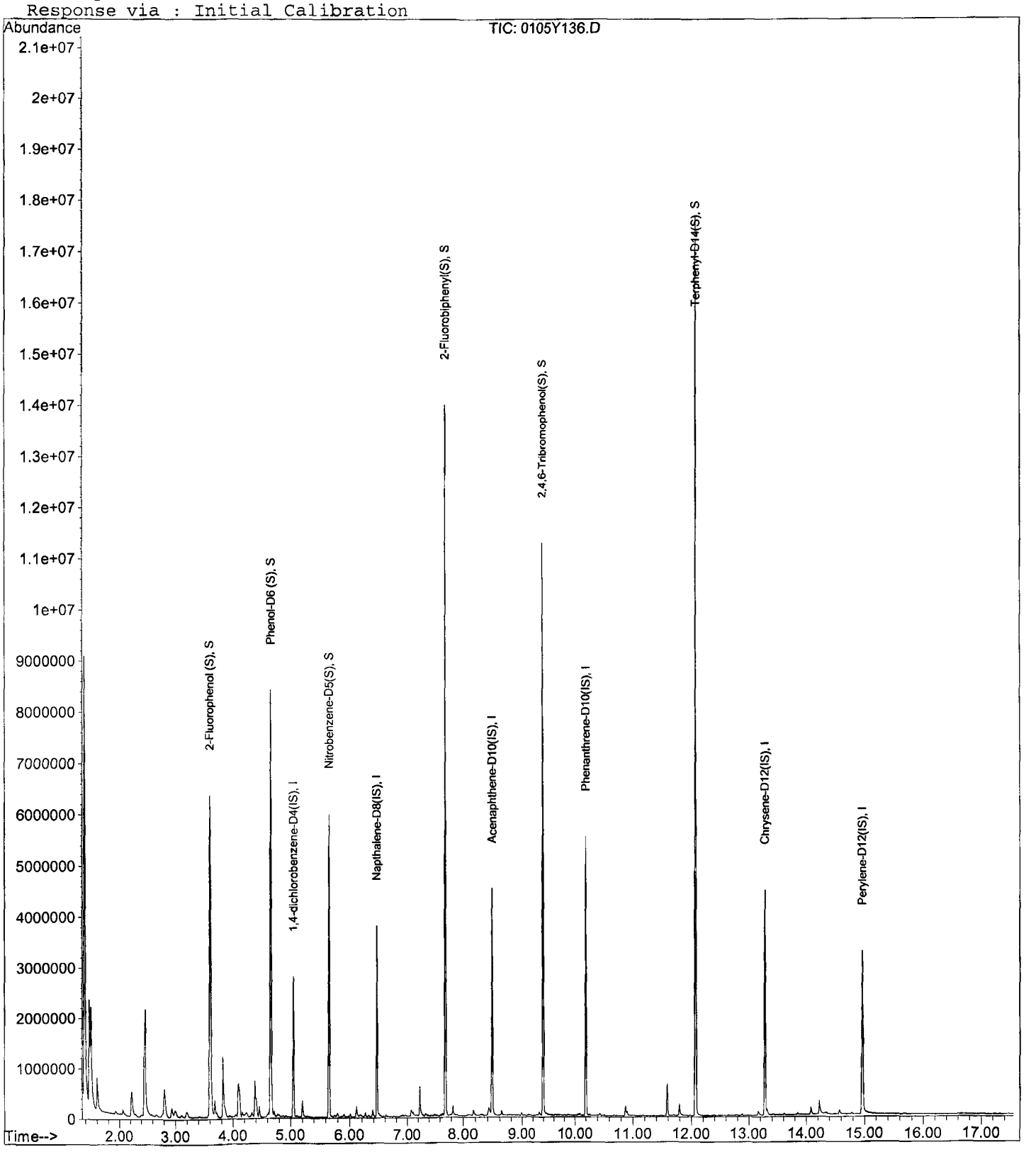
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y136.D Vial: 36
Acq On : 29 Jan 21 13:38 Operator: MA
Sample : BA25867W12 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Jan 29 14:01 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y137.D Vial: 37
Acq On : 29 Jan 21 14:03 Operator: MA
Sample : BA25870W12 1/1050 Inst : Yoda
Misc : Multiplr: 0.95

Quant Time: Jan 29 14:04 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	344838	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1339080	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	912915	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	1968225	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1729688	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1571201	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2794279	192.87260 ppb	0.00
Spiked Amount 190.476			Recovery	= 101.258%	
6) Phenol-D6 (S)	4.66	99	3597620	194.20729 ppb	0.00
Spiked Amount 190.476			Recovery	= 101.959%	
22) Nitrobenzene-D5(S)	5.66	82	2074040	100.03975 ppb	0.00
Spiked Amount 95.238			Recovery	= 105.042%	
46) 2-Fluorobiphenyl(S)	7.70	172	3809561	84.78881 ppb	0.00
Spiked Amount 95.238			Recovery	= 89.028%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1311001	181.43106 ppb	0.00
Spiked Amount 190.476			Recovery	= 95.251%	
82) Terphenyl-D14(S)	12.08	244	6303833	115.64086 ppb	0.00
Spiked Amount 95.238			Recovery	= 121.423%	

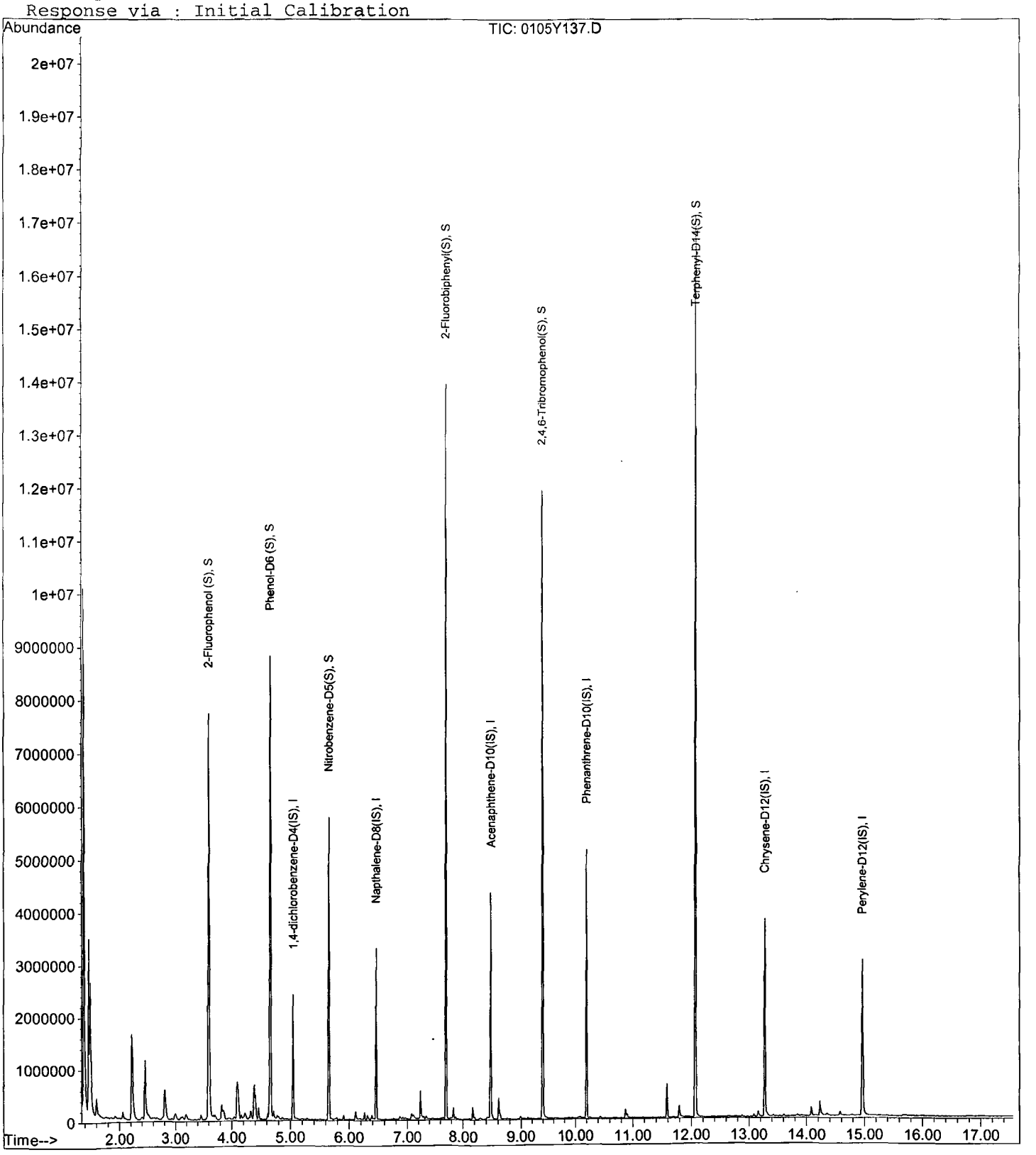
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y137.D Vial: 37
Acq On : 29 Jan 21 14:03 Operator: MA
Sample : BA25870W12 1/1050 Inst : Yoda
Misc : Multiplr: 0.95

Quant Time: Jan 29 14:04 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y133.D Vial: 33
Acq On : 29 Jan 21 12:22 Operator: MA
Sample : 210127A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415219	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1591199	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	979140	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2003251	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1831921	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1688409	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2950278	177.57870 ppb	0.00
Spiked Amount 200.000			Recovery =	88.790%	
6) Phenol-D6 (S)	4.66	99	3706542	174.48027 ppb	-0.01
Spiked Amount 200.000			Recovery =	87.240%	
22) Nitrobenzene-D5(S)	5.66	82	2252332	95.99734 ppb	0.00
Spiked Amount 100.000			Recovery =	95.997%	
46) 2-Fluorobiphenyl(S)	7.70	172	4216566	91.87500 ppb	0.00
Spiked Amount 100.000			Recovery =	91.875%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1409464	190.95781 ppb	0.00
Spiked Amount 200.000			Recovery =	95.479%	
82) Terphenyl-D14(S)	12.07	244	6417610	116.71596 ppb	0.00
Spiked Amount 100.000			Recovery =	116.716%	

Target Compounds Qvalue

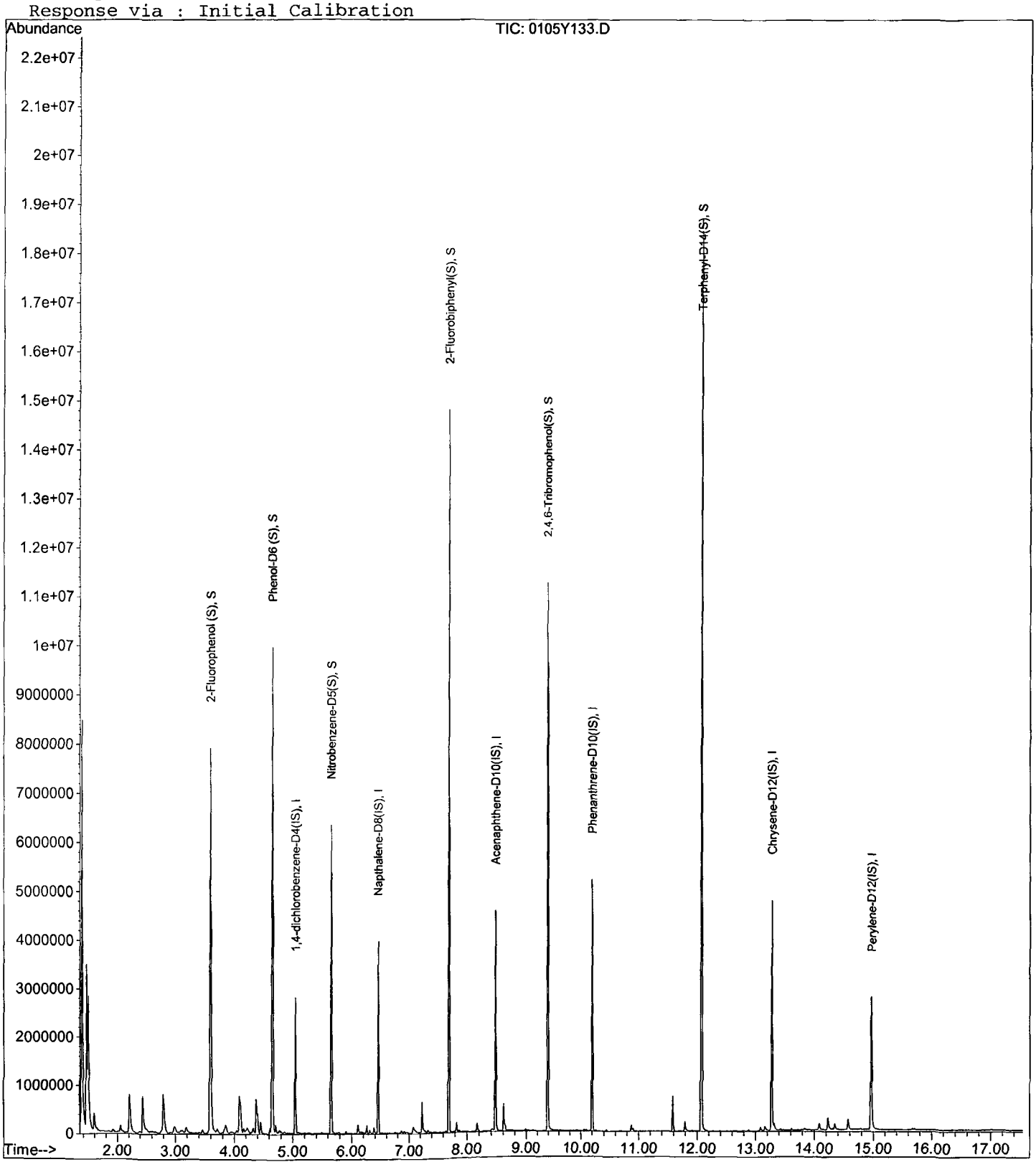
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y133.D Vial: 33
Acq On : 29 Jan 21 12:22 Operator: MA
Sample : 210127A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:49 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y134.D Vial: 34
Acq On : 29 Jan 21 12:47 Operator: MA
Sample : 210127A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	401868	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1532691	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	959138	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	1983828	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1871907	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	1795921	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	2868392	178.38578 ppb		0.00
Spiked Amount 200.000			Recovery = 89.193%			
6) Phenol-D6 (S)	4.67	99	3660090	178.01761 ppb		0.00
Spiked Amount 200.000			Recovery = 89.009%			
22) Nitrobenzene-D5(S)	5.66	82	2104952	93.14057 ppb		0.00
Spiked Amount 100.000			Recovery = 93.141%			
46) 2-Fluorobiphenyl(S)	7.70	172	3923705	87.27674 ppb		0.00
Spiked Amount 100.000			Recovery = 87.277%			
64) 2,4,6-Tribromophenol(S)	9.40	330	1382074	191.15182 ppb		0.00
Spiked Amount 200.000			Recovery = 95.576%			
82) Terphenyl-D14(S)	12.08	244	6260997	111.43533 ppb		0.00
Spiked Amount 100.000			Recovery = 111.435%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.98	42	266346	43.42409 ppb		78
4) Pyridine	1.99	79	514225	38.31098 ppb		90
7) Phenol	4.68	94	1128250	46.44853 ppb		85
8) Aniline	4.69	93	678272	38.23010 ppb	#	40
9) Bis (2-chloroethyl) ether	4.77	63	481348	46.43437 ppb		99
10) 2-Chlorophenol	4.83	128	804032	43.75108 ppb		98
11) 1,3-DCB	4.98	146	789054	37.28382 ppb		99
12) 1,4-DCB	5.07	146	818357	38.38763 ppb		99
13) Benzyl alcohol	5.21	108	475824	44.15746 ppb		99
14) 1,2-DCB	5.23	146	792048	39.57883 ppb		98
15) 2-Methylphenol	5.34	107	626951	44.55628 ppb		97
16) Bis (2-chloroisopropyl) et	5.35	45	470313	48.00935 ppb		97
17) Acetophenone	5.49	105	1155661	44.88652 ppb		100
18) 3&4-Methylphenol	5.50	107	1662438	87.47159 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	701538	46.69787 ppb		97
20) Hexachloroethane	5.61	117	288632	33.08192 ppb		95
23) Nitrobenzene	5.68	77	1049311	45.13009 ppb		98
24) Isophorone	5.95	82	1660286	44.46091 ppb		95
25) 2-Nitrophenol	6.03	139	423986	43.19712 ppb		95
26) 2,4-Dimethylphenol	6.09	122	668323	41.16938 ppb		95
27) Benzoic acid	6.23	105	629975	44.04451 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	950831	45.02628 ppb		99
29) 2,4-Dichlorophenol	6.31	162	714900	42.54560 ppb		98
30) 1,2,4-Trichlorobenzene	6.39	180	732482	37.39997 ppb		96
31) 3,4-Dimethylphenol	6.43	107	1124215	43.38630 ppb		96
32) Naphthalene	6.49	128	2277604	42.95759 ppb		99
33) 4-Chloroaniline	6.55	127	507120	25.50653 ppb		97
34) 2,6-Dichlorophenol	6.56	162	708019	43.32516 ppb		97
35) Hexachloropropene	6.59	213	320698	18.28887 ppb		98
36) Hexachlorobutadiene	6.63	225	405709	29.27940 ppb		97
37) Caprolactum	6.96	55	250751	46.86997 ppb		97
38) 4-Chloro-3-methylphenol	7.12	107	780546	44.42900 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y134.D Vial: 34
Acq On : 29 Jan 21 12:47 Operator: MA
Sample : 210127A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	1489211	42.72873	ppb		100
40)	1-Methylnaphthalene	7.39	142	1470494	40.92396	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	818152	37.90238	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	581396	43.28801	ppb		98
45)	2,4,5-Trichlorophenol	7.66	196	633576	43.17953	ppb		94
47)	1,1'-Biphenyl	7.81	154	2020756	41.88891	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1599145	42.62855	ppb		95
49)	2-Nitroaniline	7.95	65	546781	45.80036	ppb		80
50)	Dimethyl phthalate	8.18	163	2129347	46.40569	ppb		99
51)	2,6-DNT	8.24	165	453383	45.16808	ppb	#	65
52)	Acenaphthylene	8.31	152	2438274	42.68073	ppb		99
53)	3-Nitroaniline	8.44	138	340485	36.33209	ppb		90
54)	Acenaphthene	8.51	154	1615729	42.53466	ppb		99
55)	2,4-Dinitrophenol	8.56	184	202542	40.36812	ppb		97
56)	4-Nitrophenol	8.65	65	415054	44.88512	ppb		86
57)	Dibenzofuran	8.72	168	2392528	42.32210	ppb		95
58)	2,4-DNT	8.71	165	638348	44.26192	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.86	232	503163	43.30618	ppb		98
60)	Diethyl phthalate	9.00	149	2086841	44.49601	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1134171	43.77647	ppb		94
62)	Fluorene	9.11	166	2061920	43.32967	ppb		100
63)	4-Nitroaniline	9.15	138	436731	42.84314	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	325007	34.15905	ppb	#	63
67)	Diphenyl amine	9.26	169	3008922	80.63981	ppb		99
68)	n-Nitrosodiphenylamine	9.26	169	3008922	80.63981	ppb		99
69)	1,2-Diphenylhydrazine	9.30	77	2109712	44.60471	ppb	#	87
70)	4-Bromophenyl phenyl ether	9.69	248	629432	41.65036	ppb		95
71)	Hexachlorobenzene	9.75	284	643498	41.47155	ppb	#	70
72)	Atrazine	9.89	200	287848	21.91352	ppb		97
73)	Pentachlorophenol	9.99	266	405990	39.49928	ppb		99
74)	Phenanthrene	10.23	178	2956800	43.02472	ppb		100
75)	Anthracene	10.29	178	3076983	42.92198	ppb		100
76)	Carbazol	10.48	167	2725752	42.93918	ppb		95
77)	Di-n-butylphthalate	10.91	149	3643471	46.78370	ppb		99
78)	Fluoranthene	11.61	202	3440140	42.89734	ppb		100
80)	Benzidine	11.78	184	389696	20.93323	ppb		99
81)	Pyrene	11.87	202	3693717	47.32894	ppb		99
83)	Butyl benzylphthalate	12.65	149	1644858	49.16467	ppb		96
85)	Benz (a) anthracene	13.27	228	3408365	42.61557	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2328605	48.38084	ppb		99
87)	Chrysene	13.31	228	3378655	44.85465	ppb		100
88)	Di-n-octylphthalate	14.04	149	3813460	48.33002	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	3051203	43.25076	ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3363558	49.40501	ppb		99
92)	Benzo (a) pyrene	14.90	252	2863105	43.47545	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	3056885	40.27947	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	2803890	42.21593	ppb		97
95)	Benzo (g,h,i) perylene	17.09	276	2695838	41.54785	ppb		98

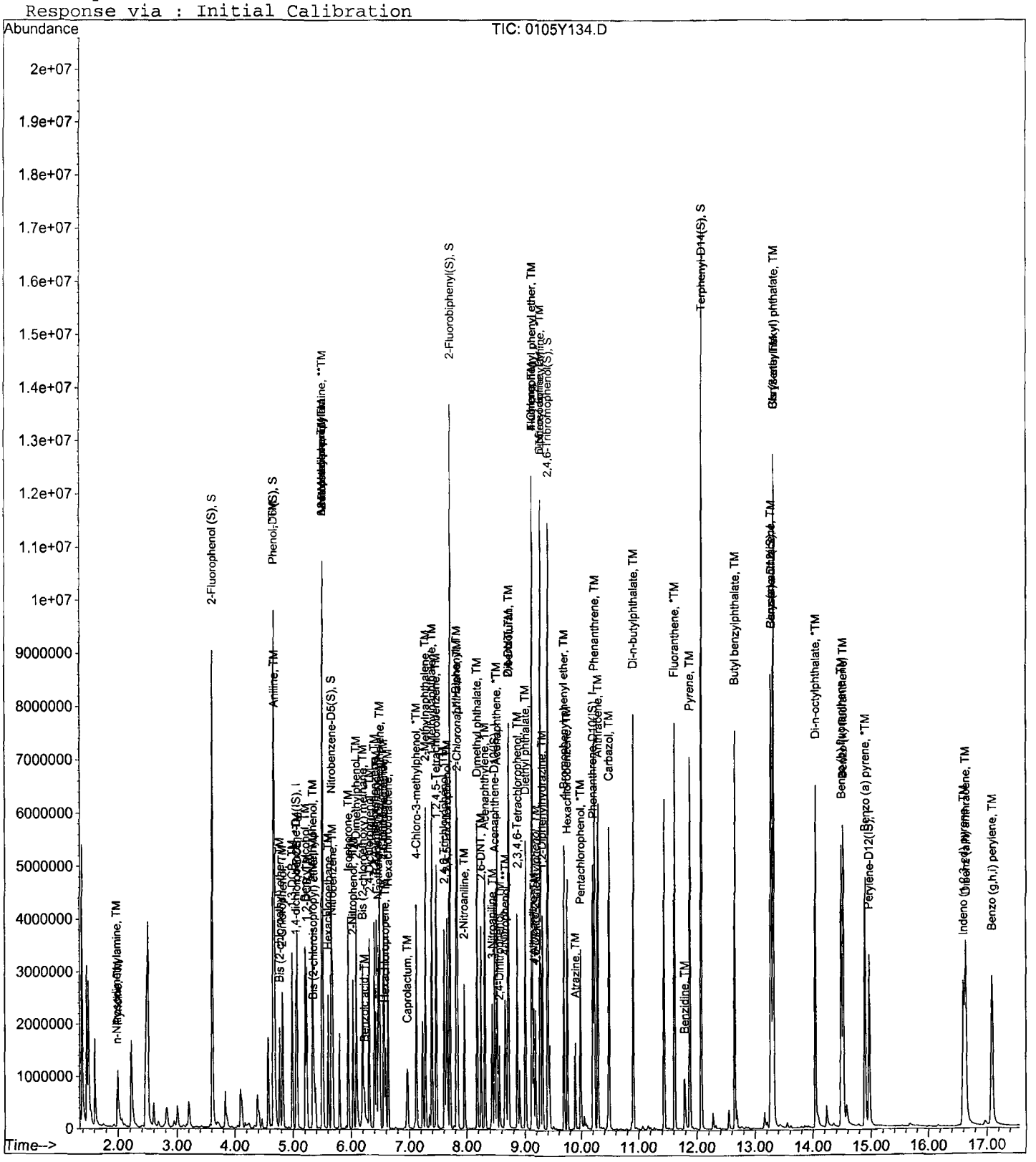
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y134.D Vial: 34
Acq On : 29 Jan 21 12:47 Operator: MA
Sample : 210127A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:49 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y135.D Vial: 35
Acq On : 29 Jan 21 13:13 Operator: MA
Sample : 210127A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 13:34 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	395752	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1541995	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	976215	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2012426	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.29	240	1905968	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1797157	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	2427892	153.32445	ppb		0.00
Spiked Amount 200.000			Recovery = 76.662%				
6) Phenol-D6 (S)	4.67	99	3143203	155.24011	ppb		0.00
Spiked Amount 200.000			Recovery = 77.620%				
22) Nitrobenzene-D5(S)	5.66	82	2019538	88.82196	ppb		0.00
Spiked Amount 100.000			Recovery = 88.822%				
46) 2-Fluorobiphenyl(S)	7.71	172	3670533	80.21709	ppb		0.00
Spiked Amount 100.000			Recovery = 80.217%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1260687	171.31289	ppb		0.00
Spiked Amount 200.000			Recovery = 85.656%				
82) Terphenyl-D14(S)	12.07	244	5893560	103.02101	ppb		0.00
Spiked Amount 100.000			Recovery = 103.021%				
Target Compounds							Qvalue
3) n-Nitrosodimethylamine	1.98	42	246715	40.84514	ppb		79
4) Pyridine	2.00	79	512863	38.80000	ppb		90
7) Phenol	4.68	94	986649	41.24674	ppb		93
8) Aniline	4.69	93	712768	40.79530	ppb	#	77
9) Bis (2-chloroethyl) ether	4.77	63	459989	45.05969	ppb		96
10) 2-Chlorophenol	4.82	128	723740	39.99064	ppb		93
11) 1,3-DCB	4.99	146	769941	36.94294	ppb		99
12) 1,4-DCB	5.07	146	782196	37.25842	ppb		96
13) Benzyl alcohol	5.21	108	451148	42.51450	ppb		97
14) 1,2-DCB	5.23	146	740283	37.56380	ppb		96
15) 2-Methylphenol	5.34	107	572550	41.31893	ppb		98
16) Bis (2-chloroisopropyl) et	5.36	45	454455	47.10749	ppb		99
17) Acetophenone	5.50	105	1108721	43.72885	ppb		94
18) 3&4-Methylphenol	5.51	107	1523494	81.39966	ppb		97
19) n-Nitrosodi-n-propylamine	5.51	70	681005	46.03165	ppb		91
20) Hexachloroethane	5.60	117	285908	33.27613	ppb		76
23) Nitrobenzene	5.68	77	1016085	43.43738	ppb		97
24) Isophorone	5.95	82	1609845	42.85004	ppb		97
25) 2-Nitrophenol	6.03	139	404984	41.01218	ppb		87
26) 2,4-Dimethylphenol	6.09	122	610334	37.37034	ppb		100
27) Benzoic acid	6.22	105	582645	41.05829	ppb		99
28) Bis (2-chloroethoxy) metha	6.19	93	894728	42.11390	ppb		98
29) 2,4-Dichlorophenol	6.30	162	663096	39.22450	ppb		93
30) 1,2,4-Trichlorobenzene	6.40	180	698250	35.43699	ppb		97
31) 3,4-Dimethylphenol	6.42	107	1029471	39.49017	ppb		99
32) Naphthalene	6.49	128	2188555	41.02899	ppb		99
33) 4-Chloroaniline	6.55	127	372800	18.63752	ppb		94
34) 2,6-Dichlorophenol	6.55	162	652975	39.71581	ppb		97
36) Hexachlorobutadiene	6.63	225	376611	27.01544	ppb		98
37) Caprolactum	6.96	55	242436	45.04232	ppb		96
38) 4-Chloro-3-methylphenol	7.12	107	720652	40.77231	ppb		94
39) 2-Methylnaphthalene	7.28	142	1416389	40.39410	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y135.D Vial: 35
Acq On : 29 Jan 21 13:13 Operator: MA
Sample : 210127A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 13:34 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	1-Methylnaphthalene	7.39	142	1415379	39.15244	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	775544	35.29999	ppb		99
44)	2,4,6-Trichlorophenol	7.60	196	544335	39.81966	ppb		98
45)	2,4,5-Trichlorophenol	7.65	196	585858	39.22900	ppb		90
47)	1,1'-Biphenyl	7.82	154	1933540	39.37984	ppb		99
48)	2-Chloronaphthalene	7.84	162	1504079	39.39299	ppb		97
49)	2-Nitroaniline	7.96	65	528279	43.47648	ppb		84
50)	Dimethyl phthalate	8.18	163	2059800	44.10476	ppb		99
51)	2,6-DNT	8.24	165	438528	42.92392	ppb	#	80
52)	Acenaphthylene	8.31	152	2291711	39.41348	ppb		99
53)	3-Nitroaniline	8.43	138	203597	21.34516	ppb		96
54)	Acenaphthene	8.51	154	1530780	39.59340	ppb		99
55)	2,4-Dinitrophenol	8.56	184	204708	40.18286	ppb		87
56)	4-Nitrophenol	8.65	65	411355	43.70692	ppb		87
57)	Dibenzofuran	8.72	168	2312769	40.19556	ppb		93
58)	2,4-DNT	8.71	165	628379	42.80850	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.87	232	473780	40.06393	ppb		92
60)	Diethyl phthalate	9.01	149	2035384	42.63966	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	1079272	40.92877	ppb		93
62)	Fluorene	9.12	166	1976282	40.80357	ppb		100
63)	4-Nitroaniline	9.14	138	370059	35.66760	ppb		94
66)	4,6-Dinitro-2-methylphenol	9.18	198	322027	33.36487	ppb	#	84
67)	Diphenyl amine	9.27	169	3010339	79.53130	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	3010339	79.53130	ppb		99
69)	1,2-Diphenylhydrazine	9.30	77	1959128	40.83236	ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	605370	39.48889	ppb	#	85
71)	Hexachlorobenzene	9.75	284	625164	39.71743	ppb	#	87
73)	Pentachlorophenol	9.99	266	386644	37.08252	ppb		99
74)	Phenanthrene	10.23	178	2913253	41.78865	ppb		99
75)	Anthracene	10.29	178	2881685	39.62646	ppb		99
76)	Carbazol	10.48	167	2588060	40.19073	ppb		97
77)	Di-n-butylphthalate	10.91	149	3530804	44.69274	ppb		98
78)	Fluoranthene	11.61	202	3381348	41.56504	ppb		98
81)	Pyrene	11.87	202	3522002	44.32221	ppb		99
83)	Butyl benzylphthalate	12.65	149	1586230	46.56500	ppb		86
85)	Benz (a) anthracene	13.27	228	3332146	40.91805	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2318992	47.32008	ppb	#	97
87)	Chrysene	13.31	228	3336512	43.50358	ppb		100
88)	Di-n-octylphthalate	14.04	149	3696461	46.01003	ppb		96
90)	Benzo (b) fluoranthene	14.48	252	3072309	43.51999	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	3207011	47.07320	ppb		100
92)	Benzo (a) pyrene	14.89	252	2742404	41.61400	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2991869	39.39566	ppb		98
94)	Dibenz (a,h) anthracene	16.64	278	2716725	40.87542	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	2612582	40.23703	ppb		100

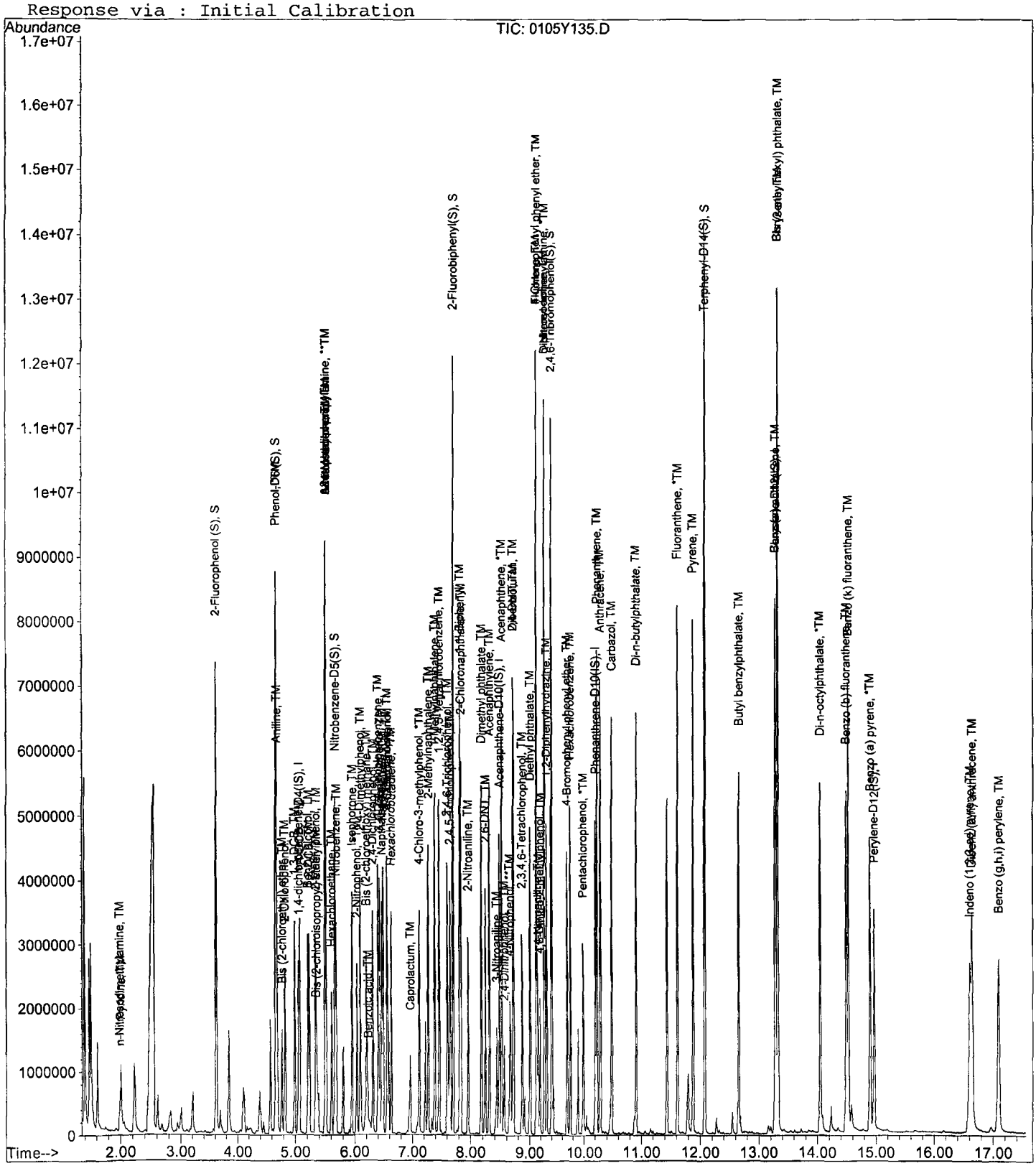
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y135.D Vial: 35
Acq On : 29 Jan 21 13:13 Operator: MA
Sample : 210127A LCSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 29 13:34 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration

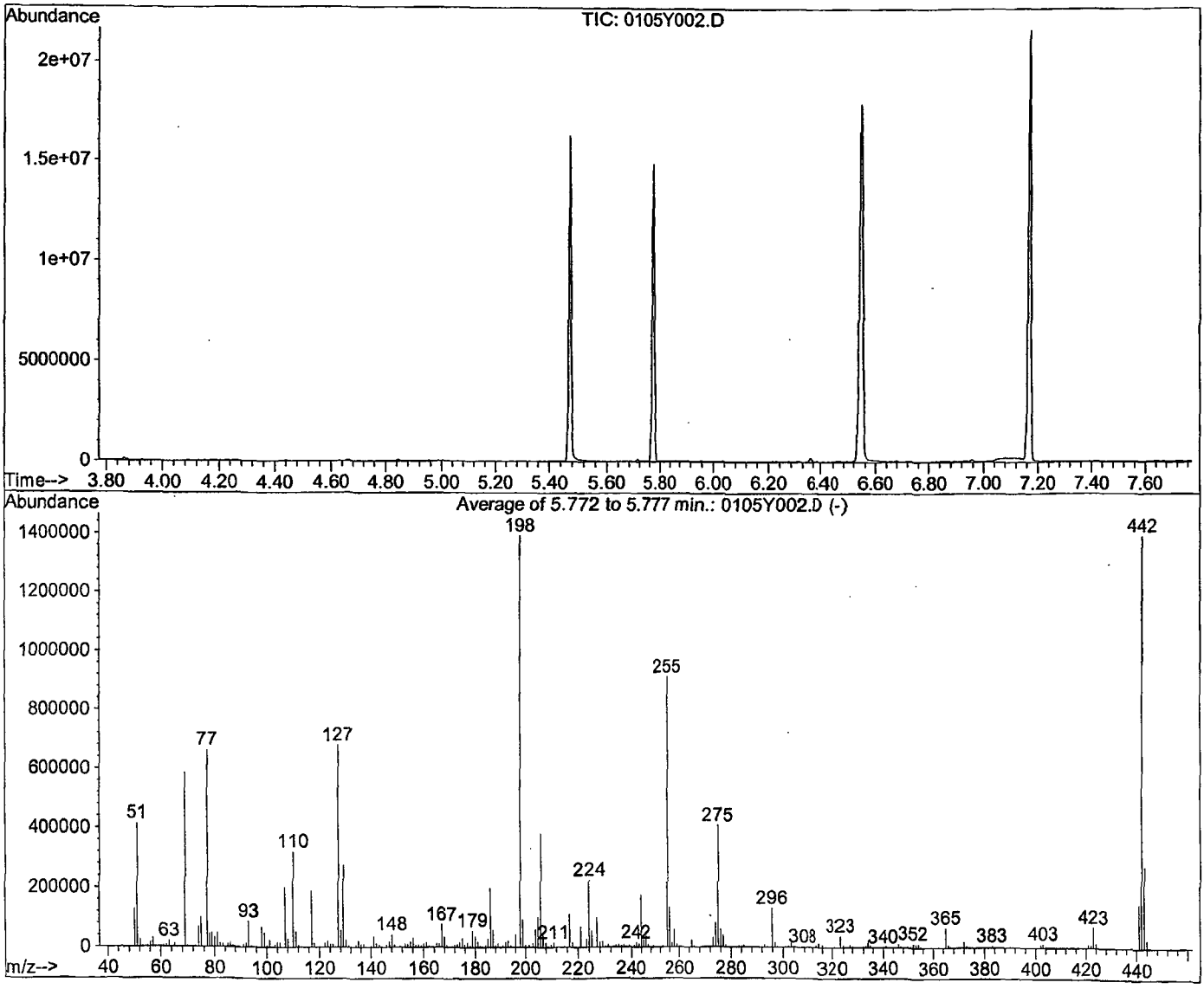


DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D
Acq On : 5 Jan 21 11:04
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

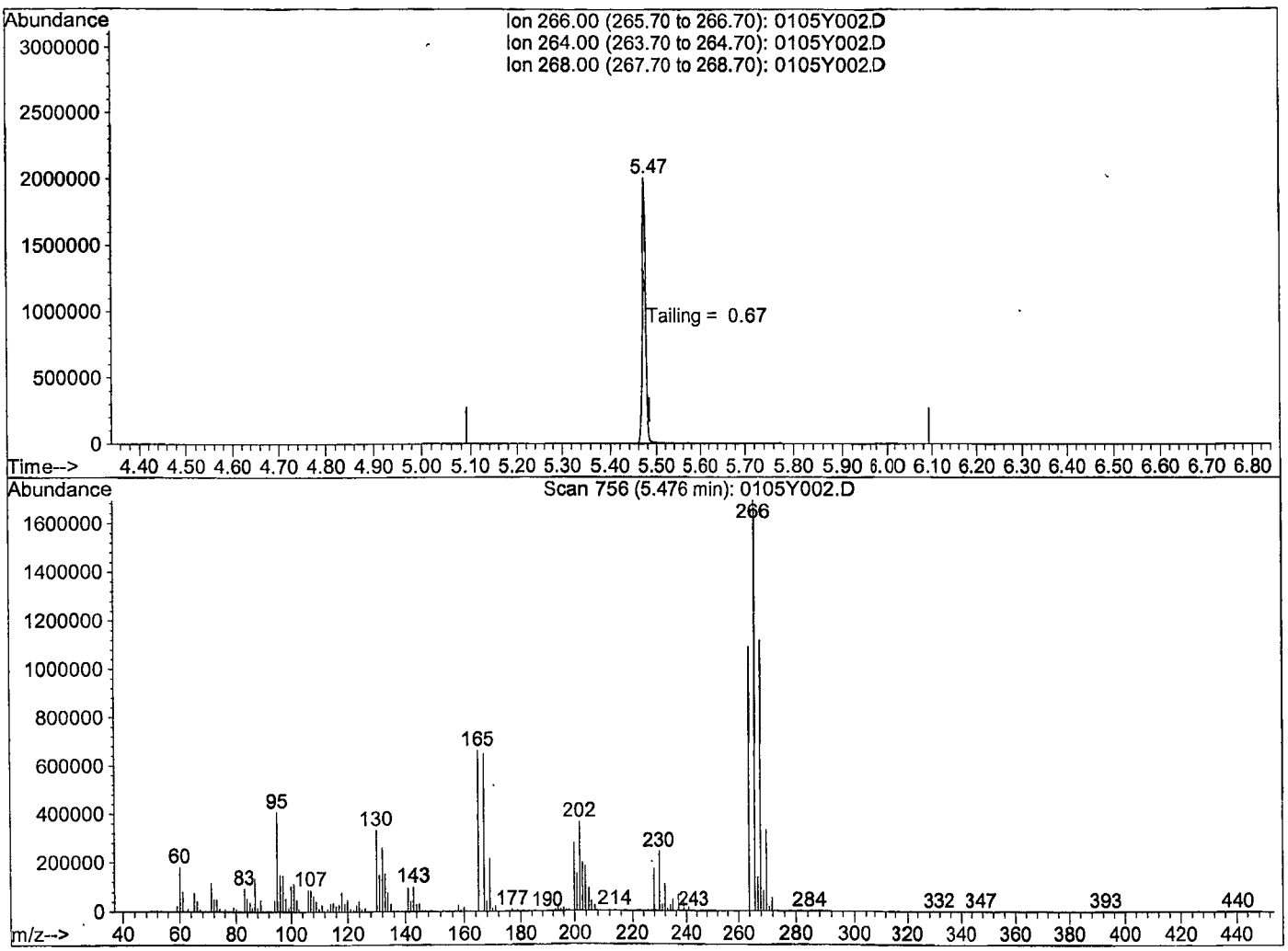
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

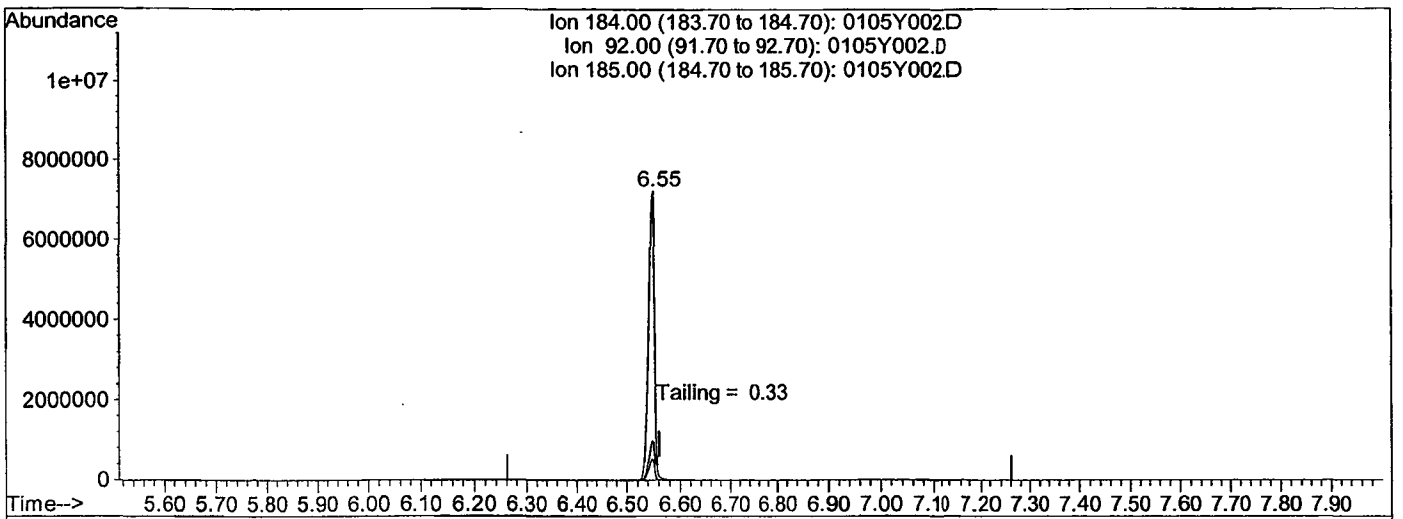
response 10909057

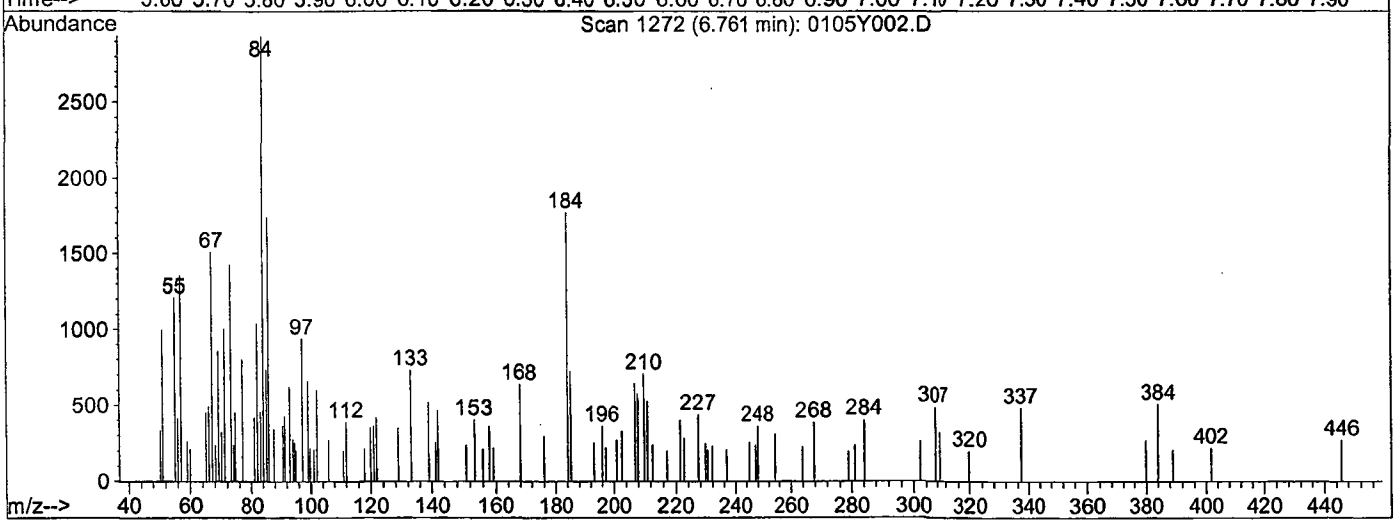
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

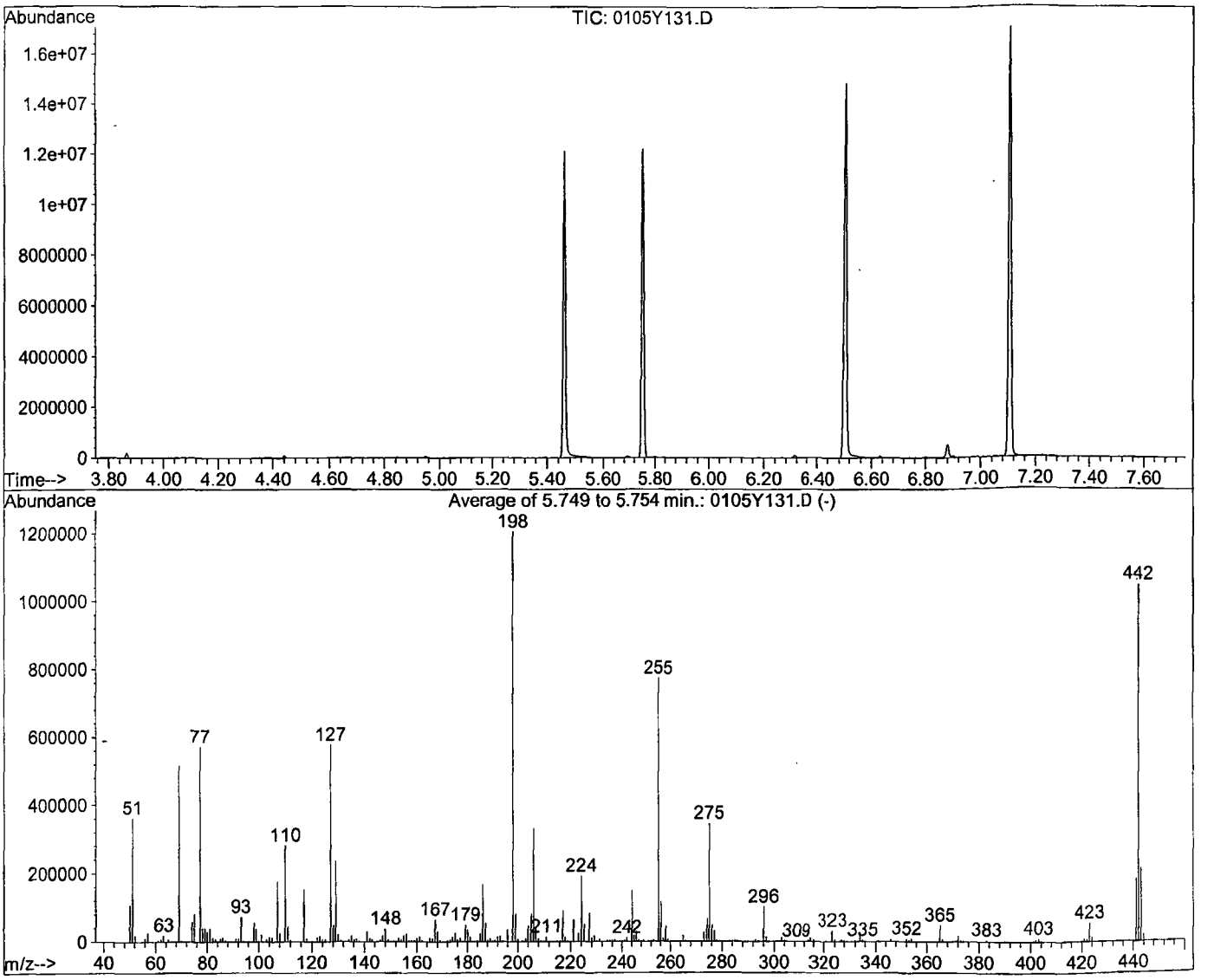
response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y131.D Vial: 31
Acq On : 29 Jan 21 10:49 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 866, 867, 868; Background Corrected with Scan 858

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	30.0	361652	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2986	PASS
127	198	10	80	47.8	576405	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1206592	PASS
199	198	5	9	6.7	80976	PASS
275	198	10	60	28.6	345109	PASS
365	198	1	100	4.0	47669	PASS
441	442	0.01	24	17.5	183584	PASS
442	198	50	500	87.1	1050731	PASS
443	442	15	24	20.2	212576	PASS

0105Y131.D Y0105.M Fri Jan 29 10:51:37 2021

Data File Name:	**0105Y131.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**29 Jan 2021 10:49**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**31**
Instrument Name:	**Yoda**

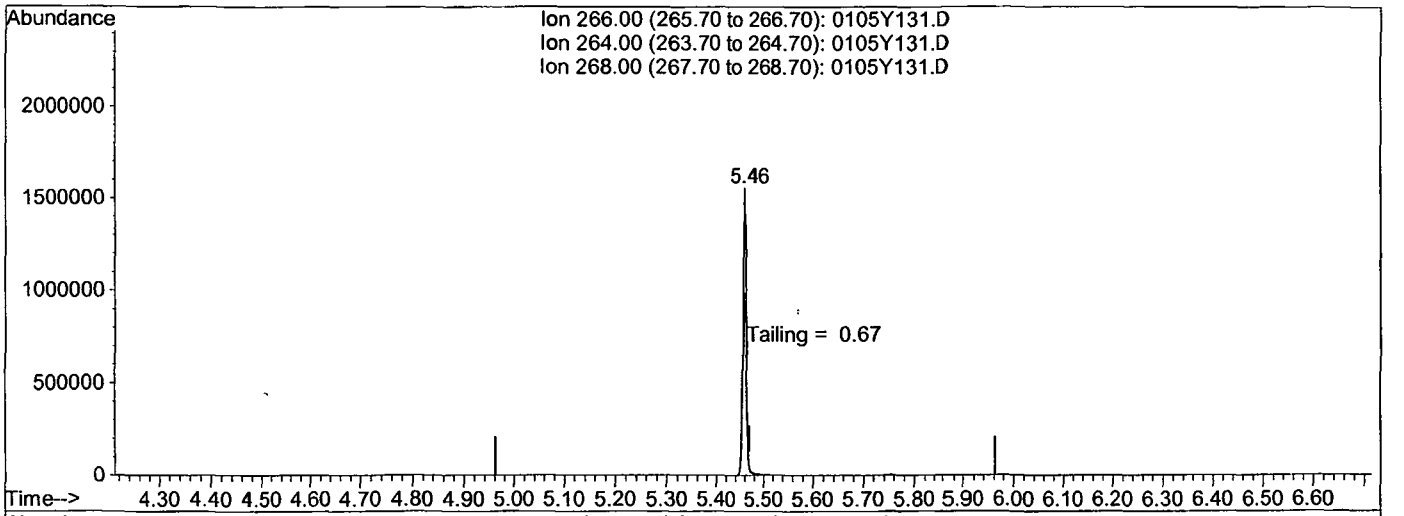
#	Name	Ret Time	Target Response
1)	DDT	7.12	112959000
2)	DDD	6.84	564459
3)	DDE	5.89	0

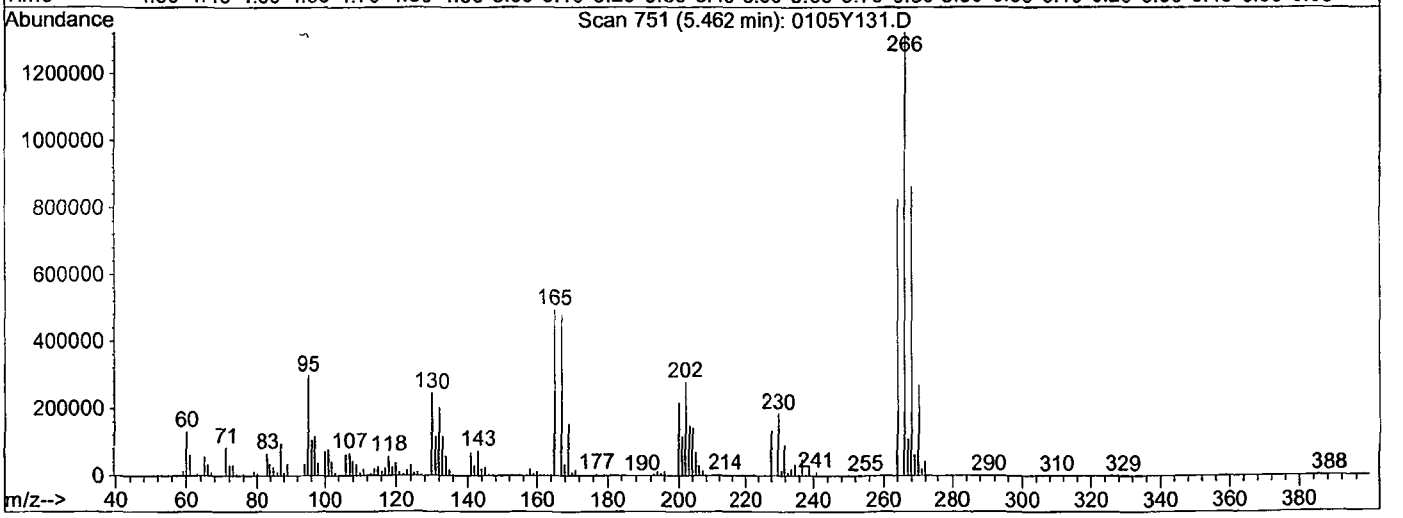
Breakdown **0.50**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y131.D Vial: 31
Acq On : 29 Jan 21 10:49 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 29 10:51 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y131.D

(5) Pentachlorophenol

5.46min 0.0000

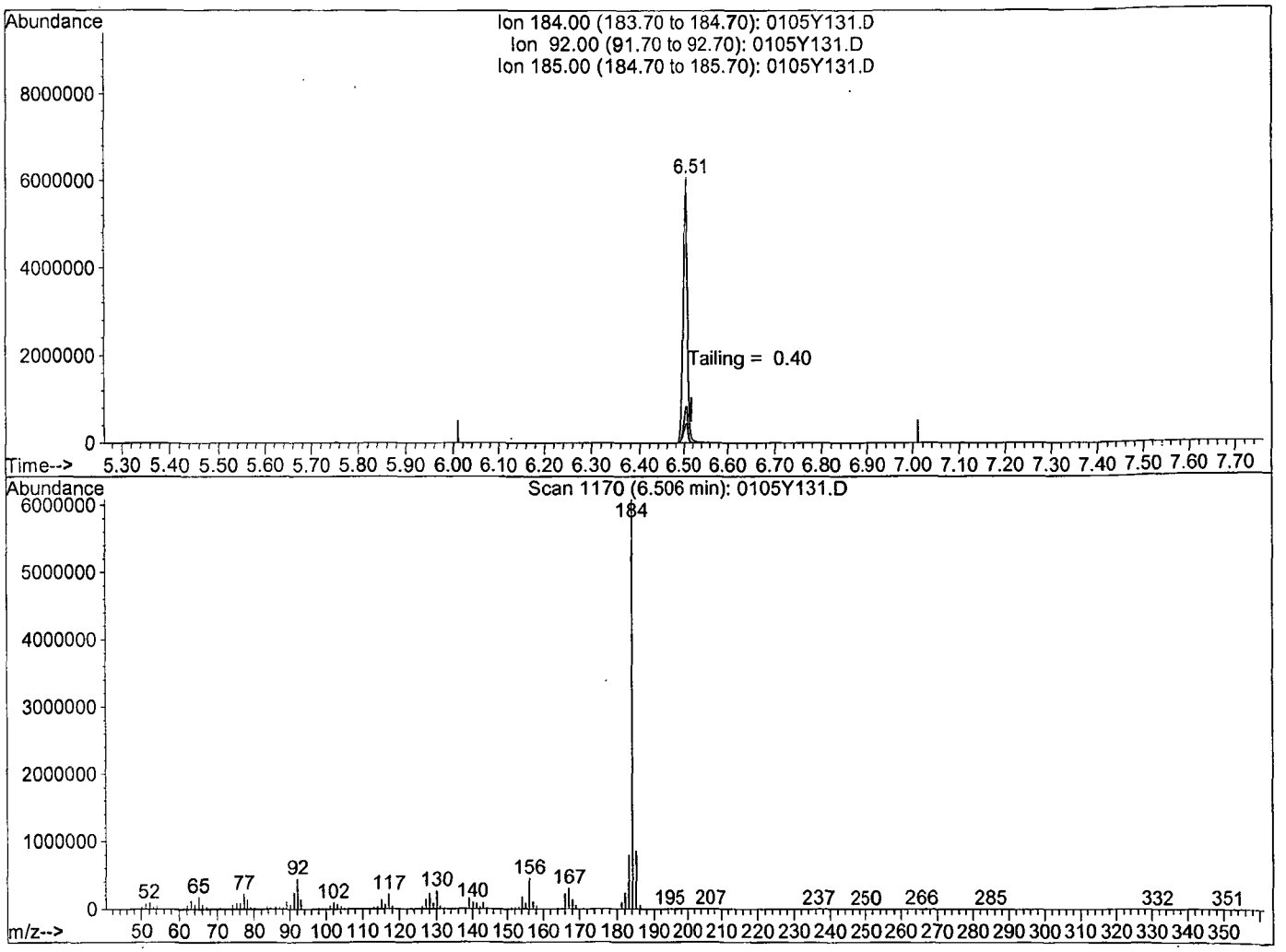
response 8243796

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.22
268.00	64.30	63.56
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y131.D Vial: 31
Acq On : 29 Jan 21 10:49 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 29 10:51 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y131.D

(6) Benzidine

6.51min 0.0000

response 42610914

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.57
185.00	14.10	14.07
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 80uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	"	"	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	"	"	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	"	"	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	"	"	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	"	"	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	"	"	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	"	"	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	"	"	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	"	"	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL			1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	(4)
Prep Date	05/29/20
Exp Date	12/31/25

Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	AO157142-49996to49999	12/31/25	3 mL	3 mL	NA	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210127A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 14:00	
Spiked ID 8			Ext. End Time:	01/28/21 8:00	
			GC Requires Extract By:		

pH1	2	01/27/21 13:40	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/28/21 10:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** DL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127A Blk				0.2,0.05	1,2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP28 E-WB6				
2	210127A LCS-1		1	1	0.2	1	1000	1	2/1	01/27/21 13:30	
						equip	E-HP29 E-WB6				
3	210127A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP16 E-WB6				
4	210127A LCSD-1		1	1	0.2	1	1000	1	2/1	01/27/21 13:30	
						equip	E-HP30 E-WB6				
5	210127A LCSD-2		0.125	2	0.05	2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP15 E-WB6				
6	BA25706	BA25706W10			0.2,0.05	1,2	1000	1	2/1	01/27/21 13:30	94863
						equip	E-HP12 E-WB6				
7	BA25867	BA25867W12			0.2,0.05	1,2	800	1	2/1	01/27/21 13:30	94883
						equip	E-HP14 E-WB6				
8	BA25870	BA25870W12			0.2,0.05	1,2	1050	1	2/1	01/27/21 13:30	94883
						equip	E-HP13 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-3-21
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/29/21
Time	10:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	DL,YL
Concentration	DL

Modified	01/30/21 7:03:00 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
2	3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
3	4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
4	5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
5	6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
6	7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
7	8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
8	9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
9	10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
10	11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
11	12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
12	31	0105Y131.D	1	SV TUNE 10/02/20		29 Jan 21 10:49
13	32	0105Y132.D	1	50ug/mL 8270 01/05/21 (1)		29 Jan 21 11:04
14	33	0105Y133.D	1	210127A BLK 1/1000		29 Jan 21 12:22
15	34	0105Y134.D	1	210127A LCS-1 1/1000		29 Jan 21 12:47
16	35	0105Y135.D	1	210127A LCSD-1 1/1000		29 Jan 21 13:13
17	36	0105Y136.D	1.25	BA25867W12 1/800		29 Jan 21 13:38
18	37	0105Y137.D	0.952381	BA25870W12 1/1050		29 Jan 21 14:03
19	38	0105Y138.D	1	50ug/mL 8270 08/12/20 (5)		29 Jan 21 14:29

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus
Initials: MA/

			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery = 1.080%				
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery = 1.080%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

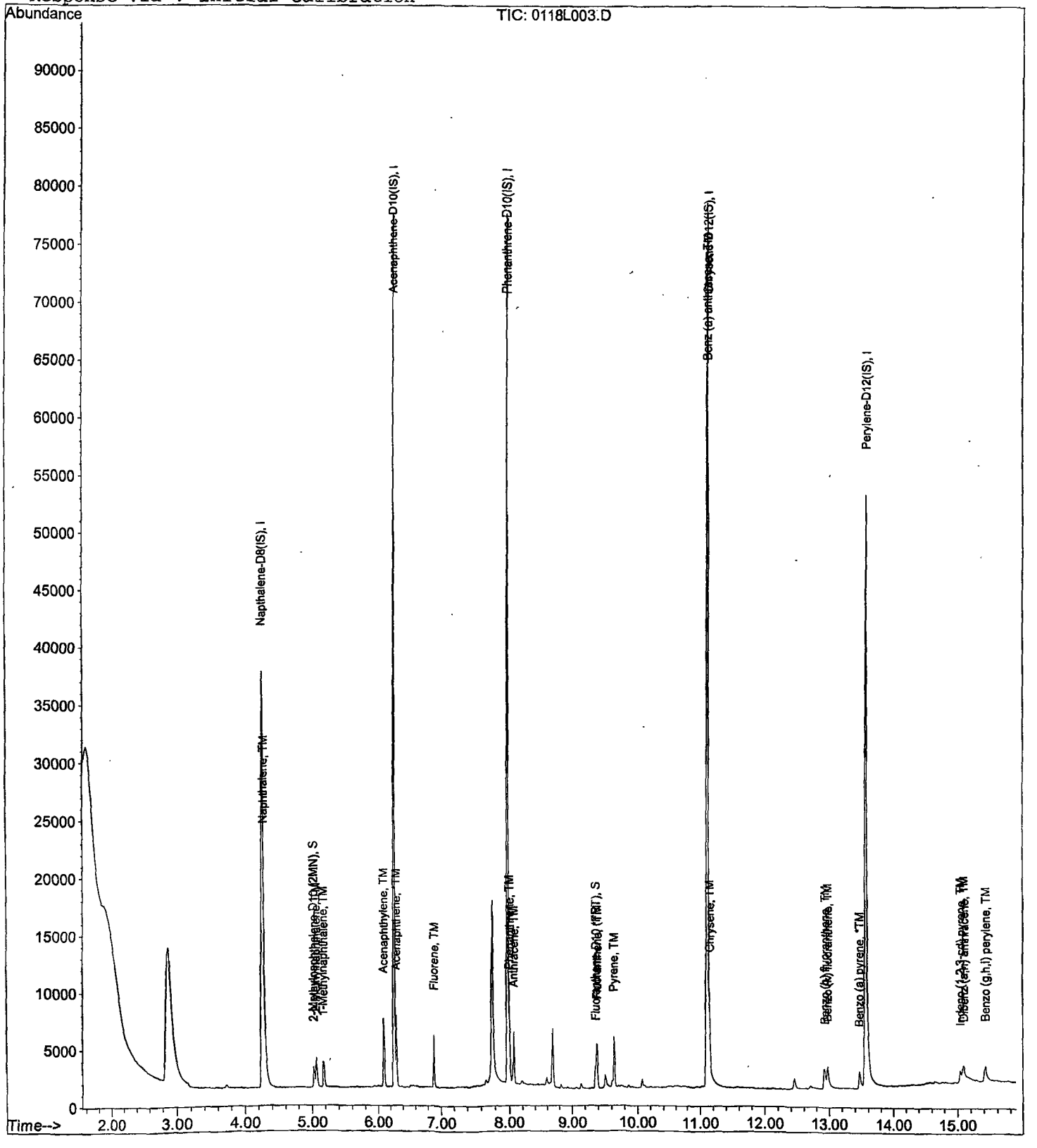
Data File : M:\LINUS\DATA\L210118\0118L003.D
Acq On : 18 Jan 21 11:33
Sample : 0.1 SIM 01/15/21
Misc :

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562 ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%		
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183 ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	6554	0.21427 ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578 ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723 ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472 ppb		99
8) Acenaphthene	6.29	154	3730	0.21987 ppb		98
9) Fluorene	6.89	166	4201	0.21236 ppb		99
11) Phenanthrene	8.00	178	6614	0.21709 ppb		99
12) Anthracene	8.06	178	5555	0.20337 ppb		100
14) Fluoranthene	9.38	202	8388	0.20768 ppb	#	84
16) Pyrene	9.64	202	8654	0.21194 ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097 ppb		96
18) Chrysene	11.15	228	7901	0.21470 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777 ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570 ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787 ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285 ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333 ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832 ppb		97

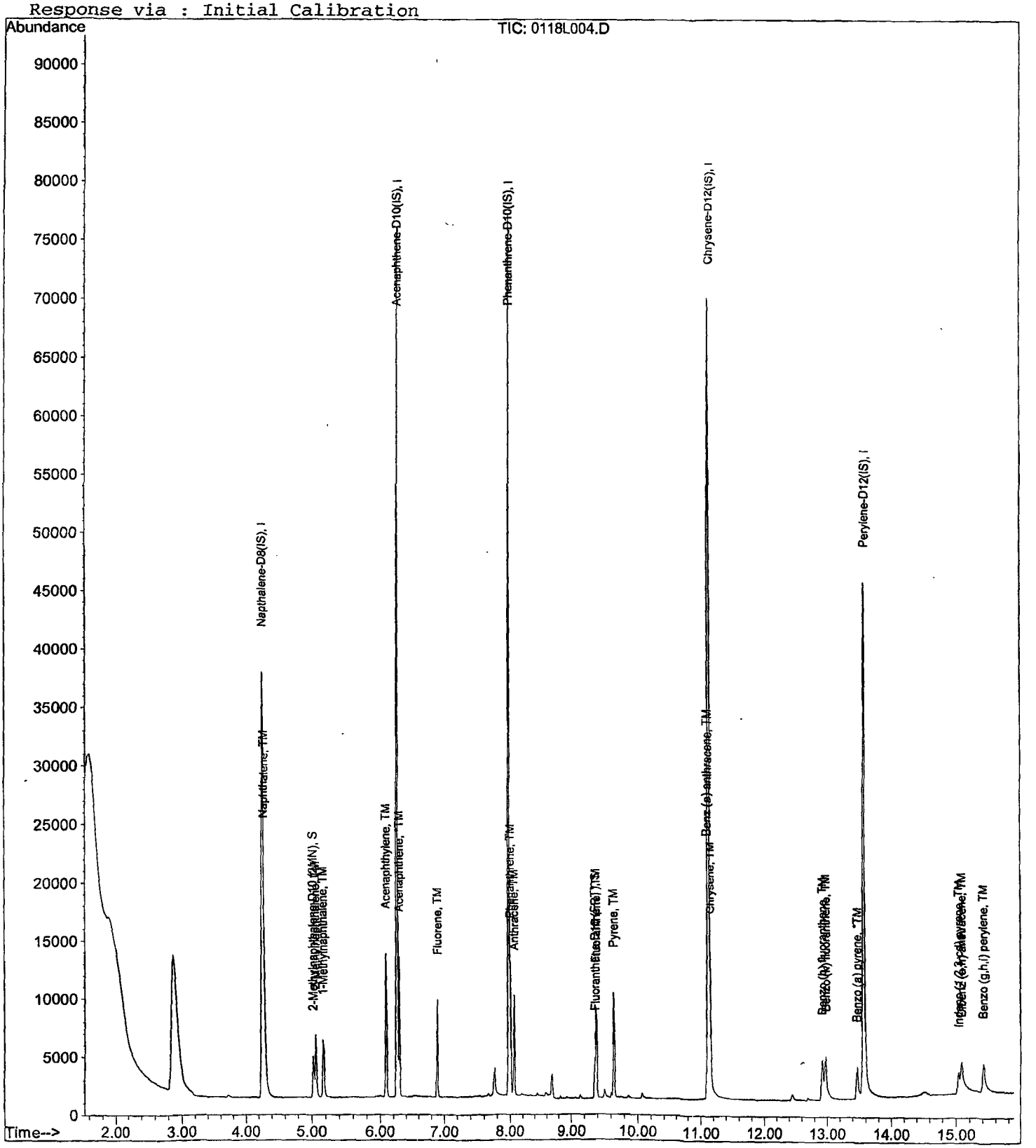
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979	ppb		0.00
Spiked Amount 5.000			Recovery	= 5.200%			
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727	ppb		0.00
Spiked Amount 5.000			Recovery	= 4.940%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	15152	0.53197	ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641	ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883	ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452	ppb		99
8) Acenaphthene	6.29	154	8507	0.53809	ppb		99
9) Fluorene	6.89	166	9747	0.52871	ppb		100
11) Phenanthrene	8.00	178	15220	0.53650	ppb		99
12) Anthracene	8.06	178	13445	0.52863	ppb		99
14) Fluoranthene	9.39	202	19405	0.51598	ppb		97
16) Pyrene	9.64	202	19829	0.52483	ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713	ppb		97
18) Chrysene	11.15	228	17766	0.52174	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842	ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592	ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124	ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285	ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408	ppb		92

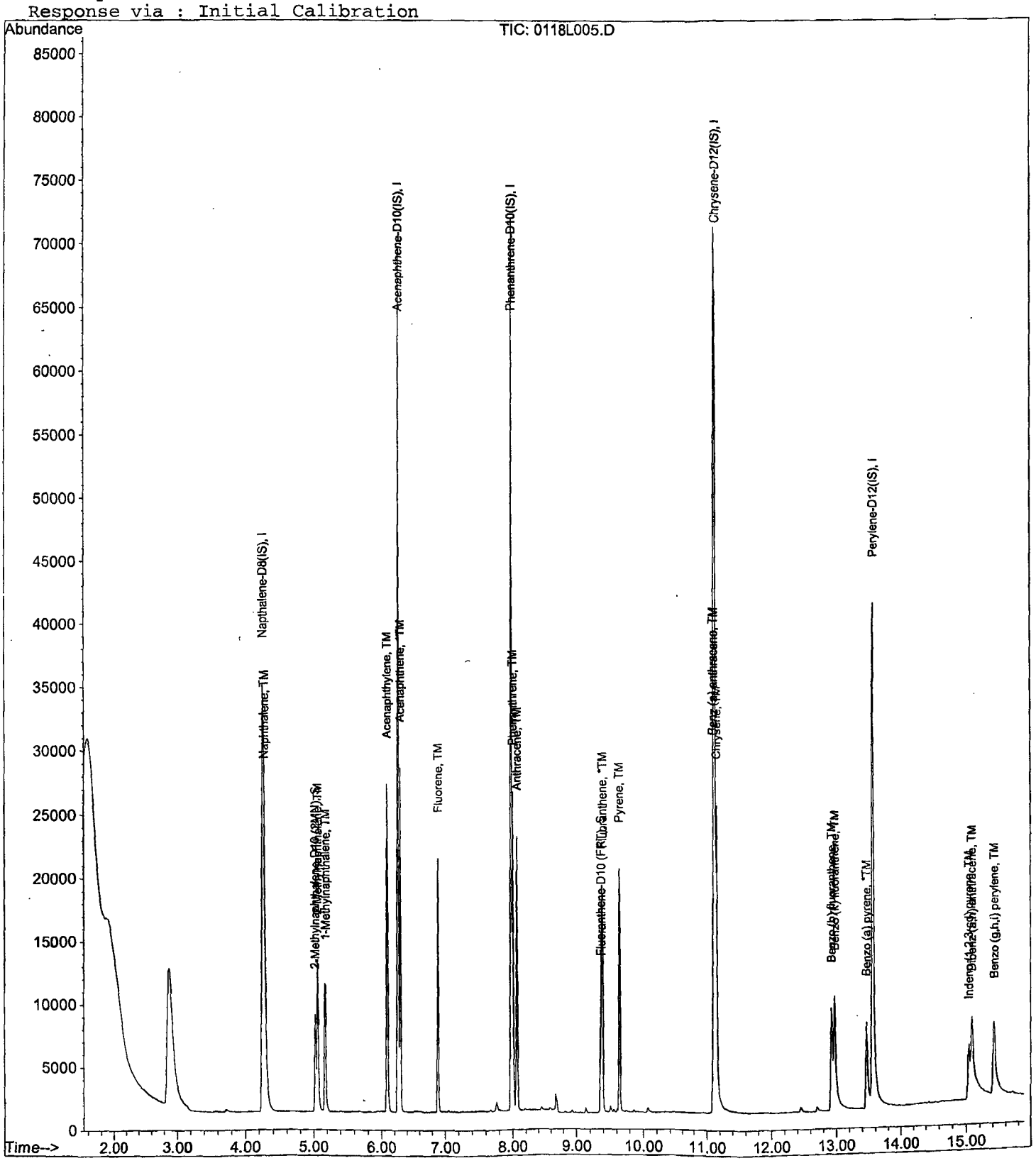
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779 ppb		0.00
Spiked Amount 5.000			Recovery = 10.160%			
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272 ppb		0.00
Spiked Amount 5.000			Recovery = 10.060%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	29158	1.03706 ppb		100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438 ppb		99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359 ppb		99
7) Acenaphthylene	6.08	152	55396	1.05240 ppb		99
8) Acenaphthene	6.29	154	16277	1.05847 ppb		100
9) Fluorene	6.89	166	18901	1.05405 ppb		99
11) Phenanthrene	8.00	178	29034	1.07377 ppb		100
12) Anthracene	8.06	178	25745	1.06201 ppb		100
14) Fluoranthene	9.39	202	38564	1.07584 ppb		98
16) Pyrene	9.65	202	38462	1.03286 ppb		100
17) Benz (a) anthracene	11.11	228	30159	0.95752 ppb		99
18) Chrysene	11.15	228	33925	1.01080 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864 ppb	#	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514 ppb		99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606 ppb		99
23) Benzo (a) pyrene	13.46	252	22522	0.92324 ppb		98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684 ppb		98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232 ppb		94

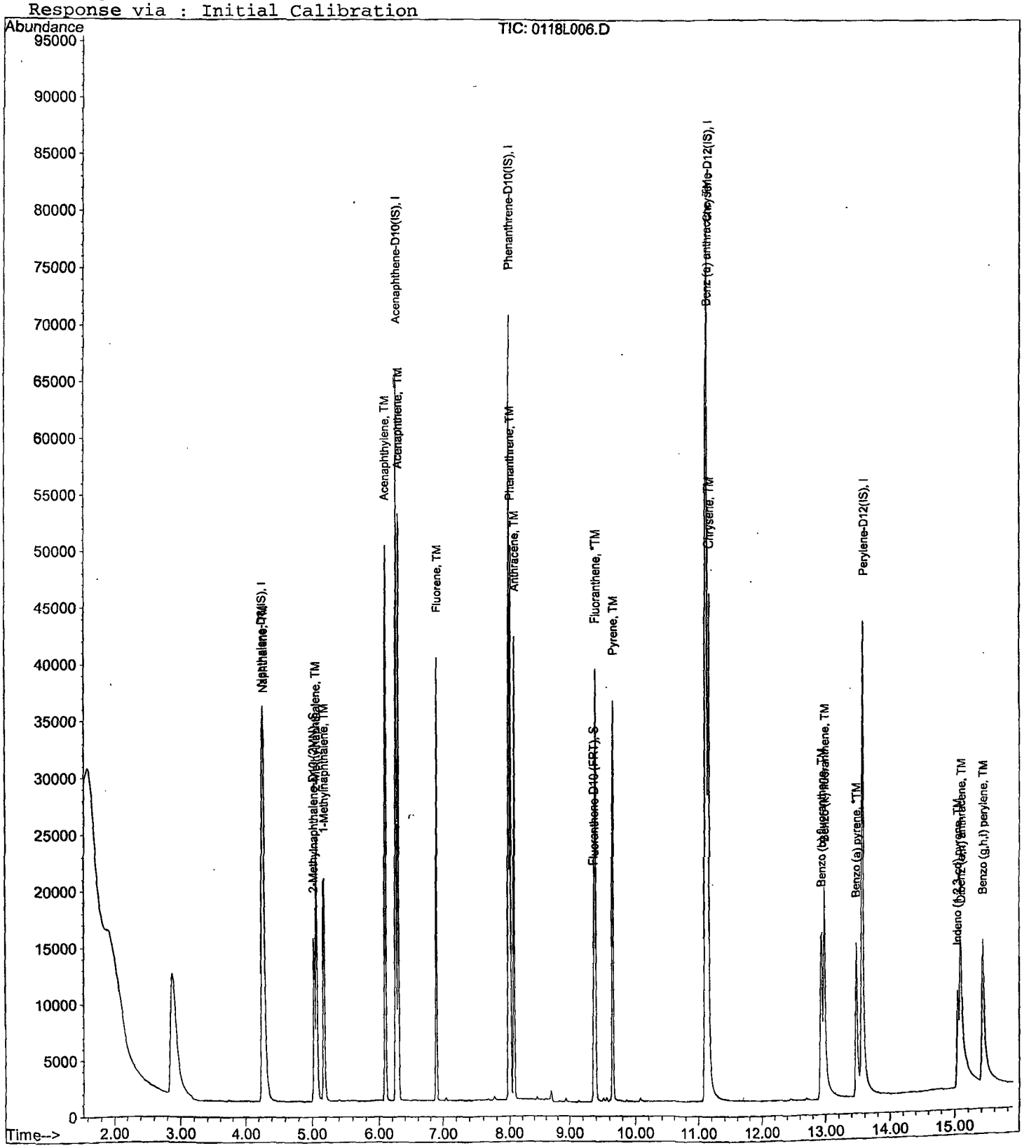
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467 ppb	0.00
Spiked Amount 5.000			Recovery	= 49.300%	
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357 ppb	0.00
Spiked Amount 5.000			Recovery	= 50.280%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	134538	4.98585 ppb	100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293 ppb	100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401 ppb	100
7) Acenaphthylene	6.08	152	266808	5.27969 ppb	100
8) Acenaphthene	6.29	154	75592	5.12022 ppb	100
9) Fluorene	6.89	166	91323	5.30474 ppb	100
11) Phenanthrene	8.00	178	136722	5.27514 ppb	100
12) Anthracene	8.06	178	124850	5.37298 ppb	100
14) Fluoranthene	9.39	202	188170	5.47654 ppb	100
16) Pyrene	9.65	202	189979	5.19874 ppb	100
17) Benz (a) anthracene	11.11	228	148868	4.81636 ppb	100
18) Chrysene	11.15	228	168073	5.10305 ppb	100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112 ppb #	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853 ppb	100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449 ppb	100
23) Benzo (a) pyrene	13.46	252	135637	5.73925 ppb	100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274 ppb	100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602 ppb	100

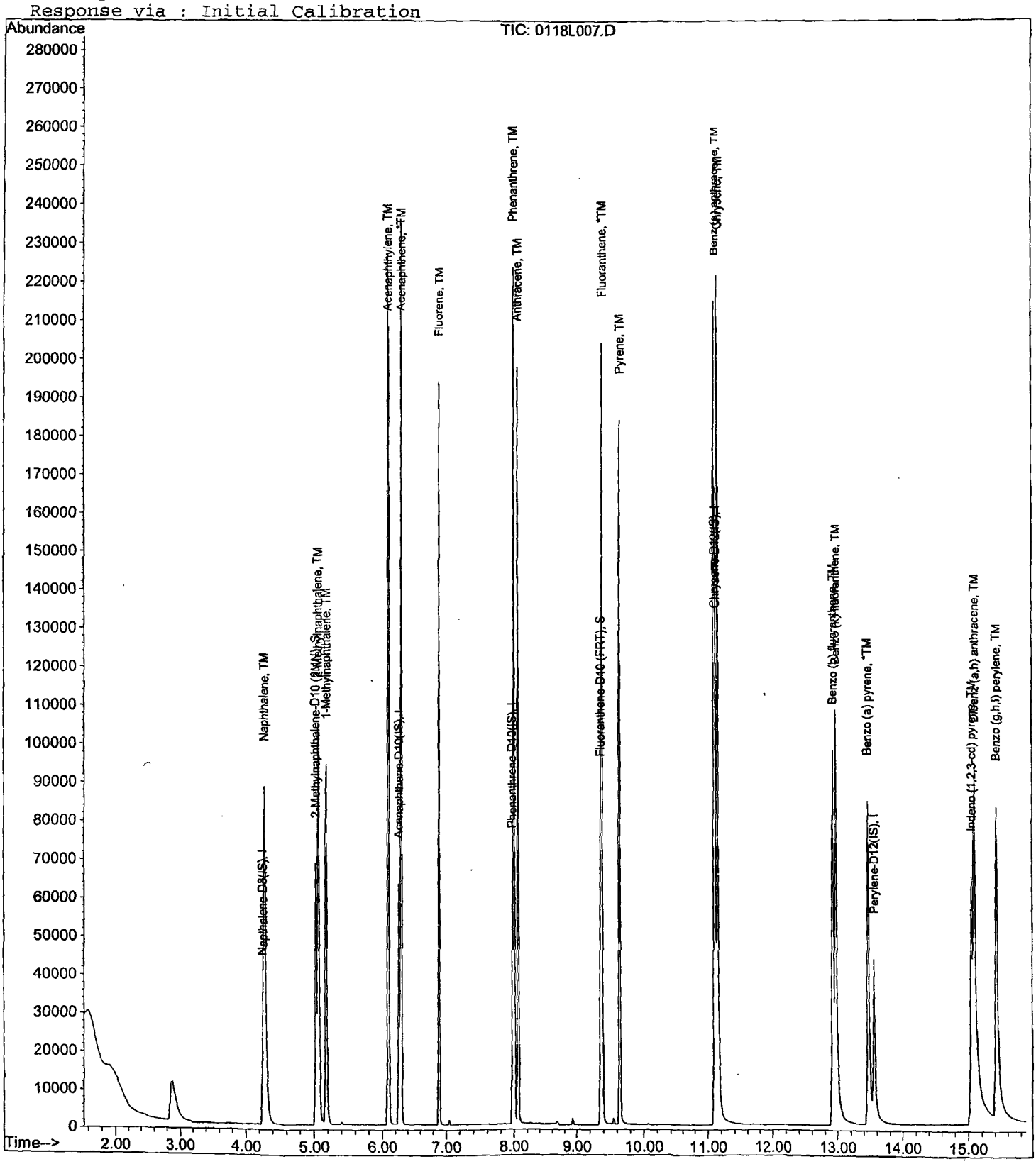
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897 ppb		0.00
Spiked Amount 5.000			Recovery	= 98.180%		
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763 ppb		0.00
Spiked Amount 5.000			Recovery	= 101.560%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	268559	9.44564 ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736 ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451 ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932 ppb		100
8) Acenaphthene	6.29	154	143677	9.22655 ppb		99
9) Fluorene	6.89	166	175331	9.65565 ppb		99
11) Phenanthrene	8.00	178	252445	9.28323 ppb		99
12) Anthracene	8.06	178	235818	9.67255 ppb		99
14) Fluoranthene	9.39	202	356187	9.88031 ppb		97
16) Pyrene	9.65	202	358384	9.35054 ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203 ppb		99
18) Chrysene	11.16	228	320451	9.27660 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742 ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427 ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043 ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132 ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641 ppb	#	90

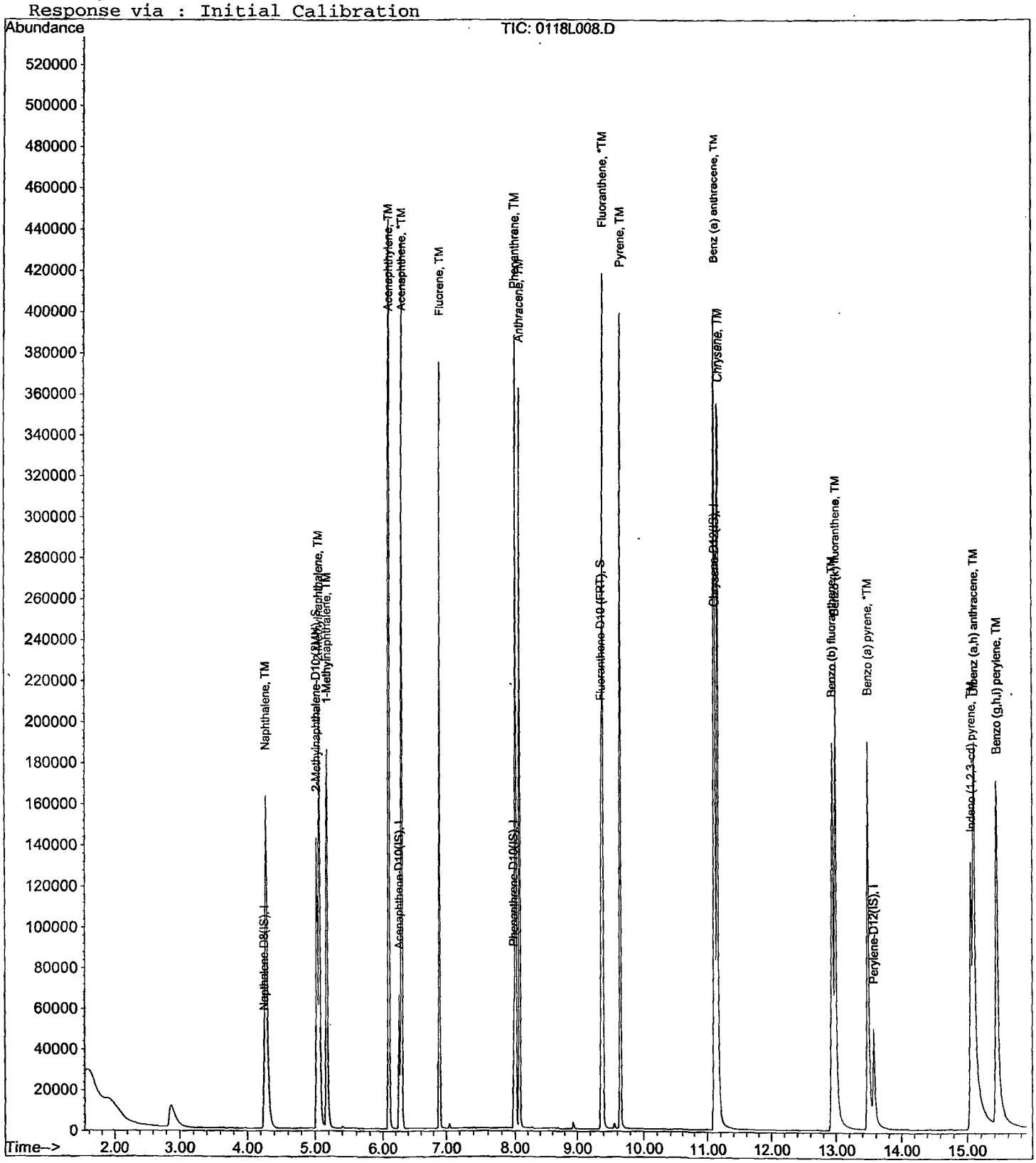
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000 ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275 ppb		0.00
Spiked Amount 5.000			Recovery	= 467.860%		
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323 ppb		0.01
Spiked Amount 5.000			Recovery	= 485.860%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	1196891	46.08087 ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476 ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633 ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017 ppb		97
8) Acenaphthene	6.30	154	631316	43.96491 ppb		89
9) Fluorene	6.89	166	764075	45.63163 ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079 ppb		98
12) Anthracene	8.08	178	1010706	44.13554 ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367 ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458 ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809 ppb		97
18) Chrysene	11.17	228	1338368	43.66618 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600 ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049 ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551 ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246 ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934 ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437 ppb		99

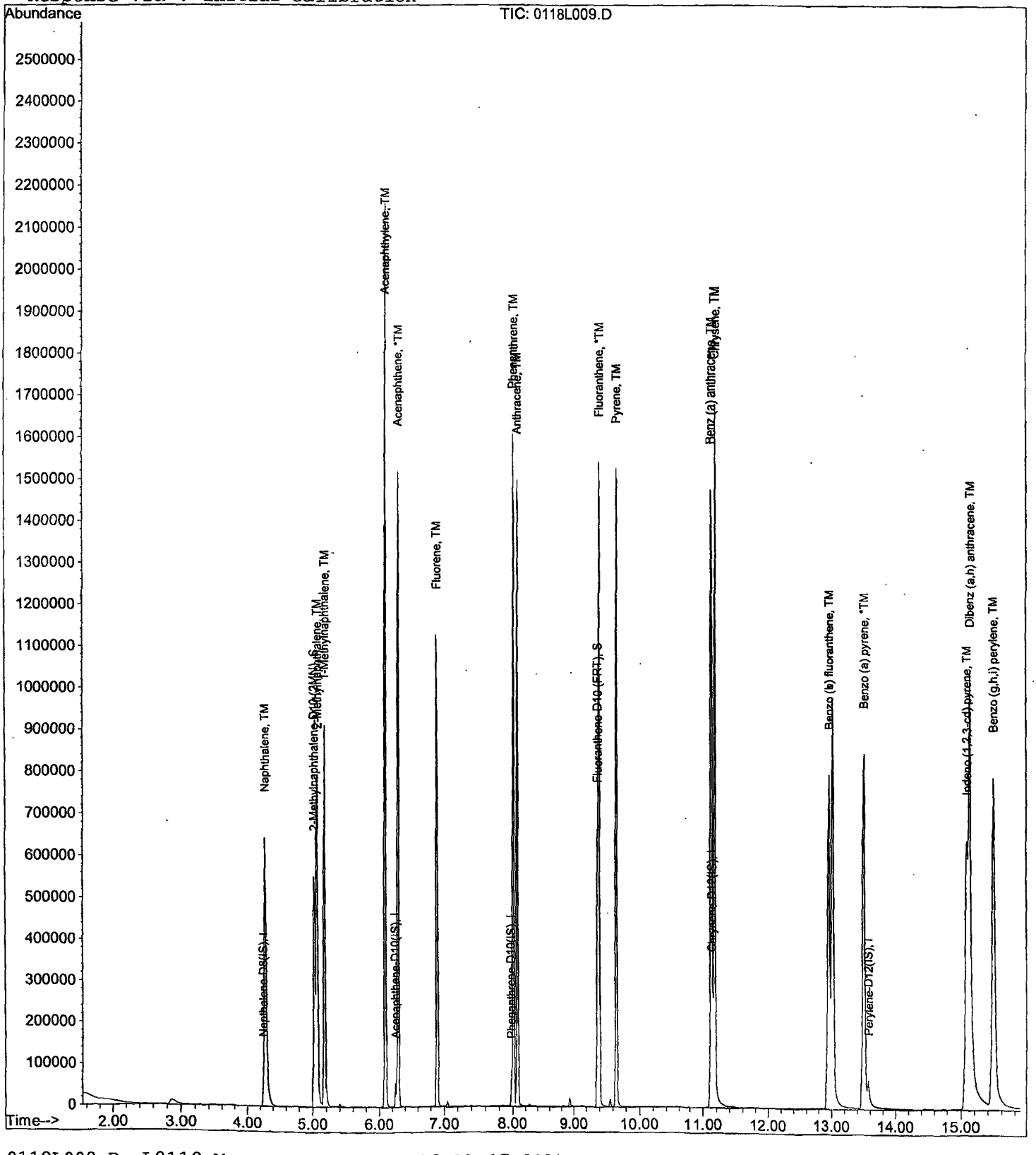
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000 ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000 ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000 ppb		0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210 ppb		0.01
Spiked Amount 5.000			Recovery	= 912.640%		
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423 ppb		0.01
Spiked Amount 5.000			Recovery	= 908.480%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	2224048	88.96172 ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956 ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247 ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934 ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300 ppb		96
9) Fluorene	6.90	166	1390953	82.59956 ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367 ppb		97
12) Anthracene	8.09	178	2040467	89.58105 ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099 ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549 ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522 ppb		96
18) Chrysene	11.19	228	2703165	90.38960 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219 ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732 ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829 ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873 ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705 ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

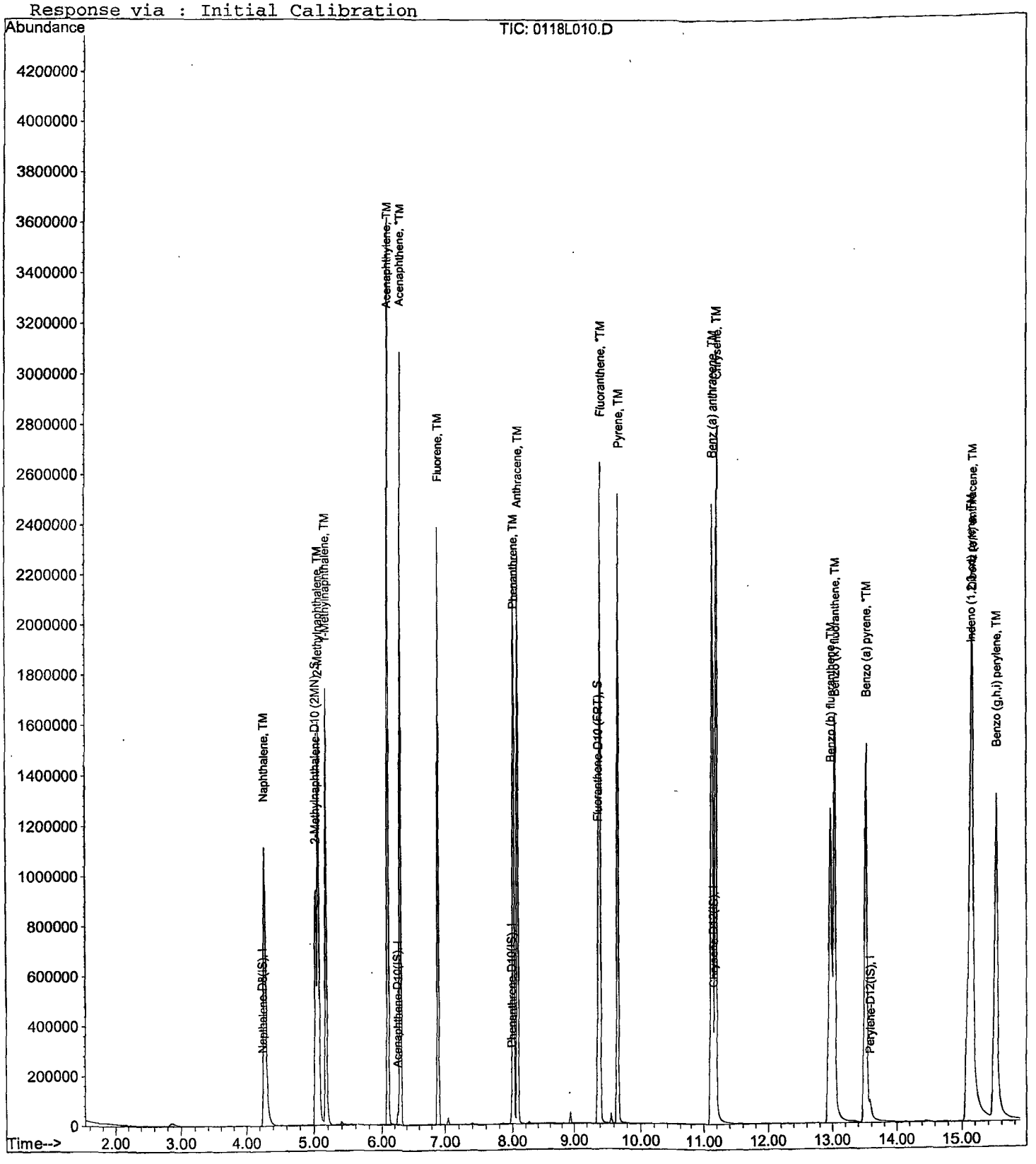
Data File : M:\LINUS\DATA\L210118\0118L010.D
Acq On : 18 Jan 21 14:07
Sample : 100 SIM 01/15/21
Misc :

Vial: 10
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:18 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



247 of 612

PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069	ppb		0.00
Spiked Amount 5.000			Recovery	= 0.020%			
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132	ppb		0.00
Spiked Amount 5.000			Recovery	= 0.220%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	137423	5.27705	ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831	ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437	ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224	ppb		100
8) Acenaphthene	6.29	154	77645	5.22665	ppb		99
9) Fluorene	6.89	166	92294	5.32787	ppb		100
11) Phenanthrene	8.00	178	132877	5.01426	ppb		100
12) Anthracene	8.06	178	132921	5.59477	ppb		99
14) Fluoranthene	9.39	202	184979	5.26550	ppb		100
16) Pyrene	9.65	202	190804	5.11487	ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082	ppb		100
18) Chrysene	11.15	228	165836	4.93766	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773	ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329	ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901	ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275	ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374	ppb		93

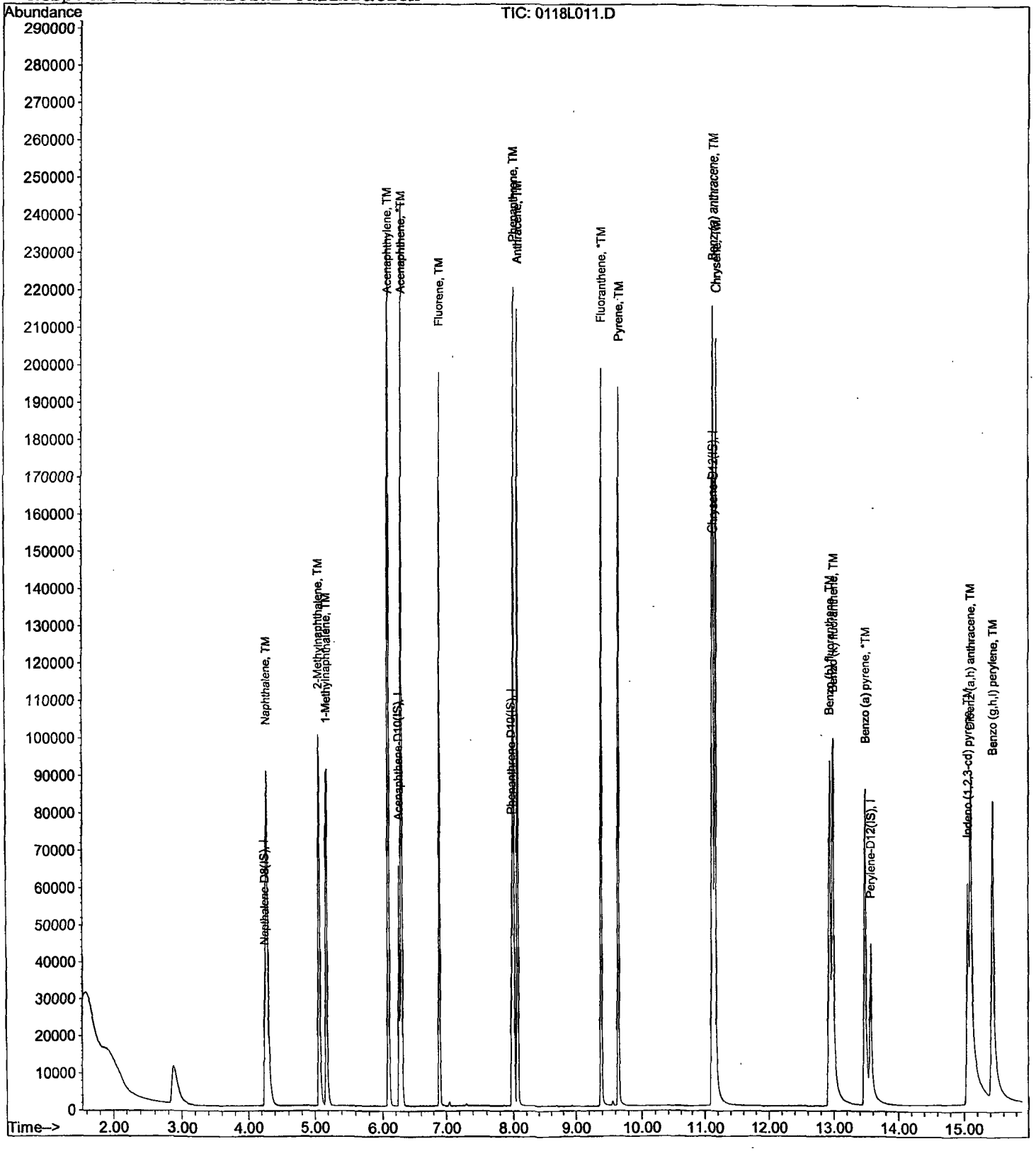
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L063.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.057	3.9	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.052	2.0	S	
4	TM	2-Methylnaphthalene	0.6368	0.6844	7.5	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6785	7.0	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.141	1.8	TM	
8	*TM	Acenaphthene	1.188	1.194	0.51	*TM	
9	TM	Fluorene	1.385	1.443	4.2	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.187	2.4	TM	
12	TM	Anthracene	1.039	1.107	6.6	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.375	1.7	S	
14	*TM	Fluoranthene	1.536	1.644	7.0	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.360	0.14	TM	
17	TM	Benz (a) anthracene	1.150	1.063	7.6	TM	
18	TM	Chrysene	1.226	1.227	0.13	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.055	7.7	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.323	4.5	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.055	12	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9726	9.9	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.076	6.6	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.7		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L063.D Vial: 63
Acq On : 29 Jan 21 10:40 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 11:13 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	71643	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35378	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	63555	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	77524	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.57	264	72787	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	75362	2.45075	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.020%			
13) Fluoranthene-D10 (FRT)	9.37	212	87360	2.54305	ppb		0.00
Spiked Amount 5.000			Recovery	= 50.860%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	151446	5.19544	ppb		99
4) 2-Methylnaphthalene	5.06	142	98059	5.37335	ppb		97
5) 1-Methylnaphthalene	5.17	142	97221	5.34774	ppb		96
7) Acenaphthylene	6.08	152	292996	5.09205	ppb		99
8) Acenaphthene	6.29	154	84476	5.02537	ppb		98
9) Fluorene	6.89	166	102131	5.21031	ppb		99
11) Phenanthrene	8.00	178	150864	5.12170	ppb		100
12) Anthracene	8.06	178	140755	5.32996	ppb		100
14) Fluoranthene	9.39	202	208921	5.35021	ppb		99
16) Pyrene	9.65	202	210804	4.99321	ppb		98
17) Benz (a) anthracene	11.11	228	164809	4.62022	ppb		99
18) Chrysene	11.16	228	190300	5.00652	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	171361	5.08753	ppb		98
21) Benzo (b) fluoranthene	12.94	252	153571	5.38668	ppb		99
22) Benzo (k) fluoranthene	12.99	252	192550	5.22255	ppb		98
23) Benzo (a) pyrene	13.48	252	153559	5.58589	ppb		98
24) Dibenz (a,h) anthracene	15.11	278	141588	5.49437	ppb		99
25) Benzo (g,h,i) perylene	15.44	276	156578	5.32869	ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

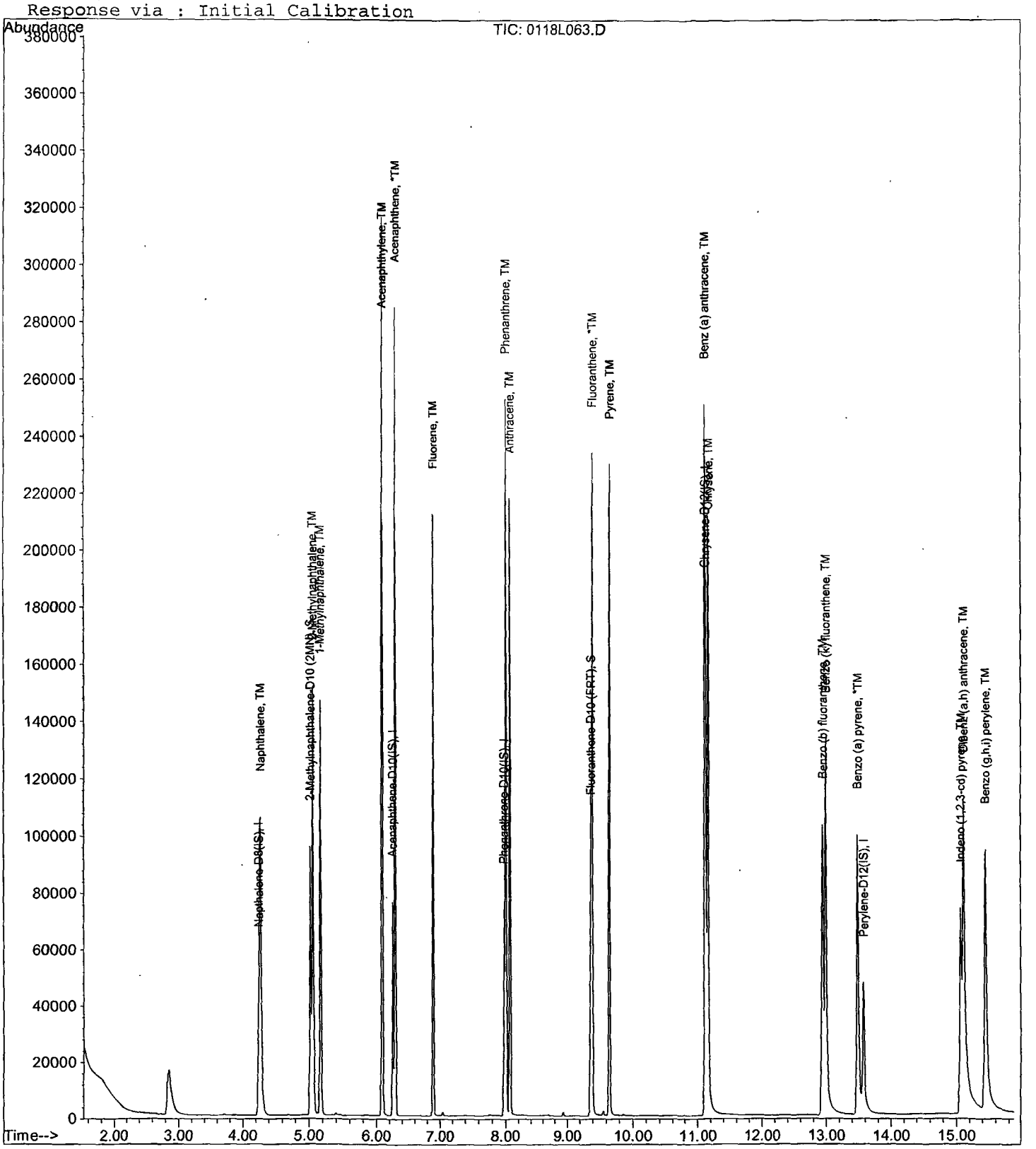
Data File : M:\LINUS\DATA\L210118\0118L063.D
Acq On : 29 Jan 21 10:40
Sample : 5 SIM 01/15/21
Misc :

Vial: 63
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 29 11:13 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L069.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.002	1.5	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.059	1.3	S	
4	TM	2-Methylnaphthalene	0.6368	0.6520	2.4	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6422	1.2	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.166	2.5	TM	
8	*TM	Acenaphthene	1.188	1.199	0.90	*TM	
9	TM	Fluorene	1.385	1.467	5.9	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.200	3.6	TM	
12	TM	Anthracene	1.039	1.116	7.5	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.341	0.74	S	
14	*TM	Fluoranthene	1.536	1.677	9.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.394	2.4	TM	
17	TM	Benz (a) anthracene	1.150	1.118	2.8	TM	
18	TM	Chrysene	1.226	1.235	0.78	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.168	7.6	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.149	17	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.292	2.0	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.081	15	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.016	15	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.107	9.7	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L069.D Vial: 69
Acq On : 29 Jan 21 13:49 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 14:19 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67868	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32078	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58193	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70656	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67239	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	71867	2.46709	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.340%			
13) Fluoranthene-D10 (FRT)	9.37	212	78057	2.48160	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.640%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	135939	4.92286	ppb		99
4) 2-Methylnaphthalene	5.06	142	88502	5.11941	ppb		98
5) 1-Methylnaphthalene	5.17	142	87175	5.06187	ppb		96
7) Acenaphthylene	6.08	152	267276	5.12292	ppb		99
8) Acenaphthene	6.29	154	76896	5.04504	ppb		98
9) Fluorene	6.89	166	94109	5.29496	ppb		99
11) Phenanthrene	8.00	178	139669	5.17854	ppb		100
12) Anthracene	8.06	178	129929	5.37335	ppb		100
14) Fluoranthene	9.39	202	195219	5.45996	ppb		100
16) Pyrene	9.65	202	196954	5.11862	ppb		99
17) Benz (a) anthracene	11.11	228	157980	4.85927	ppb		99
18) Chrysene	11.15	228	174567	5.03902	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.06	276	165091	5.37781	ppb		96
21) Benzo (b) fluoranthene	12.93	252	154514	5.86695	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	173749	5.10145	ppb		97
23) Benzo (a) pyrene	13.48	252	145424	5.72645	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	136564	5.73667	ppb		97
25) Benzo (g,h,i) perylene	15.44	276	148926	5.48646	ppb	#	90

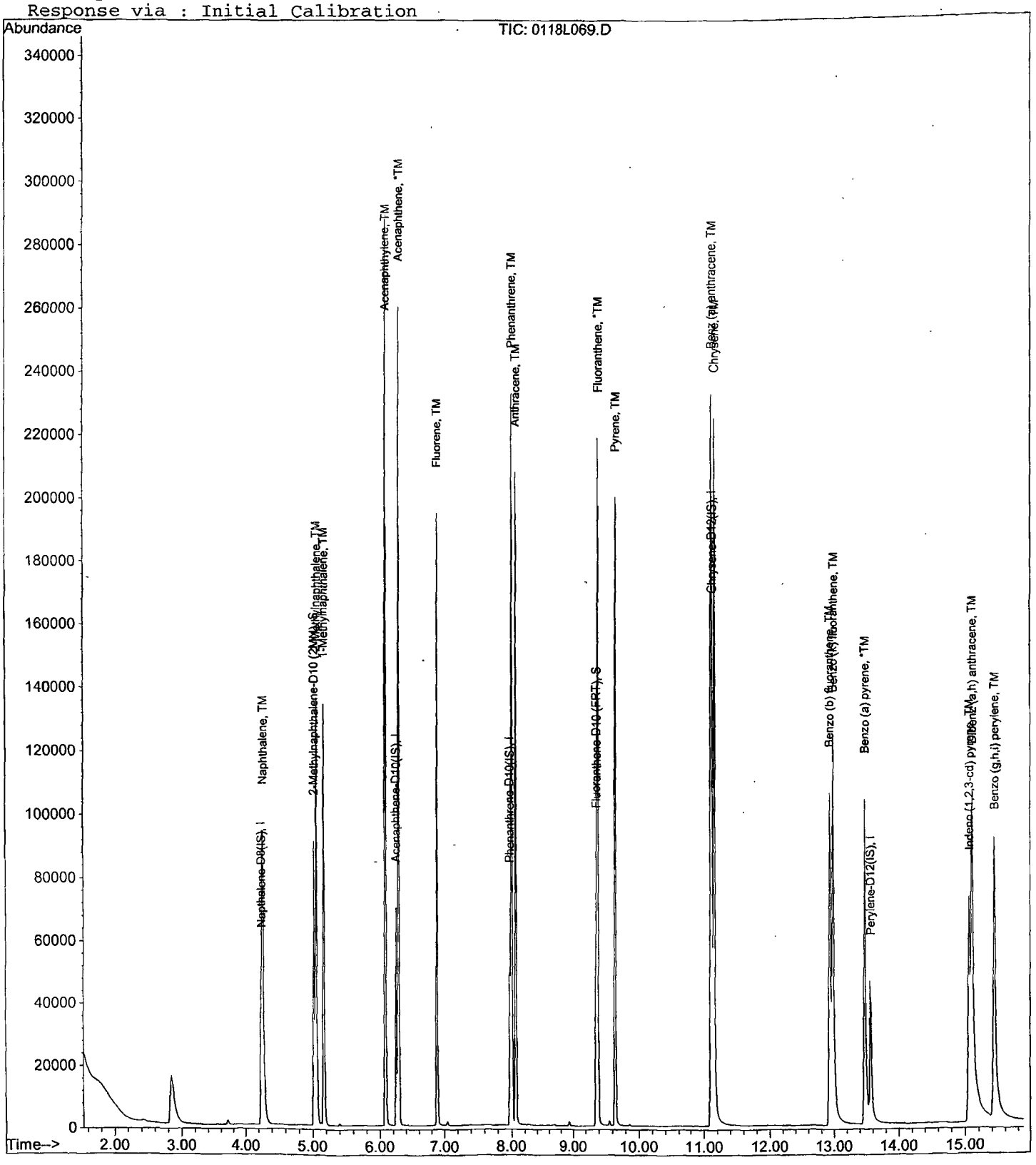
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L069.D Vial: 69
Acq On : 29 Jan 21 13:49 Operator: MA
Sample : 5 SIM 08/21/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 14:19 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L067.D Vial: 67
Acq On : 29 Jan 21 13:05 Operator: MA
Sample : BA25867W12 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 29 13:33 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61767	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	29621	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	54944	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	65197	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	62025	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	123038	5.80113 ppb	0.00
Spiked Amount 6.250			Recovery	= 92.816%	
13) Fluoranthene-D10 (FRT)	9.37	212	145629	6.12956 ppb	0.00
Spiked Amount 6.250			Recovery	= 98.080%	

Target Compounds Qvalue

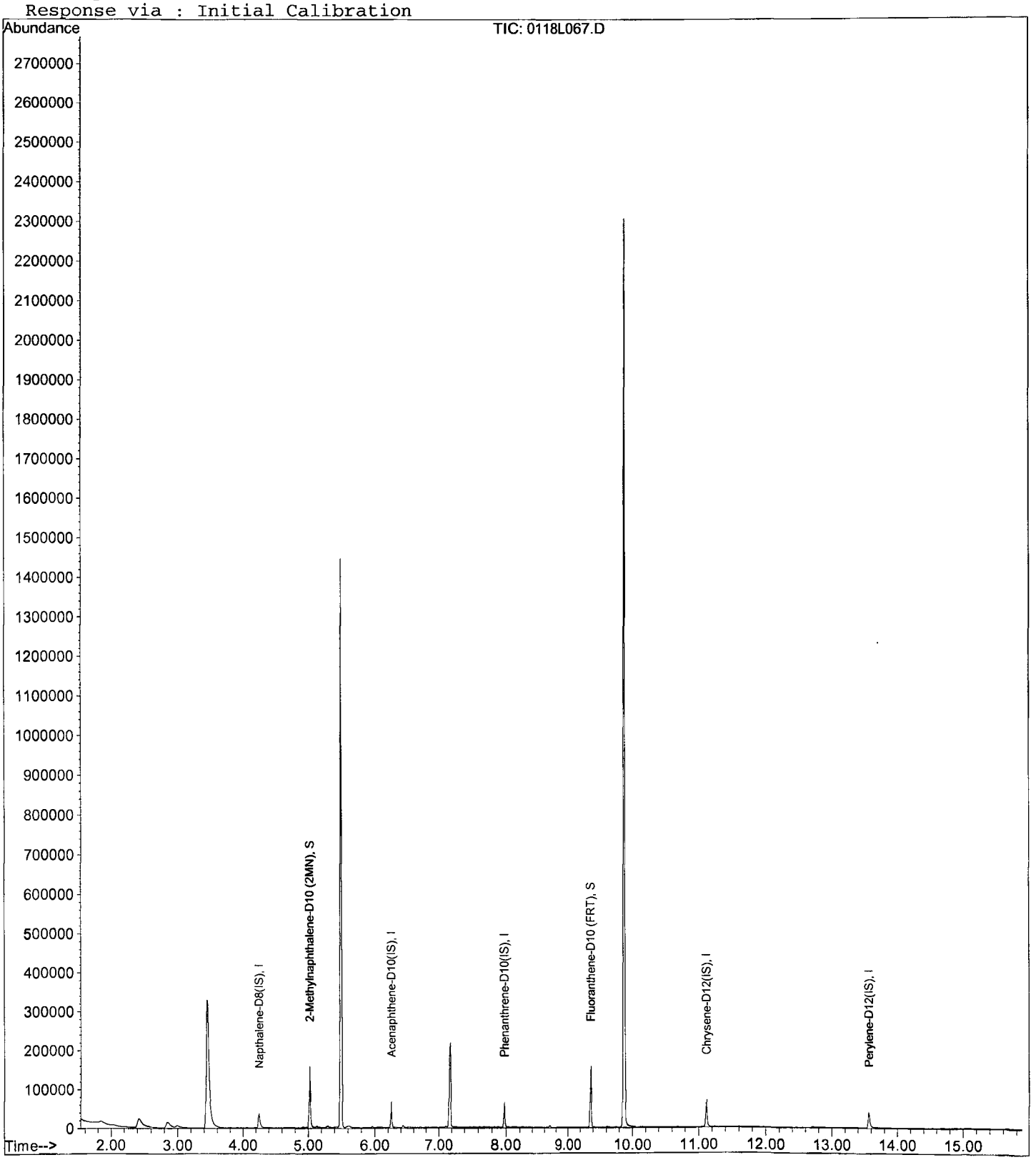
(#) = qualifier out of range (m) = manual integration
0118L067.D L0118.M Mon Feb 01 14:01:22 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L067.D Vial: 67
Acq On : 29 Jan 21 13:05 Operator: MA
Sample : BA25867W12 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Jan 29 13:33 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L068.D Vial: 68
Acq On : 29 Jan 21 13:27 Operator: MA
Sample : BA25870W12 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jan 29 14:05 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	50114	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	23395	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	43489	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	51325	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	42884	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	92670	4.10309 ppb	0.00
Spiked Amount 4.762			Recovery	= 86.163%	
13) Fluoranthene-D10 (FRT)	9.37	212	108679	4.40320 ppb	0.00
Spiked Amount 4.762			Recovery	= 92.463%	

Target Compounds Qvalue

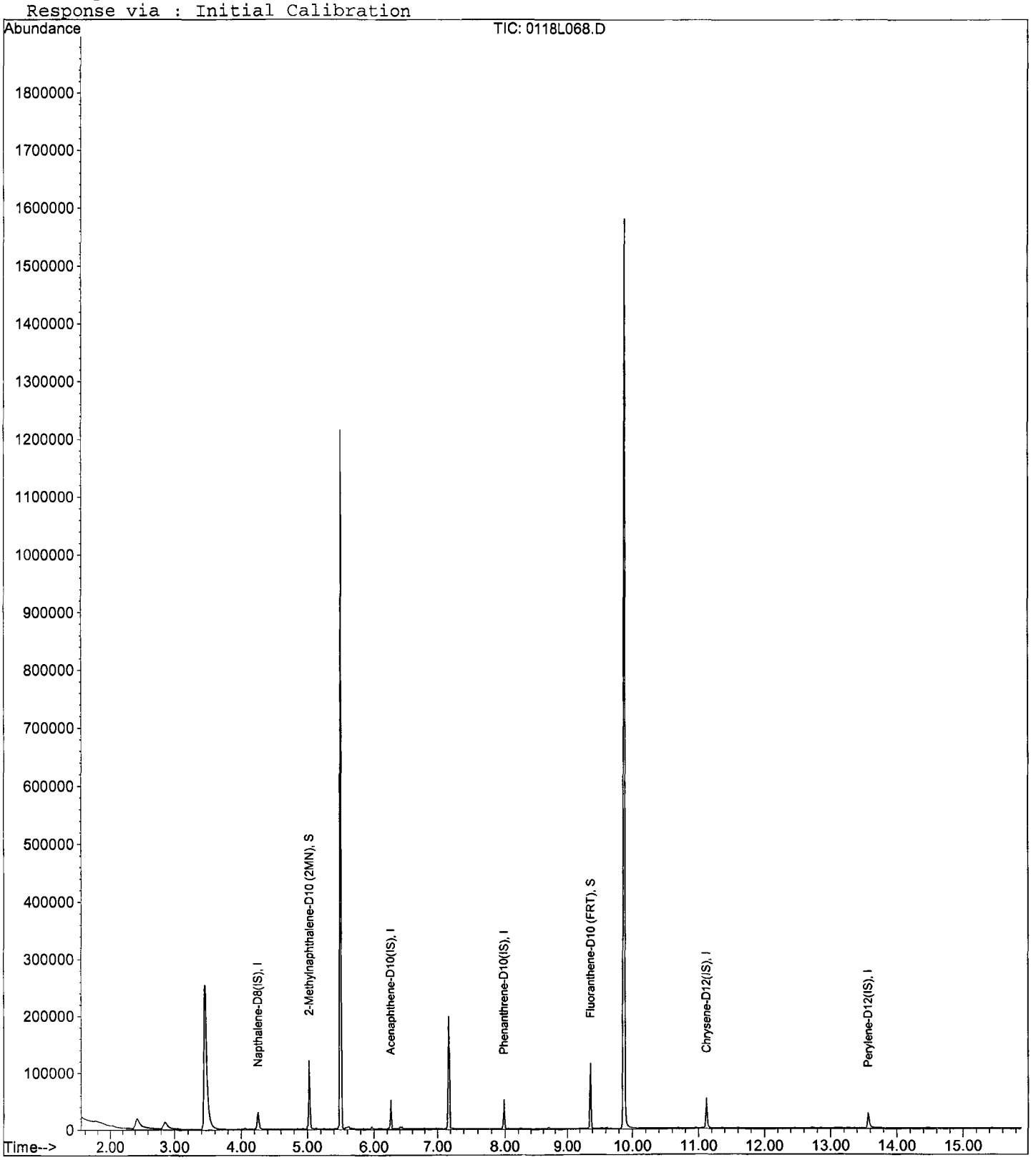
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L068.D Vial: 68
Acq On : 29 Jan 21 13:27 Operator: MA
Sample : BA25870W12 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jan 29 14:05 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L064.D Vial: 64
Acq On : 29 Jan 21 11:59 Operator: MA
Sample : 210127A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:32 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64902	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.27	164	30746	2.50000 ppb	0.01
10) Phenanthrene-D10(IS)	7.99	188	55845	2.50000 ppb	0.01
15) Chrysene-D12(IS)	11.13	240	64431	2.50000 ppb	0.01
20) Perylene-D12(IS)	13.58	264	54575	2.50000 ppb	0.02
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.03	152	135473	4.86312 ppb	0.01
Spiked Amount 5.000			Recovery =	97.260%	
13) Fluoranthene-D10 (FRT)	9.38	212	154189	5.10811 ppb	0.01
Spiked Amount 5.000			Recovery =	102.160%	
Target Compounds					Qvalue

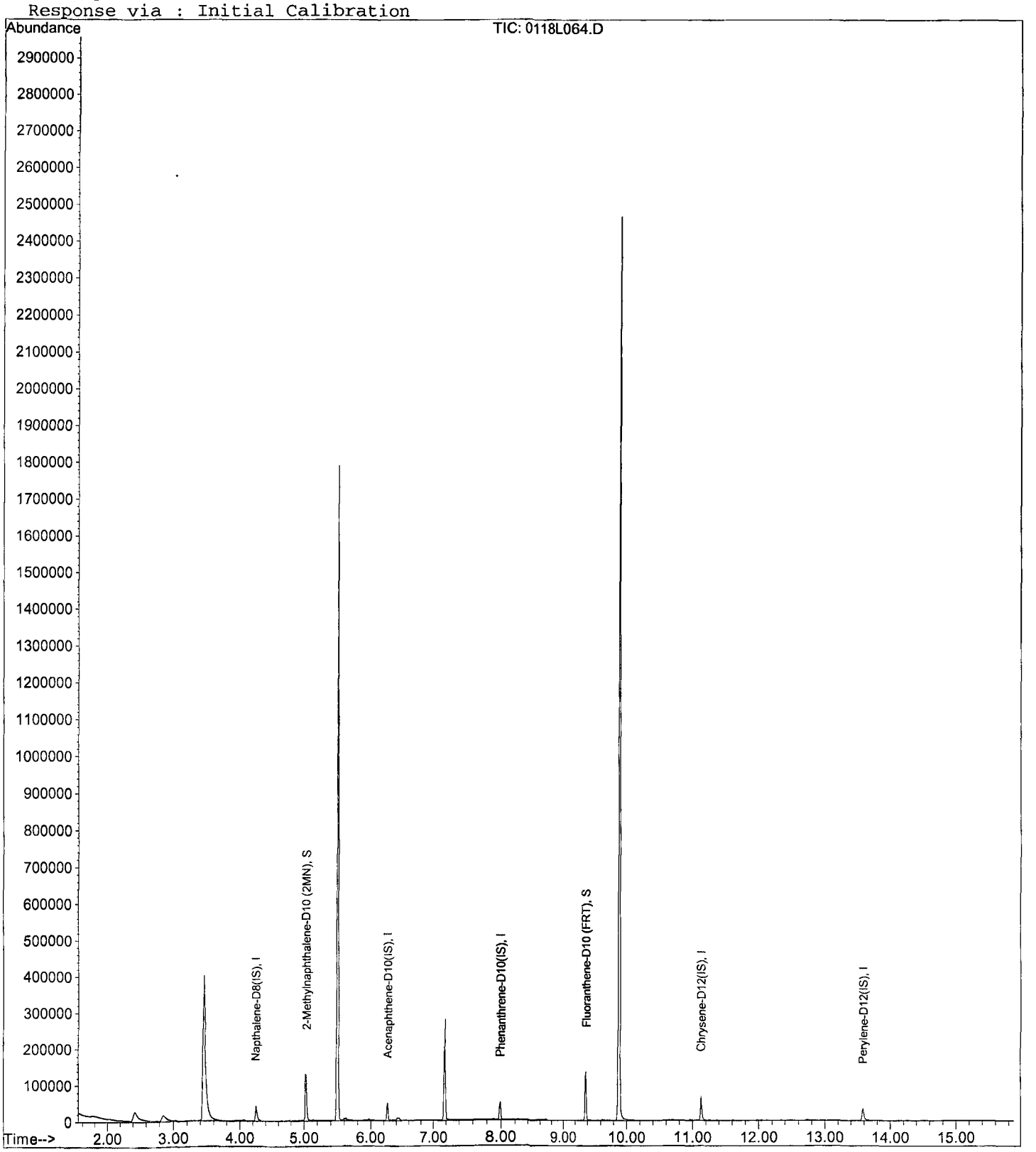
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L064.D Vial: 64
Acq On : 29 Jan 21 11:59 Operator: MA
Sample : 210127A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:32 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L065.D Vial: 65
Acq On : 29 Jan 21 12:21 Operator: MA
Sample : 210127A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:42 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63739	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30228	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	56382	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67746	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.57	264	64507	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	124399	4.54707	ppb		0.00
Spiked Amount 5.000			Recovery	= 90.940%			
13) Fluoranthene-D10 (FRT)	9.37	212	144292	4.73471	ppb		0.00
Spiked Amount 5.000			Recovery	= 94.700%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	114960	4.43282	ppb		100
4) 2-Methylnaphthalene	5.06	142	72710	4.47838	ppb		98
5) 1-Methylnaphthalene	5.17	142	72580	4.48741	ppb		96
7) Acenaphthylene	6.08	152	223841	4.55297	ppb		99
8) Acenaphthene	6.29	154	63141	4.39613	ppb		97
9) Fluorene	6.89	166	78708	4.69946	ppb		98
11) Phenanthrene	8.00	178	117704	4.50432	ppb		100
12) Anthracene	8.06	178	97063	4.14308	ppb		99
14) Fluoranthene	9.39	202	164953	4.76166	ppb		100
16) Pyrene	9.65	202	169391	4.59139	ppb		99
17) Benz (a) anthracene	11.11	228	135863	4.35849	ppb		100
18) Chrysene	11.15	228	148757	4.47844	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.06	276	140032	4.75745	ppb		97
21) Benzo (b) fluoranthene	12.94	252	132375	5.23920	ppb		99
22) Benzo (k) fluoranthene	12.99	252	153094	4.68537	ppb		98
23) Benzo (a) pyrene	13.48	252	116684	4.78934	ppb		97
24) Dibenz (a,h) anthracene	15.11	278	116081	5.08276	ppb		98
25) Benzo (g,h,i) perylene	15.44	276	124720	4.78931	ppb	#	90

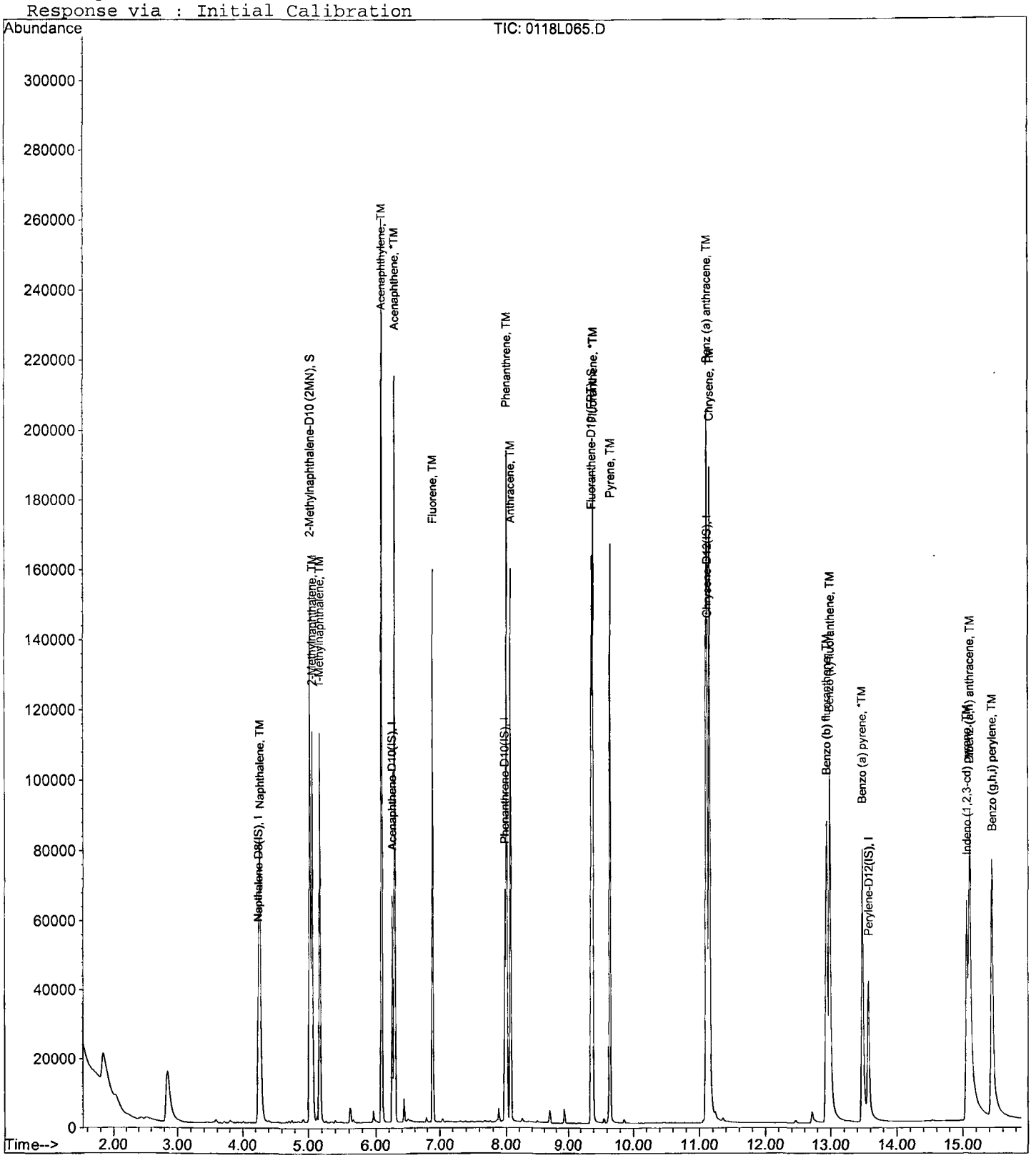
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L065.D Vial: 65
Acq On : 29 Jan 21 12:21 Operator: MA
Sample : 210127A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 12:42 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L066.D Vial: 66
Acq On : 29 Jan 21 12:43 Operator: MA
Sample : 210127A LCSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 13:33 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65009	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	30353	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	56624	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	68934	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	65419	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	130002	4.65904 ppb	0.00
Spiked Amount 5.000			Recovery	= 93.180%	
13) Fluoranthene-D10 (FRT)	9.37	212	154285	5.04098 ppb	0.00
Spiked Amount 5.000			Recovery	= 100.820%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	123031	4.65136 ppb	99
4) 2-Methylnaphthalene	5.06	142	77498	4.68003 ppb	97
5) 1-Methylnaphthalene	5.17	142	77413	4.69271 ppb	95
7) Acenaphthylene	6.08	152	237000	4.80078 ppb	99
8) Acenaphthene	6.29	154	67768	4.69885 ppb	96
9) Fluorene	6.89	166	83312	4.95387 ppb	98
11) Phenanthrene	8.00	178	125540	4.78365 ppb	100
12) Anthracene	8.06	178	107589	4.57275 ppb	99
14) Fluoranthene	9.39	202	176314	5.06786 ppb	100
16) Pyrene	9.65	202	177392	4.72539 ppb	100
17) Benz (a) anthracene	11.11	228	146226	4.61009 ppb	99
18) Chrysene	11.15	228	157784	4.66834 ppb	98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151511	5.05873 ppb	88
21) Benzo (b) fluoranthene	12.93	252	149397	5.83047 ppb	98
22) Benzo (k) fluoranthene	12.99	252	157615	4.75649 ppb	97
23) Benzo (a) pyrene	13.48	252	124215	5.02737 ppb	96
24) Dibenz (a,h) anthracene	15.11	278	125623	5.42388 ppb	96
25) Benzo (g,h,i) perylene	15.43	276	134732	5.10164 ppb	96

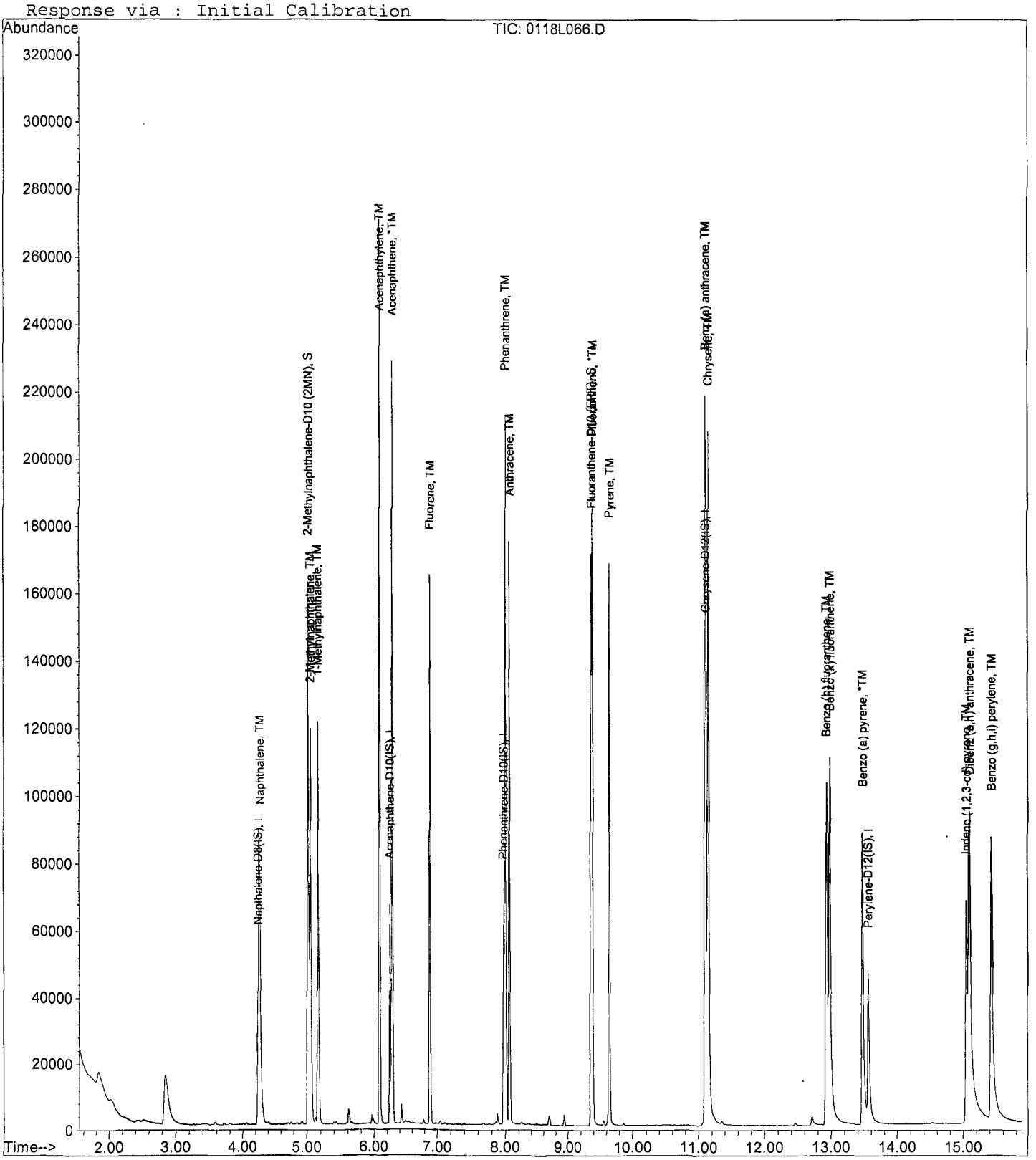
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L066.D Vial: 66
Acq On : 29 Jan 21 12:43 Operator: MA
Sample : 210127A LCSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 29 13:33 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration

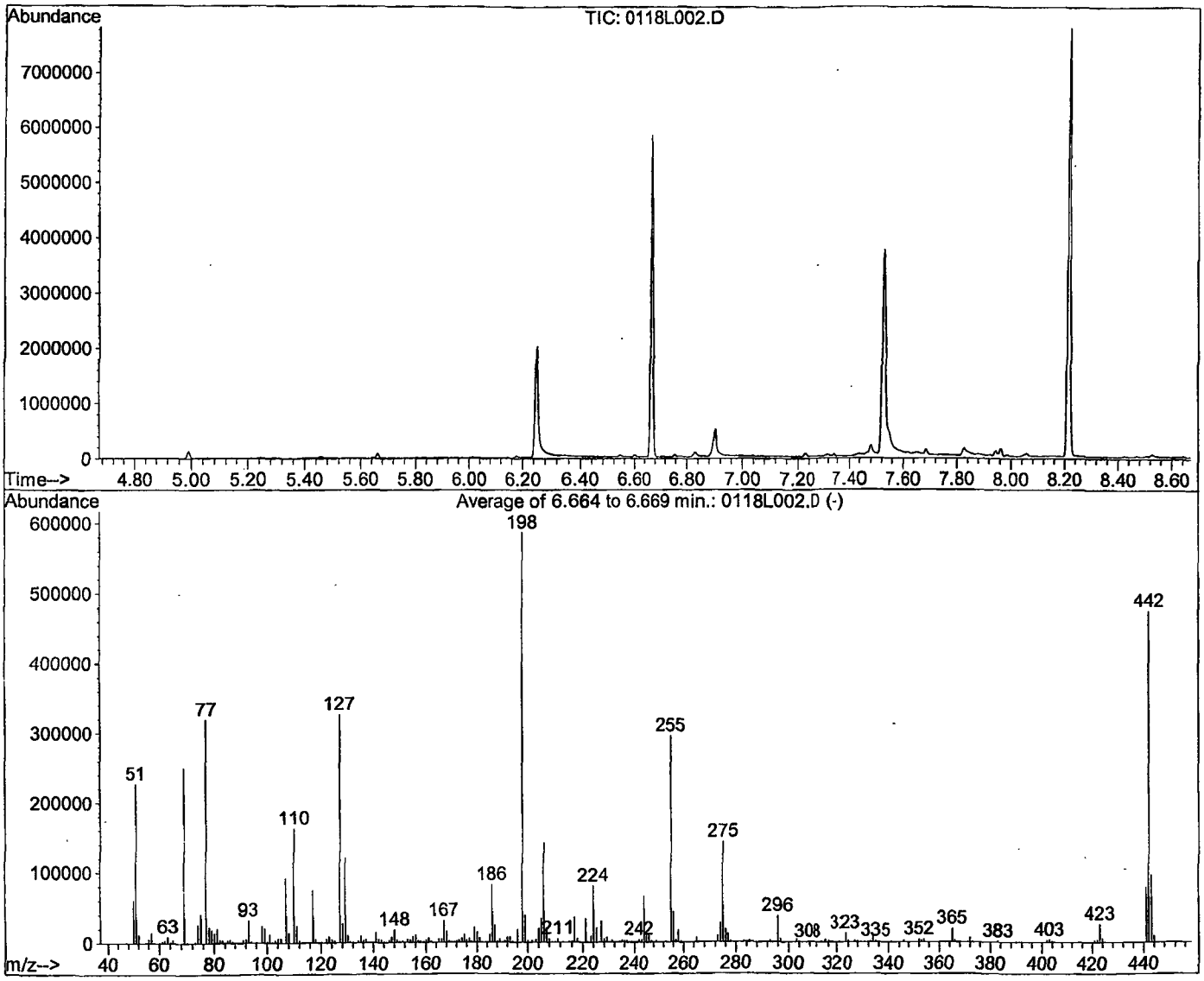


DFTPP

Data File : M:\LINUS\DATA\L210118\0118L002.D
Acq On : 18 Jan 21 11:17
Sample : SV Tune 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

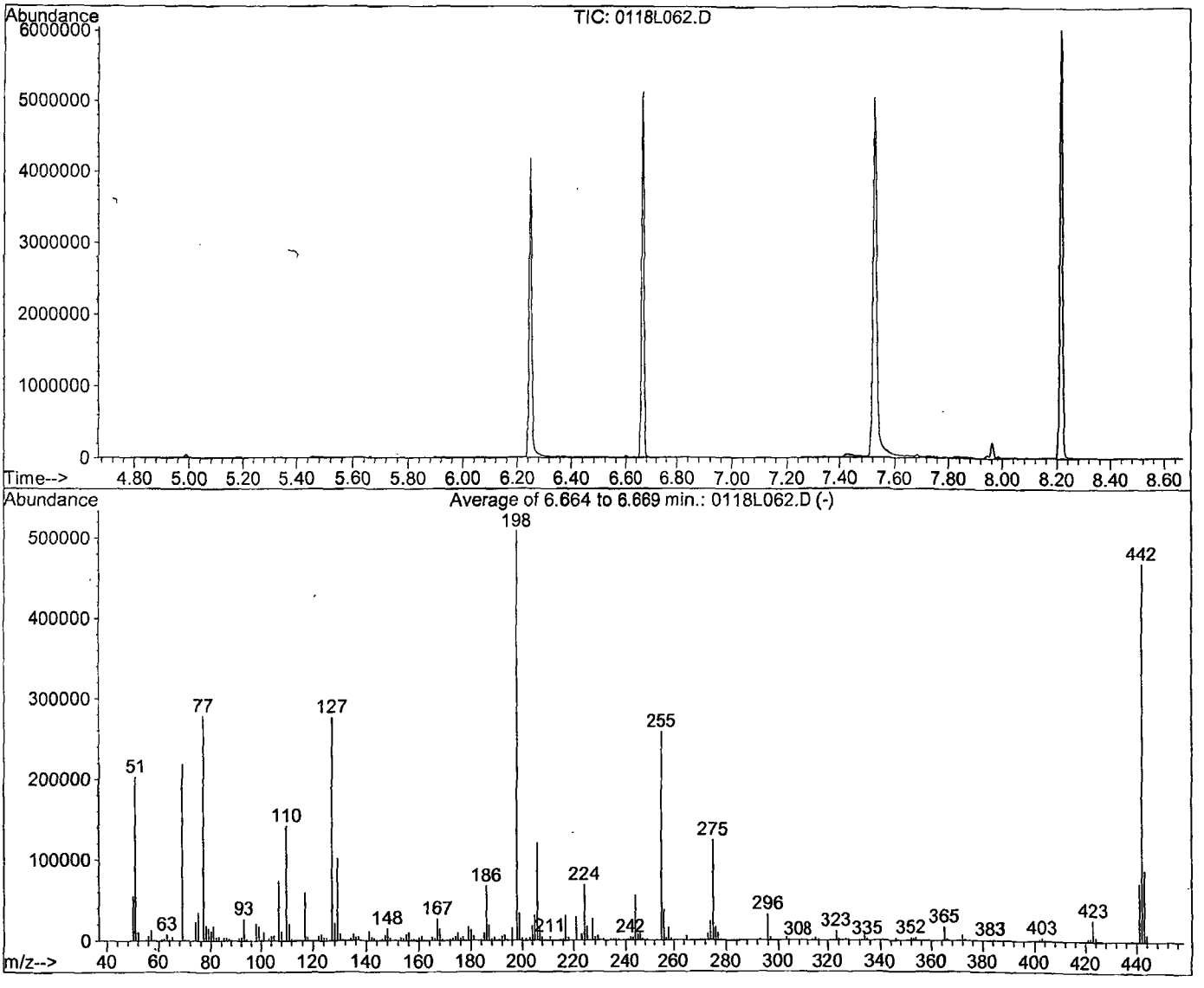
#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

Breakdown **1.63**

DFTPP

Data File : M:\LINUS\DATA\L210118\0118L062.D Vial: 62
Acq On : 29 Jan 21 10:24 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1630

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.9	202929	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1256	PASS
127	198	10	80	54.5	277120	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	508885	PASS
199	198	5	9	6.7	33864	PASS
275	198	10	60	24.4	124173	PASS
365	198	1	100	3.3	16987	PASS
441	442	0.01	24	15.5	72867	PASS
442	198	50	500	92.1	468928	PASS
443	442	15	24	19.0	89221	PASS

Data File Name:	**0118L062.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**29 Jan 2021 10:24**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**62**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	42961400
2)	DDD	7.98	1617730
3)	DDE	7.69	165220

Breakdown **3.98**

Name of Final Standard	**SIM Spike**
Prep Date	**09/11/20**
Exp Date	**09/11/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	**CL13121- 41545 41546 41547 49548**	**12/31/22**	5 mL	25 mL	**Acetone 0246130**	40 ug/mL

Name of Final Standard	SIM Surrogate	Prep'd By (Initials)	LS
Prep Date	11/30/20		
Exp Date	11/30/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-50257, 50258, 50259 A0161454-50790, 50794	10/31/2025 5/31/26	5mL	100 mL	Acetone #246130	100 ug/mL

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	PAH SIM Stock (Ampule)
Prep Date	08/20/20
Exp Date	08/20/21

Prep'd By (I MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**	**Prep'd By**	**MA**
Prep Date	**01/14/21**		
Exp Date	**01/14/22**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	08/11/20
Exp Date	04/01/21

Prep'd By (Initials) CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**	**Prep'd By (Initials)**	**CD**
Prep Date	**06/19/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210127A	Extraction Method	LIQ003	Units	mL
Spiked ID 1	8270T Spike 1-7-21 1-7-22			Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21		
Spiked ID 2	Sim Spike 9-11-20 9-11-21			Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21		
Spiked ID 3				Surrogate ID 3			
Spiked ID 4				Surrogate ID 4			
Spiked ID 5				Surrogate ID 5			
Spiked ID 6				Sufficient Vol for Matrix QC:	NO		
Spiked ID 7				Ext. Start Time:	01/27/21 14:00		
Spiked ID 8				Ext. End Time:	01/28/21 8:00		

GC Requires Extract By:				
pH1	2	01/27/21 13:40	Water Bath Temp 1 °C	70/68 E-WB6 °C
pH2	14	01/28/21 10:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** DL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127A Blk				0.2,0.05	1,2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP28 E-WB6				
2	210127A LCS-1		1	1	0.2	1	1000	1	2/1	01/27/21 13:30	
						equip	E-HP29 E-WB6				
3	210127A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP16 E-WB6				
4	210127A LCSD-1		1	1	0.2	1	1000	1	2/1	01/27/21 13:30	
						equip	E-HP30 E-WB6				
5	210127A LCSD-2		0.125	2	0.05	2	1000	1	2/1	01/27/21 13:30	
						equip	E-HP15 E-WB6				
6	BA25706	BA25706W10			0.2,0.05	1,2	1000	1	2/1	01/27/21 13:30	94863
						equip	E-HP12 E-WB6				
7	BA25867	BA25867W12			0.2,0.05	1,2	800	1	2/1	01/27/21 13:30	94883
						equip	E-HP14 E-WB6				
8	BA25870	BA25870W12			0.2,0.05	1,2	1050	1	2/1	01/27/21 13:30	94883
						equip	E-HP13 E-WB6				

Solvent and Lot#	
PH Strips	HC025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-3-21
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	DL
GC analyst's initials	MA
Date	1/29/21
Time	10:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL,KY
Extraction	DL,YL
Concentration	DL

Modified	01/30/21 7:03:00 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
2	3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
3	4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
4	5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
5	6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
6	7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
7	8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
8	9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
9	10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
10	11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
11	62	0118L062.D	1	SV TUNE 10/02/20		29 Jan 21 10:24
12	63	0118L063.D	1	5 SIM 01/15/21		29 Jan 21 10:40
13	64	0118L064.D	1	210127A BLK 1/1000		29 Jan 21 11:59
14	65	0118L065.D	1	210127A LCS-2 1/1000		29 Jan 21 12:21
15	66	0118L066.D	1	210127A LCSD-2 1/1000		29 Jan 21 12:43
16	67	0118L067.D	1.25	BA25867W12 1/800		29 Jan 21 13:05
17	68	0118L068.D	0.952381	BA25870W12 1/1050		29 Jan 21 13:27
18	69	0118L069.D	1	5 SIM 08/21/20		29 Jan 21 13:49

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO
Initials:

			0125K004 D	0125K005 D	0125K006 D	0125K007 D	0125K003 D	0125K008 D	0125K009 D	0125K010 D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
4																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

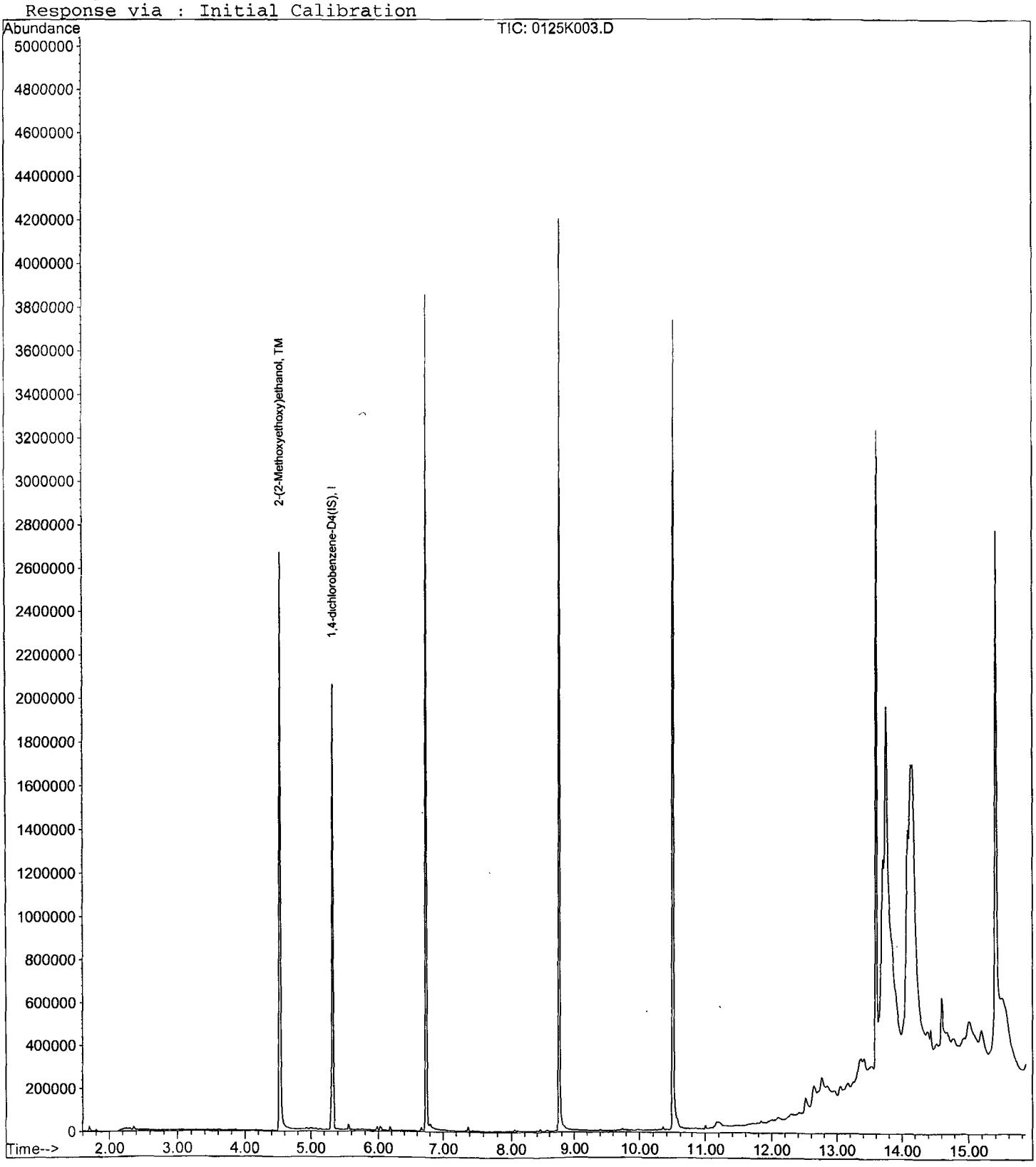
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

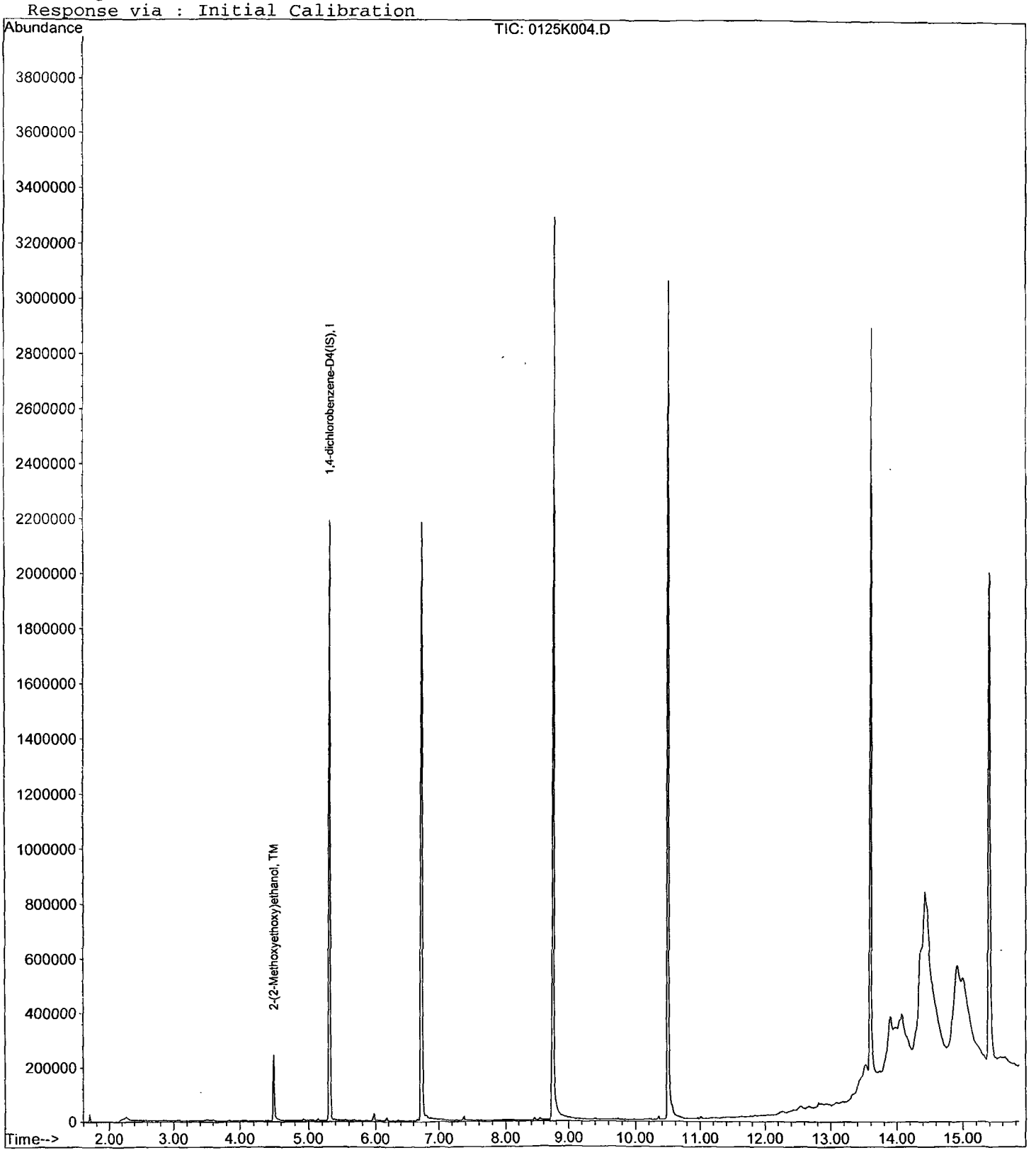
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

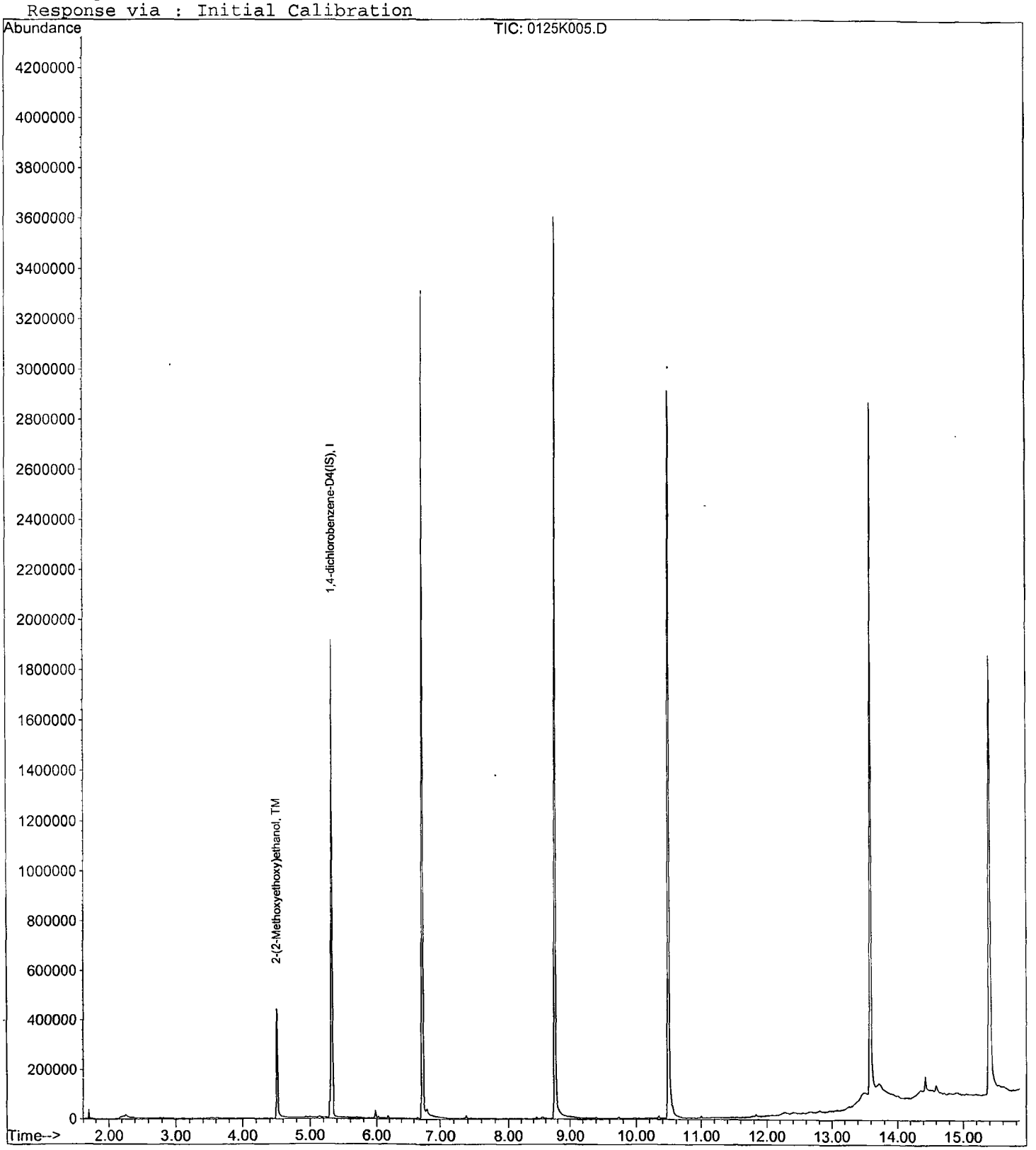
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

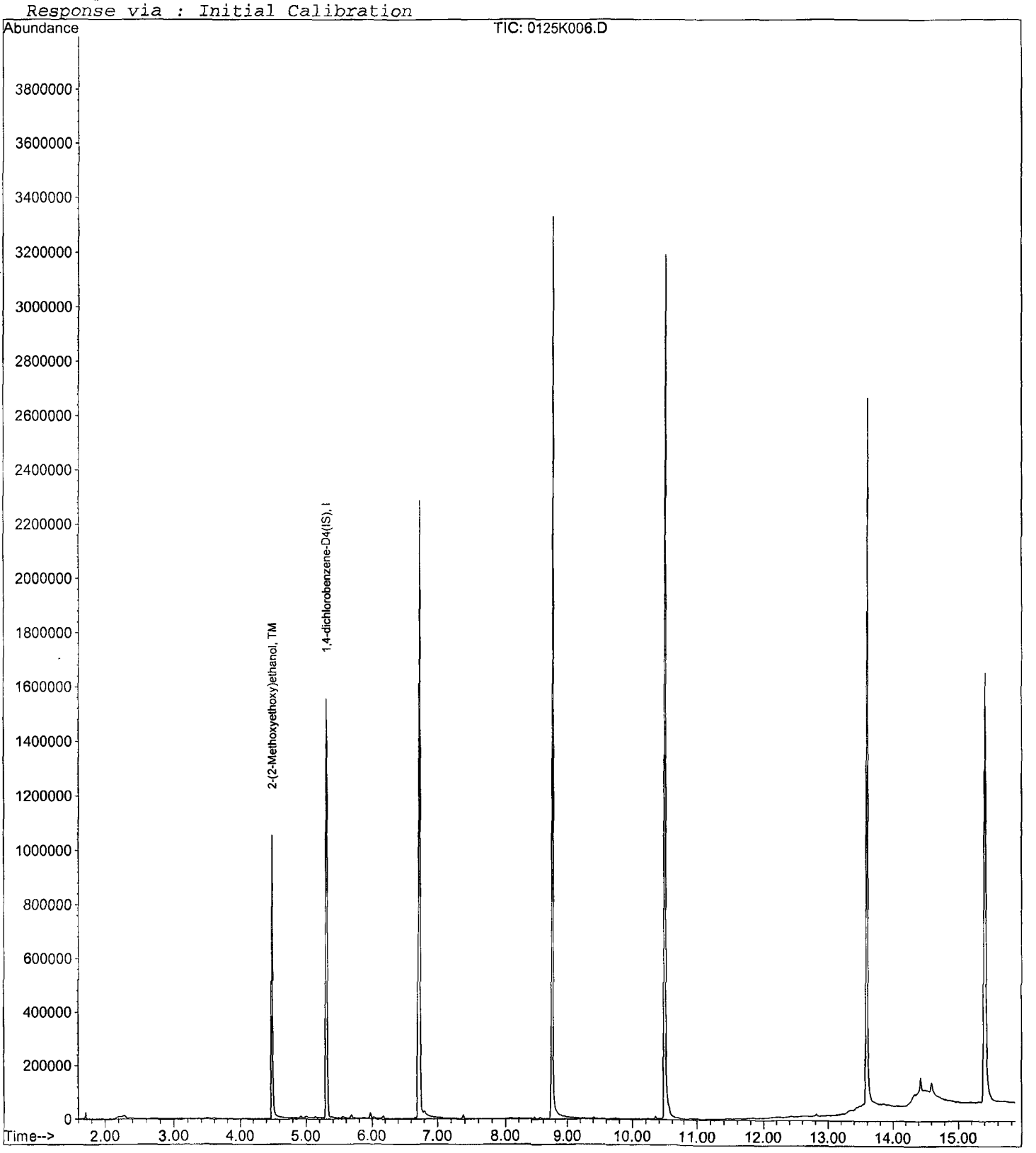
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

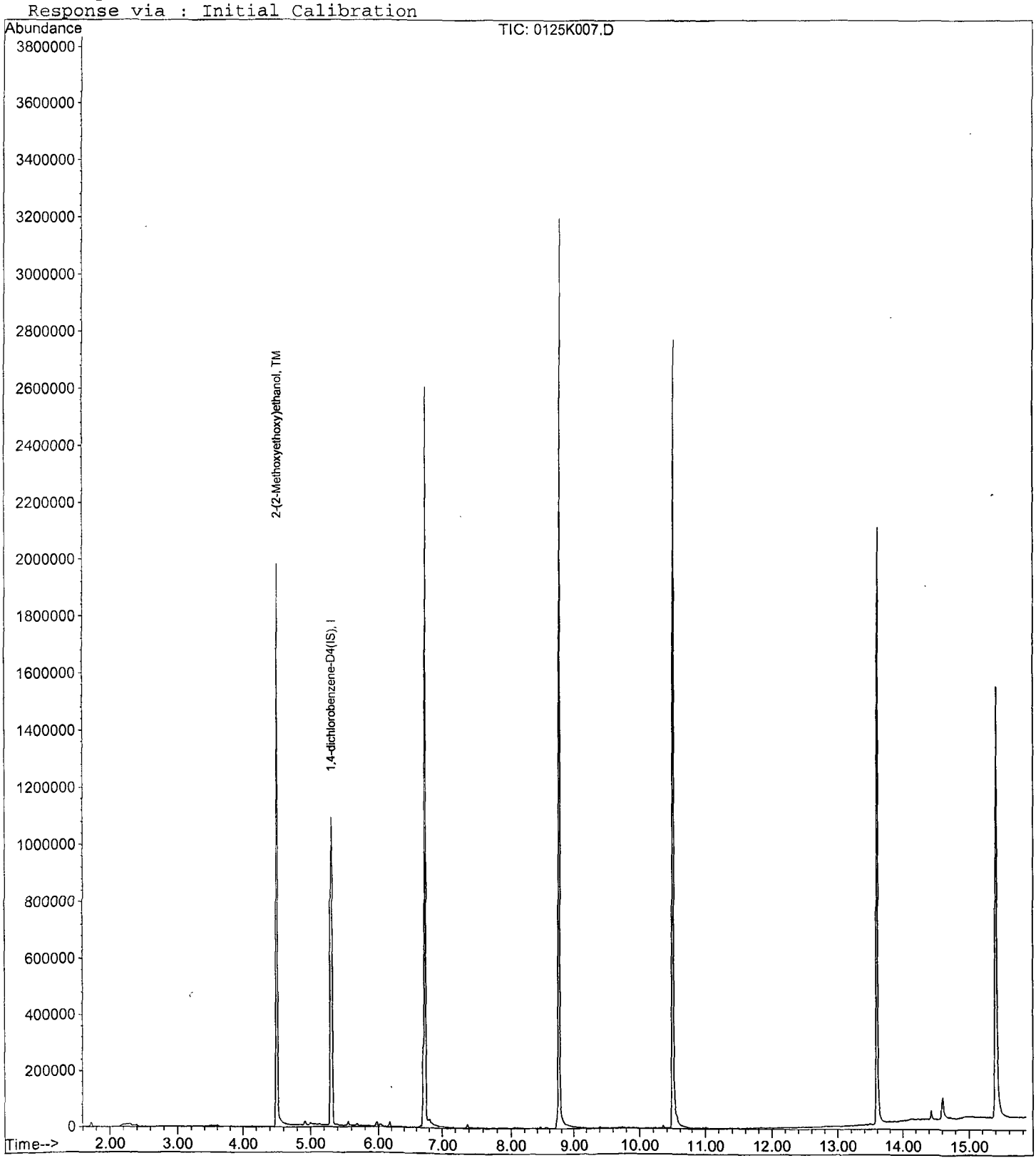
(#) = qualifier out of range (m) = manual integration
0125K007.D KMEE0125.M Tue Jan 26 10:36:40 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

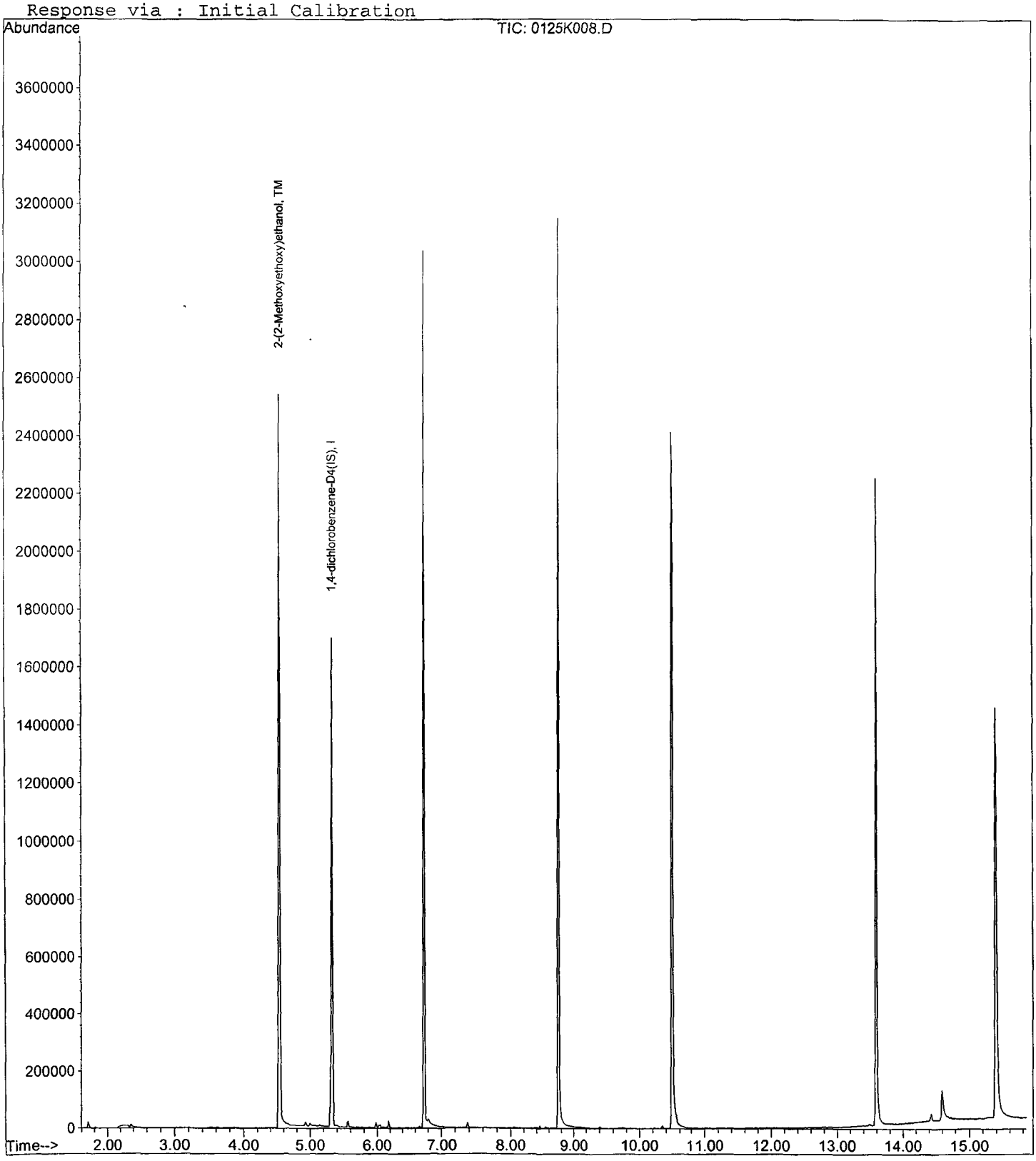
(#) = qualifier out of range (m) = manual integration
0125K008.D KMEE0125.M Tue Jan 26 10:36:44 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

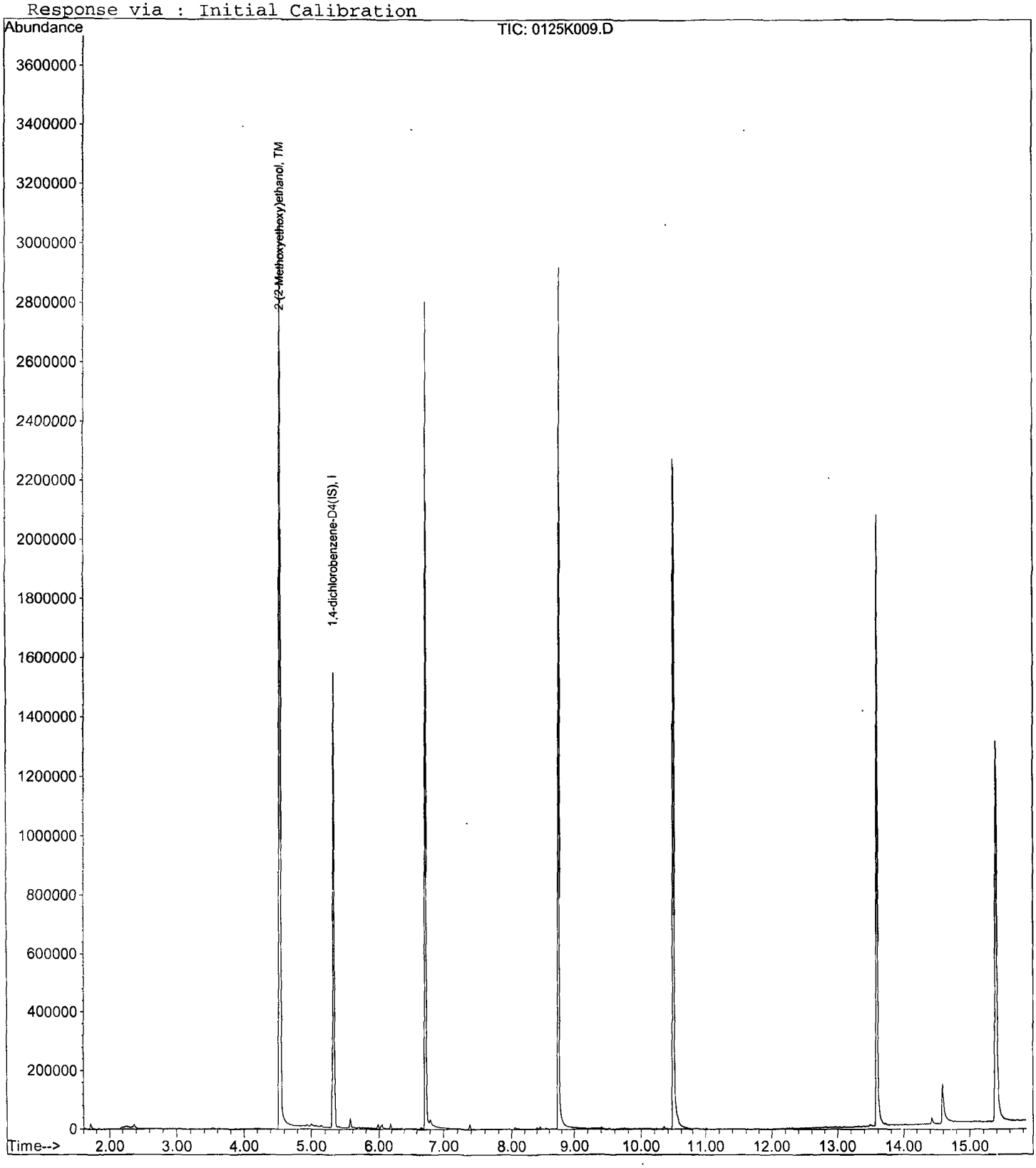
(#) = qualifier out of range (m) = manual integration
0125K009.D KMEE0125.M Tue Jan 26 10:36:48 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

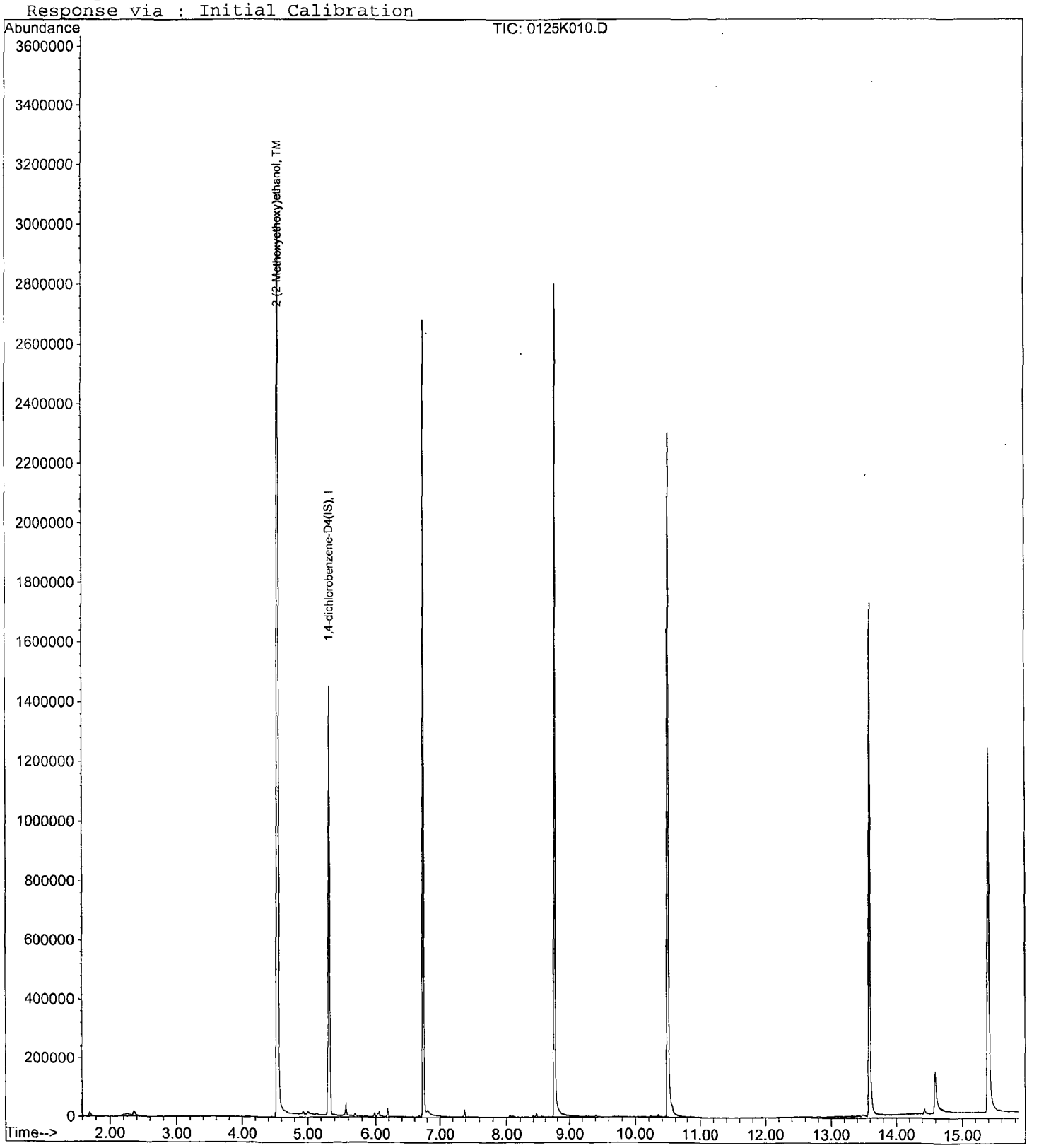
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

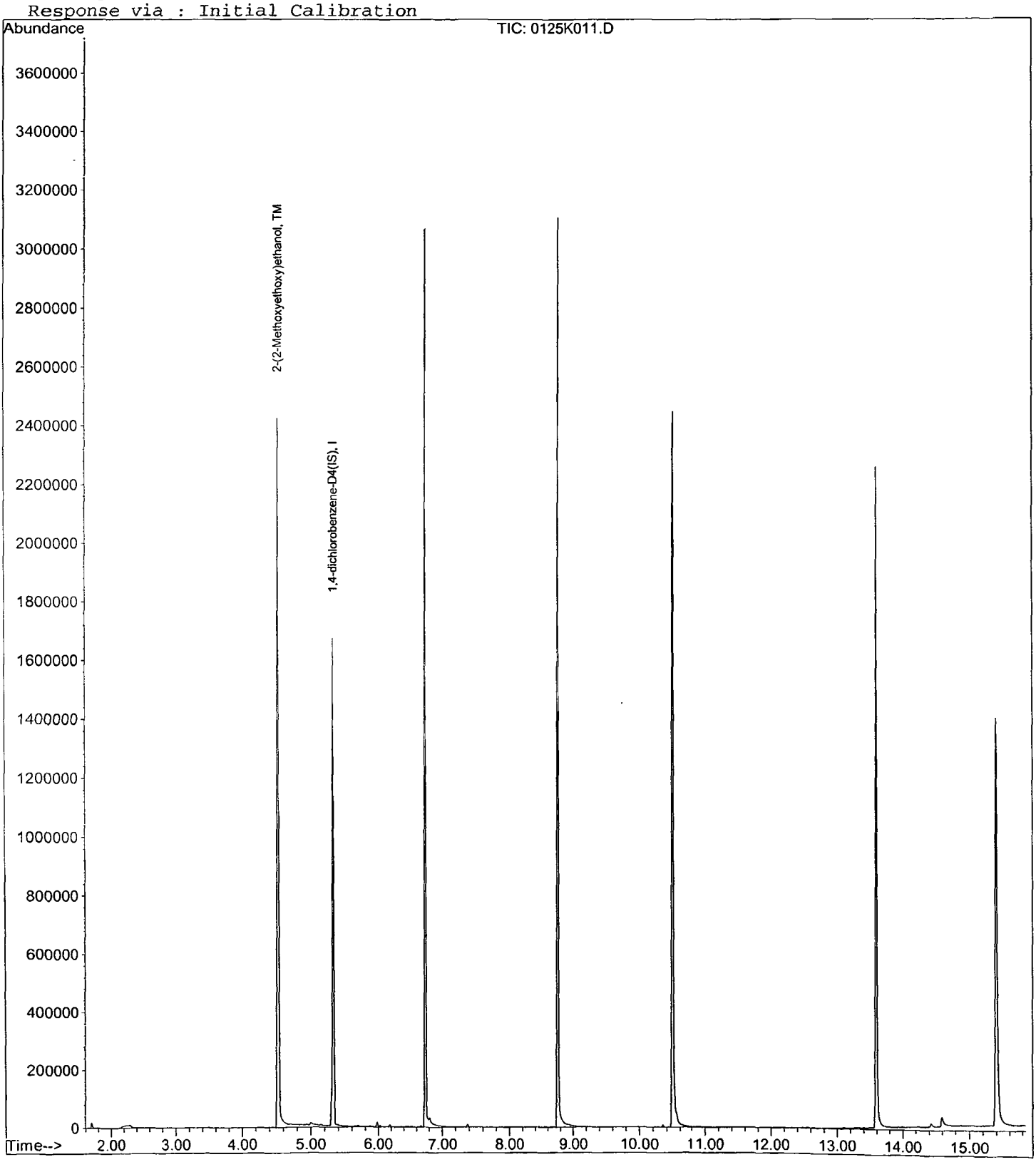
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K032.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2515	2.2	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			2.2		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K032.D Vial: 32
Acq On : 28 Jan 21 12:46 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	207359	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.56	45	651775	488.90855	ppb	94

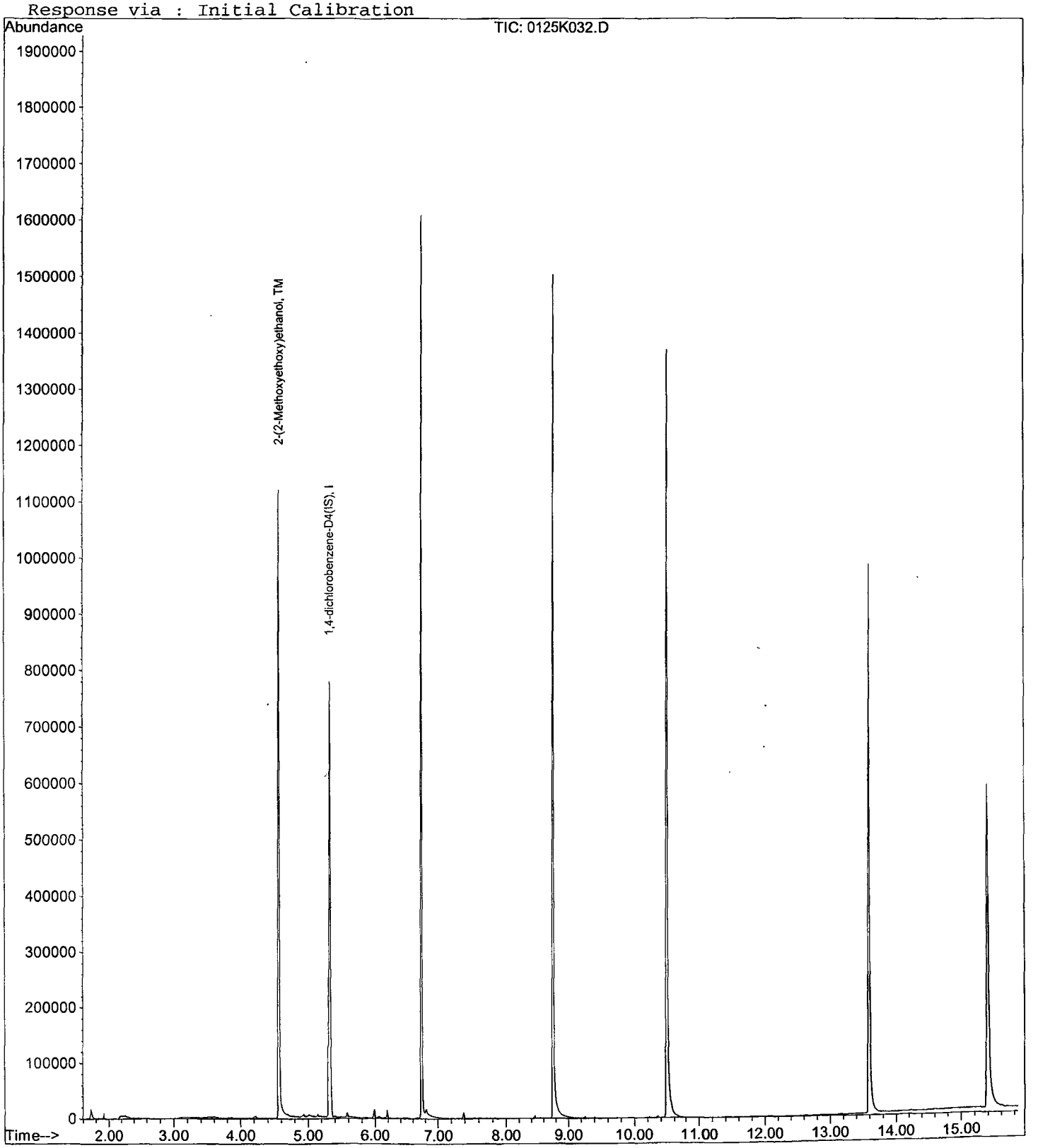
(#) = qualifier out of range (m) = manual integration
0125K032.D KMEE0125.M Thu Jan 28 14:15:59 2021

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K032.D Vial: 32
Acq On : 28 Jan 21 12:46 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 13:04 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/28/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K047.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2301	11	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K047.D Vial: 47
Acq On : 28 Jan 21 18:20 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	191125	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	549740	447.39658	ppb	100

(#) = qualifier out of range (m) = manual integration
0125K047.D KMEE0125.M Fri Jan 29 09:50:33 2021

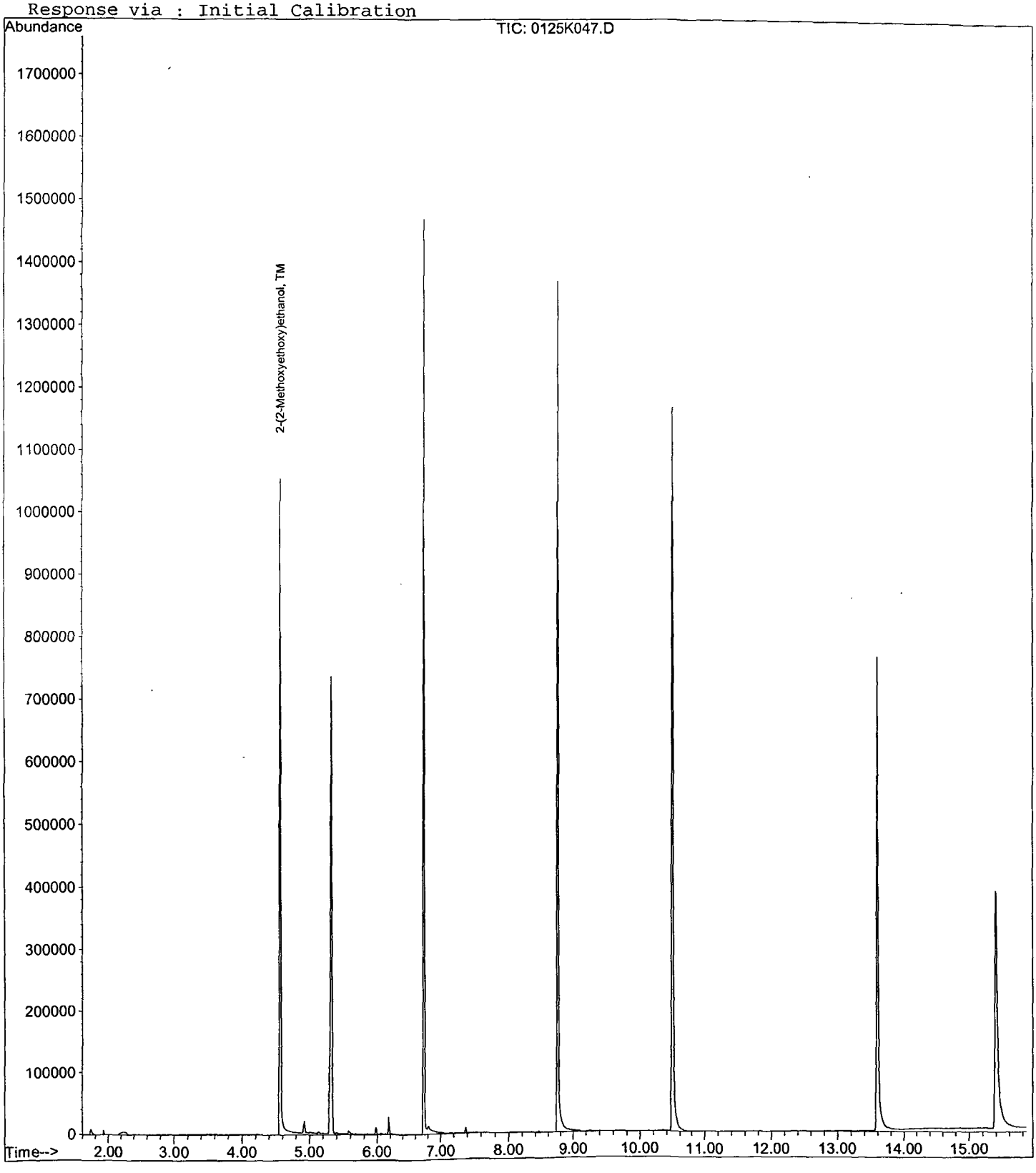
Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K047.D
Acq On : 28 Jan 21 18:20
Sample : 2 MEE 500 1/26/21 (1)
Misc :

Vial: 47
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K045.D Vial: 45
Acq On : 28 Jan 21 17:38 Operator:
Sample : BA25867W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:49 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	170863	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

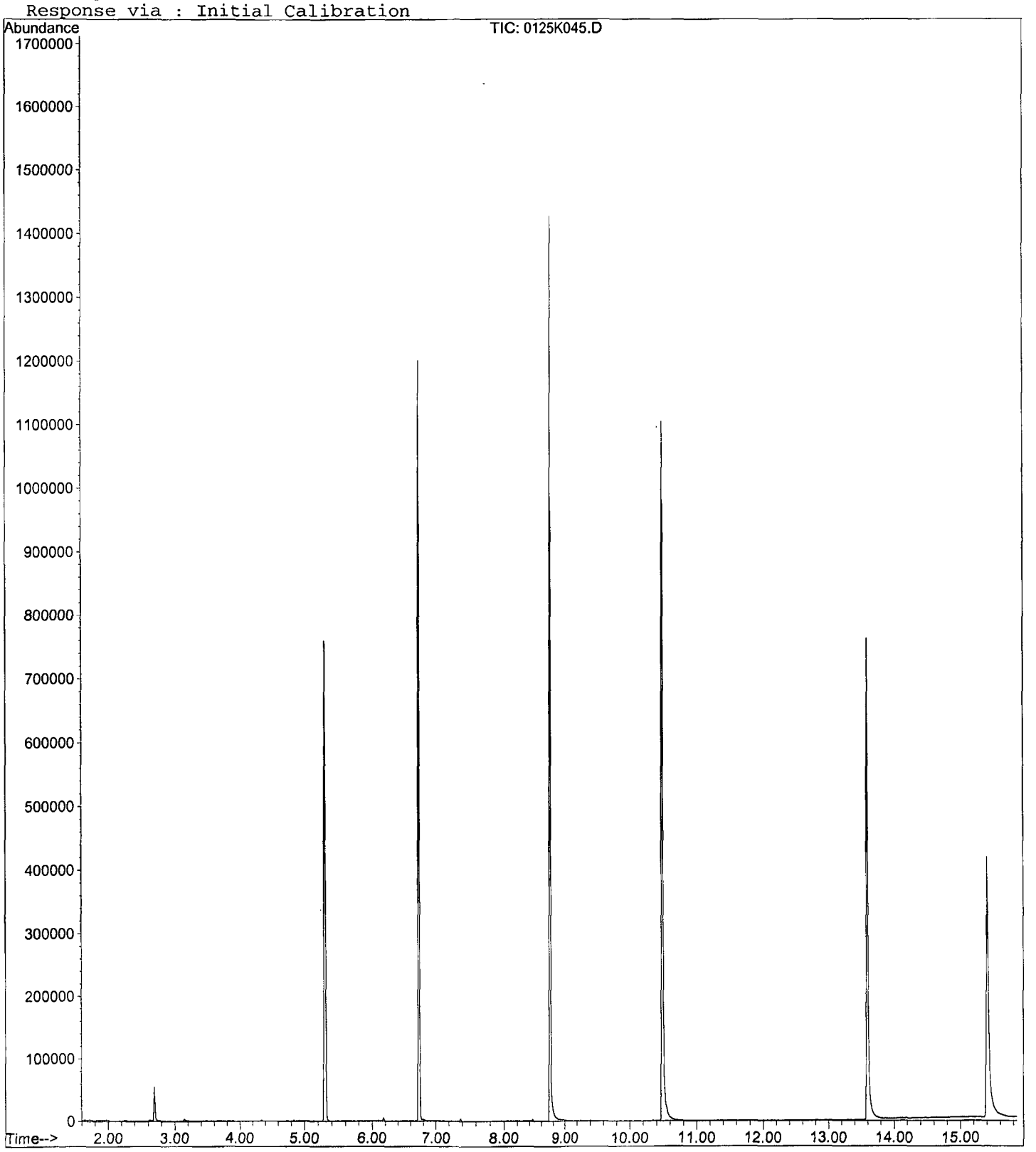
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K045.D Vial: 45
Acq On : 28 Jan 21 17:38 Operator:
Sample : BA25867W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:49 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K046.D Vial: 46
Acq On : 28 Jan 21 17:59 Operator:
Sample : BA25870W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	165507	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

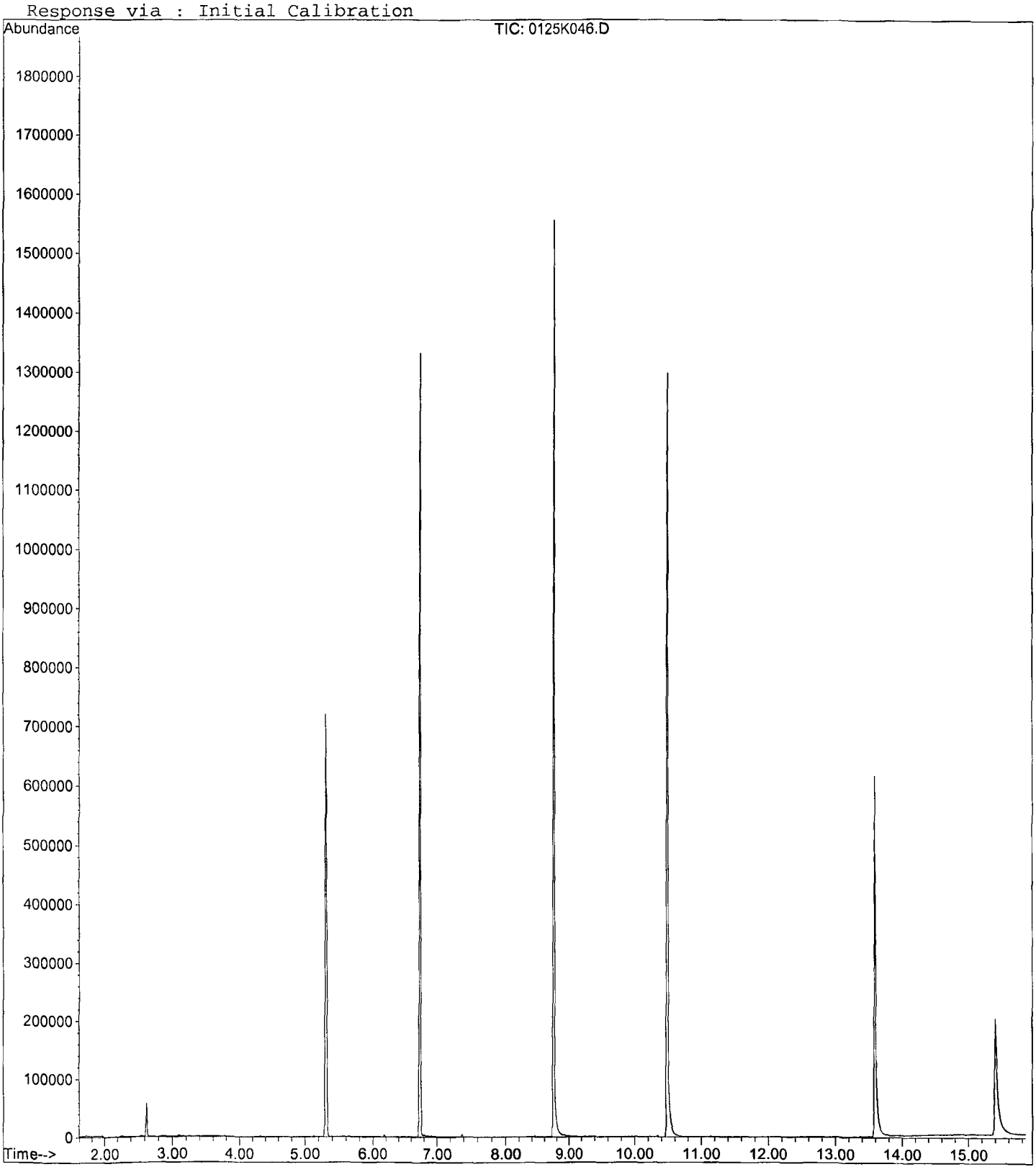
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K046.D Vial: 46
Acq On : 28 Jan 21 17:59 Operator:
Sample : BA25870W10 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 29 9:50 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K035.D Vial: 35
Acq On : 28 Jan 21 13:52 Operator:
Sample : 210127A BLK 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:16 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 12:14:35 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	231854	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds Qvalue

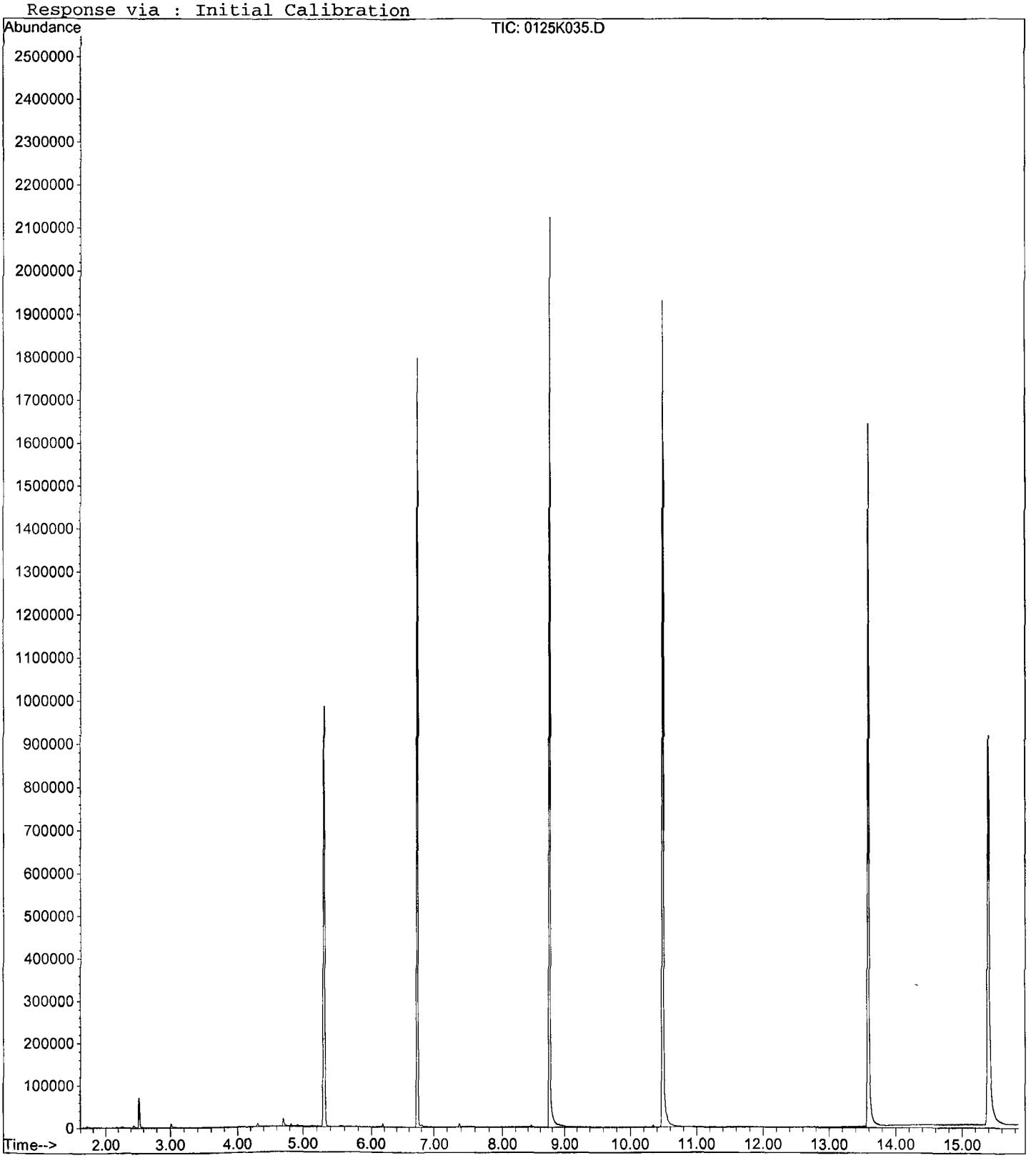
(#) = qualifier out of range (m) = manual integration
0125K035.D KMEE0125.M Fri Jan 29 11:05:00 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K035.D Vial: 35
Acq On : 28 Jan 21 13:52 Operator:
Sample : 210127A BLK 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:16 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K036.D Vial: 36
Acq On : 28 Jan 21 14:13 Operator:
Sample : 210127A LCS-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:47 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	200500	40.00000	ppb	-0.03
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.70	45	115561	89.64988	ppb	100

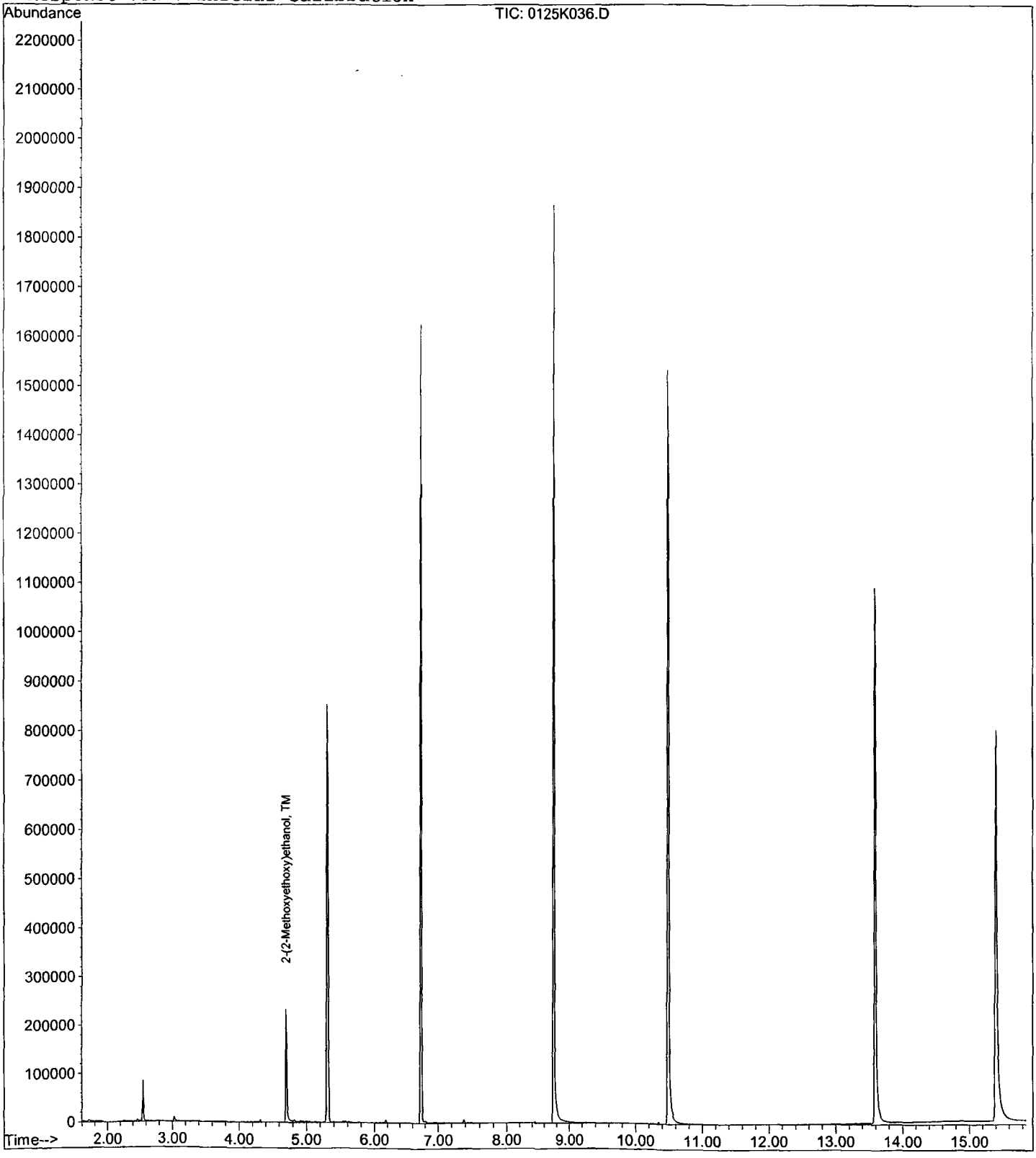
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K036.D Vial: 36
Acq On : 28 Jan 21 14:13 Operator:
Sample : 210127A LCS-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:47 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K037.D Vial: 37
Acq On : 28 Jan 21 14:34 Operator:
Sample : 210127A LCSD-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 28 14:47:04 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	191564	40.00000	ppb	-0.03
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.73	45	104222	84.62493	ppb	97

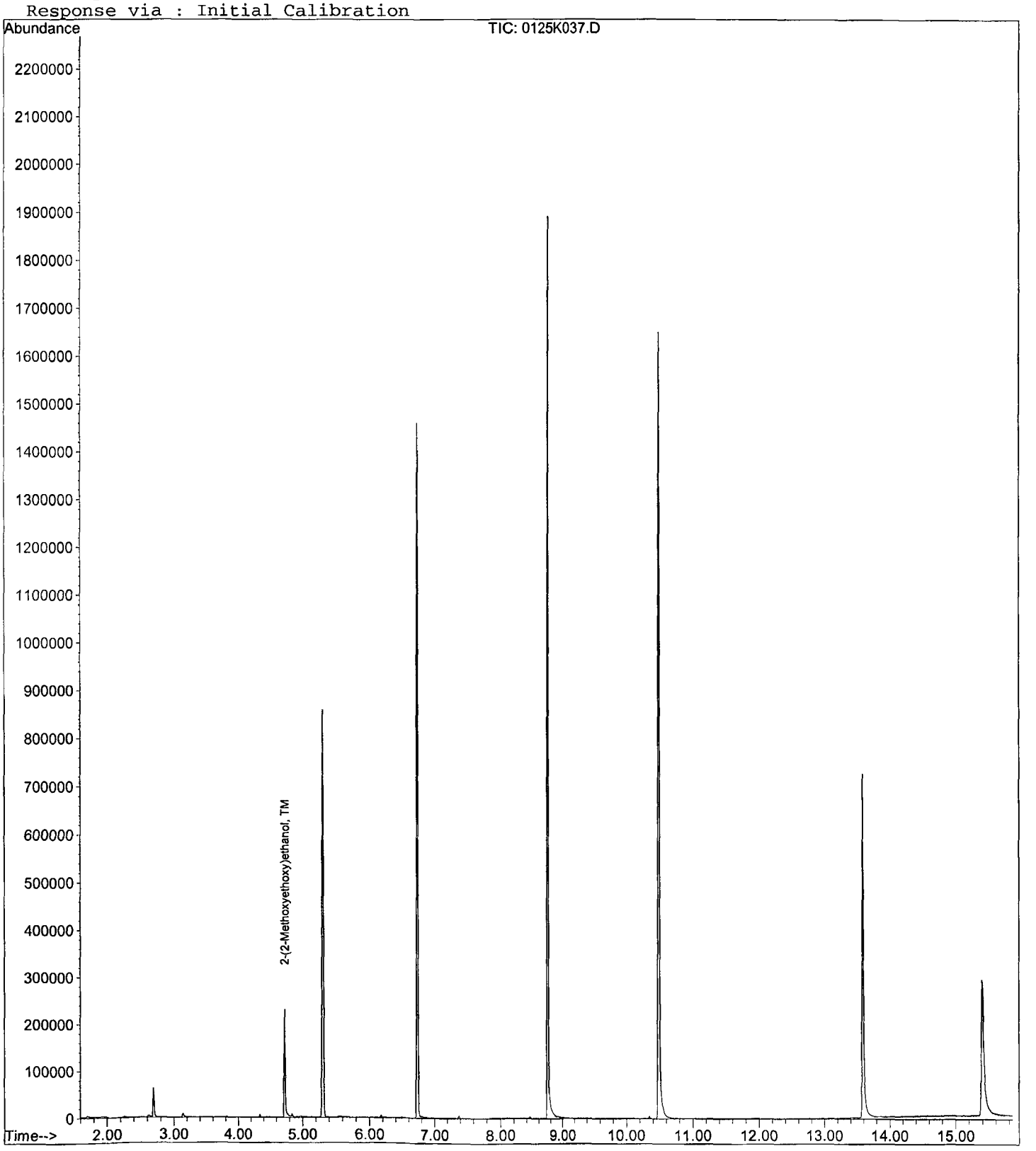
(#) = qualifier out of range (m) = manual integration
0125K037.D KMEE0125.M Fri Jan 29 11:05:10 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K037.D Vial: 37
Acq On : 28 Jan 21 14:34 Operator:
Sample : 210127A LCSD-1 5/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 28 14:54 2021 Quant Results File: KMEE0125.RES

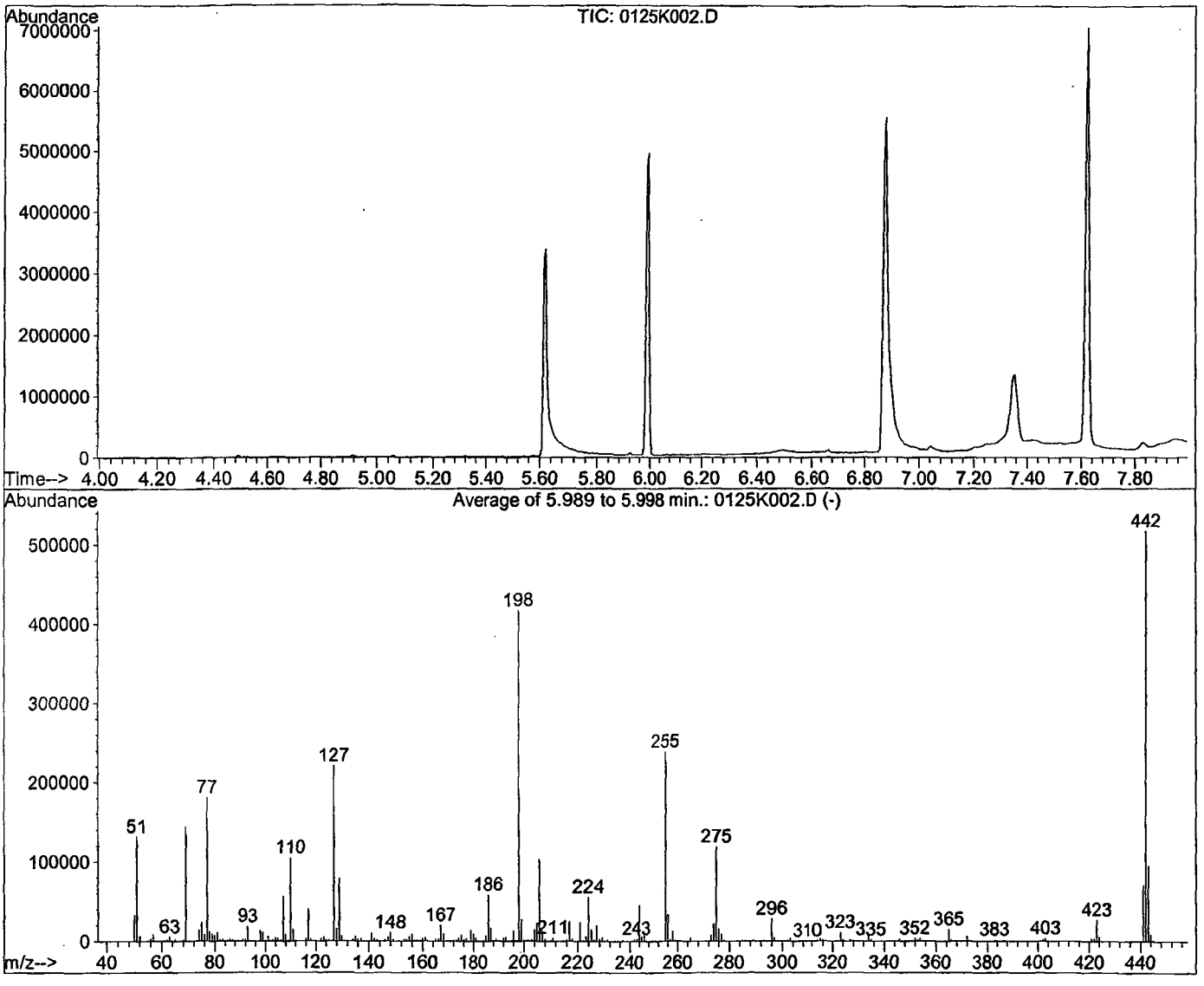
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



DFTPP

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

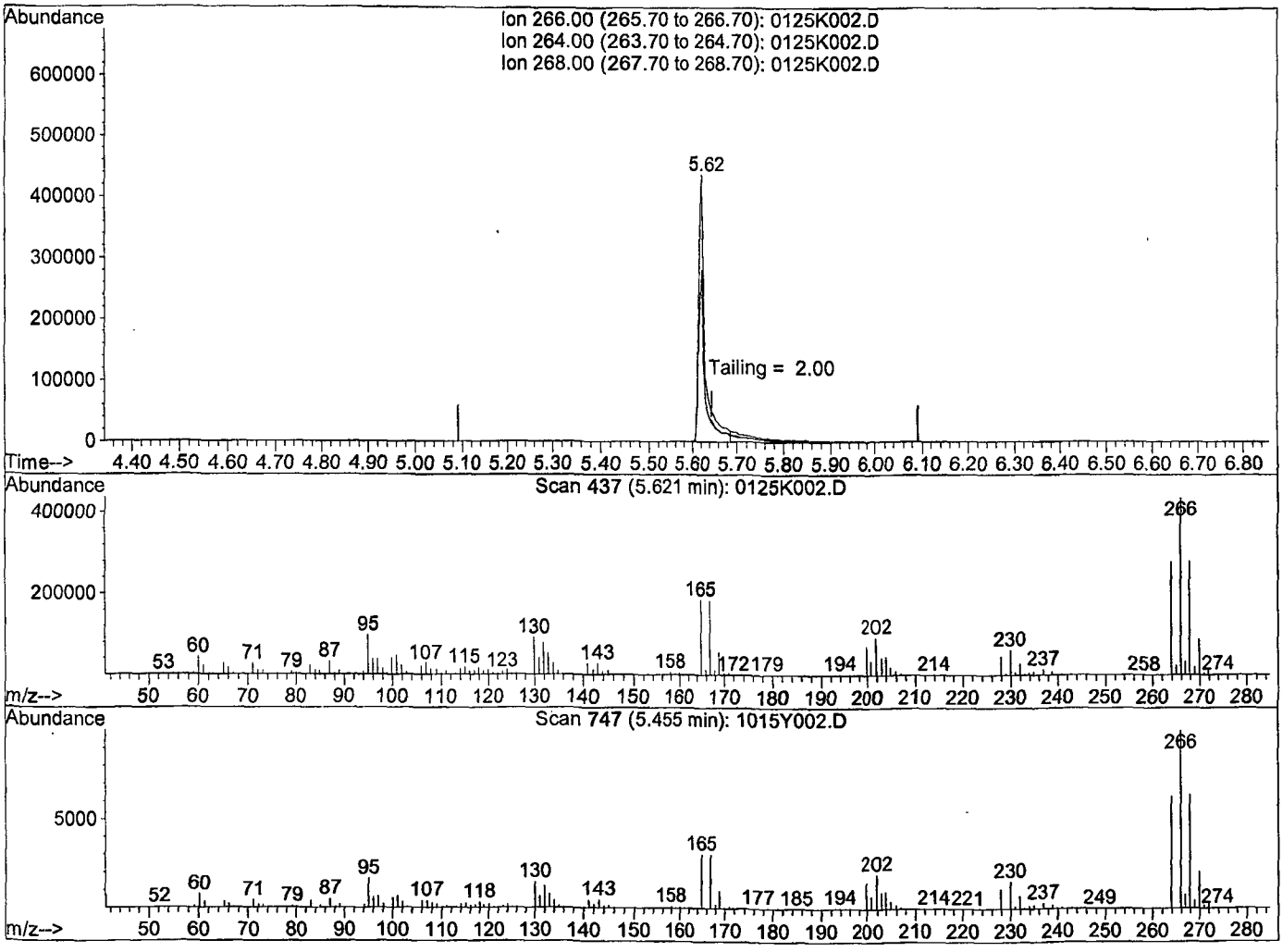
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

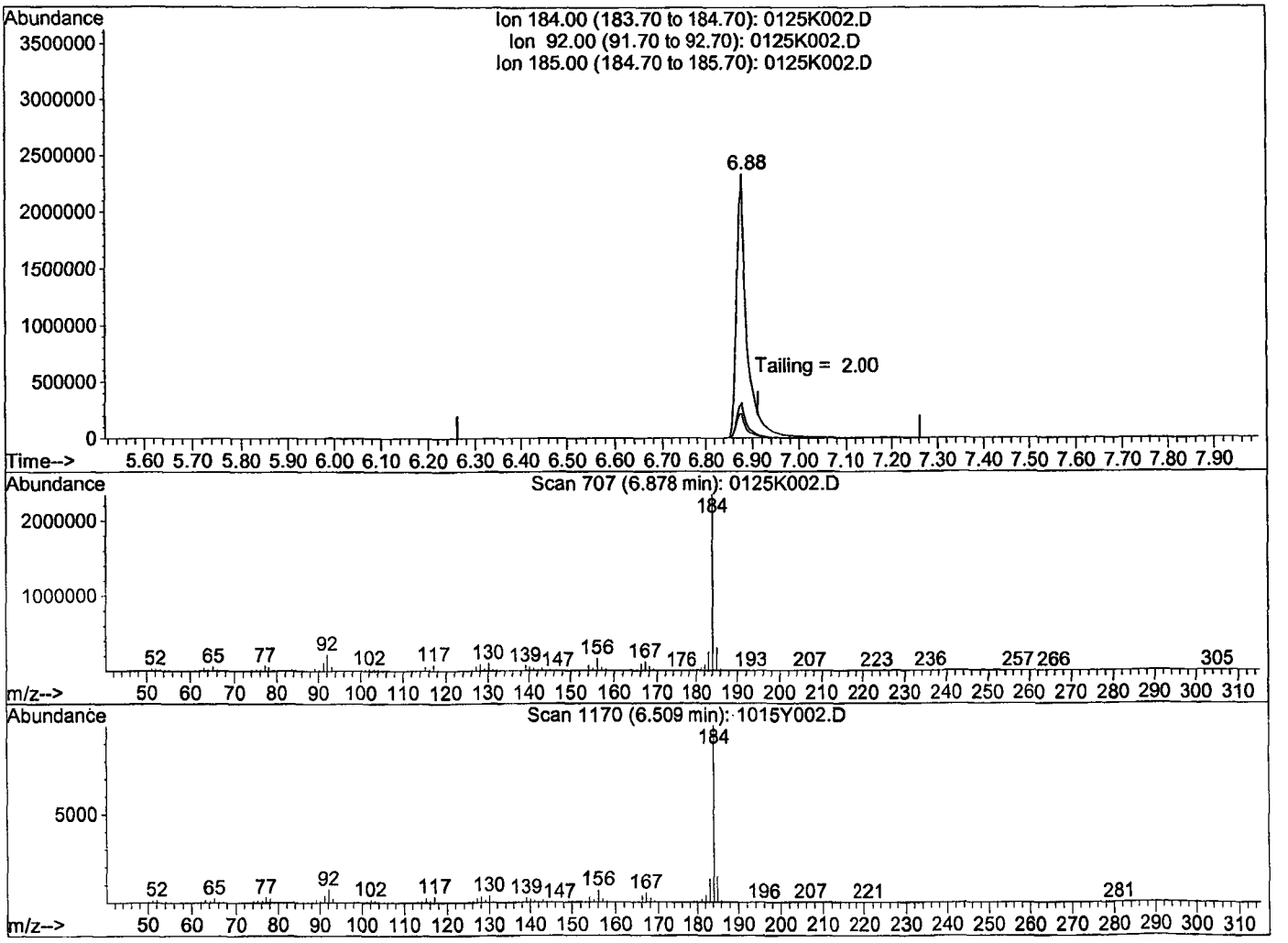
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

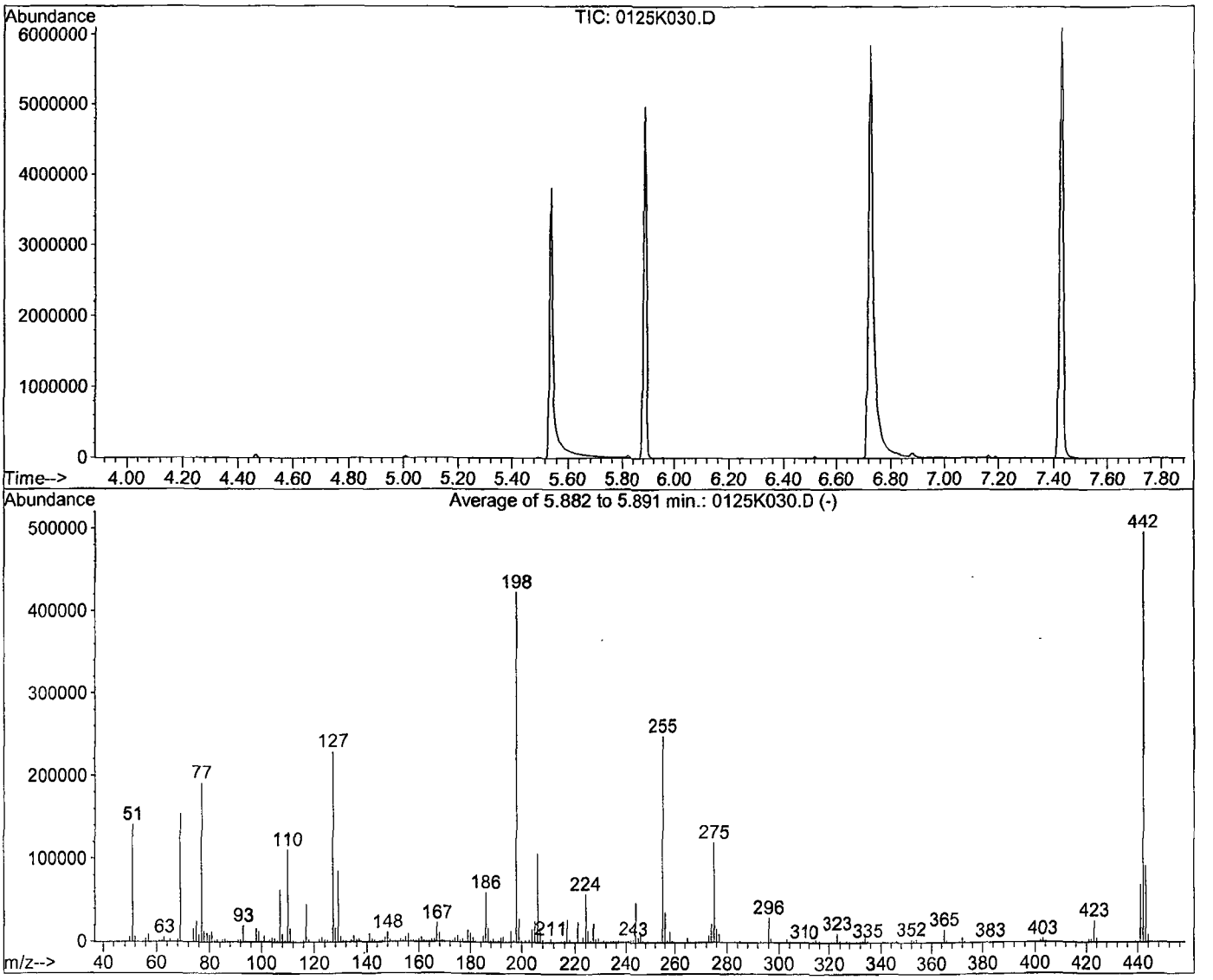
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 493, 494, 495; Background Corrected with Scan 487

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.4	141392	PASS
68	69	0.00	2	1.9	2913	PASS
70	69	0.00	2	0.5	809	PASS
127	198	10	80	54.3	229973	PASS
197	198	0.00	2	0.5	2303	PASS
198	198	100	100	100.0	423317	PASS
199	198	5	9	6.7	28176	PASS
275	198	10	60	28.3	119981	PASS
365	198	1	100	3.6	15196	PASS
441	442	0.01	24	14.0	69381	PASS
442	198	50	500	117.4	497003	PASS
443	442	15	24	18.5	91971	PASS

0125K030.D KMEE0125.M Thu Jan 28 11:54:39 2021

Data File Name:	**0125K030.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**28 Jan 2021 11:40**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**30**
Instrument Name:	**KYLO**

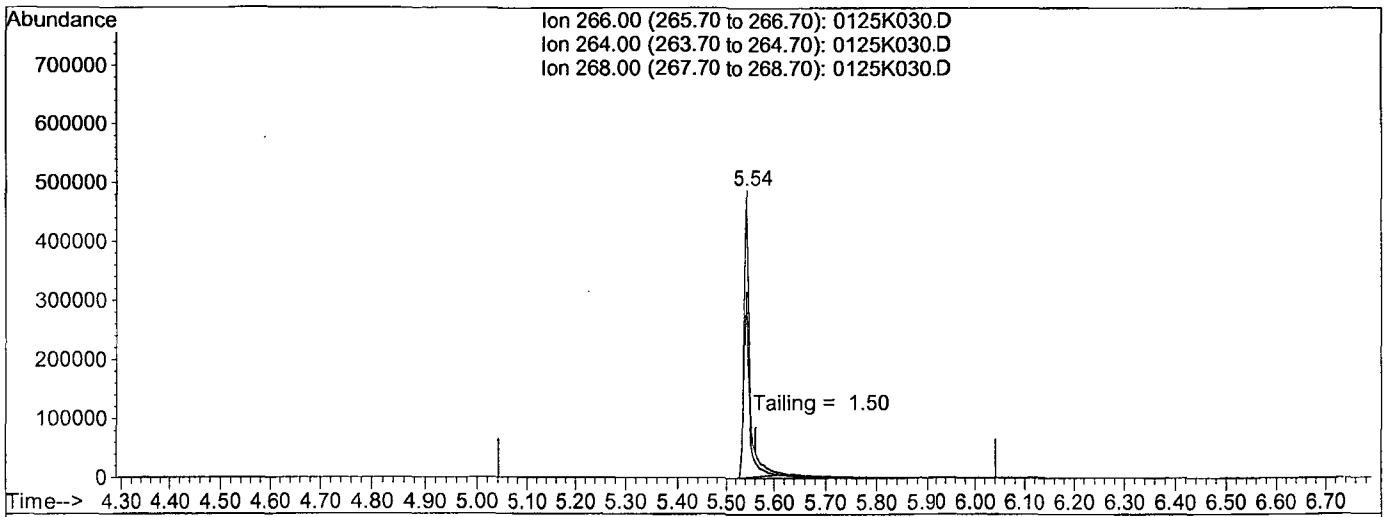
#	Name	Ret Time	Target Response
1)	DDT	7.43	57425700
2)	DDD	7.19	190243
3)	DDE	6.09	0

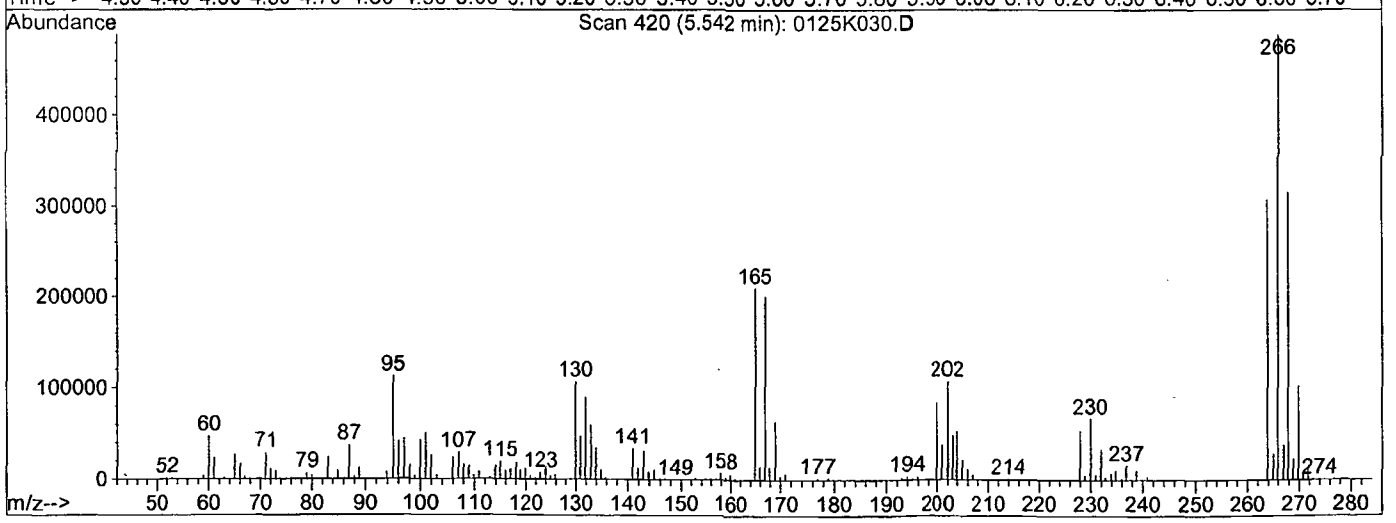
Breakdown **0.33**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:54 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K030.D

(5) Pentachlorophenol

5.54min 0.0000

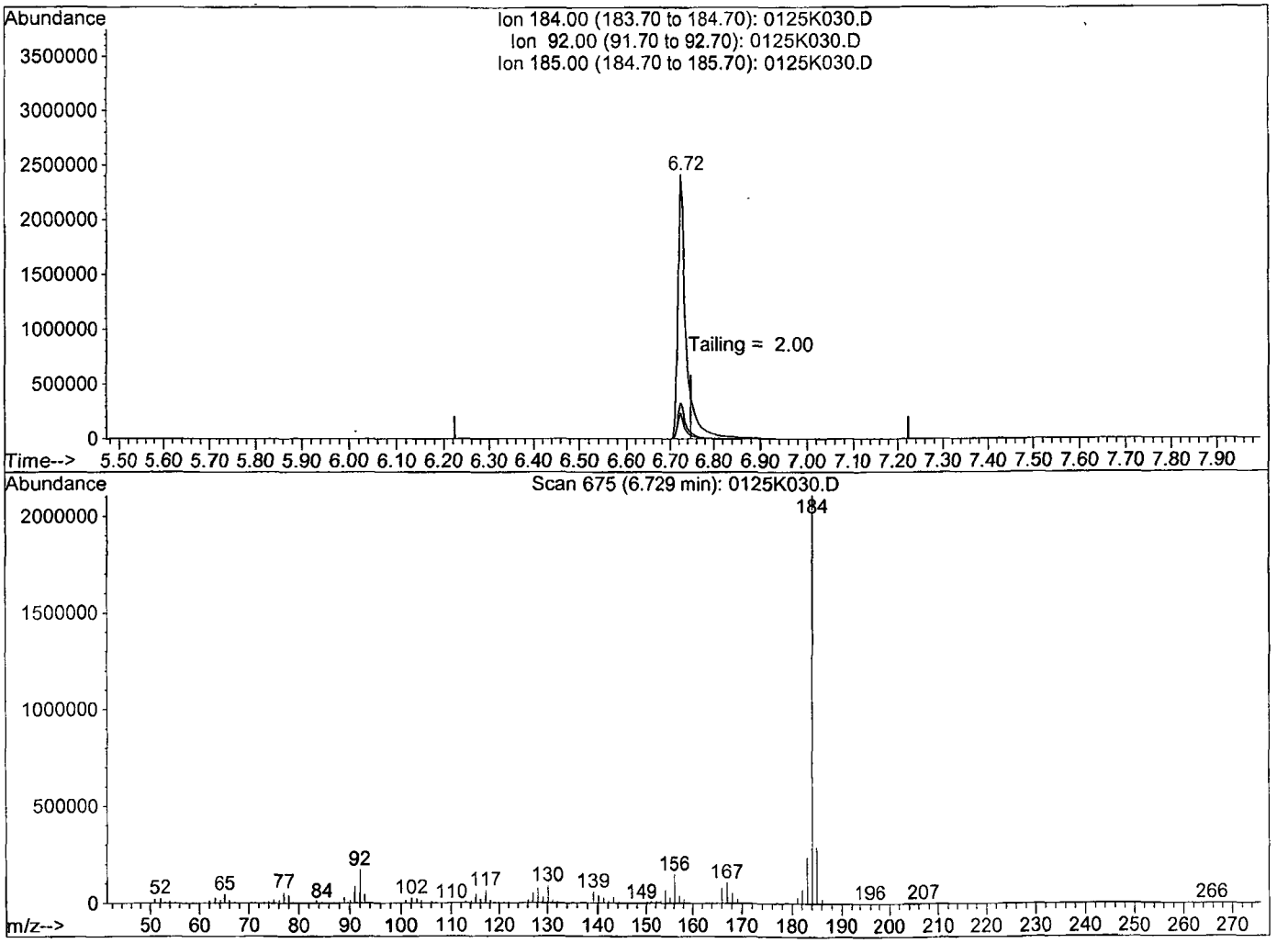
response 4166616

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	67.70
268.00	65.00	68.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K030.D Vial: 30
Acq On : 28 Jan 21 11:40 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 28 11:54 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration



TIC: 0125K030.D

(6) Benzidine

6.73min 0.0000

response 32734938

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	9.23
185.00	13.40	14.14
0.00	0.00	0.00

Name of Final Standard 2MEE Second Source Stock

Prep'd By (Initials) JP

Prep Date 10/28/19

Exp Date 10/28/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)

0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard	Diethylene Glycol
Prep Date	11/05/19
Exp Date	04/25/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of Final Standard: MEE Curve
Prep'd By (Initials): CD
Prep Date: 05/01/20
Exp Date: 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	5 uL	200uL	**Methanol 195uL Lot# 235140**	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	5 uL	100uL	**Methanol 95uL Lot# 235140**	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	20 uL	100uL	**Methanol 80 uL Lot# 235140**	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	50 uL	200 uL	**Methanol 150 uL Lot# 235140**	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	30 uL	100uL	**Methanol 70 uL Lot# 235140**	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	40 uL	100uL	**Methanol 60 uL Lot# 235140**	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	**11/06/19**	**04/25/21**	50 uL	100uL	**Methanol 50uL Lot# 235140**	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	**03/03/21**	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep'd By (Initials): MA
Prep Date: 05/01/20
Exp Date: 03/03/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	**11/06/19**	**10/28/21**	50 uL	200uL	**Methanol 150uL Lot# 235140**	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	**03/03/20**	**03/03/21**	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	MA
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49871,872,873**	**07/31/25**	3mL	3 mL	**NA**	2000ug/mL

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210127A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01-20-21 01-20-22		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	01/27/21 10:15	
Spiked ID 8			Ext. End Time:		
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/27/21 **Witnessed By:** YL **Date** 01/27/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210127A Blk				NA	NA equip	500	5	7	01/27/21 10:15	
2	210127A LCS-1		0.040	1	NA	NA equip	500	5	7	01/27/21 10:15	80ug/L
3	210127A LCSD-1		0.040	1	NA	NA equip	500	5	7	01/27/21 10:15	80ug/L (ARF 94793 BA25248)
4	BA25690	BA25690W14			NA	NA equip	500	5	7	01/27/21 10:15	94863
5	BA25693	BA25693W10			NA	NA equip	500	5	7	01/27/21 10:15	94863
6	BA25696	BA25696W10			NA	NA equip	500	5	7	01/27/21 10:15	94863
7	BA25699	BA25699W13			NA	NA equip	500	5	7	01/27/21 10:15	94863
8	BA25701	BA25701W08			NA	NA equip	500	5	7	01/27/21 10:15	94863
9	BA25704	BA25704W07			NA	NA equip	500	5	7	01/27/21 10:15	94863
10	BA25706	BA25706W07			NA	NA equip	500	5	7	01/27/21 10:15	94863
11	BA25867	BA25867W10			NA	NA equip	500	5	7	01/27/21 10:15	94883
12	BA25870	BA25870W10			NA	NA equip	500	5	7	01/27/21 10:15	94883

Solvent and Lot#	
ENVIRO-CLEAN CARTRIDGE	347266-EY
PH Strip	HC025486
Di Water	1-27-21
Methanol:DCM 80:20 PREP	1-27-21

Extraction COC Transfer	
Extraction lab employee Initials	
GC analyst's initials	HA
Date	1/28/21
Time	10:00
Refrigerator	Hobart

	Technician's Initials
Scanned By	
Sample Preparation	
Extraction	
Concentration	

Modified	01/27/21 11:10:09 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
30	0125K030.D	1	SV TUNE 10/02/20		28 Jan 21 11:40
32	0125K032.D	1	2 MEE 500 1/26/21 (2)		28 Jan 21 12:46
35	0125K035.D	1	210127A BLK 5/500		28 Jan 21 13:52
36	0125K036.D	1	210127A LCS-1 5/500		28 Jan 21 14:13
37	0125K037.D	1	210127A LCSD-1 5/500		28 Jan 21 14:34
45	0125K045.D	1	BA25867W10 5/500		28 Jan 21 17:38
46	0125K046.D	1	BA25870W10 5/500		28 Jan 21 17:59
47	0125K047.D	1	2 MEE 500 1/26/21 (1)		28 Jan 21 18:20

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	0125Z24.D	0125Z25.D	0125Z26.D	0125Z27.D	0125Z29.D	0125Z30.D	0125Z31.D	0125Z32.D			Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane	0.0934	0.1172	0.1363	0.1304	0.1350	0.1383	0.1381	0.1343			0.13	12	TM			
4	TM	Freon 114	0.0532	0.0810	0.0910	0.0871	0.0722	0.0743	0.0765	0.0709			0.08	15	TM			
5	TM**L	Chloromethane	0.2273	0.1390	0.0989	0.0615	0.0541	0.0501	0.0503	0.0487			0.09	70	TM**	1.000		
6	TM*	Vinyl chloride	0.0967	0.1157	0.1262	0.1253	0.1225	0.1213	0.1175	0.1136			0.12	8.1	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0819	0.0432	0.0412	0.0314	0.0310	0.0293	0.0266			0.04	47	TM	0.998		
10	TML	Chloroethane	0.0559	0.0565	0.0553	0.0377	0.0335	0.0284	0.0261				0.04	32	TM	0.996		
11	TM	Dichlorofluoromethane	0.2011	0.2277	0.2422	0.2409	0.2329	0.2184	0.1979				0.22	8.1	TM			
12	TM	Trichlorofluoromethane	0.1621	0.2106	0.2320	0.2287	0.2313	0.2288	0.2186	0.1682			0.21	14	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein													TM			
17	TM	Acetone	0.0404	0.0337	0.0331	0.0322	0.0293	0.0285	0.0278	0.0277			0.03	14	TM			
18	TM	Freon-113	0.0582	0.0640	0.0656	0.0608	0.0571	0.0586	0.0556	0.0538			0.06	6.8	TM			
19	TM*	1,1-DCE	0.1228	0.1466	0.1584	0.1534	0.1564	0.1521	0.1519	0.1465			0.15	7.5	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile													TM			
22	TM	t-Butanol													TM			
23	TM	Methyl Acetate	0.0863	0.0799	0.0840	0.0815	0.0685	0.0686	0.0671	0.0692			0.08	11	TM			
24	TML	Iodomethane	0.2418	0.1698	0.1371	0.1105	0.0944	0.1103	0.1304	0.1529			0.14	33	TM	0.994		
25	TM	Acrylonitrile		0.0299	0.0362	0.0373	0.0316	0.0316	0.0309	0.0306			0.03	8.9	TM			
26	TML	Methylene chloride	0.1848	0.1332	0.1028	0.0847	0.0691	0.0651	0.0642	0.0547			0.09	47	TM	0.996		
27	TM	Carbon disulfide	0.1528	0.1493	0.1471	0.1478	0.1436	0.1454	0.1459	0.1408			0.15	2.5	TM			
28	TM	Methyl t-butyl ether (MtBE)	0.2059	0.2474	0.2628	0.2628	0.2686	0.2722	0.2762	0.2720			0.26	8.9	TM			
29	TM	Trans-1,2-DCE	0.1305	0.1393	0.1552	0.1495	0.1517	0.1500	0.1466	0.1392			0.15	5.7	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether	0.2257	0.2534	0.2638	0.2745	0.2845	0.2856	0.2867	0.2786			0.27	7.8	TM			
32	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
33	TM**	1,1-DCA	0.1539	0.1918	0.1925	0.1962	0.1998	0.1895	0.1848	0.1785			0.19	7.8	TM**			
34	TM	Vinyl Acetate	0.0834	0.0698	0.0908	0.0910	0.0820	0.0927	0.1170	0.0860			0.09	15	TM			
35	TM	Ethyl tert Butyl Ether	0.1680	0.2258	0.2423	0.2489	0.2621	0.2701	0.2780	0.2786			0.25	15	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Initial Cal. Date: 01/25/21
Instrument: ZEUS

Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0368	0.0339	0.0379	0.0383	0.0375	0.0389	0.0395	0.0401			0.04	5.1	TM			
37	TM	Cis-1,2-DCE	0.1672	0.1736	0.1773	0.1752	0.1762	0.1687	0.1647	0.1585			0.17	3.9	TM			
38	TM	2,2-Dichloropropane	0.1358	0.1442	0.1516	0.1529	0.1629	0.1614	0.1629	0.1592			0.15	6.4	TM			
39	TML	2-Methylpentane													TM		*	
40	TM	3-Methylpentane													TM			
41	TM*	Chloroform	0.1896	0.2023	0.2108	0.2120	0.2215	0.2125	0.2069	0.2010			0.21	4.6	TM*			
42	TM	Bromochloromethane	0.0651	0.0756	0.0813	0.0832	0.0811	0.0764	0.0736	0.0707			0.08	8.0	TM			
43	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
44	TM	1,1,1-TCA	0.1549	0.1796	0.1968	0.1926	0.2014	0.2025	0.2004	0.1961			0.19	8.5	TM			
45	TM	Cyclohexane	0.1215	0.1607	0.1720	0.1689	0.1581	0.1622	0.1615	0.1560			0.16	9.8	TM			
46	TM	1,1-Dichloropropene	0.1145	0.1388	0.1483	0.1451	0.1483	0.1464	0.1471	0.1406			0.14	8.0	TM			
47	TM	2,2,4-Trimethylpentane	0.2351	0.2899	0.3348	0.3217	0.3055	0.3276	0.3324	0.3225			0.31	11	TM			
48	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
49	TM	Carbon Tetrachloride	0.1359	0.1498	0.1618	0.1706	0.1770	0.1804	0.1830	0.1827			0.17	10	TM			
50	TM	Tert Amyl Methyl Ether	0.1907	0.1989	0.2163	0.2216	0.2401	0.2531	0.2602	0.2646			0.23	12	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA	0.1256	0.1346	0.1555	0.1458	0.1427	0.1347	0.1329	0.1275			0.14	7.3	TM			
53	TM	Benzene	0.4050	0.4452	0.4584	0.4683	0.4612	0.4500	0.4383	0.4165			0.44	5.0	TM			
54	TM	TCE	0.1521	0.1536	0.1587	0.1545	0.1544	0.1551	0.1523	0.1520			0.15	1.4	TM			
55	TM	2-Pentanone													TM			
56	TM*	1,2-Dichloropropane	0.0786	0.0924	0.0996	0.0992	0.1038	0.1000	0.0999	0.0974			0.10	8.2	TM*			
57	TM	Bromodichloromethane	0.0921	0.1001	0.1069	0.1069	0.1253	0.1299	0.1349	0.1410			0.12	15	TM			
58	TM	Methyl Cyclohexane	0.1472	0.1682	0.1750	0.1929	0.1811	0.1958	0.1974	0.1910			0.18	9.5	TM			
59	TM	Dibromomethane	0.0834	0.0965	0.1047	0.1068	0.1098	0.1077	0.1071	0.1079			0.10	8.6	TM			
60	TM	MIBK (methyl isobutyl ketone	0.0538	0.0559	0.0644	0.0670	0.0662	0.0703	0.0738	0.0769			0.07	12	TM			
61	TM	1-Bromo-2-chloroethane		0.0224	0.0233	0.0204	0.0215	0.0217	0.0220	0.0221			0.02	4.0	TM			
62	TM	2-Chloroethyl vinyl ether													TM			
63	TM	Cis-1,3-Dichloropropene		0.1068	0.1260	0.1315	0.1476	0.1533	0.1583	0.1628			0.14	14	TM			
64	TM*	Toluene	0.3986	0.4732	0.4990	0.4994	0.4972	0.4969	0.4938	0.4746			0.48	7.1	TM*			
65	TML	Trans-1,3-Dichloropropene	0.0887	0.0991	0.1020	0.1055	0.1243	0.1313	0.1408	0.1457			0.12	18	TM	1.000		
66	TM	1,1,2-TCA	0.0691	0.0848	0.0938	0.0932	0.0952	0.0953	0.0971	0.0987			0.09	11	TM			
67	TML	2-Hexanone	0.0189	0.0205	0.0259	0.0258	0.0267	0.0279	0.0302	0.0297			0.03	16	TM	0.997		
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
70	TM	1,2-EDB	0.0953	0.1014	0.1163	0.1177	0.1337	0.1374	0.1364	0.1338			0.12	14	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene	0.2337	0.2557	0.2628	0.2638	0.2598	0.2595	0.2507	0.2377			0.25	4.5	TM			
72	TM	1-Chlorohexane	0.1472	0.1816	0.2084	0.2077	0.2052	0.2153	0.2112	0.2022			0.20	11	TM			
73	TM	1,1,1,2-Tetrachloroethane		0.1295	0.1223	0.1289	0.1512	0.1599	0.1635	0.1628			0.15	12	TM			
74	TM	m&p-Xylene	0.3960	0.4739	0.5151	0.5266	0.5423	0.5475	0.5381	0.4974			0.50	10.0	TM			
75	TM	o-Xylene	0.4077	0.4600	0.4915	0.5051	0.5399	0.5515	0.5496	0.5283			0.50	9.9	TM			
76	TML	Styrene	0.2661	0.3028	0.3287	0.3693	0.4365	0.4565	0.4661	0.4573			0.39	21	TM	1.000		
77	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
78	TM	1,3-Dichloropropane	0.1585	0.1708	0.1902	0.1836	0.1942	0.1988	0.1951	0.1889			0.19	7.4	TM			
79	TML	Dibromochloromethane	0.0793	0.0932	0.1092	0.1120	0.1314	0.1413	0.1535	0.1596			0.12	23	TM	0.999		
80	TM**	Chlorobenzene	0.4055	0.4428	0.4648	0.4825	0.4630	0.4663	0.4564	0.4376			0.45	5.2	TM**			
81	TM*	Ethylbenzene	0.5485	0.6267	0.7022	0.6913	0.7137	0.7201	0.7006	0.6647			0.67	8.6	TM*			
82	TM**L	Bromoform	0.0644	0.0729	0.0762	0.0759	0.1013	0.1117	0.1270	0.1404			0.10	29	TM**	0.998		
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene		1.621	1.785	1.954	1.973	2.035	2.107	2.014			1.9	8.7	TM			
85	TM**	1,1,2,2-Tetrachloroethane		0.2940	0.3345	0.3733	0.3576	0.3795	0.4156	0.3987			0.36	11	TM**			
86	TM	1,2,3-Trichloropropane		0.1404	0.1430	0.1489	0.1403	0.1484	0.1537	0.1493			0.15	3.5	TM			
87	TML	t-1,4-Dichloro-2-Butene		0.0537	0.0479	0.0572	0.0564	0.0696	0.0786	0.0829			0.06	21	TM	0.999		
88	TM	Bromobenzene	0.5915	0.5664	0.6039	0.6289	0.6008	0.6148	0.6413	0.6279			0.61	3.9	TM			
89	TML	n-Propylbenzene		1.790	1.997	2.091	2.149	2.239	2.289	2.149			2.1	7.9	TM	0.999		
90	TM	4-Ethyltoluene		1.645	1.778	1.965	1.902	1.994	2.020	1.924			1.9	7.1	TM			
91	TML	2-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
92	TML	1,3,5-Trimethylbenzene		1.299	1.394	1.593	1.597	1.650	1.700	1.613			1.5	9.4	TM	1.000		
93	TML	4-Chlorotoluene		1.206	1.377	1.480	1.443	1.500	1.541	1.450			1.4	7.7	TM	0.999		
94	TM	Tert-Butylbenzene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
95	TM	1,2,4-Trimethylbenzene		1.205	1.465	1.558	1.595	1.673	1.725	1.679			1.6	11	TM			
96	TM	Sec-Butylbenzene		1.743	1.926	2.124	2.120	2.242	2.332	2.217			2.1	9.6	TM			
97	TM	p-Isopropyltoluene		1.301	1.447	1.548	1.533	1.596	1.641	1.595			1.5	7.6	TM			
98	TML	Benzyl Chloride	0.3605	0.4063	0.4316	0.4673	0.5414	0.6613	0.7649	0.8335			0.56	31	TM	0.998		
99	TM	1,3-DCB	1.003	1.115	1.191	1.246	1.167	1.182	1.202	1.164			1.2	6.3	TM			
100	TM	1,4-DCB	1.067	1.188	1.231	1.250	1.174	1.192	1.207	1.158			1.2	4.7	TM			
101	TML	n-Butylbenzene	1.097	1.139	1.334	1.439	1.506	1.635	1.702	1.635			1.4	16	TM	1.000		
102	TM	1,2-DCB	1.013	1.033	1.084	1.106	1.083	1.088	1.111	1.062			1.1	3.2	TM			
103	TML	Hexachloroethane	0.1598	0.2028	0.2300	0.2455	0.2962	0.3496	0.3993	0.4447			0.29	34	TM	0.997		
104	TML	1,2-Dibromo-3-chloropropane	0.0694	0.0657	0.0808	0.0809	0.0991	0.1090	0.1210	0.1269			0.09	25	TM	0.999		
105	TM	1,2,4-Trichlorobenzene	0.8552	0.9091	0.9500	0.9954	0.9570	1.019	1.019	0.9545			0.96	5.8	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Initial Cal. Date: 01/25/21
Instrument: ZEUS

Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene	0.4433	0.4384	0.4934	0.4968	0.4817	0.5229	0.5205	0.4686			0.48	6.6	TM			
107	TML	Naphthalene		1.069	1.179	1.273	1.416	1.571	1.590	1.459			1.4	15	TM	0.999		
108	TM	1,2,3-Trichlorobenzene	0.6814	0.6455	0.6688	0.7212	0.6765	0.7277	0.7196	0.6632			0.69	4.5	TM			
109																		
110																		
111																		
112																		
113																		
114																		
115																		
116																		
117																		
118																		
119																		
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136																		
137																		
138																		
139																		
140																		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb		0.00
Spiked Amount 25.000			Recovery =	15.912%			
48) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb		0.00
Spiked Amount 25.000			Recovery =	16.508%			
69) Toluene-D8(S)	8.03	98	555650	4.08	ppb		0.00
Spiked Amount 25.000			Recovery =	16.312%			
77) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb		0.00
Spiked Amount 25.000			Recovery =	21.764%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	4219	0.22	ppb	#	81
4) Freon 114	1.16	85	2401	0.21	ppb		82
5) Chloromethane	1.20	50	10265	0.40	ppb		97
6) Vinyl chloride	1.28	62	4365	0.25	ppb		93
9) Bromomethane	1.53	94	5445	-0.48	ppb		92
10) Chloroethane	1.61	64	2525	-0.54	ppb		99
11) Dichlorofluoromethane	1.78	67	9079	0.27	ppb		97
12) Trichlorofluoromethane	1.83	101	7319	0.23	ppb		96
17) Acetone	2.36	43	30418	6.40	ppb		99
18) Freon-113	2.32	101	2626	0.29	ppb	#	68
19) 1,1-DCE	2.29	61	5546	0.25	ppb	#	80
23) Methyl Acetate	2.73	43	3897	0.34	ppb		91
24) Iodomethane	2.43	142	10919	2.34	ppb		98
25) Acrylonitrile	3.10	52	1320	0.27	ppb	#	51
26) Methylene chloride	2.81	49	8344	-1.03	ppb		94
27) Carbon disulfide	2.49	76	6898	0.31	ppb		96
28) Methyl t-butyl ether (MtBE	3.19	73	9296	0.24	ppb		92
29) Trans-1,2-DCE	3.15	61	5892	0.27	ppb	#	66
31) Diisopropyl Ether	3.93	45	10193	0.25	ppb		90
33) 1,1-DCA	3.71	63	6947	0.25	ppb		91
34) Vinyl Acetate	3.85	43	3767	0.28	ppb	#	70
35) Ethyl tert Butyl Ether	4.49	59	7584	0.20	ppb	#	85
36) MEK (2-Butanone)	4.67	43	27696	4.86	ppb		97
37) Cis-1,2-DCE	4.60	61	7551	0.29	ppb	#	82
38) 2,2-Dichloropropane	4.60	77	6132	0.26	ppb		95
41) Chloroform	5.09	83	8563	0.27	ppb	#	83
42) Bromochloromethane	4.93	49	2939	0.26	ppb	#	86
44) 1,1,1-TCA	5.30	97	6993	0.24	ppb	#	80
45) Cyclohexane	5.36	56	5488	0.23	ppb	#	75
46) 1,1-Dichloropropene	5.53	75	5171	0.24	ppb	#	78
47) 2,2,4-Trimethylpentane	5.95	57	10616	0.23	ppb		93
49) Carbon Tetrachloride	5.52	117	6138	0.24	ppb	#	80
50) Tert Amyl Methyl Ether	6.01	73	8610	0.25	ppb		93
52) 1,2-DCA	5.81	62	5673	0.27	ppb	#	90
53) Benzene	5.78	78	18288	0.27	ppb		99
54) TCE	6.61	130	6869	0.30	ppb		97
56) 1,2-Dichloropropane	6.87	63	3548	0.24	ppb	#	83
57) Bromodichloromethane	7.21	83	4157	0.24	ppb	#	65
58) Methyl Cyclohexane	6.84	83	6645	0.24	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	3765	0.24	ppb		94
60)	MIBK (methyl isobutyl ket	7.95	43	40492	4.07	ppb		97
61)	1-Bromo-2-chloroethane	7.54	144	499	0.15	ppb	#	71
63)	Cis-1,3-Dichloropropene	7.73	75	4639	0.22	ppb	#	88
64)	Toluene	8.11	91	17996	0.25	ppb		92
65)	Trans-1,3-Dichloropropene	8.36	75	4006	0.97	ppb		92
66)	1,1,2-TCA	8.56	97	3119	0.23	ppb	#	88
67)	2-Hexanone	8.88	43	14256	6.74	ppb		98
70)	1,2-EDB	9.09	107	3239	0.24	ppb	#	77
71)	Tetrachloroethene	8.72	166	7938	0.28	ppb	#	85
72)	1-Chlorohexane	9.67	91	4999	0.22	ppb	#	88
73)	1,1,1,2-Tetrachloroethane	9.75	131	3428	0.21	ppb	#	92
74)	m&p-Xylene	9.92	91	26904	0.47	ppb		95
75)	o-Xylene	10.36	91	13852	0.24	ppb		98
76)	Styrene	10.37	104	9040	0.36	ppb		93
78)	1,3-Dichloropropane	8.73	76	5384	0.26	ppb		92
79)	Dibromochloromethane	8.98	129	2694	1.06	ppb		89
80)	Chlorobenzene	9.65	112	13774	0.27	ppb		89
81)	Ethylbenzene	9.79	91	18635	0.25	ppb		94
82)	Bromoform	10.54	173	2187	1.71	ppb	#	81
84)	Isopropylbenzene	10.76	105	17650	0.22	ppb		95
85)	1,1,2,2-Tetrachloroethane	11.08	83	3333	0.22	ppb	#	87
86)	1,2,3-Trichloropropane	11.12	110	1427	0.23	ppb	#	83
87)	t-1,4-Dichloro-2-Butene	11.14	53	447	1.69	ppb		97
88)	Bromobenzene	11.06	77	7468	0.29	ppb		88
89)	n-Propylbenzene	11.21	91	19115	-0.12	ppb		97
90)	4-Ethyltoluene	11.34	105	17200	0.22	ppb		90
91)	2-Chlorotoluene	11.40	91	13451	-0.09	ppb		89
92)	1,3,5-Trimethylbenzene	11.41	105	13468	-0.00	ppb		90
93)	4-Chlorotoluene	11.40	91	13451	-0.09	ppb		89
94)	Tert-Butylbenzene	11.77	119	13648	0.21	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	14255	0.22	ppb		100
96)	Sec-Butylbenzene	12.00	105	19282	0.22	ppb		93
97)	p-Isopropyltoluene	11.77	119	13648	0.21	ppb		93
98)	Benzyl Chloride	12.35	91	4552	1.78	ppb	#	88
99)	1,3-DCB	12.10	146	12662	0.26	ppb		100
100)	1,4-DCB	12.20	146	13466	0.27	ppb	#	95
101)	n-Butylbenzene	12.61	91	13852	0.32	ppb		100
102)	1,2-DCB	12.59	146	12794	0.28	ppb	#	85
103)	Hexachloroethane	12.89	201	2018	1.82	ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.43	157	876	1.27	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	10798	0.27	ppb		90
106)	Hexachlorobutadiene	14.57	225	5597	0.28	ppb	#	81
107)	Naphthalene	14.62	128	15281	-0.15	ppb		97
108)	1,2,3-Trichlorobenzene	14.88	180	8603	0.30	ppb		96

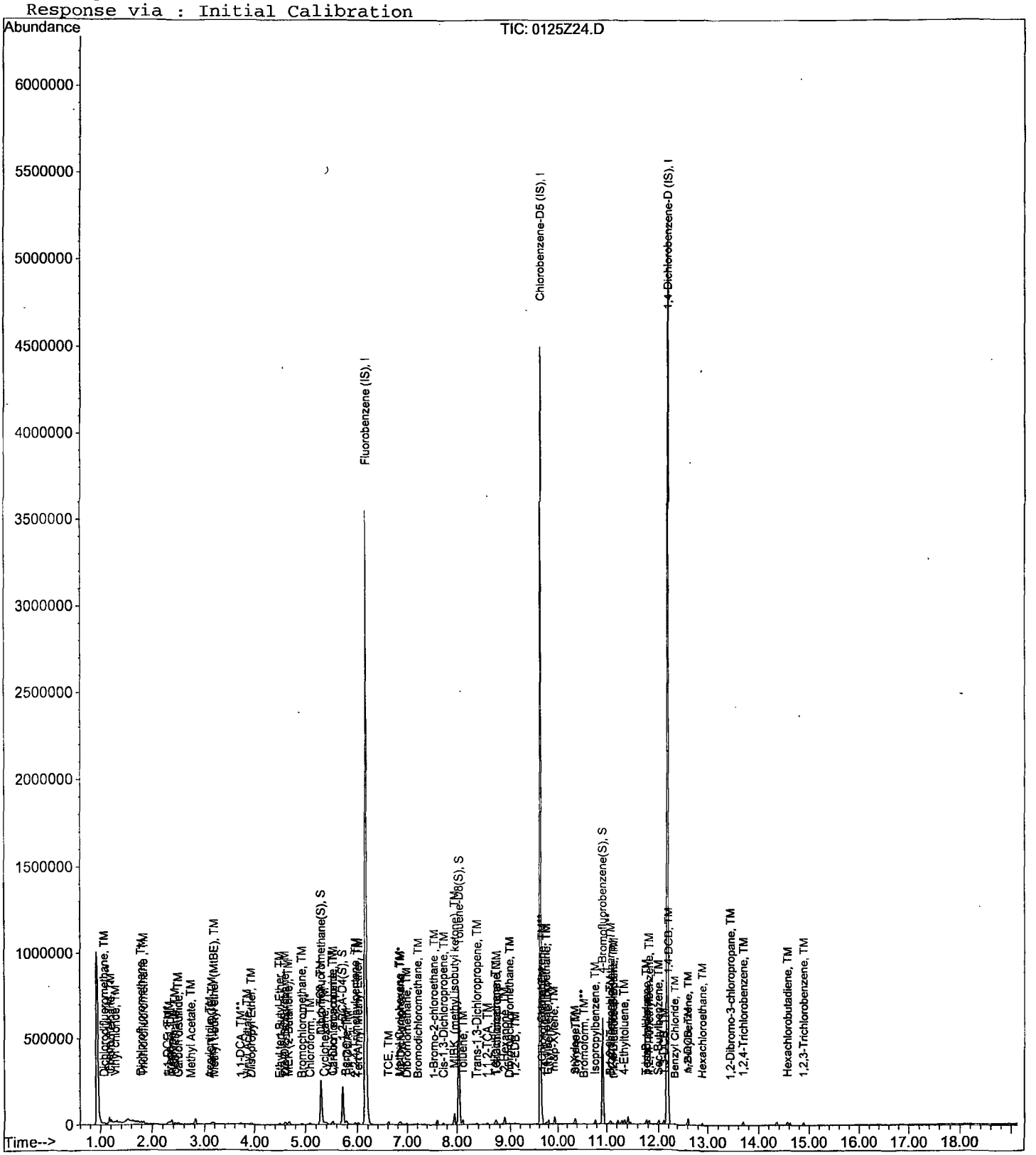
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb		0.00
Spiked Amount 25.000			Recovery = 15.912%				
48) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb		0.00
Spiked Amount 25.000			Recovery = 16.660%				
69) Toluene-D8(S)	8.03	98	538877	4.10	ppb		0.00
Spiked Amount 25.000			Recovery = 16.400%				
77) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb		0.00
Spiked Amount 25.000			Recovery = 21.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	8457	0.46	ppb		91
4) Freon 114	1.16	85	5848	0.53	ppb	#	74
5) Chloromethane	1.20	50	10032	0.43	ppb		90
6) Vinyl chloride	1.28	62	8352	0.49	ppb	#	86
9) Bromomethane	1.53	94	5908	-0.30	ppb		96
10) Chloroethane	1.61	64	4081	-0.09	ppb	#	86
11) Dichlorofluoromethane	1.79	67	16432	0.51	ppb		99
12) Trichlorofluoromethane	1.83	101	15200	0.50	ppb		91
17) Acetone	2.36	43	48606	10.66	ppb		98
18) Freon-113	2.32	101	4621	0.54	ppb		86
19) 1,1-DCE	2.30	61	10579	0.49	ppb		90
23) Methyl Acetate	2.73	43	5765	0.53	ppb	#	87
24) Iodomethane	2.43	142	12255	2.42	ppb		98
25) Acrylonitrile	3.09	52	2158	0.46	ppb	#	53
26) Methylene chloride	2.80	49	9612	-0.83	ppb		94
27) Carbon disulfide	2.49	76	10775	0.51	ppb	#	95
28) Methyl t-butyl ether (MtBE	3.18	73	17855	0.48	ppb	#	88
29) Trans-1,2-DCE	3.15	61	10050	0.48	ppb		95
31) Diisopropyl Ether	3.92	45	18284	0.47	ppb		93
33) 1,1-DCA	3.72	63	13841	0.52	ppb		92
34) Vinyl Acetate	3.86	43	5035	0.39	ppb	#	90
35) Ethyl tert Butyl Ether	4.49	59	16296	0.46	ppb		99
36) MEK (2-Butanone)	4.68	43	48887	8.95	ppb		99
37) Cis-1,2-DCE	4.60	61	12525	0.51	ppb		90
38) 2,2-Dichloropropane	4.60	77	10409	0.47	ppb	#	89
41) Chloroform	5.08	83	14596	0.49	ppb		96
42) Bromochloromethane	4.92	49	5456	0.50	ppb	#	68
44) 1,1,1-TCA	5.30	97	12958	0.47	ppb		92
45) Cyclohexane	5.37	56	11599	0.51	ppb		94
46) 1,1-Dichloropropene	5.53	75	10016	0.49	ppb		96
47) 2,2,4-Trimethylpentane	5.96	57	20920	0.47	ppb		90
49) Carbon Tetrachloride	5.52	117	10809	0.45	ppb		91
50) Tert Amyl Methyl Ether	6.00	73	14351	0.43	ppb		96
52) 1,2-DCA	5.81	62	9715	0.49	ppb		99
53) Benzene	5.78	78	32131	0.50	ppb		97
54) TCE	6.61	130	11087	0.50	ppb		92
56) 1,2-Dichloropropane	6.86	63	6671	0.48	ppb		98
57) Bromodichloromethane	7.20	83	7225	0.43	ppb		93
58) Methyl Cyclohexane	6.84	83	12136	0.46	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	6964	0.47	ppb		86
60)	MIBK (methyl isobutyl ket	7.94	43	80700	8.47	ppb		96
61)	1-Bromo-2-chloroethane	7.53	144	1613	0.51	ppb	#	69
63)	Cis-1,3-Dichloropropene	7.73	75	7705	0.38	ppb		89
64)	Toluene	8.11	91	34146	0.49	ppb		97
65)	Trans-1,3-Dichloropropene	8.37	75	7150	1.13	ppb		97
66)	1,1,2-TCA	8.56	97	6121	0.47	ppb		87
67)	2-Hexanone	8.88	43	29576	10.33	ppb		98
70)	1,2-EDB	9.09	107	5536	0.42	ppb	#	87
71)	Tetrachloroethene	8.71	166	13968	0.51	ppb		95
72)	1-Chlorohexane	9.67	91	9920	0.46	ppb	#	85
73)	1,1,1,2-Tetrachloroethane	9.75	131	7074	0.45	ppb		88
74)	m&p-Xylene	9.93	91	51763	0.94	ppb		85
75)	o-Xylene	10.35	91	25126	0.46	ppb		94
76)	Styrene	10.37	104	16538	0.51	ppb		94
78)	1,3-Dichloropropane	8.73	76	9326	0.46	ppb		92
79)	Dibromochloromethane	8.98	129	5091	1.20	ppb		100
80)	Chlorobenzene	9.65	112	24182	0.49	ppb		99
81)	Ethylbenzene	9.79	91	34227	0.47	ppb		89
82)	Bromoform	10.54	173	3982	1.83	ppb		88
84)	Isopropylbenzene	10.76	105	33705	0.42	ppb		92
85)	1,1,2,2-Tetrachloroethane	11.08	83	6114	0.40	ppb		93
86)	1,2,3-Trichloropropane	11.11	110	2920	0.48	ppb	#	78
87)	t-1,4-Dichloro-2-Butene	11.14	53	1117	1.88	ppb	#	59
88)	Bromobenzene	11.07	77	11779	0.46	ppb		94
89)	n-Propylbenzene	11.21	91	37232	0.08	ppb		99
90)	4-Ethyltoluene	11.34	105	34212	0.44	ppb		96
91)	2-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
92)	1,3,5-Trimethylbenzene	11.41	105	27021	0.20	ppb		95
93)	4-Chlorotoluene	11.41	91	25074	0.10	ppb	#	83
94)	Tert-Butylbenzene	11.76	119	27057	0.43	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	25063	0.39	ppb		96
96)	Sec-Butylbenzene	12.00	105	36250	0.41	ppb		96
97)	p-Isopropyltoluene	11.76	119	27057	0.43	ppb		92
98)	Benzyl Chloride	12.34	91	8450	1.89	ppb	#	87
99)	1,3-DCB	12.10	146	23181	0.48	ppb		95
100)	1,4-DCB	12.20	146	24714	0.50	ppb	#	88
101)	n-Butylbenzene	12.61	91	23698	0.46	ppb		93
102)	1,2-DCB	12.59	146	21490	0.48	ppb		97
103)	Hexachloroethane	12.88	201	4217	1.94	ppb	#	61
104)	1,2-Dibromo-3-chloropropan	13.44	157	1366	1.36	ppb	#	87
105)	1,2,4-Trichlorobenzene	13.68	180	18907	0.47	ppb		96
106)	Hexachlorobutadiene	14.57	225	9118	0.45	ppb		94
107)	Naphthalene	14.62	128	22225	-0.03	ppb		95
108)	1,2,3-Trichlorobenzene	14.89	180	13425	0.47	ppb		95

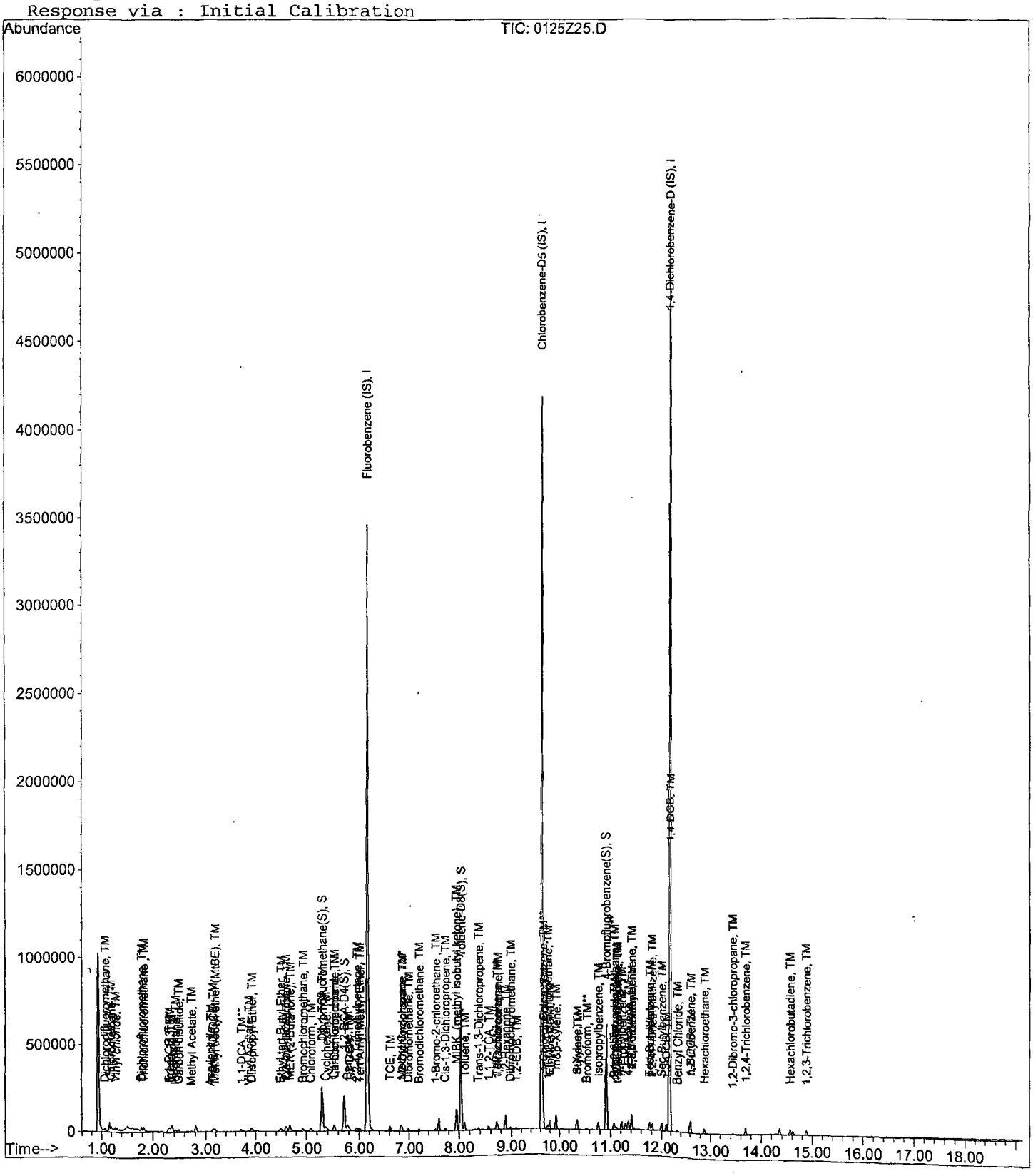
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb		0.00
Spiked Amount 25.000			Recovery = 38.496%				
48) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb		0.00
Spiked Amount 25.000			Recovery = 39.380%				
69) Toluene-D8(S)	8.03	98	1268990	9.81	ppb		0.00
Spiked Amount 25.000			Recovery = 39.236%				
77) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb		0.00
Spiked Amount 25.000			Recovery = 40.312%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	19541	1.07	ppb		95
4) Freon 114	1.16	85	13046	1.20	ppb		81
5) Chloromethane	1.20	50	14183	1.04	ppb		92
6) Vinyl chloride	1.28	62	18100	1.08	ppb		95
9) Bromomethane	1.53	94	6189	-0.22	ppb		94
10) Chloroethane	1.61	64	7923	0.95	ppb		96
11) Dichlorofluoromethane	1.79	67	34720	1.09	ppb		95
12) Trichlorofluoromethane	1.83	101	33260	1.10	ppb		98
17) Acetone	2.36	43	95048	20.98	ppb		96
18) Freon-113	2.33	101	9398	1.11	ppb		95
19) 1,1-DCE	2.30	61	22712	1.07	ppb		99
23) Methyl Acetate	2.73	43	12050	1.11	ppb		96
24) Iodomethane	2.43	142	19655	2.76	ppb		98
25) Acrylonitrile	3.10	52	5186	1.11	ppb	#	63
26) Methylene chloride	2.81	49	14737	-0.17	ppb		97
27) Carbon disulfide	2.49	76	21088	1.00	ppb	#	90
28) Methyl t-butyl ether (MtBE	3.18	73	37683	1.02	ppb	#	88
29) Trans-1,2-DCE	3.15	61	22254	1.07	ppb		91
31) Diisopropyl Ether	3.93	45	37818	0.98	ppb		92
33) 1,1-DCA	3.71	63	27596	1.04	ppb		96
34) Vinyl Acetate	3.85	43	13019	1.02	ppb		95
35) Ethyl tert Butyl Ether	4.49	59	34738	0.98	ppb		91
36) MEK (2-Butanone)	4.67	43	108684	20.02	ppb		91
37) Cis-1,2-DCE	4.60	61	25416	1.04	ppb	#	90
38) 2,2-Dichloropropane	4.59	77	21737	0.99	ppb	#	82
41) Chloroform	5.09	83	30221	1.02	ppb		96
42) Bromochloromethane	4.92	49	11662	1.07	ppb	#	75
44) 1,1,1-TCA	5.31	97	28214	1.03	ppb		96
45) Cyclohexane	5.36	56	24662	1.09	ppb		91
46) 1,1-Dichloropropene	5.53	75	21263	1.05	ppb		94
47) 2,2,4-Trimethylpentane	5.96	57	47997	1.08	ppb		99
49) Carbon Tetrachloride	5.52	117	23201	0.97	ppb		93
50) Tert Amyl Methyl Ether	6.01	73	31015	0.94	ppb	#	87
52) 1,2-DCA	5.80	62	22291	1.13	ppb		95
53) Benzene	5.78	78	65727	1.04	ppb		97
54) TCE	6.61	130	22755	1.03	ppb		94
56) 1,2-Dichloropropane	6.86	63	14276	1.03	ppb	#	93
57) Bromodichloromethane	7.21	83	15324	0.91	ppb		100
58) Methyl Cyclohexane	6.83	83	25092	0.97	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

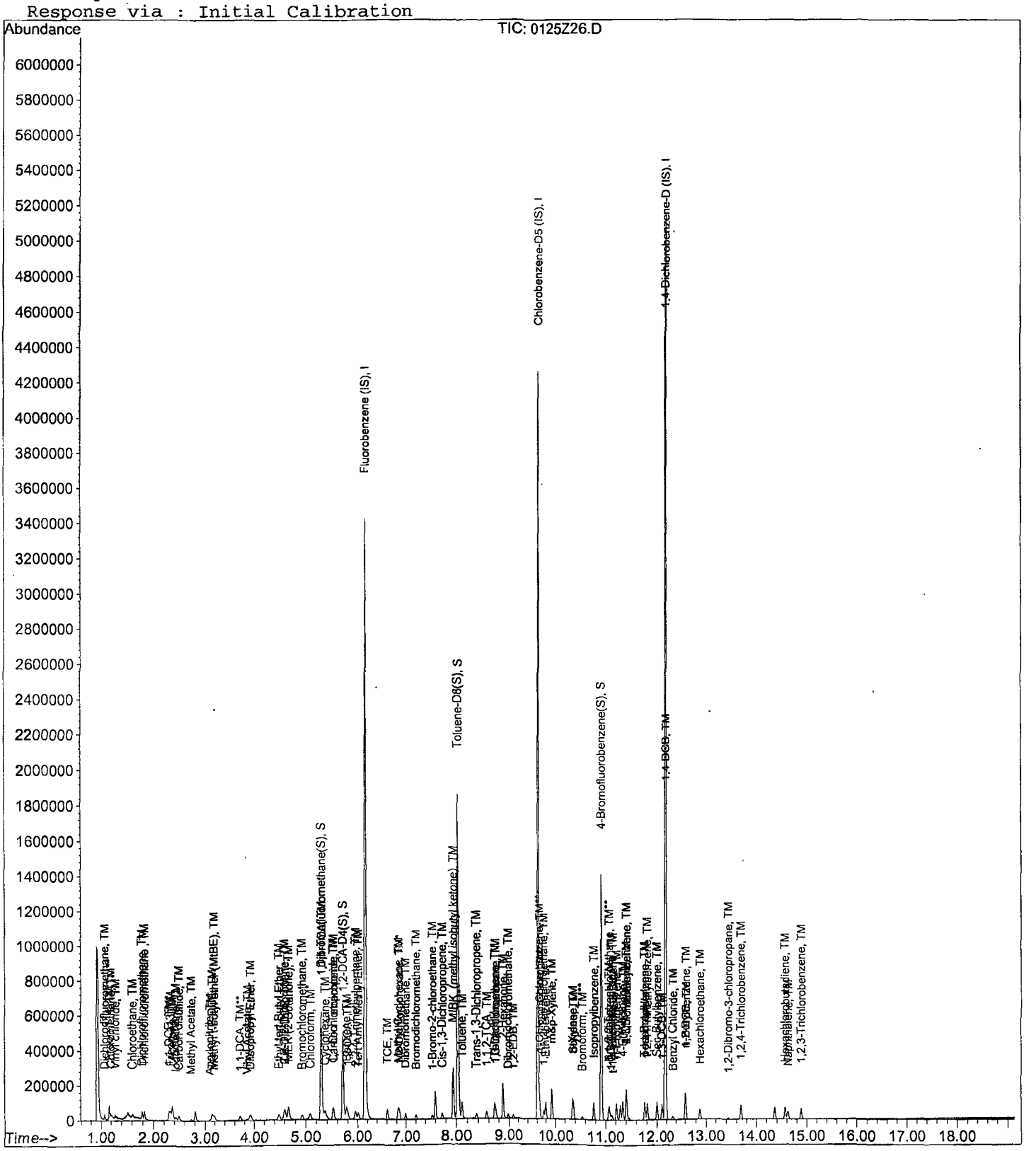
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	15013	1.02	ppb		99
60)	MIBK (methyl isobutyl ket	7.94	43	184584	19.50	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	3334	1.06	ppb		86
63)	Cis-1,3-Dichloropropene	7.73	75	18063	0.89	ppb		93
64)	Toluene	8.11	91	71543	1.04	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	14617	1.49	ppb	#	93
66)	1,1,2-TCA	8.56	97	13453	1.03	ppb		83
67)	2-Hexanone	8.88	43	74264	20.54	ppb		99
70)	1,2-EDB	9.09	107	12507	0.96	ppb	#	98
71)	Tetrachloroethene	8.72	166	28259	1.04	ppb		97
72)	1-Chlorohexane	9.67	91	22408	1.06	ppb		95
73)	1,1,1,2-Tetrachloroethane	9.75	131	13148	0.84	ppb		90
74)	m&p-Xylene	9.92	91	110759	2.04	ppb		94
75)	o-Xylene	10.35	91	52847	0.97	ppb		94
76)	Styrene	10.37	104	35341	0.90	ppb		96
78)	1,3-Dichloropropane	8.74	76	20446	1.03	ppb		99
79)	Dibromochloromethane	8.98	129	11746	1.60	ppb		86
80)	Chlorobenzene	9.65	112	49975	1.03	ppb		99
81)	Ethylbenzene	9.79	91	75493	1.05	ppb		98
82)	Bromoform	10.54	173	8190	2.12	ppb		89
84)	Isopropylbenzene	10.77	105	73117	0.93	ppb		95
85)	1,1,2,2-Tetrachloroethane	11.07	83	13703	0.92	ppb		96
86)	1,2,3-Trichloropropane	11.11	110	5857	0.98	ppb	#	85
87)	t-1,4-Dichloro-2-Butene	11.15	53	1962	2.13	ppb		98
88)	Bromobenzene	11.06	77	24739	0.99	ppb		91
89)	n-Propylbenzene	11.21	91	81815	0.59	ppb		99
90)	4-Ethyltoluene	11.34	105	72842	0.94	ppb		92
91)	2-Chlorotoluene	11.41	91	56407	0.63	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	57122	0.66	ppb		99
93)	4-Chlorotoluene	11.41	91	56407	0.63	ppb		98
94)	Tert-Butylbenzene	11.76	119	59300	0.95	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	60013	0.94	ppb		94
96)	Sec-Butylbenzene	12.00	105	78921	0.92	ppb		99
97)	p-Isopropyltoluene	11.76	119	59300	0.95	ppb		91
98)	Benzyl Chloride	12.35	91	17683	2.16	ppb		93
99)	1,3-DCB	12.10	146	48784	1.03	ppb		95
100)	1,4-DCB	12.20	146	50417	1.04	ppb		93
101)	n-Butylbenzene	12.61	91	54640	0.93	ppb		92
102)	1,2-DCB	12.60	146	44398	1.01	ppb		95
103)	Hexachloroethane	12.89	201	9422	2.23	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	3312	1.74	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	38921	0.99	ppb		88
106)	Hexachlorobutadiene	14.57	225	20215	1.02	ppb		86
107)	Naphthalene	14.62	128	48314	0.41	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	27400	0.97	ppb		91

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z26.D Vial: 21
Acq On : 25 Jan 21 16:53 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb		0.00
Spiked Amount 25.000			Recovery = 38.824%				
48) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb		0.00
Spiked Amount 25.000			Recovery = 39.864%				
69) Toluene-D8(S)	8.03	98	1265740	9.83	ppb		0.00
Spiked Amount 25.000			Recovery = 39.308%				
77) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb		0.00
Spiked Amount 25.000			Recovery = 40.020%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.07	85	36856	2.04	ppb		95
4) Freon 114	1.16	85	24600	2.30	ppb		91
5) Chloromethane	1.20	50	17391	1.54	ppb		93
6) Vinyl chloride	1.28	62	35409	2.14	ppb		97
9) Bromomethane	1.53	94	11643	1.27	ppb		86
10) Chloroethane	1.61	64	10665	1.73	ppb		93
11) Dichlorofluoromethane	1.78	67	68079	2.16	ppb		97
12) Trichlorofluoromethane	1.83	101	64626	2.18	ppb		96
17) Acetone	2.36	43	136629	30.60	ppb		96
18) Freon-113	2.32	101	17184	2.05	ppb		94
19) 1,1-DCE	2.30	61	43344	2.07	ppb		97
23) Methyl Acetate	2.73	43	23021	2.15	ppb		91
24) Iodomethane	2.43	142	31228	3.31	ppb	#	96
25) Acrylonitrile	3.10	52	10530	2.29	ppb		92
26) Methylene chloride	2.81	49	23936	1.05	ppb		98
27) Carbon disulfide	2.49	76	41776	2.02	ppb		100
28) Methyl t-butyl ether (MtBE	3.19	73	74273	2.03	ppb		95
29) Trans-1,2-DCE	3.14	61	42236	2.06	ppb		97
31) Diisopropyl Ether	3.93	45	77564	2.04	ppb		98
33) 1,1-DCA	3.71	63	55456	2.11	ppb		98
34) Vinyl Acetate	3.86	43	25718	2.04	ppb		97
35) Ethyl tert Butyl Ether	4.49	59	70337	2.02	ppb		97
36) MEK (2-Butanone)	4.67	43	162442	30.36	ppb		96
37) Cis-1,2-DCE	4.60	61	49511	2.06	ppb		99
38) 2,2-Dichloropropane	4.59	77	43199	1.99	ppb		94
41) Chloroform	5.09	83	59915	2.05	ppb		99
42) Bromochloromethane	4.93	49	23507	2.19	ppb		93
44) 1,1,1-TCA	5.30	97	54440	2.02	ppb		98
45) Cyclohexane	5.37	56	47720	2.14	ppb		92
46) 1,1-Dichloropropene	5.53	75	41012	2.06	ppb		98
47) 2,2,4-Trimethylpentane	5.95	57	90903	2.08	ppb		96
49) Carbon Tetrachloride	5.52	117	48204	2.03	ppb		99
50) Tert Amyl Methyl Ether	6.01	73	62631	1.92	ppb		94
52) 1,2-DCA	5.81	62	41209	2.12	ppb		97
53) Benzene	5.78	78	132344	2.11	ppb		99
54) TCE	6.61	130	43674	2.01	ppb		92
56) 1,2-Dichloropropane	6.86	63	28025	2.06	ppb	#	95
57) Bromodichloromethane	7.20	83	30218	1.83	ppb		90
58) Methyl Cyclohexane	6.84	83	54522	2.13	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	30181	2.07	ppb		96
60)	MIBK (methyl isobutyl ket	7.94	43	283847	30.42	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	5763	1.86	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	37163	1.87	ppb		97
64)	Toluene	8.10	91	141133	2.08	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	29817	2.23	ppb		97
66)	1,1,2-TCA	8.56	97	26352	2.05	ppb		95
67)	2-Hexanone	8.88	43	109344	28.89	ppb		97
70)	1,2-EDB	9.09	107	25207	1.94	ppb	#	96
71)	Tetrachloroethene	8.71	166	56473	2.09	ppb		95
72)	1-Chlorohexane	9.66	91	44462	2.10	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	27607	1.77	ppb		99
74)	m&p-Xylene	9.92	91	225502	4.17	ppb		98
75)	o-Xylene	10.35	91	108150	2.00	ppb		97
76)	Styrene	10.37	104	79072	1.79	ppb		97
78)	1,3-Dichloropropane	8.74	76	39314	1.99	ppb		96
79)	Dibromochloromethane	8.98	129	23970	2.31	ppb		93
80)	Chlorobenzene	9.65	112	103295	2.13	ppb		98
81)	Ethylbenzene	9.79	91	148005	2.06	ppb		99
82)	Bromoform	10.54	173	16247	2.66	ppb		94
84)	Isopropylbenzene	10.76	105	152914	2.03	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	29210	2.05	ppb		92
86)	1,2,3-Trichloropropane	11.11	110	11654	2.04	ppb	#	80
87)	t-1,4-Dichloro-2-Butene	11.14	53	4474	2.93	ppb		87
88)	Bromobenzene	11.06	77	49216	2.06	ppb		99
89)	n-Propylbenzene	11.21	91	163657	1.60	ppb		99
90)	4-Ethyltoluene	11.34	105	153756	2.08	ppb		97
91)	2-Chlorotoluene	11.41	91	115840	1.72	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	124685	1.77	ppb		100
93)	4-Chlorotoluene	11.41	91	115840	1.72	ppb		96
94)	Tert-Butylbenzene	11.76	119	121141	2.03	ppb		91
95)	1,2,4-Trimethylbenzene	11.81	105	121921	2.00	ppb		94
96)	Sec-Butylbenzene	12.00	105	166223	2.02	ppb		94
97)	p-Isopropyltoluene	11.76	119	121141	2.03	ppb		99
98)	Benzyl Chloride	12.35	91	36569	2.77	ppb	#	90
99)	1,3-DCB	12.10	146	97482	2.15	ppb		96
100)	1,4-DCB	12.20	146	97787	2.11	ppb		98
101)	n-Butylbenzene	12.61	91	112607	1.87	ppb		94
102)	1,2-DCB	12.59	146	86543	2.06	ppb		97
103)	Hexachloroethane	12.89	201	19210	2.82	ppb	#	75
104)	1,2-Dibromo-3-chloropropan	13.44	157	6332	2.38	ppb	#	76
105)	1,2,4-Trichlorobenzene	13.69	180	77892	2.08	ppb		99
106)	Hexachlorobutadiene	14.57	225	38879	2.06	ppb		94
107)	Naphthalene	14.62	128	99609	1.33	ppb		100
108)	1,2,3-Trichlorobenzene	14.88	180	56436	2.10	ppb		93

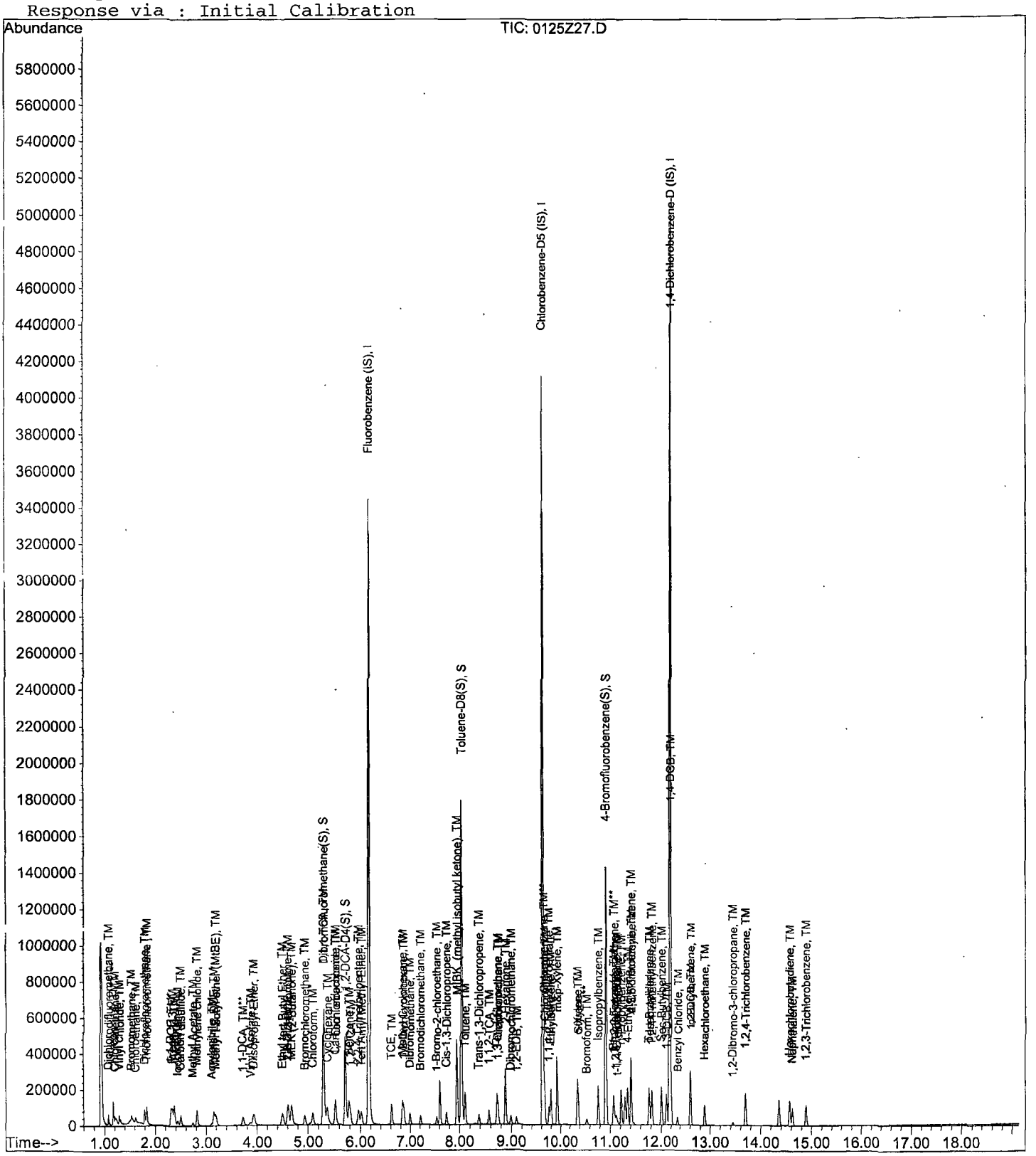
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery = 111.184%			
48) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery = 109.020%			
69) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery = 108.292%			
77) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery = 97.020%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	188844	10.55	ppb	100
4) Freon 114	1.16	85	100960	9.52	ppb	100
5) Chloromethane	1.22	50	75630	10.19	ppb	100
6) Vinyl chloride	1.28	62	171421	10.44	ppb	100
9) Bromomethane	1.53	94	43928	10.02	ppb	100
10) Chloroethane	1.60	64	46832	11.77	ppb	100
11) Dichlorofluoromethane	1.78	67	325860	10.44	ppb	100
12) Trichlorofluoromethane	1.82	101	323634	11.01	ppb	100
17) Acetone	2.36	43	205136	46.40	ppb	100
18) Freon-113	2.32	101	79840	9.64	ppb	100
19) 1,1-DCE	2.29	61	218867	10.53	ppb	100
23) Methyl Acetate	2.72	43	95883	9.06	ppb	100
24) Iodomethane	2.43	142	132052	8.06	ppb	100
25) Acrylonitrile	3.10	52	44170	9.69	ppb	100
26) Methylene chloride	2.81	49	96624	10.56	ppb	100
27) Carbon disulfide	2.49	76	200896	9.79	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	375809	10.39	ppb	100
29) Trans-1,2-DCE	3.14	61	212306	10.45	ppb	100
31) Diisopropyl Ether	3.92	45	398013	10.57	ppb	99
33) 1,1-DCA	3.71	63	279601	10.75	ppb	100
34) Vinyl Acetate	3.86	43	114693	9.20	ppb	100
35) Ethyl tert Butyl Ether	4.49	59	366723	10.62	ppb	100
36) MEK (2-Butanone)	4.67	43	262379	49.53	ppb	100
37) Cis-1,2-DCE	4.60	61	246510	10.35	ppb	100
38) 2,2-Dichloropropane	4.59	77	227889	10.59	ppb	100
41) Chloroform	5.09	83	309936	10.70	ppb	100
42) Bromochloromethane	4.93	49	113489	10.69	ppb	100
44) 1,1,1-TCA	5.29	97	281821	10.57	ppb	100
45) Cyclohexane	5.36	56	221224	10.03	ppb	100
46) 1,1-Dichloropropene	5.53	75	207546	10.51	ppb	100
47) 2,2,4-Trimethylpentane	5.95	57	427514	9.90	ppb	100
49) Carbon Tetrachloride	5.52	117	247631	10.56	ppb	100
50) Tert Amyl Methyl Ether	6.01	73	335933	10.41	ppb	100
52) 1,2-DCA	5.80	62	199683	10.39	ppb	100
53) Benzene	5.78	78	645239	10.41	ppb	100
54) TCE	6.61	130	215997	10.02	ppb	100
56) 1,2-Dichloropropane	6.86	63	145288	10.77	ppb	100
57) Bromodichloromethane	7.20	83	175253	10.69	ppb	100
58) Methyl Cyclohexane	6.83	83	253329	10.00	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

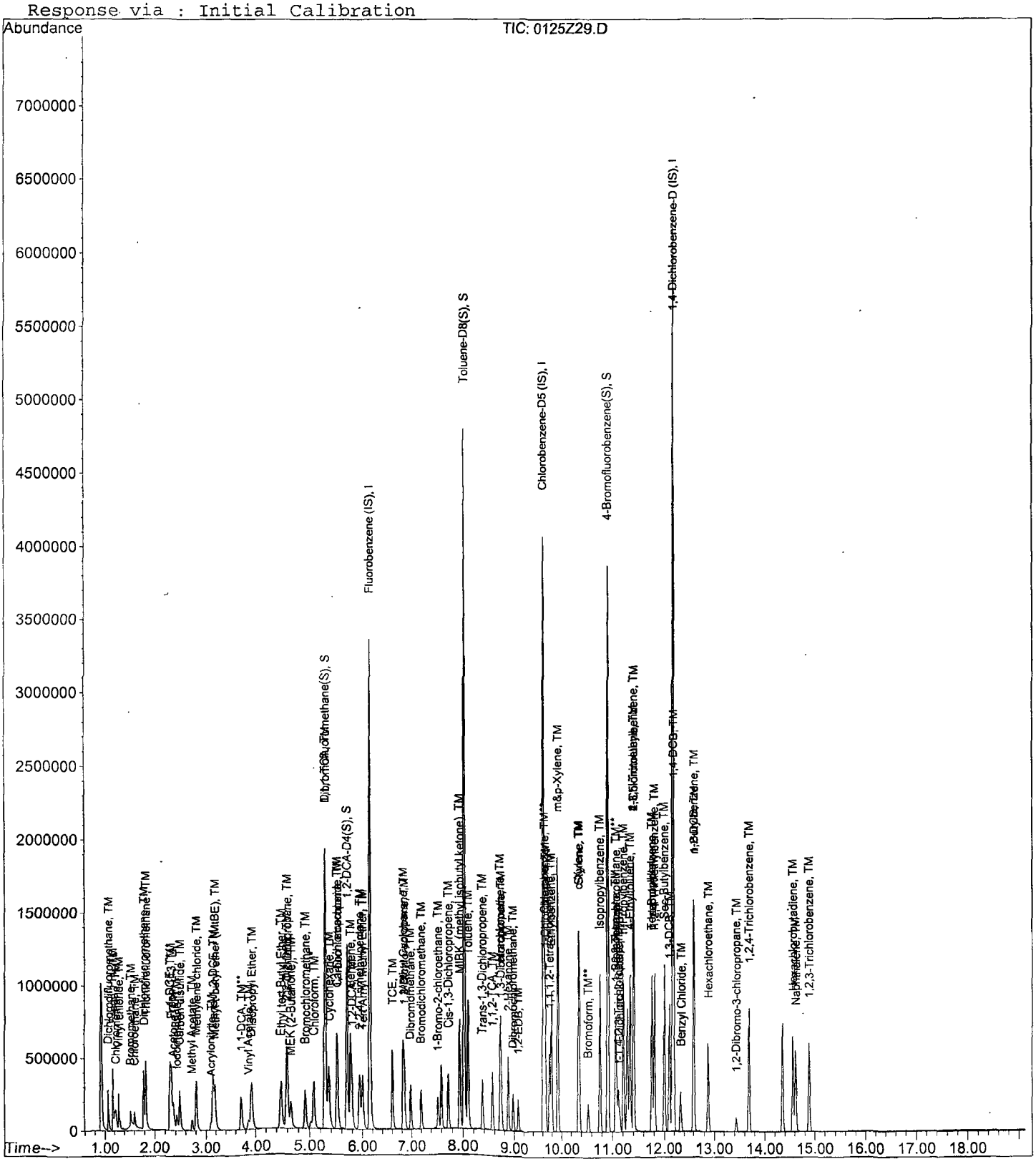
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
59)	Dibromomethane	6.99	174	153666	10.66 ppb	100
60)	MIBK (methyl isobutyl ket	7.94	43	463362	50.15 ppb	100
61)	1-Bromo-2-chloroethane	7.53	144	30133	9.83 ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	206482	10.47 ppb	100
64)	Toluene	8.11	91	695620	10.38 ppb	100
65)	Trans-1,3-Dichloropropene	8.37	75	173878	9.30 ppb	100
66)	1,1,2-TCA	8.56	97	133142	10.47 ppb	100
67)	2-Hexanone	8.88	43	187008	47.24 ppb	100
70)	1,2-EDB	9.09	107	142101	11.01 ppb	100
71)	Tetrachloroethene	8.71	166	276097	10.27 ppb	100
72)	1-Chlorohexane	9.67	91	218100	10.40 ppb	100
73)	1,1,1,2-Tetrachloroethane	9.75	131	160706	10.40 ppb	100
74)	m&p-Xylene	9.93	91	1152497	21.49 ppb	100
75)	o-Xylene	10.35	91	573719	10.71 ppb	100
76)	Styrene	10.37	104	463875	9.69 ppb	100
78)	1,3-Dichloropropane	8.74	76	206374	10.50 ppb	100
79)	Dibromochloromethane	8.98	129	139654	9.13 ppb	100
80)	Chlorobenzene	9.65	112	492038	10.24 ppb	100
81)	Ethylbenzene	9.79	91	758435	10.64 ppb	100
82)	Bromoform	10.54	173	107625	8.78 ppb	100
84)	Isopropylbenzene	10.76	105	802990	10.24 ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	145533	9.80 ppb	100
86)	1,2,3-Trichloropropane	11.12	110	57107	9.59 ppb	100
87)	t-1,4-Dichloro-2-Butene	11.14	53	22934	8.31 ppb	100
88)	Bromobenzene	11.06	77	244492	9.86 ppb	100
89)	n-Propylbenzene	11.21	91	874499	9.62 ppb	100
90)	4-Ethyltoluene	11.34	105	774025	10.07 ppb	100
91)	2-Chlorotoluene	11.41	91	587362	9.59 ppb	100
92)	1,3,5-Trimethylbenzene	11.41	105	649801	9.65 ppb	100
93)	4-Chlorotoluene	11.41	91	587362	9.59 ppb	100
94)	Tert-Butylbenzene	11.76	119	623925	10.07 ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	649191	10.24 ppb	100
96)	Sec-Butylbenzene	12.00	105	862906	10.09 ppb	100
97)	p-Isopropyltoluene	11.76	119	623925	10.07 ppb	100
98)	Benzyl Chloride	12.35	91	220322	8.12 ppb	100
99)	1,3-DCB	12.10	146	475041	10.08 ppb	100
100)	1,4-DCB	12.20	146	477849	9.92 ppb	100
101)	n-Butylbenzene	12.61	91	612725	9.27 ppb	100
102)	1,2-DCB	12.60	146	440645	10.10 ppb	100
103)	Hexachloroethane	12.89	201	120536	8.37 ppb	100
104)	1,2-Dibromo-3-chloropropan	13.44	157	40342	8.89 ppb	100
105)	1,2,4-Trichlorobenzene	13.69	180	389459	10.00 ppb	100
106)	Hexachlorobutadiene	14.57	225	196053	9.97 ppb	100
107)	Naphthalene	14.62	128	576261	9.23 ppb	100
108)	1,2,3-Trichlorobenzene	14.89	180	275293	9.83 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.30	111	2246563	56.58	ppb		0.00
Spiked Amount 25.000			Recovery = 226.332%				
48) 1,2-DCA-D4(S)	5.71	65	2038786	55.19	ppb		0.00
Spiked Amount 25.000			Recovery = 220.772%				
69) Toluene-D8(S)	8.03	98	7511750	57.76	ppb		0.00
Spiked Amount 25.000			Recovery = 231.032%				
77) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07	ppb		0.00
Spiked Amount 25.000			Recovery = 200.300%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.06	85	403319	21.64	ppb		100
4) Freon 114	1.16	85	216564	19.61	ppb		91
5) Chloromethane	1.23	50	145979	19.74	ppb		100
6) Vinyl chloride	1.28	62	353729	20.68	ppb		98
9) Bromomethane	1.53	94	90475	21.61	ppb		89
10) Chloroethane	1.60	64	82768	20.79	ppb		99
11) Dichlorofluoromethane	1.78	67	636786	19.59	ppb		100
12) Trichlorofluoromethane	1.82	101	667147	21.79	ppb		100
17) Acetone	2.36	43	249467	54.16	ppb		97
18) Freon-113	2.32	101	170880	19.80	ppb		98
19) 1,1-DCE	2.29	61	443423	20.48	ppb		98
23) Methyl Acetate	2.73	43	199882	18.13	ppb		98
24) Iodomethane	2.43	142	321433	16.36	ppb		98
25) Acrylonitrile	3.11	52	92069	19.39	ppb		94
26) Methylene chloride	2.81	49	189760	21.71	ppb		98
27) Carbon disulfide	2.49	76	423936	19.84	ppb		99
28) Methyl t-butyl ether (MtBE	3.18	73	793461	21.06	ppb		97
29) Trans-1,2-DCE	3.14	61	437329	20.66	ppb		96
31) Diisopropyl Ether	3.92	45	832520	21.23	ppb		97
33) 1,1-DCA	3.71	63	552522	20.39	ppb		99
34) Vinyl Acetate	3.86	43	270340	20.82	ppb	#	94
35) Ethyl tert Butyl Ether	4.49	59	787540	21.90	ppb		97
36) MEK (2-Butanone)	4.67	43	340311	61.66	ppb		97
37) Cis-1,2-DCE	4.60	61	491718	19.82	ppb		98
38) 2,2-Dichloropropane	4.59	77	470434	20.98	ppb		96
41) Chloroform	5.09	83	619520	20.52	ppb		99
42) Bromochloromethane	4.93	49	222768	20.14	ppb		97
44) 1,1,1-TCA	5.30	97	590280	21.25	ppb		99
45) Cyclohexane	5.36	56	472969	20.59	ppb		98
46) 1,1-Dichloropropene	5.53	75	426675	20.74	ppb		96
47) 2,2,4-Trimethylpentane	5.95	57	955162	21.23	ppb		99
49) Carbon Tetrachloride	5.52	117	526007	21.52	ppb		96
50) Tert Amyl Methyl Ether	6.01	73	737920	21.94	ppb		99
52) 1,2-DCA	5.81	62	392634	19.60	ppb		98
53) Benzene	5.78	78	1311861	20.32	ppb		98
54) TCE	6.61	130	452077	20.13	ppb		95
56) 1,2-Dichloropropane	6.86	63	291674	20.76	ppb		99
57) Bromodichloromethane	7.20	83	378829	22.19	ppb		96
58) Methyl Cyclohexane	6.84	83	570742	21.62	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

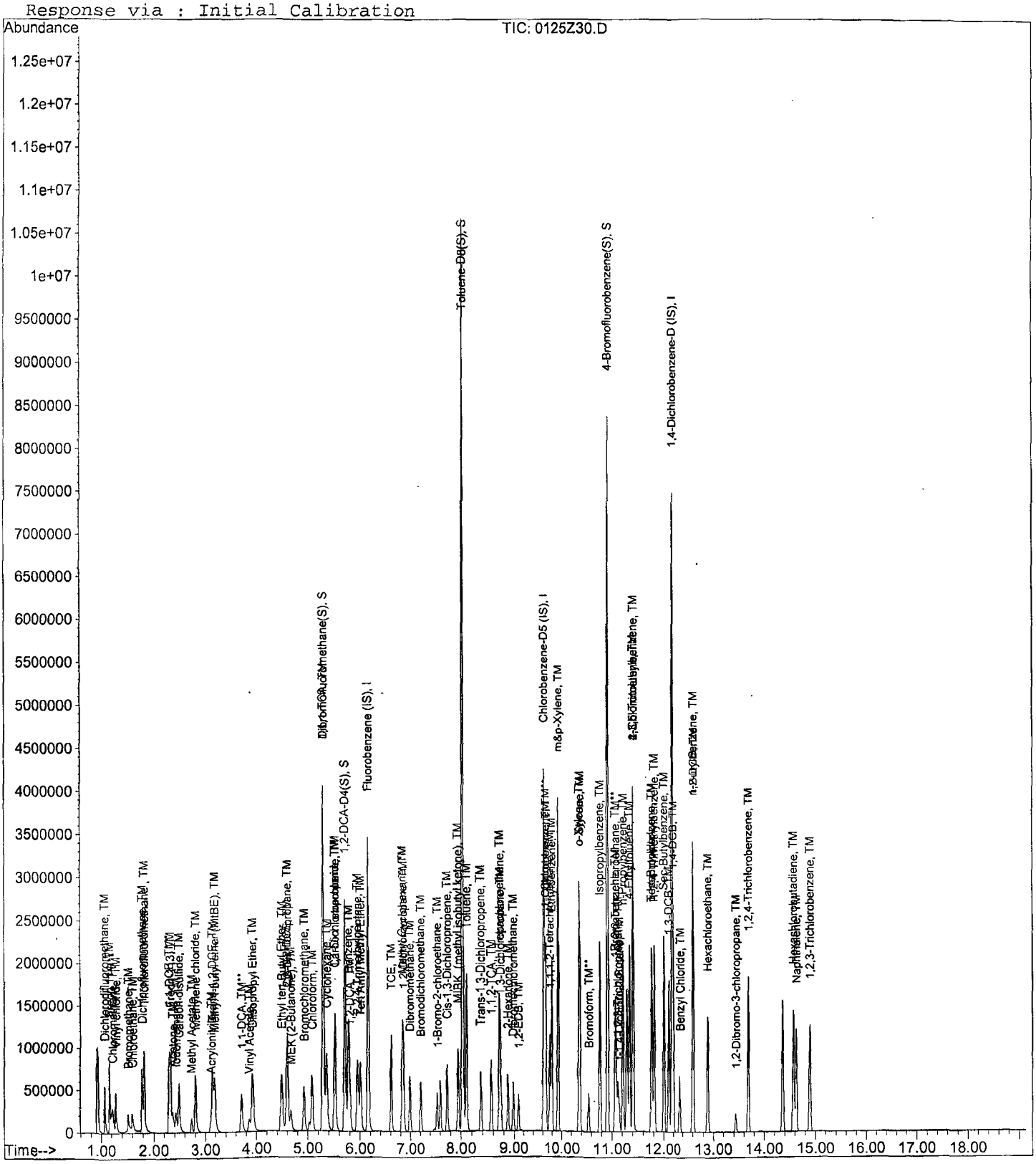
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	313910	20.91	ppb		97
60)	MIBK (methyl isobutyl ket	7.94	43	615187	63.91	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	63294	19.82	ppb		94
63)	Cis-1,3-Dichloropropene	7.73	75	446949	21.76	ppb		97
64)	Toluene	8.11	91	1448580	20.74	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	382640	18.76	ppb		98
66)	1,1,2-TCA	8.56	97	277693	20.96	ppb		98
67)	2-Hexanone	8.88	43	243904	58.22	ppb		99
70)	1,2-EDB	9.09	107	296985	22.61	ppb		99
71)	Tetrachloroethene	8.72	166	560903	20.51	ppb		97
72)	1-Chlorohexane	9.67	91	465339	21.82	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	345743	21.99	ppb		99
74)	m&p-Xylene	9.92	91	2367189	43.40	ppb		99
75)	o-Xylene	10.35	91	1192190	21.88	ppb		100
76)	Styrene	10.37	104	986898	20.06	ppb		99
78)	1,3-Dichloropropane	8.74	76	429822	21.49	ppb		99
79)	Dibromochloromethane	8.99	129	305498	18.57	ppb		96
80)	Chlorobenzene	9.65	112	1008069	20.62	ppb		98
81)	Ethylbenzene	9.79	91	1556685	21.46	ppb		97
82)	Bromoform	10.54	173	241387	17.46	ppb		94
84)	Isopropylbenzene	10.76	105	1667013	21.12	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	310985	20.81	ppb		97
86)	1,2,3-Trichloropropane	11.12	110	121580	20.29	ppb		96
87)	t-1,4-Dichloro-2-Butene	11.15	53	56998	18.22	ppb		85
88)	Bromobenzene	11.06	77	503742	20.18	ppb		99
89)	n-Propylbenzene	11.21	91	1834559	20.40	ppb		99
90)	4-Ethyltoluene	11.34	105	1633935	21.11	ppb		97
91)	2-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
92)	1,3,5-Trimethylbenzene	11.41	105	1352312	20.16	ppb		96
93)	4-Chlorotoluene	11.41	91	1228664	20.27	ppb		97
94)	Tert-Butylbenzene	11.76	119	1307807	20.96	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	1370905	21.49	ppb		98
96)	Sec-Butylbenzene	12.00	105	1837210	21.35	ppb		98
97)	p-Isopropyltoluene	11.76	119	1307807	20.96	ppb		100
98)	Benzyl Chloride	12.35	91	541868	17.47	ppb		98
99)	1,3-DCB	12.10	146	968244	20.40	ppb		99
100)	1,4-DCB	12.20	146	976761	20.15	ppb		99
101)	n-Butylbenzene	12.61	91	1339630	19.99	ppb		98
102)	1,2-DCB	12.60	146	891700	20.29	ppb		99
103)	Hexachloroethane	12.89	201	286470	17.42	ppb		90
104)	1,2-Dibromo-3-chloropropan	13.44	157	89321	18.24	ppb	#	82
105)	1,2,4-Trichlorobenzene	13.69	180	834868	21.28	ppb		97
106)	Hexachlorobutadiene	14.57	225	428476	21.64	ppb		98
107)	Naphthalene	14.62	128	1287449	20.96	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	596215	21.15	ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery = 220.264%			
48) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery = 212.784%			
69) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery = 223.732%			
77) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery = 197.396%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	850845	43.18	ppb	100
4) Freon 114	1.16	85	471713	40.41	ppb	81
5) Chloromethane	1.22	50	310138	40.69	ppb	99
6) Vinyl chloride	1.28	62	723959	40.04	ppb	99
9) Bromomethane	1.53	94	180281	42.36	ppb	92
10) Chloroethane	1.60	64	160723	39.19	ppb	96
11) Dichlorofluoromethane	1.78	67	1219590	35.49	ppb	100
12) Trichlorofluoromethane	1.82	101	1347327	41.63	ppb	99
17) Acetone	2.36	43	342775	70.40	ppb	97
18) Freon-113	2.32	101	342720	37.57	ppb	93
19) 1,1-DCE	2.29	61	935892	40.90	ppb	98
23) Methyl Acetate	2.73	43	413425	35.47	ppb	96
24) Iodomethane	2.42	142	803511	36.15	ppb	97
25) Acrylonitrile	3.10	52	190471	37.95	ppb	97
26) Methylene chloride	2.81	49	395456	44.78	ppb	96
27) Carbon disulfide	2.48	76	899456	39.82	ppb	99
28) Methyl t-butyl ether (MtBE	3.18	73	1702458	42.74	ppb	98
29) Trans-1,2-DCE	3.14	61	903425	40.37	ppb	99
31) Diisopropyl Ether	3.93	45	1766714	42.61	ppb	99
33) 1,1-DCA	3.71	63	1139247	39.78	ppb	98
34) Vinyl Acetate	3.86	43	721227	52.54	ppb	97
35) Ethyl tert Butyl Ether	4.49	59	1713648	45.08	ppb	100
36) MEK (2-Butanone)	4.67	43	487302	83.53	ppb	97
37) Cis-1,2-DCE	4.60	61	1014813	38.71	ppb	95
38) 2,2-Dichloropropane	4.59	77	1003777	42.34	ppb	97
41) Chloroform	5.09	83	1275162	39.97	ppb	100
42) Bromochloromethane	4.93	49	453439	38.79	ppb	98
44) 1,1,1-TCA	5.30	97	1235018	42.07	ppb	97
45) Cyclohexane	5.36	56	995524	40.99	ppb	97
46) 1,1-Dichloropropene	5.53	75	906680	41.69	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	2048913	43.08	ppb	99
49) Carbon Tetrachloride	5.52	117	1127652	43.66	ppb	95
50) Tert Amyl Methyl Ether	6.01	73	1603763	45.12	ppb	96
52) 1,2-DCA	5.81	62	819042	38.68	ppb	99
53) Benzene	5.78	78	2701347	39.59	ppb	99
54) TCE	6.61	130	938486	39.53	ppb	97
56) 1,2-Dichloropropane	6.86	63	616004	41.49	ppb	97
57) Bromodichloromethane	7.20	83	831516	46.07	ppb	99
58) Methyl Cyclohexane	6.84	83	1216748	43.61	ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	660236	41.60	ppb		95
60)	MIBK (methyl isobutyl ket	7.94	43	909331	89.37	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	135518	40.16	ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	975719	44.95	ppb		96
64)	Toluene	8.11	91	3043083	41.23	ppb		100
65)	Trans-1,3-Dichloropropene	8.37	75	868044	39.37	ppb		97
66)	1,1,2-TCA	8.56	97	598299	42.72	ppb		95
67)	2-Hexanone	8.88	43	372224	82.44	ppb		99
70)	1,2-EDB	9.09	107	632935	44.90	ppb		99
71)	Tetrachloroethene	8.71	166	1163392	39.64	ppb		100
72)	1-Chlorohexane	9.67	91	979964	42.80	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	758668	44.96	ppb		97
74)	m&p-Xylene	9.93	91	4994604	85.31	ppb		97
75)	o-Xylene	10.35	91	2550600	43.60	ppb		97
76)	Styrene	10.37	104	2163300	40.77	ppb		96
78)	1,3-Dichloropropane	8.74	76	905531	42.18	ppb		99
79)	Dibromochloromethane	8.98	129	712541	39.28	ppb		94
80)	Chlorobenzene	9.65	112	2118380	40.36	ppb		97
81)	Ethylbenzene	9.79	91	3251491	41.77	ppb		97
82)	Bromoform	10.54	173	589640	37.73	ppb		96
84)	Isopropylbenzene	10.76	105	3577162	43.75	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.08	83	705505	45.58	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	260822	42.02	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	133478	39.23	ppb	#	80
88)	Bromobenzene	11.06	77	1088521	42.09	ppb		98
89)	n-Propylbenzene	11.22	91	3884703	42.06	ppb		99
90)	4-Ethyltoluene	11.34	105	3428735	42.76	ppb		98
91)	2-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
92)	1,3,5-Trimethylbenzene	11.41	105	2886286	41.75	ppb		97
93)	4-Chlorotoluene	11.41	91	2615545	41.98	ppb		96
94)	Tert-Butylbenzene	11.76	119	2785413	43.10	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	2928711	44.32	ppb		99
96)	Sec-Butylbenzene	12.00	105	3958318	44.40	ppb		99
97)	p-Isopropyltoluene	11.76	119	2785413	43.10	ppb		98
98)	Benzyl Chloride	12.35	91	1298244	38.25	ppb		99
99)	1,3-DCB	12.10	146	2039819	41.49	ppb		99
100)	1,4-DCB	12.20	146	2048086	40.79	ppb		98
101)	n-Butylbenzene	12.61	91	2888608	41.49	ppb		98
102)	1,2-DCB	12.60	146	1886399	41.45	ppb		99
103)	Hexachloroethane	12.89	201	677839	37.60	ppb	#	85
104)	1,2-Dibromo-3-chloropropan	13.44	157	205371	39.13	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	1730023	42.58	ppb		97
106)	Hexachlorobutadiene	14.57	225	883426	43.08	ppb		99
107)	Naphthalene	14.62	128	2698564	42.82	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	1221506	41.84	ppb		99

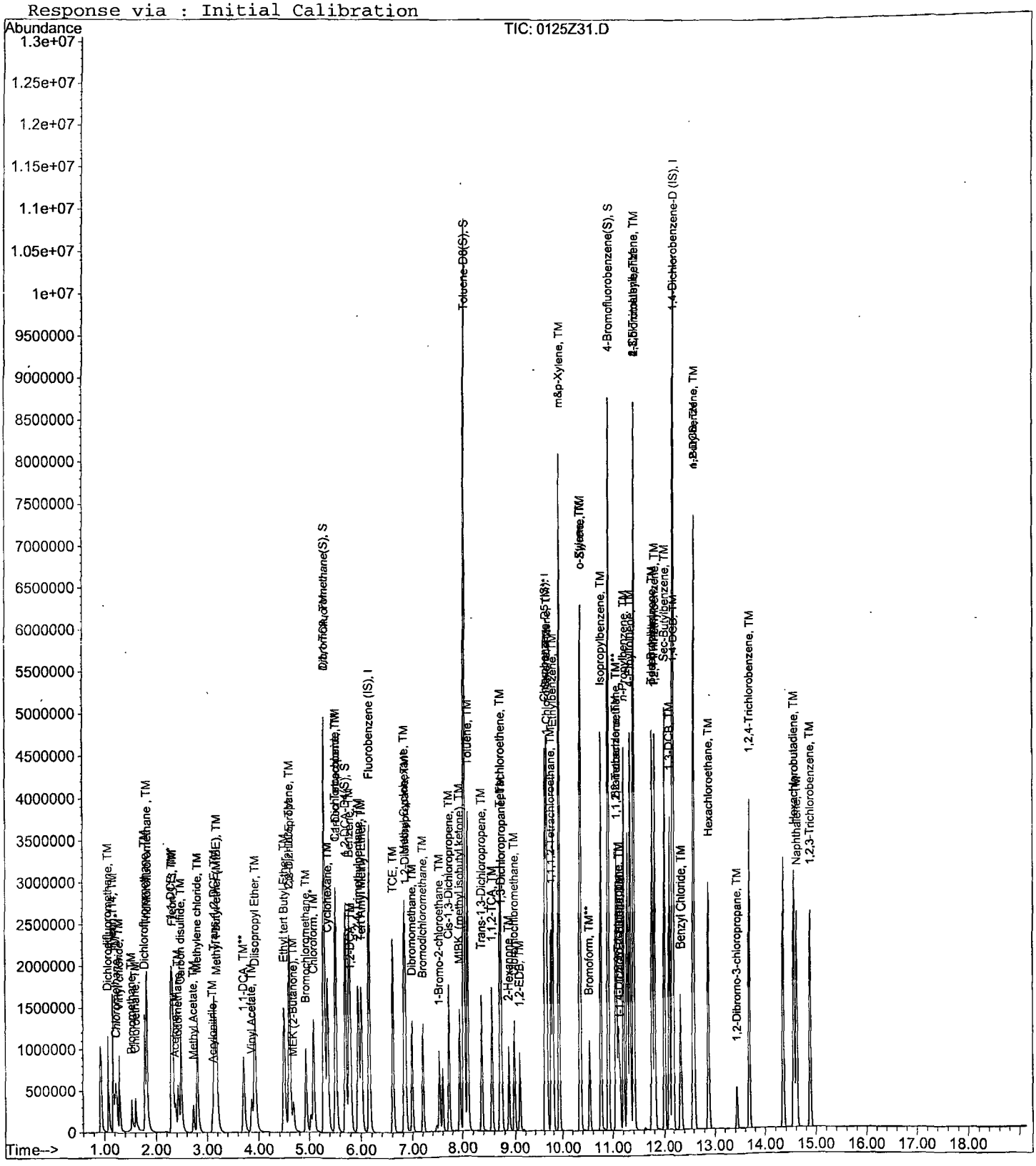
(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z31.D
Acq On : 25 Jan 21 18:47
Sample : 40ug/L VOC STD 1/25/21
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery = 452.384%			
48) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery = 441.048%			
69) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery = 417.644%			
77) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery = 401.700%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	2142477	105.02	ppb	99
4) Freon 114	1.16	85	1130573	93.54	ppb	86
5) Chloromethane	1.22	50	776119	99.77	ppb	100
6) Vinyl chloride	1.28	62	1812047	96.79	ppb	97
9) Bromomethane	1.52	94	424790	98.76	ppb	93
10) Chloroethane	1.60	64	329613	78.79	ppb	99
11) Dichlorofluoromethane	1.77	67	1768543	49.71	ppb	100
12) Trichlorofluoromethane	1.80	101	2682800	80.07	ppb	99
17) Acetone	2.38	43	441385	87.56	ppb	96
18) Freon-113	2.31	101	858240	90.87	ppb	94
19) 1,1-DCE	2.28	61	2337639	98.67	ppb	99
23) Methyl Acetate	2.73	43	1104464	91.53	ppb	95
24) Iodomethane	2.42	142	2439219	102.40	ppb	95
25) Acrylonitrile	3.11	52	488871	94.07	ppb	96
26) Methylene chloride	2.80	49	872512	97.73	ppb	97
27) Carbon disulfide	2.47	76	2246656	96.07	ppb	100
28) Methyl t-butyl ether (MtBE	3.19	73	4339324	105.23	ppb	98
29) Trans-1,2-DCE	3.14	61	2220503	95.83	ppb	97
31) Diisopropyl Ether	3.93	45	4444765	103.54	ppb	99
33) 1,1-DCA	3.71	63	2847490	96.03	ppb	99
34) Vinyl Acetate	3.86	43	1372264	96.55	ppb	96
35) Ethyl tert Butyl Ether	4.49	59	4444937	112.93	ppb	99
36) MEK (2-Butanone)	4.68	43	638941	105.78	ppb	99
37) Cis-1,2-DCE	4.60	61	2528790	93.16	ppb	96
38) 2,2-Dichloropropane	4.59	77	2539577	103.47	ppb	100
41) Chloroform	5.09	83	3206108	97.05	ppb	99
42) Bromochloromethane	4.93	49	1127669	93.16	ppb	95
44) 1,1,1-TCA	5.30	97	3128191	102.92	ppb	98
45) Cyclohexane	5.36	56	2487897	98.94	ppb	100
46) 1,1-Dichloropropene	5.53	75	2242635	99.60	ppb	99
47) 2,2,4-Trimethylpentane	5.95	57	5144591	104.47	ppb	99
49) Carbon Tetrachloride	5.52	117	2914383	108.97	ppb	97
50) Tert Amyl Methyl Ether	6.01	73	4221488	114.71	ppb	94
52) 1,2-DCA	5.81	62	2034029	92.78	ppb	99
53) Benzene	5.78	78	6643693	94.04	ppb	100
54) TCE	6.61	130	2425073	98.65	ppb	96
56) 1,2-Dichloropropane	6.86	63	1553226	101.03	ppb	99
57) Bromodichloromethane	7.20	83	2249058	120.36	ppb	97
58) Methyl Cyclohexane	6.83	83	3046967	105.49	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	1721933	104.80	ppb		96
60)	MIBK (methyl isobutyl ket	7.95	43	1227198	116.48	ppb		100
61)	1-Bromo-2-chloroethane	7.54	144	352361	100.84	ppb		95
63)	Cis-1,3-Dichloropropene	7.73	75	2596344	115.52	ppb		97
64)	Toluene	8.11	91	7571955	99.08	ppb		98
65)	Trans-1,3-Dichloropropene	8.37	75	2323946	100.55	ppb		97
66)	1,1,2-TCA	8.56	97	1574254	108.57	ppb		94
67)	2-Hexanone	8.88	43	474176	100.60	ppb		98
70)	1,2-EDB	9.09	107	1667762	110.13	ppb		99
71)	Tetrachloroethene	8.71	166	2962882	93.98	ppb		99
72)	1-Chlorohexane	9.67	91	2520576	102.48	ppb		99
73)	1,1,1,2-Tetrachloroethane	9.75	131	2028613	111.90	ppb		99
74)	m&p-Xylene	9.93	91	12398749	197.14	ppb		99
75)	o-Xylene	10.35	91	6584991	104.78	ppb		98
76)	Styrene	10.37	104	5699111	99.72	ppb		96
78)	1,3-Dichloropropane	8.74	76	2354438	102.10	ppb		99
79)	Dibromochloromethane	8.98	129	1989350	100.64	ppb		96
80)	Chlorobenzene	9.65	112	5454562	96.74	ppb		96
81)	Ethylbenzene	9.79	91	8285082	99.07	ppb		98
82)	Bromoform	10.54	173	1750422	101.50	ppb		97
84)	Isopropylbenzene	10.76	105	9290802	104.50	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.08	83	1839648	109.31	ppb		100
86)	1,2,3-Trichloropropane	11.12	110	688681	102.04	ppb		97
87)	t-1,4-Dichloro-2-Butene	11.14	53	382334	100.80	ppb	#	80
88)	Bromobenzene	11.06	77	2897158	103.03	ppb		93
89)	n-Propylbenzene	11.21	91	9913611	99.15	ppb		99
90)	4-Ethyltoluene	11.34	105	8875825	101.80	ppb		99
91)	2-Chlorotoluene	11.41	91	6692118	99.21	ppb		95
92)	1,3,5-Trimethylbenzene	11.41	105	7444513	99.31	ppb		96
93)	4-Chlorotoluene	11.41	91	6692118	99.21	ppb		95
94)	Tert-Butylbenzene	11.76	119	7359947	104.72	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	7745661	107.80	ppb		100
96)	Sec-Butylbenzene	12.00	105	10228163	105.52	ppb		98
97)	p-Isopropyltoluene	11.76	119	7359947	104.72	ppb		98
98)	Benzyl Chloride	12.35	91	3845812	101.36	ppb		99
99)	1,3-DCB	12.10	146	5368951	100.44	ppb		98
100)	1,4-DCB	12.20	146	5342198	97.85	ppb		98
101)	n-Butylbenzene	12.61	91	7543645	99.48	ppb		100
102)	1,2-DCB	12.59	146	4898650	98.99	ppb		99
103)	Hexachloroethane	12.89	201	2051749	101.60	ppb	#	79
104)	1,2-Dibromo-3-chloropropan	13.44	157	585335	100.79	ppb	#	85
105)	1,2,4-Trichlorobenzene	13.69	180	4404077	99.69	ppb		97
106)	Hexachlorobutadiene	14.57	225	2162031	96.97	ppb		98
107)	Naphthalene	14.62	128	6732995	98.78	ppb		99
108)	1,2,3-Trichlorobenzene	14.89	180	3060243	96.40	ppb		96

(#) = qualifier out of range (m) = manual integration

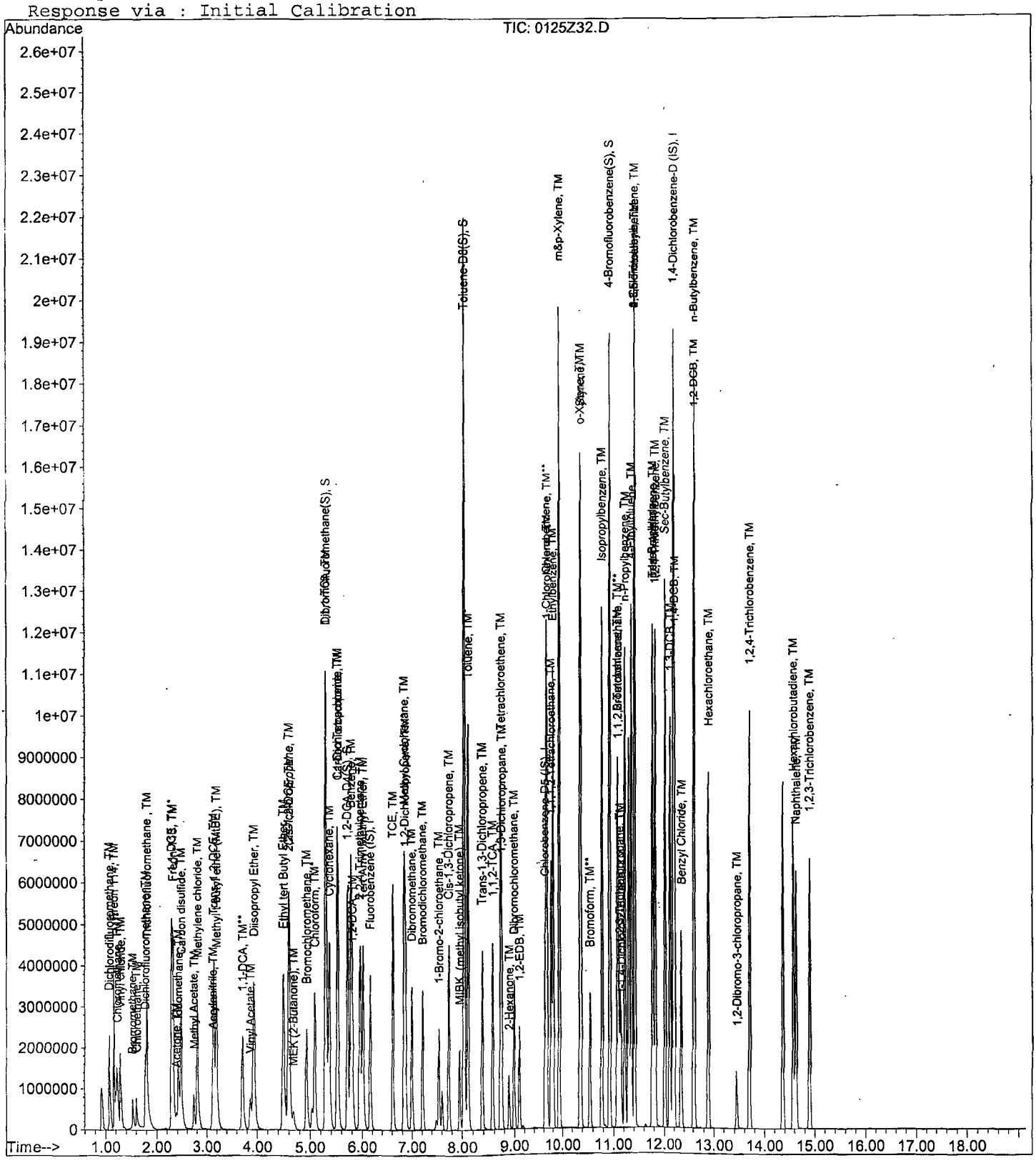
Quantitation Report

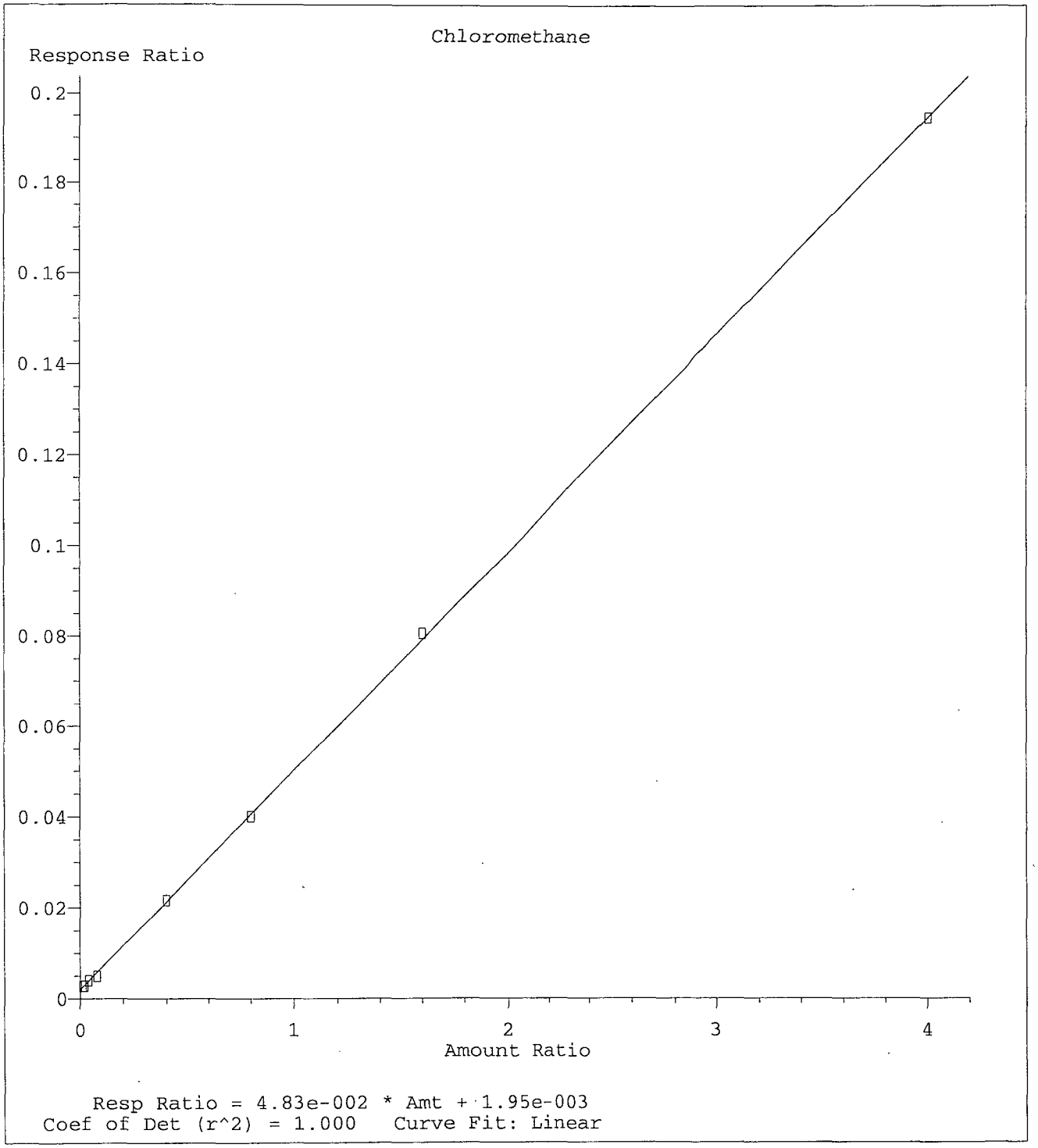
Data File : M:\ZEUS\DATA\210125\0125Z32.D
Acq On : 25 Jan 21 19:10
Sample : 100ug/L VOC STD 1/25/21
Misc :

Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

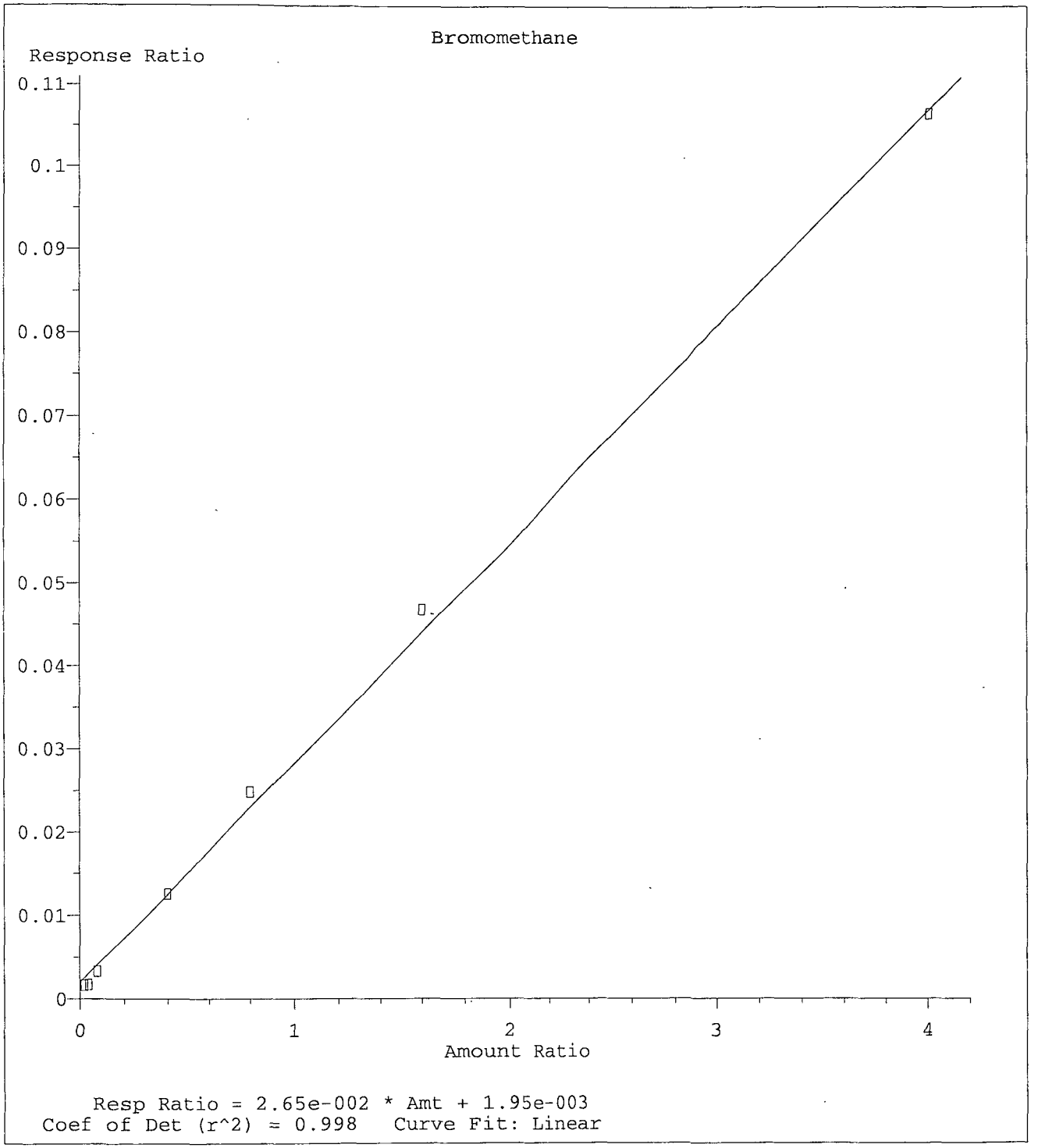
Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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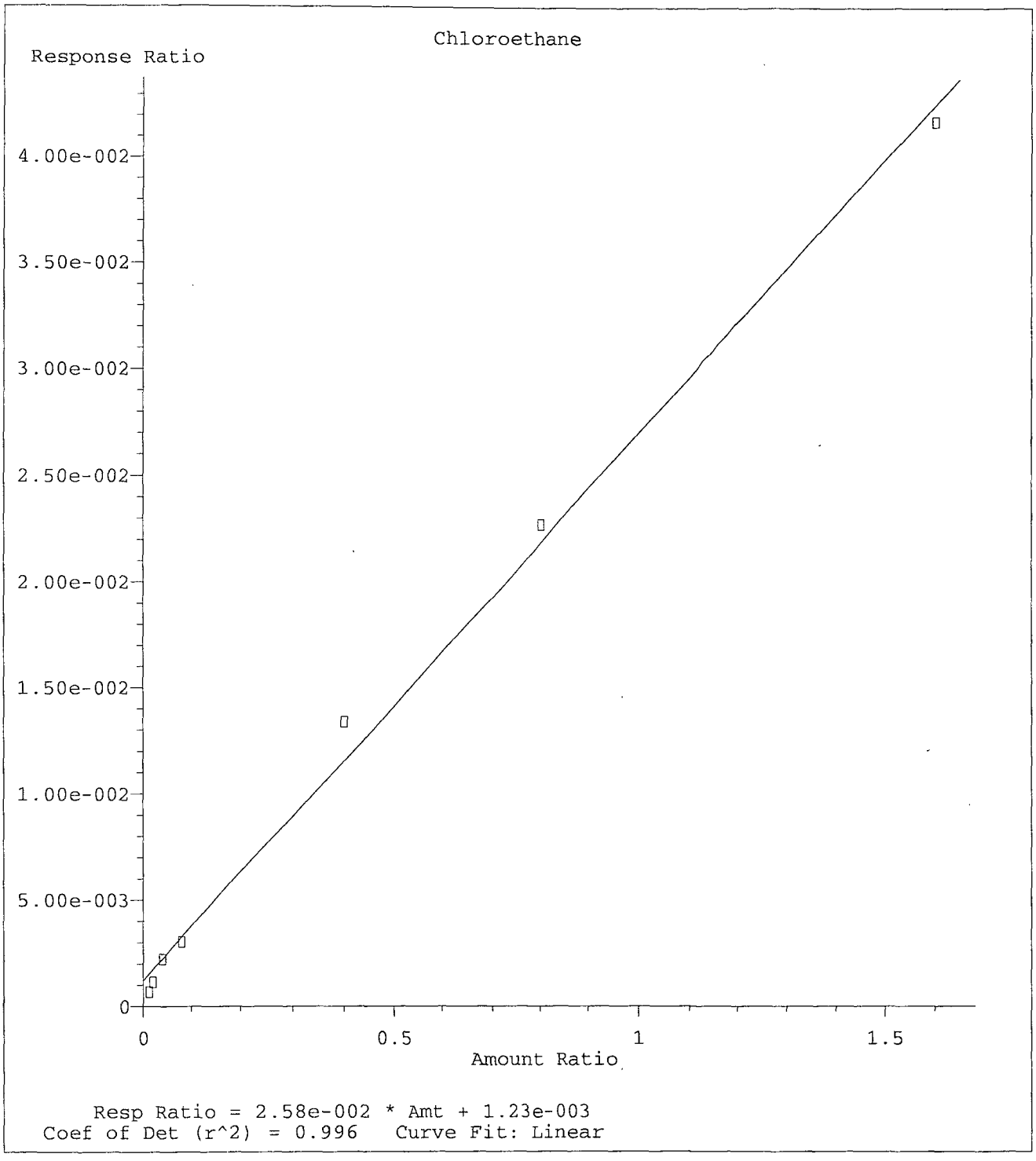
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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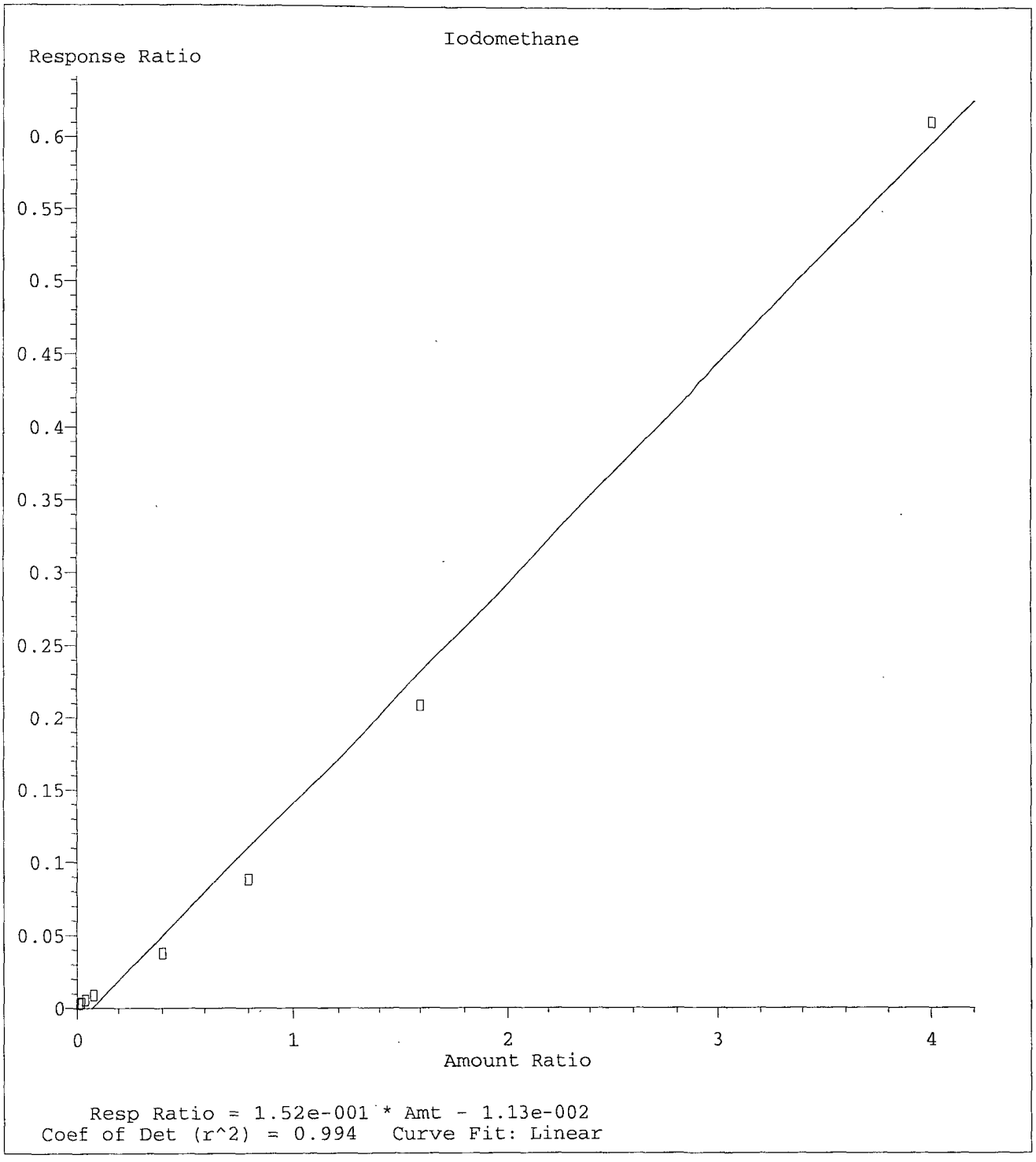
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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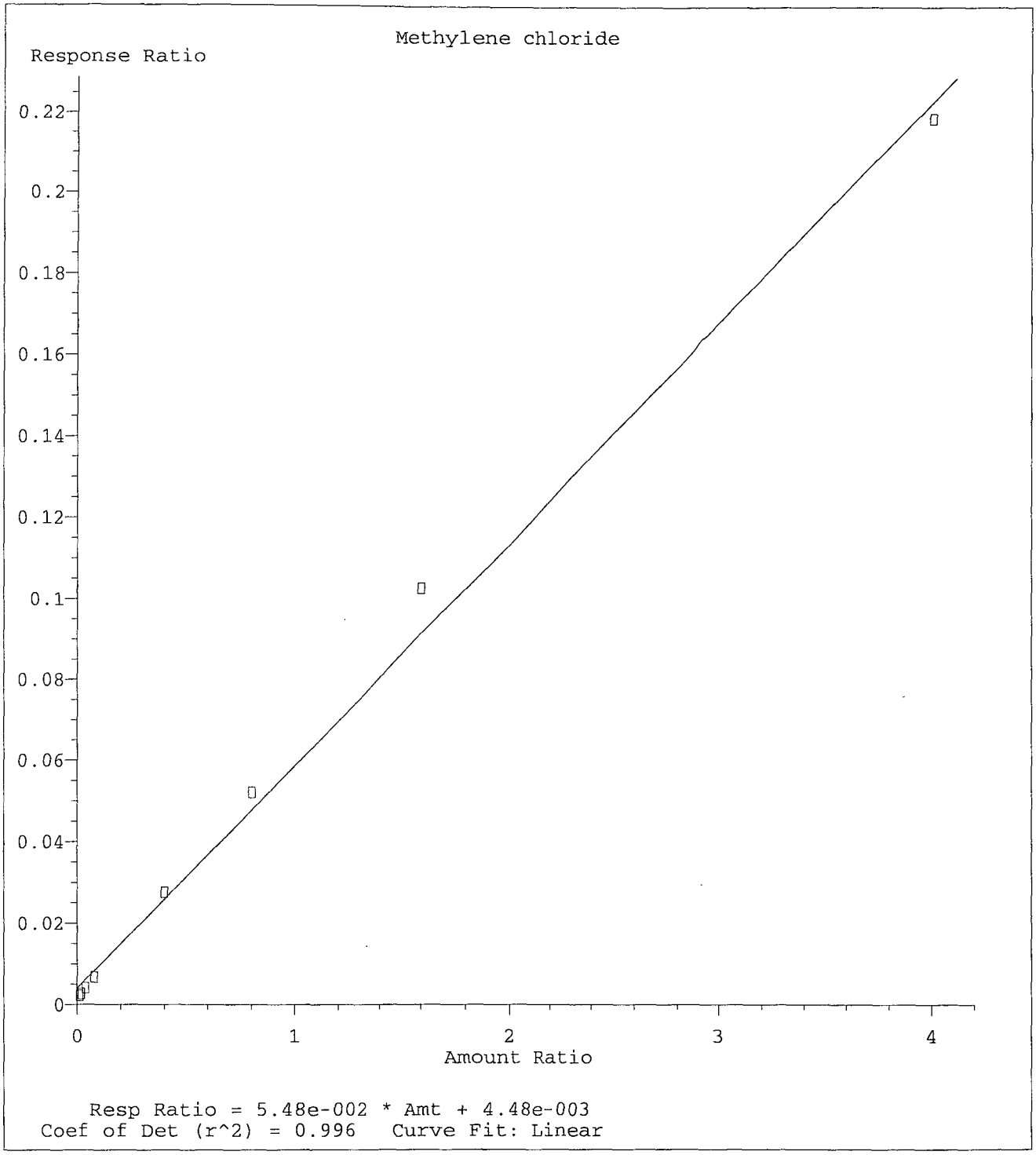

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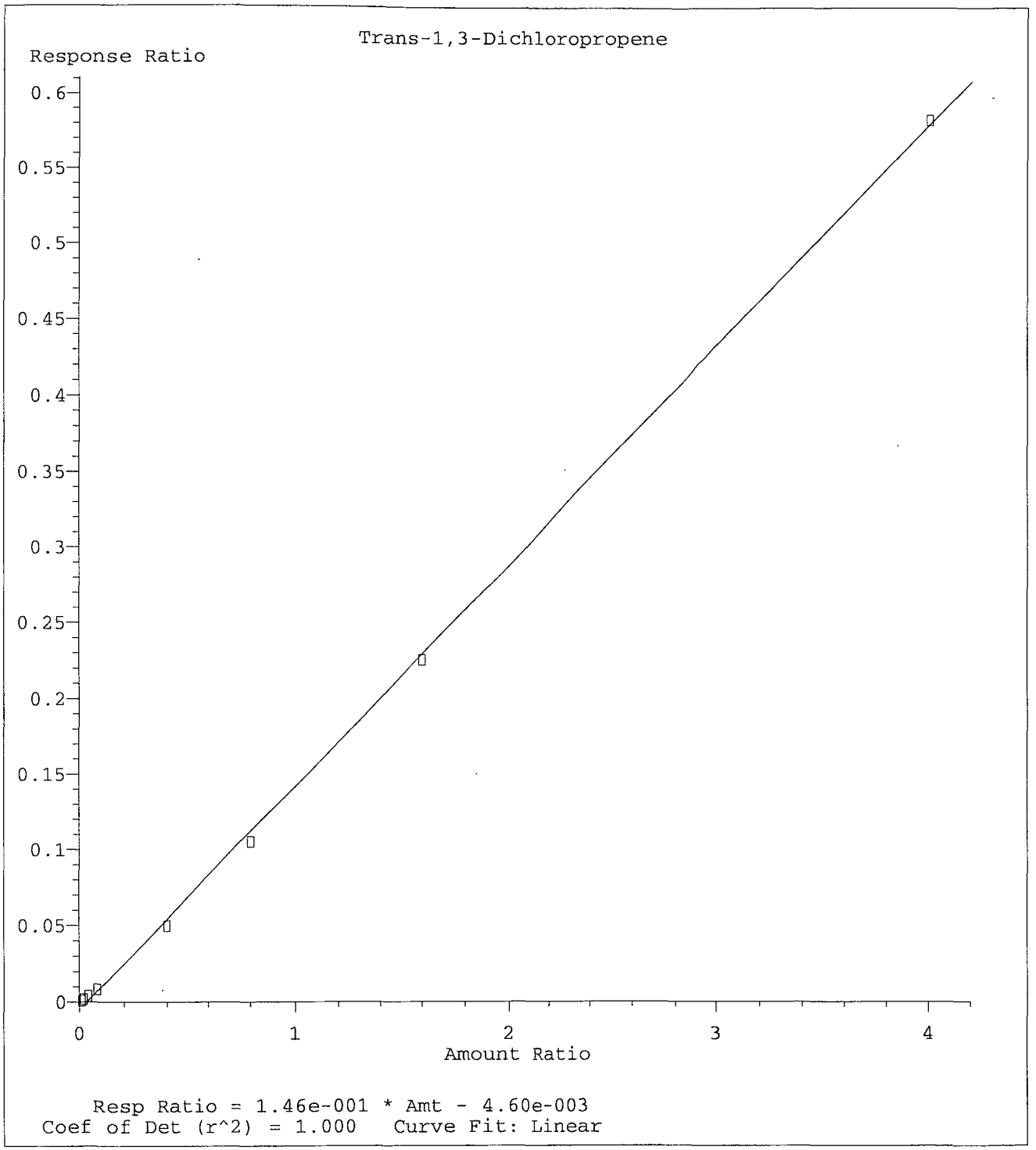
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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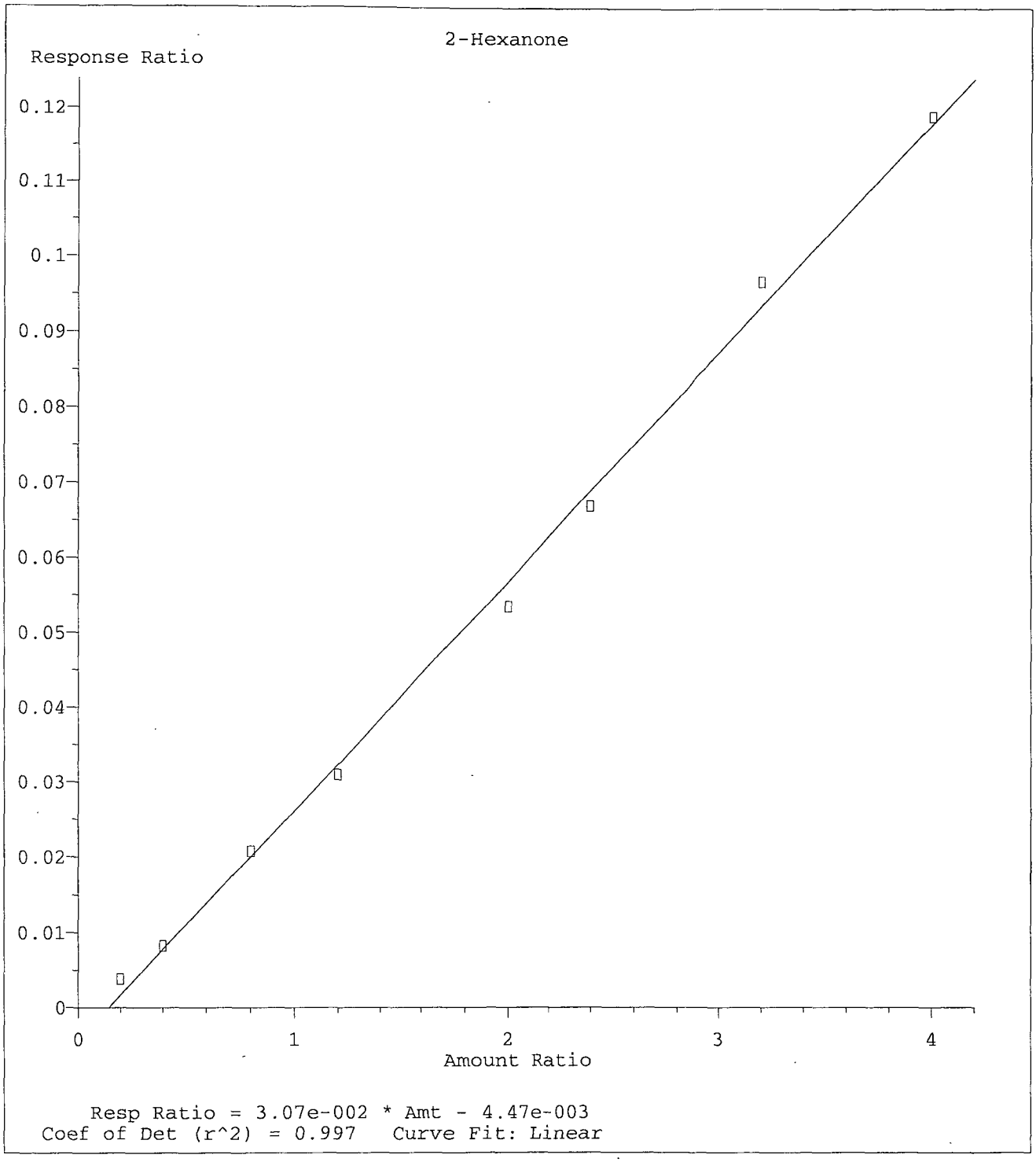

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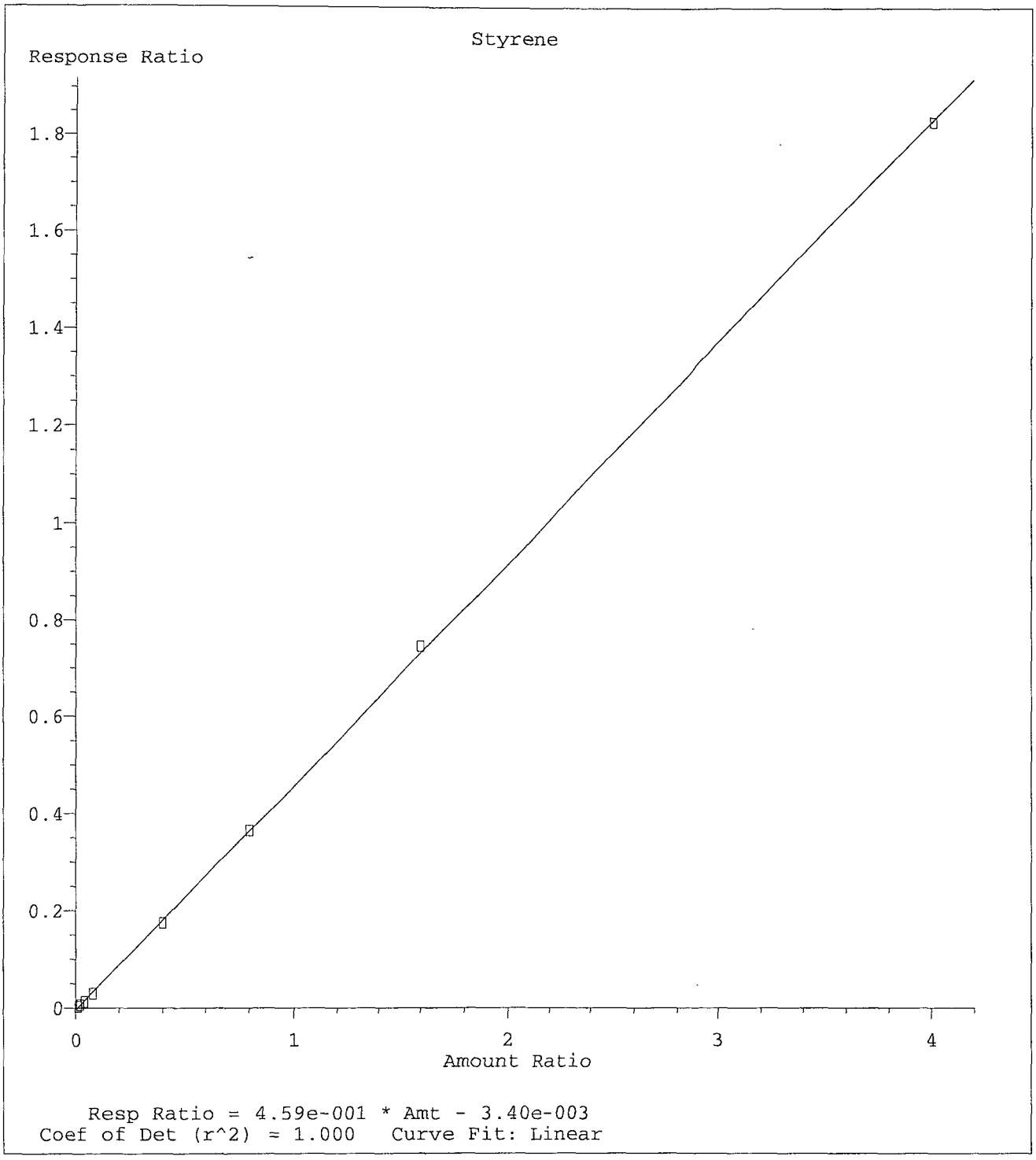
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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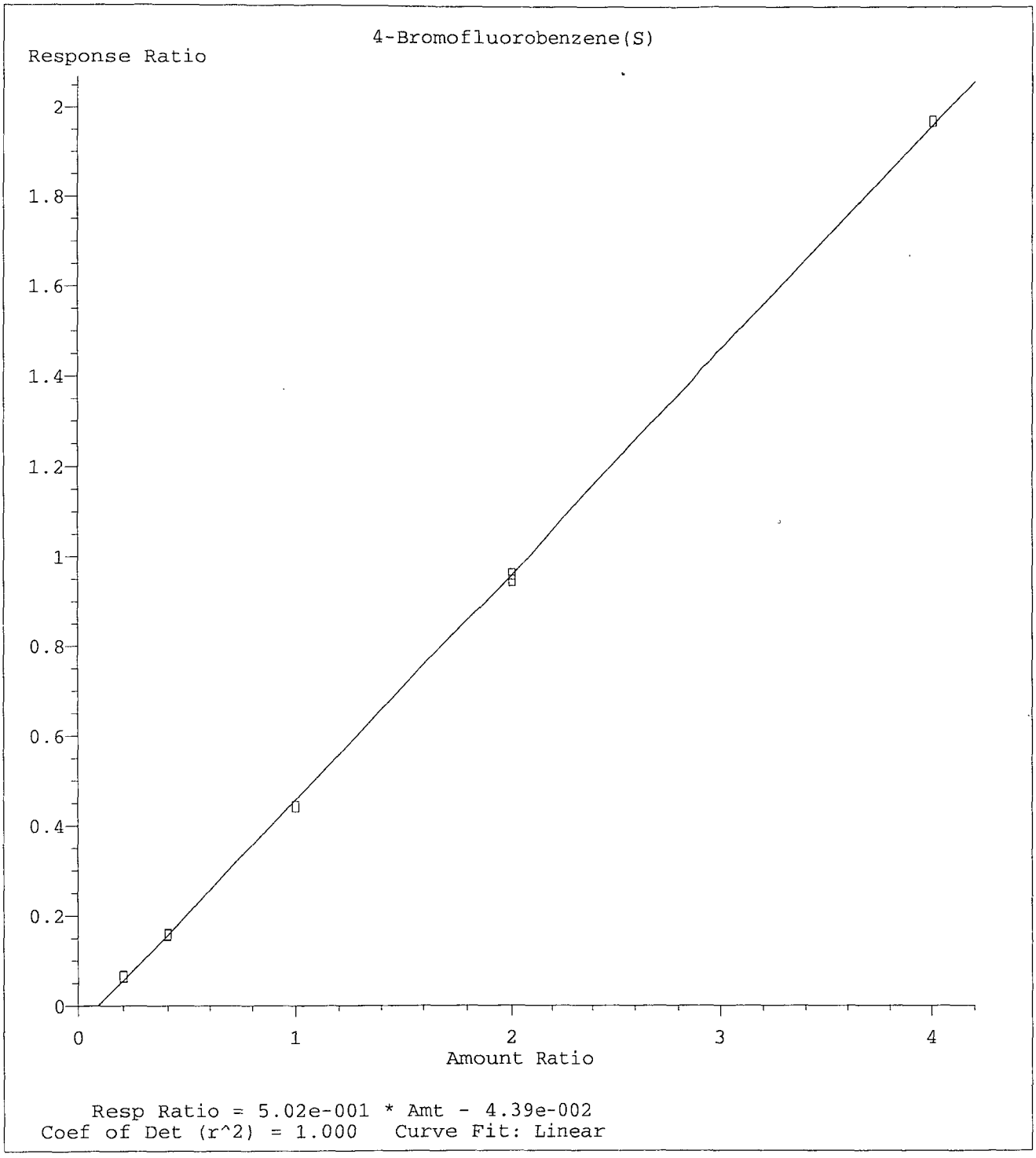
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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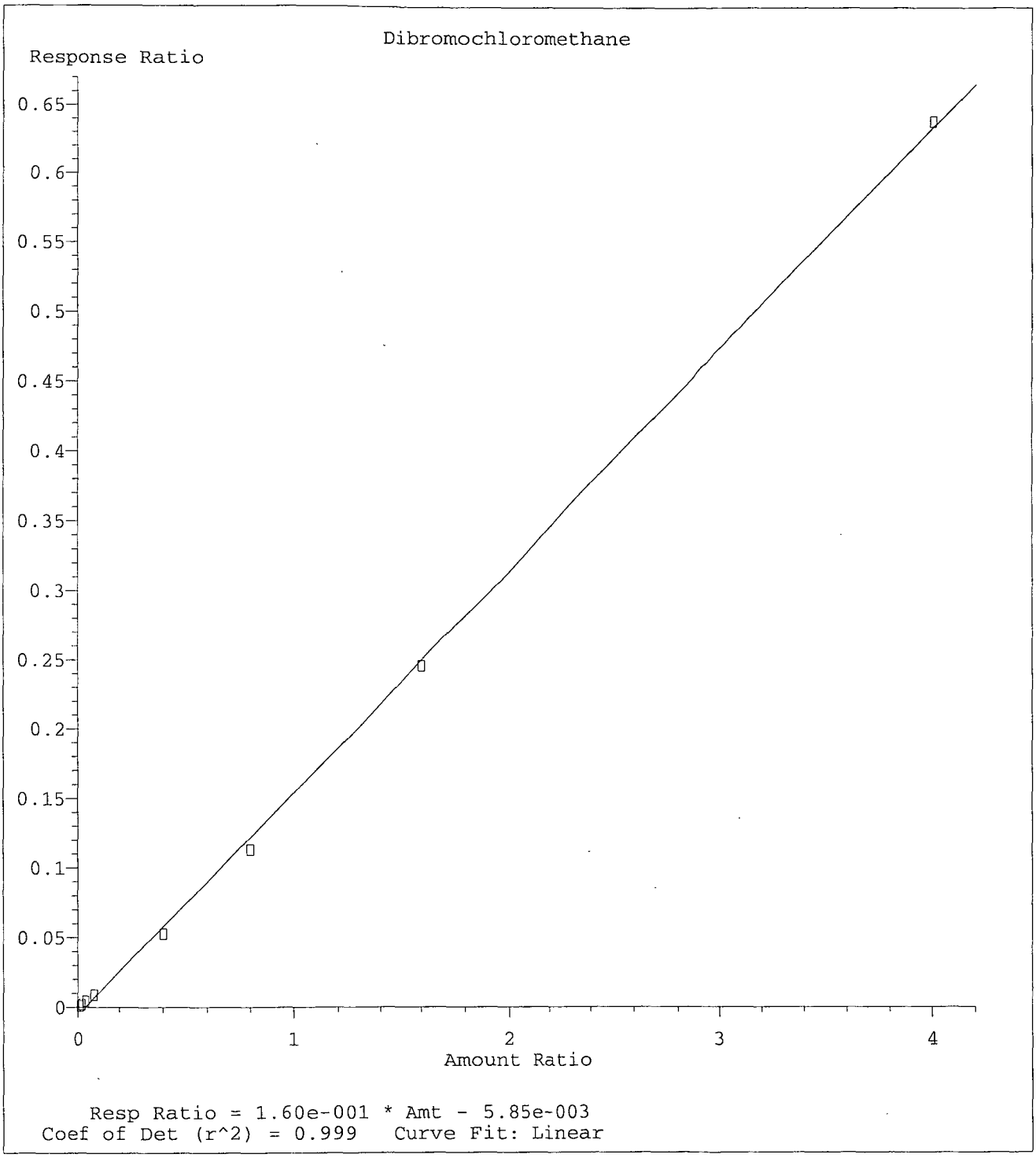
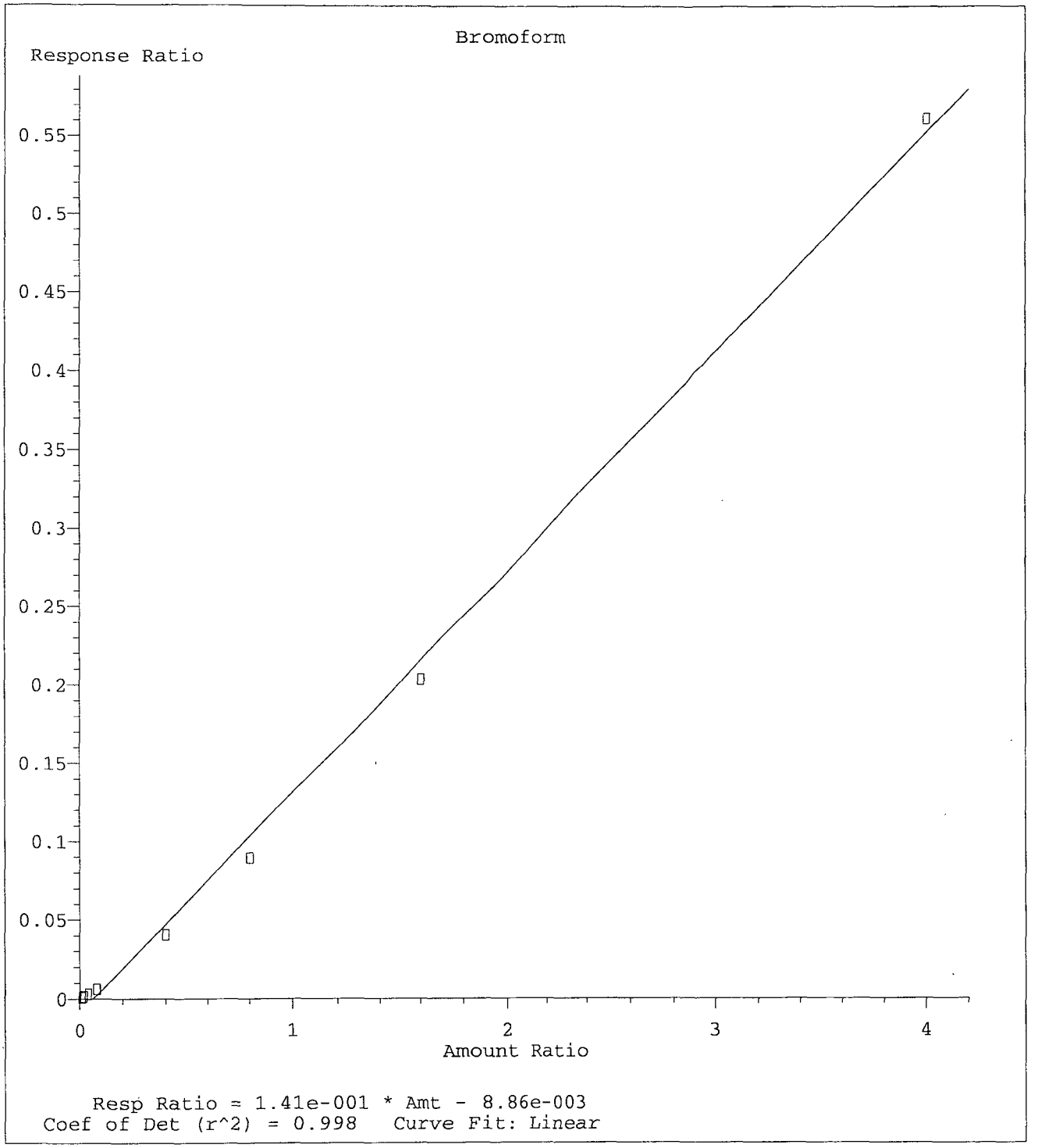
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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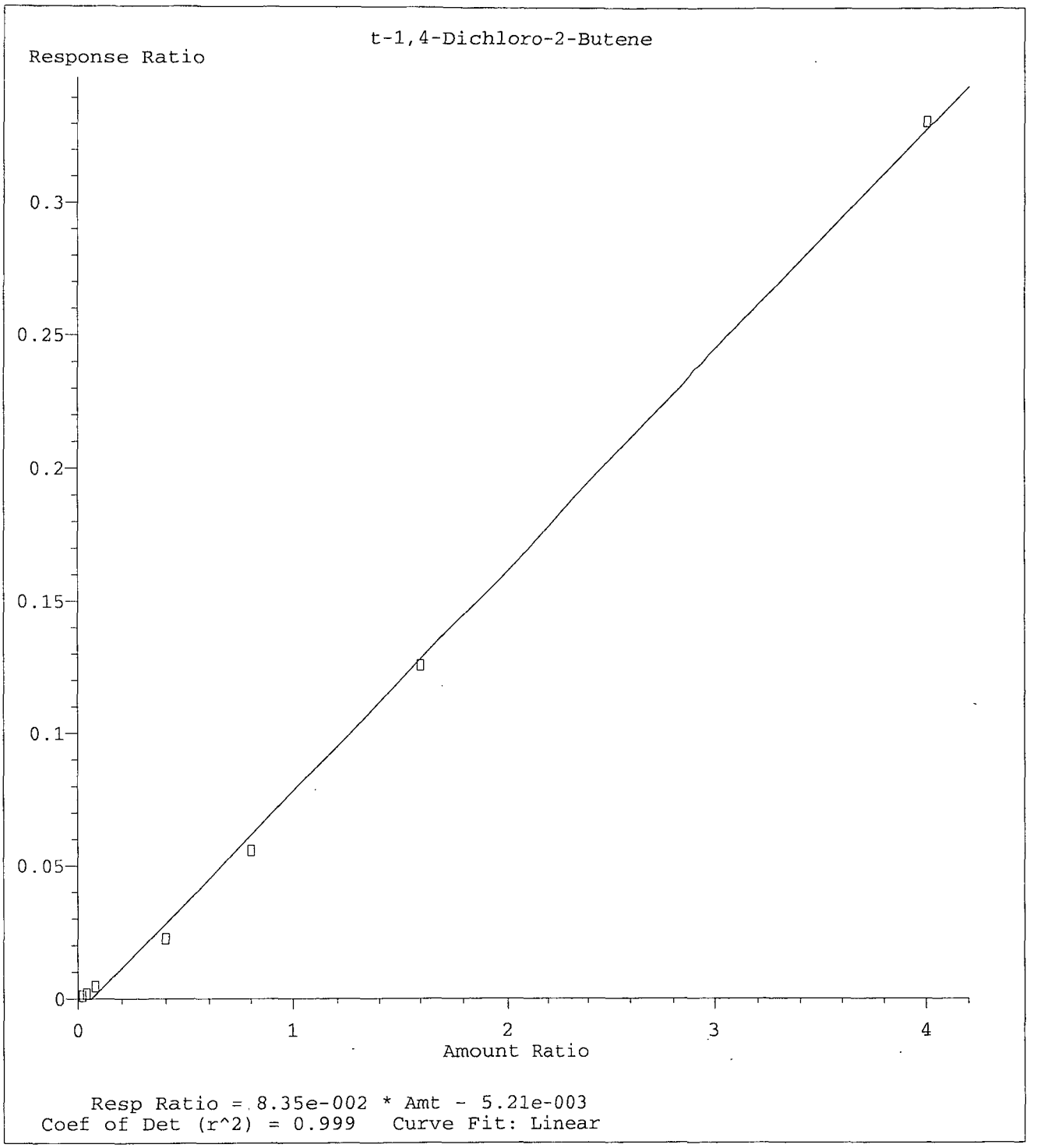
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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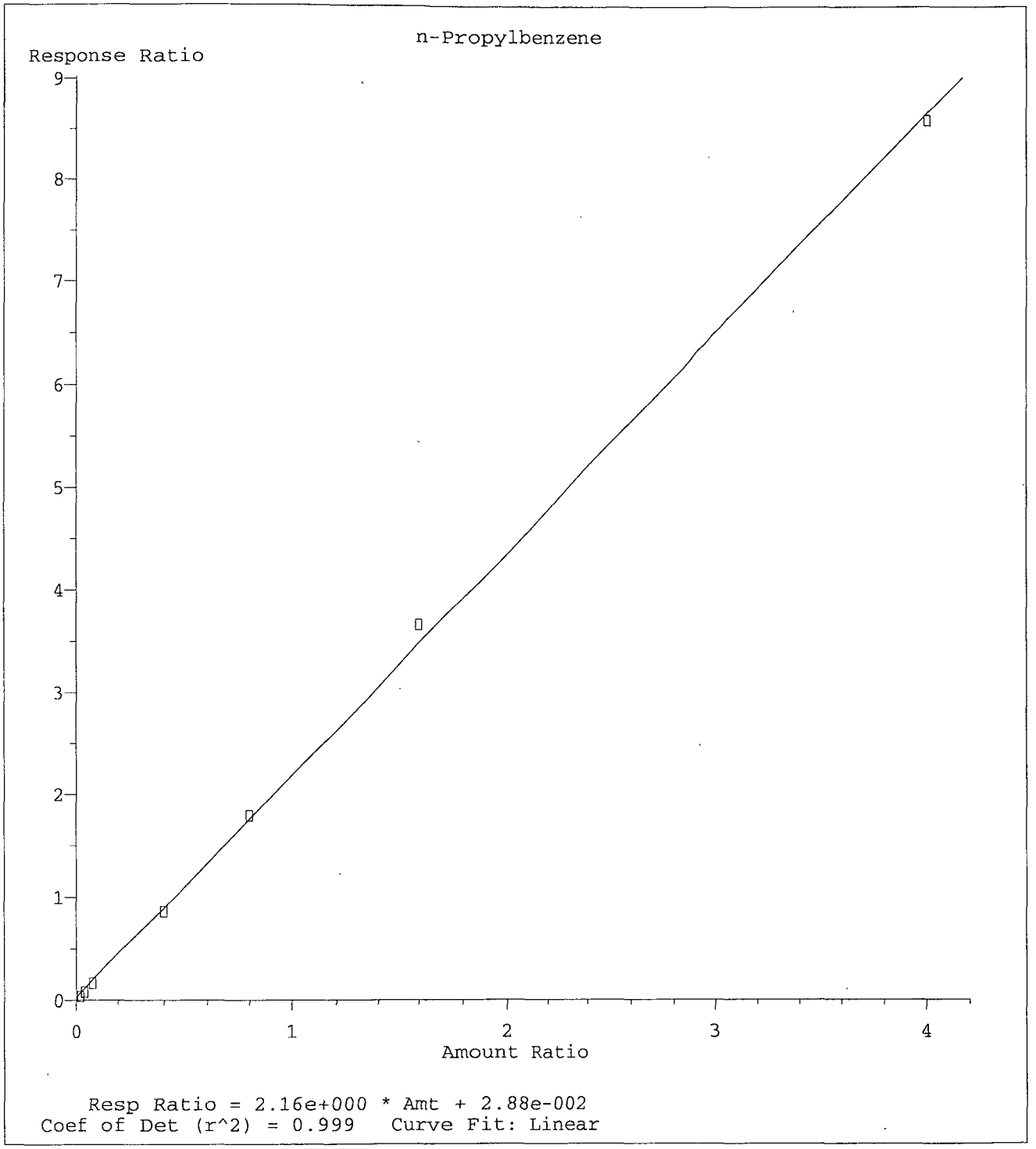
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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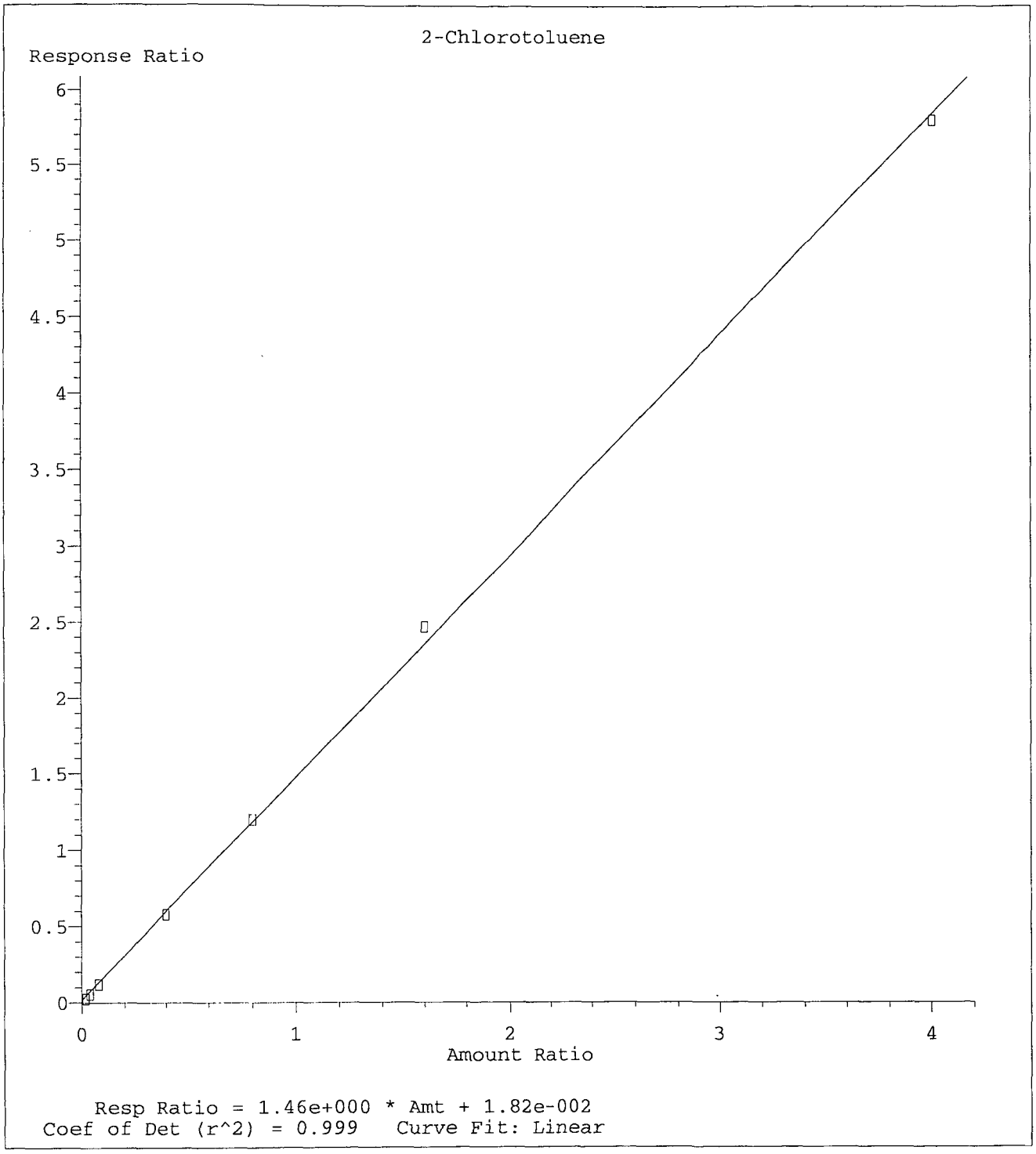
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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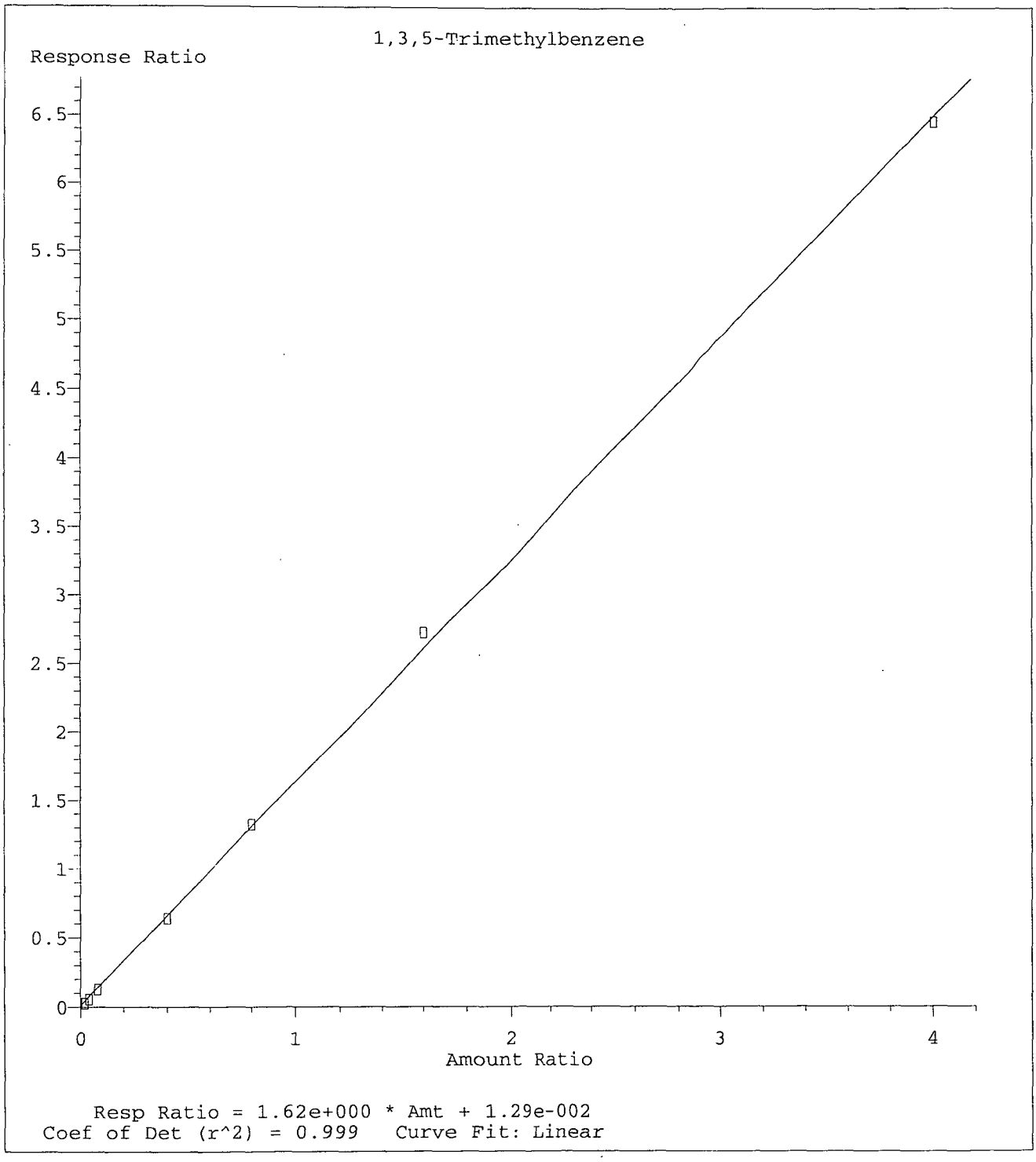
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



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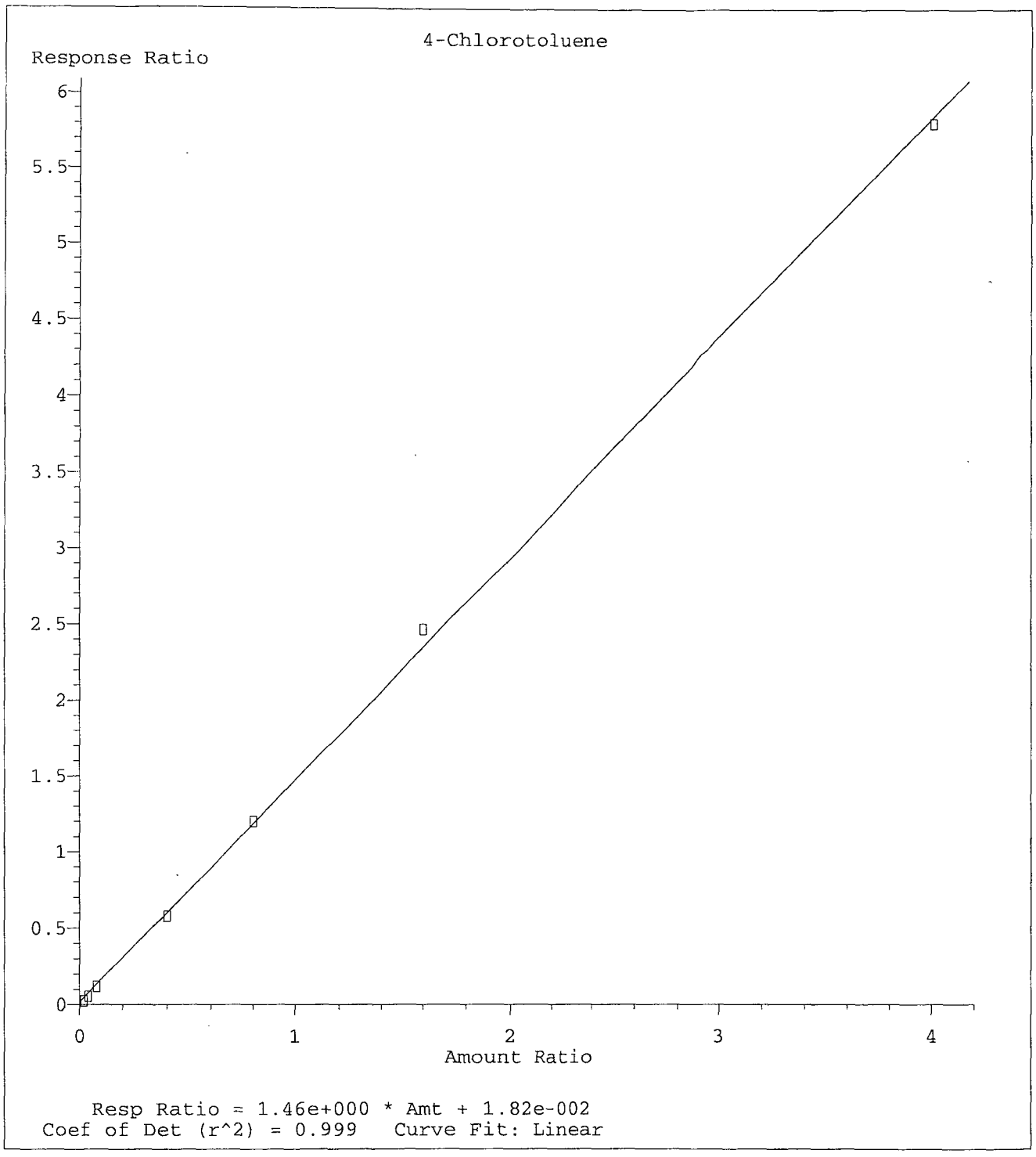

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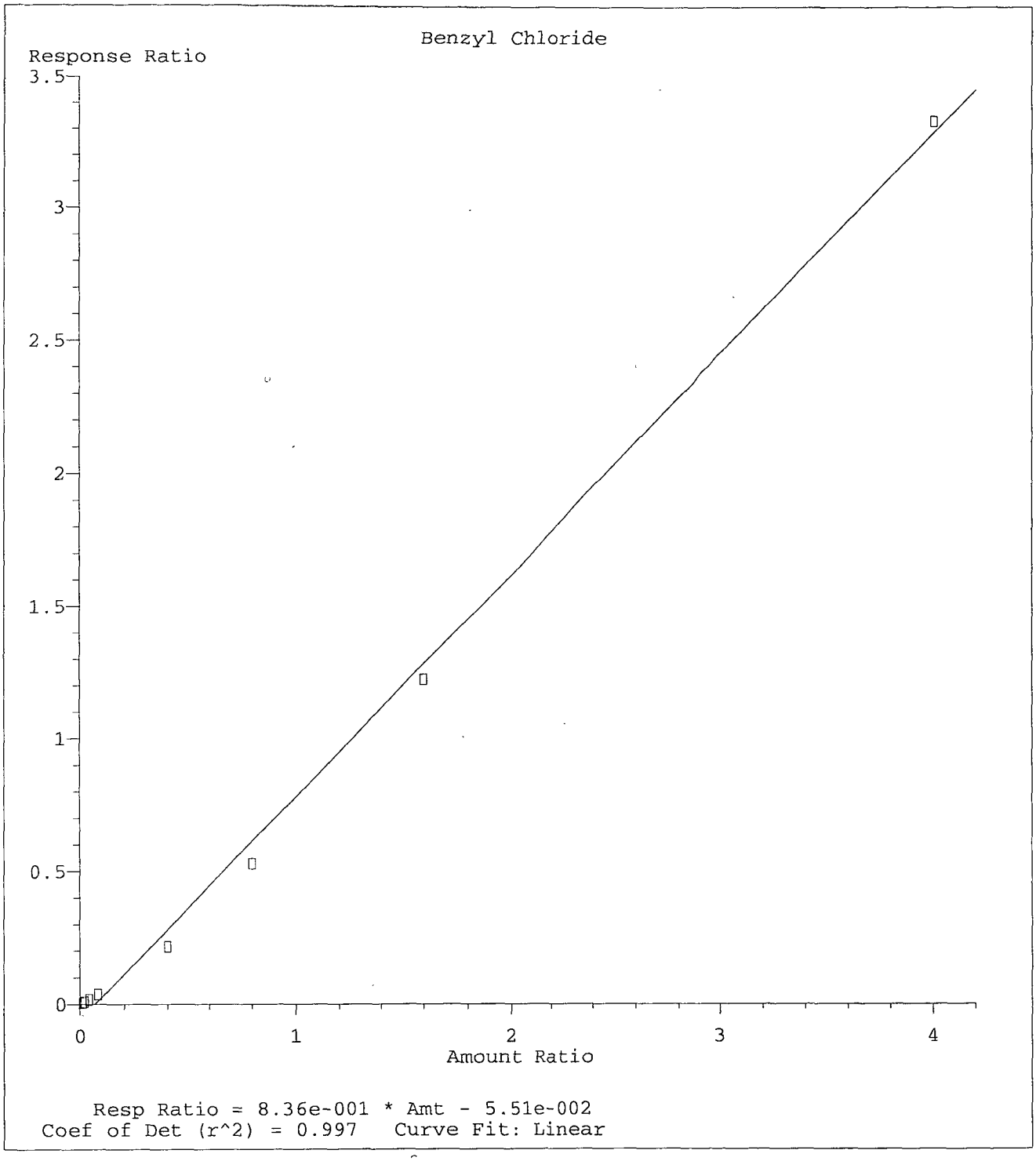

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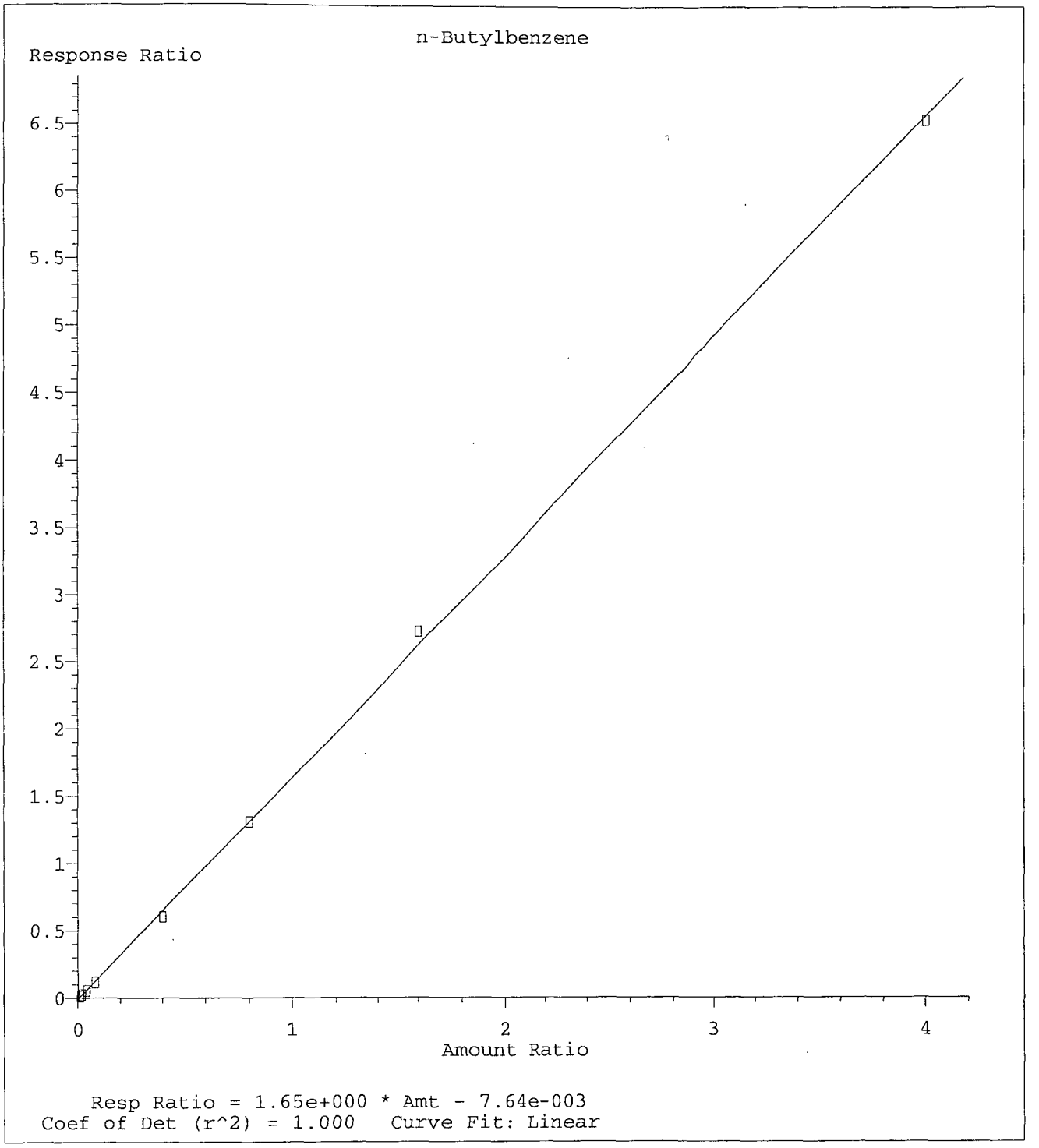

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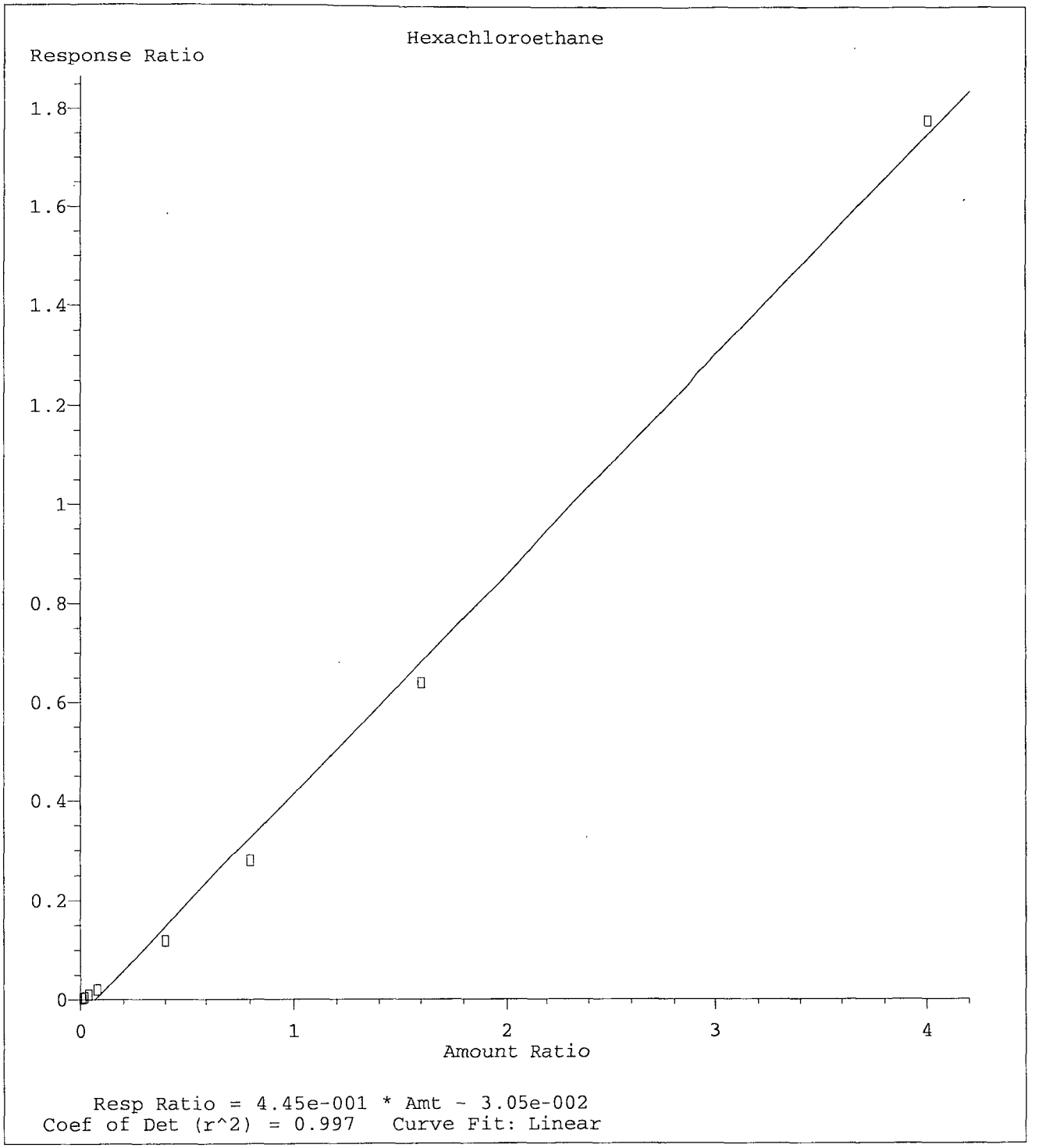
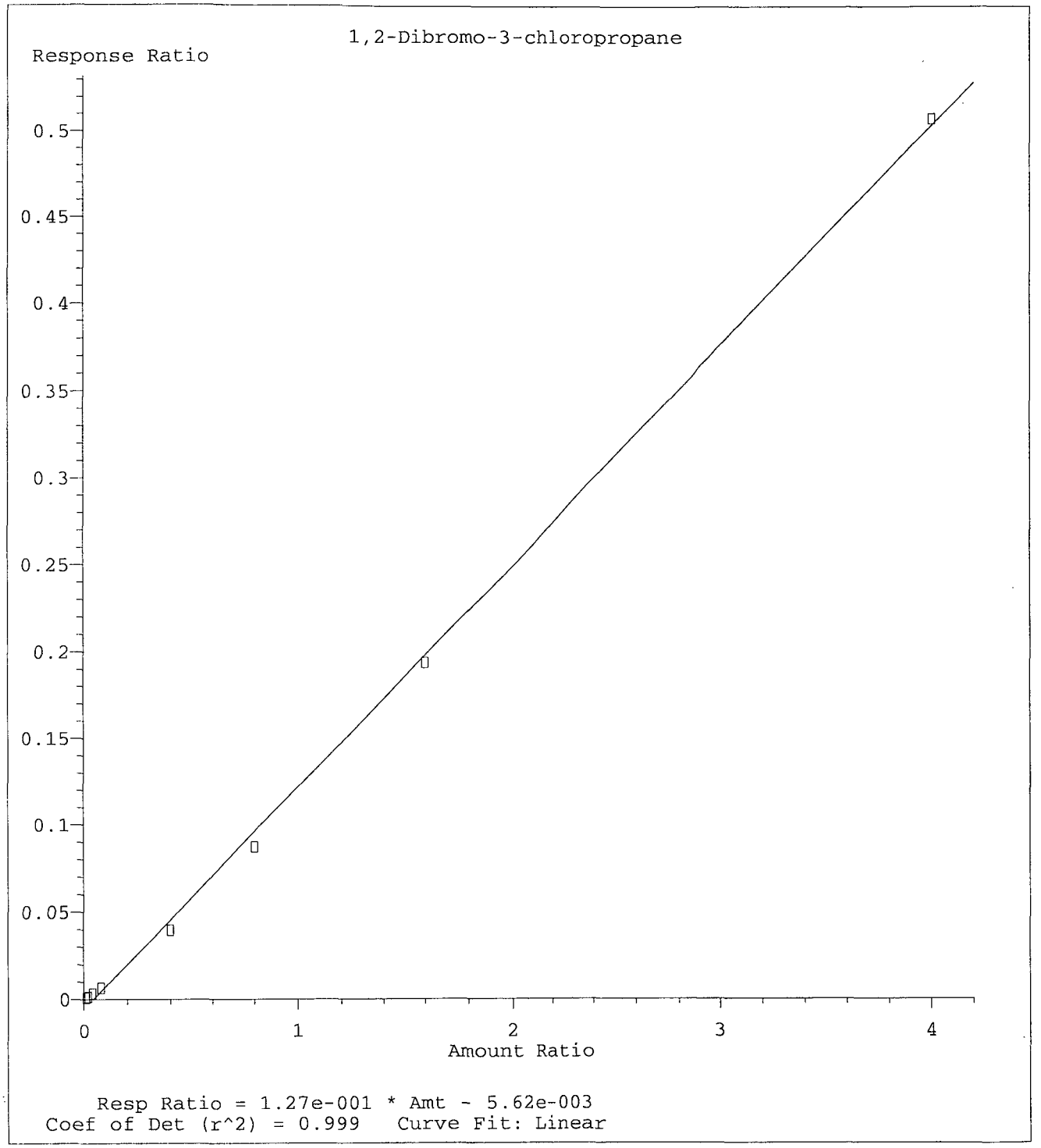
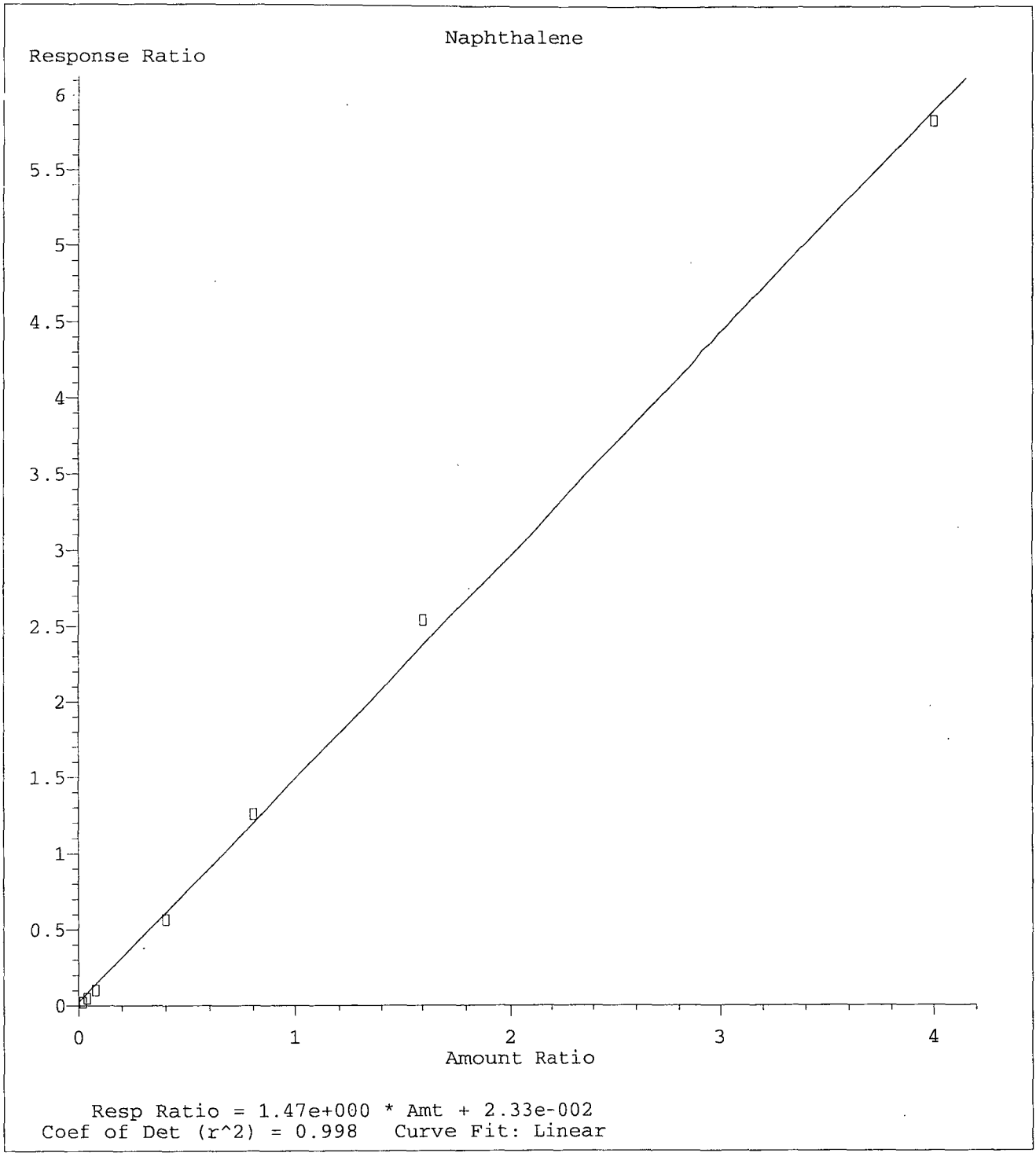


Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021



Method Name: M:\ZEUS\DATA\210125\Z0125W.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Water Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM	
2	TM	Dichlorodifluoromethane	0.1279	0.1279	0.06	TM	
3	TM	Freon 114	0.0758	0.0778	2.7	TM	
4	TM**L	Chloromethane	0.0912	0.0534	42	TM**L	0.43
5	TM*	Vinyl chloride	0.1174	0.1204	2.6	TM*	
6		Butane	0.0000	0.0006	0.00		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0406	0.0338	17	TML	9.4
9	TML	Chloroethane	0.0419	0.0273	35	TML	6.2
10	TM	Dichlorofluoromethane	0.2230	0.2281	2.3	TM	
11	TM	Trichlorofluoromethane	0.2100	0.2261	7.6	TM	
12	TM	Pentane	0.0000	0.0006	0.00	TM	
13	TM	Acrolein	0.0000	0.0510	0.00	TM	
14	TM	Acetone	0.0316	0.0320	1.1	TM	
15	TM	Freon-113	0.0592	0.0570	3.6	TM	
16	TM*	1,1-DCE	0.1485	0.1725	16	TM*	
17	TM	2-Propanol	0.0000	0.0012	0.00	TM	
18	TM	Acetonitrile	0.0000	0.0326	0.00	TM	
19	TM	t-Butanol	0.0000	0.0031	0.00	TM	
20	TM	Methyl Acetate	0.0756	0.0766	1.3	TM	
21	TML	Iodomethane	0.1434	0.1481	3.3	TML	16
22	TM	Acrylonitrile	0.0326	0.0343	5.2	TM	
23	TML	Methylene chloride	0.0948	0.0761	20	TML	18
24	TM	Carbon disulfide	0.1466	0.1559	6.3	TM	
25	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2928	13	TM	
26	TM	Trans-1,2-DCE	0.1452	0.1622	12	TM	
27	TM	Hexane	0.0000	0.0001	0.00	TM	
28	TM	Diisopropyl Ether	0.2691	0.2970	10	TM	
29	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**	
30	TM**	1,1-DCA	0.1859	0.2141	15	TM**	
31	TM	Vinyl Acetate	0.0891	0.1003	13	TM	
32	TM	Ethyl tert Butyl Ether	0.2467	0.2811	14	TM	
33	TM	MEK (2-Butanone)	0.0379	0.0409	8.0	TM	
34	TM	Cis-1,2-DCE	0.1702	0.1855	9.0	TM	
35	TM	2,2-Dichloropropane	0.1539	0.1715	11	TM	
36	TM	3-Methylpentane	0.0000	0.0600	0.00	TM	
37	TM*	Chloroform	0.2071	0.2323	12	TM*	
38	TM	Bromochloromethane	0.0759	0.0865	14	TM	
39	TM	1,1,1-TCA	0.1905	0.2172	14	TM	
40	TM	Cyclohexane	0.1576	0.1706	8.3	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1-Dichloropropene	0.1411	0.1671	18	TM	
42	TM	2,2,4-Trimethylpentane	0.3087	0.3314	7.4	TM	
43	TM	Carbon Tetrachloride	0.1676	0.1914	14	TM	
44	TM	Tert Amyl Methyl Ether	0.2307	0.2630	14	TM	
45	TM	Methylcyclopentane	0.0000	0.0161	0.00	TM	
46	TM	1,2-DCA	0.1374	0.1548	13	TM	
47	TM	Benzene	0.4429	0.4954	12	TM	
48	TM	TCE	0.1541	0.1740	13	TM	
49	TM	2-Pentanone	0.0000	0.7081	0.00	TM	
50	TM*	1,2-Dichloropropane	0.0964	0.1084	12	TM*	
51	TM	Bromodichloromethane	0.1171	0.1406	20	TM	
52	TM	Methyl Cyclohexane	0.1811	0.2033	12	TM	
53	TM	Dibromomethane	0.1030	0.1223	19	TM	
54	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0728	10	TM	
55	TM	1-Bromo-2-chloroethane	0.0219	0.0229	4.6	TM	
56	TM	2-Chloroethyl vinyl ether	0.0000	0.0013	0.00	TM	
57	TM	Cis-1,3-Dichloropropene	0.1409	0.1684	20	TM	
58	TM*	Toluene	0.4791	0.5593	17	TM*	
59	TML	Trans-1,3-Dichloropropene	0.1172	0.1432	22	TML	6.0
60	TM	1,1,2-TCA	0.0909	0.1069	18	TM	
61	TML	2-Hexanone	0.0257	0.0293	14	TML	2.7
62	TM	1,2-EDB	0.1215	0.1447	19	TM	
63	TM	Tetrachloroethene	0.2530	0.2758	9.0	TM	
64	TM	1-Chlorohexane	0.1973	0.2190	11	TM	
65	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1664	14	TM	
66	TM	m&p-Xylene	0.5046	0.5928	17	TM	
67	TM	o-Xylene	0.5042	0.5874	16	TM	
68	TML	Styrene	0.3854	0.4794	24	TML	6.2
69	TM	1,3-Dichloropropane	0.1850	0.2189	18	TM	
70	TML	Dibromochloromethane	0.1225	0.1457	19	TML	0.16
71	TM**	Chlorobenzene	0.4524	0.4971	9.9	TM**	
72	TM*	Ethylbenzene	0.6710	0.7745	15	TM*	
73	TM**L	Bromoform	0.0962	0.1080	12	TM**L	7.4
74	TM	Isopropylbenzene	1.927	2.311	20	TM	
75	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.4234	16	TM**	
76	TM	1,2,3-Trichloropropane	0.1463	0.1724	18	TM	
77	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0738	16	TML	4.0
78	TM	Bromobenzene	0.6094	0.7153	17	TM	
79	TML	n-Propylbenzene	2.101	2.545	21	TML	15
80	TM	4-Ethyltoluene	1.890	2.143	13	TM	
		Average			14.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/25/21
Matrix: Water Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0125Z34.D

		Compound	MEAN	CCRF	%D		%Drift
81	TML	2-Chlorotoluene	1.428	1.724	21	TML	15
82	TML	1,3,5-Trimethylbenzene	1.550	1.879	21	TML	14
83	TML	4-Chlorotoluene	1.428	1.724	21	TML	15
84	TM	Tert-Butylbenzene	1.523	1.804	18	TM	
85	TM	1,2,4-Trimethylbenzene	1.557	1.875	20	TM	
86	TM	Sec-Butylbenzene	2.101	2.526	20	TM	
87	TM	p-Isopropyltoluene	1.523	1.804	18	TM	
88	TML	Benzyl Chloride	0.5584	0.5984	7.2	TML	12
89	TM	1,3-DCB	1.159	1.319	14	TM	
90	TM	1,4-DCB	1.183	1.359	15	TM	
91	TML	n-Butylbenzene	1.436	1.802	25	TML	11
92	TM	1,2-DCB	1.073	1.230	15	TM	
93	TML	Hexachloroethane	0.2910	0.3519	21	TML	3.8
94	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1142	21	TML	0.77
95	TM	1,2,4-Trichlorobenzene	0.9574	1.069	12	TM	
96	TM	Hexachlorobutadiene	0.4832	0.5569	15	TM	
97	TML	Naphthalene	1.365	1.741	28	TML	14
98	TM	1,2,3-Trichlorobenzene	0.6880	0.8166	19	TM	
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			18.4		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3871104	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2965491	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1056256	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	1152891	27.34	ppb	0.00
Spiked Amount 25.000			Recovery =	109.340%		
48) 1,2-DCA-D4(S)	5.71	65	1055709	26.90	ppb	0.00
Spiked Amount 25.000			Recovery =	107.616%		
69) Toluene-D8(S)	8.03	98	3905223	27.36	ppb	0.00
Spiked Amount 25.000			Recovery =	109.444%		
77) 4-Bromofluorobenzene(S)	10.91	95	1355508	24.96	ppb	0.00
Spiked Amount 25.000			Recovery =	99.844%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	198117	10.01	ppb	100
4) Freon 114	1.16	85	120488	10.27	ppb	91
5) Chloromethane	1.22	50	82611	10.04	ppb	98
6) Vinyl chloride	1.28	62	186480	10.26	ppb	97
9) Bromomethane	1.53	94	52396	10.94	ppb	94
10) Chloroethane	1.60	64	42256	9.38	ppb	89
11) Dichlorofluoromethane	1.78	67	353273	10.23	ppb	100
12) Trichlorofluoromethane	1.82	101	350072	10.76	ppb	100
17) Acetone	2.36	43	247370	50.56	ppb	97
18) Freon-113	2.32	101	88336	9.64	ppb	92
19) 1,1-DCE	2.30	61	267131	11.62	ppb	100
23) Methyl Acetate	2.73	43	118586	10.13	ppb	95
24) Iodomethane	2.43	142	229292	11.60	ppb	97
25) Acrylonitrile	3.10	52	53066	10.52	ppb	92
26) Methylene chloride	2.81	49	117888	11.85	ppb	96
27) Carbon disulfide	2.49	76	241344	10.63	ppb	100
28) Methyl t-butyl ether (MtBE	3.18	73	453360	11.33	ppb	99
29) Trans-1,2-DCE	3.14	61	251156	11.17	ppb	91
31) Diisopropyl Ether	3.93	45	459917	11.04	ppb	98
33) 1,1-DCA	3.71	63	331517	11.52	ppb	97
34) Vinyl Acetate	3.86	43	155326	11.26	ppb	95
35) Ethyl tert Butyl Ether	4.49	59	435304	11.39	ppb	100
36) MEK (2-Butanone)	4.67	43	316666	54.01	ppb	98
37) Cis-1,2-DCE	4.60	61	287220	10.90	ppb	97
38) 2,2-Dichloropropane	4.59	77	265506	11.14	ppb	98
41) Chloroform	5.09	83	359662	11.22	ppb	100
42) Bromochloromethane	4.93	49	133919	11.40	ppb	95
44) 1,1,1-TCA	5.30	97	336361	11.40	ppb	99
45) Cyclohexane	5.36	56	264235	10.83	ppb	97
46) 1,1-Dichloropropene	5.53	75	258683	11.84	ppb	98
47) 2,2,4-Trimethylpentane	5.96	57	513141	10.74	ppb	99
49) Carbon Tetrachloride	5.52	117	296343	11.42	ppb	94
50) Tert Amyl Methyl Ether	6.01	73	407189	11.40	ppb	99
52) 1,2-DCA	5.81	62	239643	11.26	ppb	98
53) Benzene	5.78	78	767099	11.19	ppb	98
54) TCE	6.61	130	269410	11.29	ppb	98
56) 1,2-Dichloropropane	6.86	63	167798	11.24	ppb	100
57) Bromodichloromethane	7.21	83	217643	12.00	ppb	97
58) Methyl Cyclohexane	6.84	83	314861	11.23	ppb	98

(#) = qualifier out of range (m) = manual integration

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	189308	11.87	ppb		94
60)	MIBK (methyl isobutyl ket	7.94	43	563958	55.15	ppb		99
61)	1-Bromo-2-chloroethane	7.54	144	35490	10.46	ppb		93
63)	Cis-1,3-Dichloropropene	7.73	75	260806	11.96	ppb		96
64)	Toluene	8.11	91	865968	11.67	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	221786	10.60	ppb		98
66)	1,1,2-TCA	8.56	97	165499	11.76	ppb		96
67)	2-Hexanone	8.88	43	226496	51.36	ppb		98
70)	1,2-EDB	9.09	107	171702	11.91	ppb		97
71)	Tetrachloroethene	8.71	166	327108	10.90	ppb		98
72)	1-Chlorohexane	9.67	91	259736	11.10	ppb		98
73)	1,1,1,2-Tetrachloroethane	9.75	131	197406	11.44	ppb		97
74)	m&p-Xylene	9.93	91	1406440	23.50	ppb		97
75)	o-Xylene	10.35	91	696726	11.65	ppb		97
76)	Styrene	10.37	104	568717	10.62	ppb		100
78)	1,3-Dichloropropane	8.74	76	259709	11.83	ppb		99
79)	Dibromochloromethane	8.98	129	172809	10.02	ppb		100
80)	Chlorobenzene	9.65	112	589695	10.99	ppb		98
81)	Ethylbenzene	9.79	91	918755	11.54	ppb		96
82)	Bromoform	10.54	173	128063	9.26	ppb		96
84)	Isopropylbenzene	10.76	105	976539	12.00	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	178876	11.61	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	72831	11.78	ppb		98
87)	t-1,4-Dichloro-2-Butene	11.14	53	31181	10.40	ppb		98
88)	Bromobenzene	11.06	77	302201	11.74	ppb		94
89)	n-Propylbenzene	11.21	91	1075385	11.45	ppb		97
90)	4-Ethyltoluene	11.34	105	905253	11.34	ppb		98
91)	2-Chlorotoluene	11.41	91	728223	11.51	ppb		98
92)	1,3,5-Trimethylbenzene	11.41	105	794090	11.39	ppb		97
93)	4-Chlorotoluene	11.41	91	728223	11.51	ppb		98
94)	Tert-Butylbenzene	11.76	119	762257	11.85	ppb		96
95)	1,2,4-Trimethylbenzene	11.81	105	792106	12.04	ppb		100
96)	Sec-Butylbenzene	12.00	105	1067296	12.03	ppb		99
97)	p-Isopropyltoluene	11.76	119	762257	11.85	ppb		96
98)	Benzyl Chloride	12.34	91	252842	8.81	ppb		98
99)	1,3-DCB	12.10	146	557233	11.38	ppb		98
100)	1,4-DCB	12.20	146	574213	11.49	ppb		99
101)	n-Butylbenzene	12.61	91	761329	11.07	ppb		99
102)	1,2-DCB	12.60	146	519577	11.47	ppb		99
103)	Hexachloroethane	12.89	201	148685	9.62	ppb		98
104)	1,2-Dibromo-3-chloropropan	13.44	157	48244	10.08	ppb	#	83
105)	1,2,4-Trichlorobenzene	13.69	180	451521	11.16	ppb		98
106)	Hexachlorobutadiene	14.57	225	235297	11.53	ppb		93
107)	Naphthalene	14.62	128	735691	11.44	ppb		98
108)	1,2,3-Trichlorobenzene	14.89	180	345018	11.87	ppb		100

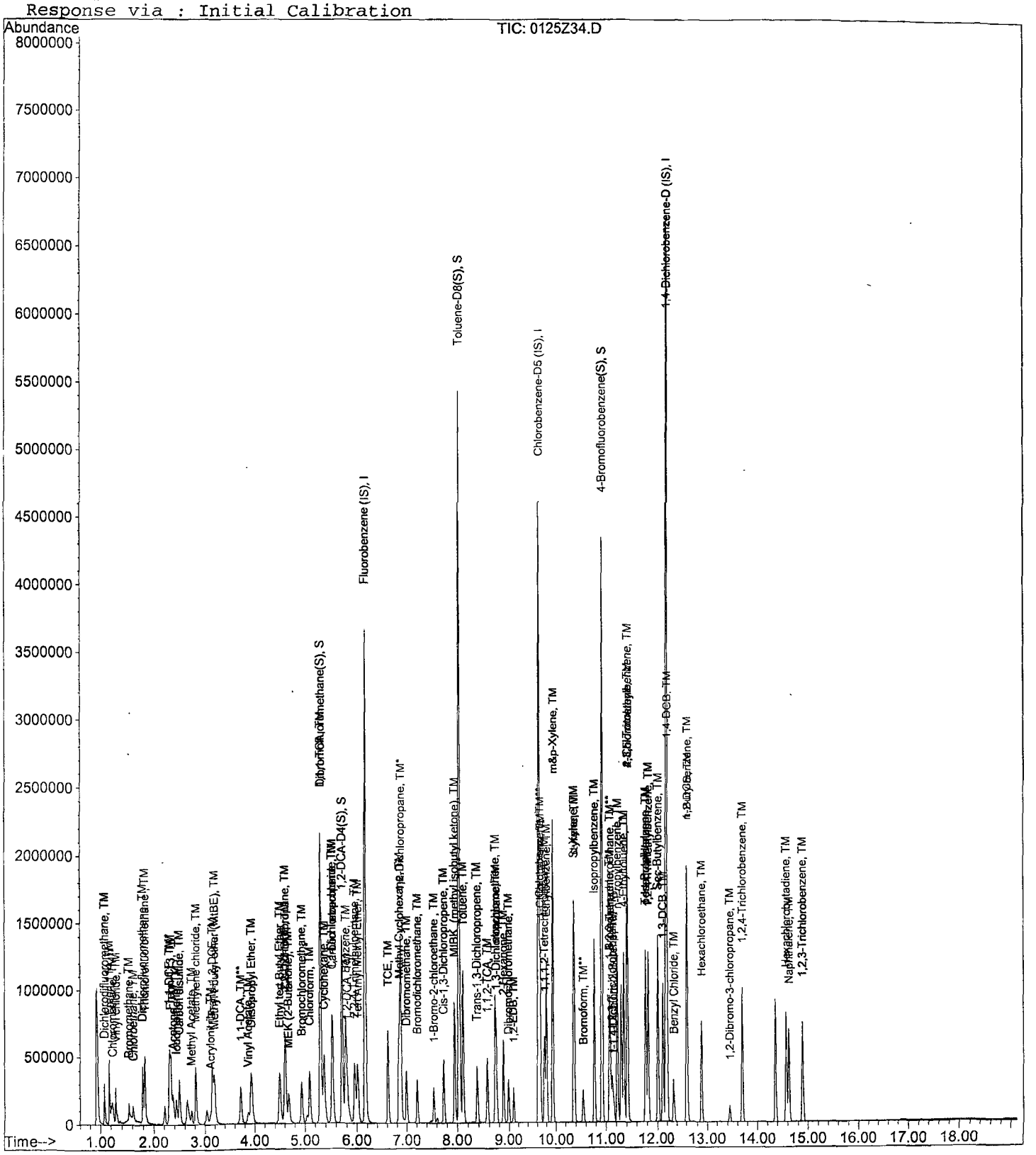
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z34.D Vial: 29
Acq On : 25 Jan 21 19:57 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 11:03 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z02.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM	
3	TM	Dichlorodifluoromethane	0.1279	0.1377	7.7	TM	
4	TM	Freon 114	0.0758	0.0817	7.8	TM	
5	TM**L	Chloromethane	0.0912	0.0555	39	TM**L	4.8
6	TM*	Vinyl chloride	0.1174	0.1271	8.3	TM*	
7		Butane	0.0000	0.0003	0.00		
8	TML	Bromomethane	0.0406	0.0399	1.9	TML	32 *High
9	TML	Chloroethane	0.0419	0.0303	28	TML	5.5
10	TM	Dichlorofluoromethane	0.2230	0.2365	6.1	TM	
11	TM	Trichlorofluoromethane	0.2100	0.2359	12	TM	
12	TM	Pentane	0.0000	0.0002	0.00	TM	
13	TM	Acrolein	0.0000	0.0470	0.00	TM	
14	TM	Acetone	0.0316	0.0287	9.1	TM	
15	TM	Freon-113	0.0592	0.0586	1.0	TM	
16	TM*	1,1-DCE	0.1485	0.1566	5.4	TM*	
17	TM	2-Propanol	0.0000	0.0010	0.00	TM	
18	TM	Acetonitrile	0.0000	0.0362	0.00	TM	
19	TM	t-Butanol	0.0000	0.0031	0.00	TM	
20	TM	Methyl Acetate	0.0756	0.0707	6.5	TM	
21	TML	Iodomethane	0.1434	0.1320	8.0	TML	5.4
22	TM	Acrylonitrile	0.0326	0.0331	1.7	TM	
23	TML	Methylene chloride	0.0948	0.0699	26	TML	7.1
24	TM	Carbon disulfide	0.1466	0.1394	4.9	TM	
25	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2656	2.7	TM	
26	TM	Trans-1,2-DCE	0.1452	0.1537	5.8	TM	
27	TM	Diisopropyl Ether	0.2691	0.2854	6.1	TM	
28	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0002	0.00	TM**	
29	TM**	1,1-DCA	0.1859	0.2020	8.7	TM**	
30	TM	Vinyl Acetate	0.0891	0.1029	16	TM	
31	TM	Ethyl tert Butyl Ether	0.2467	0.2536	2.8	TM	
32	TM	MEK (2-Butanone)	0.0379	0.0396	4.5	TM	
33	TM	Cis-1,2-DCE	0.1702	0.1746	2.6	TM	
34	TM	2,2-Dichloropropane	0.1539	0.1647	7.1	TM	
35	TML	2-Methylpentane	0.0000	0.0014	0.00	TML	
36	TM	3-Methylpentane	0.0000	0.0550	0.00	TM	
37	TM*	Chloroform	0.2071	0.2181	5.3	TM*	
38	TM	Bromochloromethane	0.0759	0.0825	8.8	TM	
39	S	Dibromofluoromethane(S)	0.2724	0.3031	11	S	
40	TM	1,1,1-TCA	0.1905	0.1977	3.8	TM	
		Average			6.6		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0127Z02.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Cyclohexane	0.1576	0.1596	1.3	TM	
42	TM	1,1-Dichloropropene	0.1411	0.1466	3.9	TM	
43	TM	2,2,4-Trimethylpentane	0.3087	0.3229	4.6	TM	
44	S	1,2-DCA-D4(S)	0.2534	0.2779	9.7	S	
45	TM	Carbon Tetrachloride	0.1676	0.1669	0.48	TM	
46	TM	Tert Amyl Methyl Ether	0.2307	0.2362	2.4	TM	
47	TM	Methylcyclopentane	0.0000	0.0178	0.00	TM	
48	TM	1,2-DCA	0.1374	0.1384	0.68	TM	
49	TM	Benzene	0.4429	0.4572	3.2	TM	
50	TM	TCE	0.1541	0.1478	4.1	TM	
51	TM	2-Pentanone	0.0000	0.7171	0.00	TM	
52	TM*	1,2-Dichloropropane	0.0964	0.1064	10	TM*	
53	TM	Bromodichloromethane	0.1171	0.1222	4.3	TM	
54	TM	Methyl Cyclohexane	0.1811	0.1818	0.43	TM	
55	TM	Dibromomethane	0.1030	0.1076	4.5	TM	
56	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0666	0.84	TM	
57	TM	1-Bromo-2-chloroethane	0.0219	0.0210	4.2	TM	
58	TM	2-Chloroethyl vinyl ether	0.0000	0.0000	0.00	TM	
59	TM	Cis-1,3-Dichloropropene	0.1409	0.1394	1.0	TM	
60	TM*	Toluene	0.4791	0.4930	2.9	TM*	
61	TML	Trans-1,3-Dichloropropene	0.1172	0.1206	2.9	TML	9.5
62	TM	1,1,2-TCA	0.0909	0.0951	4.6	TM	
63	TML	2-Hexanone	0.0257	0.0270	4.9	TML	4.8
64	I	Chlorobenzene-D5 (IS)	ISTD			I	
65	S	Toluene-D8(S)	1.203	1.334	11	S	
66	TM	1,2-EDB	0.1215	0.1302	7.2	TM	
67	TM	Tetrachloroethene	0.2530	0.2567	1.5	TM	
68	TM	1-Chlorohexane	0.1973	0.2012	1.9	TM	
69	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1488	2.3	TM	
70	TM	m&p-Xylene	0.5046	0.5391	6.8	TM	
71	TM	o-Xylene	0.5042	0.5325	5.6	TM	
72	TML	Styrene	0.3854	0.4250	10	TML	5.6
73	SL	4-Bromofluorobenzene(S)	0.4155	0.4525	8.9	SL	1.1
74	TM	1,3-Dichloropropane	0.1850	0.1935	4.6	TM	
75	TML	Dibromochloromethane	0.1225	0.1261	3.0	TML	12
76	TM**	Chlorobenzene	0.4524	0.4698	3.9	TM**	
77	TM*	Ethylbenzene	0.6710	0.7069	5.4	TM*	
78	TM**L	Bromoform	0.0962	0.0935	2.8	TM**L	18
79	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
80	TM	Isopropylbenzene	1.927	2.002	3.9	TM	
		Average			3.9		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0127Z02.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3917	7.4	TM**		
82	TM	1,2,3-Trichloropropane	0.1463	0.1508	3.1	TM		
83	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0527	17	TML	21	*NT
84	TM	Bromobenzene	0.6094	0.6156	1.0	TM		
85	TML	n-Propylbenzene	2.101	2.224	5.9	TML	0.37	
86	TM	4-Ethyltoluene	1.890	1.995	5.6	TM		
87	TML	2-Chlorotoluene	1.428	1.508	5.6	TML	0.35	
88	TML	1,3,5-Trimethylbenzene	1.550	1.637	5.6	TML	1.0	
89	TML	4-Chlorotoluene	1.428	1.508	5.6	TML	0.35	
90	TM	Tert-Butylbenzene	1.523	1.574	3.3	TM		
91	TM	1,2,4-Trimethylbenzene	1.557	1.627	4.5	TM		
92	TM	Sec-Butylbenzene	2.101	2.208	5.1	TM		
93	TM	p-Isopropyltoluene	1.523	1.574	3.3	TM		
94	TML	Benzyl Chloride	0.5584	0.6387	14	TML	7.1	
95	TM	1,3-DCB	1.159	1.219	5.2	TM		
96	TM	1,4-DCB	1.183	1.217	2.8	TM		
97	TML	n-Butylbenzene	1.436	1.623	13	TML	0.22	
98	TM	1,2-DCB	1.073	1.108	3.3	TM		
99	TML	Hexachloroethane	0.2910	0.3026	4.0	TML	15	
100	TML	1,2-Dibromo-3-chloropropane	0.0941	0.0978	3.9	TML	12	
101	TM	1,2,4-Trichlorobenzene	0.9574	0.9915	3.6	TM		
102	TM	Hexachlorobutadiene	0.4832	0.5095	5.4	TM		
103	TML	Naphthalene	1.365	1.448	6.1	TML	5.5	
104	TM	1,2,3-Trichlorobenzene	0.6880	0.7096	3.1	TM		
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			5.7			

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z02.D Vial: 2
Acq On : 27 Jan 21 08:41 Operator: LP,DG,CH
Sample : 210127A CCV 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3222907	25.000	ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2435440	25.000	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	899328	25.000	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	976726	27.816	ppb	0.00
Spiked Amount 25.000			Recovery = 111.264%			
48) 1,2-DCA-D4(S)	5.71	65	895551	27.413	ppb	0.00
Spiked Amount 25.000			Recovery = 109.652%			
69) Toluene-D8(S)	8.03	98	3248852	27.717	ppb	0.00
Spiked Amount 25.000			Recovery = 110.868%			
77) 4-Bromofluorobenzene(S)	10.91	95	1102146	24.735	ppb	0.00
Spiked Amount 25.000			Recovery = 98.940%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.07	85	177468	10.765	ppb	98
4) Freon 114	1.16	85	105328	10.784	ppb	92
5) Chloromethane	1.22	50	71496	10.480	ppb	96
6) Vinyl chloride	1.28	62	163816	10.828	ppb	99
9) Bromomethane	1.53	94	51393	13.216	ppb	94
10) Chloroethane	1.60	64	39107	10.554	ppb	95
11) Dichlorofluoromethane	1.78	67	304886	10.605	ppb	99
12) Trichlorofluoromethane	1.82	101	304116	11.231	ppb	100
17) Acetone	2.36	43	185150	45.450	ppb	97
18) Freon-113	2.32	101	75528	9.896	ppb	100
19) 1,1-DCE	2.30	61	201838	10.542	ppb	94
23) Methyl Acetate	2.73	43	91146	9.347	ppb	92
24) Iodomethane	2.43	142	170140	10.537	ppb	95
25) Acrylonitrile	3.10	52	42728	10.174	ppb	94
26) Methylene chloride	2.80	49	90128	10.712	ppb	96
27) Carbon disulfide	2.49	76	179712	9.509	ppb	98
28) Methyl t-butyl ether (MtBE	3.18	73	342379	10.274	ppb	100
29) Trans-1,2-DCE	3.14	61	198177	10.584	ppb	97
31) Diisopropyl Ether	3.93	45	367991	10.608	ppb	97
33) 1,1-DCA	3.71	63	260456	10.869	ppb	96
34) Vinyl Acetate	3.86	43	132711	11.555	ppb	94
35) Ethyl tert Butyl Ether	4.49	59	326981	10.280	ppb	98
36) MEK (2-Butanone)	4.67	43	255019	52.247	ppb	98
37) Cis-1,2-DCE	4.60	61	225093	10.261	ppb	96
38) 2,2-Dichloropropane	4.59	77	212335	10.706	ppb	97
41) Chloroform	5.09	83	281128	10.531	ppb	97
42) Bromochloromethane	4.93	49	106376	10.875	ppb	94
44) 1,1,1-TCA	5.30	97	254862	10.376	ppb	98
45) Cyclohexane	5.36	56	205801	10.128	ppb	98
46) 1,1-Dichloropropene	5.53	75	189032	10.389	ppb	97
47) 2,2,4-Trimethylpentane	5.96	57	416314	10.461	ppb	98
49) Carbon Tetrachloride	5.52	117	215097	9.952	ppb	98
50) Tert Amyl Methyl Ether	6.01	73	304510	10.239	ppb	94
52) 1,2-DCA	5.81	62	178357	10.068	ppb	98
53) Benzene	5.78	78	589362	10.323	ppb	98
54) TCE	6.61	130	190569	9.593	ppb	98
56) 1,2-Dichloropropane	6.86	63	137190	11.043	ppb	97
57) Bromodichloromethane	7.21	83	157482	10.429	ppb	94
58) Methyl Cyclohexane	6.84	83	234425	10.043	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z02.D Vial: 2
Acq On : 27 Jan 21 08:41 Operator: LP,DG,CH
Sample : 210127A CCV 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:02 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
59)	Dibromomethane	6.99	174	138690	10.445	ppb	99
60)	MIBK (methyl isobutyl ket	7.94	43	429280	50.422	ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	27045	9.578	ppb	98
63)	Cis-1,3-Dichloropropene	7.73	75	179772	9.898	ppb	97
64)	Toluene	8.11	91	635521	10.290	ppb	97
65)	Trans-1,3-Dichloropropene	8.37	75	155448	9.045	ppb	99
66)	1,1,2-TCA	8.56	97	122600	10.463	ppb	97
67)	2-Hexanone	8.88	43	173760	47.610	ppb	96
70)	1,2-EDB	9.09	107	126871	10.718	ppb	96
71)	Tetrachloroethene	8.71	166	250074	10.148	ppb	99
72)	1-Chlorohexane	9.67	91	195979	10.194	ppb	99
73)	1,1,1,2-Tetrachloroethane	9.75	131	144917	10.227	ppb	97
74)	m&p-Xylene	9.92	91	1050350	21.367	ppb	100
75)	o-Xylene	10.35	91	518726	10.560	ppb	100
76)	Styrene	10.37	104	414019	9.436	ppb	98
78)	1,3-Dichloropropane	8.74	76	188494	10.458	ppb	99
79)	Dibromochloromethane	8.98	129	122875	8.794	ppb	98
80)	Chlorobenzene	9.65	112	457687	10.386	ppb	99
81)	Ethylbenzene	9.79	91	688681	10.536	ppb	99
82)	Bromoform	10.54	173	91104	8.229	ppb	93
84)	Isopropylbenzene	10.76	105	720047	10.388	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	140890	10.738	ppb	99
86)	1,2,3-Trichloropropane	11.12	110	54252	10.310	ppb	97
87)	t-1,4-Dichloro-2-Butene	11.14	53	18961	7.872	ppb	88
88)	Bromobenzene	11.06	77	221463	10.102	ppb	97
89)	n-Propylbenzene	11.21	91	799948	9.963	ppb	100
90)	4-Ethyltoluene	11.34	105	717753	10.559	ppb	98
91)	2-Chlorotoluene	11.41	91	542473	10.035	ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	588920	9.898	ppb	99
93)	4-Chlorotoluene	11.41	91	542473	10.035	ppb	98
94)	Tert-Butylbenzene	11.76	119	566214	10.334	ppb	97
95)	1,2,4-Trimethylbenzene	11.81	105	585223	10.447	ppb	98
96)	Sec-Butylbenzene	12.00	105	794241	10.510	ppb	99
97)	p-Isopropyltoluene	11.76	119	566214	10.334	ppb	99
98)	Benzyl Chloride	12.35	91	229759	9.289	ppb	99
99)	1,3-DCB	12.10	146	438365	10.518	ppb	96
100)	1,4-DCB	12.20	146	437625	10.281	ppb	100
101)	n-Butylbenzene	12.61	91	583713	9.978	ppb	99
102)	1,2-DCB	12.60	146	398480	10.328	ppb	100
103)	Hexachloroethane	12.89	201	108857	8.512	ppb	94
104)	1,2-Dibromo-3-chloropropan	13.44	157	35175	8.788	ppb	94
105)	1,2,4-Trichlorobenzene	13.69	180	356656	10.355	ppb	95
106)	Hexachlorobutadiene	14.57	225	183274	10.543	ppb	95
107)	Naphthalene	14.62	128	521040	9.448	ppb	98
108)	1,2,3-Trichlorobenzene	14.88	180	255259	10.314	ppb	99

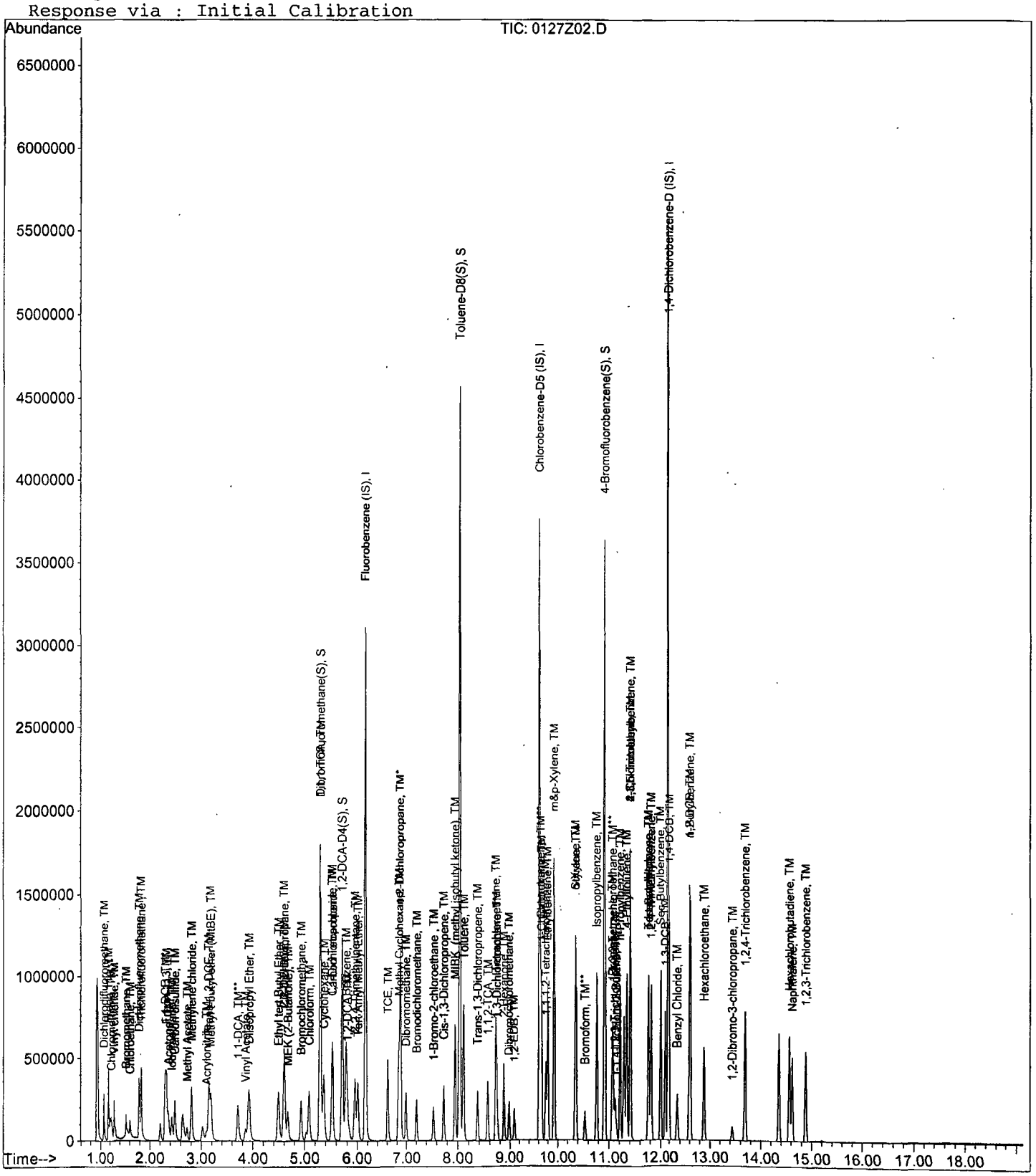
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z02.D Vial: 2
Acq On : 27 Jan 21 08:41 Operator: LP,DG,CH
Sample : 210127A CCV 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:02 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jan 27 09:03:17 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/27/21
Matrix: Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z29.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0002	0.00	TM		
3	TM	Dichlorodifluoromethane	0.1279	0.1389	8.6	TM		
4	TM	Freon 114	0.0758	0.0778	2.7	TM		
5	TM**L	Chloromethane	0.0912	0.0466	49	TM**L	14	
6	TM*	Vinyl chloride	0.1174	0.1169	0.42	TM*		
7		Butane	0.0000	0.0018	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
9	TML	Bromomethane	0.0406	0.0142	65	TML	65	*nt
10	TML	Chloroethane	0.0419	0.0300	28	TML	4.4	
11	TM	Dichlorofluoromethane	0.2230	0.2124	4.8	TM		
12	TM	Trichlorofluoromethane	0.2100	0.2181	3.9	TM		
13	TM	Pentane	0.0000	0.0018	0.00	TM		
14	TM	Acrolein	0.0000	0.0439	0.00	TM		
15	TM	Acetone	0.0316	0.0272	14	TM		
16	TM	Freon-113	0.0592	0.0559	5.6	TM		
17	TM*	1,1-DCE	0.1485	0.1570	5.7	TM*		
18	TM	2-Propanol	0.0000	0.0012	0.00	TM		
19	TM	Acetonitrile	0.0000	0.0286	0.00	TM		
20	TM	t-Butanol	0.0000	0.0034	0.00	TM		
21	TM	Methyl Acetate	0.0756	0.0623	18	TM		
22	TML	Iodomethane	0.1434	0.0944	34	TML	19	
23	TM	Acrylonitrile	0.0326	0.0295	9.3	TM		
24	TML	Methylene chloride	0.0948	0.0631	33	TML	5.2	
25	TM	Carbon disulfide	0.1466	0.1551	5.8	TM		
26	TM	Methyl t-butyl ether (MtBE)	0.2585	0.2642	2.2	TM		
27	TM	Trans-1,2-DCE	0.1452	0.1501	3.4	TM		
28	TM	Hexane	0.0000	0.0000	0.00	TM		
29	TM	Diisopropyl Ether	0.2691	0.2722	1.2	TM		
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
31	TM**	1,1-DCA	0.1859	0.1943	4.5	TM**		
32	TM	Vinyl Acetate	0.0891	0.0923	3.6	TM		
33	TM	Ethyl tert Butyl Ether	0.2467	0.2667	8.1	TM		
34	TM	MEK (2-Butanone)	0.0379	0.0352	7.0	TM		
35	TM	Cis-1,2-DCE	0.1702	0.1746	2.6	TM		
36	TM	2,2-Dichloropropane	0.1539	0.1680	9.2	TM		
37	TML	2-Methylpentane	0.0000	0.0004	0.00	TML		
38	TM	3-Methylpentane	0.0000	0.0514	0.00	TM		
39	TM*	Chloroform	0.2071	0.2245	8.4	TM*		
40	TM	Bromochloromethane	0.0759	0.0813	7.2	TM		
		Average			8.9			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/27/21
Matrix: 0 Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0127Z29.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	Dibromofluoromethane(S)	0.2724	0.3120	15	S	
42	TM	1,1,1-TCA	0.1905	0.2193	15	TM	
43	TM	Cyclohexane	0.1576	0.1626	3.2	TM	
44	TM	1,1-Dichloropropene	0.1411	0.1515	7.3	TM	
45	TM	2,2,4-Trimethylpentane	0.3087	0.3084	0.08	TM	
46	S	1,2-DCA-D4(S)	0.2534	0.2936	16	S	
47	TM	Carbon Tetrachloride	0.1676	0.1804	7.6	TM	
48	TM	Tert Amyl Methyl Ether	0.2307	0.2535	9.9	TM	
49	TM	Methylcyclopentane	0.0000	0.0130	0.00	TM	
50	TM	1,2-DCA	0.1374	0.1462	6.4	TM	
51	TM	Benzene	0.4429	0.4948	12	TM	
52	TM	TCE	0.1541	0.1731	12	TM	
53	TM	2-Pentanone	0.0000	0.6717	0.00	TM	
54	TM*	1,2-Dichloropropane	0.0964	0.1088	13	TM*	
55	TM	Bromodichloromethane	0.1171	0.1421	21	TM	
56	TM	Methyl Cyclohexane	0.1811	0.1958	8.1	TM	
57	TM	Dibromomethane	0.1030	0.1283	25	TM	
58	TM	MIBK (methyl isobutyl ketone)	0.0660	0.0709	7.4	TM	
59	TM	1-Bromo-2-chloroethane	0.0219	0.0242	11	TM	
60	TM	2-Chloroethyl vinyl ether	0.0000	0.0000	0.00	TM	
61	TM	Cis-1,3-Dichloropropene	0.1409	0.1614	15	TM	
62	TM*	Toluene	0.4791	0.5377	12	TM*	
63	TML	Trans-1,3-Dichloropropene	0.1172	0.1363	16	TML	1.2
64	TM	1,1,2-TCA	0.0909	0.1046	15	TM	
65	TML	2-Hexanone	0.0257	0.0297	15	TML	4.1
66	I	Chlorobenzene-D5 (IS)	ISTD			I	
67	S	Toluene-D8(S)	1.203	1.254	4.2	S	
68	TM	1,2-EDB	0.1215	0.1323	8.9	TM	
69	TM	Tetrachloroethene	0.2530	0.3036	20	TM	
70	TM	1-Chlorohexane	0.1973	0.2091	6.0	TM	
71	TM	1,1,1,2-Tetrachloroethane	0.1455	0.1590	9.3	TM	
72	TM	m&p-Xylene	0.5046	0.5669	12	TM	
73	TM	o-Xylene	0.5042	0.5747	14	TM	
74	TML	Styrene	0.3854	0.4562	18	TML	1.2
75	SL	4-Bromofluorobenzene(S)	0.4155	0.4865	17	SL	5.7
76	TM	1,3-Dichloropropane	0.1850	0.1939	4.8	TM	
77	TML	Dibromochloromethane	0.1225	0.1354	11	TML	6.3
78	TM**	Chlorobenzene	0.4524	0.4778	5.6	TM**	
79	TM*	Ethylbenzene	0.6710	0.7400	10	TM*	
80	TM**L	Bromoform	0.0962	0.1022	6.2	TM**L	12
		Average			10.5		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Cal. Date: 01/25/21
Data File: 0127Z29.D

		Compound	MEAN	CCRF	%D		%Drift
81	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
82	TM	Isopropylbenzene	1.927	2.187	13	TM	
83	TM**	1,1,2,2-Tetrachloroethane	0.3647	0.3615	0.90	TM**	
84	TM	1,2,3-Trichloropropane	0.1463	0.1463	0.03	TM	
85	TML	t-1,4-Dichloro-2-Butene	0.0637	0.0312	51	TML	47
86	TM	Bromobenzene	0.6094	0.6637	8.9	TM	
87	TML	n-Propylbenzene	2.101	2.333	11	TML	4.7
88	TM	4-Ethyltoluene	1.890	2.061	9.1	TM	
89	TML	2-Chlorotoluene	1.428	1.578	11	TML	5.2
90	TML	1,3,5-Trimethylbenzene	1.550	1.755	13	TML	6.3
91	TML	4-Chlorotoluene	1.428	1.578	11	TML	5.2
92	TM	Tert-Butylbenzene	1.523	1.721	13	TM	
93	TM	1,2,4-Trimethylbenzene	1.557	1.756	13	TM	
94	TM	Sec-Butylbenzene	2.101	2.355	12	TM	
95	TM	p-Isopropyltoluene	1.523	1.721	13	TM	
96	TML	Benzyl Chloride	0.5584	0.5280	5.4	TML	20
97	TM	1,3-DCB	1.159	1.271	9.7	TM	
98	TM	1,4-DCB	1.183	1.252	5.8	TM	
99	TML	n-Butylbenzene	1.436	1.657	15	TML	1.9
100	TM	1,2-DCB	1.073	1.143	6.6	TM	
101	TML	Hexachloroethane	0.2910	0.2567	12	TML	25
102	TML	1,2-Dibromo-3-chloropropane	0.0941	0.1023	8.7	TML	8.6
103	TM	1,2,4-Trichlorobenzene	0.9574	1.057	10	TM	
104	TM	Hexachlorobutadiene	0.4832	0.5194	7.5	TM	
105	TML	Naphthalene	1.365	1.828	34	TML	20
106	TM	1,2,3-Trichlorobenzene	0.6880	0.7409	7.7	TM	
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			12.1		

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z29.D Vial: 29
Acq On : 27 Jan 21 19:02 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/27/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 8:40 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3758310	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	3170790	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	1175552	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1172446	28.6333 ppb	0.00
Spiked Amount 25.000			Recovery	= 114.532%	
48) 1,2-DCA-D4(S)	5.71	65	1103452	28.9651 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.860%	
69) Toluene-D8(S)	8.03	98	3976213	26.0549 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.220%	
77) 4-Bromofluorobenzene(S)	10.91	95	1542604	26.4268 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.708%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.07	85	208828	10.8630 ppb	98
4) Freon 114	1.16	85	116928	10.2662 ppb	89
5) Chloromethane	1.22	50	70013	8.6393 ppb	100
6) Vinyl chloride	1.28	62	175680	9.9578 ppb	92
9) Bromomethane	1.53	94	21359	3.5221 ppb	94
10) Chloroethane	1.61	64	45168	10.4419 ppb	97
11) Dichlorofluoromethane	1.78	67	319249	9.5227 ppb	99
12) Trichlorofluoromethane	1.83	101	327936	10.3858 ppb	98
17) Acetone	2.36	43	204691	43.0888 ppb	96
18) Freon-113	2.32	101	83984	9.4362 ppb	89
19) 1,1-DCE	2.30	61	236040	10.5722 ppb	95
23) Methyl Acetate	2.73	43	93717	8.2419 ppb	95
24) Iodomethane	2.43	142	141925	8.0665 ppb	99
25) Acrylonitrile	3.10	52	44419	9.0701 ppb	100
26) Methylene chloride	2.81	49	94912	9.4758 ppb	99
27) Carbon disulfide	2.49	76	233152	10.5796 ppb	99
28) Methyl t-butyl ether (MtBE	3.19	73	397220	10.2219 ppb	97
29) Trans-1,2-DCE	3.15	61	225683	10.3360 ppb	95
31) Diisopropyl Ether	3.92	45	409212	10.1161 ppb	98
33) 1,1-DCA	3.71	63	292108	10.4533 ppb	98
34) Vinyl Acetate	3.86	43	138711	10.3564 ppb	95
35) Ethyl tert Butyl Ether	4.49	59	400939	10.8093 ppb	99
36) MEK (2-Butanone)	4.67	43	264749	46.5132 ppb	96
37) Cis-1,2-DCE	4.60	61	262485	10.2611 ppb	97
38) 2,2-Dichloropropane	4.59	77	252557	10.9196 ppb	100
41) Chloroform	5.09	83	337465	10.8406 ppb	96
42) Bromochloromethane	4.93	49	122252	10.7178 ppb	96
44) 1,1,1-TCA	5.30	97	329642	11.5088 ppb	99
45) Cyclohexane	5.36	56	244496	10.3182 ppb	98
46) 1,1-Dichloropropene	5.53	75	227766	10.7346 ppb	96
47) 2,2,4-Trimethylpentane	5.95	57	463682	9.9917 ppb	99
49) Carbon Tetrachloride	5.52	117	271170	10.7595 ppb	94
50) Tert Amyl Methyl Ether	6.01	73	381154	10.9904 ppb	94
52) 1,2-DCA	5.81	62	219832	10.6413 ppb	99
53) Benzene	5.78	78	743809	11.1722 ppb	99
54) TCE	6.61	130	260257	11.2348 ppb	97
56) 1,2-Dichloropropane	6.86	63	163607	11.2930 ppb	99
57) Bromodichloromethane	7.20	83	213566	12.1280 ppb	91
58) Methyl Cyclohexane	6.84	83	294358	10.8140 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z29.D Vial: 29
Acq On : 27 Jan 21 19:02 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/27/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 8:40 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
59)	Dibromomethane	6.99	174	192939	12.4610	ppb	93
60)	MIBK (methyl isobutyl ket	7.94	43	533168	53.7035	ppb	99
61)	1-Bromo-2-chloroethane	7.54	144	36433	11.0647	ppb	87
63)	Cis-1,3-Dichloropropene	7.73	75	242693	11.4587	ppb	96
64)	Toluene	8.11	91	808405	11.2248	ppb	96
65)	Trans-1,3-Dichloropropene	8.37	75	204902	10.1216	ppb	97
66)	1,1,2-TCA	8.56	97	157248	11.5081	ppb	92
67)	2-Hexanone	8.88	43	223129	52.0584	ppb	98
70)	1,2-EDB	9.09	107	167834	10.8905	ppb	100
71)	Tetrachloroethene	8.72	166	385087	12.0026	ppb	97
72)	1-Chlorohexane	9.67	91	265202	10.5956	ppb	98
73)	1,1,1,2-Tetrachloroethane	9.75	131	201679	10.9324	ppb	96
74)	m&p-Xylene	9.93	91	1437909	22.4673	ppb	97
75)	o-Xylene	10.35	91	728888	11.3976	ppb	96
76)	Styrene	10.37	104	578625	10.1155	ppb	97
78)	1,3-Dichloropropane	8.74	76	245893	10.4790	ppb	99
79)	Dibromochloromethane	8.98	129	171696	9.3719	ppb	98
80)	Chlorobenzene	9.65	112	606049	10.5631	ppb	98
81)	Ethylbenzene	9.79	91	938604	11.0292	ppb	97
82)	Bromoform	10.54	173	129571	8.8440	ppb	99
84)	Isopropylbenzene	10.76	105	1028353	11.3498	ppb	99
85)	1,1,2,2-Tetrachloroethane	11.08	83	169968	9.9100	ppb	100
86)	1,2,3-Trichloropropane	11.12	110	68804	10.0033	ppb	100
87)	t-1,4-Dichloro-2-Butene	11.15	53	14677	5.2977	ppb	96
88)	Bromobenzene	11.06	77	312103	10.8912	ppb	95
89)	n-Propylbenzene	11.21	91	1097144	10.4705	ppb	100
90)	4-Ethyltoluene	11.34	105	968993	10.9052	ppb	100
91)	2-Chlorotoluene	11.41	91	742216	10.5188	ppb	98
92)	1,3,5-Trimethylbenzene	11.41	105	825318	10.6260	ppb	99
93)	4-Chlorotoluene	11.41	91	742216	10.5188	ppb	98
94)	Tert-Butylbenzene	11.76	119	809101	11.2971	ppb	100
95)	1,2,4-Trimethylbenzene	11.81	105	825810	11.2780	ppb	99
96)	Sec-Butylbenzene	12.00	105	1107221	11.2090	ppb	100
97)	p-Isopropyltoluene	11.76	119	809101	11.2971	ppb	97
98)	Benzyl Chloride	12.35	91	248287	7.9650	ppb	99
99)	1,3-DCB	12.10	146	597714	10.9719	ppb	98
100)	1,4-DCB	12.20	146	588646	10.5800	ppb	97
101)	n-Butylbenzene	12.61	91	779002	10.1851	ppb	99
102)	1,2-DCB	12.60	146	537539	10.6584	ppb	98
103)	Hexachloroethane	12.89	201	120683	7.4799	ppb	95
104)	1,2-Dibromo-3-chloropropan	13.44	157	48102	9.1430	ppb	88
105)	1,2,4-Trichlorobenzene	13.69	180	497214	11.0443	ppb	96
106)	Hexachlorobutadiene	14.57	225	244231	10.7488	ppb	96
107)	Naphthalene	14.62	128	859531	12.0276	ppb	98
108)	1,2,3-Trichlorobenzene	14.89	180	348389	10.7692	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

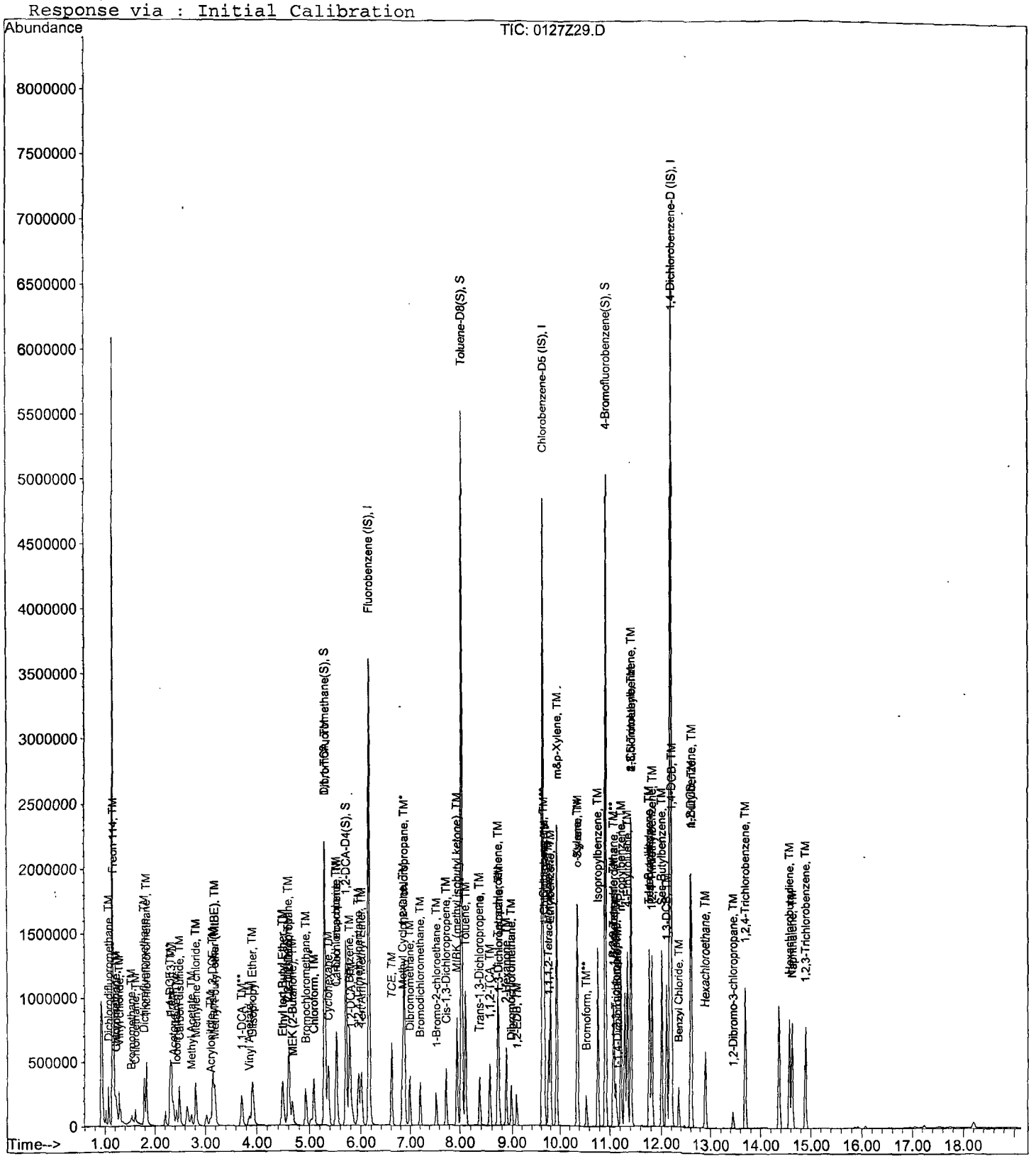
Data File : M:\ZEUS\DATA\210125\0127Z29.D
Acq On : 27 Jan 21 19:02
Sample : Ending CCV 10ug/L 1/27/21
Misc :

Vial: 29
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 8:40 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z10.D Vial: 10
Acq On : 27 Jan 21 11:45 Operator: LP,DG,CH
Sample : BA25866W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:30 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3100409	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2341179	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	848192	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	927809	27.4669 ppb	0.00
Spiked Amount 25.000			Recovery = 109.868%		
48) 1,2-DCA-D4(S)	5.71	65	875969	27.8730 ppb	0.00
Spiked Amount 25.000			Recovery = 111.492%		
69) Toluene-D8(S)	8.03	98	3068945	27.2359 ppb	0.00
Spiked Amount 25.000			Recovery = 108.944%		
77) 4-Bromofluorobenzene(S)	10.91	95	1025366	24.0084 ppb	0.00
Spiked Amount 25.000			Recovery = 96.032%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

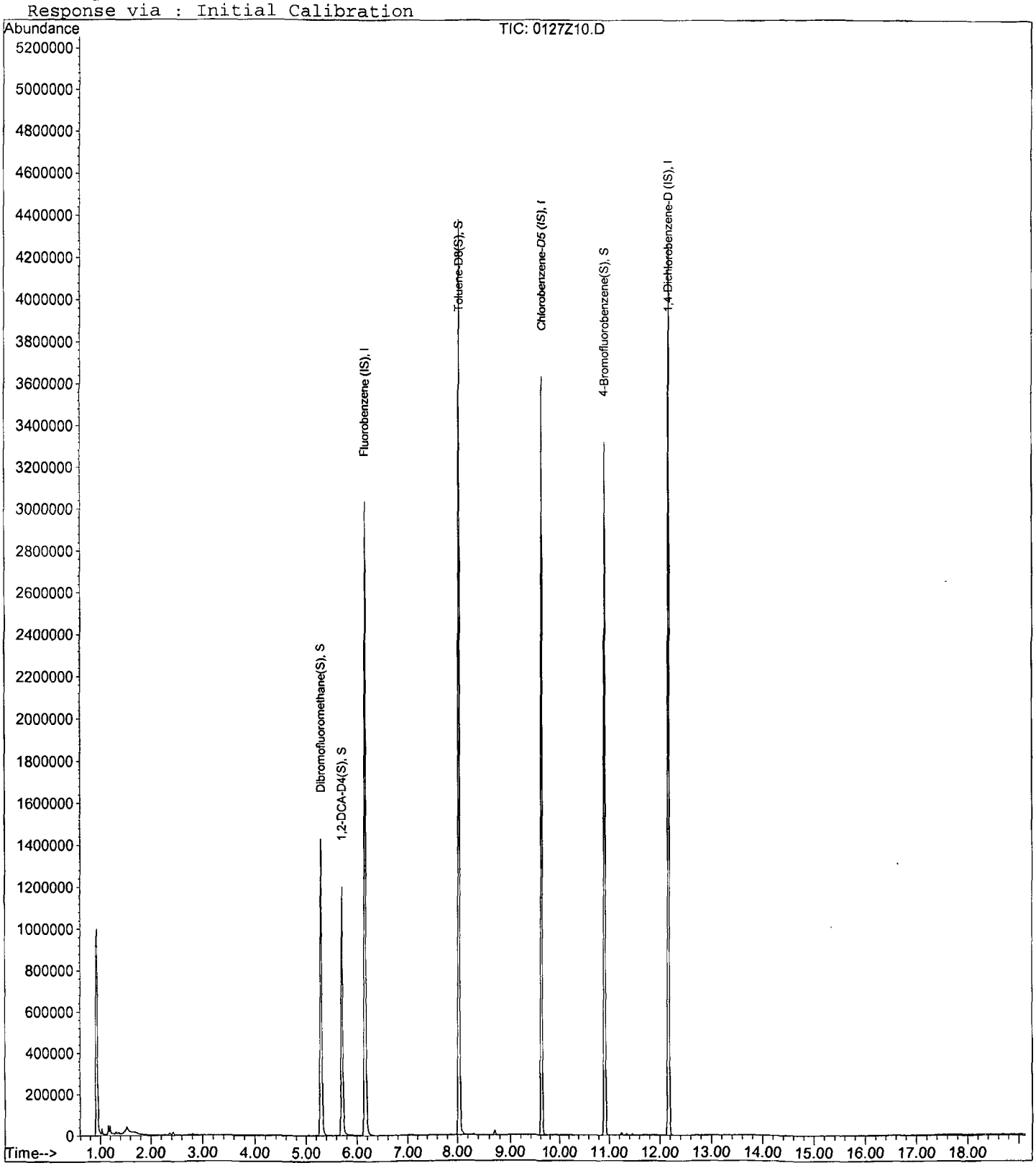
Data File : M:\ZEUS\DATA\210125\0127Z10.D
Acq On : 27 Jan 21 11:45
Sample : BA25866W01
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 14:30 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z14.D Vial: 14
Acq On : 27 Jan 21 13:17 Operator: LP,DG,CH
Sample : BA25867W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:32 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	2969253	25.0000 ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2237174	25.0000 ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	815872	25.0000 ppb		0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	931575	28.7966 ppb		0.00
Spiked Amount 25.000			Recovery = 115.188%			
48) 1,2-DCA-D4(S)	5.71	65	874907	29.0689 ppb		0.00
Spiked Amount 25.000			Recovery = 116.276%			
69) Toluene-D8(S)	8.03	98	3038844	28.2225 ppb		0.00
Spiked Amount 25.000			Recovery = 112.888%			
77) 4-Bromofluorobenzene(S)	10.91	95	1006112	24.5941 ppb		0.00
Spiked Amount 25.000			Recovery = 98.376%			
Target Compounds						Qvalue
5) Chloromethane	1.20	50	11728	1.0376 ppb		98
9) Bromomethane	1.53	94	4819	-0.3131 ppb		82
10) Chloroethane	1.59	64	303	-1.0900 ppb	#	40
11) Dichlorofluoromethane	1.78	67	465	0.0176 ppb	#	43
17) Acetone	2.36	43	5601	1.4924 ppb		97
23) Methyl Acetate	2.72	43	1618	0.1801 ppb	#	45
24) Iodomethane	2.43	142	10626	2.4468 ppb		98
26) Methylene chloride	2.81	49	747	-1.9269 ppb		92
27) Carbon disulfide	2.49	76	722	0.0415 ppb	#	74
34) Vinyl Acetate	3.86	43	81	0.0077 ppb	#	70
36) MEK (2-Butanone)	4.68	43	662	0.1472 ppb	#	47
37) Cis-1,2-DCE	4.59	61	103	0.0051 ppb	#	12
46) 1,1-Dichloropropene	5.49	75	52	0.0031 ppb	#	37
52) 1,2-DCA	5.81	62	2713	0.1662 ppb	#	76
53) Benzene	5.78	78	465	0.0088 ppb	#	61
54) TCE	6.61	130	112	0.0061 ppb	#	57
60) MIBK (methyl isobutyl ket	7.94	43	64	0.0082 ppb	#	40
64) Toluene	8.11	91	1417	0.0249 ppb		92
65) Trans-1,3-Dichloropropene	8.29	75	122	0.7939 ppb	#	38
67) 2-Hexanone	8.93	43	188	3.6983 ppb	#	31
72) 1-Chlorohexane	9.62	91	4064	0.2301 ppb	#	1
74) m&p-Xylene	9.93	91	602	0.0133 ppb		96
75) o-Xylene	10.35	91	370	0.0082 ppb		95
76) Styrene	10.37	104	52	0.1864 ppb	#	38
80) Chlorobenzene	9.65	112	93	0.0023 ppb	#	7
81) Ethylbenzene	9.79	91	86	0.0014 ppb	#	39
82) Bromoform	10.54	173	205	1.5916 ppb	#	29
84) Isopropylbenzene	10.76	105	64	0.0010 ppb	#	45
90) 4-Ethyltoluene	11.31	105	62	0.0010 ppb	#	41
94) Tert-Butylbenzene	11.77	119	2535	0.0510 ppb	#	84
95) 1,2,4-Trimethylbenzene	11.82	105	291	0.0057 ppb	#	27
96) Sec-Butylbenzene	12.01	105	460	0.0067 ppb	#	52
97) p-Isopropyltoluene	11.77	119	2535	0.0510 ppb	#	84
98) Benzyl Chloride	12.30	91	75	1.6512 ppb	#	57
99) 1,3-DCB	12.17	146	224	0.0059 ppb	#	1
100) 1,4-DCB	12.17	146	224	0.0058 ppb	#	1
101) n-Butylbenzene	12.60	91	51	0.1170 ppb	#	24
107) Naphthalene	14.61	128	5612	-0.2787 ppb	#	39

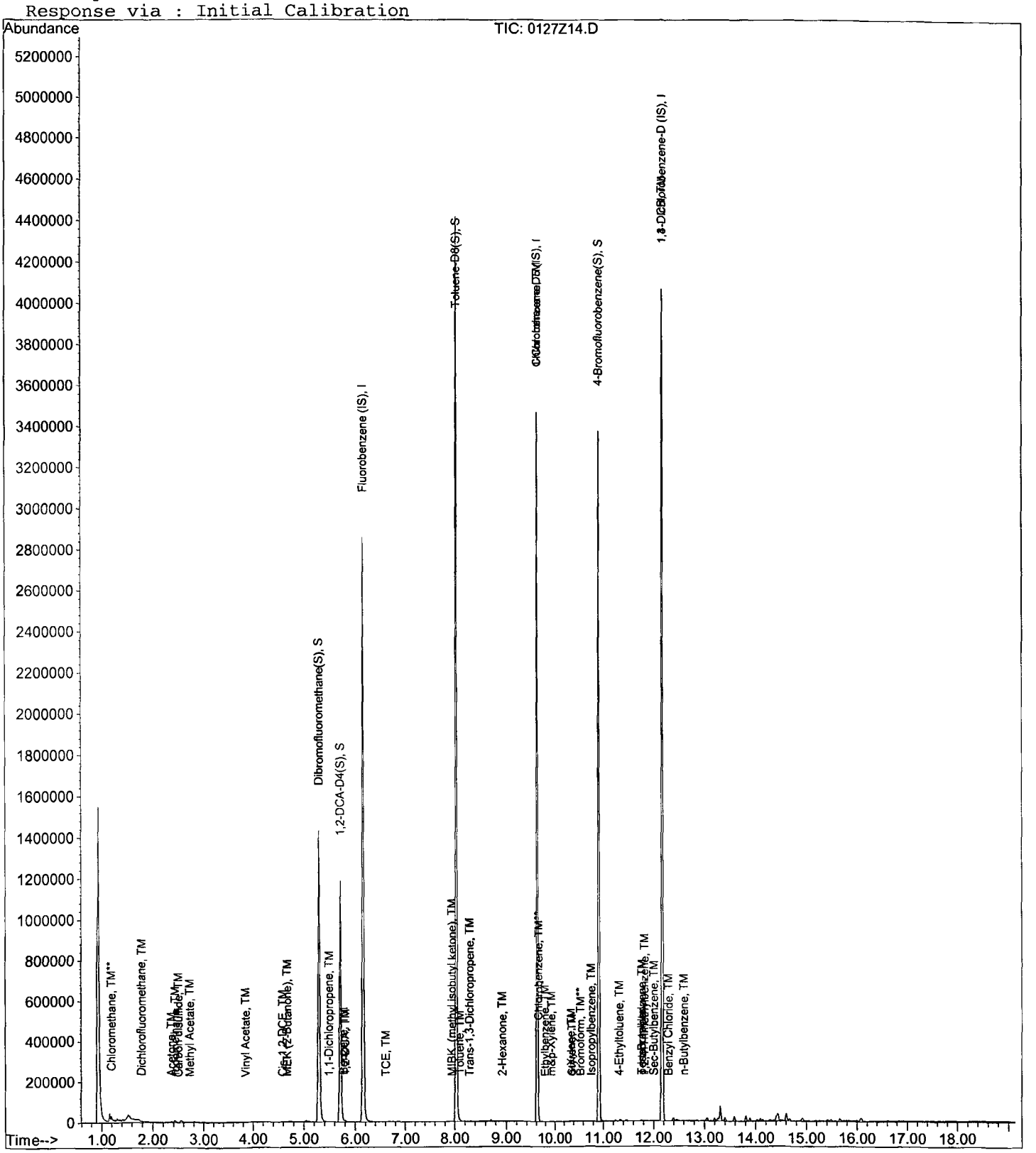
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z14.D Vial: 14
Acq On : 27 Jan 21 13:17 Operator: LP,DG,CH
Sample : BA25867W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:32 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z11.D Vial: 11
Acq On : 27 Jan 21 12:08 Operator: LP,DG,CH
Sample : BA25869W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:31 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3023395	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2272539	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	840576	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	894442	27.1536 ppb	0.00
Spiked Amount 25.000			Recovery = 108.616%		
48) 1,2-DCA-D4(S)	5.71	65	854198	27.8726 ppb	0.00
Spiked Amount 25.000			Recovery = 111.492%		
69) Toluene-D8(S)	8.03	98	2941848	26.8965 ppb	0.00
Spiked Amount 25.000			Recovery = 107.584%		
77) 4-Bromofluorobenzene(S)	10.91	95	980201	23.6773 ppb	0.00
Spiked Amount 25.000			Recovery = 94.708%		
Target Compounds					Qvalue
9) Bromomethane	1.53	94	4997	-0.2849 ppb #	71
10) Chloroethane	1.59	64	349	-1.0770 ppb #	1
11) Dichlorofluoromethane	1.79	67	212	0.0079 ppb #	43
17) Acetone	2.36	43	9320	2.4388 ppb	96
23) Methyl Acetate	2.72	43	1125	0.1230 ppb #	45
24) Iodomethane	2.43	142	14681	2.6568 ppb #	89
26) Methylene chloride	2.81	49	1234	-1.8555 ppb #	78
27) Carbon disulfide	2.50	76	388	0.0219 ppb #	74
31) Diisopropyl Ether	3.86	45	57	0.0018 ppb #	29
34) Vinyl Acetate	3.87	43	189	0.0175 ppb #	70
35) Ethyl tert Butyl Ether	4.51	59	54	0.0018 ppb #	28
36) MEK (2-Butanone)	4.70	43	695	0.1518 ppb #	47
37) Cis-1,2-DCE	4.59	61	64	0.0031 ppb #	12
50) Tert Amyl Methyl Ether	5.95	73	74	0.0027 ppb #	51
52) 1,2-DCA	5.80	62	2749	0.1654 ppb #	70
53) Benzene	5.78	78	1088	0.0203 ppb #	52
58) Methyl Cyclohexane	6.75	83	50	0.0023 ppb #	17
60) MIBK (methyl isobutyl ket	7.89	43	118	0.0148 ppb #	40
64) Toluene	8.11	91	1731	0.0299 ppb	90
65) Trans-1,3-Dichloropropene	8.31	75	73	0.7910 ppb #	31
67) 2-Hexanone	8.89	43	172	3.6931 ppb #	31
72) 1-Chlorohexane	9.62	91	4213	0.2349 ppb #	1
74) m&p-Xylene	9.92	91	745	0.0162 ppb #	74
75) o-Xylene	10.35	91	109	0.0024 ppb #	26
76) Styrene	10.37	104	206	0.1901 ppb #	38
81) Ethylbenzene	9.92	91	745	0.0122 ppb	97
82) Bromoform	10.54	173	299	1.5987 ppb #	29
84) Isopropylbenzene	10.91	105	1185	0.0183 ppb #	45
89) n-Propylbenzene	11.23	91	175	-0.3307 ppb #	47
90) 4-Ethyltoluene	11.30	105	64	0.0010 ppb #	41
92) 1,3,5-Trimethylbenzene	11.44	105	55	-0.1985 ppb #	24
95) 1,2,4-Trimethylbenzene	11.80	105	58	0.0011 ppb #	27
96) Sec-Butylbenzene	12.18	105	460	0.0065 ppb #	71
99) 1,3-DCB	12.17	146	233	0.0060 ppb #	1
100) 1,4-DCB	12.17	146	233	0.0059 ppb #	1
101) n-Butylbenzene	12.63	91	52	0.1170 ppb #	24
107) Naphthalene	14.63	128	65	-0.3943 ppb #	68

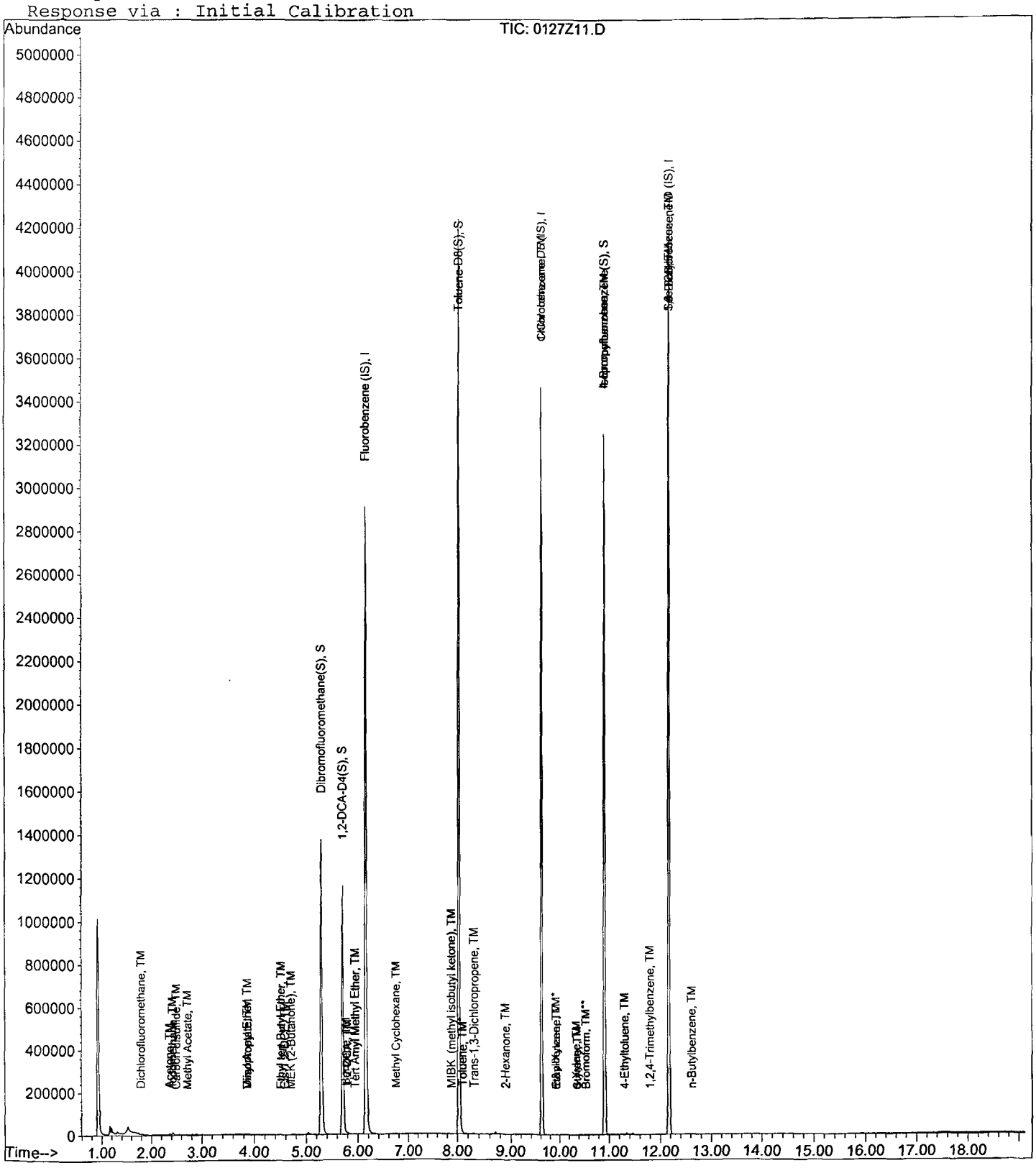
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z11.D Vial: 11
Acq On : 27 Jan 21 12:08 Operator: LP,DG,CH
Sample : BA25869W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:31 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z15.D Vial: 15
Acq On : 27 Jan 21 13:40 Operator: LP,DG,CH
Sample : BA25870W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 14:33 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3062807	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2319650	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	852480	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	934550	28.0062 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.024%	
48) 1,2-DCA-D4(S)	5.71	65	882802	28.4353 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.740%	
69) Toluene-D8(S)	8.03	98	3021004	27.0592 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.236%	
77) 4-Bromofluorobenzene(S)	10.92	95	1016743	24.0257 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.104%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

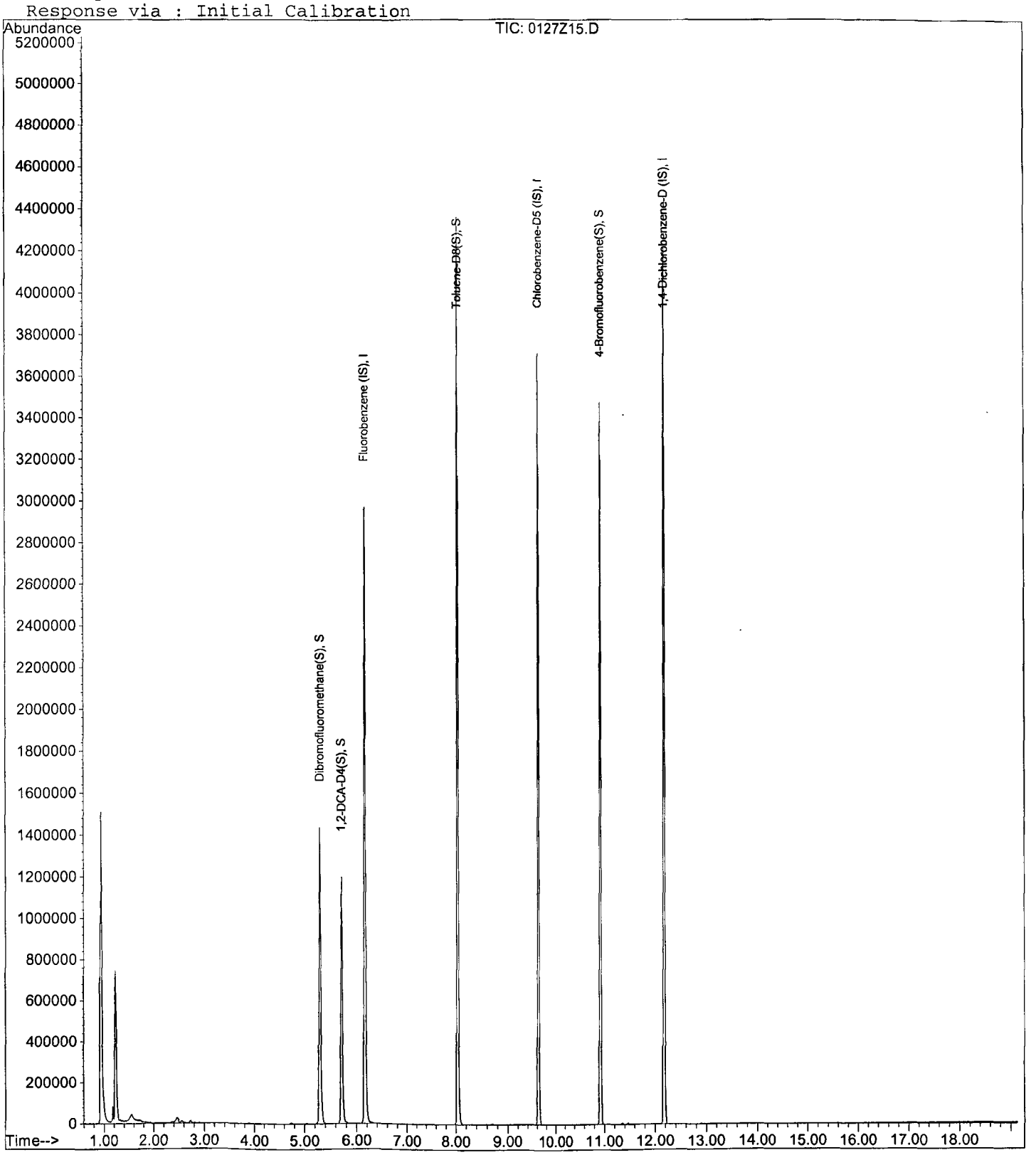
Data File : M:\ZEUS\DATA\210125\0127Z15.D
Acq On : 27 Jan 21 13:40
Sample : BA25870W01
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 14:33 2021

Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z08.D Vial: 8
Acq On : 27 Jan 21 10:59 Operator: LP,DG,CH
Sample : 210127A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 8:38 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3268866	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2446696	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	944832	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	968795	27.2023 ppb	0.00
Spiked Amount 25.000			Recovery = 108.808%		
48) 1,2-DCA-D4(S)	5.71	65	919213	27.7417 ppb	0.00
Spiked Amount 25.000			Recovery = 110.968%		
69) Toluene-D8(S)	8.03	98	3178278	26.9897 ppb	0.00
Spiked Amount 25.000			Recovery = 107.960%		
77) 4-Bromofluorobenzene(S)	10.91	95	1059894	23.7704 ppb	0.00
Spiked Amount 25.000			Recovery = 95.080%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

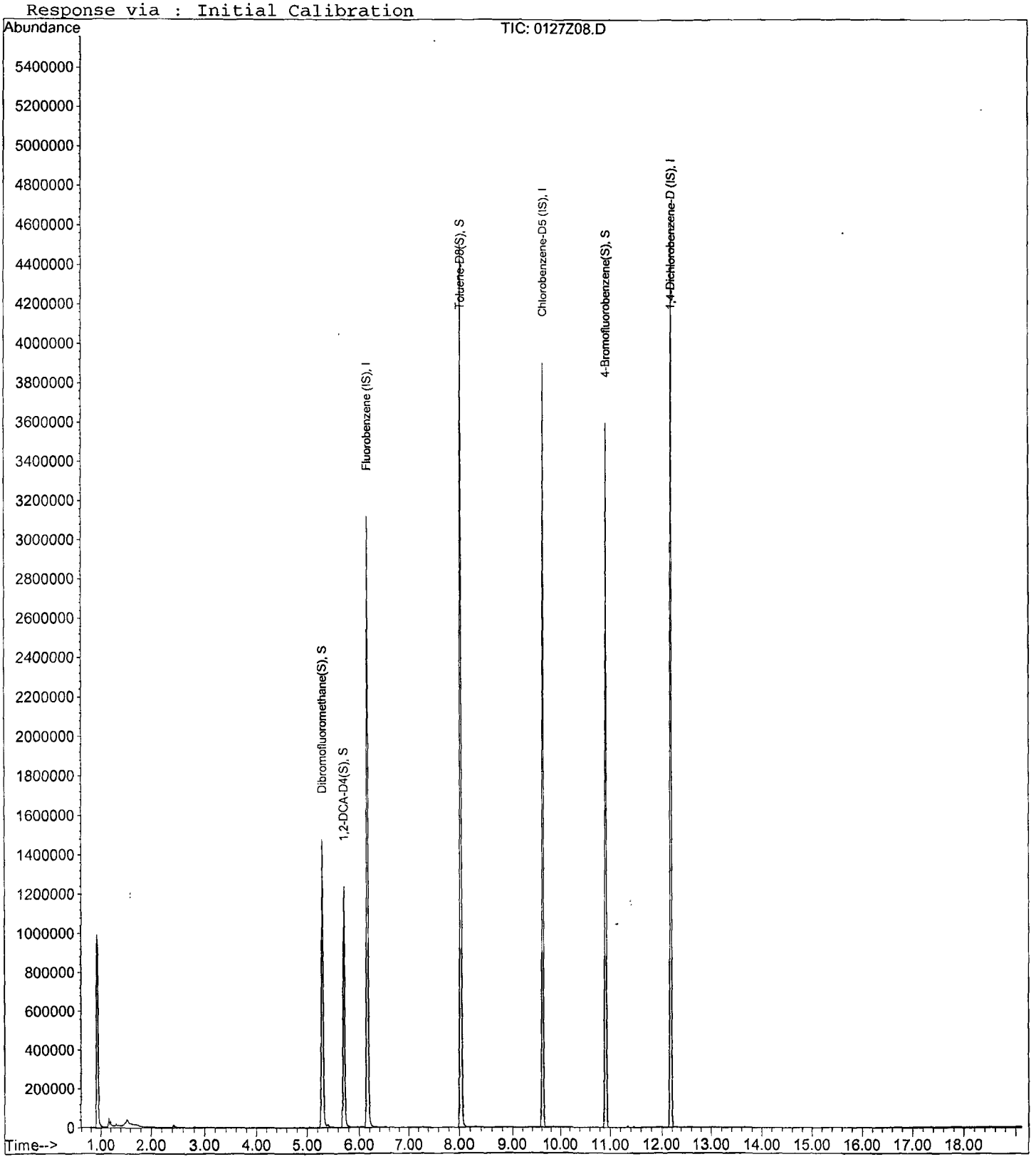
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z08.D
Acq On : 27 Jan 21 10:59
Sample : 210127A BLK
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 8:38 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z03.D Vial: 3
Acq On : 27 Jan 21 09:04 Operator: LP,DG,CH
Sample : 210127A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:51 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3288356	25.0000 ppb		0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2464684	25.0000 ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	877952	25.0000 ppb		0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.30	111	996180	27.8054 ppb		0.00
Spiked Amount 25.000			Recovery = 111.220%			
48) 1,2-DCA-D4(S)	5.71	65	924807	27.7451 ppb		0.00
Spiked Amount 25.000			Recovery = 110.980%			
69) Toluene-D8(S)	8.03	98	3352538	28.2617 ppb		0.00
Spiked Amount 25.000			Recovery = 113.048%			
77) 4-Bromofluorobenzene(S)	10.91	95	1129676	25.0237 ppb		0.00
Spiked Amount 25.000			Recovery = 100.096%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.06	85	185513	11.0293 ppb		98
4) Freon 114	1.16	85	101689	10.2042 ppb		92
5) Chloromethane	1.22	50	69747	9.9761 ppb		99
6) Vinyl chloride	1.28	62	170033	11.0151 ppb		100
9) Bromomethane	1.53	94	49905	12.4892 ppb		96
10) Chloroethane	1.60	64	39704	10.4961 ppb		96
11) Dichlorofluoromethane	1.78	67	309276	10.5437 ppb		100
12) Trichlorofluoromethane	1.82	101	301295	10.9057 ppb		100
17) Acetone	2.36	43	209258	50.3456 ppb		97
18) Freon-113	2.32	101	78144	10.0348 ppb		97
19) 1,1-DCE	2.30	61	206474	10.5696 ppb		97
23) Methyl Acetate	2.73	43	98666	9.9172 ppb		93
24) Iodomethane	2.43	142	188849	11.2995 ppb		99
25) Acrylonitrile	3.10	52	46197	10.7813 ppb	#	92
26) Methylene chloride	2.81	49	90864	10.5604 ppb		96
27) Carbon disulfide	2.49	76	184960	9.5923 ppb		98
28) Methyl t-butyl ether (MtBE	3.18	73	359318	10.5680 ppb		100
29) Trans-1,2-DCE	3.14	61	206035	10.7847 ppb		95
31) Diisopropyl Ether	3.92	45	381092	10.7674 ppb		100
33) 1,1-DCA	3.71	63	261826	10.7087 ppb		100
34) Vinyl Acetate	3.86	43	133270	11.3722 ppb		96
35) Ethyl tert Butyl Ether	4.49	59	339011	10.4459 ppb		98
36) MEK (2-Butanone)	4.67	43	278510	55.9238 ppb		94
37) Cis-1,2-DCE	4.61	61	231656	10.3502 ppb		96
38) 2,2-Dichloropropane	4.60	77	225816	11.1587 ppb		91
41) Chloroform	5.09	83	288469	10.5910 ppb		97
42) Bromochloromethane	4.93	49	109625	10.9843 ppb		96
44) 1,1,1-TCA	5.30	97	260092	10.3784 ppb		95
45) Cyclohexane	5.37	56	213229	10.2847 ppb		93
46) 1,1-Dichloropropene	5.53	75	193427	10.4190 ppb		98
47) 2,2,4-Trimethylpentane	5.95	57	438087	10.7893 ppb		100
49) Carbon Tetrachloride	5.52	117	221708	10.0542 ppb		94
50) Tert Amyl Methyl Ether	6.01	73	319318	10.5233 ppb		94
52) 1,2-DCA	5.81	62	184935	10.2314 ppb		99
53) Benzene	5.78	78	608820	10.4516 ppb		100
54) TCE	6.61	130	197183	9.7285 ppb		96
56) 1,2-Dichloropropane	6.86	63	138852	10.9540 ppb		97
57) Bromodichloromethane	7.21	83	159354	10.3427 ppb		100
58) Methyl Cyclohexane	6.84	83	243929	10.2421 ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z03.D Vial: 3
Acq On : 27 Jan 21 09:04 Operator: LP,DG,CH
Sample : 210127A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:51 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
59)	Dibromomethane	6.99	174	142646	10.5294 ppb	97
60)	MIBK (methyl isobutyl ket	7.94	43	481295	55.4069 ppb	98
61)	1-Bromo-2-chloroethane	7.54	144	26334	9.1406 ppb	100
63)	Cis-1,3-Dichloropropene	7.73	75	186077	10.0412 ppb	95
64)	Toluene	8.11	91	658224	10.4457 ppb	99
65)	Trans-1,3-Dichloropropene	8.37	75	159871	9.1110 ppb	97
66)	1,1,2-TCA	8.56	97	126894	10.6138 ppb	97
67)	2-Hexanone	8.88	43	185664	49.6867 ppb	99
70)	1,2-EDB	9.09	107	132076	11.0255 ppb	95
71)	Tetrachloroethene	8.72	166	252000	10.1047 ppb	96
72)	1-Chlorohexane	9.67	91	207936	10.6877 ppb	99
73)	1,1,1,2-Tetrachloroethane	9.75	131	147347	10.2755 ppb	94
74)	m&p-Xylene	9.93	91	1077731	21.6639 ppb	99
75)	o-Xylene	10.35	91	527721	10.6160 ppb	96
76)	Styrene	10.37	104	420088	9.4602 ppb	97
78)	1,3-Dichloropropane	8.74	76	194190	10.6465 ppb	99
79)	Dibromochloromethane	8.98	129	124695	8.8163 ppb	98
80)	Chlorobenzene	9.65	112	466037	10.4498 ppb	100
81)	Ethylbenzene	9.79	91	703313	10.6321 ppb	97
82)	Bromoform	10.54	173	93913	8.3529 ppb	100
84)	Isopropylbenzene	10.76	105	742782	10.9768 ppb	100
85)	1,1,2,2-Tetrachloroethane	11.08	83	146173	11.4115 ppb	98
86)	1,2,3-Trichloropropane	11.12	110	54478	10.6053 ppb	96
87)	t-1,4-Dichloro-2-Butene	11.15	53	22140	9.1099 ppb	84
88)	Bromobenzene	11.06	77	228171	10.6613 ppb	98
89)	n-Propylbenzene	11.21	91	830516	10.6172 ppb	99
90)	4-Ethyltoluene	11.34	105	740705	11.1617 ppb	95
91)	2-Chlorotoluene	11.41	91	556610	10.5636 ppb	97
92)	1,3,5-Trimethylbenzene	11.41	105	605967	10.4431 ppb	99
93)	4-Chlorotoluene	11.41	91	556610	10.5636 ppb	97
94)	Tert-Butylbenzene	11.76	119	581581	10.8729 ppb	99
95)	1,2,4-Trimethylbenzene	11.81	105	608008	11.1181 ppb	100
96)	Sec-Butylbenzene	12.00	105	818950	11.1010 ppb	99
97)	p-Isopropyltoluene	11.76	119	581581	10.8729 ppb	98
98)	Benzyl Chloride	12.35	91	246049	10.0300 ppb	99
99)	1,3-DCB	12.10	146	446132	10.9654 ppb	99
100)	1,4-DCB	12.20	146	449490	10.8174 ppb	98
101)	n-Butylbenzene	12.61	91	605663	10.5982 ppb	98
102)	1,2-DCB	12.60	146	403205	10.7048 ppb	98
103)	Hexachloroethane	12.89	201	116319	9.1550 ppb	95
104)	1,2-Dibromo-3-chloropropan	13.44	157	35443	9.0352 ppb	90
105)	1,2,4-Trichlorobenzene	13.68	180	363185	10.8018 ppb	94
106)	Hexachlorobutadiene	14.57	225	182863	10.7760 ppb	98
107)	Naphthalene	14.62	128	552545	10.2977 ppb	100
108)	1,2,3-Trichlorobenzene	14.89	180	260306	10.7739 ppb	98

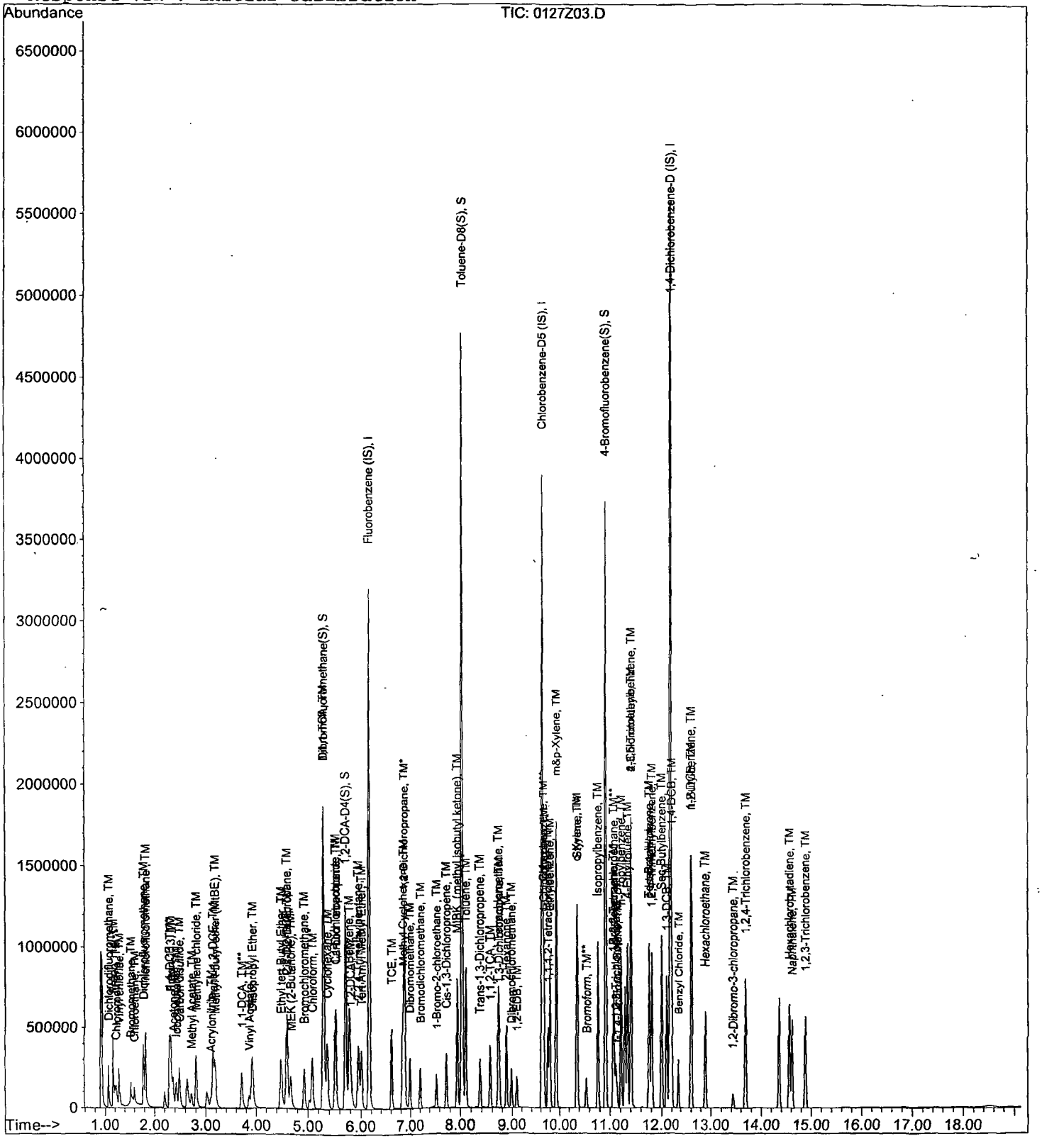
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z03.D Vial: 3
Acq On : 27 Jan 21 09:04 Operator: LP,DG,CH
Sample : 210127A LCS 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:51 2021 Quant Results File: Z0125W.RES

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z04.D Vial: 4
Acq On : 27 Jan 21 09:27 Operator: LP,DG,CH
Sample : 210127A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:51 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3317978	25.0000 ppb	0.00
68) Chlorobenzene-D5 (IS)	9.62	117	2500754	25.0000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.17	152	921408	25.0000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.30	111	1010983	27.9667 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.868%	
48) 1,2-DCA-D4(S)	5.71	65	922531	27.4298 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.720%	
69) Toluene-D8(S)	8.03	98	3369860	27.9980 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.992%	
77) 4-Bromofluorobenzene(S)	10.91	95	1133373	24.7679 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.072%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	1.06	85	193909	11.4256 ppb	97
4) Freon 114	1.16	85	105960	10.5379 ppb	95
5) Chloromethane	1.22	50	73025	10.3896 ppb	97
6) Vinyl chloride	1.28	62	174427	11.1989 ppb	98
9) Bromomethane	1.53	94	52820	13.1911 ppb	95
10) Chloroethane	1.60	64	41768	10.9938 ppb	100
11) Dichlorofluoromethane	1.78	67	319405	10.7918 ppb	98
12) Trichlorofluoromethane	1.82	101	305046	10.9429 ppb	98
17) Acetone	2.36	43	198958	47.4402 ppb	99
18) Freon-113	2.32	101	82984	10.5612 ppb	96
19) 1,1-DCE	2.30	61	219453	11.1337 ppb	93
23) Methyl Acetate	2.73	43	97149	9.6776 ppb	97
24) Iodomethane	2.43	142	192904	11.4162 ppb	98
25) Acrylonitrile	3.10	52	42918	9.9266 ppb	93
26) Methylene chloride	2.81	49	90272	10.3665 ppb	95
27) Carbon disulfide	2.49	76	192832	9.9112 ppb	98
28) Methyl t-butyl ether (MtBE	3.18	73	361363	10.5332 ppb	97
29) Trans-1,2-DCE	3.14	61	212969	11.0481 ppb	95
31) Diisopropyl Ether	3.93	45	388297	10.8730 ppb	99
33) 1,1-DCA	3.71	63	276616	11.2126 ppb	98
34) Vinyl Acetate	3.86	43	141326	11.9520 ppb	96
35) Ethyl tert Butyl Ether	4.49	59	350497	10.7034 ppb	99
36) MEK (2-Butanone)	4.67	43	268135	53.3598 ppb	99
37) Cis-1,2-DCE	4.60	61	241574	10.6969 ppb	94
38) 2,2-Dichloropropane	4.59	77	231894	11.3567 ppb	97
41) Chloroform	5.09	83	297789	10.8355 ppb	100
42) Bromochloromethane	4.93	49	110315	10.9548 ppb	97
44) 1,1,1-TCA	5.30	97	276916	10.9510 ppb	96
45) Cyclohexane	5.36	56	224802	10.7462 ppb	98
46) 1,1-Dichloropropene	5.53	75	204786	10.9324 ppb	99
47) 2,2,4-Trimethylpentane	5.96	57	458622	11.1942 ppb	98
49) Carbon Tetrachloride	5.52	117	234588	10.5433 ppb	93
50) Tert Amyl Methyl Ether	6.01	73	326797	10.6736 ppb	96
52) 1,2-DCA	5.81	62	188541	10.3378 ppb	97
53) Benzene	5.78	78	634423	10.7938 ppb	100
54) TCE	6.61	130	203949	9.9725 ppb	97
56) 1,2-Dichloropropane	6.86	63	141379	11.0538 ppb	97
57) Bromodichloromethane	7.21	83	164277	10.5670 ppb	98
58) Methyl Cyclohexane	6.84	83	260998	10.8610 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z04.D Vial: 4
Acq On : 27 Jan 21 09:27 Operator: LP,DG,CH
Sample : 210127A LCSD 10ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 9:51 2021 Quant Results File: Z0125W.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	Dibromomethane	6.99	174	143269	10.4810	ppb	#	89
60)	MIBK (methyl isobutyl ket	7.94	43	464832	53.0339	ppb		98
61)	1-Bromo-2-chloroethane	7.54	144	28418	9.7759	ppb		98
63)	Cis-1,3-Dichloropropene	7.73	75	190560	10.1913	ppb		95
64)	Toluene	8.11	91	680876	10.7087	ppb		99
65)	Trans-1,3-Dichloropropene	8.37	75	165055	9.3042	ppb		96
66)	1,1,2-TCA	8.56	97	127463	10.5663	ppb		96
67)	2-Hexanone	8.88	43	187968	49.8419	ppb		98
70)	1,2-EDB	9.09	107	131887	10.8509	ppb		97
71)	Tetrachloroethene	8.71	166	261667	10.3410	ppb		97
72)	1-Chlorohexane	9.67	91	214829	10.8827	ppb		97
73)	1,1,1,2-Tetrachloroethane	9.75	131	150885	10.3705	ppb		96
74)	m&p-Xylene	9.93	91	1110693	22.0044	ppb		99
75)	o-Xylene	10.35	91	545259	10.8106	ppb		99
76)	Styrene	10.37	104	433159	9.6108	ppb		95
78)	1,3-Dichloropropane	8.74	76	196471	10.6162	ppb		98
79)	Dibromochloromethane	8.98	129	127897	8.9023	ppb		98
80)	Chlorobenzene	9.65	112	475893	10.5169	ppb		98
81)	Ethylbenzene	9.79	91	733116	10.9228	ppb		99
82)	Bromoform	10.54	173	93237	8.2071	ppb		99
84)	Isopropylbenzene	10.76	105	773797	10.8959	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.08	83	145048	10.7897	ppb		99
86)	1,2,3-Trichloropropane	11.12	110	56171	10.4192	ppb		92
87)	t-1,4-Dichloro-2-Butene	11.14	53	20310	8.1591	ppb		90
88)	Bromobenzene	11.06	77	229268	10.2073	ppb		96
89)	n-Propylbenzene	11.21	91	863556	10.5158	ppb		99
90)	4-Ethyltoluene	11.34	105	754432	10.8324	ppb		100
91)	2-Chlorotoluene	11.41	91	565029	10.2074	ppb		99
92)	1,3,5-Trimethylbenzene	11.41	105	632253	10.3810	ppb		98
93)	4-Chlorotoluene	11.41	91	565029	10.2074	ppb		99
94)	Tert-Butylbenzene	11.76	119	604574	10.7697	ppb		99
95)	1,2,4-Trimethylbenzene	11.81	105	622757	10.8507	ppb		100
96)	Sec-Butylbenzene	12.00	105	853731	11.0267	ppb		98
97)	p-Isopropyltoluene	11.76	119	604574	10.7697	ppb		96
98)	Benzyl Chloride	12.35	91	232375	9.1908	ppb		99
99)	1,3-DCB	12.10	146	453556	10.6221	ppb		98
100)	1,4-DCB	12.20	146	450800	10.3372	ppb		99
101)	n-Butylbenzene	12.61	91	619268	10.3282	ppb		99
102)	1,2-DCB	12.60	146	411495	10.4097	ppb		99
103)	Hexachloroethane	12.89	201	115036	8.7259	ppb		98
104)	1,2-Dibromo-3-chloropropan	13.44	157	35583	8.6911	ppb	#	86
105)	1,2,4-Trichlorobenzene	13.69	180	372537	10.5573	ppb		95
106)	Hexachlorobutadiene	14.56	225	194274	10.9085	ppb		93
107)	Naphthalene	14.62	128	543284	9.6226	ppb		100
108)	1,2,3-Trichlorobenzene	14.89	180	262731	10.3614	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

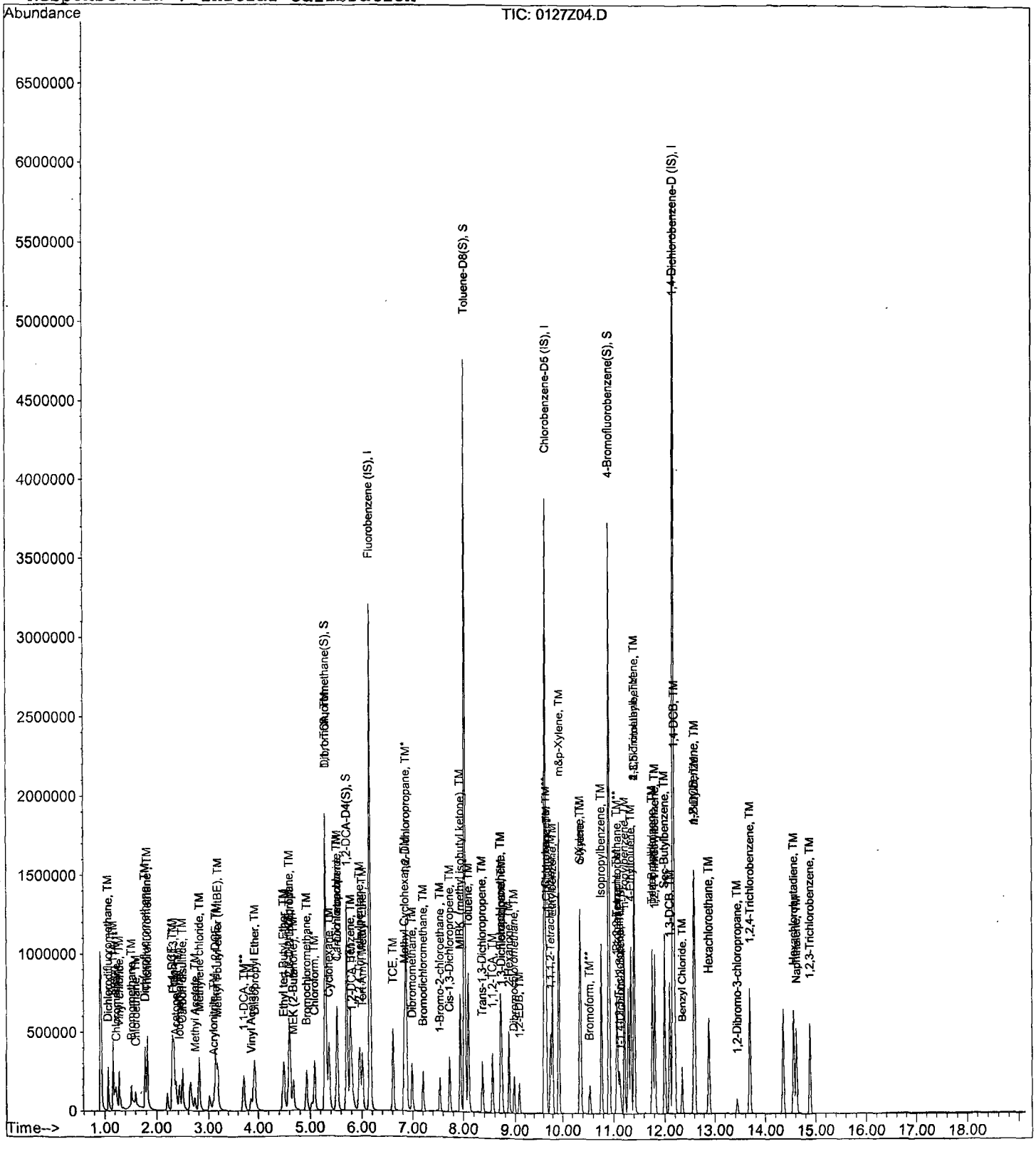
Data File : M:\ZEUS\DATA\210125\0127Z04.D
Acq On : 27 Jan 21 09:27
Sample : 210127A LCSD 10ug/L
Misc :

Vial: 4
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 9:51 2021

Quant Results File: Z0125W.RES

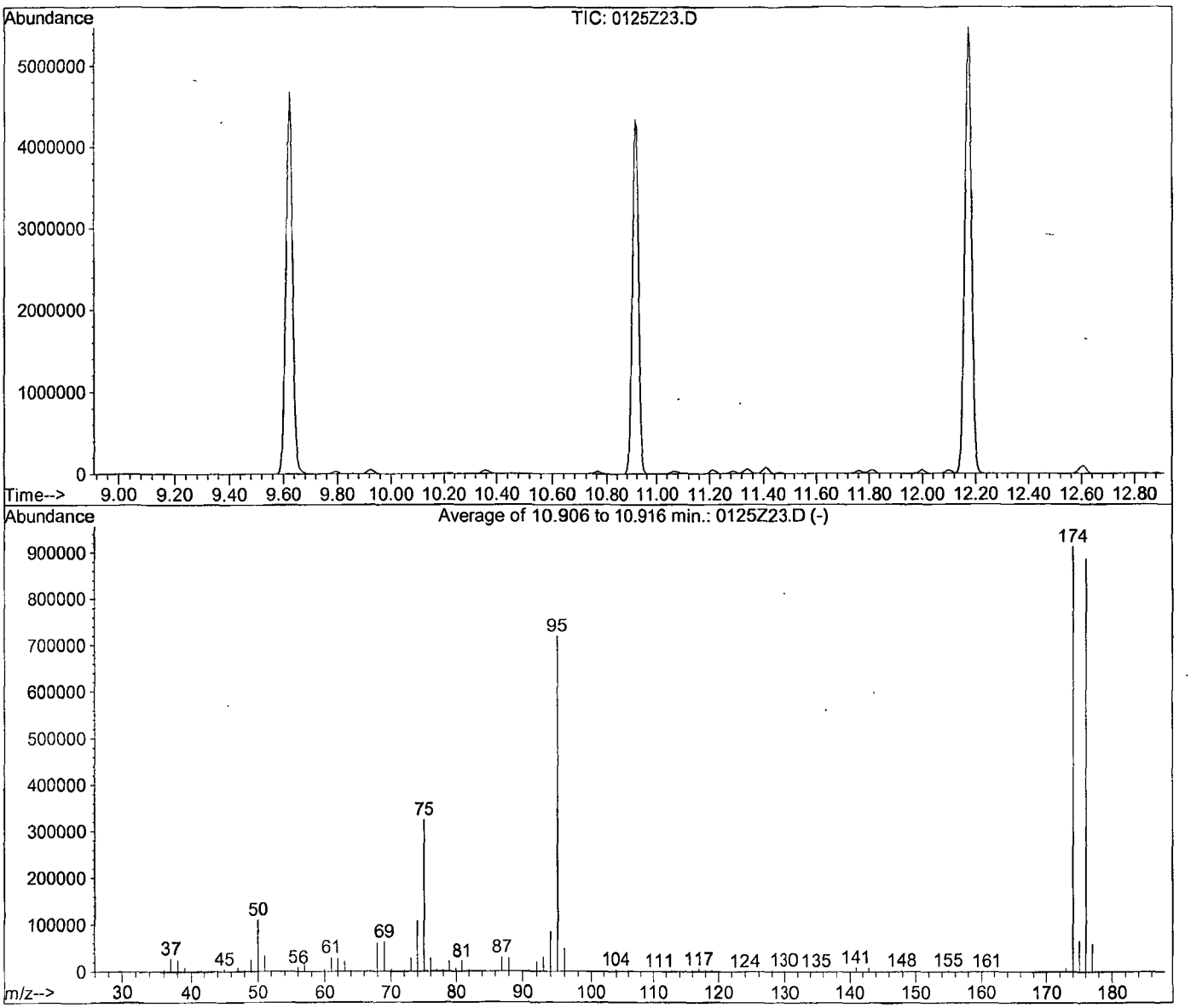
Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Data File : M:\ZEUS\DATA\210125\0125Z23.D
Acq On : 25 Jan 21 15:44
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 18
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125S.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 1968, 1969, 1970; Background Corrected with Scan 1958

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	110717	PASS
75	95	30	60	45.0	324181	PASS
95	95	100	100	100.0	719808	PASS
96	95	5	9	6.9	49611	PASS
173	174	0.00	2	0.7	6674	PASS
174	95	50	200	126.6	911531	PASS
175	174	5	9	7.2	65973	PASS
176	174	95	100	97.2	885717	PASS
177	176	5	9	6.7	58992	PASS

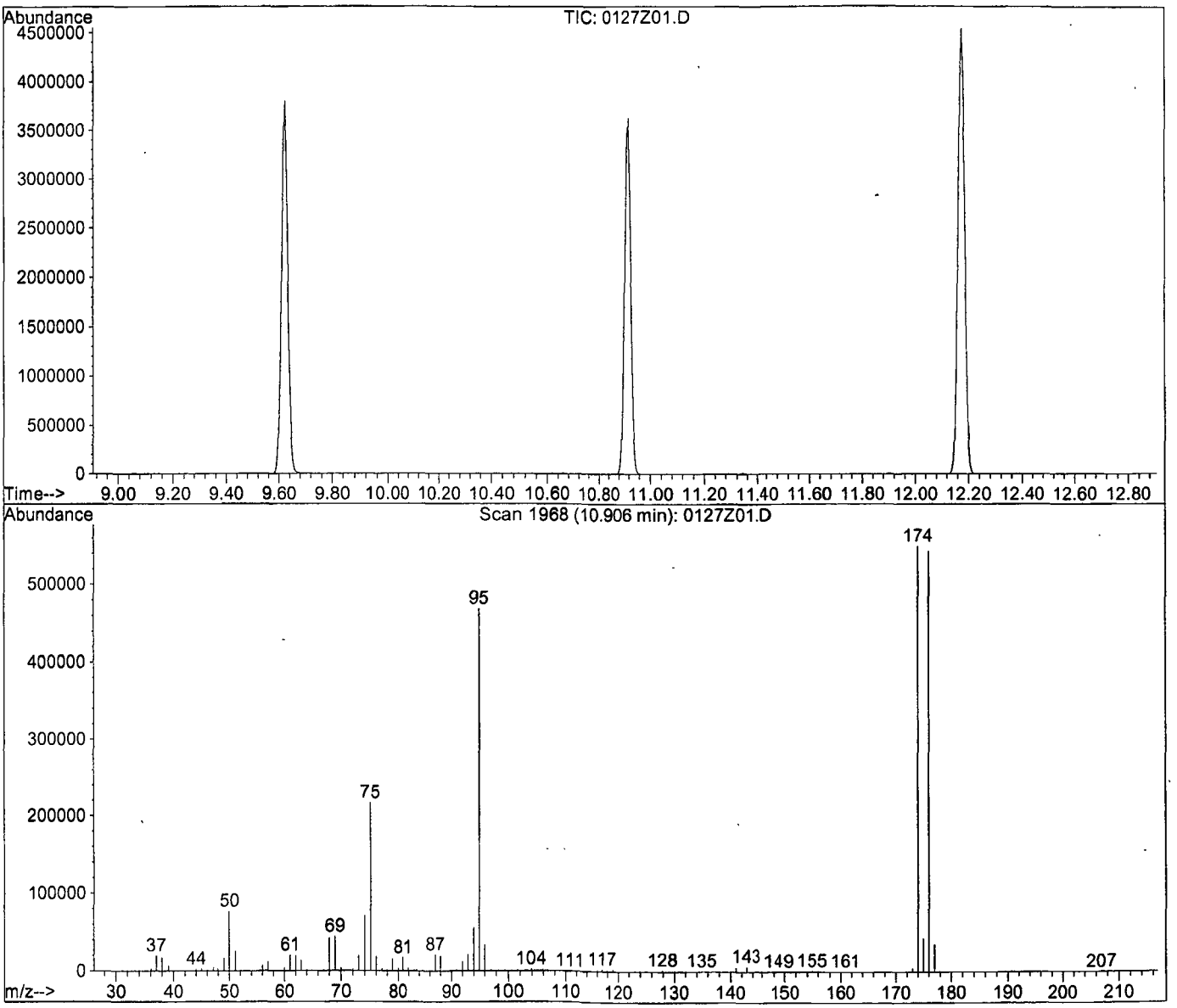
0125Z23.D Z0125S.M Tue Jan 26 10:36:29 2021

BFB

Data File : M:\ZEUS\DATA\210125\0127Z01.D
Acq On : 27 Jan 21 08:18
Sample : 25ug/L BFB STD 12/22/20
Misc :

Vial: 1
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Method : M:\ZEUS\DATA\210125\Z0125W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Scan 1968

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	76688	PASS
75	95	30	60	46.3	216960	PASS
95	95	100	100	100.0	468864	PASS
96	95	5	9	7.1	33344	PASS
173	174	0.00	2	0.8	4461	PASS
174	95	50	200	117.2	549568	PASS
175	174	5	9	7.9	43192	PASS
176	174	95	101	98.8	543168	PASS
177	176	5	9	6.6	36112	PASS

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 01/18/21 A
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	219061767-50972	01/18/22	06/28/29	200uL			50
Benzyl Chloride	Absolute	70037	1,000	082720-51148	01/04/22	08/27/21	200uL			50

VOA STD 8

Prepared: 01/18/21 B
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-51043	01/04/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16071-51542	01/04/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16248-51598	01/04/22	01/27/21	100uL			50

VOA STD TBA

Prepared: 01/18/21 C
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL15725-51578	01/04/22	09/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16253-51600	01/04/22	01/27/21	100uL			250

VOA STD 1

Prepared: 01/18/21 D
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-51156	01/04/22	11/14/22	50	2mL	Methanol	50

VOA STD 2

Prepared: 01/18/21 E
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16074-51593	01/04/22	11/30/30	100	4mL	Methanol	50

VOA STD 9

Prepared: 01/18/21 F
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 01/18/21	01/04/22	N/A	200uL			5

VOA STD. 10

Prepared: 01/18/21 G
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 01/18/21 H
Expires: 03/19/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 01/18/21	01/04/22	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 01/18/21 I
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16067-51588	01/04/22	11/30/30	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 01/18/21 J
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 01/18/21 K
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14381-51056	01/04/22	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16187-51524	01/04/22	01/13/22	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	091818-51617	1/18//2022	09/18/23	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-51625	12/22/21	12/25/21	500uL			50

VOA STD. TBA

Prepared: 01/18/21 L
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL16012-51128	01/04/22	11/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16193-51526	01/04/22	01/13/22	50uL			250

VOA STD. 0

Prepared: 01/18/21 M
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-51568	01/04/22	09/30/22	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 01/18/21 N
Expires: 03/19/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-51151	01/04/22	12/11/22	50uL	2mL	Methanol	50

ZEUS 8260 Standard Prep

ZEUS 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/18/21	03/19/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/18/21	03/19/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/18/21	03/19/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/18/21	03/19/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/25/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/18/21	03/19/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/18/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/18/21	03/19/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/18/21	03/19/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/18/21	01/27/21	N/A	40uL			200

ZEUS 8260 Water Second Source (SS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/18/21	03/19/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/18/21	01/18/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/18/21	03/19/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/18/21	03/19/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/25/21

Prepared By (Initials): CH

Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/18/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/18/21	03/19/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/18/21	03/19/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/18/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	18	0125Z23.D	1	25ug/L BFB STD 12/22/20		25 Jan 21 15:44
2	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
3	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
4	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
5	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
6	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
7	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
8	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
9	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
10	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
11	29	0125Z34.D	1	(SS) 10ug/L VOC STD 1/25/21		25 Jan 21 19:57
12	1	0127Z01.D	1	25ug/L BFB STD 12/22/20		27 Jan 21 08:18
13	2	0127Z02.D	1	210127A CCV 10ug/L		27 Jan 21 08:41
14	3	0127Z03.D	1	210127A LCS 10ug/L		27 Jan 21 09:04
15	4	0127Z04.D	1	210127A LCSD 10ug/L		27 Jan 21 09:27
16	8	0127Z08.D	1	210127A BLK		27 Jan 21 10:59
17	10	0127Z10.D	1	BA25866W01		27 Jan 21 11:45
18	11	0127Z11.D	1	BA25869W01		27 Jan 21 12:08
19	14	0127Z14.D	1	BA25867W01		27 Jan 21 13:17
20	15	0127Z15.D	1	BA25870W01		27 Jan 21 13:40
21	29	0127Z29.D	1	Ending CCV 10ug/L 1/27/21		27 Jan 21 19:02

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS
Initials: CH

		Compound	0125Z24.D	0125Z25 D	0125Z26.D	0125Z27 D	0125Z29.D	0125Z30.D	0125Z31.D	0125Z32.D			Avg	%RSD	Type	r^2	Q	MRF
			1	2	3	4	5	6	7	8								
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.2167	0.2167	0.2621	0.2644	0.3028	0.3082	0.3000	0.3080			0.27	14	S			
3	S	1,2-DCA-D4(S)	0.2092	0.2111	0.2495	0.2526	0.2763	0.2797	0.2696	0.2794			0.25	11	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)	0.9814	0.9866	1.180	1.182	1.303	1.390	1.346	1.256			1.2	13	S			
6	SL	4-Bromofluorobenzene(S)	0.3267	0.3197	0.3960	0.3924	0.4429	0.4806	0.4733	0.4929			0.42	16	S	1.000		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
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11																		
12																		
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Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z24.D Vial: 19
Acq On : 25 Jan 21 16:07 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3762809	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2831008	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1052160	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	163067	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	157410	4.13	ppb	0.00
Spiked Amount 25.000			Recovery =	16.508%		
5) Toluene-D8(S)	8.03	98	555650	4.08	ppb	0.00
Spiked Amount 25.000			Recovery =	16.312%		
6) 4-Bromofluorobenzene(S)	10.91	95	184971	5.44	ppb	0.00
Spiked Amount 25.000			Recovery =	21.764%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

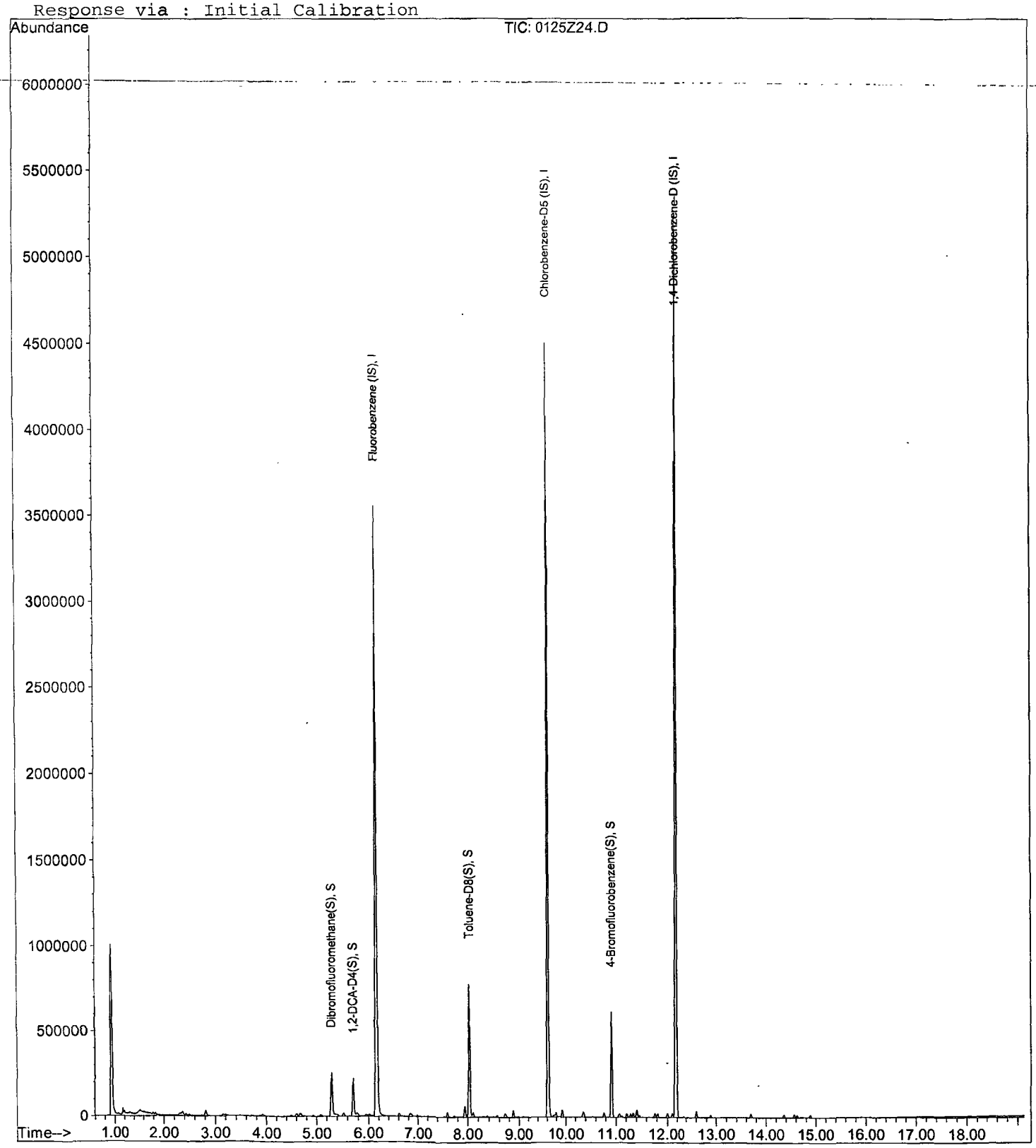
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z24.D
Acq On : 25 Jan 21 16:07
Sample : 0.3ug/L VOC STD 1/25/21
Misc :

Vial: 19
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z25.D Vial: 20
Acq On : 25 Jan 21 16:30 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3608369	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2730884	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1039872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	156398	3.98	ppb	0.00
Spiked Amount 25.000			Recovery =	15.912%		
3) 1,2-DCA-D4(S)	5.71	65	152322	4.16	ppb	0.00
Spiked Amount 25.000			Recovery =	16.660%		
5) Toluene-D8(S)	8.03	98	538877	4.10	ppb	0.00
Spiked Amount 25.000			Recovery =	16.400%		
6) 4-Bromofluorobenzene(S)	10.91	95	174608	5.37	ppb	0.00
Spiked Amount 25.000			Recovery =	21.484%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

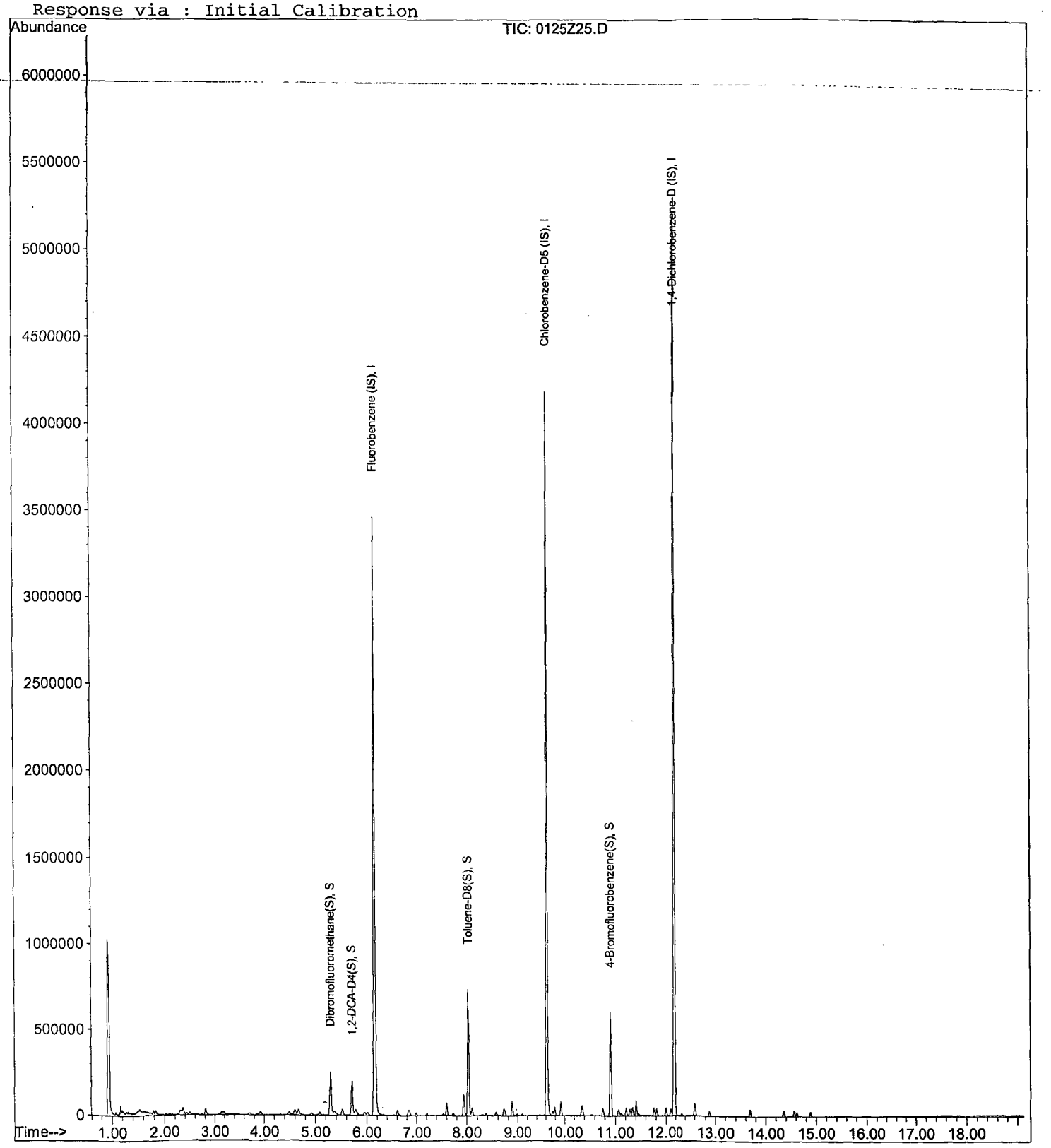
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z25.D
Acq On : 25 Jan 21 16:30
Sample : 0.5ug/L VOC STD 1/25/21
Misc :

Vial: 20
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z26.D
Acq On : 25 Jan 21 16:53
Sample : 1ug/L VOC STD 1/25/21
Misc :

Vial: 21
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3584252	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2687917	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	375837	9.62	ppb	0.00
Spiked Amount 25.000			Recovery =	38.496%		
3) 1,2-DCA-D4(S)	5.71	65	357679	9.84	ppb	0.00
Spiked Amount 25.000			Recovery =	39.380%		
5) Toluene-D8(S)	8.03	98	1268990	9.81	ppb	0.00
Spiked Amount 25.000			Recovery =	39.236%		
6) 4-Bromofluorobenzene(S)	10.91	95	425786	10.08	ppb	0.00
Spiked Amount 25.000			Recovery =	40.312%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

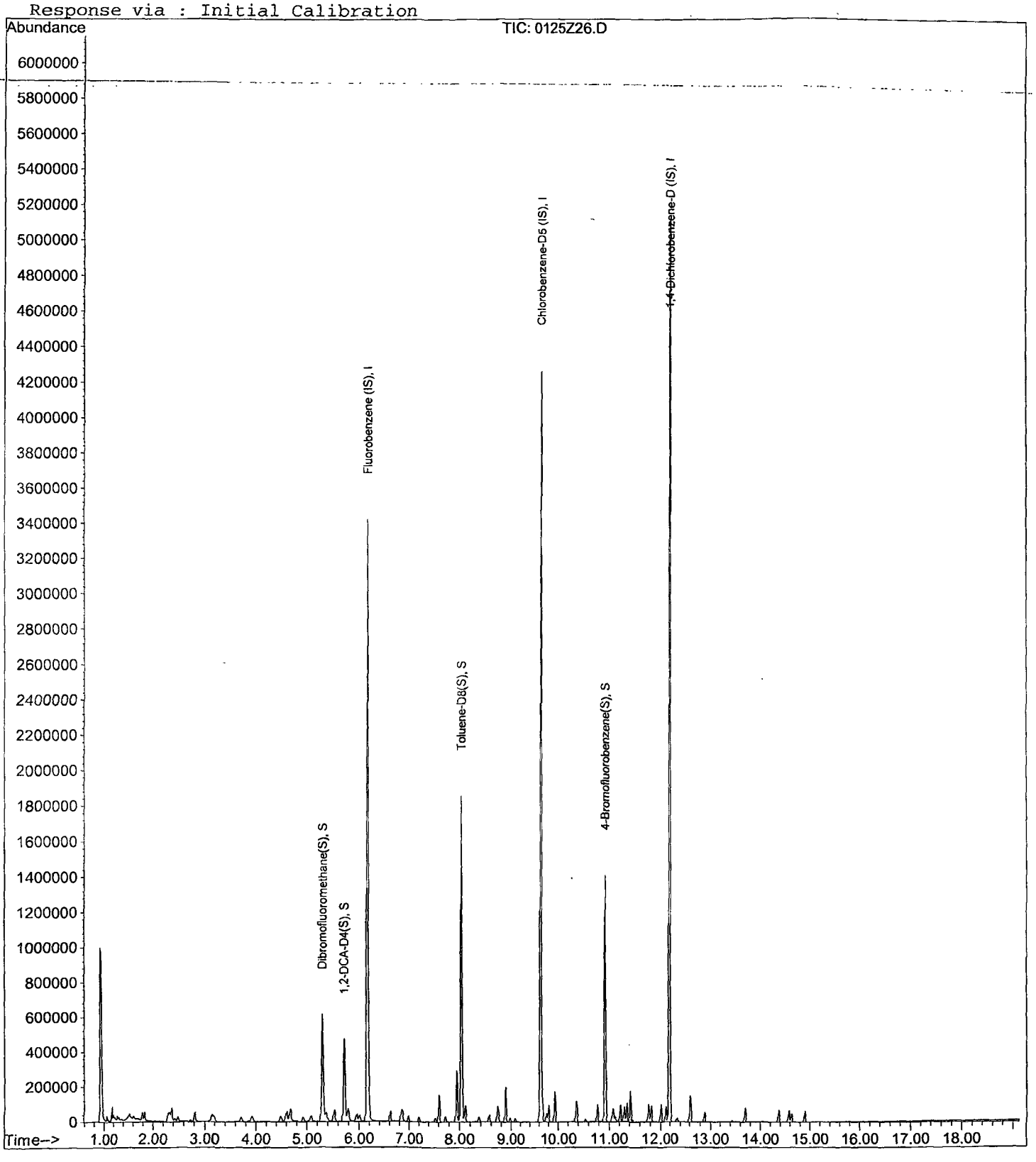
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z26.D
Acq On : 25 Jan 21 16:53
Sample : 1ug/L VOC STD 1/25/21
Misc :

Vial: 21
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z27.D Vial: 22
Acq On : 25 Jan 21 17:16 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3532465	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2676231	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	978176	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	373542	9.71	ppb	0.00
Spiked Amount 25.000			Recovery =	38.824%		
3) 1,2-DCA-D4(S)	5.71	65	356849	9.97	ppb	0.00
Spiked Amount 25.000			Recovery =	39.864%		
5) Toluene-D8(S)	8.03	98	1265740	9.83	ppb	0.00
Spiked Amount 25.000			Recovery =	39.308%		
6) 4-Bromofluorobenzene(S)	10.91	95	420015	10.01	ppb	0.00
Spiked Amount 25.000			Recovery =	40.020%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

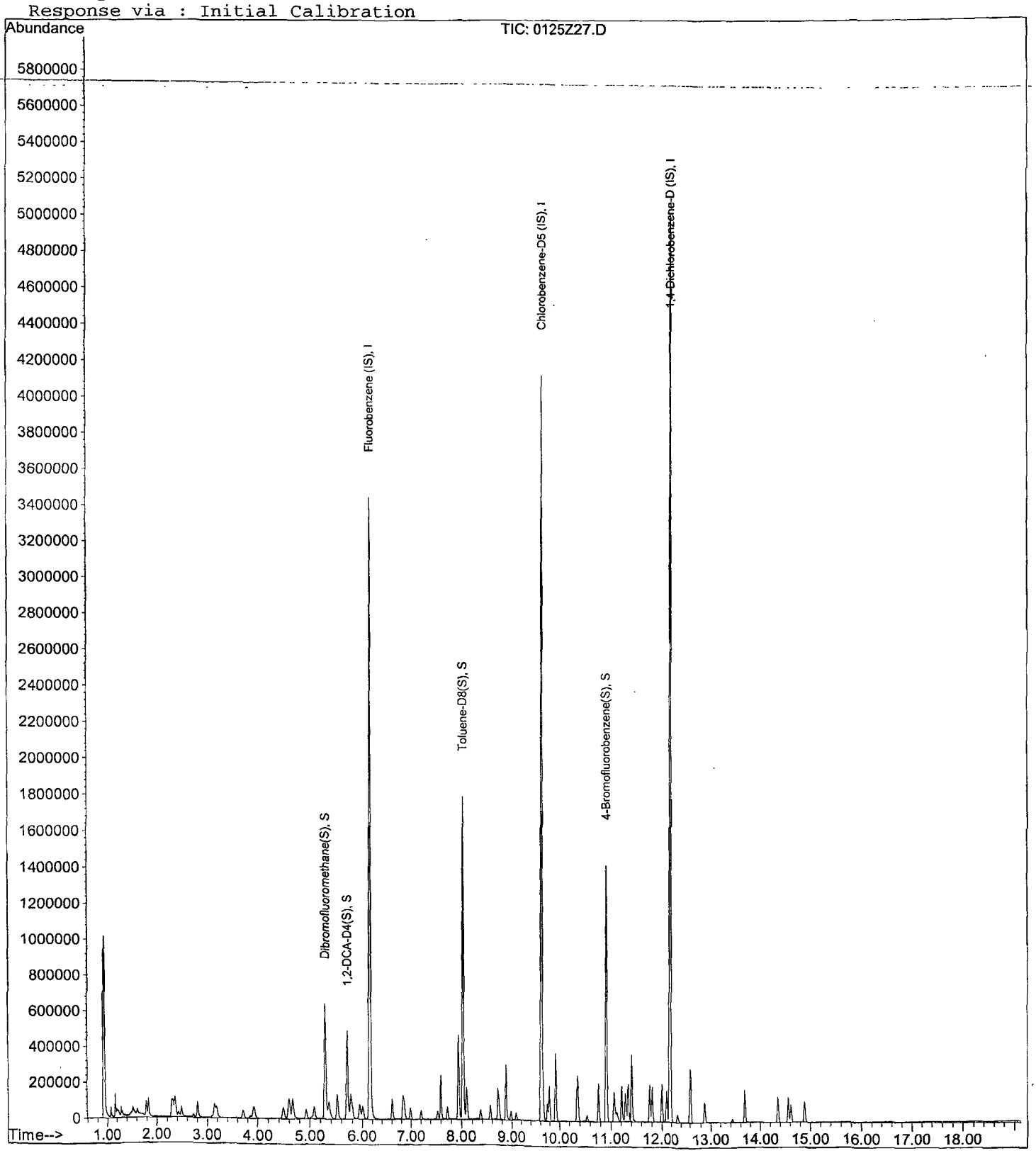
Data File : M:\ZEUS\DATA\210125\0125Z27.D
Acq On : 25 Jan 21 17:16
Sample : 2ug/L VOC STD 1/25/21
Misc :

Vial: 22
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021

Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z29.D Vial: 24
Acq On : 25 Jan 21 18:02 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3497956	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2656534	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1017408	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	1059336	27.80	ppb	0.00
Spiked Amount 25.000			Recovery = 111.184%			
3) 1,2-DCA-D4(S)	5.71	65	966381	27.26	ppb	0.00
Spiked Amount 25.000			Recovery = 109.020%			
5) Toluene-D8(S)	8.03	98	3461519	27.07	ppb	0.00
Spiked Amount 25.000			Recovery = 108.292%			
6) 4-Bromofluorobenzene(S)	10.91	95	1176611	24.25	ppb	0.00
Spiked Amount 25.000			Recovery = 97.020%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

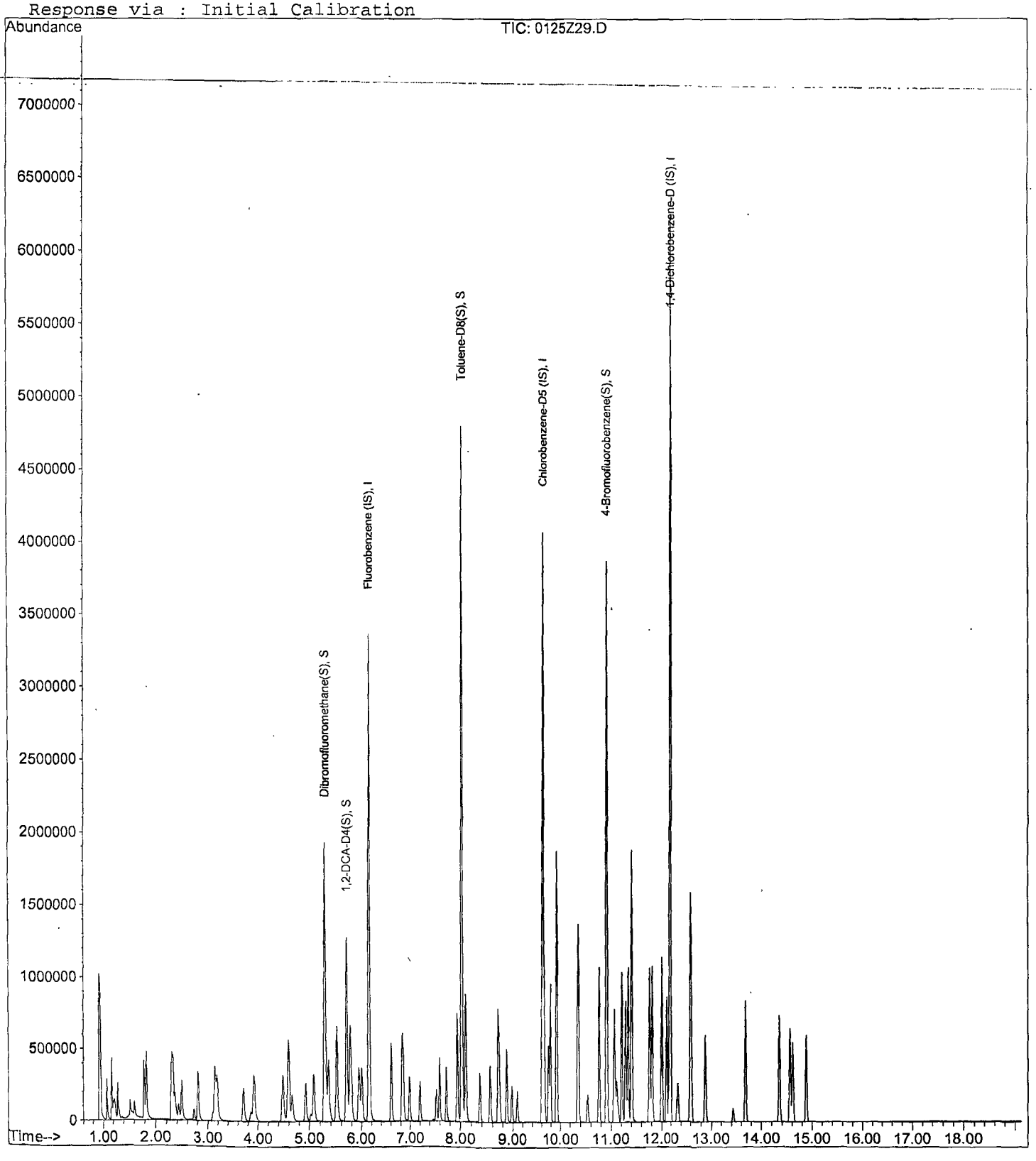
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z29.D
Acq On : 25 Jan 21 18:02
Sample : 10ug/L VOC STD 1/25/21
Misc :

Vial: 24
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z30.D Vial: 25
Acq On : 25 Jan 21 18:25 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3644180	25.00 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2702183	25.00 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1024192	25.00 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	2246563	56.58 ppb	0.00
Spiked Amount 25.000			Recovery =	226.332%	
3) 1,2-DCA-D4(S)	5.71	65	2038786	55.19 ppb	0.00
Spiked Amount 25.000			Recovery =	220.772%	
5) Toluene-D8(S)	8.03	98	7511750	57.76 ppb	0.00
Spiked Amount 25.000			Recovery =	231.032%	
6) 4-Bromofluorobenzene(S)	10.92	95	2597067	50.07 ppb	0.00
Spiked Amount 25.000			Recovery =	200.300%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

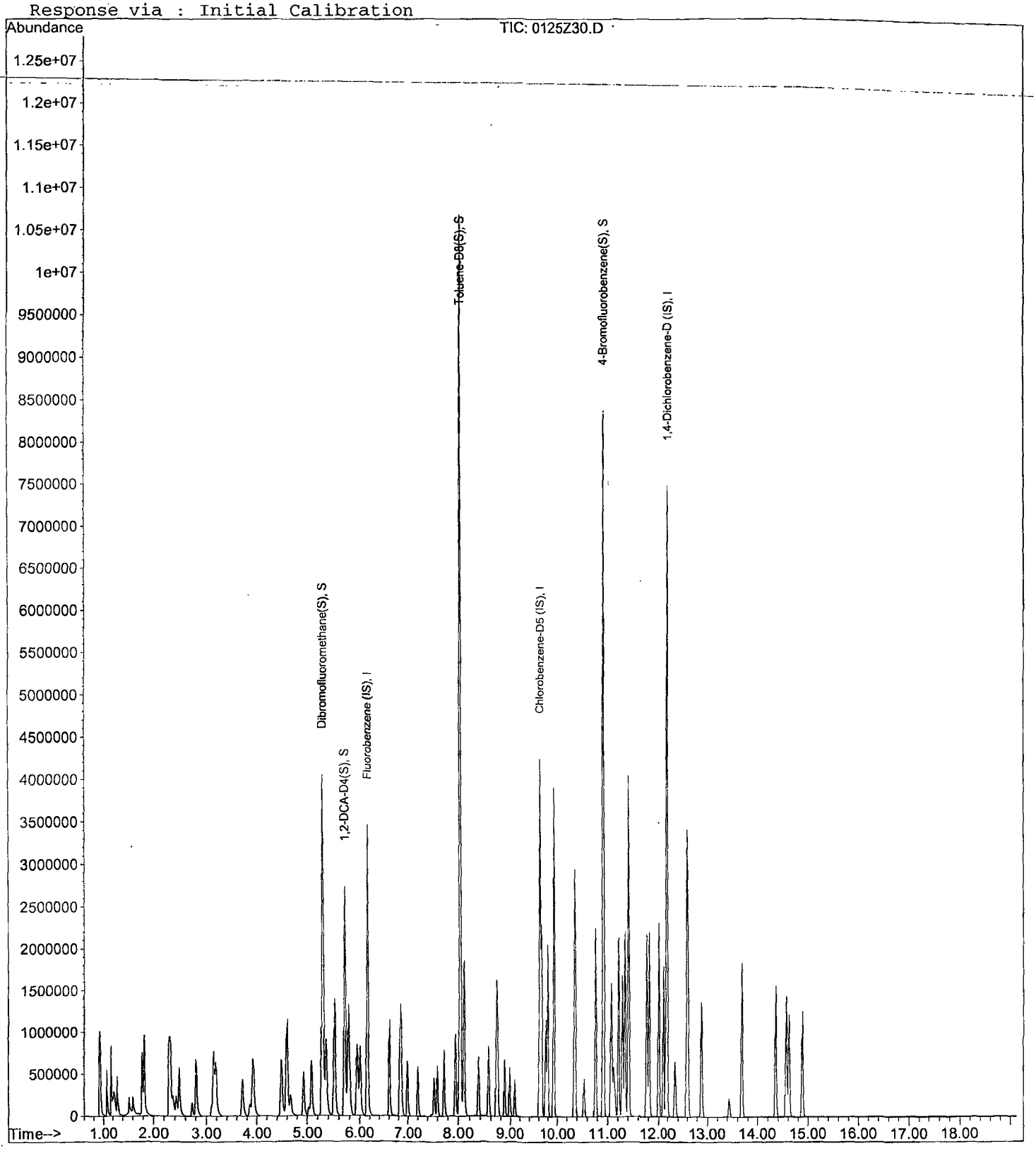
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z30.D
Acq On : 25 Jan 21 18:25
Sample : 20ug/L VOC STD 1/25/21
Misc :

Vial: 25
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z31.D Vial: 26
Acq On : 25 Jan 21 18:47 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3851974	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2900648	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1060864	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	2310987	55.07	ppb	0.00
Spiked Amount 25.000			Recovery = 220.264%			
3) 1,2-DCA-D4(S)	5.71	65	2077051	53.20	ppb	0.00
Spiked Amount 25.000			Recovery = 212.784%			
5) Toluene-D8(S)	8.03	98	7808599	55.93	ppb	0.00
Spiked Amount 25.000			Recovery = 223.732%			
6) 4-Bromofluorobenzene(S)	10.91	95	2745574	49.35	ppb	0.00
Spiked Amount 25.000			Recovery = 197.396%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

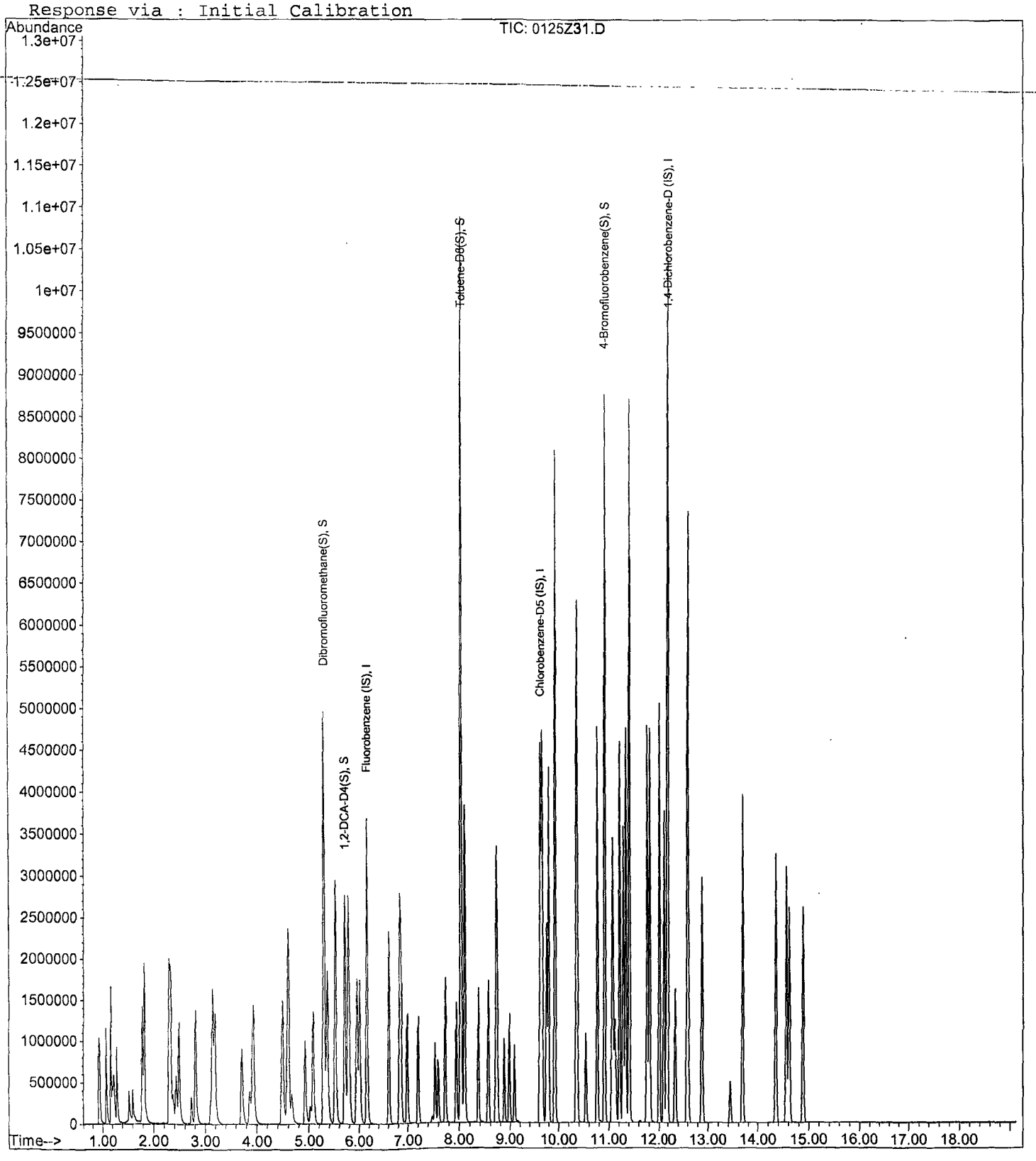
Data File : M:\ZEUS\DATA\210125\0125Z31.D
Acq On : 25 Jan 21 18:47
Sample : 40ug/L VOC STD 1/25/21
Misc :

Vial: 26
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021

Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z32.D Vial: 27
Acq On : 25 Jan 21 19:10 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3988232	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3115897	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1153536	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.30	111	4914233	113.10	ppb	0.00
Spiked Amount 25.000			Recovery =	452.384%		
3) 1,2-DCA-D4(S)	5.71	65	4457494	110.26	ppb	0.00
Spiked Amount 25.000			Recovery =	441.048%		
5) Toluene-D8(S)	8.03	98	15658169	104.41	ppb	0.00
Spiked Amount 25.000			Recovery =	417.644%		
6) 4-Bromofluorobenzene(S)	10.91	95	6143253	100.43	ppb	0.00
Spiked Amount 25.000			Recovery =	401.700%		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

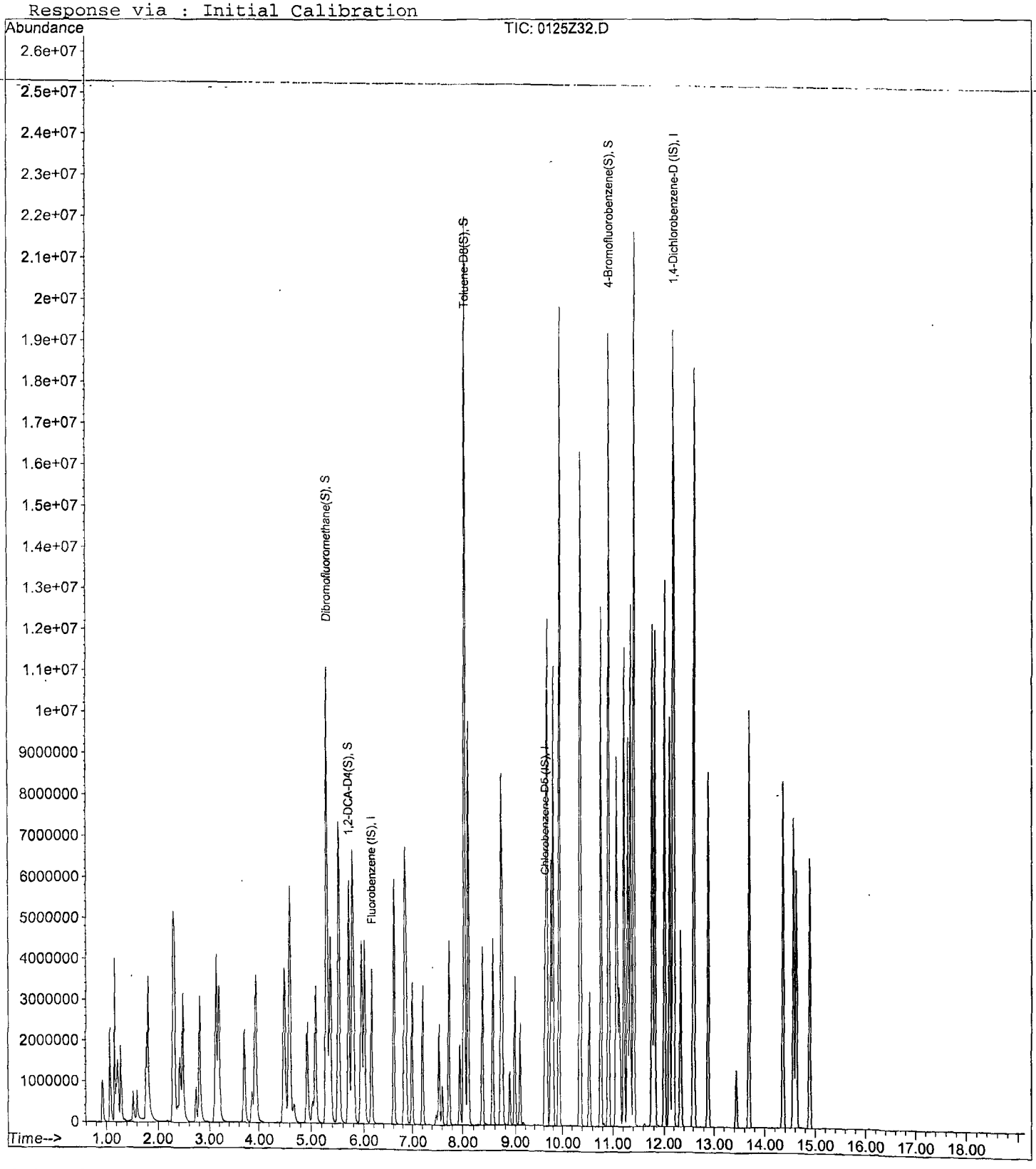
Quantitation Report

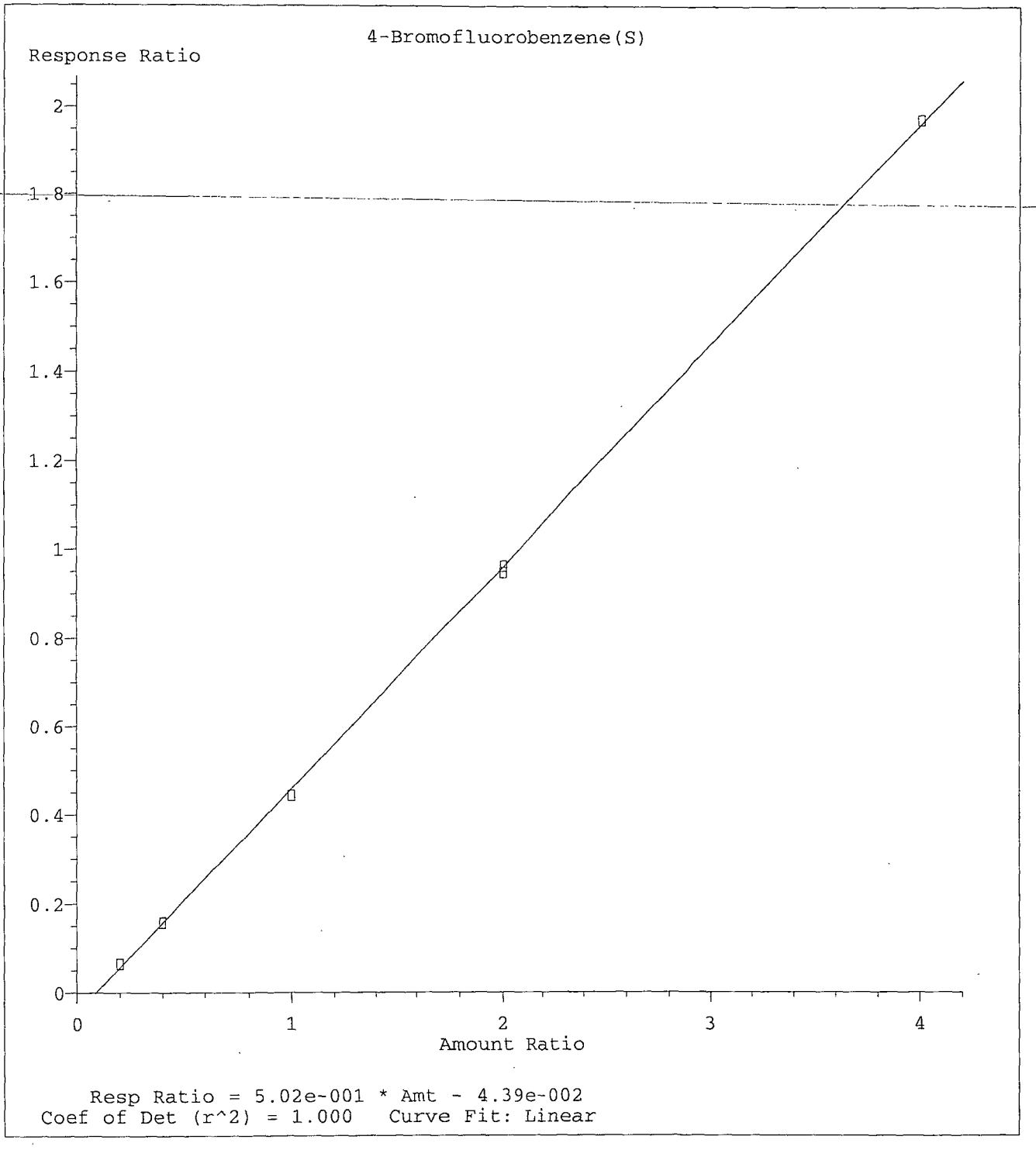
Data File : M:\ZEUS\DATA\210125\0125Z32.D
Acq On : 25 Jan 21 19:10
Sample : 100ug/L VOC STD 1/25/21
Misc :

Vial: 27
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 12:04 2021 Quant Results File: Z0125SUR.RES

Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\Z0125SUR.M
Calibration Table Last Updated: Tue Jan 26 11:01:24 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Water Instrument: ZEUS
Initials: CH

			0125Z36.D	0125Z37.D	0125Z38.D	0125Z39.D	0125Z40.D	0125Z41.D	0125Z42.D										
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	14.0	5.943	3.222	1.423	1.019	0.9015	0.8455				3.9	123	TMHB	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
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Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z36.D
Acq On : 25 Jan 21 20:43
Sample : 20ug/L GAS STD 1/25/21
Misc :

Vial: 31
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3473573	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5054482	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4196316	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	38845899m	17.67	ppb	100

(#) = qualifier out of range (m) = manual integration

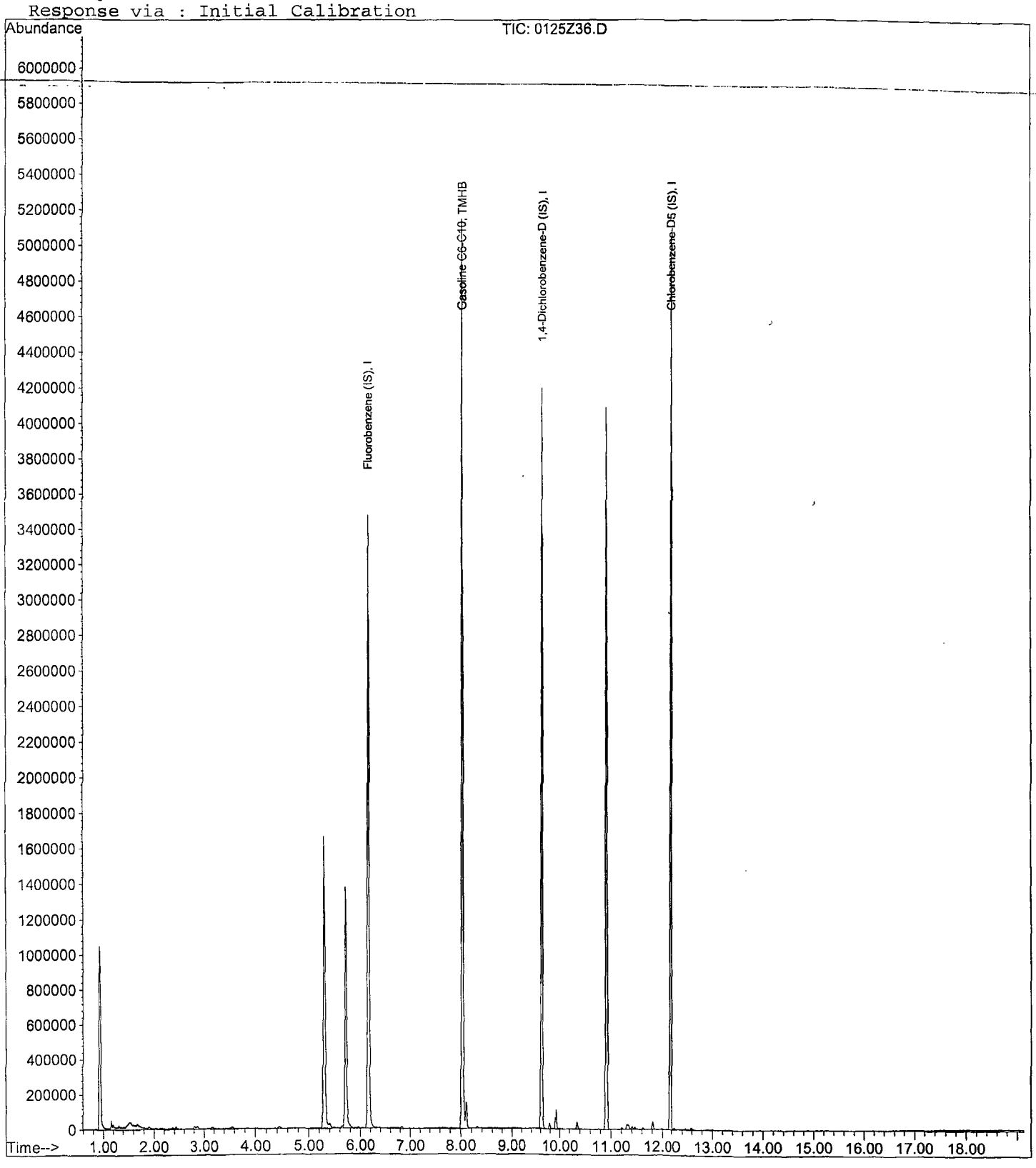
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z36.D
Acq On : 25 Jan 21 20:43
Sample : 20ug/L GAS STD 1/25/21
Misc :

Vial: 31
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:12 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z37.D Vial: 32
Acq On : 25 Jan 21 21:06 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3453271	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5130542	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4275409	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	41043942m	45.92	ppb	100

(#) = qualifier out of range (m) = manual integration

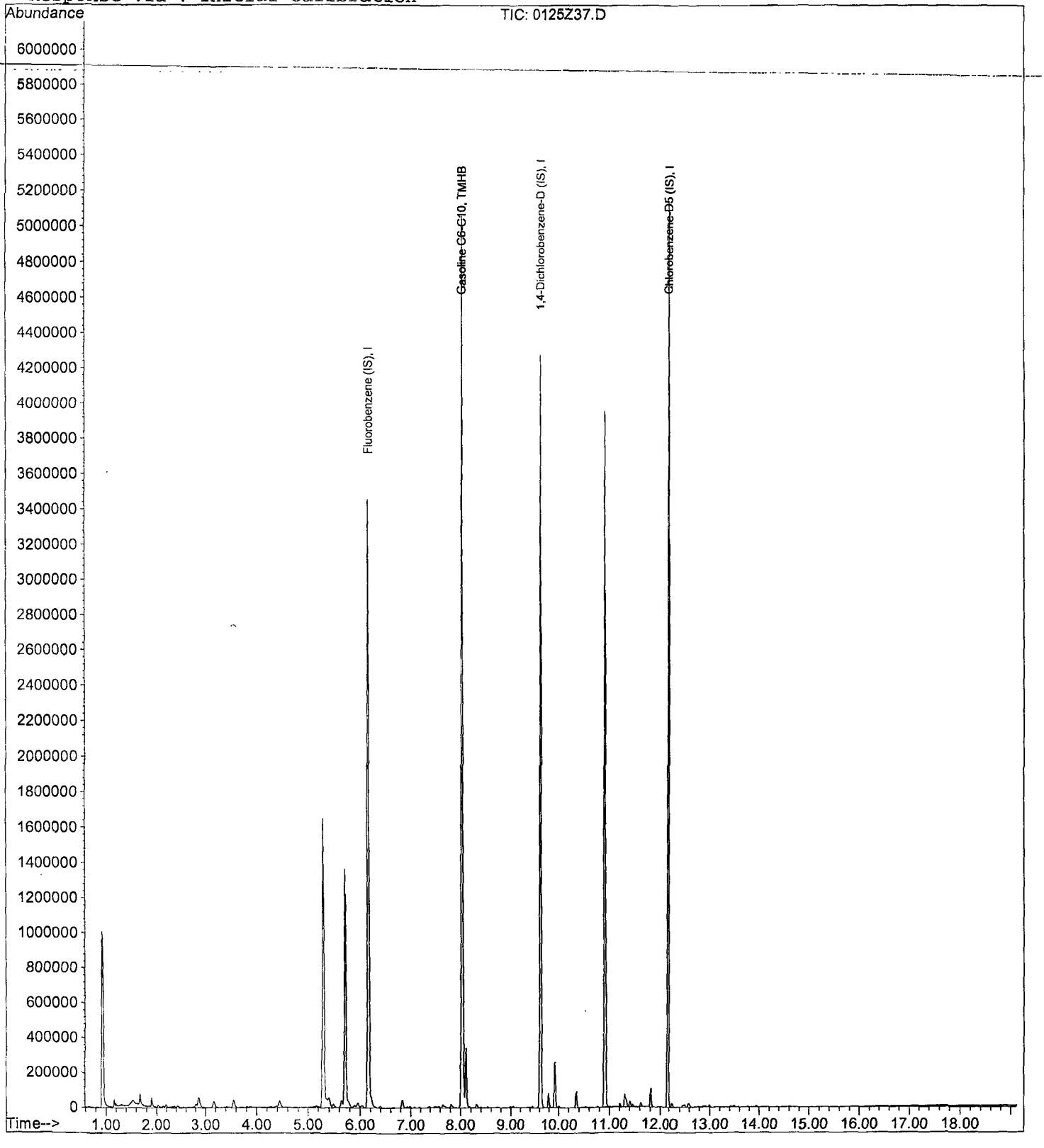
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z37.D
Acq On : 25 Jan 21 21:06
Sample : 50ug/L GAS STD 1/25/21
Misc :

Vial: 32
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z38.D
Acq On : 25 Jan 21 21:29
Sample : 100ug/L GAS STD 1/25/21
Misc :
Vial: 33
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3372890	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4802768	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4140552	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	43466644m	86.21	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

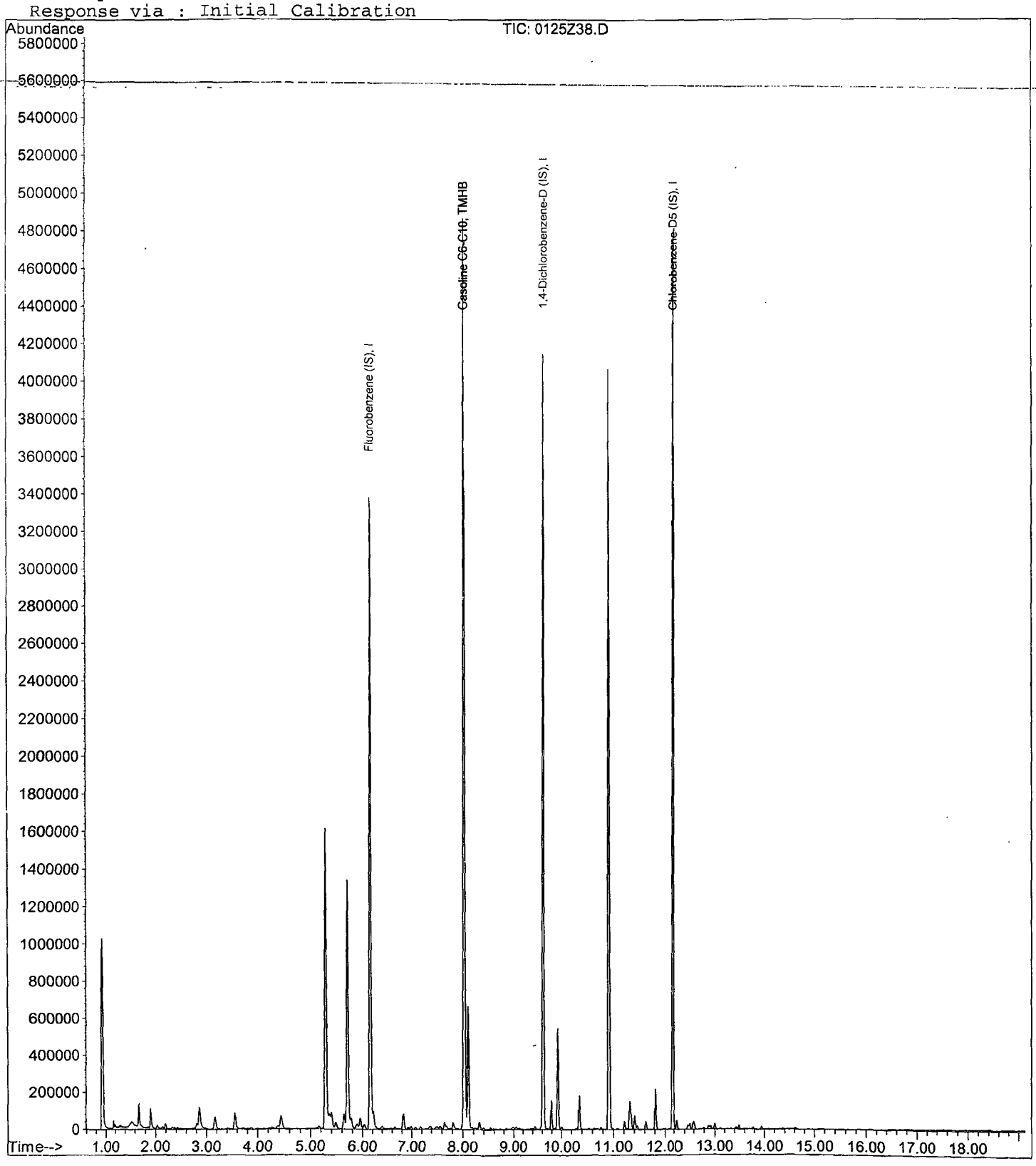
Data File : M:\ZEUS\DATA\210125\0125Z38.D
Acq On : 25 Jan 21 21:29
Sample : 100ug/L GAS STD 1/25/21
Misc :

Vial: 33
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:13 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z39.D
Acq On : 25 Jan 21 21:52
Sample : 300ug/L GAS STD 1/25/21
Misc :

Vial: 34
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:14 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	TIC	3429087	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4818669	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4159957	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	58556434m	254.73	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

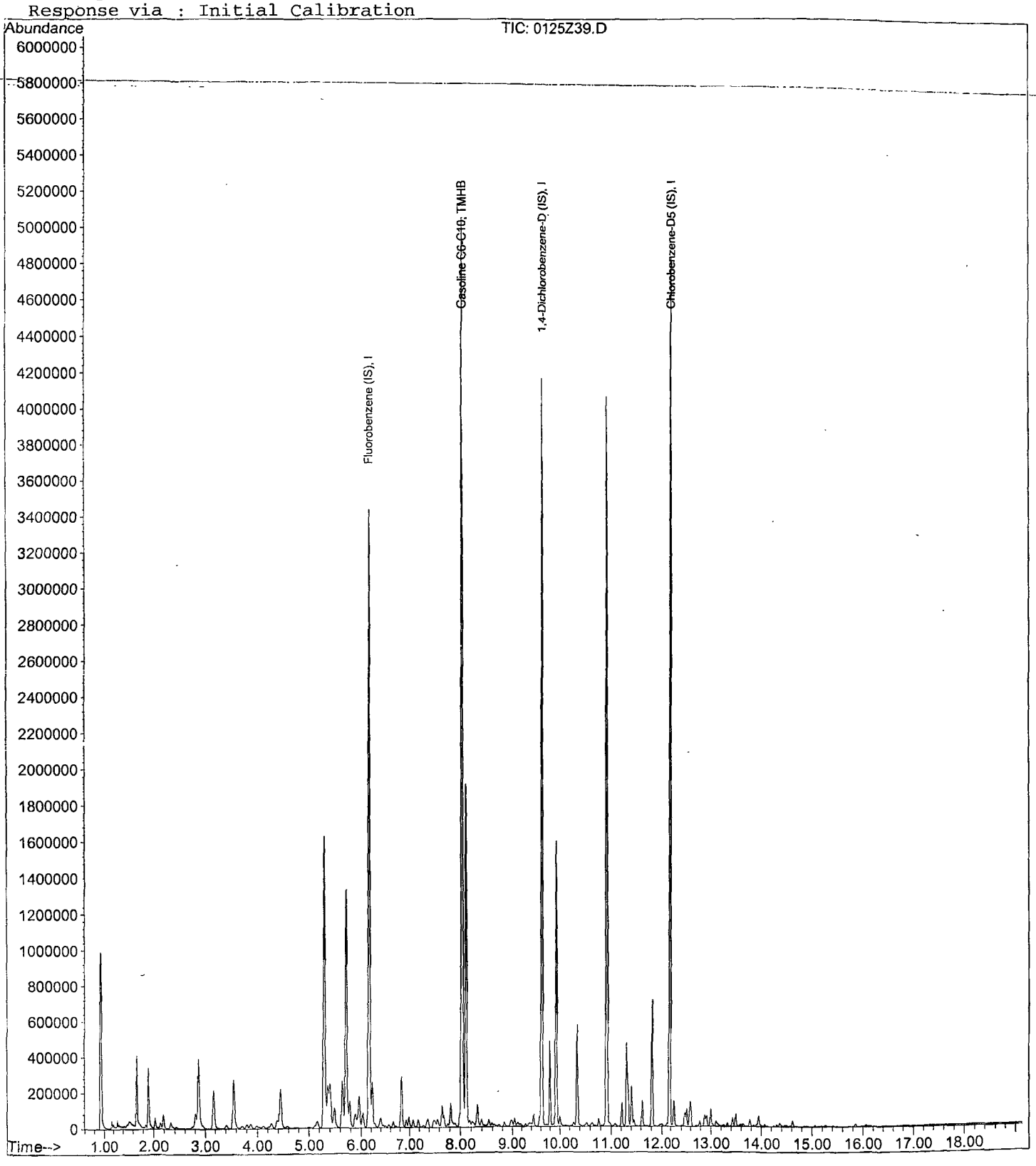
Data File : M:\ZEUS\DATA\210125\0125Z39.D
Acq On : 25 Jan 21 21:52
Sample : 300ug/L GAS STD 1/25/21
Misc :

Vial: 34
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:14 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z40.D
Acq On : 25 Jan 21 22:15
Sample : 600ug/L GAS STD 1/25/21
Misc :

Vial: 35
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	TIC	3512382	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5118079	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4192540	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	85903188m	551.65	ppb	100

(#) = qualifier out of range (m) = manual integration

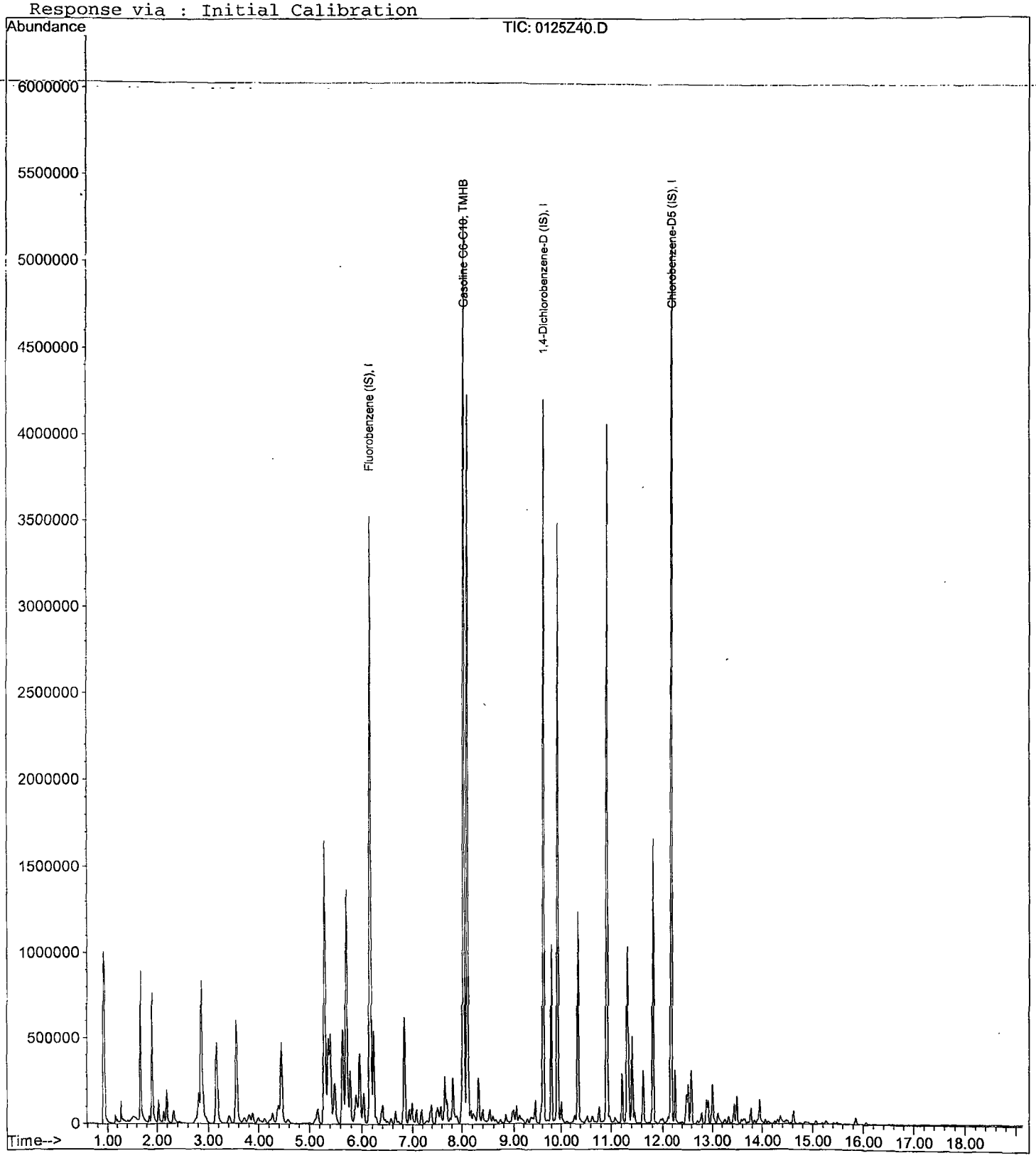
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z40.D
Acq On : 25 Jan 21 22:15
Sample : 600ug/L GAS STD 1/25/21
Misc :

Vial: 35
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z41.D Vial: 36
Acq On : 25 Jan 21 22:38 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	TIC	3620807	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5252263	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4492752	25.00 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.11	TIC	104457487m	728.32 ppb	100

(#) = qualifier out of range (m) = manual integration

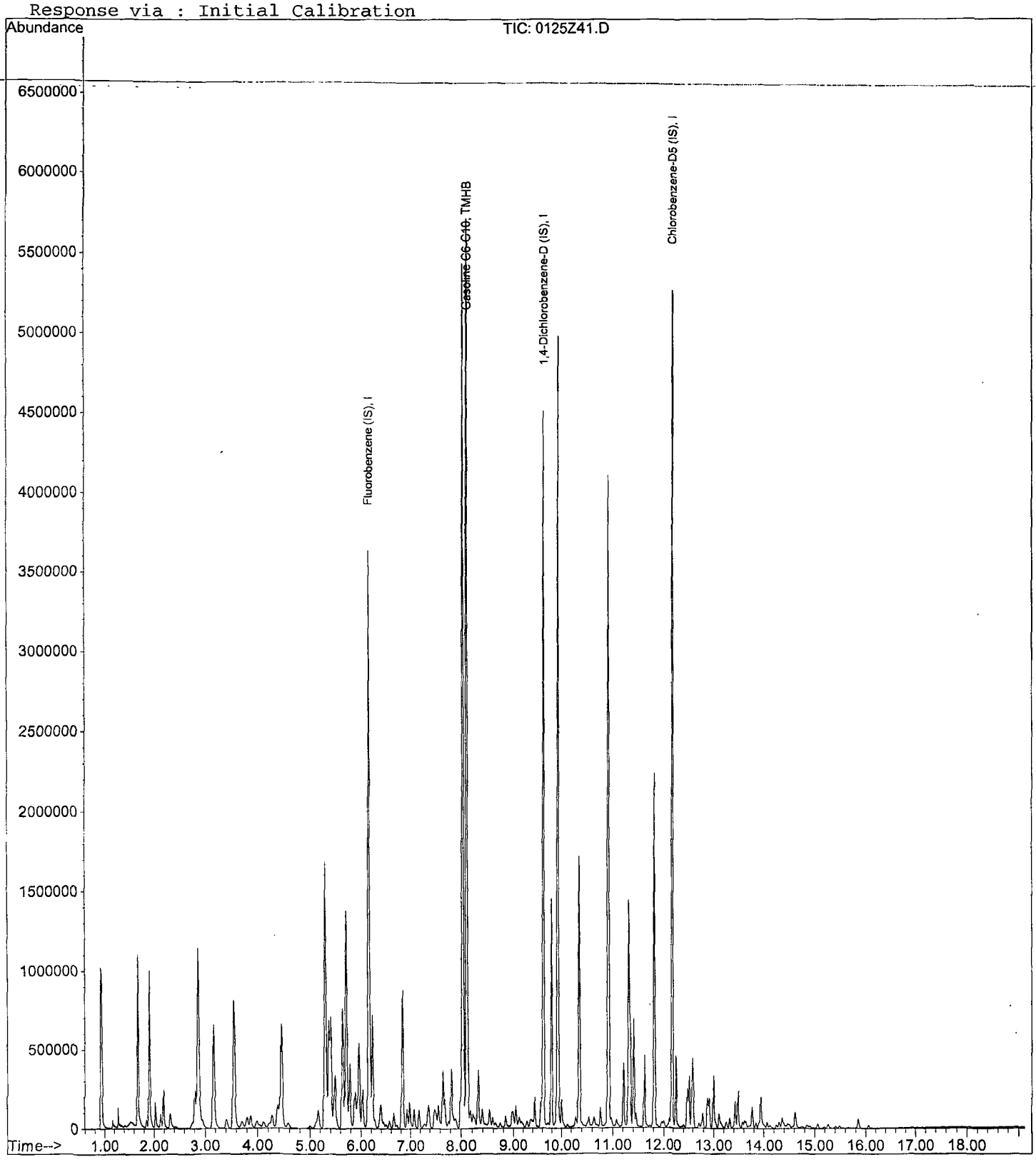
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z41.D
Acq On : 25 Jan 21 22:38
Sample : 800ug/L GAS STD 1/25/21
Misc :

Vial: 36
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:15 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z42.D Vial: 37
Acq On : 25 Jan 21 23:01 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:09:45 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	TIC	3619634	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5399873	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4370383	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.11	TIC	122414748m	928.27	ppb	100

(#) = qualifier out of range (m) = manual integration

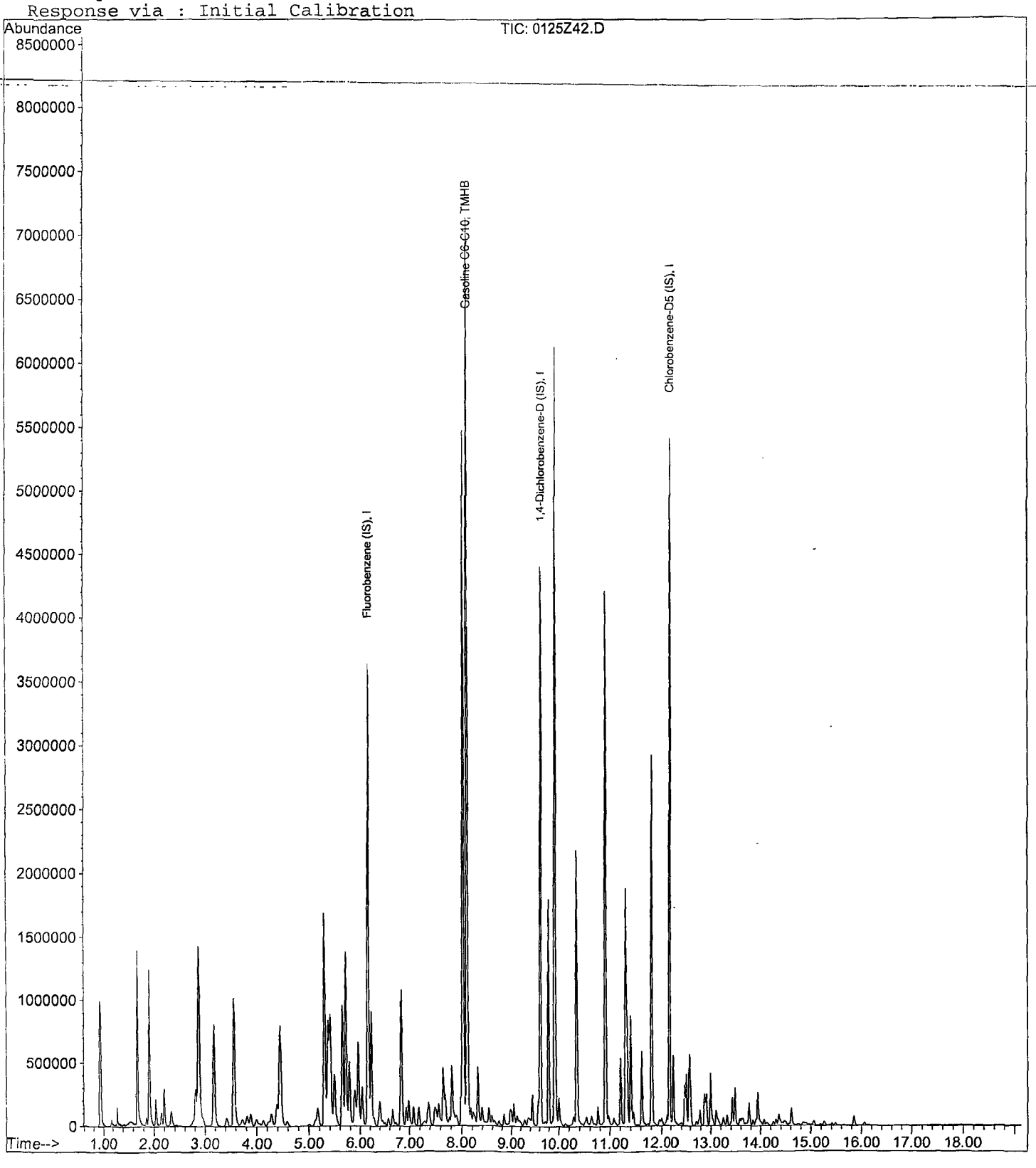
Quantitation Report

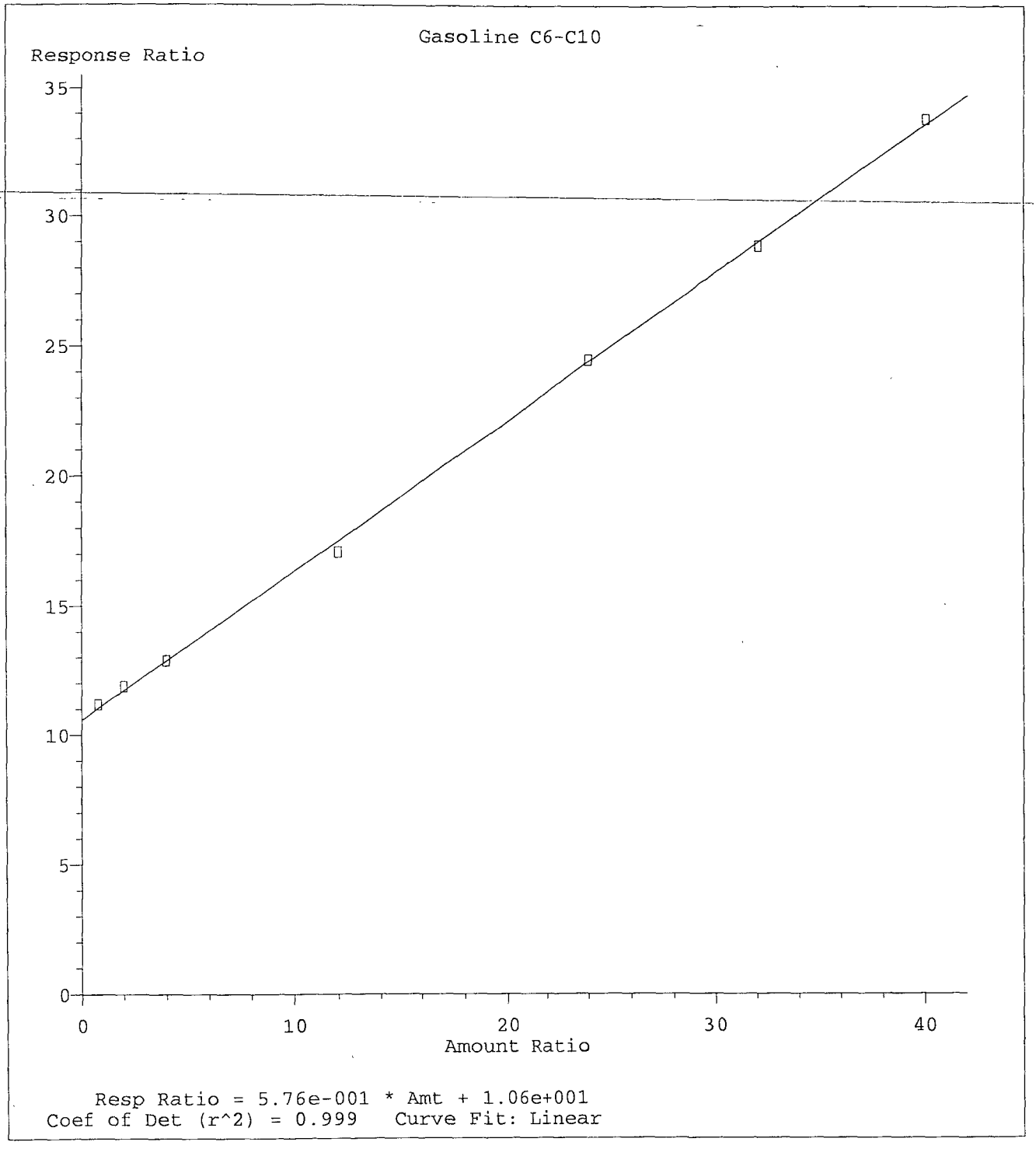
Data File : M:\ZEUS\DATA\210125\0125Z42.D
Acq On : 25 Jan 21 23:01
Sample : 1000ug/L GAS STD 1/25/21
Misc :

Vial: 37
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:16 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration





Method Name: M:\ZEUS\DATA\210125\ZGAS0125.M
Calibration Table Last Updated: Tue Jan 26 10:16:41 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/25/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0125Z43.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.905	1.468	62	TMHBL	1.8
2							
3							
4							
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39							
40							
		Average			62.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0125Z43.D Vial: 38
Acq On : 25 Jan 21 23:24 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/25/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3601969	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5185513	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4579228	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	63434795m	305.33	ppb	100

(#) = qualifier out of range (m) = manual integration
0125Z43.D ZGAS0125.M Tue Jan 26 11:50:17 2021 Page 1

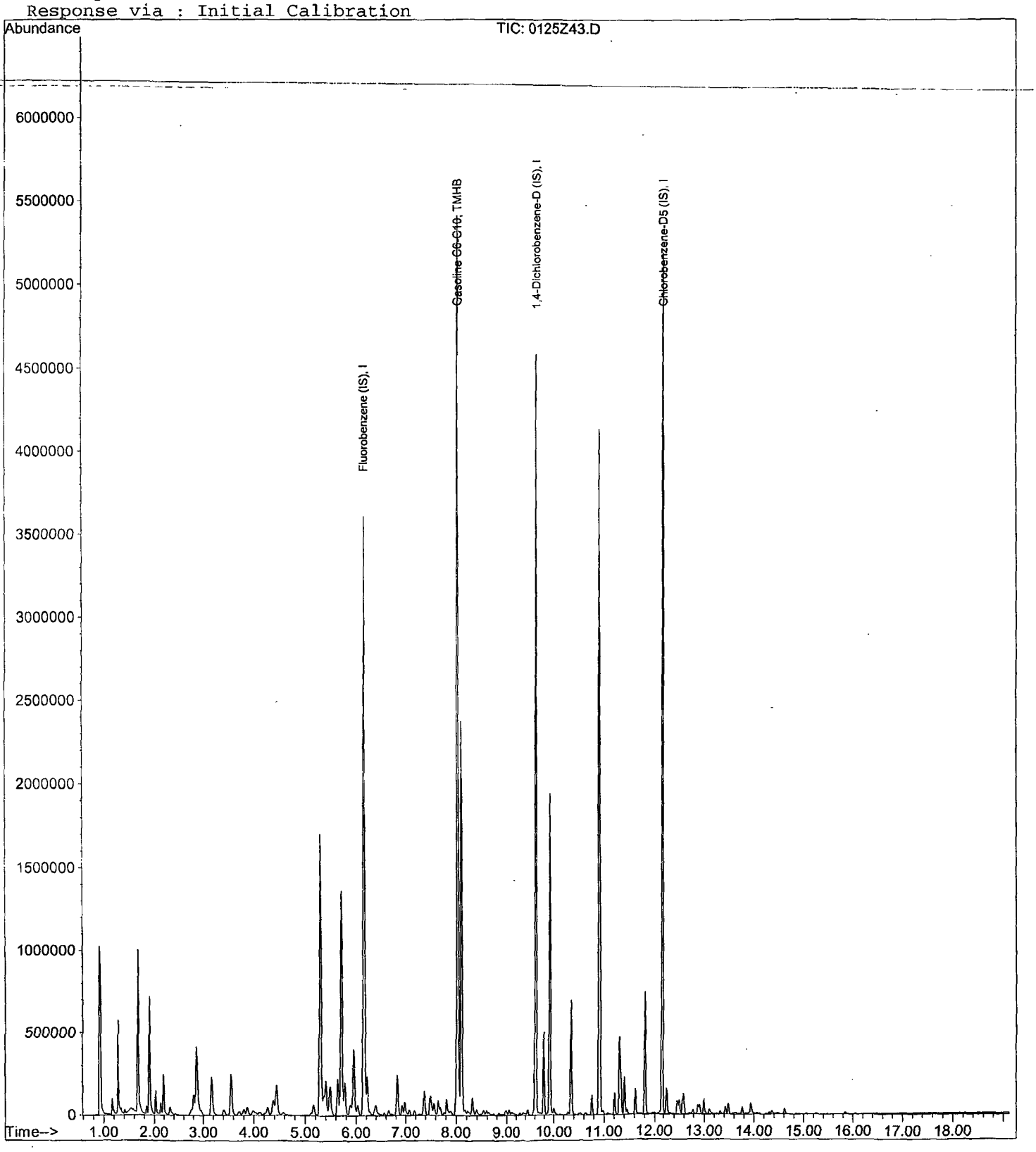
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0125Z43.D
Acq On : 25 Jan 21 23:24
Sample : (SS) 300ug/L GAS STD 1/25/21
Misc :

Vial: 38
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 26 10:20 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.444	63	TMHBL	2.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.3009	10	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2823	11	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.353	12	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4537	9.2	SL	0.83
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
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14							
15							
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39							
40							
		Average			10.6		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z05.D Vial: 5
Acq On : 27 Jan 21 09:50 Operator: LP,DG,CH
Sample : 210127A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 27 10:27 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3209833	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4533135	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3771980	25.0000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	8.03	TIC	55622864m	293.0758 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z05.D Vial: 5
Acq On : 27 Jan 21 09:50 Operator: LP,DG,CH
Sample : 210127A CCV 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	Qion	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3314998	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2455709	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	904960	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	997380	27.6152 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.460%	
3) 1,2-DCA-D4(S)	5.71	65	935829	27.8502 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.400%	
5) Toluene-D8(S)	8.03	98	3323277	28.1175 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.468%	
6) 4-Bromofluorobenzene(S)	10.91	95	1114115	24.7914 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.164%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

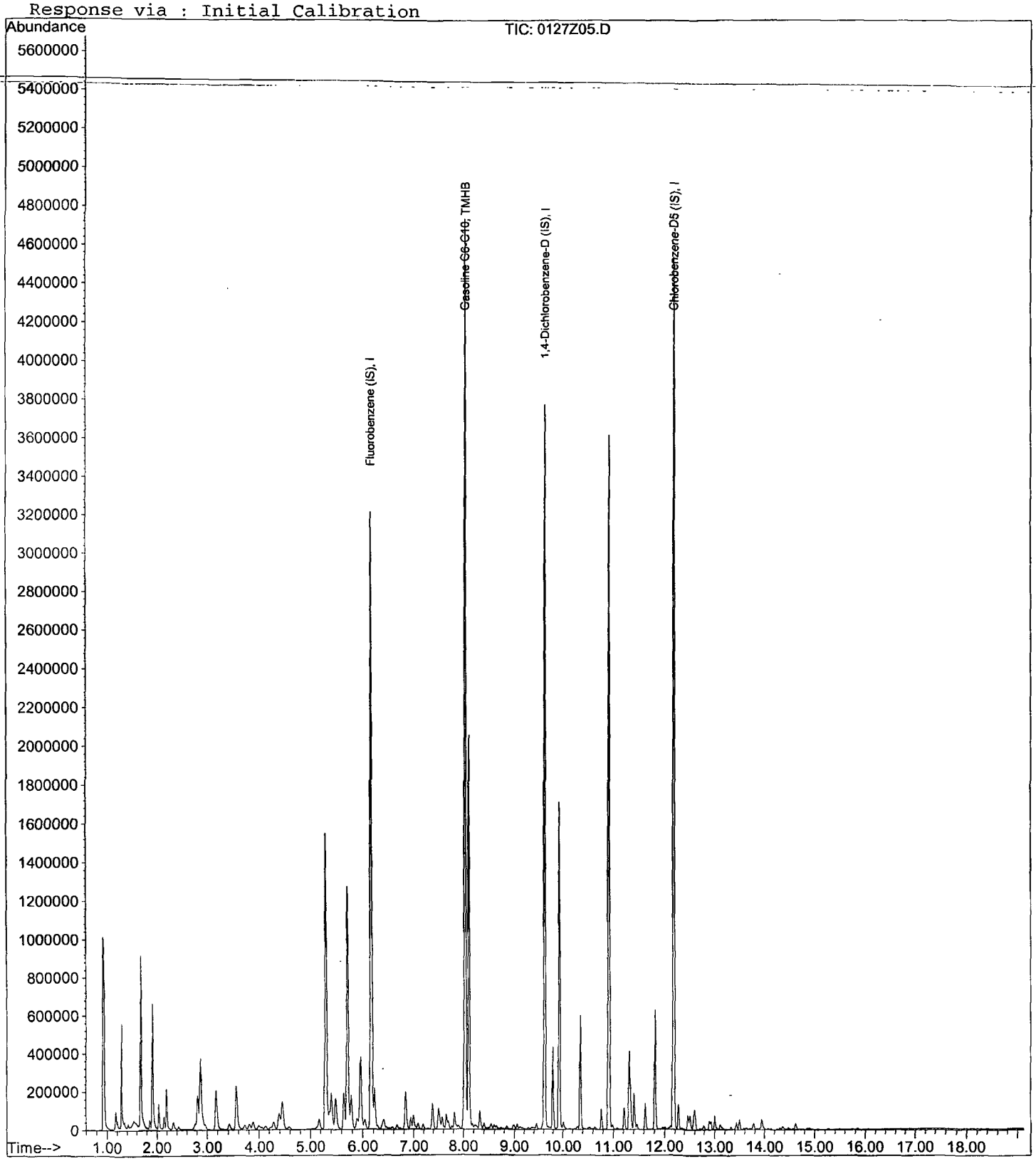
Data File : M:\ZEUS\DATA\210125\0127Z05.D
Acq On : 27 Jan 21 09:50
Sample : 210127A CCV 300ug/L
Misc :

Vial: 5
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 27 10:27 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/27/21
Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.905	1.542	61	TMHBL	15
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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38							
39							
40							
		Average			61.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/27/21
Matrix: Instrument: ZEUS
Initial Cal. Date: 01/25/21
Data File: 0127Z30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.2724	0.3098	14	S	
3	S	1,2-DCA-D4(S)	0.2534	0.2925	15	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	1.203	1.264	5.0	S	
6	SL	4-Bromofluorobenzene(S)	0.4155	0.4883	18	SL	6.1
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
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38							
39							
40							
		Average			13.0		

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z30.D
Acq On : 27 Jan 21 19:25
Sample : Ending CCV 300ug/L 1/27/21
Misc :

Vial: 30
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:29 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3540187	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	5827457	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	4607516	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	65497741m	343.9613	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z30.D Vial: 30
Acq On : 27 Jan 21 19:25 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/27/21 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3693402	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	3101529	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	1168384	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	1144272	28.4363 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.744%	
3) 1,2-DCA-D4(S)	5.71	65	1080173	28.8524 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.408%	
5) Toluene-D8(S)	8.03	98	3919354	26.2558 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.024%	
6) 4-Bromofluorobenzene(S)	10.92	95	1514607	26.5183 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.072%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

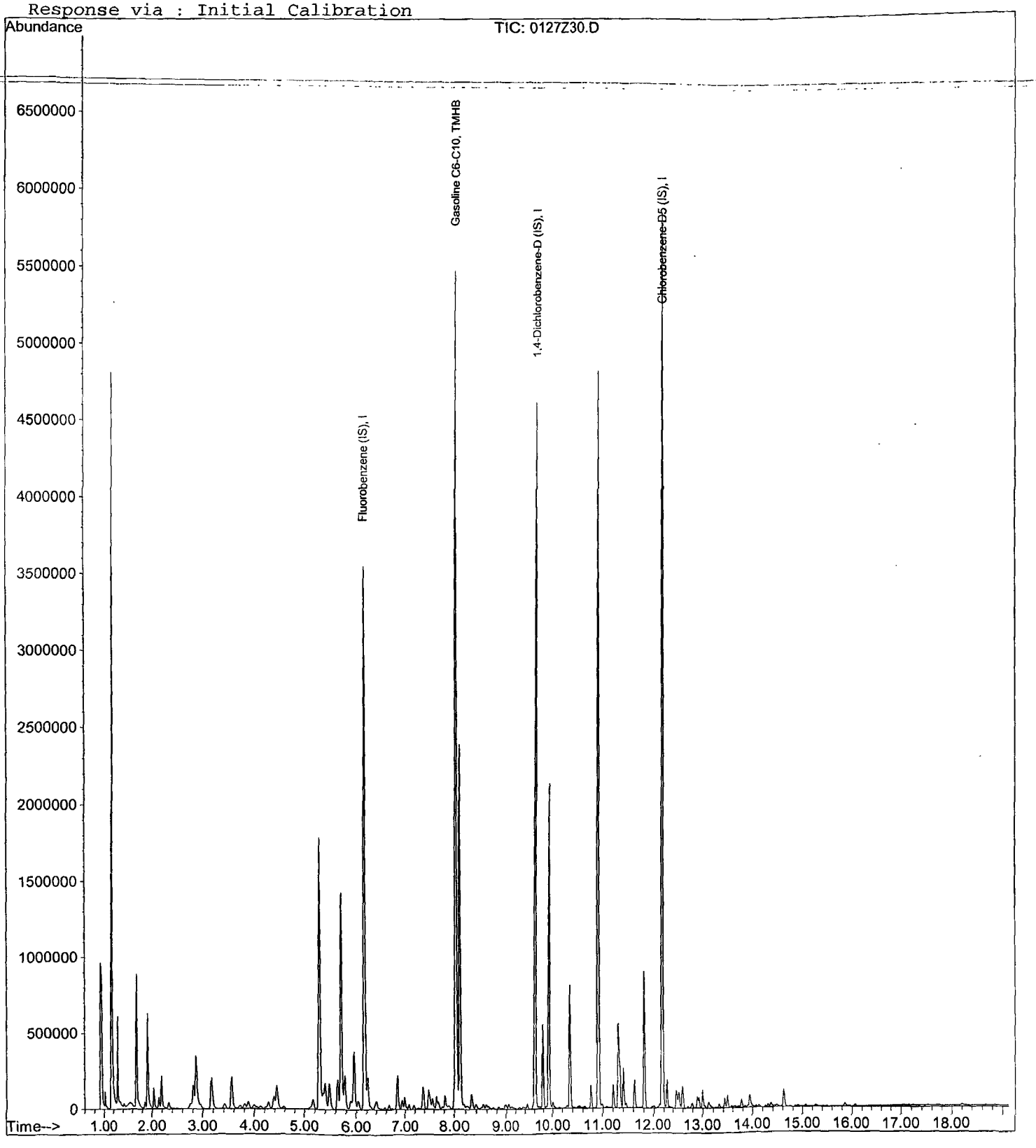
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z30.D
Acq On : 27 Jan 21 19:25
Sample : *Ending CCV 300ug/L 1/27/21*
Misc :

Vial: 30
Operator: LP,DG,CH
Inst : *ZEUS*
Multiplr: 1.00

Quant Time: Feb 2 15:29 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z10.D
Acq On : 27 Jan 21 11:45
Sample : BA25866W01
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3031951	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4259661	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3631837	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z10.D Vial: 10
Acq On : 27 Jan 21 11:45 Operator: LP,DG,CH
Sample : BA25866W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3100409	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2341179	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	848192	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	927809	27.4669 ppb	0.00
Spiked Amount 25.000			Recovery = 109.868%		
3) 1,2-DCA-D4(S)	5.71	65	875969	27.8730 ppb	0.00
Spiked Amount 25.000			Recovery = 111.492%		
5) Toluene-D8(S)	8.03	98	3068945	27.2359 ppb	0.00
Spiked Amount 25.000			Recovery = 108.944%		
6) 4-Bromofluorobenzene(S)	10.91	95	1025366	24.0084 ppb	0.00
Spiked Amount 25.000			Recovery = 96.032%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

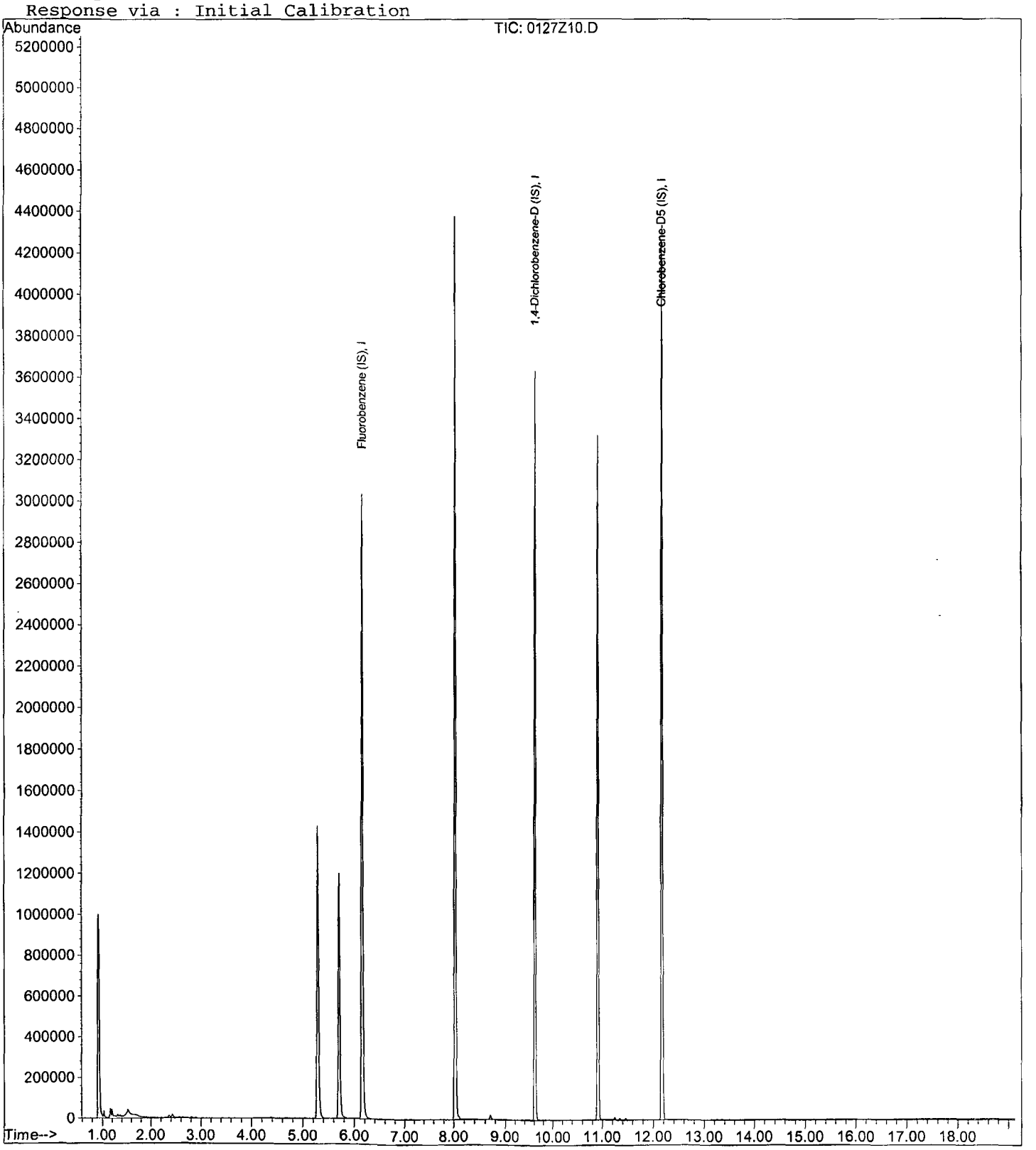
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z10.D
Acq On : 27 Jan 21 11:45
Sample : BA25866W01
Misc :

Vial: 10
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z14.D Vial: 14
Acq On : 27 Jan 21 13:17 Operator: LP,DG,CH
Sample : BA25867W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:28 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	2853229	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4063396	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3466304	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z14.D Vial: 14
Acq On : 27 Jan 21 13:17 Operator: LP,DG,CH
Sample : BA25867W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	2969253	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2237174	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	815872	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	931575	28.7966 ppb	0.00
Spiked Amount 25.000			Recovery = 115.188%		
3) 1,2-DCA-D4(S)	5.71	65	874907	29.0689 ppb	0.00
Spiked Amount 25.000			Recovery = 116.276%		
5) Toluene-D8(S)	8.03	98	3038844	28.2225 ppb	0.00
Spiked Amount 25.000			Recovery = 112.888%		
6) 4-Bromofluorobenzene(S)	10.91	95	1006112	24.5941 ppb	0.00
Spiked Amount 25.000			Recovery = 98.376%		

Target Compounds Qvalue

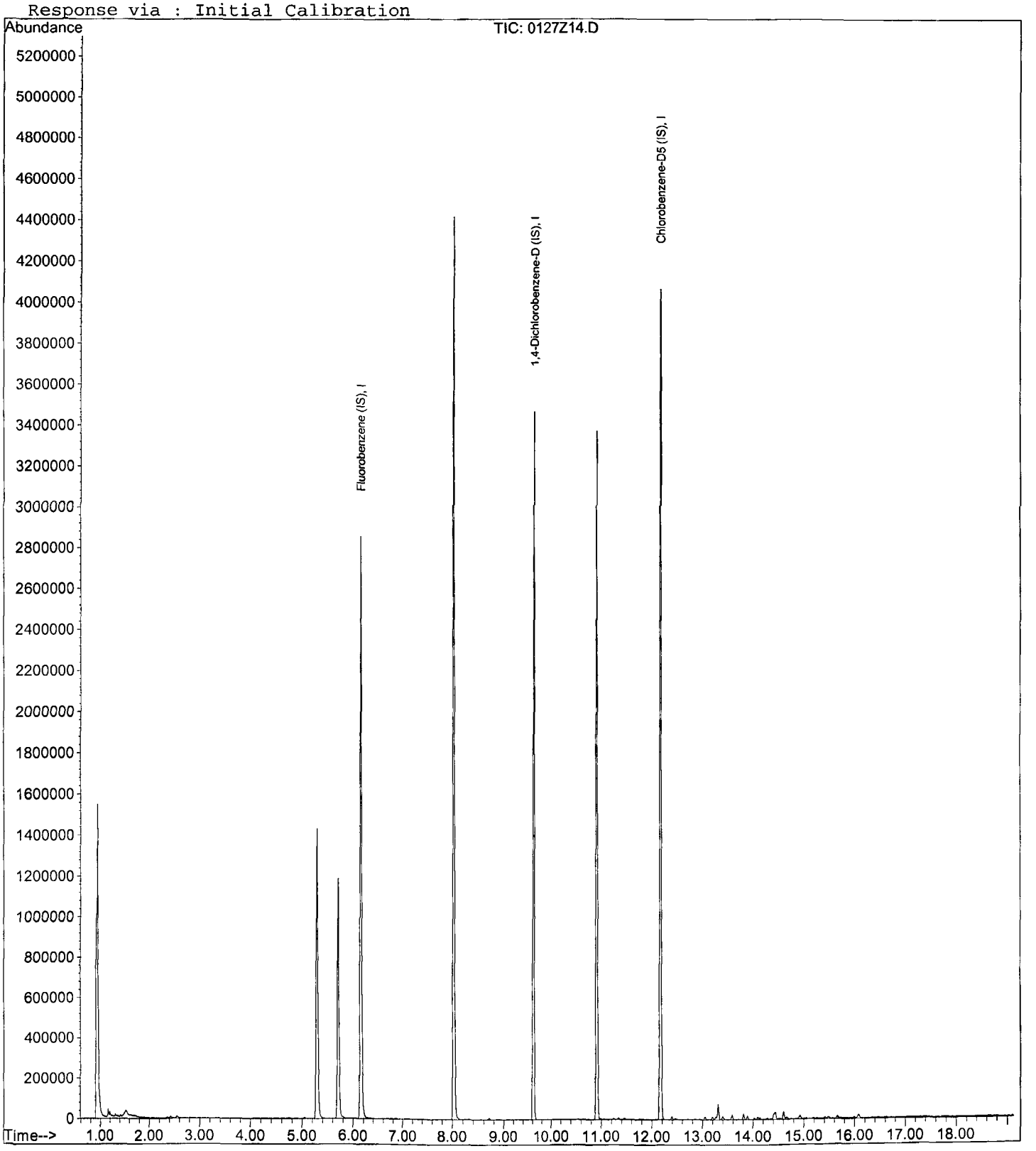
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z14.D Vial: 14
Acq On : 27 Jan 21 13:17 Operator: LP,DG,CH
Sample : BA25867W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:28 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z11.D Vial: 11
Acq On : 27 Jan 21 12:08 Operator: LP,DG,CH
Sample : BA25869W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	2908839	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4145434	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3461658	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z11.D Vial: 11
Acq On : 27 Jan 21 12:08 Operator: LP,DG,CH
Sample : BA25869W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3023395	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2272539	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	840576	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	894442	27.1536 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.616%	
3) 1,2-DCA-D4(S)	5.71	65	854198	27.8726 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.492%	
5) Toluene-D8(S)	8.03	98	2941848	26.8965 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.584%	
6) 4-Bromofluorobenzene(S)	10.91	95	980201	23.6773 ppb	0.00
Spiked Amount 25.000			Recovery	= 94.708%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

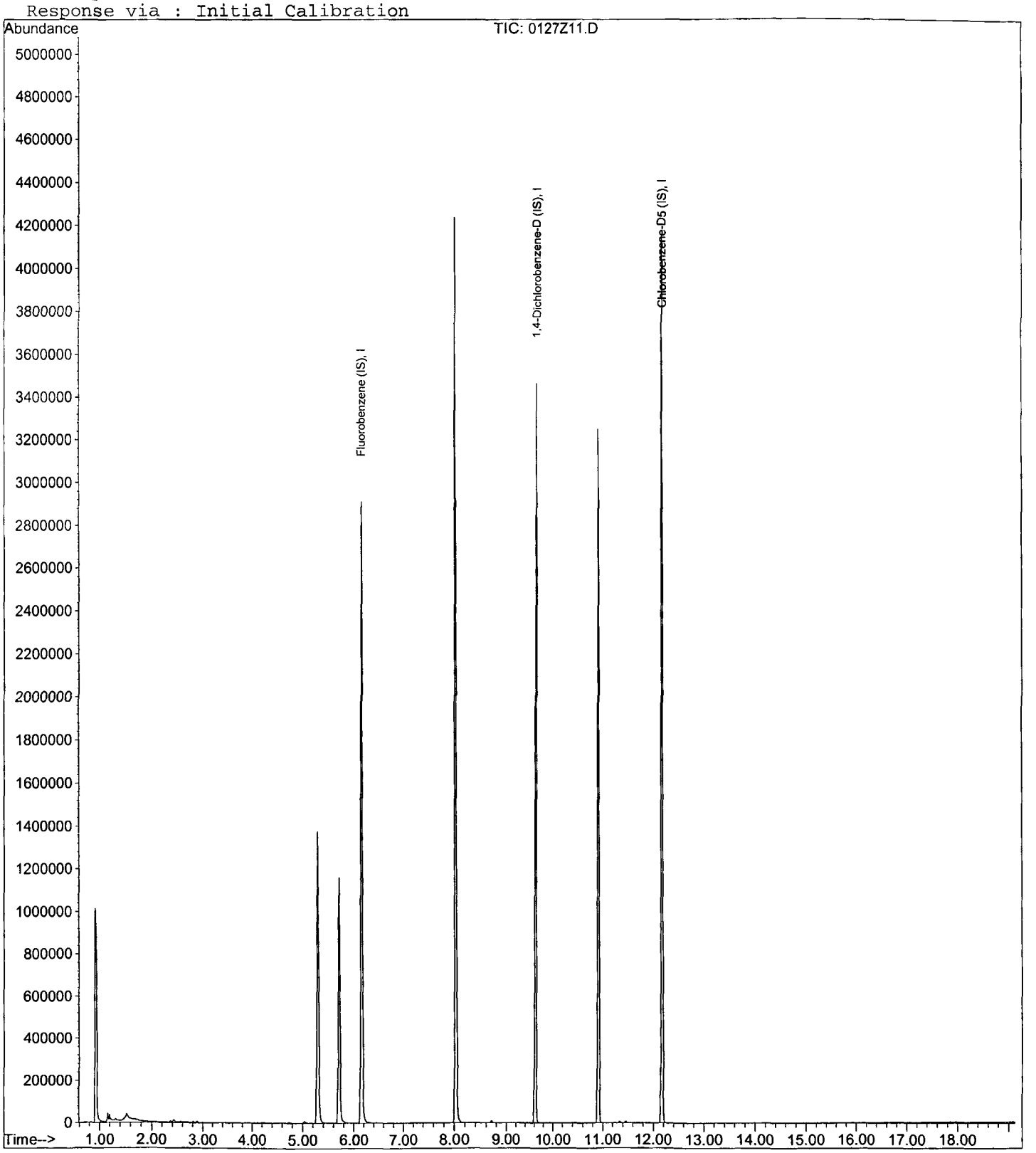
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z11.D
Acq On : 27 Jan 21 12:08
Sample : BA25869W01
Misc :

Vial: 11
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z15.D Vial: 15
Acq On : 27 Jan 21 13:40 Operator: LP,DG,CH
Sample : BA25870W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:28 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	2967518	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4215475	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3706943	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z15.D Vial: 15
Acq On : 27 Jan 21 13:40 Operator: LP,DG,CH
Sample : BA25870W01 Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3062807	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2319650	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	852480	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	934550	28.0062 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.024%	
3) 1,2-DCA-D4(S)	5.71	65	882802	28.4353 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.740%	
5) Toluene-D8(S)	8.03	98	3021004	27.0592 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.236%	
6) 4-Bromofluorobenzene(S)	10.92	95	1016743	24.0257 ppb	0.00
Spiked Amount 25.000			Recovery	= 96.104%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

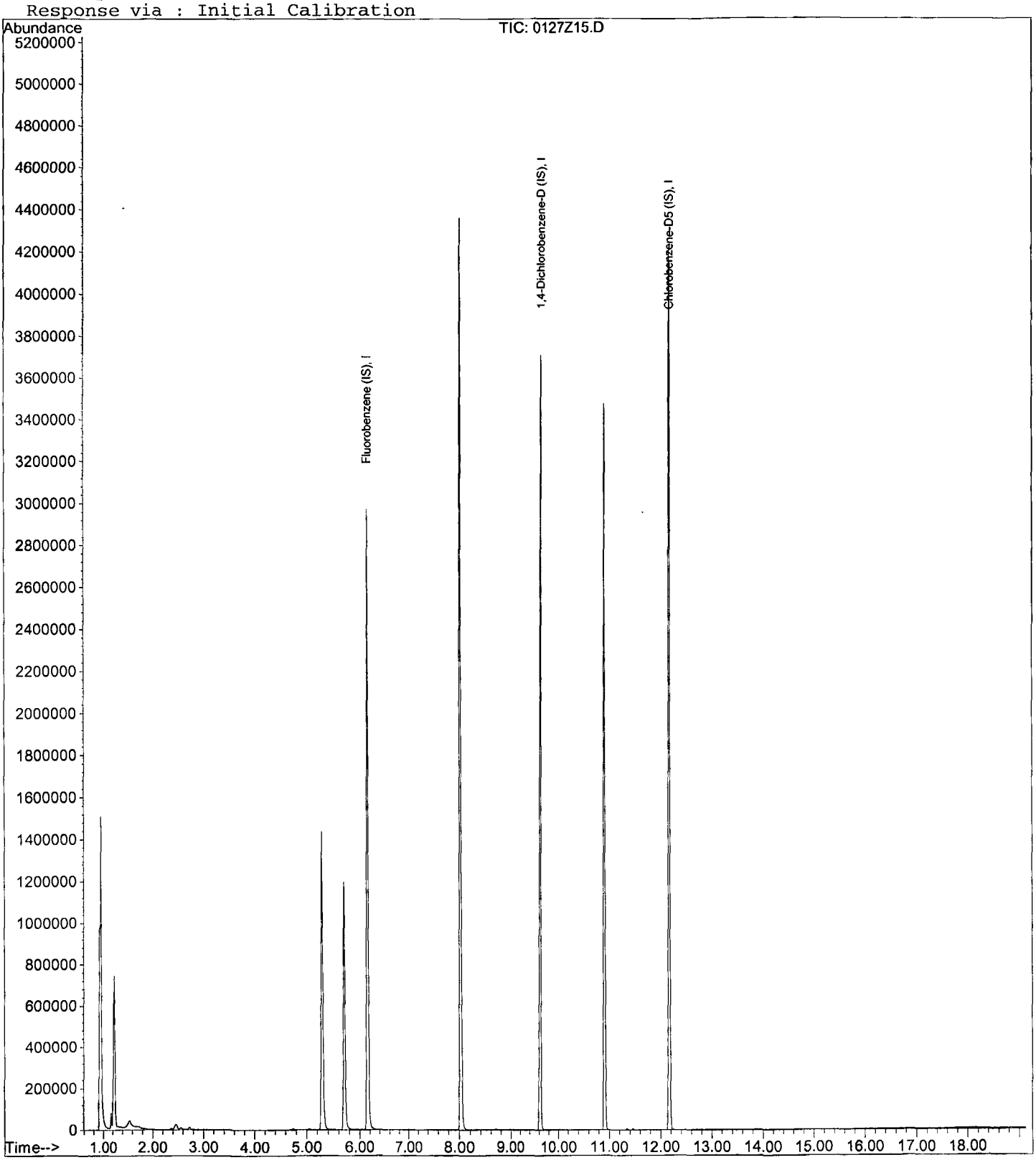
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z15.D
Acq On : 27 Jan 21 13:40
Sample : BA25870W01
Misc :

Vial: 15
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:28 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z08.D
Acq On : 27 Jan 21 10:59
Sample : 210127A BLK
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	TIC	3117692	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4632892	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3900059	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z08.D Vial: 8
Acq On : 27 Jan 21 10:59 Operator: LP,DG,CH
Sample : 210127A BLK Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3268866	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2446696	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	944832	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	968795	27.2023 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.808%	
3) 1,2-DCA-D4(S)	5.71	65	919213	27.7417 ppb	0.00
Spiked Amount 25.000			Recovery	= 110.968%	
5) Toluene-D8(S)	8.03	98	3178278	26.9897 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.960%	
6) 4-Bromofluorobenzene(S)	10.91	95	1059894	23.7704 ppb	0.00
Spiked Amount 25.000			Recovery	= 95.080%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

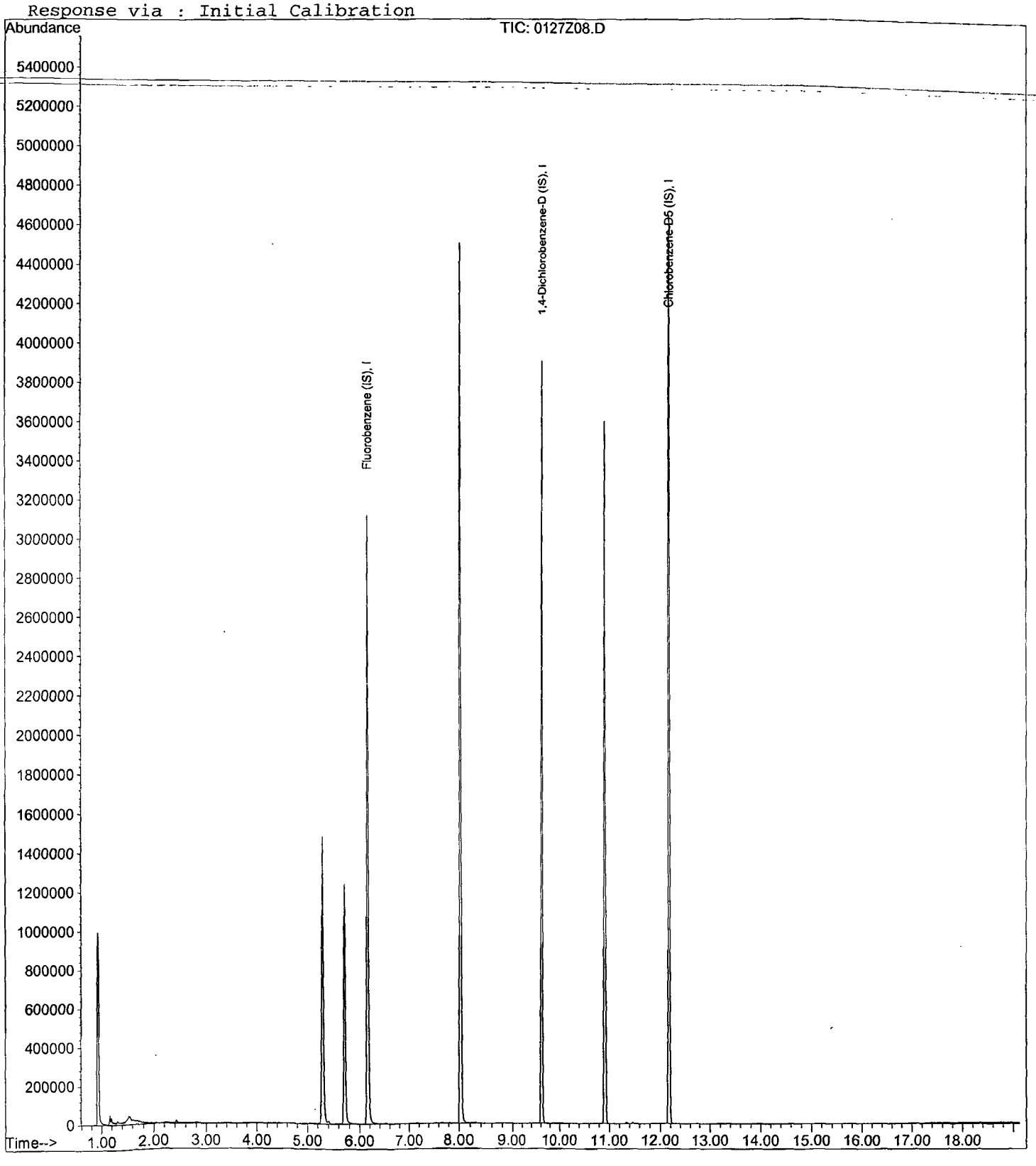
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z08.D
Acq On : 27 Jan 21 10:59
Sample : 210127A BLK
Misc :

Vial: 8
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Feb 2 15:27 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z06.D Vial: 6
Acq On : 27 Jan 21 10:13 Operator: LP,DG,CH
Sample : 210127A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 8:37 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3130760	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4614681	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3786108	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	54510157m	296.6464	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z06.D Vial: 6
Acq On : 27 Jan 21 10:13 Operator: LP,DG,CH
Sample : 210127A LCS 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	96	3299373	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2460190	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	920128	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	976002	27.1513 ppb	0.00
Spiked Amount 25.000			Recovery = 108.604%		
3) 1,2-DCA-D4(S)	5.71	65	927671	27.7381 ppb	0.00
Spiked Amount 25.000			Recovery = 110.952%		
5) Toluene-D8(S)	8.03	98	3301076	27.8788 ppb	0.00
Spiked Amount 25.000			Recovery = 111.516%		
6) 4-Bromofluorobenzene(S)	10.91	95	1099200	24.4481 ppb	0.00
Spiked Amount 25.000			Recovery = 97.792%		
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

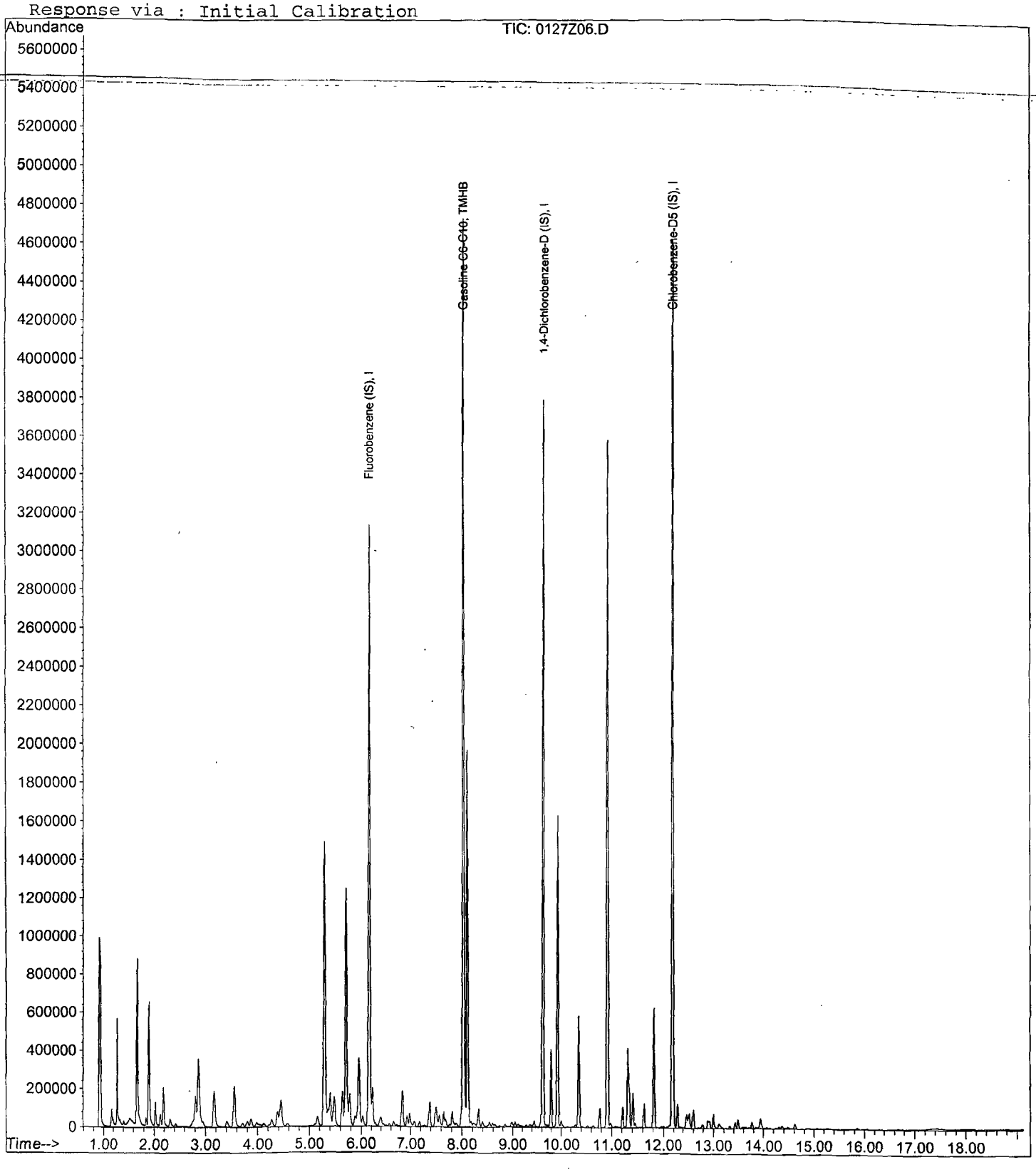
Quantitation Report

Data File : M:\ZEUS\DATA\210125\0127Z06.D
Acq On : 27 Jan 21 10:13
Sample : 210127A LCS 300ug/L
Misc :

Vial: 6
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 8:37 2021 Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z07.D Vial: 7
Acq On : 27 Jan 21 10:36 Operator: LP,DG,CH
Sample : 210127A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Jan 28 8:37 2021 Quant Results File: ZGAS0125.RES

Quant Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.16	TIC	3116372	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	12.17	TIC	4532870	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	9.62	TIC	3775984	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.03	TIC	54303610m	297.2588	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\ZEUS\DATA\210125\0127Z07.D Vial: 7
Acq On : 27 Jan 21 10:36 Operator: LP,DG,CH
Sample : 210127A LCSD 300ug/L Inst : ZEUS
Misc : Multiplr: 1.00

Quant Time: Feb 2 15:33 2021 Quant Results File: Z0125SUR.RES

Quant Method : M:\ZEUS\DATA\210125\Z0125SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 11:01:24 2021
Response via : Initial Calibration
DataAcq Meth : 122820_EST_TEST.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
1) Fluorobenzene (IS)	6.16	96	3256846	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	9.62	117	2426769	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.17	152	905664	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	5.30	111	974342	27.4590 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.836%	
3) 1,2-DCA-D4(S)	5.71	65	916939	27.7752 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.100%	
5) Toluene-D8(S)	8.03	98	3299460	28.2489 ppb	0.00
Spiked Amount 25.000			Recovery	= 112.996%	
6) 4-Bromofluorobenzene(S)	10.91	95	1095923	24.6874 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.748%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

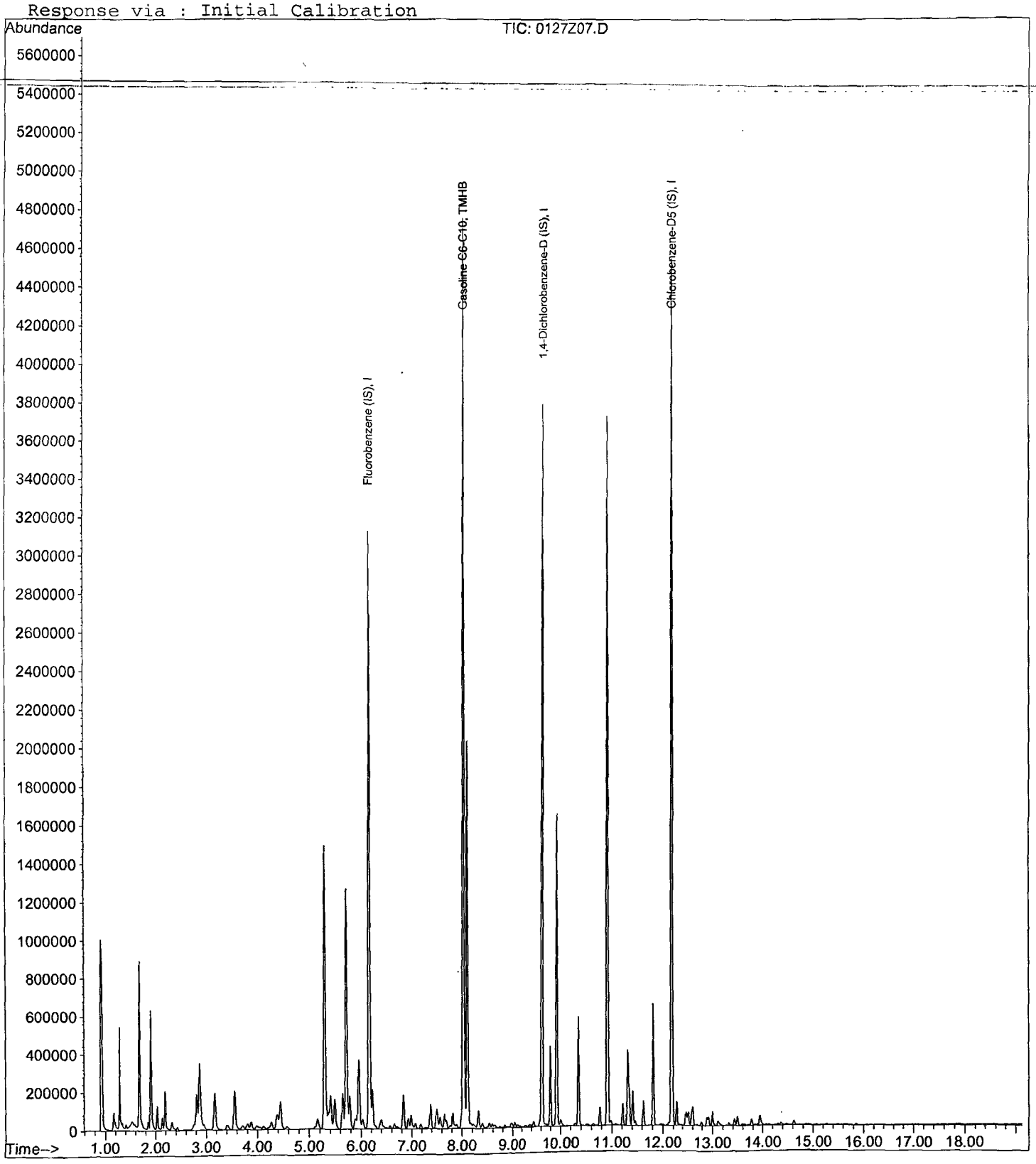
Data File : M:\ZEUS\DATA\210125\0127Z07.D
Acq On : 27 Jan 21 10:36
Sample : 210127A LCSD 300ug/L
Misc :

Vial: 7
Operator: LP,DG,CH
Inst : ZEUS
Multiplr: 1.00

Quant Time: Jan 28 8:37 2021

Quant Results File: ZGAS0125.RES

Method : M:\ZEUS\DATA\210125\ZGAS0125.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jan 26 10:16:41 2021
Response via : Initial Calibration



Zeus Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 — Prepared By (Initials): CH

Expires: 01/04/22

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 — Prepared By (Initials): CH

Expires: 01/31/30

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

Zeus Gas Calibration Curve

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 03/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

Zeus Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/25/21 — Prepared By (Initials): CH

Expires: 01/26/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\ZEUS\DATA\210125\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	19	0125Z24.D	1	0.3ug/L VOC STD 1/25/21		25 Jan 21 16:07
2	20	0125Z25.D	1	0.5ug/L VOC STD 1/25/21		25 Jan 21 16:30
3	21	0125Z26.D	1	1ug/L VOC STD 1/25/21		25 Jan 21 16:53
4	22	0125Z27.D	1	2ug/L VOC STD 1/25/21		25 Jan 21 17:16
5	23	0125Z28.D	1	5ug/L VOC STD 1/25/21		25 Jan 21 17:39
6	24	0125Z29.D	1	10ug/L VOC STD 1/25/21		25 Jan 21 18:02
7	25	0125Z30.D	1	20ug/L VOC STD 1/25/21		25 Jan 21 18:25
8	26	0125Z31.D	1	40ug/L VOC STD 1/25/21		25 Jan 21 18:47
9	27	0125Z32.D	1	100ug/L VOC STD 1/25/21		25 Jan 21 19:10
10	31	0125Z36.D	1	20ug/L GAS STD 1/25/21		25 Jan 21 20:43
11	32	0125Z37.D	1	50ug/L GAS STD 1/25/21		25 Jan 21 21:06
12	33	0125Z38.D	1	100ug/L GAS STD 1/25/21		25 Jan 21 21:29
13	34	0125Z39.D	1	300ug/L GAS STD 1/25/21		25 Jan 21 21:52
14	35	0125Z40.D	1	600ug/L GAS STD 1/25/21		25 Jan 21 22:15
15	36	0125Z41.D	1	800ug/L GAS STD 1/25/21		25 Jan 21 22:38
16	37	0125Z42.D	1	1000ug/L GAS STD 1/25/21		25 Jan 21 23:01
17	38	0125Z43.D	1	(SS) 300ug/L GAS STD 1/25/21		25 Jan 21 23:24
18	5	0127Z05.D	1	210127A CCV 300ug/L		27 Jan 21 09:50
19	6	0127Z06.D	1	210127A LCS 300ug/L		27 Jan 21 10:13
20	7	0127Z07.D	1	210127A LCSD 300ug/L		27 Jan 21 10:36
21	8	0127Z08.D	1	210127A BLK		27 Jan 21 10:59
22	10	0127Z10.D	1	BA25866W01		27 Jan 21 11:45
23	11	0127Z11.D	1	BA25869W01		27 Jan 21 12:08
24	14	0127Z14.D	1	BA25867W01		27 Jan 21 13:17
25	15	0127Z15.D	1	BA25870W01		27 Jan 21 13:40
26	30	0127Z30.D	1	Ending CCV 300ug/L 1/27/21		27 Jan 21 19:25

ORGANICS

Calibration Data

RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/14/20
Matrix: Instrument: 7890
Initials: CD

0914R07.D 0914R08.D 0914R09.D 0914R10.D 0914R11.D 0914R12.D 0914R13.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
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0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

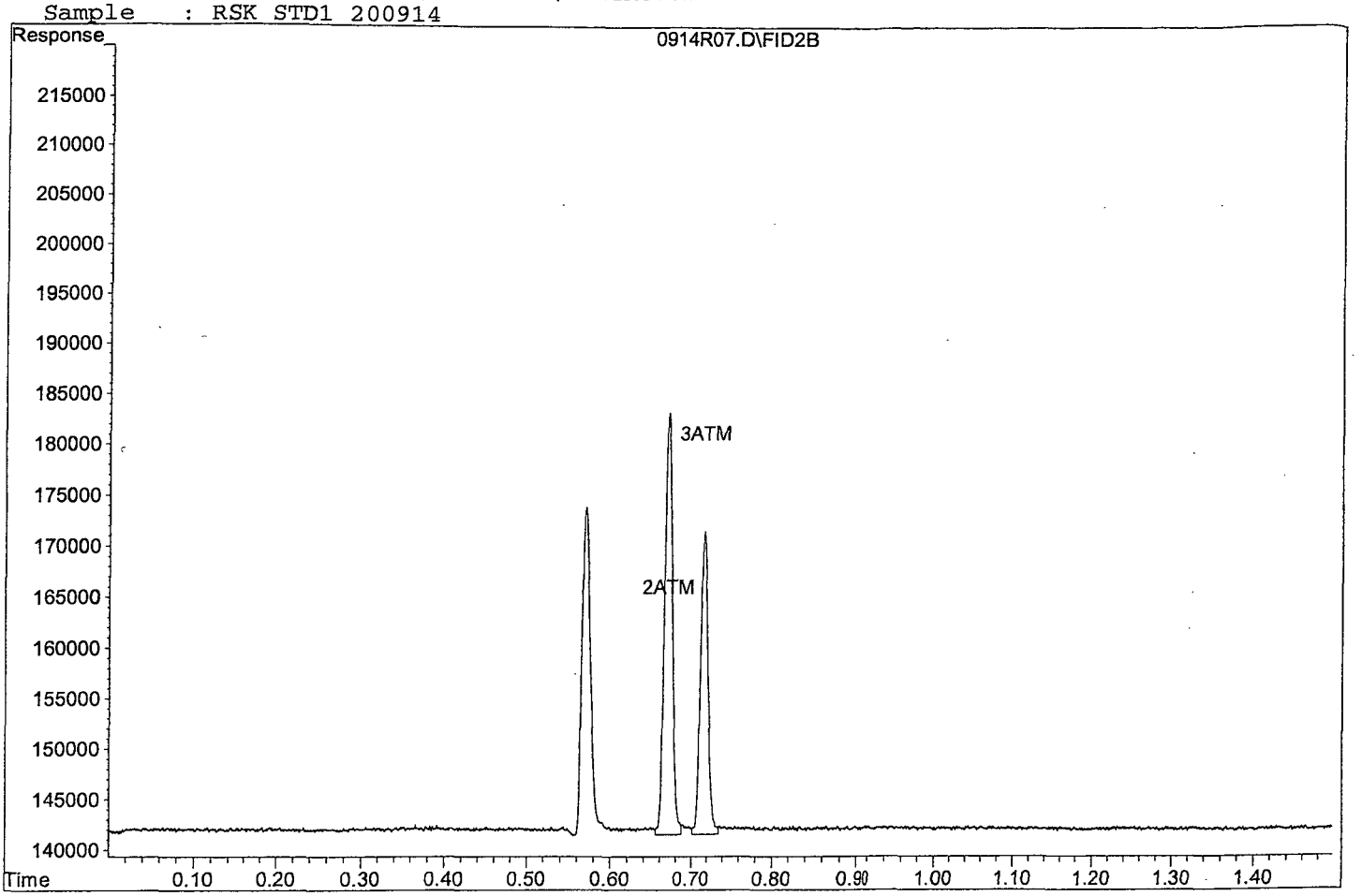
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	41762	102628.492 ppb
3) ATM Ethene	0.72	29966	4.139 ppb
Target Compounds			
1) ATM Methane	0.57	32423	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

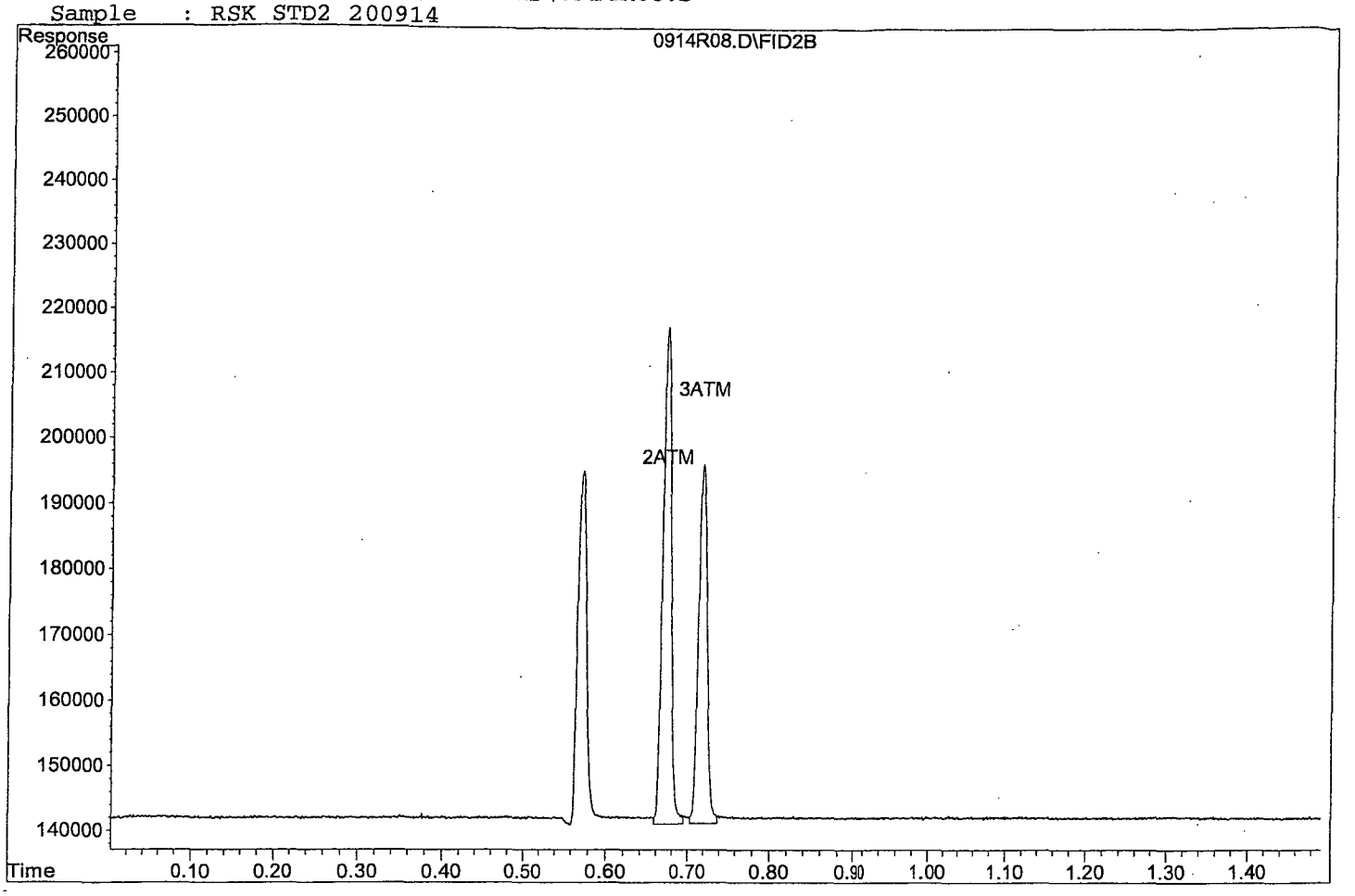
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	76271	190289.144 ppb
3) ATM Ethene	0.72	54983	7.686 ppb
Target Compounds			
1) ATM Methane	0.57	54196	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

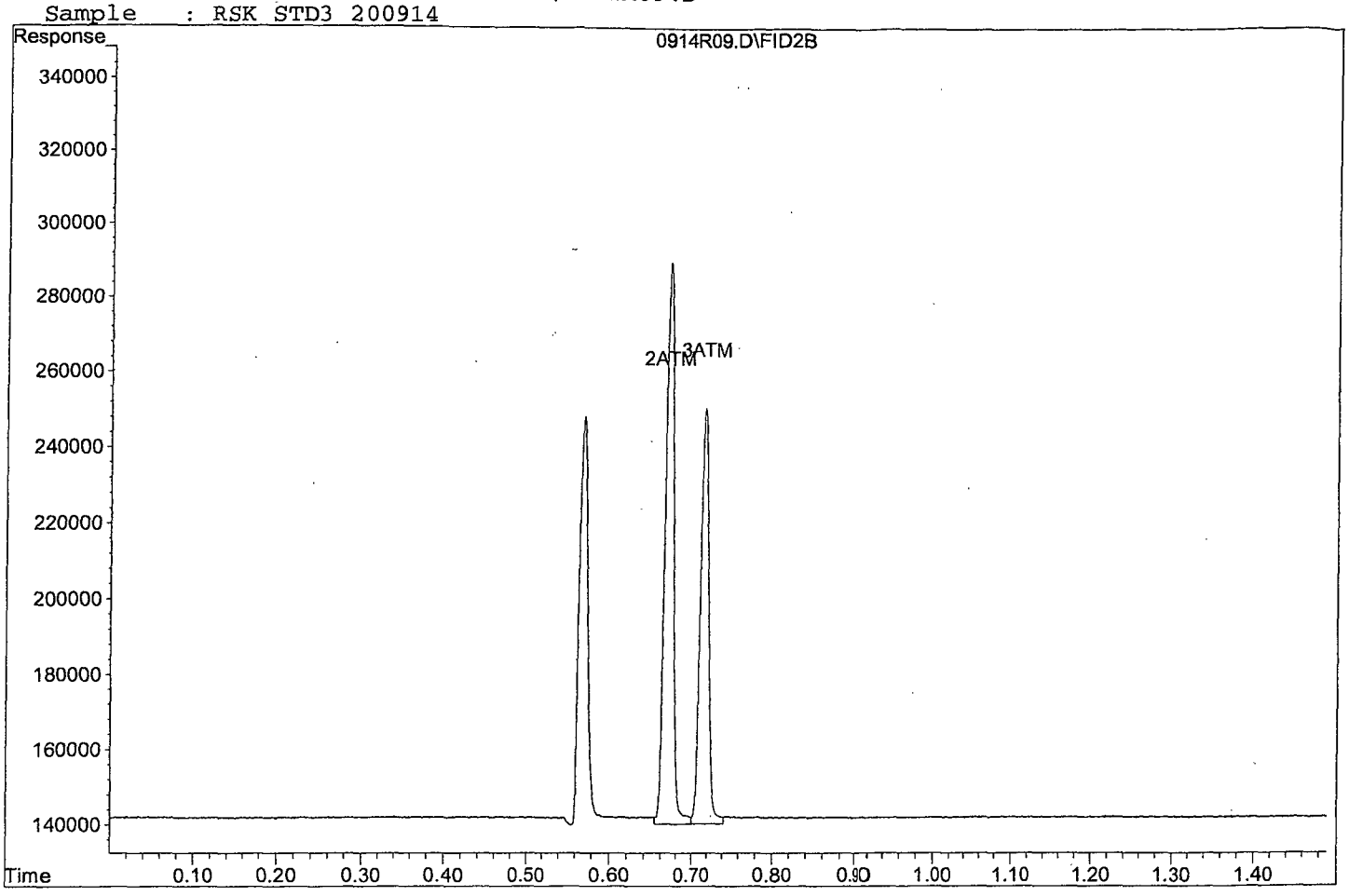
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

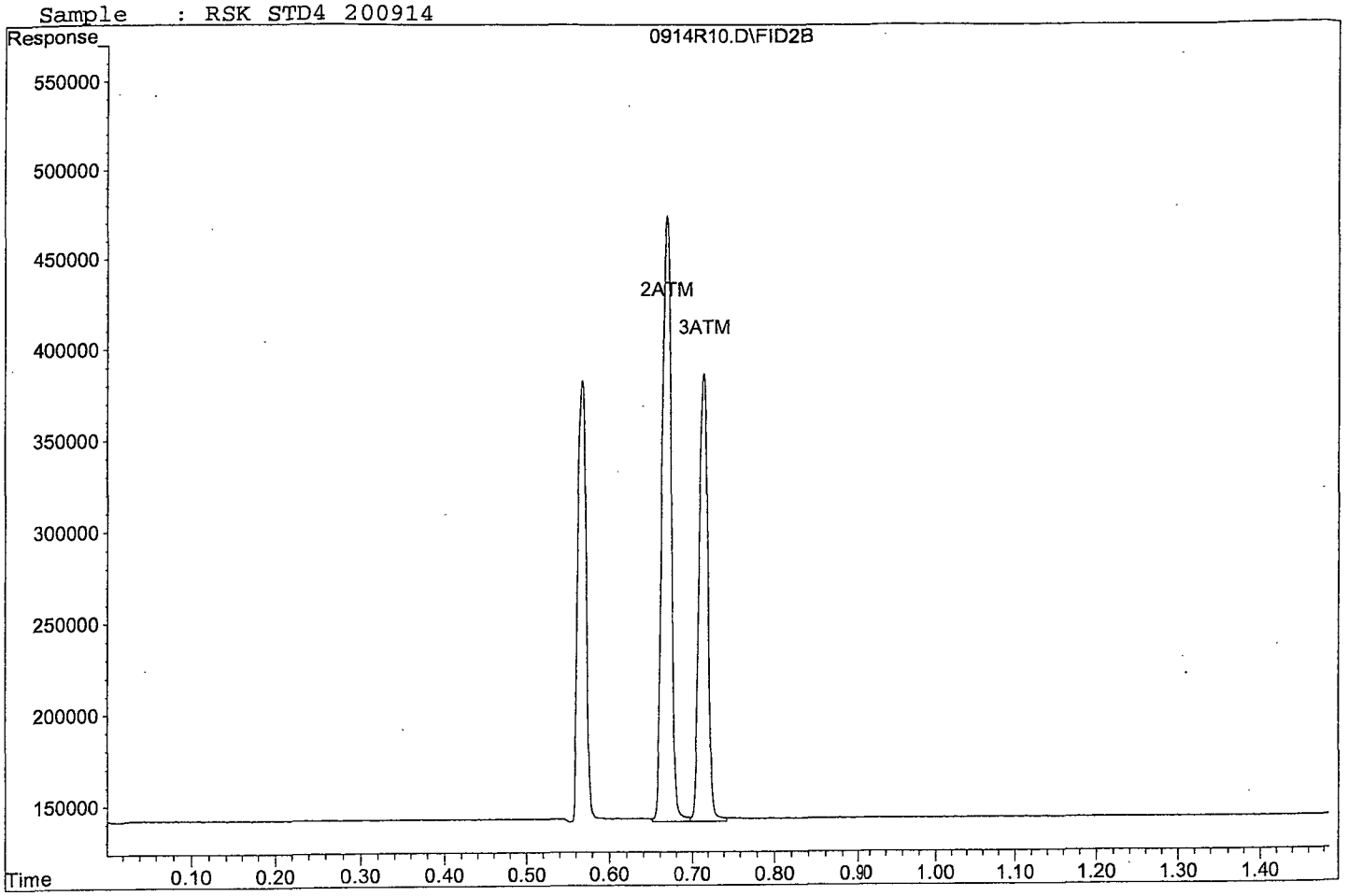
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	333873	844667.853	ppb
3) ATM Ethene	0.71	246286	34.810	ppb
Target Compounds				
1) ATM Methane	0.57	242197	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

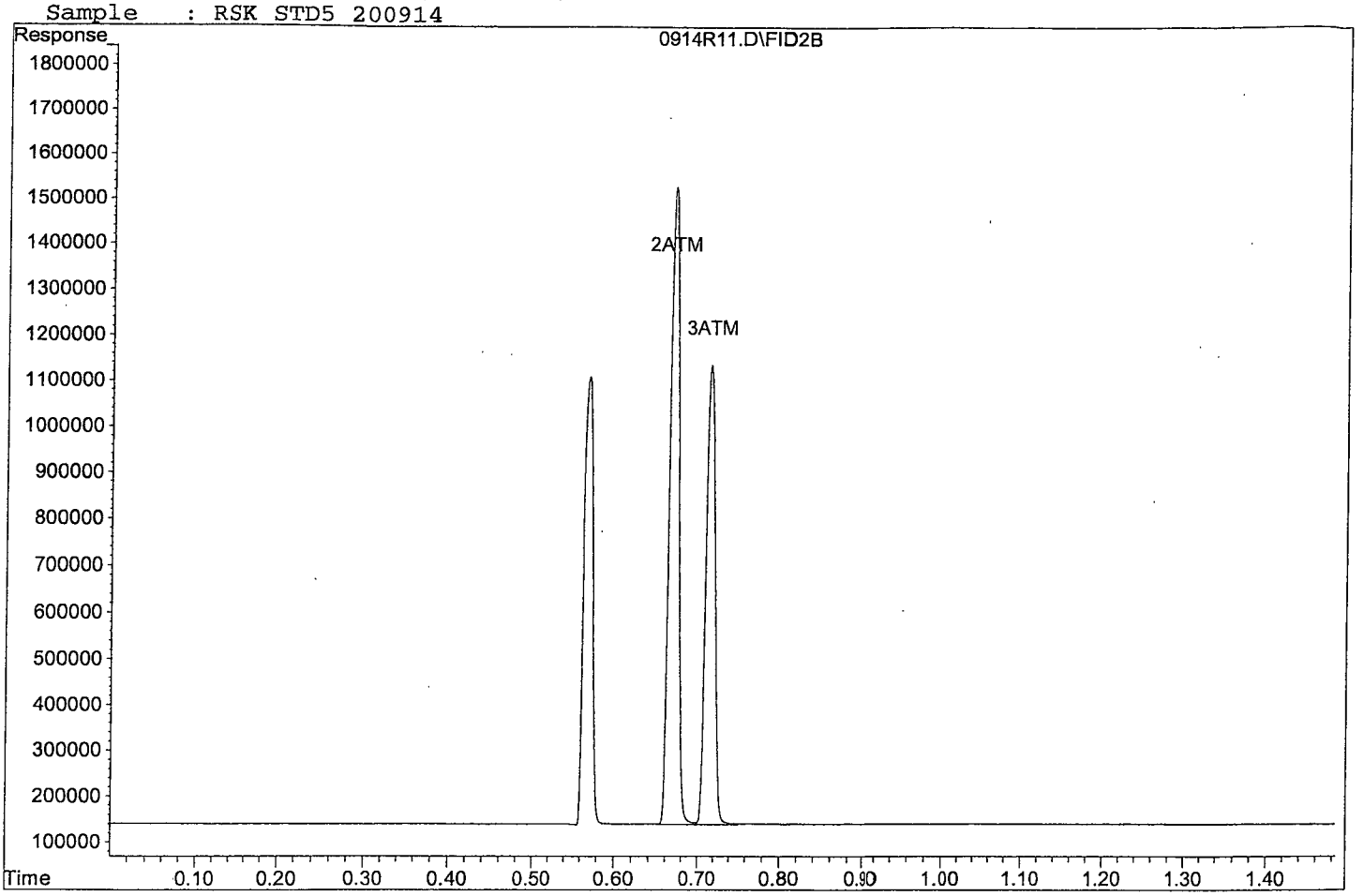
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	1392673	3534302.847	ppb
3) ATM Ethene	0.71	999836	141.654	ppb
Target Compounds				
1) ATM Methane	0.57	973152	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

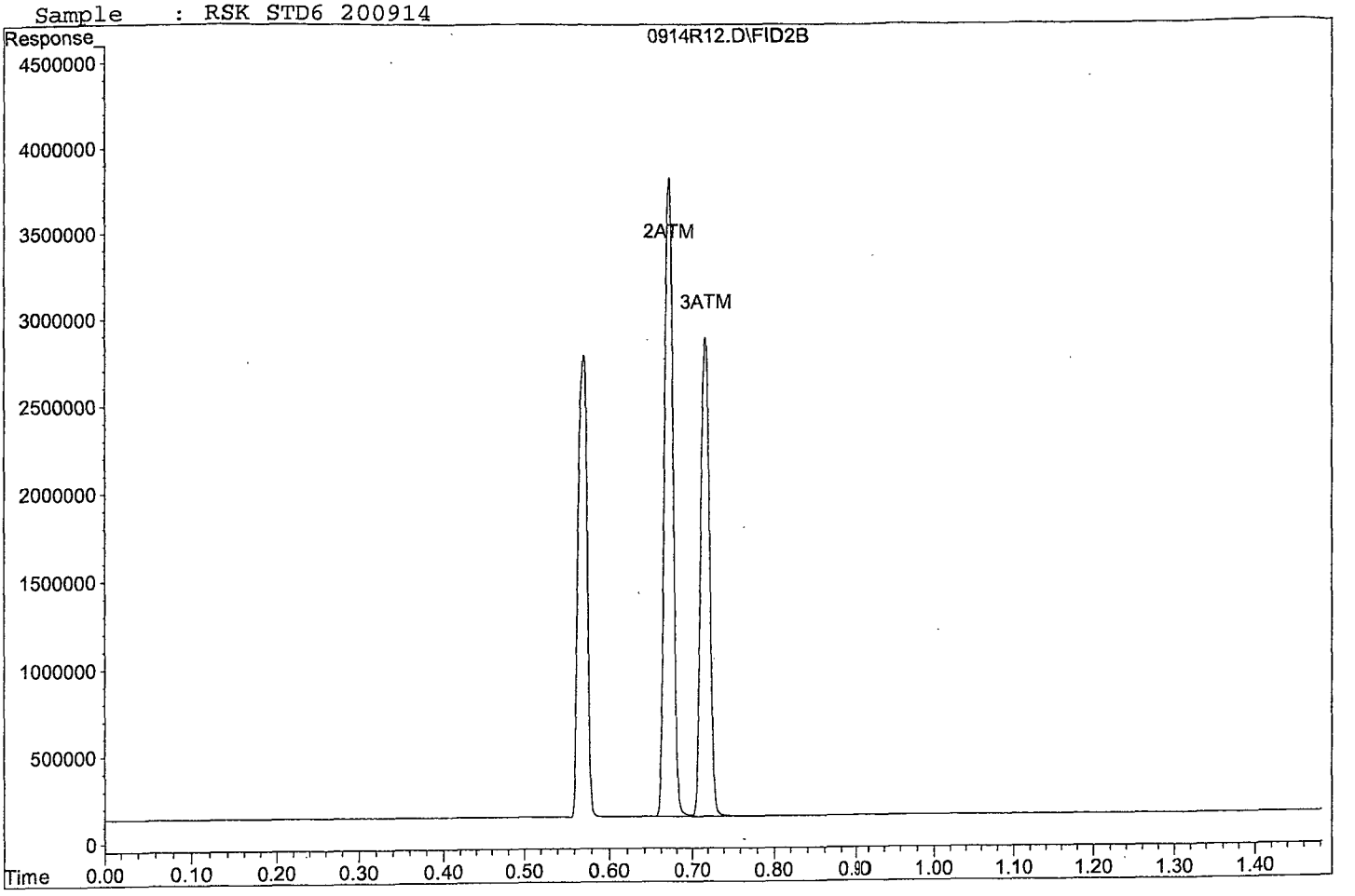
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

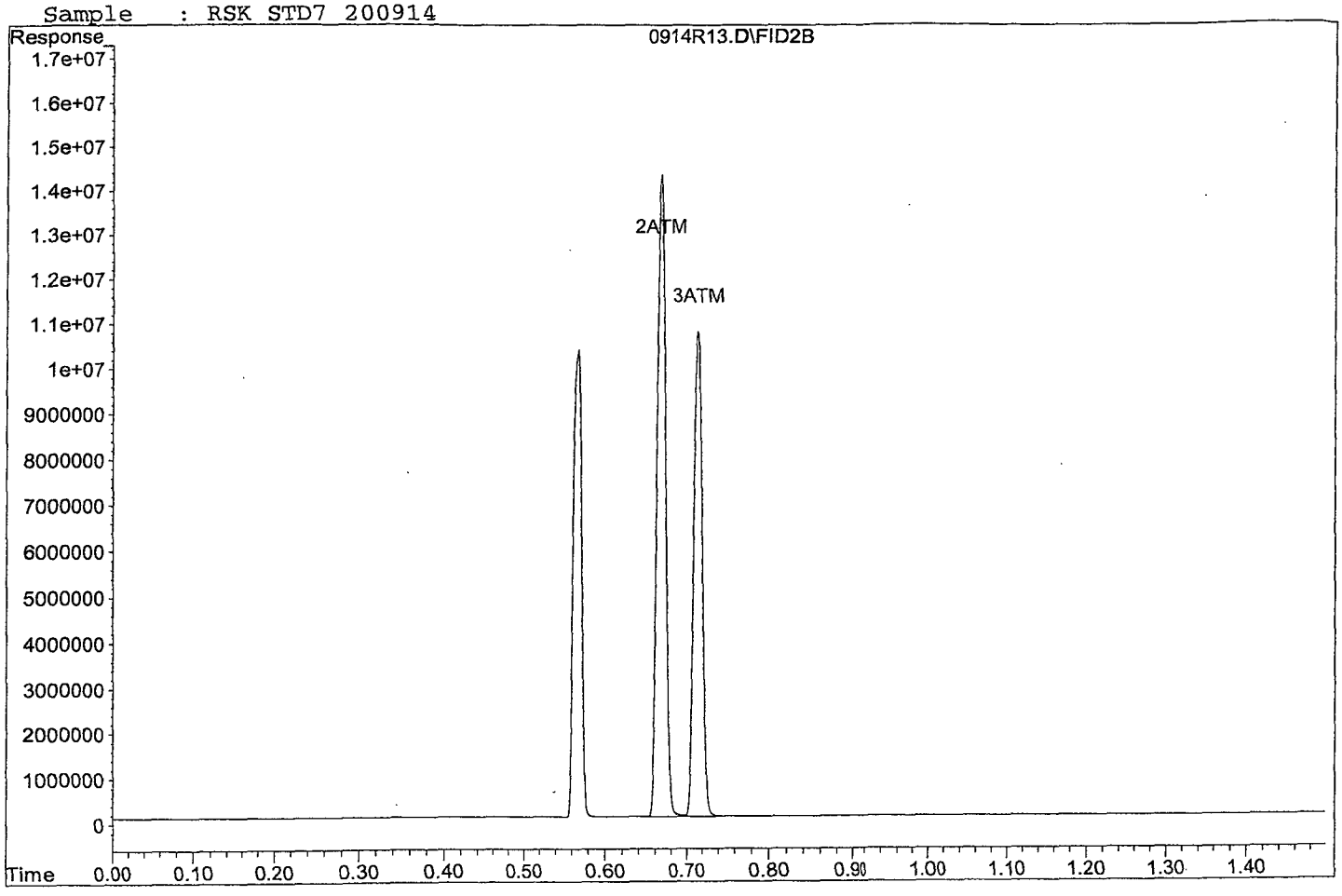
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

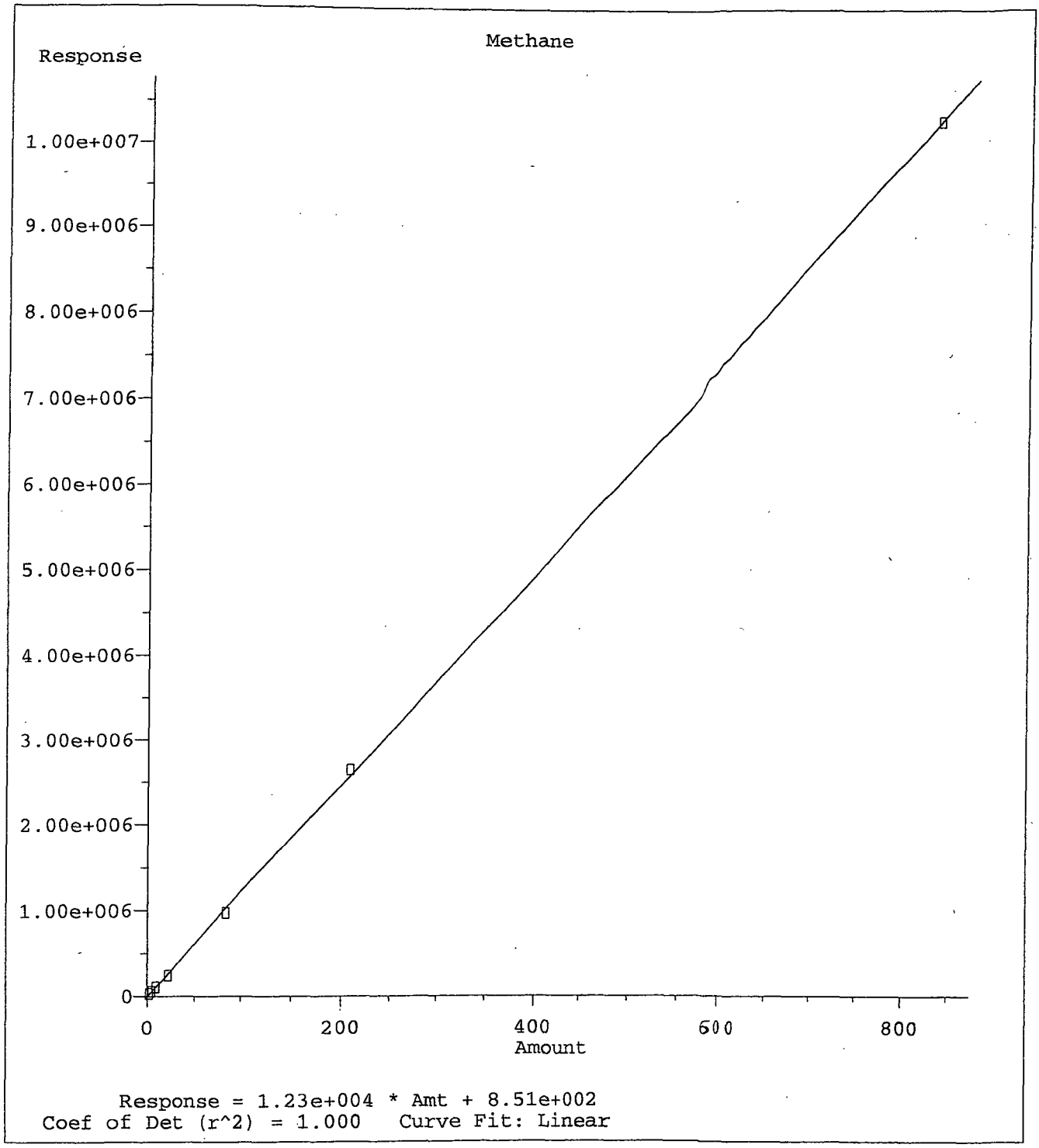
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	36168407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

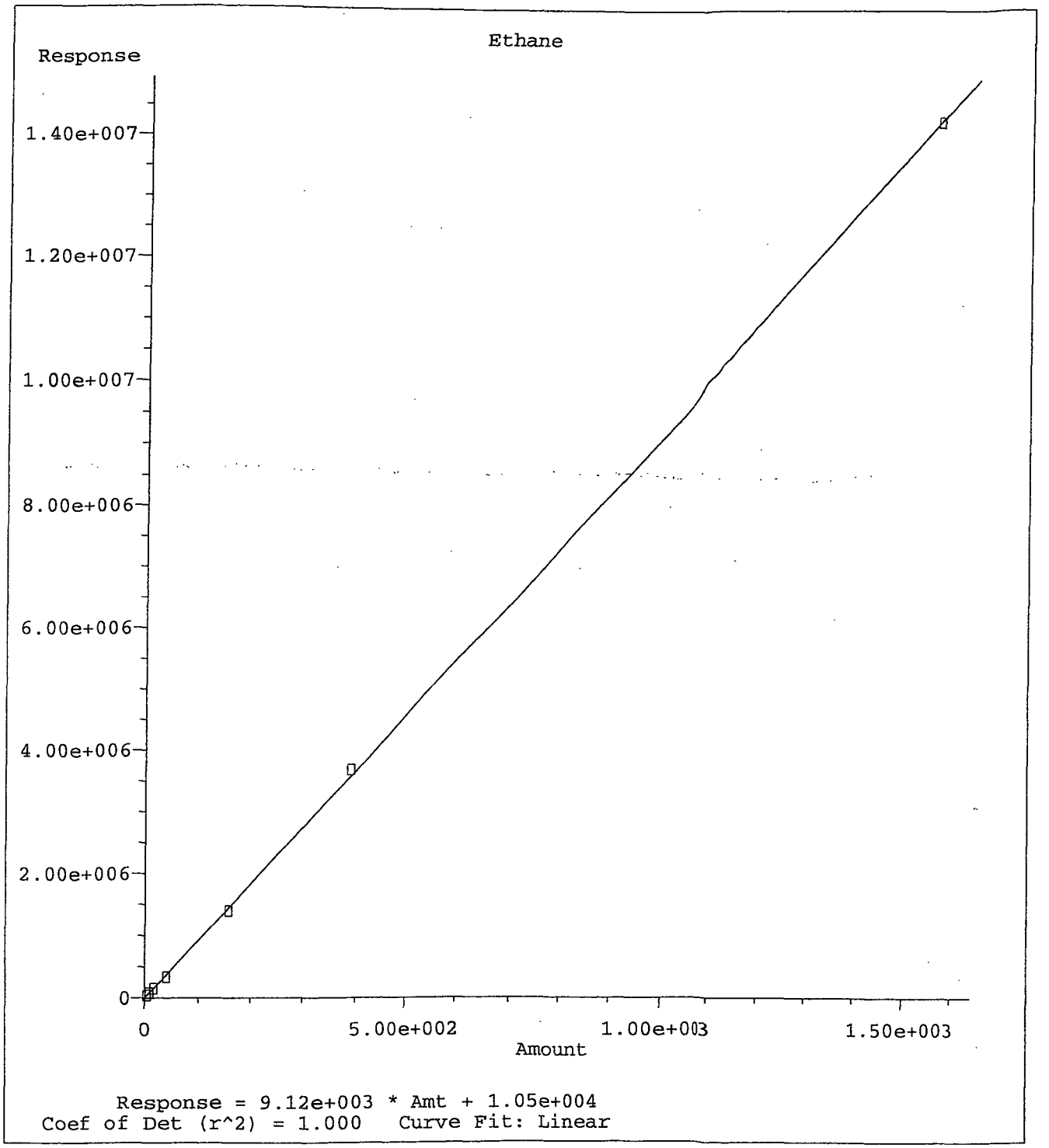
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

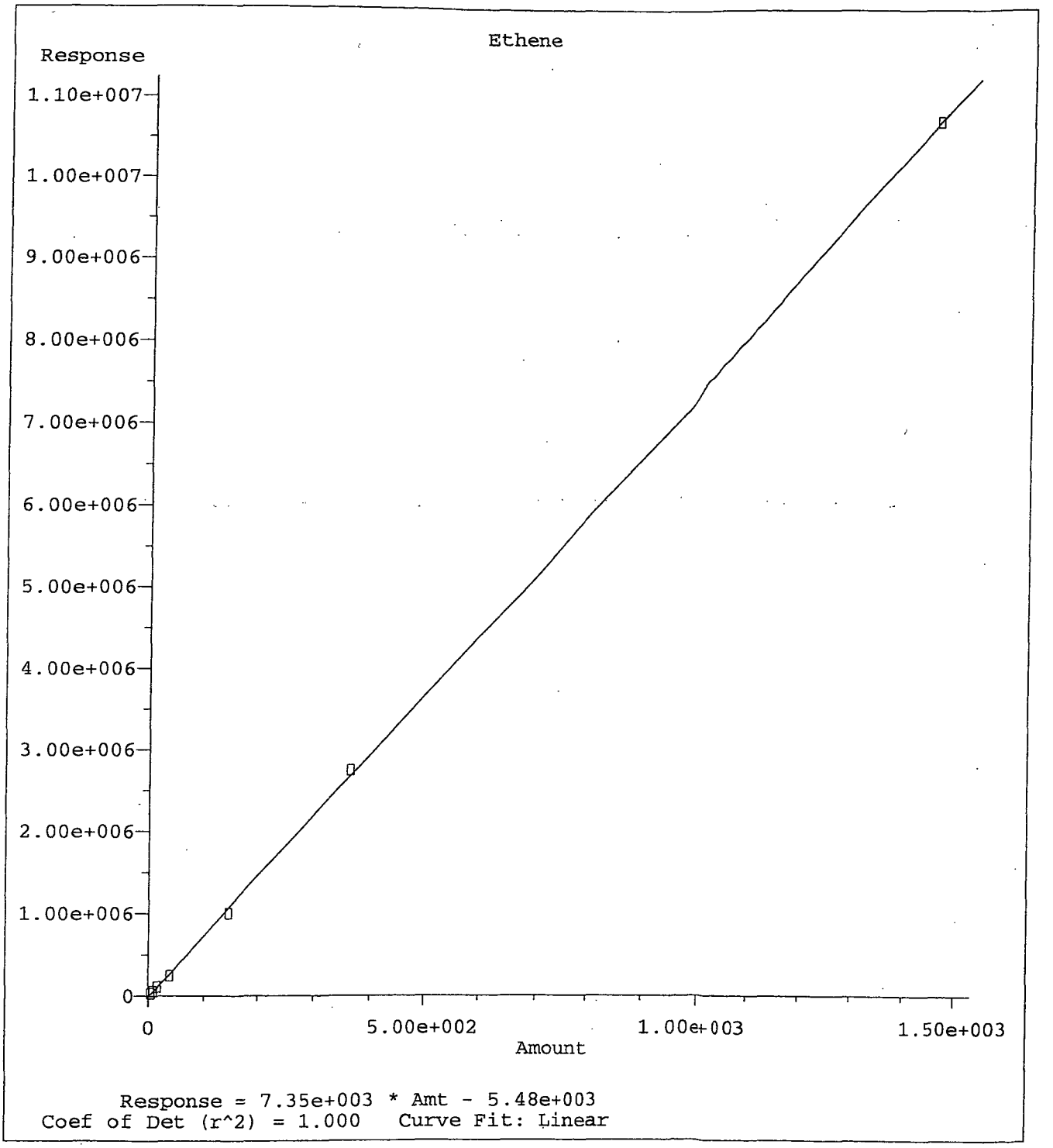




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

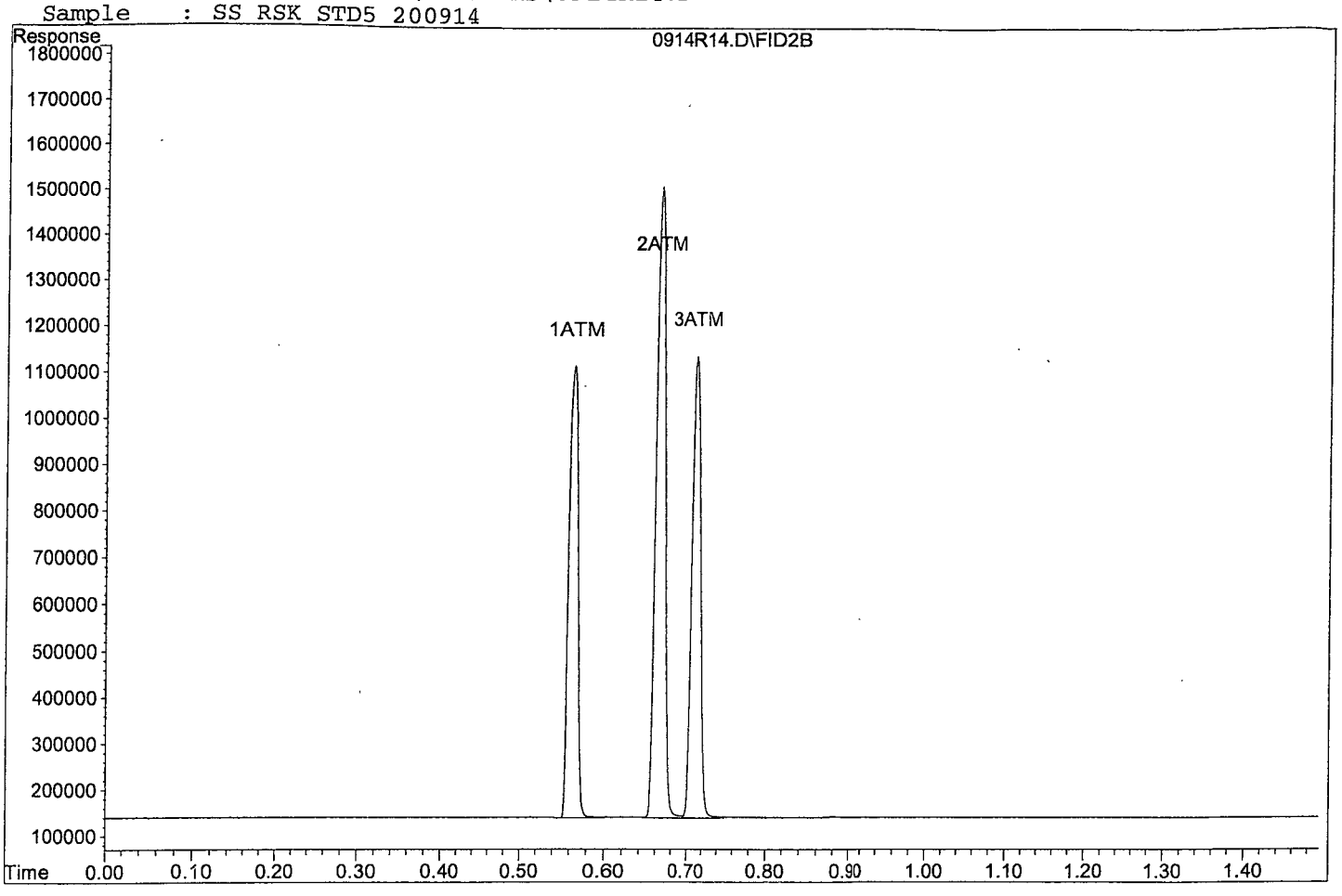
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0129R02.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	21871	15	ATML	11
2	ATML	Ethane	18863	18906	0.23	ATML	3.0
3	ATML	Ethene	14798	15958	7.8	ATML	9.0
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.7		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R02.D Vial: 2
Acq On : 29 Jan 21 12:03 Operator: LS
Sample : 210129A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 12:05 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

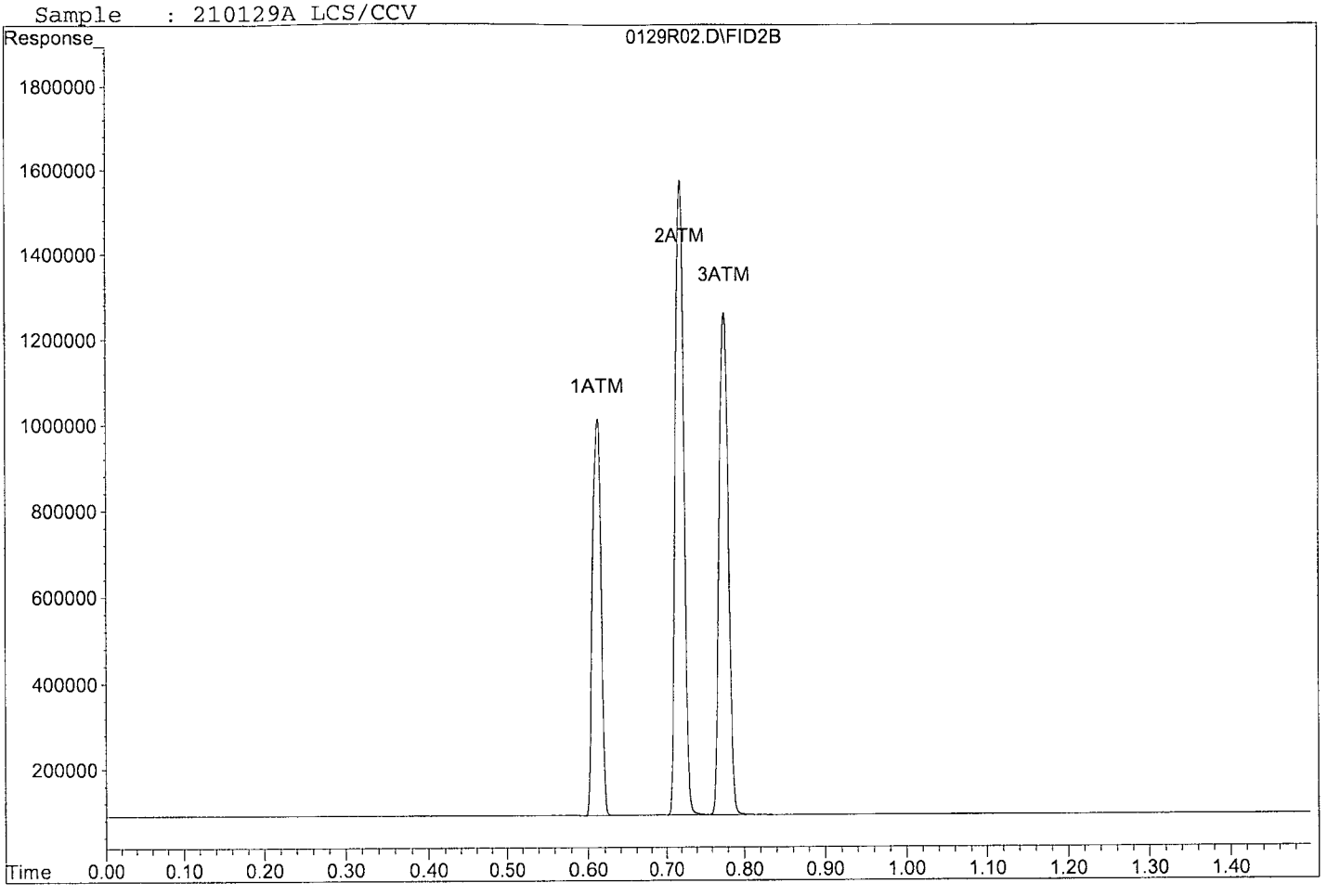
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	912028	73.881	ppb
2) ATM Ethane	0.72	1477939	160.993	ppb
3) ATM Ethene	0.78	1163617	158.984	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R02.D
Sample : 210129A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0129R23.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24929	2.9	ATML	0.98
2	ATML	Ethane	18863	21539	14	ATML	17
3	ATML	Ethene	14798	17051	15	ATML	16
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			10.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R23.D Vial: 23
Acq On : 29 Jan 21 13:55 Operator: LS
Sample : 210129A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 13:57 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

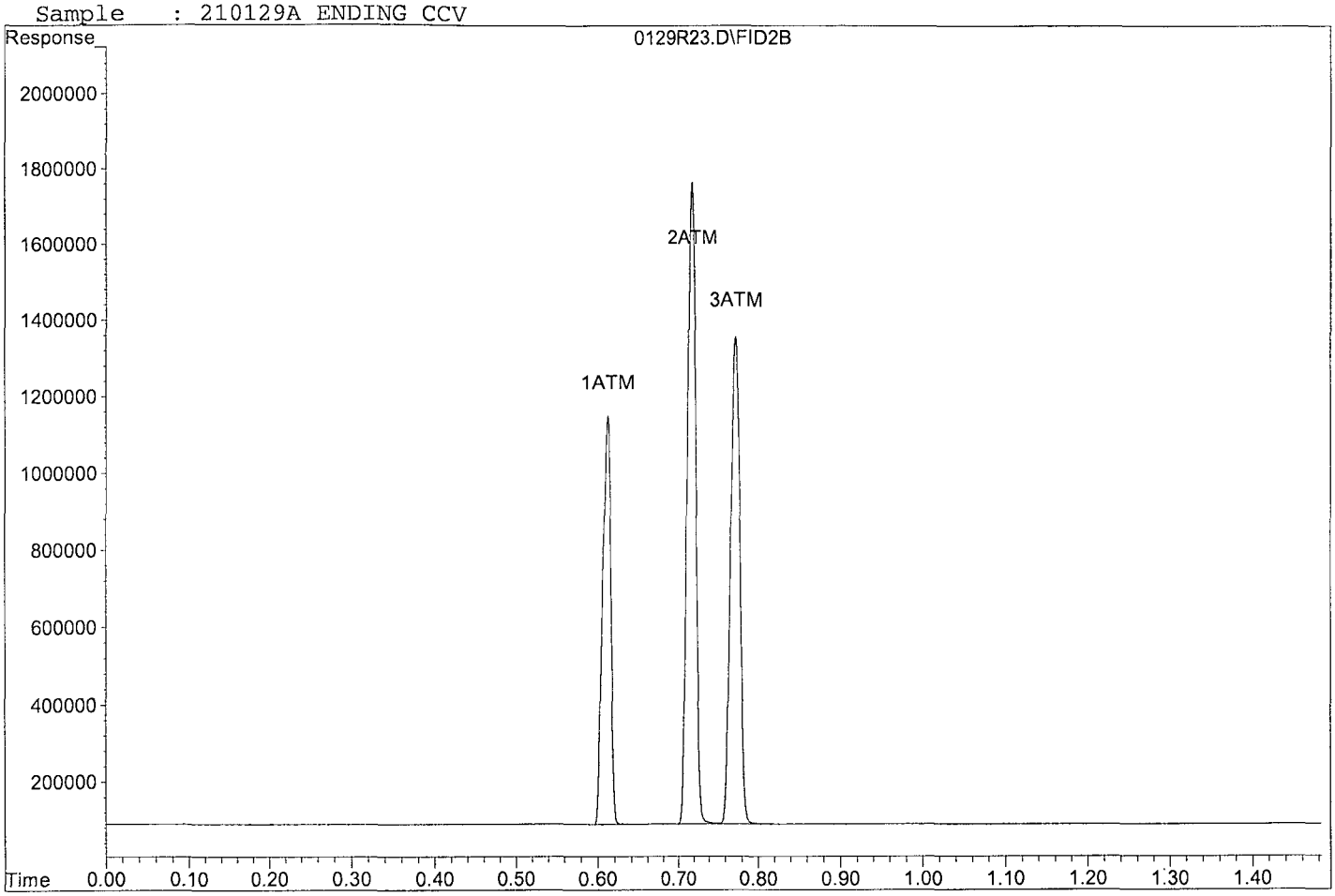
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1039548	84.221 ppb
2) ATM Ethane	0.72	1683808	183.578 ppb
3) ATM Ethene	0.77	1243336	169.825 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R23.D
Sample : 210129A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R19.D Vial: 19
Acq On : 29 Jan 21 13:40 Operator: LS
Sample : BA25866W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 13:43 2021 Quant Results File: RSK0914A.RES

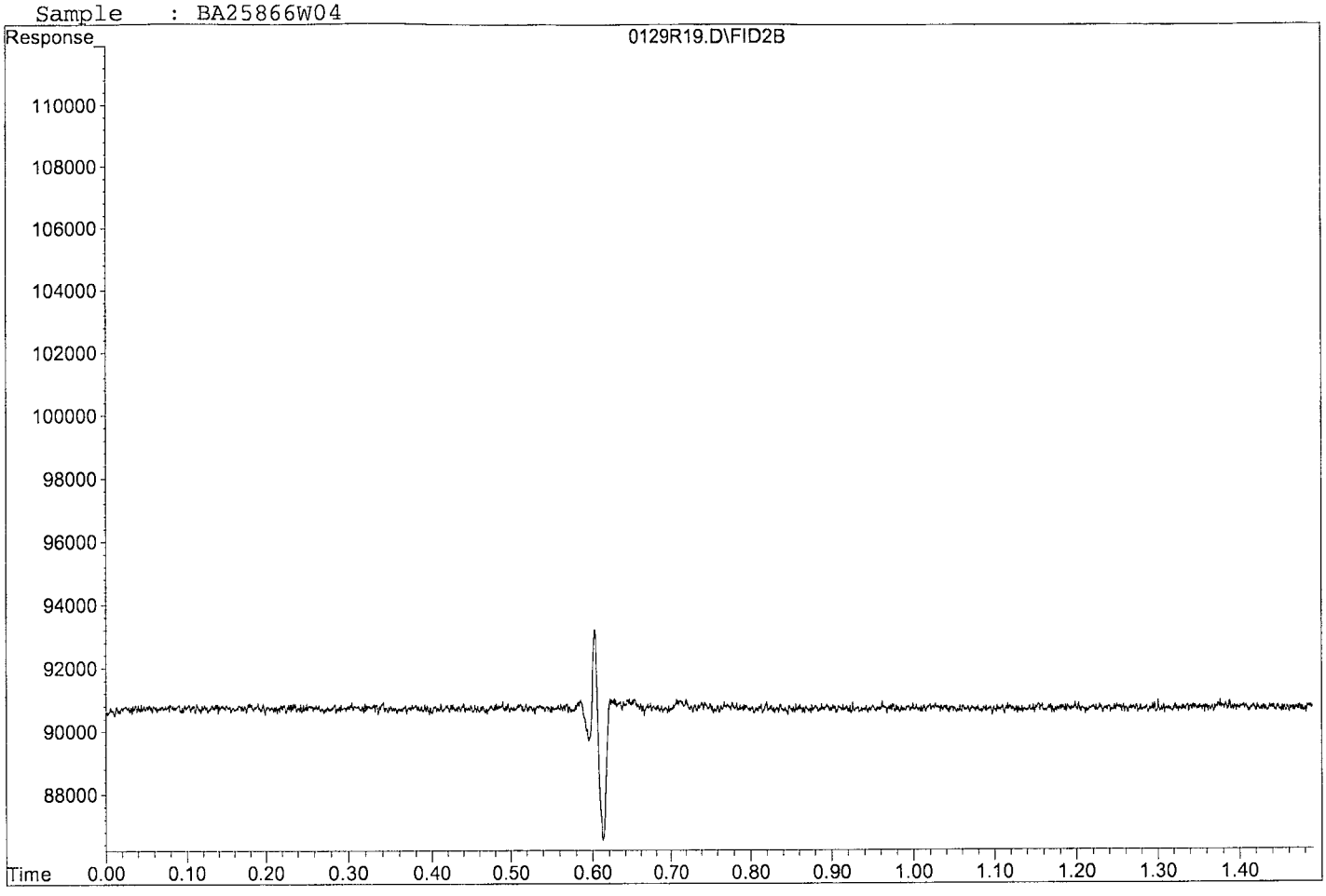
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R19.D
Sample : BA25866W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R20.D Vial: 20
Acq On : 29 Jan 21 13:43 Operator: LS
Sample : BA25867W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 13:45 2021 Quant Results File: RSK0914A.RES

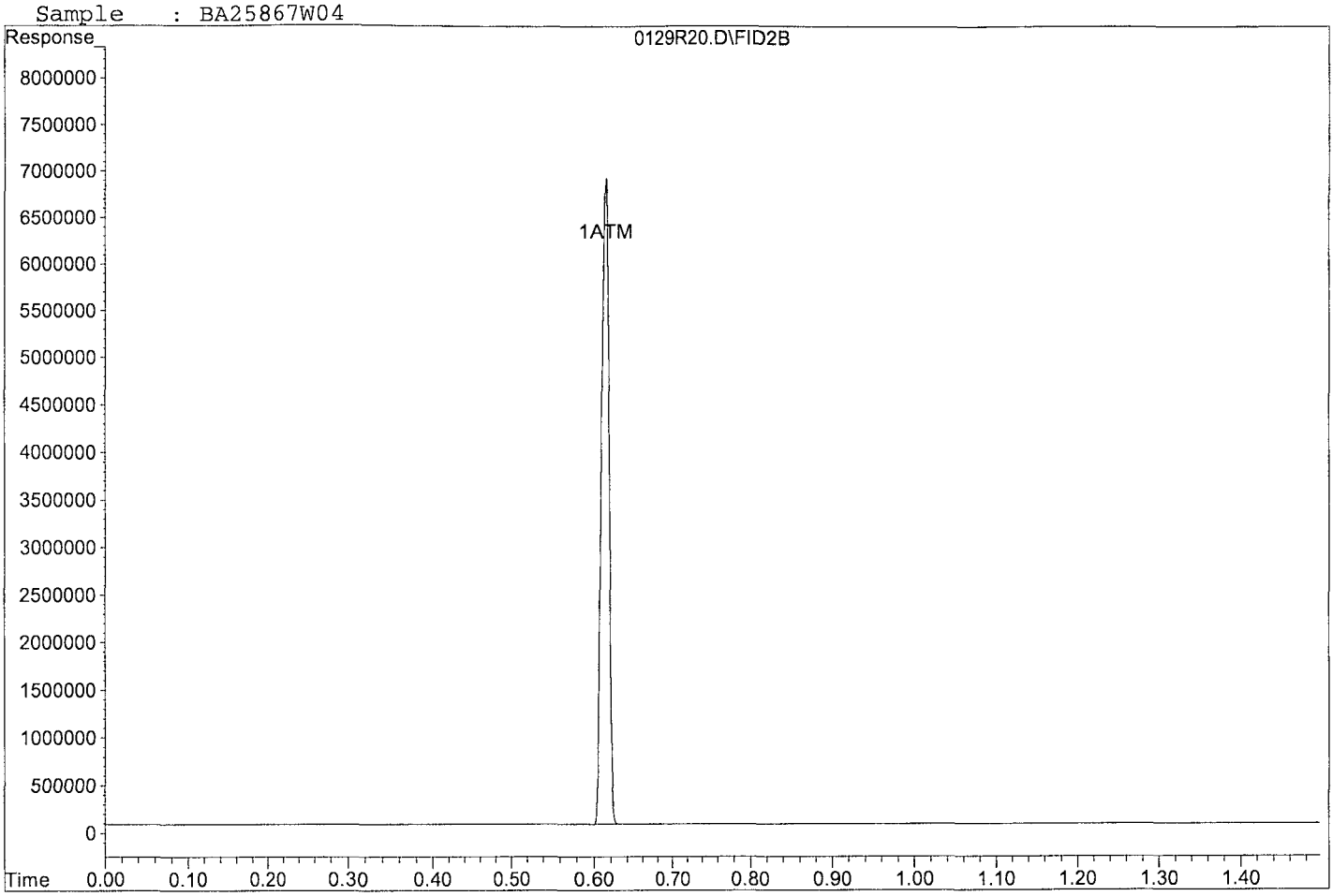
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	6940344	562.676	ppb
Target Compounds				
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R20.D
Sample : BA25867W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R21.D Vial: 21
Acq On : 29 Jan 21 13:46 Operator: LS
Sample : BA25869W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 13:48 2021 Quant Results File: RSK0914A.RES

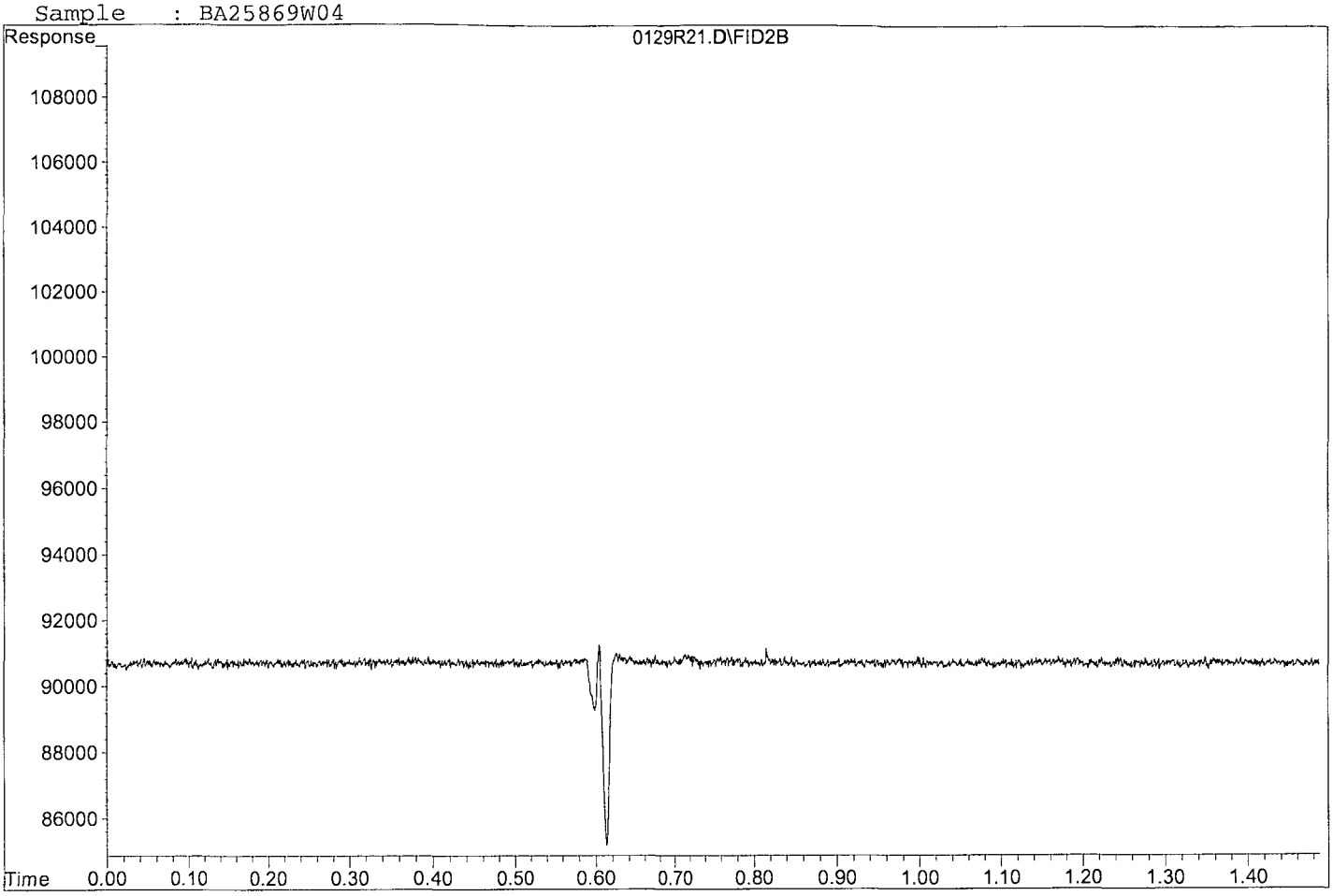
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R21.D
Sample : BA25869W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R22.D Vial: 22
Acq On : 29 Jan 21 13:49 Operator: LS
Sample : BA25870W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 13:51 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R22.D
Sample : BA25870W04

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R04.D Vial: 4
Acq On : 29 Jan 21 12:09 Operator: LS
Sample : 210129A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 12:11 2021 Quant Results File: RSK0914A.RES

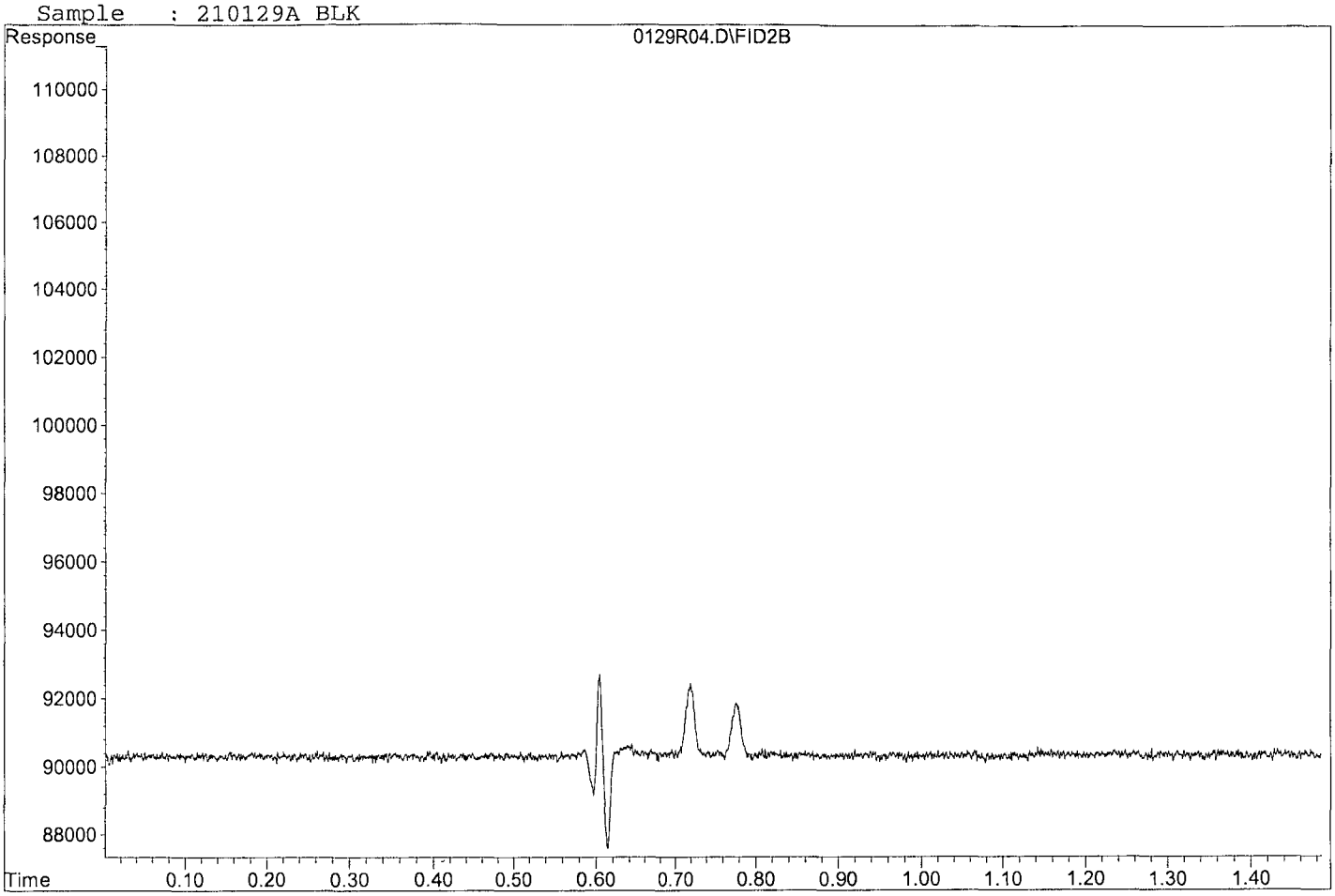
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R04.D
Sample : 210129A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R02.D Vial: 2
Acq On : 29 Jan 21 12:03 Operator: LS
Sample : 210129A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 12:05 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

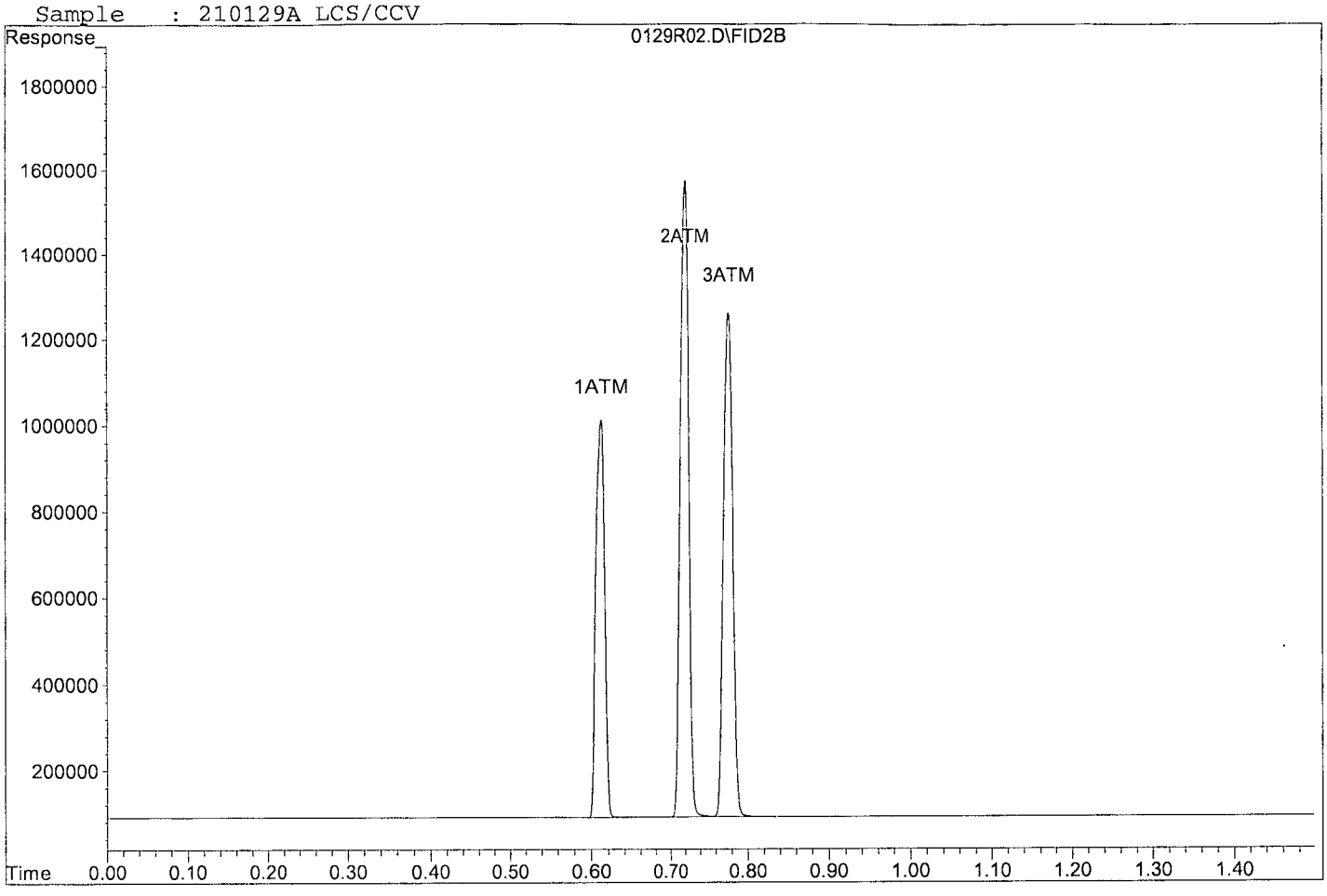
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	912028	73.881	ppb
2) ATM Ethane	0.72	1477939	160.993	ppb
3) ATM Ethene	0.78	1163617	158.984	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R02.D
Sample : 210129A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0129R03.D Vial: 3
Acq On : 29 Jan 21 12:06 Operator: LS
Sample : 210129A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jan 29 12:08 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

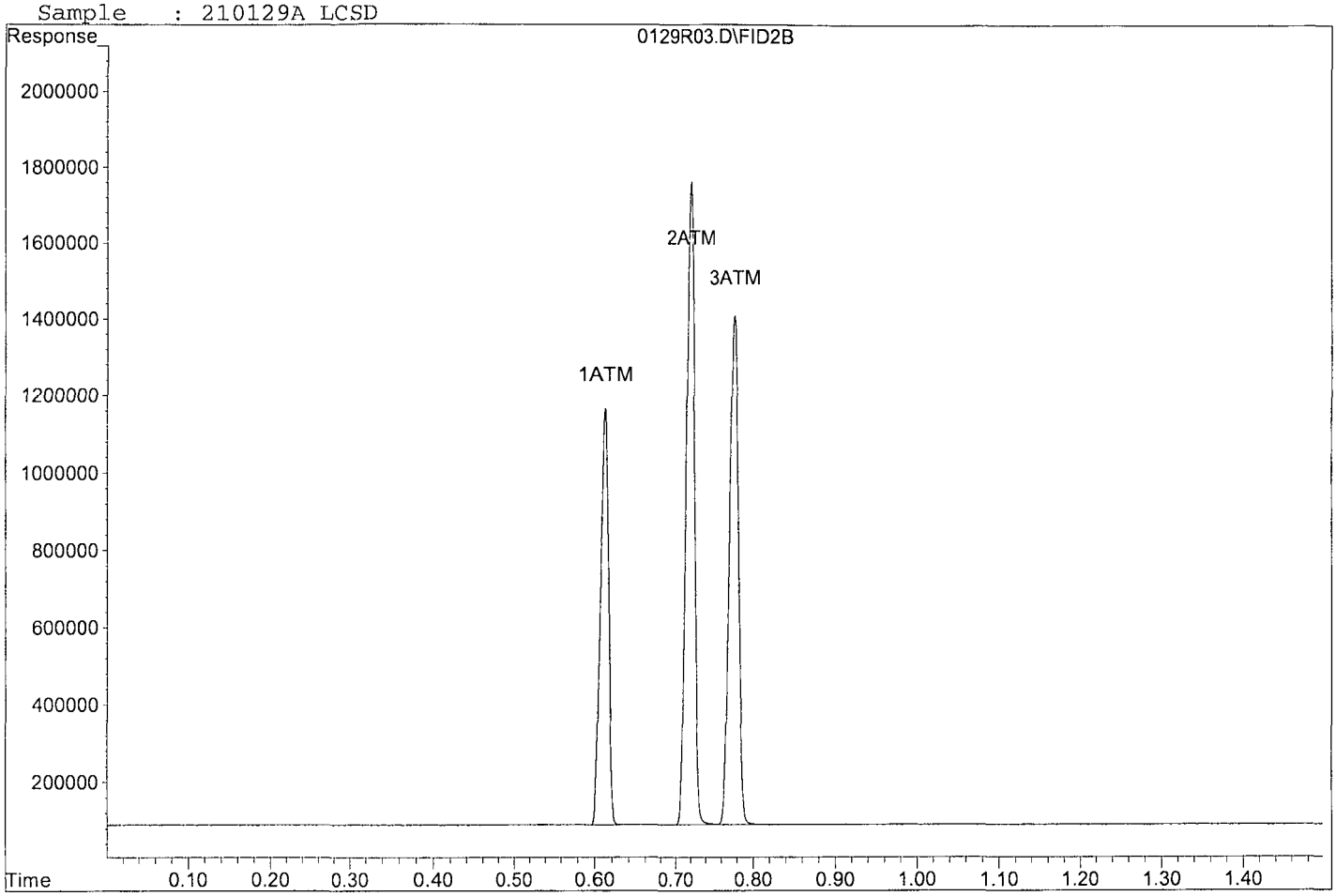
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1036710	83.991 ppb
2) ATM Ethane	0.72	1638395	178.596 ppb
3) ATM Ethene	0.78	1289822	176.146 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0129R03.D
Sample : 210129A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 1/29/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0129R02.D	1	210129A LCS/CCV		29 Jan 21 12:03
2	3	0129R03.D	1	210129A LCSD		29 Jan 21 12:06
3	4	0129R04.D	1	210129A BLK		29 Jan 21 12:09
4	19	0129R19.D	1	BA25866W04		29 Jan 21 13:40
5	20	0129R20.D	1	BA25867W04		29 Jan 21 13:43
6	21	0129R21.D	1	BA25869W04		29 Jan 21 13:46
7	22	0129R22.D	1	BA25870W04		29 Jan 21 13:49
8	23	0129R23.D	1	210129A ENDING CCV		29 Jan 21 13:55
9	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
10	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
11	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
12	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
13	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
14	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
15	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
16	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

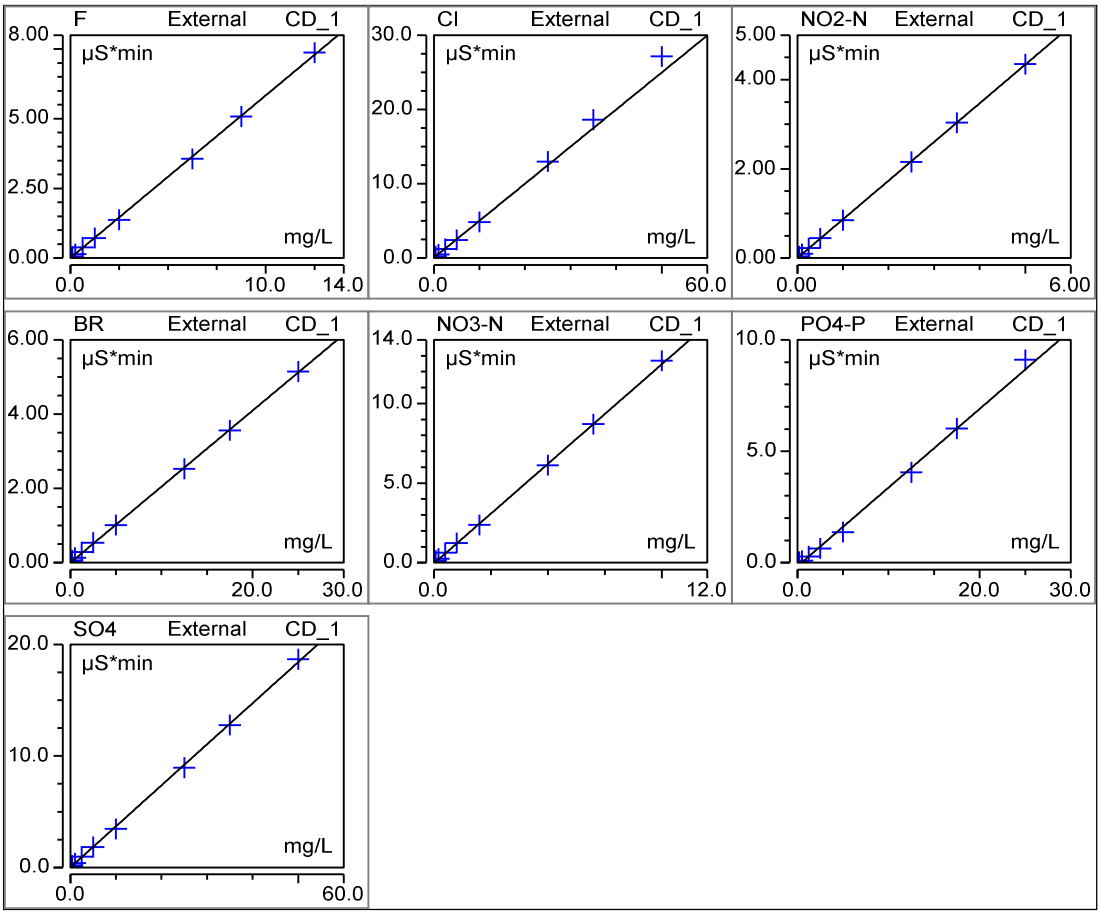
Calibration Batch Report

Sequence:	**210126**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:51**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.583	0.000	99.9606
Cl	Area	Lin, WithOffset, 1/R²	9.000	0.030	0.499	0.000	99.5440
NO2-N	Area	Lin	9.000	0.000	0.868	0.000	99.9956
BR	Area	Lin	9.000	0.000	0.205	0.000	99.9804
NO3-N	Area	Lin, WithOffset, 1/lg²(A)	9.000	-0.049	1.251	0.000	99.9303
PO4-P	Area	Lin, WithOffset, 1/lg²(A)	9.000	-0.158	0.353	0.000	99.4861
SO4	Area	Lin	9.000	0.000	0.369	0.000	99.9414

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2021.01.26	0.024	0.2020	0.0254	0.1150	0.0845	0.4898	0.2651
Cal 2 2021.01.26	0.095	0.4226	0.0471	0.3104	0.1413	0.5445	0.4879
Cal 3 2021.01.26	0.248	0.9020	0.1073	0.6538	0.2432	0.6993	1.0420
Cal 4 2021.01.26	0.662	2.4157	0.2550	1.3965	0.5409	1.2440	2.6396
Cal 5 2021.01.26	1.228	4.8344	0.5116	2.6302	1.0296	2.2684	4.9686
Cal 6 2021.01.26	2.355	9.6622	0.9782	4.9454	1.9396	4.3403	9.3756
Cal 7 2021.01.26	6.104	25.9739	2.4840	12.3418	4.9338	11.9325	24.2815
Cal 8 2021.01.26	8.704	37.2594	3.4985	17.4083	6.9973	17.5014	34.6687
Cal 9 2021.01.26	12.635	54.3347	5.0118	25.1299	10.1774	26.2361	50.7104

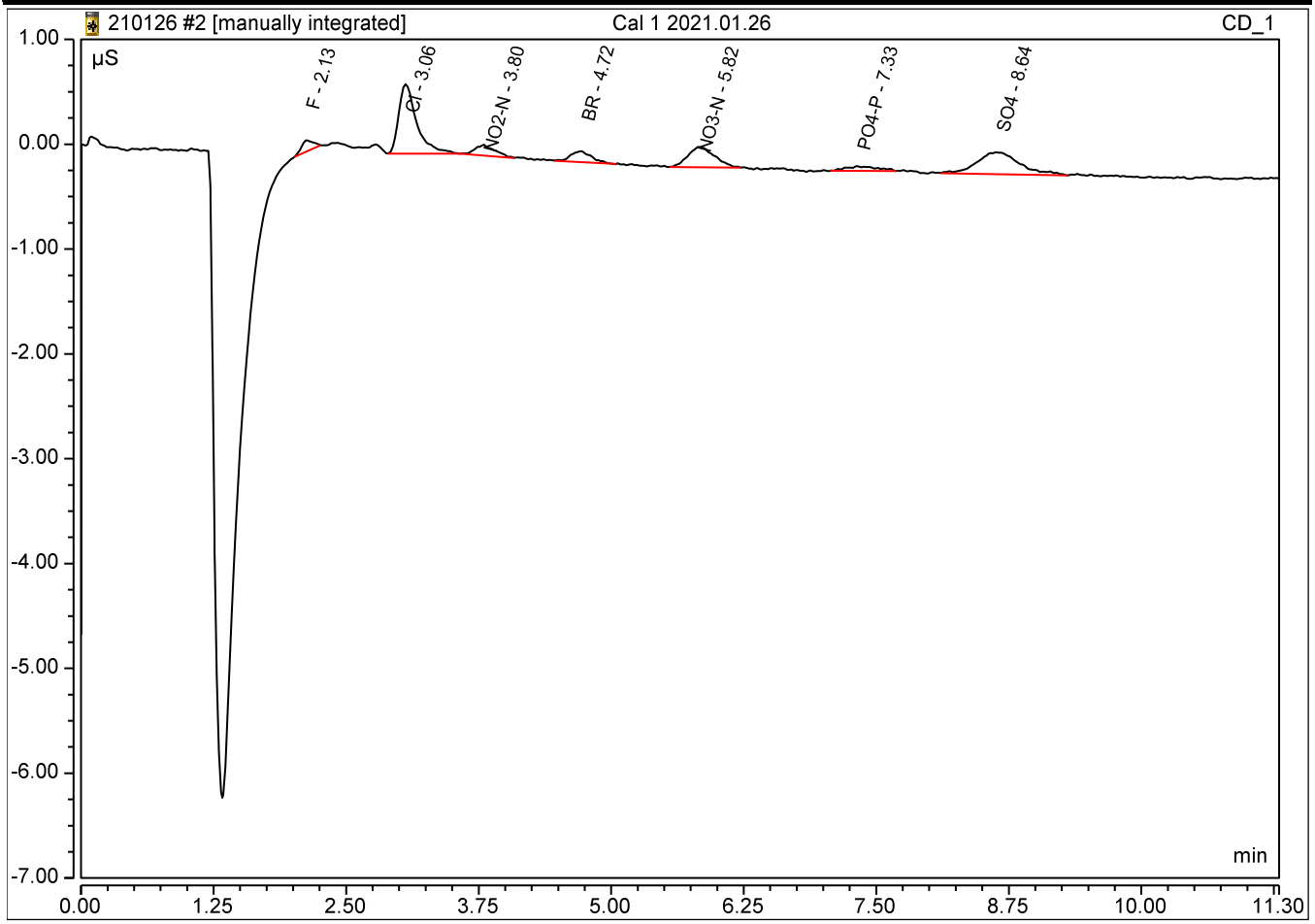


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 1 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 16:54**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB*	0.014	0.109	0.02	0.05	47.1%
2	3.06	**Cl**	BMB*	0.131	0.665	0.20	0.2	101.0%
3	3.80	**NO2-N**	BMB*	0.022	0.103	0.03	0.02	126.8%
4	4.72	**BR**	BMB*	0.024	0.104	0.11	0.1	115.0%
5	5.82	**NO3-N**	BMB	0.057	0.195	0.08	0.04	211.4%
6	7.33	**PO4-P**	BMB*	0.015	0.045	0.49	0.1	489.8%
7	8.64	**SO4**	BMB*	0.098	0.208	0.27	0.2	132.6%



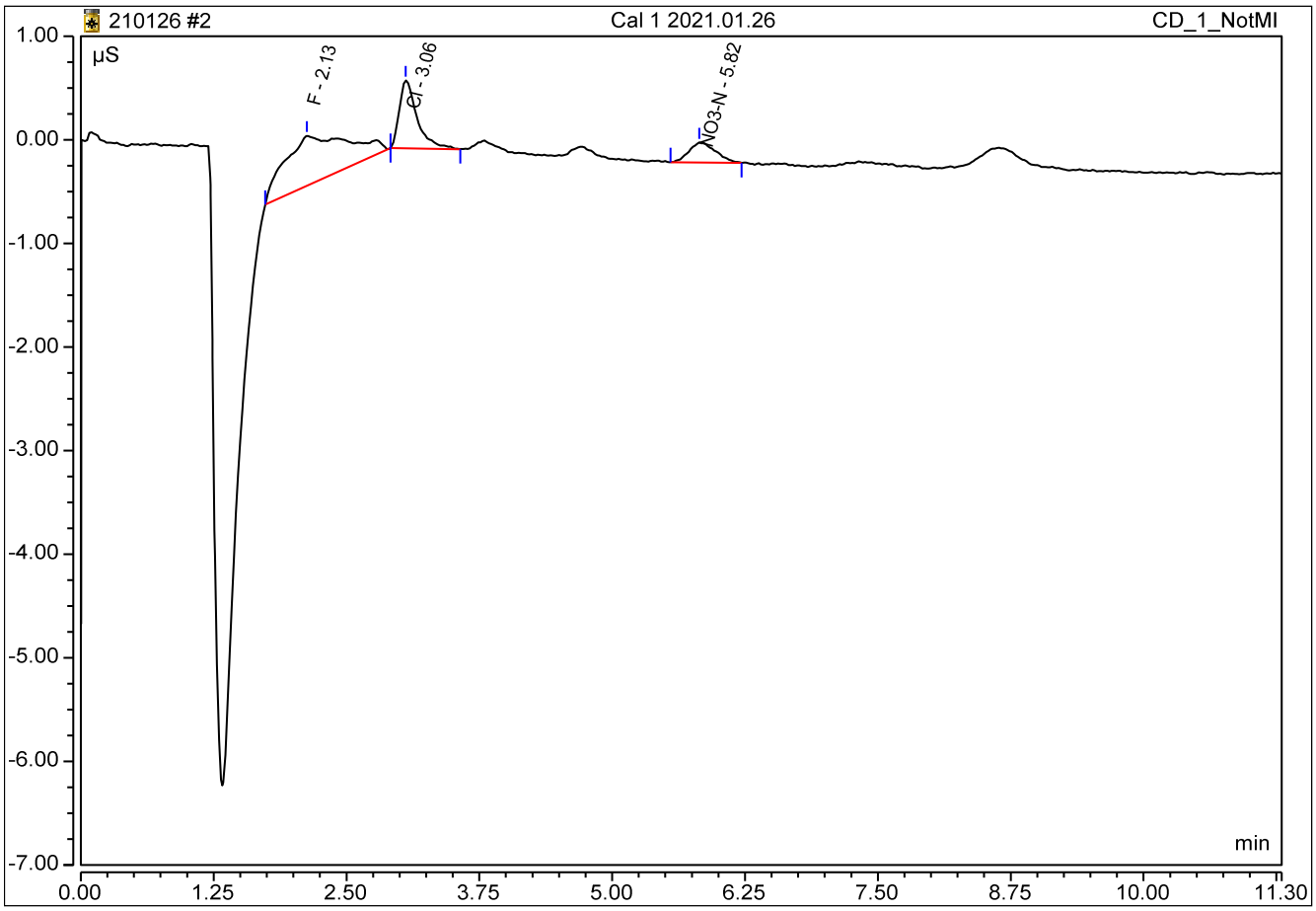
MI 5 F Br NO2 PO4 SO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 16:54**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.13	**F**	BMB*	0.319	0.484	0.5710
2	3.06	**Cl**	BMB*	0.127	0.656	0.2002
3	n.a.	**NO2-N**	BMB*	n.a.	n.a.	n.a.
4	n.a.	**BR**	BMB*	n.a.	n.a.	n.a.
5	5.82	**NO3-N**	BMB	0.057	0.195	0.0845
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	n.a.	**SO4**	BMB*	n.a.	n.a.	n.a.

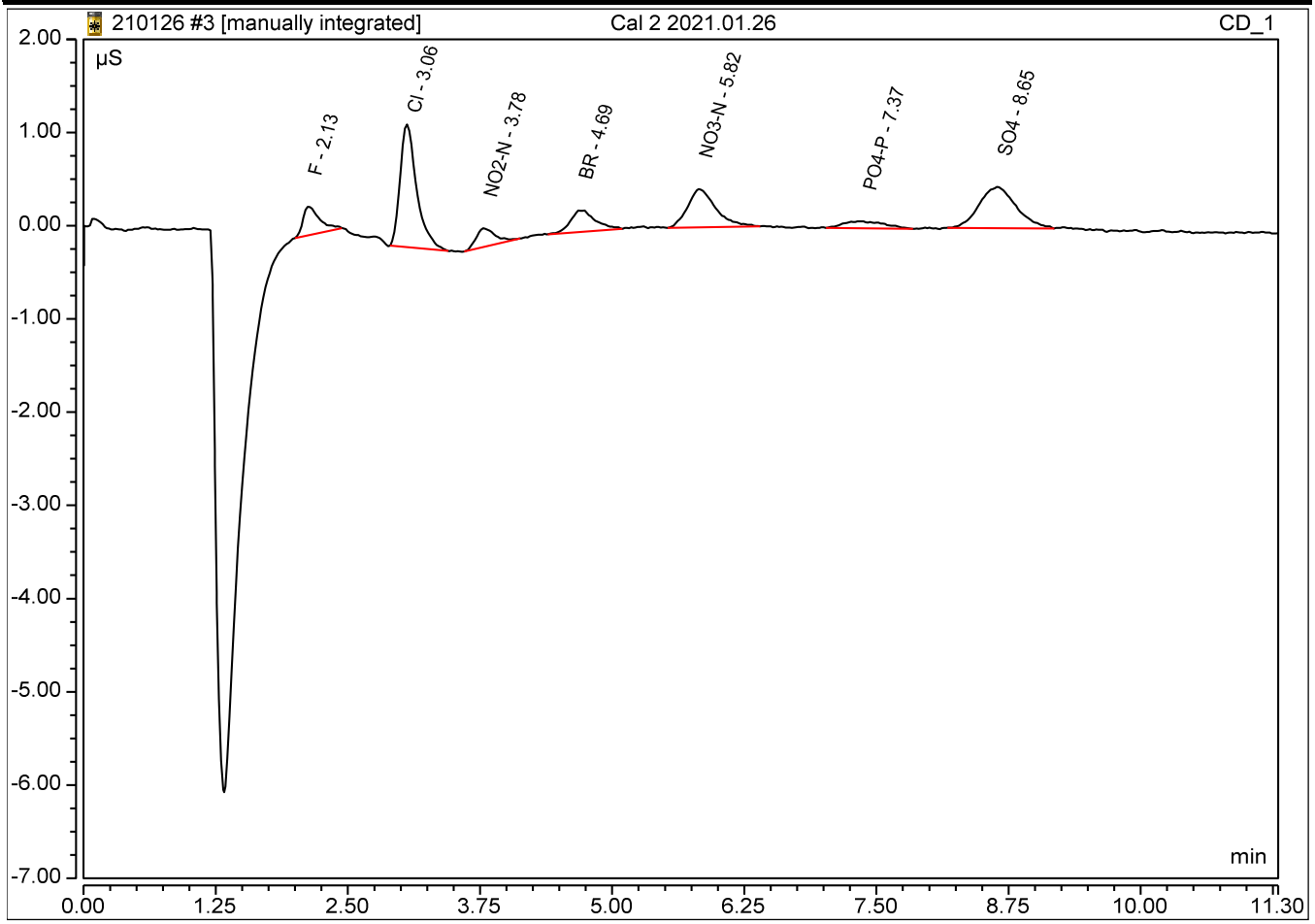


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 2 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:09**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB*	0.056	0.309	0.10	0.1	95.4%
2	3.06	**Cl**	BMB	0.241	1.318	0.42	0.4	105.7%
3	3.78	**NO2-N**	BMB	0.041	0.200	0.05	0.04	117.8%
4	4.69	**BR**	BMB	0.064	0.232	0.31	0.2	155.2%
5	5.82	**NO3-N**	BMB	0.128	0.410	0.14	0.08	176.6%
6	7.37	**PO4-P**	BMB*	0.034	0.075	0.54	0.2	272.2%
7	8.65	**SO4**	BMB	0.180	0.442	0.49	0.4	122.0%

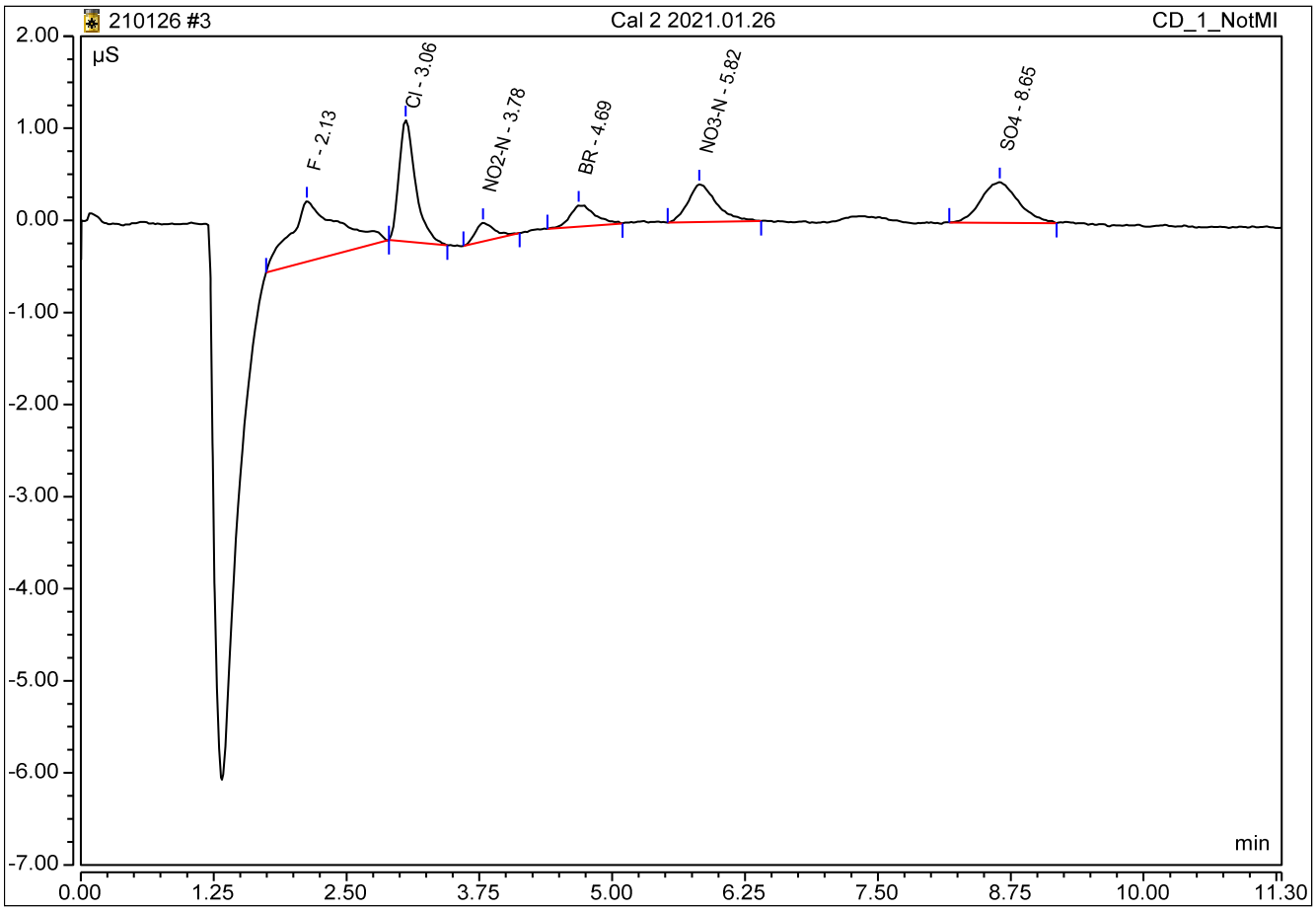


MI 5 F PO4 GA 01/26/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:09**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.13	**F**	BMB*	0.346	0.656	0.6195
2	3.06	**Cl**	BMB	0.241	1.318	0.4277
3	3.78	**NO2-N**	BMB	0.041	0.200	0.0471
4	4.69	**BR**	BMB	0.064	0.232	0.3104
5	5.82	**NO3-N**	BMB	0.128	0.410	0.1413
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	8.65	**SO4**	BMB	0.180	0.442	0.4879

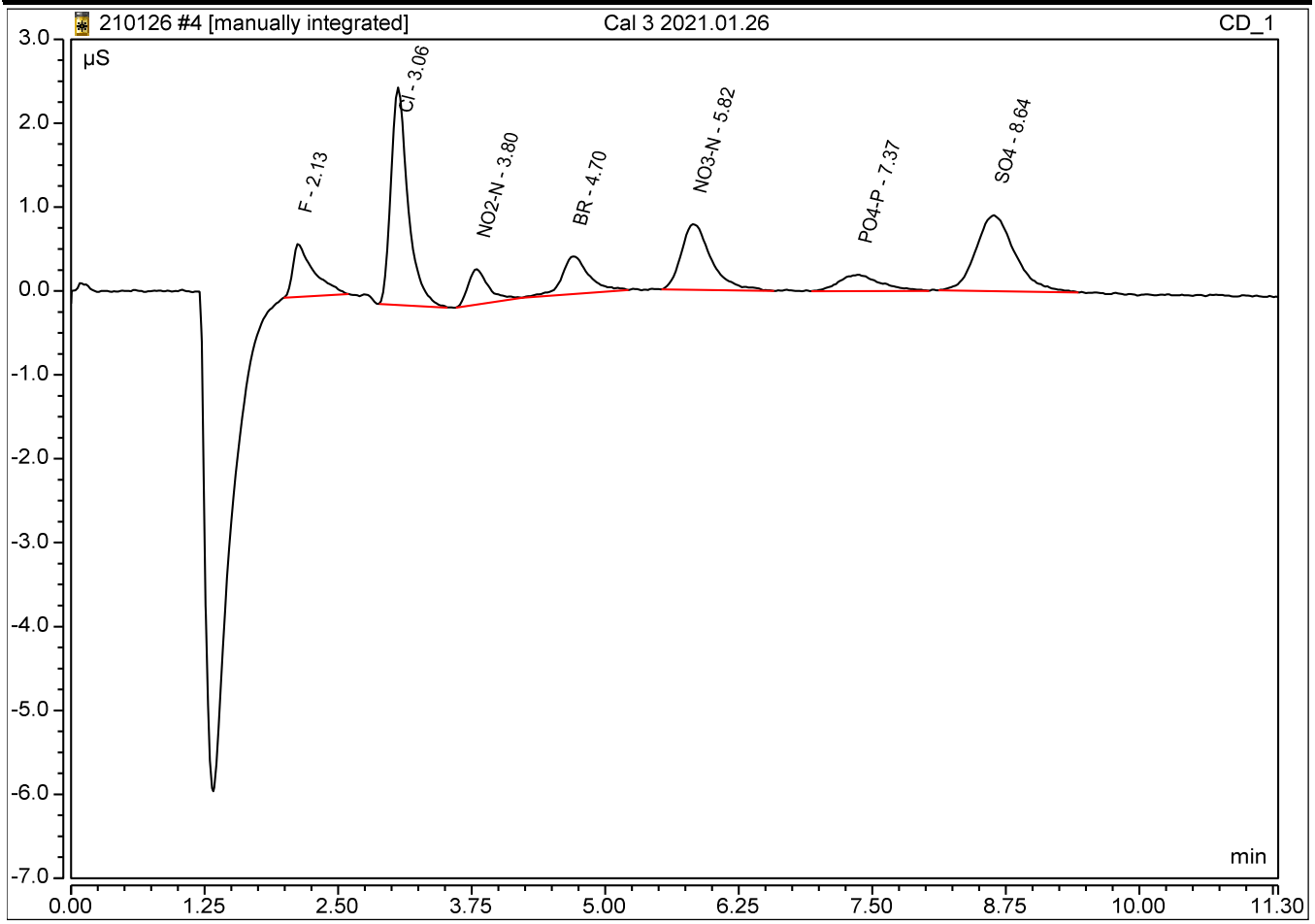


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 3 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB*	0.145	0.633	0.25	0.25	99.2%
2	3.06	**Cl**	BMB	0.480	2.593	0.90	1	90.2%
3	3.80	**NO2-N**	BMB	0.093	0.422	0.11	0.1	107.3%
4	4.70	**BR**	BMB	0.134	0.449	0.65	0.5	130.8%
5	5.82	**NO3-N**	BMB	0.255	0.782	0.24	0.2	121.6%
6	7.37	**PO4-P**	BMB*	0.089	0.196	0.70	0.5	139.9%
7	8.64	**SO4**	BMB	0.384	0.905	1.04	1	104.2%



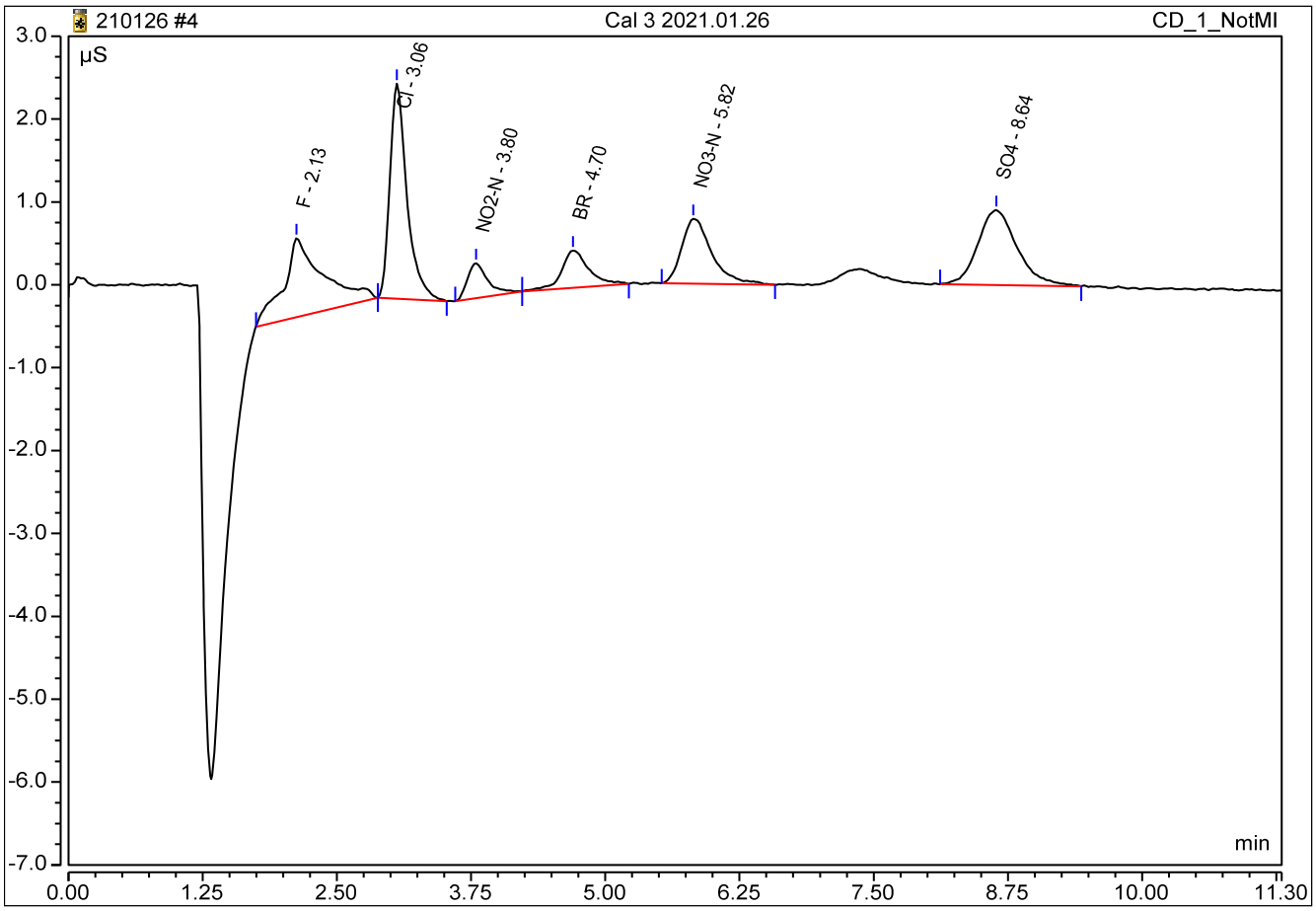
MI 5 F PO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.13	**F**	BMB*	0.406	0.951	0.7268
2	3.06	**Cl**	BMB	0.480	2.593	0.9060
3	3.80	**NO2-N**	BMB	0.093	0.422	0.1073
4	4.70	**BR**	BMB	0.134	0.449	0.6538
5	5.82	**NO3-N**	BMB	0.255	0.782	0.2432
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	8.64	**SO4**	BMB	0.384	0.905	1.0420

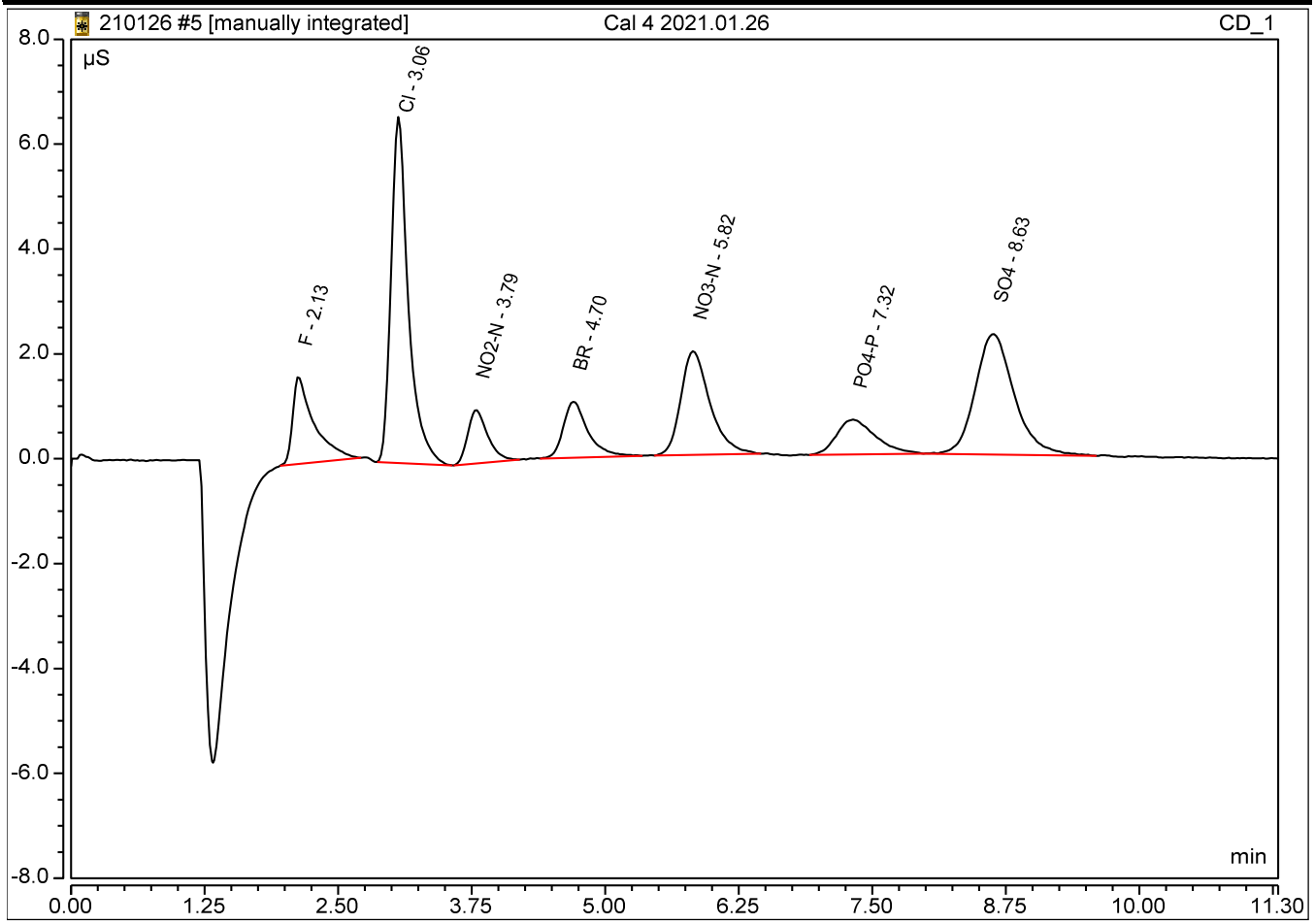


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 4 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:38**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB*	0.386	1.667	0.66	0.625	105.9%
2	3.06	**Cl**	BMB	1.235	6.598	2.42	2.5	96.6%
3	3.79	**NO2-N**	BMB	0.221	1.021	0.26	0.25	102.0%
4	4.70	**BR**	BMB	0.286	1.064	1.40	1.25	111.7%
5	5.82	**NO3-N**	BMB	0.628	1.976	0.54	0.5	108.2%
6	7.32	**PO4-P**	BMB	0.281	0.664	1.24	1.25	99.5%
7	8.63	**SO4**	BMB	0.973	2.300	2.64	2.5	105.6%



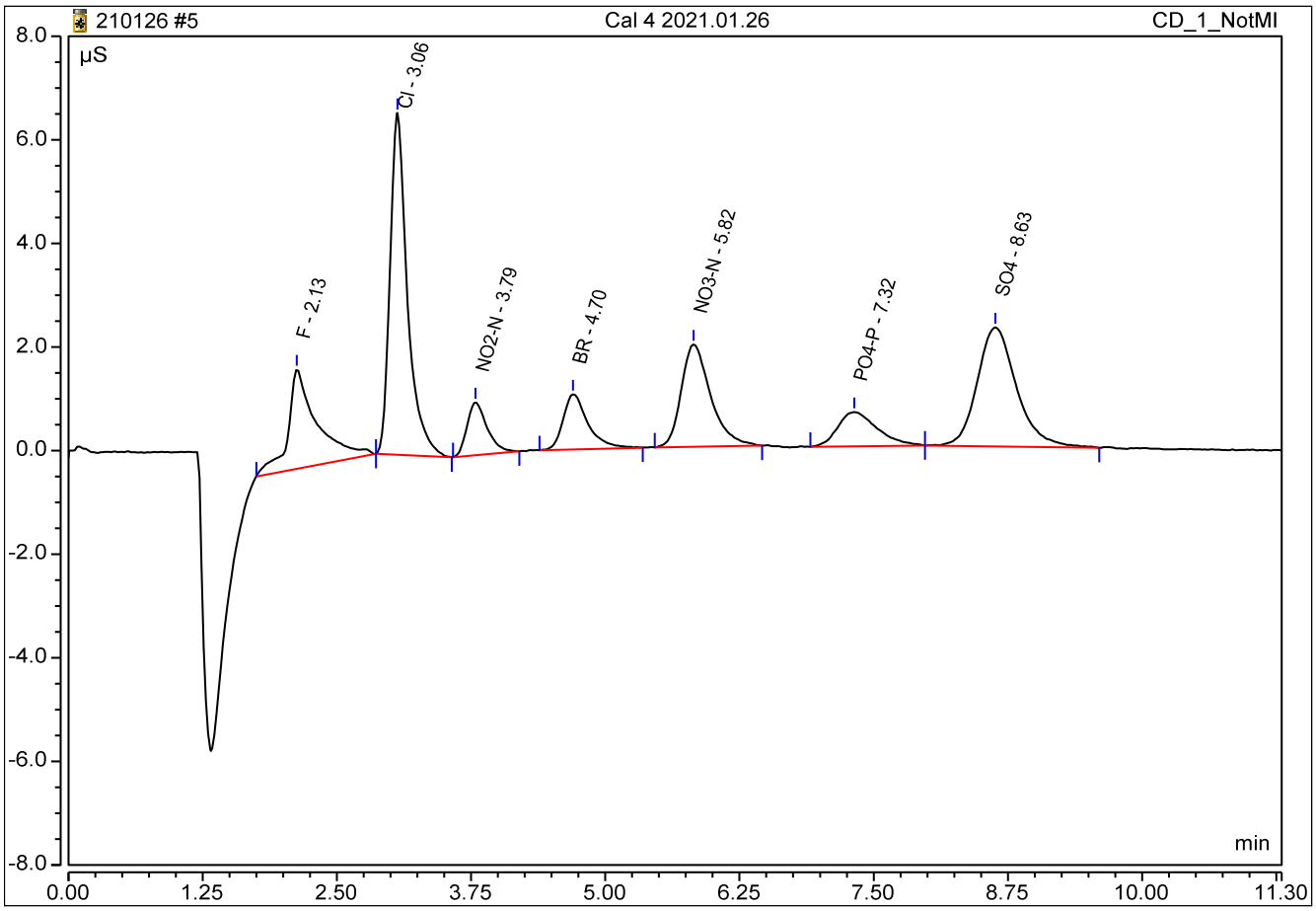
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:38**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.13	**F**	BMB*	0.599	1.920	1.0735
2	3.06	**Cl**	BMB	1.235	6.598	2.4164
3	3.79	**NO2-N**	BMB	0.221	1.021	0.2550
4	4.70	**BR**	BMB	0.286	1.064	1.3965
5	5.82	**NO3-N**	BMB	0.628	1.976	0.5409
6	7.32	**PO4-P**	BMB	0.281	0.664	1.2749
7	8.63	**SO4**	BMB	0.973	2.300	2.6396

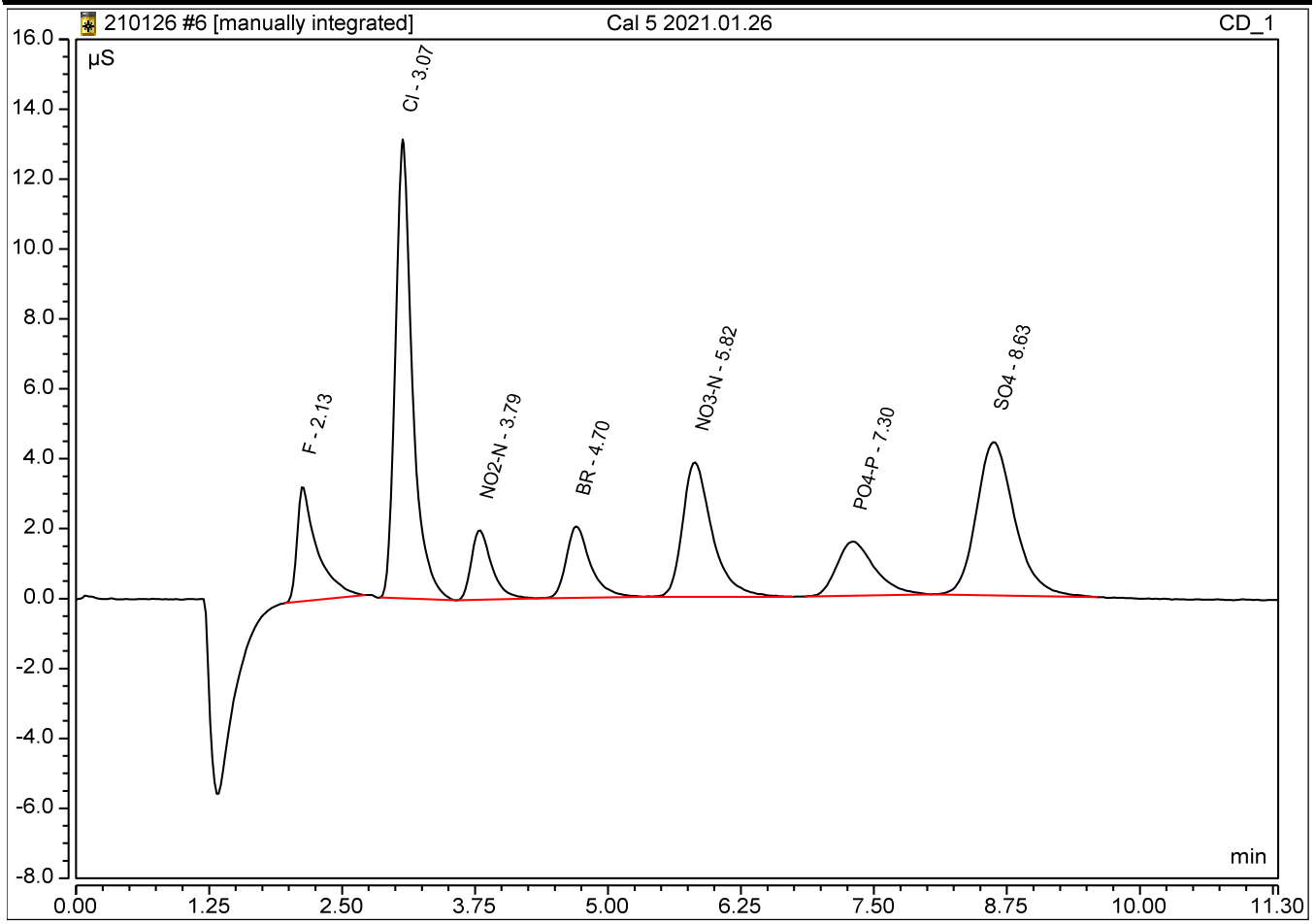


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 5 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:53**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB*	0.716	3.306	1.23	1.25	98.2%
2	3.07	**Cl**	BMB	2.442	13.134	4.83	5	96.7%
3	3.79	**NO2-N**	BMB	0.444	1.991	0.51	0.5	102.3%
4	4.70	**BR**	BMB	0.539	2.044	2.63	2.5	105.2%
5	5.82	**NO3-N**	BMB	1.239	3.848	1.03	1	103.0%
6	7.30	**PO4-P**	BMB	0.643	1.549	2.27	2.5	90.7%
7	8.63	**SO4**	BMB	1.831	4.391	4.97	5	99.4%

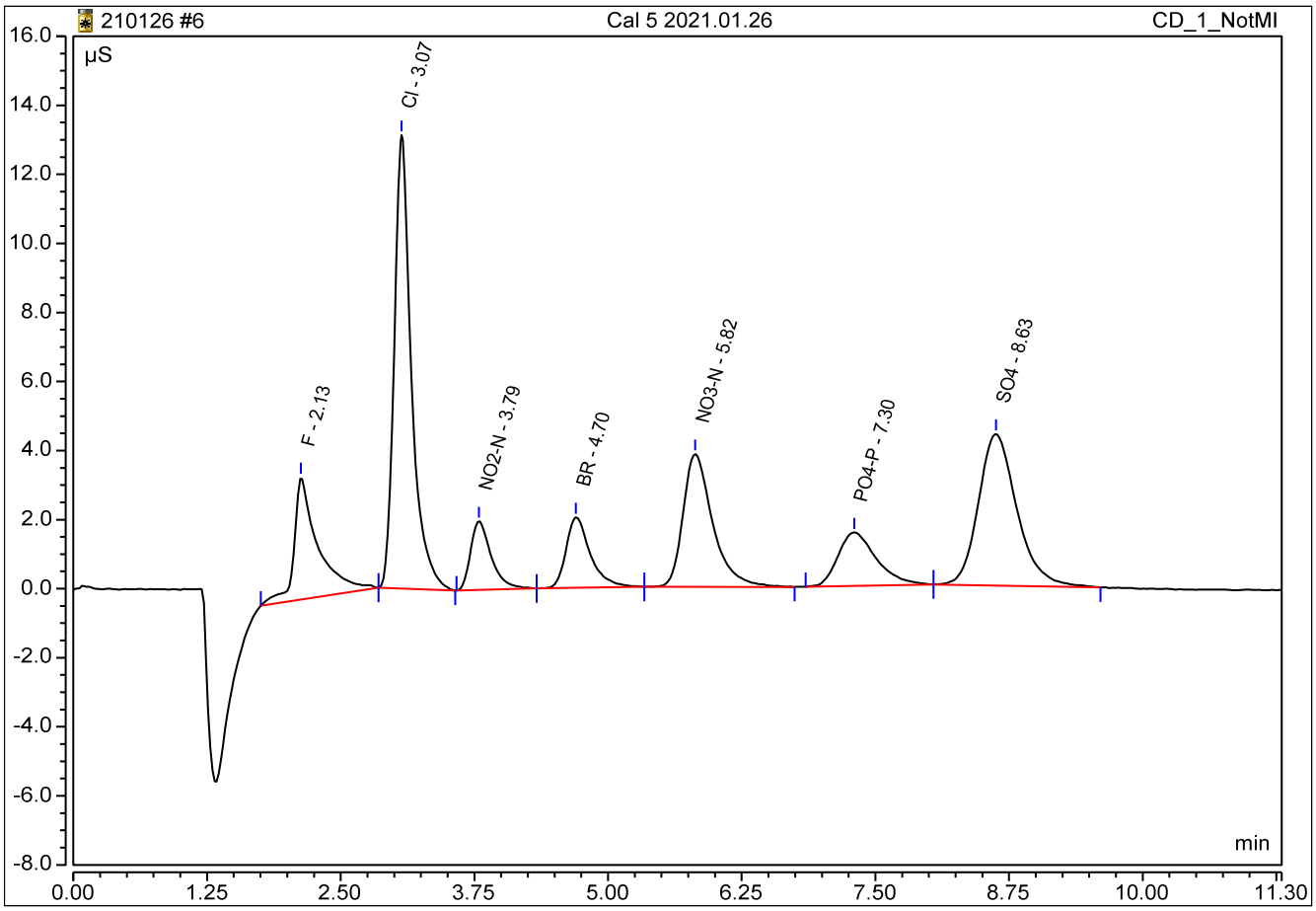


MI 5 F GA 01/27/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 17:53**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.13	**F**	BMB*	0.919	3.546	1.6461
2	3.07	**Cl**	BMB	2.442	13.134	4.8298
3	3.79	**NO2-N**	BMB	0.444	1.991	0.5116
4	4.70	**BR**	BMB	0.539	2.044	2.6302
5	5.82	**NO3-N**	BMB	1.239	3.848	1.0296
6	7.30	**PO4-P**	BMB	0.643	1.549	2.2920
7	8.63	**SO4**	BMB	1.831	4.391	4.9686

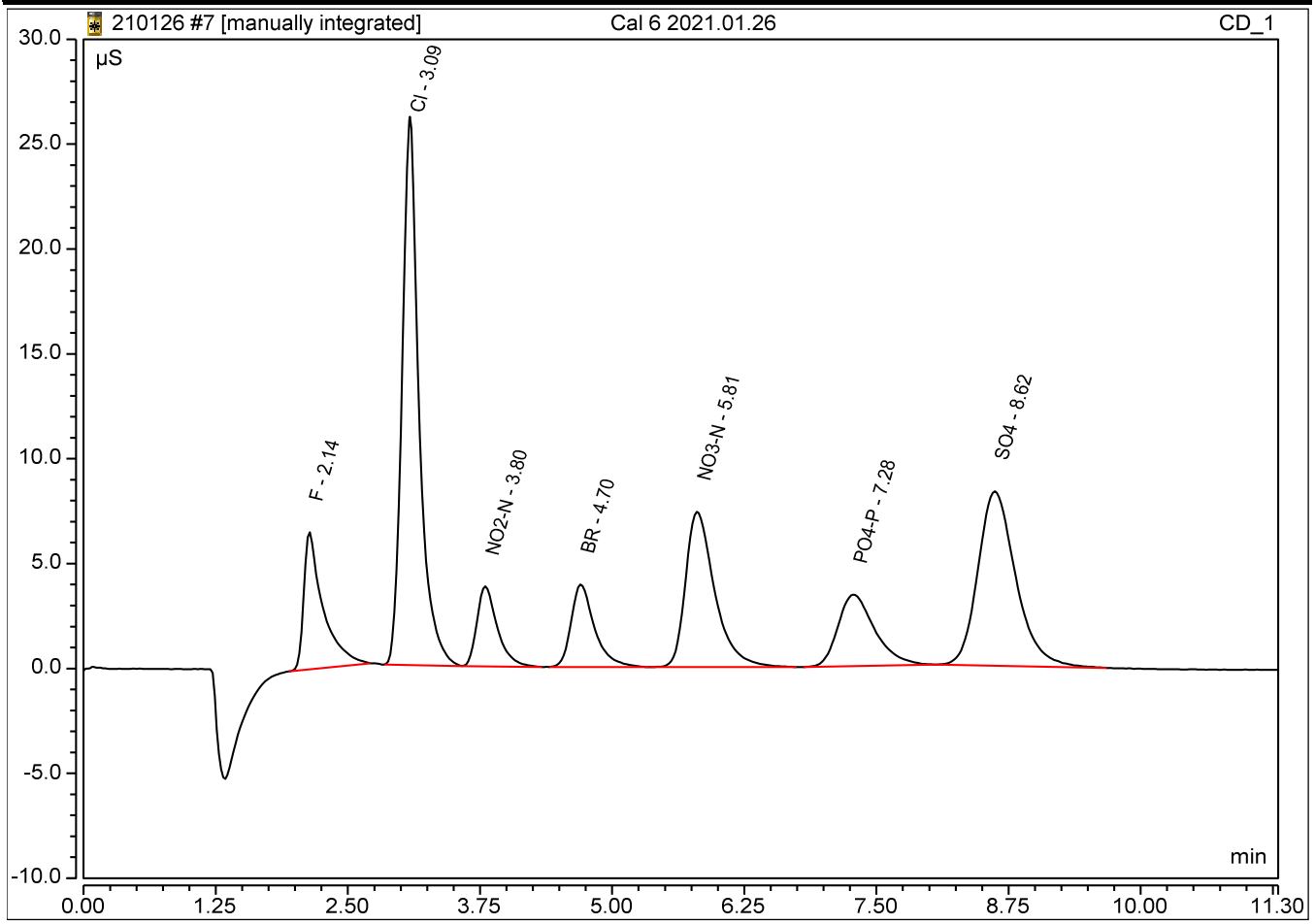


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 6 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:07**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	1.374	6.568	2.35	2.5	94.2%
2	3.09	**Cl**	BMB	4.850	26.144	9.66	10	96.6%
3	3.80	**NO2-N**	BMB	0.849	3.807	0.98	1	97.8%
4	4.70	**BR**	BMB	1.013	3.931	4.95	5	98.9%
5	5.81	**NO3-N**	BMB	2.378	7.418	1.94	2	97.0%
6	7.28	**PO4-P**	BMB	1.374	3.412	4.34	5	86.8%
7	8.62	**SO4**	BMB	3.455	8.312	9.38	10	93.8%



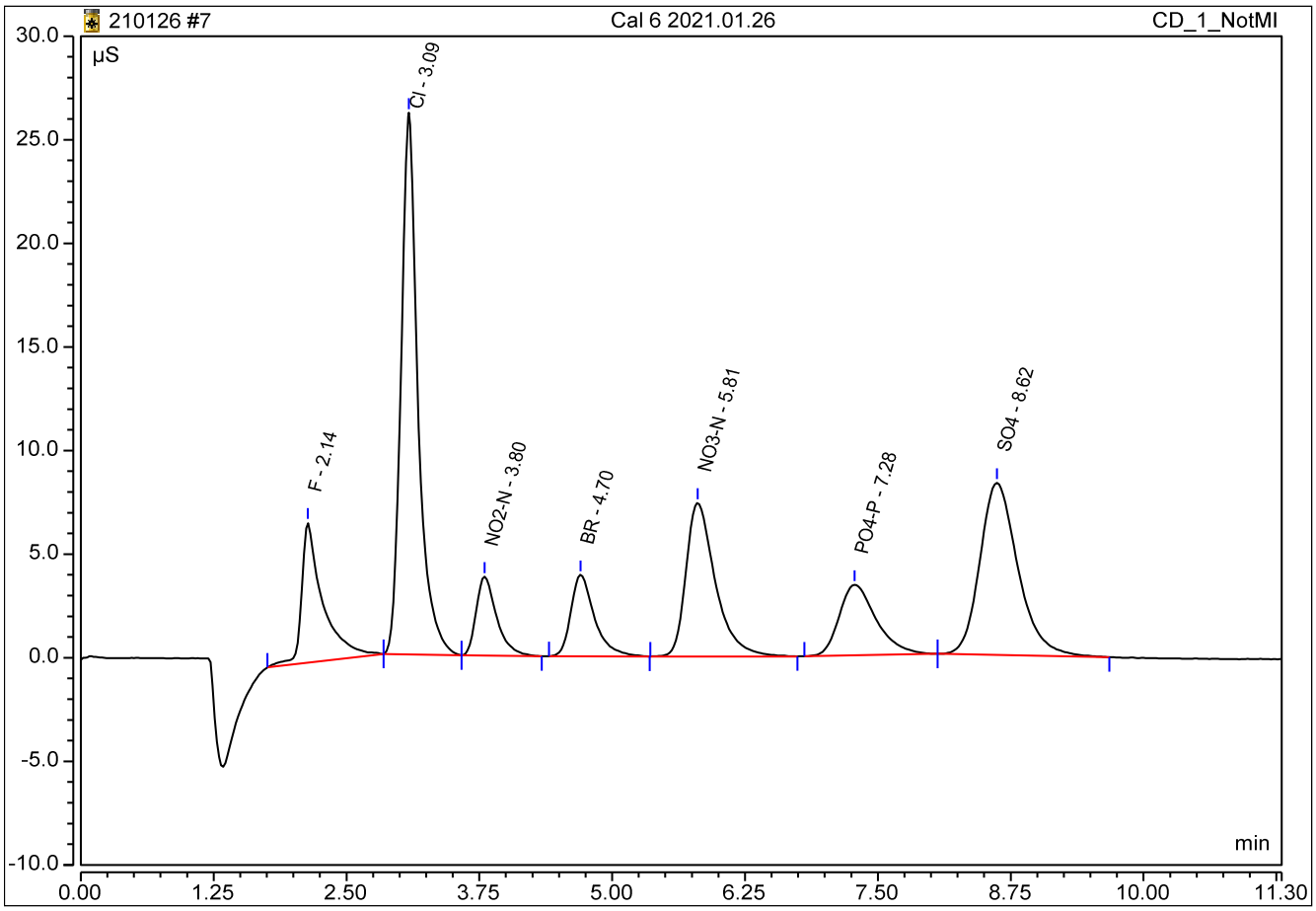
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:07**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	1.549	6.765	2.7763
2	3.09	**Cl**	BMB	4.850	26.144	9.6470
3	3.80	**NO2-N**	BMB	0.849	3.807	0.9782
4	4.70	**BR**	BMB	1.013	3.931	4.9454
5	5.81	**NO3-N**	BMB	2.378	7.418	1.9396
6	7.28	**PO4-P**	BMB	1.374	3.412	4.3492
7	8.62	**SO4**	BMB	3.455	8.312	9.3756

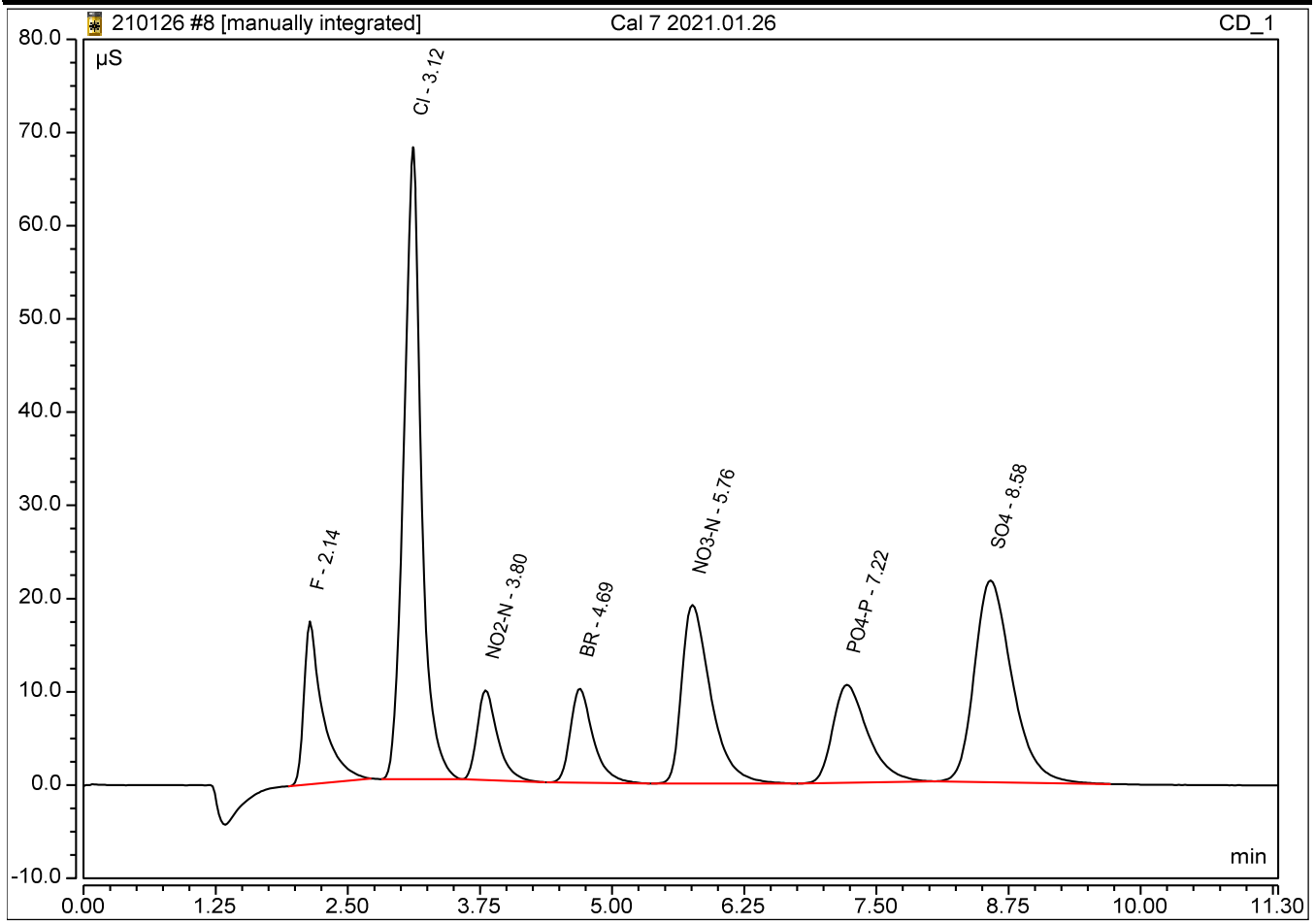


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 7 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:22**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	3.561	17.483	6.10	6.25	97.7%
2	3.12	**Cl**	BMB	12.986	67.809	25.97	25	103.9%
3	3.80	**NO2-N**	BMB	2.156	9.636	2.48	2.5	99.4%
4	4.69	**BR**	BMB	2.528	10.100	12.34	12.5	98.7%
5	5.76	**NO3-N**	BMB	6.125	19.164	4.93	5	98.7%
6	7.22	**PO4-P**	BMB	4.055	10.508	11.93	12.5	95.5%
7	8.58	**SO4**	BMB	8.948	21.657	24.28	25	97.1%



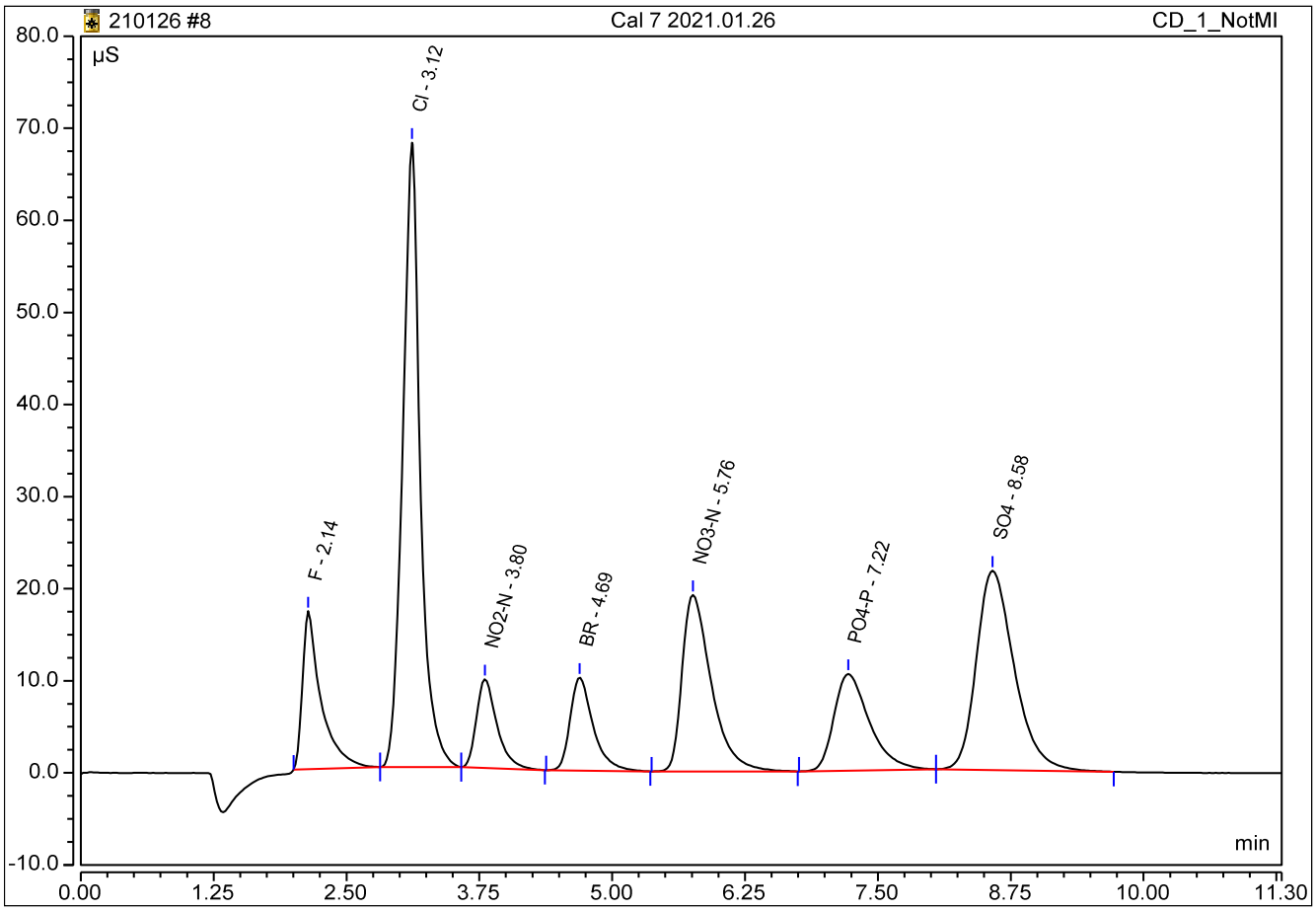
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:22**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	3.443	17.169	6.1689
2	3.12	**Cl**	BMB	12.986	67.809	25.9228
3	3.80	**NO2-N**	BMB	2.156	9.636	2.4840
4	4.69	**BR**	BMB	2.528	10.100	12.3418
5	5.76	**NO3-N**	BMB	6.125	19.164	4.9338
6	7.22	**PO4-P**	BMB	4.055	10.508	11.8875
7	8.58	**SO4**	BMB	8.948	21.657	24.2816

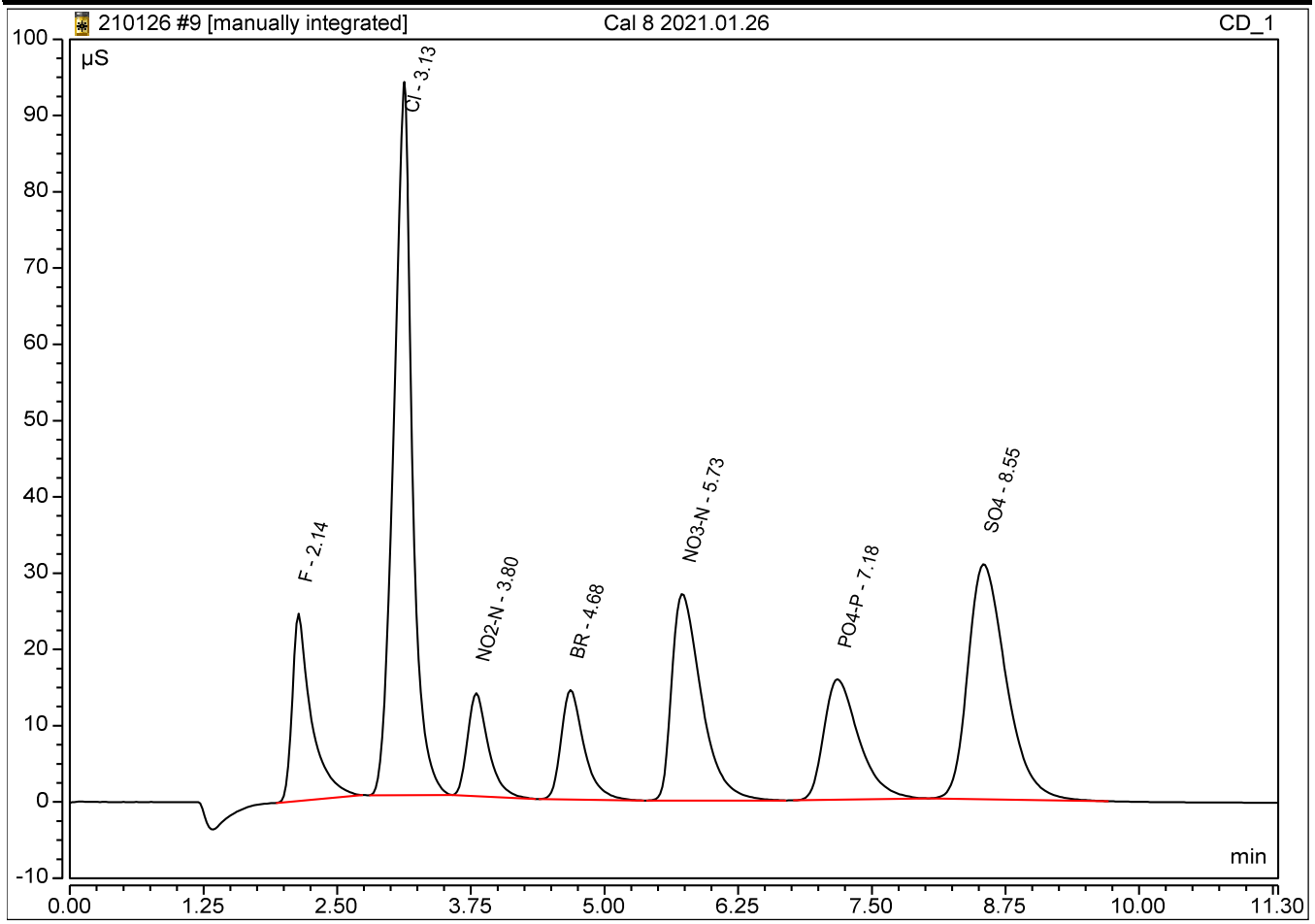


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 8 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:37**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	5.078	24.586	8.70	8.75	99.5%
2	3.13	**Cl**	BMB	18.615	93.504	37.26	35	106.5%
3	3.80	**NO2-N**	BMB	3.036	13.485	3.50	3.5	100.0%
4	4.68	**BR**	BMB	3.566	14.353	17.41	17.5	99.5%
5	5.73	**NO3-N**	BMB	8.706	27.108	7.00	7	100.0%
6	7.18	**PO4-P**	BMB	6.021	15.799	17.50	17.5	100.0%
7	8.55	**SO4**	BMB	12.775	30.840	34.67	35	99.1%



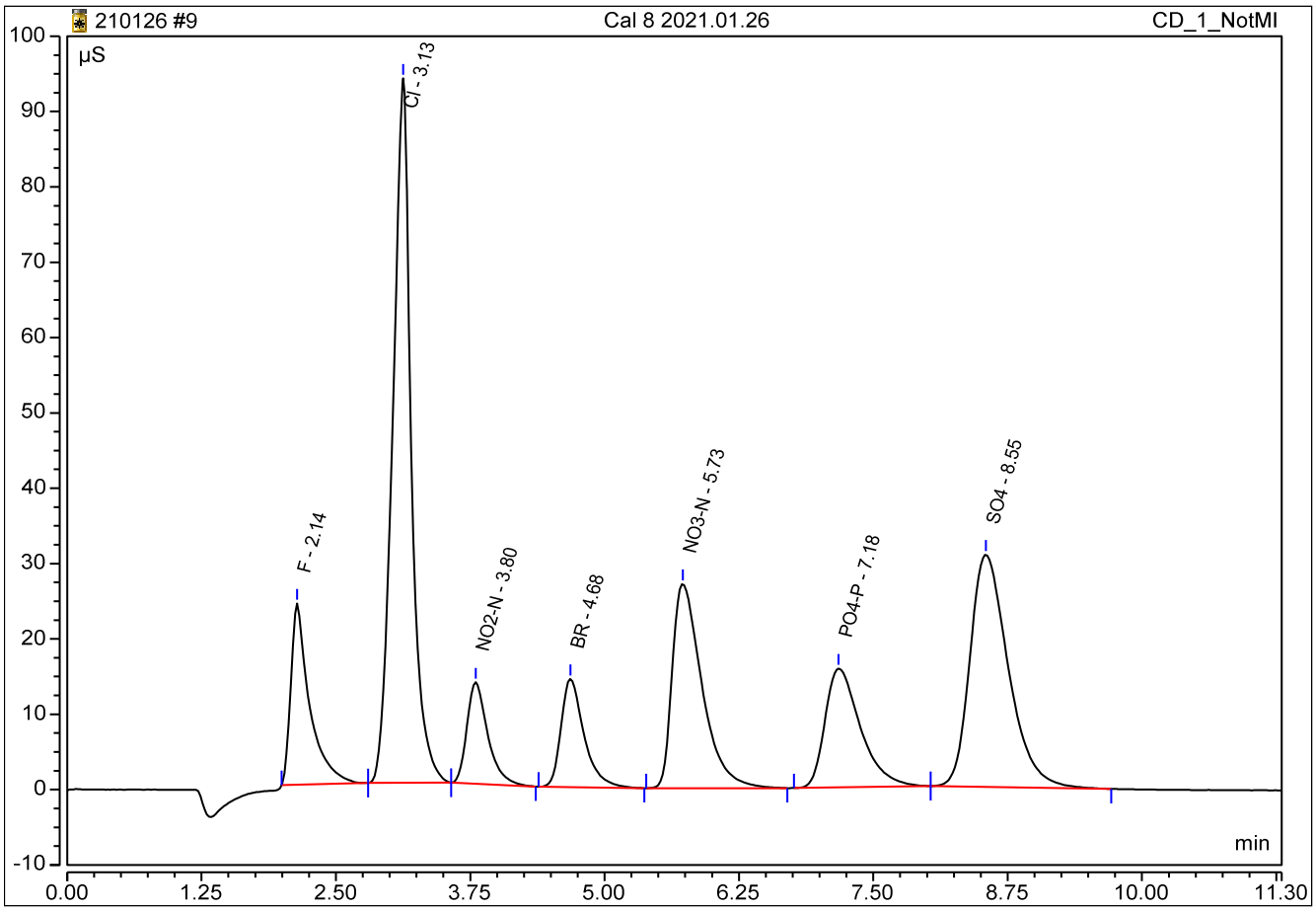
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:37**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	4.843	24.071	8.6771
2	3.13	**Cl**	BMB	18.615	93.504	37.1835
3	3.80	**NO2-N**	BMB	3.036	13.485	3.4985
4	4.68	**BR**	BMB	3.566	14.353	17.4083
5	5.73	**NO3-N**	BMB	8.706	27.108	6.9973
6	7.18	**PO4-P**	BMB	6.021	15.799	17.4168
7	8.55	**SO4**	BMB	12.775	30.840	34.6688

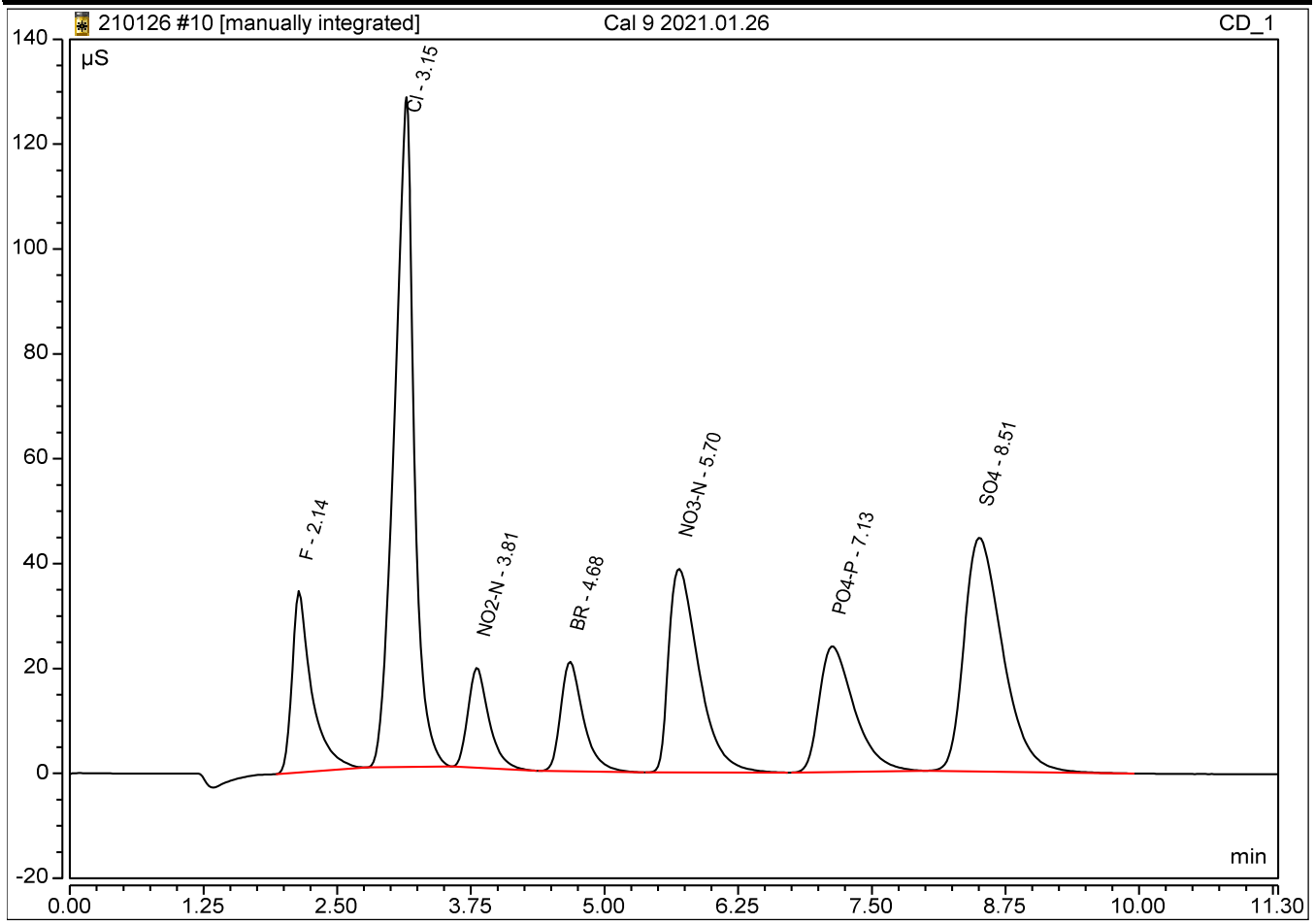


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**Cal 9 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	7.372	34.618	12.63	12.5	101.1%
2	3.15	**Cl**	BMB	27.132	127.765	54.33	50	108.7%
3	3.81	**NO2-N**	BMB	4.350	19.074	5.01	5	100.2%
4	4.68	**BR**	BMB	5.148	20.898	25.13	25	100.5%
5	5.70	**NO3-N**	BMB	12.686	38.853	10.18	10	101.8%
6	7.13	**PO4-P**	BMB	9.105	23.999	26.24	25	104.9%
7	8.51	**SO4**	BMB	18.687	44.592	50.71	50	101.4%



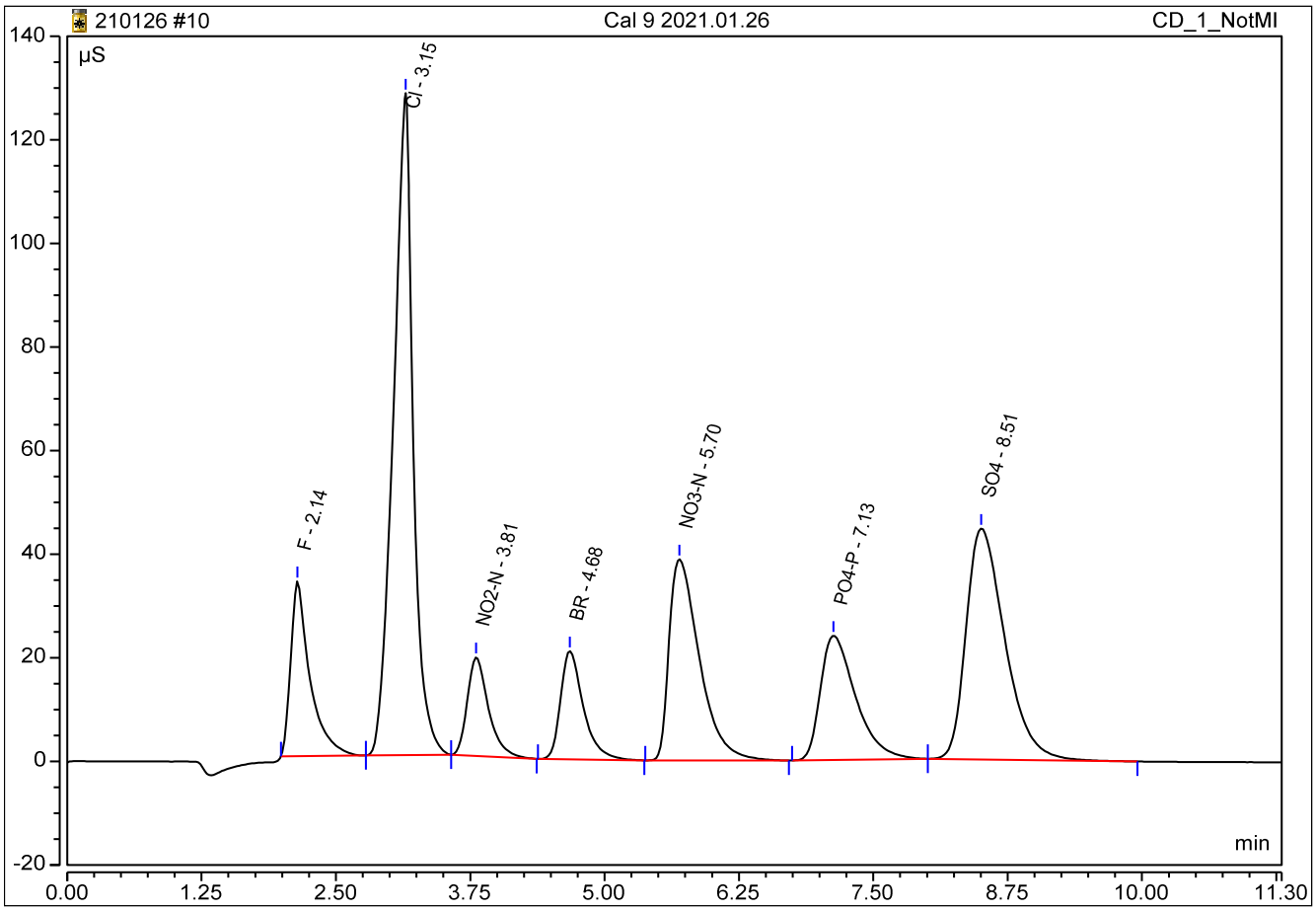
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.01.26**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 18:51**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	6.953	33.798	12.4585
2	3.15	**Cl**	BMB	27.132	127.765	54.2212
3	3.81	**NO2-N**	BMB	4.350	19.074	5.0118
4	4.68	**BR**	BMB	5.148	20.898	25.1299
5	5.70	**NO3-N**	BMB	12.686	38.853	10.1774
6	7.13	**PO4-P**	BMB	9.105	23.999	26.0894
7	8.51	**SO4**	BMB	18.687	44.592	50.7105

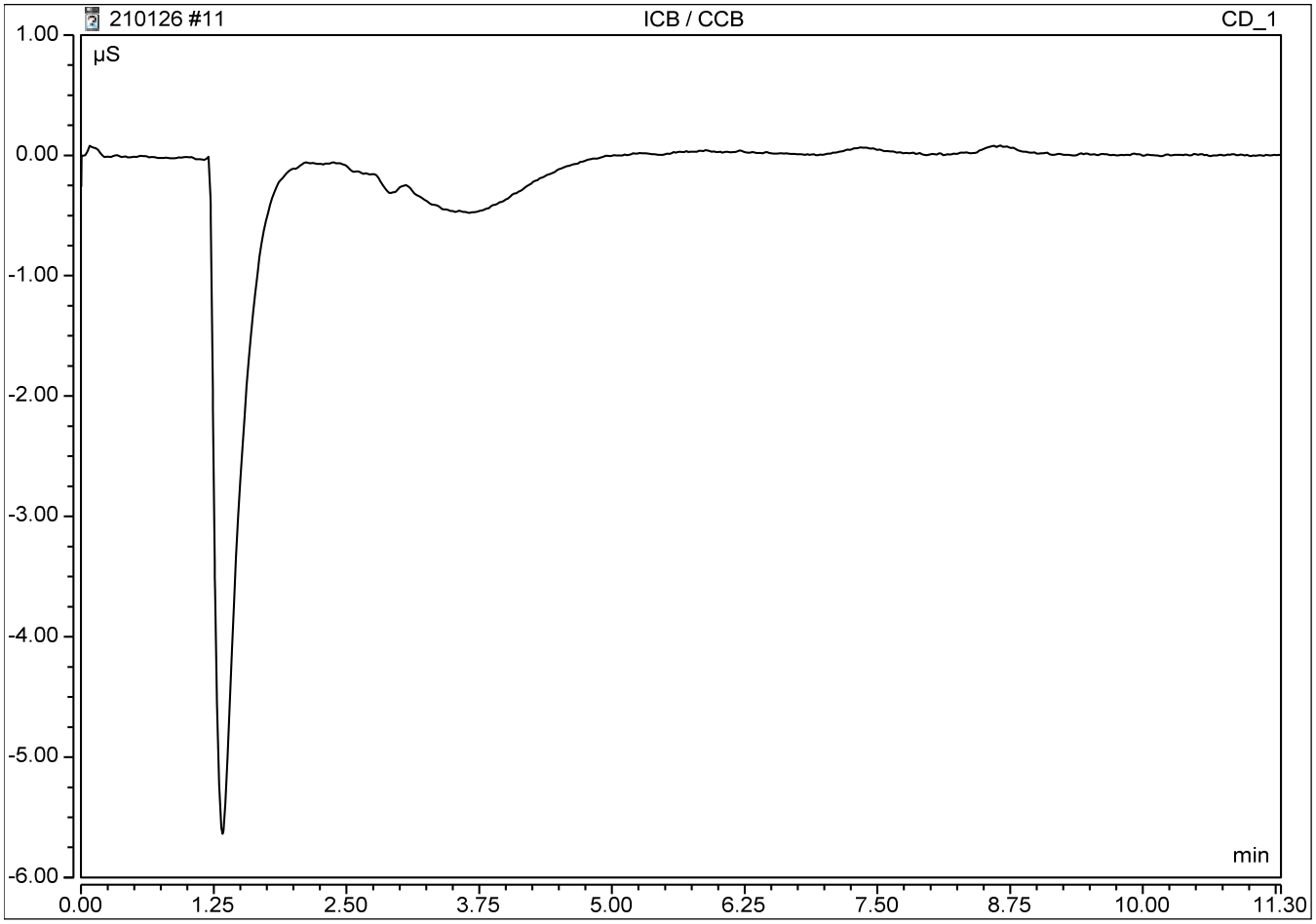


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 19:06**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

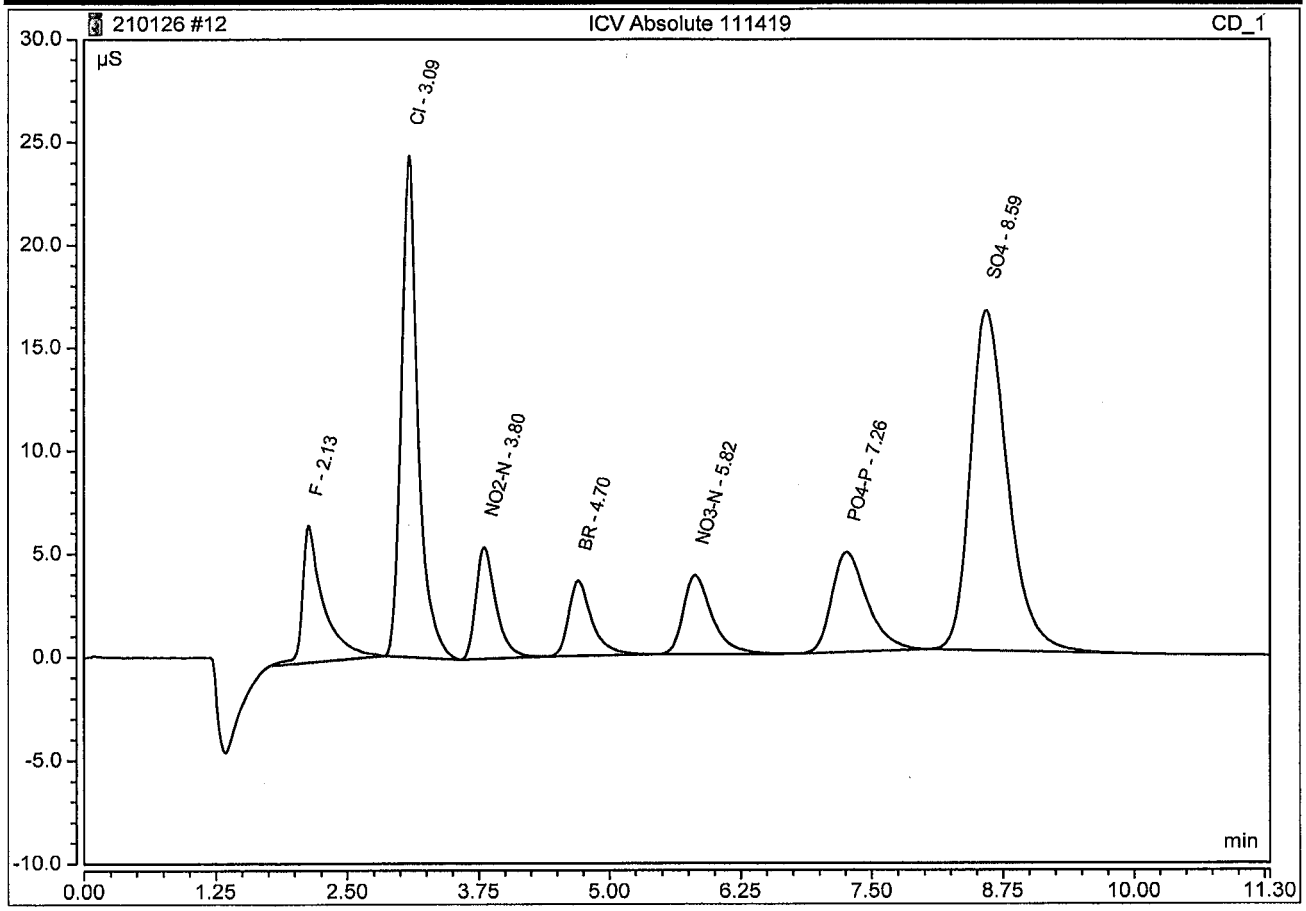


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 19:21**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery	
1	2.13	F	BMB	1.537	6.653	2.63	2.5	105.4%	
2	3.09	Cl	BMB	4.507	24.366	8.98	10	89.8%	*
3	3.80	NO2-N	BMB	1.200	5.420	1.38	1.522334	90.8%	
4	4.70	BR	BMB	0.948	3.651	4.63	5	92.5%	
5	5.82	NO3-N	BMB	1.223	3.836	1.02	1.129525	90.0%	
6	7.26	PO4-P	BMB	1.912	4.857	5.86	6.522	89.9%	*
7	8.59	SO4	BMB	6.831	16.550	18.54	20	92.7%	



* % Recovery meets the 2-sig fig requirement for 90-110% acceptance criteria. (se 01-27-21)

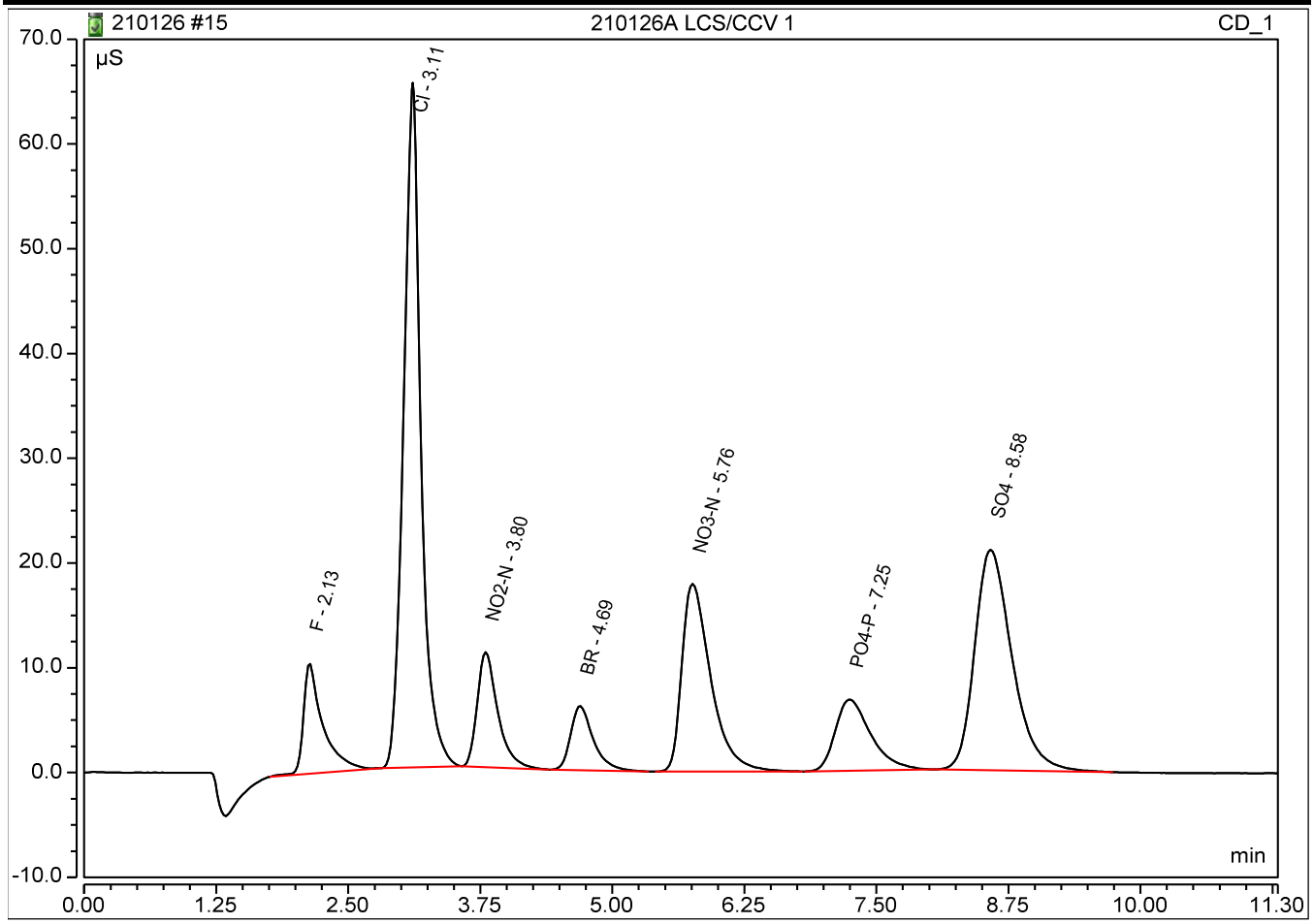
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**210126A LCS/CCV 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 20:05**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.13	**F**	BMB	2.234	10.592	3.83	5	76.6%
2	3.11	**Cl**	BMB	12.382	65.358	24.76	25	99.1%
3	3.80	**NO2-N**	BMB	2.482	10.984	2.86	3.04	94.1%
4	4.69	**BR**	BMB	1.528	6.136	7.46	10	74.6%
5	5.76	**NO3-N**	BMB	5.706	17.925	4.60	5	92.0%
6	7.25	**PO4-P**	BMB	2.657	6.802	7.97	10	79.7%
7	8.58	**SO4**	BMB	8.647	21.052	23.47	25	93.9%



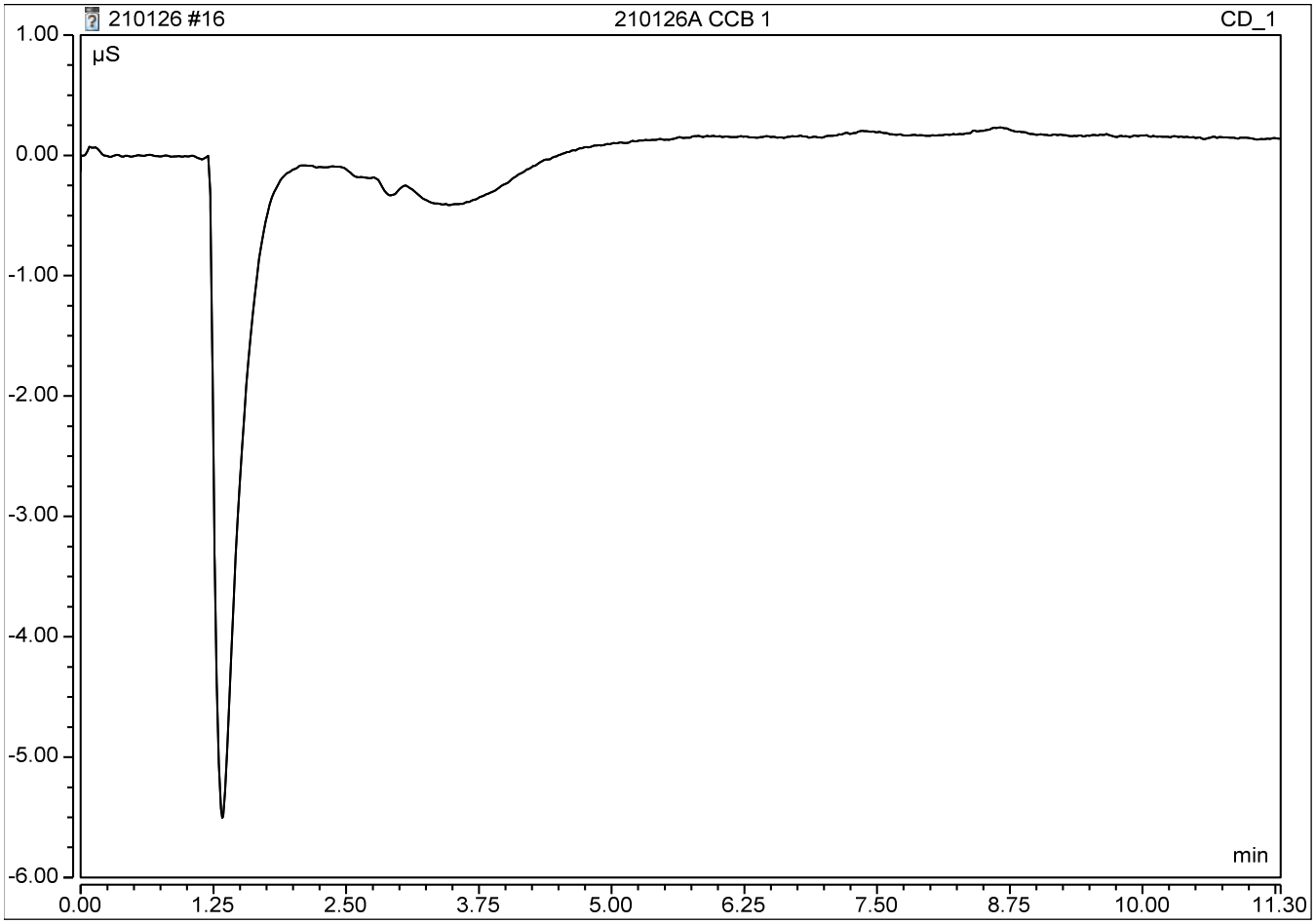
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**210126A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 20:19**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery



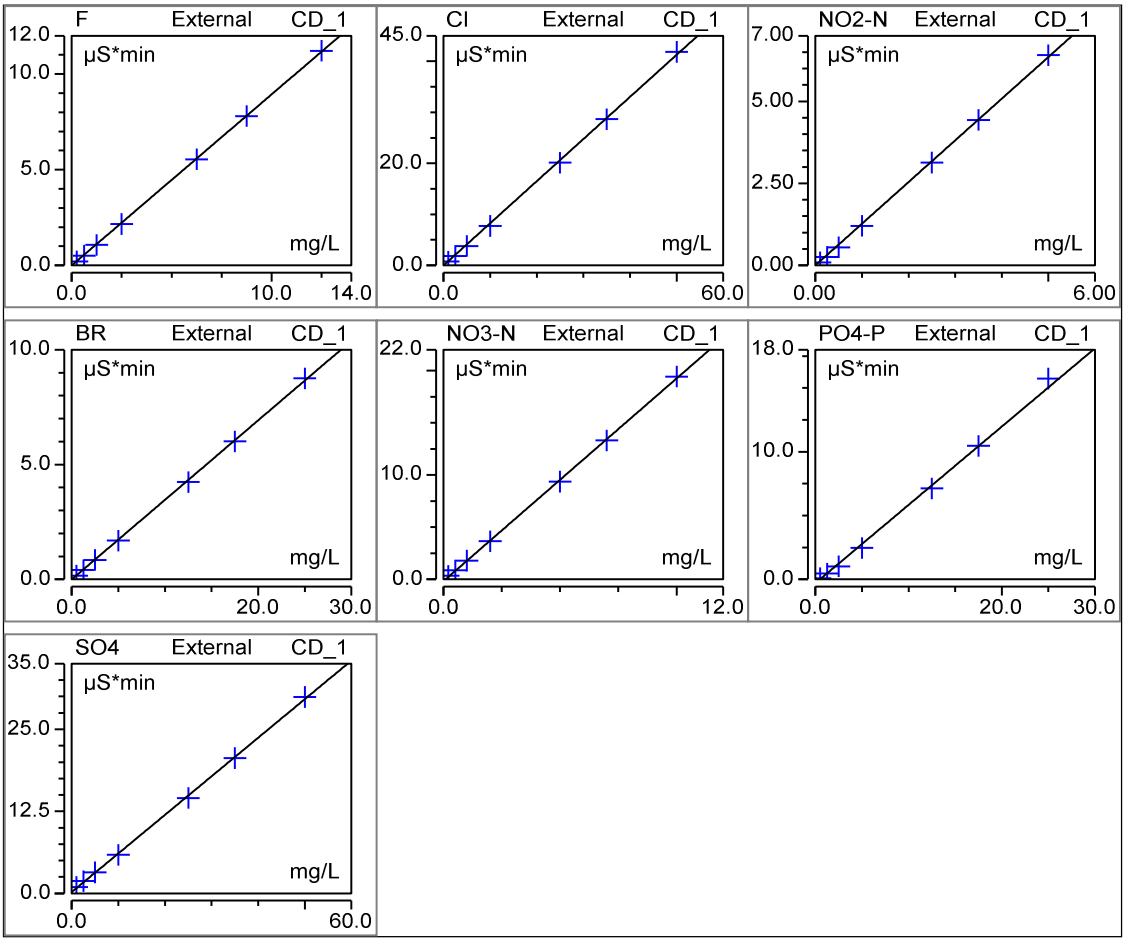
Calibration Batch Report

Sequence:	**210203A**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.5**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	7.000	0.000	0.893	0.000	99.9871
Cl	Area	Lin	7.000	0.000	0.825	0.000	99.9273
NO2-N	Area	Lin	7.000	0.000	1.271	0.000	99.9381
BR	Area	Lin	7.000	0.000	0.346	0.000	99.9644
NO3-N	Area	Lin, WithOffset	7.000	-0.165	1.942	0.000	99.9688
PO4-P	Area	Lin, WithOffset, 1/A	7.000	-0.298	0.614	0.000	99.6191
SO4	Area	Lin, WithOffset	7.000	0.204	0.588	0.000	99.9463

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 3 2021.02.02	0.237	0.9173	0.0705	0.4608	0.2625	0.6209	1.3057
Cal 4 2021.02.02	0.569	2.2144	0.2005	1.1782	0.5265	1.2294	2.8210
Cal 5 2021.02.02	1.193	4.5949	0.4335	2.4409	1.0060	2.1549	5.0945
Cal 6 2021.02.02	2.420	9.3635	0.9484	4.8795	1.9657	4.4909	9.6485
Cal 7 2021.02.02	6.210	24.3939	2.4658	12.2333	4.9072	12.0961	24.3523
Cal 8 2021.02.02	8.738	34.7080	3.4902	17.3510	6.9400	17.5274	34.7181
Cal 9 2021.02.02	12.553	50.6912	5.0440	25.2720	10.0921	26.1304	50.5599

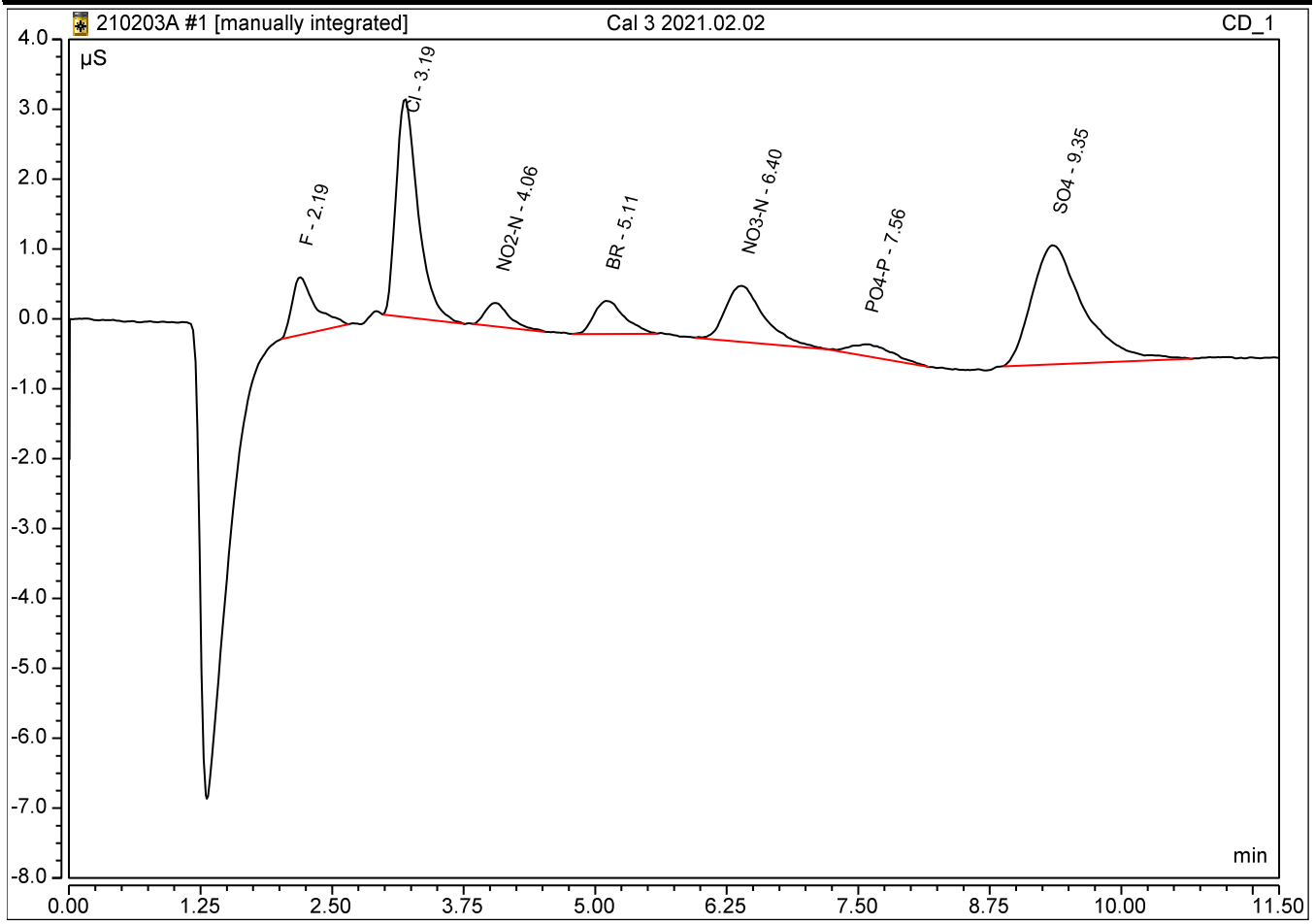


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.212	0.828	0.24	0.25	95.0%
2	3.19	**Cl**	BMB	0.757	3.125	0.92	1	91.7%
3	4.06	**NO2-N**	BMB	0.090	0.335	0.07	0.1	70.5%
4	5.11	**BR**	BMB	0.160	0.474	0.46	0.5	92.2%
5	6.40	**NO3-N**	BMB	0.345	0.799	0.26	0.2	131.2%
6	7.56	**PO4-P**	BMB	0.083	0.167	0.62	0.5	124.2%
7	9.35	**SO4**	BMB*	0.972	1.704	1.31	1	130.6%



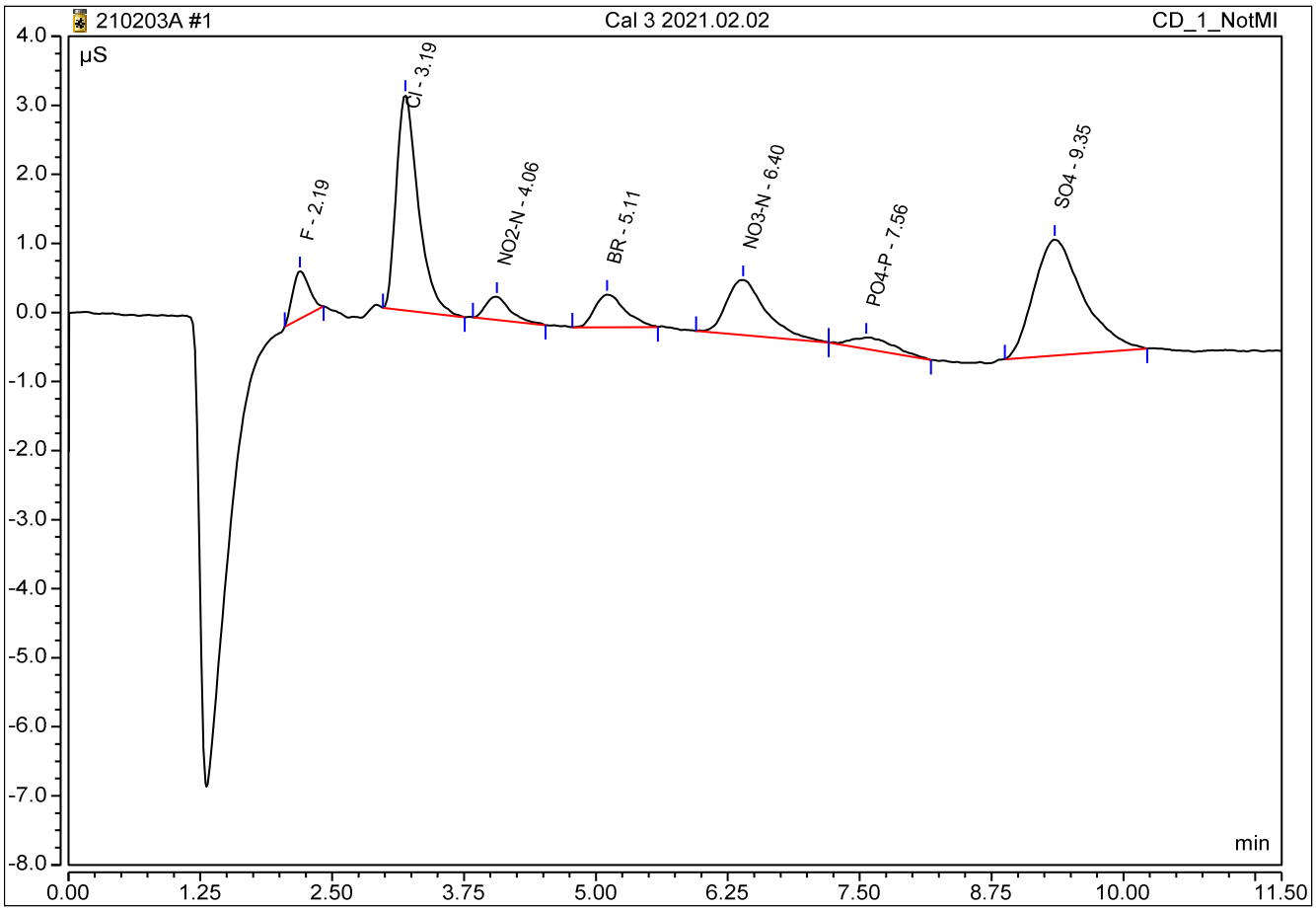
MI 5 F SO4 GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.125	0.692	0.1533
2	3.19	**Cl**	BMB	0.757	3.125	0.9173
3	4.06	**NO2-N**	BMB	0.090	0.335	0.0705
4	5.11	**BR**	BMB	0.160	0.474	0.4608
5	6.40	**NO3-N**	BMB	0.345	0.799	0.2625
6	7.56	**PO4-P**	BMB	0.083	0.167	0.6209
7	9.35	**SO4**	BMB*	0.906	1.679	1.2254

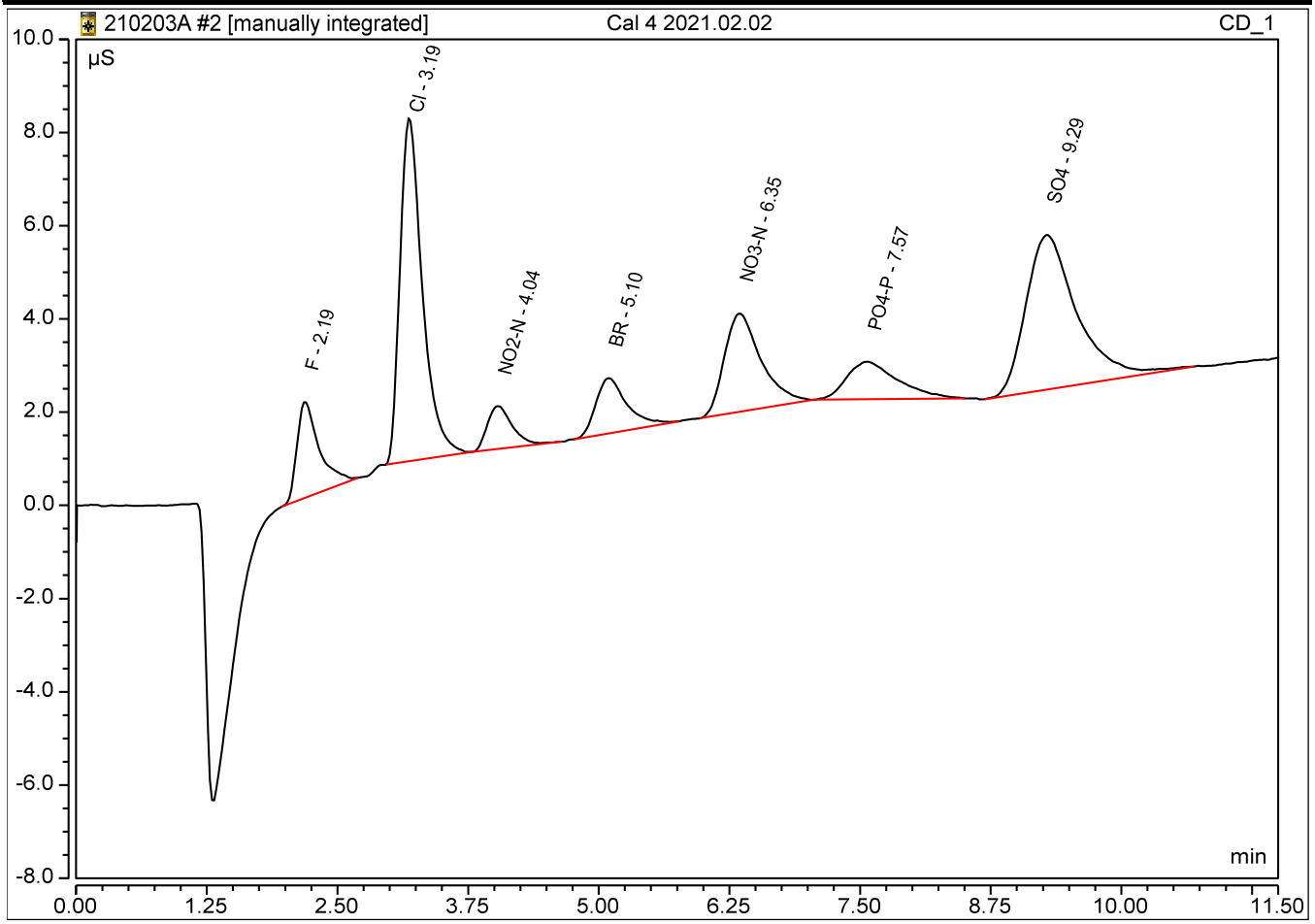


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.508	2.069	0.57	0.625	91.1%
2	3.19	**Cl**	BMB	1.828	7.371	2.21	2.5	88.6%
3	4.04	**NO2-N**	BMB	0.255	0.922	0.20	0.25	80.2%
4	5.10	**BR**	BMB	0.408	1.188	1.18	1.25	94.3%
5	6.35	**NO3-N**	BMB	0.858	2.111	0.53	0.5	105.3%
6	7.57	**PO4-P**	BMB	0.456	0.806	1.23	1.25	98.4%
7	9.29	**SO4**	BMB	1.863	3.319	2.82	2.5	112.8%



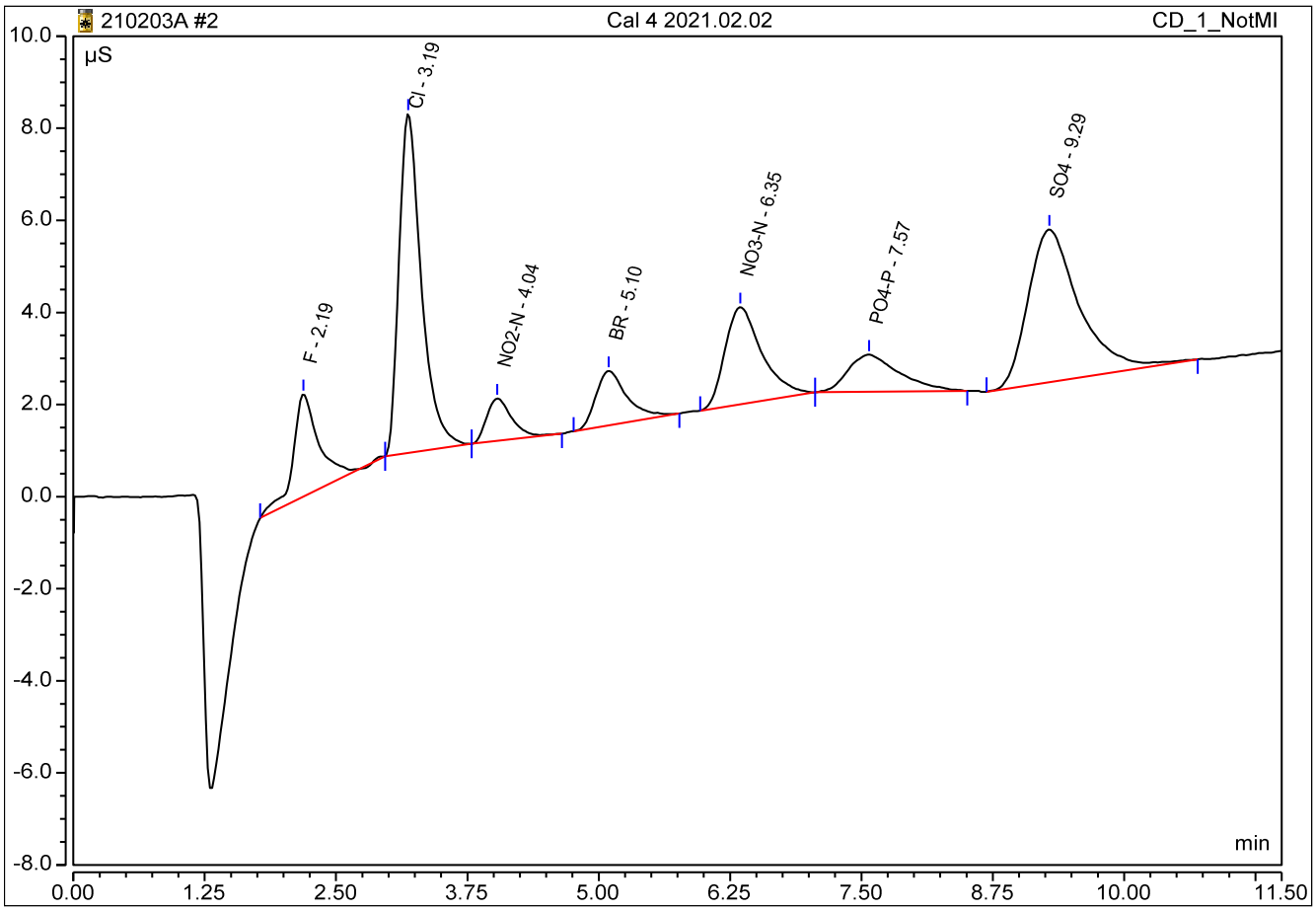
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.626	2.228	0.7683
2	3.19	**Cl**	BMB	1.828	7.371	2.2144
3	4.04	**NO2-N**	BMB	0.255	0.922	0.2005
4	5.10	**BR**	BMB	0.408	1.188	1.1782
5	6.35	**NO3-N**	BMB	0.858	2.111	0.5265
6	7.57	**PO4-P**	BMB	0.456	0.806	1.2294
7	9.29	**SO4**	BMB	1.863	3.319	2.8512

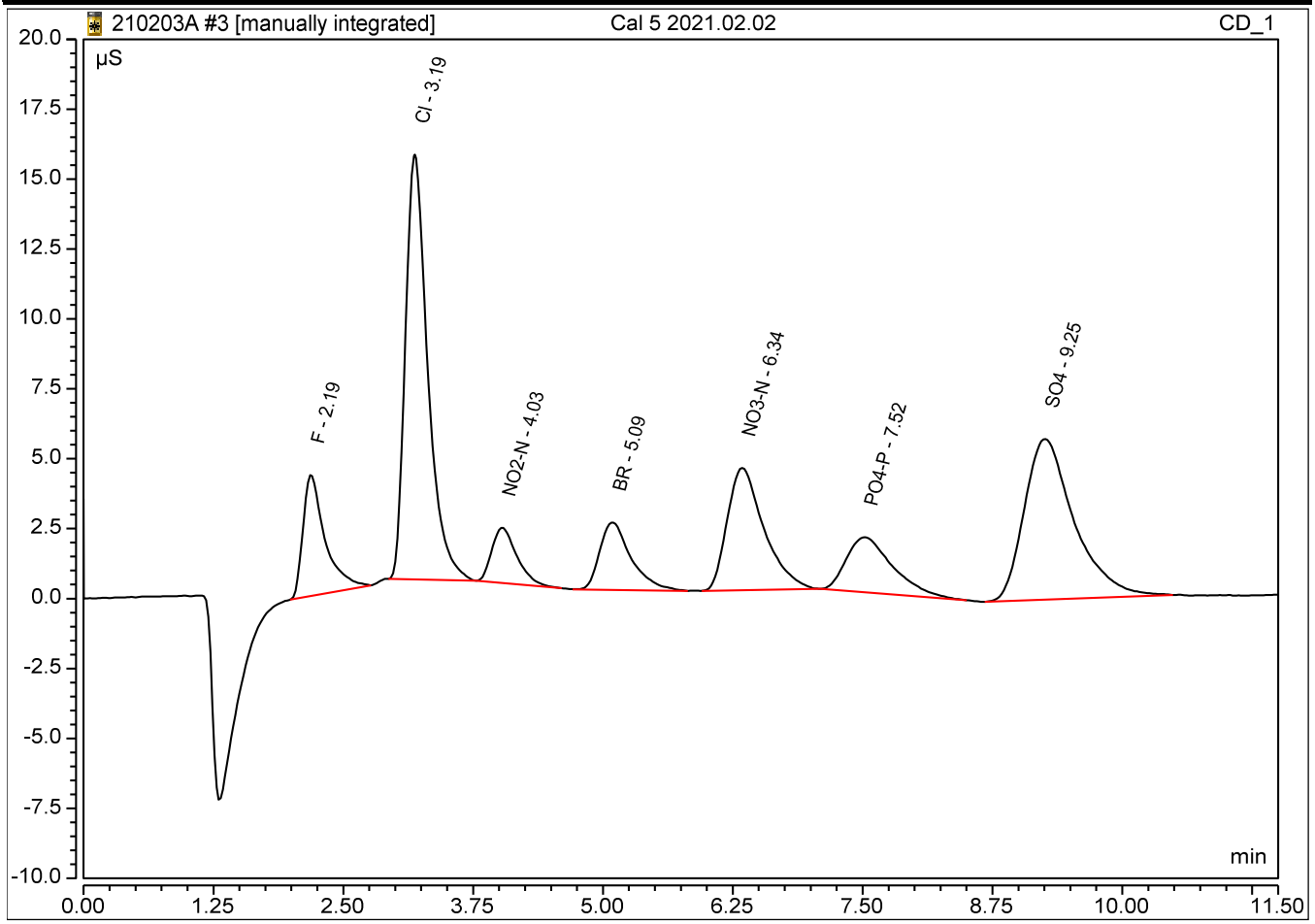


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	1.066	4.348	1.19	1.25	95.4%
2	3.19	**Cl**	BMB	3.792	15.189	4.59	5	91.9%
3	4.03	**NO2-N**	BMB	0.551	1.971	0.43	0.5	86.7%
4	5.09	**BR**	BMB	0.845	2.414	2.44	2.5	97.6%
5	6.34	**NO3-N**	BMB	1.789	4.375	1.01	1	100.6%
6	7.52	**PO4-P**	BMB	1.024	1.967	2.15	2.5	86.2%
7	9.25	**SO4**	BMB	3.199	5.751	5.09	5	101.9%



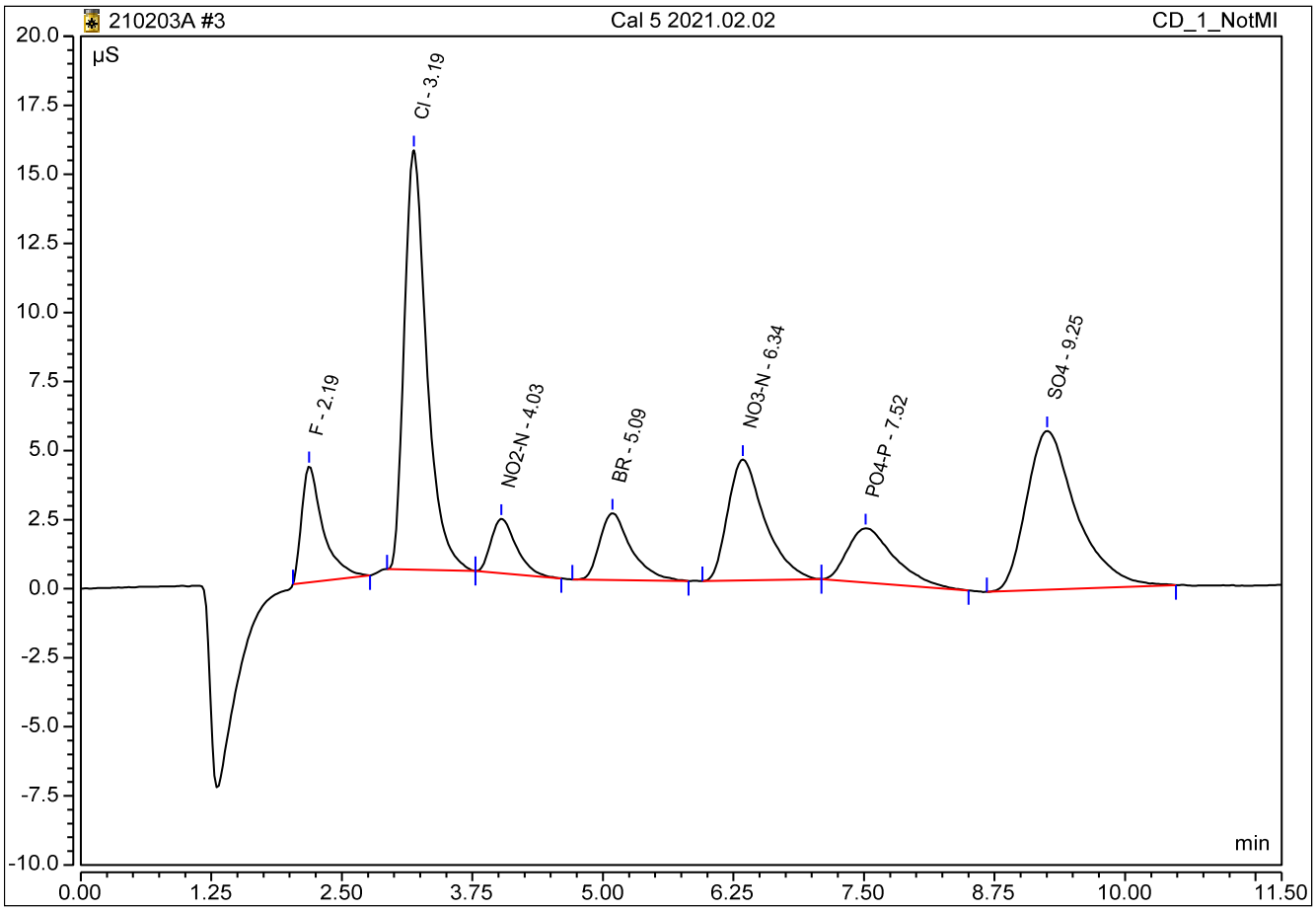
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.997	4.205	1.2240
2	3.19	**Cl**	BMB	3.792	15.189	4.5949
3	4.03	**NO2-N**	BMB	0.551	1.971	0.4335
4	5.09	**BR**	BMB	0.845	2.414	2.4409
5	6.34	**NO3-N**	BMB	1.789	4.375	1.0060
6	7.52	**PO4-P**	BMB	1.024	1.967	2.1549
7	9.25	**SO4**	BMB	3.199	5.751	5.1227

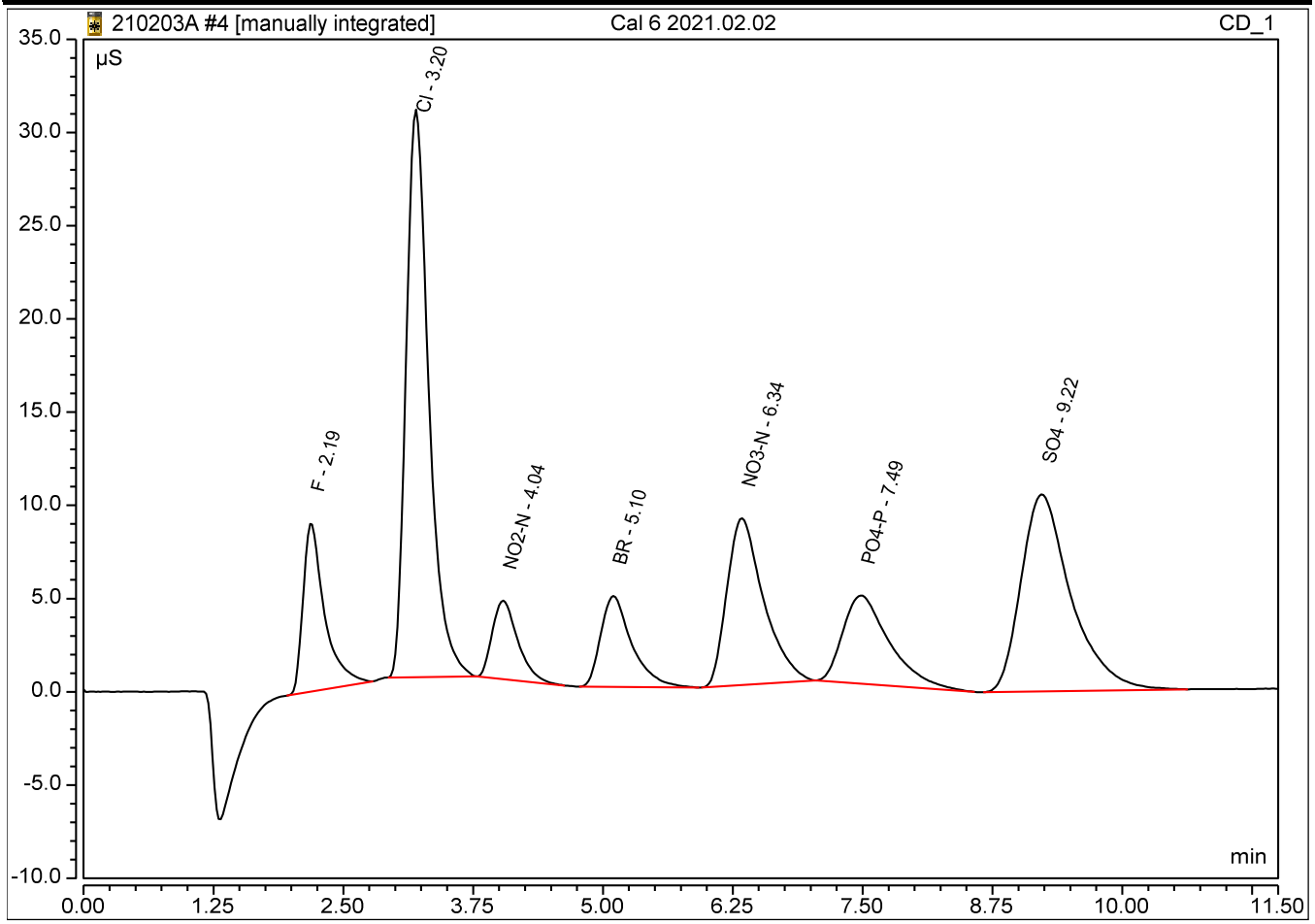


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	2.162	9.056	2.42	2.5	96.8%
2	3.20	**Cl**	BMB	7.728	30.456	9.36	10	93.6%
3	4.04	**NO2-N**	BMB	1.205	4.210	0.95	1	94.8%
4	5.10	**BR**	BMB	1.690	4.876	4.88	5	97.6%
5	6.34	**NO3-N**	BMB	3.652	8.947	1.97	2	98.3%
6	7.49	**PO4-P**	BMB	2.458	4.735	4.49	5	89.8%
7	9.22	**SO4**	BMB	5.877	10.569	9.65	10	96.5%

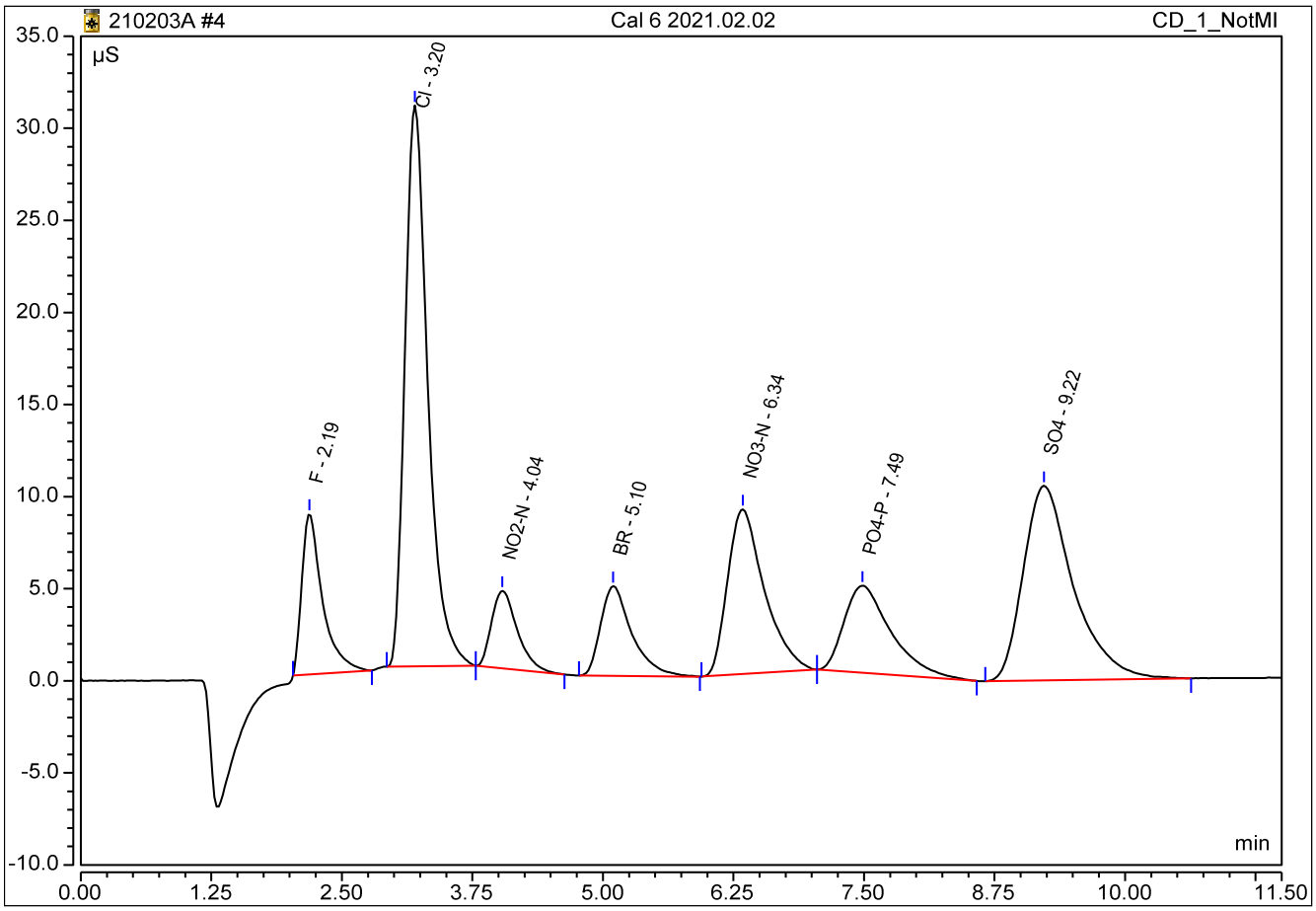


MI 5 F GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	1.996	8.721	2.4511
2	3.20	**Cl**	BMB	7.728	30.456	9.3635
3	4.04	**NO2-N**	BMB	1.205	4.210	0.9484
4	5.10	**BR**	BMB	1.690	4.876	4.8795
5	6.34	**NO3-N**	BMB	3.652	8.947	1.9657
6	7.49	**PO4-P**	BMB	2.458	4.735	4.4909
7	9.22	**SO4**	BMB	5.877	10.569	9.6724

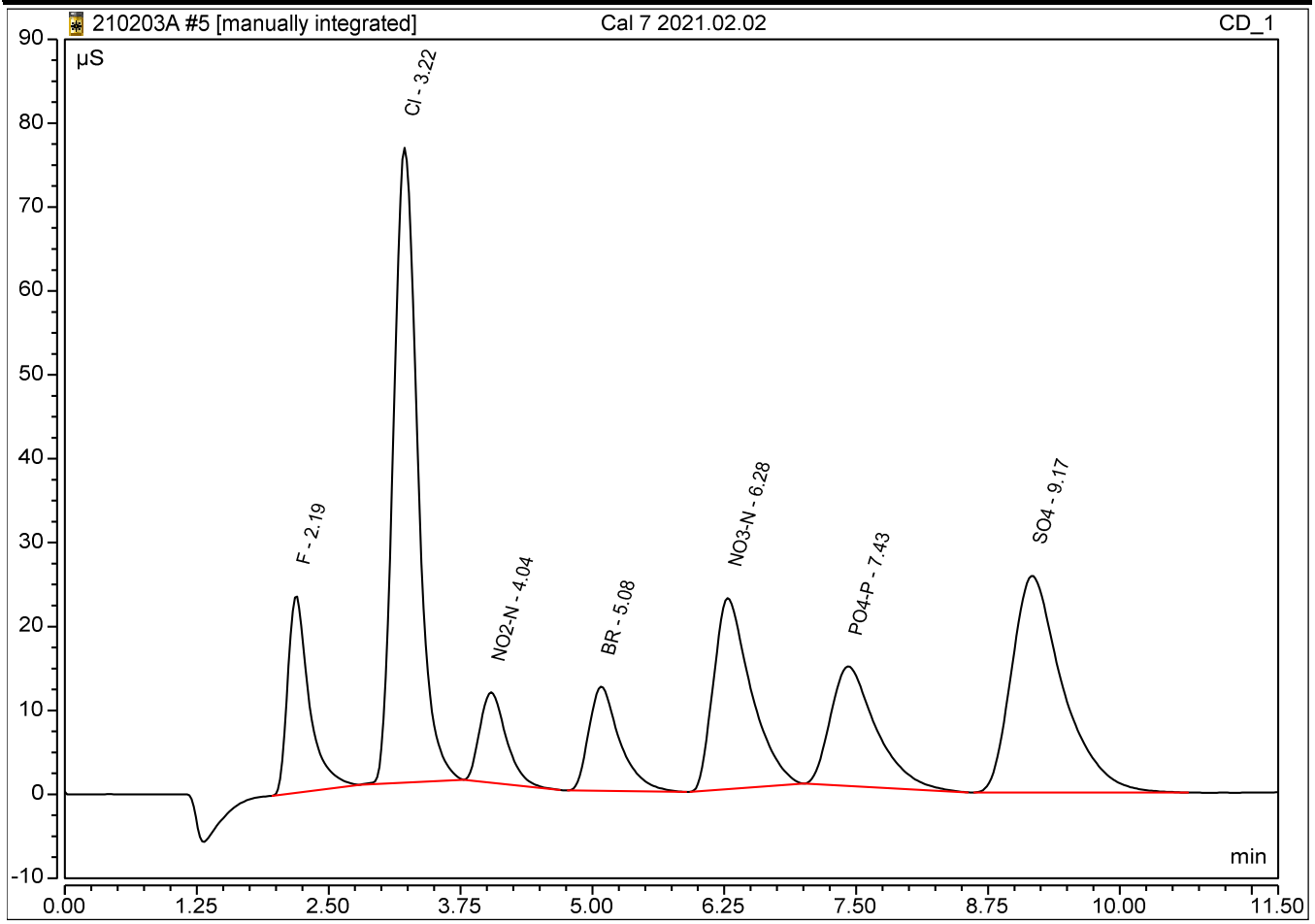


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	5.546	23.521	6.21	6.25	99.4%
2	3.22	**Cl**	BMB	20.132	75.675	24.39	25	97.6%
3	4.04	**NO2-N**	BMB	3.133	10.776	2.47	2.5	98.6%
4	5.08	**BR**	BMB	4.236	12.431	12.23	12.5	97.9%
5	6.28	**NO3-N**	BMB	9.364	22.776	4.91	5	98.1%
6	7.43	**PO4-P**	BMB	7.126	14.242	12.10	12.5	96.8%
7	9.17	**SO4**	BMB	14.521	25.835	24.35	25	97.4%



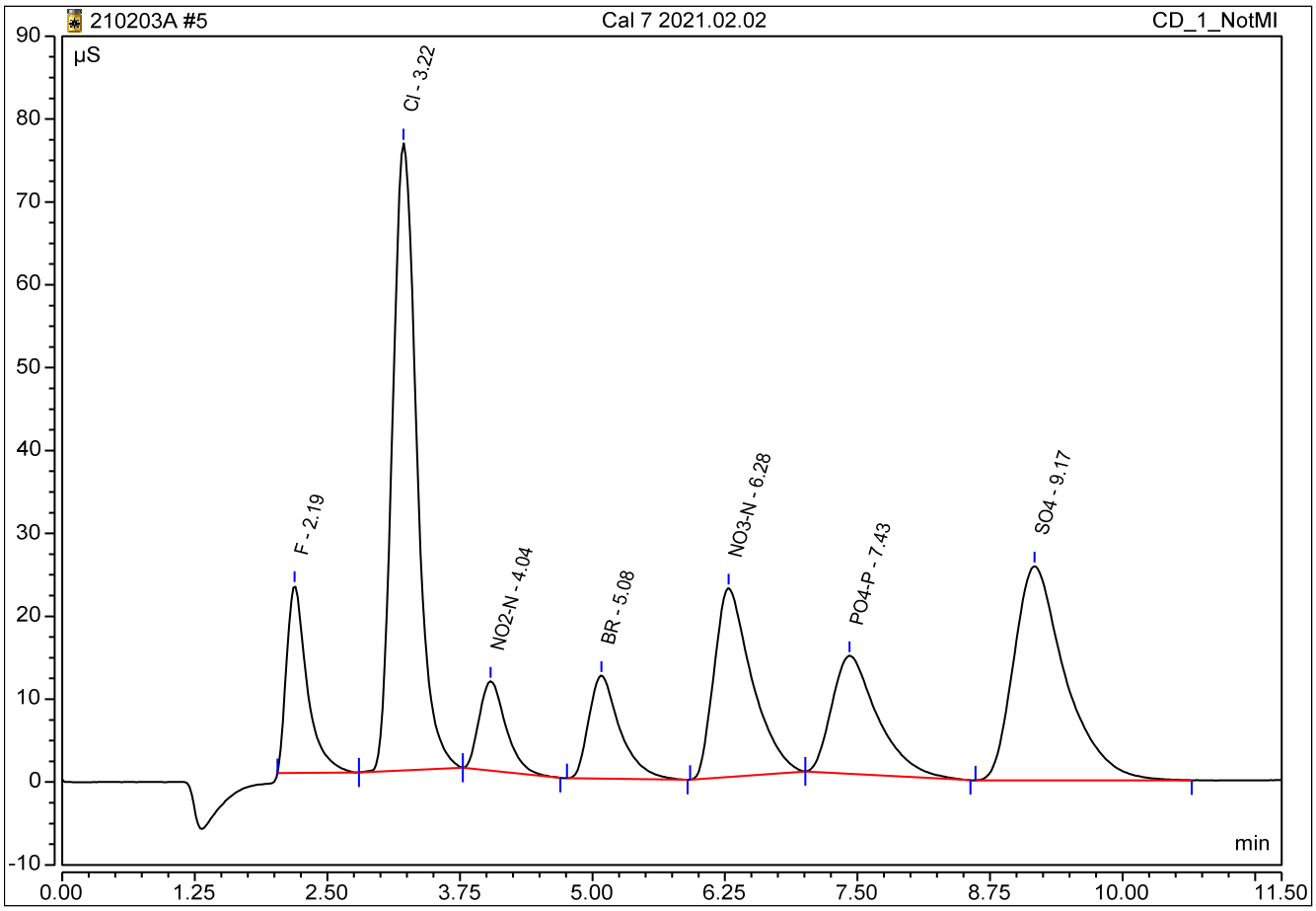
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	5.087	22.614	6.2472
2	3.22	**Cl**	BMB	20.132	75.675	24.3939
3	4.04	**NO2-N**	BMB	3.133	10.776	2.4658
4	5.08	**BR**	BMB	4.236	12.431	12.2333
5	6.28	**NO3-N**	BMB	9.364	22.776	4.9072
6	7.43	**PO4-P**	BMB	7.126	14.242	12.0961
7	9.17	**SO4**	BMB	14.521	25.835	24.3628

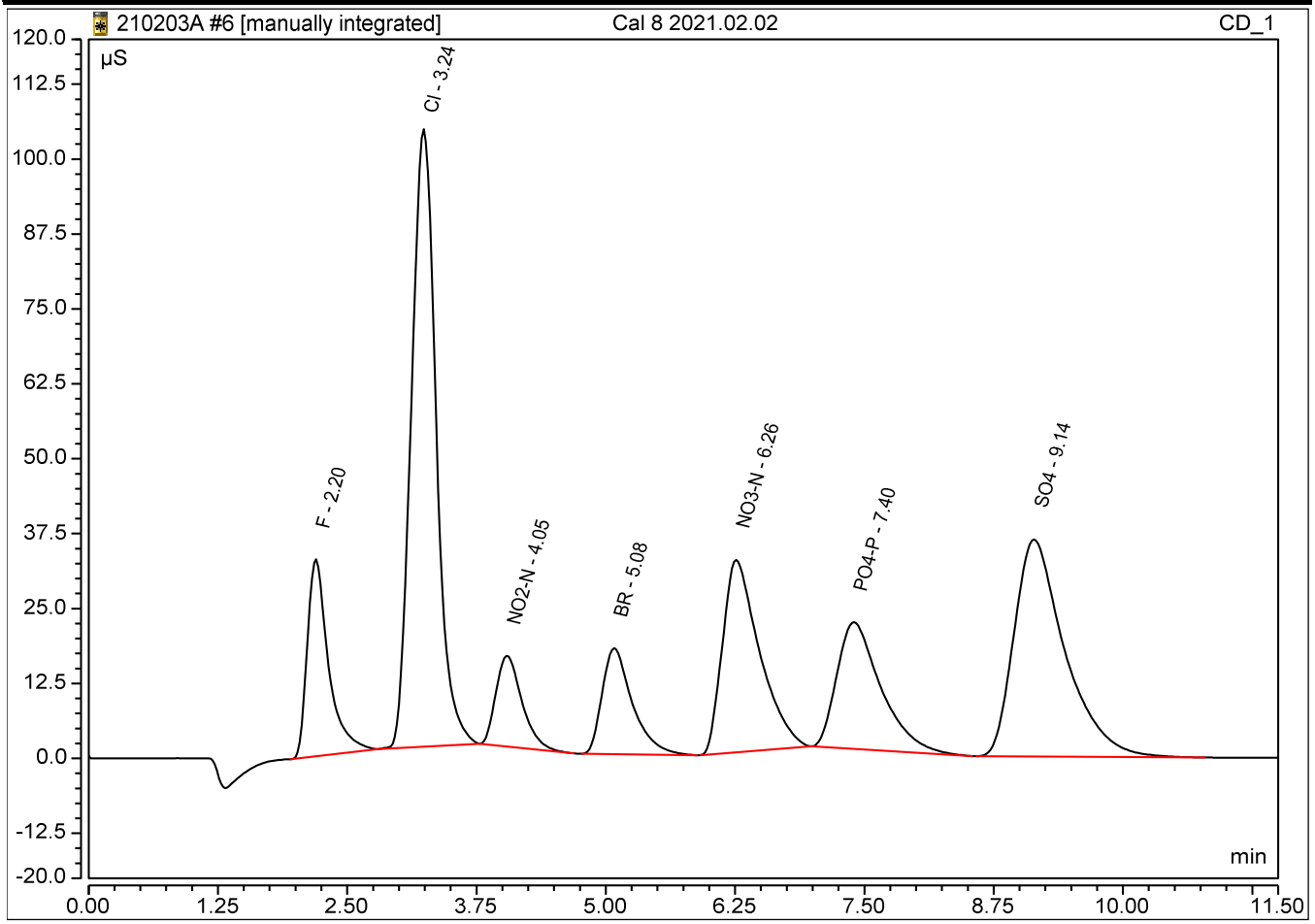


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	7.804	32.914	8.74	8.75	99.9%
2	3.24	**Cl**	BMB	28.644	103.088	34.71	35	99.2%
3	4.05	**NO2-N**	BMB	4.434	15.154	3.49	3.5	99.7%
4	5.08	**BR**	BMB	6.008	17.692	17.35	17.5	99.1%
5	6.26	**NO3-N**	BMB	13.311	32.129	6.94	7	99.1%
6	7.40	**PO4-P**	BMB	10.459	21.166	17.53	17.5	100.2%
7	9.14	**SO4**	BMB	20.615	36.256	34.72	35	99.2%



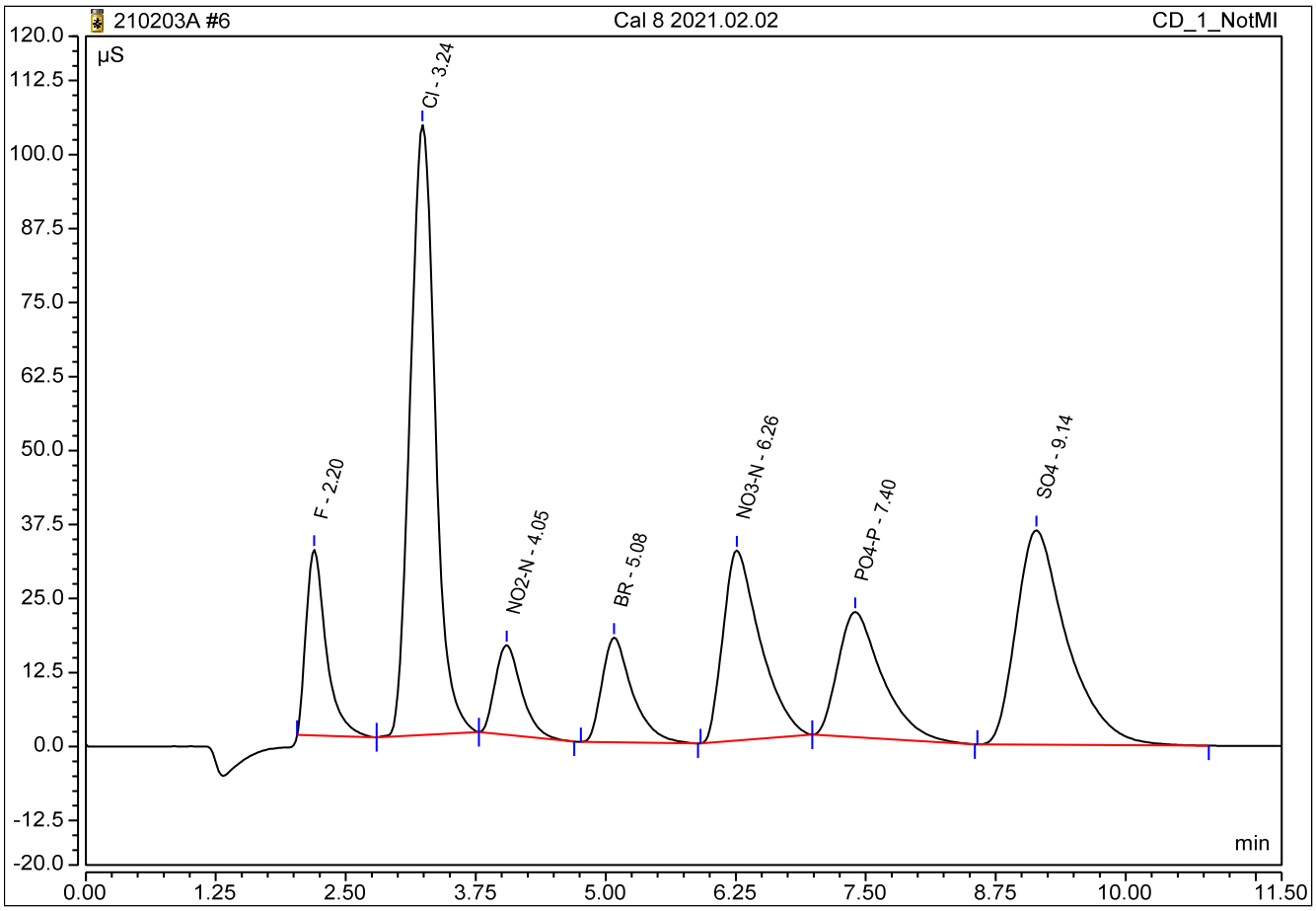
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	7.029	31.386	8.6319
2	3.24	**Cl**	BMB	28.644	103.088	34.7080
3	4.05	**NO2-N**	BMB	4.434	15.154	3.4902
4	5.08	**BR**	BMB	6.008	17.692	17.3510
5	6.26	**NO3-N**	BMB	13.311	32.129	6.9400
6	7.40	**PO4-P**	BMB	10.459	21.166	17.5274
7	9.14	**SO4**	BMB	20.615	36.256	34.7191

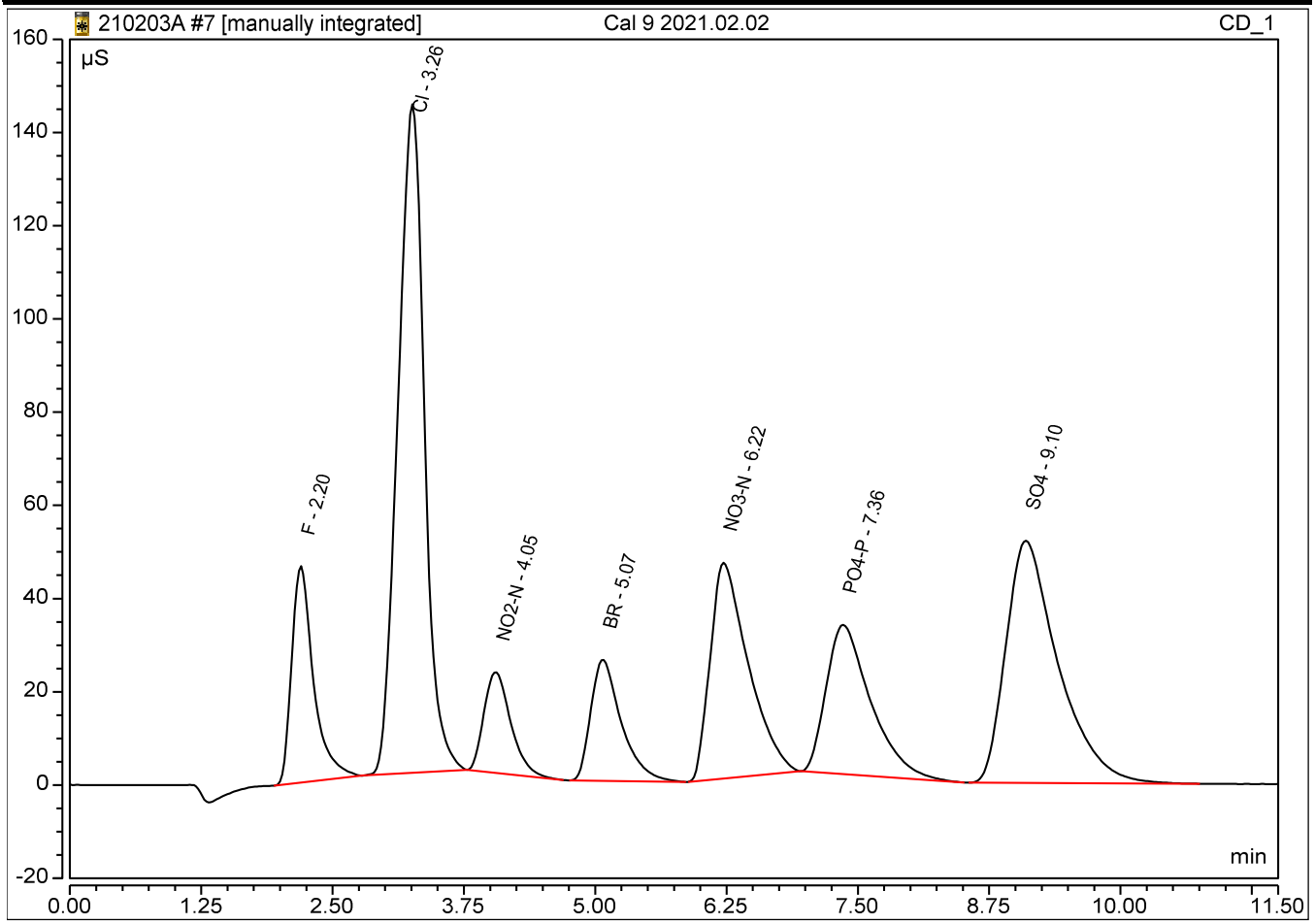


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	11.211	46.442	12.55	12.5	100.4%
2	3.26	**Cl**	BMB	41.835	143.444	50.69	50	101.4%
3	4.05	**NO2-N**	BMB	6.408	21.642	5.04	5	100.9%
4	5.07	**BR**	BMB	8.751	26.016	25.27	25	101.1%
5	6.22	**NO3-N**	BMB	19.431	46.298	10.09	10	100.9%
6	7.36	**PO4-P**	BMB	15.739	32.038	26.13	25	104.5%
7	9.10	**SO4**	BMB	29.929	51.969	50.56	50	101.1%



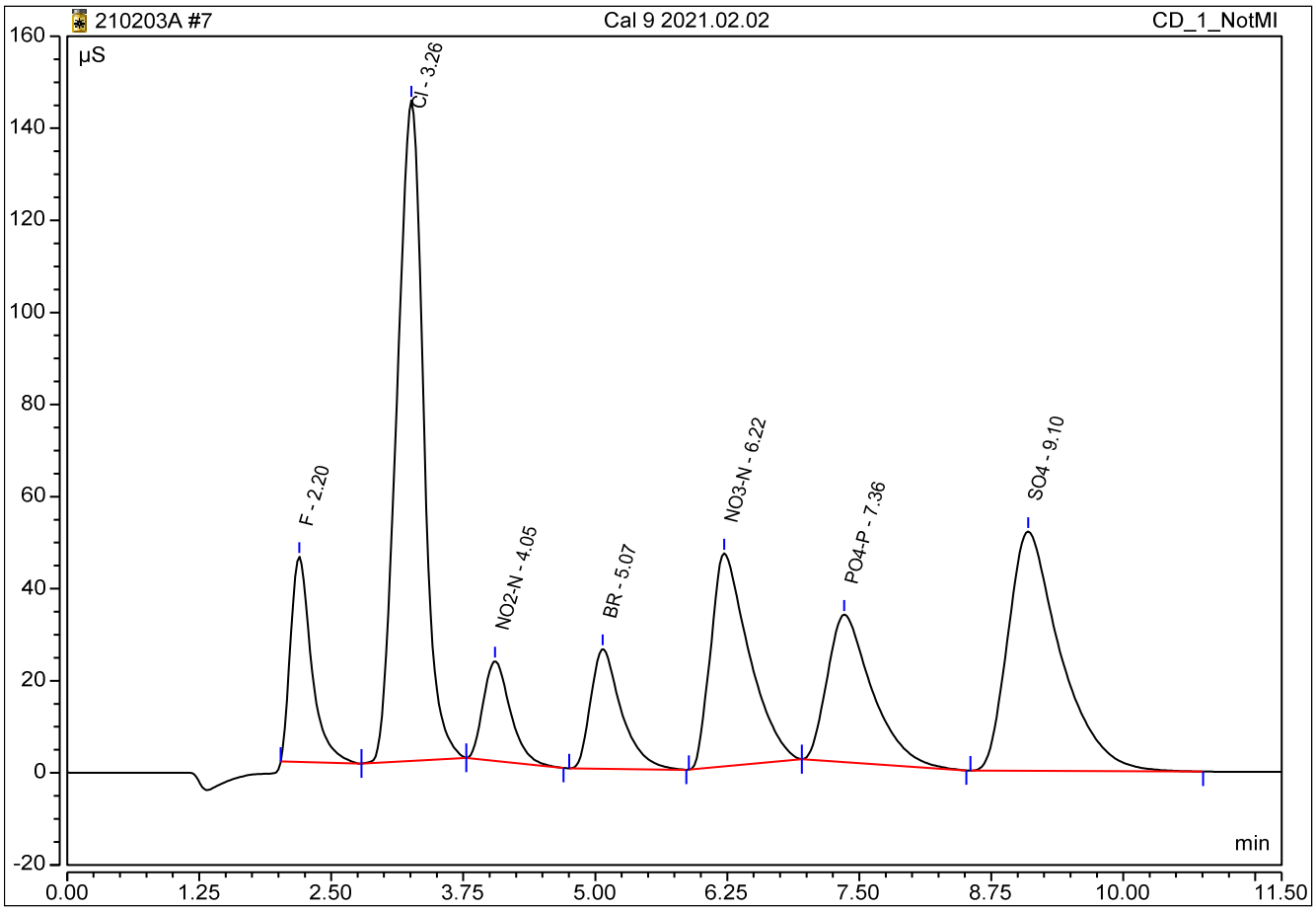
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	10.253	44.598	12.5913
2	3.26	**Cl**	BMB	41.835	143.444	50.6912
3	4.05	**NO2-N**	BMB	6.408	21.642	5.0440
4	5.07	**BR**	BMB	8.751	26.016	25.2720
5	6.22	**NO3-N**	BMB	19.431	46.298	10.0921
6	7.36	**PO4-P**	BMB	15.739	32.038	26.1304
7	9.10	**SO4**	BMB	29.929	51.969	50.5464

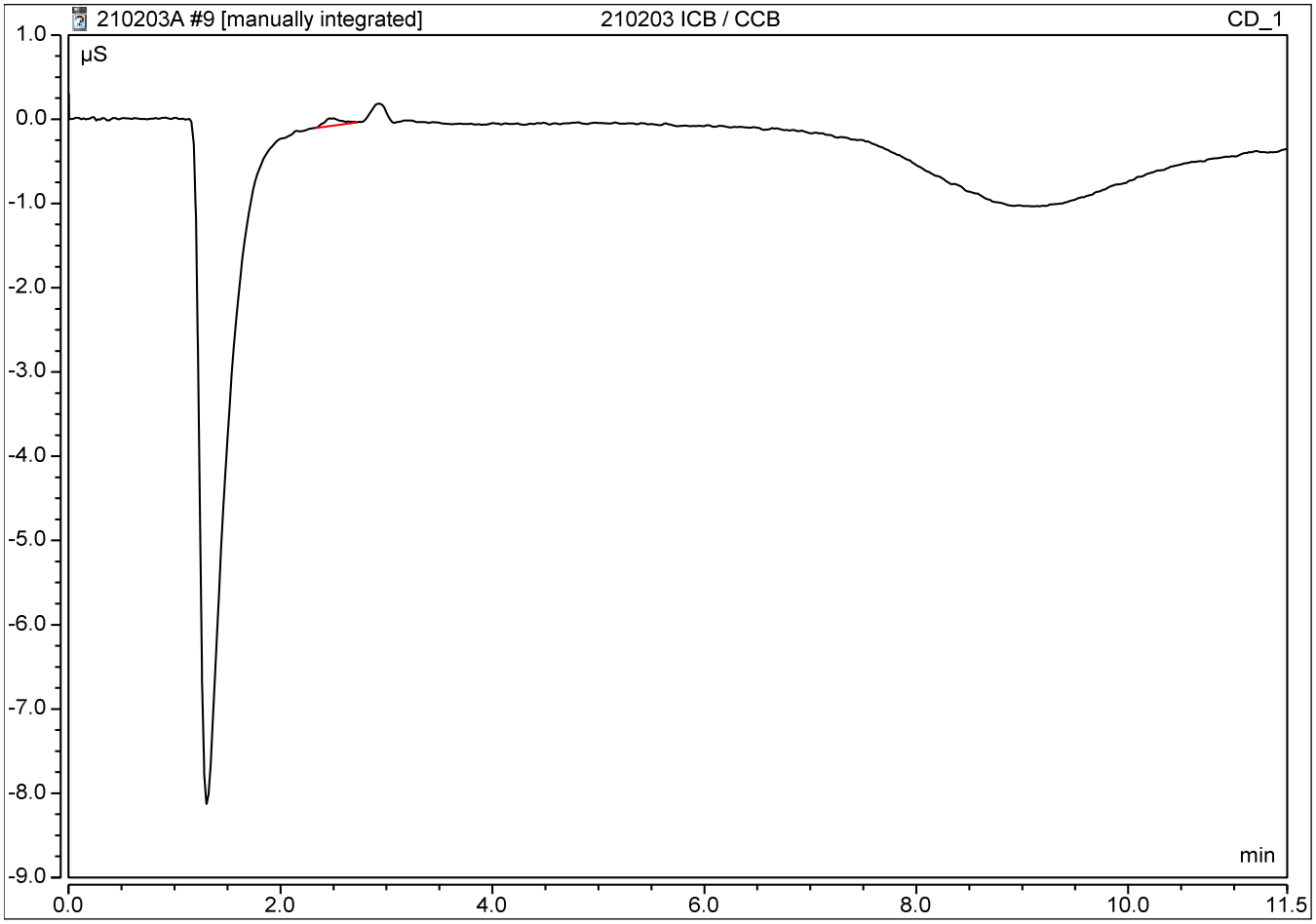


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

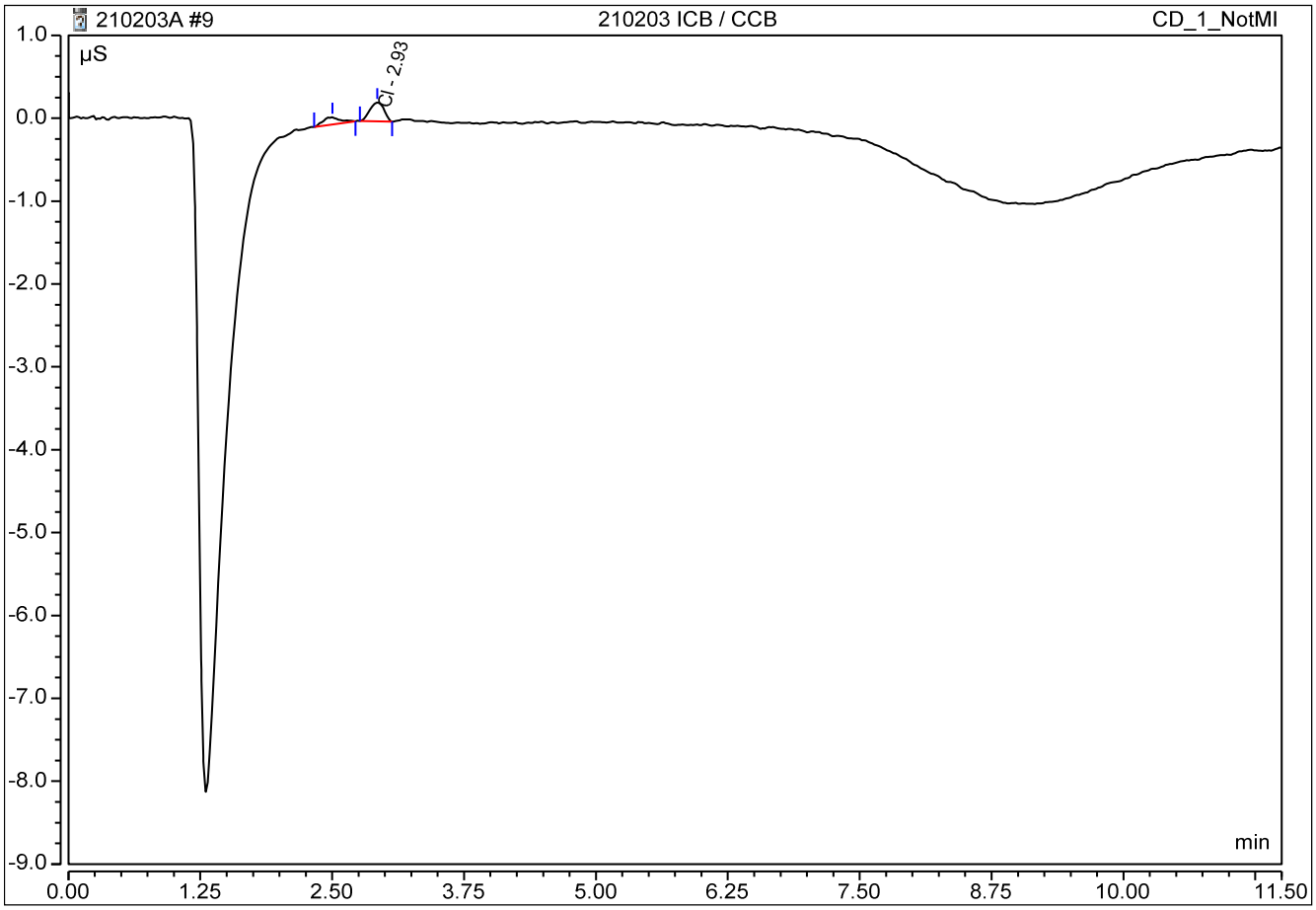


MI7 CI GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L

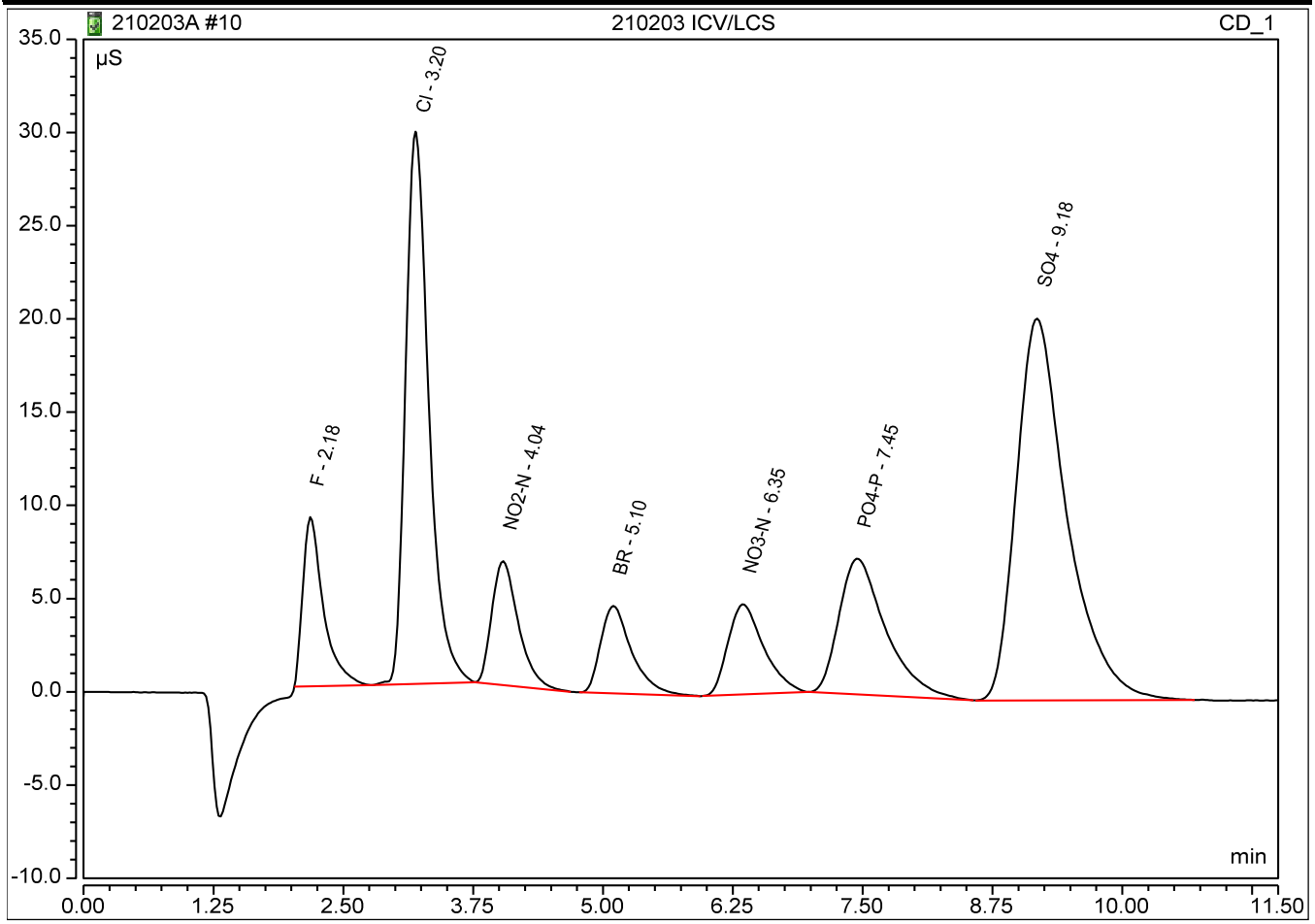


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICV/LCS**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 16:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	2.086	9.078	2.34	2.5	93.4%
2	3.20	**Cl**	BMB	7.701	29.618	9.33	10	93.3%
3	4.04	**NO2-N**	BMB	1.968	6.640	1.55	1.522334	101.7%
4	5.10	**BR**	BMB	1.627	4.686	4.70	5	94.0%
5	6.35	**NO3-N**	BMB	1.932	4.836	1.08	1.129525	95.6%
6	7.45	**PO4-P**	BMB	3.795	7.286	6.67	6.522	102.3%
7	9.18	**SO4**	BMB	11.558	20.473	19.31	20	96.6%



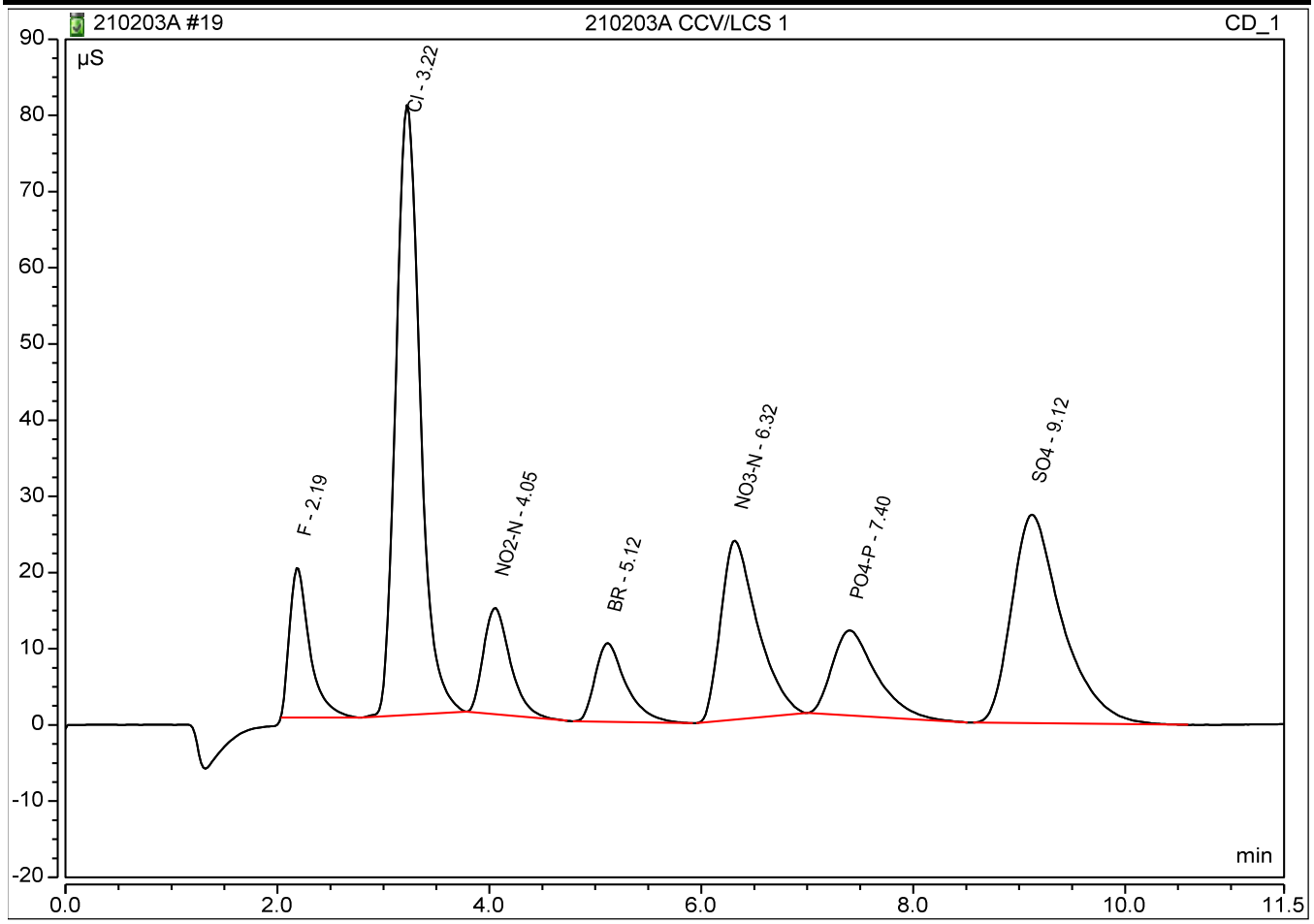
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:30**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB	4.339	19.733	4.86	5	97.2%
2	3.22	**Cl**	BMB	21.350	80.071	25.87	25	103.5%
3	4.05	**NO2-N**	BMB	4.101	13.961	3.23	3.04	106.2%
4	5.12	**BR**	BMB	3.477	10.324	10.04	10	100.4%
5	6.32	**NO3-N**	BMB	9.467	23.512	4.96	5	99.2%
6	7.40	**PO4-P**	BMB	5.382	11.154	9.25	10	92.5%
7	9.12	**SO4**	BMB	15.125	27.374	25.38	25	101.5%

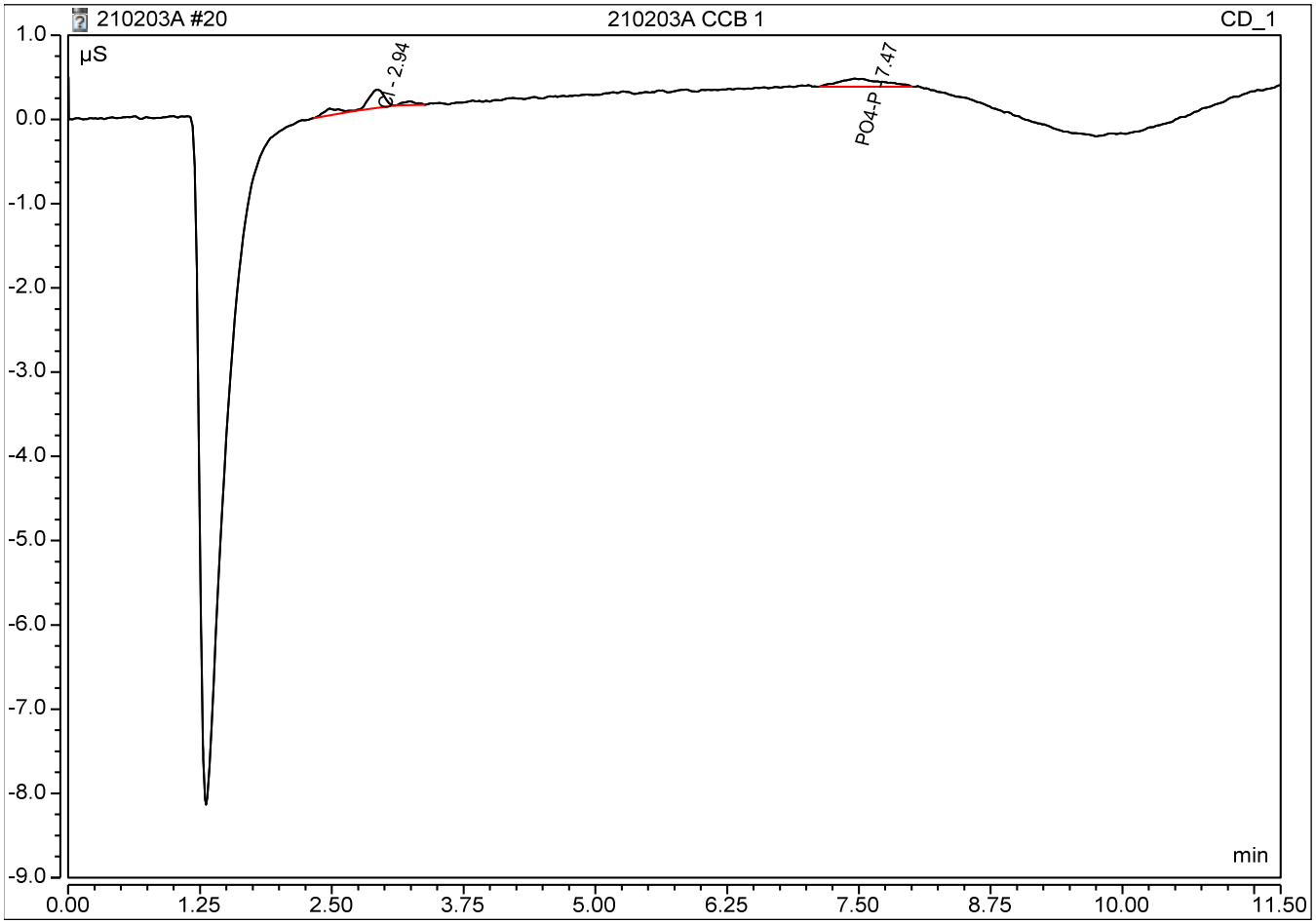


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:45**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	2.94	**Cl**	BMB	0.037	0.216	0.04		
4	7.47	**PO4-P**	BMB	0.047	0.095	0.56		



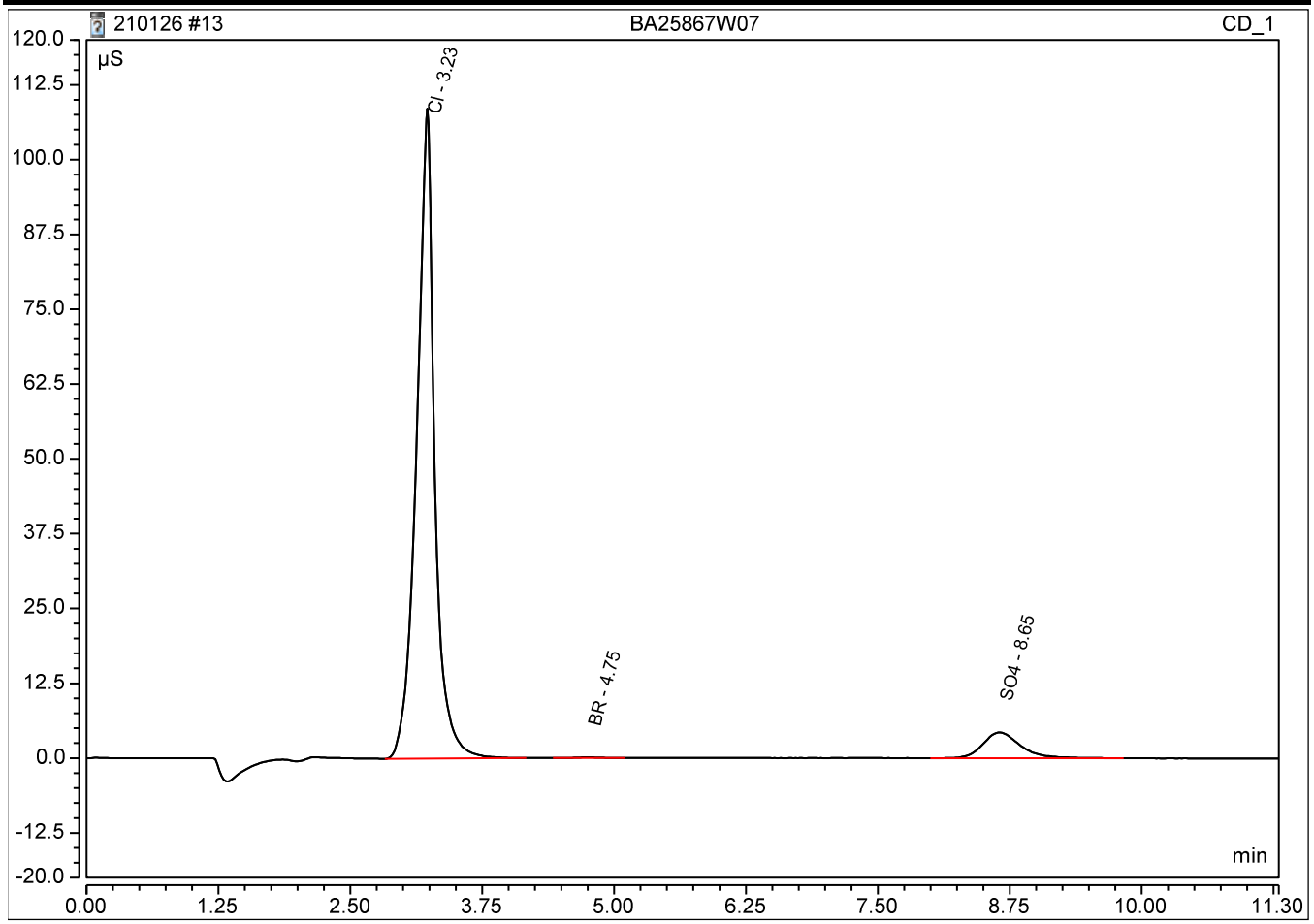
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**BA25867W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 19:35**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.23	**Cl**	BMB	21.335	108.658	42.71		
2	4.75	**BR**	BMB	0.033	0.121	0.16		
3	8.65	**SO4**	BMB	1.791	4.309	4.86		



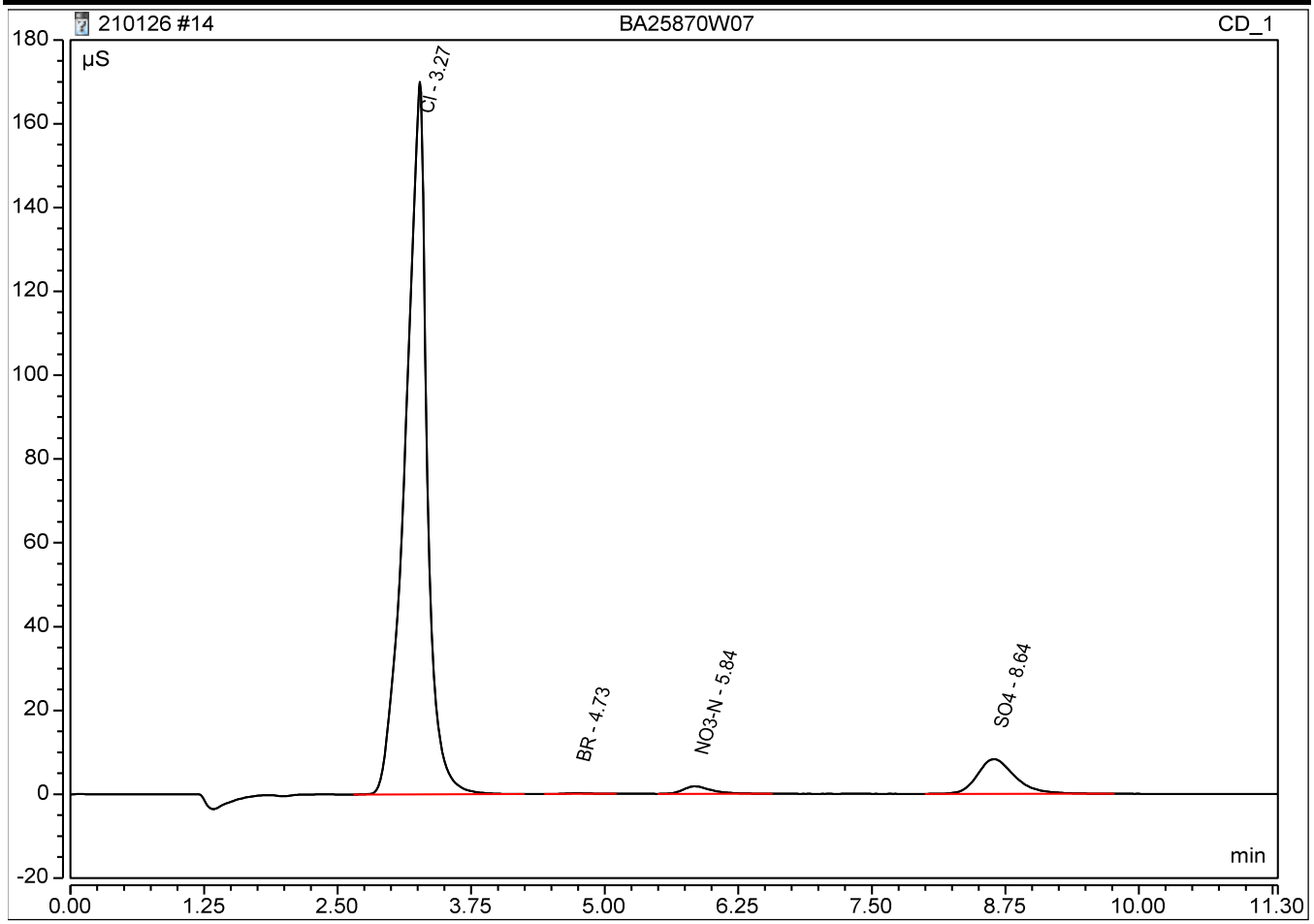
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210126

Peak Integration Report

Sample Name:	**BA25870W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.26**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**26-Jan-2021 / 19:50**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.27	**Cl**	BMB	39.908	170.051	79.95		
2	4.73	**BR**	BMB	0.051	0.203	0.25		
3	5.84	**NO3-N**	BMB	0.557	1.779	0.48		
4	8.64	**SO4**	BMB	3.405	8.282	9.24		



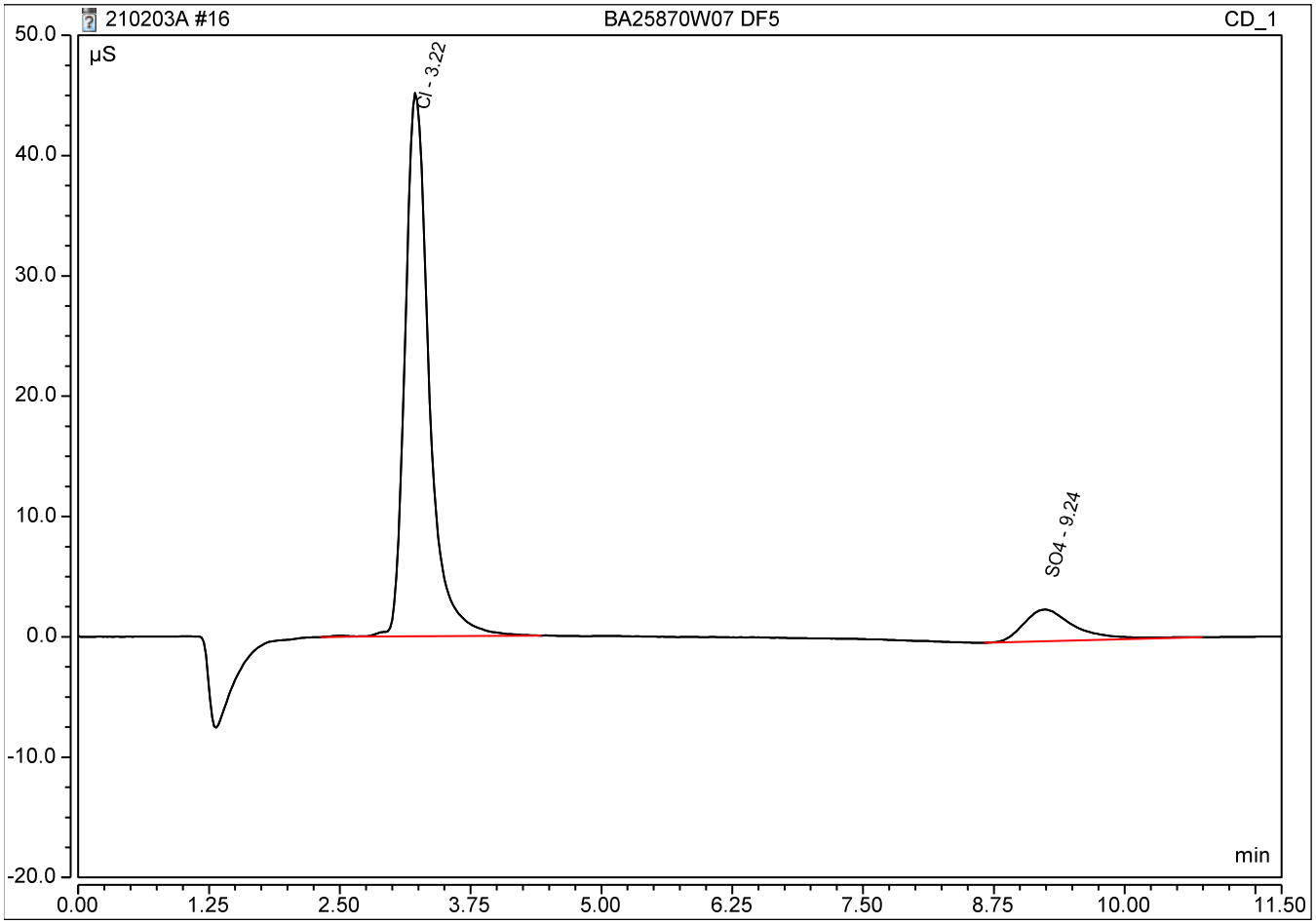
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**BA25870W07 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 17:45**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	3.22	**Cl**	BMB	12.012	45.164	72.78		
3	9.24	**SO4**	BMB	1.492	2.647	10.96		

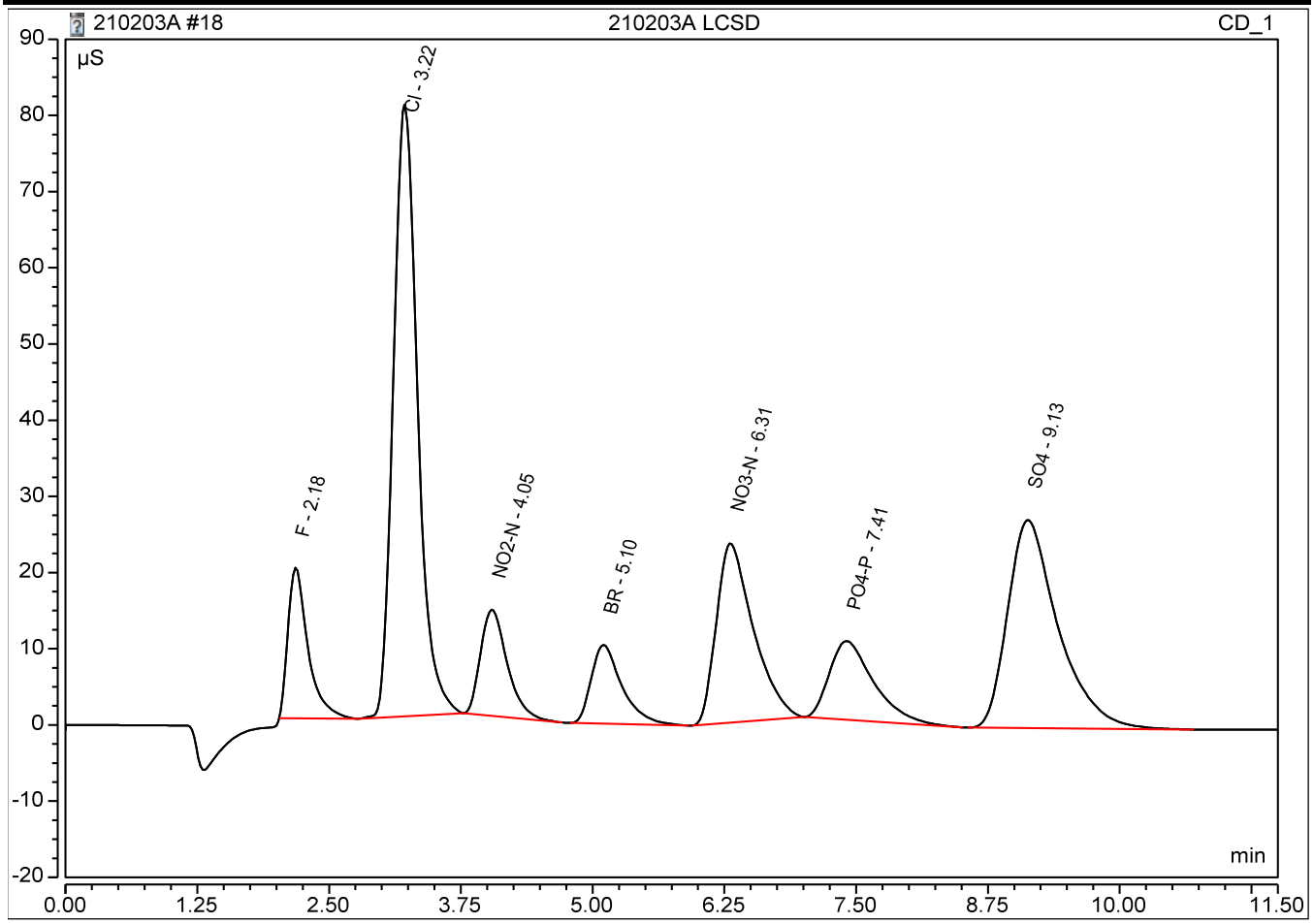


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A LCSD**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:15**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	4.354	19.801	4.88		
2	3.22	**Cl**	BMB	21.392	80.269	25.92		
3	4.05	**NO2-N**	BMB	4.094	13.961	3.22		
4	5.10	**BR**	BMB	3.493	10.353	10.09		
5	6.31	**NO3-N**	BMB	9.557	23.547	5.01		
6	7.41	**PO4-P**	BMB	5.050	10.343	8.72		
7	9.13	**SO4**	BMB	15.139	27.327	25.40		



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Anion Chromatography Working Standard

Prep Date: 01/26/21

Exp Date: 01/27/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 01/26/21

Exp Date: 01/27/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 01/26/21	01/27/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 01/26/21	01/27/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 01/26/21	01/27/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 01/26/21	01/27/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 01/26/21	01/27/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 01/26/21	01/27/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 01/26/21	01/27/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 01/26/21	01/27/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 01/26/21	01/27/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Anion Chromatography Working Standard

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 02/02/21	02/03/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 02/02/21	02/03/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 02/02/21	02/03/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 02/02/21	02/03/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 02/02/21	02/03/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 02/02/21	02/03/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 02/02/21	02/03/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 02/02/21	02/03/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 02/02/21	02/03/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GA5	Cal 1 2021.01.26	26/Jan/2021	16:40	Blank	
2	GA5	Cal 1 2021.01.26	26/Jan/2021	16:54	Calibration Standard	
3	GA6	Cal 2 2021.01.26	26/Jan/2021	17:09	Calibration Standard	
4	GA7	Cal 3 2021.01.26	26/Jan/2021	17:24	Calibration Standard	
5	GA8	Cal 4 2021.01.26	26/Jan/2021	17:38	Calibration Standard	
6	GB1	Cal 5 2021.01.26	26/Jan/2021	17:53	Calibration Standard	
7	GB2	Cal 6 2021.01.26	26/Jan/2021	18:07	Calibration Standard	
8	GB3	Cal 7 2021.01.26/LCSD	26/Jan/2021	18:22	Calibration Standard	
9	GB4	Cal 8 2021.01.26	26/Jan/2021	18:37	Calibration Standard	
10	GB5	Cal 9 2021.01.26	26/Jan/2021	18:51	Calibration Standard	
11	R1	ICB / CCB	26/Jan/2021	19:06	Unknown	
12	GB6	ICV Absolute 111419	26/Jan/2021	19:21	Check Standard	
13	GB7	BA25867W07	26/Jan/2021	19:35	Unknown	94883 ERH1217
14	GB8	BA25870W07	26/Jan/2021	19:50	Unknown	94883 ERH1224
15	R2	210126A LCS/CCV 1	26/Jan/2021	20:05	Check Standard	
16	R1	210126A CCB 1	26/Jan/2021	20:19	Unknown	
17	R2	STOP	26/Jan/2021	20:31	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	BD3	Cal 3 2021.02.02	03/Feb/2021	13:53	Calibration Standard	F and PO4>PQL
2	BD4	Cal 4 2021.02.02	03/Feb/2021	14:08	Calibration Standard	
3	BD5	Cal 5 2021.02.02	03/Feb/2021	14:23	Calibration Standard	
4	BD6	Cal 6 2021.02.02	03/Feb/2021	14:38	Calibration Standard	
5	BD7	Cal 7 2021.02.02	03/Feb/2021	14:53	Calibration Standard	
6	BD8	Cal 8 2021.02.02	03/Feb/2021	15:07	Calibration Standard	
7	BE1	Cal 9 2021.02.02	03/Feb/2021	15:22	Calibration Standard	
8	R1	ICB / CCBxxx	03/Feb/2021	15:37	Unknown	
9	R1	210203 ICB / CCB	03/Feb/2021	15:52	Unknown	replaced ICB
10	BE2	210203 ICV/LCS	03/Feb/2021	16:07	Check Standard	Absolute 111419
11	BE3	BA26344W01	03/Feb/2021	16:22	Unknown	
12	BE4	BA26345W01	03/Feb/2021	16:46	Unknown	
13	BE5	BA26346W01	03/Feb/2021	17:01	Unknown	
14	BE6	BA26347W01	03/Feb/2021	17:16	Unknown	
15	BE7	BA26348W01	03/Feb/2021	17:30	Unknown	
16	GA6	BA25870W07 DF5	03/Feb/2021	17:45	Unknown	
17	GA7	BA26001W11 DF5	03/Feb/2021	18:00	Unknown	
18	R2	210203A LCSD	03/Feb/2021	18:15	Unknown	
19	R2	210203A CCV/LCS 1	03/Feb/2021	18:30	Check Standard	
20	R1	210203A CCB 1	03/Feb/2021	18:45	Unknown	
21	BE8	BA26349W01	03/Feb/2021	19:00	Unknown	
22	GA8	BA26385W01	03/Feb/2021	19:14	Unknown	
23	R2	210203A CCV/LCS 1	03/Feb/2021	19:29	Check Standard	
24	R1	210203A CCB 1	03/Feb/2021	19:44	Unknown	baseline shifted
25	R1	210203A CCB 1	03/Feb/2021	19:59	Unknown	
26	R2	stop	03/Feb/2021	20:11	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

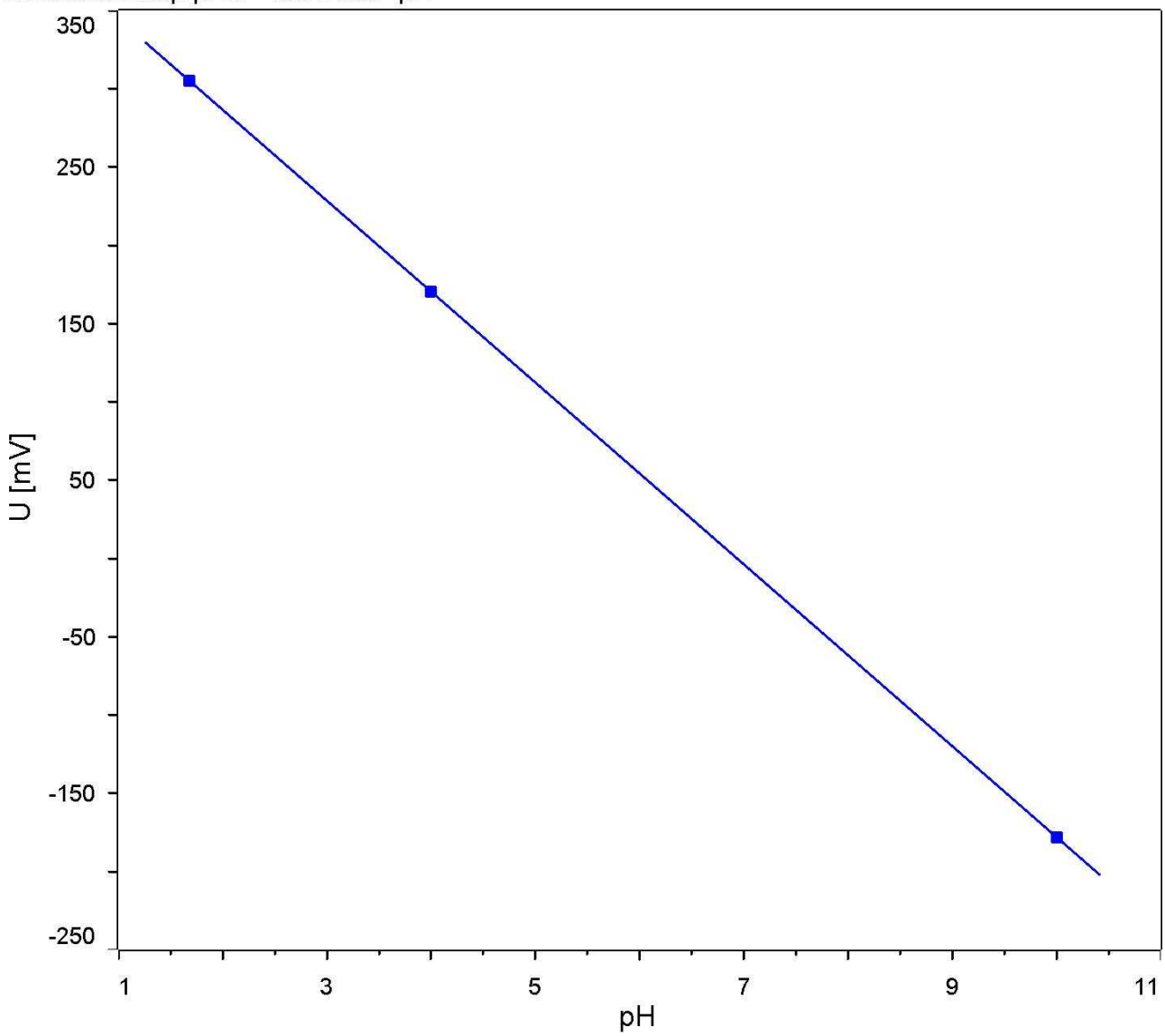
Timao Calibration Curve

2021-02-01 16:12:58

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0423	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.93	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.931	
Res19	21.1	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.1171	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA26302W01	2021-02-01 18:21:52 UTC-8	Alkalinity	0.000	4.680	0.00	0.00	187.20	187.20	mg/L	25 mL	0.0200	210201A	AR
BA26163W07	2021-02-01 18:15:11 UTC-8	Alkalinity	0.000	4.020	0.00	0.00	160.80	160.80	mg/L	25 mL	0.0200	210201A	AR
BA26160W07	2021-02-01 18:10:33 UTC-8	Alkalinity	0.000	2.054	0.00	0.00	82.16	82.16	mg/L	25 mL	0.0200	210201A	AR
BA26016W07	2021-02-01 18:06:16 UTC-8	Alkalinity	0.000	1.606	0.00	0.00	64.24	64.24	mg/L	25 mL	0.0200	210201A	AR
BA26013W07	2021-02-01 17:56:22 UTC-8	Alkalinity	0.000	6.936	0.00	0.00	277.44	277.44	mg/L	25 mL	0.0200	210201A	AR
BA26006W07	2021-02-01 17:48:33 UTC-8	Alkalinity	0.000	4.734	0.00	0.00	189.36	189.36	mg/L	25 mL	0.0200	210201A	AR
BA26001W11	2021-02-01 17:44:23 UTC-8	Alkalinity	0.000	1.564	0.00	0.00	62.56	62.56	mg/L	25 mL	0.0200	210201A	AR
BA25870W07	2021-02-01 17:39:46 UTC-8	Alkalinity	0.000	1.914	0.00	0.00	76.56	76.56	mg/L	25 mL	0.0200	210201A	AR
BA25867W07	2021-02-01 17:34:53 UTC-8	Alkalinity	0.000	2.030	0.00	0.00	81.20	81.20	mg/L	25 mL	0.0200	210201A	AR
210201A LCSD	2021-02-01 17:26:12 UTC-8	Alkalinity	0.272	6.292	0.00	21.76	229.92	251.68	mg/L	25 mL	0.0200	210201A	AR
210201A LCS	2021-02-01 17:16:36 UTC-8	Alkalinity	0.278	6.460	0.00	22.24	236.16	258.40	mg/L	25 mL	0.0200	210201A	AR
210201A BLK	2021-02-01 17:13:35 UTC-8	Alkalinity	0.000	0.086	0.00	0.00	3.44	3.44	mg/L	25 mL	0.0200	210201A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA
ORP standard	Thermo Fisher Scientific	mV	NA	WZ1-40222	01/11/19	1/31/20	20mL	20mL	ORP STD	220mV

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210126 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

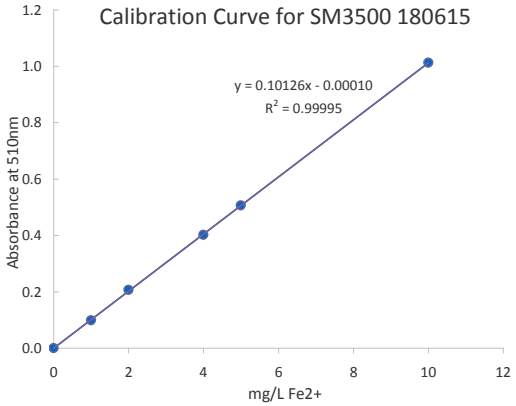
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210126	0.299	2.95

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	01/26/21	2.95



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
01/26/21	0:31	CCV 4.0 A210126	1	0.390	25mL		3.85	3.85	4.00	96.3%
01/26/21	0:31	Blk/ CCB A210126	1	0.000	25mL		0.00	0.00		
01/26/21	0:31	LCS A210126	1	0.299	25mL		2.95	2.95	3.00	98.5%
01/26/21	0:31	LCSD A210126	1	0.301	25mL		2.97	2.97	3.00	99.1%
01/26/21	0:32	BA25690W12	1	0.005	25mL		0.05	0.05		
01/26/21	0:32	BA25693W09	1	0.078	25mL		0.77	0.77		
01/26/21	0:33	BA25696W09	1	0.008	25mL		0.08	0.08		
01/26/21	0:33	BA25699W12	1	0.010	25mL		0.10	0.10		
01/26/21	0:34	BA25867W09	1	0.037	25mL		0.37	0.37		
01/26/21	0:35	BA25870W09	1	0.002	25mL		0.02	0.02		
01/26/21	0:35	BA25870W09 MS	1	0.290	25mL		2.87	2.87		
01/26/21	0:36	BA25870W09 MSD	1	0.289	25mL		2.86	2.86		
01/26/21	0:36	CCV 4.0 A210126	1	0.401	25mL		3.96	3.96	4.00	99.0%
01/26/21	0:36	Blk/ CCB A210126	1	0.002	25mL		0.02	0.02		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

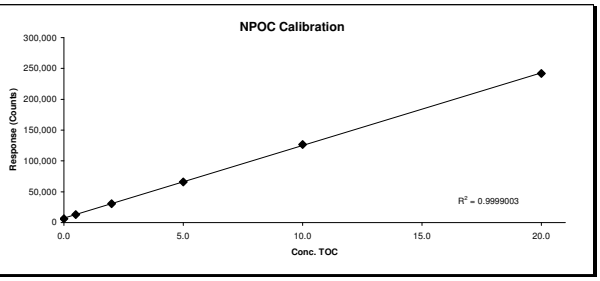
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210126A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-26	05:02 PM	QCB	1	2268	40mL	0.000	0	0.00	0.00		
2021-01-26	05:41 PM	CCV	1	60057	40mL	0.000	4.905	4.91	0.11	5.00	98.1%
2021-01-26	06:21 PM	CCB	1	1752	40mL	0.000	0	0.00	0.00		
2021-01-26	07:00 PM	210126A LCS	1	58930	40mL	0.000	4.809	4.81	0.00	5.00	96.2%
2021-01-26	07:41 PM	210126A LCSD	1	58620	40mL	0.000	4.784	4.78	0.06	5.00	95.7%
2021-01-26	08:21 PM	BA25870W06	1	4231	40mL	0.000	0.216	0.22	0.02		
2021-01-26	08:57 PM	BA25867W06	1	7003	40mL	0.000	0.451	0.45	0.05		
2021-01-26	09:34 PM	BA25865W02	1	117323	40mL	0.000	9.815	9.82	2.30		
2021-01-26	10:13 PM	BA25865W02 DUP	1	118522	40mL	0.000	9.917	9.92	2.85		
2021-01-26	10:52 PM	CCV	1	67773	40mL	0.000	5.56	5.56	0.28	5.00	111.2%
2021-01-26	11:32 PM	CCB	1	2279	40mL	0.000	0.007	0.01	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **06/11/20**

Exp Date **06/11/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**6465171-49409**	**06/30/21**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC_MS/MSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**6465171-49409**	**06/30/21**	200 uL	40 mL	**sample**	5 ppm

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94883 SDG: 94883
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 01/26/21

Analyte	Calibration Verification									M
	True ICV	Found 11:58	%R(1)	True CCV1	Found 13:06	%R(1)	True CCV1	Found 13:12	%R(1)	
TOXN	3	3.2919	110	3	2.9146	97.2	3	2.7569	91.9	

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94883 SDG: 94883

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 01/26/21 12:00	C	CCB 01/26/21 13:07	C	CCB 01/26/21 13:13	C		C		C	
TOXN	.100	U	.100	U	.100	U					

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 12:54:13
Tray Number:	3
Tray Name:	210126B NO2 NO3 TOXN

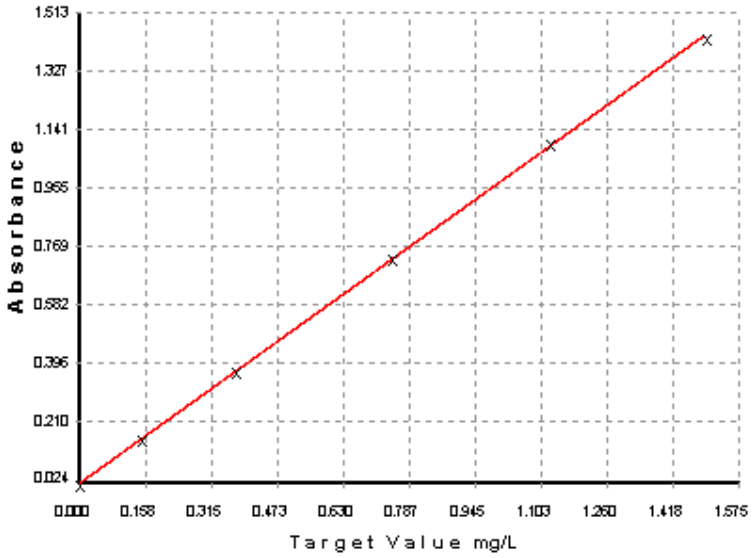
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0244	-0.0027	0.0000	
S90	0.1681	0.1490	0.1500	-0.69
S91	0.3822	0.3749	0.3750	-0.04
S92	0.7404	0.7528	0.7500	0.38
S93	1.1019	1.1343	1.1250	0.83
S94	1.4406	1.4917	1.5000	-0.55
S0	0.0350	0.0085	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	0.8
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-2.845079E-002
b =:	1.055256E+000
Date & Time:	2021-01-26 12:48:53
Original Date & Time:	2021-01-26 10:56:23

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0244			0.024401			ERR	2021-01-26 10:49:03
	S90	Standard 90	0.1681			0.168130			ERR	2021-01-26 10:50:16
	S91	Standard 91	0.3822			0.382186			ERR	2021-01-26 10:51:30
	S92	Standard 92	0.7404			0.740356			ERR	2021-01-26 10:52:43
	S93	Standard 93	1.1019			1.101891			ERR	2021-01-26 10:53:57
	S94	Standard 94	1.4406			1.440586			ERR	2021-01-26 10:55:10
	S0	Standard 0	0.0350			0.035037			ERR	2021-01-26 10:56:23
	CCV	CCV .75	0.0068	mg/L		0.033377			ERR	2021-01-26 10:57:36
	CCB	CCB	-0.0016	mg/L		0.025484			ERR	2021-01-26 10:58:50
3	U1	ICV NO2	0.8170	mg/L		0.801202			ERR	2021-01-26 11:00:04
4	U2	ICV NO3 TOXN	0.0070	mg/L		0.033610			ERR	2021-01-26 11:01:18
5	U3	ICB NO2 NO3 TOXN	0.0007	mg/L		0.027645			ERR	2021-01-26 11:02:31
6	U4	210125A Blk NO2 NO3 TOXN	0.0017	mg/L		0.028607			ERR	2021-01-26 11:03:46
8	U5	210125A LCS NO2	0.7751	mg/L		0.761438			ERR	2021-01-26 11:05:00
9	U6	210125A LCS NO3 TOXN	0.0079	mg/L		0.034410			ERR	2021-01-26 11:06:13
37	U7	BA25693W08 pH 8.53	0.0031	mg/L		0.029946			ERR	2021-01-26 11:07:27
38	U8	BA25696W08 pH 6.45	0.0039	mg/L		0.030682			ERR	2021-01-26 11:08:40
39	U9	BA25699W11 pH 6.24	0.0026	mg/L		0.029470			ERR	2021-01-26 11:09:54
40	U10	BA25600W06	-0.0018	mg/L		0.025228			ERR	
	CCV	CCV .75	0.6854	mg/L		0.676519			ERR	2021-01-26 11:12:22
	CCB	CCB	0.0028	mg/L		0.029643			ERR	2021-01-26 11:13:38
41	U11	BA25600W07 pH 6.01	-0.0026	mg/L		0.024543			ERR	
42	U12	BA25601W06	-0.0014	mg/L		0.025641			ERR	
43	U13	BA25601W07 pH 6.27	-0.0007	mg/L		0.026299			ERR	

44	U14	BA25602W06	-0.0009	mg/L	0.026113	ERR	
45	U15	BA25602W07 pH 8.28	-0.0019	mg/L	0.025128	ERR	
47	U16	BA25214 PT	0.0016	mg/L	0.028492	ERR	2021-01-26 11:25:35
	CCV	CCV .75	0.6693	mg/L	0.661199	ERR	2021-01-26 11:27:53
	CCB	CCB	0.0039	mg/L	0.030682	ERR	2021-01-26 11:30:07

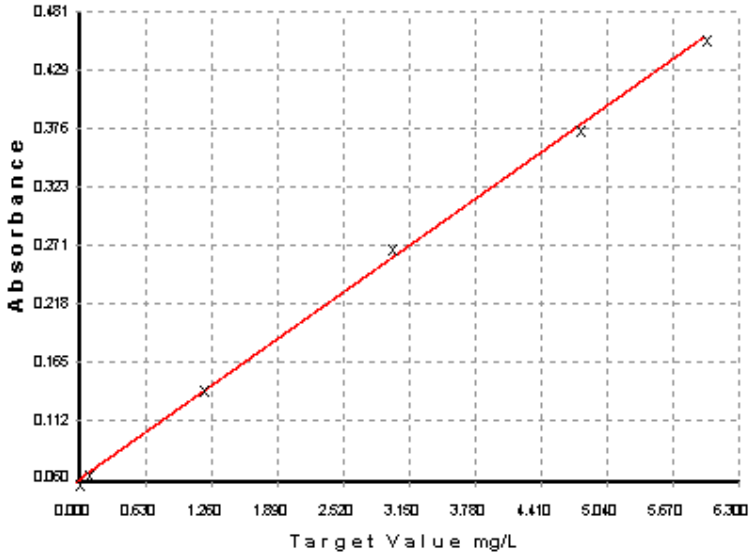
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0598	-0.0454	0.0000	
S90	0.0676	0.0722	0.1000	-27.80
S91	0.1436	1.2203	1.2000	1.69
S92	0.2704	3.1332	3.0000	4.44
S93	0.3775	4.7498	4.8000	-1.05
S94	0.4583	5.9700	6.0000	-0.50
S0	0.0637	0.0138	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9996
Carryover(%):	1.0
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-9.478600E-001
b =:	1.509410E+001
Date & Time:	2021-01-26 12:48:53
Original Date & Time:	2021-01-26 11:52:05

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0598			0.059788			ERR	2021-01-26 11:38:55
	S90	Standard 90	0.0676			0.067580			ERR	2021-01-26 11:41:07
	S91	Standard 91	0.1436			0.143640			ERR	2021-01-26 11:43:19
	S92	Standard 92	0.2704			0.270375			ERR	2021-01-26 11:45:31
	S93	Standard 93	0.3775			0.377474			ERR	2021-01-26 11:47:42
	S94	Standard 94	0.4583			0.458315			ERR	2021-01-26 11:49:54
	S0	Standard 0	0.0637			0.063713			ERR	2021-01-26 11:52:05
	CCV	CCV	2.7899	mg/L		0.247628			ERR	2021-01-26 11:54:16
	CCB	CCB	-0.0099	mg/L		0.062142			ERR	2021-01-26 11:56:28
4	U2	ICV NO3 TOXN	3.2919	mg/L		0.280885			ERR	2021-01-26 11:58:39
5	U3	ICB NO2 NO3 TOXN	-0.0239	mg/L		0.061211			ERR	2021-01-26 12:00:51
6	U4	210125A Blk NO2 NO3 TOXN	-0.0333	mg/L		0.060592			ERR	2021-01-26 12:03:04
9	U6	210125A LCS NO3 TOXN	3.0680	mg/L		0.266057			ERR	2021-01-26 12:05:15
37	U7	BA25693W08 pH 8.53	0.2264	mg/L		0.077794			ERR	2021-01-26 12:07:26
38	U8	BA25696W08 pH 6.45	-0.0120	mg/L		0.062002			ERR	2021-01-26 12:09:37
39	U9	BA25699W11 pH 6.24	0.0249	mg/L		0.064446			ERR	2021-01-26 12:11:48
40	U10	BA25600W06	155.3339	mg/L		0.234314		x60.0000	ERR	
41	U11	BA25600W07 pH 6.01	137.7930	mg/L		0.214946		x60.0000	ERR	2021-01-26 12:16:12
42	U12	BA25601W06	877.7513	mg/L		0.208177		x400.0000	ERR	2021-01-26 12:16:50
	CCV	CCV	2.8810	mg/L		0.253668			ERR	2021-01-26 12:17:55
	CCB	CCB	-0.0101	mg/L		0.062126			ERR	2021-01-26 12:18:51
43	U13	BA25601W07 pH 6.27	820.5052	mg/L		0.198695		x400.0000	ERR	2021-01-26 12:19:48
44	U14	BA25602W06	861.3977	mg/L		0.205468		x400.0000	ERR	2021-01-26 12:20:44
45	U15	BA25602W07 pH 8.28	809.8693	mg/L		0.196933		x400.0000	ERR	2021-01-26 12:21:40
47	U16	BA25214 PT	4.3472	mg/L		0.350802			ERR	2021-01-26 12:22:36
	CCV	CCV	2.6957	mg/L		0.241389			ERR	2021-01-26 12:23:32
	CCB	CCB	-0.0207	mg/L		0.061428			ERR	2021-01-26 12:24:29

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.2848	mg/L		0.000000			ERR	2021-01-26 12:48:53
4	U2	ICV NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
5	U3	ICB NO2 NO3 TOXN	-0.0247	mg/L		0.000000			ERR	2021-01-26 12:48:53
5	U3	ICB NO2 NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
6	U4	210125A Blk NO2 NO3 TOXN	-0.0350	mg/L		0.000000			ERR	2021-01-26 12:48:53
6	U4	210125A Blk NO2 NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
9	U6	210125A LCS NO3 TOXN	3.0602	mg/L		0.000000			ERR	2021-01-26 12:48:53
9	U6	210125A LCS NO3 TOXN				0.000000			ERR	2021-01-26 12:48:53
37	U7	BA25693W08 pH 8.53	0.2232	mg/L		0.000000			ERR	2021-01-26 12:48:53
37	U7	BA25693W08 pH 8.53				0.000000			ERR	2021-01-26 12:48:53
38	U8	BA25696W08 pH 6.45	-0.0159	mg/L		0.000000			ERR	2021-01-26 12:48:53
38	U8	BA25696W08 pH 6.45				0.000000			ERR	2021-01-26 12:48:53
39	U9	BA25699W11 pH 6.24	0.0222	mg/L		0.000000			ERR	2021-01-26 12:48:53
39	U9	BA25699W11 pH 6.24				0.000000			ERR	2021-01-26 12:48:53
40	U10	BA25600W06	155.3358	mg/L		0.000000		x60.0000	ERR	2021-01-26 12:49:31
40	U10	BA25600W06				0.000000		x60.0000	ERR	2021-01-26 12:49:31
41	U11	BA25600W07 pH 6.01	137.7956	mg/L		0.000000		x60.0000	ERR	2021-01-26 12:49:31
41	U11	BA25600W07 pH 6.01				0.000000		x60.0000	ERR	2021-01-26 12:49:31
42	U12	BA25601W06	877.7527	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
42	U12	BA25601W06				0.000000		x400.0000	ERR	2021-01-26 12:49:31
43	U13	BA25601W07 pH 6.27	820.5059	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
43	U13	BA25601W07 pH 6.27				0.000000		x400.0000	ERR	2021-01-26 12:49:31
44	U14	BA25602W06	861.3986	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
44	U14	BA25602W06				0.000000		x400.0000	ERR	2021-01-26 12:49:31
45	U15	BA25602W07 pH 8.28	809.8713	mg/L		0.000000		x400.0000	ERR	2021-01-26 12:49:31
45	U15	BA25602W07 pH 8.28				0.000000		x400.0000	ERR	2021-01-26 12:49:31
47	U16	BA25214 PT	4.3456	mg/L		0.000000			ERR	2021-01-26 12:48:53
47	U16	BA25214 PT				0.000000			ERR	2021-01-26 12:48:53

AQ2 Tray Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-01-26 15:01:05
Tray Number:	4
Tray Name:	210126C TOXN

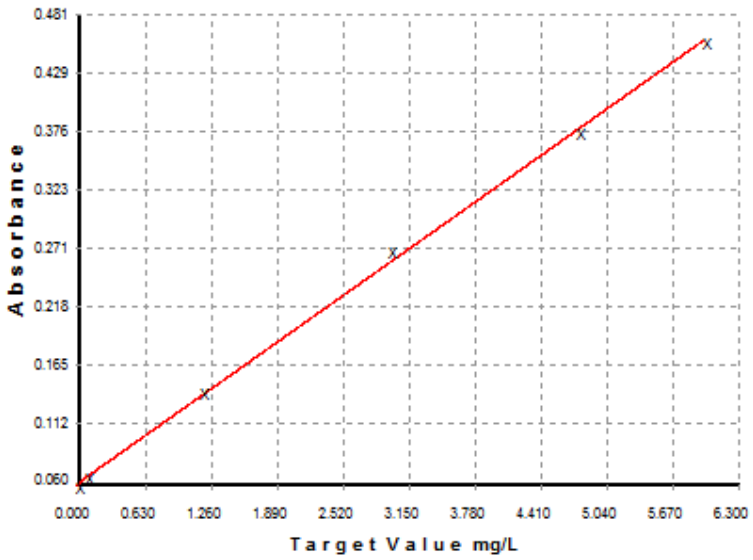
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0598	-0.0454	0.0000	
S90	0.0676	0.0722	0.1000	-27.80
S91	0.1436	1.2203	1.2000	1.69
S92	0.2704	3.1332	3.0000	4.44
S93	0.3775	4.7498	4.8000	-1.05
S94	0.4583	5.9700	6.0000	-0.50
S0	0.0637	0.0138	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9996
Carryover(%):	1.0
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-9.478600E-001
b =:	1.509410E+001
Date & Time:	2021-01-26 12:48:53
Original Date & Time:	2021-01-26 11:52:05

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	CCV	CCV	2.9146	mg/L		0.255895			ERR	2021-01-26 13:06:24
	CCB	CCB	-0.0125	mg/L		0.061971			ERR	2021-01-26 13:07:20
6	U1	210126A Blk NO2 NO3 TOXN	-0.0174	mg/L		0.061645			ERR	2021-01-26 13:08:16
9	U2	210125A LCS NO3 TOXN	3.1857	mg/L		0.273850			ERR	2021-01-26 13:09:12
11	U3	210125A LCSD NO3 TOXN	3.2547	mg/L		0.278425			ERR	2021-01-26 13:10:08
48	U4	BA25867W08	0.0072	mg/L		0.063277			ERR	2021-01-26 13:11:04
49	U5	BA25870W08	0.4945	mg/L		0.095556			ERR	2021-01-26 13:12:00
	CCV	CCV	2.7569	mg/L		0.245444			ERR	2021-01-26 13:12:56
	CCB	CCB	-0.0080	mg/L		0.062266			ERR	2021-01-26 13:13:52

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

Bold and Blue= Needs to be filled out everytime reagent is prepped

Bold and Green= Needs to be filled out everytime reagent is switched out

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 19, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94899

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Eleven water samples were received January 27, 2021. Written results for the requested analyses are being provided on this February 19, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94899
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	8
Sample Results	21
QC Forms	88
Method 8015B Calibration Data	166
Method 8015B Raw Data	217
Method 8270D Calibration Data	271
Method 8270D Raw Data	319
Method 8270D SIM Calibration Data	359
Method 8270D SIM Raw Data	386
APPL SOP 2-MEE Calibration Data	422
APPL SOP 2-MEE Raw Data	449
Method 8260B Calibration Data	485
Method 8260B Raw Data	568
Method 8260B GRO Calibration Data	604
Method 8260B GRO Raw Data	657
Method RSK-175 Calibration Data	707
Method RSK-175 Raw Data	735
Method 300 Calibration Data	768
Method 300 Raw Data	814
Inorganic Analyses and Calibration Raw Data	825

CASE NARRATIVE

Case Narrative

ARF: 94899

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Eleven water samples were received January 27, 2021 at 3.0°C, 4.0°C, 5.0°, 3.0°C, 3.0°C, 2.0°C, 2.0°C and 3.0°C. The sample group was assigned Analytical Request Form (ARF) number 94899.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8270D SIM: In the MS/MSD performed on sample ERH1214, one compound and one surrogate recovered outside their control limits. Corrective action: the client was notified.

EPA 8260B: One or two samples recovered above the upper control limit in five samples. No target analytes were detected in the samples.

RSK-175: Manual integrations were performed for this method in accordance with APPL's SOP. Chromatograms before and after manual integration are enclosed for specific samples and analytes. Abbreviated flags for technical justification are listed on the chromatogram.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94899	01/27/21	ERH1213	BA26000	01/26/21 9:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1213	BA26000	01/26/21 9:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1213	BA26000	01/26/21 9:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	SM3500FeB	Ferrous Iron
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1214	BA26001	01/26/21 9:10:00 AM	WATER	SW846 9060A	9060A TOC
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1215	BA26003	01/26/21 9:10:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1218	BA26005	01/25/21 11:50:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1218	BA26005	01/25/21 11:50:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1218	BA26005	01/25/21 11:50:00 AM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	SM3500FeB	Ferrous Iron
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1219	BA26006	01/25/21 12:20:00 PM	WATER	SW846 9060A	9060A TOC

94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1220	BA26008	01/25/21 12:20:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1267	BA26010	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
94899	01/27/21	ERH1267	BA26010	01/25/21 12:20:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1221	BA26012	01/25/21 2:45:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1221	BA26012	01/25/21 2:45:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1221	BA26012	01/25/21 2:45:00 PM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	SM3500FeB	Ferrous Iron
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1222	BA26013	01/25/21 3:10:00 PM	WATER	SW846 9060A	9060A TOC
94899	01/27/21	ERH1239	BA26015	01/26/21 9:49:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1239	BA26015	01/26/21 9:49:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1239	BA26015	01/26/21 9:49:00 AM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	SM3500FeB	Ferrous Iron
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 8270D	EPA 8270D WATER
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	RSK 175	METHANE BY RSK 175
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94899	01/27/21	ERH1240	BA26016	01/26/21 10:57:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 94899

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Brooke Gottmeier**
Phone: **808-954-4536** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **202102,202104,20210**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **01/27/21** Time: **10:30**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **SEE CRF**
Color: **VFRG/L-PurBrown**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **02/03/21**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com
EDD: AECOM EQuIS EDD 2.5.3 Red Hill 87DMEE->3535A to brooke.gottmeier@, Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 6-$87DC53W5, 6-$87DMEEW5, 14-$DOC53W5LIQ, 6-$SIM53LIQ51
Extractions: 6-_LIQ003, 14-_LIQ005, 6-_MWE2MEE
VOA: 10-$86BTOTXDOD5W, 10-$GASBL, 10-$GRO86BW, 8-$RSKMETH
Wetlab: 4-$232W(HCO3,CO3,ALK), 4-$300W, 4-$353TOXNW, 4-$35FE, 4-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID		APPL ID	Sampled		Analyses Requested
1.	ERH1213	LCSD	BA26000W	01/26/21	09:00	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1214	D:8260,GRO,PAH,8270,2-MEE	BA26001W	01/26/21	09:10	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
3.	ERH1214 BLANK	LCSD	BA26002W	01/27/21	00:00	$DOC53W5LIQ -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH1215	LCSD BA26003W	01/26/21	09:10	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
5.	ERH1215 BLANK	LCSD BA26004W	01/27/21	00:00	$DOC53W5LIQ -- See Comments
6.	ERH1218	LCSD BA26005W	01/25/21	11:50	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
7.	ERH1219	LCSD BA26006W	01/25/21	12:20	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
8.	ERH1219 BLANK	LCSD BA26007W	01/27/21	00:00	$DOC53W5LIQ -- See Comments
9.	ERH1220	LCSD BA26008W	01/25/21	12:20	$86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
10.	ERH1220 BLANK	LCSD BA26009W	01/27/21	00:00	$DOC53W5LIQ -- See Comments
11.	ERH1267	LCSD BA26010W	01/25/21	12:20	$DOC53W5LIQ -- See Comments
12.	ERH1267 BLANK	LCSD BA26011W	01/27/21	00:00	$DOC53W5LIQ -- See Comments
13.	ERH1221	LCSD BA26012W	01/25/21	14:45	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
14.	ERH1222	LCSD BA26013W	01/25/21	15:10	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
15.	ERH1222 BLANK	LCSD BA26014W	01/27/21	00:00	$DOC53W5LIQ -- See Comments
16.	ERH1239	LCSD BA26015W	01/26/21	09:49	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- See Comments
17.	ERH1240	LCSD BA26016W	01/26/21	10:57	$232W(HCO3,CO3,ALK), $300W, $353TOXNW, $35FE, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- See Comments
18.	ERH1240 BLANK	LCSD BA26017W	01/27/21	00:00	$DOC53W5LIQ -- See Comments

APPL Sample Receipt Form

ARF# **94899**

Sample	Container Type	Count	p
BA26000	[13] VOAs - HCL	4	NA
BA26001	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	8	NA
	[17] Amber Liter	12	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	6	1.6
	[40] 500mL Amber, unprsrvd	6	NA
BA26002	[39] Amber Liter, HCL prsvd	1	NA
BA26003	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA26004	[39] Amber Liter, HCL prsvd	1	NA
BA26005	[13] VOAs - HCL	4	NA
BA26006	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA26007	[39] Amber Liter, HCL prsvd	1	NA
BA26008	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA26009	[39] Amber Liter, HCL prsvd	1	NA
BA26010	[17] Amber Liter	1	NA
BA26011	[39] Amber Liter, HCL prsvd	1	NA
BA26012	[13] VOAs - HCL	4	NA
BA26013	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	2	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA26014	[39] Amber Liter, HCL prsvd	1	NA
BA26015	[13] VOAs - HCL	4	NA
BA26016	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[39] Amber Liter, HCL prsvd	1	1.3
	[39] Amber Liter, HCL prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	2	NA
BA26017	[39] Amber Liter, HCL prsvd	1	NA

94899

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202102

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): MM, AM, KL
Sampler (Signature):

Date Shipped: 1/26/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1213	Trip Blank	1/26/21	0900	HST	4	X			X							X						
ERH1214	RHMW2254-01	1/26/21	0910	HST	18	X			X**		X**	X**	X**	X**	X**	X	X	X	X		X	
ERH1215	RHMW2294-01	1/26/21	0910	HST	4	X			X		X	X	X*	X	X							

1/26/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: 3.0/3.0 R1: 3.0/3.0 5.0/5.0 2.0/2.0 4.0/4.0 3.0/3.0 2.0/2.0 3.0/3.0

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/26/21	15:30					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202104

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): KL, MM, AM
Sampler (Signature):

Date Shipped: 1/26/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1213	Trip Blank	1/26/21	0900	HST	0	X			X							X						
ERH1214	RHMW2253-01	1/26/21	0910	HST	1	X			X**		X*	X*	X*	X*	X*	X	X	X	X		X	
ERH1215	RHMW2253-01	1/26/21	0910	HST	7	X			X		X	X*	X	X	X							

1/26/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/26/21	15:30					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202103

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): AM, KL, MM
Sampler (Signature):
Date Shipped: 1/26/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1213	Trip blank	1/26/21	0900	HST	6	X			X							X						
ERH1214	RHMW2254-01	1/26/21	0910	HST	14	X			X**		X**	X**	X**	X**	X**	X	X	X	X		X	
ERH1215	RHMW2254-01	1/26/21	0910	HST	6	X			X		X	X*	X	X	X							

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

14 of 838

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date 1/26/21	Time 1530	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 1-27-21	Time 1030	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202107

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
CV18F0126 / 60571032	KL, MM, AM	102604	Cindy Ba

Date Shipped: 01/26/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1218	Trip Blank	01/25/21	1150	HST	4	X			X							X							
ERH1219	RHMW02	01/25/21	1220	HST	8	X			X		X	X*	X	X	X	X	X	X	X		X		
ERH1220	RHMW02	01/25/21	1220	HST	12	X			X		X	X*	X	X	X								See other Cooler
ERH1267	RHMW02	01/25/21	1220	HST	8	X					X	X*											

CB 01/26/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Cindy Ba (AECOM)	01/26/21	1530					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202106

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): KL, AM, MM

Sampler (Signature):

Date Shipped: 1/26/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1218	Trip Blank	1/25/21	1150	HST	0	X			X							X							
ERH1219	RHMW02	1/25/21	1220	HST	9	X			X		X	X*	X	X	X	X	X	X	X	X		X		
ERH1220	RHMW02	1/25/21	1220	HST	0	X			X		X	X*	X	X	X									See other COCs
ERH1267	RHMW02	1/25/21	1220	HST	1	X					X	X*												

1/26/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/26/21	1530					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202108

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): AM, MM, KL

Sampler (Signature): Cindy Brown

Date Shipped: 01/26/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1221	Trip Blank	01/25/21	1445	HST	4	X			X							X						
ERH1222	RHMW03	01/25/21	1510	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

CB 01.26.21

Analysis Requested/Method Number

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: Refrigerated

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Cindy Brown (AECOM)	01/26/21	1530					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 202117

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM, JV, KS

Sampler (Signature):

Date Shipped: 1/26/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC
ERH1239	Trip Blank	1/26/21	0945	HST	4	X			X							X						
ERH1240	~~HDMW2253-03~~ RHMW09	1/26/21	1057	HST	17	X			X		X	X*	X	X	X	X	X	X	X		X	

1/26/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/26/21	1530					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-27-21	1030	

See page 2 for Container Preservative and Sampling Information

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 48915

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: (808) 356-5373	Company Name: Same Phone: Same
Address: 1001 Bishop St. Ste. 1600 Honolulu, HI 96813 Fax:	Address: Fax:
Attn: brooke.gottreier@aecom.com	Attn: Sheree.Swith@aecom.com

Project Name/Number	Sampler (Print)
CNRFO126 / 60571032	MM
Purchase Order Number	**Sampler (Signature)**
102604	

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil
ERH1214	RHMW2254-01	1/26/21	0910	HST	4	X		
ERH1215	RHMW2254-01	1/26/21	0910	HST	1	X		
ERH1255	Trip Blank	1/26/21	0830	HST	0	X		
ERH1256	RHSF	1/26/21	0845	HST	2	X		
ERH1257	RHSF	1/26/21	0910	HST	6	X		
ERH1258	Field Blank	1/26/21	1234	HST	0	X		

Analysis Requested/Method Number: VOCs 524.2; total Pb 200.8; TPH-d 8015*; DOC 5310**; SVOCs 525.2; 8270D-SIM (Naphthalene)

ERH1214							X	
ERH1215							X	
ERH1255	X (hold)							
ERH1256	X	X	X	X	X			
ERH1257	X	X	X	X	X			
ERH1258					X	(hold)		

Date Shipped: 1/26/21
Carrier: FedEx
Waybill No.:
Comments:

See other coolers for RHMW2254-01 + DW samples

Pre-Chlorination
Post-Chlorination

* TPH-d C8-C18, C10-C25
** DOC field filtered
Hold ERH1255 - ERH1258 for analysis unless associated sample is detect.

1/26/21

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	1/26/21	1530					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					1-27-21	10:30	

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94899**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/27/21

2) Coolers: Number of Coolers: 9

3) YES Were custody seals present and intact?
How many? 18 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R1 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp

1: 3.0/3.0	2: 4.0/4.0	3: 5.0/5.0	4: 3.0/3.0	5: 3.0/3.0	6: 2.0/2.0
7: 2.0/2.0	8: 3.0/3.0	9: 3.0/3.0	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) Yes Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA26000w03-04, BA26005all, BA26012all, BA26015w03-04
Smaller than a pea: BA26006w04, BA26013w04, BA26015w01-02, BA26016w02-04

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate:

Notes/Deficiencies:
Ferrous Iron received out of holding time

CUSTODY SEAL
AECOM (808)521-3051
Initials [signature] Date 1/26/21

Personnel receiving samples: MS Second reviewer: [signature]
Personnel labeling samples: MS/AD
Project manager notified: AA Date/Time of notification 01/27/21
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.4	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	81.1	56-125			%	02/01/21	02/02/21

Quant Method: DOC1218.M
Run #: 201056
Instrument: Apollo
Sequence: 210201
Dilution Factor: 1
Initials: SSE

Printed: 02/09/21 3:40:06 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	87.6	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	79.6	56-125			%	02/01/21	02/02/21

Quant Method:	DOC1218.M
Run #:	201057
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

Printed: 02/09/21 3:40:06 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A1-260986

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	390 ++	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	80.1	60-142			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	69.0	56-125			%	02/01/21	02/08/21

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	208011
Instrument:	Apollo
Sequence:	210208
Dilution Factor:	1
Initials:	SSE

Printed: 02/09/21 3:40:06 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	1500 ++	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	180 J	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.1	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	82.5	56-125			%	02/01/21	02/02/21

J = Estimated value.
++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	201058
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A1-260986

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	380 ++	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	83.7	60-142			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	71.9	56-125			%	02/01/21	02/08/21

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	208012
Instrument:	Apollo
Sequence:	210208
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	1600 ++	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	330	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	90.7	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	84.1	56-125			%	02/01/21	02/02/21

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	201059
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1267

APPL ID: BA26010

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A1-260986

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	340 ++	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	84.4	60-142			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	71.9	56-125			%	02/01/21	02/08/21

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	208013
Instrument:	Apollo
Sequence:	210208
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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ARF: 94899

Sample ID: ERH1267

APPL ID: BA26010

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	970 ++	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	92.8	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	85.0	56-125			%	02/01/21	02/02/21

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	DOC1218.M
Run #:	201060
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A1-260986

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	76.2	60-142			%	02/01/21	02/08/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	64.9	56-125			%	02/01/21	02/08/21

Quant Method: DOC1218.M
Run #: 208014
Instrument: Apollo
Sequence: 210208
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	180 J	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	220 ++J	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	86.2	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	79.6	56-125			%	02/01/21	02/02/21

J = Estimated value.
++(T4M) The analyst has noted that the chromatogram of this sample does not contain a petroleum hydrocarbon pattern, however the presence of a dominant peak(s) were noted.

Quant Method:	DOC1218.M
Run #:	201061
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

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EPA 8015B TPH LIQ-LIQ

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.9	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	82.0	56-125			%	02/01/21	02/02/21

Quant Method:	DOC1218.M
Run #:	201062
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	82.1	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	75.0	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	68.8	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	79.3	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	71.6	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	103	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y154
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	81.6	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	76.6	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	66.1	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	77.7	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	67.7	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	105	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y155
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	86.4	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	73.2	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	78.6	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	86.9	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	76.9	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	106	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y156
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	77.7	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	64.9	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	69.4	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	72.2	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	73.2	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	92.9	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y157
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	87.8	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	80.1	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	78.6	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	83.2	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	78.6	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	106	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y158
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	81.4	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	75.5	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	77.5	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	81.6	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	81.8	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	104	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y159
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 2:00:20 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	82.1	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	89.1	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L078
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	83.8	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	93.6	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L079
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 4:04:02 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	25	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	17	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	44	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	94.0	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	95.9	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L080
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	23	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	16	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	41	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	85.0	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	88.6	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L081
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	81.9	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	92.4	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L082
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 4:04:02 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	78.1	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	89.9	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L083
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 4:04:02 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K063
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

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APPL Inc.
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K064
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1219

Sample Collection Date: 01/25/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94899

APPL ID: BA26006

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K065
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1220

Sample Collection Date: 01/25/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94899

APPL ID: BA26008

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K066
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1222

Sample Collection Date: 01/25/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94899

APPL ID: BA26013

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K067
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

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Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1240

Sample Collection Date: 01/26/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94899

APPL ID: BA26016

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K068
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1213

APPL ID: BA26000

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	106	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	116	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	01/29/21	01/29/21

Quant Method: M0128W.M
Run #: 0129M15
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	109	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	102	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	121 #	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	106	89-112			%	01/29/21	01/29/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M16
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	109	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	105	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	120 #	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	108	89-112			%	01/29/21	01/29/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M17
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1218

APPL ID: BA26005

Sample Collection Date: 01/25/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	117	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	111	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	129 #	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	115 #	89-112			%	01/30/21	01/30/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M18
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	111	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	112	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	123 #	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	109	89-112			%	01/30/21	01/30/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M19
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	108	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	108	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	120 #	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	105	89-112			%	01/30/21	01/30/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M20
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1221

APPL ID: BA26012

Sample Collection Date: 01/25/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	108	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	104	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	116	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	105	89-112			%	01/30/21	01/30/21

Quant Method: M0128W.M
Run #: 0129M21
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	105	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	103	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	117	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	01/30/21	01/30/21

Quant Method: M0128W.M
Run #: 0129M22
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

Printed: 02/05/21 10:48:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1239

APPL ID: BA26015

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	105	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	116	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	01/30/21	01/30/21

Quant Method: M0128W.M
Run #: 0129M23
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/30/21	01/30/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	108	81-118			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	103	85-114			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	117	80-119			%	01/30/21	01/30/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	01/30/21	01/30/21

Quant Method: M0128W.M
Run #: 0129M24
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1213

APPL ID: BA26000

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M15
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	102	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M16
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1215

APPL ID: BA26003

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	105	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M17
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1218

APPL ID: BA26005

Sample Collection Date: 01/25/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	111	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M18
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	112	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M19
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1220

APPL ID: BA26008

Sample Collection Date: 01/25/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	108	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M20
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1221

APPL ID: BA26012

Sample Collection Date: 01/25/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	104	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M21
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	103	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M22
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1239

APPL ID: BA26015

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M23
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/30/21	01/30/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	103	85-114			%	01/30/21	01/30/21

Quant Method:	MGAS0128.M
Run #:	0129M24
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1213

APPL ID: BA26000

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R05
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R06
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1218

APPL ID: BA26005

Sample Collection Date: 01/25/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R09
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE - Dilution

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	5400	50.0	10.00	2.50	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R11
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	10
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	3900 E	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

E = The reported value exceeds linear range.

Quant Method:	RSK0914A.M
Run #:	0201R10
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1221

APPL ID: BA26012

Sample Collection Date: 01/25/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	2.8 J	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

J = Estimated value.

Quant Method:	RSK0914A.M
Run #:	0201R12
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R13
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1239

APPL ID: BA26015

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R14
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94899

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R15
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	119	5.0	1.00	0.40	mg/L	5	02/03/21	02/03/21
EPA 300.0	NITRATE	2.6	0.5	0.18	0.04	mg/L	1	01/27/21	01/27/21
EPA 300.0	SULFATE	19.0	1.0	0.20	0.09	mg/L	1	01/27/21	01/27/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	21.6	1.0	0.20	0.08	mg/L	1	01/27/21	01/27/21
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	1	01/27/21	01/27/21
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	1	01/27/21	01/27/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	21.7	1.0	0.20	0.08	mg/L	1	01/27/21	01/27/21
EPA 300.0	NITRATE	3.0	0.5	0.18	0.04	mg/L	1	01/27/21	01/27/21
EPA 300.0	SULFATE	22.6	1.0	0.20	0.09	mg/L	1	01/27/21	01/27/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	22.7	1.0	0.20	0.08	mg/L	1	01/27/21	01/27/21
EPA 300.0	NITRATE	0.71	0.5	0.18	0.04	mg/L	1	01/27/21	01/27/21
EPA 300.0	SULFATE	3.8	1.0	0.20	0.09	mg/L	1	01/27/21	01/27/21

Printed: 02/04/21 3:02:48 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1214

APPL ID: BA26001

Sample Collection Date: 01/26/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.82	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	62.6	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	62.6	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	0.20 J	0.93	0.350	0.130	mg/L	1	01/29/21	01/29/21

J = Estimated value.

Printed: 02/04/21 2:45:03 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1219

APPL ID: BA26006

Sample Collection Date: 01/25/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.039 J	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	189	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	189	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	1.9	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	3.2	0.93	0.350	0.130	mg/L	1	01/29/21	01/29/21

J = Estimated value.

Printed: 02/04/21 2:45:03 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1222

APPL ID: BA26013

Sample Collection Date: 01/25/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	1.8	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	277	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	277	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	1.4	0.93	0.350	0.130	mg/L	1	01/29/21	01/29/21

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1240

APPL ID: BA26016

Sample Collection Date: 01/26/21

ARF: 94899

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.59	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	64.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	64.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	0.19 J	0.93	0.350	0.130	mg/L	1	01/29/21	01/29/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210201A-BLK	Blank	60-142	89.5		56-125	81.4	
210201A-LCS	Lab Control Spike	60-142	88.7		56-125	89.3	
BA26001-MS	Matrix Spike	60-142	90.0		56-125	90.7	
BA26001-MSD	Matrix SpikeD	60-142	88.7		56-125	89.3	
BA26001	ERH1214	60-142	89.4		56-125	81.1	
BA26003	ERH1215	60-142	87.6		56-125	79.6	
BA26006	ERH1219	60-142	89.1		56-125	82.5	
BA26008	ERH1220	60-142	90.7		56-125	84.1	
BA26010	ERH1267	60-142	92.8		56-125	85.0	
BA26013	ERH1222	60-142	86.2		56-125	79.6	
BA26016	ERH1240	60-142	89.9		56-125	82.0	

Comments: Batch: #DOC53-210201A

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/08/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210201A1-BLK	Blank	0-1	0.0		60-142	82.9	
210201A1-LCS	Lab Control Spike	0-1	0.0		60-142	83.3	
BA26006	ERH1219	0-1	0.0		60-142	80.1	
BA26008	ERH1220	0-1	0.0		60-142	83.7	
BA26010	ERH1267	0-1	0.0		60-142	84.4	
BA26013	ERH1222	0-1	0.0		60-142	76.2	

Comments: Batch: #DOC53-210201A1

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/08/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210201A1-BLK	Blank	56-125	70.8				
210201A1-LCS	Lab Control Spike	56-125	79.3				
BA26006	ERH1219	56-125	69.0				
BA26008	ERH1220	56-125	71.9				
BA26010	ERH1267	56-125	71.9				
BA26013	ERH1222	56-125	64.9				

Comments: Batch: #DOC53-210201A1

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Apollo

Blank ID: 210201A-BLK Time Analyzed: 1455

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	201052	02/02/21 1455
210201A-LCS	Lab Control Spike	201053	02/02/21 1523
210201A-MS	Matrix Spike	201054	02/02/21 1551
210201A-MSD	Matrix SpikeD	201055	02/02/21 1620
BA26001	ERH1214	201056	02/02/21 1648
BA26003	ERH1215	201057	02/02/21 1717
BA26006	ERH1219	201058	02/02/21 1745
BA26008	ERH1220	201059	02/02/21 1813
BA26010	ERH1267	201060	02/02/21 1841
BA26013	ERH1222	201061	02/02/21 1909
BA26016	ERH1240	201062	02/02/21 1937

Comments: Batch: #DOC53-210201A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/08/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210201A1-BLK	Time Analyzed:	1705

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A1-BLK	Blank	208009	02/08/21 1705
210201A1-LCS	Lab Control Spike	208010	02/08/21 1733
BA26006	ERH1219	208011	02/08/21 1801
BA26008	ERH1220	208012	02/08/21 1829
BA26010	ERH1267	208013	02/08/21 1857
BA26013	ERH1222	208014	02/08/21 1925

Comments: Batch: #DOC53-210201A1

Method Blank
EPA 8015B TPH LIQ-LIQ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26001 - 260823**
Batch ID: #DOC53-210201A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
BLANK	SURROGATE: OCTACOSANE (S)	89.5	60-142			%	02/01/21	02/02/21
BLANK	SURROGATE: ORTHO-TERPHEN	81.4	56-125			%	02/01/21	02/02/21

Quant Method: DOC1218.M
Run #: 201052
Instrument: Apollo
Sequence: 210201
Initials: SSE

GC SC-Blank-REG MDLs-DOD
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Method Blank
EPA 8015B TPH WATER L-L SGC

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26006 - 260986**
Batch ID: #DOC53-210201A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/08/21
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	02/01/21	02/08/21
BLANK	SURROGATE: OCTACOSANE (S)	82.9	60-142			%	02/01/21	02/08/21
BLANK	SURROGATE: ORTHO-TERPHEN	70.8	56-125			%	02/01/21	02/08/21

Quant Method: DOC1218.M
Run #: 208009
Instrument: Apollo
Sequence: 210208
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/09/21 3:40:39 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Apollo

LCS ID: 210201A-LCS Time Analyzed: 1523

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	201052	02/02/21 1455
210201A-LCS	Lab Control Spike	201053	02/02/21 1523
210201A-MS	Matrix Spike	201054	02/02/21 1551
210201A-MSD	Matrix SpikeD	201055	02/02/21 1620
BA26001	ERH1214	201056	02/02/21 1648
BA26003	ERH1215	201057	02/02/21 1717
BA26006	ERH1219	201058	02/02/21 1745
BA26008	ERH1220	201059	02/02/21 1813
BA26010	ERH1267	201060	02/02/21 1841
BA26013	ERH1222	201061	02/02/21 1909
BA26016	ERH1240	201062	02/02/21 1937

Comments: Batch: #DOC53-210201A

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/08/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210201A1-LCS	Time Analyzed:	1733

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A1-BLK	Blank	208009	02/08/21 1705
210201A1-LCS	Lab Control Spike	208010	02/08/21 1733
BA26006	ERH1219	208011	02/08/21 1801
BA26008	ERH1220	208012	02/08/21 1829
BA26010	ERH1267	208013	02/08/21 1857
BA26013	ERH1222	208014	02/08/21 1925

Comments: Batch: #DOC53-210201A1

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **210201W-26001 LCS - 260823**
Batch ID: #DOC53-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1700	85.0	36-132
OIL (C24-C40)	2000	1770	88.5	41-113
SURROGATE: OCTACOSANE (S)	150	133	88.7	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	02/01/21
Analysis Date :	02/02/21
Instrument :	Apollo
Run :	201053
Initials :	SSE

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APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8015B TPH WATER L-L SGC

APPL ID: **210201W-26006 LCS - 260986**
Batch ID: #DOC53-210201A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1480	74.0	36-132
OIL (C24-C40)	2000	1570	78.5	41-113
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0.0	0-1
SURROGATE: OCTACOSANE (S)	150	125	83.3	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	119	79.3	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	02/01/21
Analysis Date :	02/08/21
Instrument :	Apollo
Run :	208010
Initials :	SSE

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APPL Standard LCS

Matrix Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **210201W-26001 MS - 260823**
Batch ID: #DOC53-210201A
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	2000	43	1790	1830	87.3	89.3	36-132	2.2	30
OIL (C24-C40)	2000	52	1870	1970	90.9	95.9	41-113	5.2	30
SURROGATE: OCTACOSANE (S)	150	NA	135	133	90.0	88.7	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	136	134	90.7	89.3	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC1218.M	DOC1218.M
Extraction Date :	02/01/21	02/01/21
Analysis Date :	02/02/21	02/02/21
Instrument :	Apollo	Apollo
Run :	201054	201055
Initials :	SSE	

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APPL MSD SCII

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	43-140	80.5		44-119	77.5	
BA26001-MS	Matrix Spike	43-140	80.5		44-119	76.7	
BA26001-MSD	Matrix SpikeD	43-140	86.5		44-119	80.4	
210129A-LCS	Lab Control Spike	43-140	83.5		44-119	76.9	
BA26001	ERH1214	43-140	82.1		44-119	75.0	
BA26003	ERH1215	43-140	81.6		44-119	76.6	
BA26006	ERH1219	43-140	86.4		44-119	73.2	
BA26008	ERH1220	43-140	77.7		44-119	64.9	
BA26013	ERH1222	43-140	87.8		44-119	80.1	
BA26016	ERH1240	43-140	81.4		44-119	75.5	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	19-119	77.8		44-120	82.1	
BA26001-MS	Matrix Spike	19-119	80.5		44-120	81.9	
BA26001-MSD	Matrix SpikeD	19-119	81.5		44-120	81.9	
210129A-LCS	Lab Control Spike	19-119	82.5		44-120	82.5	
BA26001	ERH1214	19-119	68.8		44-120	79.3	
BA26003	ERH1215	19-119	66.1		44-120	77.7	
BA26006	ERH1219	19-119	78.6		44-120	86.9	
BA26008	ERH1220	19-119	69.4		44-120	72.2	
BA26013	ERH1222	19-119	78.6		44-120	83.2	
BA26016	ERH1240	19-119	77.5		44-120	81.6	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	10-115	79.5		50-134	102	
BA26001-MS	Matrix Spike	10-115	79.5		50-134	94.0	
BA26001-MSD	Matrix SpikeD	10-115	83.0		50-134	98.8	
210129A-LCS	Lab Control Spike	10-115	81.5		50-134	98.0	
BA26001	ERH1214	10-115	71.6		50-134	103	
BA26003	ERH1215	10-115	67.7		50-134	105	
BA26006	ERH1219	10-115	76.9		50-134	106	
BA26008	ERH1220	10-115	73.2		50-134	92.9	
BA26013	ERH1222	10-115	78.6		50-134	106	
BA26016	ERH1240	10-115	81.8		50-134	104	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

Blank ID: 210129A-BLK Time Analyzed: 1540

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0105Y149	02/01/21 1540
210129A-MS	Matrix Spike	0105Y151	02/01/21 1632
210129A-MSD	Matrix SpikeD	0105Y152	02/01/21 1658
210129A-LCS	Lab Control Spike	0105Y153	02/01/21 1723
BA26001	ERH1214	0105Y154	02/01/21 1749
BA26003	ERH1215	0105Y155	02/01/21 1815
BA26006	ERH1219	0105Y156	02/01/21 1841
BA26008	ERH1220	0105Y157	02/01/21 1906
BA26013	ERH1222	0105Y158	02/01/21 1932
BA26016	ERH1240	0105Y159	02/01/21 1957

Comments: Batch: #87DC5-210129A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-26001 - 260802**
Batch ID: #87DC5-210129A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	80.5	43-140			%	01/29/21	02/01/21
BLANK	SURROGATE: 2-FLUORBIPHENY	77.5	44-119			%	01/29/21	02/01/21
BLANK	SURROGATE: 2-FLUOROPHENO	77.8	19-119			%	01/29/21	02/01/21
BLANK	SURROGATE: NITROBENZENE-	82.1	44-120			%	01/29/21	02/01/21
BLANK	SURROGATE: PHENOL-D6 (S)	79.5	10-115			%	01/29/21	02/01/21
BLANK	SURROGATE: TERPHENYL-D14 (	102	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y149
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 2:00:28 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210129A-LCS	Time Analyzed:	1723

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0105Y149	02/01/21 1540
210129A-MS	Matrix Spike	0105Y151	02/01/21 1632
210129A-MSD	Matrix SpikeD	0105Y152	02/01/21 1658
210129A-LCS	Lab Control Spike	0105Y153	02/01/21 1723
BA26001	ERH1214	0105Y154	02/01/21 1749
BA26003	ERH1215	0105Y155	02/01/21 1815
BA26006	ERH1219	0105Y156	02/01/21 1841
BA26008	ERH1220	0105Y157	02/01/21 1906
BA26013	ERH1222	0105Y158	02/01/21 1932
BA26016	ERH1240	0105Y159	02/01/21 1957

Comments: Batch: #87DC5-210129A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **210129W-26001 LCS - 260802**
Batch ID: #87DC5-210129A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	40.1	80.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	167	83.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	76.9	76.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	165	82.5	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	82.5	82.5	44-120
SURROGATE: PHENOL-D6 (S)	200	163	81.5	10-115
SURROGATE: TERPHENYL-D14 (S)	100	98.0	98.0	50-134

Comments:

Primary	SPK
Quant Method :	Y0105.M
Extraction Date :	01/29/21
Analysis Date :	02/01/21
Instrument :	Yoda
Run :	0105Y153
Initials :	MA

Printed: 02/02/21 2:00:08 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D WATER

APPL ID: **210129W-26001 MS - 260802**
Batch ID: #87DC5-210129A
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	50.0	ND	39.8	39.4	79.6	78.8	10-115	1.0	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	NA	161	173	80.5	86.5	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	100	NA	76.7	80.4	76.7	80.4	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	200	NA	161	163	80.5	81.5	19-119		
SURROGATE: NITROBENZENE-D5 (S)	100	NA	81.9	81.9	81.9	81.9	44-120		
SURROGATE: PHENOL-D6 (S)	200	NA	159	166	79.5	83.0	10-115		
SURROGATE: TERPHENYL-D14 (S)	100	NA	94.0	98.8	94.0	98.8	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y0105.M	Y0105.M
Extraction Date :	01/29/21	01/29/21
Analysis Date :	02/01/21	02/01/21
Instrument :	Yoda	Yoda
Run :	0105Y151	0105Y152
Initials :	MA	

Printed: 02/02/21 2:00:05 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/05/21
Matrix: Water Instrument: Yoda
ID: 0105Y002.D Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94899
Case No: 94899 Date Analyzed: 02/01/21
Matrix: Water Instrument: Yoda
ID: 0105Y147.D Time Analyzed: 14:59

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y148.D	02/01/21 15:15
2	Blank	210129A BLK 1/1000	0105Y149.D	02/01/21 15:40
3		BA26001W21 MS-1 1/10	0105Y151.D	02/01/21 16:32
4		BA26001W23 MSD-1 1/1	0105Y152.D	02/01/21 16:58
5	Lab Control Spike	210129A LCS-1 1/1000	0105Y153.D	02/01/21 17:23
6	ERH1214	BA26001W20 1/1010	0105Y154.D	02/01/21 17:49
7	ERH1215	BA26003W09 1/1010	0105Y155.D	02/01/21 18:15
8	ERH1219	BA26006W13 1/1040	0105Y156.D	02/01/21 18:41
9	ERH1220	BA26008W07 1/1020	0105Y157.D	02/01/21 19:06
10	ERH1222	BA26013W14 1/1020	0105Y158.D	02/01/21 19:32
11	ERH1240	BA26016W12 1/1010	0105Y159.D	02/01/21 19:57
12	ERH1226	50ug/mL 8270 08/12/2	0105Y166.D	02/01/21 22:56
13	ERH1238			
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	28.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	45.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.0
275	10 - 60% of mass 198	30.5
365	1 - 100% of mass 198	4.3
441	0.01 - 24% of mass 442	17.2
442	50 - 500% of mass 198	104.0
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y148.D Date Analyzed: 1 Feb 21 15:15

Instrument ID: Yoda Time Analyzed: 1 Feb 21 15:15

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	518055	5.06	2067070	6.47	1300070	8.48
	UPPER LIMIT	1036110	5.23	4134140	6.64	2600140	8.65
	LOWER LIMIT	259028	4.89	1033535	6.30	650035	8.31
	SAMPLE NO.						
01	210129A BLK 1/1000	413306	5.05	1601350	6.46	1016460	8.47
02	BA26001W21 MS-1 1/1(	387875	5.05	1519510	6.47	964286	8.48
03	BA26001W23 MSD-1 1/	418886	5.05	1650920	6.46	1016760	8.48
04	210129A LCS-1 1/1000	420096	5.05	1660370	6.46	1051570	8.47
05	BA26001W20 1/1010	438037	5.05	1714490	6.46	1056940	8.47
06	BA26003W09 1/1010	450697	5.05	1748210	6.46	1080030	8.47
07	BA26006W13 1/1040	415367	5.05	1615020	6.46	1061740	8.47
08	BA26008W07 1/1020	475831	5.05	1850580	6.46	1191820	8.47
09	BA26013W14 1/1020	439331	5.05	1709310	6.46	1066270	8.47
10	BA26016W12 1/1010	443960	5.05	1750680	6.46	1100050	8.47
11	50ug/mL 8270 08/12/20	597519	5.05	2483140	6.47	1595730	8.48
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y148.D Date Analyzed: 1 Feb 21 15:15

Instrument ID: Yoda Time Analyzed: 1 Feb 21 15:15

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2640410	10.21	2697490	13.29	2522970	14.97
	UPPER LIMIT	5280820	10.38	5394980	13.46	5045940	15.14
	LOWER LIMIT	1320205	10.04	1348745	13.12	1261485	14.80
	SAMPLE NO.						
01	210129A BLK 1/1000	2094300	10.20	1896320	13.28	1799000	14.97
02	BA26001W21 MS-1 1/1(	1969540	10.20	1869820	13.28	1695920	14.97
03	BA26001W23 MSD-1 1/	2144730	10.20	2041250	13.28	1882410	14.97
04	210129A LCS-1 1/1000	2163010	10.20	2031350	13.28	1789450	14.97
05	BA26001W20 1/1010	2216040	10.20	1989360	13.28	1899190	14.96
06	BA26003W09 1/1010	2264200	10.20	2002470	13.28	1912620	14.96
07	BA26006W13 1/1040	2099460	10.20	1901680	13.28	1826530	14.96
08	BA26008W07 1/1020	2429640	10.20	2211720	13.28	2113160	14.96
09	BA26013W14 1/1020	2233440	10.20	2042980	13.28	1848820	14.96
10	BA26016W12 1/1010	2289800	10.20	2051990	13.28	1949340	14.96
11	50ug/mL 8270 08/12/20	3256000	10.21	3161600	13.29	2954150	14.97
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	39-114	84.8		58-120	88.9	
210129A-LCS	Lab Control Spike	39-114	83.4		58-120	88.0	
BA26001-MS	Matrix Spike	39-114	24.8	*	58-120	86.0	
BA26001-MSD	Matrix SpikeD	39-114	30.4	*	58-120	87.8	
BA26001	ERH1214	39-114	82.1		58-120	89.1	
BA26003	ERH1215	39-114	83.8		58-120	93.6	
BA26006	ERH1219	39-114	94.0		58-120	95.9	
BA26008	ERH1220	39-114	85.0		58-120	88.6	
BA26013	ERH1222	39-114	81.9		58-120	92.4	
BA26016	ERH1240	39-114	78.1		58-120	89.9	

Comments: Batch: #SIM53-210129A

* = Recovery outside of Control Limits on QC Sample.

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Linus

Blank ID: 210129A-BLK Time Analyzed: 1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0118L074	02/01/21 1544
210129A-LCS	Lab Control Spike	0118L075	02/01/21 1606
210129A-MS	Matrix Spike	0118L076	02/01/21 1628
210129A-MSD	Matrix SpikeD	0118L077	02/01/21 1650
BA26001	ERH1214	0118L078	02/01/21 1712
BA26003	ERH1215	0118L079	02/01/21 1735
BA26006	ERH1219	0118L080	02/01/21 1757
BA26008	ERH1220	0118L081	02/01/21 1819
BA26013	ERH1222	0118L082	02/01/21 1841
BA26016	ERH1240	0118L083	02/01/21 1903

Comments: Batch: #SIM53-210129A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **210129W-26001 - 260807**
Batch ID: #SIM53-210129A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	SURROGATE: 2-METHYLNAPHT	84.8	39-114			%	01/29/21	02/01/21
BLANK	SURROGATE: FLUORANTHENE-	88.9	58-120			%	01/29/21	02/01/21

Quant Method:L0118.M
Run #:0118L074
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 4:04:23 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Linus
LCS ID:	210129A-LCS	Time Analyzed:	1606

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0118L074	02/01/21 1544
210129A-LCS	Lab Control Spike	0118L075	02/01/21 1606
210129A-MS	Matrix Spike	0118L076	02/01/21 1628
210129A-MSD	Matrix SpikeD	0118L077	02/01/21 1650
BA26001	ERH1214	0118L078	02/01/21 1712
BA26003	ERH1215	0118L079	02/01/21 1735
BA26006	ERH1219	0118L080	02/01/21 1757
BA26008	ERH1220	0118L081	02/01/21 1819
BA26013	ERH1222	0118L082	02/01/21 1841
BA26016	ERH1240	0118L083	02/01/21 1903

Comments: Batch: #SIM53-210129A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **210129W-26001 LCS - 260807**
Batch ID: #SIM53-210129A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.12	82.4	41-115
2-METHYLNAPHTHALENE	5.00	4.11	82.2	39-114
NAPHTHALENE	5.00	4.04	80.8	43-114
SURROGATE: 2-METHYLNAPHTHALEN	5.00	4.17	83.4	39-114
SURROGATE: FLUORANTHENE-D10 (S)	5.00	4.40	88.0	58-120

Comments:

Primary	SPK
Quant Method :	L0118.M
Extraction Date :	01/29/21
Analysis Date :	02/01/21
Instrument :	Linus
Run :	0118L075
Initials :	MA

Printed: 02/02/21 4:03:59 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **210129W-26001 MS - 260807**
Batch ID: #SIM53-210129A
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	5.00	ND	2.59	2.85	51.8	57.0	41-115	9.6	20
2-METHYLNAPHTHALENE	5.00	ND	1.58	1.84	31.6 #	36.8 #	39-114	15.2	20
NAPHTHALENE	5.00	ND	4.04	4.05	80.8	81.0	43-114	0.25	20
SURROGATE: 2-METHYLNAPHTHALEN	5.00	NA	1.24	1.52	24.8 #	30.4 #	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	5.00	NA	4.30	4.39	86.0	87.8	58-120		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	L0118.M	L0118.M
Extraction Date :	01/29/21	01/29/21
Analysis Date :	02/01/21	02/01/21
Instrument :	Linus	Linus
Run :	0118L076	0118L077
Initials :	MA	

Printed: 02/02/21 3:59:49 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94899
Case No: 94899 Date Analyzed: 02/01/21
Matrix: Water Instrument: Linus
ID: 0118L071.D Time Analyzed: 14:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21	0118L072.D	02/01/21 15:00
2	Blank	210129A BLK 1/1000	0118L074.D	02/01/21 15:44
3	Lab Control Spike	210129A LCS-2 1/1000	0118L075.D	02/01/21 16:06
4		BA26001W30 MS-2 1/10	0118L076.D	02/01/21 16:28
5		BA26001W31 MSD-2 1/1	0118L077.D	02/01/21 16:50
6	ERH1214	BA26001W20 1/1010	0118L078.D	02/01/21 17:12
7	ERH1215	BA26003W09 1/1010	0118L079.D	02/01/21 17:35
8	ERH1219	BA26006W13 1/1040	0118L080.D	02/01/21 17:57
9	ERH1220	BA26008W07 1/1020	0118L081.D	02/01/21 18:19
10	ERH1222	BA26013W14 1/1020	0118L082.D	02/01/21 18:41
11	ERH1240	BA26016W12 1/1010	0118L083.D	02/01/21 19:03
12		5 SIM 01/15/21	0118L090.D	02/01/21 21:37
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	39.0
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	54.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	25.0
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	15.6
442	50 - 500% of mass 198	93.2
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L072.D Date Analyzed: 1 Feb 21 15:00

Instrument ID: Linus Time Analyzed: 1 Feb 21 15:00

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	66665	4.25	33162	6.25	59700	7.98
	UPPER LIMIT	133330	4.42	66324	6.42	119400	8.15
	LOWER LIMIT	33333	4.08	16581	6.08	29850	7.81
	SAMPLE NO.						
01	210129A BLK 1/1000	66632	4.25	31782	6.25	59744	7.98
02	210129A LCS-2 1/1000	67204	4.25	31665	6.25	60381	7.98
03	BA26001W30 MS-2 1/1(	65475	4.25	29538	6.25	57635	7.98
04	BA26001W31 MSD-2 1/	66022	4.25	31459	6.25	57420	7.98
05	BA26001W20 1/1010	68259	4.25	32961	6.25	60989	7.98
06	BA26003W09 1/1010	65928	4.25	31253	6.25	59413	7.98
07	BA26006W13 1/1040	62613	4.25	31977	6.25	59497	7.98
08	BA26008W07 1/1020	66318	4.25	34099	6.25	63060	7.98
09	BA26013W14 1/1020	67296	4.25	32461	6.25	61236	7.98
10	BA26016W12 1/1010	70182	4.25	33647	6.25	62753	7.98
11	5 SIM 01/15/21	67763	4.25	32122	6.25	57990	7.98
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L072.D Date Analyzed: 1 Feb 21 15:00

Instrument ID: Linus Time Analyzed: 1 Feb 21 15:00

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	72038	11.12	66209	13.57		
	UPPER LIMIT	144076	11.29	132418	13.74		
	LOWER LIMIT	36019	10.95	33105	13.40		
	SAMPLE NO.						
01	210129A BLK 1/1000	67854	11.12	62412	13.56		
02	210129A LCS-2 1/1000	72838	11.12	68395	13.56		
03	BA26001W30 MS-2 1/1(	70005	11.12	39480	13.56		
04	BA26001W31 MSD-2 1/	70559	11.12	67406	13.56		
05	BA26001W20 1/1010	73110	11.12	69418	13.56		
06	BA26003W09 1/1010	70875	11.12	67108	13.56		
07	BA26006W13 1/1040	72536	11.12	70531	13.56		
08	BA26008W07 1/1020	77732	11.12	75966	13.57		
09	BA26013W14 1/1020	75224	11.12	70865	13.57		
10	BA26016W12 1/1010	76340	11.12	73304	13.56		
11	5 SIM 01/15/21	70197	11.12	68908	13.56		
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: KYLO

Blank ID: 210201A-BLK Time Analyzed: 1232

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	0125K059	02/02/21 1232
210201A-LCS	Lab Control Spike	0125K060	02/02/21 1253
210201A-MS	Matrix Spike	0125K061	02/02/21 1315
210201A-MSD	Matrix SpikeD	0125K062	02/02/21 1437
BA26001	ERH1214	0125K063	02/02/21 1459
BA26003	ERH1215	0125K064	02/02/21 1520
BA26006	ERH1219	0125K065	02/02/21 1541
BA26008	ERH1220	0125K066	02/02/21 1603
BA26013	ERH1222	0125K067	02/02/21 1624
BA26016	ERH1240	0125K068	02/02/21 1645

Comments: Batch: #87DME-210201A

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26001 - 260816**
Batch ID: #87DME-210201A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:KMEE0125.M
Run #:0125K059
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/03/21 2:01:40 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/02/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210201A-LCS	Time Analyzed:	1253

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	0125K059	02/02/21 1232
210201A-LCS	Lab Control Spike	0125K060	02/02/21 1253
210201A-MS	Matrix Spike	0125K061	02/02/21 1315
210201A-MSD	Matrix SpikeD	0125K062	02/02/21 1437
BA26001	ERH1214	0125K063	02/02/21 1459
BA26003	ERH1215	0125K064	02/02/21 1520
BA26006	ERH1219	0125K065	02/02/21 1541
BA26008	ERH1220	0125K066	02/02/21 1603
BA26013	ERH1222	0125K067	02/02/21 1624
BA26016	ERH1240	0125K068	02/02/21 1645

Comments: Batch: #87DME-210201A

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **210201W-26001 LCS - 260816**
Batch ID: #87DME-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	73.4	91.8	30-130

Comments:

Primary	SPK
Quant Method :	KMEE0125.M
Extraction Date :	02/01/21
Analysis Date :	02/02/21
Instrument :	KYLO
Run :	0125K060
Initials :	MA

Printed: 02/03/21 2:01:22 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **210201W-26001 MS - 260816**
Batch ID: #87DME-210201A
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	73.6	70.6	92.0	88.3	30-130	4.2	20

Comments:

Primary	SPK	DUP
Quant Method :	KMEE0125.M	KMEE0125.M
Extraction Date :	02/01/21	02/01/21
Analysis Date :	02/02/21	02/02/21
Instrument :	KYLO	KYLO
Run :	0125K061	0125K062
Initials :	MA	

Printed: 02/03/21 2:01:19 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94899
Case No: 94899 Date Analyzed: 02/02/21
Matrix: Water Instrument: KYLO
ID: 0125K057.D Time Analyzed: 11:37

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2 MEE 500 1/26/21 (2	0125K058.D	02/02/21 12:08
2	Blank	210201A BLK 2/500	0125K059.D	02/02/21 12:32
3	Lab Control Spike	210201A LCS-1 2/500	0125K060.D	02/02/21 12:53
4		BA26001W17 MS-1 2/50	0125K061.D	02/02/21 13:15
5		BA26001W19 MSD-1 2/5	0125K062.D	02/02/21 14:37
6	ERH1214	BA26001W14 2/500	0125K063.D	02/02/21 14:59
7	ERH1215	BA26003W05 2/500	0125K064.D	02/02/21 15:20
8	ERH1219	BA26006W11 2/500	0125K065.D	02/02/21 15:41
9	ERH1220	BA26008W06 2/500	0125K066.D	02/02/21 16:03
10	ERH1222	BA26013W11 2/500	0125K067.D	02/02/21 16:24
11	ERH1240	BA26016W10 2/500	0125K068.D	02/02/21 16:45
12		2 MEE 500 1/26/21 (1	0125K071.D	02/02/21 17:49
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	58.3
68	0 - 2.04% of mass 69	2.0
70	0 - 2.04% of mass 69	0.2
127	10 - 80% of mass 198	67.1
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	22.4
365	1 - 100% of mass 198	2.4
441	0.01 - 24% of mass 442	14.0
442	50 - 500% of mass 198	62.1
443	15 - 24% of mass 442	19.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K058.D Date Analyzed: 2 Feb 21 12:08

Instrument ID: KYLO Time Analyzed: 2 Feb 21 12:08

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	158559	5.32					
	UPPER LIMIT	317118	5.49					
	LOWER LIMIT	79280	5.15					
	SAMPLE NO.							
01	210201A BLK 2/500	204607	5.32					
02	210201A LCS-1 2/500	183301	5.32					
03	BA26001W17 MS-1 2/5(	192966	5.32					
04	BA26001W19 MSD-1 2/	174269	5.32					
05	BA26001W14 2/500	169068	5.32					
06	BA26003W05 2/500	174523	5.32					
07	BA26006W11 2/500	168042	5.32					
08	BA26008W06 2/500	159043	5.32					
09	BA26013W11 2/500	169083	5.32					
10	BA26016W10 2/500	167029	5.32					
11	2 MEE 500 1/26/21 (1)	154456	5.33					
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	81-118	105		85-114	106	
210129AM-BLK	Blank	81-118	109		85-114	104	
BA26000	ERH1213	81-118	106		85-114	101	
BA26001	ERH1214	81-118	109		85-114	102	
BA26003	ERH1215	81-118	109		85-114	105	
BA26005	ERH1218	81-118	117		85-114	111	
BA26006	ERH1219	81-118	111		85-114	112	
BA26008	ERH1220	81-118	108		85-114	108	
BA26012	ERH1221	81-118	108		85-114	104	
BA26013	ERH1222	81-118	105		85-114	103	
BA26015	ERH1239	81-118	105		85-114	101	
BA26016	ERH1240	81-118	108		85-114	103	
BA26001-MS	Matrix Spike	81-118	107		85-114	105	
BA26001-MSD	Matrix SpikeD	81-118	105		85-114	106	

Comments: Batch: #86BTO-210129AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	80-119	116		89-112	105	
210129AM-BLK	Blank	80-119	118		89-112	107	
BA26000	ERH1213	80-119	116		89-112	102	
BA26001	ERH1214	80-119	121	#	89-112	106	
BA26003	ERH1215	80-119	120	#	89-112	108	
BA26005	ERH1218	80-119	129	#	89-112	115	#
BA26006	ERH1219	80-119	123	#	89-112	109	
BA26008	ERH1220	80-119	120	#	89-112	105	
BA26012	ERH1221	80-119	116		89-112	105	
BA26013	ERH1222	80-119	117		89-112	102	
BA26015	ERH1239	80-119	116		89-112	101	
BA26016	ERH1240	80-119	117		89-112	104	
BA26001-MS	Matrix Spike	80-119	118		89-112	103	
BA26001-MSD	Matrix SpikeD	80-119	116		89-112	105	

Comments: Batch: #86BTO-210129AM

= Recovery outside of Control Limits on Sample.

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

Blank ID: 210129AM-BLK Time Analyzed: 1926

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M04	01/29/21 1730
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26000	ERH1213	0129M15	01/29/21 2249
BA26001	ERH1214	0129M16	01/29/21 2318
BA26003	ERH1215	0129M17	01/29/21 2347
BA26005	ERH1218	0129M18	01/30/21 0016
BA26006	ERH1219	0129M19	01/30/21 0045
BA26008	ERH1220	0129M20	01/30/21 0114
BA26012	ERH1221	0129M21	01/30/21 0143
BA26013	ERH1222	0129M22	01/30/21 0212
BA26015	ERH1239	0129M23	01/30/21 0241
BA26016	ERH1240	0129M24	01/30/21 0310
210129AM-MS	Matrix Spike	0129M25	01/30/21 0339
210129AM-MSD	Matrix SpikeD	0129M26	01/30/21 0408

Comments: Batch: #86BTO-210129AM

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210129W-26001 - 260845**
Batch ID: #86BTO-210129AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	SURROGATE: 1,2-DICHLOROET	109	81-118			%	01/29/21	01/29/21
BLANK	SURROGATE: 4-BROMOFLUORO	104	85-114			%	01/29/21	01/29/21
BLANK	SURROGATE: DIBROMOFLUOR	118	80-119			%	01/29/21	01/29/21
BLANK	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/29/21	01/29/21

Quant Method:M0128W.M
Run #:0129M08
Instrument:Max
Sequence:210128
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/05/21 10:49:18 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
LCS ID:	210129AM-LCS	Time Analyzed:	1730

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M04	01/29/21 1730
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26000	ERH1213	0129M15	01/29/21 2249
BA26001	ERH1214	0129M16	01/29/21 2318
BA26003	ERH1215	0129M17	01/29/21 2347
BA26005	ERH1218	0129M18	01/30/21 0016
BA26006	ERH1219	0129M19	01/30/21 0045
BA26008	ERH1220	0129M20	01/30/21 0114
BA26012	ERH1221	0129M21	01/30/21 0143
BA26013	ERH1222	0129M22	01/30/21 0212
BA26015	ERH1239	0129M23	01/30/21 0241
BA26016	ERH1240	0129M24	01/30/21 0310
210129AM-MS	Matrix Spike	0129M25	01/30/21 0339
210129AM-MSD	Matrix SpikeD	0129M26	01/30/21 0408

Comments: Batch: #86BTO-210129AM

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **210129W-26001 LCS - 260845**
Batch ID: #86BTO-210129AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	11.5	115	79-120
ETHYLBENZENE	10.00	12.0	120	79-121
TOLUENE	10.00	11.8	118	80-121
XYLENES (TOTAL)	30.0	35.8	119	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	26.2	105	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.5	106	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	29.1	116	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	26.2	105	89-112

Comments:

Primary	SPK
Quant Method :	M0128W.M
Extraction Date :	01/29/21
Analysis Date :	01/29/21
Instrument :	Max
Run :	0129M04
Initials :	SSE

Printed: 02/05/21 10:48:38 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **210130W-26001 MS - 260845**
Batch ID: #86BTO-210129AM
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	ND	11.3	11.3	113	113	79-120	0.0	20
ETHYLBENZENE	10.00	ND	11.3	11.8	113	118	79-121	4.3	20
TOLUENE	10.00	ND	11.9	11.9	119	119	80-121	0.0	20
XYLENES (TOTAL)	30.0	ND	33.9	35.0	113	117	79-121	3.2	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	26.8	26.3	107	105	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.3	26.4	105	106	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	29.5	28.9	118	116	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	25.8	26.3	103	105	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	M0128W.M	M0128W.M
Extraction Date :	01/30/21	01/30/21
Analysis Date :	01/30/21	01/30/21
Instrument :	Max	Max
Run :	0129M25	0129M26
Initials :	SSE	

Printed: 02/05/21 10:48:32 AM
APPL MSD SCII

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	85-114	106				
210129AM-LCSD	Lab Control SpikeD	85-114	102				
210129AM-BLK	Blank	85-114	104				
BA26000	ERH1213	85-114	101				
BA26001	ERH1214	85-114	102				
BA26003	ERH1215	85-114	105				
BA26005	ERH1218	85-114	111				
BA26006	ERH1219	85-114	112				
BA26008	ERH1220	85-114	108				
BA26012	ERH1221	85-114	104				
BA26013	ERH1222	85-114	103				
BA26015	ERH1239	85-114	101				
BA26016	ERH1240	85-114	103				
BA26001-MS	Matrix Spike	85-114	98.4				
BA26001-MSD	Matrix SpikeD	85-114	104				

Comments: Batch: #GRO86-210129AM

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

Blank ID: 210129AM-BLK Time Analyzed: 1926

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M05	01/29/21 1759
210129AM-LCSD	Lab Control SpikeD	0129M07	01/29/21 1857
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26000	ERH1213	0129M15	01/29/21 2249
BA26001	ERH1214	0129M16	01/29/21 2318
BA26003	ERH1215	0129M17	01/29/21 2347
BA26005	ERH1218	0129M18	01/30/21 0016
BA26006	ERH1219	0129M19	01/30/21 0045
BA26008	ERH1220	0129M20	01/30/21 0114
BA26012	ERH1221	0129M21	01/30/21 0143
BA26013	ERH1222	0129M22	01/30/21 0212
BA26015	ERH1239	0129M23	01/30/21 0241
BA26016	ERH1240	0129M24	01/30/21 0310
210129AM-MS	Matrix Spike	0129M27	01/30/21 0437
210129AM-MSD	Matrix SpikeD	0129M28	01/30/21 0506

Comments: Batch: #GRO86-210129AM

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-26001 - 260846**
Batch ID: #GRO86-210129AM

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
BLANK	SURROGATE: 4-BROMOFLUORO	104	85-114			%	01/29/21	01/29/21

Quant Method:MGAS0128.M
Run #:0129M08
Instrument:Max
Sequence:210128
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/05/21 10:54:06 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
LCS ID:	210129AM-LCS	Time Analyzed:	1759

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M05	01/29/21 1759
210129AM-LCSD	Lab Control SpikeD	0129M07	01/29/21 1857
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26000	ERH1213	0129M15	01/29/21 2249
BA26001	ERH1214	0129M16	01/29/21 2318
BA26003	ERH1215	0129M17	01/29/21 2347
BA26005	ERH1218	0129M18	01/30/21 0016
BA26006	ERH1219	0129M19	01/30/21 0045
BA26008	ERH1220	0129M20	01/30/21 0114
BA26012	ERH1221	0129M21	01/30/21 0143
BA26013	ERH1222	0129M22	01/30/21 0212
BA26015	ERH1239	0129M23	01/30/21 0241
BA26016	ERH1240	0129M24	01/30/21 0310
210129AM-MS	Matrix Spike	0129M27	01/30/21 0437
210129AM-MSD	Matrix SpikeD	0129M28	01/30/21 0506

Comments: Batch: #GRO86-210129AM

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210129W-26001 LCS - 260846**
Batch ID: #GRO86-210129AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	353	350	118	117	78-122	0.85	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.6	25.6	106	102	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	MGAS0128.M	MGAS0128.M
Extraction Date :	01/29/21	01/29/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Max	Max
Run :	0129M05	0129M07
Initials :	SSE	

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210130W-26001 MS - 260846**
Batch ID: #GRO86-210129AM
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	300	329	100	110	78-122	9.2	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.6	26.1	98.4	104	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	MGAS0128.M	MGAS0128.M
Extraction Date :	01/30/21	01/30/21
Analysis Date :	01/30/21	01/30/21
Instrument :	Max	Max
Run :	0129M27	0129M28
Initials :	SSE	

Printed: 02/05/21 10:53:46 AM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Rocky

Blank ID: 210201A-BLK Time Analyzed: 1208

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-LCS	Lab Control Spike	0201R01	02/01/21 1157
210201A-LCSD	Lab Control SpikeD	0201R03	02/01/21 1204
210201A-BLK	Blank	0201R04	02/01/21 1208
BA26000	ERH1213	0201R05	02/01/21 1211
BA26001	ERH1214	0201R06	02/01/21 1215
210201A-MS	Matrix Spike	0201R07	02/01/21 1218
210201A-MSD	Matrix SpikeD	0201R08	02/01/21 1221
BA26005	ERH1218	0201R09	02/01/21 1227
BA26006	ERH1219	0201R10	02/01/21 1230
BA26006	ERH1219	0201R11	02/01/21 1238
BA26012	ERH1221	0201R12	02/01/21 1242
BA26013	ERH1222	0201R13	02/01/21 1246
BA26015	ERH1239	0201R14	02/01/21 1250
BA26016	ERH1240	0201R15	02/01/21 1254

Comments: Batch: #RSKME-210201A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26001 - 260777**
Batch ID: #RSKME-210201A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method: RSK0914A.M
Run #: 0201R04
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 02/01/21 2:46:24 PM

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Rocky

LCS ID: 210201A-LCS Time Analyzed: 1157

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-LCS	Lab Control Spike	0201R01	02/01/21 1157
210201A-LCSD	Lab Control SpikeD	0201R03	02/01/21 1204
210201A-BLK	Blank	0201R04	02/01/21 1208
BA26000	ERH1213	0201R05	02/01/21 1211
BA26001	ERH1214	0201R06	02/01/21 1215
210201A-MS	Matrix Spike	0201R07	02/01/21 1218
210201A-MSD	Matrix SpikeD	0201R08	02/01/21 1221
BA26005	ERH1218	0201R09	02/01/21 1227
BA26006	ERH1219	0201R10	02/01/21 1230
BA26006	ERH1219	0201R11	02/01/21 1238
BA26012	ERH1221	0201R12	02/01/21 1242
BA26013	ERH1222	0201R13	02/01/21 1246
BA26015	ERH1239	0201R14	02/01/21 1250
BA26016	ERH1240	0201R15	02/01/21 1254

Comments: Batch: #RSKME-210201A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210201W-26001 LCS - 260777**
Batch ID: #RSKME-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	85.4	95.6	102	115	72-125	11.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	02/01/21	02/01/21
Analysis Date :	02/01/21	02/01/21
Instrument :	Rocky	Rocky
Run :	0201R01	0201R03
Initials :	LSI	

Matrix Spike Recoveries
METHANE

APPL ID: **210201W-26001 MS - 260777**
Batch ID: #RSKME-210201A
Sample ID: BA26001
Client ID: ERH1214

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	ND	86.1	82.1	103	98.4	72-125	4.8	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	02/01/21	02/01/21
Analysis Date :	02/01/21	02/01/21
Instrument :	Rocky	Rocky
Run :	0201R07	0201R08
Initials :	LSI	

Printed: 02/01/21 2:46:14 PM
APPL MSD SCII

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/27/21

Matrix: WATER Instrument: Charlie

Blank ID: 210127A1-BLK Time Analyzed: 2039

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA26001	ERH1214	15	01/27/21 1925
BA26006	ERH1219	16	01/27/21 1940
BA26013	ERH1222	17	01/27/21 1955
BA26016	ERH1240	18	01/27/21 2009
210127A1-LCS	Lab Control Spike	19	01/27/21 2024
210127A1-BLK	Blank	20	01/27/21 2039
210127A1-LCSD	Lab Control SpikeD	7	01/27/21 1728

Comments: Batch: #300W-210127A1

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210203A-BLK	Time Analyzed:	1552

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210203A-BLK	Blank	13	02/03/21 1552
BA26001	ERH1214	21	02/03/21 1800
210203A-LCSD	Lab Control SpikeD	22	02/03/21 1815
210203A-LCS	Lab Control Spike	23	02/03/21 1830

Comments: Batch: #300WD-210203A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	02/03/21	02/03/21	#300WD-210203A-BA26001
EPA 300.0	CHLORIDE	0.18 J	1.0	0.20	0.08	mg/L	01/27/21	01/27/21	#300W-210127A1-BA26006
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/27/21	01/27/21	#300W-210127A1-BA26006
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/27/21	01/27/21	#300W-210127A1-BA26006

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 02/04/21 3:02:48 PM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	01/27/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210127A1-LCS	Time Analyzed:	2024

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA26001	ERH1214	15	01/27/21 1925
BA26006	ERH1219	16	01/27/21 1940
BA26013	ERH1222	17	01/27/21 1955
BA26016	ERH1240	18	01/27/21 2009
210127A1-LCS	Lab Control Spike	19	01/27/21 2024
210127A1-BLK	Blank	20	01/27/21 2039
210127A1-LCSD	Lab Control SpikeD	7	01/27/21 1728

Comments: Batch: #300W-210127A1

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210203A-LCS	Time Analyzed:	1830

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210203A-BLK	Blank	13	02/03/21 1552
BA26001	ERH1214	21	02/03/21 1800
210203A-LCSD	Lab Control SpikeD	22	02/03/21 1815
210203A-LCS	Lab Control Spike	23	02/03/21 1830

Comments: Batch: #300WD-210203A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	26.3	24.5	105	98.0	7.1	20	90-110	01/27/21	01/27/21	01/27/21	01/27/21	#300W-210127A1-BA2600
EPA 300.0	NITRATE	22.1	22.9	21.6	104	97.7	5.8	20	90-110	01/27/21	01/27/21	01/27/21	01/27/21	#300W-210127A1-BA2600
EPA 300.0	SULFATE	25.0	25.5	24.4	102	97.6	4.4	20	90-110	01/27/21	01/27/21	01/27/21	01/27/21	#300W-210127A1-BA2600

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	25.9	25.9	104	104	0.0	20	90-110	02/03/21	02/03/21	02/03/21	02/03/21	#300WD-210203A-BA2600

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/03/21

Matrix: WATER Instrument: EVE

Blank ID: 210202A-BLK Time Analyzed: 1104

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210202A-BLK	Blank	19	02/03/21 1104
210202A-LCS	Lab Control Spike	21	02/03/21 1108
210202A-LCSD	Lab Control SpikeD	22	02/03/21 1110
BA26001	ERH1214	24	02/03/21 1115
BA26006	ERH1219	25	02/03/21 1117
BA26013	ERH1222	28	02/03/21 1123
BA26016	ERH1240	29	02/03/21 1126

Comments: Batch: #353TO-210202A

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Tiamo

Blank ID: 210201A-BLK Time Analyzed: 1713

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726
BA26001	ERH1214	6	02/01/21 1744
BA26006	ERH1219	7	02/01/21 1748
BA26013	ERH1222	8	02/01/21 1756
BA26016	ERH1240	9	02/01/21 1806

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Manual Spec

Blank ID: A210202-BLK Time Analyzed: 1637

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210202-BLK	Blank	19	02/02/21 1637
A210202-LCS	Lab Control Spike	20	02/02/21 1639
A210202-LCSD	Lab Control SpikeD	22	02/02/21 1640
BA26006	ERH1219	23	02/02/21 1641
BA26001	ERH1214	24	02/02/21 1641
BA26013	ERH1222	25	02/02/21 1642
BA26016	ERH1240	26	02/02/21 1643

Comments: Batch: #35FE-A210202

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 01/29/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210128A-BLK Time Analyzed: 1052

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-BLK	Blank	12	01/29/21 1052
210128A-LCS	Lab Control Spike	13	01/29/21 1131
210128A-LCSD	Lab Control SpikeD	14	01/29/21 1211
BA26001	ERH1214	17	01/29/21 1409
BA26006	ERH1219	18	01/29/21 1445
BA26013	ERH1222	19	01/29/21 1523
BA26016	ERH1240	20	01/29/21 1559

Comments: Batch: #TOCW5-210128A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
EPA 353.2	NITRATE-NITRITE A	0.032 J	0.10	0.090	0.028	mg/L	02/03/21	02/03/21	#353TO-210202A-BA26165
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	02/02/21	02/02/21	#35FE-A210202-BA26163
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/29/21	01/29/21	#TOCW5-210128A-BA26001

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210202A-LCS	Time Analyzed:	1108

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210202A-BLK	Blank	19	02/03/21 1104
210202A-LCS	Lab Control Spike	21	02/03/21 1108
210202A-LCSD	Lab Control SpikeD	22	02/03/21 1110
BA26001	ERH1214	24	02/03/21 1115
BA26006	ERH1219	25	02/03/21 1117
BA26013	ERH1222	28	02/03/21 1123
BA26016	ERH1240	29	02/03/21 1126

Comments: Batch: #353TO-210202A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210201A-LCS	Time Analyzed:	1716

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726
BA26001	ERH1214	6	02/01/21 1744
BA26006	ERH1219	7	02/01/21 1748
BA26013	ERH1222	8	02/01/21 1756
BA26016	ERH1240	9	02/01/21 1806

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94899

Case No: 94899 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Manual Spec

LCS ID: A210202-LCS Time Analyzed: 1639

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210202-BLK	Blank	19	02/02/21 1637
A210202-LCS	Lab Control Spike	20	02/02/21 1639
A210202-LCSD	Lab Control SpikeD	22	02/02/21 1640
BA26006	ERH1219	23	02/02/21 1641
BA26001	ERH1214	24	02/02/21 1641
BA26013	ERH1222	25	02/02/21 1642
BA26016	ERH1240	26	02/02/21 1643

Comments: Batch: #35FE-A210202

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94899
Case No:	94899	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210128A-LCS	Time Analyzed:	1131

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-BLK	Blank	12	01/29/21 1052
210128A-LCS	Lab Control Spike	13	01/29/21 1131
210128A-LCSD	Lab Control SpikeD	14	01/29/21 1211
BA26001	ERH1214	17	01/29/21 1409
BA26006	ERH1219	18	01/29/21 1445
BA26013	ERH1222	19	01/29/21 1523
BA26016	ERH1240	20	01/29/21 1559

Comments: Batch: #TOCW5-210128A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	3.09	3.11	103	104	0.65	20	90-110	02/03/21	02/03/21	02/03/21	02/03/21	#353TO-210202A-BA2616
SM 2320B	BICARBONATE AS CACO3	250	236	230	94.4	92.0	2.6	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY AS CA	250	258	252	103	101	2.4	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SM3500Fe	FERROUS IRON	3.00	3.12	3.11	104	104	0.32	20	80-120	02/02/21	02/02/21	02/02/21	02/02/21	#35FE-A210202-BA26163
SW846 90	TOTAL ORGANIC CARBO	5.00	5.19	5.15	104	103	0.77	20	80-120	01/29/21	01/29/21	01/29/21	01/29/21	#TOCW5-210128A-BA260

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/TW

			1218004.D	1218005.D	1218006.D	1218007 D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
6																	
7																	
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1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

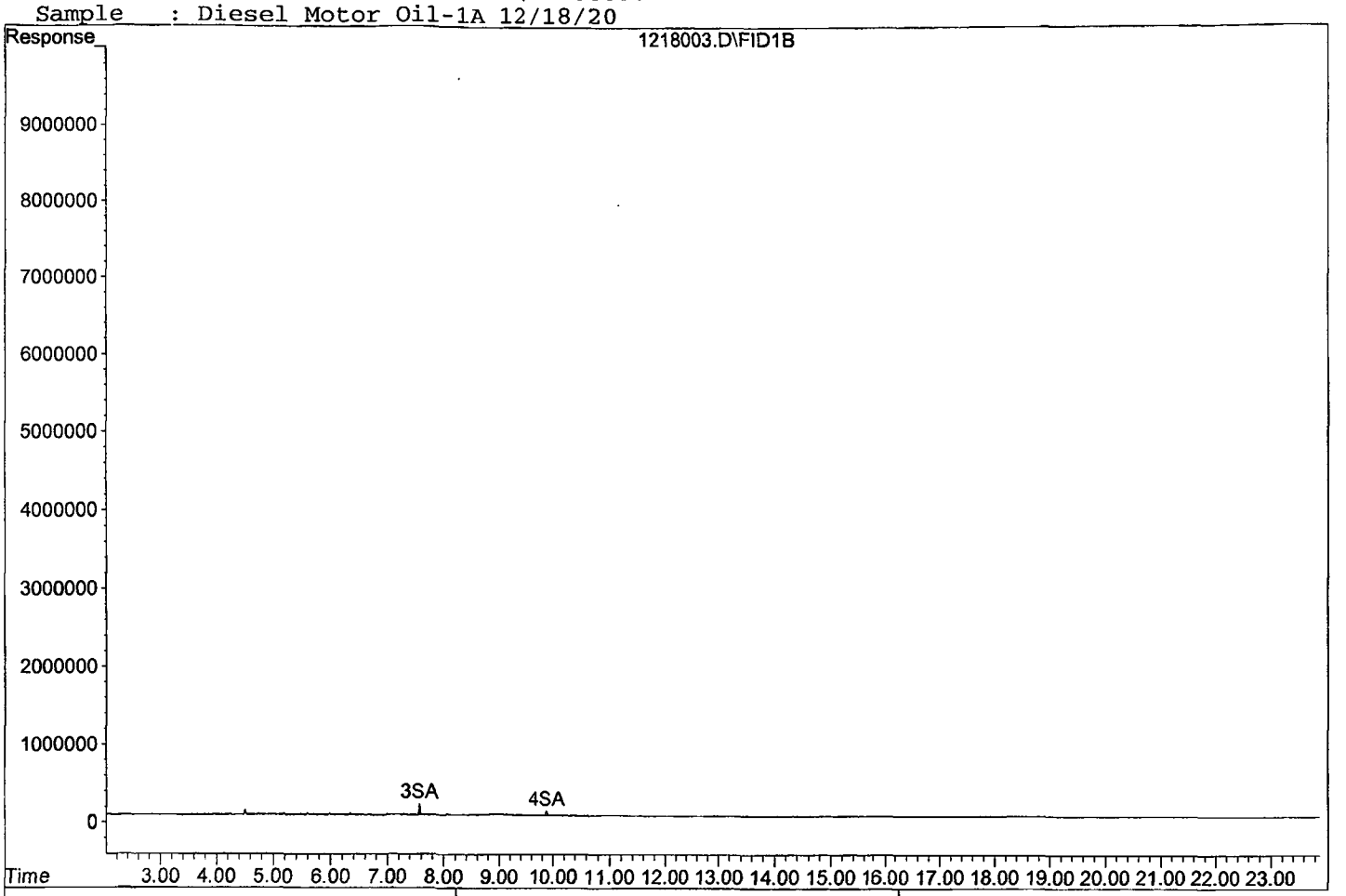
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

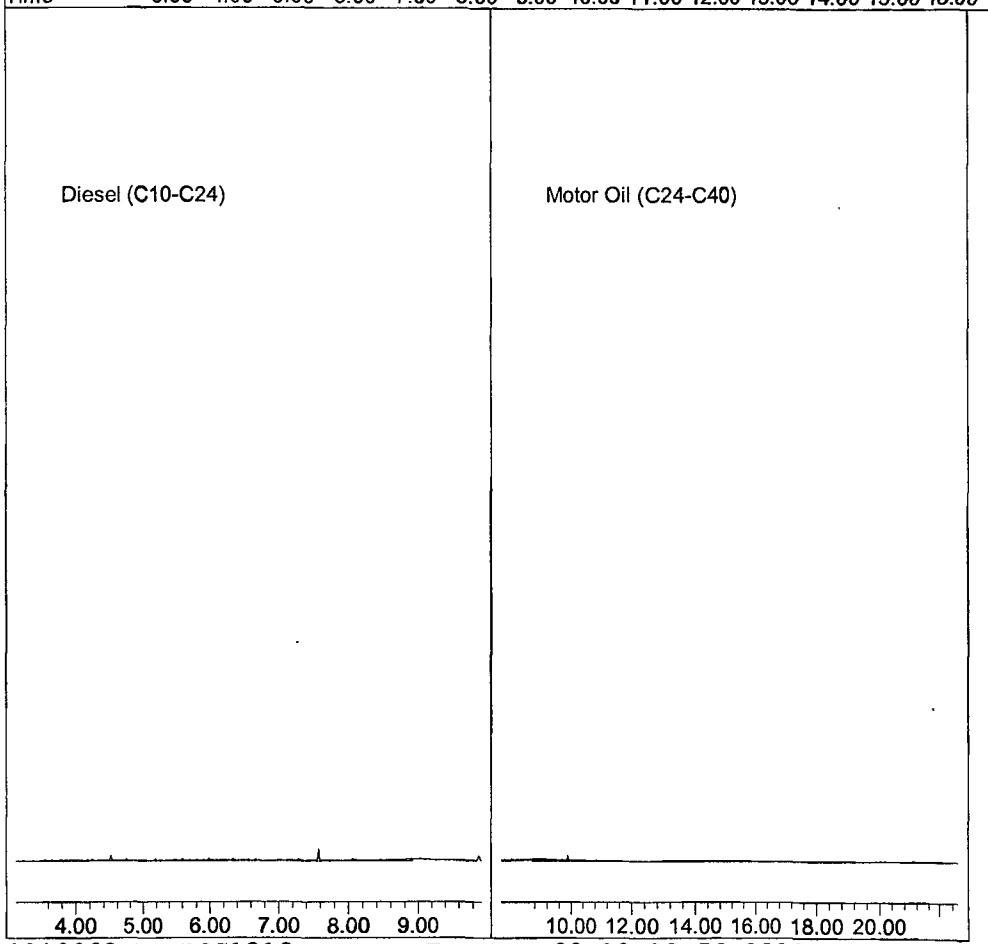
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





1218003.D DOC1218.M Tue Dec 22 10:22:58 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

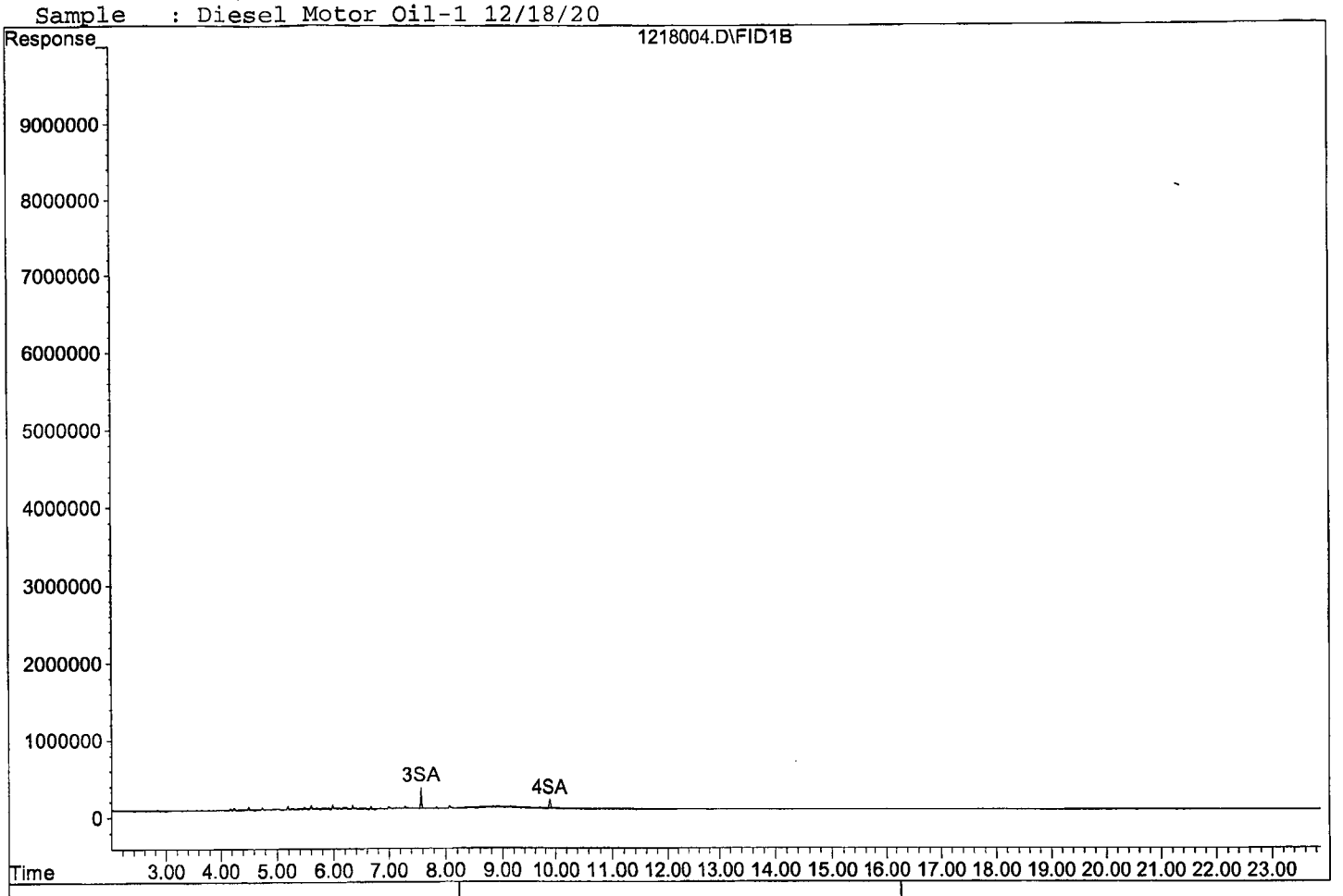
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

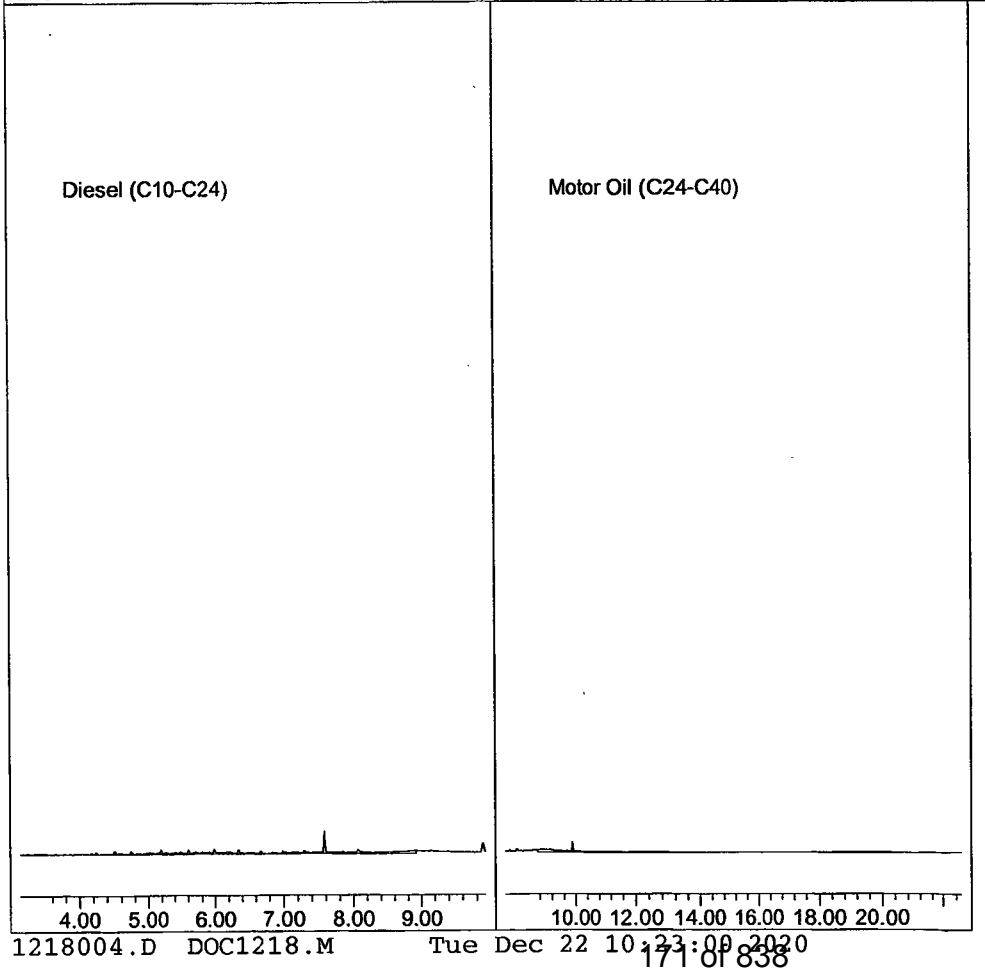
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000	Recovery =		1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000	Recovery =		1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

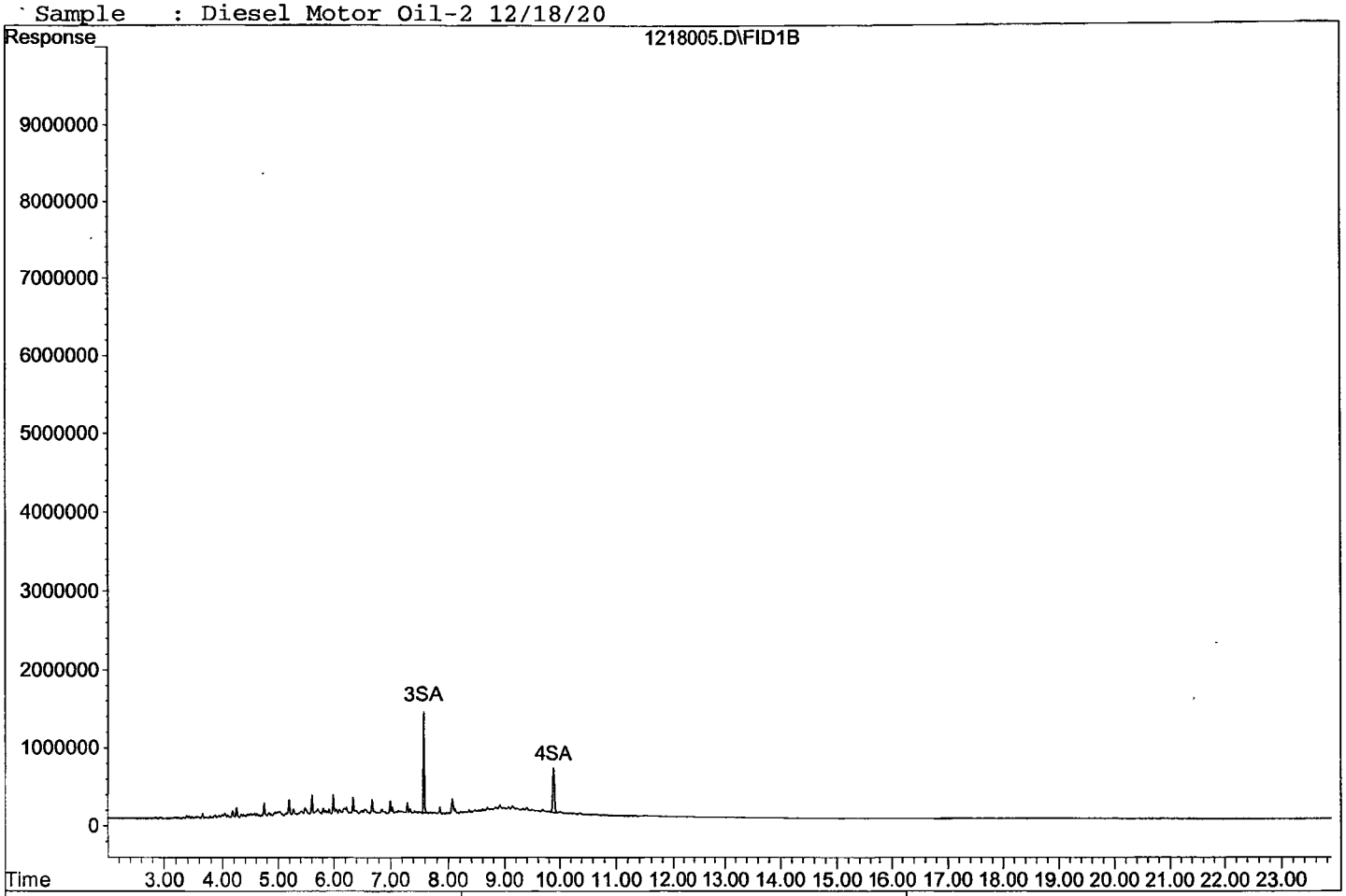
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

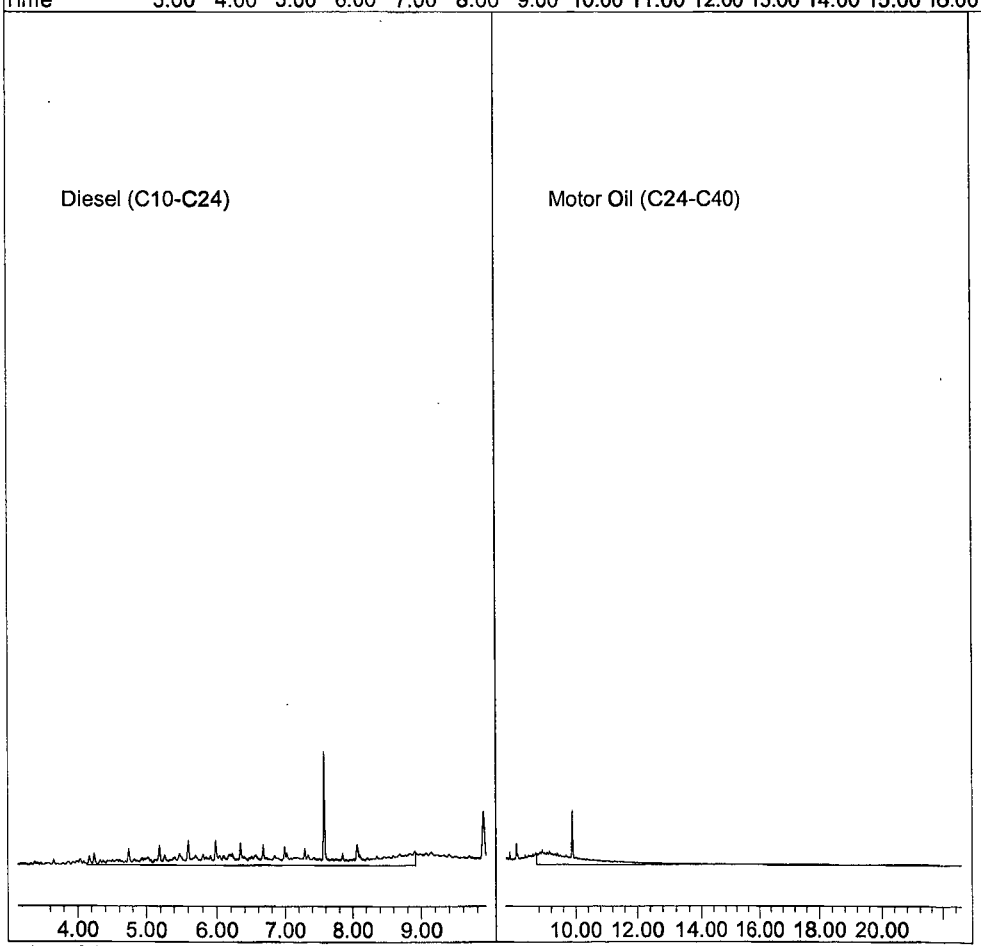
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

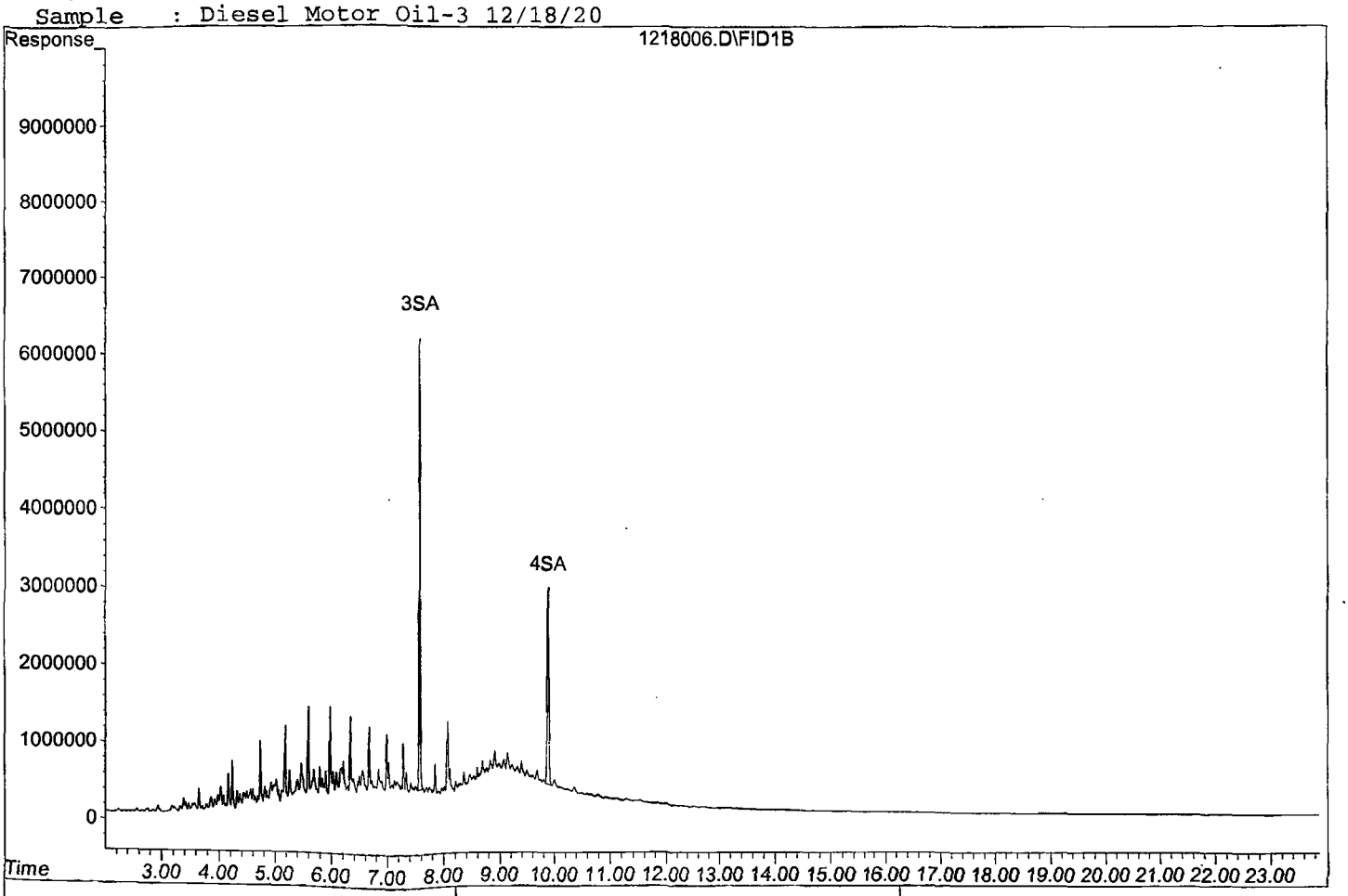
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000		Recovery =	40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000		Recovery =	40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb

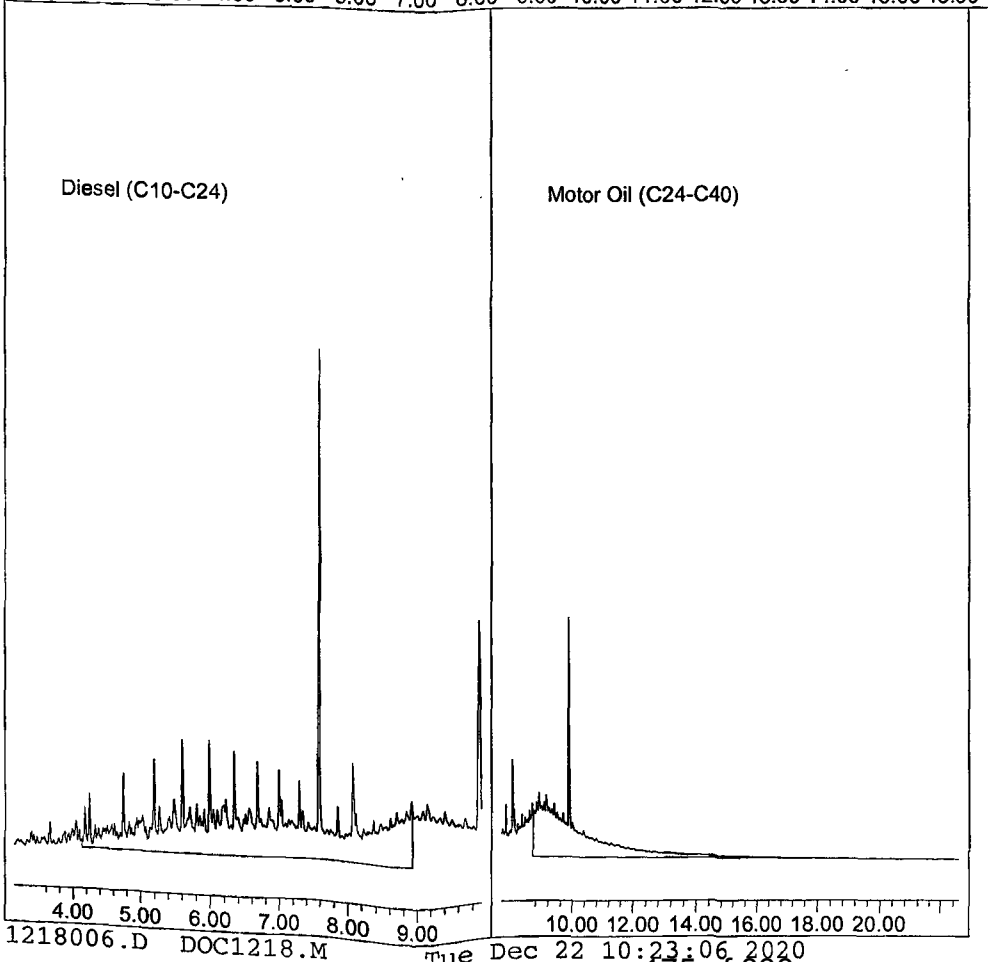
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

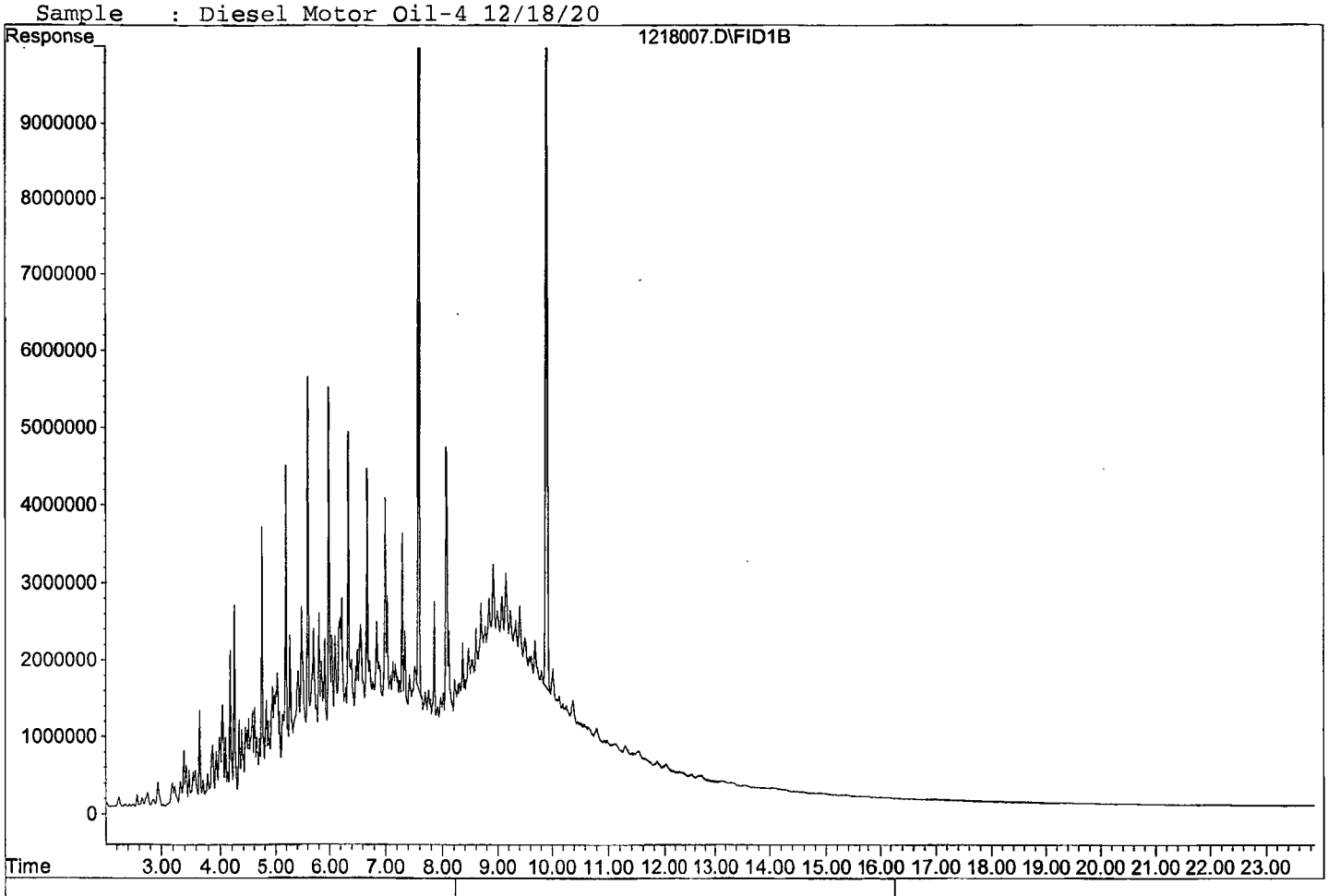
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

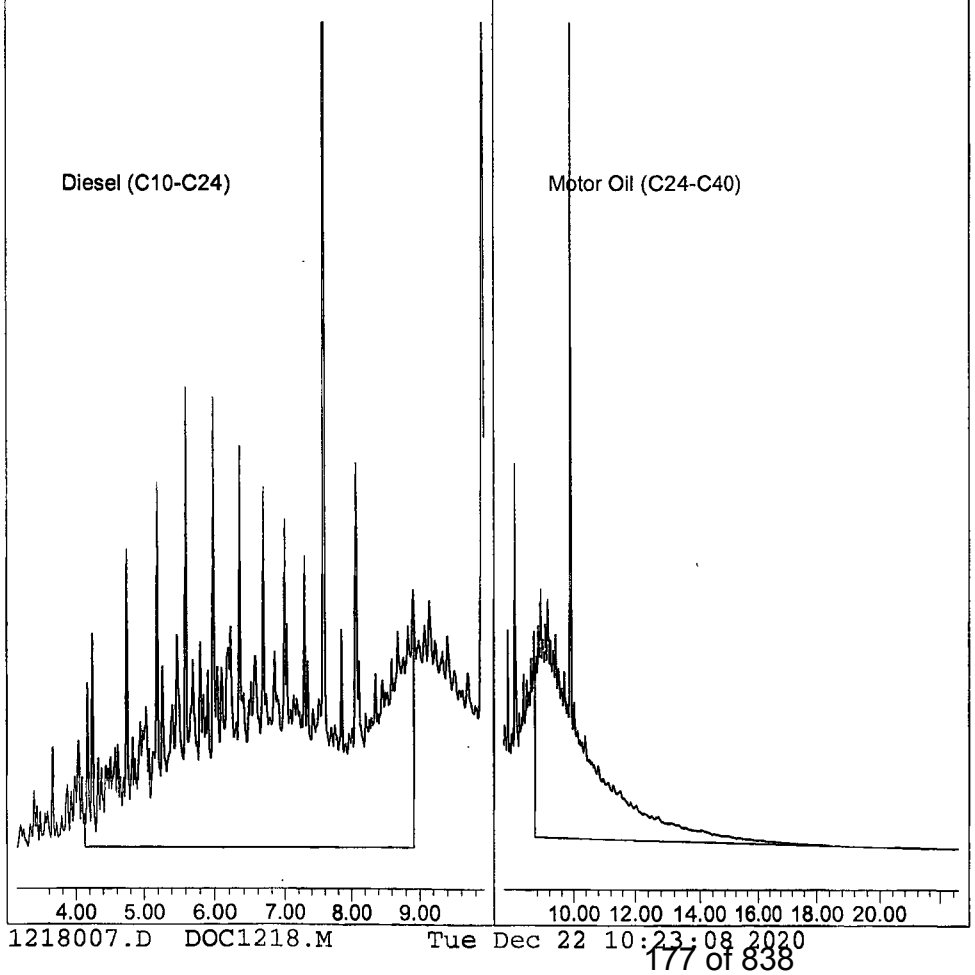
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000		Recovery =	149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000		Recovery =	157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

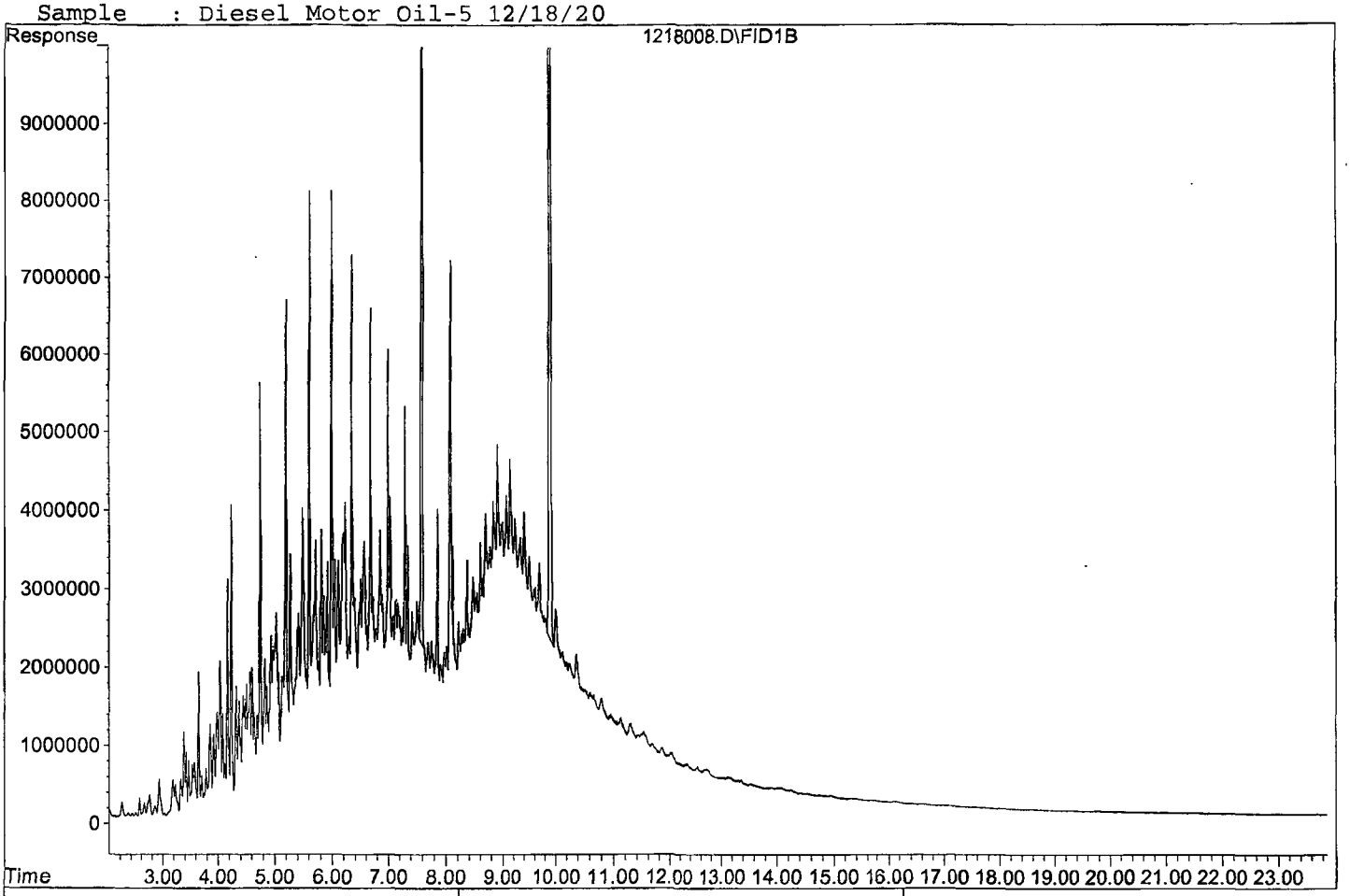
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

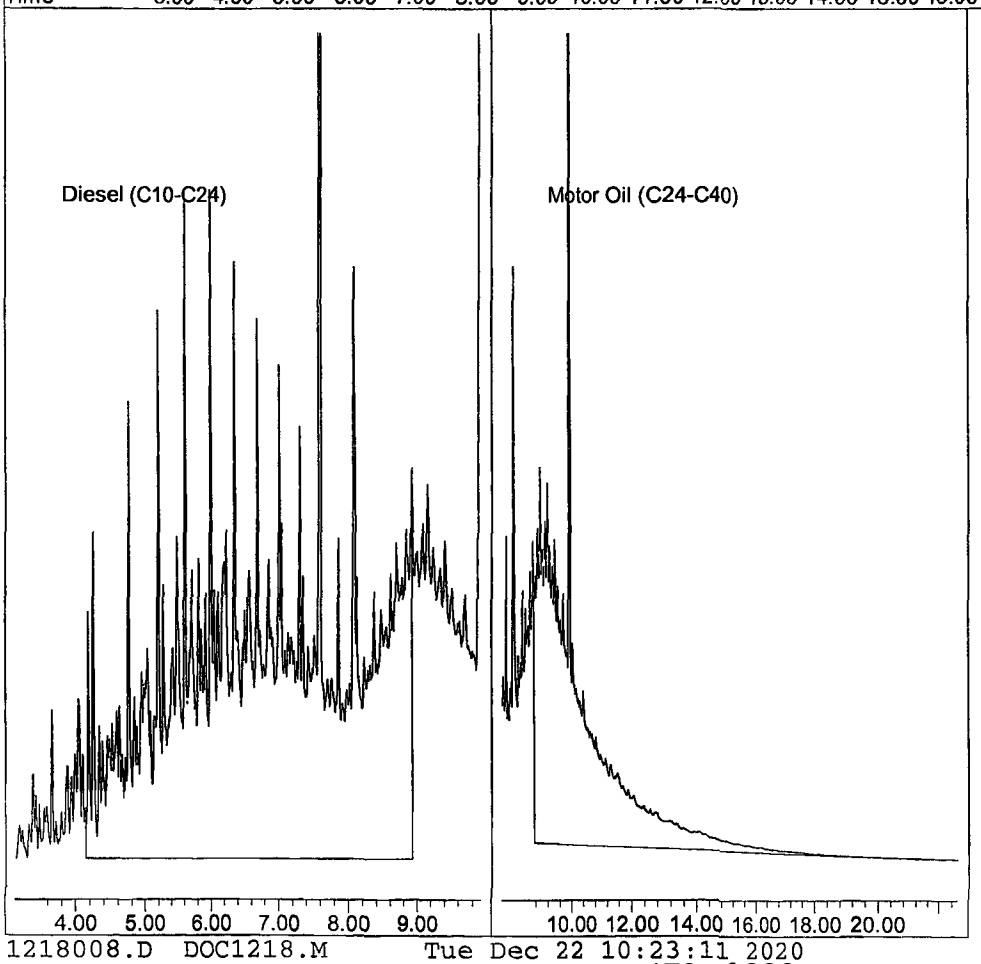
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000		Recovery =	224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000		Recovery =	237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

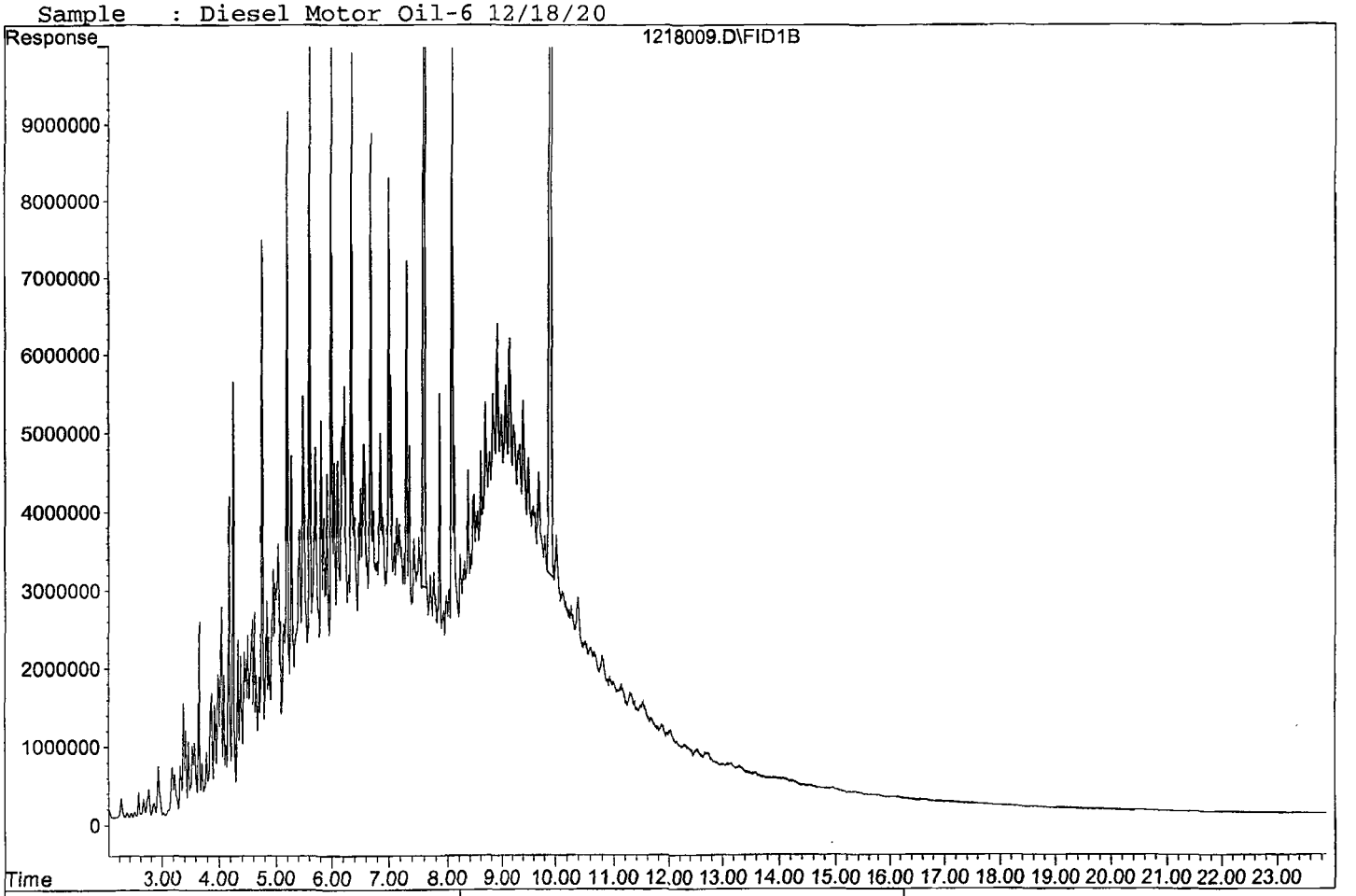
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

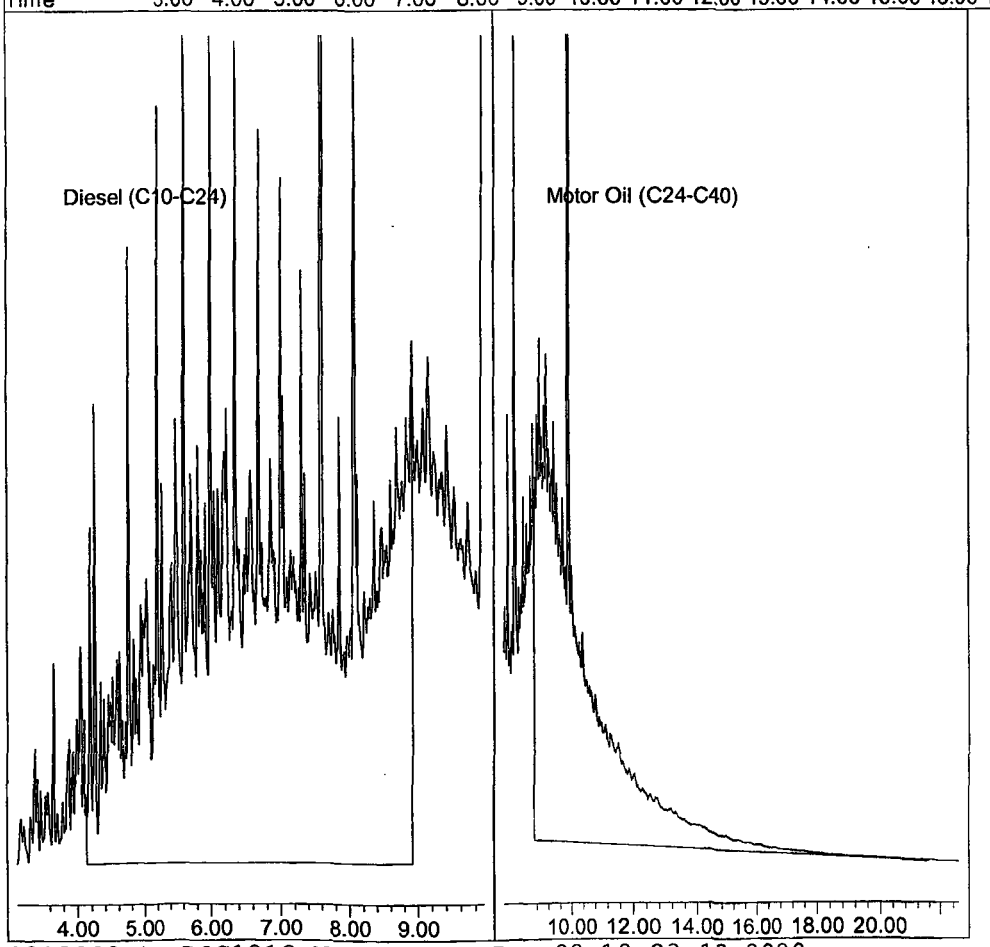
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572	ppb
Surrogate Spike 30.000		Recovery =	311.91%	
4) SA Octacosane(S)	9.91	438795924	96.608	ppb
Surrogate Spike 30.000		Recovery =	322.03%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330	ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739	ppb
Target Compounds				

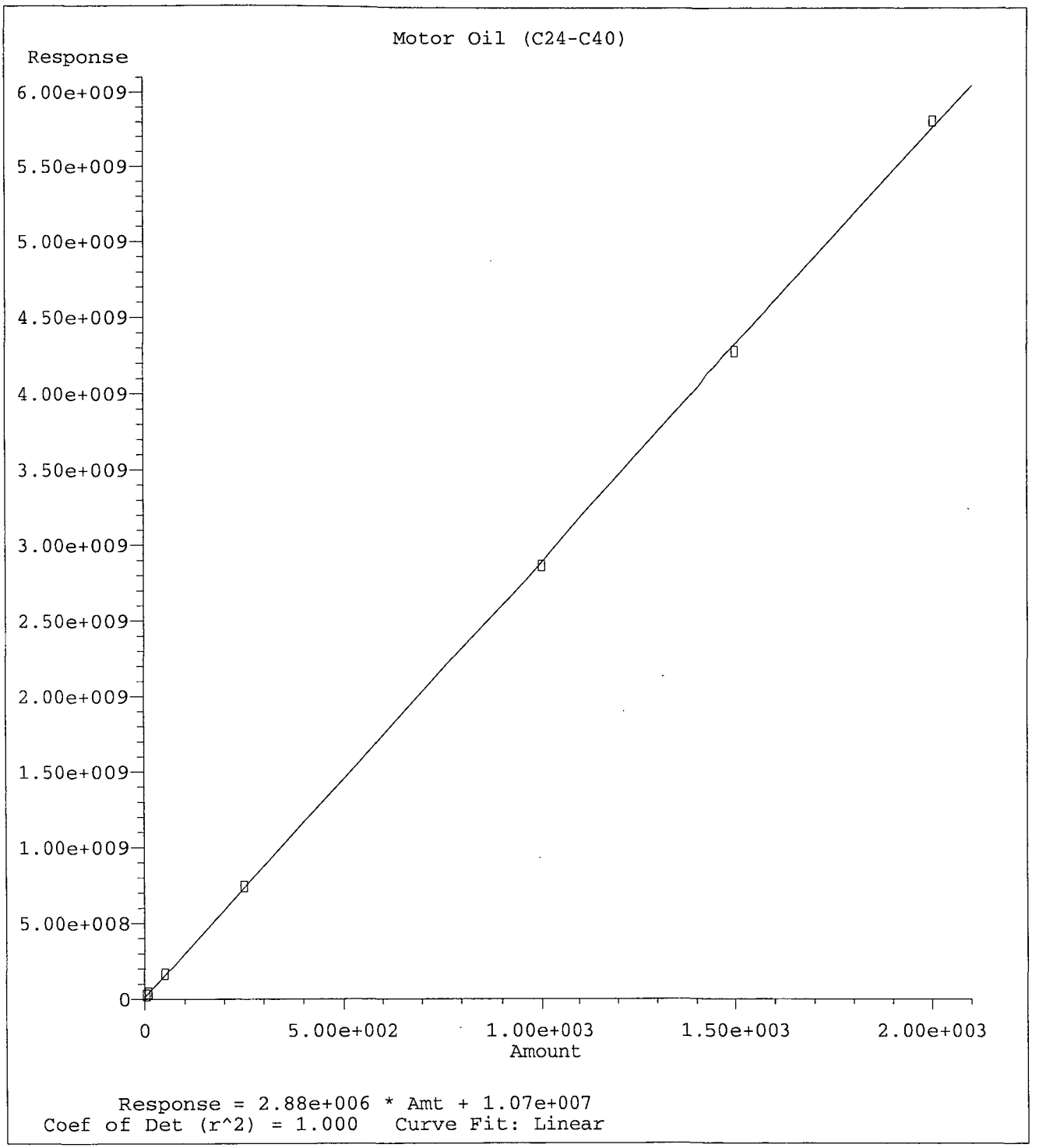
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20







Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
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38							
39							
40							
		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

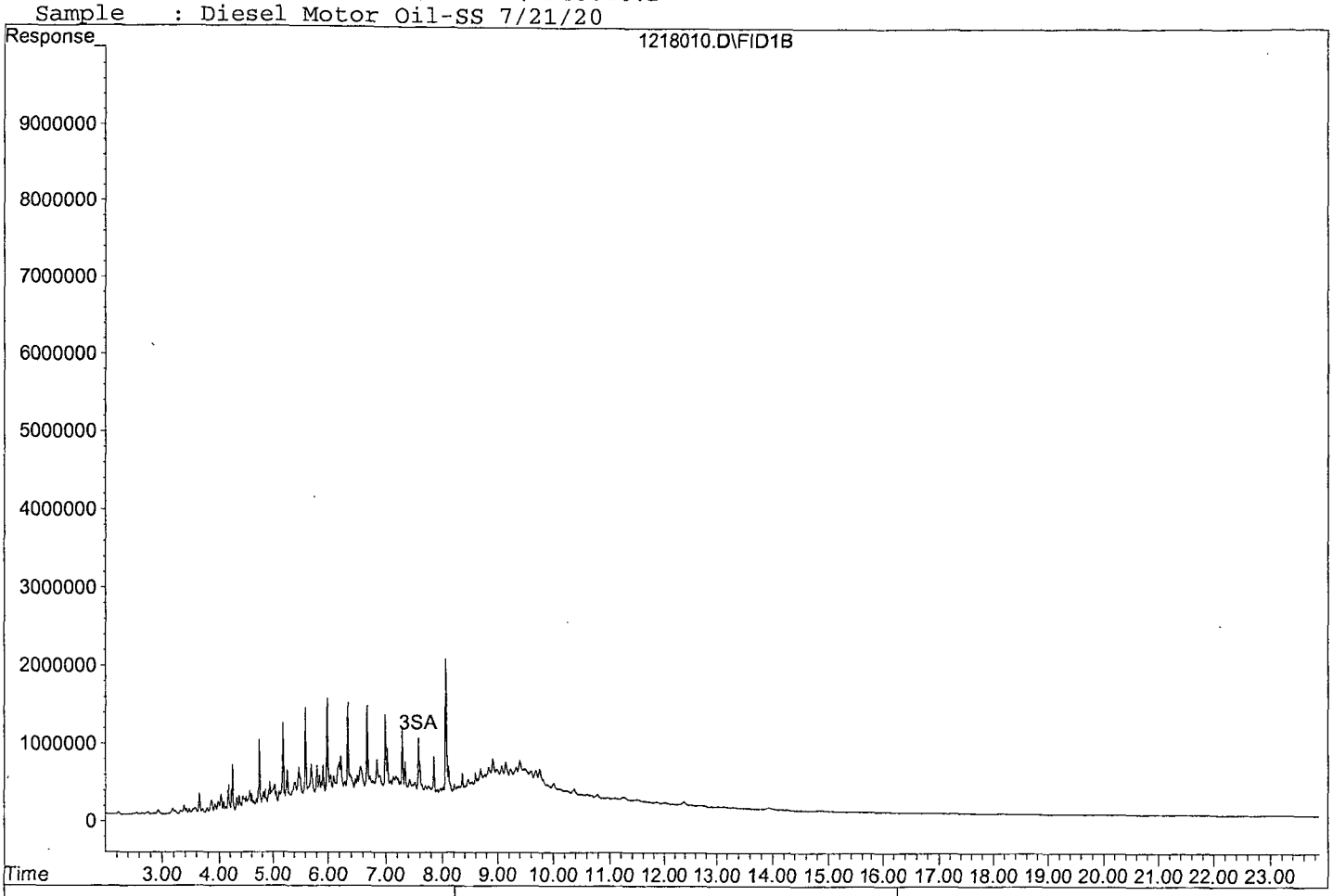
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000	Recovery =		2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000	Recovery =		0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb

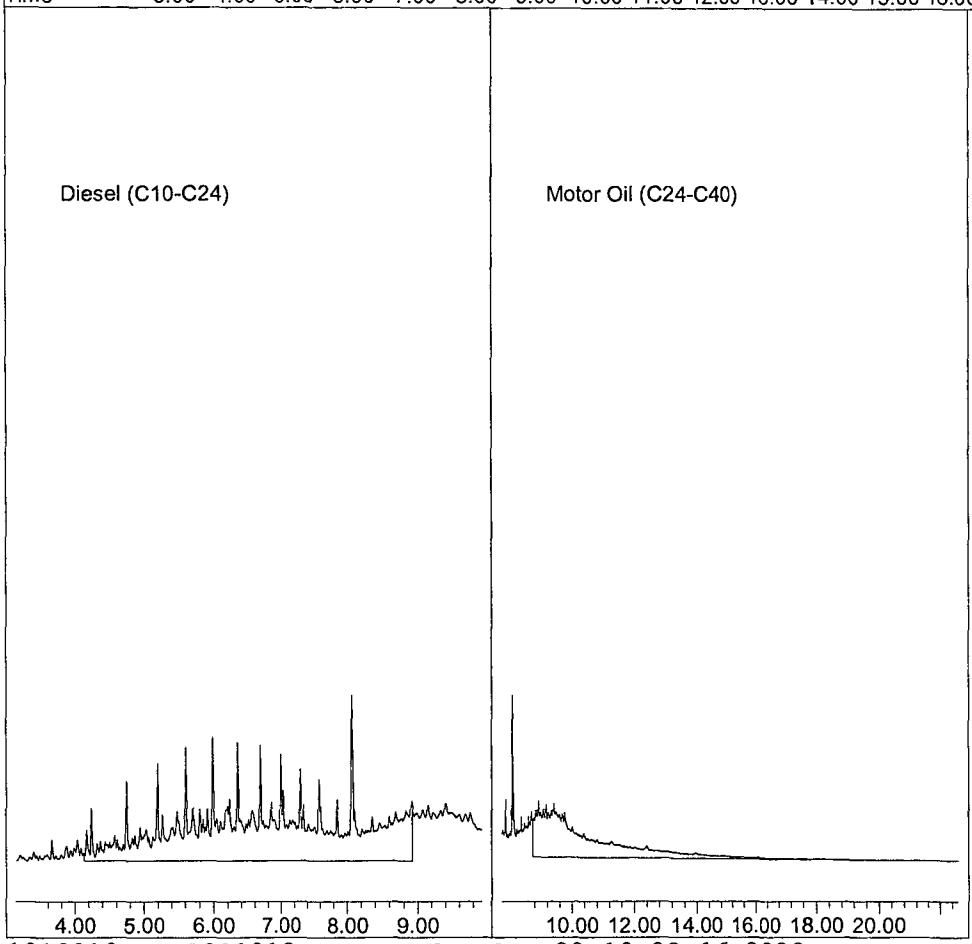
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





1218010.D DOC1218.M Tue Dec 22 10:23:16 2020

TPH Extractables
DEC0208

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Initial Cal. Date: 02/08/21
Instrument: Apollo

Initials: SS

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
			208001 D	208002 D	208003.D	208004.D	208005 D	208006.D									
1	SC	Decanoic Acid(S)	733363	895035	1021149	1091042	1115406	1161581					1002929	16	SC		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
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35																	

0.459751

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208001.D Vial: 1
Acq On : 2-8-21 12:45:58 Operator:
Sample : Decanoic Acid- 1 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

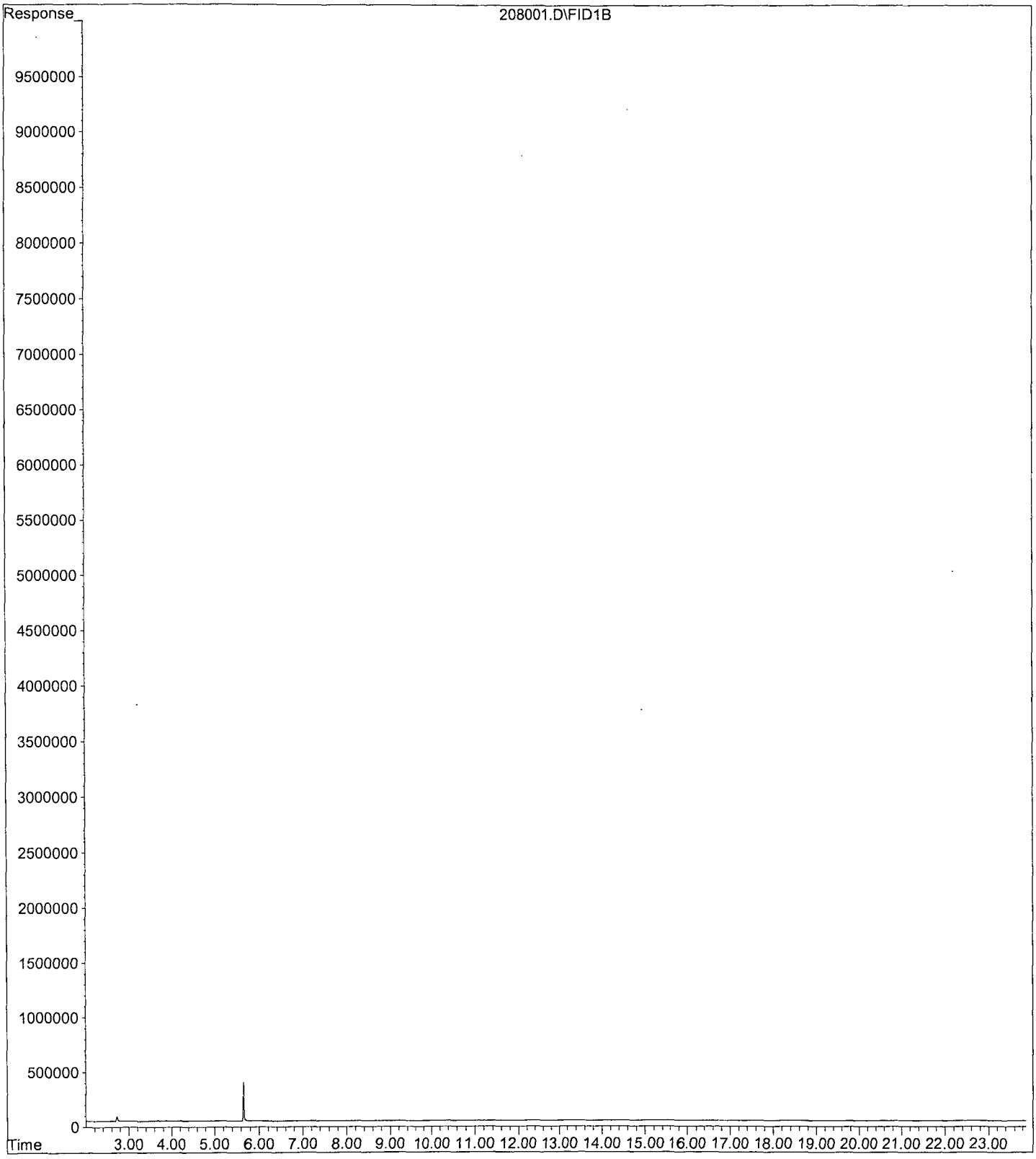
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.66	4400177	2.194 ppb
Surrogate Spike 24.000		*Recovery* =	9.14%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208001.D
Operator :
Acquired : 2-8-21 12:45:58 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 1 2/8/21
Misc Info : water
Vial Number: 1



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208002.D Vial: 2
Acq On : 2-8-21 13:13:57 Operator:
Sample : Decanoic Acid- 2 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

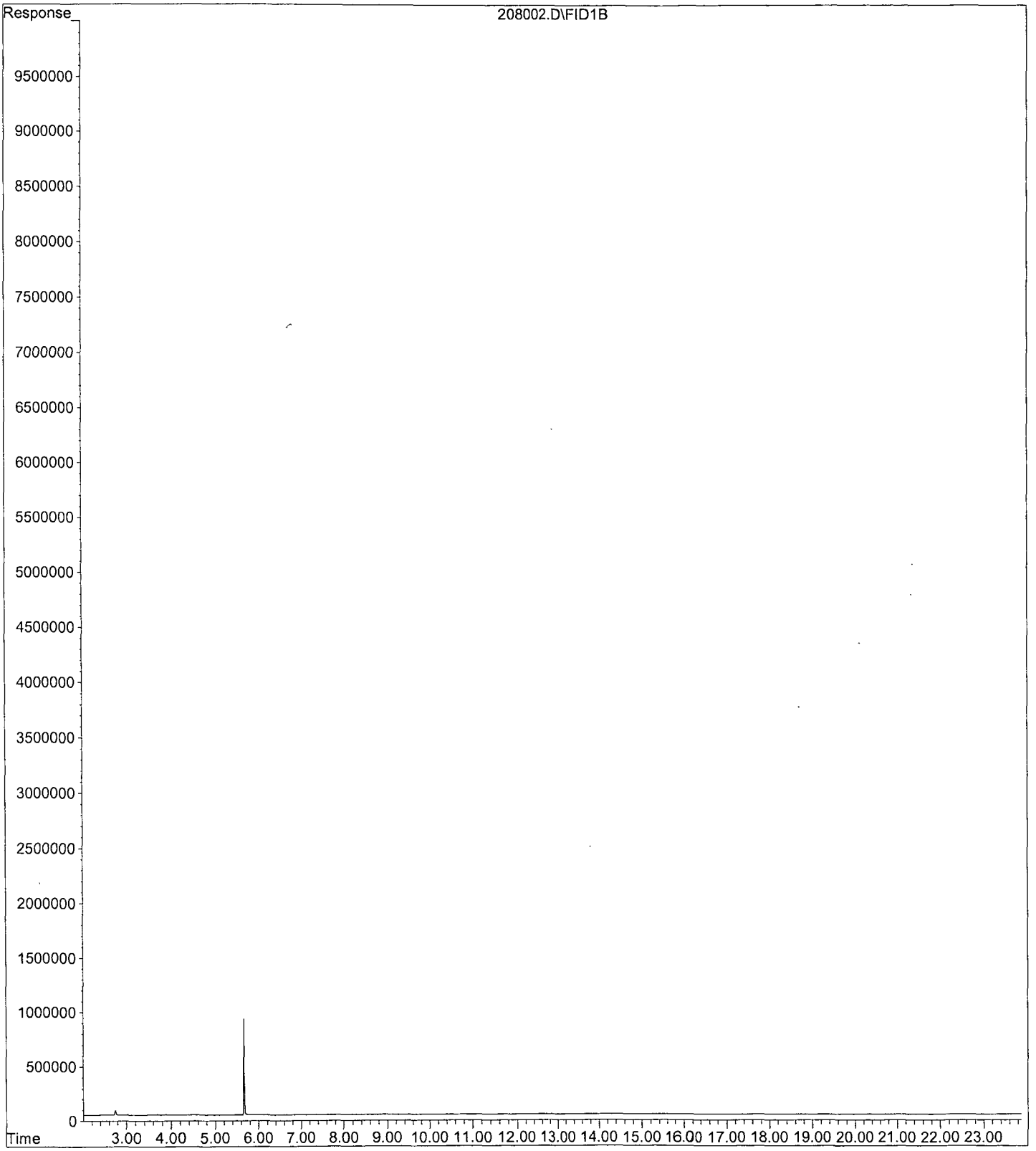
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.66	10740416	5.355 ppb
Surrogate Spike 24.000	Recovery =		22.31%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208002.D
Operator :
Acquired : 2-8-21 13:13:57 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 2 2/8/21
Misc Info : water
Vial Number: 2



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208003.D Vial: 3
Acq On : 2-8-21 13:42:06 Operator:
Sample : Decanoic Acid- 3 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

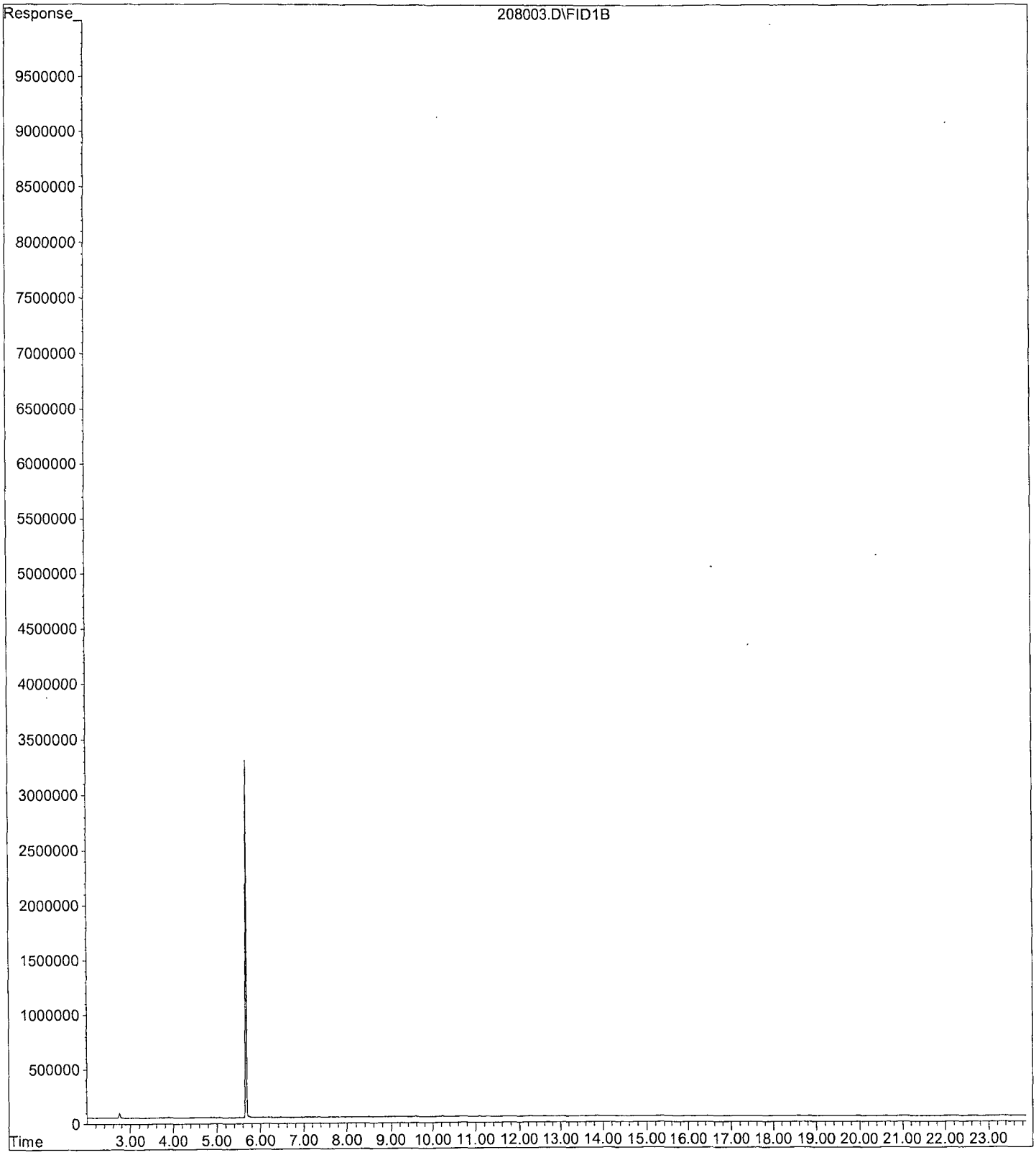
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.68	49015149	24.436 ppb
Surrogate Spike 24.000		Recovery =	101.82%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208003.D
Operator :
Acquired : 2-8-21 13:42:06 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 3 2/8/21
Misc Info : water
Vial Number: 3



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208004.D Vial: 4
Acq On : 2-8-21 14:10:19 Operator:
Sample : Decanoic Acid- 4 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

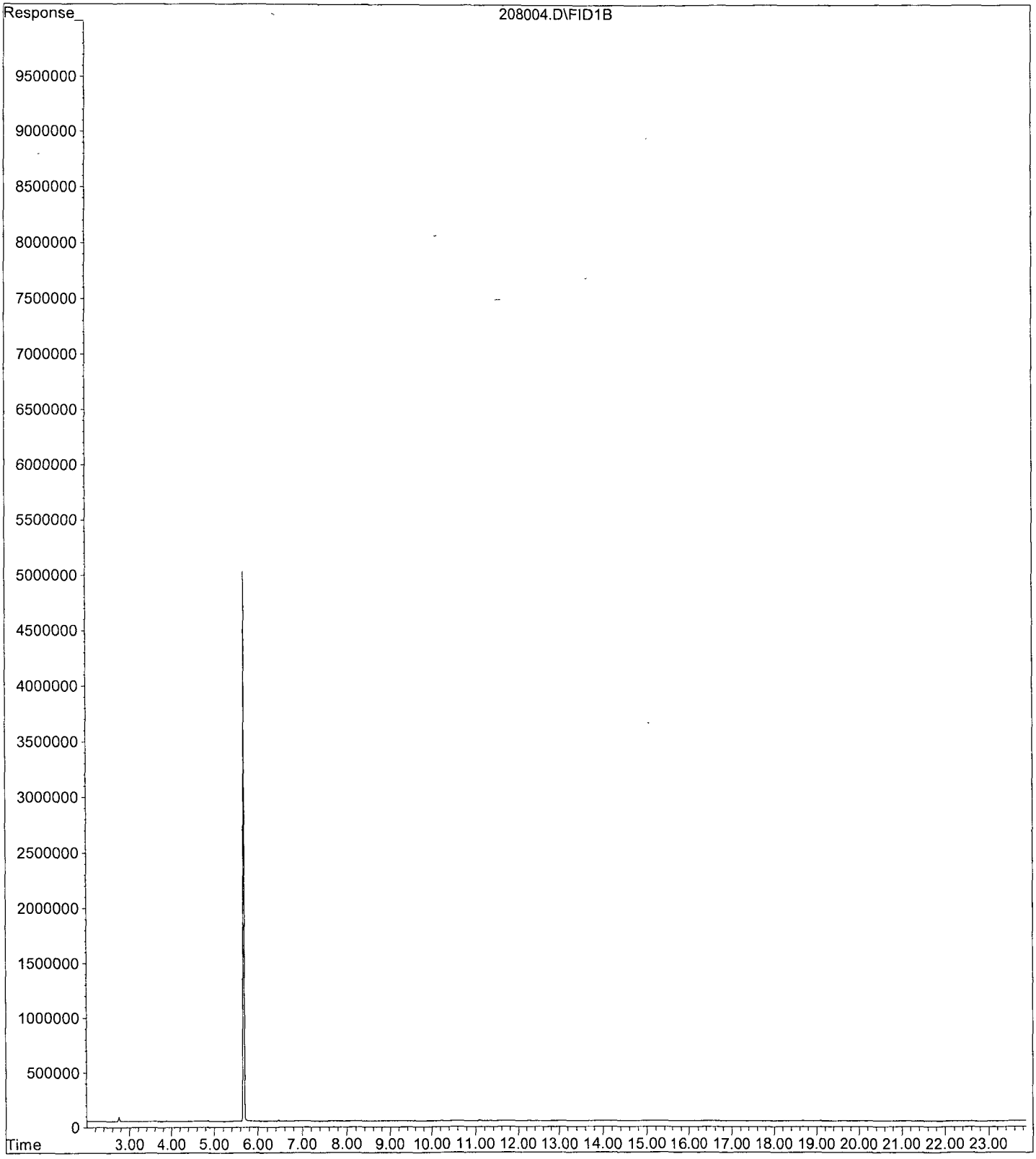
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.69	78555004	39.163 ppb
Surrogate Spike 24.000		Recovery =	163.18%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208004.D
Operator :
Acquired : 2-8-21 14:10:19 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 4 2/8/21
Misc Info : water
Vial Number: 4



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208005.D Vial: 5
Acq On : 2-8-21 14:38:32 Operator:
Sample : Decanoic Acid- 5 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

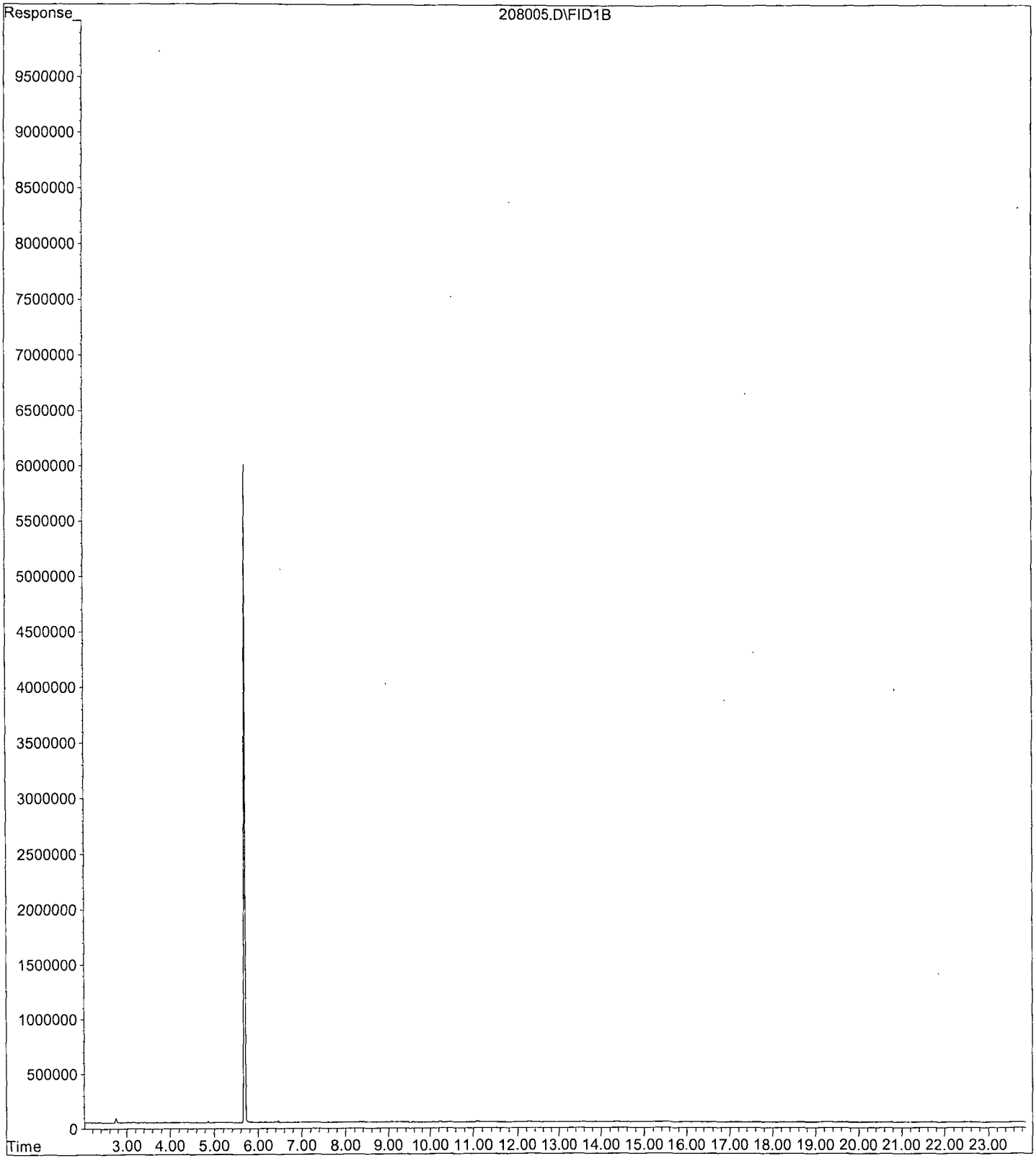
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.70	107078961	53.383 ppb
Surrogate Spike 24.000		Recovery =	222.43%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208005.D
Operator :
Acquired : 2-8-21 14:38:32 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 5 2/8/21
Misc Info : water
Vial Number: 5



Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208006.D Vial: 6
Acq On : 2-8-21 15:06:47 Operator:
Sample : Decanoic Acid- 6 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 8 15:56 2021 Quant Results File: DEC0208.RES

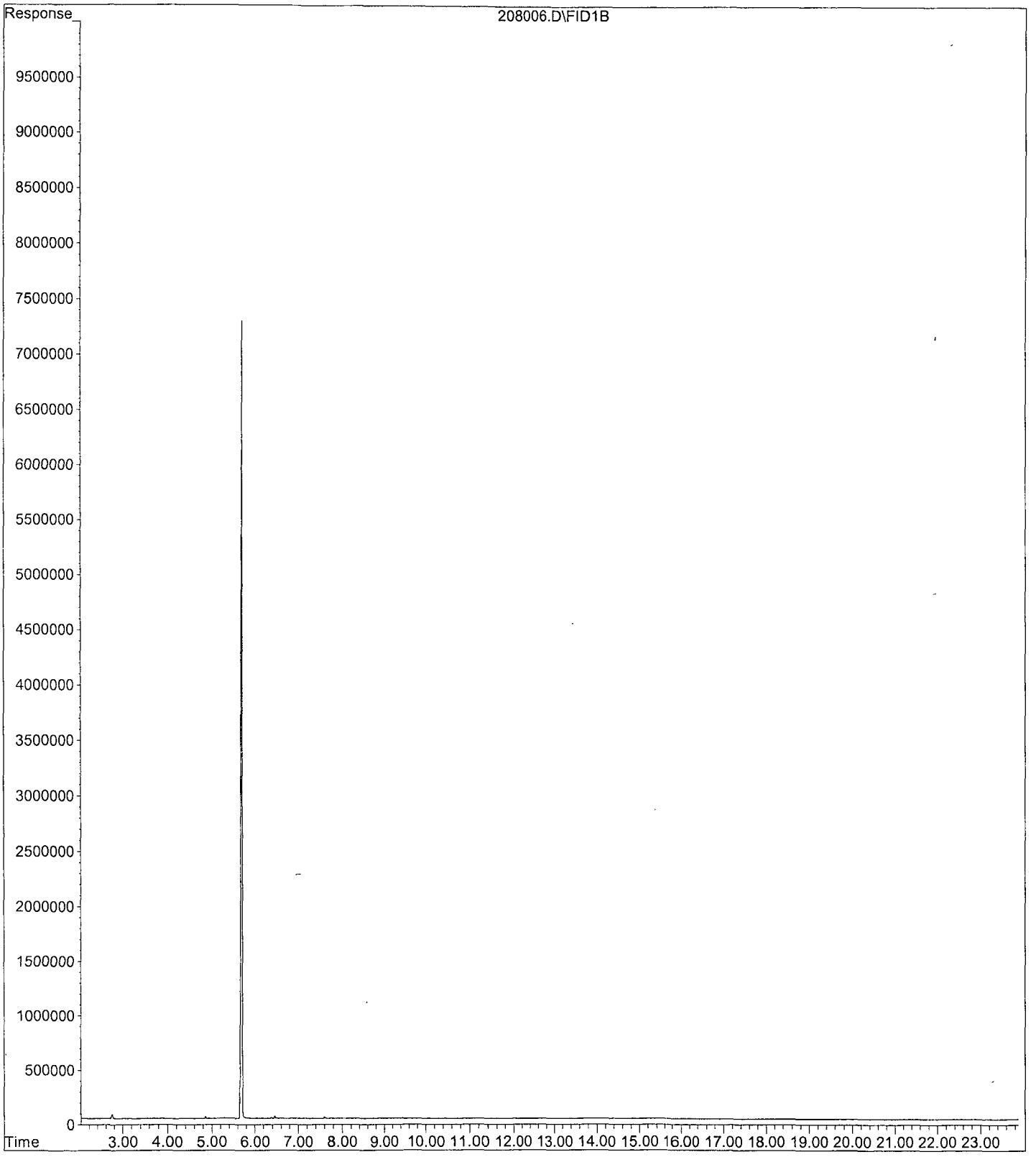
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.70	139389745	69.491 ppb
Surrogate Spike 24.000		Recovery =	289.55%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208006.D
Operator :
Acquired : 2-8-21 15:06:47 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- 6 2/8/21
Misc Info : water
Vial Number: 6



TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/02/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 201050.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2327120	5.1	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1438200	17	HBTML	1.6
3	SA	Ortho-Terphenyl(S)	2953720	2896690	1.9	SA	
4	SA	Octacosane(S)	2271000	2188910	3.6	SA	
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40							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210201\201050.D Vial: 50
Acq On : 2-2-21 13:52:22 Operator:
Sample : Diesel Motor Oil-CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 14:22 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

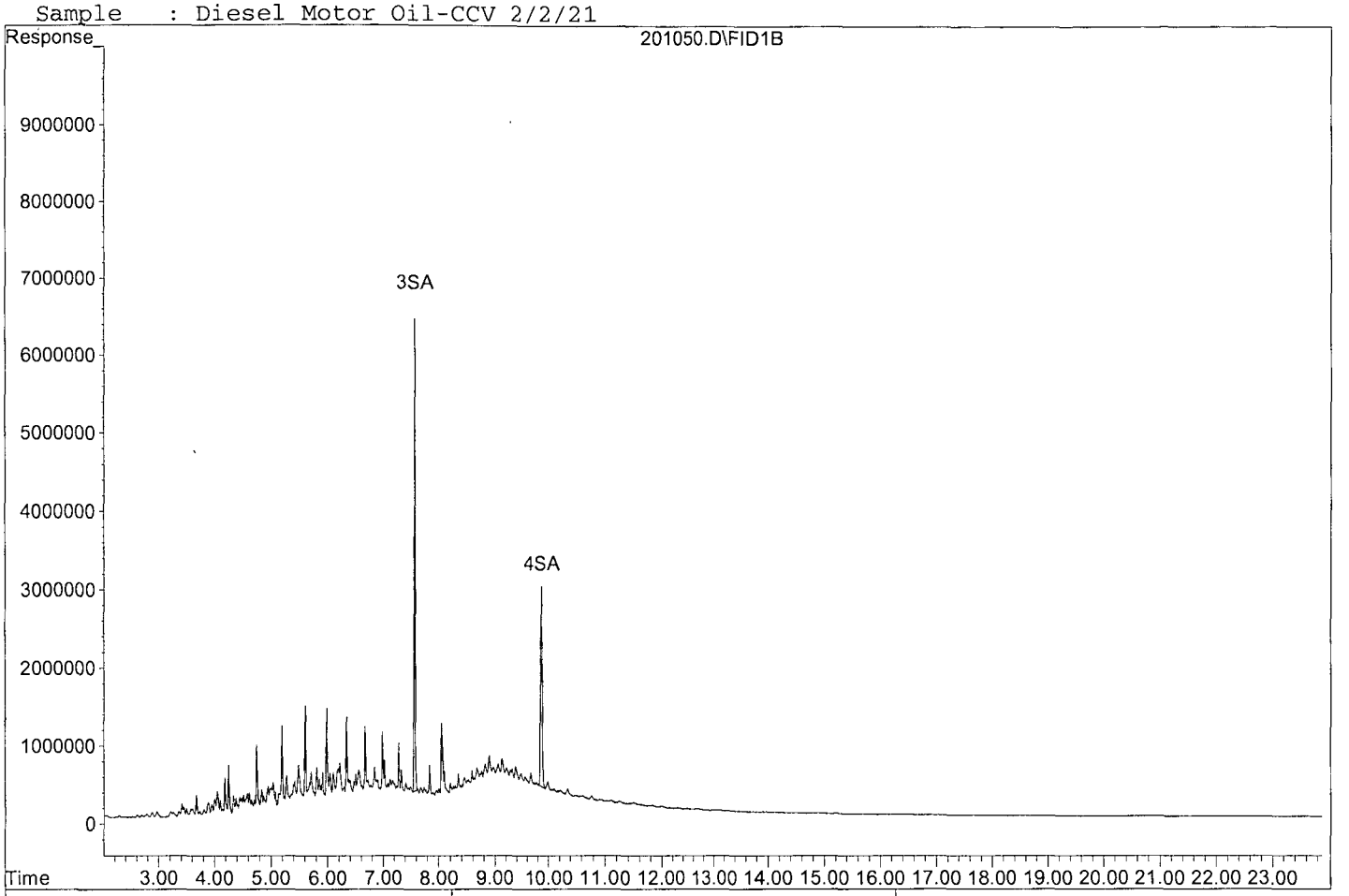
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

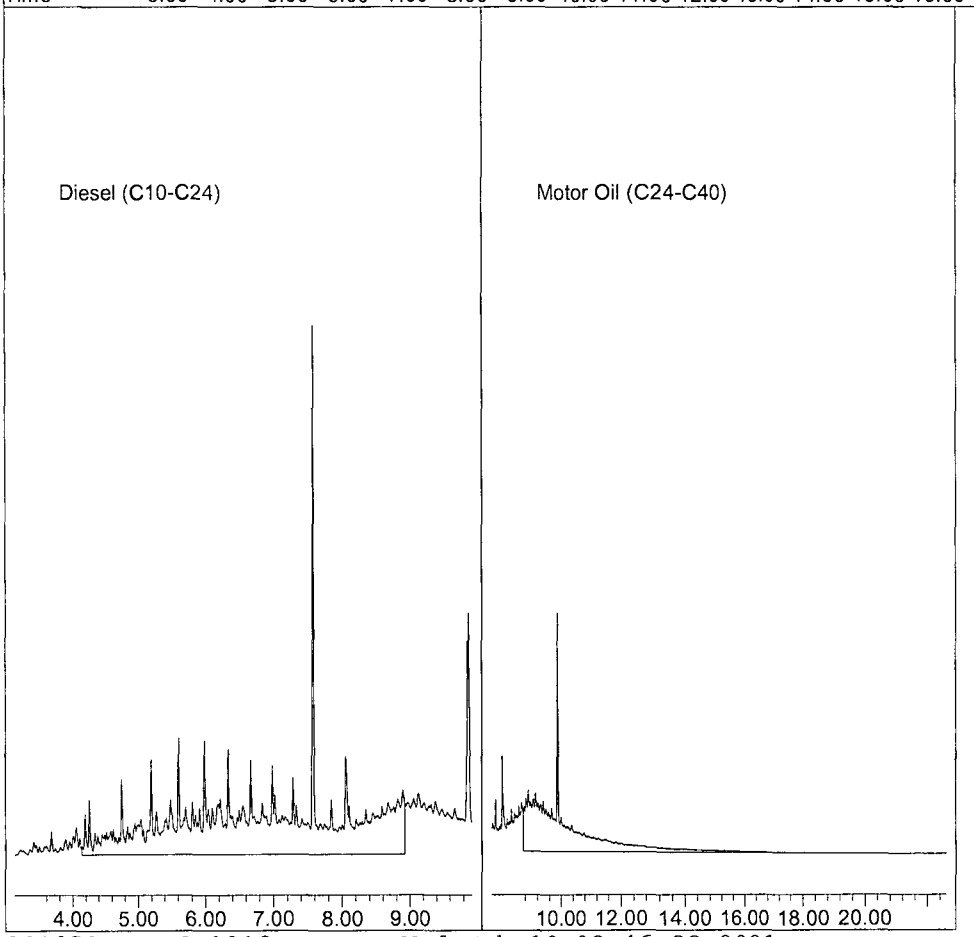
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	72417168	12.259 ppb
Surrogate Spike 30.000	Recovery =		40.86%
4) SA Octacosane(S)	9.87	54722795	12.048 ppb
Surrogate Spike 30.000	Recovery =		40.16%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1163559242	237.270 ppb
2) HBTM Motor Oil (C24-C40)	15.16	719100288	246.122 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201050.D
Sample : Diesel Motor Oil-CCV 2/2/21





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/02/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 201064.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2516540	2.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1547120	10	HBTML	6.0
3	SA	Ortho-Terphenyl(S)	2953720	3223430	9.1	SA	
4	SA	Octacosane(S)	2271000	2363920	4.1	SA	
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40							
		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210201\201064.D Vial: 64
Acq On : 2-2-21 20:34:08 Operator:
Sample : Diesel Motor Oil-CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

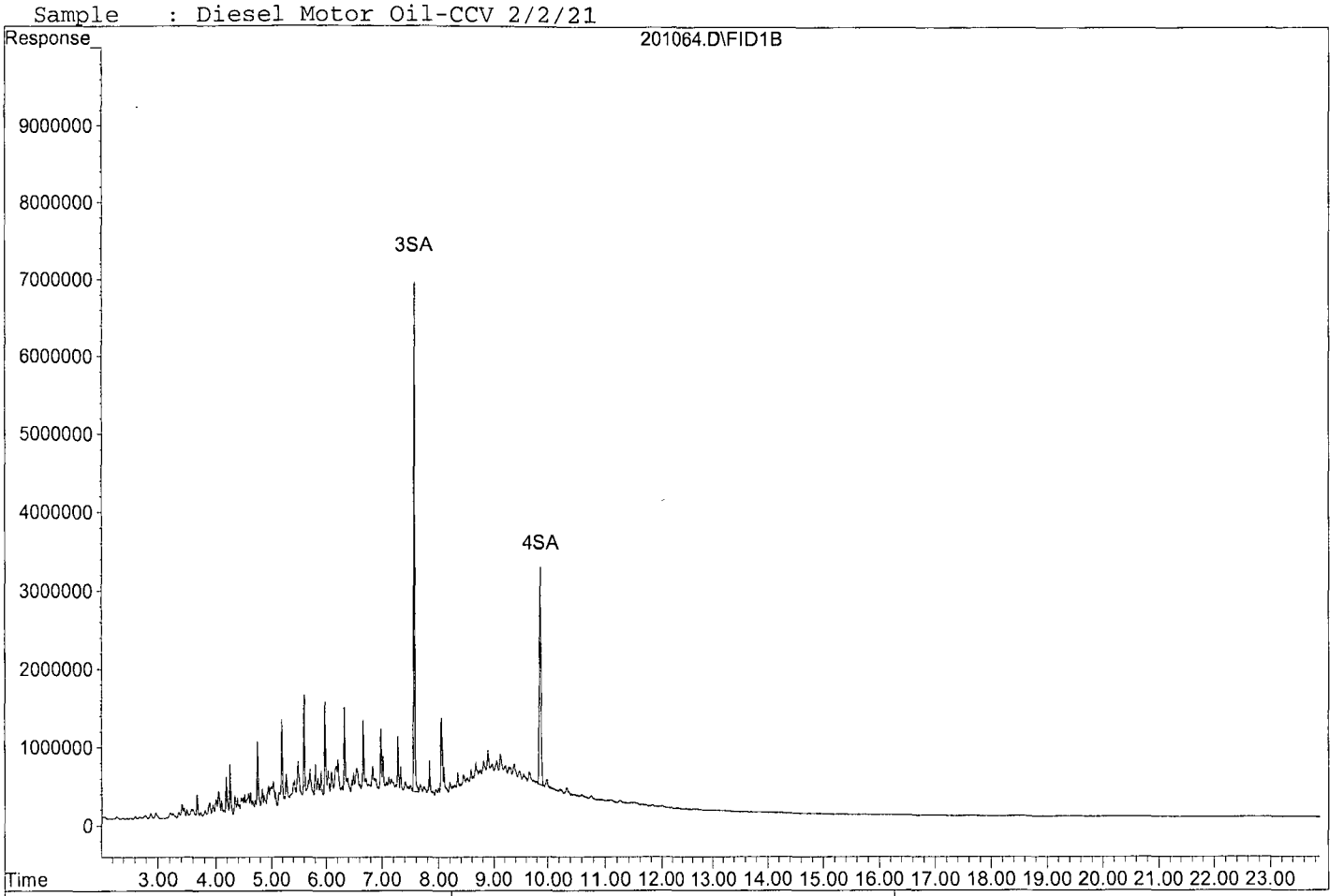
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

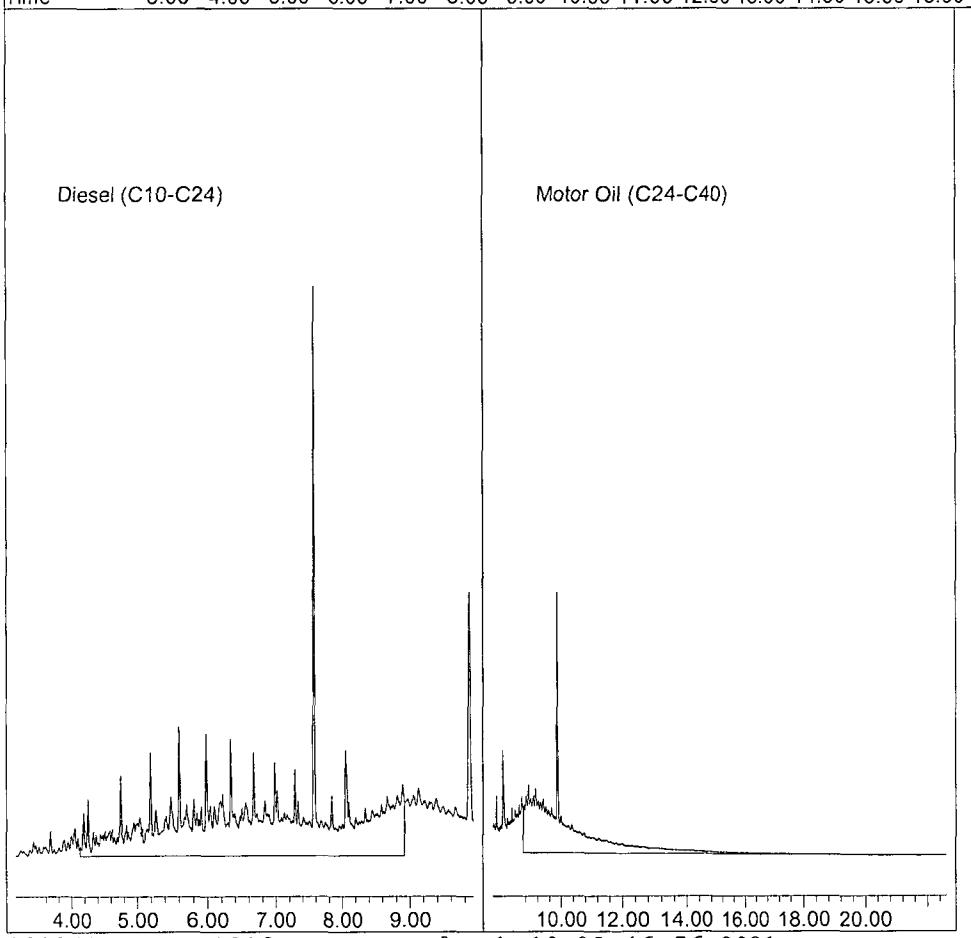
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	80585763	13.641 ppb
Surrogate Spike 30.000	Recovery =		45.47%
4) SA Octacosane(S)	9.87	59097891	13.011 ppb
Surrogate Spike 30.000	Recovery =		43.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1258268431	256.583 ppb
2) HBTM Motor Oil (C24-C40)	15.16	773559334	265.043 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201064.D
Sample : Diesel Motor Oil-CCV 2/2/21





TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/08/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 208007.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2075760	15	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1235400	28	HBTML	16
3	SA	Ortho-Terphenyl(S)	2953720	2540550	14	SA	
4	SA	Octacosane(S)	2271000	1984090	13	SA	
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40							
		Average			17.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208007.D Vial: 7
Acq On : 2-8-21 16:09:02 Operator:
Sample : Diesel Motor Oil- CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 9 7:32 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

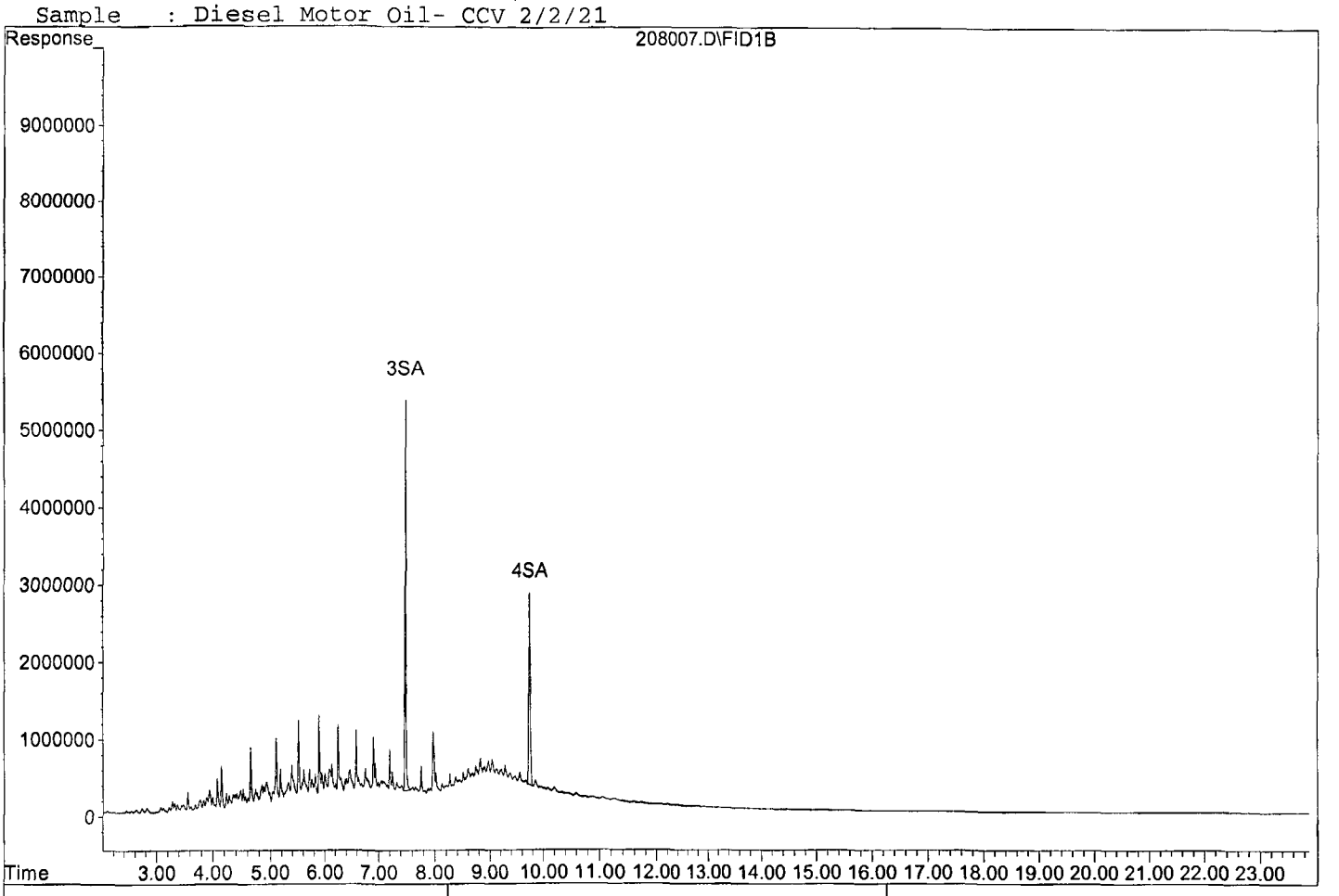
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

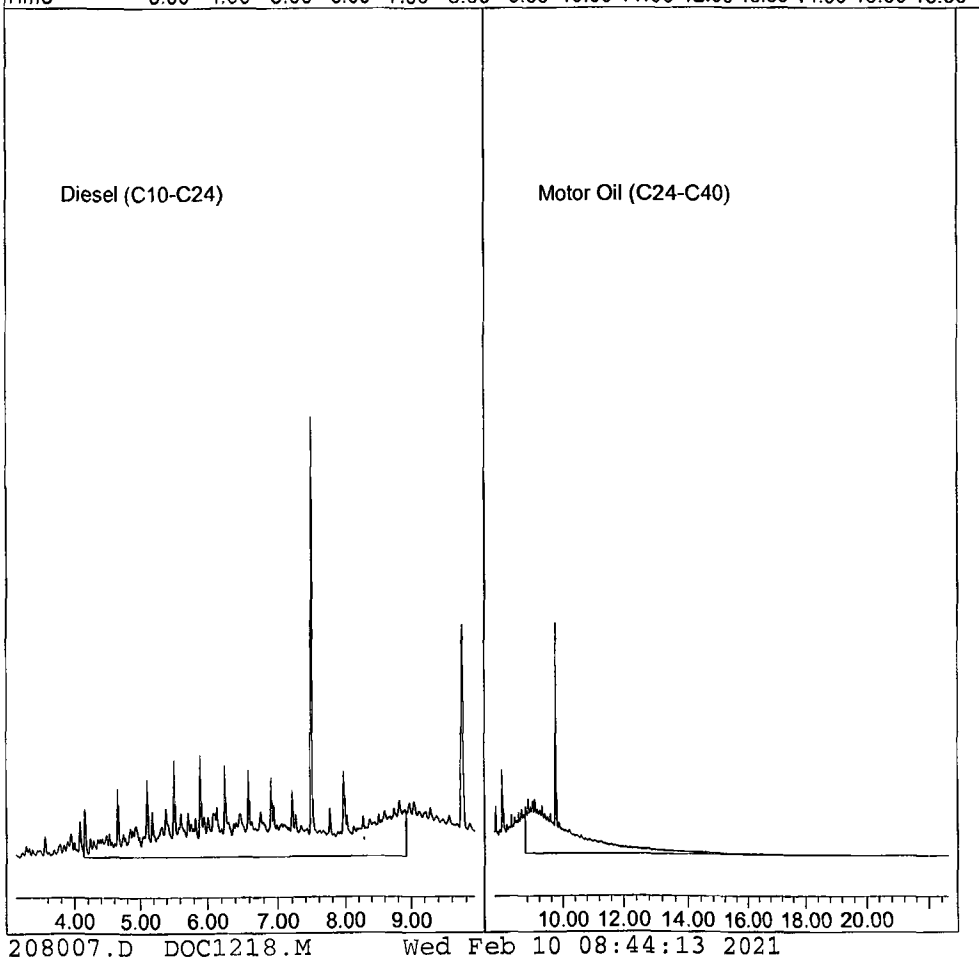
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.48	63513775	10.751 ppb
Surrogate Spike 30.000		Recovery =	35.84%
4) SA Octacosane(S)	9.74	49602370	10.921 ppb
Surrogate Spike 30.000		Recovery =	36.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1037882452	211.642 ppb
2) HBTM Motor Oil (C24-C40)	15.16	617701966	210.893 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208007.D
Sample : Diesel Motor Oil- CCV 2/2/21





TPH Extractables
DEC0208

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/08/21
Instrument: Apollo
Initial Cal. Date: 02/08/21
Data File: 208008.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1002930	1024140	2.1	SC	
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		Average			2.1		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208008.D Vial: 8
Acq On : 2-8-21 16:37:07 Operator:
Sample : Decanoic Acid- CCV 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 9 7:31 2021 Quant Results File: DEC0208.RES

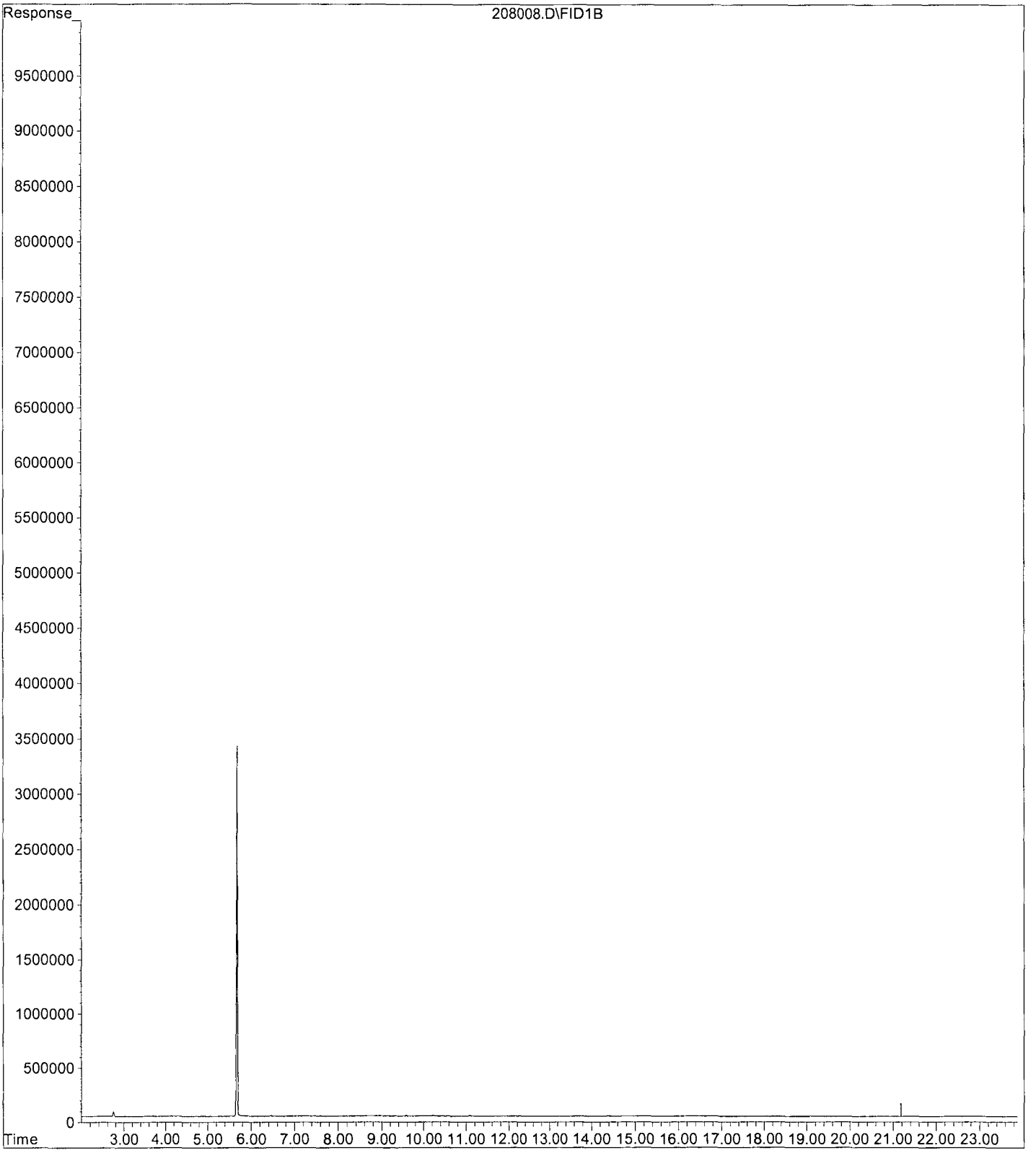
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	5.68	49158869	24.508	ppb
Surrogate Spike 24.000	Recovery	=	102.12%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208008.D
Operator :
Acquired : 2-8-21 16:37:07 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- CCV 2/8/21
Misc Info : water
Vial Number: 8



TPH Extractables
DEC0208

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/08/21
Instrument: Apollo
Initial Cal. Date: 02/08/21
Data File: 208022.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1002930	1116400	11	SC	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208022.D Vial: 22
Acq On : 2-8-21 23:10:01 Operator:
Sample : Decanoic Acid- CCV 2/8/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 9 7:31 2021 Quant Results File: DEC0208.RES

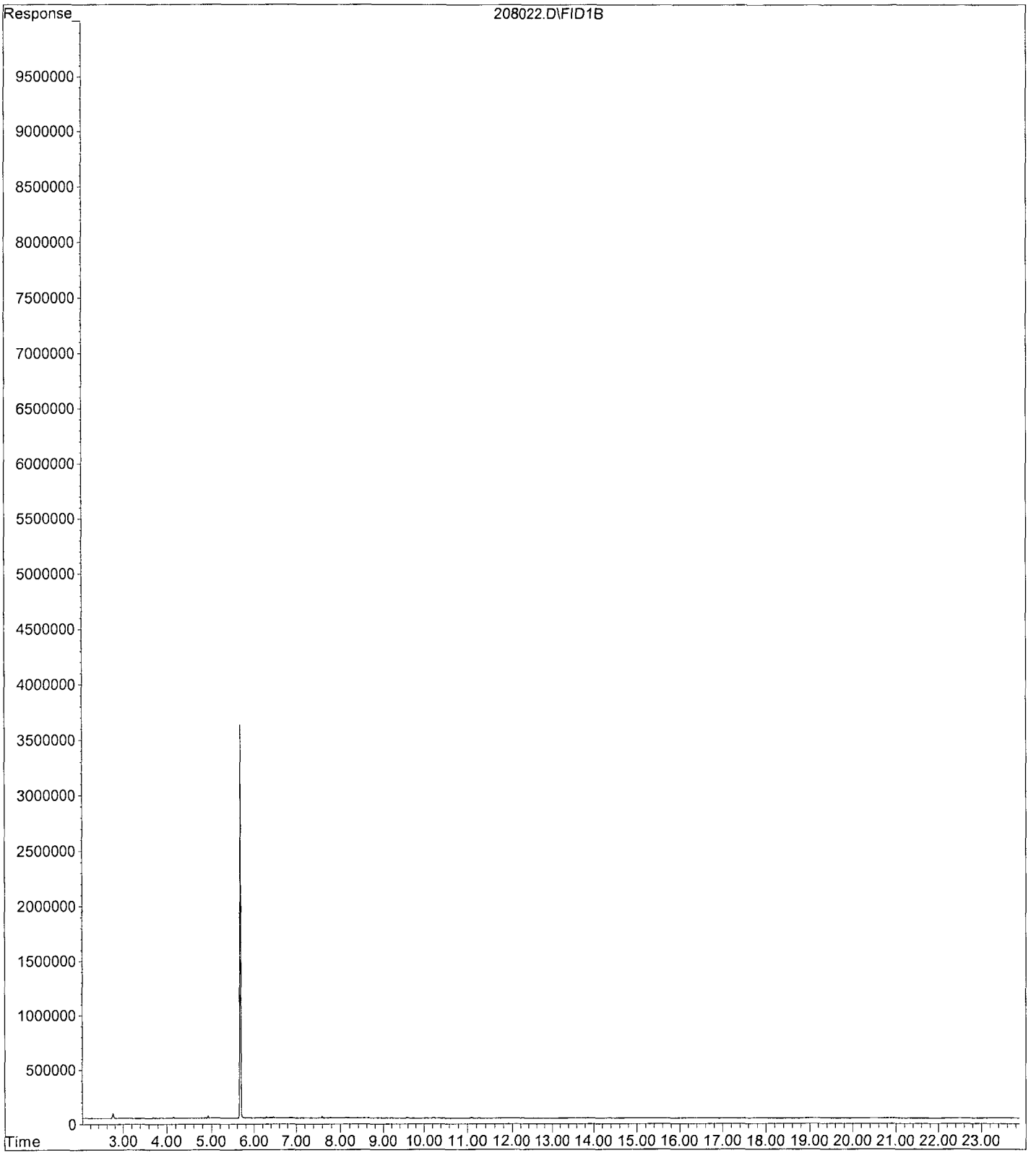
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.68	53587378	26.715 ppb
Surrogate Spike 24.000	Recovery =		111.31%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\210208\208022.D
Operator :
Acquired : 2-8-21 23:10:01 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid- CCV 2/8/21
Misc Info : water
Vial Number: 22



TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/08/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 208023.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2186170	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1295050	25	HBTML	11
3	SA	Ortho-Terphenyl(S)	2953720	2678760	9.3	SA	
4	SA	Octacosane(S)	2271000	2086310	8.1	SA	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.4		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210208\208023.D Vial: 23
Acq On : 2-8-21 23:38:03 Operator:
Sample : Diesel Motor Oil- CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 9 7:32 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

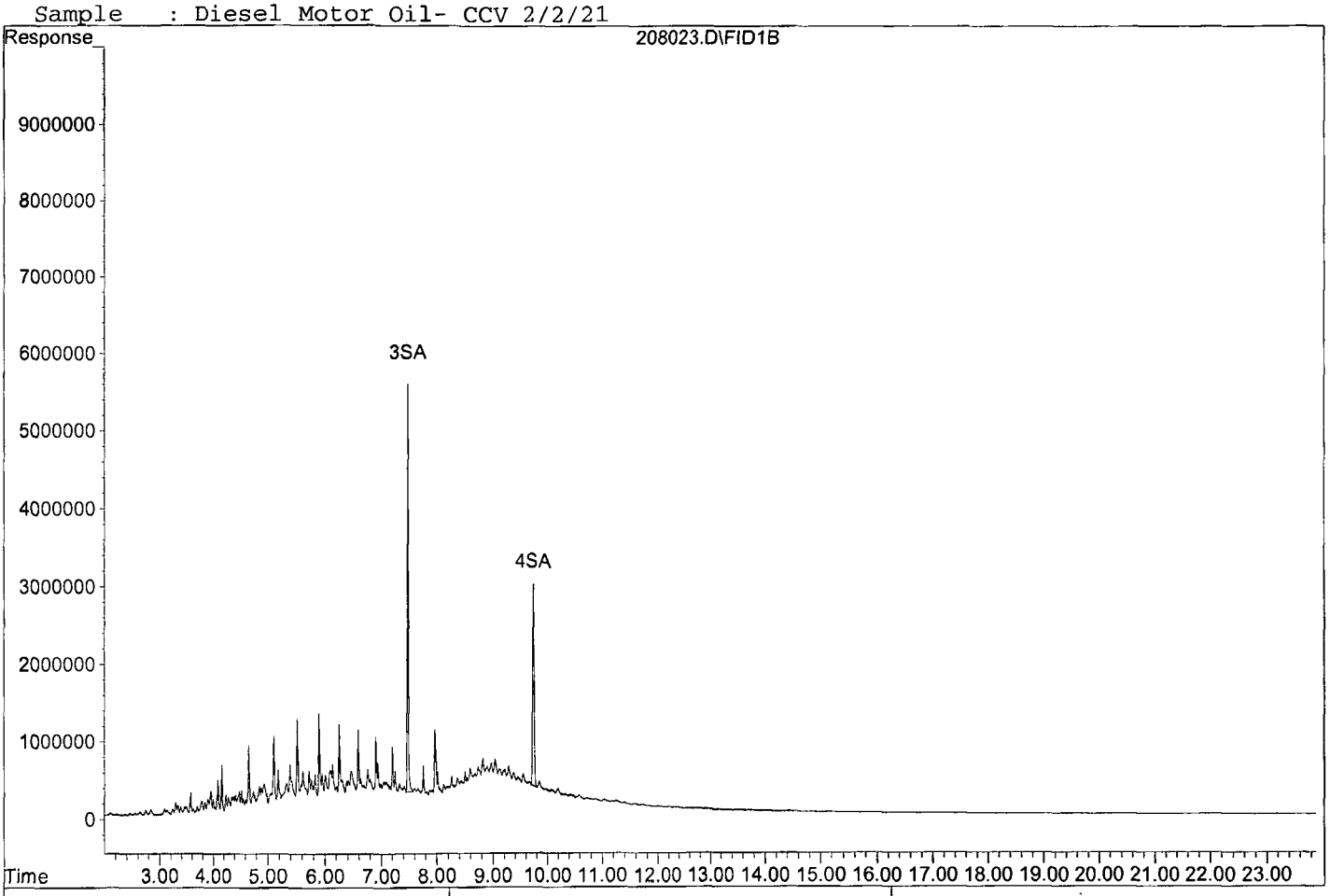
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

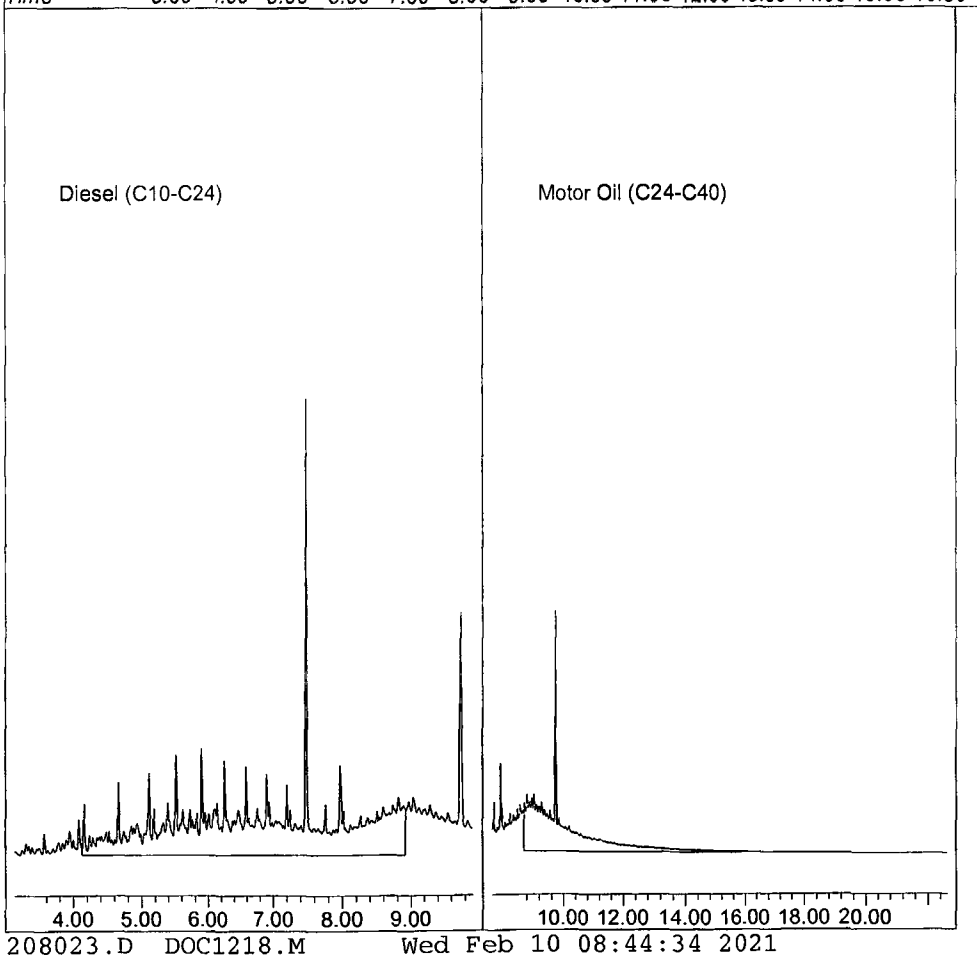
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.48	66968889	11.336 ppb
Surrogate Spike 30.000	Recovery =		37.79%
4) SA Octacosane(S)	9.74	52157742	11.483 ppb
Surrogate Spike 30.000	Recovery =		38.28%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1093087138	222.899 ppb
2) HBTM Motor Oil (C24-C40)	15.16	647526320	221.255 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208023.D
Sample : Diesel Motor Oil- CCV 2/2/21





ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201056.D Vial: 56
Acq On : 2-2-21 16:48:44 Operator:
Sample : BA26001W34 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

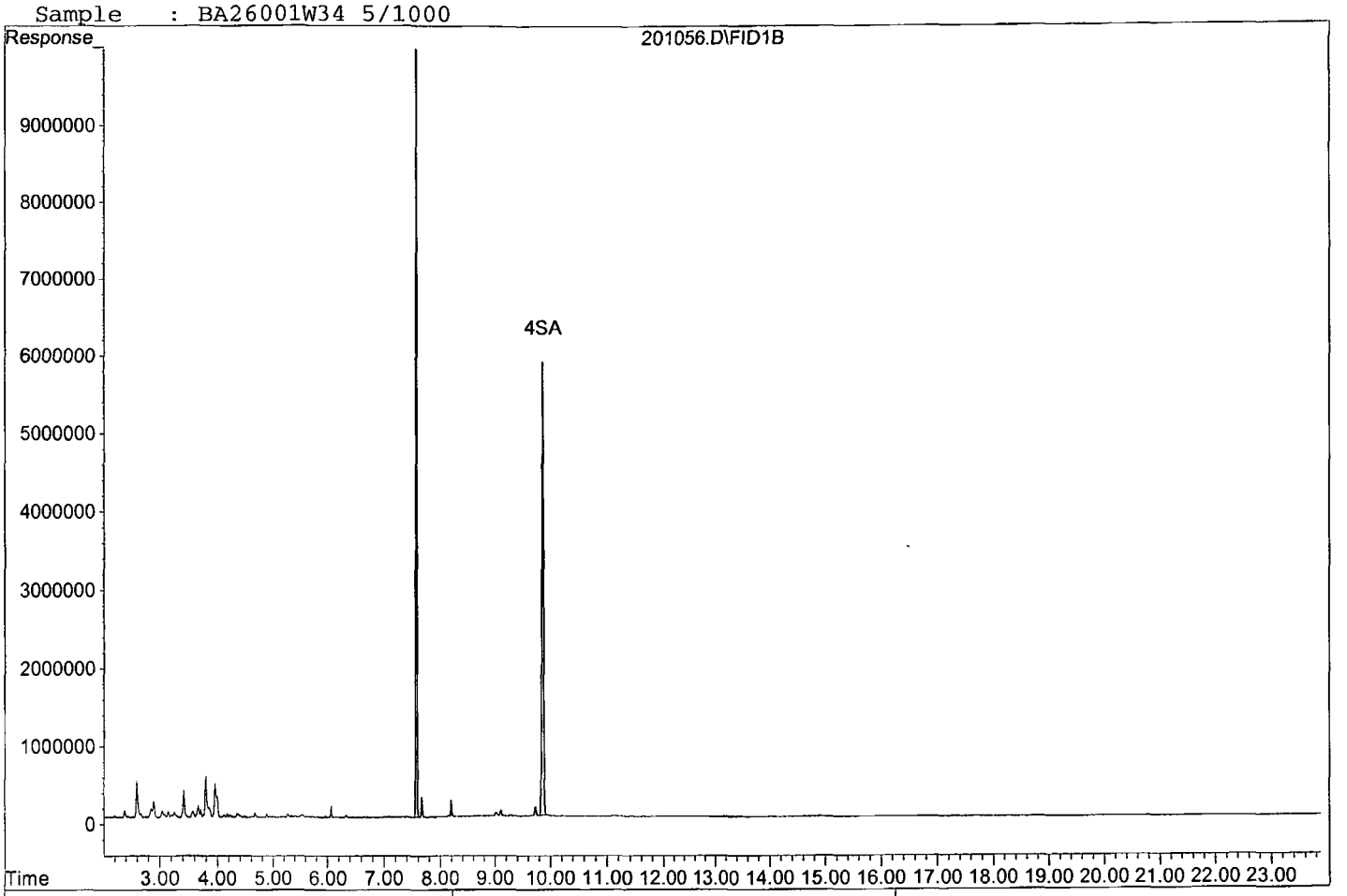
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

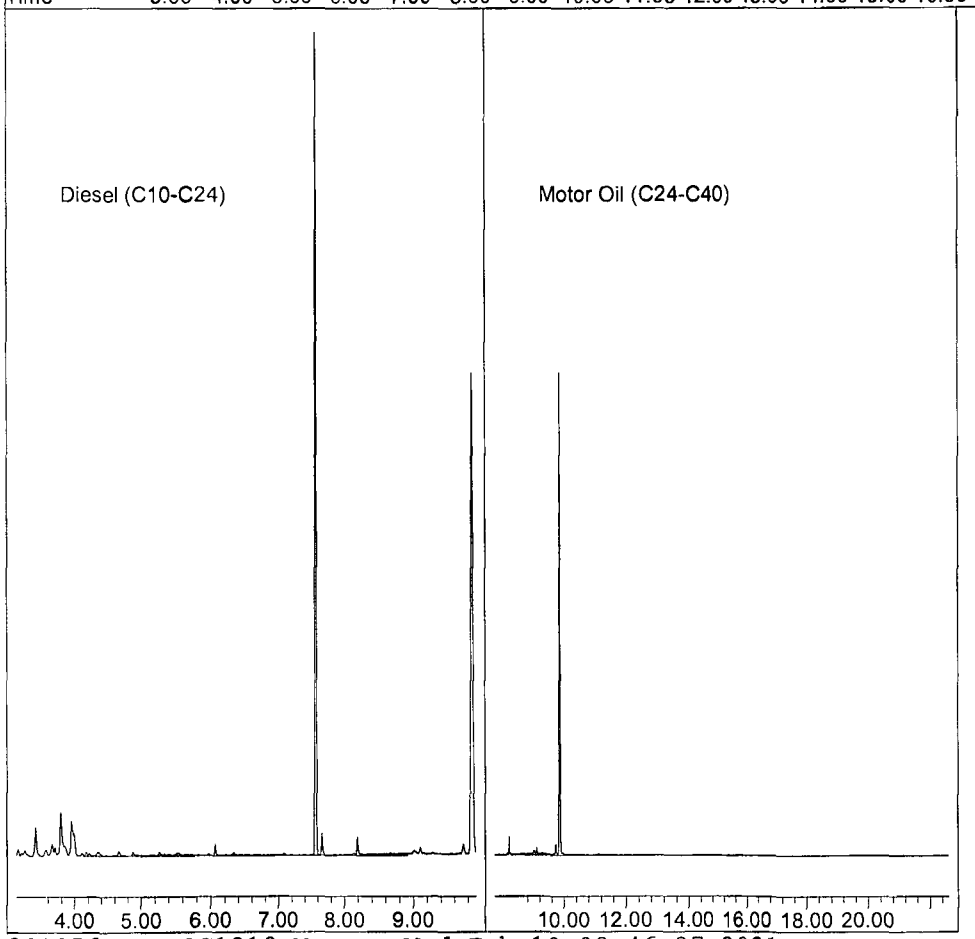
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	143720038	121.643 ppb
Surrogate Spike 150.000		Recovery =	81.10%
4) SA Octacosane(S)	9.87	121754444	134.032 ppb
Surrogate Spike 150.000		Recovery =	89.35%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	41744382	42.562 ppb
2) HBTM Motor Oil (C24-C40)	15.16	40534265	51.819 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201056.D
Sample : BA26001W34 5/1000





201056.D DOC1218.M Wed Feb 10 08:46:37 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201057.D Vial: 57
Acq On : 2-2-21 17:17:00 Operator:
Sample : BA26003W11 5/1020 Inst : Apollo
Misc : water Multiplr: 4.90
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

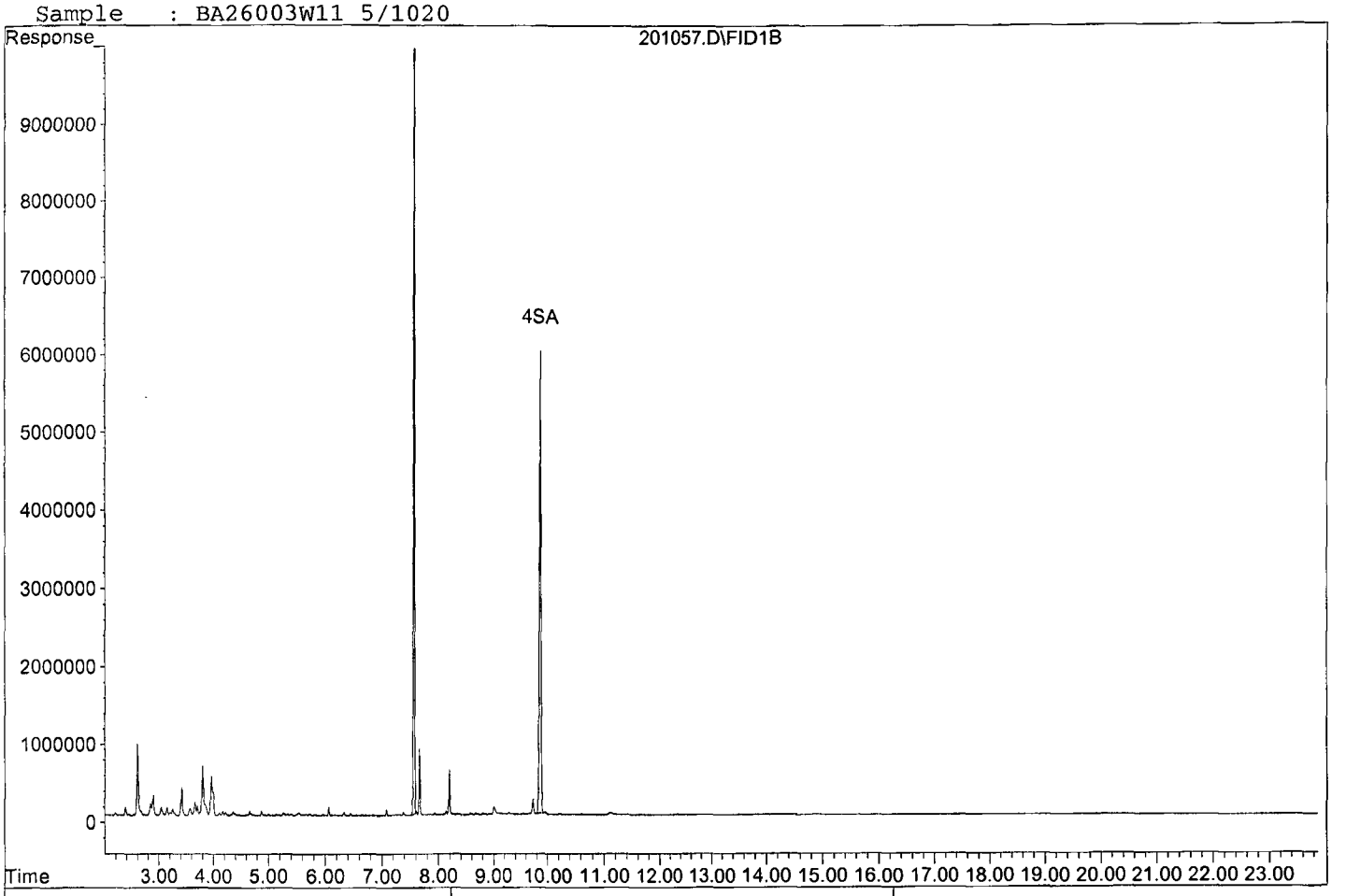
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

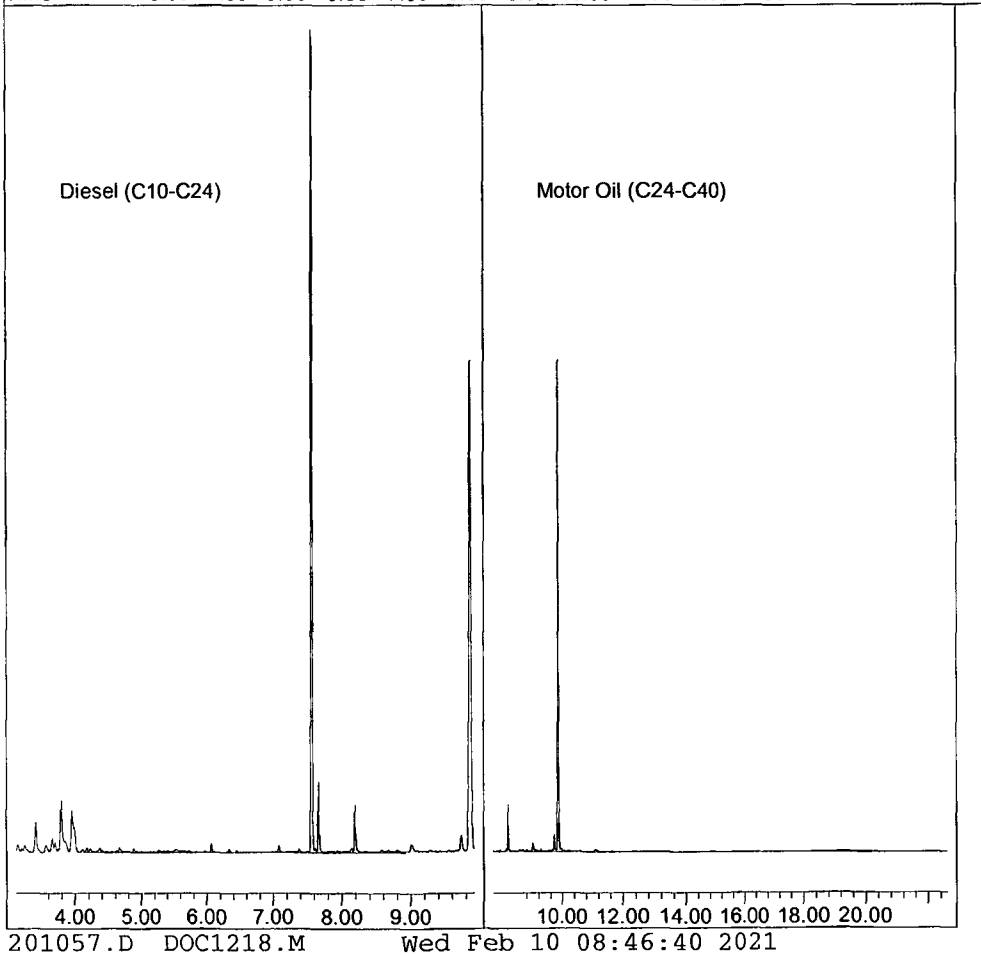
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	141116631	117.098 ppb
Surrogate Spike 147.059		Recovery =	79.63%
4) SA Octacosane(S)	9.87	119349043	128.808 ppb
Surrogate Spike 147.059		Recovery =	87.59%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	57423548	57.400 ppb
2) HBTM Motor Oil (C24-C40)	15.16	41742212	52.860 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201057.D
Sample : BA26003W11 5/1020





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201058.D Vial: 58
Acq On : 2-2-21 17:45:14 Operator:
Sample : BA26006W16 5/1040 Inst : Apollo
Misc : water Multiplr: 4.81
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

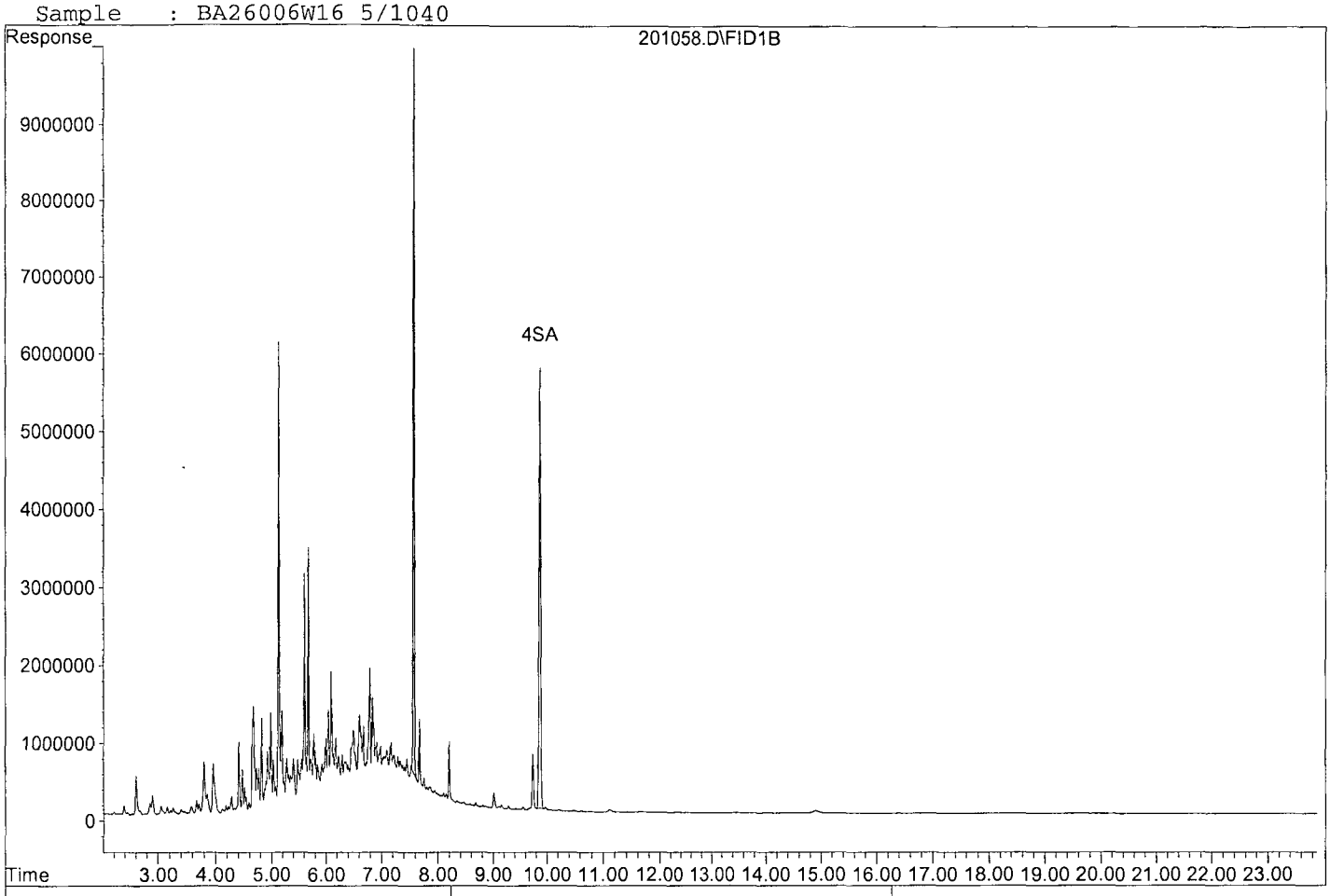
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

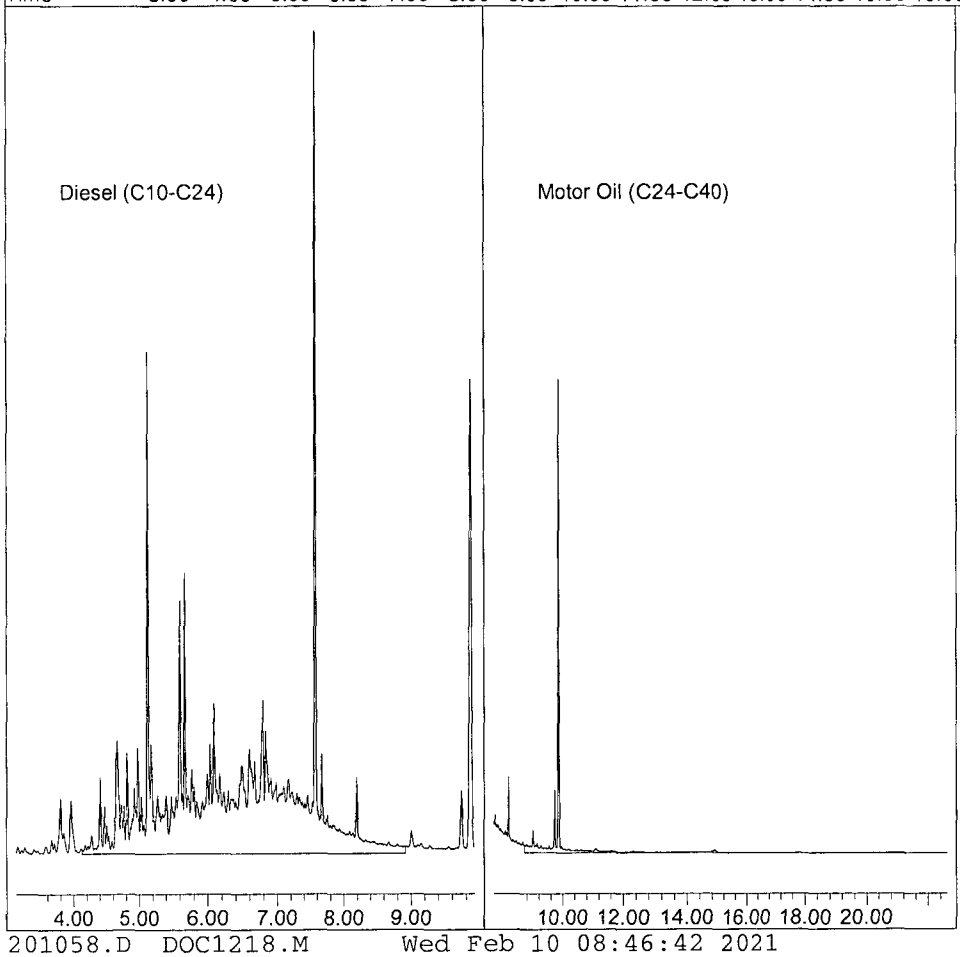
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	146156037	118.947 ppb
Surrogate Spike 144.231		Recovery =	82.47%
4) SA Octacosane(S)	9.87	121443573	128.547 ppb
Surrogate Spike 144.231		Recovery =	89.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1550952838	1520.510 ppb
2) HBTM Motor Oil (C24-C40)	15.16	118858150	180.655 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201058.D
Sample : BA26006W16 5/1040





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208011.D Vial: 11
Acq On : 2-8-21 18:01:28 Operator:
Sample : BA26006W16 5/1040 SG Inst : Apollo
Misc : water Multiplr: 4.81
IntFile : events.e
Quant Time: Feb 9 7:33 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	122190020	99.443 ppb
Surrogate Spike 144.231		Recovery =	68.95%
4) SA Octacosane(S)	9.75	109140964	115.525 ppb
Surrogate Spike 144.231		Recovery =	80.10%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	393225853	385.507 ppb
2) HBTM Motor Oil (C24-C40)	15.16	25511269	24.732 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208011.D
Acq On : 2-8-21 18:01:28
Sample : BA26006W16 5/1040 SG
Misc : water
IntFile : events.e
Quant Time: Feb 9 15:15 2021 Quant Results File: DEC0208.RES

Vial: 11
Operator:
Inst : Apollo
Multiplr: 4.81

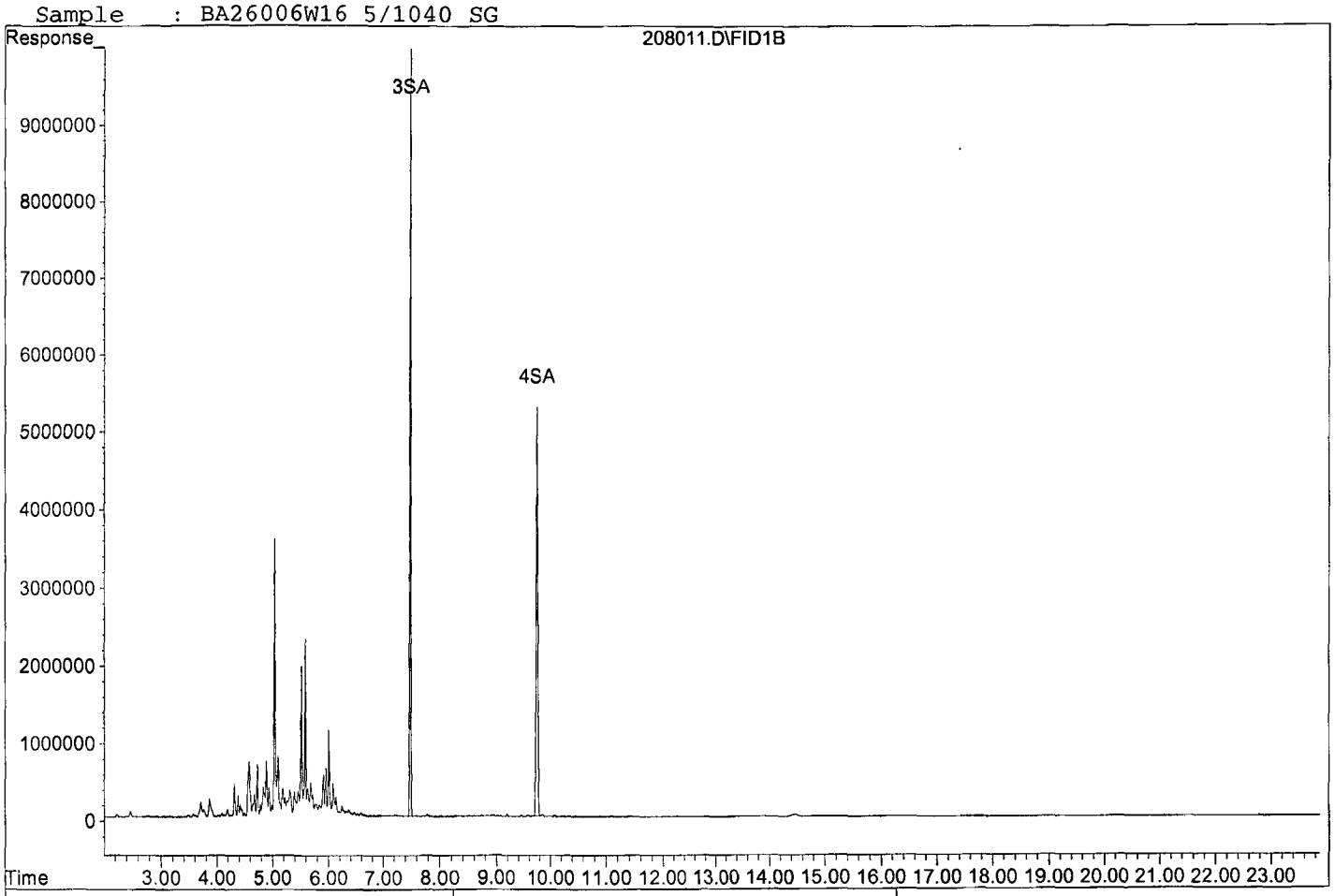
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

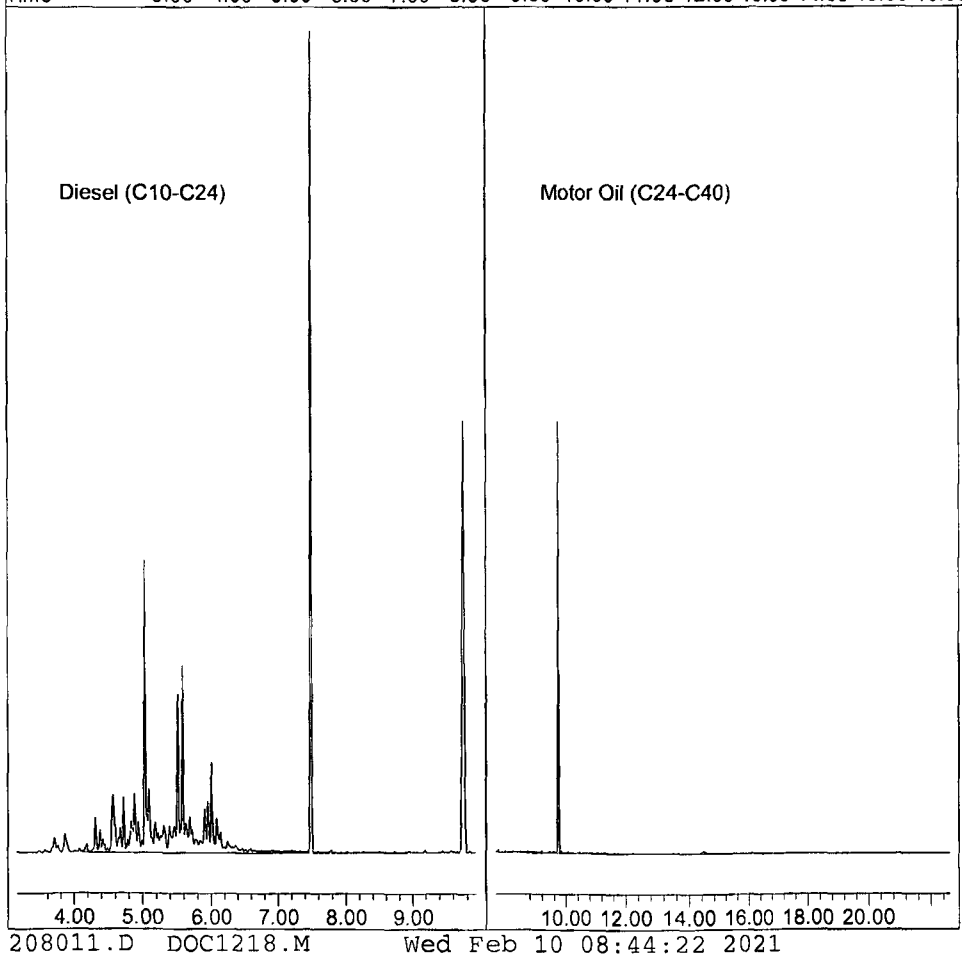
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 115.385		Recovery =	0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208011.D
Sample : BA26006W16 5/1040 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201059.D Vial: 59
Acq On : 2-2-21 18:13:25 Operator:
Sample : BA26008W12 5/1050 Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

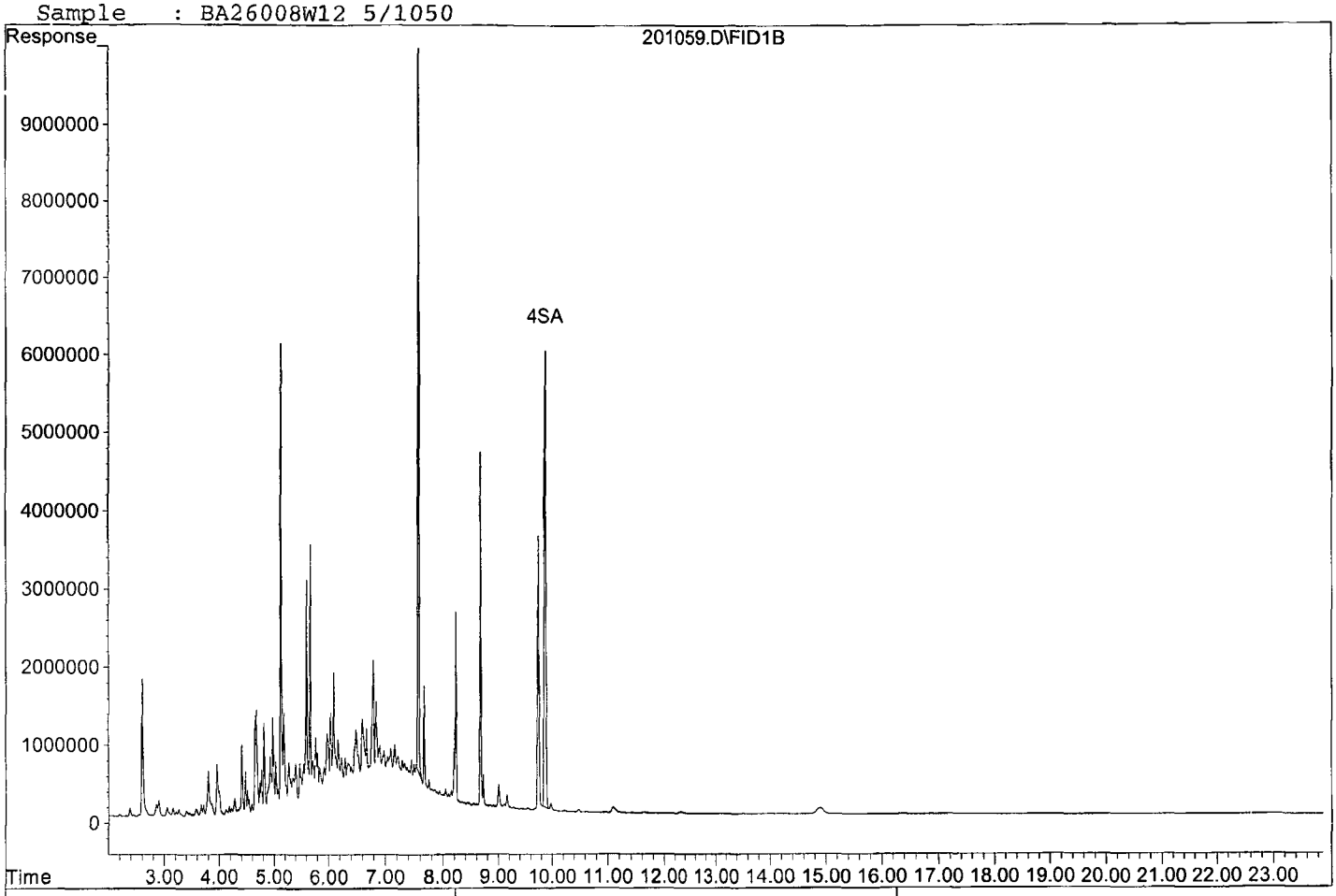
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

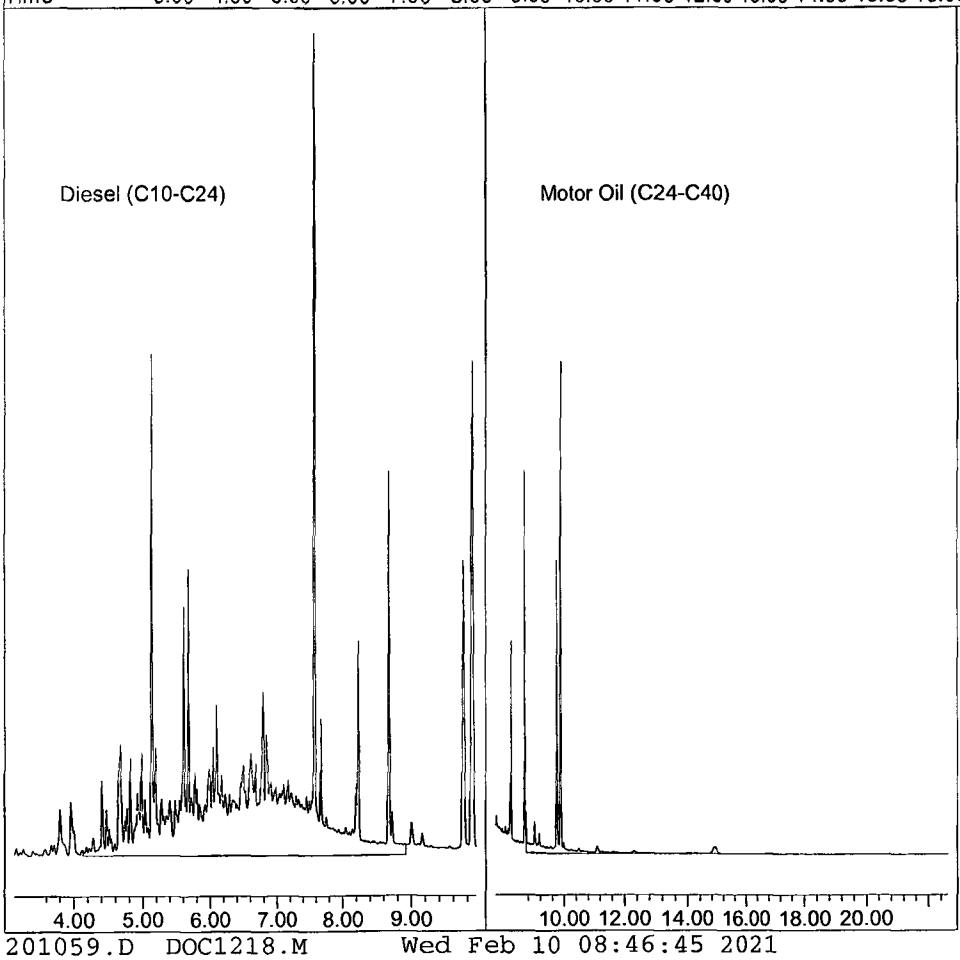
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	149084834	120.175 ppb
Surrogate Spike 142.857		Recovery =	84.12%
4) SA Octacosane(S)	9.87	123514878	129.495 ppb
Surrogate Spike 142.857		Recovery =	90.65%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1670768371	1622.373 ppb
2) HBTM Motor Oil (C24-C40)	15.16	210661588	330.819 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201059.D
Sample : BA26008W12 5/1050





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208012.D Vial: 12
Acq On : 2-8-21 18:29:34 Operator:
Sample : BA26008W12 5/1050 SG Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 9 7:33 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	127479910	102.760 ppb
Surrogate Spike 142.857		Recovery =	71.93%
4) SA Octacosane(S)	9.74	114030735	119.551 ppb
Surrogate Spike 142.857		Recovery =	83.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	390015370	378.718 ppb
2) HBTM Motor Oil (C24-C40)	15.16	34907107	40.041 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208012.D Vial: 12
Acq On : 2-8-21 18:29:34 Operator:
Sample : BA26008W12 5/1050 SG Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 9 15:15 2021 Quant Results File: DEC0208.RES

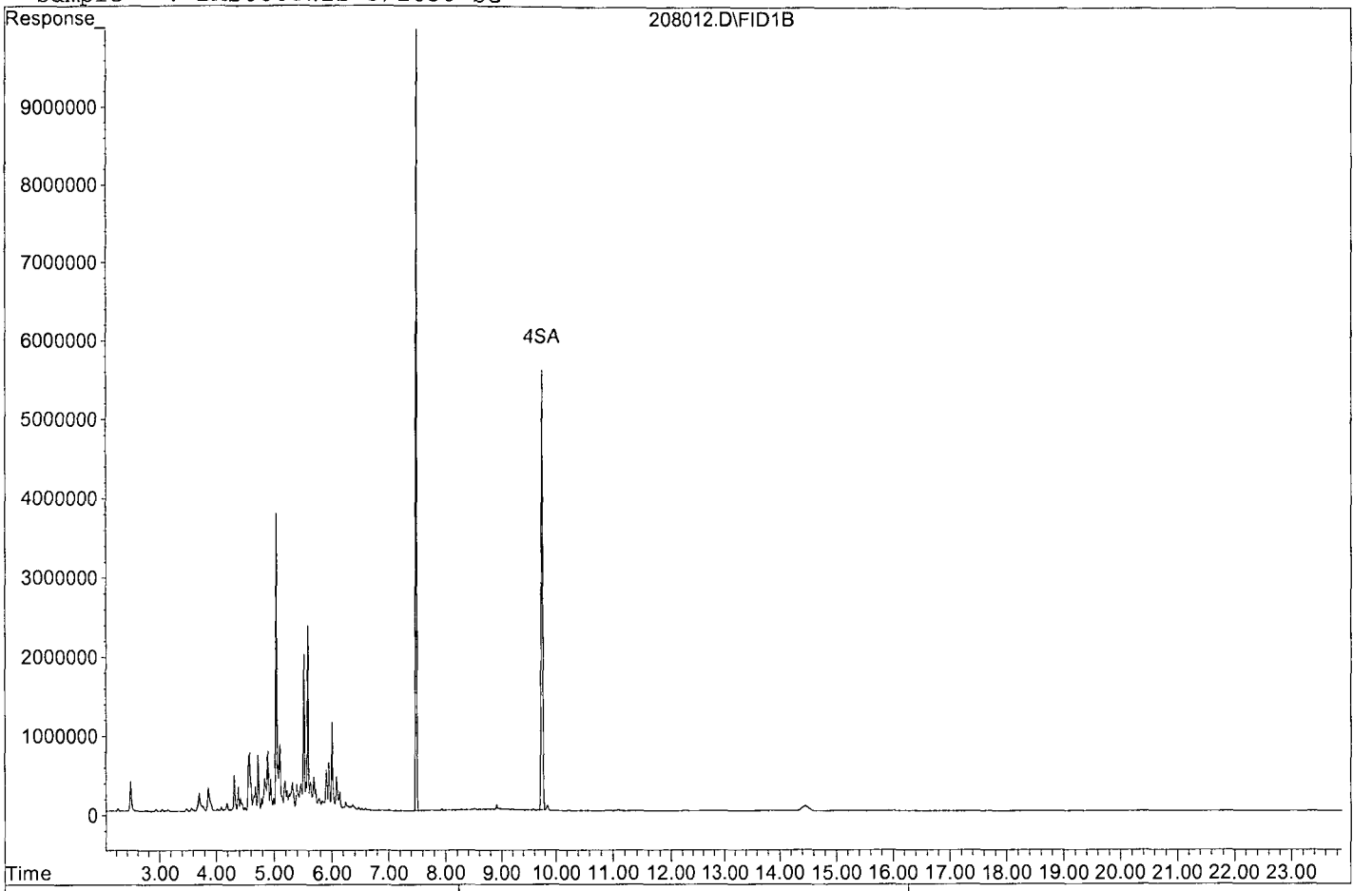
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

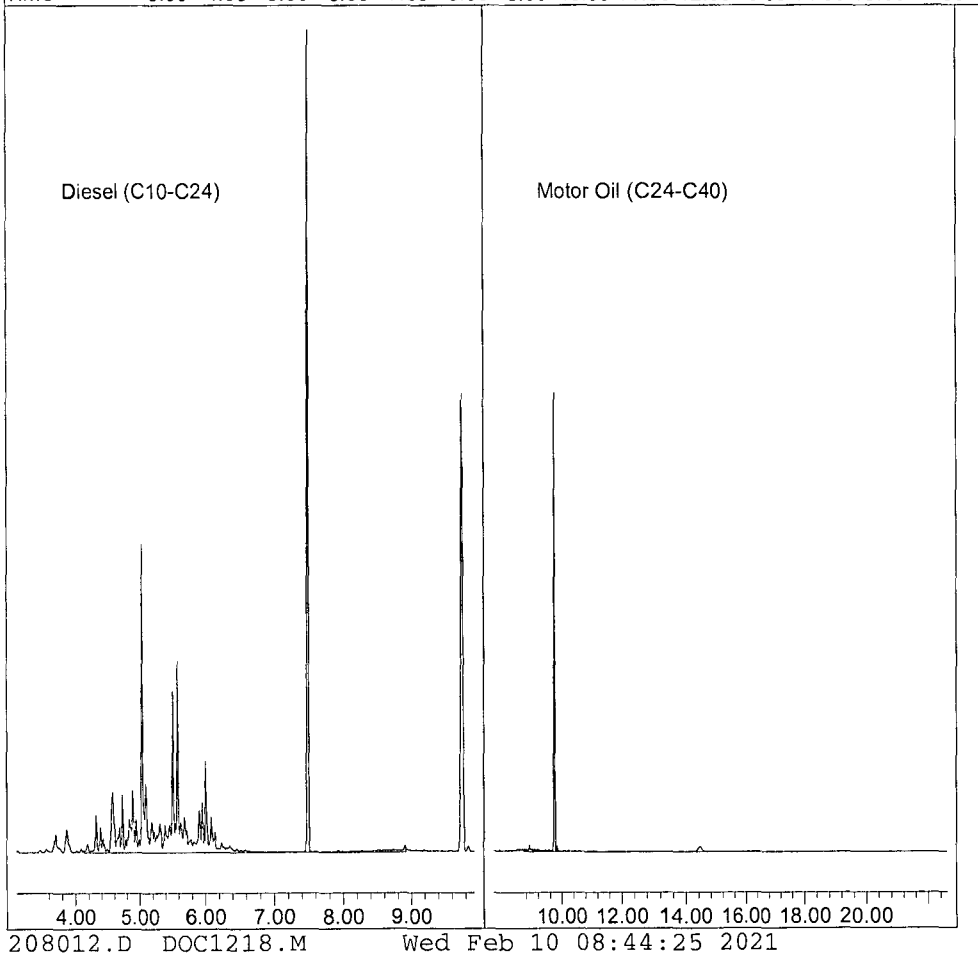
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 114.286		Recovery =	0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208012.D
Sample : BA26008W12 5/1050 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201060.D Vial: 60
Acq On : 2-2-21 18:41:35 Operator:
Sample : BA26010W01 5/1070 Inst : Apollo
Misc : water Multiplr: 4.67
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

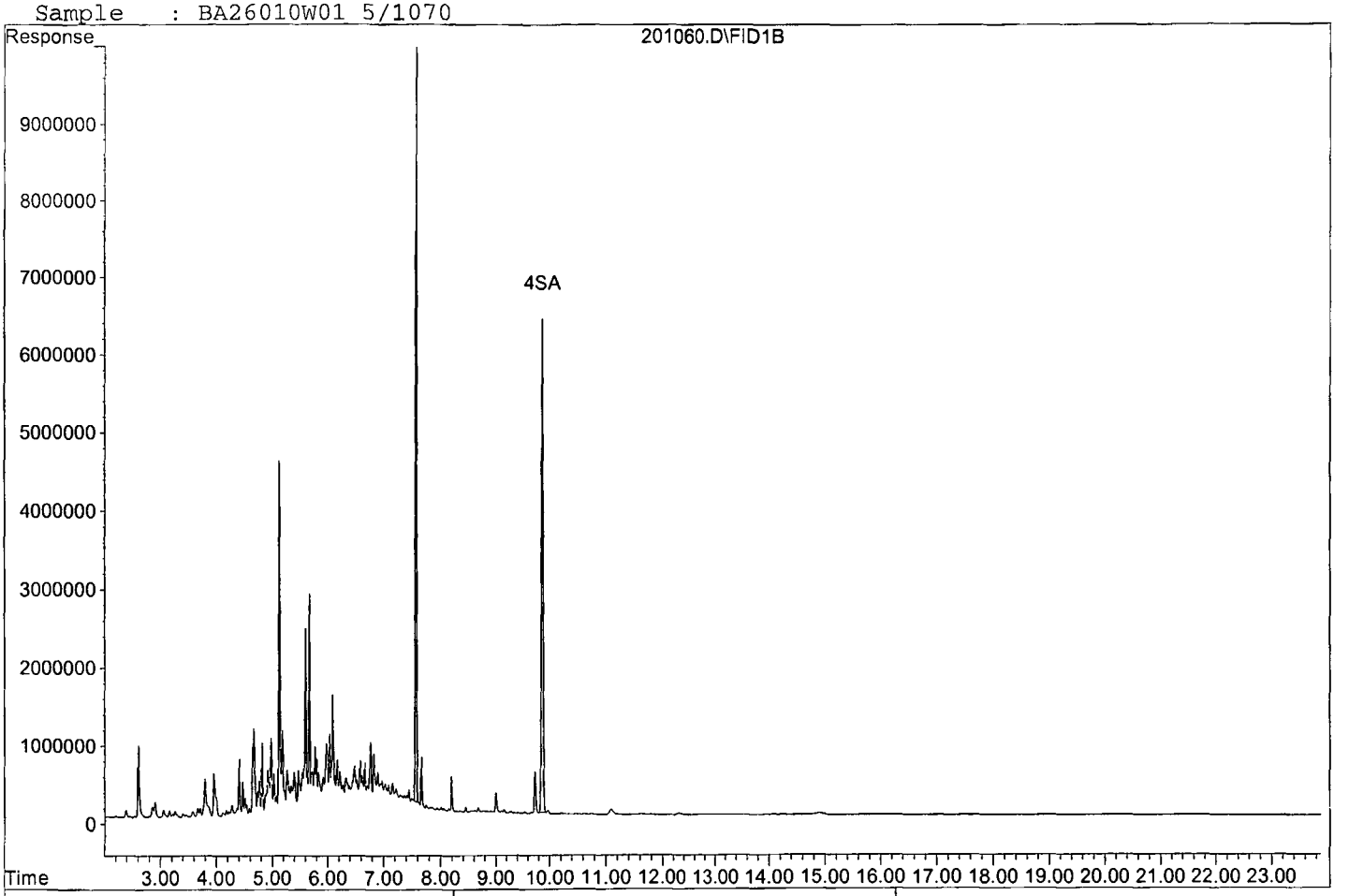
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

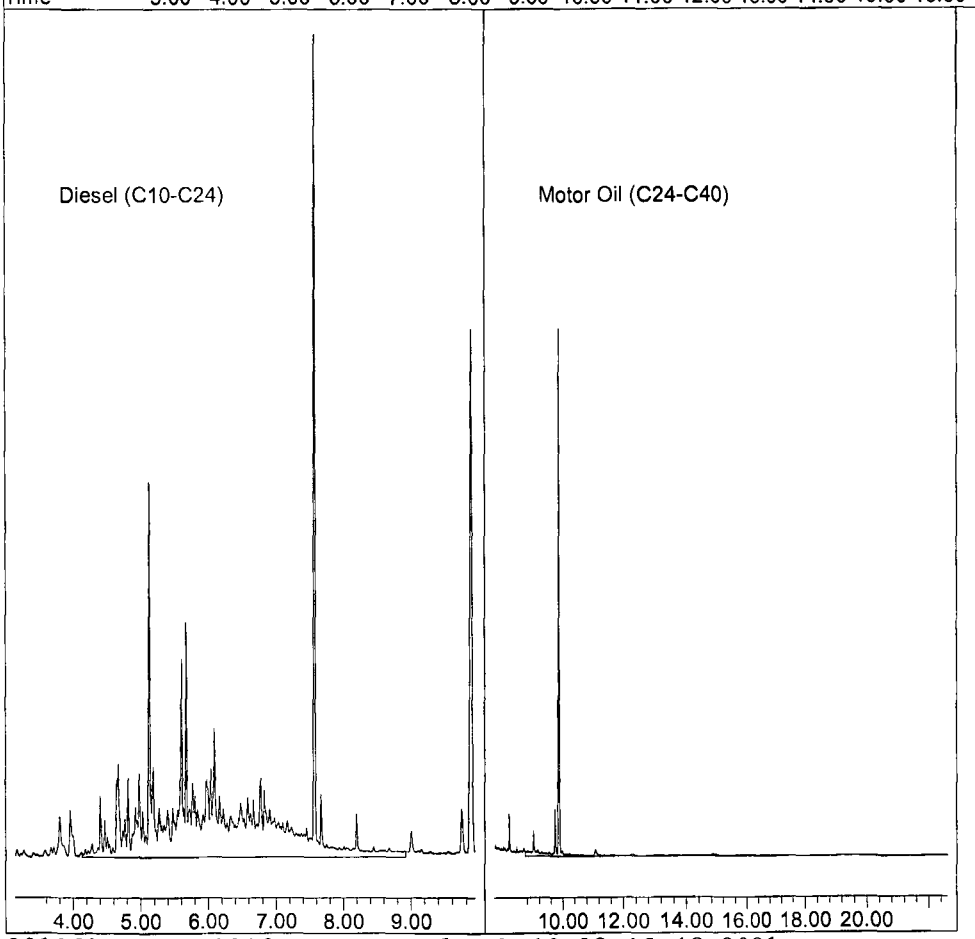
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	150566642	119.101 ppb
Surrogate Spike 140.187		Recovery =	84.96%
4) SA Octacosane(S)	9.87	126505801	130.152 ppb
Surrogate Spike 140.187		Recovery =	92.84%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1019736102	971.692 ppb
2) HBTM Motor Oil (C24-C40)	15.16	86383614	122.867 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\210201\201060.D
Sample : BA26010W01 5/1070





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208013.D Vial: 13
Acq On : 2-8-21 18:57:38 Operator:
Sample : BA26010W01 5/1070 SG Inst : Apollo
Misc : water Multiplr: 4.67
IntFile : events.e
Quant Time: Feb 9 7:33 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	127434060	100.803 ppb
Surrogate Spike 140.187		Recovery =	71.91%
4) SA Octacosane(S)	9.74	115011576	118.326 ppb
Surrogate Spike 140.187		Recovery =	84.41%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	354643436	337.935 ppb
2) HBTM Motor Oil (C24-C40)	15.16	31087395	33.092 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208013.D Vial: 13
Acq On : 2-8-21 18:57:38 Operator:
Sample : BA26010W01 5/1070 SG Inst : Apollo
Misc : water Multiplr: 4.67
IntFile : events.e
Quant Time: Feb 9 15:15 2021 Quant Results File: DEC0208.RES

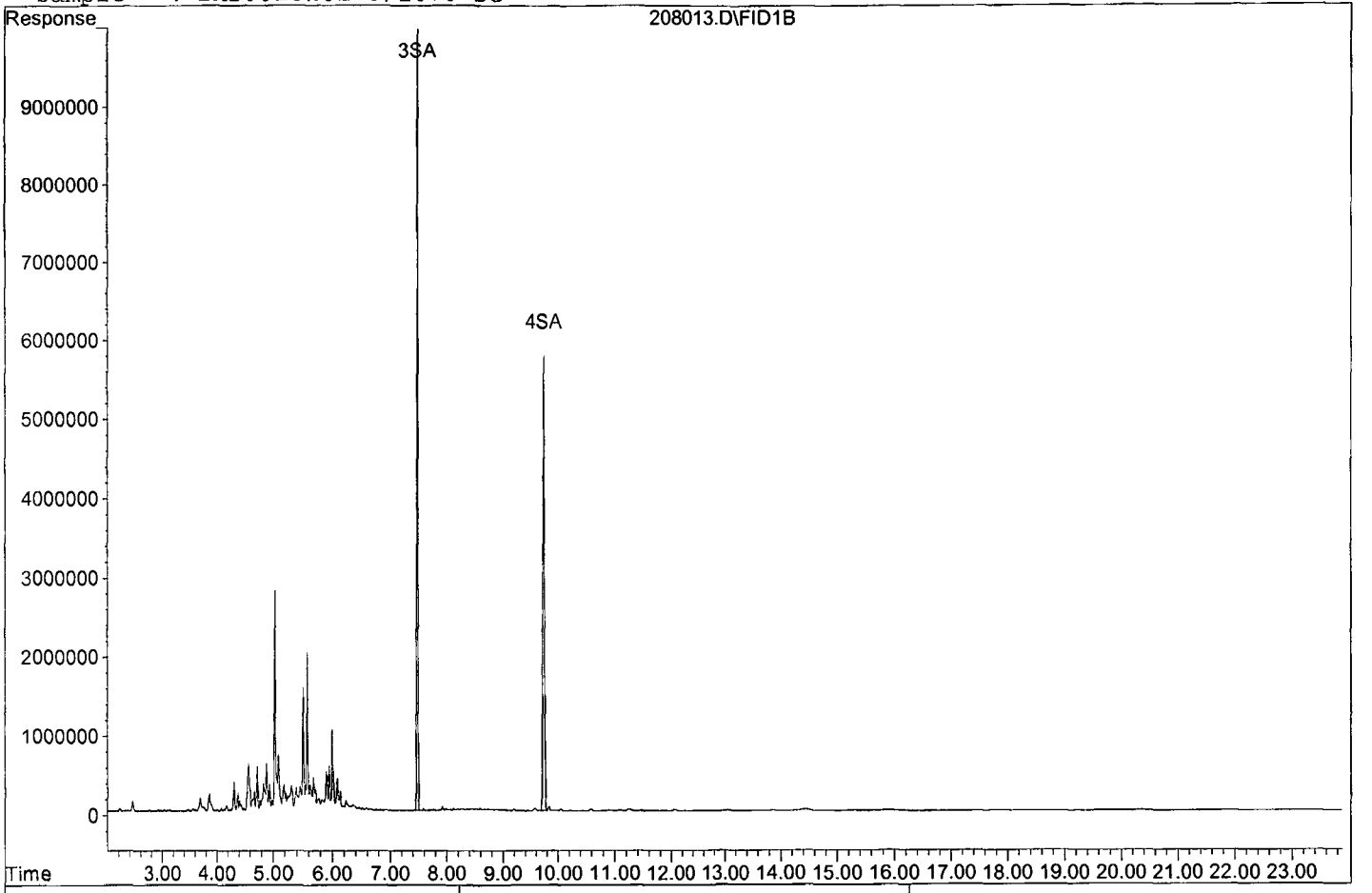
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

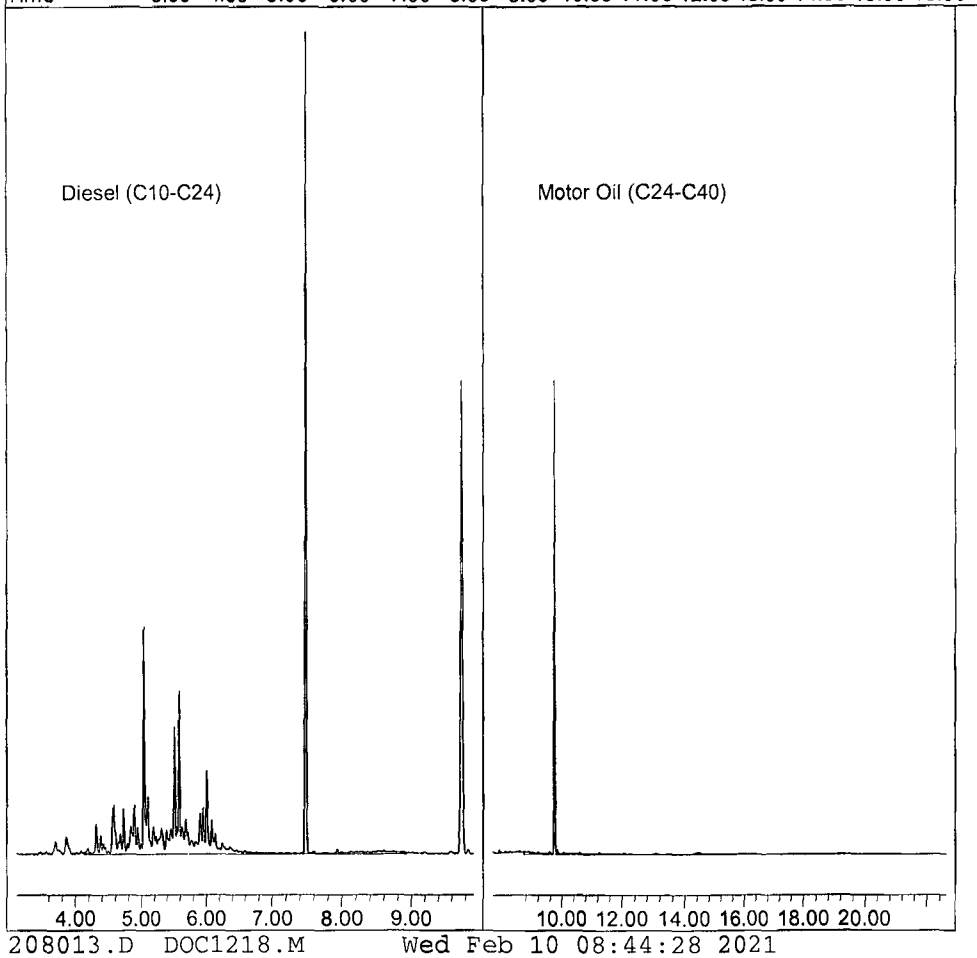
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 112.150	Recovery =		0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208013.D
Sample : BA26010W01 5/1070 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201061.D Vial: 61
Acq On : 2-2-21 19:09:44 Operator:
Sample : BA26013W16 5/1050 Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

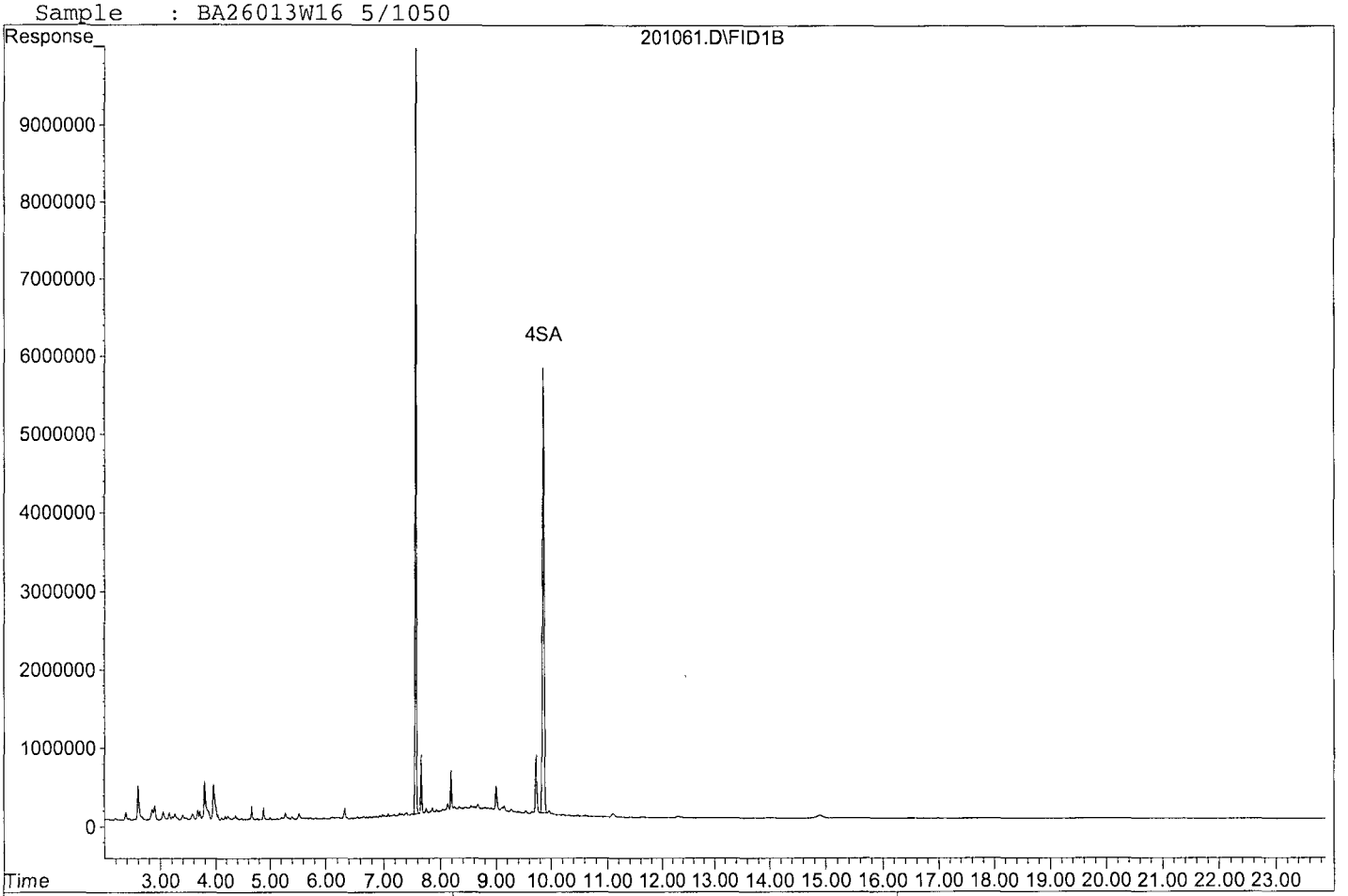
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

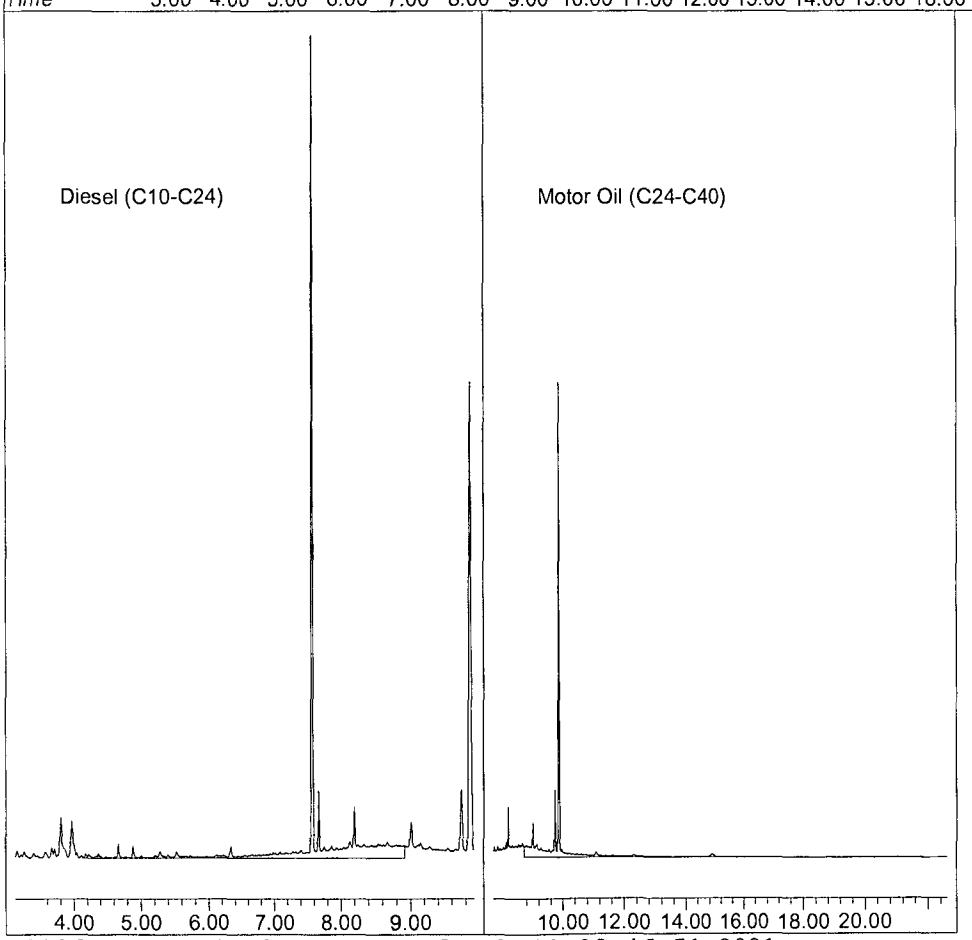
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	141024559	113.678 ppb
Surrogate Spike 142.857		Recovery =	79.57%
4) SA Octacosane(S)	9.87	117473259	123.161 ppb
Surrogate Spike 142.857		Recovery =	86.21%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	186619901	181.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	146430124	224.551 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201061.D
Sample : BA26013W16 5/1050





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208014.D Vial: 14
Acq On : 2-8-21 19:25:42 Operator:
Sample : BA26013W16 5/1050 SG Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 9 15:13 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	115035083	92.728 ppb
Surrogate Spike 142.857		Recovery =	64.91%
4) SA Octacosane(S)	9.75	103759438	108.783 ppb
Surrogate Spike 142.857		Recovery =	76.15%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	27019587	26.237 ppb
2) HBTM Motor Oil (C24-C40)	15.16	17944978	11.978 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208014.D Vial: 14
Acq On : 2-8-21 19:25:42 Operator:
Sample : BA26013W16 5/1050 SG Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 9 15:14 2021 Quant Results File: DEC0208.RES

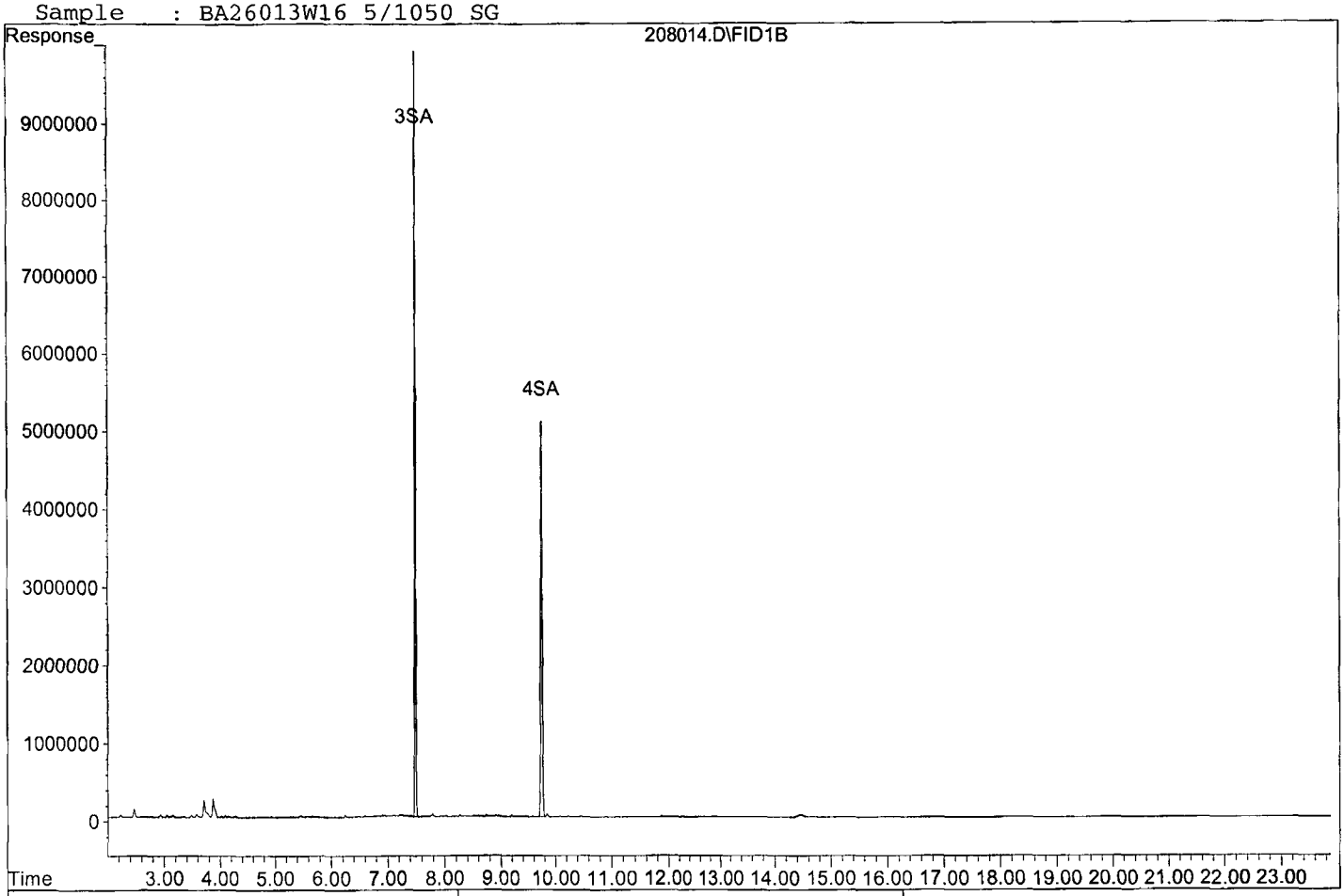
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

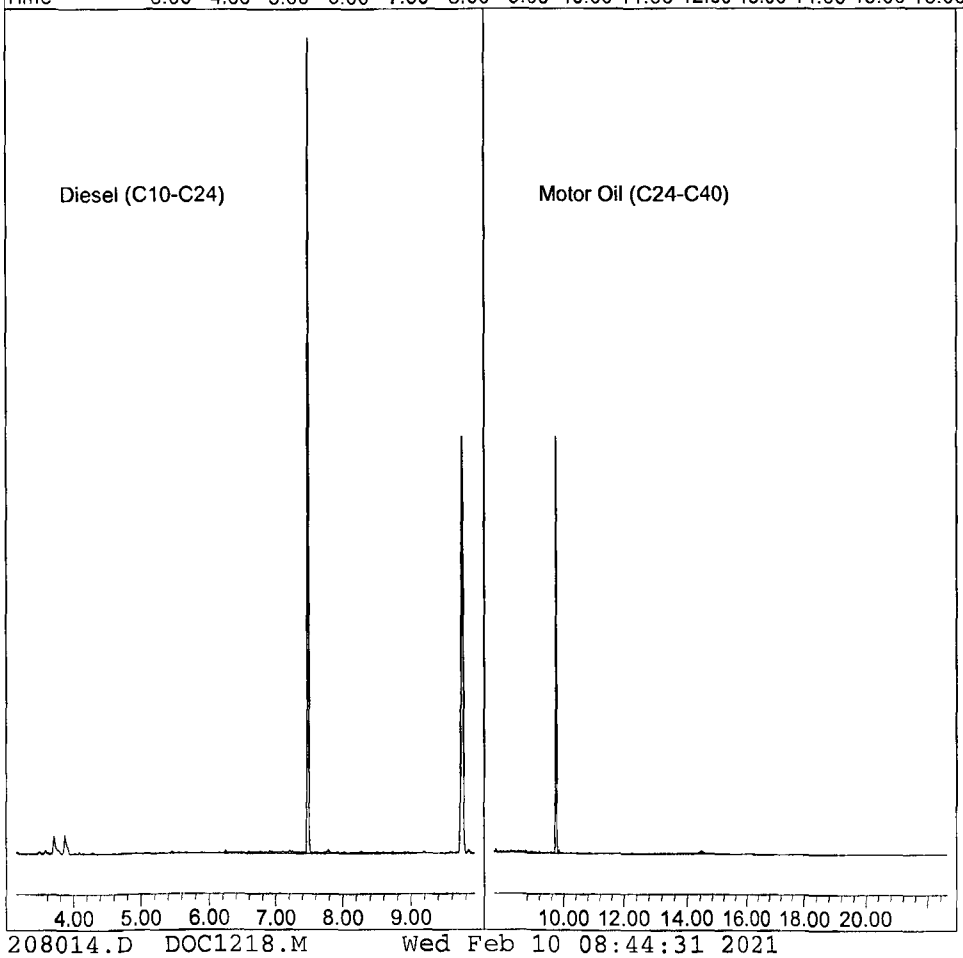
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 114.286		Recovery =	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208014.D
Sample : BA26013W16 5/1050 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201062.D Vial: 62
Acq On : 2-2-21 19:37:51 Operator:
Sample : BA26016W14 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

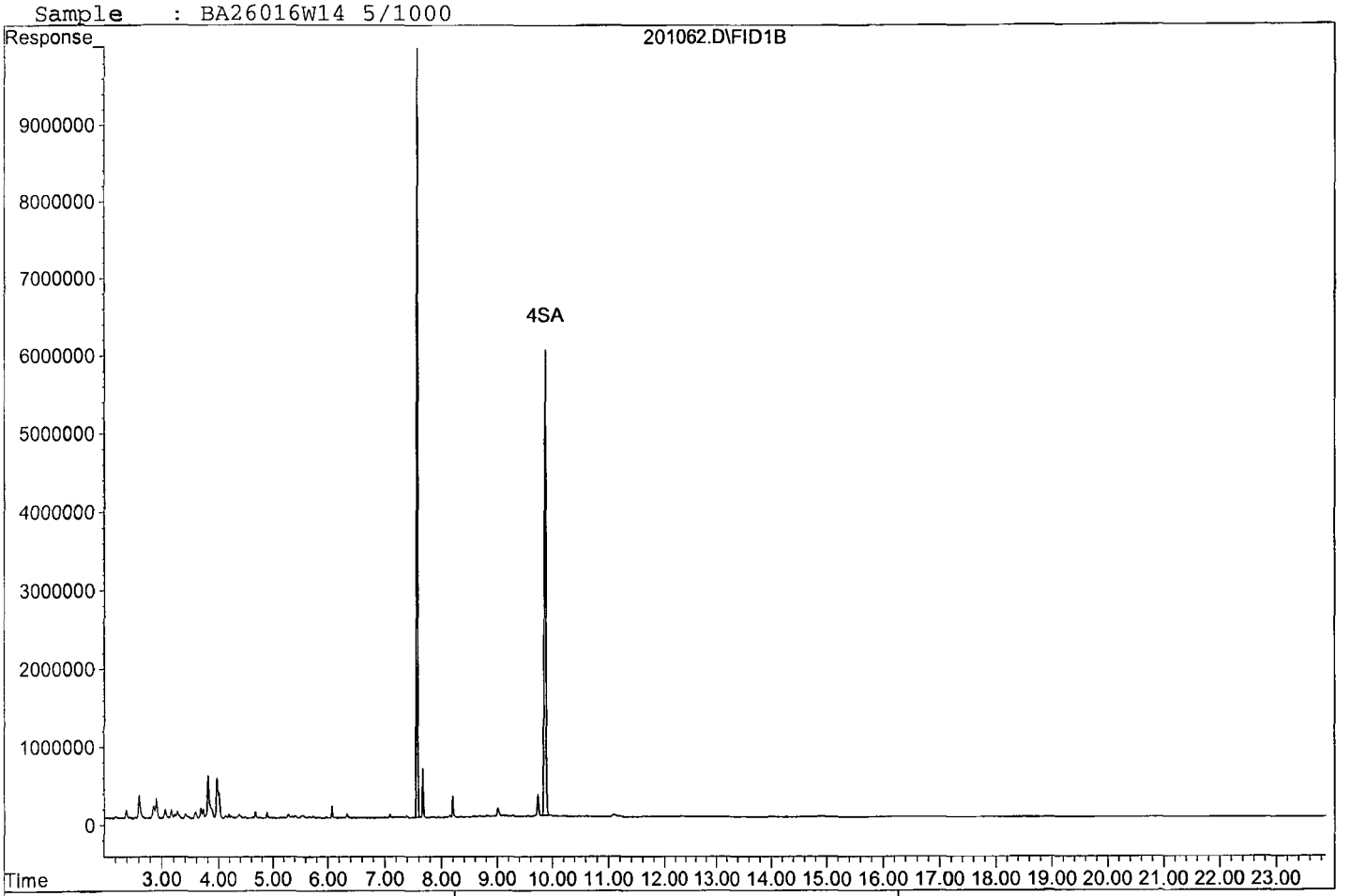
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

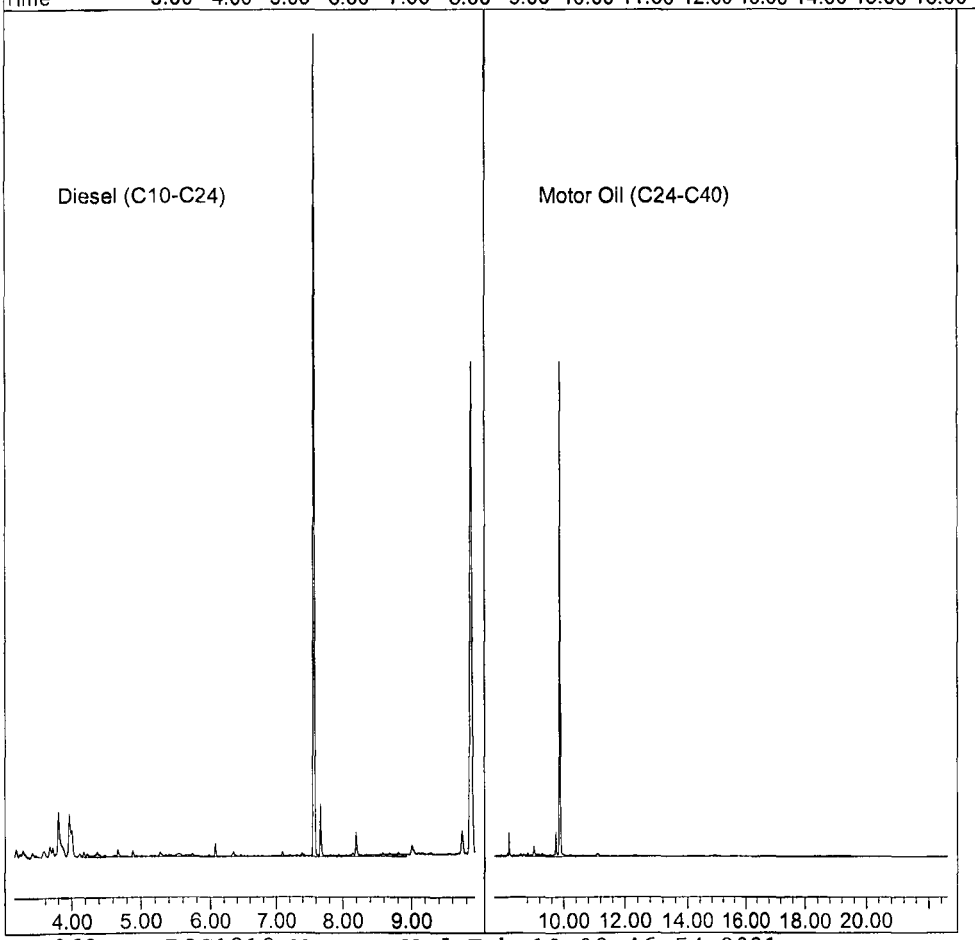
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	145334142	123.009 ppb
Surrogate Spike 150.000		Recovery =	82.01%
4) SA Octacosane(S)	9.87	122480595	134.831 ppb
Surrogate Spike 150.000		Recovery =	89.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	56803843	57.916 ppb
2) HBTM Motor Oil (C24-C40)	15.16	58801798	83.553 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201062.D
Sample : BA26016W14 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201052.D Vial: 52
Acq On : 2-2-21 14:55:08 Operator:
Sample : 210201A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

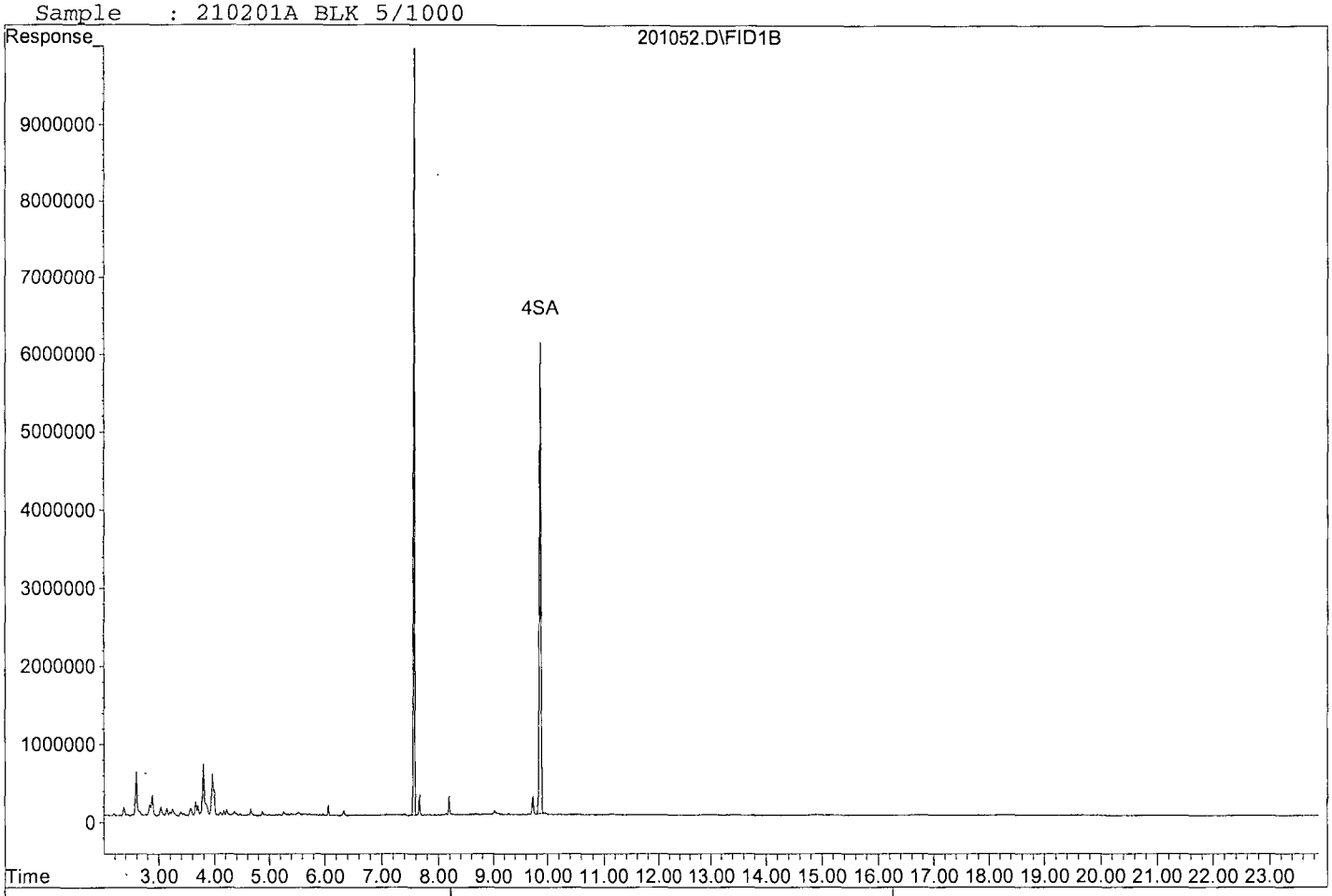
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

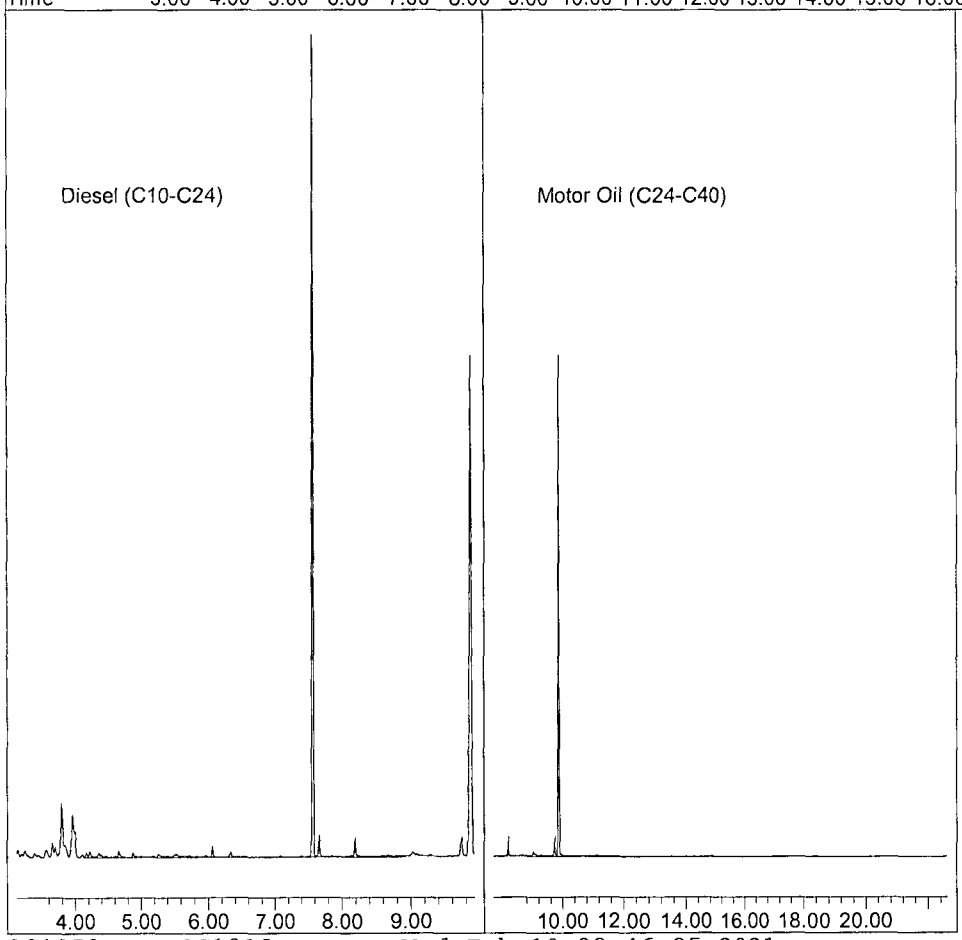
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	144180913	122.033 ppb
Surrogate Spike 150.000		Recovery =	81.36%
4) SA Octacosane(S)	9.87	121985254	134.286 ppb
Surrogate Spike 150.000		Recovery =	89.52%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	40958294	41.761 ppb
2) HBTM Motor Oil (C24-C40)	15.16	37896125	47.236 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201052.D
Sample : 210201A BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208009.D Vial: 9
Acq On : 2-8-21 17:05:13 Operator:
Sample : 210201A BLK 5/1000 SG Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 9 7:33 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	125409777	106.146 ppb
Surrogate Spike 150.000		Recovery =	70.76%
4) SA Octacosane(S)	9.75	112933052	124.321 ppb
Surrogate Spike 150.000		Recovery =	82.88%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	18013874	18.367 ppb
2) HBTM Motor Oil (C24-C40)	15.16	15618303	8.535 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208009.D Vial: 9
Acq On : 2-8-21 17:05:13 Operator:
Sample : 210201A BLK 5/1000 SG Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 9 15:14 2021 Quant Results File: DEC0208.RES

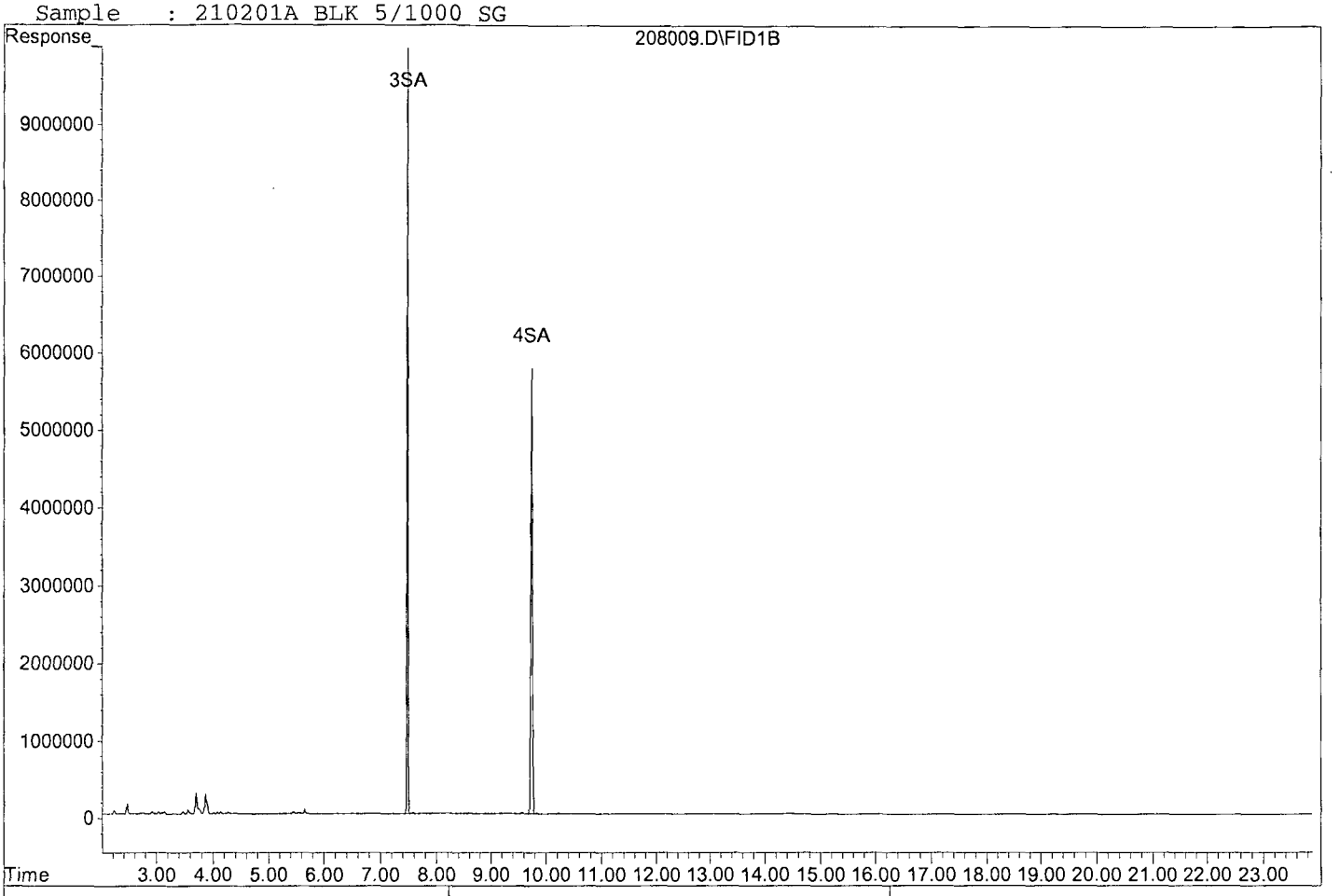
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

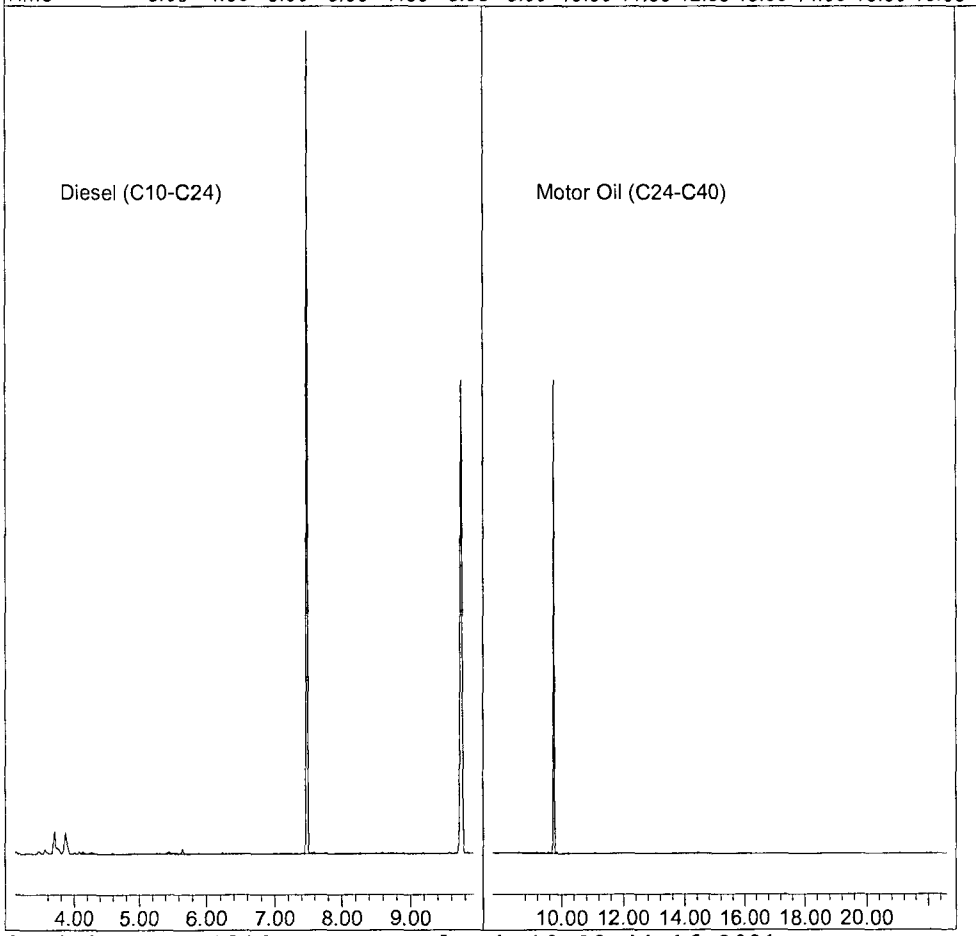
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 120.000		Recovery =	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208009.D
Sample : 210201A BLK 5/1000 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201053.D Vial: 53
Acq On : 2-2-21 15:23:34 Operator:
Sample : 210201A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

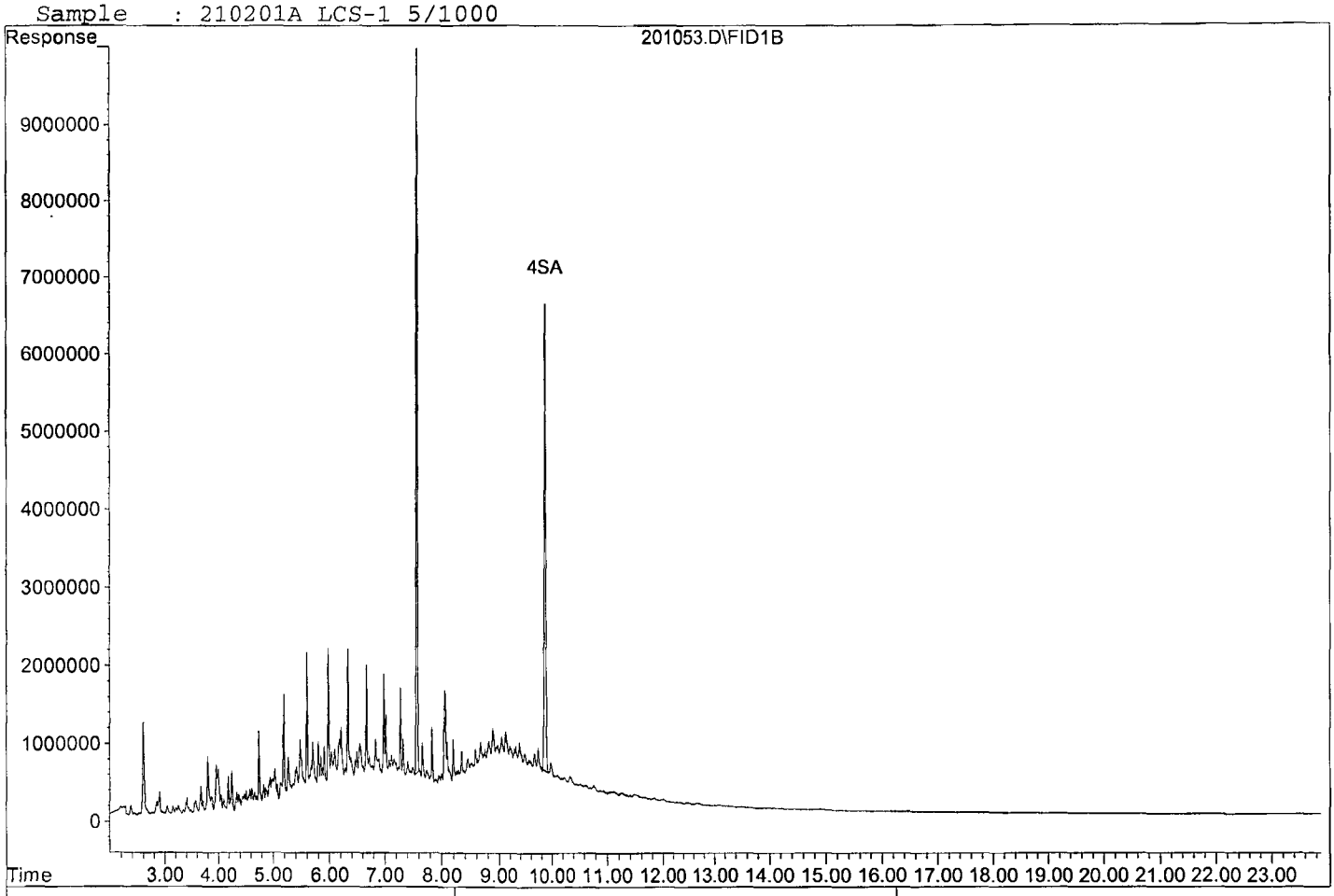
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

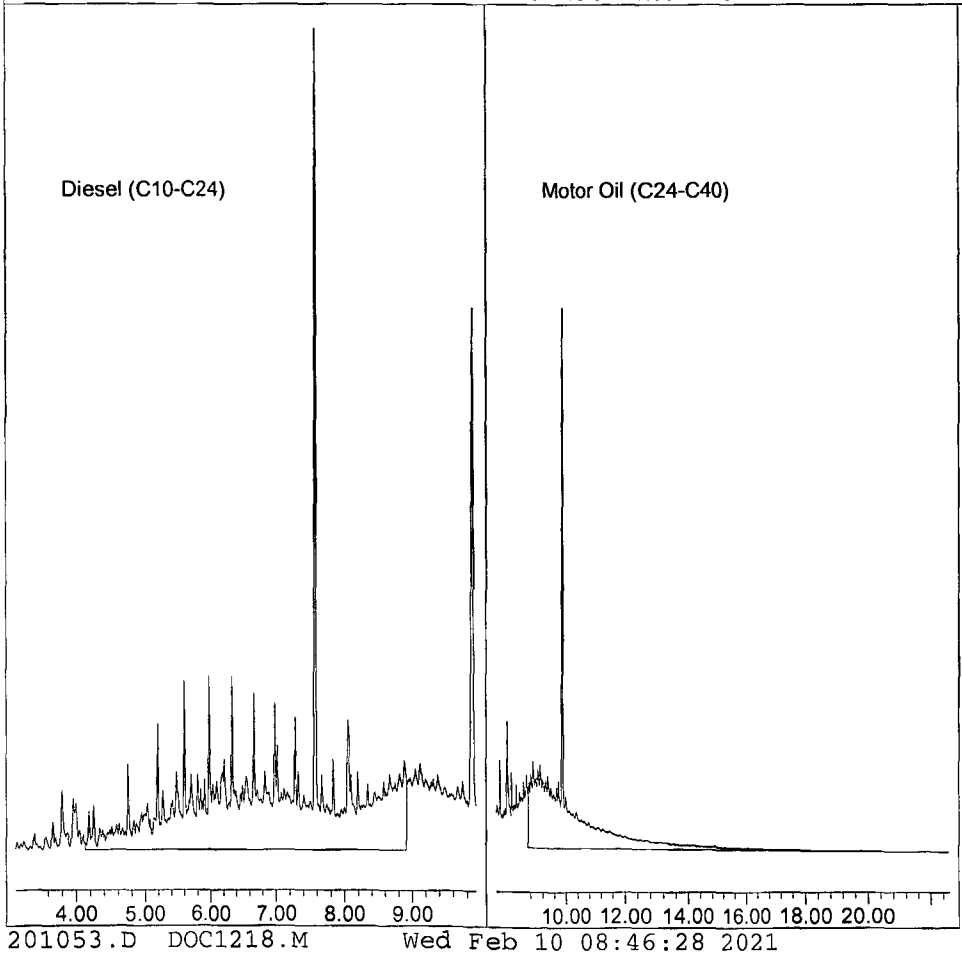
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	157826880	133.583 ppb
Surrogate Spike 150.000		Recovery =	89.06%
4) SA Octacosane(S)	9.87	121100688	133.312 ppb
Surrogate Spike 150.000		Recovery =	88.87%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1666043113	1698.676 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1030161512	1770.980 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201053.D
Sample : 210201A LCS-1 5/1000





201053.D DOC1218.M Wed Feb 10 08:46:28 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208010.D Vial: 10
Acq On : 2-8-21 17:33:23 Operator:
Sample : 210201A LCS-1 5/1000 SG Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 9 7:33 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210208\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 10:53:07 2021
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.49	140363367	118.802 ppb
Surrogate Spike 150.000		Recovery =	79.20%
4) SA Octacosane(S)	9.75	113923271	125.411 ppb
Surrogate Spike 150.000		Recovery =	83.61%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1453295063	1481.761 ppb
2) HBTM Motor Oil (C24-C40)	15.16	912243044	1566.134 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210208\208010.D Vial: 10
Acq On : 2-8-21 17:33:23 Operator:
Sample : 210201A LCS-1 5/1000 SG Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 9 15:16 2021 Quant Results File: DEC0208.RES

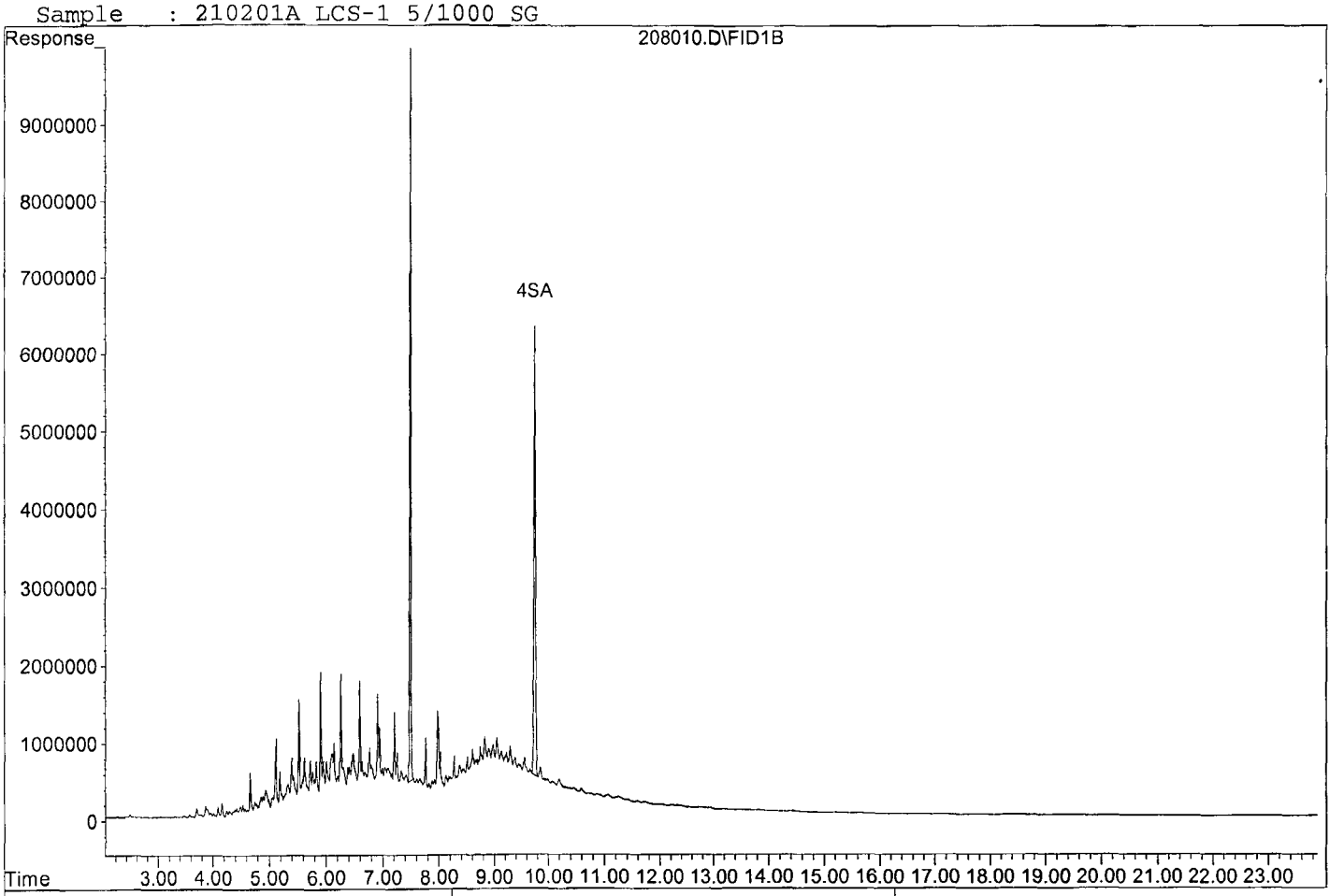
Method : G:\APOLLO\DATA\210208\DEC0208.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Mon Feb 08 15:54:54 2021
Response via : Multiple Level Calibration

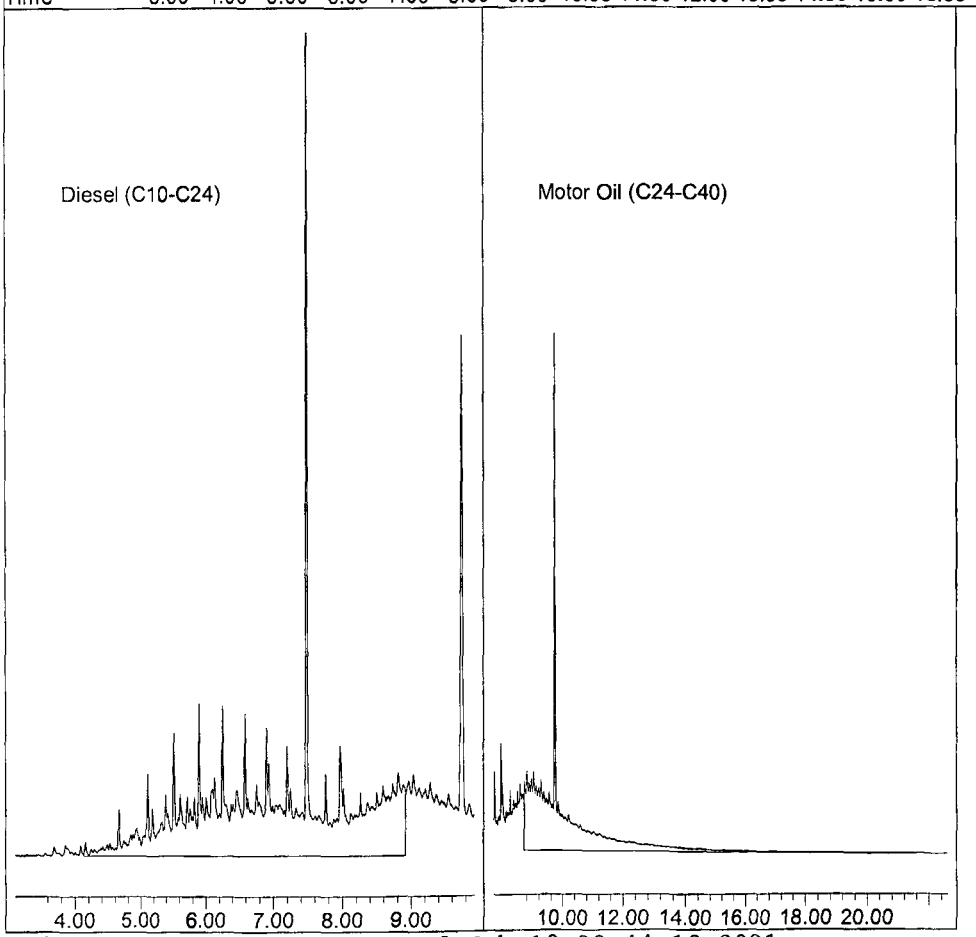
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 120.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210208\208010.D
Sample : 210201A LCS-1 5/1000 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201054.D Vial: 54
Acq On : 2-2-21 15:51:59 Operator:
Sample : BA26001W35 MS-1 5/1010 Inst : Apollo
Misc : water Multiplr: 4.95
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

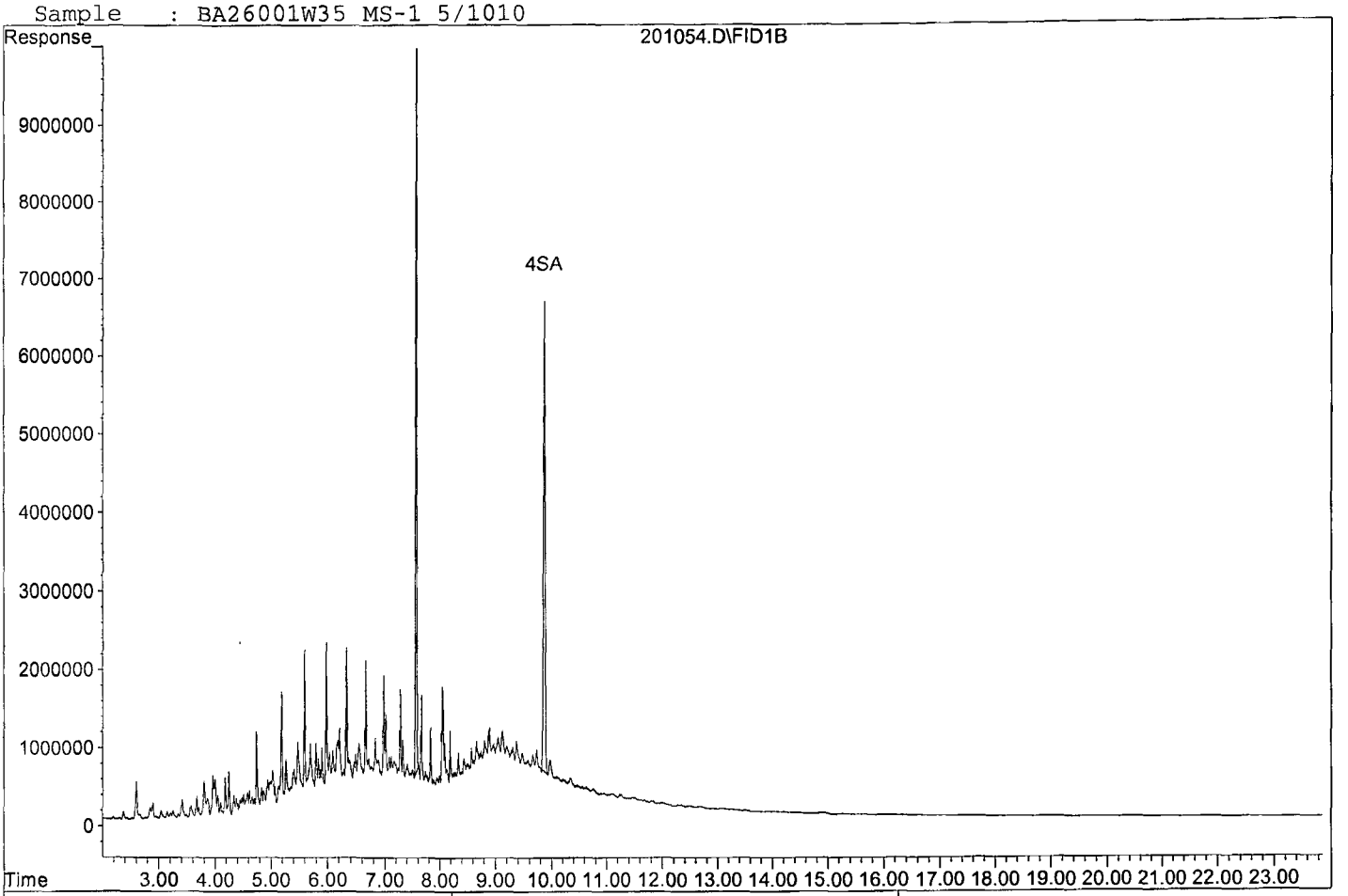
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

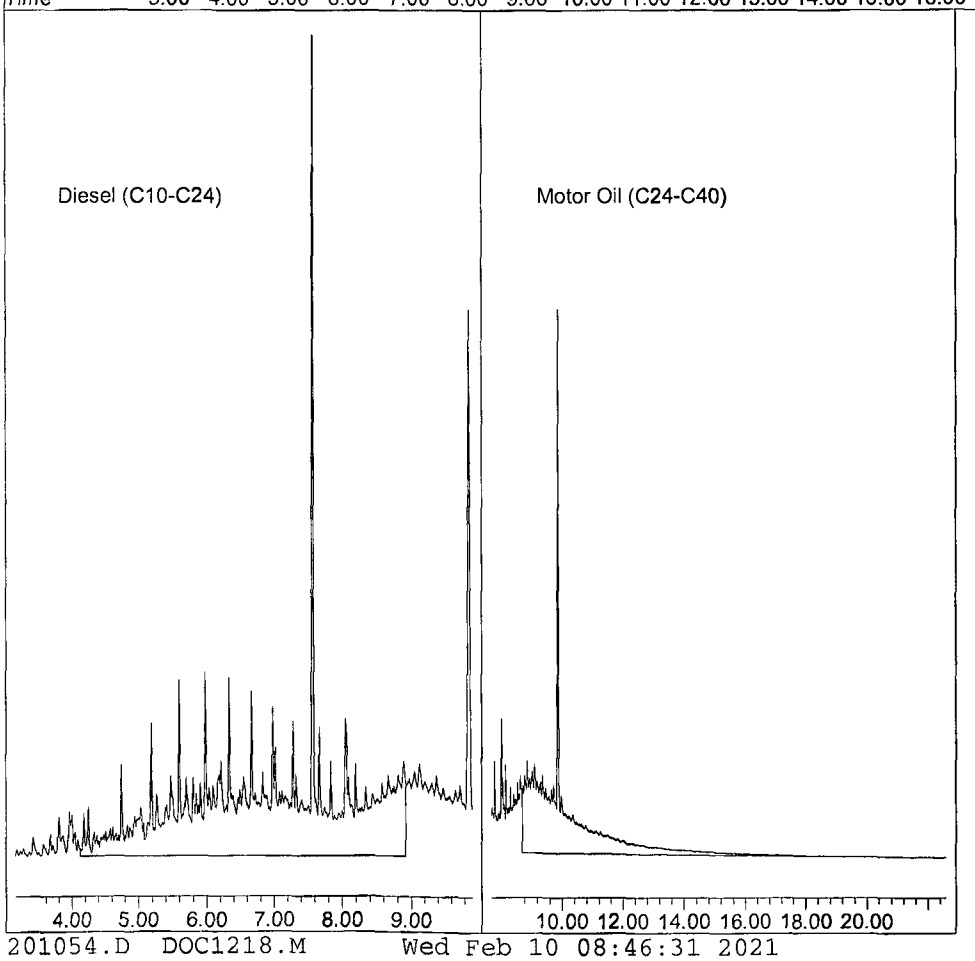
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	161968551	135.731 ppb
Surrogate Spike 148.515		Recovery =	91.39%
4) SA Octacosane(S)	9.87	124234989	135.408 ppb
Surrogate Spike 148.515		Recovery =	91.17%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1769757459	1786.558 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1099264306	1872.303 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201054.D
Sample : BA26001W35 MS-1 5/1010





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201055.D Vial: 55
Acq On : 2-2-21 16:20:20 Operator:
Sample : BA26001W37 MSD-1 5/1010 Inst : Apollo
Misc : water Multiplr: 4.95
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

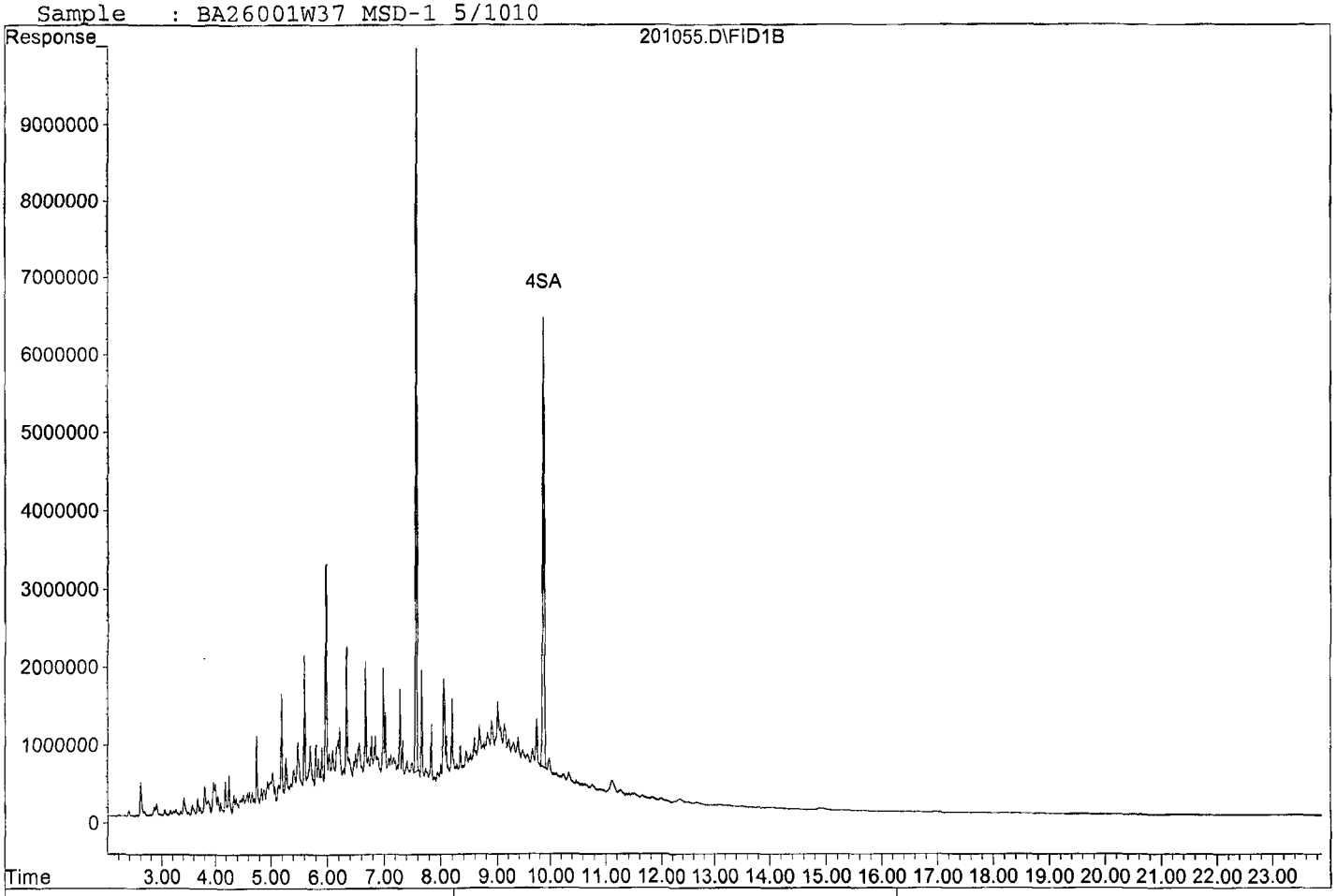
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

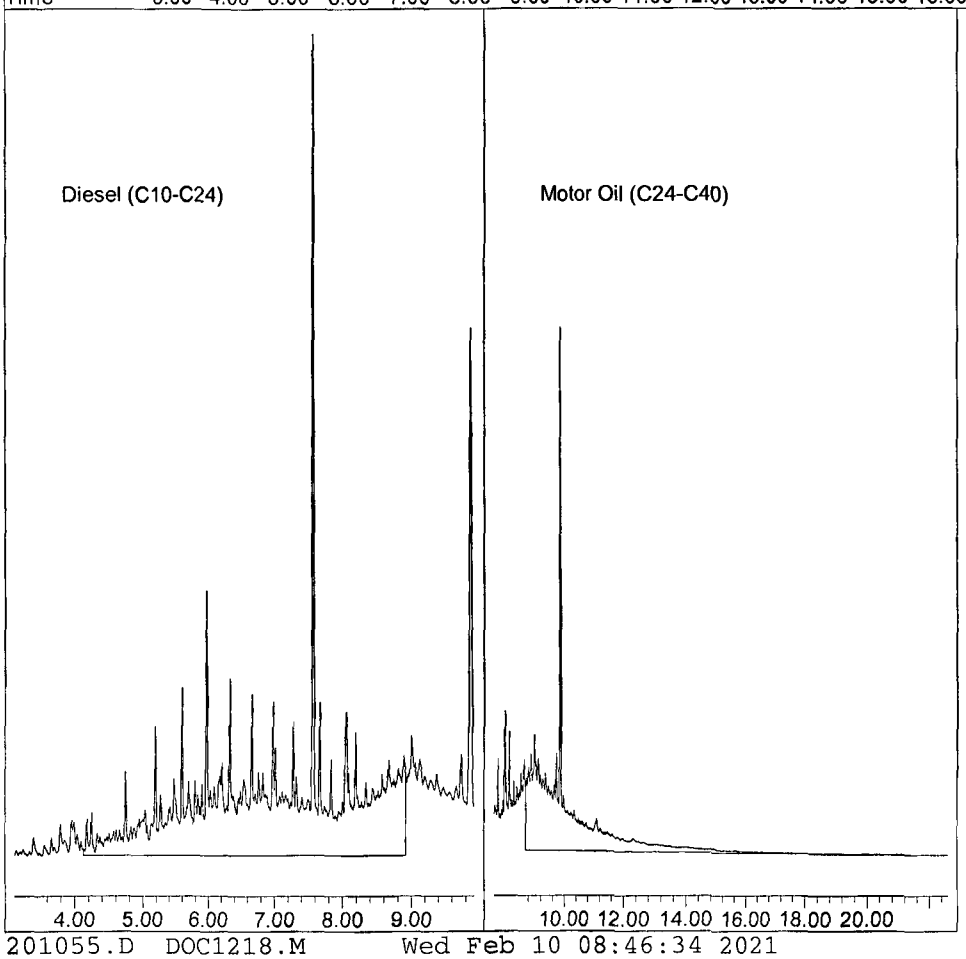
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	160491636	134.494 ppb
Surrogate Spike 148.515		Recovery =	90.56%
4) SA Octacosane(S)	9.87	122286394	133.285 ppb
Surrogate Spike 148.515		Recovery =	89.75%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1816026812	1833.266 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1155934598	1969.775 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201055.D
Sample : BA26001W37 MSD-1 5/1010





Diesel / Motor Oil CCV

Prepared: 02/02/21

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Prep'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	1250uL	10mL	MC	250

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	08/11/21	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0155668-50515,50518,50519**	**08/11/21**	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	**08/05/21**	**06/30/25**	1666uL			100

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

THC Surrogate

Prepared: 01/28/21 **Prepared By (Initials): ss**

Expires: 01/28/22

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15440-50949**	**01/28/22**	**06/30/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 01/28/21

Expires: 01/28/22

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	A0156490-50991,50992,51528	01/28/22	02/28/27	4.05 mL	8.1 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	A0155668-50514 A0160024-5153 A0157842-50994	01/28/22	01/31/27	4.05 mL			25,000

Decanoic Acid Calibration Curve

Prepared: 02/08/21

Expires: 09/14/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid STD	O2SI	Decanoic Acid-1	60	Prepared 09/14/20	09/14/21	N/A	50uL	1mL	MC	3
		Decanoic Acid-2					100uL	1mL	MC	6
		Decanoic Acid-3					400uL	1mL	MC	24
		Decanoic Acid-4					600uL	1mL	MC	36
		Decanoic Acid-5					800uL	1mL	MC	48
		Decanoic Acid-6					100uL	100uL	N/A	60

Decanoic Acid Standard

Prepared: 09/14/20

Expires: 09/14/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid	O2SI	011729-01-05-5PAK	1,000	**397380-50547**	**09/14/21**	**12/30/21**	600uL	10mL	MC	60

Decanoic Acid Spike

Prepared: 12/01/20 **Prepared By (Initials): SS**

Expires: 12/01/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	Absolute	72766	1,000	**080320-50538-42**	**12/01/21**	**08/03/23**	N/A	N/A	N/A	1,000

Decanoic Acid CCV

Prepared: 02/08/21

Expires: 09/14/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid	O2SI	011729-01-05-5PAK	1,000	**397380-50547**	09/14/21	**12/30/21**	360uL	10mL	MC	36

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210201A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-28-21 1-28-22		Surrogate ID 1	THC Surrogate 1-28-21 1-28-22	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 12-1-20 12-1-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 12:05	
Spiked ID 8			Ext. End Time:	02/02/21 6:30	
			GC Requires Extract By:		

pH1	2	02/01/20 10:25	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 02/01/21 **Witnessed By:** DL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210201A Blk		0.050	2	0.250	1	1000	5	2	02/01/21 10:30	*
						equip	E-HP51 E-WB1				
2	210201A LCS-1		0.080,0.05	1,2	0.250	1	1000	5	2	02/01/21 10:30	*
						equip	E-HP50 E-WB2				
3	BA26001 MS-1	BA26001W35	0.080	1	0.250	1	1010	5	2	02/01/21 10:30	94899
						equip	E-HP12 E-WB3				
4	BA26001 MSD-1	BA26001W37	0.080	1	0.250	1	1010	5	2	02/01/21 10:30	94899
						equip	E-HP11 E-WB1				
5	BA26001	BA26001W34			0.250	1	1000	5	2	02/01/21 10:30	94899
						equip	E-HP49 E-WB2				
6	BA26003	BA26003W11			0.250	1	1020	5	2	02/01/21 10:30	94899
						equip	E-HP48 E-WB3				
7	BA26006	BA26006W16	0.050	2	0.250	1	1040	5	2	02/01/21 10:30	94899 *
						equip	E-HP47 E-WB1				
8	BA26008	BA26008W12	0.050	2	0.250	1	1050	5	2	02/01/21 10:30	94899 *
						equip	E-HP25 E-WB2				
9	BA26010	BA26010W01	0.050	2	0.250	1	1070	5	2	02/01/21 10:30	94899 *
						equip	E-HP26 E-WB3				
10	BA26013	BA26013W16	0.050	2	0.250	1	1050	5	2	02/01/21 10:30	94899 *
						equip	E-HP27 E-WB1				
11	BA26016	BA26016W14			0.250	1	1000	5	2	02/01/21 10:30	94899
						equip	E-HP28 E-WB2				
12	BA26019	BA26019W08			0.250	1	980	5	2	02/01/21 10:30	94912
						equip	E-HP10 E-WB3				
13	BA26020	BA26020W07			0.250	1	1040	5	2	02/01/21 10:30	94912
						equip	E-HP9 E-WB1				
14	BA26150	BA26150W06	0.050	2	0.250	1	970	5	2	02/01/21 10:30	94921 *
						equip	E-HP29 E-WB2				
15	BA26152	BA26152W07			0.250	1	980	5	2	02/01/21 10:30	94921
						equip	E-HP30 E-WB3				
16	BA26155	BA26155W06	0.050	2	0.250	1	500	5	2	02/01/21 10:30	94921 *
						equip	E-HP16 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279
Silica gel (*)	05D627T

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	2/2/21
Time	11:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	02/09/21 6:17:14 AM

Reviewed By: SS **Date** 02/10/21

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210201A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-28-21 1-28-22		Surrogate ID 1	THC Surrogate 1-28-21 1-28-22	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 12-1-20 12-1-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 12:05	
Spiked ID 8			Ext. End Time:	02/02/21 6:30	
			GC Requires Extract By:		

pH1	2	02/01/20 10:25	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 02/01/21 **Witnessed By:** DL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W07			0.250	1	990	5	2	02/01/21 10:30	94921
						equip	E-HP15 E-WB2				
18	BA26160	BA26160W17			0.250	1	1000	5	2	02/01/21 10:30	94920
						equip	E-HP14 E-WB3				
19	BA26163	BA26163W17			0.250	1	1050	5	2	02/01/21 10:30	94920
						equip	E-HP13 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279
Silica gel (*)	05D627T

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	
Time	
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	02/09/21 6:17:14 AM

Reviewed By: SS **Date** 02/10/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	50	201050.D	1	Diesel Motor Oil-CCV 2/2/21	water	2-2-21 13:52:22
10	52	201052.D	5	210201A BLK 5/1000	water	2-2-21 14:55:08
11	53	201053.D	5	210201A LCS-1 5/1000	water	2-2-21 15:23:34
12	54	201054.D	4.9505	BA26001W35 MS-1 5/1010	water	2-2-21 15:51:59
13	55	201055.D	4.9505	BA26001W37 MSD-1 5/1010	water	2-2-21 16:20:20
14	56	201056.D	5	BA26001W34 5/1000	water	2-2-21 16:48:44
15	57	201057.D	4.90196	BA26003W11 5/1020	water	2-2-21 17:17:00
16	58	201058.D	4.80769	BA26006W16 5/1040	water	2-2-21 17:45:14
17	59	201059.D	4.7619	BA26008W12 5/1050	water	2-2-21 18:13:25
18	60	201060.D	4.6729	BA26010W01 5/1070	water	2-2-21 18:41:35
19	61	201061.D	4.7619	BA26013W16 5/1050	water	2-2-21 19:09:44
20	62	201062.D	5	BA26016W14 5/1000	water	2-2-21 19:37:51
21	64	201064.D	1	Diesel Motor Oil-CCV 2/2/21	water	2-2-21 20:34:08
22	1	208001.D	1	Decanoic Acid- 1 2/8/21	water	2-8-21 12:45:58
23	2	208002.D	1	Decanoic Acid- 2 2/8/21	water	2-8-21 13:13:57
24	3	208003.D	1	Decanoic Acid- 3 2/8/21	water	2-8-21 13:42:06
25	4	208004.D	1	Decanoic Acid- 4 2/8/21	water	2-8-21 14:10:19
26	5	208005.D	1	Decanoic Acid- 5 2/8/21	water	2-8-21 14:38:32
27	6	208006.D	1	Decanoic Acid- 6 2/8/21	water	2-8-21 15:06:47
28	7	208007.D	1	Diesel Motor Oil- CCV 2/2/21	water	2-8-21 16:09:02
29	8	208008.D	1	Decanoic Acid- CCV 2/8/21	water	2-8-21 16:37:07
30	9	208009.D	5	210201A BLK 5/1000 SG	water	2-8-21 17:05:13
31	10	208010.D	5	210201A LCS-1 5/1000 SG	water	2-8-21 17:33:23
32	11	208011.D	4.80769	BA26006W16 5/1040 SG	water	2-8-21 18:01:28
33	12	208012.D	4.7619	BA26008W12 5/1050 SG	water	2-8-21 18:29:34
34	13	208013.D	4.6729	BA26010W01 5/1070 SG	water	2-8-21 18:57:38
35	14	208014.D	4.7619	BA26013W16 5/1050 SG	water	2-8-21 19:25:42
36	22	208022.D	1	Decanoic Acid- CCV 2/8/21	water	2-8-21 23:10:01
37	23	208023.D	1	Diesel Motor Oil- CCV 2/2/21	water	2-8-21 23:38:03

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Initial Cal. Date: 01/05/21
Instrument: Yoda

Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

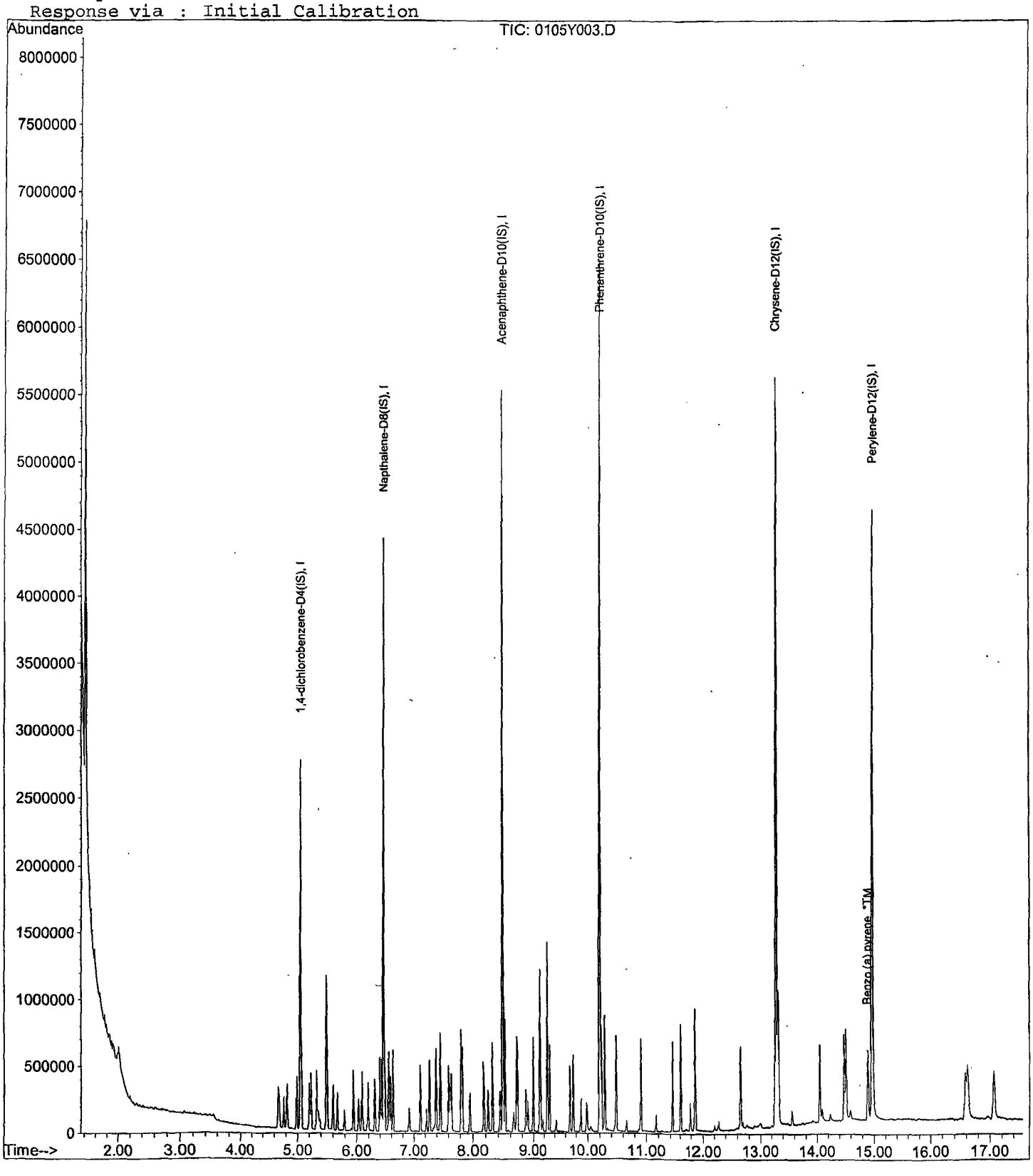
Data File : M:\YODA\DATA\Y210105\0105Y003.D
Acq On : 5 Jan 21 11:25
Sample : 4ug/mL 8270 01/05/21
Misc :

Vial: 3
Operator: MA
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 5 17:45 2021

Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery	= 4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery	= 4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery	= 4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037	# 1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

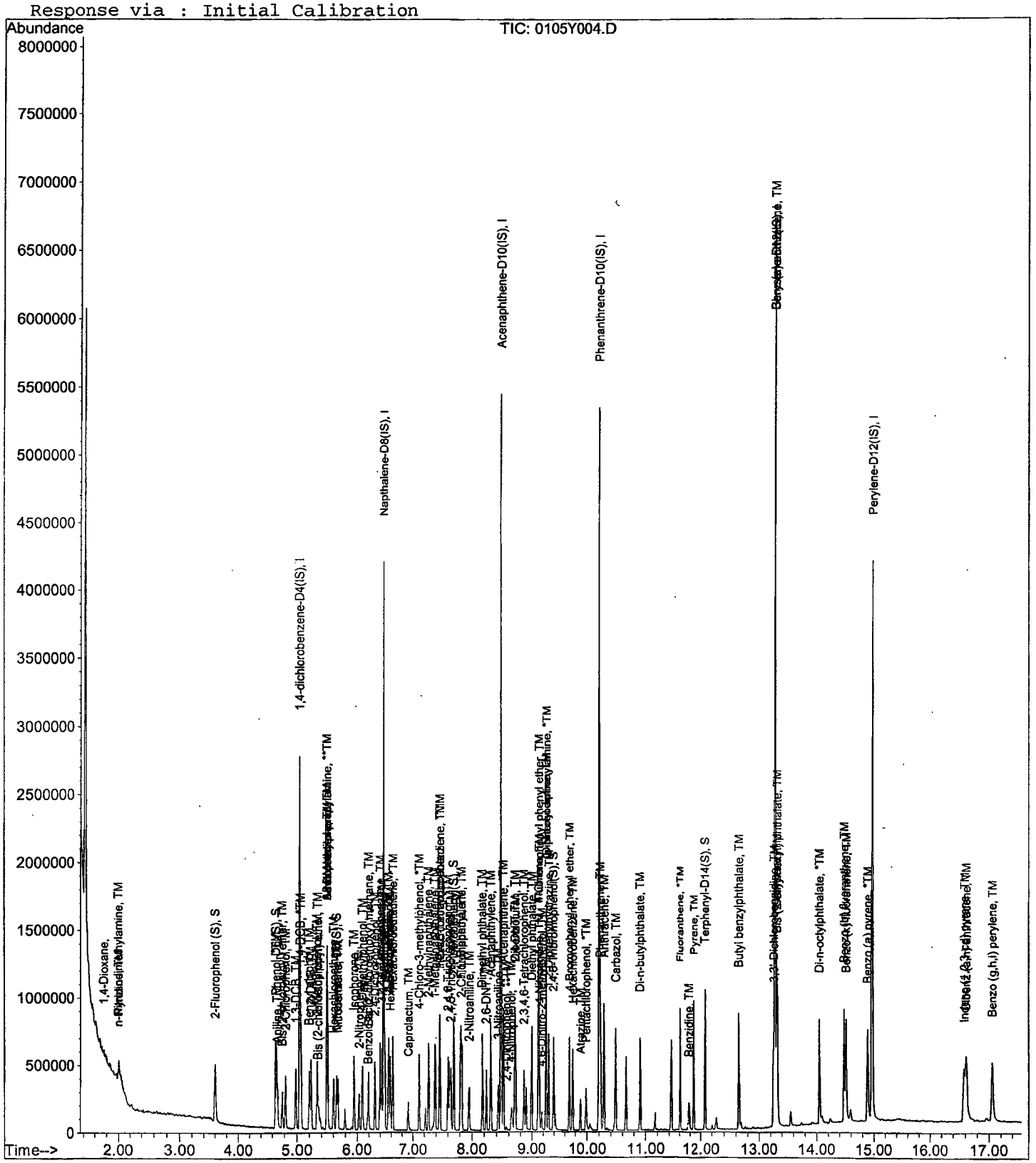
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411 ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%		
6) Phenol-D6 (S)	4.66	99	492275	20.31208 ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%		
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036 ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%		
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840 ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%		
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194 ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%		
82) Terphenyl-D14(S)	12.07	244	719678	9.80130 ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713		91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743 ppb		80
4) Pyridine	2.00	79	159922	10.10773 ppb		95
7) Phenol	4.67	94	284850	9.94852 ppb		94
8) Aniline	4.69	93	215040	10.28244 ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288 ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397 ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890 ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580 ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889 ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913 ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047 ppb		96
17) Acetophenone	5.49	105	301622	9.93857 ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173 ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080 ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192 ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780 ppb		91
24) Isophorone	5.95	82	433948	9.99676 ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219 ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036 ppb		99
27) Benzoic acid	6.19	105	96995	12.03014 ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695 ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390 ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216 ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228 ppb		98
32) Naphthalene	6.49	128	626299	10.16177 ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372 ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495 ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280 ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411 ppb		94
37) Caprolactum	6.93	55	62259	10.01107 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

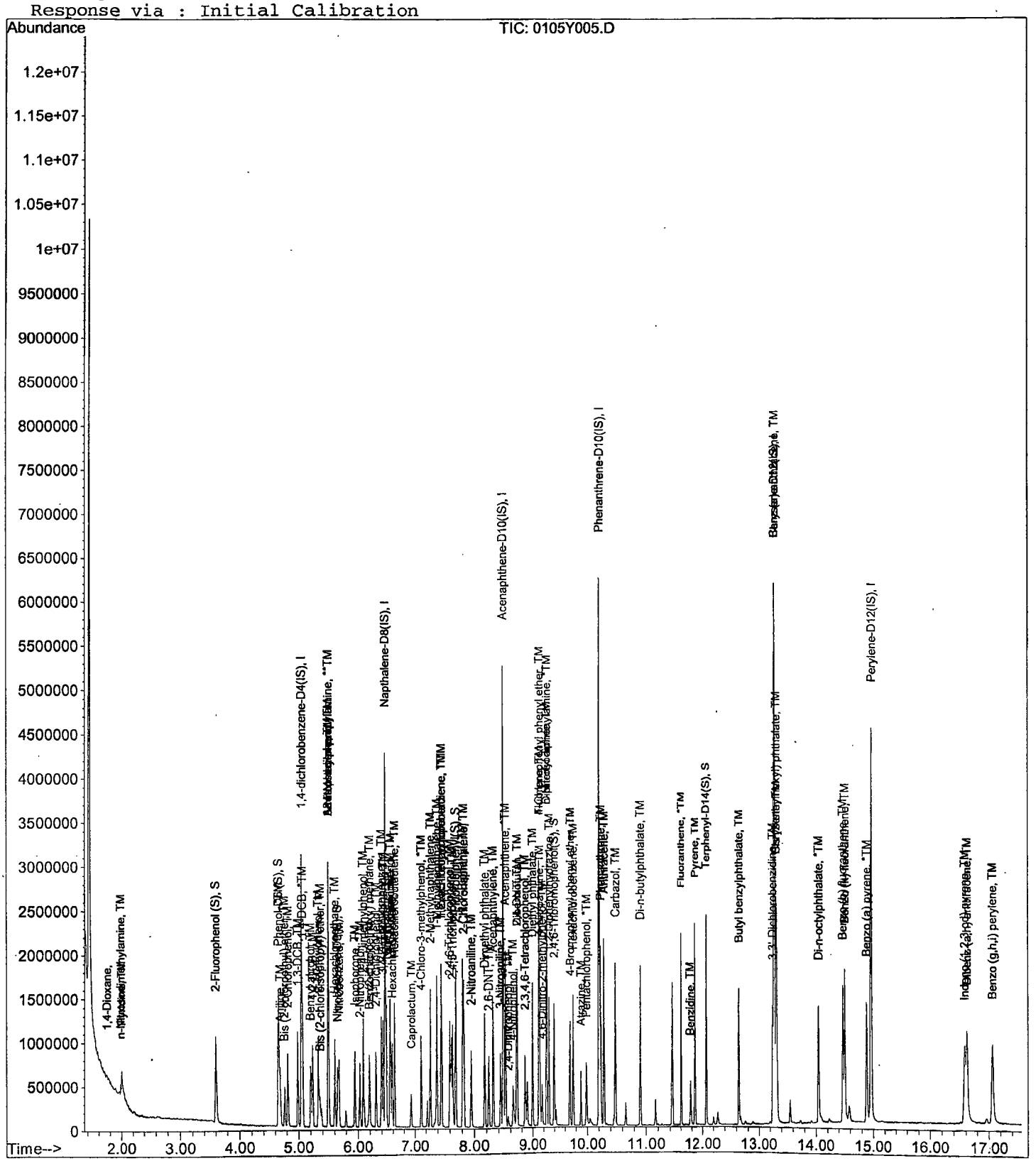
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291	ppb	0.00
Spiked Amount 200.000			Recovery = 20.367%			
6) Phenol-D6 (S)	4.66	99	982259	41.09491	ppb	0.00
Spiked Amount 200.000			Recovery = 20.548%			
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676	ppb	0.00
Spiked Amount 100.000			Recovery = 20.247%			
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838	ppb	0.00
Spiked Amount 100.000			Recovery = 19.988%			
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560	ppb	0.00
Spiked Amount 200.000			Recovery = 19.203%			
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382	ppb	0.00
Spiked Amount 100.000			Recovery = 20.144%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361		95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205	ppb	77
4) Pyridine	2.00	79	285742	18.31197	ppb	93
7) Phenol	4.67	94	577332	20.44481	ppb	98
8) Aniline	4.69	93	466624	22.62348	ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322	ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045	ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920	ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675	ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685	ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353	ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390	ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265	ppb	99
17) Acetophenone	5.49	105	602936	20.14408	ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933	ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837	ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841	ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574	ppb	92
24) Isophorone	5.95	82	880199	20.26492	ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391	ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280	ppb	97
27) Benzoic acid	6.20	105	256511	20.08076	ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476	ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992	ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794	ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850	ppb	98
32) Naphthalene	6.49	128	1239162	20.09363	ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498	ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561	ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334	ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574	ppb	97
37) Caprolactum	6.94	55	124469	20.00238	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

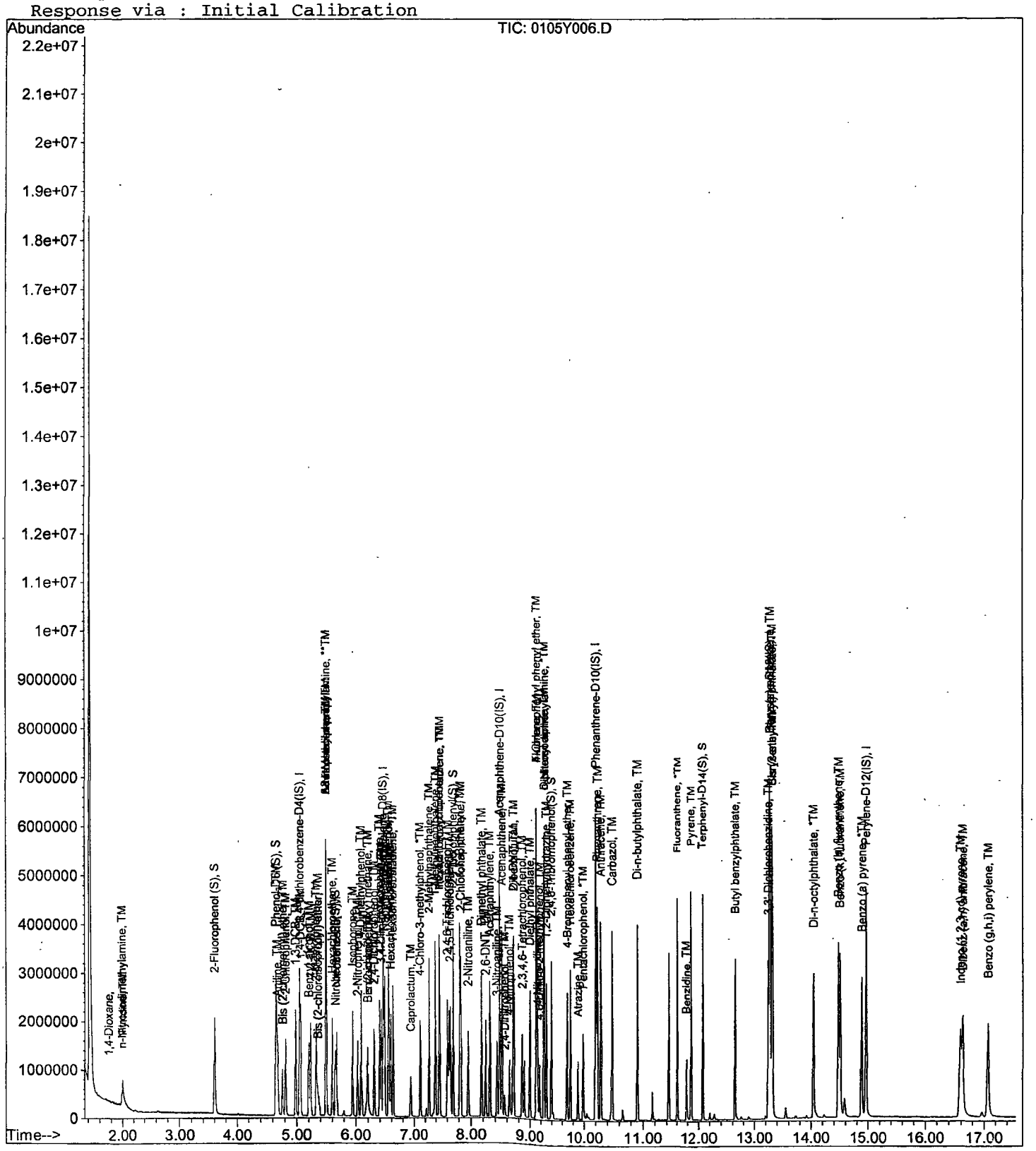
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967 ppb	0.00
Spiked Amount 200.000			Recovery =	40.315%	
6) Phenol-D6 (S)	4.67	99	2073058	80.33420 ppb	0.00
Spiked Amount 200.000			Recovery =	40.167%	
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156 ppb	0.00
Spiked Amount 100.000			Recovery =	39.782%	
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219 ppb	0.00
Spiked Amount 100.000			Recovery =	39.422%	
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158 ppb	0.00
Spiked Amount 200.000			Recovery =	39.906%	
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922 ppb	0.00
Spiked Amount 100.000			Recovery =	40.089%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747	54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850 ppb	93
4) Pyridine	1.99	79	710577	42.17927 ppb	100
7) Phenol	4.68	94	1249780	40.99379 ppb	96
8) Aniline	4.69	93	852672	38.29141 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360 ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826 ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439 ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338 ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093 ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316 ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142 ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767 ppb	98
17) Acetophenone	5.49	105	1298420	40.18079 ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972 ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083 ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355 ppb	99
24) Isophorone	5.95	82	1929574	40.57653 ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009 ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262 ppb	95
27) Benzoic acid	6.22	105	694050	39.13552 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698 ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676 ppb	97
32) Naphthalene	6.49	128	2700428	39.99560 ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681 ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710 ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202 ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790 ppb	96
37) Caprolactum	6.96	55	275073	40.37550 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

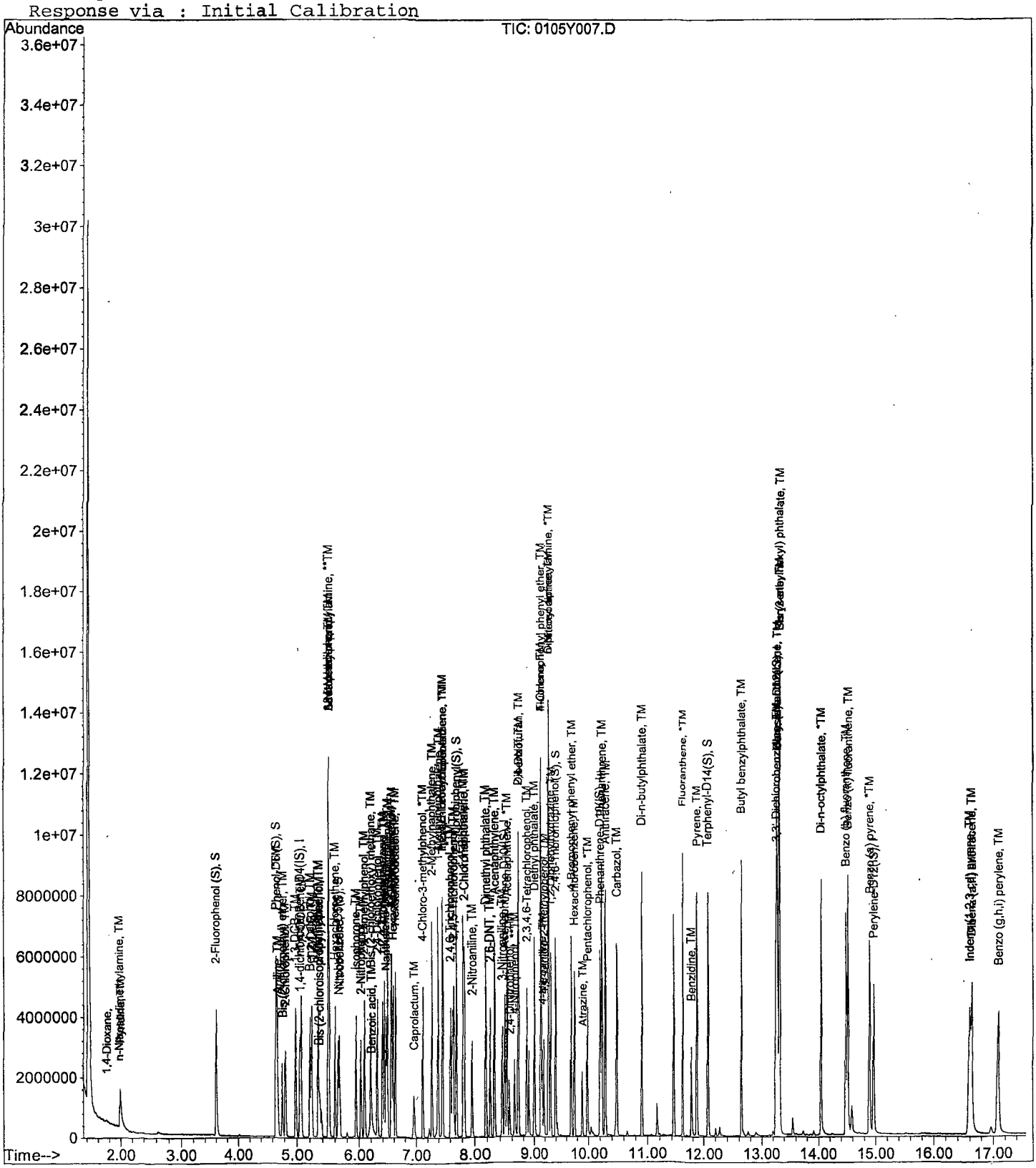
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501 ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827 ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678 ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033 ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973 ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691 ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290 ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584 ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983 ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022 ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174 ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741 ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990 ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046 ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381 ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245 ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395 ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389 ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069 ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506 ppb	100
62)	Fluorene	9.11	166	2868571	49.36863 ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128 ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785 ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785 ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089 ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978 ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367 ppb	100
72)	Atrazine	9.89	200	418889	26.25754 ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356 ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640 ppb	100
75)	Anthracene	10.29	178	4512131	51.82540 ppb	100
76)	Carbazol	10.49	167	4021683	52.16528 ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661 ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724 ppb	100
80)	Benzidine	11.78	184	1334887	54.03870 ppb	100
81)	Pyrene	11.88	202	5487771	52.99187 ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593 ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347 ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761 ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599 ppb	100
87)	Chrysene	13.31	228	5235913	52.38491 ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495 ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338 ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646 ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782 ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159 ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960 ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590 ppb	100

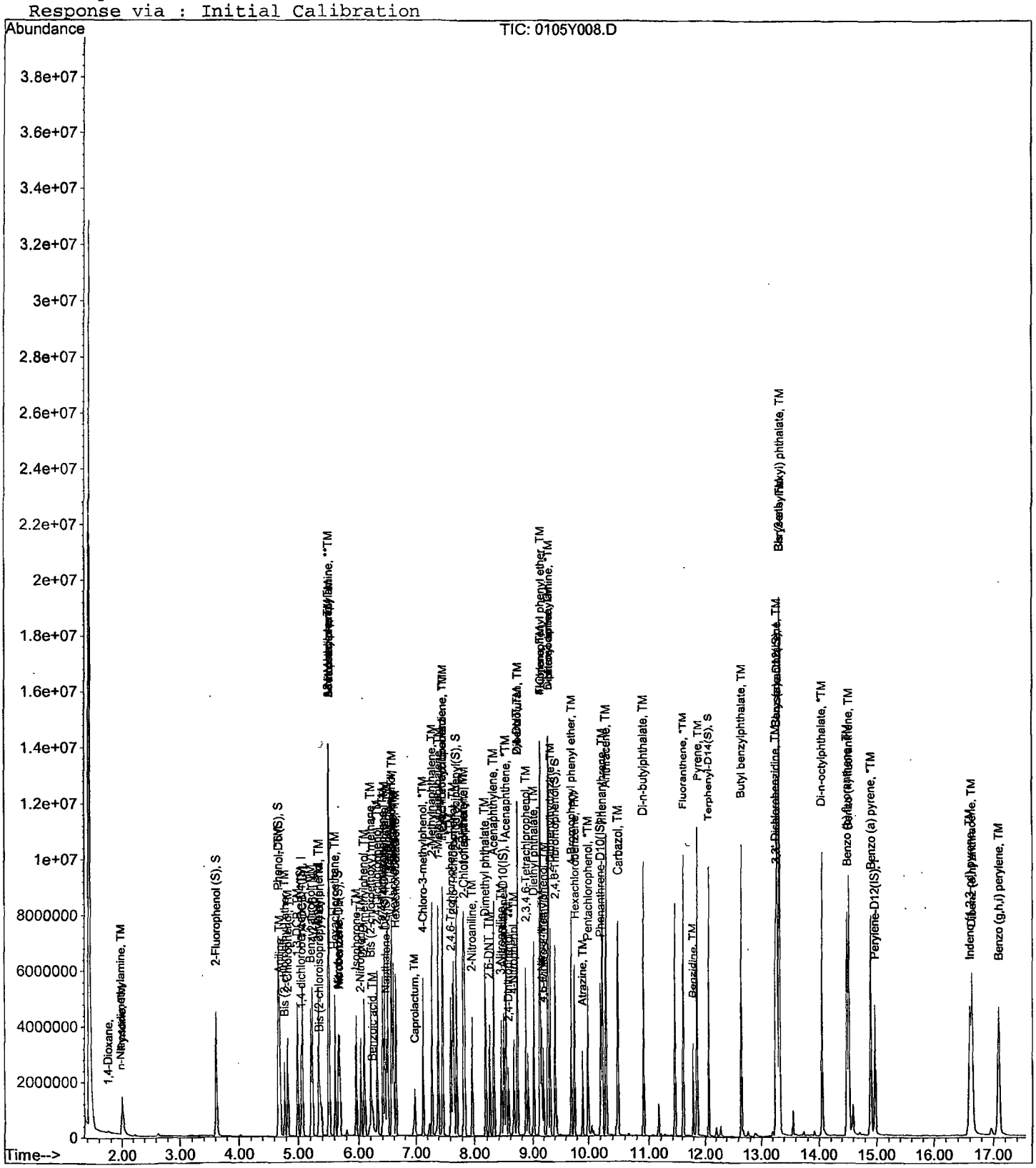
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382	ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%				
6) Phenol-D6 (S)	4.67	99	2714982	119.91052	ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%				
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297	ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%				
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223	ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868	ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%				
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361	ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380			95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310	ppb		92
4) Pyridine	1.99	79	901311	60.97669	ppb		97
7) Phenol	4.68	94	1606167	60.04495	ppb		96
8) Aniline	4.69	93	1200640	61.45164	ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145	ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776	ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182	ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978	ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043	ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365	ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897	ppb		96
17) Acetophenone	5.50	105	1702308	60.04028	ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638	ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425	ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967	ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951	ppb		89
24) Isophorone	5.96	82	2504820	59.55758	ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859	ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930	ppb		99
27) Benzoic acid	6.23	105	965560	57.47534	ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945	ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990	ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563	ppb		100
32) Naphthalene	6.49	128	3532998	59.16571	ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729	ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808	ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347	ppb		98
37) Caprolactum	6.98	55	354905	58.90188	ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb	97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb	99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb	98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb	95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb	99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb	98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb	91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb	97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb	92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb	100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb	99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb	99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb	93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb	93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb	98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb	97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb	98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb	95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb	98
62)	Fluorene	9.11	166	3228662	60.22935	ppb	100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb	95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb #	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb	96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb	96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb	96
72)	Atrazine	9.89	200	456257	29.70998	ppb	98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb	99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb	99
75)	Anthracene	10.29	178	5016441	59.85415	ppb	100
76)	Carbazol	10.49	167	4476193	60.31428	ppb	98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb	99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb #	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb	99
81)	Pyrene	11.88	202	6087066	61.51608	ppb	100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb	99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb	99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb	98
87)	Chrysene	13.32	228	5981915	62.63562	ppb	99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb	99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb #	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb	99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb	100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb	98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb	97

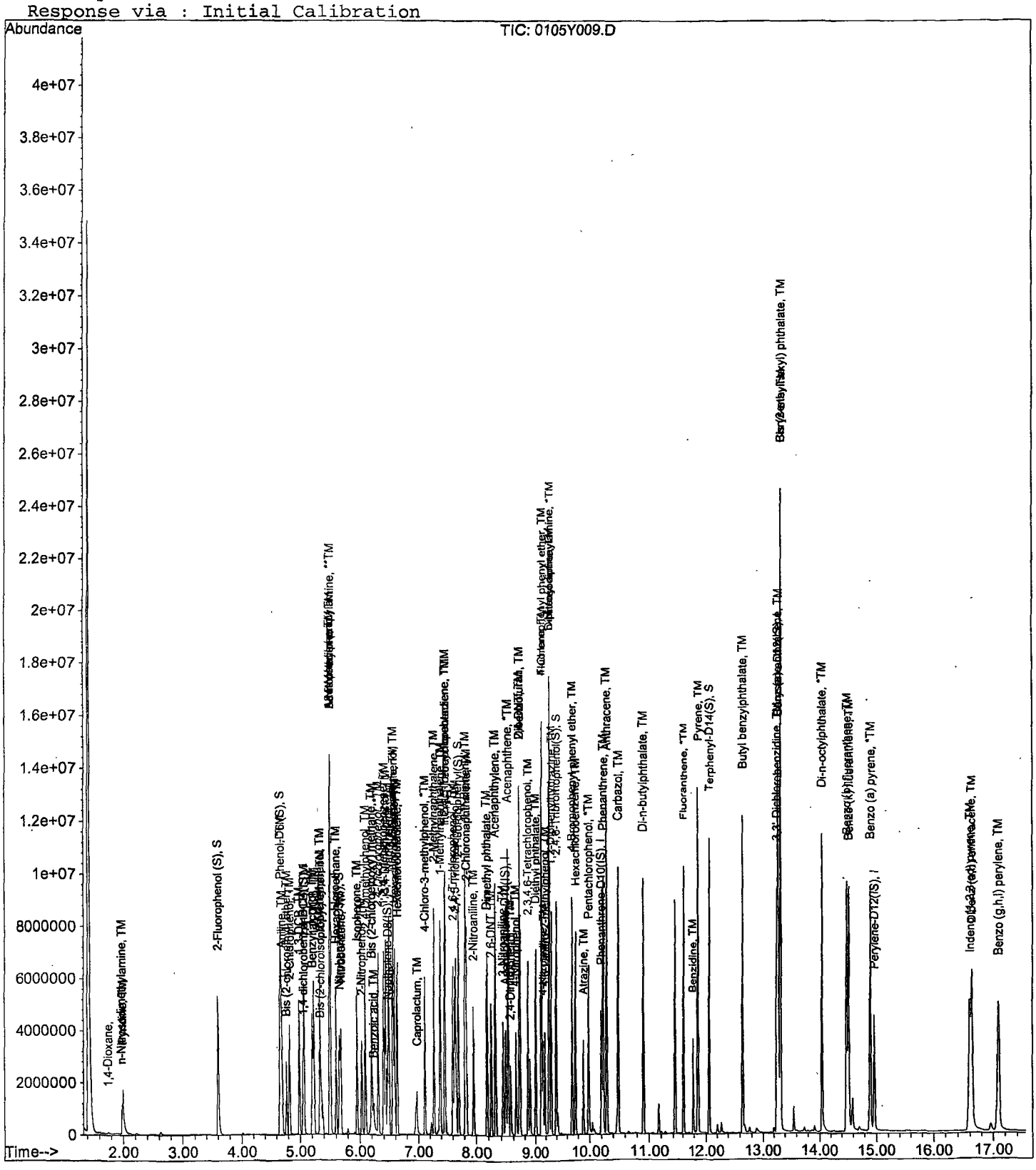
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

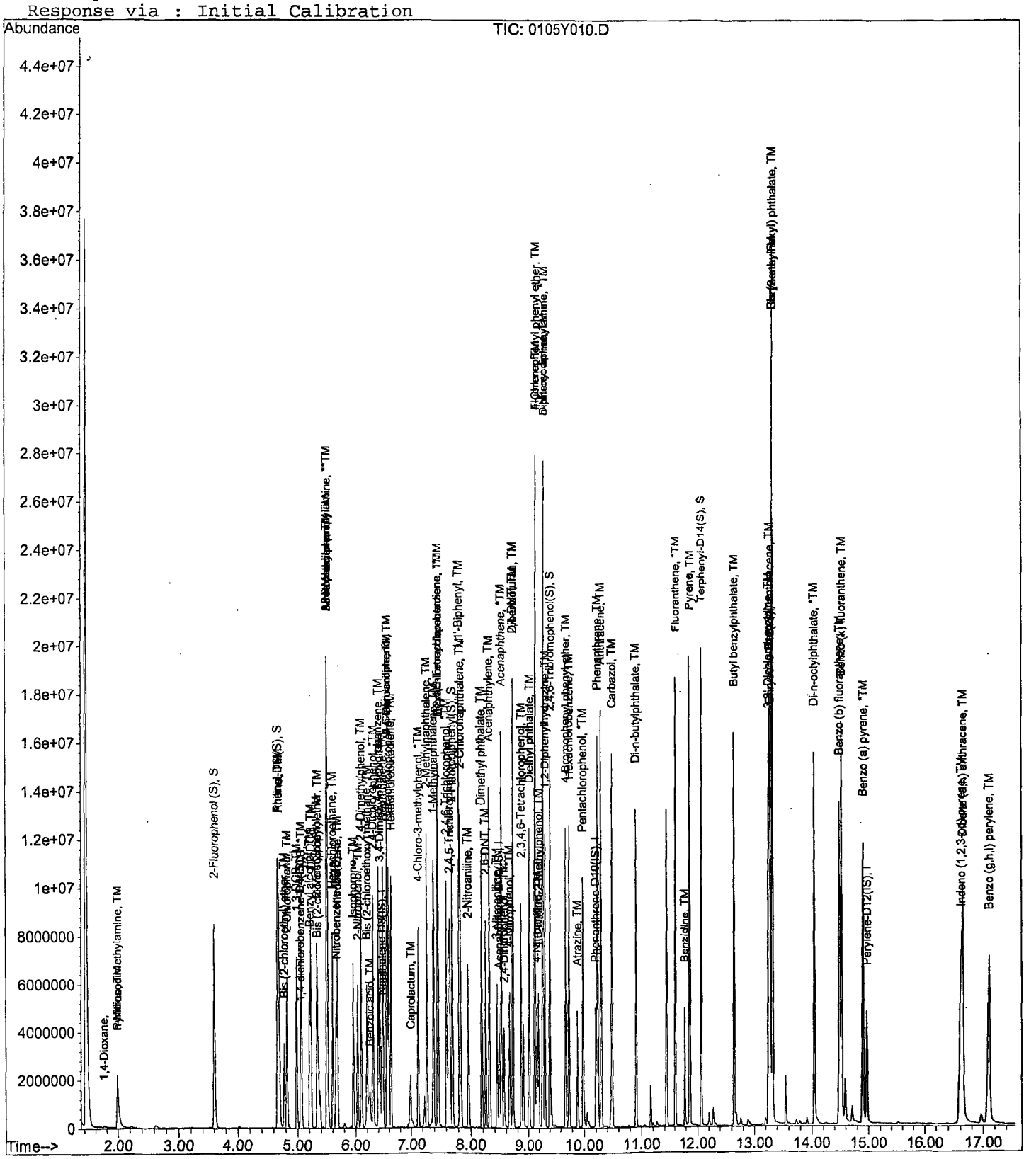
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247 ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%			
6) Phenol-D6 (S)	4.68	99	4838998	197.64897 ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%			
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945 ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%			
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565 ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%			
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871 ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%			
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130 ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908		81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926 ppb		96
4) Pyridine	1.99	79	1601618	100.20673 ppb		96
7) Phenol	4.69	94	2870003	99.22404 ppb		81
8) Aniline	4.69	93	2014720	95.36394 ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289 ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836 ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989 ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837 ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920 ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560 ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143 ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822 ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813 ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428 ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856 ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156 ppb		99
24) Isophorone	5.97	82	4503216	100.78300 ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859 ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007 ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862 ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765 ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602 ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189 ppb		99
32) Naphthalene	6.49	128	6519693	102.76799 ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290 ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905 ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413 ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620 ppb		98
37) Caprolactum	7.01	55	633770	99.00399 ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774 ppb		100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266 ppb		99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549 ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230 ppb		99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837 ppb		98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605 ppb		99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650 ppb		96
49)	2-Nitroaniline	7.96	65	1532235	103.70705 ppb		85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662 ppb		98
51)	2,6-DNT	8.25	165	1319759	106.24011 ppb	#	60
52)	Acenaphthylene	8.32	152	7124816	100.77445 ppb		100
53)	3-Nitroaniline	8.45	138	1138354	98.15154 ppb		96
54)	Acenaphthene	8.52	154	4795569	102.00983 ppb		99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520 ppb		96
56)	4-Nitrophenol	8.66	65	1237411	108.12825 ppb		92
57)	Dibenzofuran	8.72	168	7159718	102.33720 ppb		95
58)	2,4-DNT	8.71	165	1977249	110.78005 ppb		81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726 ppb	#	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384 ppb		94
62)	Fluorene	9.12	166	6390371	108.50934 ppb		99
63)	4-Nitroaniline	9.17	138	1261280	99.97842 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814 ppb	#	78
67)	Diphenyl amine	9.27	169	9859114	212.48800 ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800 ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548 ppb		91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128 ppb	#	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176 ppb	#	82
72)	Atrazine	9.90	200	864021	52.89701 ppb		99
73)	Pentachlorophenol	9.99	266	1429911	111.87699 ppb		97
74)	Phenanthrene	10.24	178	8381398	98.07775 ppb		95
75)	Anthracene	10.29	178	9355388	104.94806 ppb		99
76)	Carbazol	10.49	167	8095783	102.56147 ppb		96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581 ppb		98
78)	Fluoranthene	11.62	202	9298740	93.24730 ppb		92
80)	Benzidine	11.79	184	2654497	103.79547 ppb	#	97
81)	Pyrene	11.88	202	10226323	95.38246 ppb		90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515 ppb		94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396 ppb	#	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047 ppb	#	90
87)	Chrysene	13.32	228	10082415	97.43480 ppb		92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622 ppb	#	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716 ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179 ppb		99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957 ppb		99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534 ppb		97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641 ppb		98

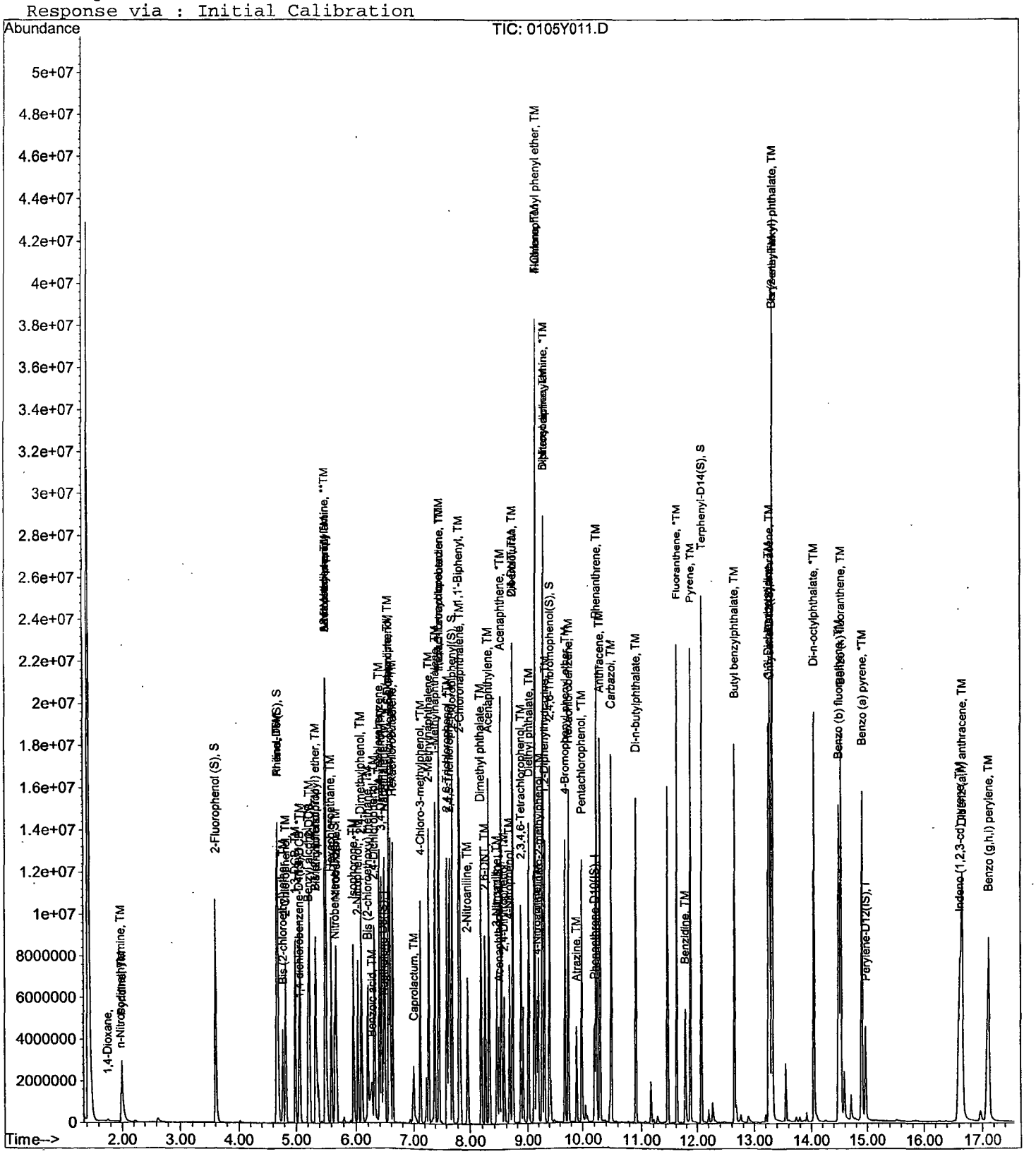
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
92							
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117							
118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb		
Spiked Amount 200.000			Recovery	=	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000	ppb		
Spiked Amount 200.000			Recovery	=	0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068	ppb		-0.05
Spiked Amount 100.000			Recovery	=	6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376	ppb		-0.05
Spiked Amount 100.000			Recovery	=	0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008	ppb		0.00
Spiked Amount 200.000			Recovery	=	0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782	ppb		0.00
Spiked Amount 100.000			Recovery	=	0.008%		
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714			89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434	ppb		91
4) Pyridine	1.99	79	735710	52.57161	ppb		96
7) Phenol	4.68	94	1293943	51.09241	ppb		98
8) Aniline	4.69	93	1003200	54.23301	ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820	ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455	ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903	ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548	ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516	ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525	ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681	ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723	ppb		98
17) Acetophenone	5.49	105	1339909	49.91549	ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572	ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872	ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564	ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285	ppb		97
24) Isophorone	5.95	82	2061471	51.58112	ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174	ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498	ppb		93
27) Benzoic acid	6.23	105	812071	51.60901	ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322	ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348	ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988	ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292	ppb		98
32) Naphthalene	6.49	128	2835600	49.97177	ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826	ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500	ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132	ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264	ppb		98
37) Caprolactum	6.97	55	280159	48.92994	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091	ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468	ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163	ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598	ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145	ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770	ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854	ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887	ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285	ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600	ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497	ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262	ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322	ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054	ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106	ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975	ppb		97
62)	Fluorene	9.11	166	2532549	47.63871	ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852	ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650	ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338	ppb		95
72)	Atrazine	9.89	200	359433	24.27186	ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124	ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327	ppb		100
75)	Anthracene	10.29	178	3950822	48.88531	ppb		100
76)	Carbazol	10.48	167	3450310	48.21274	ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046	ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019	ppb		99
80)	Benzidine	11.78	184	1084184	46.34613	ppb		98
81)	Pyrene	11.88	202	4791836	48.86133	ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442	ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448	ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052	ppb		99
87)	Chrysene	13.31	228	4533491	47.89571	ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301	ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717	ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820	ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774	ppb		98

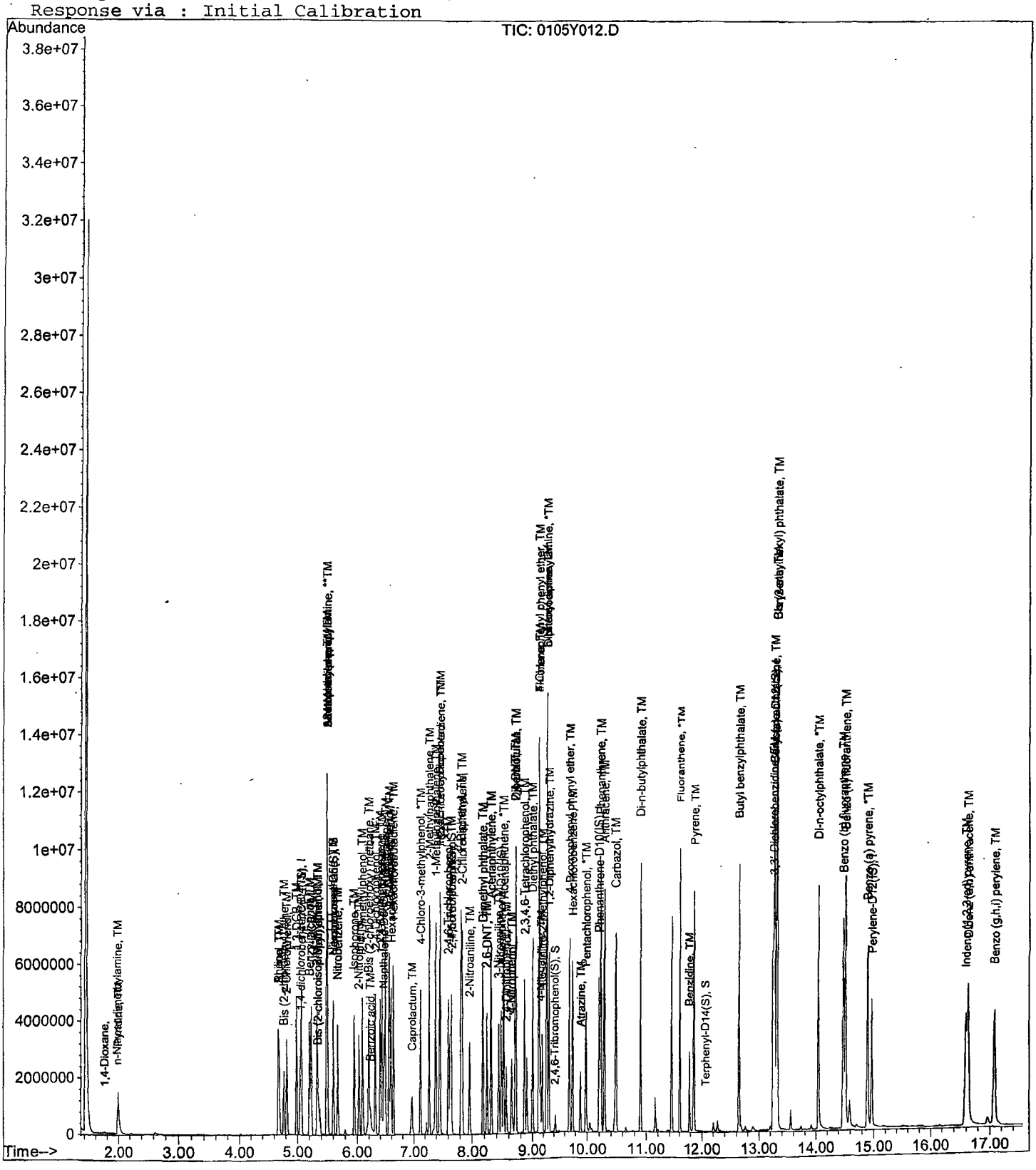
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2758	14			
3	TM	n-Nitrosodimethylamine	0.6105	0.5863	4.0	TM		
4	TM	Pyridine	1.336	1.268	5.1	TM		
5	S	2-Fluorophenol (S)	1.601	1.664	3.9	S		
6	S	Phenol-D6 (S)	2.046	2.183	6.7	S		
7	*TM	Phenol	2.418	2.651	9.6	*TM		
8	TM	Aniline	1.766	1.947	10	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.128	9.3	TM		
10	TM	2-Chlorophenol	1.829	1.956	6.9	TM		
11	TM	1,3-DCB	2.107	2.140	1.6	TM		
12	*TM	1,4-DCB	2.122	2.190	3.2	*TM		
13	TM	Benzyl alcohol	1.073	1.127	5.1	TM		
14	TM	1,2-DCB	1.992	2.067	3.8	TM		
15	TM	2-Methylphenol	1.401	1.494	6.6	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.086	11	TM		
17	TM	Acetophenone	2.563	2.769	8.1	TM		
18	TM	3&4-Methylphenol	1.892	2.057	8.7	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.645	10.0	**TM		
20	TM	Hexachloroethane	0.8684	0.9075	4.5	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5990	1.6	S		
23	TM	Nitrobenzene	0.6068	0.6079	0.19	TM		
24	TM	Isophorone	0.9746	0.9874	1.3	TM		
25	*TM	2-Nitrophenol	0.2562	0.2550	0.44	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4264	0.65	TM		
27	TML	Benzoic acid	0.3484	0.2632	24	TML	27	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5637	2.3	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4398	0.28	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5097	0.28	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6879	1.7	TM		
32	TM	Naphthalene	1.384	1.419	2.6	TM		
33	TM	4-Chloroaniline	0.5189	0.5474	5.5	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4316	1.2	TM		
35	TM	Hexachloropropene	0.4576	0.4418	3.5	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3599	0.48	*TM		
37	TM	Caprolactum	0.1396	0.1472	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4713	2.8	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9449	3.9	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9795	4.5	TM		
		Average			5.1			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5319	6.6	**TML	13
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.9060	0.64	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5614	0.22	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6229	1.8	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.915	2.2	S	
47	TM	1,1'-Biphenyl	2.012	2.109	4.8	TM	
48	TM	2-Chloronaphthalene	1.564	1.622	3.7	TM	
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM	
50	TM	Dimethyl phthalate	1.914	1.978	3.4	TM	
51	TM	2,6-DNT	0.4186	0.4349	3.9	TM	
52	TM	Acenaphthylene	2.382	2.458	3.2	TM	
53	TM	3-Nitroaniline	0.3908	0.4149	6.2	TM	
54	*TM	Acenaphthene	1.584	1.613	1.8	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.1723	23	**TML	18
56	**TM	4-Nitrophenol	0.3856	0.3602	6.6	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6274	4.3	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4779	1.4	TM	
60	TM	Diethyl phthalate	1.956	1.991	1.8	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.132	4.7	TM	
62	TM	Fluorene	1.985	2.086	5.1	TM	
63	TM	4-Nitroaniline	0.4251	0.4395	3.4	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2931	2.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1781	7.2	TM	
67	TM	Diphenyl amine	0.7523	0.7935	5.5	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7935	5.5	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9875	3.5	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3148	3.3	TM	
71	TM	Hexachlorobenzene	0.3129	0.3163	1.1	TM	
72	TM	Atrazine	0.2649	0.2514	5.1	TM	
73	*TM	Pentachlorophenol	0.2072	0.2030	2.1	*TM	
74	TM	Phenanthrene	1.386	1.438	3.8	TM	
75	TM	Anthracene	1.445	1.517	5.0	TM	
76	TM	Carbazol	1.280	1.323	3.3	TM	
77	TM	Di-n-butylphthalate	1.570	1.711	9.0	TM	
78	*TM	Fluoranthene	1.617	1.718	6.2	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3612	9.2	TM	
		Average			4.5		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.758	5.4	TM	
82	S	Terphenyl-D14(S)	1.201	1.245	3.7	S	
83	TM	Butyl benzylphthalate	0.7149	0.7587	6.1	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6027	8.7	TM	
85	TM	Benz (a) anthracene	1.709	1.765	3.3	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.150	12	TM	
87	TM	Chrysene	1.610	1.754	9.0	TM	
88	*TM	Di-n-octylphthalate	1.686	1.776	5.4	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.613	2.7	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.712	13	TM	
92	*TM	Benzo (a) pyrene	1.467	1.564	6.6	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.660	1.8	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.454	1.7	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.392	3.6	TM	
96							
97							
98							
99							
100							
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112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	518055	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2067067	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1300068	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2640413	40.00000	ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2697493	40.00000	ppb	0.00
89) Perylene-D12(IS)	14.97	264	2522965	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	2154615	103.94389	ppb	0.00
Spiked Amount 200.000			Recovery = 51.972%			
6) Phenol-D6 (S)	4.67	99	2826908	106.65726	ppb	0.00
Spiked Amount 200.000			Recovery = 53.329%			
22) Nitrobenzene-D5(S)	5.67	82	1547833	50.78329	ppb	0.00
Spiked Amount 100.000			Recovery = 50.783%			
46) 2-Fluorobiphenyl(S)	7.71	172	3112793	51.08194	ppb	0.00
Spiked Amount 100.000			Recovery = 51.082%			
64) 2,4,6-Tribromophenol(S)	9.41	330	952545	97.19584	ppb	0.00
Spiked Amount 200.000			Recovery = 48.598%			
82) Terphenyl-D14(S)	12.07	244	4198476	51.85552	ppb	0.00
Spiked Amount 100.000			Recovery = 51.856%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.97	42	379638	48.01332	ppb	80
4) Pyridine	1.99	79	820927	47.44409	ppb	94
7) Phenol	4.68	94	1716430	54.81511	ppb	92
8) Aniline	4.69	93	1261056	55.13705	ppb	94
9) Bis (2-chloroethyl) ether	4.77	63	730232	54.64480	ppb	92
10) 2-Chlorophenol	4.82	128	1266492	53.45957	ppb	99
11) 1,3-DCB	4.99	146	1385918	50.79942	ppb	96
12) 1,4-DCB	5.07	146	1418477	51.61529	ppb	96
13) Benzyl alcohol	5.21	108	729863	52.54200	ppb	95
14) 1,2-DCB	5.23	146	1338348	51.87858	ppb	97
15) 2-Methylphenol	5.33	107	967259	53.32436	ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	703111	55.67628	ppb	92
17) Acetophenone	5.50	105	1793129	54.02621	ppb	98
18) 3&4-Methylphenol	5.51	107	2664149	108.73957	ppb	94
19) n-Nitrosodi-n-propylamine	5.51	70	1065108	54.99802	ppb	96
20) Hexachloroethane	5.60	117	587685	52.25145	ppb	87
23) Nitrobenzene	5.69	77	1570835	50.09479	ppb	96
24) Isophorone	5.96	82	2551349	50.66003	ppb	94
25) 2-Nitrophenol	6.04	139	658930	49.77860	ppb	88
26) 2,4-Dimethylphenol	6.10	122	1101787	50.32521	ppb	97
27) Benzoic acid	6.24	105	680072	36.66114	ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1456499	51.14144	ppb	99
29) 2,4-Dichlorophenol	6.32	162	1136298	50.14200	ppb	96
30) 1,2,4-Trichlorobenzene	6.40	180	1316990	49.86052	ppb	98
31) 3,4-Dimethylphenol	6.43	107	1777513	50.86465	ppb	98
32) Naphthalene	6.49	128	3666950	51.28221	ppb	99
33) 4-Chloroaniline	6.56	127	1414406	52.74906	ppb	95
34) 2,6-Dichlorophenol	6.57	162	1115271	50.60293	ppb	94
35) Hexachloropropene	6.59	213	1141511	48.26928	ppb	99
36) Hexachlorobutadiene	6.63	225	929916	49.76125	ppb	98
37) Caprolactum	6.99	55	380329	52.71225	ppb	96
38) 4-Chloro-3-methylphenol	7.13	107	1217821	51.39863	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	2441456	51.94128	ppb		99
40)	1-Methylnaphthalene	7.40	142	2530915	52.22663	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	864384	43.57873	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1472289	50.32000	ppb		96
44)	2,4,6-Trichlorophenol	7.61	196	912270	50.11111	ppb		98
45)	2,4,5-Trichlorophenol	7.66	196	1012210	50.89380	ppb		97
47)	1,1'-Biphenyl	7.82	154	3426868	52.40799	ppb		99
48)	2-Chloronaphthalene	7.84	162	2635437	51.82990	ppb		96
49)	2-Nitroaniline	7.96	65	847181	52.35362	ppb		82
50)	Dimethyl phthalate	8.18	163	3214146	51.67797	ppb		99
51)	2,6-DNT	8.25	165	706770	51.94689	ppb	#	62
52)	Acenaphthylene	8.31	152	3994761	51.58877	ppb		99
53)	3-Nitroaniline	8.44	138	674269	53.08118	ppb		96
54)	Acenaphthene	8.52	154	2621356	50.91145	ppb		100
55)	2,4-Dinitrophenol	8.57	184	279984	40.89434	ppb		96
56)	4-Nitrophenol	8.66	65	585341	46.70052	ppb		93
57)	Dibenzofuran	8.72	168	3908467	51.00722	ppb		93
58)	2,4-DNT	8.71	165	1019636	52.15944	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	776560	49.30957	ppb		95
60)	Diethyl phthalate	9.01	149	3235138	50.89084	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1838997	52.36707	ppb		93
62)	Fluorene	9.12	166	3390288	52.56119	ppb		99
63)	4-Nitroaniline	9.16	138	714173	51.68753	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	587859	46.42141	ppb	#	95
67)	Diphenyl amine	9.27	169	5237719	105.46611	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5237719	105.46611	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3259332	51.77478	ppb		90
70)	4-Bromophenyl phenyl ether	9.70	248	1039075	51.65935	ppb	#	85
71)	Hexachlorobenzene	9.75	284	1043815	50.54274	ppb	#	77
72)	Atrazine	9.89	200	414853	23.72877	ppb		96
73)	Pentachlorophenol	9.99	266	669903	48.96863	ppb		98
74)	Phenanthrene	10.24	178	4746148	51.88831	ppb		100
75)	Anthracene	10.29	178	5008404	52.49116	ppb		99
76)	Carbazol	10.49	167	4365250	51.66646	ppb		96
77)	Di-n-butylphthalate	10.91	149	5647409	54.48295	ppb		98
78)	Fluoranthene	11.62	202	5669705	53.11863	ppb		98
80)	Benzidine	11.79	184	1217967	45.40145	ppb		99
81)	Pyrene	11.88	202	5926906	52.70054	ppb		99
83)	Butyl benzylphthalate	12.65	149	2558334	53.06473	ppb		92
84)	3,3'-Dichlorobenzidine	13.25	252	2032152	54.35472	ppb	#	98
85)	Benz (a) anthracene	13.28	228	5952291	51.64524	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	3878275	55.91652	ppb	#	93
87)	Chrysene	13.32	228	5914541	54.48897	ppb		99
88)	Di-n-octylphthalate	14.04	149	5989527	52.67618	ppb		96
90)	Benzo (b) fluoranthene	14.50	252	5087114	51.32987	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5398281	56.44215	ppb		98
92)	Benzo (a) pyrene	14.91	252	4931940	53.30900	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5233563	49.08831	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	4585696	49.14696	ppb		100
95)	Benzo (g,h,i) perylene	17.11	276	4391478	48.17719	ppb		98

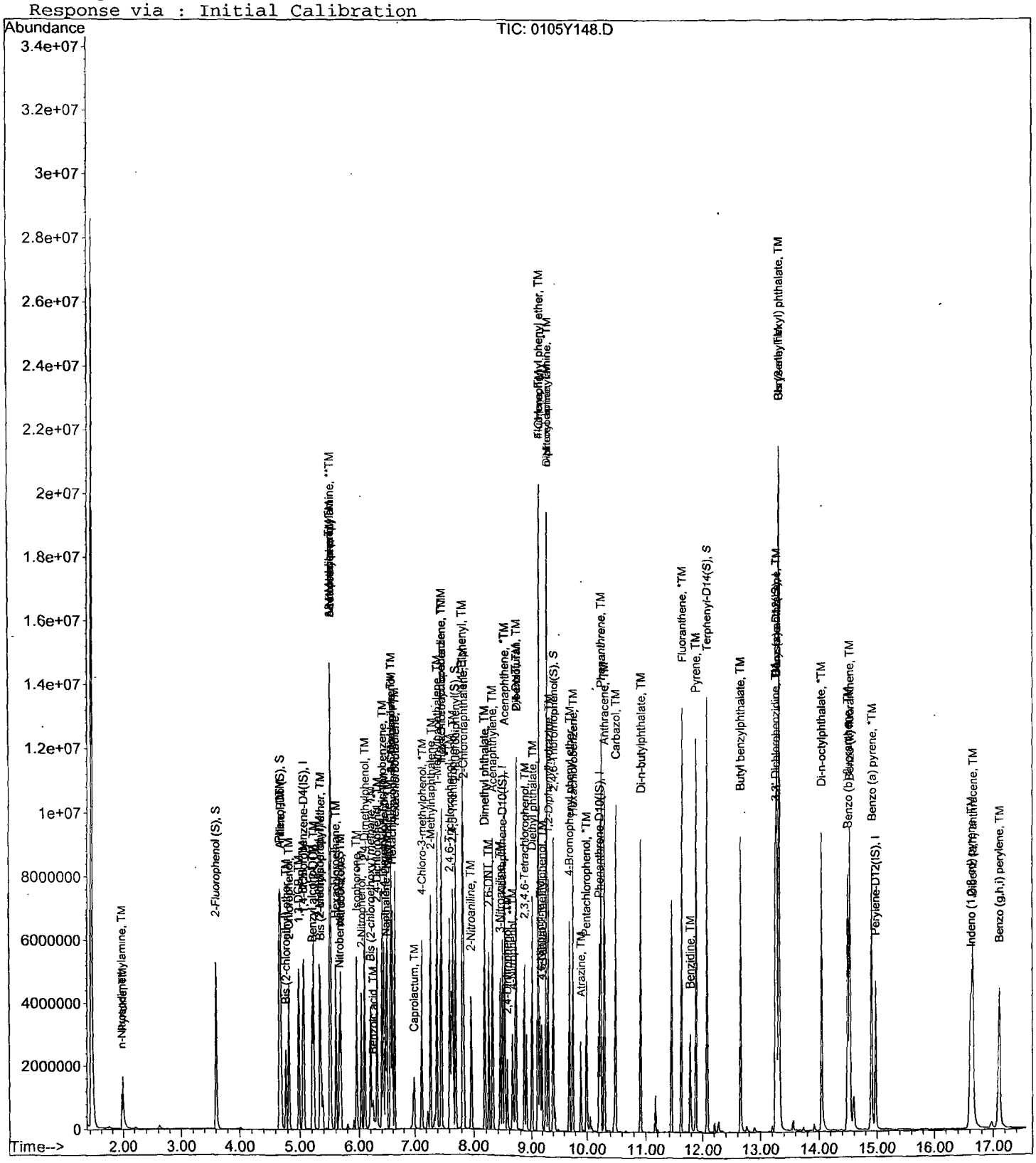
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2671	16		
3	TM	n-Nitrosodimethylamine	0.6105	0.5502	9.9	TM	
4	TM	Pyridine	1.336	1.235	7.6	TM	
5	S	2-Fluorophenol (S)	1.601	1.684	5.2	S	
6	S	Phenol-D6 (S)	2.046	2.288	12	S	
7	*TM	Phenol	2.418	2.728	13	*TM	
8	TM	Aniline	1.766	1.912	8.3	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.147	11	TM	
10	TM	2-Chlorophenol	1.829	1.979	8.2	TM	
11	TM	1,3-DCB	2.107	2.062	2.1	TM	
12	*TM	1,4-DCB	2.122	2.150	1.3	*TM	
13	TM	Benzyl alcohol	1.073	1.180	10	TM	
14	TM	1,2-DCB	1.992	2.034	2.1	TM	
15	TM	2-Methylphenol	1.401	1.544	10	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.115	14	TM	
17	TM	Acetophenone	2.563	2.879	12	TM	
18	TM	3&4-Methylphenol	1.892	2.171	15	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.771	18	**TM	
20	TM	Hexachloroethane	0.8684	0.8952	3.1	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6031	2.3	S	
23	TM	Nitrobenzene	0.6068	0.6242	2.9	TM	
24	TM	Isophorone	0.9746	0.9869	1.3	TM	
25	*TM	2-Nitrophenol	0.2562	0.2683	4.7	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4229	0.18	TM	
27	TML	Benzoic acid	0.3484	0.4082	17	TML	6.0
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5659	2.7	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4419	0.77	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5014	1.9	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6786	0.35	TM	
32	TM	Naphthalene	1.384	1.398	1.0	TM	
33	TM	4-Chloroaniline	0.5189	0.5720	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4329	1.5	TM	
35	TM	Hexachloropropene	0.4576	0.4402	3.8	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3520	2.7	*TM	
37	TM	Caprolactum	0.1396	0.1461	4.7	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4775	4.1	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9187	1.0	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9607	2.4	TM	
		Average			6.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5660	0.63	**TML	8.0	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8792	2.3	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5614	0.23	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.5988	2.1	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.818	3.0	S		
47	TM	1,1'-Biphenyl	2.012	2.083	3.5	TM		
48	TM	2-Chloronaphthalene	1.564	1.576	0.71	TM		
49	TM	2-Nitroaniline	0.4979	0.5173	3.9	TM		
50	TM	Dimethyl phthalate	1.914	1.917	0.17	TM		
51	TM	2,6-DNT	0.4186	0.4299	2.7	TM		
52	TM	Acenaphthylene	2.382	2.349	1.4	TM		
53	TM	3-Nitroaniline	0.3908	0.4133	5.8	TM		
54	*TM	Acenaphthene	1.584	1.590	0.36	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.2291	2.7	**TML	0.38	
56	**TM	4-Nitrophenol	0.3856	0.3868	0.31	**TM		
57	TM	Dibenzofuran	2.358	2.382	1.0	TM		
58	TM	2,4-DNT	0.6015	0.6243	3.8	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4693	3.2	TM		
60	TM	Diethyl phthalate	1.956	1.930	1.3	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.123	4.0	TM		
62	TM	Fluorene	1.985	2.065	4.0	TM		
63	TM	4-Nitroaniline	0.4251	0.4390	3.3	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2857	5.3	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1877	2.2	TM		
67	TM	Diphenyl amine	0.7523	0.7816	3.9	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7816	3.9	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9548	0.12	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2961	2.8	TM		
71	TM	Hexachlorobenzene	0.3129	0.3119	0.30	TM		
72	TM	Atrazine	0.2649	0.2391	9.7	TM		
73	*TM	Pentachlorophenol	0.2072	0.2029	2.1	*TM		
74	TM	Phenanthrene	1.386	1.415	2.1	TM		
75	TM	Anthracene	1.445	1.445	0.03	TM		
76	TM	Carbazol	1.280	1.273	0.51	TM		
77	TM	Di-n-butylphthalate	1.570	1.623	3.4	TM		
78	*TM	Fluoranthene	1.617	1.662	2.8	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.2625	34	TM		*NT
		Average			3.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.744	4.6	TM	
82	S	Terphenyl-D14(S)	1.201	1.263	5.2	S	
83	TM	Butyl benzylphthalate	0.7149	0.7726	8.1	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6280	13	TM	
85	TM	Benz (a) anthracene	1.709	1.775	3.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.168	14	TM	
87	TM	Chrysene	1.610	1.709	6.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.640	4.4	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.619	6.8	TM	
92	*TM	Benzo (a) pyrene	1.467	1.553	5.9	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.657	2.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.455	1.7	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.379	4.6	TM	
96							
97							
98							
99							
100							
101							
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111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	597519	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2483138	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1595725	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3256004	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	3161604	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2954151	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2515522	105.21594 ppb	0.00
Spiked Amount 200.000			Recovery =	52.608%	
6) Phenol-D6 (S)	4.67	99	3418464	111.82372 ppb	0.00
Spiked Amount 200.000			Recovery =	55.912%	
22) Nitrobenzene-D5(S)	5.66	82	1872038	51.12874 ppb	0.00
Spiked Amount 100.000			Recovery =	51.129%	
46) 2-Fluorobiphenyl(S)	7.71	172	3626780	48.48936 ppb	0.00
Spiked Amount 100.000			Recovery =	48.489%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1139612	94.73865 ppb	0.00
Spiked Amount 200.000			Recovery =	47.370%	
82) Terphenyl-D14(S)	12.08	244	4990569	52.59038 ppb	0.00
Spiked Amount 100.000			Recovery =	52.590%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.97	42	410941	45.06047 ppb	75
4) Pyridine	1.99	79	922141	46.20608 ppb	92
7) Phenol	4.69	94	2037557	56.41676 ppb	86
8) Aniline	4.69	93	1427968	54.13171 ppb	95
9) Bis (2-chloroethyl) ether	4.77	63	856695	55.58254 ppb	94
10) 2-Chlorophenol	4.82	128	1478368	54.10404 ppb	98
11) 1,3-DCB	4.98	146	1539839	48.93512 ppb	99
12) 1,4-DCB	5.07	146	1605908	50.66416 ppb	99
13) Benzyl alcohol	5.21	108	881472	55.01713 ppb	94
14) 1,2-DCB	5.23	146	1519016	51.05115 ppb	99
15) 2-Methylphenol	5.34	107	1152856	55.10387 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	833141	57.19908 ppb	95
17) Acetophenone	5.50	105	2150334	56.17241 ppb	95
18) 3&4-Methylphenol	5.51	107	3243712	114.78775 ppb	94
19) n-Nitrosodi-n-propylamine	5.51	70	1322814	59.22109 ppb	94
20) Hexachloroethane	5.60	117	668598	51.53983 ppb	97
23) Nitrobenzene	5.69	77	1937330	51.43033 ppb	95
24) Isophorone	5.96	82	3063289	50.63341 ppb	95
25) 2-Nitrophenol	6.04	139	832678	52.36416 ppb	83
26) 2,4-Dimethylphenol	6.10	122	1312633	49.90970 ppb	97
27) Benzoic acid	6.25	105	1267152	52.98115 ppb	96
28) Bis (2-chloroethoxy) metha	6.20	93	1756572	51.34314 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1371611	50.38417 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1556348	49.04952 ppb	99
31) 3,4-Dimethylphenol	6.43	107	2106264	50.17297 ppb	97
32) Naphthalene	6.49	128	4339317	50.51692 ppb	99
33) 4-Chloroaniline	6.56	127	1775552	55.12235 ppb	93
34) 2,6-Dichlorophenol	6.56	162	1343541	50.74578 ppb	98
35) Hexachloropropene	6.59	213	1366378	48.09670 ppb	100
36) Hexachlorobutadiene	6.64	225	1092517	48.66642 ppb	97
37) Caprolactum	6.99	55	453540	52.32646 ppb	96
38) 4-Chloro-3-methylphenol	7.13	107	1482053	52.06976 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	2851515	50.50021	ppb	99
40)	1-Methylnaphthalene	7.40	142	2981835	51.22144	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	1128960	46.01296	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1753677	48.83207	ppb	99
44)	2,4,6-Trichlorophenol	7.61	196	1119849	50.11620	ppb	98
45)	2,4,5-Trichlorophenol	7.67	196	1194393	48.92711	ppb	95
47)	1,1'-Biphenyl	7.82	154	4155035	51.77056	ppb	99
48)	2-Chloronaphthalene	7.84	162	3142850	50.35695	ppb	98
49)	2-Nitroaniline	7.96	65	1031887	51.95300	ppb	83
50)	Dimethyl phthalate	8.19	163	3823670	50.08738	ppb	99
51)	2,6-DNT	8.25	165	857463	51.34579	ppb #	70
52)	Acenaphthylene	8.32	152	4684674	49.28920	ppb	99
53)	3-Nitroaniline	8.45	138	824468	52.87973	ppb	94
54)	Acenaphthene	8.52	154	3171407	50.18217	ppb	100
55)	2,4-Dinitrophenol	8.57	184	456941	49.80975	ppb	89
56)	4-Nitrophenol	8.66	65	771570	50.15291	ppb	91
57)	Dibenzofuran	8.72	168	4750987	50.51462	ppb	91
58)	2,4-DNT	8.71	165	1245359	51.90275	ppb	84
59)	2,3,4,6-Tetrachlorophenol	8.86	232	936002	48.42181	ppb	92
60)	Diethyl phthalate	9.01	149	3849856	49.34002	ppb	97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2240829	51.98690	ppb	99
62)	Fluorene	9.12	166	4118050	52.01496	ppb	99
63)	4-Nitroaniline	9.16	138	875610	51.62988	ppb	96
66)	4,6-Dinitro-2-methylphenol	9.20	198	763769	48.90960	ppb	96
67)	Diphenyl amine	9.27	169	6362466	103.89225	ppb	99
68)	n-Nitrosodiphenylamine	9.27	169	6362466	103.89225	ppb	99
69)	1,2-Diphenylhydrazine	9.31	77	3886067	50.05955	ppb	95
70)	4-Bromophenyl phenyl ether	9.69	248	1204990	48.58167	ppb	92
71)	Hexachlorobenzene	9.75	284	1269546	49.85063	ppb #	90
72)	Atrazine	9.89	200	486645	22.57253	ppb	96
73)	Pentachlorophenol	9.99	266	826005	48.96386	ppb	99
74)	Phenanthrene	10.24	178	5760076	51.06736	ppb	100
75)	Anthracene	10.29	178	5881189	49.98491	ppb	99
76)	Carbazol	10.49	167	5182827	49.74544	ppb	97
77)	Di-n-butylphthalate	10.91	149	6607607	51.69429	ppb	99
78)	Fluoranthene	11.62	202	6764096	51.39053	ppb	98
80)	Benzidine	11.79	184	1037367	32.99282	ppb	98
81)	Pyrene	11.88	202	6893694	52.29882	ppb	99
83)	Butyl benzylphthalate	12.65	149	3053173	54.03224	ppb	96
84)	3,3'-Dichlorobenzidine	13.25	252	2481804	56.63715	ppb #	98
85)	Benz (a) anthracene	13.27	228	7016264	51.94036	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4614438	56.76403	ppb #	91
87)	Chrysene	13.32	228	6753956	53.08828	ppb	100
88)	Di-n-octylphthalate	14.04	149	7229096	54.24486	ppb	99
90)	Benzo (b) fluoranthene	14.49	252	6055988	52.18699	ppb #	98
91)	Benzo (k) fluoranthene	14.53	252	5978190	53.38218	ppb	99
92)	Benzo (a) pyrene	14.91	252	5735319	52.94426	ppb	99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	6118221	49.00996	ppb	98
94)	Dibenz (a,h) anthracene	16.65	278	5371287	49.16412	ppb	99
95)	Benzo (g,h,i) perylene	17.11	276	5090690	47.69644	ppb	99

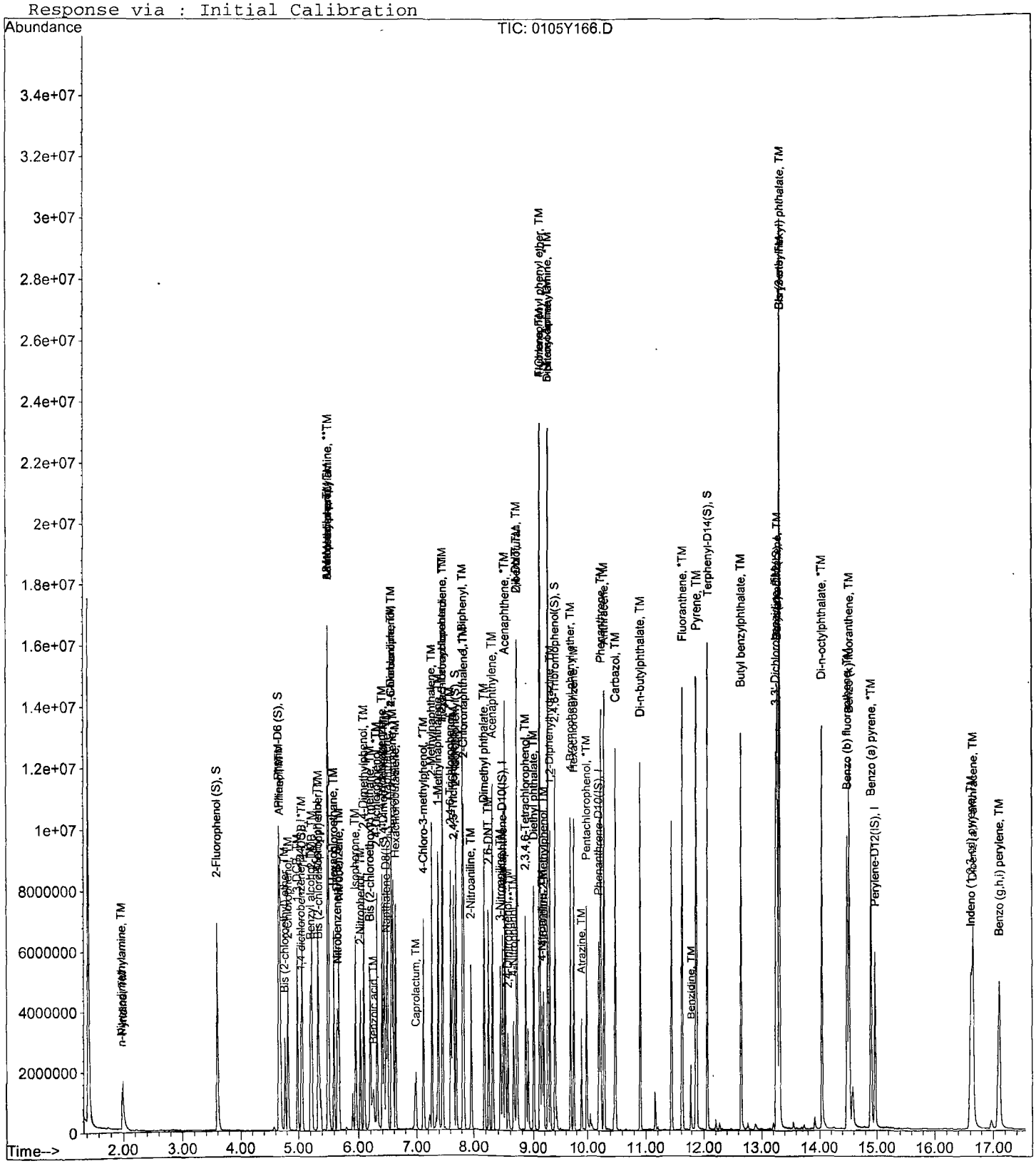
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y154.D Vial: 54
Acq On : 1 Feb 21 17:49 Operator: MA
Sample : BA26001W20 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:36 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	438037	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1714493	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1056939	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2216042	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1989361	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1899188	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2411574	136.23039 ppb	0.00
Spiked Amount 198.020			Recovery =	68.796%	
6) Phenol-D6 (S)	4.66	99	3208560	141.75326 ppb	0.00
Spiked Amount 198.020			Recovery =	71.585%	
22) Nitrobenzene-D5(S)	5.66	82	2003638	78.47185 ppb	0.00
Spiked Amount 99.010			Recovery =	79.257%	
46) 2-Fluorobiphenyl(S)	7.70	172	3717274	74.29113 ppb	0.00
Spiked Amount 99.010			Recovery =	75.034%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1307989	162.54045 ppb	0.00
Spiked Amount 198.020			Recovery =	82.083%	
82) Terphenyl-D14(S)	12.07	244	6125310	101.56807 ppb	0.00
Spiked Amount 99.010			Recovery =	102.584%	

Target Compounds Qvalue

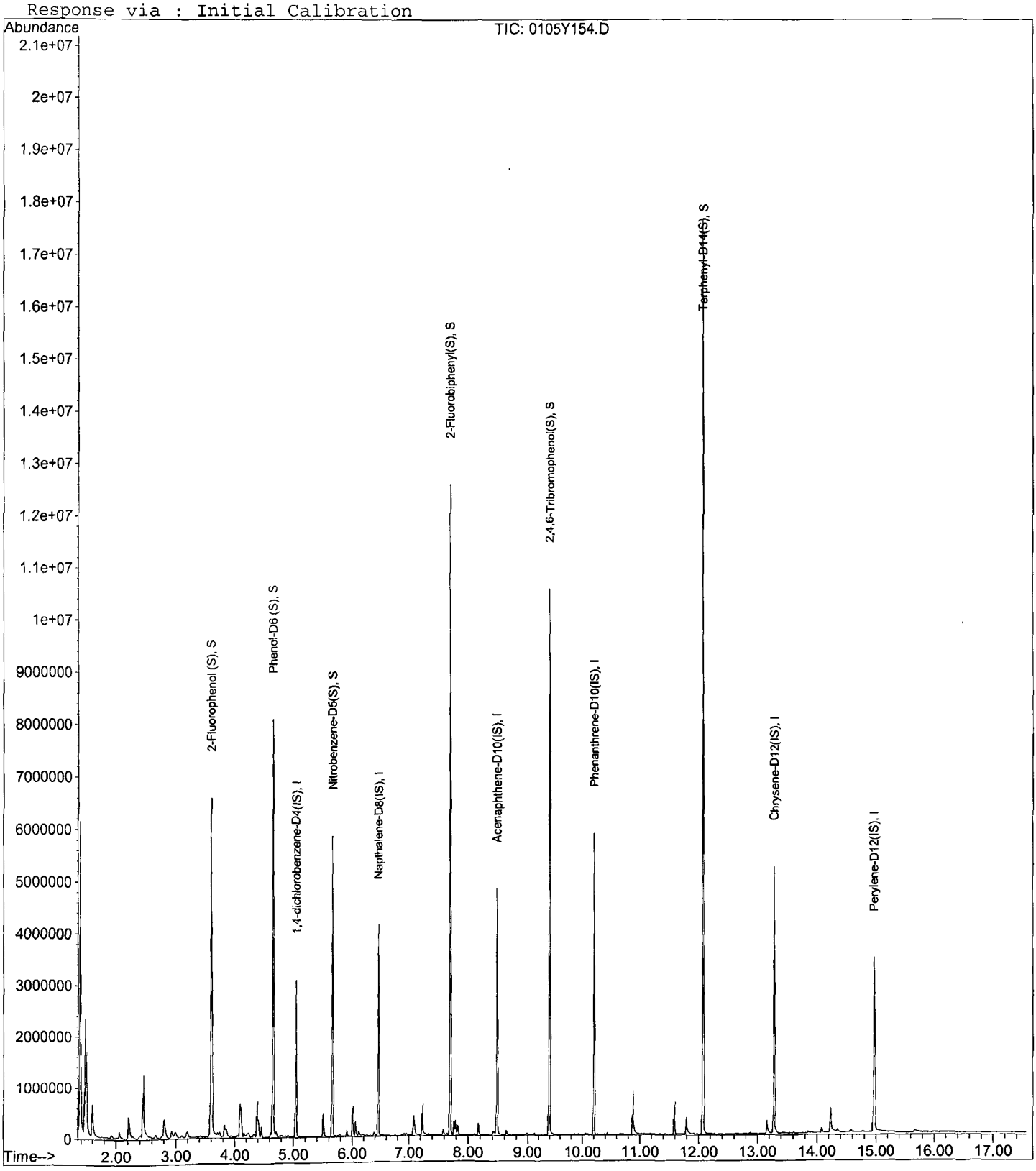
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y154.D Vial: 54
Acq On : 1 Feb 21 17:49 Operator: MA
Sample : BA26001W20 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:36 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y155.D Vial: 55
Acq On : 1 Feb 21 18:15 Operator: MA
Sample : BA26003W09 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:37 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	450697	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1748214	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1080029	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2264199	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2002466	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1912620	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2383996	130.88958 ppb	0.00
Spiked Amount 198.020			Recovery =	66.099%	
6) Phenol-D6 (S)	4.66	99	3120073	133.97192 ppb	0.00
Spiked Amount 198.020			Recovery =	67.656%	
22) Nitrobenzene-D5(S)	5.66	82	2003648	76.95860 ppb	0.00
Spiked Amount 99.010			Recovery =	77.729%	
46) 2-Fluorobiphenyl(S)	7.70	172	3878858	75.86313 ppb	0.00
Spiked Amount 99.010			Recovery =	76.622%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1328519	161.56216 ppb	0.00
Spiked Amount 198.020			Recovery =	81.589%	
82) Terphenyl-D14(S)	12.08	244	6285639	103.54450 ppb	0.00
Spiked Amount 99.010			Recovery =	104.579%	

Target Compounds Qvalue

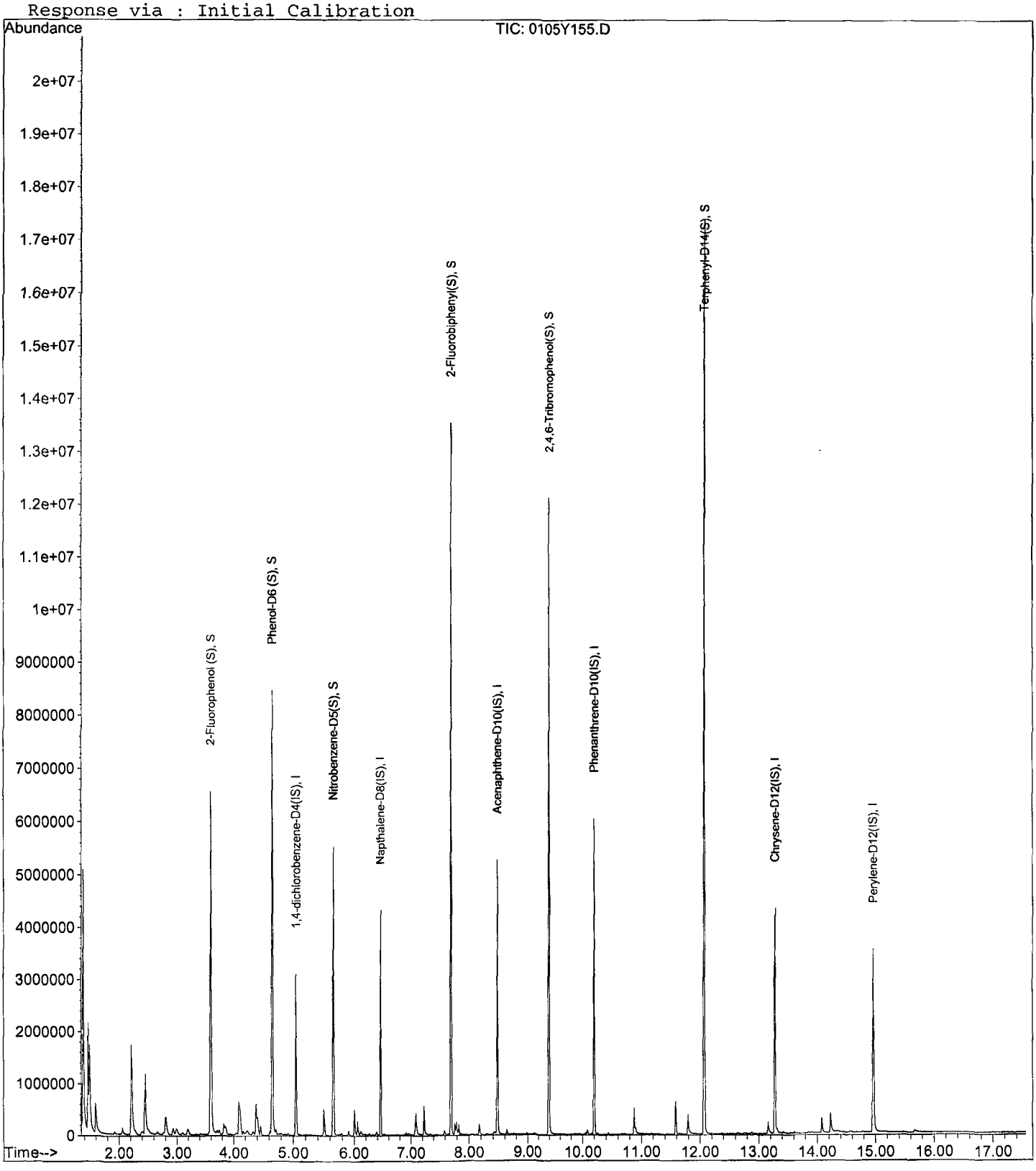
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y155.D Vial: 55
Acq On : 1 Feb 21 18:15 Operator: MA
Sample : BA26003W09 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:37 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y156.D Vial: 56
Acq On : 1 Feb 21 18:41 Operator: MA
Sample : BA26006W13 1/1040 Inst : Yoda
Misc : Multiplr: 0.96

Quant Time: Feb 2 10:38 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	415367	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1615017	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1061737	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2099462	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1901679	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1826529	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2611101	151.06512 ppb	0.00
Spiked Amount 192.308			Recovery =	78.554%	
6) Phenol-D6 (S)	4.66	99	3270075	147.96115 ppb	0.00
Spiked Amount 192.308			Recovery =	76.940%	
22) Nitrobenzene-D5(S)	5.66	82	2069986	83.58127 ppb	0.00
Spiked Amount 96.154			Recovery =	86.924%	
46) 2-Fluorobiphenyl(S)	7.70	172	3645168	70.42895 ppb	0.00
Spiked Amount 96.154			Recovery =	73.246%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1382835	166.13036 ppb	0.00
Spiked Amount 192.308			Recovery =	86.388%	
82) Terphenyl-D14(S)	12.07	244	6074503	102.33038 ppb	0.00
Spiked Amount 96.154			Recovery =	106.423%	

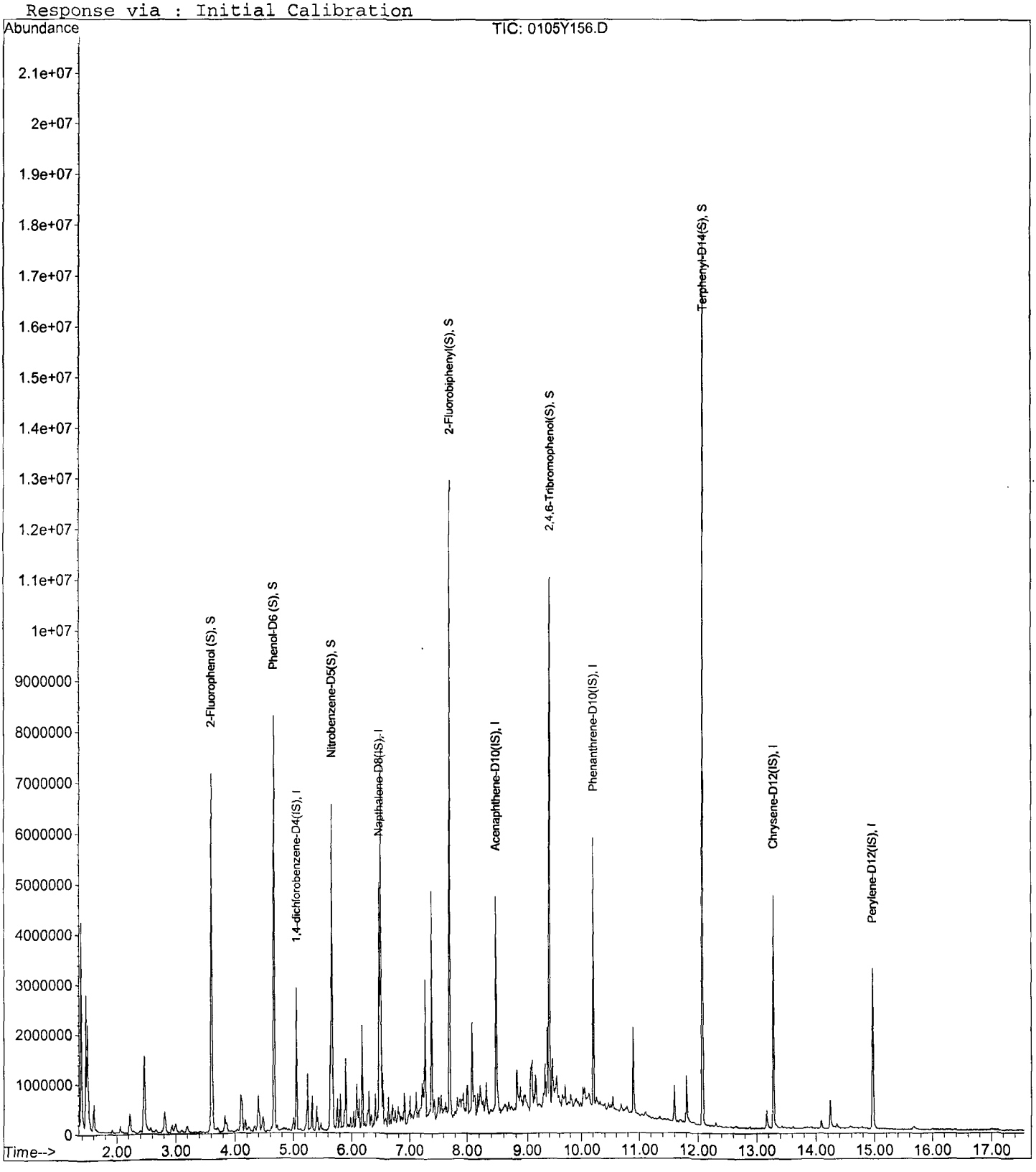
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0105Y156.D Y0105.M Tue Feb 02 14:08:05 2021 Page 1

Data File : M:\YODA\DATA\Y210105\0105Y156.D Vial: 56
Acq On : 1 Feb 21 18:41 Operator: MA
Sample : BA26006W13 1/1040 Inst : Yoda
Misc : Multiplr: 0.96

Quant Time: Feb 2 10:38 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y157.D Vial: 57
Acq On : 1 Feb 21 19:06 Operator: MA
Sample : BA26008W07 1/1020 Inst : Yoda
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:39 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	475831	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1850579	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1191816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2429636	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2211723	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2113164	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2641065	135.99733 ppb	0.00
Spiked Amount 196.078			Recovery =	69.358%	
6) Phenol-D6 (S)	4.66	99	3565979	143.60830 ppb	0.00
Spiked Amount 196.078			Recovery =	73.240%	
22) Nitrobenzene-D5(S)	5.66	82	1969981	70.77902 ppb	0.00
Spiked Amount 98.039			Recovery =	72.195%	
46) 2-Fluorobiphenyl(S)	7.70	172	3623651	63.59446 ppb	0.00
Spiked Amount 98.039			Recovery =	64.866%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1395504	152.28215 ppb	0.00
Spiked Amount 196.078			Recovery =	77.664%	
82) Terphenyl-D14(S)	12.07	244	6164660	91.04182 ppb	0.00
Spiked Amount 98.039			Recovery =	92.863%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0105Y157.D Y0105.M Tue Feb 02 14:08:11 2021 Page 1

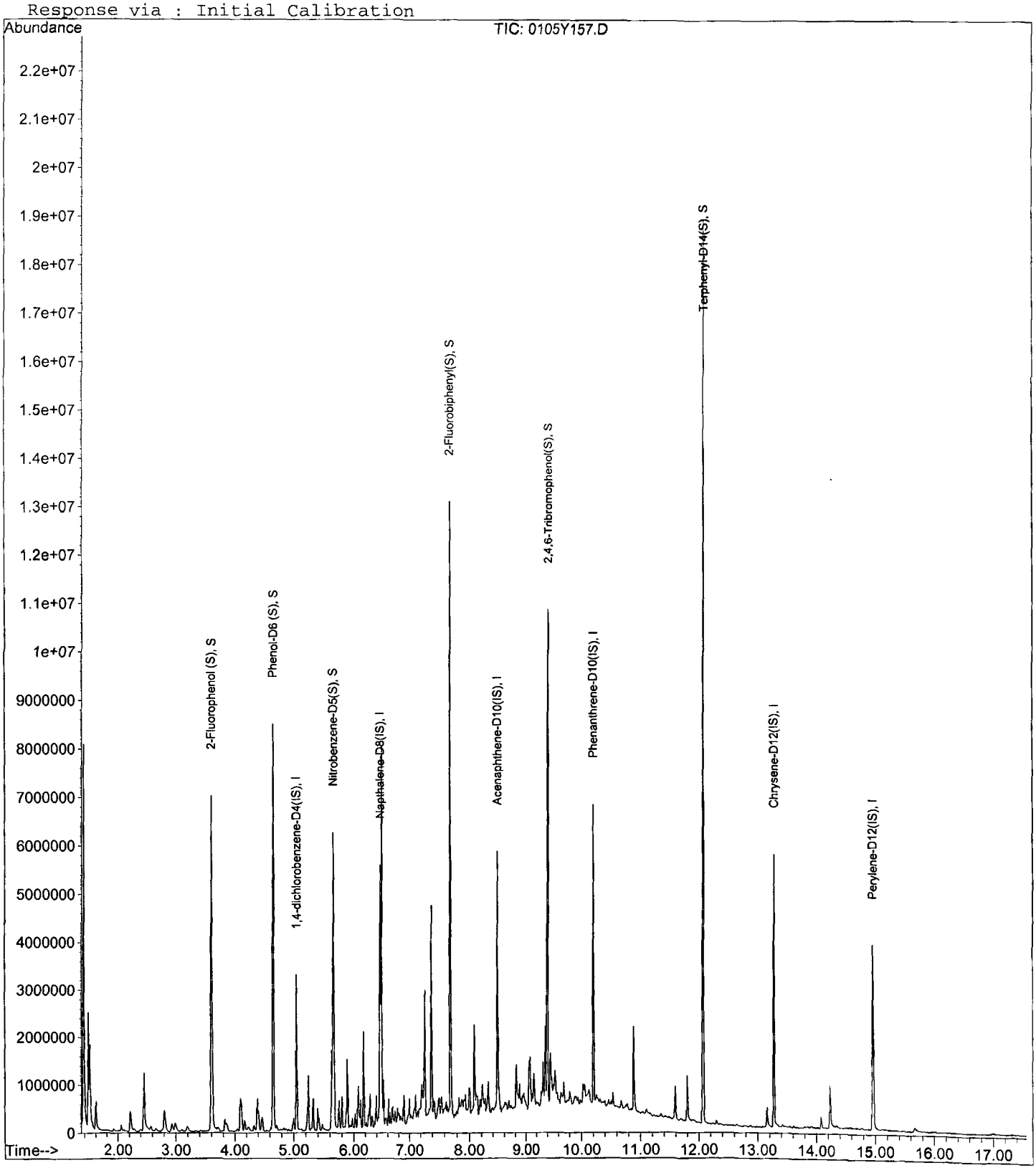
Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y157.D
Acq On : 1 Feb 21 19:06
Sample : BA26008W07 1/1020
Misc :

Vial: 57
Operator: MA
Inst : Yoda
Multiplr: 0.98

Quant Time: Feb 2 10:39 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y158.D Vial: 58
Acq On : 1 Feb 21 19:32 Operator: MA
Sample : BA26013W14 1/1020 Inst : Yoda
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:39 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	439331	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1709314	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1066265	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2233444	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2042984	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1848824	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2763421	154.12008 ppb	0.00
Spiked Amount 196.078			Recovery =	78.601%	
6) Phenol-D6 (S)	4.67	99	3534061	154.14722 ppb	0.00
Spiked Amount 196.078			Recovery =	78.615%	
22) Nitrobenzene-D5(S)	5.66	82	2095759	81.52103 ppb	0.00
Spiked Amount 98.039			Recovery =	83.151%	
46) 2-Fluorobiphenyl(S)	7.70	172	4003951	78.54268 ppb	0.00
Spiked Amount 98.039			Recovery =	80.114%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1411574	172.17322 ppb	0.00
Spiked Amount 196.078			Recovery =	87.808%	
82) Terphenyl-D14(S)	12.07	244	6507712	104.04613 ppb	0.00
Spiked Amount 98.039			Recovery =	106.127%	

Target Compounds	Qvalue

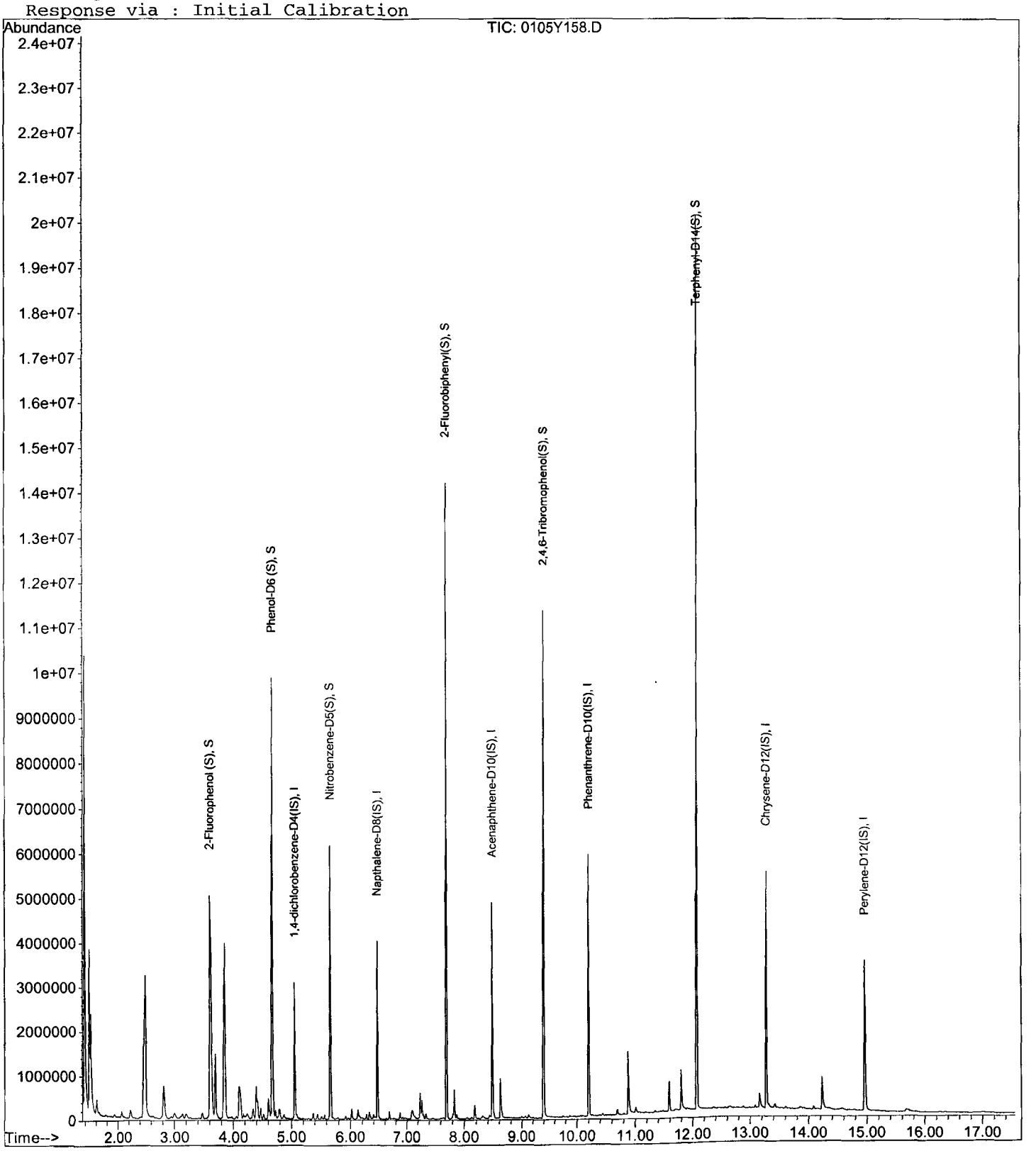
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y158.D Vial: 58
Acq On : 1 Feb 21 19:32 Operator: MA
Sample : BA26013W14 1/1020 Inst : Yoda
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:39 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y159.D Vial: 59
Acq On : 1 Feb 21 19:57 Operator: MA
Sample : BA26016W12 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:40 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	443960	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1750679	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1100047	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2289800	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2051988	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1949343	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2753518	153.47170 ppb	0.00
Spiked Amount 198.020			Recovery = 77.503%		
6) Phenol-D6 (S)	4.67	99	3713693	161.88099 ppb	0.00
Spiked Amount 198.020			Recovery = 81.750%		
22) Nitrobenzene-D5(S)	5.66	82	2107227	80.82303 ppb	0.00
Spiked Amount 99.010			Recovery = 81.631%		
46) 2-Fluorobiphenyl(S)	7.70	172	3895152	74.79550 ppb	0.00
Spiked Amount 99.010			Recovery = 75.544%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1350362	161.23015 ppb	0.00
Spiked Amount 198.020			Recovery = 81.421%		
82) Terphenyl-D14(S)	12.08	244	6435346	103.45222 ppb	0.00
Spiked Amount 99.010			Recovery = 104.487%		

Target Compounds Qvalue

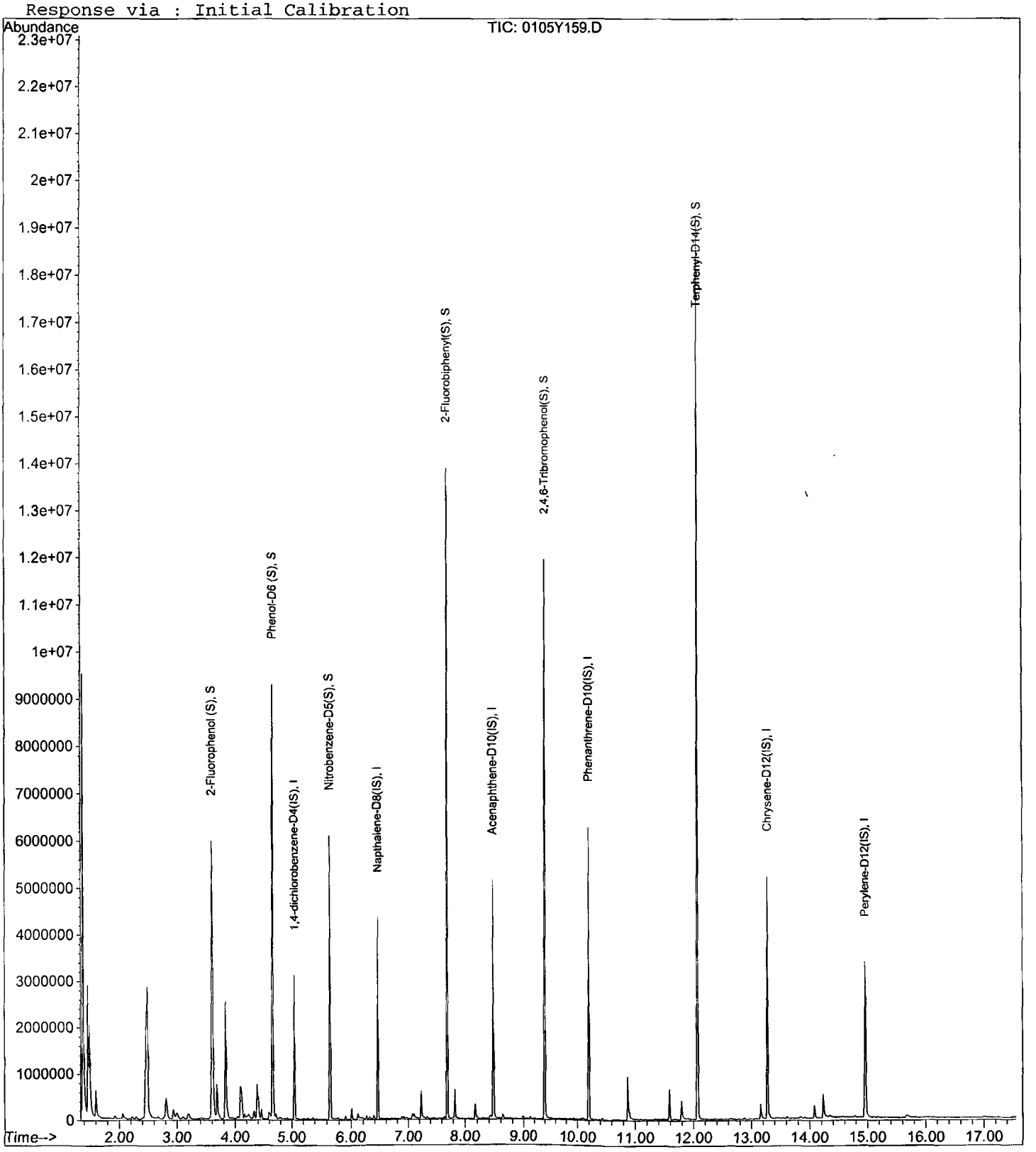
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y159.D Vial: 59
Acq On : 1 Feb 21 19:57 Operator: MA
Sample : BA26016W12 1/1010 Inst : Yoda
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:40 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y149.D Vial: 49
Acq On : 1 Feb 21 15:40 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:01 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	413306	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1601345	40.00000 ppb	-0.01
41) Acenaphthene-D10(IS)	8.47	164	1016462	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2094303	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1896323	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1799002	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2571665	155.50625 ppb	-0.01
Spiked Amount 200.000			Recovery = 77.753%		
6) Phenol-D6 (S)	4.67	99	3360530	158.92444 ppb	0.00
Spiked Amount 200.000			Recovery = 79.462%		
22) Nitrobenzene-D5(S)	5.66	82	1939638	82.14612 ppb	0.00
Spiked Amount 100.000			Recovery = 82.146%		
46) 2-Fluorobiphenyl(S)	7.70	172	3690537	77.46074 ppb	0.00
Spiked Amount 100.000			Recovery = 77.461%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1233107	160.93031 ppb	0.00
Spiked Amount 200.000			Recovery = 80.465%		
82) Terphenyl-D14(S)	12.07	244	5815050	102.16563 ppb	0.00
Spiked Amount 100.000			Recovery = 102.166%		

Target Compounds Qvalue

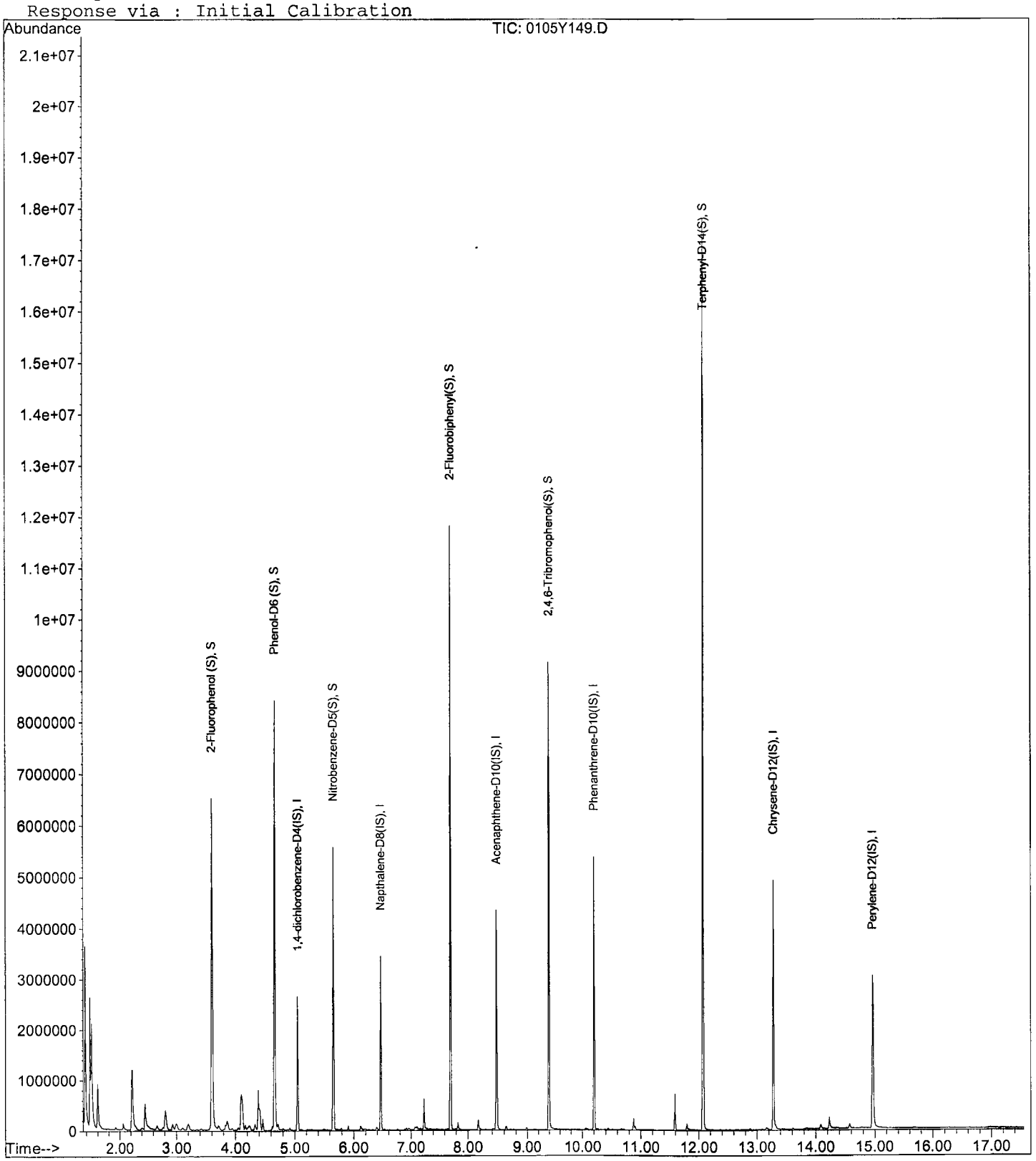
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y149.D Vial: 49
Acq On : 1 Feb 21 15:40 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:01 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	420096	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1660369	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1051569	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2163014	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2031349	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1789445	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2773482	164.99925 ppb	0.00
Spiked Amount 200.000			Recovery =	82.500%	
6) Phenol-D6 (S)	4.67	99	3508957	163.26163 ppb	0.00
Spiked Amount 200.000			Recovery =	81.631%	
22) Nitrobenzene-D5(S)	5.66	82	2020544	82.53060 ppb	0.00
Spiked Amount 100.000			Recovery =	82.531%	
46) 2-Fluorobiphenyl(S)	7.70	172	3787987	76.85178 ppb	0.00
Spiked Amount 100.000			Recovery =	76.852%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1326221	167.30402 ppb	0.00
Spiked Amount 200.000			Recovery =	83.652%	
82) Terphenyl-D14(S)	12.08	244	5974737	97.99365 ppb	0.00
Spiked Amount 100.000			Recovery =	97.994%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.98	42	240764	37.55009 ppb	76
4) Pyridine	2.00	79	252952	18.02781 ppb	89
7) Phenol	4.69	94	1019034	40.13195 ppb	88
9) Bis (2-chloroethyl) ether	4.77	63	469032	43.28304 ppb	99
10) 2-Chlorophenol	4.83	128	772827	40.22839 ppb	97
11) 1,3-DCB	4.98	146	751890	33.98622 ppb	99
12) 1,4-DCB	5.07	146	781851	35.08386 ppb	99
13) Benzyl alcohol	5.21	108	445867	39.58202 ppb	99
14) 1,2-DCB	5.23	146	752538	35.97284 ppb	100
15) 2-Methylphenol	5.34	107	612479	41.63911 ppb	98
16) Bis (2-chloroisopropyl) et	5.36	45	455962	44.52484 ppb	97
17) Acetophenone	5.49	105	1118075	41.54237 ppb	98
18) 3&4-Methylphenol	5.50	107	1644398	82.76818 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	665697	42.38941 ppb	97
20) Hexachloroethane	5.61	117	282234	30.94499 ppb	97
23) Nitrobenzene	5.68	77	1031413	40.94912 ppb	99
24) Isophorone	5.95	82	1616604	39.96218 ppb	93
25) 2-Nitrophenol	6.03	139	428379	40.28854 ppb	97
26) 2,4-Dimethylphenol	6.09	122	690823	39.28300 ppb	95
27) Benzoic acid	6.23	105	655997	42.61015 ppb	97
28) Bis (2-chloroethoxy) metha	6.20	93	882306	38.56843 ppb	99
29) 2,4-Dichlorophenol	6.31	162	712752	39.15596 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	734283	34.60890 ppb	96
31) 3,4-Dimethylphenol	6.43	107	1106298	39.41172 ppb	98
32) Naphthalene	6.49	128	2261064	39.36629 ppb	99
34) 2,6-Dichlorophenol	6.56	162	703826	39.75672 ppb	96
35) Hexachloropropene	6.59	213	415550	21.87580 ppb	99
36) Hexachlorobutadiene	6.63	225	438990	29.24503 ppb	98
37) Caprolactum	6.96	55	236094	40.73680 ppb	93
38) 4-Chloro-3-methylphenol	7.12	107	762014	40.03879 ppb	98
39) 2-Methylnaphthalene	7.28	142	1490255	39.47065 ppb	100
40) 1-Methylnaphthalene	7.39	142	1457765	37.45001 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	836544	35.34798	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	580664	39.43337	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	619388	38.50218	ppb		97
47)	1,1'-Biphenyl	7.82	154	2012581	38.05238	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1565501	38.06356	ppb		95
49)	2-Nitroaniline	7.95	65	426142	32.55765	ppb		80
50)	Dimethyl phthalate	8.18	163	2106250	41.86760	ppb		99
51)	2,6-DNT	8.24	165	444655	40.40480	ppb	#	58
52)	Acenaphthylene	8.32	152	2335421	37.28703	ppb		100
54)	Acenaphthene	8.51	154	1587048	38.10727	ppb		99
55)	2,4-Dinitrophenol	8.56	184	221967	40.35693	ppb		98
56)	4-Nitrophenol	8.66	65	420143	41.44176	ppb		84
57)	Dibenzofuran	8.72	168	2329030	37.57756	ppb		98
58)	2,4-DNT	8.71	165	635543	40.19398	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.86	232	495909	38.93019	ppb		97
60)	Diethyl phthalate	9.00	149	2119627	41.22252	ppb		96
61)	4-Chlorophenyl phenyl ethe	9.12	204	1128145	39.71645	ppb		95
62)	Fluorene	9.12	166	2034087	38.98759	ppb		100
66)	4,6-Dinitro-2-methylphenol	9.18	198	340023	32.77676	ppb	#	78
67)	Diphenyl amine	9.26	169	1500137	36.87349	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1500137	36.87349	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1530170	29.67166	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	627761	38.09859	ppb		93
71)	Hexachlorobenzene	9.75	284	634986	37.53289	ppb	#	71
73)	Pentachlorophenol	9.99	266	422094	37.66411	ppb		99
74)	Phenanthrene	10.23	178	2951017	39.38333	ppb		100
75)	Anthracene	10.29	178	2922276	37.38700	ppb		99
76)	Carbazol	10.48	167	2244381	32.42714	ppb		96
77)	Di-n-butylphthalate	10.91	149	3594807	42.33499	ppb		99
78)	Fluoranthene	11.61	202	3389473	38.76422	ppb		99
81)	Pyrene	11.88	202	3572937	42.18793	ppb		100
83)	Butyl benzylphthalate	12.65	149	1616705	44.53026	ppb		94
85)	Benz (a) anthracene	13.27	228	3307221	38.10528	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2304265	44.11738	ppb		98
87)	Chrysene	13.31	228	3381556	41.36947	ppb		99
88)	Di-n-octylphthalate	14.04	149	3774366	44.07999	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	2936701	41.77835	ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3328114	49.06131	ppb		99
92)	Benzo (a) pyrene	14.90	252	2628699	40.06051	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2930976	38.76018	ppb		98
94)	Dibenz (a,h) anthracene	16.64	278	2696174	40.74105	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	2574665	39.82396	ppb		99

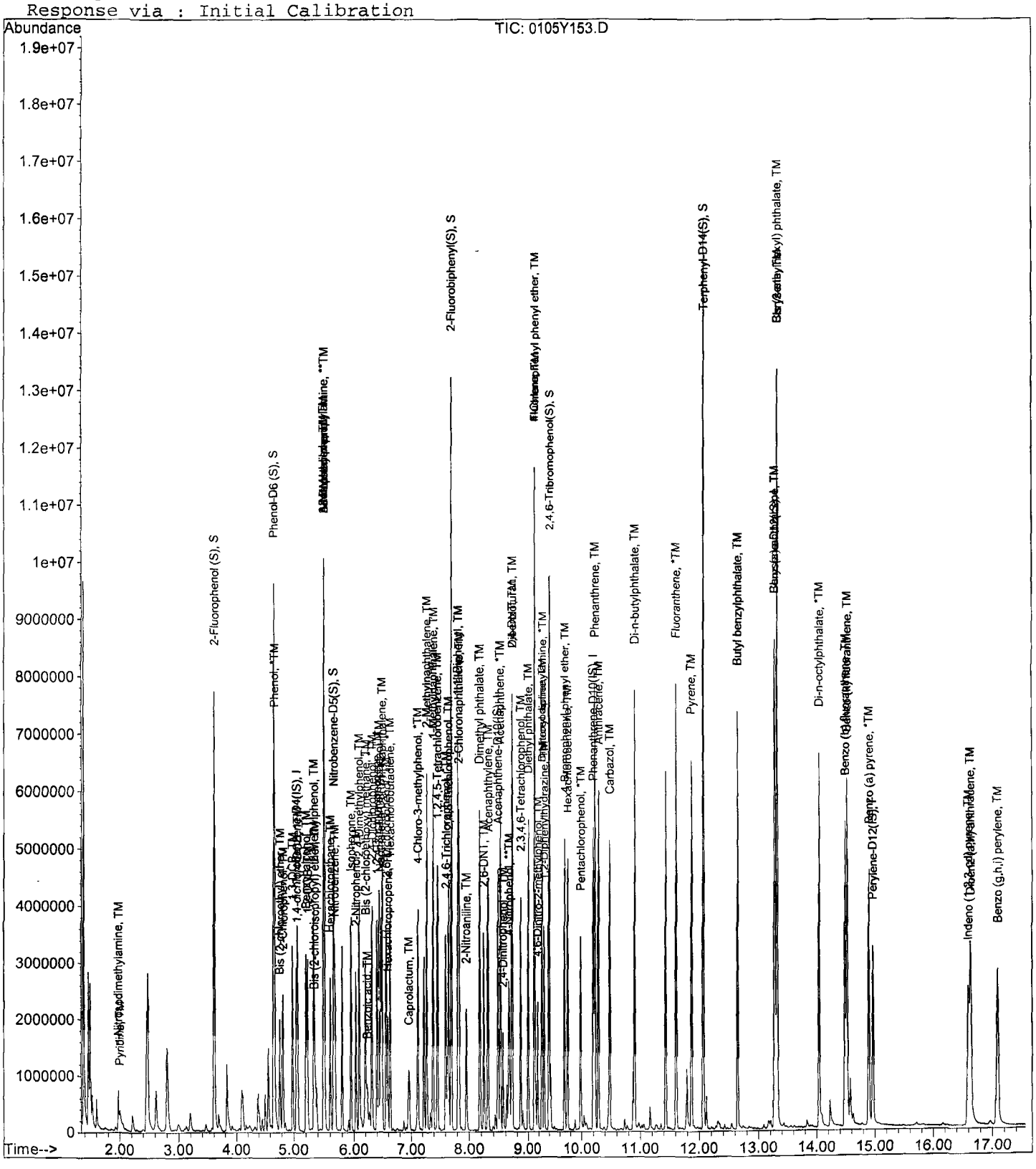
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y151.D Vial: 51
Acq On : 1 Feb 21 16:32 Operator: MA
Sample : BA26001W21 MS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:35 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	387875	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1519508	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	964286	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	1969538	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	1869822	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.97	264	1695919	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.61	112	2491422	160.53165 ppb		0.00
Spiked Amount 200.000			Recovery =	80.266%		
6) Phenol-D6 (S)	4.67	99	3164317	159.45672 ppb		0.00
Spiked Amount 200.000			Recovery =	79.729%		
22) Nitrobenzene-D5(S)	5.66	82	1834467	81.87630 ppb		0.00
Spiked Amount 100.000			Recovery =	81.876%		
46) 2-Fluorobiphenyl(S)	7.70	172	3467999	76.72844 ppb		0.00
Spiked Amount 100.000			Recovery =	76.728%		
64) 2,4,6-Tribromophenol(S)	9.40	330	1169545	160.89380 ppb		0.00
Spiked Amount 200.000			Recovery =	80.447%		
82) Terphenyl-D14(S)	12.07	244	5273079	93.95669 ppb		0.00
Spiked Amount 100.000			Recovery =	93.957%		
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.97	42	214164	36.17617 ppb		81
4) Pyridine	2.00	79	233684	18.03810 ppb		93
7) Phenol	4.68	94	933504	39.81755 ppb		90
9) Bis (2-chloroethyl) ether	4.77	63	420495	42.02744 ppb		99
10) 2-Chlorophenol	4.82	128	704909	39.74112 ppb		99
11) 1,3-DCB	4.98	146	684154	33.49339 ppb		100
12) 1,4-DCB	5.07	146	717217	34.85706 ppb		99
13) Benzyl alcohol	5.20	108	404145	38.85855 ppb		96
14) 1,2-DCB	5.23	146	686259	35.52967 ppb		99
15) 2-Methylphenol	5.33	107	558846	41.14898 ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	412126	43.58735 ppb		98
17) Acetophenone	5.49	105	1019126	41.01143 ppb		96
18) 3&4-Methylphenol	5.51	107	1491690	81.31895 ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	596607	41.14583 ppb		98
20) Hexachloroethane	5.60	117	252882	30.03003 ppb		95
23) Nitrobenzene	5.69	77	934099	40.52346 ppb		89
24) Isophorone	5.95	82	1478409	39.93390 ppb		92
25) 2-Nitrophenol	6.04	139	373258	38.35872 ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	636068	39.52238 ppb		99
27) Benzoic acid	6.23	105	554966	39.92192 ppb		96
28) Bis (2-chloroethoxy) metha	6.20	93	796675	38.05358 ppb		99
29) 2,4-Dichlorophenol	6.31	162	645431	38.74457 ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	676659	34.84944 ppb		98
31) 3,4-Dimethylphenol	6.43	107	1008733	39.26731 ppb		99
32) Naphthalene	6.49	128	2053314	39.06328 ppb		99
34) 2,6-Dichlorophenol	6.56	162	637386	39.34136 ppb		98
35) Hexachloropropene	6.59	213	375245	21.58526 ppb		99
36) Hexachlorobutadiene	6.63	225	399366	29.07168 ppb		96
37) Caprolactum	6.97	55	214655	40.47107 ppb		95
38) 4-Chloro-3-methylphenol	7.13	107	698422	40.09937 ppb		92
39) 2-Methylnaphthalene	7.27	142	1345651	38.94465 ppb		98
40) 1-Methylnaphthalene	7.39	142	1333965	37.44644 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y151.D Vial: 51
Acq On : 1 Feb 21 16:32 Operator: MA
Sample : BA26001W21 MS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:35 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	777756	35.83861 ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	532606	39.44363 ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	562710	38.14513 ppb		95
47)	1,1'-Biphenyl	7.82	154	1866829	38.49151 ppb		99
48)	2-Chloronaphthalene	7.84	162	1444128	38.29073 ppb		99
49)	2-Nitroaniline	7.96	65	394600	32.87666 ppb		97
50)	Dimethyl phthalate	8.18	163	1940849	42.07187 ppb		100
51)	2,6-DNT	8.25	165	412067	40.83283 ppb		97
52)	Acenaphthylene	8.31	152	2147256	37.38595 ppb		99
54)	Acenaphthene	8.52	154	1480846	38.77569 ppb		100
55)	2,4-Dinitrophenol	8.56	184	176995	36.89945 ppb		93
56)	4-Nitrophenol	8.66	65	361268	38.85997 ppb		85
57)	Dibenzofuran	8.71	168	2152605	37.87475 ppb		100
58)	2,4-DNT	8.71	165	569999	39.31172 ppb		98
59)	2,3,4,6-Tetrachlorophenol	8.86	232	442382	37.87162 ppb		97
60)	Diethyl phthalate	9.00	149	1905186	40.40586 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1020917	39.19475 ppb		99
62)	Fluorene	9.11	166	1839105	38.44106 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.18	198	287549	30.44140 ppb	#	64
67)	Diphenyl amine	9.26	169	1439017	38.84581 ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1439017	38.84581 ppb		98
69)	1,2-Diphenylhydrazine	9.31	77	1404487	29.90990 ppb		97
70)	4-Bromophenyl phenyl ether	9.69	248	565900	37.71805 ppb		96
71)	Hexachlorobenzene	9.75	284	584451	37.93944 ppb		98
73)	Pentachlorophenol	9.99	266	366943	35.95937 ppb		98
74)	Phenanthrene	10.23	178	2678488	39.25775 ppb		100
75)	Anthracene	10.29	178	2657843	37.34424 ppb		99
76)	Carbazol	10.49	167	2131187	33.81650 ppb		99
77)	Di-n-butylphthalate	10.90	149	3254120	42.08744 ppb		99
78)	Fluoranthene	11.62	202	3177752	39.91295 ppb	#	97
81)	Pyrene	11.88	202	3351711	42.99458 ppb		99
83)	Butyl benzylphthalate	12.65	149	1487964	44.52472 ppb		99
85)	Benz (a) anthracene	13.27	228	3038651	38.03532 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2113197	43.95432 ppb		98
87)	Chrysene	13.32	228	3139948	41.73208 ppb		99
88)	Di-n-octylphthalate	14.04	149	3412689	43.29906 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	3015538	45.26574 ppb	#	99
91)	Benzo (k) fluoranthene	14.53	252	2801754	43.57969 ppb		98
92)	Benzo (a) pyrene	14.90	252	2461095	39.57467 ppb		98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2712164	37.84449 ppb		99
94)	Dibenz (a,h) anthracene	16.64	278	2499763	39.85624 ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	2398890	39.15140 ppb		98

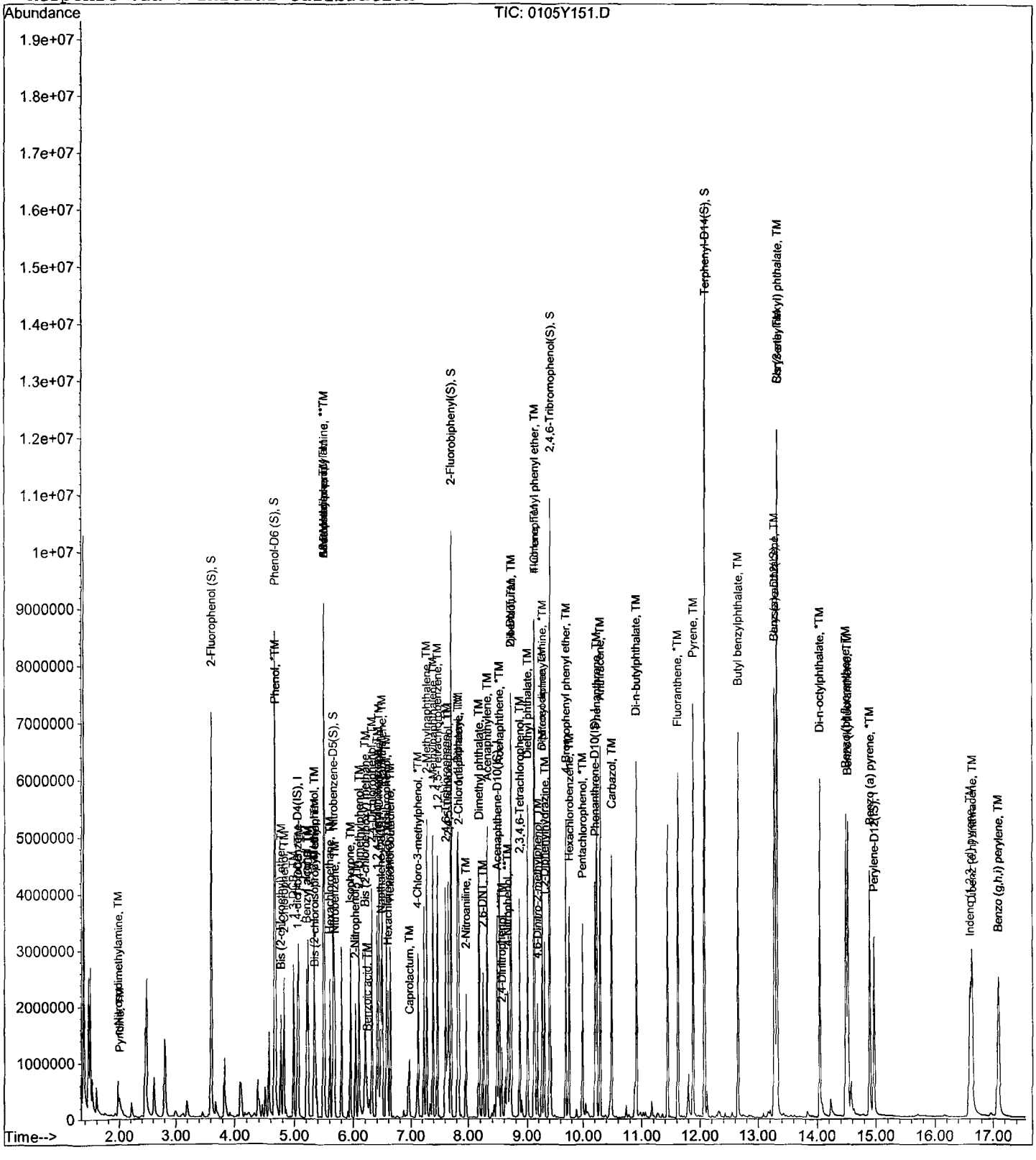
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y151.D Vial: 51
Acq On : 1 Feb 21 16:32 Operator: MA
Sample : BA26001W21 MS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:35 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y152.D Vial: 52
Acq On : 1 Feb 21 16:58 Operator: MA
Sample : BA26001W23 MSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:58 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418886	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1650918	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1016761	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2144733	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2041247	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	1882414	40.00000	ppb		0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	2730225	162.89500	ppb		0.00
Spiked Amount 200.000			Recovery = 81.448%				
6) Phenol-D6 (S)	4.67	99	3560659	166.14572	ppb		0.00
Spiked Amount 200.000			Recovery = 83.073%				
22) Nitrobenzene-D5(S)	5.66	82	1993964	81.91116	ppb		0.00
Spiked Amount 100.000			Recovery = 81.911%				
46) 2-Fluorobiphenyl(S)	7.71	172	3832062	80.40756	ppb		0.00
Spiked Amount 100.000			Recovery = 80.408%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1322448	172.53927	ppb		0.00
Spiked Amount 200.000			Recovery = 86.269%				
82) Terphenyl-D14(S)	12.08	244	6055299	98.83339	ppb		0.00
Spiked Amount 100.000			Recovery = 98.833%				
Target Compounds							Qvalue
3) n-Nitrosodimethylamine	1.98	42	207196	32.40809	ppb		75
4) Pyridine	2.00	79	452757	32.36107	ppb		91
7) Phenol	4.68	94	998254	39.42714	ppb		91
8) Aniline	4.69	93	742253	40.13665	ppb	#	63
9) Bis (2-chloroethyl) ether	4.77	63	445423	41.22310	ppb		98
10) 2-Chlorophenol	4.82	128	703369	36.71861	ppb		91
11) 1,3-DCB	4.99	146	757153	34.32297	ppb		99
12) 1,4-DCB	5.07	146	798488	35.93391	ppb		99
13) Benzyl alcohol	5.21	108	438916	39.07750	ppb		99
14) 1,2-DCB	5.24	146	757742	36.32624	ppb		98
15) 2-Methylphenol	5.34	107	556771	37.96116	ppb		99
16) Bis (2-chloroisopropyl) et	5.36	45	441667	43.25351	ppb		99
17) Acetophenone	5.50	105	1069880	39.86650	ppb		98
18) 3&4-Methylphenol	5.51	107	1481122	74.76528	ppb		95
19) n-Nitrosodi-n-propylamine	5.51	70	639332	40.82817	ppb		95
20) Hexachloroethane	5.61	117	294085	32.33751	ppb		88
23) Nitrobenzene	5.68	77	989820	39.52276	ppb		98
24) Isophorone	5.95	82	1588825	39.50032	ppb		96
25) 2-Nitrophenol	6.03	139	406132	38.41489	ppb		94
26) 2,4-Dimethylphenol	6.09	122	542281	31.01283	ppb		97
27) Benzoic acid	6.23	105	609232	40.26387	ppb		98
28) Bis (2-chloroethoxy) metha	6.20	93	909833	39.99941	ppb		99
29) 2,4-Dichlorophenol	6.31	162	673107	37.18969	ppb		98
30) 1,2,4-Trichlorobenzene	6.40	180	729894	34.59897	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1034948	37.08095	ppb		97
32) Naphthalene	6.49	128	2181929	38.20599	ppb		99
33) 4-Chloroaniline	6.55	127	603553	28.18286	ppb		95
34) 2,6-Dichlorophenol	6.56	162	660225	37.50734	ppb		95
35) Hexachloropropene	6.59	213	414032	21.92066	ppb		99
36) Hexachlorobutadiene	6.63	225	451135	30.22617	ppb		98
37) Caprolactum	6.96	55	246984	42.85978	ppb		92
38) 4-Chloro-3-methylphenol	7.12	107	710602	37.55118	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y152.D Vial: 52
Acq On : 1 Feb 21 16:58 Operator: MA
Sample : BA26001W23 MSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:58 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	1455700	38.77615 ppb		100
40)	1-Methylnaphthalene	7.39	142	1443388	37.29294 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	828873	36.22286 ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	550314	38.65168 ppb		97
45)	2,4,5-Trichlorophenol	7.66	196	586978	37.73664 ppb		94
47)	1,1'-Biphenyl	7.82	154	1969724	38.51702 ppb	#	97
48)	2-Chloronaphthalene	7.84	162	1514605	38.08678 ppb		95
49)	2-Nitroaniline	7.96	65	513224	40.55315 ppb		80
50)	Dimethyl phthalate	8.18	163	2037191	41.88117 ppb		99
51)	2,6-DNT	8.24	165	425860	40.02170 ppb	#	63
52)	Acenaphthylene	8.31	152	2337727	38.60160 ppb		99
53)	3-Nitroaniline	8.44	138	363598	36.59958 ppb		86
54)	Acenaphthene	8.51	154	1559608	38.73041 ppb		99
55)	2,4-Dinitrophenol	8.56	184	204295	39.08170 ppb		88
56)	4-Nitrophenol	8.65	65	380486	38.81492 ppb		84
57)	Dibenzofuran	8.72	168	2299877	38.37753 ppb		95
58)	2,4-DNT	8.71	165	619342	40.51030 ppb		91
59)	2,3,4,6-Tetrachlorophenol	8.87	232	479699	38.94684 ppb		97
60)	Diethyl phthalate	9.01	149	2022645	40.68306 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.13	204	1090809	39.71670 ppb		92
62)	Fluorene	9.12	166	1939106	38.43947 ppb		98
63)	4-Nitroaniline	9.15	138	421667	39.02107 ppb		83
66)	4,6-Dinitro-2-methylphenol	9.18	198	325230	31.61800 ppb	#	68
67)	Diphenyl amine	9.27	169	2664281	66.04644 ppb		98
68)	n-Nitrosodiphenylamine	9.27	169	2664281	66.04644 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1994135	38.99805 ppb	#	89
70)	4-Bromophenyl phenyl ether	9.69	248	613753	37.56594 ppb		92
71)	Hexachlorobenzene	9.75	284	609753	36.34861 ppb	#	72
72)	Atrazine	9.90	200	295148	20.78354 ppb		99
73)	Pentachlorophenol	9.99	266	395610	35.60179 ppb		97
74)	Phenanthrene	10.23	178	2843075	38.26619 ppb		100
75)	Anthracene	10.30	178	2914555	37.60605 ppb		100
76)	Carbazol	10.48	167	2632592	38.36028 ppb		95
77)	Di-n-butylphthalate	10.91	149	3519066	41.79626 ppb		98
78)	Fluoranthene	11.61	202	3308332	38.15875 ppb		99
81)	Pyrene	11.87	202	3495490	41.07333 ppb		98
83)	Butyl benzylphthalate	12.65	149	1584778	43.43921 ppb		91
85)	Benz (a) anthracene	13.28	228	3245997	37.21852 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2217313	42.24675 ppb		98
87)	Chrysene	13.31	228	3321812	40.44151 ppb		99
88)	Di-n-octylphthalate	14.05	149	3583532	41.64835 ppb		98
90)	Benzo (b) fluoranthene	14.49	252	2915939	39.43421 ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3229172	45.25174 ppb		99
92)	Benzo (a) pyrene	14.90	252	2660116	38.53714 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2879404	36.19756 ppb		98
94)	Dibenz (a,h) anthracene	16.64	278	2594932	37.27464 ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	2540537	37.35531 ppb		98

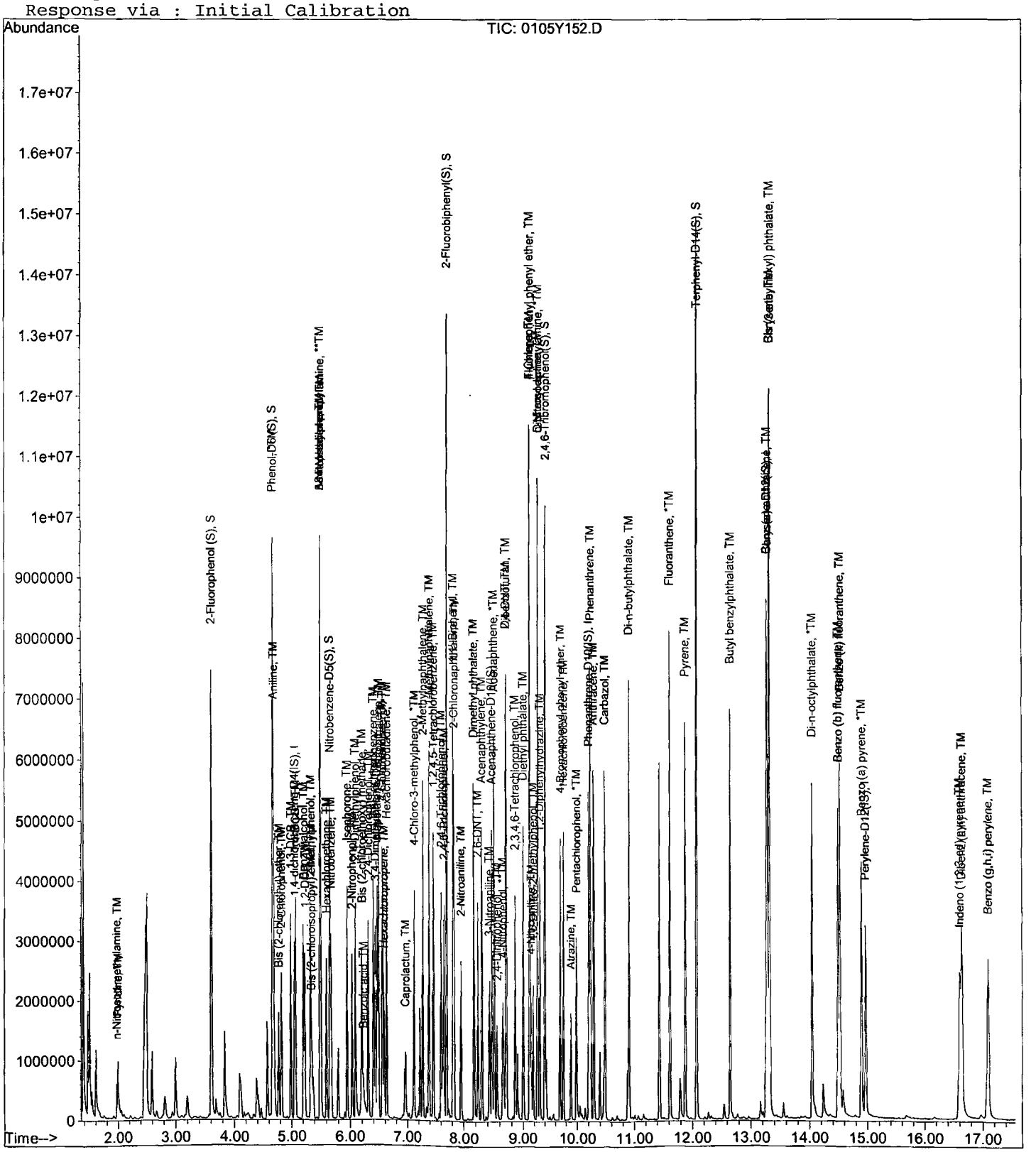
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y152.D Vial: 52
Acq On : 1 Feb 21 16:58 Operator: MA
Sample : BA26001W23 MSD-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:58 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration

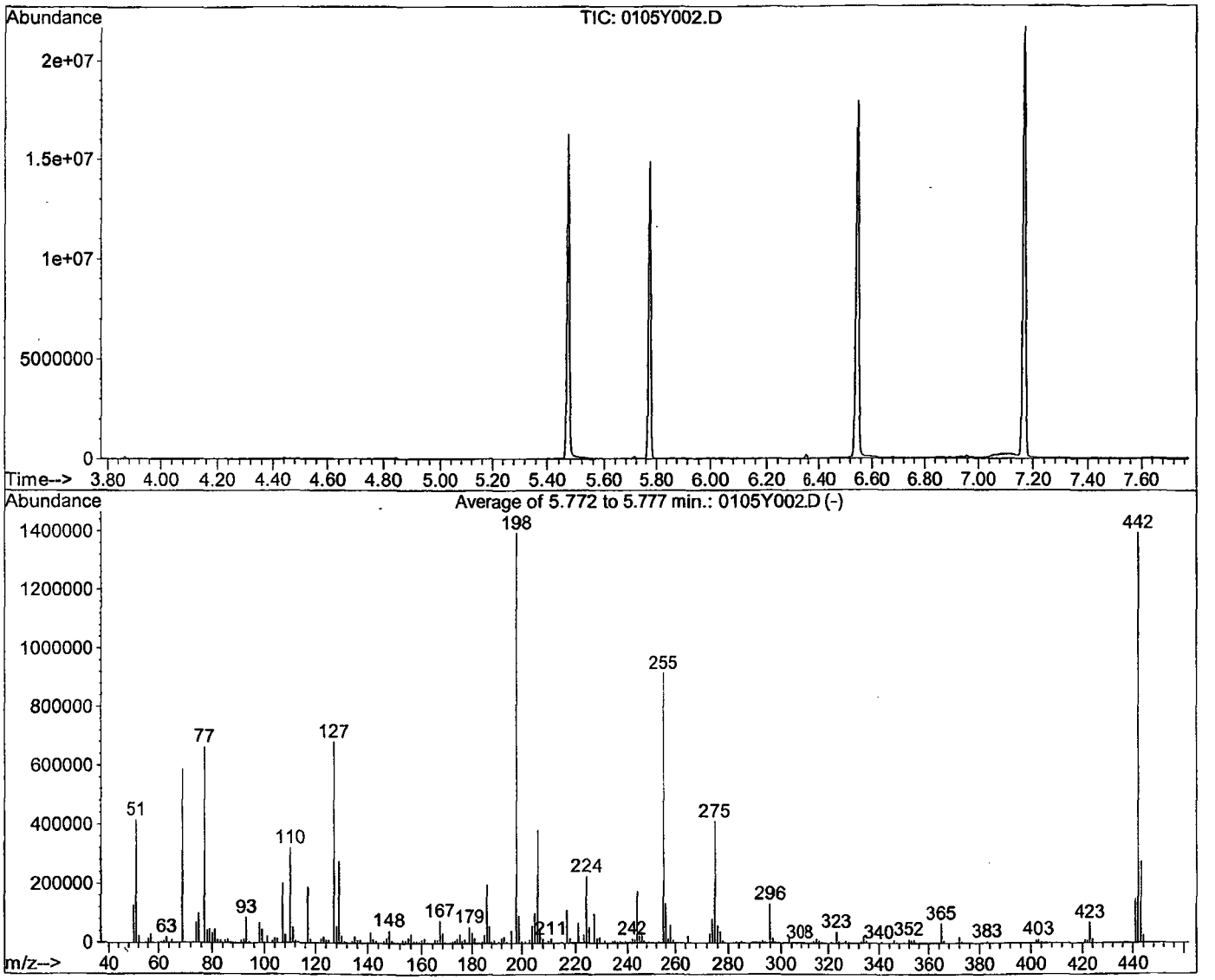


DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D
Acq On : 5 Jan 21 11:04
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

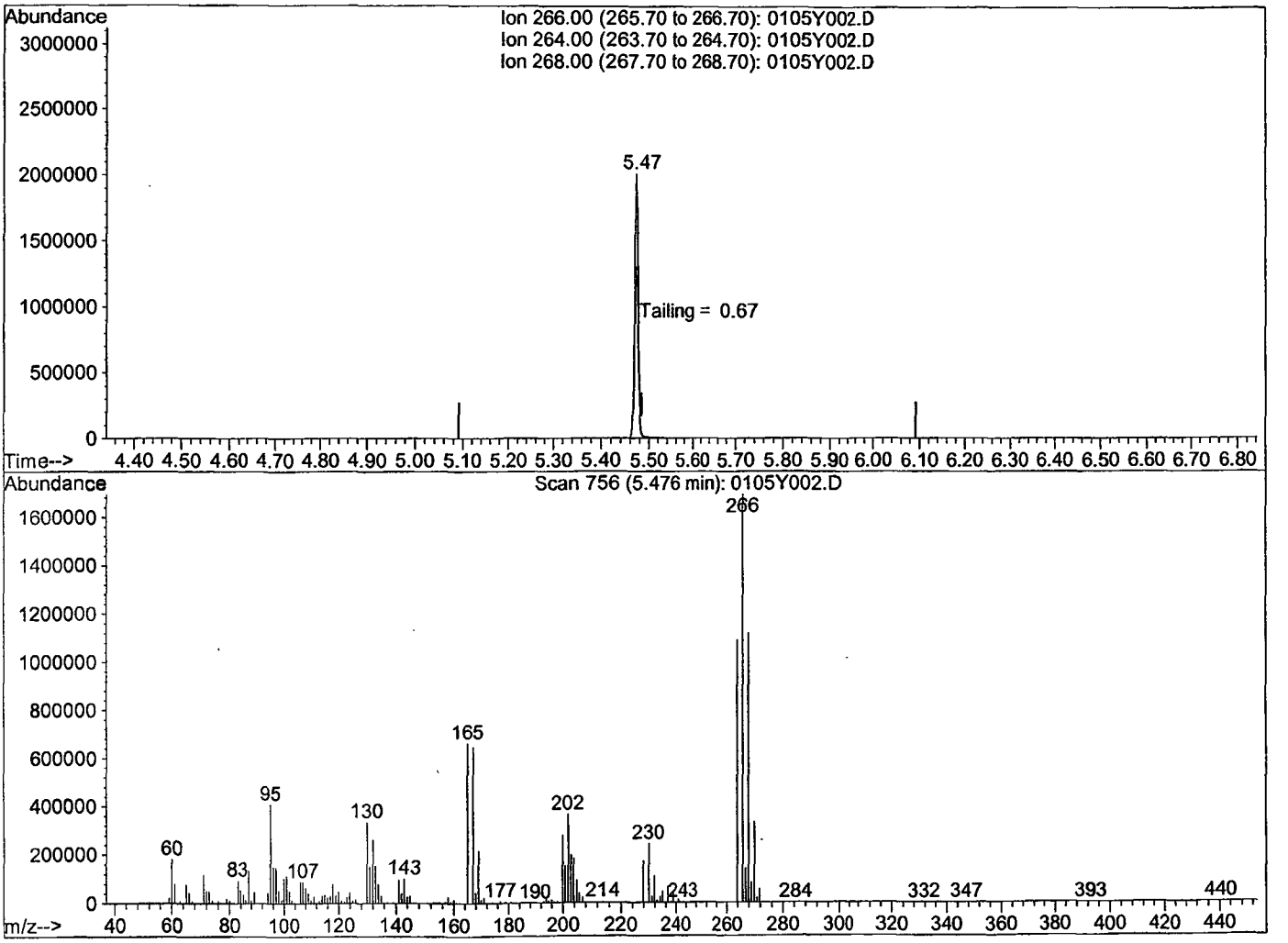
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

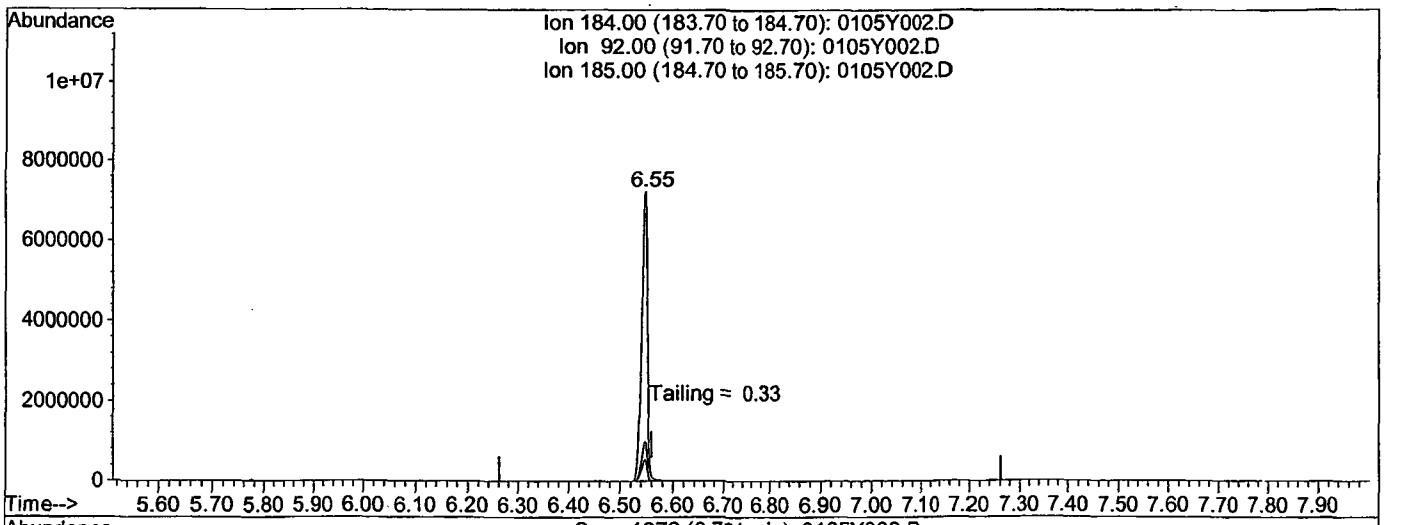
response 10909057

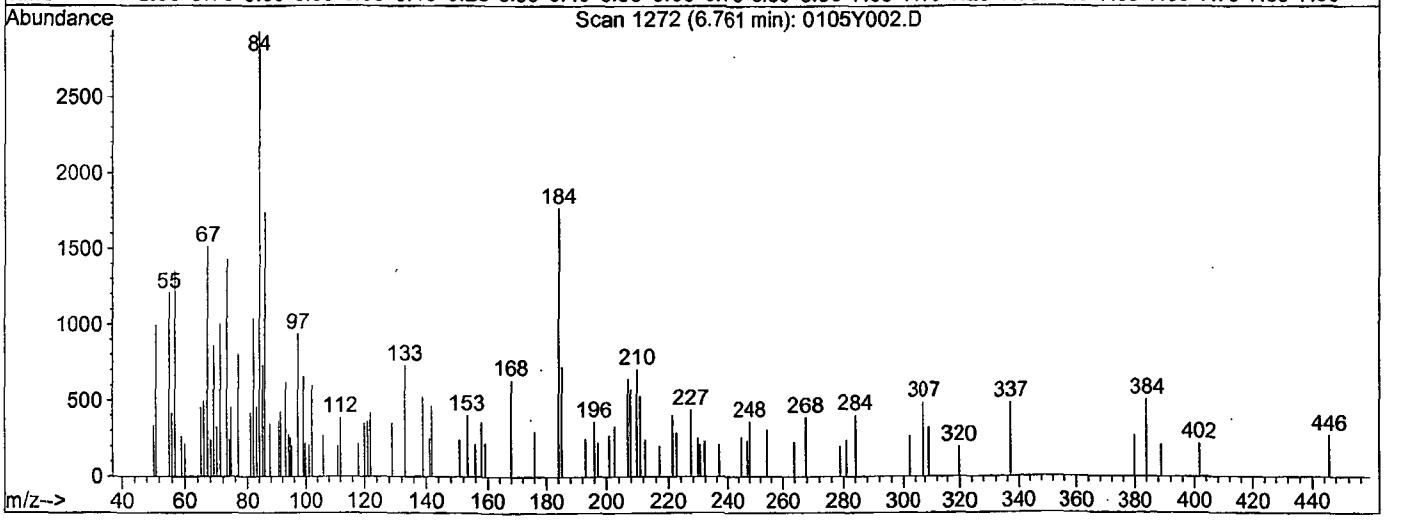
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

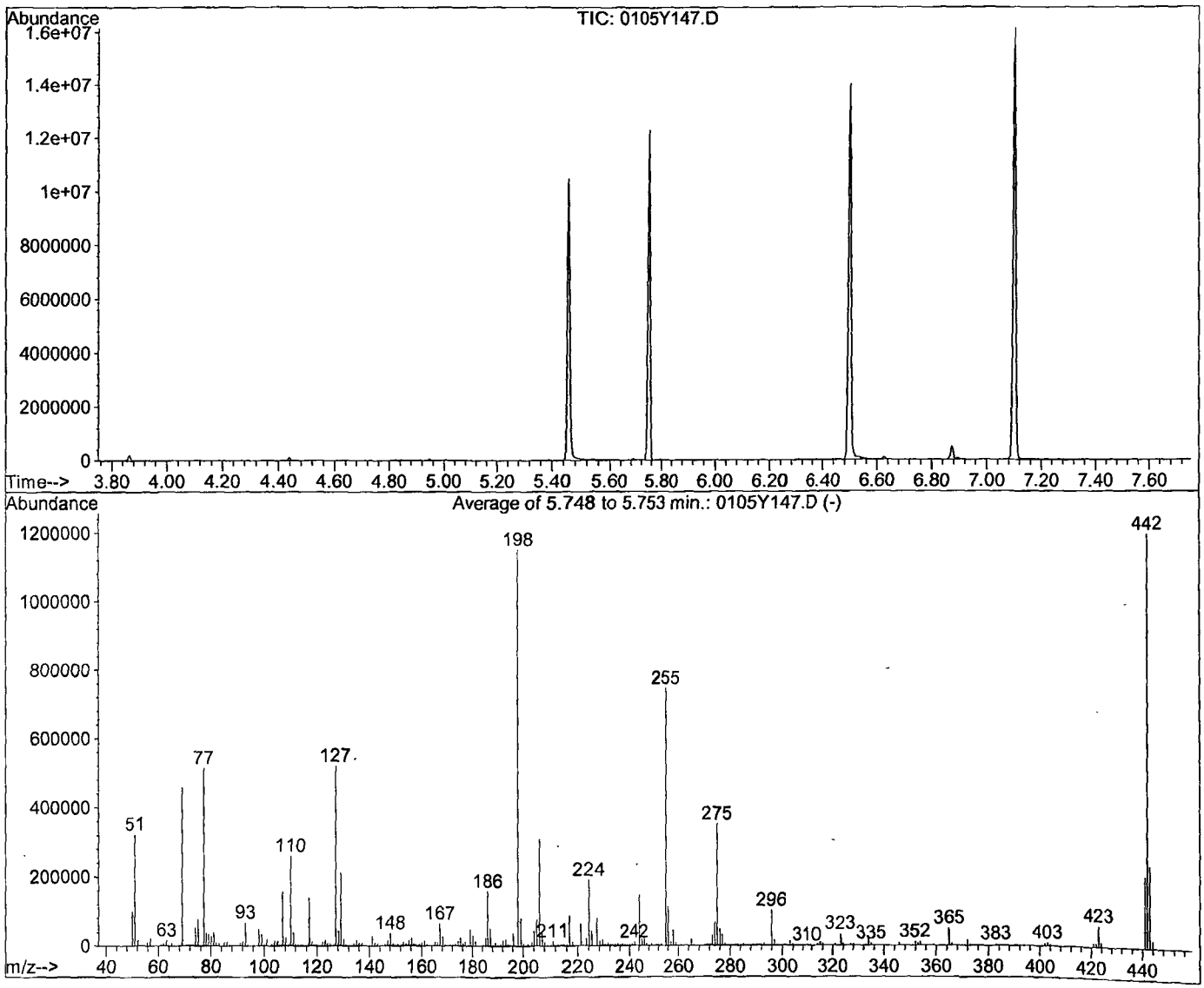
response 0

Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y147.D Vial: 47
Acq On : 1 Feb 21 14:59 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 866, 867, 868; Background Corrected with Scan 857

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.0	322091	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2173	PASS
127	198	10	80	45.3	521408	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1150805	PASS
199	198	5	9	7.0	80048	PASS
275	198	10	60	30.5	351104	PASS
365	198	1	100	4.3	49960	PASS
441	442	0.01	24	17.2	206165	PASS
442	198	50	500	104.0	1196736	PASS
443	442	15	24	19.7	235776	PASS

Data File Name:	**0105Y147.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**1 Feb 21 14:59**
Method File:	**DFTPP2.M**
Sample Name:	**SVTUNE 10/02/20**
Vial Number:	**47**
Instrument Name:	**Yoda**

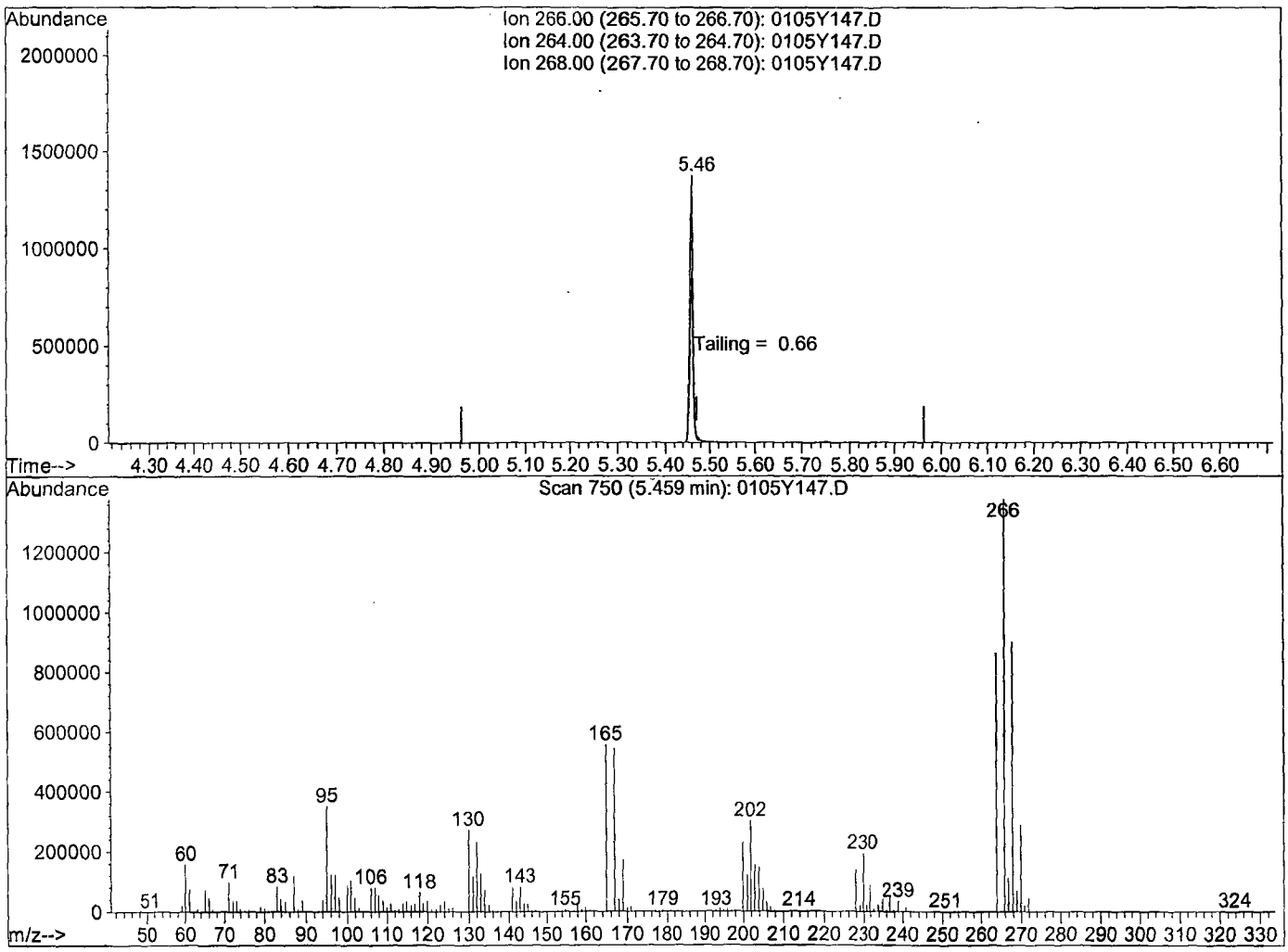
#	Name	Ret Time	Target Response
1)	DDT	7.12	105036000
2)	DDD	6.84	3530120
3)	DDE	5.89	0

Breakdown **3.25**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y147.D Vial: 47
Acq On : 1 Feb 21 14:59 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Feb 1 14:58 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y147.D

(5) Pentachlorophenol

5.46min 0.0000

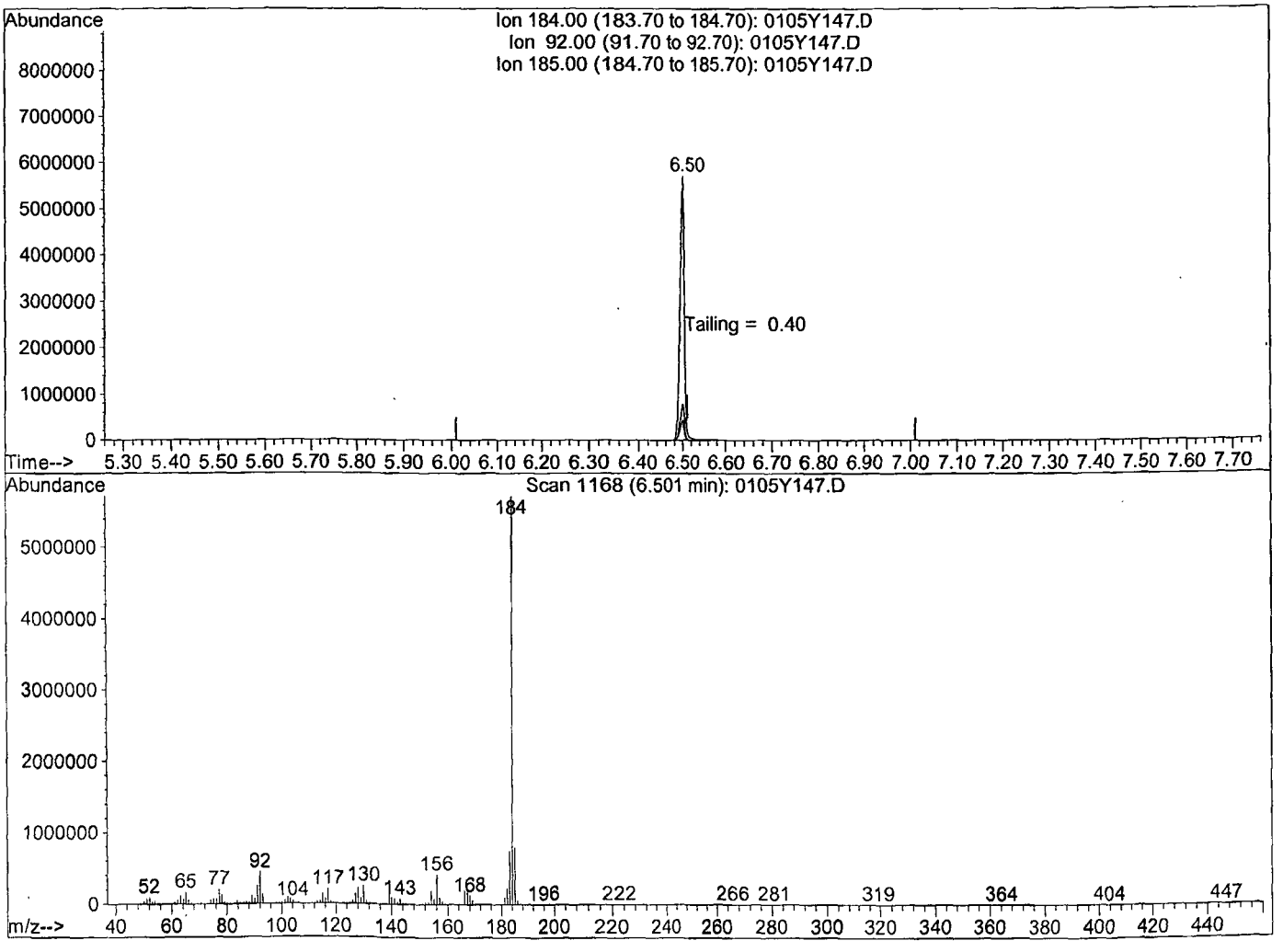
response 7209317

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.74
268.00	64.30	65.66
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y147.D Vial: 47
Acq On : 1 Feb 21 14:59 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Feb 1 14:58 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y147.D

(6) Benzidine

6.50min 0.0000

response 38655361

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.52
185.00	14.10	14.03
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Allquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL	"	"	1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	**(4)**	**Prep'd By (Initials)**	**MA**
Prep Date	**05/29/20**		
Exp Date	**12/31/25**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22	Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21
Spiked ID 2	Sim Spike 9-11-20 9-11-21	Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21
Spiked ID 3		Surrogate ID 3	
Spiked ID 4		Surrogate ID 4	
Spiked ID 5		Surrogate ID 5	
Spiked ID 6		Sufficient Vol for Matrix QC:	yes
Spiked ID 7		Ext. Start Time:	01/29/21 12:00
Spiked ID 8		Ext. End Time:	01/30/21 6:00
		GC Requires Extract By:	

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210129A Blk				0.2,0.05	1,2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP51				
2	210129A LCS-1		1	1	0.2	1	1000	1	2/1	01/29/21 10:25	
						equip	E-HP50				
3	210129A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP49				
4	BA26001 MS-1	BA26001W21	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP48				
5	BA26001 MSD-1	BA26001W23	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP47				
6	BA26001 MS-2	BA26001W30	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP25				
7	BA26001 MSD-2	BA26001W31	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP26				
8	BA26001	BA26001W20			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP27				
9	BA26003	BA26003W09			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP28				
10	BA26006	BA26006W13			0.2,0.05	1,2	1040	1	2/1	01/29/21 10:25	94899
						equip	E-HP29				
11	BA26008	BA26008W07			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP30				
12	BA26013	BA26013W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP16				
13	BA26016	BA26016W12			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP15				
14	BA26150	BA26150W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP14				
15	BA26152	BA26152W04			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94921
						equip	E-HP13				
16	BA26155	BA26155W05			0.2,0.05	1,2	400	1	2/1	01/29/21 10:25	94921
						equip	E-HP12				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/1/21
Time	12:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	
			GC Requires Extract By:		

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP11				
18	BA26160	BA26160W12			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94920
						equip	E-HP10				
19	BA26163	BA26163W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94920
						equip	E-HP9				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	
Time	
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
47	0105Y147.D	1	SVTUNE 10/02/20		1 Feb 21 14:59
48	0105Y148.D	1	50ug/mL 8270 01/05/21 (1)		1 Feb 21 15:15
49	0105Y149.D	1	210129A BLK 1/1000		1 Feb 21 15:40
51	0105Y151.D	1	BA26001W21 MS-1 1/1000		1 Feb 21 16:32
52	0105Y152.D	1	BA26001W23 MSD-1 1/1000		1 Feb 21 16:58
53	0105Y153.D	1	210129A LCS-1 1/1000		1 Feb 21 17:23
54	0105Y154.D	0.9901	BA26001W20 1/1010		1 Feb 21 17:49
55	0105Y155.D	0.9901	BA26003W09 1/1010		1 Feb 21 18:15
56	0105Y156.D	0.96154	BA26006W13 1/1040		1 Feb 21 18:41
57	0105Y157.D	0.98039	BA26008W07 1/1020		1 Feb 21 19:06
58	0105Y158.D	0.98039	BA26013W14 1/1020		1 Feb 21 19:32
59	0105Y159.D	0.9901	BA26016W12 1/1010		1 Feb 21 19:57
66	0105Y166.D	1	50ug/mL 8270 08/12/20 (5)		1 Feb 21 22:56

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/18/21
Matrix: Instrument: Linus
Initials: MA/MW

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

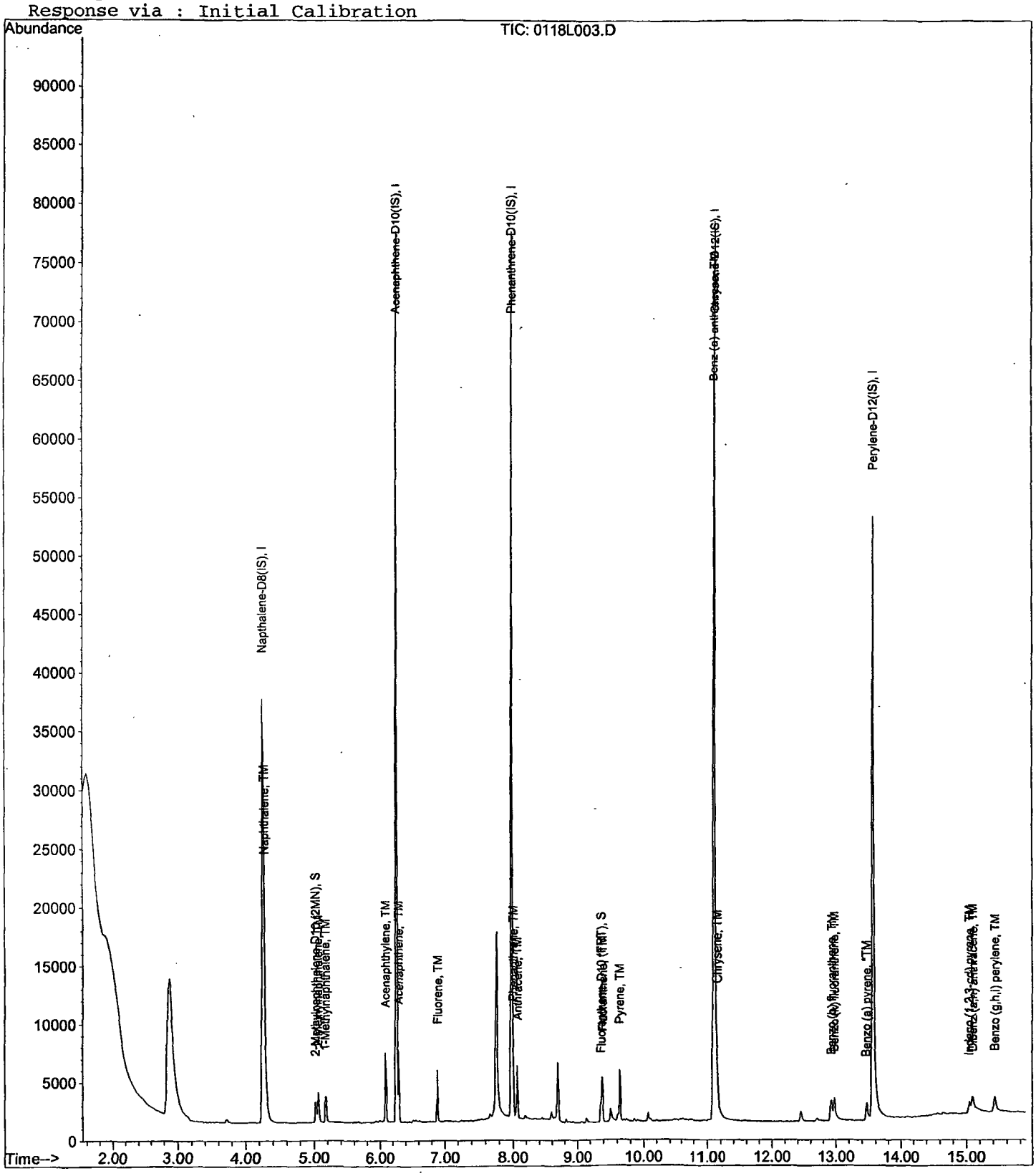
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562	ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%			
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183	ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	6554	0.21427	ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578	ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723	ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472	ppb		99
8) Acenaphthene	6.29	154	3730	0.21987	ppb		98
9) Fluorene	6.89	166	4201	0.21236	ppb		99
11) Phenanthrene	8.00	178	6614	0.21709	ppb		99
12) Anthracene	8.06	178	5555	0.20337	ppb		100
14) Fluoranthene	9.38	202	8388	0.20768	ppb	#	84
16) Pyrene	9.64	202	8654	0.21194	ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097	ppb		96
18) Chrysene	11.15	228	7901	0.21470	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777	ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570	ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787	ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285	ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333	ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

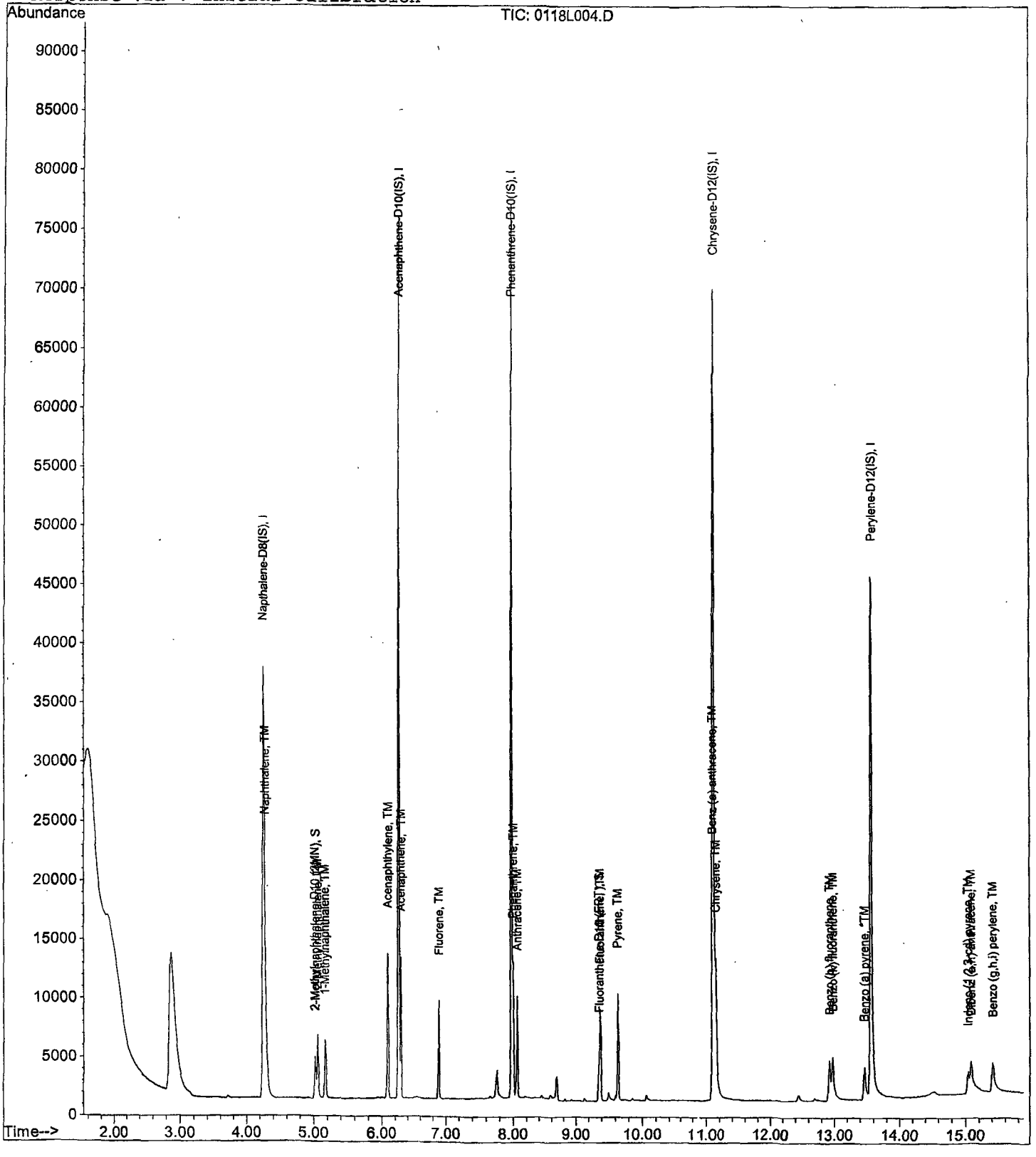
Data File : M:\LINUS\DATA\L210118\0118L004.D
Acq On : 18 Jan 21 11:55
Sample : 0.2 SIM 01/15/21
Misc :

Vial: 4
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979	ppb		0.00
Spiked Amount 5.000			Recovery =	5.200%			
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727	ppb		0.00
Spiked Amount 5.000			Recovery =	4.940%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	15152	0.53197	ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641	ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883	ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452	ppb		99
8) Acenaphthene	6.29	154	8507	0.53809	ppb		99
9) Fluorene	6.89	166	9747	0.52871	ppb		100
11) Phenanthrene	8.00	178	15220	0.53650	ppb		99
12) Anthracene	8.06	178	13445	0.52863	ppb		99
14) Fluoranthene	9.39	202	19405	0.51598	ppb		97
16) Pyrene	9.64	202	19829	0.52483	ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713	ppb		97
18) Chrysene	11.15	228	17766	0.52174	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842	ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592	ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124	ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285	ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408	ppb		92

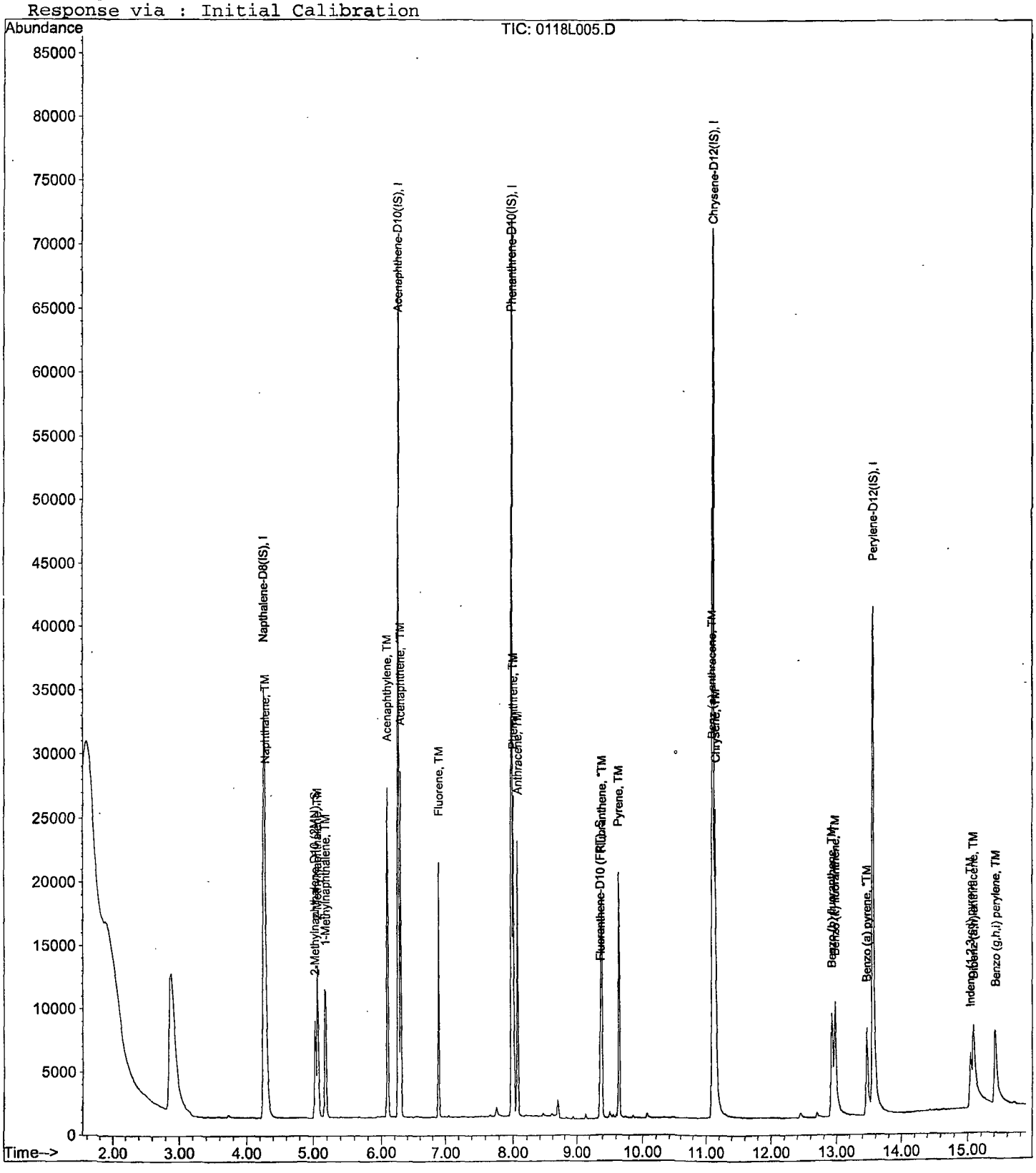
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779 ppb	0.00
Spiked Amount 5.000			Recovery	= 10.160%	
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272 ppb	0.00
Spiked Amount 5.000			Recovery	= 10.060%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	29158	1.03706 ppb	100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438 ppb	99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359 ppb	99
7) Acenaphthylene	6.08	152	55396	1.05240 ppb	99
8) Acenaphthene	6.29	154	16277	1.05847 ppb	100
9) Fluorene	6.89	166	18901	1.05405 ppb	99
11) Phenanthrene	8.00	178	29034	1.07377 ppb	100
12) Anthracene	8.06	178	25745	1.06201 ppb	100
14) Fluoranthene	9.39	202	38564	1.07584 ppb	98
16) Pyrene	9.65	202	38462	1.03286 ppb	100
17) Benz (a) anthracene	11.11	228	30159	0.95752 ppb	99
18) Chrysene	11.15	228	33925	1.01080 ppb	99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864 ppb #	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514 ppb	99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606 ppb	99
23) Benzo (a) pyrene	13.46	252	22522	0.92324 ppb	98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684 ppb	98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

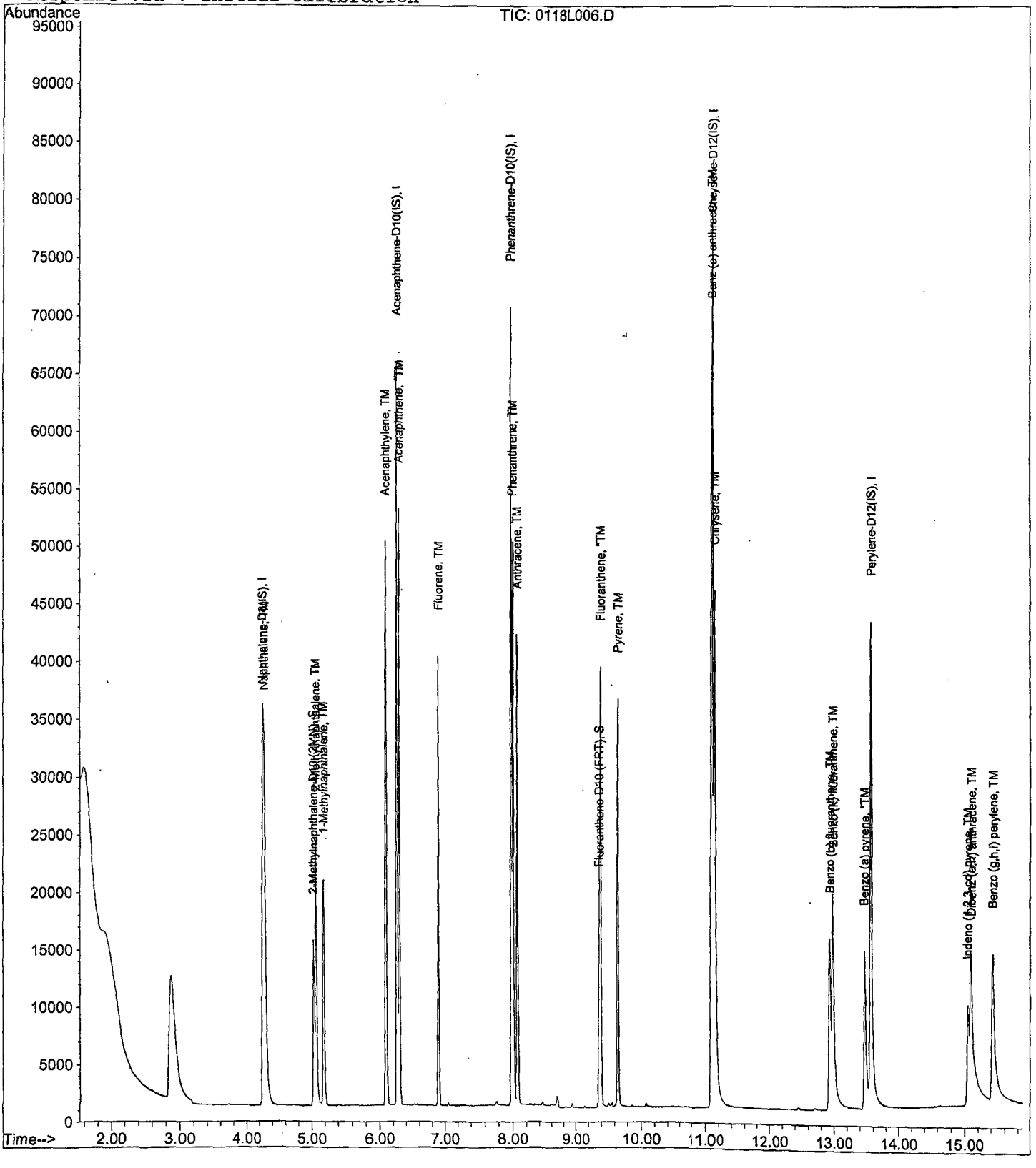
Data File : M:\LINUS\DATA\L210118\0118L006.D
Acq On : 18 Jan 21 12:39
Sample : 1 SIM 01/15/21
Misc :

Vial: 6
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.300%		
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.280%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	134538	4.98585 ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293 ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401 ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969 ppb		100
8) Acenaphthene	6.29	154	75592	5.12022 ppb		100
9) Fluorene	6.89	166	91323	5.30474 ppb		100
11) Phenanthrene	8.00	178	136722	5.27514 ppb		100
12) Anthracene	8.06	178	124850	5.37298 ppb		100
14) Fluoranthene	9.39	202	188170	5.47654 ppb		100
16) Pyrene	9.65	202	189979	5.19874 ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636 ppb		100
18) Chrysene	11.15	228	168073	5.10305 ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112 ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853 ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449 ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925 ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274 ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602 ppb		100

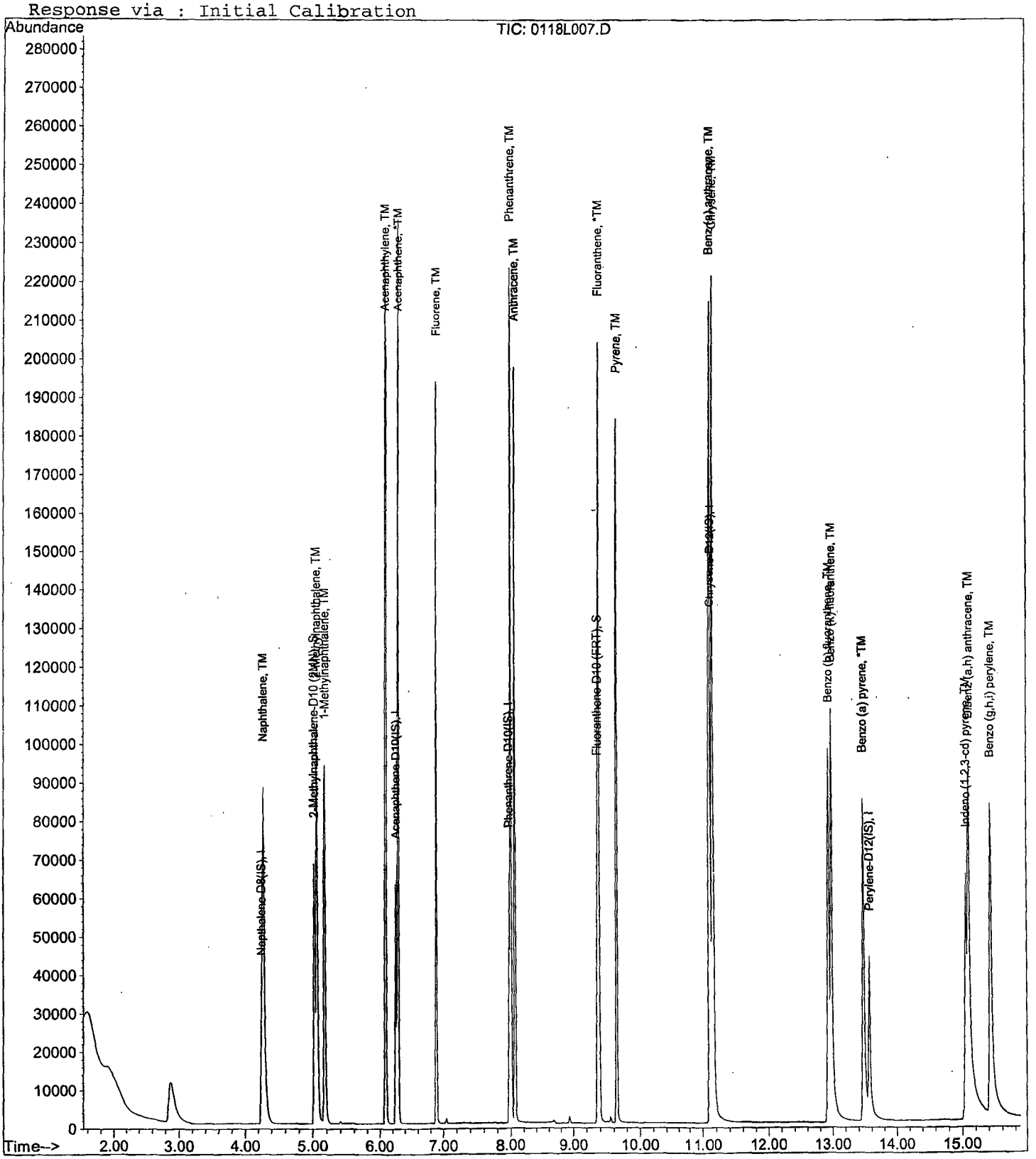
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897	ppb		0.00
Spiked Amount 5.000			Recovery	= 98.180%			
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763	ppb		0.00
Spiked Amount 5.000			Recovery	= 101.560%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	268559	9.44564	ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736	ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451	ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932	ppb		100
8) Acenaphthene	6.29	154	143677	9.22655	ppb		99
9) Fluorene	6.89	166	175331	9.65565	ppb		99
11) Phenanthrene	8.00	178	252445	9.28323	ppb		99
12) Anthracene	8.06	178	235818	9.67255	ppb		99
14) Fluoranthene	9.39	202	356187	9.88031	ppb		97
16) Pyrene	9.65	202	358384	9.35054	ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203	ppb		99
18) Chrysene	11.16	228	320451	9.27660	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742	ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427	ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043	ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225	ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132	ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641	ppb	#	90

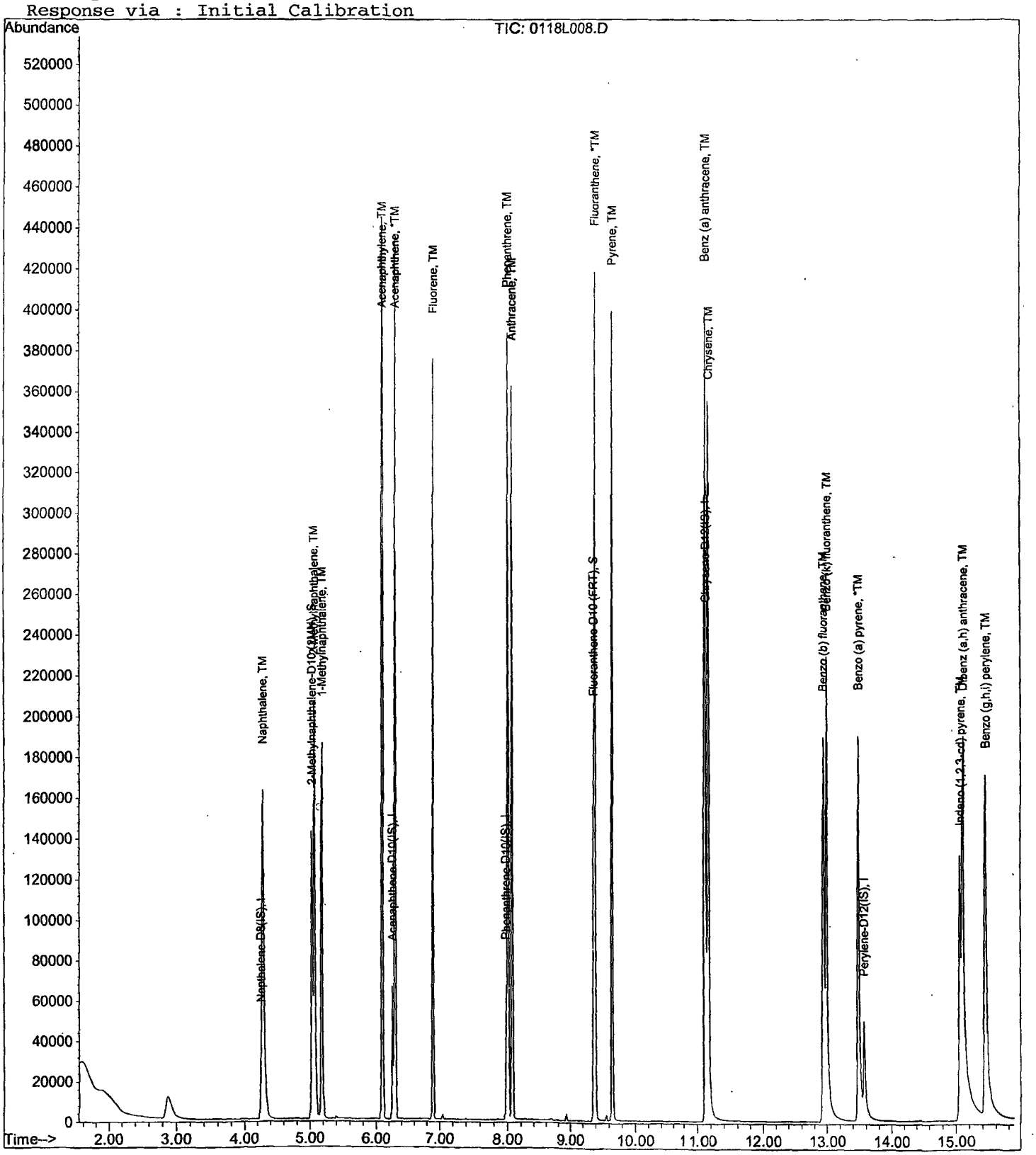
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275	ppb		0.00
Spiked Amount 5.000			Recovery	= 467.860%			
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323	ppb		0.01
Spiked Amount 5.000			Recovery	= 485.860%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	1196891	46.08087	ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476	ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633	ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017	ppb		97
8) Acenaphthene	6.30	154	631316	43.96491	ppb		89
9) Fluorene	6.89	166	764075	45.63163	ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079	ppb		98
12) Anthracene	8.08	178	1010706	44.13554	ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367	ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458	ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809	ppb		97
18) Chrysene	11.17	228	1338368	43.66618	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600	ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049	ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551	ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246	ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934	ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

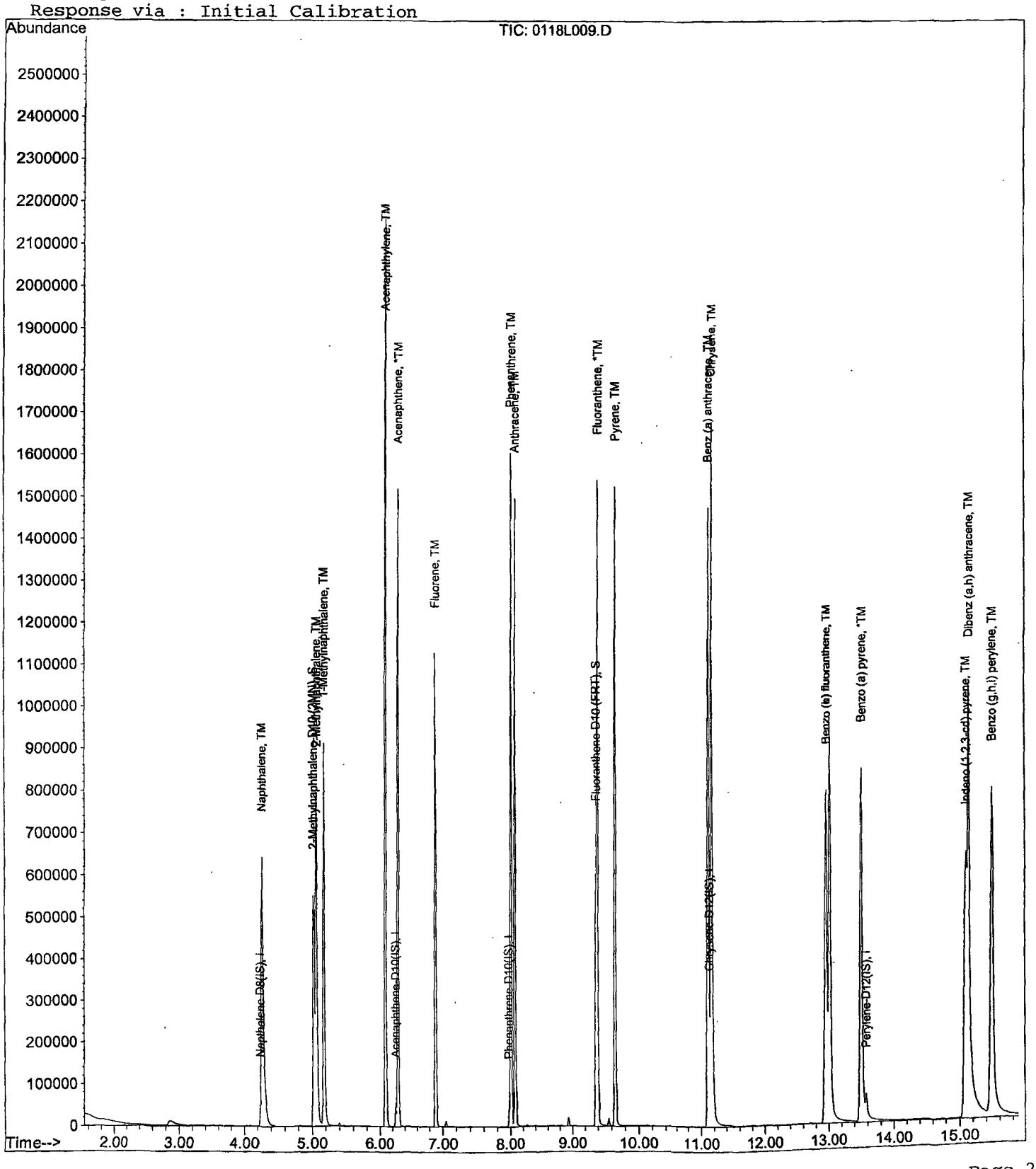
Data File : M:\LINUS\DATA\L210118\0118L009.D
Acq On : 18 Jan 21 13:45
Sample : 50 SIM 01/15/21
Misc :

Vial: 9
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000	ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000	ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000	ppb		0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210	ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%				
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423	ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	2224048	88.96172	ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956	ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247	ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934	ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300	ppb		96
9) Fluorene	6.90	166	1390953	82.59956	ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367	ppb		97
12) Anthracene	8.09	178	2040467	89.58105	ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099	ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549	ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522	ppb		96
18) Chrysene	11.19	228	2703165	90.38960	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219	ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732	ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829	ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873	ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705	ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621	ppb		99

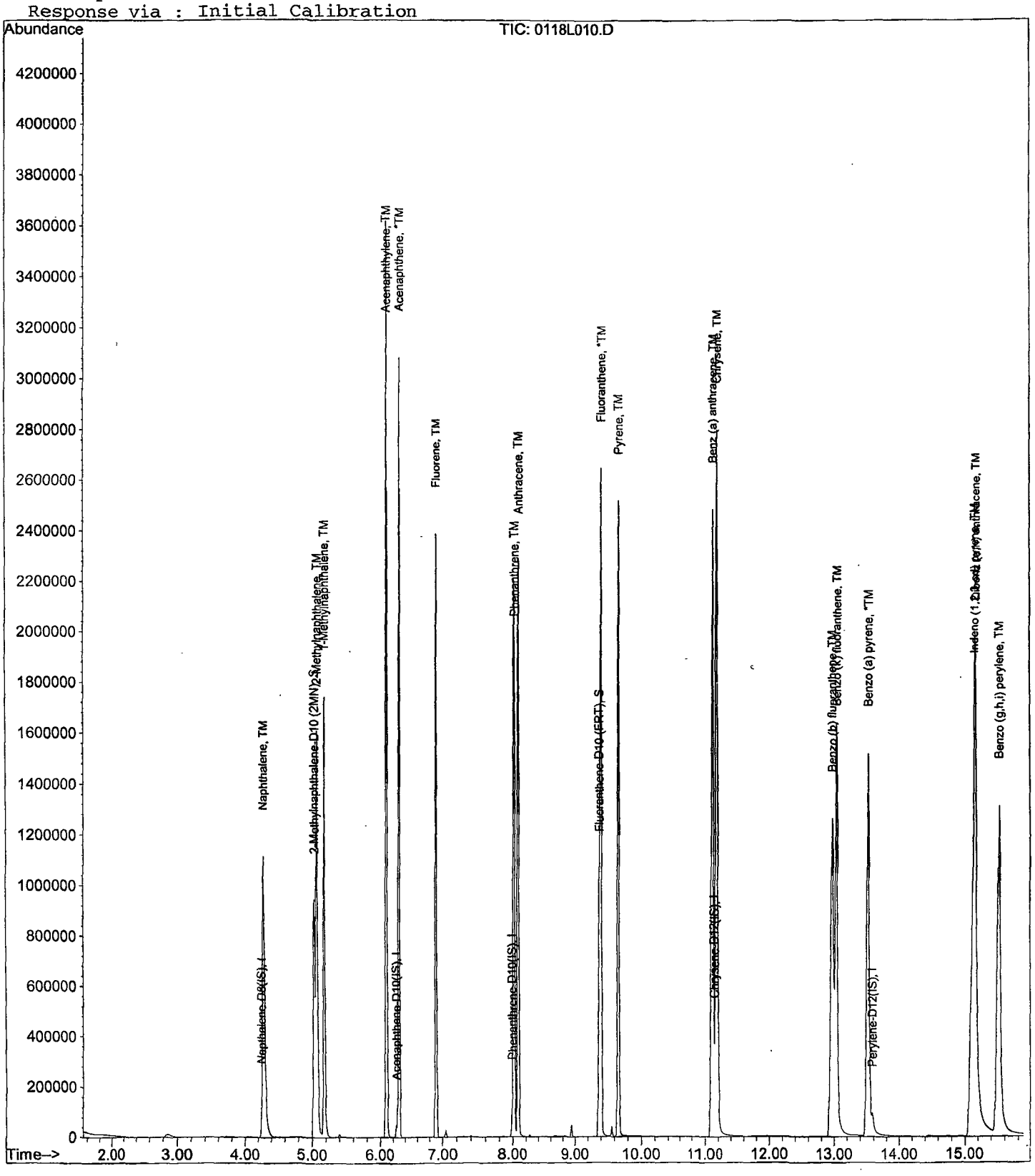
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069 ppb		0.00
Spiked Amount 5.000			Recovery =	0.020%		
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132 ppb		0.00
Spiked Amount 5.000			Recovery =	0.220%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	137423	5.27705 ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831 ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437 ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224 ppb		100
8) Acenaphthene	6.29	154	77645	5.22665 ppb		99
9) Fluorene	6.89	166	92294	5.32787 ppb		100
11) Phenanthrene	8.00	178	132877	5.01426 ppb		100
12) Anthracene	8.06	178	132921	5.59477 ppb		99
14) Fluoranthene	9.39	202	184979	5.26550 ppb		100
16) Pyrene	9.65	202	190804	5.11487 ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082 ppb		100
18) Chrysene	11.15	228	165836	4.93766 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773 ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329 ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901 ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275 ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374 ppb		93

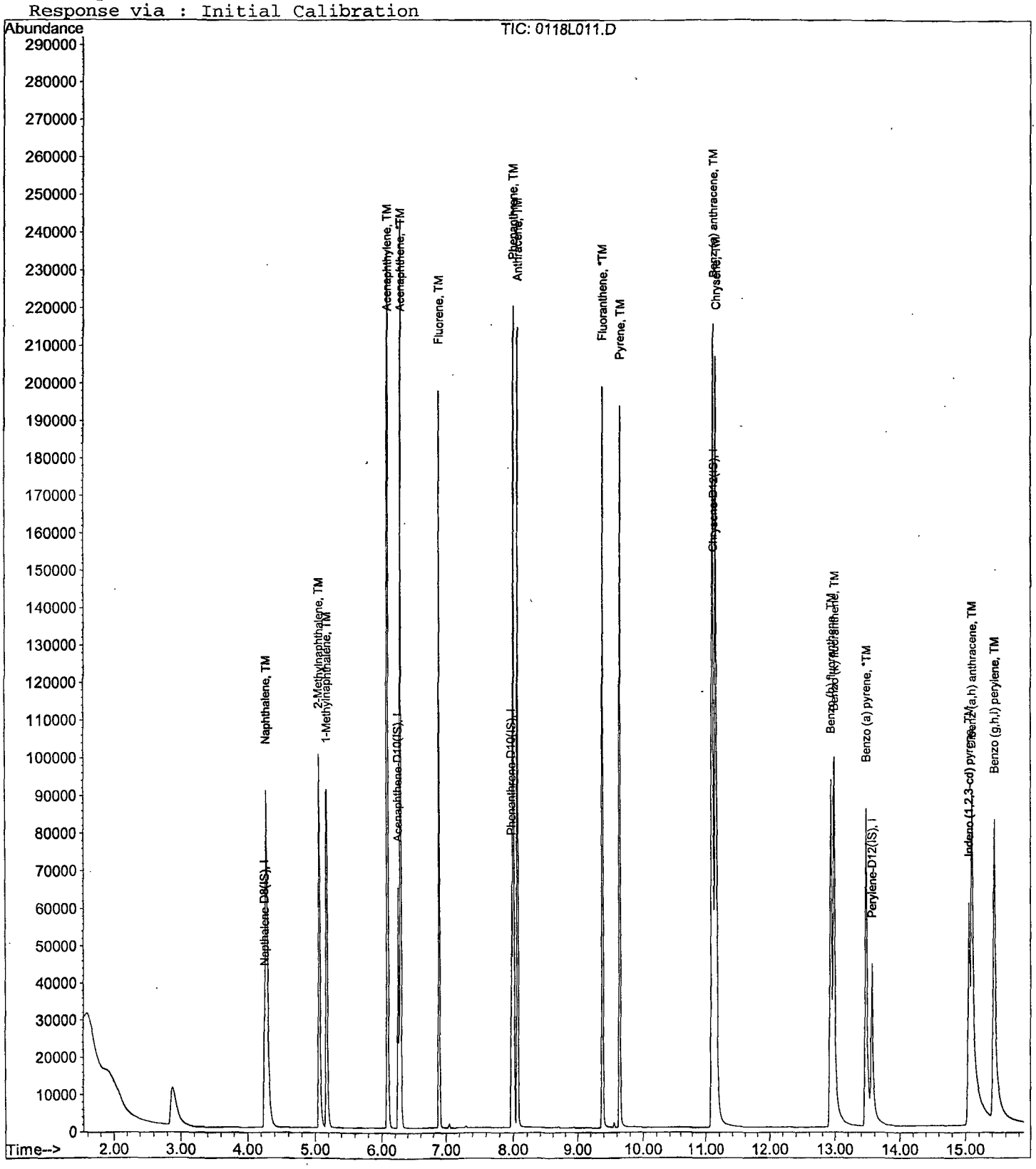
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 15:00
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L072.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.062	4.4	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.061	1.1	S	
4	TM	2-Methylnaphthalene	0.6368	0.6878	8.0	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6764	6.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.099	0.82	TM	
8	*TM	Acenaphthene	1.188	1.202	1.2	*TM	
9	TM	Fluorene	1.385	1.433	3.4	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.181	1.9	TM	
12	TM	Anthracene	1.039	1.084	4.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.309	3.1	S	
14	*TM	Fluoranthene	1.536	1.625	5.8	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.374	0.95	TM	
17	TM	Benz (a) anthracene	1.150	1.018	11	TM	
18	TM	Chrysene	1.226	1.235	0.78	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.053	3.1	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.026	4.8	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.353	6.9	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.041	10	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9398	6.2	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.065	5.5	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L072.D Vial: 72
Acq On : 1 Feb 21 15:00 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:17 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66665	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33162	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	59700	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72038	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.57	264	66209	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	70715	2.47135 ppb		0.00
Spiked Amount 5.000			Recovery = 49.420%			
13) Fluoranthene-D10 (FRT)	9.37	212	78149	2.42181 ppb		0.00
Spiked Amount 5.000			Recovery = 48.440%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	141650	5.22224 ppb		99
4) 2-Methylnaphthalene	5.06	142	91710	5.40070 ppb		98
5) 1-Methylnaphthalene	5.17	142	90190	5.33144 ppb		95
7) Acenaphthylene	6.08	152	271877	5.04076 ppb		99
8) Acenaphthene	6.29	154	79744	5.06087 ppb		98
9) Fluorene	6.89	166	95011	5.17097 ppb		99
11) Phenanthrene	8.00	178	141005	5.09610 ppb		100
12) Anthracene	8.06	178	129383	5.21570 ppb		100
14) Fluoranthene	9.39	202	194084	5.29119 ppb		99
16) Pyrene	9.65	202	198023	5.04767 ppb		99
17) Benz (a) anthracene	11.11	228	146690	4.42545 ppb		98
18) Chrysene	11.16	228	177988	5.03921 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	151687	4.84638 ppb		98
21) Benzo (b) fluoranthene	12.94	252	135869	5.23925 ppb		100
22) Benzo (k) fluoranthene	12.99	252	179197	5.34326 ppb		99
23) Benzo (a) pyrene	13.48	252	137877	5.51373 ppb		98
24) Dibenz (a,h) anthracene	15.11	278	124449	5.30908 ppb		98
25) Benzo (g,h,i) perylene	15.44	276	141027	5.27629 ppb	#	91

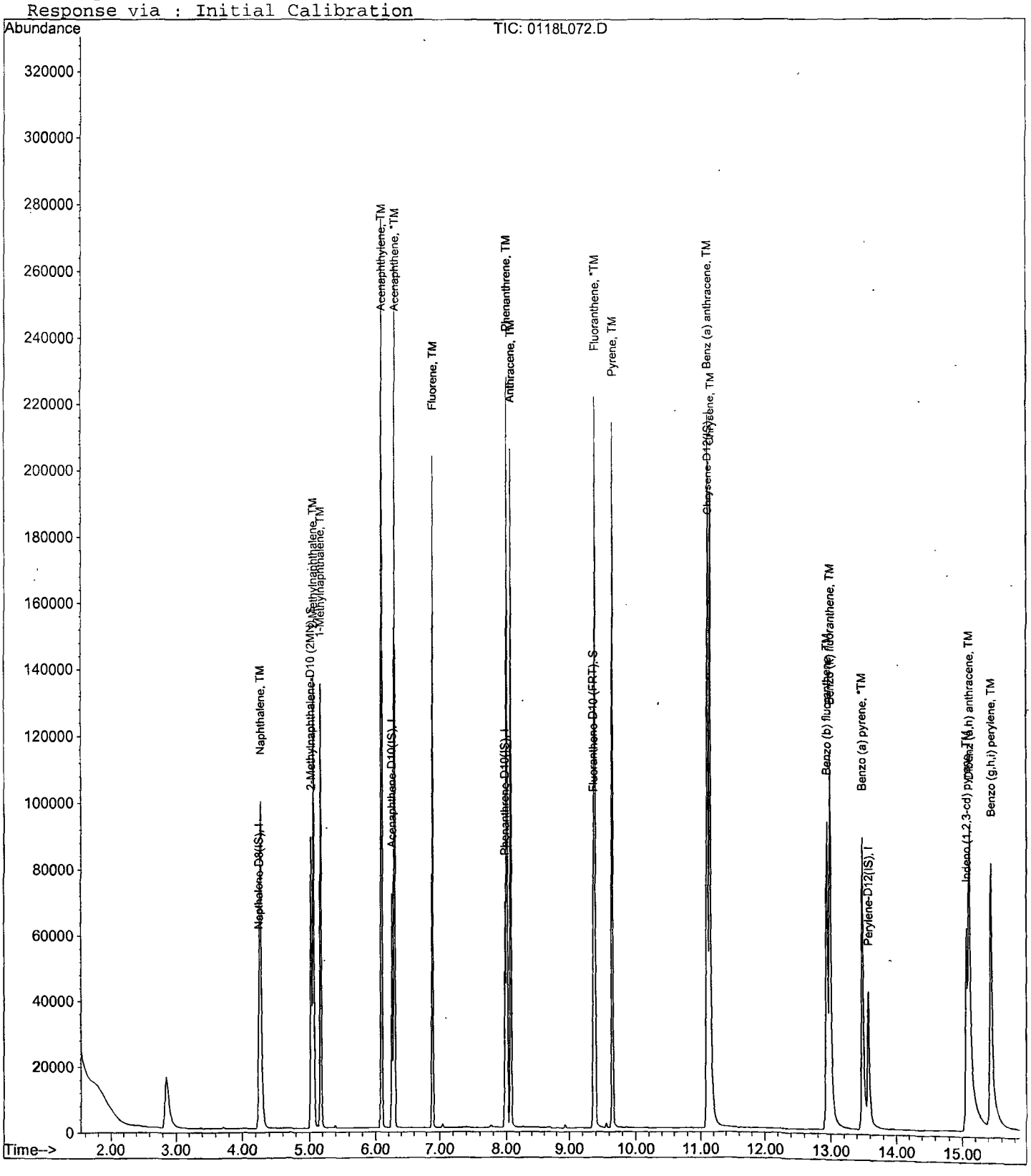
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L072.D Vial: 72
Acq On : 1 Feb 21 15:00 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:17 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 21:37
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L090.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	0.9987	1.8	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.059	1.3	S	
4	TM	2-Methylnaphthalene	0.6368	0.6461	1.5	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6373	0.46	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.186	2.9	TM	
8	*TM	Acenaphthene	1.188	1.185	0.28	*TM	
9	TM	Fluorene	1.385	1.453	4.9	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.194	3.1	TM	
12	TM	Anthracene	1.039	1.123	8.1	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.375	1.8	S	
14	*TM	Fluoranthene	1.536	1.693	10	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.406	3.3	TM	
17	TM	Benz (a) anthracene	1.150	1.161	0.94	TM	
18	TM	Chrysene	1.226	1.242	1.4	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.239	14	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.172	20	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.271	0.38	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.092	16	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.048	18	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.108	9.8	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L090.D Vial: 90
Acq On : 1 Feb 21 21:37 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:51 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67763	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32122	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57990	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70197	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	68908	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	71743	2.46665 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.340%		
13) Fluoranthene-D10 (FRT)	9.37	212	79750	2.54430 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.880%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	135356	4.90934 ppb		99
4) 2-Methylnaphthalene	5.06	142	87569	5.07329 ppb		98
5) 1-Methylnaphthalene	5.17	142	86370	5.02289 ppb		94
7) Acenaphthylene	6.08	152	268909	5.14716 ppb		99
8) Acenaphthene	6.29	154	76103	4.98617 ppb		99
9) Fluorene	6.89	166	93317	5.24321 ppb		99
11) Phenanthrene	8.00	178	138520	5.15392 ppb		100
12) Anthracene	8.06	178	130195	5.40320 ppb		100
14) Fluoranthene	9.39	202	196394	5.51205 ppb		99
16) Pyrene	9.65	202	197405	5.16389 ppb		98
17) Benz (a) anthracene	11.11	228	163010	5.04678 ppb		99
18) Chrysene	11.15	228	174424	5.06781 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.06	276	173963	5.70387 ppb		94
21) Benzo (b) fluoranthene	12.93	252	161581	5.98669 ppb	#	96
22) Benzo (k) fluoranthene	12.99	252	175176	5.01878 ppb		98
23) Benzo (a) pyrene	13.48	252	150560	5.78510 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	144378	5.91802 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	152654	5.48759 ppb		99

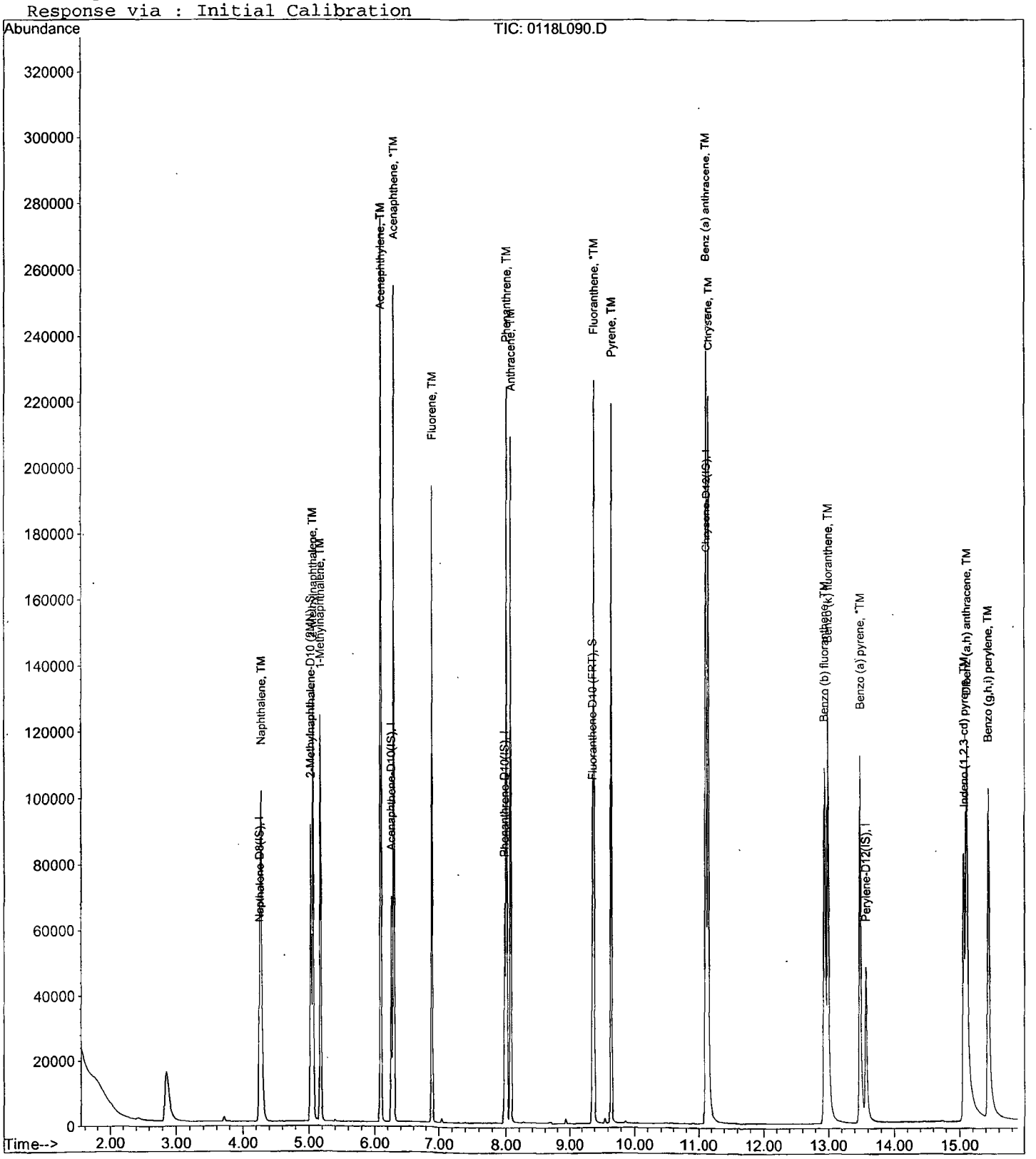
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L090.D Vial: 90
Acq On : 1 Feb 21 21:37 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:51 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L078.D Vial: 78
Acq On : 1 Feb 21 17:12 Operator: MA
Sample : BA26001W20 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:29 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	68259	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32961	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	60989	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	73110	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	69418	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	120186	4.06156	ppb	0.00
Spiked Amount 4.950			Recovery = 82.052%			
13) Fluoranthene-D10 (FRT)	9.37	212	146880	4.41145	ppb	0.00
Spiked Amount 4.950			Recovery = 89.102%			

Target Compounds Qvalue

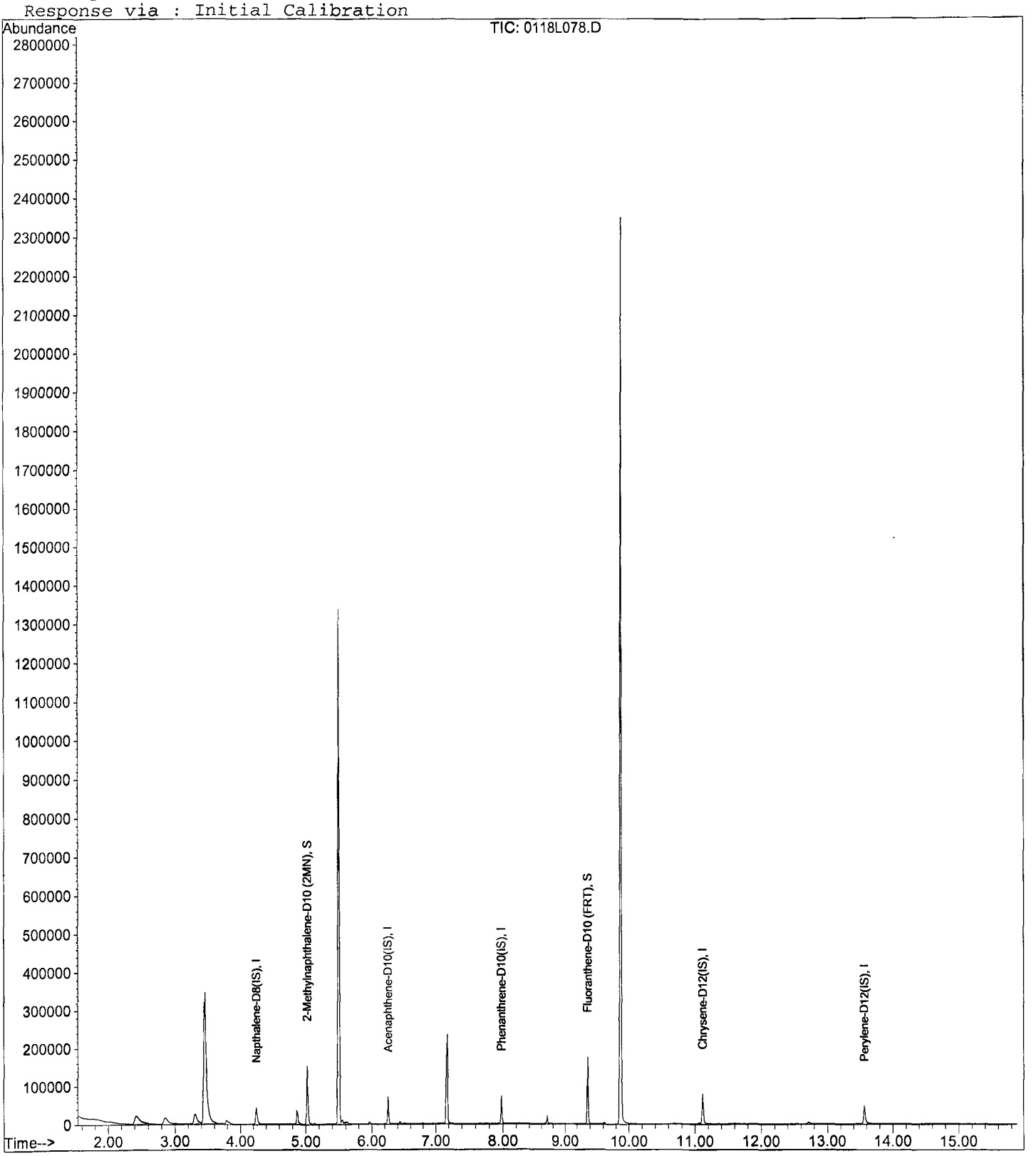
(#) = qualifier out of range (m) = manual integration
0118L078.D L0118.M Tue Feb 02 16:19:20 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L078.D Vial: 78
Acq On : 1 Feb 21 17:12 Operator: MA
Sample : BA26001W20 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:29 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L079.D Vial: 79
Acq On : 1 Feb 21 17:35 Operator: MA
Sample : BA26003W09 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:29 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65928	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31253	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	59413	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	70875	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	67108	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	118532	4.14729 ppb	0.00
Spiked Amount 4.950			Recovery =	83.769%	
13) Fluoranthene-D10 (FRT)	9.37	212	150319	4.63450 ppb	0.00
Spiked Amount 4.950			Recovery =	93.627%	

Target Compounds	Qvalue

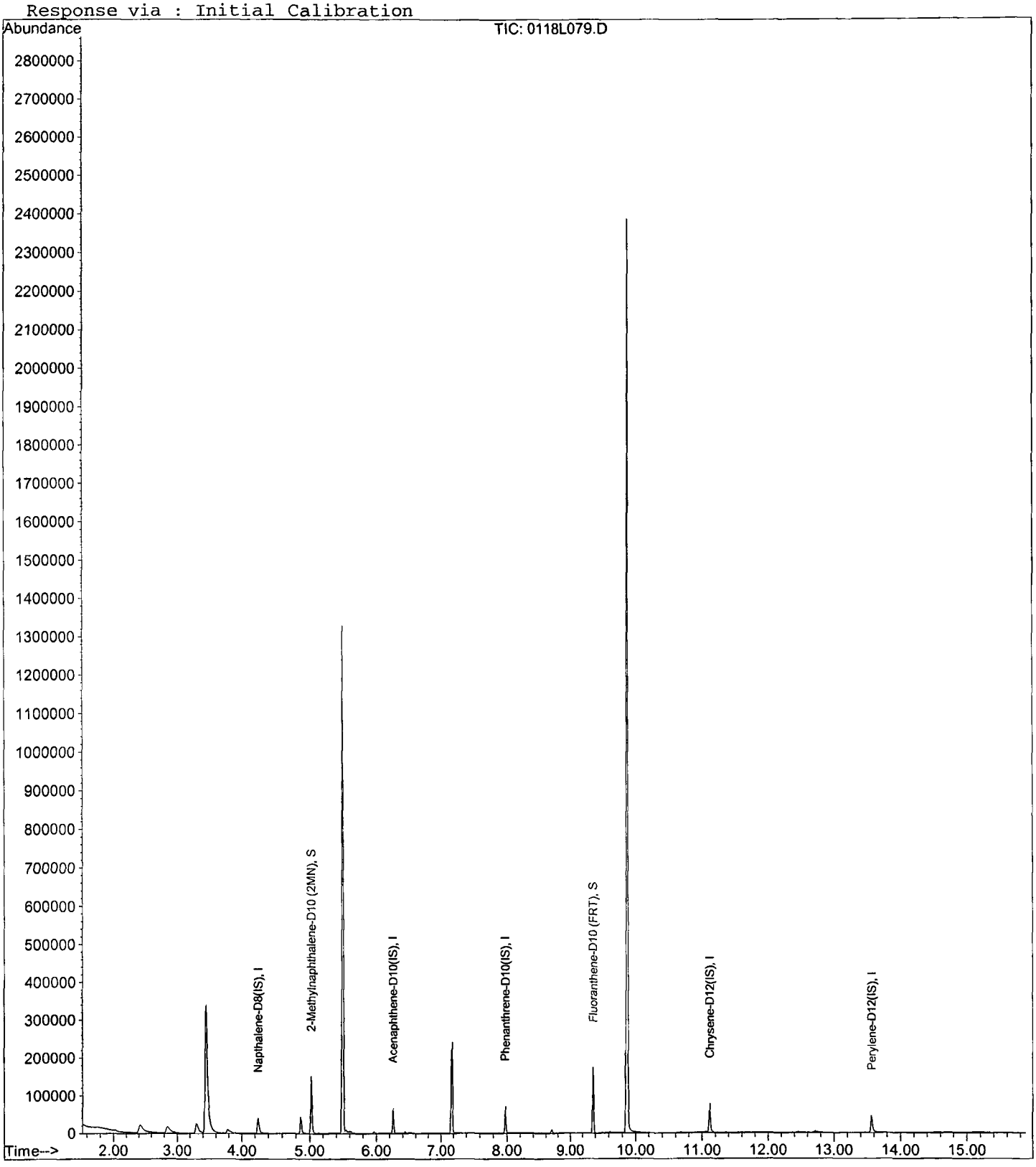
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L079.D Vial: 79
Acq On : 1 Feb 21 17:35 Operator: MA
Sample : BA26003W09 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:29 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L080.D Vial: 80
Acq On : 1 Feb 21 17:57 Operator: MA
Sample : BA26006W13 1/1040 Inst : Linus
Misc : Multiplr: 0.96

Quant Time: Feb 2 10:30 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	62613	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31977	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	59497	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	72536	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	70531	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	126342	4.52034	ppb	0.00
Spiked Amount 4.808			Recovery = 94.016%			
13) Fluoranthene-D10 (FRT)	9.37	212	154182	4.60996	ppb	0.00
Spiked Amount 4.808			Recovery = 95.888%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	1156971	43.66805	ppb	98
4) 2-Methylnaphthalene	5.06	142	285379	17.20507	ppb	100
5) 1-Methylnaphthalene	5.18	142	410532	24.84469	ppb	99
8) Acenaphthene	6.29	154	5270	0.33351	ppb	98
9) Fluorene	6.89	166	3600	0.19538	ppb	98

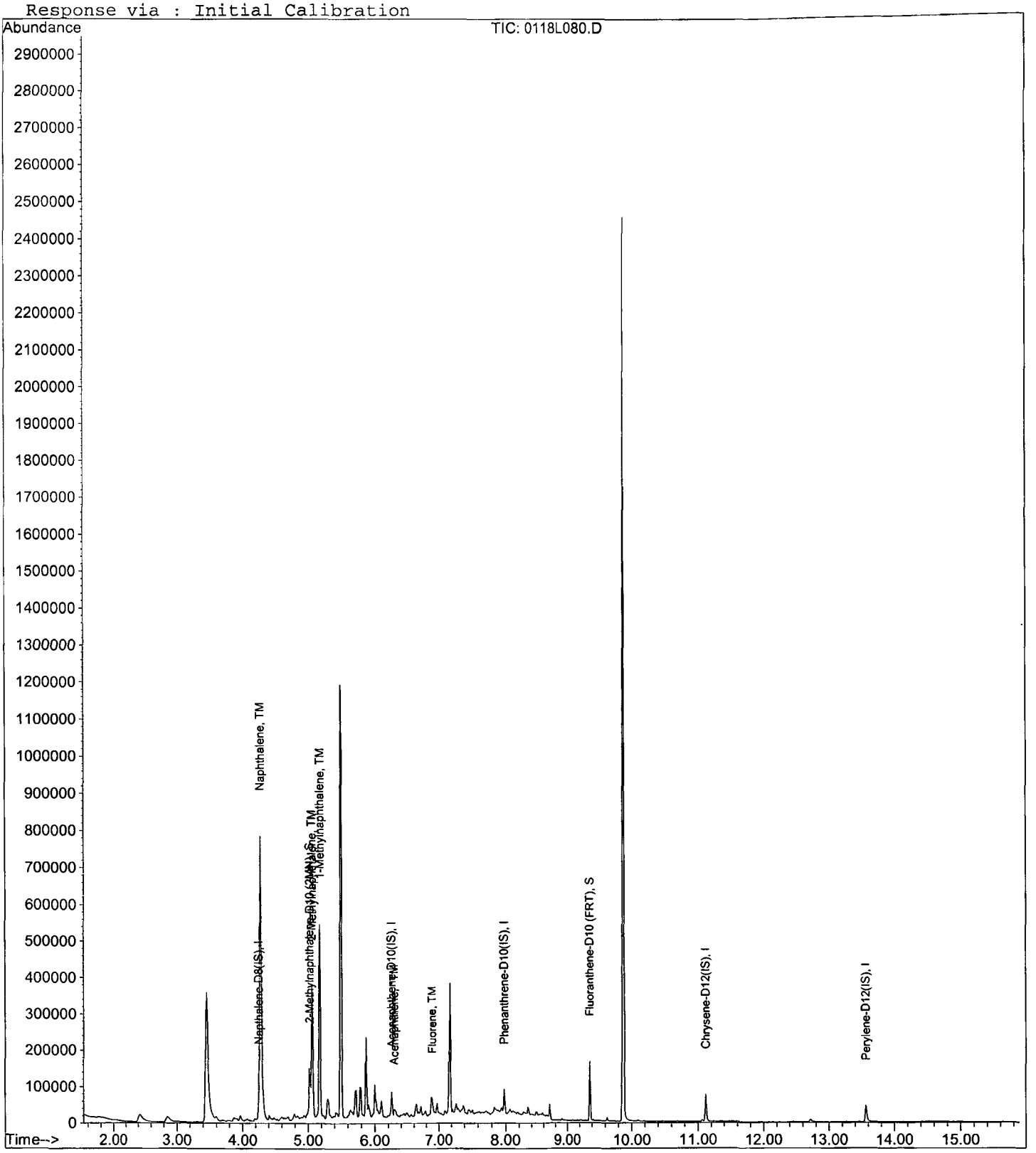
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L080.D Vial: 80
Acq On : 1 Feb 21 17:57 Operator: MA
Sample : BA26006W13 1/1040 Inst : Linus
Misc : Multiplr: 0.96

Quant Time: Feb 2 10:30 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L081.D Vial: 81
Acq On : 1 Feb 21 18:19 Operator: MA
Sample : BA26008W07 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:30 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66318	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	34099	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	63060	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	77732	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.57	264	75966	2.50000 ppb	0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	121033	4.16862 ppb	0.00
Spiked Amount 4.902			Recovery =	85.048%	
13) Fluoranthene-D10 (FRT)	9.37	212	150950	4.34181 ppb	0.00
Spiked Amount 4.902			Recovery =	88.577%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	1132678	41.15412 ppb	98
4) 2-Methylnaphthalene	5.06	142	276258	16.03300 ppb	99
5) 1-Methylnaphthalene	5.18	142	402217	23.43217 ppb	99
8) Acenaphthene	6.29	154	5030	0.30436 ppb	98
9) Fluorene	6.89	166	3567	0.18510 ppb	100

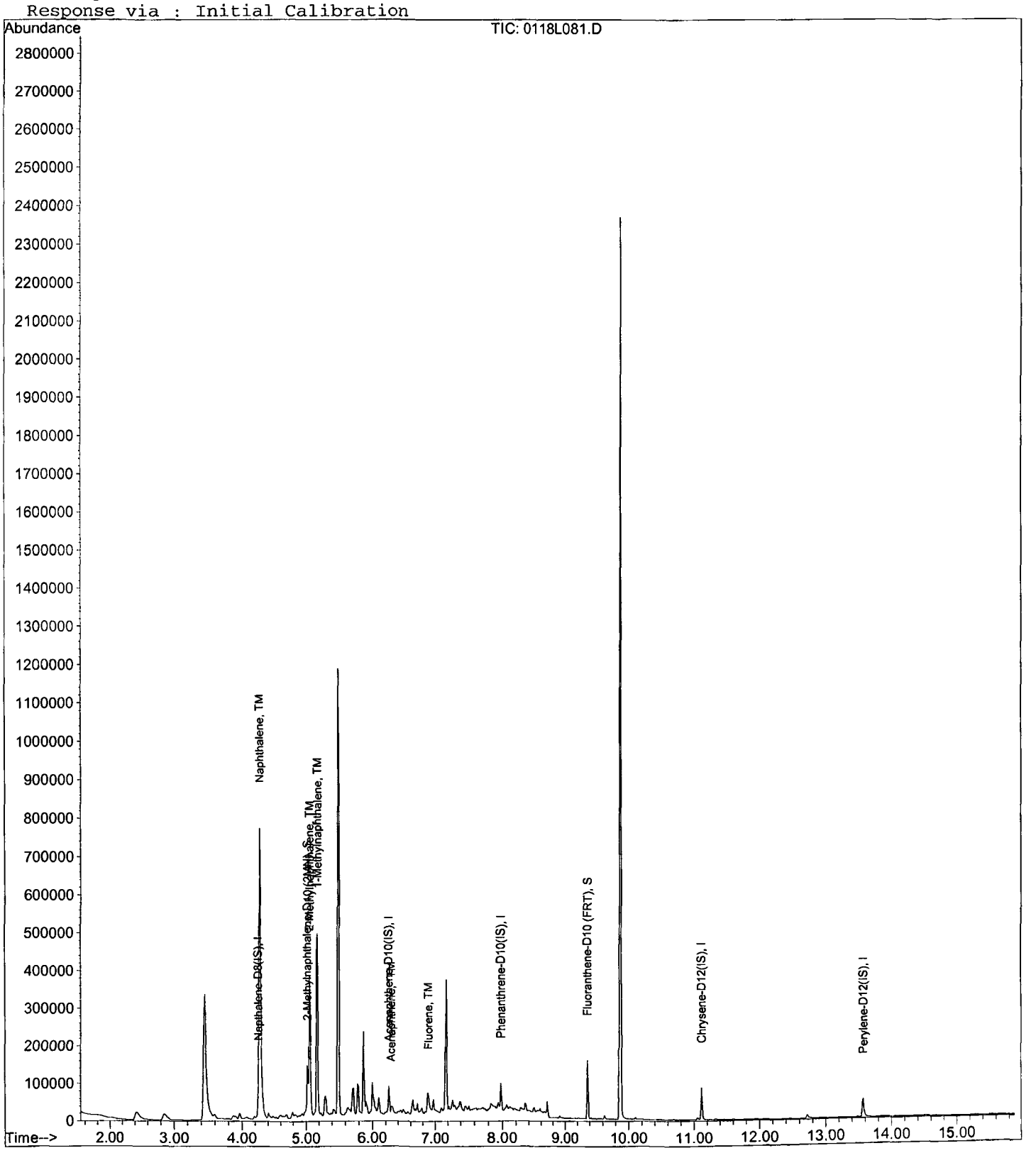
(#) = qualifier out of range (m) = manual integration
0118L081.D L0118.M Tue Feb 02 16:19:34 2021

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L081.D Vial: 81
Acq On : 1 Feb 21 18:19 Operator: MA
Sample : BA26008W07 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:30 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L082.D Vial: 82
Acq On : 1 Feb 21 18:41 Operator: MA
Sample : BA26013W14 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:32 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67296	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32461	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	61236	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	75224	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.57	264	70865	2.50000	ppb	0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	118314	4.01574	ppb	0.00
Spiked Amount 4.902			Recovery =	81.926%		
13) Fluoranthene-D10 (FRT)	9.37	212	152844	4.52722	ppb	0.00
Spiked Amount 4.902			Recovery =	92.351%		

Target Compounds	Qvalue

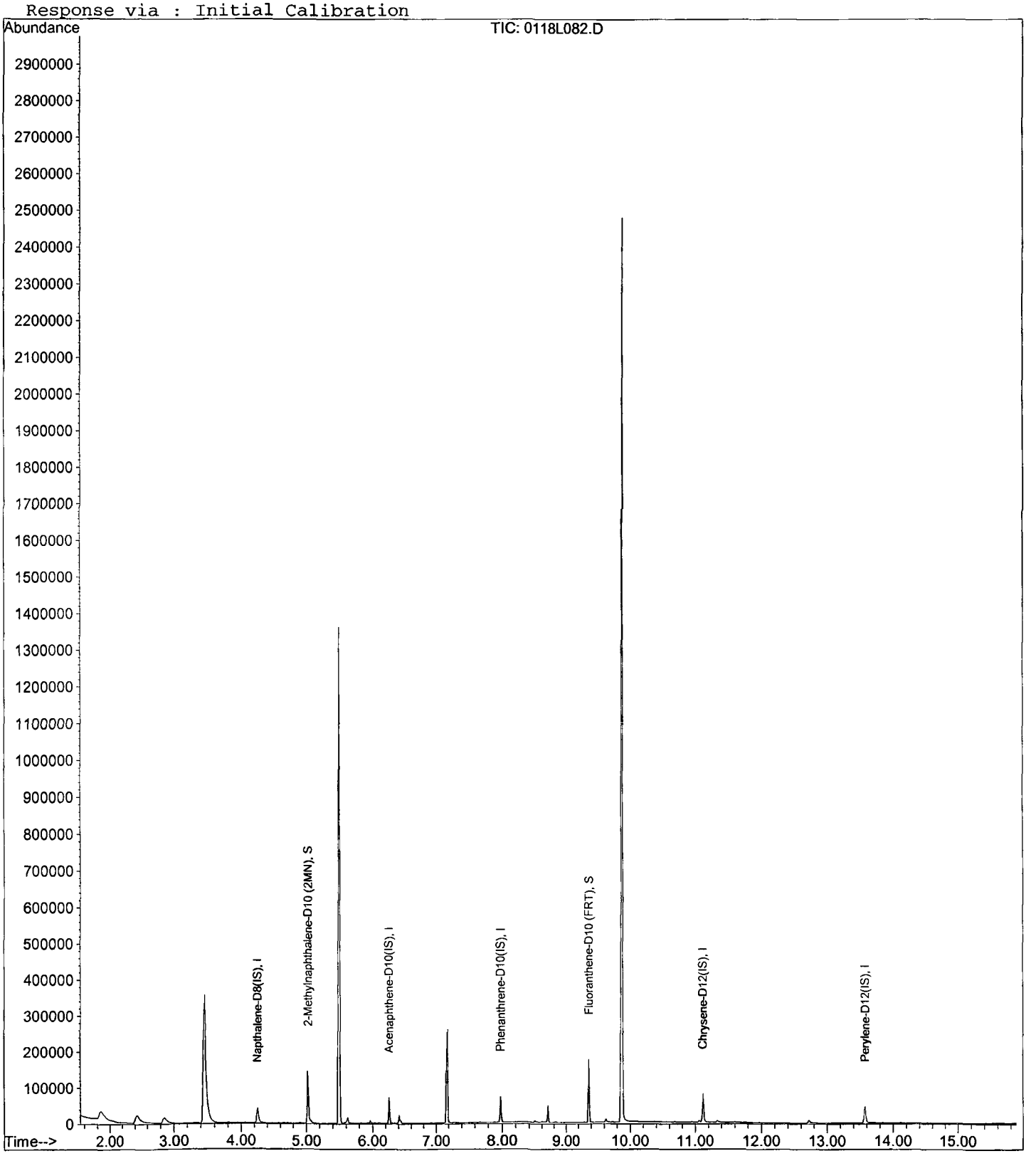
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L082.D Vial: 82
Acq On : 1 Feb 21 18:41 Operator: MA
Sample : BA26013W14 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:32 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L083.D Vial: 83
Acq On : 1 Feb 21 19:03 Operator: MA
Sample : BA26016W12 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:33 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70182	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	33647	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	62753	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	76340	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	73304	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	117583	3.86472	ppb	0.00
Spiked Amount 4.950			Recovery	= 78.073%		
13) Fluoranthene-D10 (FRT)	9.37	212	152469	4.45059	ppb	0.00
Spiked Amount 4.950			Recovery	= 89.910%		

Target Compounds Qvalue

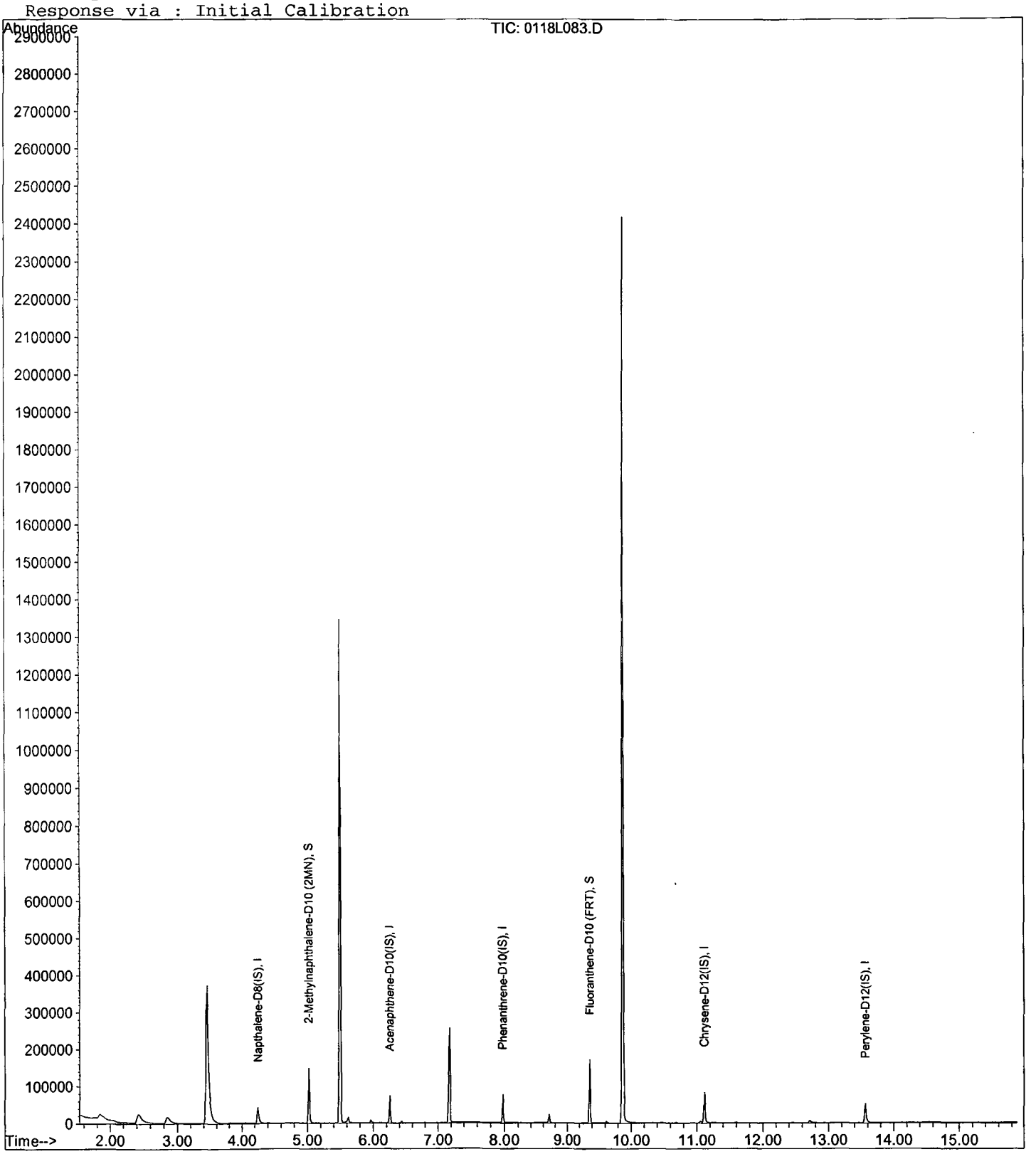
(#) = qualifier out of range (m) = manual integration
0118L083.D L0118.M Tue Feb 02 16:19:44 2021 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L083.D Vial: 83
Acq On : 1 Feb 21 19:03 Operator: MA
Sample : BA26016W12 1/1010 Inst : Linus
Misc : Multiplr: 0.99

Quant Time: Feb 2 10:33 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L074.D Vial: 74
Acq On : 1 Feb 21 15:44 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:02 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66632	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31782	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	59744	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	67854	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	62412	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	121240	4.23919	ppb	0.00
Spiked Amount 5.000			Recovery =	84.780%		
13) Fluoranthene-D10 (FRT)	9.37	212	143602	4.44690	ppb	0.00
Spiked Amount 5.000			Recovery =	88.940%		

Target Compounds Qvalue

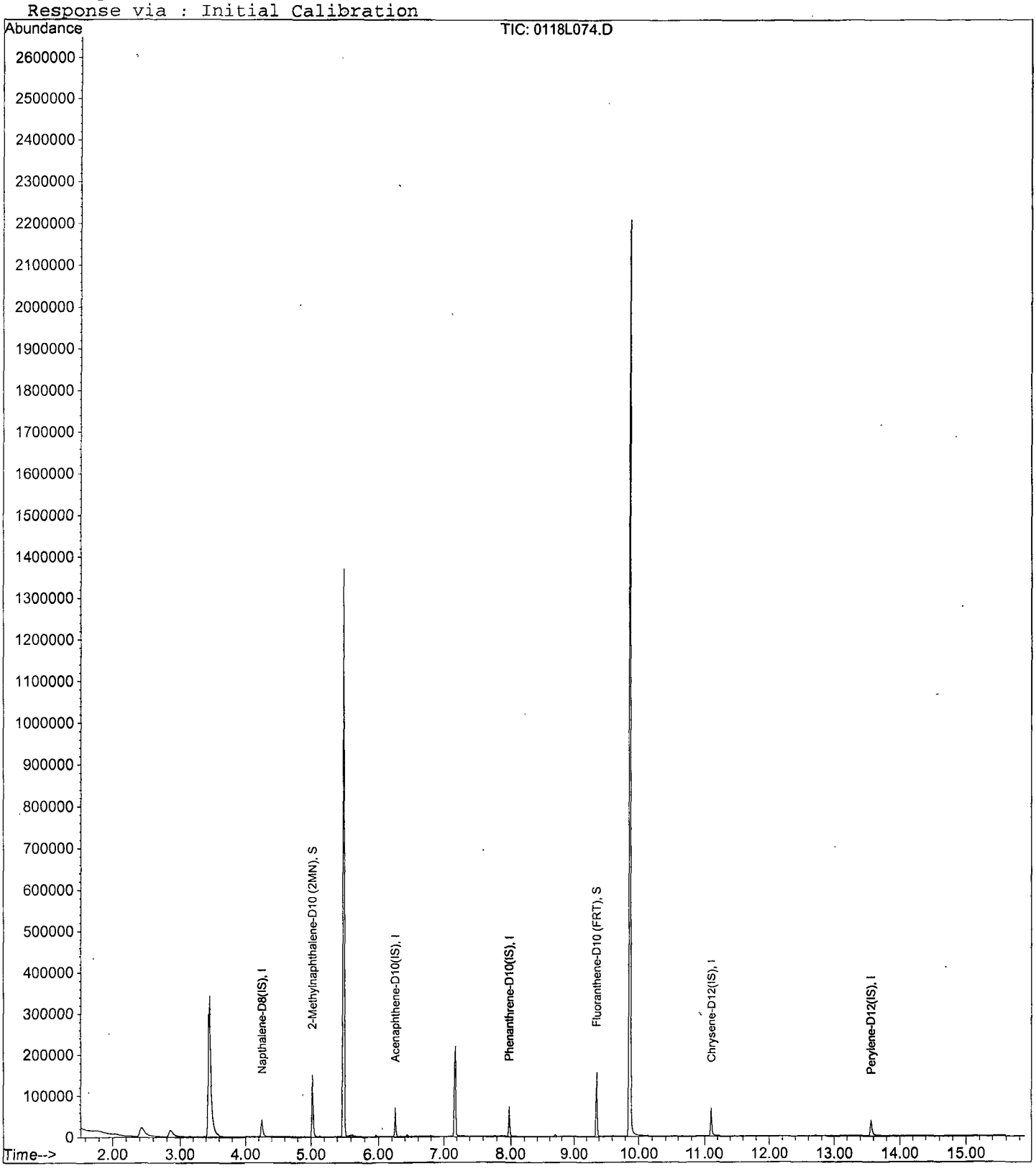
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L074.D Vial: 74
Acq On : 1 Feb 21 15:44 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:02 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L075.D Vial: 75
Acq On : 1 Feb 21 16:06 Operator: MA
Sample : 210129A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:33 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67204	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31665	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	60381	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72838	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	68395	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	120301	4.17056 ppb		0.00
Spiked Amount 5.000			Recovery	= 83.420%		
13) Fluoranthene-D10 (FRT)	9.37	212	143656	4.40164 ppb		0.00
Spiked Amount 5.000			Recovery	= 88.040%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	110466	4.03991 ppb		100
4) 2-Methylnaphthalene	5.06	142	70371	4.11084 ppb		98
5) 1-Methylnaphthalene	5.17	142	70339	4.12463 ppb		95
7) Acenaphthylene	6.08	152	212592	4.12793 ppb		100
8) Acenaphthene	6.29	154	62102	4.12757 ppb		99
9) Fluorene	6.89	166	76989	4.38822 ppb		99
11) Phenanthrene	8.00	178	115247	4.11820 ppb		100
12) Anthracene	8.06	178	97755	3.89626 ppb		100
14) Fluoranthene	9.39	202	162248	4.37338 ppb		100
16) Pyrene	9.65	202	164483	4.14668 ppb		100
17) Benz (a) anthracene	11.11	228	133858	3.99397 ppb		100
18) Chrysene	11.15	228	146691	4.10751 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.05	276	135927	4.29515 ppb		89
21) Benzo (b) fluoranthene	12.93	252	119298	4.45323 ppb		98
22) Benzo (k) fluoranthene	12.99	252	161948	4.67460 ppb		96
23) Benzo (a) pyrene	13.48	252	104011	4.02648 ppb	#	94
24) Dibenz (a,h) anthracene	15.11	278	111518	4.60538 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	122003	4.41865 ppb		95

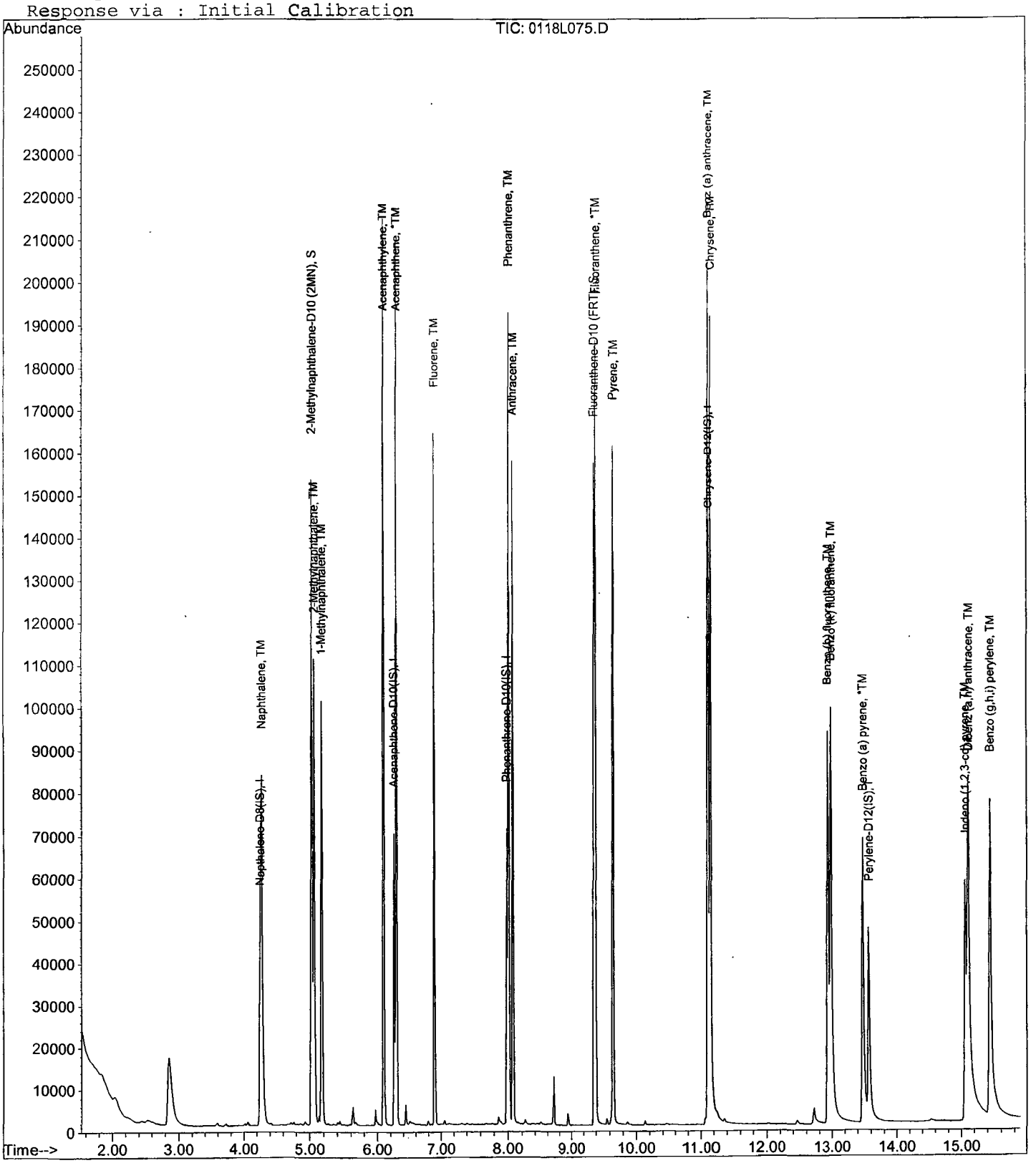
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L075.D Vial: 75
Acq On : 1 Feb 21 16:06 Operator: MA
Sample : 210129A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:33 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L076.D Vial: 76
Acq On : 1 Feb 21 16:28 Operator: MA
Sample : BA26001W30 MS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:01 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	65475	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	29538	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57635	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70005	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	39480	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	34727	1.23570 ppb		0.00
Spiked Amount 5.000			Recovery	= 24.720%		
13) Fluoranthene-D10 (FRT)	9.37	212	133957	4.30002 ppb		0.00
Spiked Amount 5.000			Recovery	= 86.000%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	107494	4.03503 ppb		100
4) 2-Methylnaphthalene	5.06	142	26402	1.58304 ppb		98
5) 1-Methylnaphthalene	5.17	142	43044	2.59072 ppb		94
7) Acenaphthylene	6.08	152	6727	0.14002 ppb		100
8) Acenaphthene	6.29	154	7825	0.55753 ppb		99
9) Fluorene	6.89	166	74429	4.54779 ppb		100
11) Phenanthrene	8.00	178	109406	4.09575 ppb		100
12) Anthracene	8.06	178	49123	2.05120 ppb		100
14) Fluoranthene	9.39	202	154712	4.36894 ppb		100
16) Pyrene	9.65	202	126909	3.32890 ppb		100
17) Benz (a) anthracene	11.11	228	116849	3.62756 ppb		99
18) Chrysene	11.15	228	139965	4.07778 ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	121949	4.00941 ppb	#	87
21) Benzo (b) fluoranthene	12.93	252	129610	8.38161 ppb		98
22) Benzo (k) fluoranthene	12.99	252	136144	6.80792 ppb		97
23) Benzo (a) pyrene	13.48	252	60896	4.08397 ppb	#	95
24) Dibenz (a,h) anthracene	15.11	278	107184	7.66828 ppb		96
25) Benzo (g,h,i) perylene	15.43	276	102773	6.44830 ppb		94

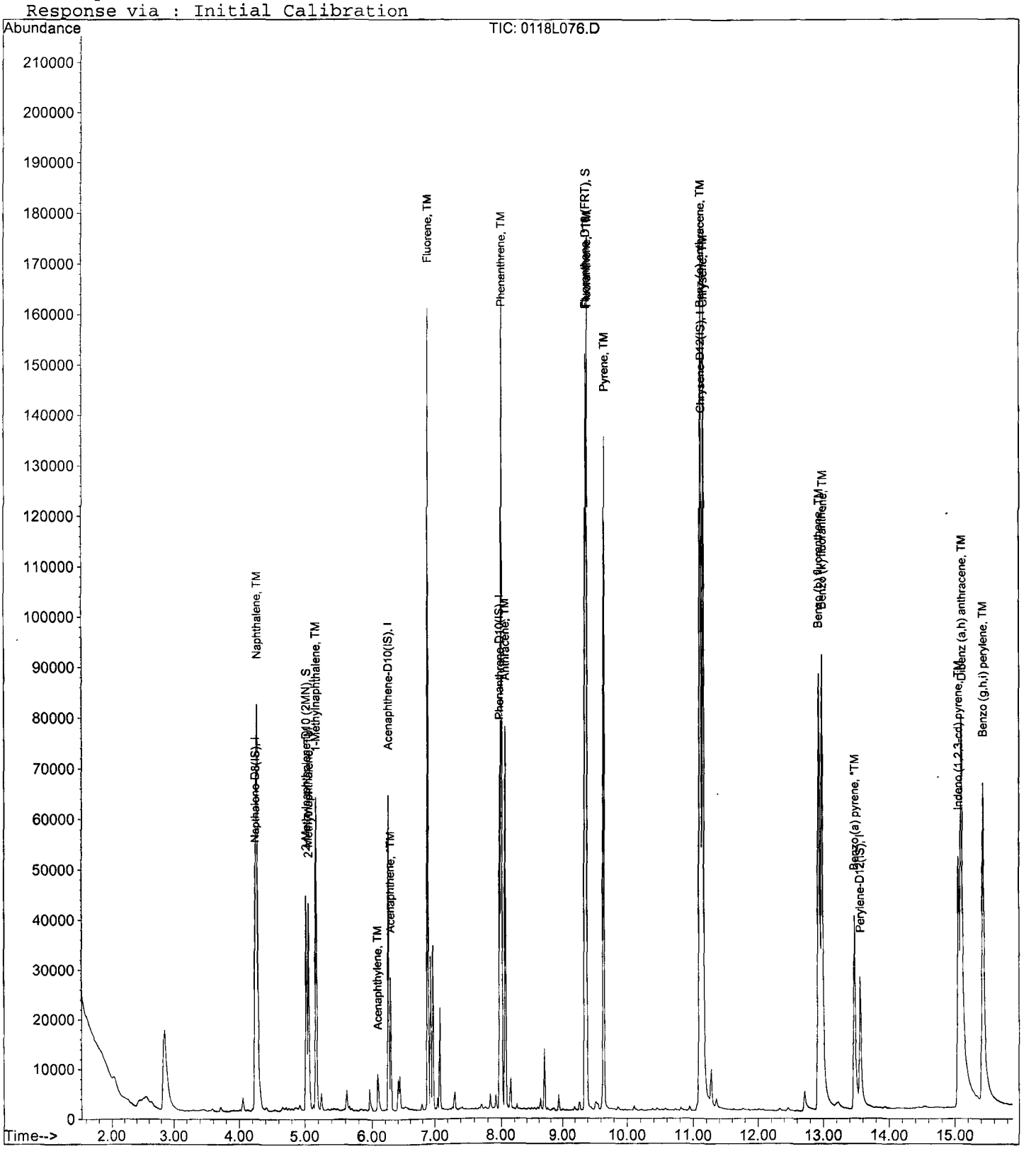
(#) = qualifier out of range (m) = manual integration
0118L076.D L0118.M Tue Feb 02 16:19:10 2021

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L076.D Vial: 76
Acq On : 1 Feb 21 16:28 Operator: MA
Sample : BA26001W30 MS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:01 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L077.D Vial: 77
Acq On : 1 Feb 21 16:50 Operator: MA
Sample : BA26001W31 MSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:01 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66022	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31459	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	57420	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	70559	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	67406	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	42967	1.51623 ppb	0.00
Spiked Amount 5.000			Recovery	= 30.320%	
13) Fluoranthene-D10 (FRT)	9.37	212	136189	4.38804 ppb	0.00
Spiked Amount 5.000			Recovery	= 87.760%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	108731	4.04765 ppb	99
4) 2-Methylnaphthalene	5.06	142	31018	1.84441 ppb	98
5) 1-Methylnaphthalene	5.17	142	47667	2.84520 ppb	95
7) Acenaphthylene	6.08	152	6869	0.13425 ppb	99
8) Acenaphthene	6.29	154	7396	0.49479 ppb	98
9) Fluorene	6.89	166	74515	4.27501 ppb	100
11) Phenanthrene	8.00	178	109431	4.11202 ppb	100
12) Anthracene	8.06	178	81877	3.43169 ppb	100
14) Fluoranthene	9.39	202	156394	4.43297 ppb	100
16) Pyrene	9.65	202	140567	3.65821 ppb	99
17) Benz (a) anthracene	11.11	228	129958	4.00285 ppb	99
18) Chrysene	11.15	228	141534	4.09111 ppb	98
19) Indeno (1,2,3-cd) pyrene	15.05	276	135305	4.41359 ppb	89
21) Benzo (b) fluoranthene	12.93	252	131681	4.98759 ppb	98
22) Benzo (k) fluoranthene	12.99	252	143948	4.21599 ppb	97
23) Benzo (a) pyrene	13.48	252	104651	4.11070 ppb	95
24) Dibenz (a,h) anthracene	15.11	278	111442	4.66977 ppb	96
25) Benzo (g,h,i) perylene	15.43	276	119835	4.40381 ppb	94

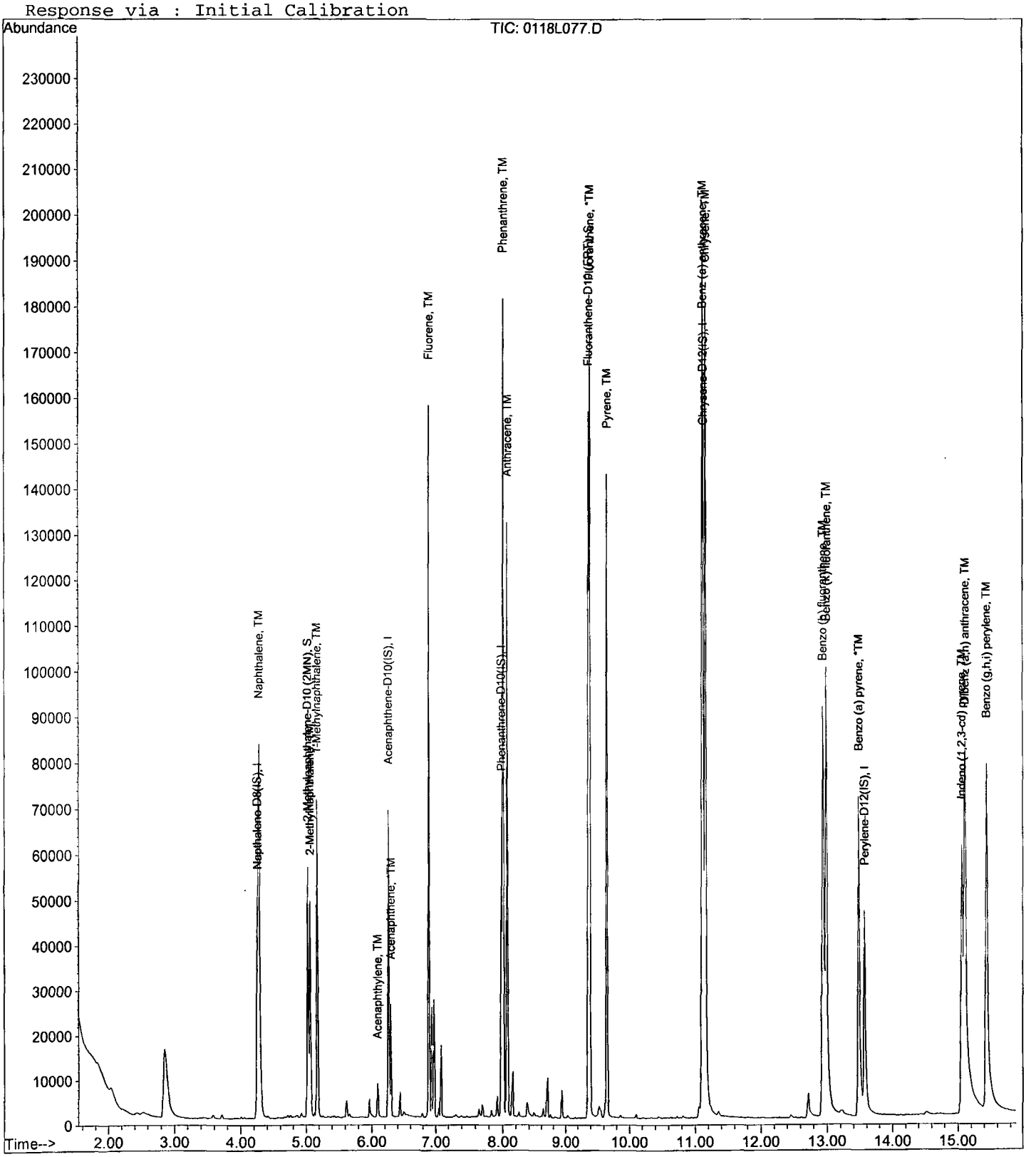
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L077.D Vial: 77
Acq On : 1 Feb 21 16:50 Operator: MA
Sample : BA26001W31 MSD-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

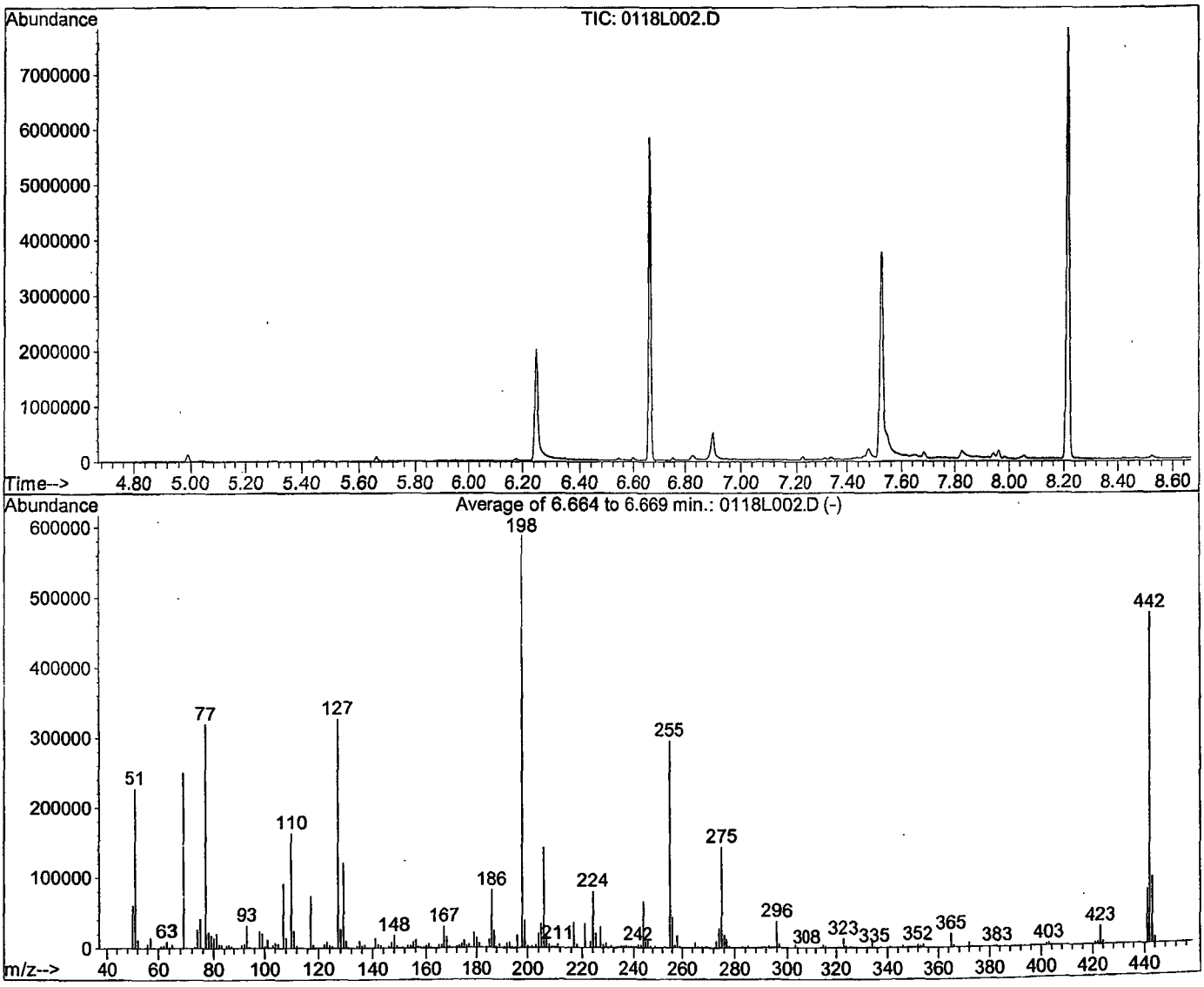
Quant Time: Feb 2 10:01 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Data File : M:\LINUS\DATA\L210118\0118L002.D Vial: 2
Acq On : 18 Jan 21 11:17 Operator: MA
Sample : SV Tune 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

0118L002.D L0118.M Mon Jan 18 16:16:32 2021

Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

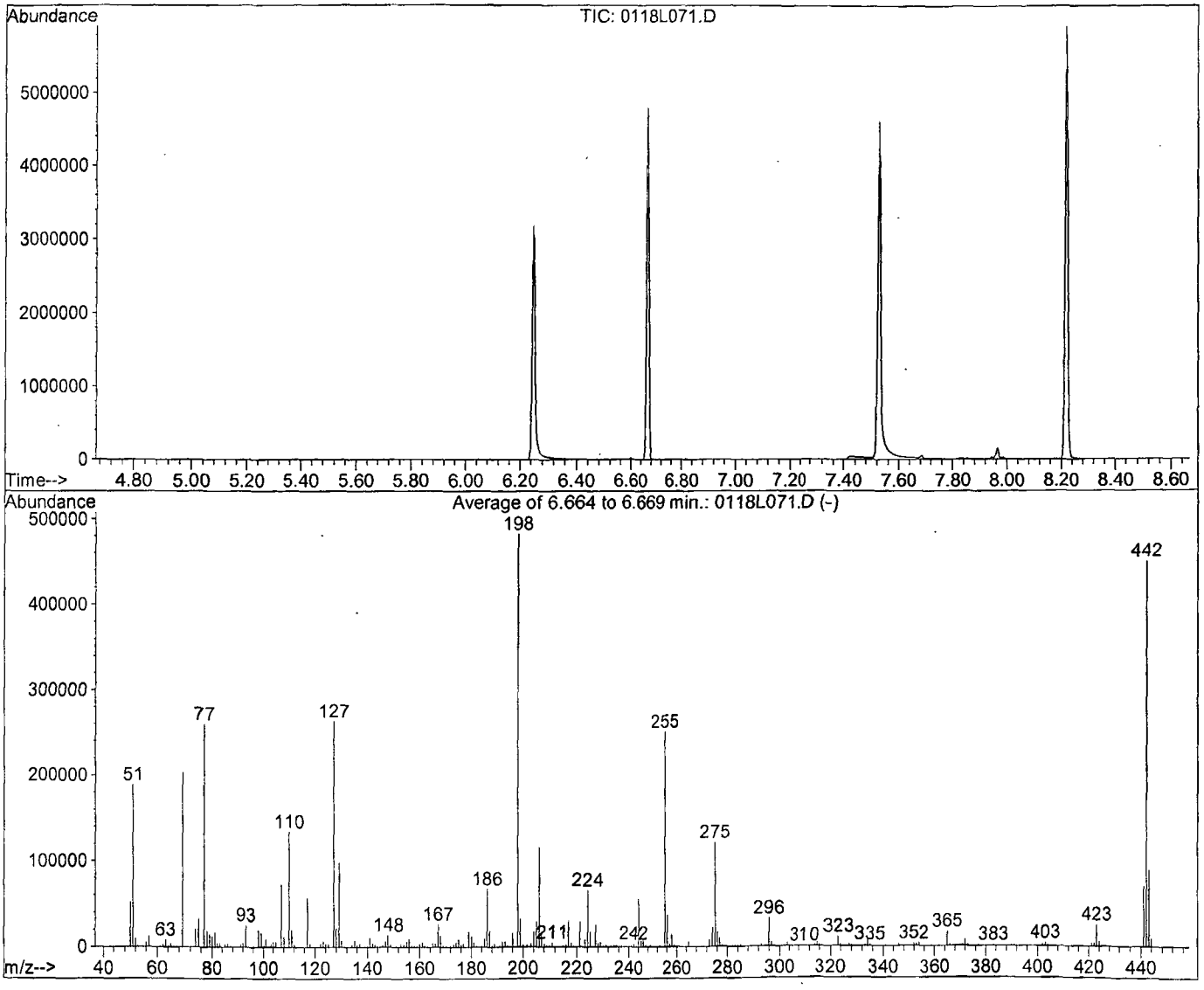
#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

Breakdown **1.63**

Data File : M:\LINUS\DATA\L210118\0118L071.D
Acq On : 1 Feb 21 14:44
Sample : SVTUNE 10/02/20
Misc :

Vial: 71
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.0	188267	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1207	PASS
127	198	10	80	54.5	263040	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	482944	PASS
199	198	5	9	6.6	31997	PASS
275	198	10	60	25.0	120824	PASS
365	198	1	100	3.5	16772	PASS
441	442	0.01	24	15.6	70267	PASS
442	198	50	500	93.2	449941	PASS
443	442	15	24	19.7	88693	PASS

0118L071.D L0118.M Mon Feb 01 14:59:45 2021

Data File Name:	**0118L071.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**1 Feb 21 14:44**
Method File:	**DFTPP2.M**
Sample Name:	**SVTUNE 10/02/20**
Vial Number:	**71**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	40152000
2)	DDD	7.98	1025770
3)	DDE	7.69	220978

Breakdown **3.01**

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Spike
Prep Date	09/11/20
Exp Date	09/11/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41545 41546 41547 49548	12/31/22	5 mL	25 mL	Acetone 0246130	40 ug/mL

Name of Final Standard	**8270 PAH SIM Second Source**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/21**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**
Prep Date	**01/14/21**
Exp Date	**01/14/22**

Prep'd By **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	08/11/20
Exp Date	04/01/21

Prep'd By (Initials) CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	11/30/20
Exp Date	11/30/21

Prep'd By (Initials) LS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0154854-50257, 50258, 50259 A0161454-50790, 50794**	**10/31/2025 5/31/26**	5mL	100 mL	Acetone #246130	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**	**Prep'd By (Initials)**	**CD**
Prep Date	**06/19/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22	Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21
Spiked ID 2	Sim Spike 9-11-20 9-11-21	Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21
Spiked ID 3		Surrogate ID 3	
Spiked ID 4		Surrogate ID 4	
Spiked ID 5		Surrogate ID 5	
Spiked ID 6		Sufficient Vol for Matrix QC:	yes
Spiked ID 7		Ext. Start Time:	01/29/21 12:00
Spiked ID 8		Ext. End Time:	01/30/21 6:00
		GC Requires Extract By:	

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C
pH3			Water Bath Temp 3 °C

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210129A Blk				0.2,0.05	1,2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP51				
2	210129A LCS-1		1	1	0.2	1	1000	1	2/1	01/29/21 10:25	
						equip	E-HP50				
3	210129A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP49				
4	BA26001 MS-1	BA26001W21	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP48				
5	BA26001 MSD-1	BA26001W23	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP47				
6	BA26001 MS-2	BA26001W30	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP25				
7	BA26001 MSD-2	BA26001W31	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP26				
8	BA26001	BA26001W20			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP27				
9	BA26003	BA26003W09			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP28				
10	BA26006	BA26006W13			0.2,0.05	1,2	1040	1	2/1	01/29/21 10:25	94899
						equip	E-HP29				
11	BA26008	BA26008W07			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP30				
12	BA26013	BA26013W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP16				
13	BA26016	BA26016W12			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP15				
14	BA26150	BA26150W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP14				
15	BA26152	BA26152W04			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94921
						equip	E-HP13				
16	BA26155	BA26155W05			0.2,0.05	1,2	400	1	2/1	01/29/21 10:25	94921
						equip	E-HP12				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/1/21
Time	12:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	
			GC Requires Extract By:		

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP11				
18	BA26160	BA26160W12			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94920
						equip	E-HP10				
19	BA26163	BA26163W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94920
						equip	E-HP9				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	
Time	
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
71	0118L071.D	1	SVTUNE 10/02/20		1 Feb 21 14:44
72	0118L072.D	1	5 SIM 01/15/21		1 Feb 21 15:00
74	0118L074.D	1	210129A BLK 1/1000		1 Feb 21 15:44
75	0118L075.D	1	210129A LCS-2 1/1000		1 Feb 21 16:06
76	0118L076.D	1	BA26001W30 MS-2 1/1000		1 Feb 21 16:28
77	0118L077.D	1	BA26001W31 MSD-2 1/1000		1 Feb 21 16:50
78	0118L078.D	0.9901	BA26001W20 1/1010		1 Feb 21 17:12
79	0118L079.D	0.9901	BA26003W09 1/1010		1 Feb 21 17:35
80	0118L080.D	0.96154	BA26006W13 1/1040		1 Feb 21 17:57
81	0118L081.D	0.980392	BA26008W07 1/1020		1 Feb 21 18:19
82	0118L082.D	0.98039	BA26013W14 1/1020		1 Feb 21 18:41
83	0118L083.D	0.9901	BA26016W12 1/1010		1 Feb 21 19:03
90	0118L090.D	1	5 SIM 01/15/21		1 Feb 21 21:37

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO
Initials: HA

			0125K004.D	0125K005 D	0125K006 D	0125K007 D	0125K003 D	0125K008 D	0125K009 D	0125K010 D								
		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
4																		
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34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

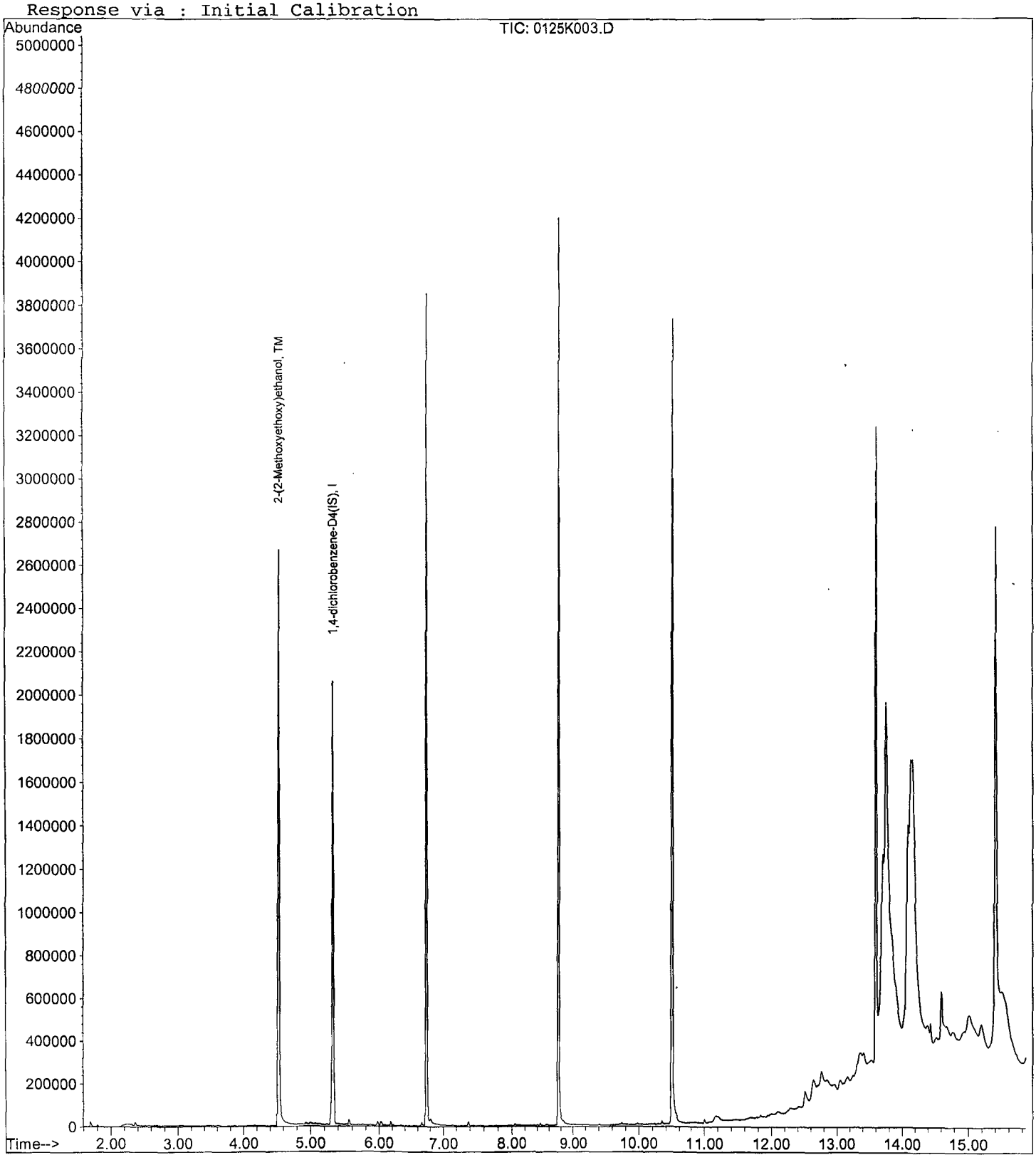
(#) = qualifier out of range (m) = manual integration
0125K003.D KMEE0125.M Tue Jan 26 10:36:22 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

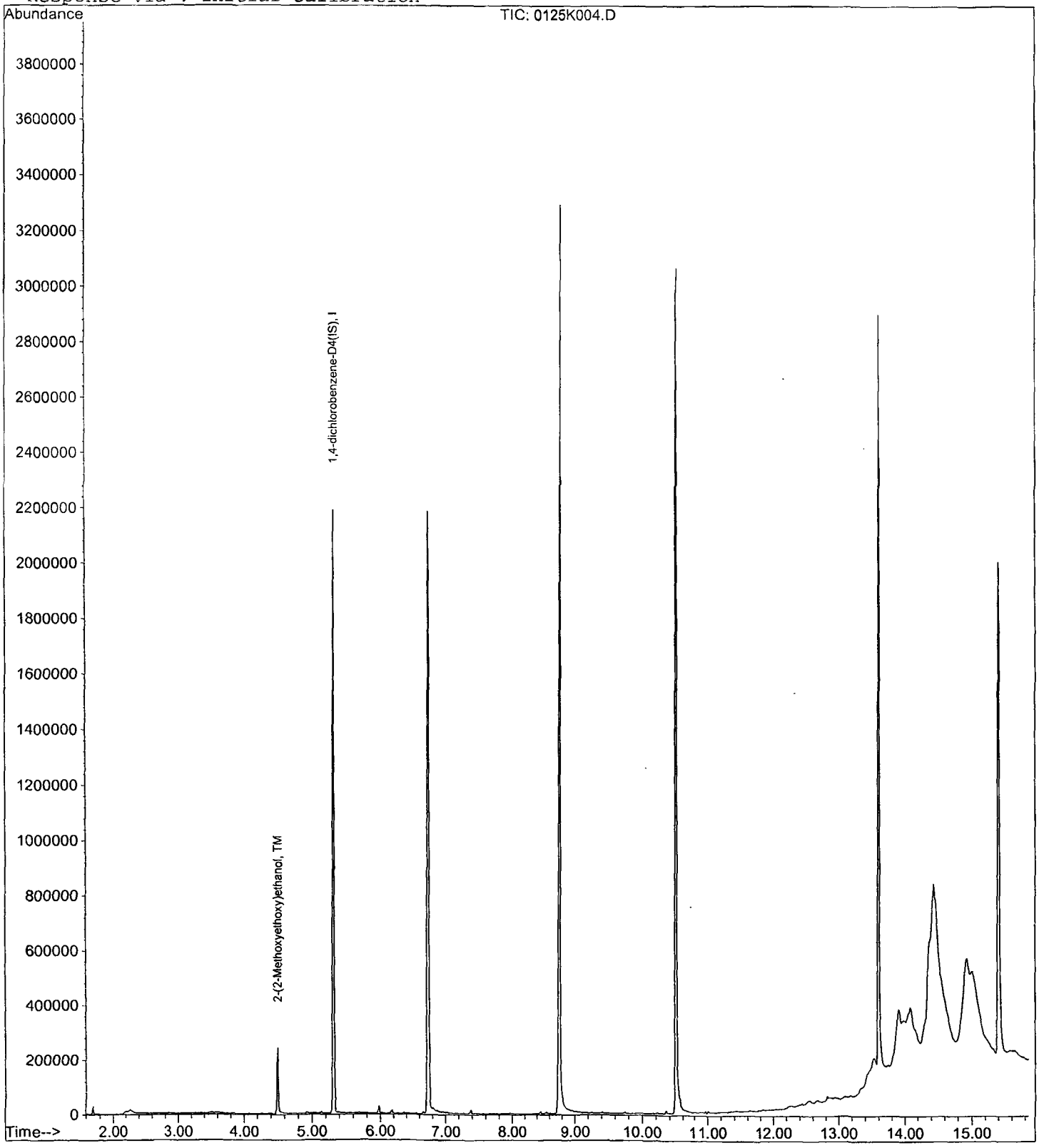
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

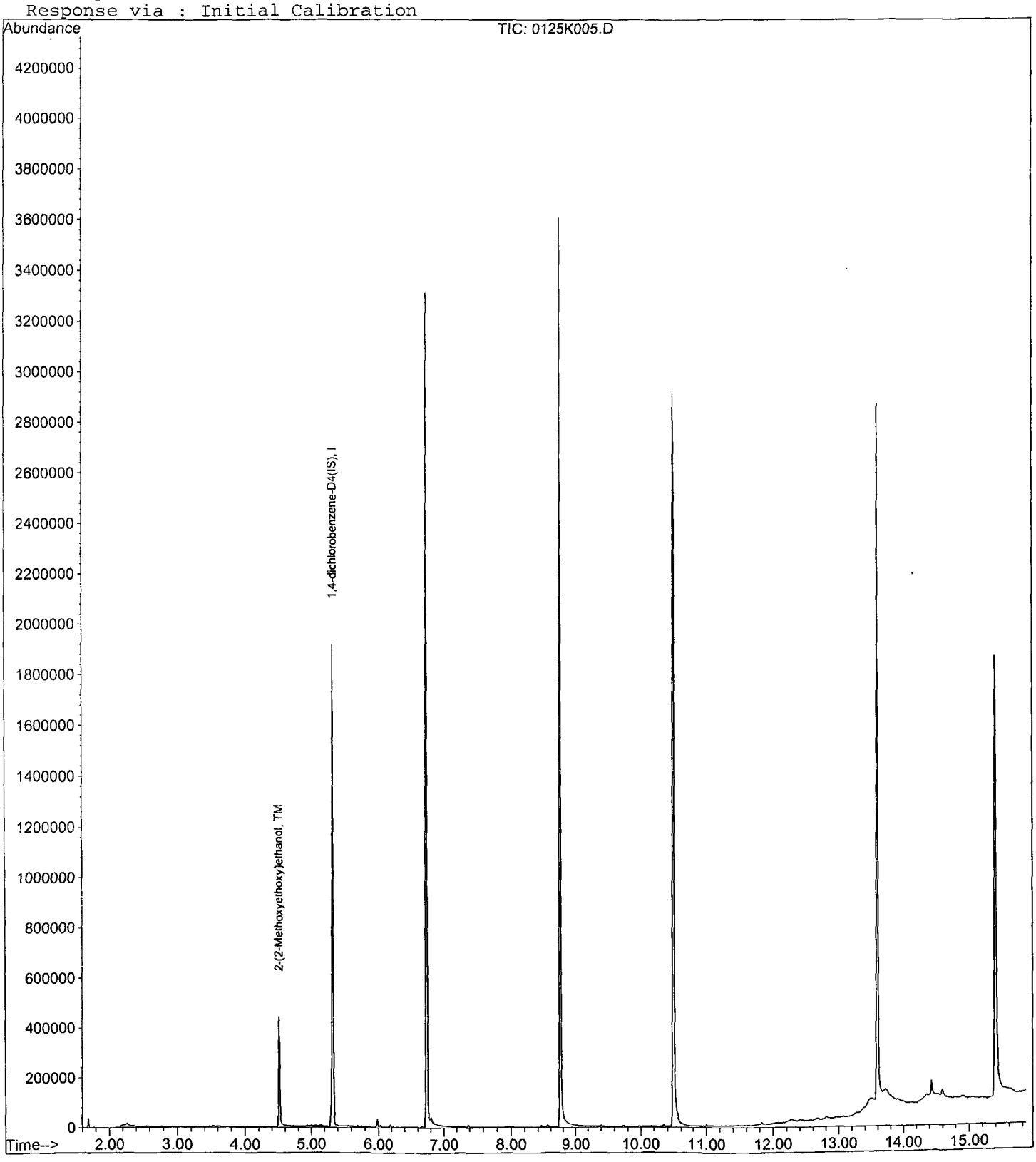
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

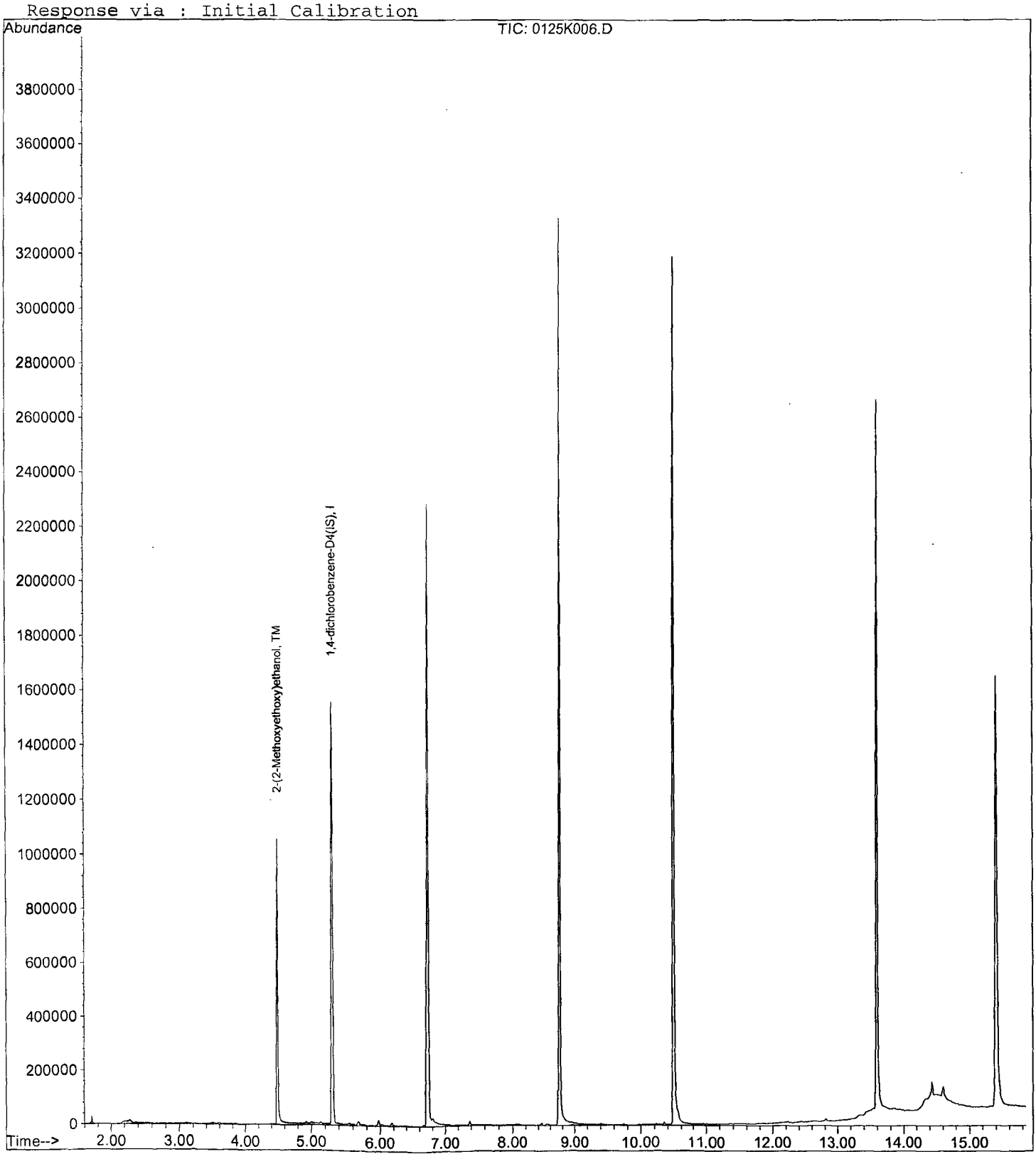
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

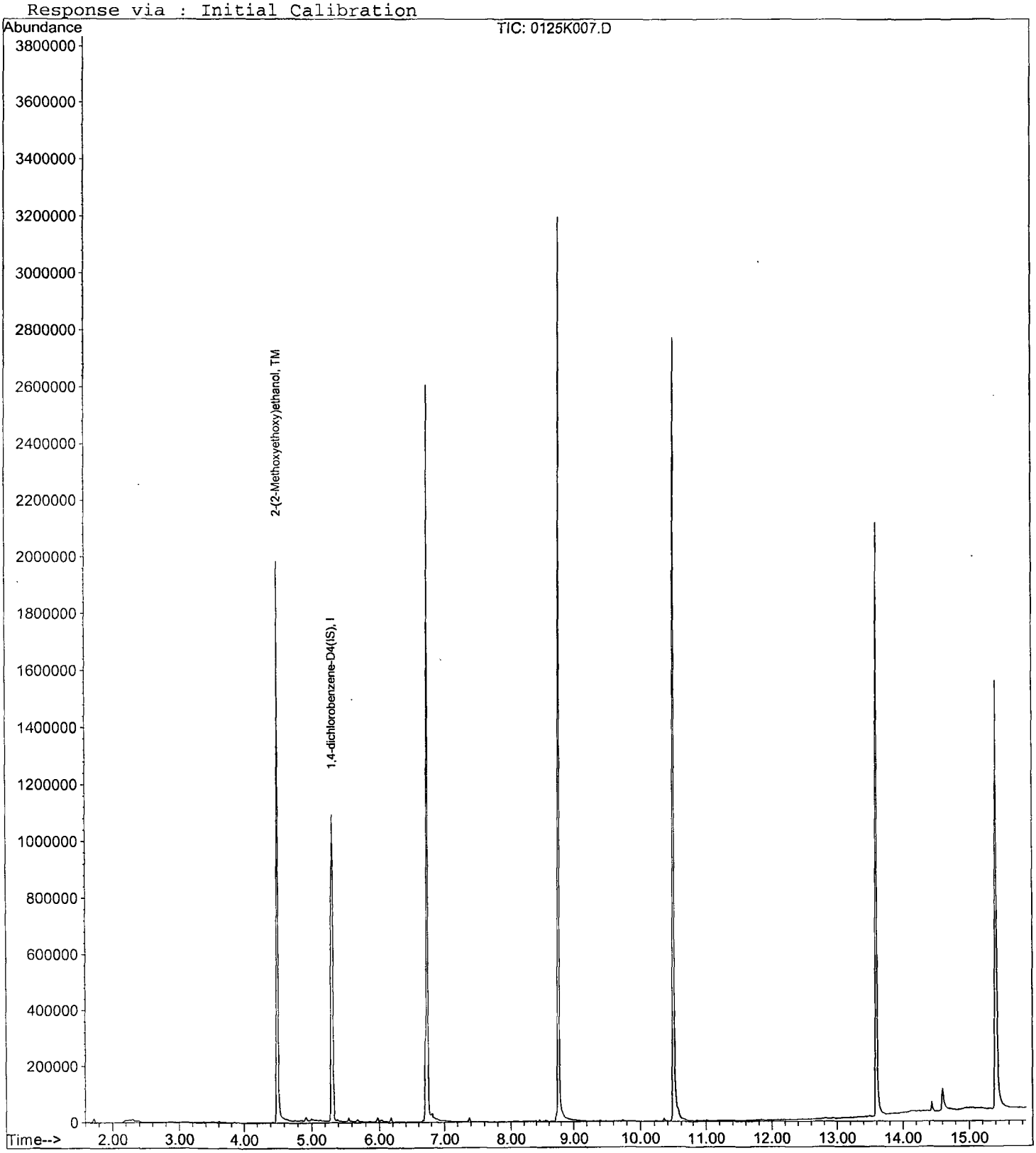
(#) = qualifier out of range (m) = manual integration
0125K007.D KMEE0125.M Tue Jan 26 10:36:40 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

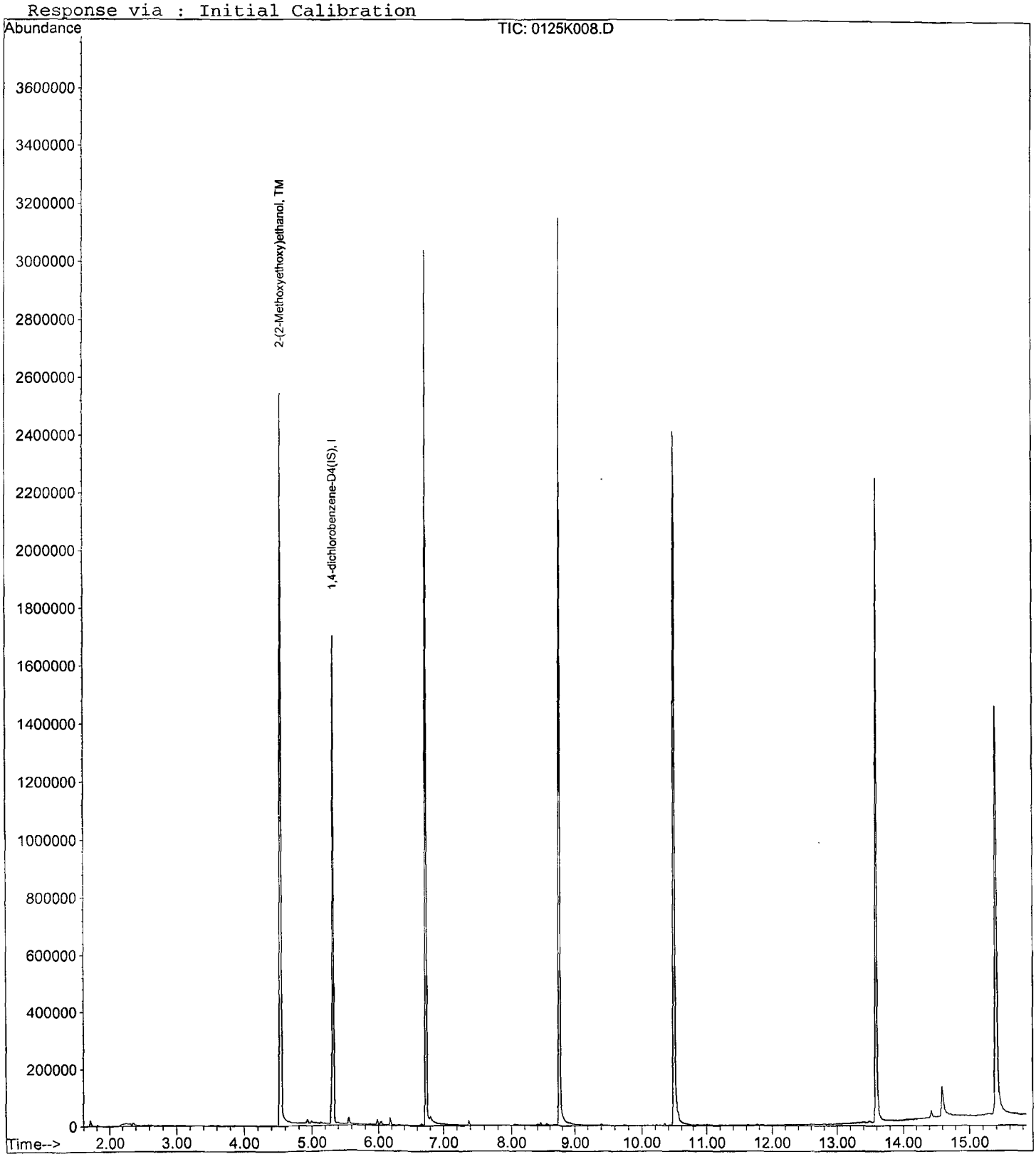
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

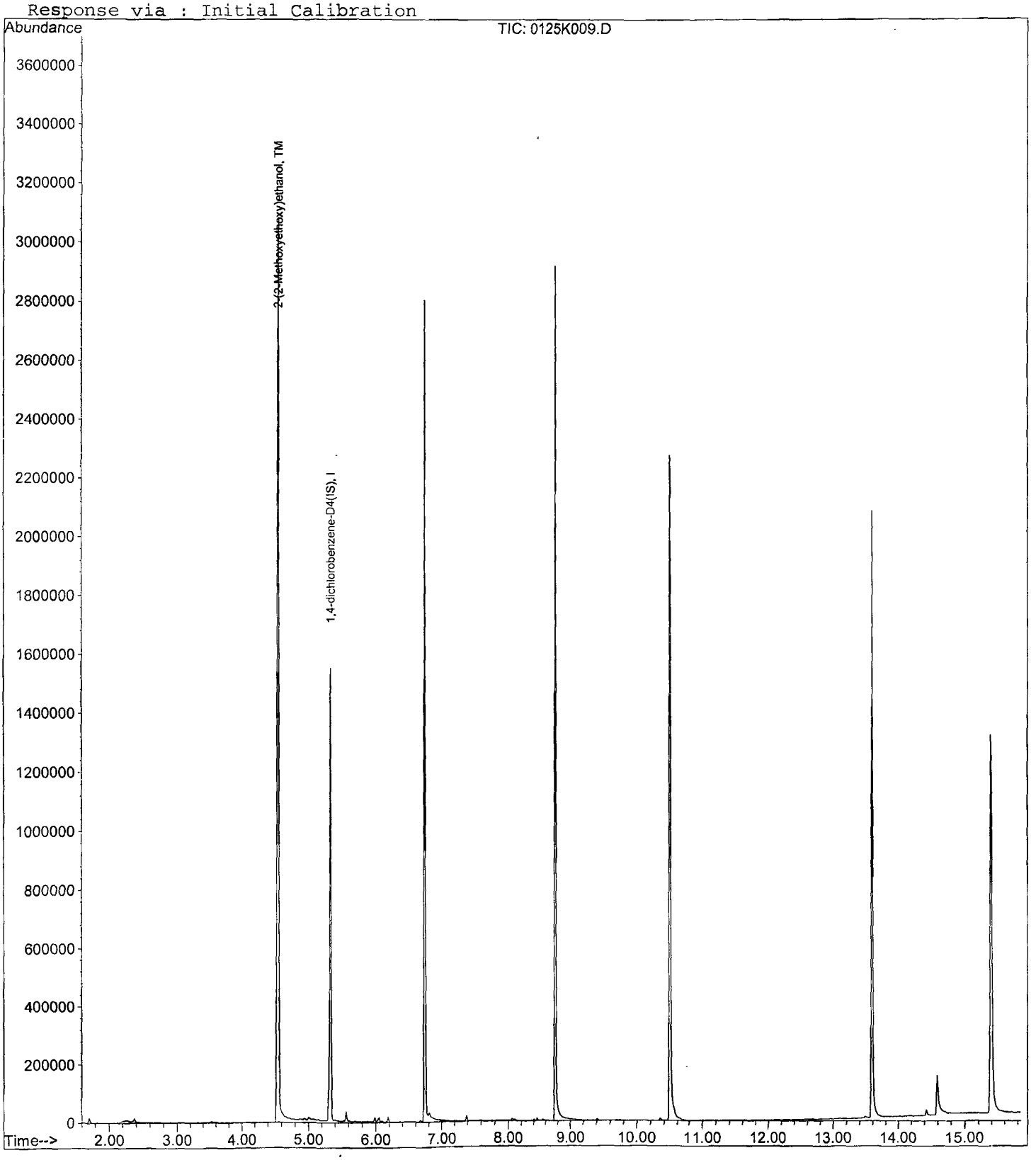
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

(#) = qualifier out of range (m) = manual integration
0125K010.D KMEE0125.M Tue Jan 26 10:36:53 2021 Page 1

Quantitation Report

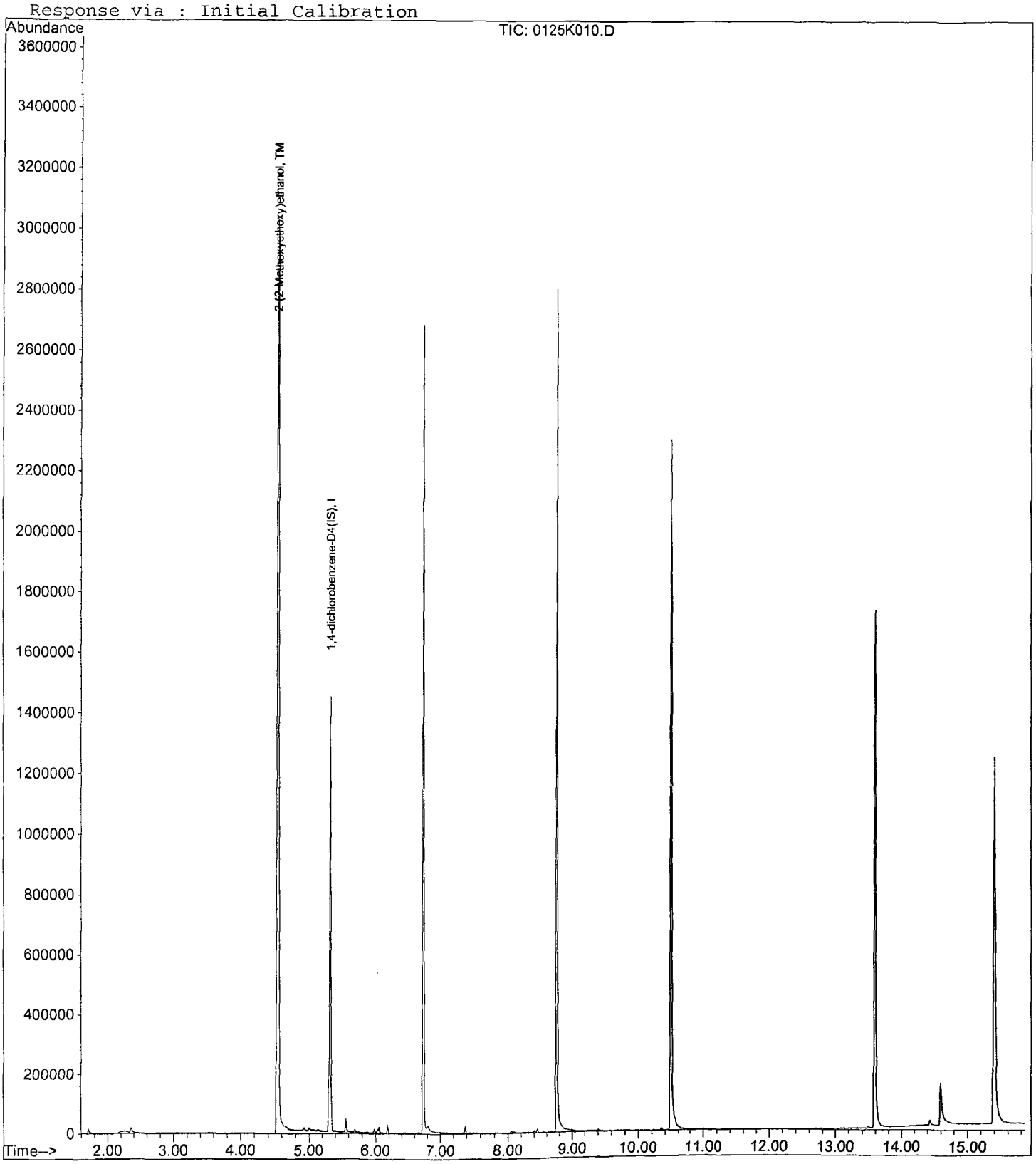
Data File : M:\KYLO\DATA\210125M\0125K010.D
Acq On : 25 Jan 21 15:17
Sample : 2MEE 1000 5/1/20
Misc :

Vial: 10
Operator:
Inst : KYLO
Multiplr: 1.00

Quant Time: Jan 25 15:36 2021

Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

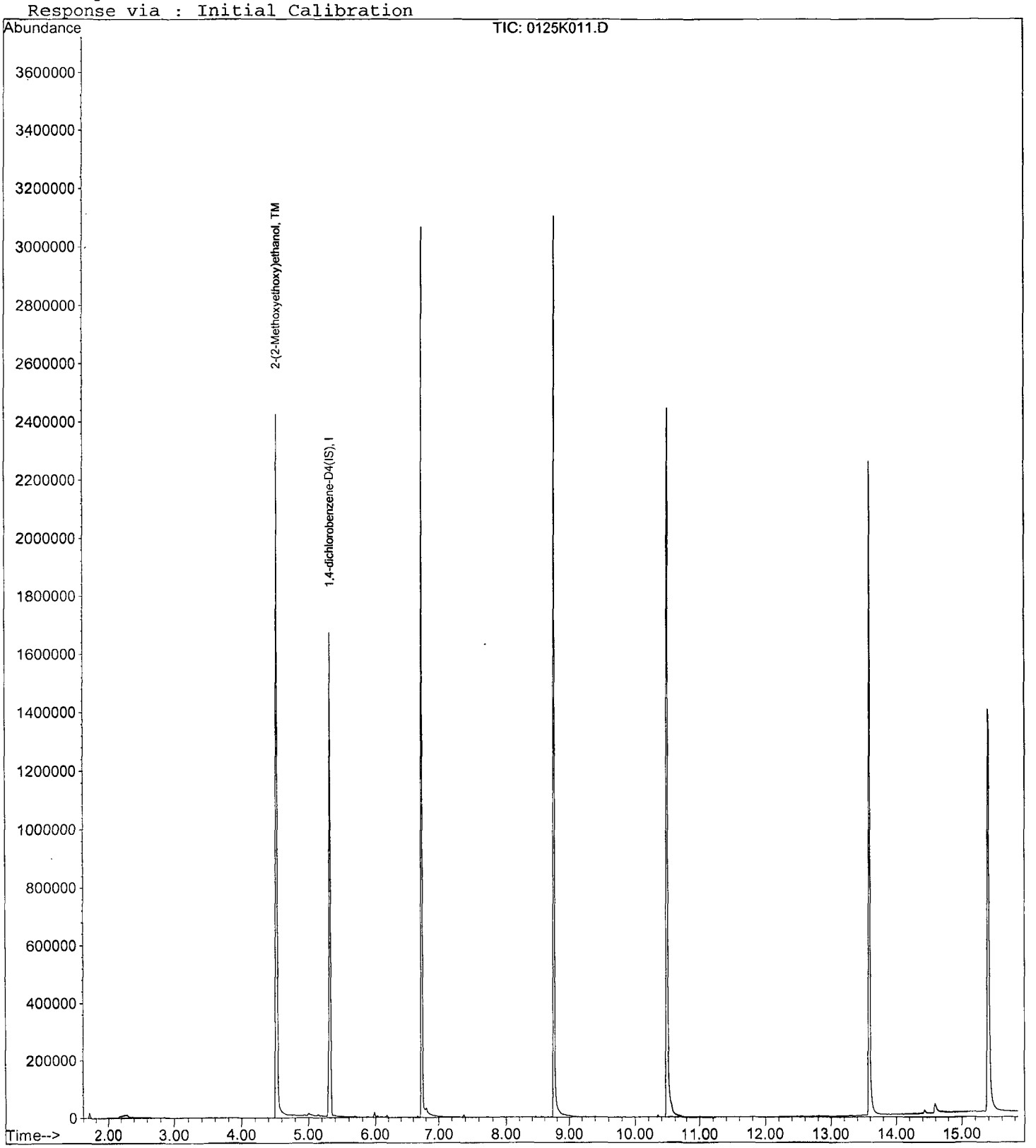
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 2 Feb 21 12:08
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K058.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.3065	19	TM	
3							
4							
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			19.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K058.D Vial: 58
Acq On : 2 Feb 21 12:08 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 12:25 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	158559	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.56	45	607455	595.90363	ppb	97

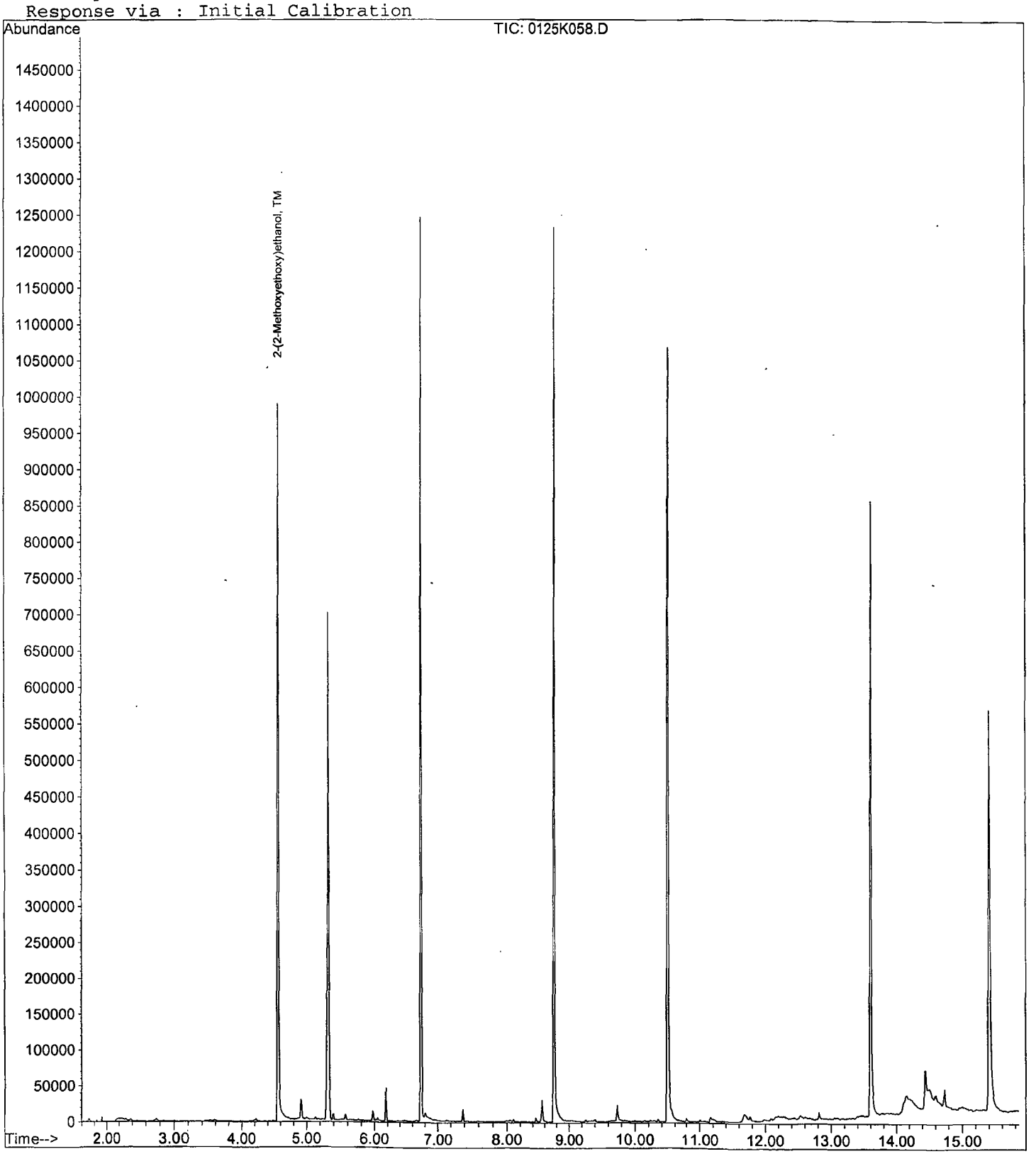
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K058.D Vial: 58
Acq On : 2 Feb 21 12:08 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 12:25 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 2 Feb 21 17:49
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K071.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2787	8.4	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
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34							
35							
36							
37							
38							
39							
40							
		Average			8.4		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K071.D Vial: 71
Acq On : 2 Feb 21 17:49 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 18:17 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	154456	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	538112	541.90195	ppb	98

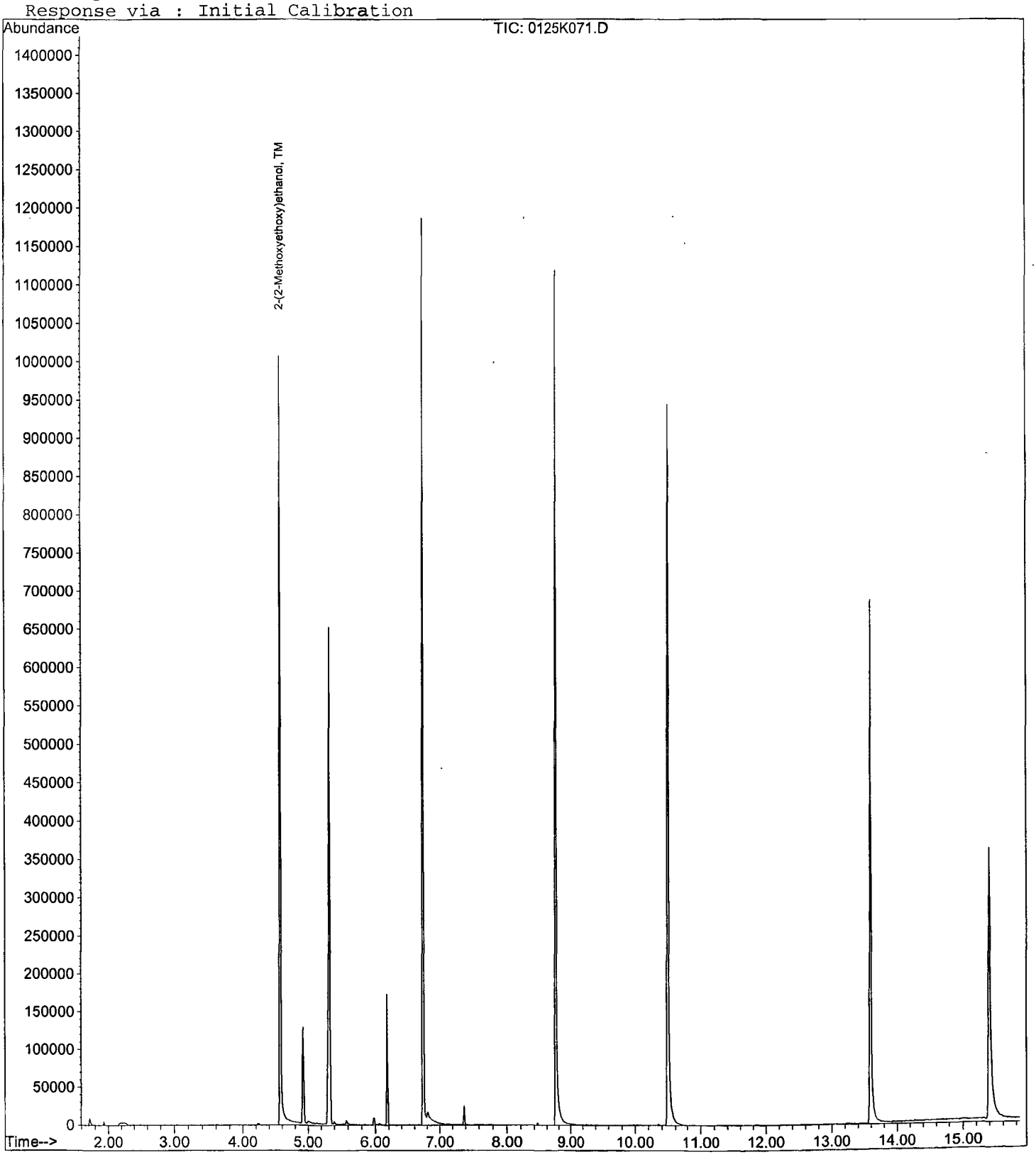
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K071.D Vial: 71
Acq On : 2 Feb 21 17:49 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 18:17 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K063.D Vial: 63
Acq On : 2 Feb 21 14:59 Operator:
Sample : BA26001W14 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	169068	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

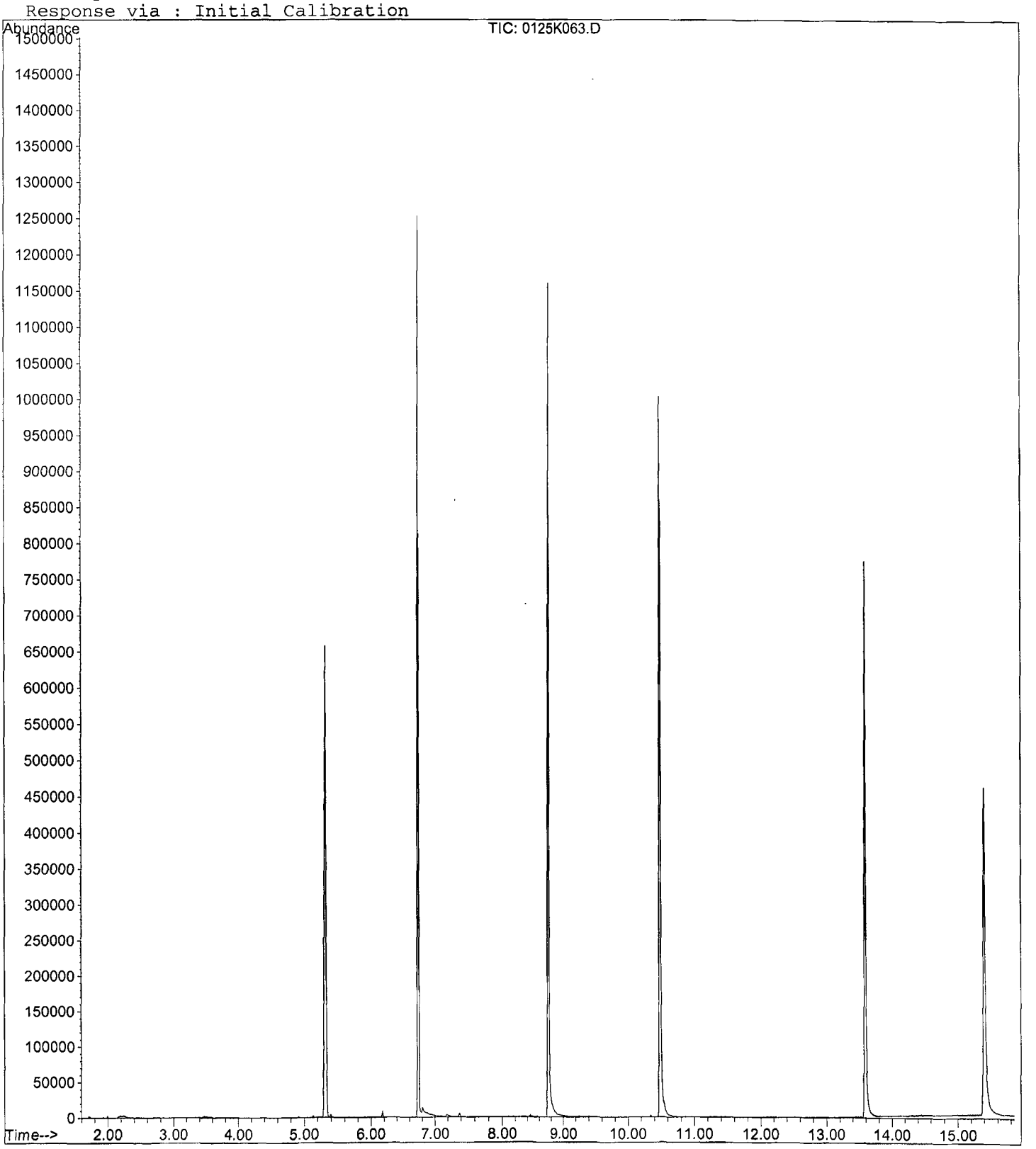
(#) = qualifier out of range (m) = manual integration
0125K063.D KMEE0125.M Wed Feb 03 14:14:53 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K063.D Vial: 63
Acq On : 2 Feb 21 14:59 Operator:
Sample : BA26001W14 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K064.D Vial: 64
Acq On : 2 Feb 21 15:20 Operator:
Sample : BA26003W05 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	174523	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

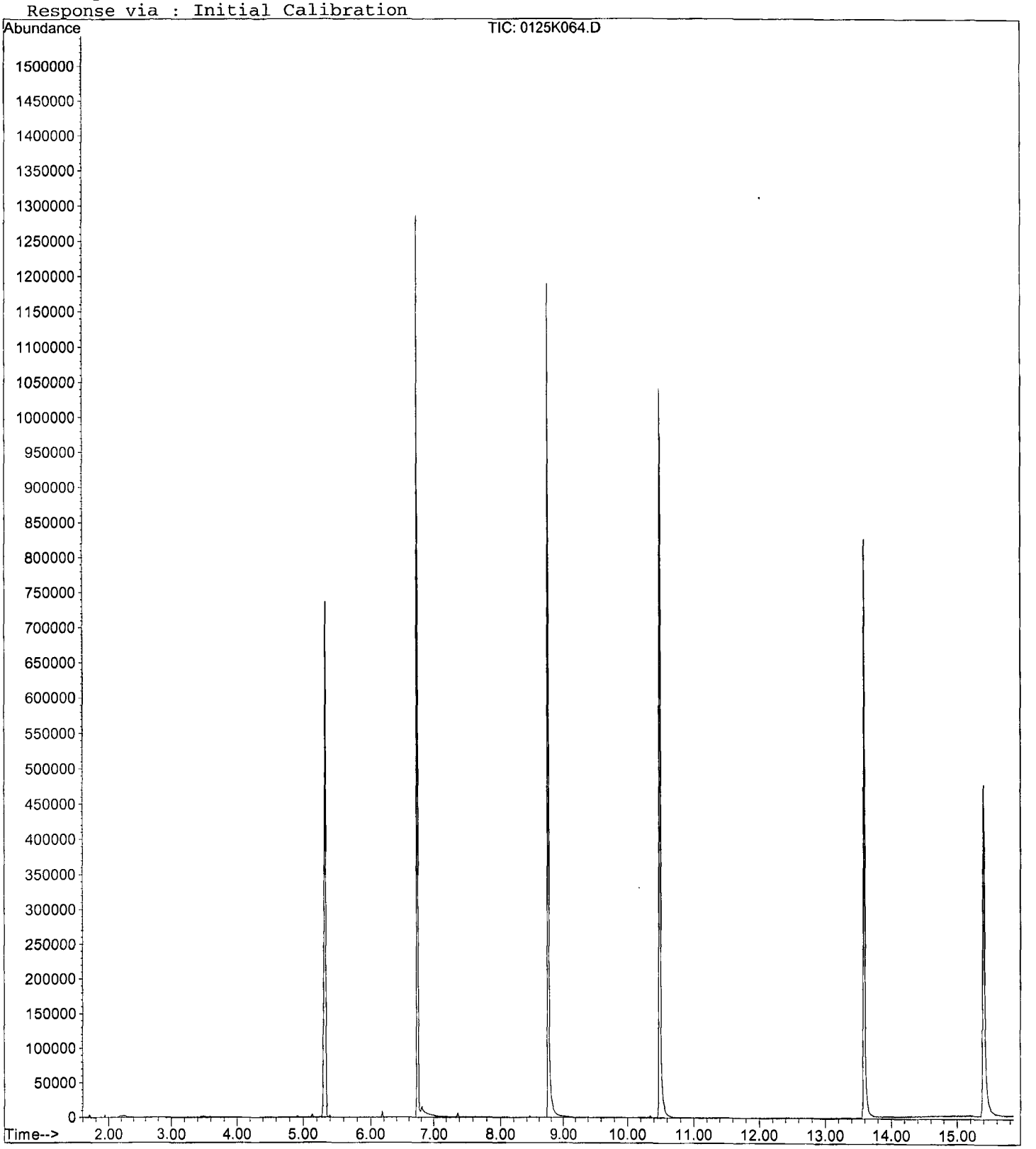
(#) = qualifier out of range (m) = manual integration
0125K064.D KMEE0125.M Wed Feb 03 14:14:58 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K064.D Vial: 64
Acq On : 2 Feb 21 15:20 Operator:
Sample : BA26003W05 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K065.D Vial: 65
Acq On : 2 Feb 21 15:41 Operator:
Sample : BA26006W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	168042	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

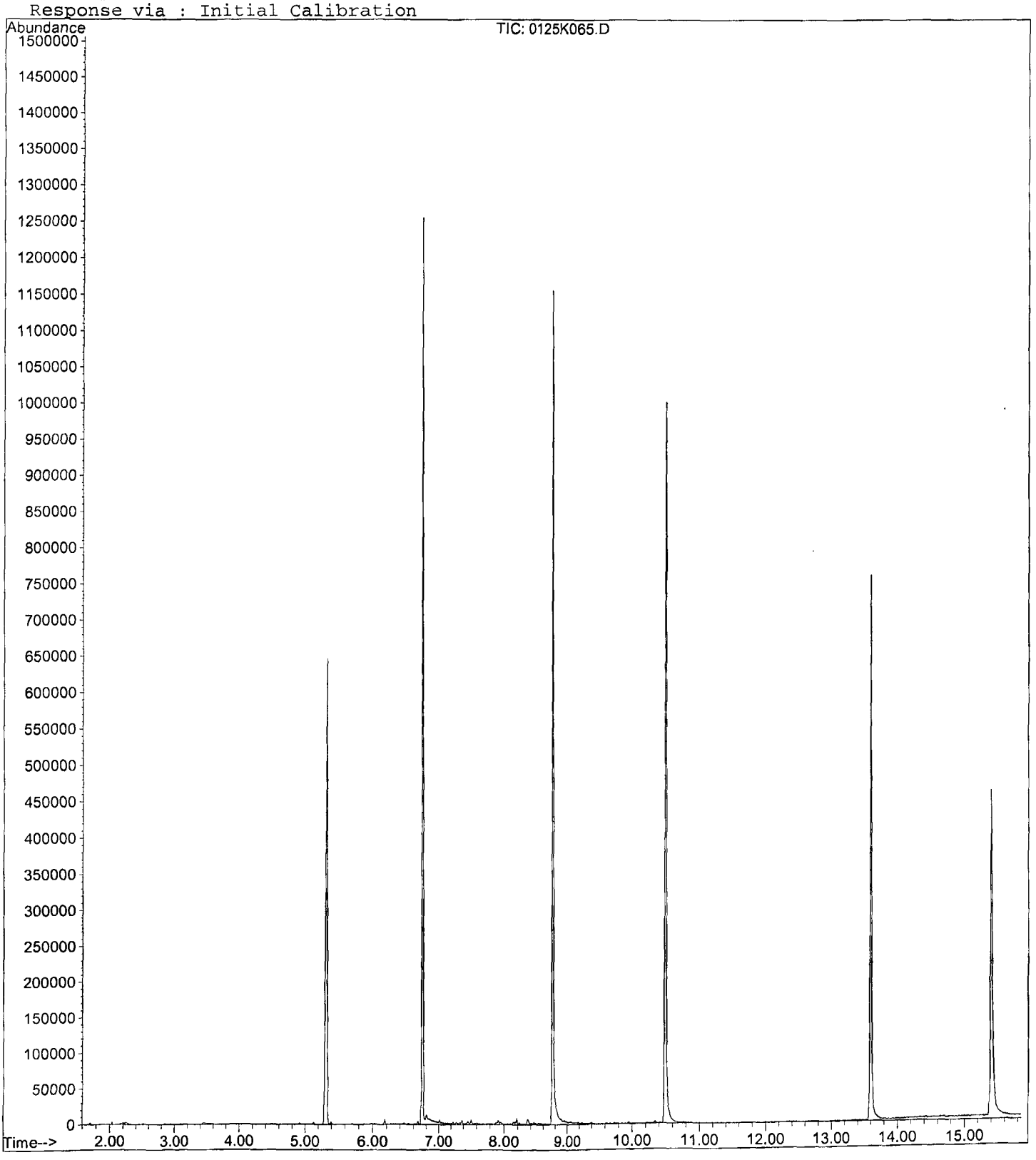
(#) = qualifier out of range (m) = manual integration
0125K065.D KMEE0125.M Wed Feb 03 14:15:02 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K065.D Vial: 65
Acq On : 2 Feb 21 15:41 Operator:
Sample : BA26006W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K066.D Vial: 66
Acq On : 2 Feb 21 16:03 Operator:
Sample : BA26008W06 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	159043	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

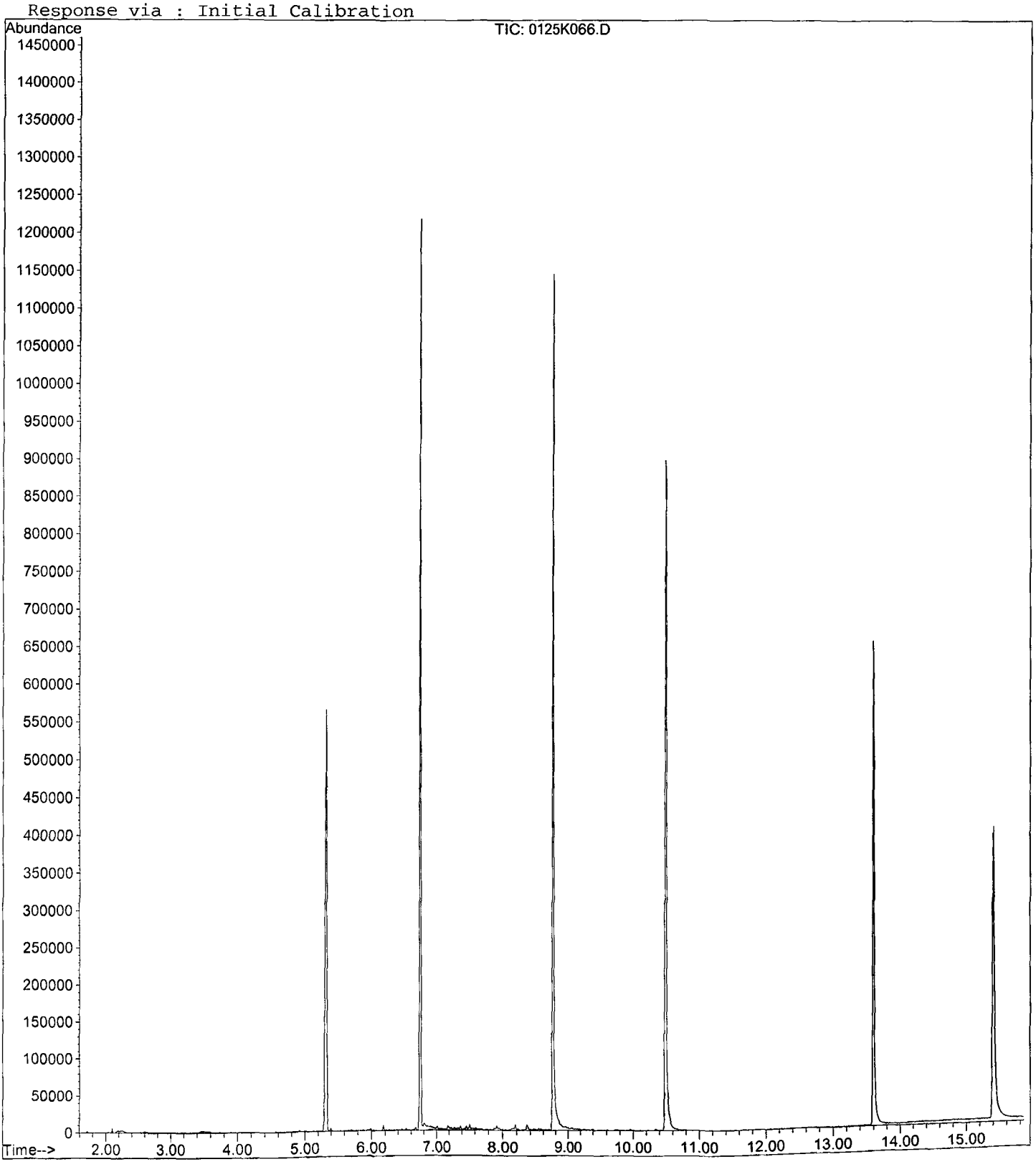
(#) = qualifier out of range (m) = manual integration
0125K066.D KMEE0125.M Wed Feb 03 14:15:06 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K066.D Vial: 66
Acq On : 2 Feb 21 16:03 Operator:
Sample : BA26008W06 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K067.D Vial: 67
Acq On : 2 Feb 21 16:24 Operator:
Sample : BA26013W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	169083	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

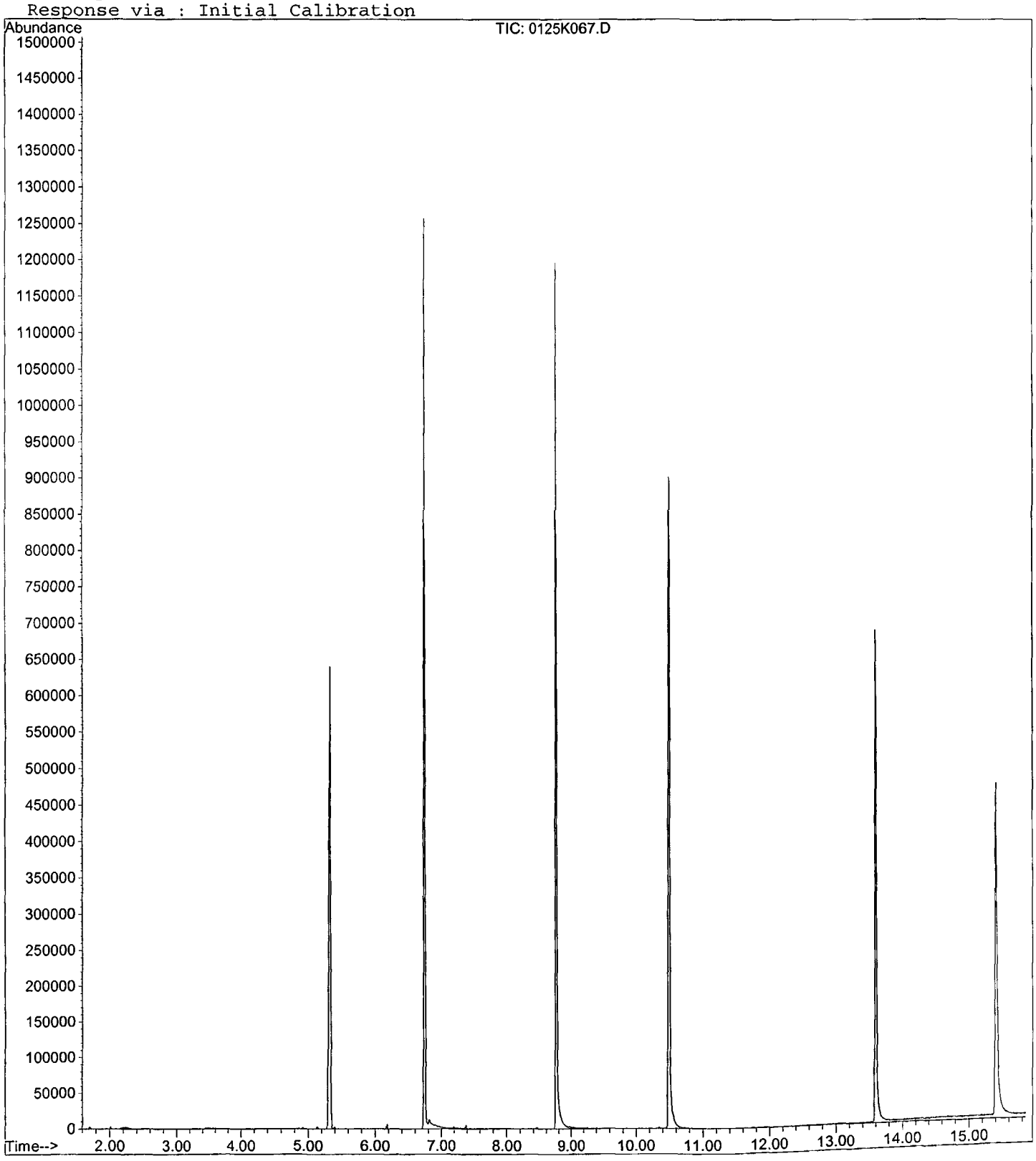
(#) = qualifier out of range (m) = manual integration
0125K067.D KMEE0125.M Wed Feb 03 14:15:11 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K067.D Vial: 67
Acq On : 2 Feb 21 16:24 Operator:
Sample : BA26013W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K068.D Vial: 68
Acq On : 2 Feb 21 16:45 Operator:
Sample : BA26016W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	167029	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

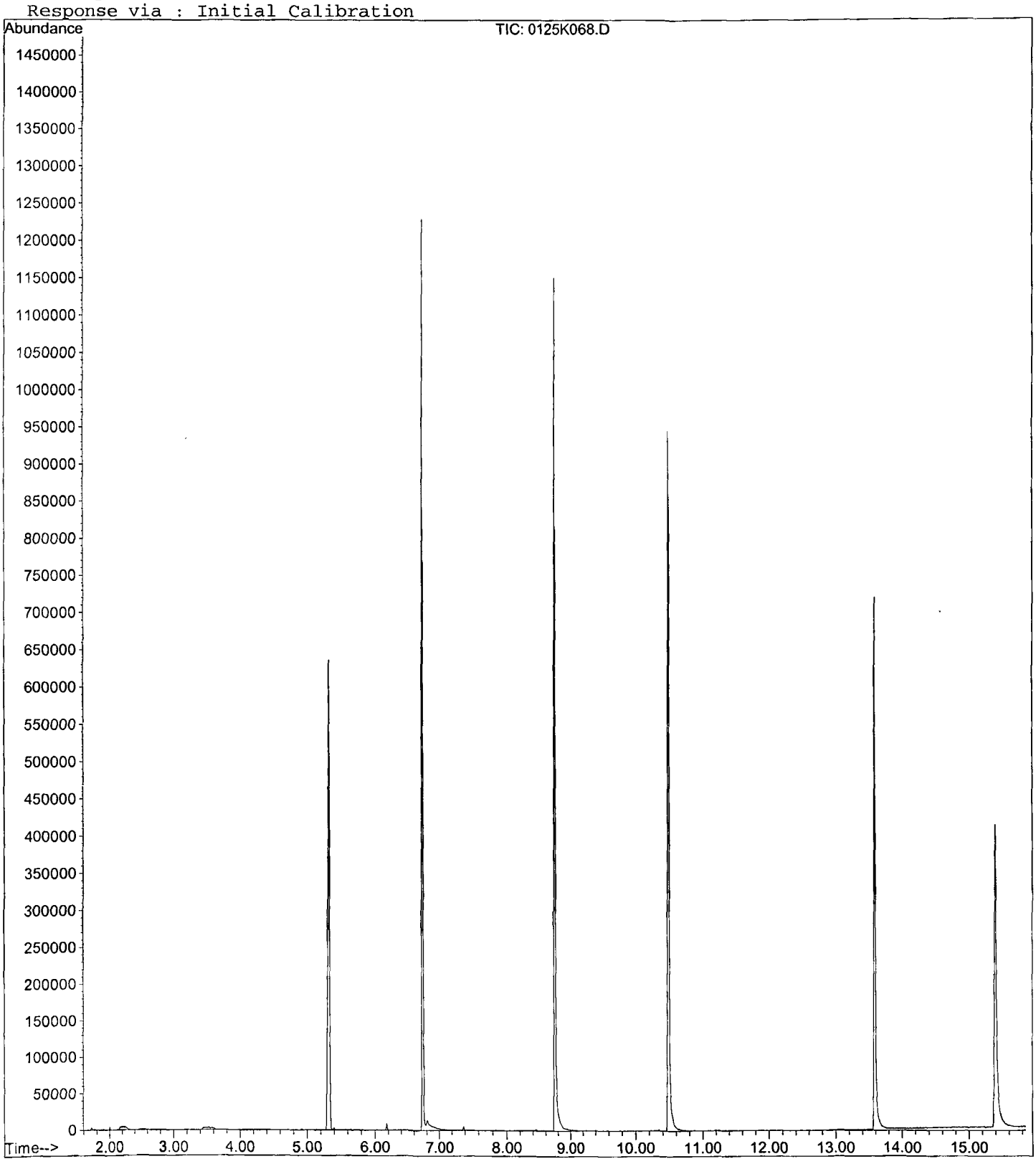
(#) = qualifier out of range (m) = manual integration
0125K068.D KMEE0125.M Wed Feb 03 14:15:15 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K068.D Vial: 68
Acq On : 2 Feb 21 16:45 Operator:
Sample : BA26016W10 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K059.D Vial: 59
Acq On : 2 Feb 21 12:32 Operator:
Sample : 210201A BLK 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	204607	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

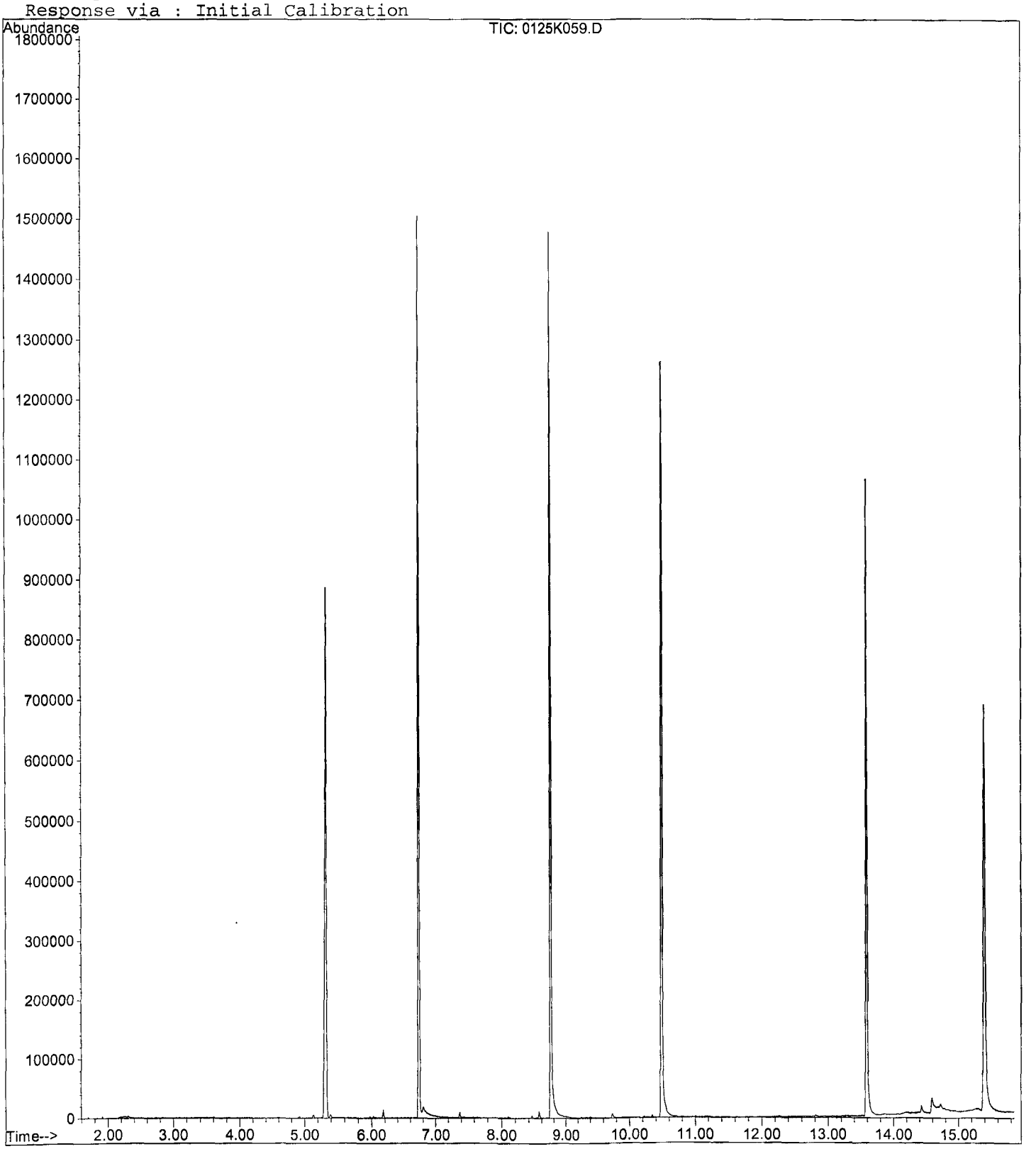
(#) = qualifier out of range (m) = manual integration
0125K059.D KMEE0125.M Wed Feb 03 14:14:32 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K059.D Vial: 59
Acq On : 2 Feb 21 12:32 Operator:
Sample : 210201A BLK 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K060.D Vial: 60
Acq On : 2 Feb 21 12:53 Operator:
Sample : 210201A LCS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	183301	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.58	45	86452	73.36063	ppb	97

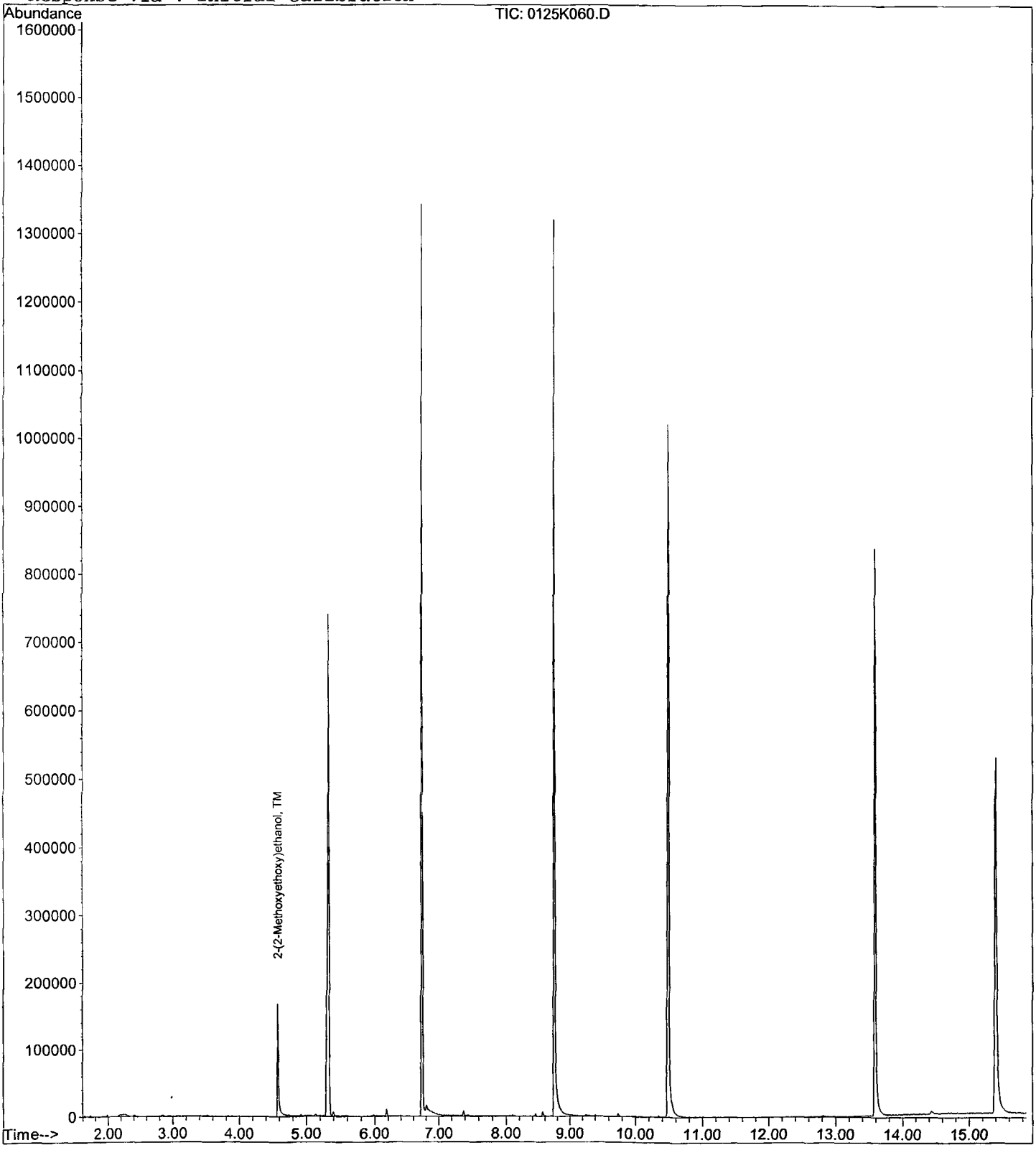
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K060.D Vial: 60
Acq On : 2 Feb 21 12:53 Operator:
Sample : 210201A LCS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K061.D Vial: 61
Acq On : 2 Feb 21 13:15 Operator:
Sample : BA26001W17 MS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	192966	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	91271	73.57069	ppb	98

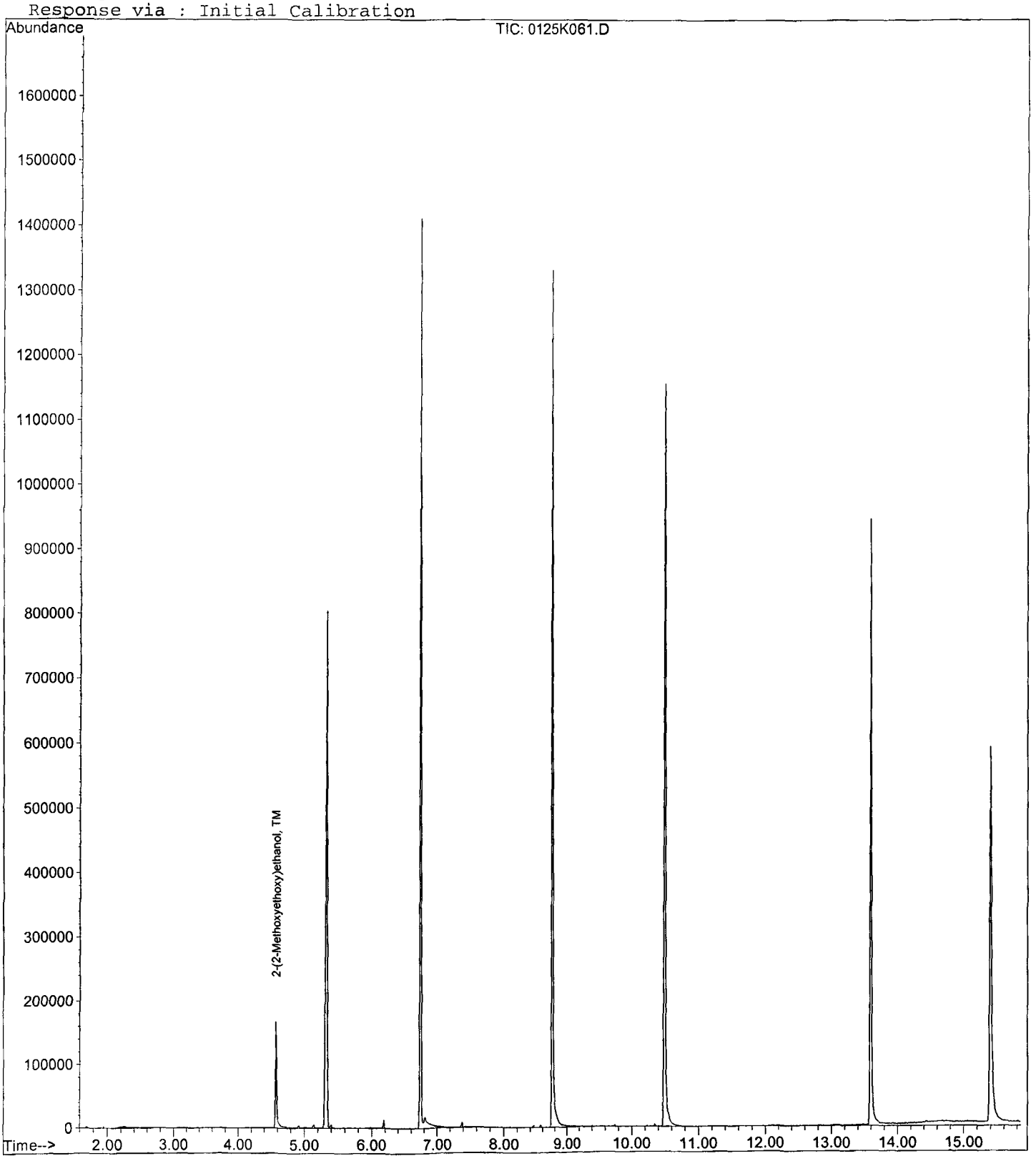
(#) = qualifier out of range (m) = manual integration
0125K061.D KMEE0125.M Wed Feb 03 14:14:45 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K061.D Vial: 61
Acq On : 2 Feb 21 13:15 Operator:
Sample : BA26001W17 MS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K062.D Vial: 62
Acq On : 2 Feb 21 14:37 Operator:
Sample : BA26001W19 MSD-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	174269	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.58	45	79142	70.63821	ppb	97

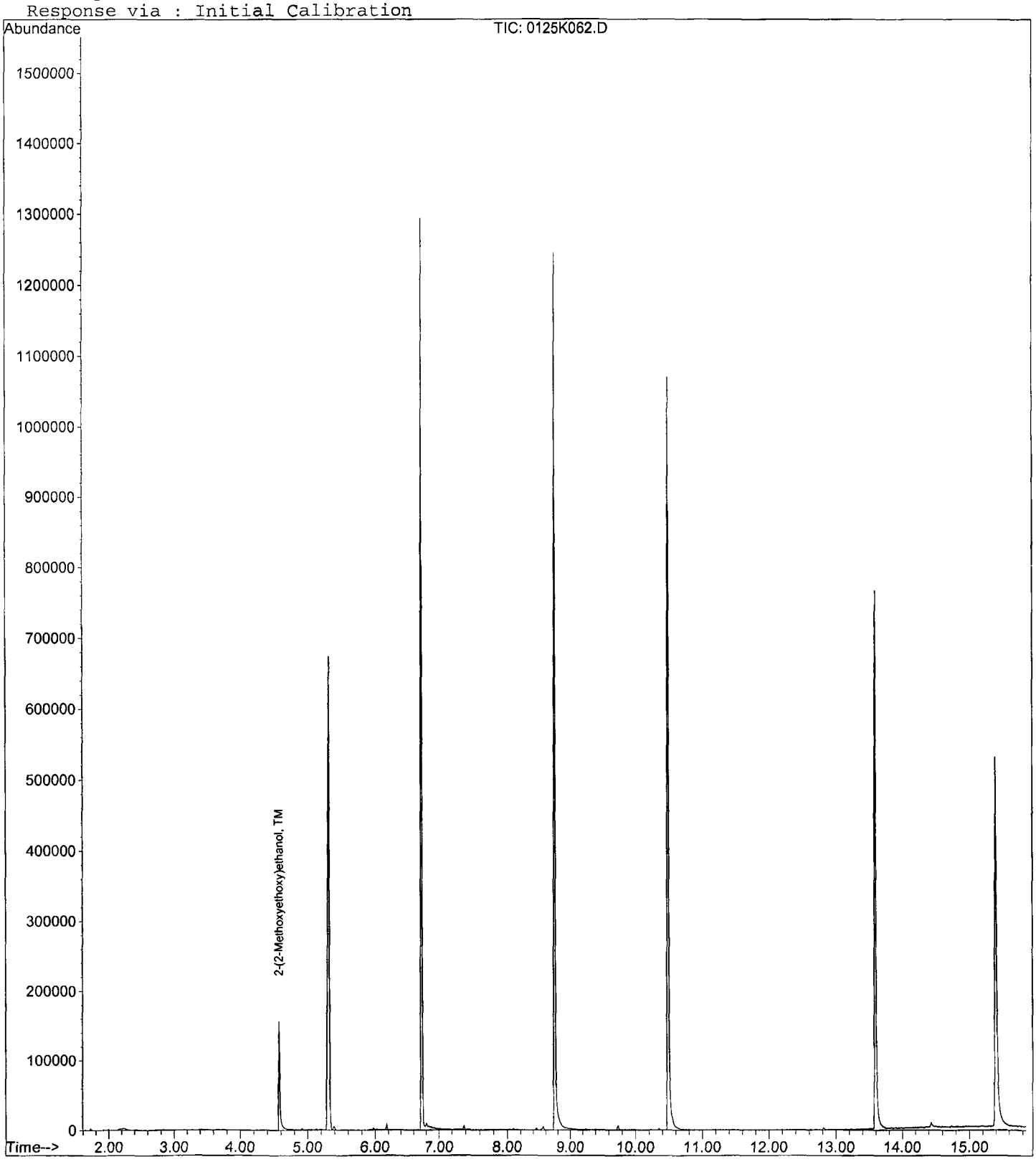
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K062.D Vial: 62
Acq On : 2 Feb 21 14:37 Operator:
Sample : BA26001W19 MSD-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:26 2021 Quant Results File: KMEE0125.RES

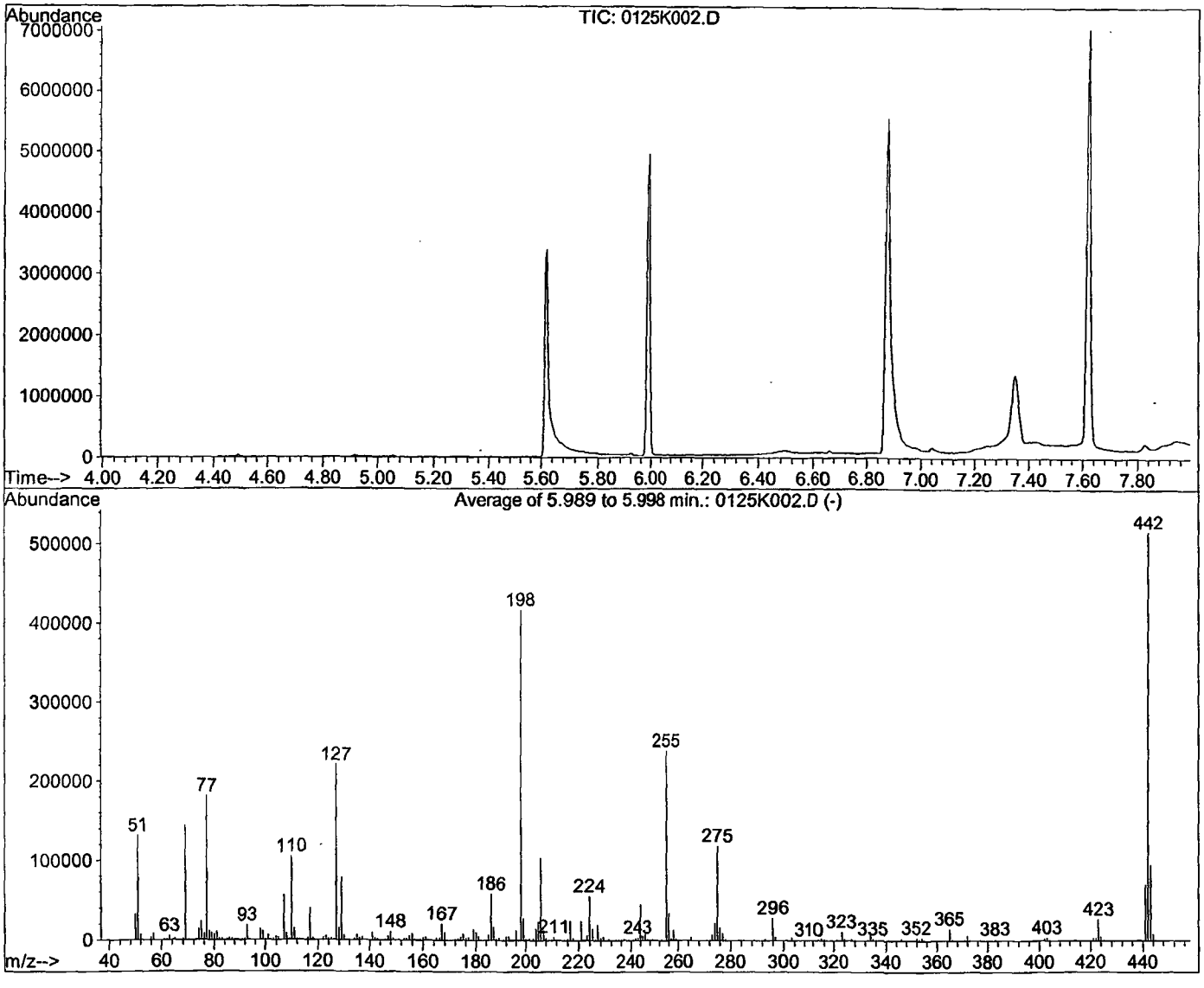
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Data File : M:\KYLO\DATA\210125M\0125K002.D
Acq On : 25 Jan 21 12:32
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator:
Inst : KYLO
Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

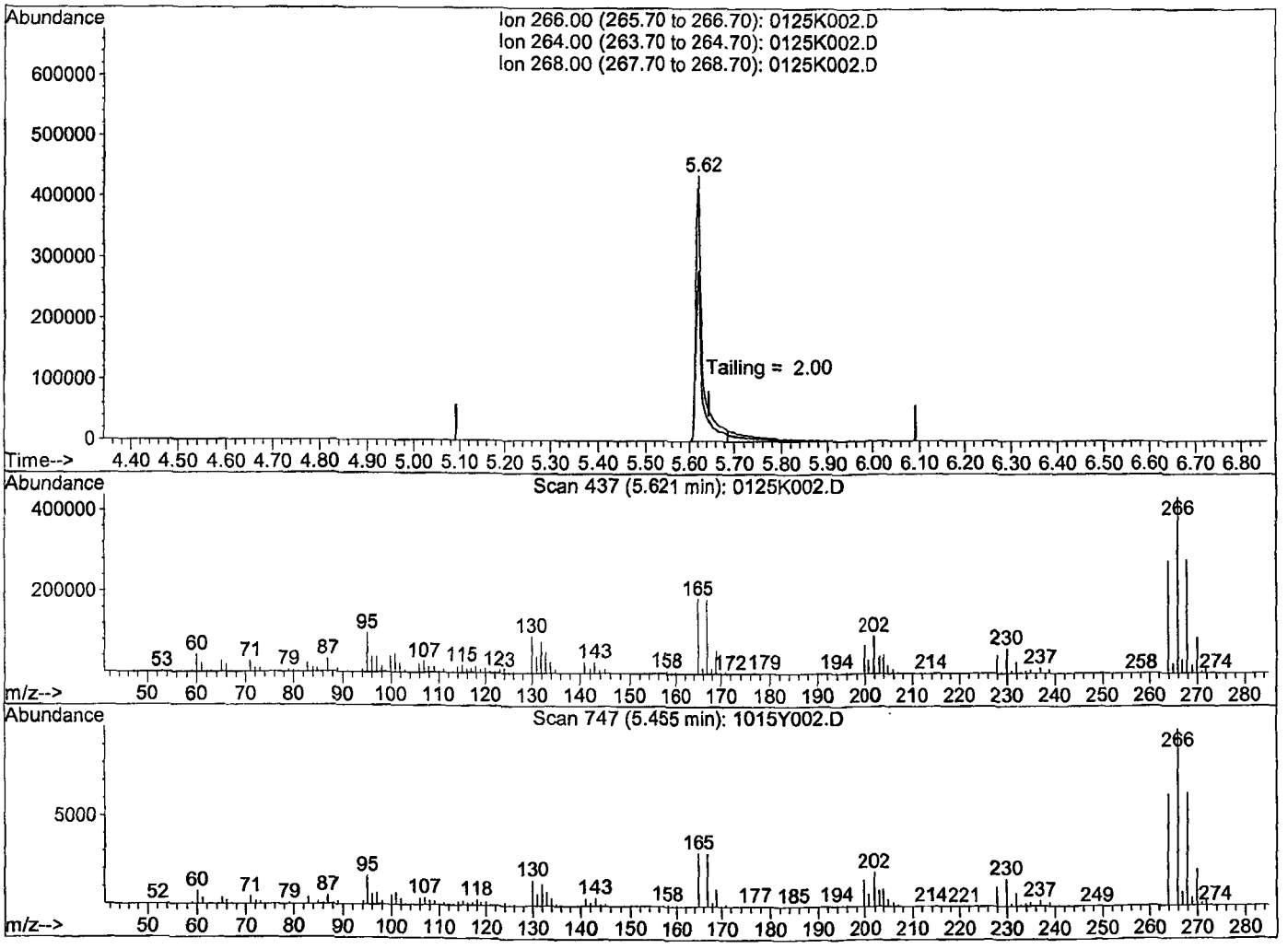
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

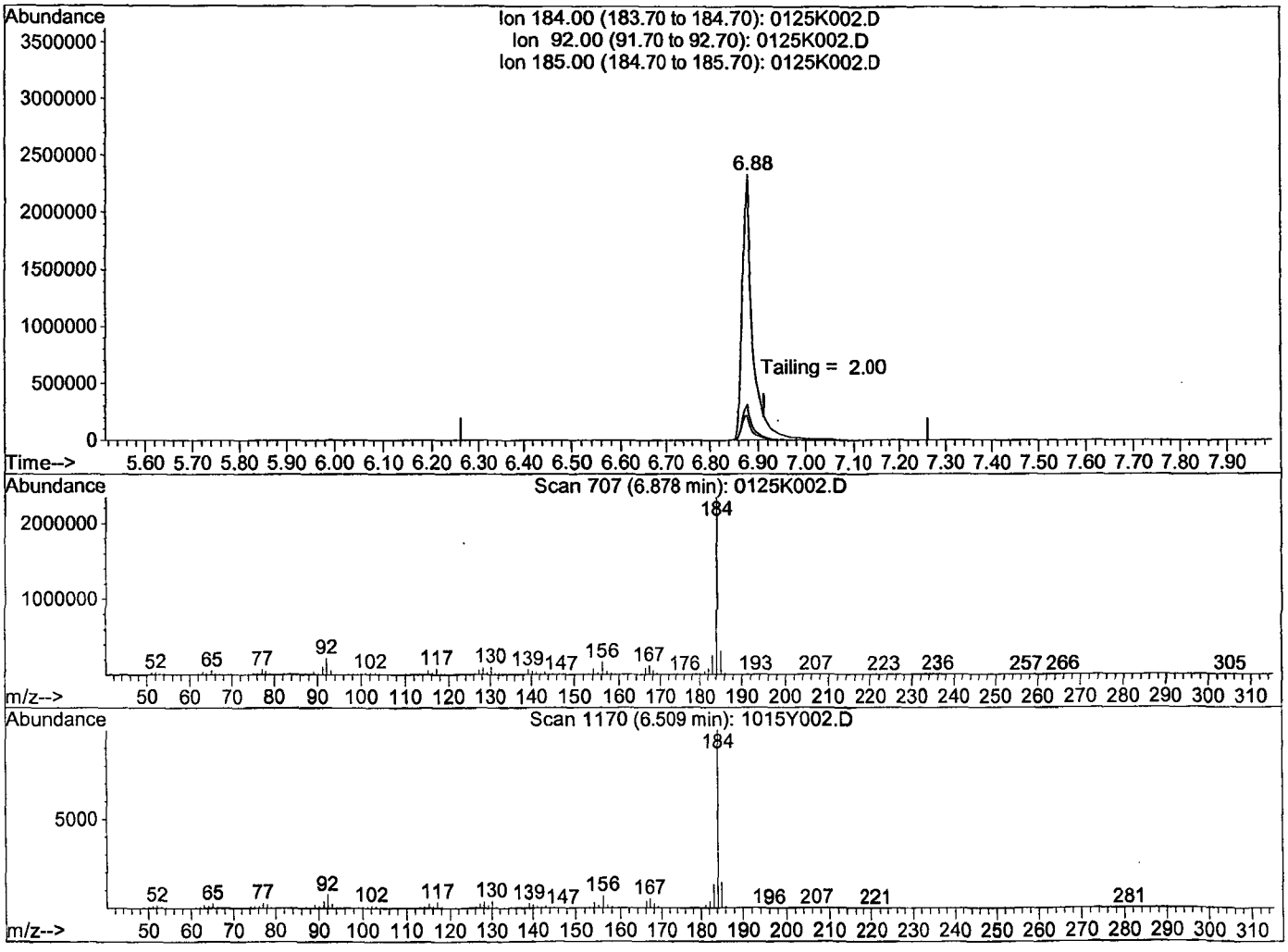
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

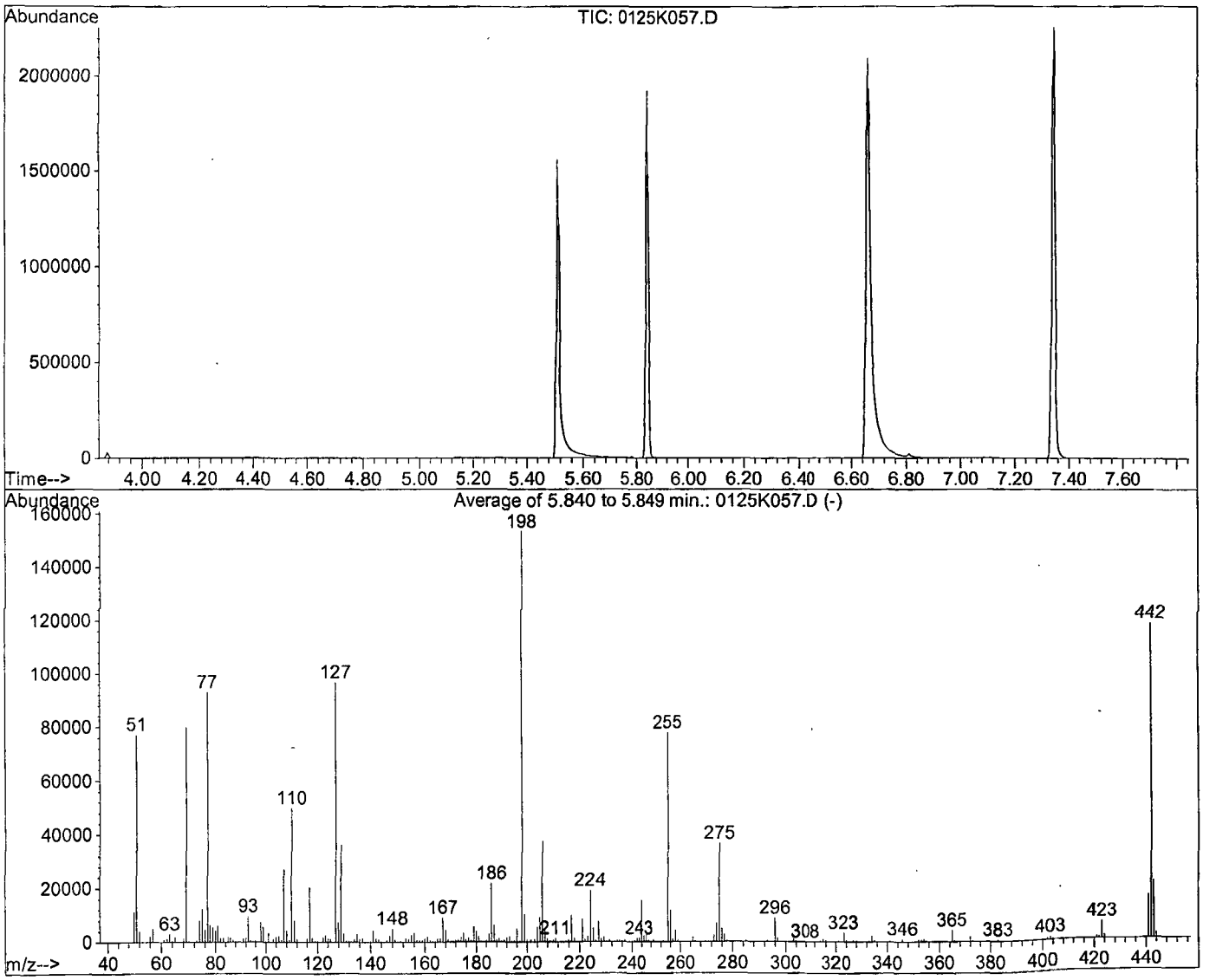
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 10:51 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 484, 485, 486; Background Corrected with Scan 479

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	50.3	77133	PASS
68	69	0.00	2	1.8	1405	PASS
70	69	0.00	2	0.4	325	PASS
127	198	10	80	63.1	96747	PASS
197	198	0.00	2	0.2	286	PASS
198	198	100	100	100.0	153243	PASS
199	198	5	9	6.6	10184	PASS
275	198	10	60	23.8	36488	PASS
365	198	1	100	2.7	4210	PASS
441	442	0.01	24	13.7	16277	PASS
442	198	50	500	77.5	118739	PASS
443	442	15	24	18.2	21634	PASS

Data File Name:	**0125K057.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**2 Feb 21 11:37**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**57**
Instrument Name:	**KYLO**

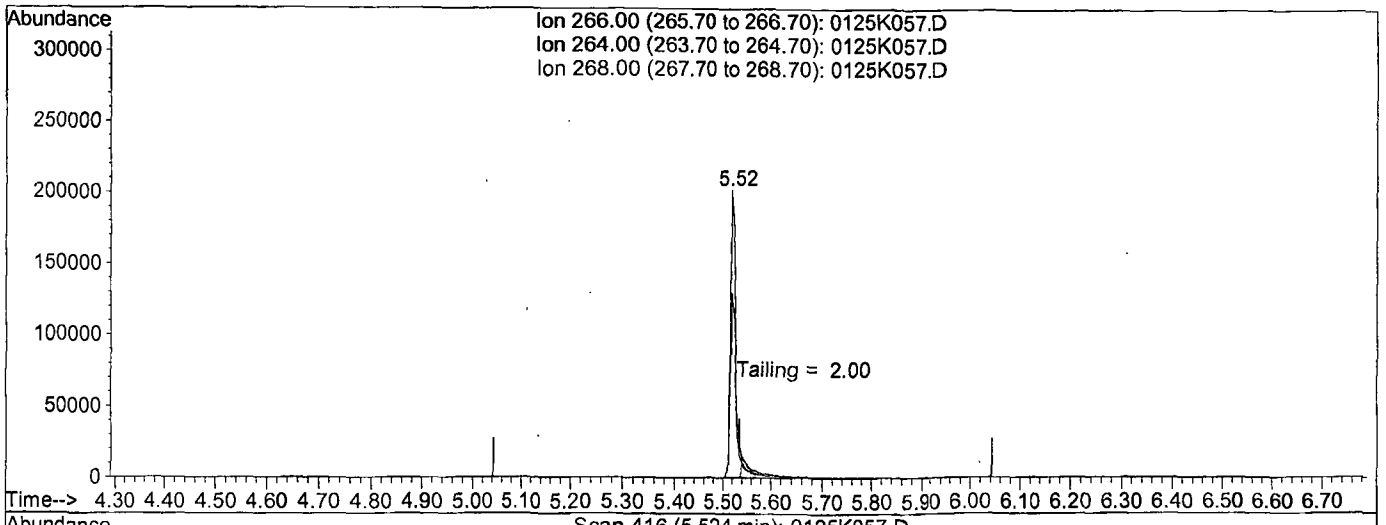
#	Name	Ret Time	Target Response
1)	DDT	7.43	24084700
2)	DDD	7.19	0
3)	DDE	6.09	184408

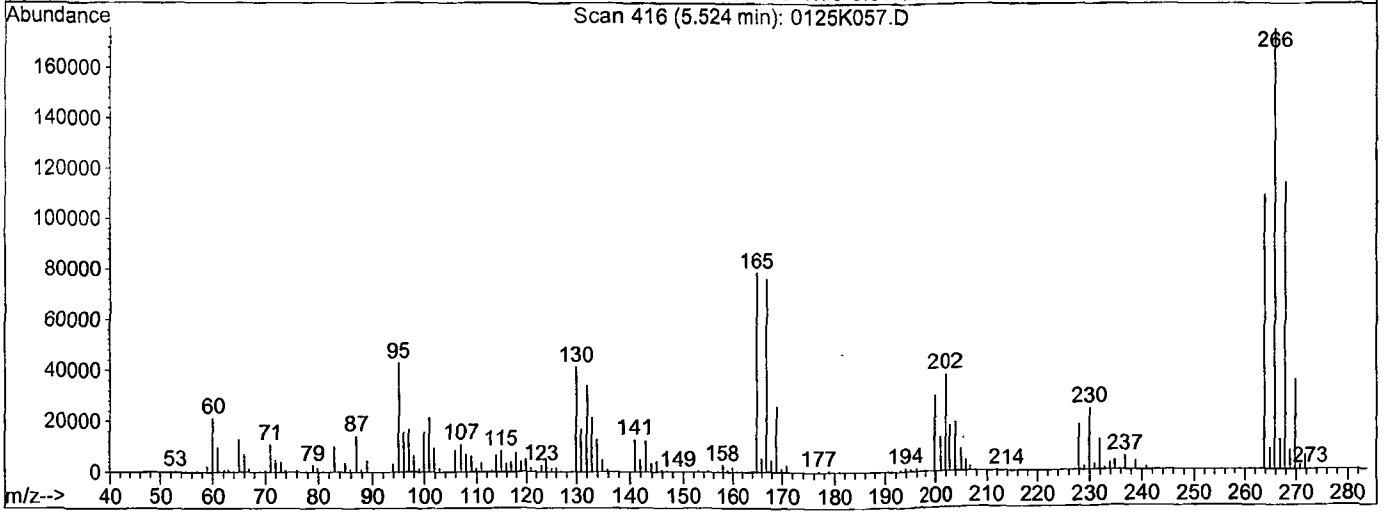
Breakdown **0.76**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 11:37 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Feb 2 12:06 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K057.D

(5) Pentachlorophenol

5.52min 0.0000

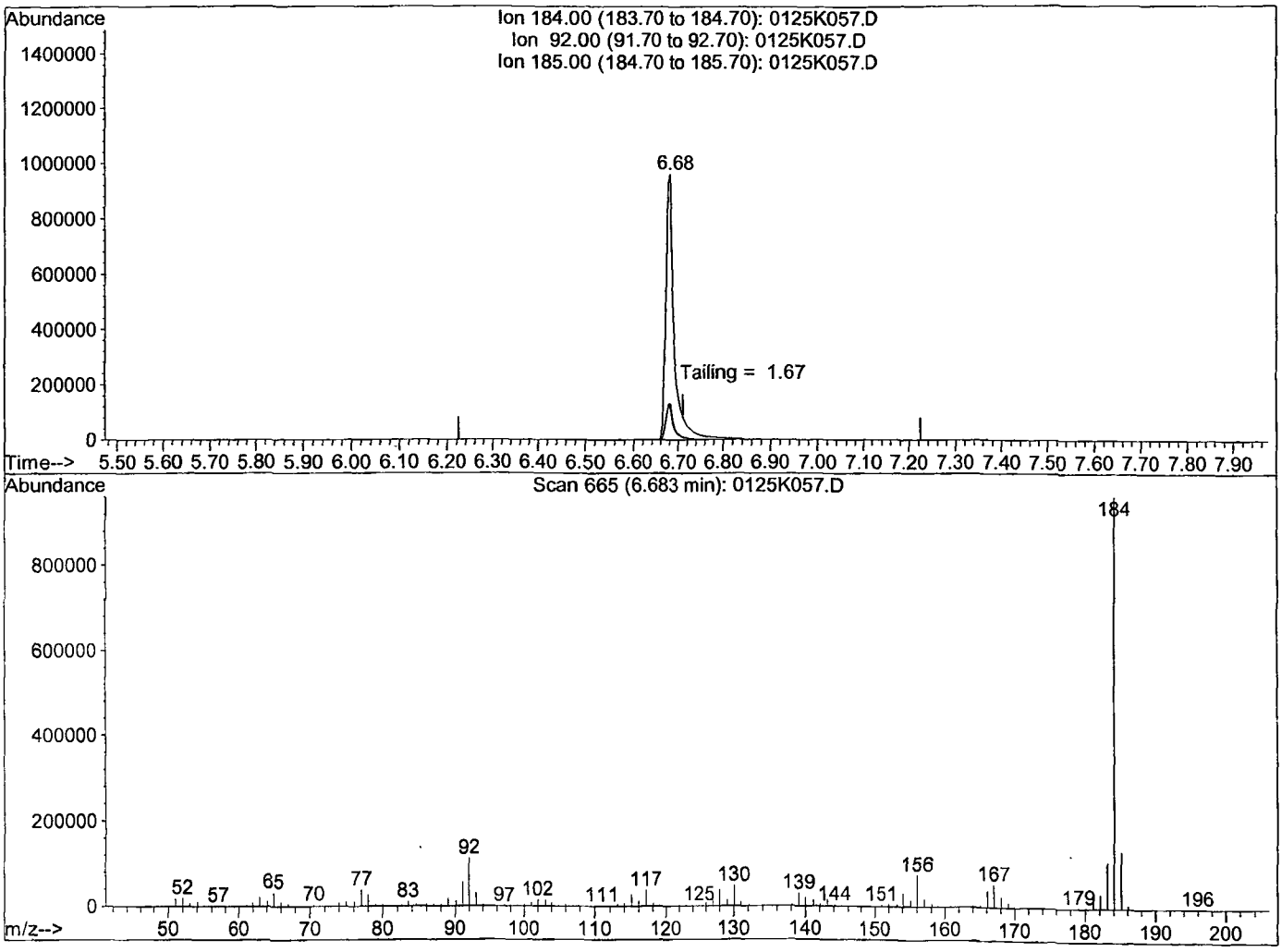
response 1764537

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	60.36
268.00	65.00	62.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 11:37 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Feb 2 12:06 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration



TIC: 0125K057.D

(6) Benzidine

6.68min 0.0000

response 12838216

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	12.23
185.00	13.40	14.00
0.00	0.00	0.00

Name of Final Standard **2MEE Second Source Stock** **Prep'd By (Initials)** **JP**

Prep Date **10/28/19**
Exp Date **10/28/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**04/25/21**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Name of Final Standard: MEE Curve
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	11/06/19	10/28/21	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (3)	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	07/31/25		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49871,872,873**	**07/31/25**	3 mL	3 mL	**NA**	2000ug/mL

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210201A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01-20-21 01-20-22		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 9:00	
Spiked ID 8			Ext. End Time:	02/02/21 7:30	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 02/01/21 **Witnessed By:** YL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210201A Blk				NA	NA equip	500	2	7	02/01/21 9:00	
2	210201A LCS-1		0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	
3	BA26001 MS-1	BA26001W17	0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	94899
4	BA26001 MSD-1	BA26001W19	0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	94899
5	BA26001	BA26001W14			NA	NA equip	500	2	7	02/01/21 9:00	94899
6	BA26003	BA26003W05			NA	NA equip	500	2	7	02/01/21 9:00	94899
7	BA26006	BA26006W11			NA	NA equip	500	2	7	02/01/21 9:00	94899
8	BA26008	BA26008W06			NA	NA equip	500	2	7	02/01/21 9:00	94899
9	BA26013	BA26013W11			NA	NA equip	500	2	7	02/01/21 9:00	94899
10	BA26016	BA26016W10			NA	NA equip	500	2	7	02/01/21 9:00	94899
11	BA26160	BA26160W11			NA	NA equip	500	2	7	02/01/21 9:00	94920
12	BA26163	BA26163W11			NA	NA equip	500	2	7	02/01/21 9:00	94920

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	047266-EY
PH Strip	hc025486
Dicholormethane	60182
Methanol	60268
Di Water	2-1-21
MeOH:DCM MIX	1-27-21

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/2/21
Time	10:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	YL
Sample Preparation	YL
Extraction	YL
Concentration	YL,KY

Modified	02/01/21 1:26:25 PM

Reviewed By: **Date**

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 1-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: **Date**

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
57	0125K057.D	1	SV TUNE 10/02/20		2 Feb 21 11:37
58	0125K058.D	1	2 MEE 500 1/26/21 (2)		2 Feb 21 12:08
59	0125K059.D	1	210201A BLK 2/500		2 Feb 21 12:32
60	0125K060.D	1	210201A LCS-1 2/500		2 Feb 21 12:53
61	0125K061.D	1	BA26001W17 MS-1 2/500		2 Feb 21 13:15
62	0125K062.D	1	BA26001W19 MSD-1 2/500		2 Feb 21 14:37
63	0125K063.D	1	BA26001W14 2/500		2 Feb 21 14:59
64	0125K064.D	1	BA26003W05 2/500		2 Feb 21 15:20
65	0125K065.D	1	BA26006W11 2/500		2 Feb 21 15:41
66	0125K066.D	1	BA26008W06 2/500		2 Feb 21 16:03
67	0125K067.D	1	BA26013W11 2/500		2 Feb 21 16:24
68	0125K068.D	1	BA26016W10 2/500		2 Feb 21 16:45
71	0125K071.D	1	2 MEE 500 1/26/21 (1)		2 Feb 21 17:49

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
			0128M02.D	0128M03.D	0128M04 D	0128M05.D	0128M06.D	0128M07 D	0128M08 D	0128M09.D	0128M10.D							
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.0817	0.0881	0.0724	0.0592	0.0664	0.0878	0.0822	0.0782		0.08	13	TM			
4	TM	Freon 114		0.0617	0.0642	0.0667	0.0441	0.0549	0.0586	0.0668	0.0694		0.06	14	TM			
5	TM**	Chloromethane		0.1269	0.1029	0.0927	0.0963	0.0905	0.0959	0.0937	0.0903		0.10	12	TM**			
6	TM*	Vinyl chloride		0.0978	0.1049	0.0914	0.0890	0.0845	0.0882	0.0898	0.0910		0.09	6.9	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TML	Bromomethane		0.0705	0.0468	0.0471	0.0410	0.0387	0.0372	0.0372	0.0355		0.04	26	TM	1.000		
9	TM	Chloroethane		0.0575	0.0580	0.0588	0.0555	0.0526	0.0524	0.0505	0.0398		0.05	12	TM			
10	TML	Dichlorofluoromethane		0.1586	0.1013	0.1001	0.0809	0.0924	0.0901	0.0963	0.1005		0.10	23	TM	0.999		
11	TM	Trichlorofluoromethane		0.1197	0.0972	0.1137	0.1130	0.1051	0.1144	0.1145	0.1143		0.11	6.3	TM			
12	TM	2,2-Dichloro-1,1,1-trifluoroethane													TM			
13	TM	Acrolein		0.0026	0.0023	0.0021	0.0025	0.0024	0.0025	0.0025	0.0025		0.00	6.6	TM			
14	TM	Acetone		0.0194	0.0229	0.0142	0.0191	0.0190	0.0193	0.0179	0.0183		0.02	13	TM			
15	TML	Freon-113		0.0353	0.0314	0.0237	0.0171	0.0203	0.0208	0.0214	0.0223		0.02	26	TM	1.000		
16	TM	Acetonitrile		0.0091	0.0090	0.0083	0.0084	0.0083	0.0087	0.0086	0.0085		0.01	3.7	TM			
17	TM	2-propanol													TM			
18	TM*	1,1-DCE		0.1307	0.1194	0.1100	0.0951	0.0957	0.1027	0.1091	0.1060		0.11	11	TM*			
19	TM	t-Butanol		0.0055	0.0054	0.0060	0.0054	0.0060	0.0064	0.0067			0.01	8.8	TM			
20	TML	Methyl Acetate			0.1145	0.0452	0.0595	0.0493	0.0516	0.0499	0.0507		0.06	41	TM	1.000		
21	TML	Iodomethane		0.0759	0.0645	0.0802	0.0748	0.0957	0.1051	0.1136	0.1143		0.09	21	TM	1.000		
22	TML	Acrylonitrile			0.0054	0.0045	0.0027	0.0031	0.0300	0.0280	0.0268		0.01	91	TM	0.990		
23	TM	2-Methylpentane													TM			
24	TML	Methylene chloride		0.1787	0.1391	0.1026	0.0772	0.0769	0.0826	0.0818	0.0777		0.10	37	TM	1.000		
25	TM	Carbon disulfide		0.1538	0.1518	0.1408	0.1209	0.1370	0.1354	0.1411	0.1395		0.14	7.3	TM			
26	TM	Methyl t-butyl ether (MtBE)		0.2756	0.2191	0.2197	0.1930	0.2265	0.2206	0.2187	0.2194		0.22	10	TM			
27	TM	Trans-1,2-DCE		0.1191	0.0990	0.0979	0.0799	0.0848	0.0891	0.0913	0.0877		0.09	13	TM			
28	TM	3-Methylpentane													TM			
29	TM	Diisopropyl Ether		0.2609	0.2700	0.2602	0.2257	0.2584	0.2562	0.2578	0.2508		0.26	5.1	TM			
30	TM**	1,1-DCA		0.1695	0.1565	0.1488	0.1277	0.1333	0.1464	0.1470	0.1453		0.15	8.8	TM**			
31	TM	Vinyl Acetate													TM			
32	TM	Ethyl tert Butyl Ether		0.2436	0.2210	0.2113	0.1879	0.2247	0.2294	0.2301	0.2308		0.22	7.5	TM			
33	TML	Methylcyclopentane													TM			
34	TM	MEK (2-Butanone)		0.0218	0.0251	0.0261	0.0247	0.0264	0.0261	0.0254	0.0252		0.03	5.8	TM			
35	TML	Cis-1,2-DCE		0.1387	0.1035	0.1045	0.0826	0.0912	0.0943	0.0989	0.0950		0.10	17	TM	1.000		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	2,2-Dichloropropane		0.1413	0.1438	0.1325	0.1136	0.1119	0.1218	0.1226	0.1197		0.13	9.6	TM			
37	TM*	Chloroform		0.1977	0.1560	0.1528	0.1304	0.1398	0.1472	0.1520	0.1487		0.15	13	TM*			
38	TM	Bromochloromethane		0.0834	0.0726	0.0651	0.0568	0.0600	0.0678	0.0692	0.0670		0.07	12	TM			
39	SL	Dibromofluoromethane(S)	0.3233	0.2998	0.2270	0.2652	0.2095	0.2195	0.1967	0.1990	0.1763		0.24	21	S	0.996		
40	TM	1,1,1-TCA		0.1514	0.1662	0.1368	0.1179	0.1216	0.1276	0.1351	0.1339		0.14	12	TM			
41	TML	Cyclohexane		0.1003	0.0674	0.0661	0.0466	0.0603	0.0588	0.0608	0.0624		0.07	24	TM	1.000		
42	TM	1,1-Dichloropropene		0.1356	0.1111	0.1163	0.0973	0.0987	0.1045	0.1064	0.1038		0.11	11	TM			
43	TML	2,2,4-Trimethylpentane		0.1767	0.2038	0.1676	0.1155	0.1467	0.1590	0.1733	0.1831		0.17	16	TM	0.999		
44	SL	1,2-DCA-D4(S)	0.3286	0.3183	0.2362	0.2862	0.2241	0.2397	0.2200	0.2286	0.2145		0.26	17	S	0.999		
45	TM	Carbon Tetrachloride		0.1391	0.1239	0.1197	0.1012	0.1127	0.1149	0.1216	0.1179		0.12	9.0	TM			
46	TM	Tert Amyl Methyl Ether		0.1974	0.1769	0.1805	0.1436	0.1777	0.1861	0.1807	0.1911		0.18	8.9	TM			
47	TM	1,2-DCA		0.1335	0.1235	0.1095	0.0985	0.1001	0.1103	0.1090	0.1065		0.11	11	TM			
48	TM	Benzene		0.4267	0.3647	0.3409	0.2990	0.3075	0.3309	0.3386	0.3273		0.34	12	TM			
49	TM	TCE		0.1125	0.1047	0.0858	0.0826	0.0892	0.0940	0.0958	0.0926		0.09	10	TM			
50	TM	2-Pentanone		0.0416	0.0413	0.0429	0.0436	0.0452	0.0475	0.0455	0.0437		0.04	4.8	TM			
51	TM*	1,2-Dichloropropane		0.0530	0.0465	0.0407	0.0391	0.0434	0.0410	0.0442	0.0429		0.04	9.9	TM*			
52	TM	Bromodichloromethane		0.1384	0.1234	0.1189	0.1006	0.1044	0.1154	0.1191	0.1159		0.12	9.9	TM			
53	TM	Methyl Cyclohexane		0.1515	0.1231	0.1181	0.0899	0.1053	0.1112	0.1179	0.1196		0.12	15	TM			
54	TM	Dibromomethane		0.0599	0.0512	0.0505	0.0427	0.0476	0.0519	0.0505	0.0491		0.05	9.5	TM			
55	TML	MIBK (methyl isobutyl ketone)		0.0371	0.0454	0.0482	0.0528	0.0578	0.0608	0.0587	0.0633		0.05	17	TM	0.996		
56	TM	1-Bromo-2-chloroethane			0.0179	0.0190	0.0133	0.0158	0.0162	0.0170	0.0173		0.02	11	TM			
57	TM	2-Chloroethyl vinyl ether													TM			
58	TM	Cis-1,3-Dichloropropene													TM			
59	TM*	Toluene		0.4063	0.3982	0.3646	0.3308	0.3448	0.3696	0.3777	0.3673		0.37	6.8	TM*			
60	TM	Trans-1,3-Dichloropropene		0.1522	0.1241	0.1114	0.1018	0.1089	0.1232	0.1255	0.1258		0.12	13	TM			
61	TM	1,1,2-TCA		0.0838	0.0637	0.0630	0.0537	0.0566	0.0608	0.0599	0.0580		0.06	15	TM			
62	TML	2-Hexanone		0.0196	0.0276	0.0287	0.0311	0.0348	0.0397	0.0385	0.0422		0.03	23	TM	0.992		
63	I	Chlorobenzene-D5 (IS)																
64	SL	Toluene-D8(S)	1.389	1.567	1.104	1.337	1.038	1.110	0.9753	1.027	0.9346		1.2	19	S	0.998		
65	TM	1,2-EDB		0.1040	0.1011	0.0971	0.0836	0.0906	0.0965	0.0972	0.0927		0.10	6.7	TM			
66	TML	Tetrachloroethene		0.1053	0.0848	0.0676	0.0681	0.0679	0.0738	0.0759	0.0706		0.08	17	TM	0.999		
67	TM	1-Chlorohexane		0.1741	0.1262	0.1195	0.1131	0.1299	0.1290	0.1384	0.1356		0.13	14	TM			
68	TM	1,1,1,2-Tetrachloroethane		0.1404	0.1417	0.1096	0.1072	0.1101	0.1213	0.1245	0.1200		0.12	11	TM			
69	TM	m&p-Xylene		0.2361	0.2315	0.2228	0.1996	0.2078	0.2249	0.2256	0.2127		0.22	5.6	TM			
70	TM	o-Xylene		0.2626	0.2565	0.2258	0.1900	0.2121	0.2208	0.2287	0.2156		0.23	10	TM			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	Styrene		0.3733	0.3535	0.3474	0.3152	0.3416	0.3744	0.3797	0.3680		0.36	6.1	TM			
72	SL	4-Bromofluorobenzene(S)	0.5733	0.6541	0.4599	0.5424	0.4320	0.4606	0.4017	0.4195	0.3932		0.48	18	S	0.999		
73	TM	1,3-Dichloropropane		0.1409	0.1629	0.1601	0.1341	0.1360	0.1487	0.1493	0.1419		0.15	7.2	TM			
74	TM	Dibromochloromethane		0.1330	0.1256	0.1206	0.1034	0.1145	0.1216	0.1213	0.1168		0.12	7.2	TM			
75	TM**	Chlorobenzene		0.3889	0.3453	0.3330	0.2810	0.3119	0.3289	0.3347	0.3164		0.33	9.3	TM**			
76	TM*	Ethylbenzene		0.6053	0.5505	0.5014	0.4557	0.4795	0.5130	0.5326	0.5049		0.52	8.9	TM*			
77	TM**	Bromoform		0.1173	0.0960	0.0914	0.0846	0.0900	0.0990	0.0977	0.0987		0.10	10.0	TM**			
78	I	1,4-Dichlorobenzene-D (IS)																
79	TML	Isopropylbenzene		1.503	1.331	1.253	0.9831	0.9717	0.9550	0.9426	0.8050		1.1	22	TM	0.996		
80	TM**L	1,1,2,2-Tetrachloroethane		0.3050	0.2916	0.2208	0.1867	0.1725	0.1756	0.1634	0.1599		0.21	28	TM**	1.000		
81	TML	1,2,3-Trichloropropane			0.0931	0.0906	0.0670	0.0659	0.0634	0.0622	0.0552		0.07	21	TM	0.998		
82	TM	t-1,4-Dichloro-2-Butene			0.0388	0.0323	0.0324	0.0323	0.0379	0.0308	0.0328		0.03	9.2	TM			
83	TML	Bromobenzene		0.5208	0.4709	0.4026	0.3198	0.3125	0.3019	0.2893	0.2545		0.36	26	TM	0.997		
84	TML	n-Propylbenzene		1.192	1.932	1.879	1.626	0.9754	1.010	1.010	0.8850		1.3	33	TM	0.997		
85	TML	4-Ethyltoluene		0.9170	0.8286	0.8912	0.7795	0.9290	0.8838	0.9125	0.8331		0.87	6.0	TM	0.999		
86	TML	2-Chlorotoluene			1.947	1.888	1.628	0.7488	0.6463	0.6347	0.5508		1.1	56	TM	0.994		
87	TM	1,3,5-Trimethylbenzene		0.8192	0.7571	0.7490	0.6399	0.7183	0.7621	0.7793	0.7023		0.74	7.3	TM			
88	TML	4-Chlorotoluene		0.9664	0.9646	0.8904	0.6992	0.7212	0.7334	0.7373	0.6451		0.79	16	TM	0.997		
89	TM	Tert-Butylbenzene		0.3950	0.3442	0.3300	0.2932	0.3521	0.3866	0.4178	0.3995		0.36	12	TM			
90	TM	1,2,4-Trimethylbenzene		0.6576	0.5813	0.5718	0.4852	0.5735	0.6559	0.7293	0.7016		0.62	13	TM			
91	TM	Sec-Butylbenzene		0.7355	0.7025	0.6646	0.6353	0.7149	0.7979	0.8924	0.8371		0.75	12	TM			
92	TML	p-Isopropyltoluene		0.5184	0.5025	0.4579	0.4526	0.5251	0.6311	0.7112	0.7287		0.57	19	TM	0.999		
93	TML	Benzyl Chloride			0.0926	0.0754	0.0971	0.1028	0.1410	0.1602	0.2017		0.12	36	TM	0.993		
94	TM	1,3-DCB		0.6453	0.5550	0.5201	0.4690	0.4947	0.5137	0.5228	0.4859		0.53	10	TM			
95	TM	1,4-DCB		0.6398	0.5771	0.5121	0.4428	0.4613	0.4954	0.5004	0.4843		0.51	13	TM			
96	TML	n-Butylbenzene		0.2219	0.2439	0.2543	0.2305	0.2819	0.3654	0.4277	0.4857		0.31	32	TM	0.996		
97	TM	1,2-DCB		0.4658	0.4268	0.4277	0.3580	0.4175	0.4738	0.4915	0.5026		0.45	11	TM			
98	TML	Hexachloroethane		0.2405	0.1917	0.1772	0.1652	0.1506	0.1468	0.1447	0.1357		0.17	20	TM	0.999		
99	TML	1,2-Dibromo-3-chloropropane			0.0299	0.0233	0.0269	0.0280	0.0347	0.0379	0.0401		0.03	20	TM	0.999		
100	TML	1,2,4-Trichlorobenzene			0.0553	0.0487	0.0493	0.0551	0.0847	0.1106	0.1311		0.08	44	TM	0.994		
101	TML	Hexachlorobutadiene			0.0704	0.0708	0.0721	0.0882	0.1132	0.1385	0.1592		0.10	35	TM	0.996		
102	TML	Naphthalene		0.2255	0.1808	0.1637	0.1549	0.1628	0.2069	0.2426	0.2832		0.20	22	TM	0.995		
103	TML	1,2,3-Trichlorobenzene			0.0742	0.0788	0.0568	0.0690	0.1010	0.1263	0.1446		0.09	35	TM	0.996		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.56	96	1849966	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1440324	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	420605	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.68	111	119602	4.18	ppb		0.00
Spiked Amount 25.000			Recovery =	16.708%			
44) 1,2-DCA-D4(S)	5.11	65	121587	5.11	ppb		0.00
Spiked Amount 25.000			Recovery =	20.424%			
64) Toluene-D8(S)	7.37	98	400207	3.81	ppb		0.00
Spiked Amount 25.000			Recovery =	15.256%			
72) 4-Bromofluorobenzene(S)	10.03	95	165161	4.05	ppb		0.00
Spiked Amount 25.000			Recovery =	16.200%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	1253	0.22	ppb		91
4) Freon 114	1.05	85	1244	0.28	ppb		79
5) Chloromethane	1.08	50	3054	0.42	ppb	#	71
6) Vinyl chloride	1.14	62	2181	0.32	ppb		94
8) Bromomethane	1.35	94	1307	-0.32	ppb		94
9) Chloroethane	1.43	64	1882	0.48	ppb	#	67
10) Dichlorofluoromethane	1.56	67	2580	0.99	ppb	#	74
11) Trichlorofluoromethane	1.60	101	3359	0.41	ppb		94
13) Acrolein	1.89	56	1455	8.10	ppb	#	48
14) Acetone	2.03	43	16534	11.90	ppb		97
15) Freon-113	2.00	103	573	0.82	ppb	#	64
16) Acetonitrile	2.25	41	6860	10.78	ppb	#	80
18) 1,1-DCE	1.98	61	3300	0.41	ppb	#	76
19) t-Butanol	2.59	59	3634	8.32	ppb	#	91
20) Methyl Acetate	2.33	43	7736	1.71	ppb	#	78
21) Iodomethane	2.09	142	1310	1.15	ppb	#	60
22) Acrylonitrile	2.72	53	184	2.64	ppb	#	57
24) Methylene chloride	2.40	84	7023	0.54	ppb	#	79
25) Carbon disulfide	2.15	76	4414	0.43	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	5553	0.33	ppb	#	71
27) Trans-1,2-DCE	2.69	96	3153	0.46	ppb	#	68
29) Diisopropyl Ether	3.35	45	6377	0.34	ppb		92
30) 1,1-DCA	3.16	63	4132	0.38	ppb	#	75
32) Ethyl tert Butyl Ether	3.87	59	4238	0.26	ppb	#	86
34) MEK (2-Butanone)	4.05	43	7021	3.78	ppb		88
35) Cis-1,2-DCE	3.97	96	3313	0.45	ppb	#	67
36) 2,2-Dichloropropane	3.95	77	4834	0.52	ppb		94
37) Chloroform	4.46	83	4310	0.38	ppb		80
38) Bromochloromethane	4.31	130	1570	0.31	ppb	#	65
40) 1,1,1-TCA	4.69	97	4584	0.45	ppb	#	90
41) Cyclohexane	4.77	41	2215	0.89	ppb	#	38
42) 1,1-Dichloropropene	4.95	75	2816	0.35	ppb	#	73
43) 2,2,4-Trimethylpentane	5.40	57	2517	1.34	ppb	#	48
45) Carbon Tetrachloride	4.93	117	3619	0.41	ppb		89
46) Tert Amyl Methyl Ether	5.45	73	3253	0.25	ppb	#	92
48) Benzene	5.19	78	8829	0.35	ppb		95
49) TCE	6.00	95	2952	0.42	ppb	#	81
50) 2-Pentanone	6.28	43	21838	6.72	ppb		89
51) 1,2-Dichloropropane	6.24	63	887	0.27	ppb	#	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	Bromodichloromethane	6.58	83	2960	0.34	ppb		93
53)	Methyl Cyclohexane	6.23	83	1917	0.22	ppb		99
54)	Dibromomethane	6.36	93	792	0.21	ppb		77
55)	MIBK (methyl isobutyl ket	7.30	43	10491	8.63	ppb	#	75
56)	1-Bromo-2-chloroethane	6.90	144	613	0.50	ppb	#	33
59)	Toluene	7.44	91	10289	0.38	ppb		82
60)	Trans-1,3-Dichloropropene	7.69	75	2619	0.29	ppb	#	80
61)	1,1,2-TCA	7.87	83	1396	0.30	ppb	#	39
62)	2-Hexanone	8.16	43	152	9.02	ppb	#	31
65)	1,2-EDB	8.34	107	1159	0.21	ppb	#	55
66)	Tetrachloroethene	8.01	164	1882	0.14	ppb		95
67)	1-Chlorohexane	8.90	91	2154	0.28	ppb	#	67
68)	1,1,1,2-Tetrachloroethane	8.96	131	2215	0.32	ppb		87
69)	m&p-Xylene	9.14	106	8641	0.68	ppb		94
70)	o-Xylene	9.53	106	3818	0.29	ppb		79
71)	Styrene	9.55	104	5584	0.27	ppb	#	88
73)	1,3-Dichloropropane	8.02	76	2275	0.27	ppb	#	81
74)	Dibromochloromethane	8.25	129	2505	0.36	ppb		98
75)	Chlorobenzene	8.87	112	6069	0.32	ppb	#	89
76)	Ethylbenzene	9.01	91	10538	0.35	ppb		99
77)	Bromoform	9.68	173	1914	0.34	ppb	#	70
79)	Isopropylbenzene	9.91	105	8148	-1.33	ppb		96
80)	1,1,2,2-Tetrachloroethane	10.19	83	1046	-0.58	ppb	#	69
81)	1,2,3-Trichloropropane	10.20	110	932	-0.99	ppb	#	53
82)	t-1,4-Dichloro-2-Butene	10.26	53	76	0.13	ppb	#	16
83)	Bromobenzene	10.16	156	2942	-1.27	ppb		96
84)	n-Propylbenzene	10.33	91	6822	-1.90	ppb		93
85)	4-Ethyltoluene	10.45	105	5491	-0.22	ppb	#	71
86)	2-Chlorotoluene	10.38	91	4490	-5.31	ppb	#	66
87)	1,3,5-Trimethylbenzene	10.52	105	3711	0.30	ppb	#	76
88)	4-Chlorotoluene	10.49	91	3575	-1.00	ppb		95
89)	Tert-Butylbenzene	10.82	119	1783	0.29	ppb		82
90)	1,2,4-Trimethylbenzene	10.87	105	2992	0.29	ppb	#	72
91)	Sec-Butylbenzene	11.04	105	3175	0.25	ppb		92
92)	p-Isopropyltoluene	11.19	119	2047	1.56	ppb	#	64
93)	Benzyl Chloride	11.35	91	119	3.64	ppb	#	15
94)	1,3-DCB	11.11	146	2541	0.29	ppb	#	63
95)	1,4-DCB	11.19	146	3223	0.37	ppb	#	72
96)	n-Butylbenzene	11.59	91	637	2.51	ppb	#	37
97)	1,2-DCB	11.55	146	1948	0.26	ppb	#	62
98)	Hexachloroethane	11.81	117	1280	-0.48	ppb	#	79
99)	1,2-Dibromo-3-chloropropan	12.32	157	45	1.87	ppb	#	16
100)	1,2,4-Trichlorobenzene	13.15	180	516	4.08	ppb	#	65
101)	Hexachlorobutadiene	13.35	225	284	3.29	ppb	#	50
102)	Naphthalene	13.38	128	897	2.63	ppb	#	68
103)	1,2,3-Trichlorobenzene	13.61	180	166	3.43	ppb	#	73

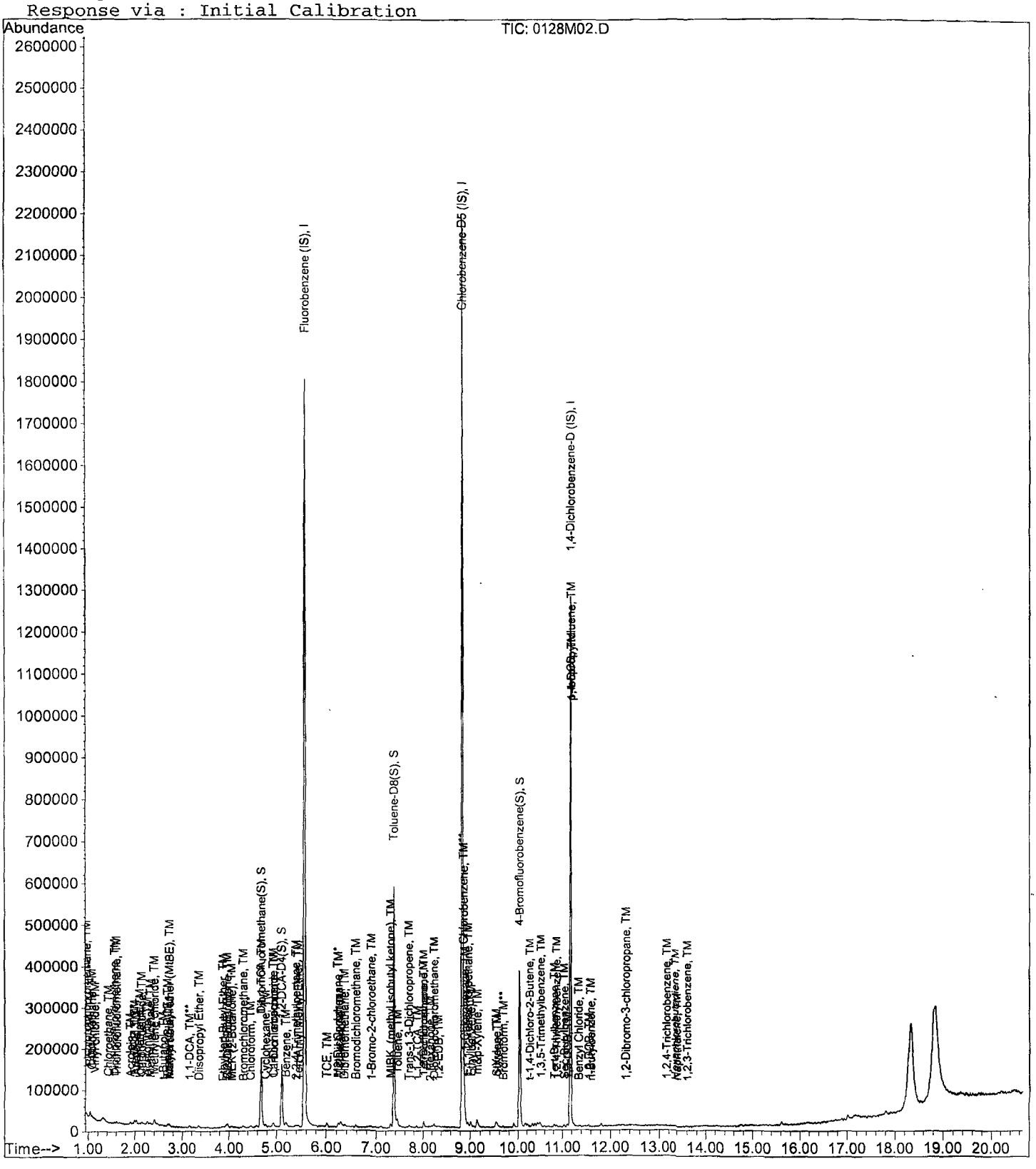
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1703128	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1442379	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	506390	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	102134	3.50	ppb		0.00
Spiked Amount 25.000			Recovery =	13.980%			
44) 1,2-DCA-D4(S)	5.11	65	108428	4.86	ppb		0.00
Spiked Amount 25.000			Recovery =	19.440%			
64) Toluene-D8(S)	7.37	98	452170	4.79	ppb		0.00
Spiked Amount 25.000			Recovery =	19.164%			
72) 4-Bromofluorobenzene(S)	10.03	95	188679	5.11	ppb		0.00
Spiked Amount 25.000			Recovery =	20.424%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	2784	0.53	ppb	#	87
4) Freon 114	1.04	85	2102	0.51	ppb		96
5) Chloromethane	1.08	50	4324	0.64	ppb		97
6) Vinyl chloride	1.14	62	3330	0.53	ppb		91
8) Bromomethane	1.35	94	2401	0.18	ppb	#	69
9) Chloroethane	1.42	64	1960	0.54	ppb		93
10) Dichlorofluoromethane	1.56	67	5403	1.43	ppb		93
11) Trichlorofluoromethane	1.60	101	4078	0.54	ppb		79
13) Acrolein	1.90	56	4403	26.61	ppb	#	68
14) Acetone	2.03	43	13207	10.33	ppb		98
15) Freon-113	2.01	103	1204	1.27	ppb	#	69
16) Acetonitrile	2.25	41	15511	26.47	ppb		96
18) 1,1-DCE	1.99	61	4451	0.60	ppb	#	89
19) t-Butanol	2.59	59	9288	23.11	ppb		100
20) Methyl Acetate	2.34	43	2363	0.32	ppb	#	69
21) Iodomethane	2.10	142	2587	1.33	ppb	#	86
22) Acrylonitrile	2.71	53	166	2.64	ppb	#	82
24) Methylene chloride	2.41	84	6087	0.47	ppb		83
25) Carbon disulfide	2.15	76	5238	0.55	ppb		93
26) Methyl t-butyl ether (MtBE	2.73	73	9388	0.61	ppb	#	86
27) Trans-1,2-DCE	2.69	96	4058	0.64	ppb		94
29) Diisopropyl Ether	3.35	45	8887	0.51	ppb	#	90
30) 1,1-DCA	3.15	63	5772	0.58	ppb	#	96
32) Ethyl tert Butyl Ether	3.88	59	8297	0.55	ppb	#	79
34) MEK (2-Butanone)	4.05	43	14845	8.68	ppb		100
35) Cis-1,2-DCE	3.97	96	4725	0.70	ppb	#	74
36) 2,2-Dichloropropane	3.96	77	4814	0.56	ppb		97
37) Chloroform	4.47	83	6734	0.65	ppb		80
38) Bromochloromethane	4.31	130	2841	0.62	ppb		85
40) 1,1,1-TCA	4.71	97	5157	0.56	ppb		89
41) Cyclohexane	4.78	41	3416	1.22	ppb	#	57
42) 1,1-Dichloropropene	4.95	75	4618	0.62	ppb	#	75
43) 2,2,4-Trimethylpentane	5.40	57	6020	1.63	ppb	#	75
45) Carbon Tetrachloride	4.93	117	4738	0.58	ppb		98
46) Tert Amyl Methyl Ether	5.44	73	6725	0.55	ppb	#	94
47) 1,2-DCA	5.22	62	4549	0.60	ppb	#	72
48) Benzene	5.19	78	14534	0.62	ppb	#	91
49) TCE	6.02	95	3833	0.59	ppb		78
50) 2-Pentanone	6.28	43	70774	23.66	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	1805	0.60	ppb	#	72
52)	Bromodichloromethane	6.58	83	4715	0.59	ppb		96
53)	Methyl Cyclohexane	6.24	83	5159	0.65	ppb		78
54)	Dibromomethane	6.36	93	2040	0.59	ppb	#	68
55)	MIBK (methyl isobutyl ket	7.30	43	25261	12.08	ppb		98
56)	1-Bromo-2-chloroethane	6.89	144	760	0.67	ppb	#	50
59)	Toluene	7.44	91	13841	0.55	ppb		98
60)	Trans-1,3-Dichloropropene	7.70	75	5185	0.63	ppb	#	65
61)	1,1,2-TCA	7.87	83	2854	0.67	ppb	#	64
62)	2-Hexanone	8.19	43	13374	13.35	ppb	#	96
65)	1,2-EDB	8.34	107	2999	0.55	ppb	#	76
66)	Tetrachloroethene	8.01	164	3038	0.42	ppb		84
67)	1-Chlorohexane	8.90	91	5023	0.65	ppb	#	88
68)	1,1,1,2-Tetrachloroethane	8.96	131	4051	0.58	ppb		81
69)	m&p-Xylene	9.14	106	13622	1.07	ppb		87
70)	o-Xylene	9.52	106	7575	0.58	ppb		78
71)	Styrene	9.55	104	10770	0.52	ppb	#	84
73)	1,3-Dichloropropane	8.03	76	4066	0.48	ppb	#	77
74)	Dibromochloromethane	8.25	129	3837	0.56	ppb		99
75)	Chlorobenzene	8.87	112	11218	0.59	ppb	#	82
76)	Ethylbenzene	9.01	91	17462	0.58	ppb		91
77)	Bromoform	9.68	173	3384	0.61	ppb		82
79)	Isopropylbenzene	9.91	105	15219	-1.00	ppb	#	88
81)	1,2,3-Trichloropropane	10.22	110	1090	-1.02	ppb	#	31
82)	t-1,4-Dichloro-2-Butene	10.26	53	315	0.46	ppb		77
83)	Bromobenzene	10.16	156	5275	-0.93	ppb		86
84)	n-Propylbenzene	10.32	91	12074	-1.68	ppb		96
86)	2-Chlorotoluene	10.37	91	13312	-4.56	ppb		100
87)	1,3,5-Trimethylbenzene	10.51	105	8297	0.55	ppb		97
88)	4-Chlorotoluene	10.49	91	9788	-0.58	ppb		95
89)	Tert-Butylbenzene	10.81	119	4000	0.54	ppb		88
90)	1,2,4-Trimethylbenzene	10.87	105	6660	0.53	ppb		88
91)	Sec-Butylbenzene	11.04	105	7449	0.49	ppb		89
92)	p-Isopropyltoluene	11.19	119	5250	1.75	ppb	#	88
93)	Benzyl Chloride	11.33	91	355	3.69	ppb	#	61
94)	1,3-DCB	11.11	146	6535	0.61	ppb		93
95)	1,4-DCB	11.20	146	6480	0.62	ppb		93
96)	n-Butylbenzene	11.59	91	2247	2.66	ppb	#	78
97)	1,2-DCB	11.56	146	4718	0.52	ppb		90
98)	Hexachloroethane	11.82	117	2436	-0.15	ppb		79
99)	1,2-Dibromo-3-chloropropan	12.32	157	149	1.99	ppb	#	16
100)	1,2,4-Trichlorobenzene	13.16	180	638	4.08	ppb	#	63
101)	Hexachlorobutadiene	13.35	225	734	3.41	ppb	#	84
102)	Naphthalene	13.38	128	2284	2.84	ppb	#	54
103)	1,2,3-Trichlorobenzene	13.62	180	933	3.67	ppb	#	52

(#) = qualifier out of range (m) = manual integration

Quantitation Report

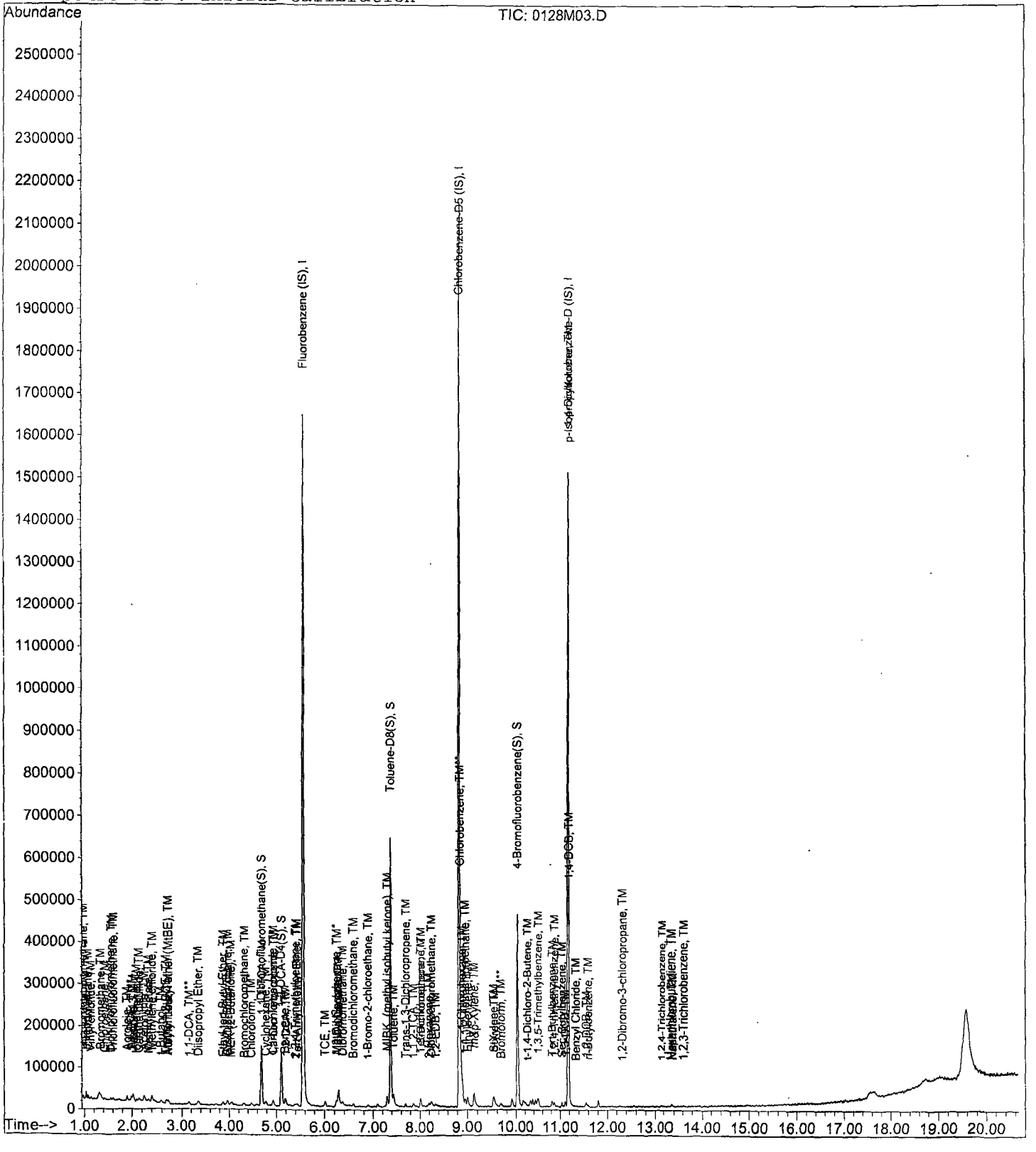
Data File : M:\MAX\DATA\210128\0128M03.D
Acq On : 28 Jan 21 17:55
Sample : 0.5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 3
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1780184	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1490103	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	579540	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	161611	7.98	ppb		0.00
Spiked Amount 25.000			Recovery = 31.924%				
44) 1,2-DCA-D4(S)	5.11	65	168204	8.53	ppb		0.00
Spiked Amount 25.000			Recovery = 34.120%				
64) Toluene-D8(S)	7.37	98	657981	8.30	ppb		0.00
Spiked Amount 25.000			Recovery = 33.216%				
72) 4-Bromofluorobenzene(S)	10.03	95	274125	8.58	ppb		0.00
Spiked Amount 25.000			Recovery = 34.336%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	6270	1.14	ppb		95
4) Freon 114	1.04	85	4574	1.06	ppb		97
5) Chloromethane	1.08	50	7328	1.04	ppb		91
6) Vinyl chloride	1.15	62	7471	1.14	ppb		95
8) Bromomethane	1.34	94	3336	0.51	ppb		100
9) Chloroethane	1.42	64	4132	1.09	ppb	#	81
10) Dichlorofluoromethane	1.56	67	7215	1.65	ppb		91
11) Trichlorofluoromethane	1.61	101	6922	0.87	ppb	#	66
13) Acrolein	1.90	56	8316	48.08	ppb	#	68
14) Acetone	2.03	43	32650	24.42	ppb		98
15) Freon-113	2.02	103	2239	1.89	ppb	#	69
16) Acetonitrile	2.25	41	32085	52.39	ppb	#	93
18) 1,1-DCE	1.99	61	8505	1.10	ppb		92
19) t-Butanol	2.59	59	19124	45.52	ppb	#	89
20) Methyl Acetate	2.34	43	8153	1.91	ppb		96
21) Iodomethane	2.09	142	4592	1.56	ppb		95
22) Acrylonitrile	2.71	53	382	2.75	ppb	#	57
24) Methylene chloride	2.41	84	9903	1.11	ppb		94
25) Carbon disulfide	2.15	76	10806	1.08	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	15604	0.98	ppb		98
27) Trans-1,2-DCE	2.70	96	7050	1.06	ppb		85
29) Diisopropyl Ether	3.36	45	19223	1.06	ppb	#	85
30) 1,1-DCA	3.16	63	11144	1.07	ppb		96
32) Ethyl tert Butyl Ether	3.87	59	15739	0.99	ppb	#	81
34) MEK (2-Butanone)	4.05	43	35678	19.97	ppb		87
35) Cis-1,2-DCE	3.97	96	7372	1.06	ppb		83
36) 2,2-Dichloropropane	3.96	77	10238	1.14	ppb		99
37) Chloroform	4.48	83	11106	1.02	ppb		98
38) Bromochloromethane	4.31	130	5171	1.07	ppb		94
40) 1,1,1-TCA	4.70	97	11832	1.22	ppb	#	81
41) Cyclohexane	4.78	41	4799	1.49	ppb		81
42) 1,1-Dichloropropene	4.94	75	7913	1.02	ppb		95
43) 2,2,4-Trimethylpentane	5.39	57	14515	2.26	ppb		94
45) Carbon Tetrachloride	4.93	117	8826	1.04	ppb		92
46) Tert Amyl Methyl Ether	5.44	73	12594	0.99	ppb		95
47) 1,2-DCA	5.21	62	8792	1.11	ppb	#	83
48) Benzene	5.20	78	25966	1.07	ppb		99
49) TCE	6.02	95	7456	1.11	ppb		89
50) 2-Pentanone	6.28	43	146931	47.00	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	3313	1.06	ppb	#	94
52)	Bromodichloromethane	6.58	83	8787	1.05	ppb		94
53)	Methyl Cyclohexane	6.24	83	8766	1.05	ppb		99
54)	Dibromomethane	6.37	93	3644	1.01	ppb		95
55)	MIBK (methyl isobutyl ket	7.30	43	64694	20.20	ppb		97
56)	1-Bromo-2-chloroethane	6.90	144	1275	1.08	ppb		95
59)	Toluene	7.44	91	28353	1.08	ppb		99
60)	Trans-1,3-Dichloropropene	7.70	75	8835	1.02	ppb		98
61)	1,1,2-TCA	7.87	83	4536	1.02	ppb		94
62)	2-Hexanone	8.18	43	39355	21.29	ppb	#	87
65)	1,2-EDB	8.34	107	6028	1.06	ppb		92
66)	Tetrachloroethene	8.01	164	5053	0.87	ppb		87
67)	1-Chlorohexane	8.90	91	7523	0.95	ppb		97
68)	1,1,1,2-Tetrachloroethane	8.96	131	8445	1.16	ppb		91
69)	m&p-Xylene	9.14	106	27593	2.10	ppb		96
70)	o-Xylene	9.52	106	15290	1.13	ppb		97
71)	Styrene	9.54	104	21071	0.99	ppb	#	96
73)	1,3-Dichloropropane	8.03	76	9707	1.11	ppb		95
74)	Dibromochloromethane	8.25	129	7485	1.05	ppb		86
75)	Chlorobenzene	8.87	112	20581	1.05	ppb		96
76)	Ethylbenzene	9.01	91	32813	1.06	ppb		93
77)	Bromoform	9.68	173	5720	0.99	ppb	#	76
79)	Isopropylbenzene	9.91	105	30845	-0.28	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	6760	0.86	ppb	#	93
81)	1,2,3-Trichloropropane	10.21	110	2159	-0.31	ppb	#	60
82)	t-1,4-Dichloro-2-Butene	10.27	53	899	1.14	ppb	#	16
83)	Bromobenzene	10.16	156	10916	-0.10	ppb		78
84)	n-Propylbenzene	10.32	91	44787	-0.16	ppb		97
85)	4-Ethyltoluene	10.44	105	19209	0.38	ppb		93
86)	2-Chlorotoluene	10.32	91	45143	-2.11	ppb	#	35
87)	1,3,5-Trimethylbenzene	10.51	105	17551	1.02	ppb		99
88)	4-Chlorotoluene	10.49	91	22361	0.16	ppb		96
89)	Tert-Butylbenzene	10.82	119	7979	0.94	ppb		99
90)	1,2,4-Trimethylbenzene	10.87	105	13475	0.94	ppb		98
91)	Sec-Butylbenzene	11.04	105	16285	0.94	ppb		90
92)	p-Isopropyltoluene	11.20	119	11649	2.08	ppb	#	89
93)	Benzyl Chloride	11.34	91	2146	4.06	ppb	#	74
94)	1,3-DCB	11.11	146	12866	1.06	ppb		90
95)	1,4-DCB	11.20	146	13377	1.12	ppb		95
96)	n-Butylbenzene	11.60	91	5654	2.93	ppb	#	83
97)	1,2-DCB	11.55	146	9895	0.96	ppb		93
98)	Hexachloroethane	11.81	117	4444	0.38	ppb		85
99)	1,2-Dibromo-3-chloropropan	12.31	157	694	2.54	ppb	#	42
100)	1,2,4-Trichlorobenzene	13.15	180	1281	4.26	ppb		83
101)	Hexachlorobutadiene	13.36	225	1633	3.62	ppb	#	61
102)	Naphthalene	13.38	128	4192	3.08	ppb	#	88
103)	1,2,3-Trichlorobenzene	13.62	180	1720	3.86	ppb	#	66

(#) = qualifier out of range (m) = manual integration

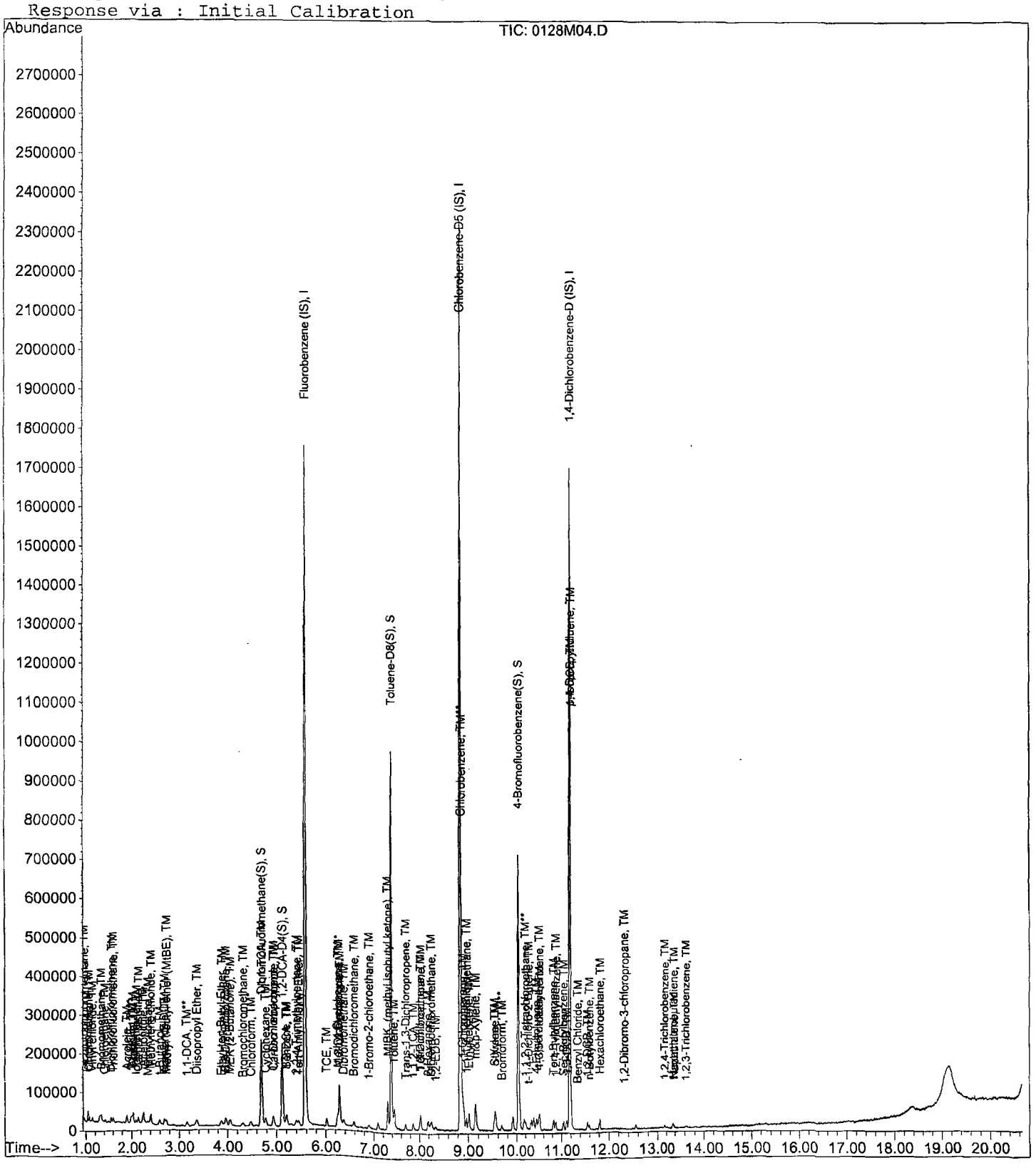
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M04.D
Acq On : 28 Jan 21 18:24
Sample : 1ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 4
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1793882	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1489443	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	621742	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	190286	10.21	ppb		0.00
Spiked Amount 25.000			Recovery =	40.828%			
44) 1,2-DCA-D4(S)	5.11	65	205399	10.91	ppb		0.00
Spiked Amount 25.000			Recovery =	43.652%			
64) Toluene-D8(S)	7.37	98	796795	10.87	ppb		0.00
Spiked Amount 25.000			Recovery =	43.464%			
72) 4-Bromofluorobenzene(S)	10.03	95	323162	10.74	ppb		0.00
Spiked Amount 25.000			Recovery =	42.972%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	10383	1.88	ppb		91
4) Freon 114	1.05	85	9565	2.19	ppb		88
5) Chloromethane	1.08	50	13302	1.88	ppb		89
6) Vinyl chloride	1.15	62	13123	1.99	ppb		90
8) Bromomethane	1.34	94	6755	1.84	ppb		100
9) Chloroethane	1.42	64	8445	2.21	ppb		98
10) Dichlorofluoromethane	1.56	67	14361	2.63	ppb		98
11) Trichlorofluoromethane	1.60	101	16311	2.04	ppb		99
13) Acrolein	1.90	56	11265	64.64	ppb		84
14) Acetone	2.03	43	30665	22.76	ppb		88
15) Freon-113	2.02	103	3401	2.60	ppb		88
16) Acetonitrile	2.25	41	44441	72.01	ppb		96
18) 1,1-DCE	1.99	61	15792	2.03	ppb		96
19) t-Butanol	2.59	59	32233	76.14	ppb		95
20) Methyl Acetate	2.34	43	6485	1.43	ppb		99
21) Iodomethane	2.10	142	11513	2.39	ppb		91
22) Acrylonitrile	2.72	53	647	2.88	ppb	#	57
24) Methylene chloride	2.41	84	14721	1.96	ppb		93
25) Carbon disulfide	2.15	76	20200	2.01	ppb		94
26) Methyl t-butyl ether (MtBE	2.73	73	31534	1.96	ppb		97
27) Trans-1,2-DCE	2.69	96	14051	2.09	ppb		89
29) Diisopropyl Ether	3.36	45	37347	2.04	ppb		95
30) 1,1-DCA	3.16	63	21356	2.03	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	30329	1.90	ppb		93
34) MEK (2-Butanone)	4.04	43	56203	31.21	ppb		100
35) Cis-1,2-DCE	3.97	96	15001	2.17	ppb		85
36) 2,2-Dichloropropane	3.96	77	19012	2.10	ppb		94
37) Chloroform	4.47	83	21929	2.00	ppb		89
38) Bromochloromethane	4.31	130	9343	1.92	ppb		89
40) 1,1,1-TCA	4.70	97	19639	2.01	ppb	#	94
41) Cyclohexane	4.79	41	9486	2.53	ppb		84
42) 1,1-Dichloropropene	4.95	75	16691	2.13	ppb		93
43) 2,2,4-Trimethylpentane	5.40	57	24051	2.98	ppb		91
45) Carbon Tetrachloride	4.94	117	17179	2.01	ppb		81
46) Tert Amyl Methyl Ether	5.44	73	25908	2.01	ppb		98
47) 1,2-DCA	5.21	62	15718	1.97	ppb		95
48) Benzene	5.19	78	48919	1.99	ppb		95
49) TCE	6.02	95	12315	1.81	ppb		79
50) 2-Pentanone	6.28	43	231042	73.34	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	5835	1.85	ppb		100
52)	Bromodichloromethane	6.58	83	17060	2.03	ppb		96
53)	Methyl Cyclohexane	6.24	83	16947	2.02	ppb		97
54)	Dibromomethane	6.37	93	7250	2.00	ppb		95
55)	MIBK (methyl isobutyl ket	7.30	43	103694	28.30	ppb		97
56)	1-Bromo-2-chloroethane	6.90	144	2720	2.28	ppb		98
59)	Toluene	7.44	91	52322	1.97	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	15980	1.83	ppb		95
61)	1,1,2-TCA	7.87	83	9045	2.02	ppb		79
62)	2-Hexanone	8.18	43	61848	28.18	ppb		91
65)	1,2-EDB	8.34	107	11575	2.04	ppb		84
66)	Tetrachloroethene	8.01	164	8058	1.58	ppb		91
67)	1-Chlorohexane	8.90	91	14234	1.79	ppb		96
68)	1,1,1,2-Tetrachloroethane	8.97	131	13059	1.80	ppb		91
69)	m&p-Xylene	9.14	106	53097	4.05	ppb		90
70)	o-Xylene	9.52	106	26901	1.99	ppb		97
71)	Styrene	9.54	104	41391	1.95	ppb		98
73)	1,3-Dichloropropane	8.03	76	19078	2.18	ppb		97
74)	Dibromochloromethane	8.25	129	14367	2.02	ppb		89
75)	Chlorobenzene	8.87	112	39680	2.02	ppb		90
76)	Ethylbenzene	9.01	91	59743	1.94	ppb		91
77)	Bromoform	9.67	173	10891	1.89	ppb		91
79)	Isopropylbenzene	9.91	105	62315	1.18	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	10984	1.81	ppb		99
81)	1,2,3-Trichloropropane	10.21	110	4504	1.29	ppb	#	82
82)	t-1,4-Dichloro-2-Butene	10.26	53	1605	1.90	ppb		80
83)	Bromobenzene	10.16	156	20024	1.21	ppb		96
84)	n-Propylbenzene	10.32	91	93455	1.92	ppb		97
85)	4-Ethyltoluene	10.44	105	44327	1.52	ppb		96
86)	2-Chlorotoluene	10.32	91	93920	1.38	ppb	#	36
87)	1,3,5-Trimethylbenzene	10.51	105	37253	2.02	ppb		100
88)	4-Chlorotoluene	10.49	91	44287	1.42	ppb		97
89)	Tert-Butylbenzene	10.82	119	16416	1.81	ppb		100
90)	1,2,4-Trimethylbenzene	10.87	105	28443	1.85	ppb		93
91)	Sec-Butylbenzene	11.04	105	33059	1.78	ppb		97
92)	p-Isopropyltoluene	11.19	119	22775	2.64	ppb		92
93)	Benzyl Chloride	11.34	91	3750	4.34	ppb	#	70
94)	1,3-DCB	11.11	146	25871	1.98	ppb		96
95)	1,4-DCB	11.19	146	25472	1.99	ppb		97
96)	n-Butylbenzene	11.59	91	12651	3.47	ppb		92
97)	1,2-DCB	11.56	146	21272	1.92	ppb		94
98)	Hexachloroethane	11.82	117	8812	1.58	ppb		99
99)	1,2-Dibromo-3-chloropropan	12.31	157	1161	2.95	ppb	#	61
100)	1,2,4-Trichlorobenzene	13.15	180	2420	4.58	ppb	#	67
101)	Hexachlorobutadiene	13.35	225	3523	4.06	ppb		93
102)	Naphthalene	13.38	128	8142	3.59	ppb	#	93
103)	1,2,3-Trichlorobenzene	13.62	180	3918	4.43	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

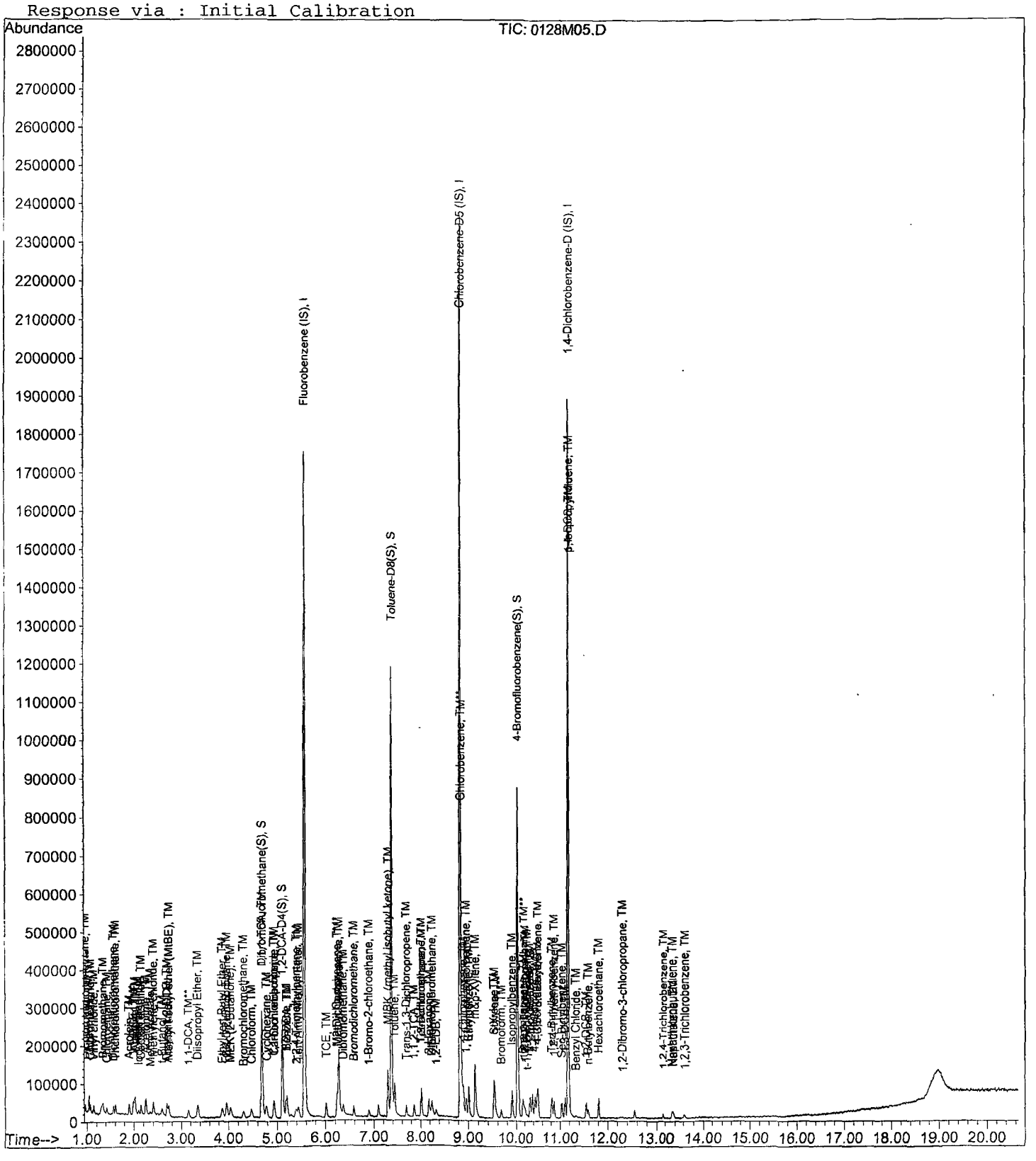
Data File : M:\MAX\DATA\210128\0128M05.D
Acq On : 28 Jan 21 18:53
Sample : 2ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 5
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1785695	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1469528	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	713253	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	374035	25.26	ppb		0.00
Spiked Amount 25.000			Recovery =	101.020%			
44) 1,2-DCA-D4(S)	5.11	65	400143	23.96	ppb		0.00
Spiked Amount 25.000			Recovery =	95.844%			
64) Toluene-D8(S)	7.37	98	1524890	24.65	ppb		0.00
Spiked Amount 25.000			Recovery =	98.612%			
72) 4-Bromofluorobenzene(S)	10.03	95	634843	24.81	ppb		0.00
Spiked Amount 25.000			Recovery =	99.256%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	21125	3.84	ppb		89
4) Freon 114	1.05	85	15751	3.63	ppb		98
5) Chloromethane	1.08	50	34401	4.88	ppb		91
6) Vinyl chloride	1.15	62	31792	4.83	ppb		91
8) Bromomethane	1.34	94	14633	4.96	ppb		94
9) Chloroethane	1.42	64	19812	5.22	ppb		100
10) Dichlorofluoromethane	1.56	67	28887	4.67	ppb		96
11) Trichlorofluoromethane	1.60	101	40343	5.07	ppb		91
13) Acrolein	1.90	56	17964	103.55	ppb	#	68
14) Acetone	2.03	43	54605	40.72	ppb		91
15) Freon-113	2.02	103	6110	4.32	ppb		92
16) Acetonitrile	2.25	41	59713	97.20	ppb		97
18) 1,1-DCE	1.99	61	33972	4.38	ppb		98
19) t-Butanol	2.59	59	38518	91.40	ppb	#	88
20) Methyl Acetate	2.34	43	21239	5.54	ppb	#	84
21) Iodomethane	2.10	142	26697	4.24	ppb		97
22) Acrylonitrile	2.73	53	958	3.04	ppb	#	35
24) Methylene chloride	2.41	84	27557	4.29	ppb		93
25) Carbon disulfide	2.15	76	43168	4.32	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	68929	4.31	ppb		97
27) Trans-1,2-DCE	2.69	96	28521	4.27	ppb		98
29) Diisopropyl Ether	3.36	45	80602	4.43	ppb		97
30) 1,1-DCA	3.16	63	45607	4.35	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	67102	4.23	ppb		95
34) MEK (2-Butanone)	4.04	43	70542	39.35	ppb		99
35) Cis-1,2-DCE	3.97	96	29514	4.31	ppb		93
36) 2,2-Dichloropropane	3.96	77	40555	4.51	ppb		97
37) Chloroform	4.48	83	46575	4.26	ppb		96
38) Bromochloromethane	4.31	130	20303	4.20	ppb		93
40) 1,1,1-TCA	4.70	97	42100	4.32	ppb		94
41) Cyclohexane	4.78	41	16648	4.15	ppb		93
42) 1,1-Dichloropropene	4.94	75	34741	4.45	ppb		92
43) 2,2,4-Trimethylpentane	5.39	57	41257	4.30	ppb		96
45) Carbon Tetrachloride	4.93	117	36156	4.26	ppb		92
46) Tert Amyl Methyl Ether	5.44	73	51301	4.01	ppb	#	94
47) 1,2-DCA	5.21	62	35165	4.42	ppb		100
48) Benzene	5.20	78	106796	4.37	ppb		96
49) TCE	6.02	95	29491	4.36	ppb		86
50) 2-Pentanone	6.28	43	311456	99.32	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	13979	4.46	ppb		98
52)	Bromodichloromethane	6.58	83	35936	4.30	ppb		95
53)	Methyl Cyclohexane	6.24	83	32094	3.84	ppb		94
54)	Dibromomethane	6.37	93	15263	4.24	ppb		97
55)	MIBK (methyl isobutyl ket	7.30	43	150717	38.34	ppb		96
56)	1-Bromo-2-chloroethane	6.89	144	4736	3.98	ppb	#	65
59)	Toluene	7.44	91	118139	4.47	ppb		98
60)	Trans-1,3-Dichloropropene	7.69	75	36344	4.18	ppb		99
61)	1,1,2-TCA	7.86	83	19176	4.30	ppb		96
62)	2-Hexanone	8.18	43	88796	36.68	ppb		98
65)	1,2-EDB	8.34	107	24563	4.38	ppb		99
66)	Tetrachloroethene	8.01	164	20016	4.47	ppb		93
67)	1-Chlorohexane	8.90	91	33231	4.24	ppb		95
68)	1,1,1,2-Tetrachloroethane	8.96	131	31513	4.40	ppb		95
69)	m&p-Xylene	9.14	106	117312	9.07	ppb		91
70)	o-Xylene	9.52	106	55843	4.19	ppb		90
71)	Styrene	9.54	104	92634	4.42	ppb		98
73)	1,3-Dichloropropane	8.03	76	39399	4.57	ppb		98
74)	Dibromochloromethane	8.25	129	30387	4.32	ppb		93
75)	Chlorobenzene	8.87	112	82586	4.26	ppb		88
76)	Ethylbenzene	9.01	91	133925	4.40	ppb		97
77)	Bromoform	9.68	173	24863	4.37	ppb		97
79)	Isopropylbenzene	9.91	105	140233	4.16	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	26634	4.90	ppb		96
81)	1,2,3-Trichloropropane	10.21	110	9562	4.10	ppb		88
82)	t-1,4-Dichloro-2-Butene	10.25	53	4616	4.77	ppb		88
83)	Bromobenzene	10.16	156	45618	4.34	ppb		98
84)	n-Propylbenzene	10.32	91	231913	6.90	ppb		92
85)	4-Ethyltoluene	10.44	105	111191	4.04	ppb		98
86)	2-Chlorotoluene	10.32	91	232298	9.70	ppb	#	35
87)	1,3,5-Trimethylbenzene	10.50	105	91275	4.32	ppb		99
88)	4-Chlorotoluene	10.48	91	99746	4.07	ppb		97
89)	Tert-Butylbenzene	10.81	119	41824	4.02	ppb		95
90)	1,2,4-Trimethylbenzene	10.87	105	69221	3.92	ppb		98
91)	Sec-Butylbenzene	11.04	105	90622	4.25	ppb		96
92)	p-Isopropyltoluene	11.19	119	64559	4.47	ppb		97
93)	Benzyl Chloride	11.33	91	13847	5.98	ppb	#	92
94)	1,3-DCB	11.11	146	66909	4.46	ppb		97
95)	1,4-DCB	11.19	146	63171	4.31	ppb		97
96)	n-Butylbenzene	11.59	91	32880	4.79	ppb		95
97)	1,2-DCB	11.55	146	51066	4.02	ppb		98
98)	Hexachloroethane	11.81	117	23570	5.06	ppb		87
99)	1,2-Dibromo-3-chloropropan	12.32	157	3838	5.12	ppb		88
100)	1,2,4-Trichlorobenzene	13.15	180	7031	5.69	ppb	#	77
101)	Hexachlorobutadiene	13.36	225	10281	5.41	ppb		92
102)	Naphthalene	13.37	128	22096	5.16	ppb		95
103)	1,2,3-Trichlorobenzene	13.62	180	8107	5.29	ppb		96

(#) = qualifier out of range (m) = manual integration

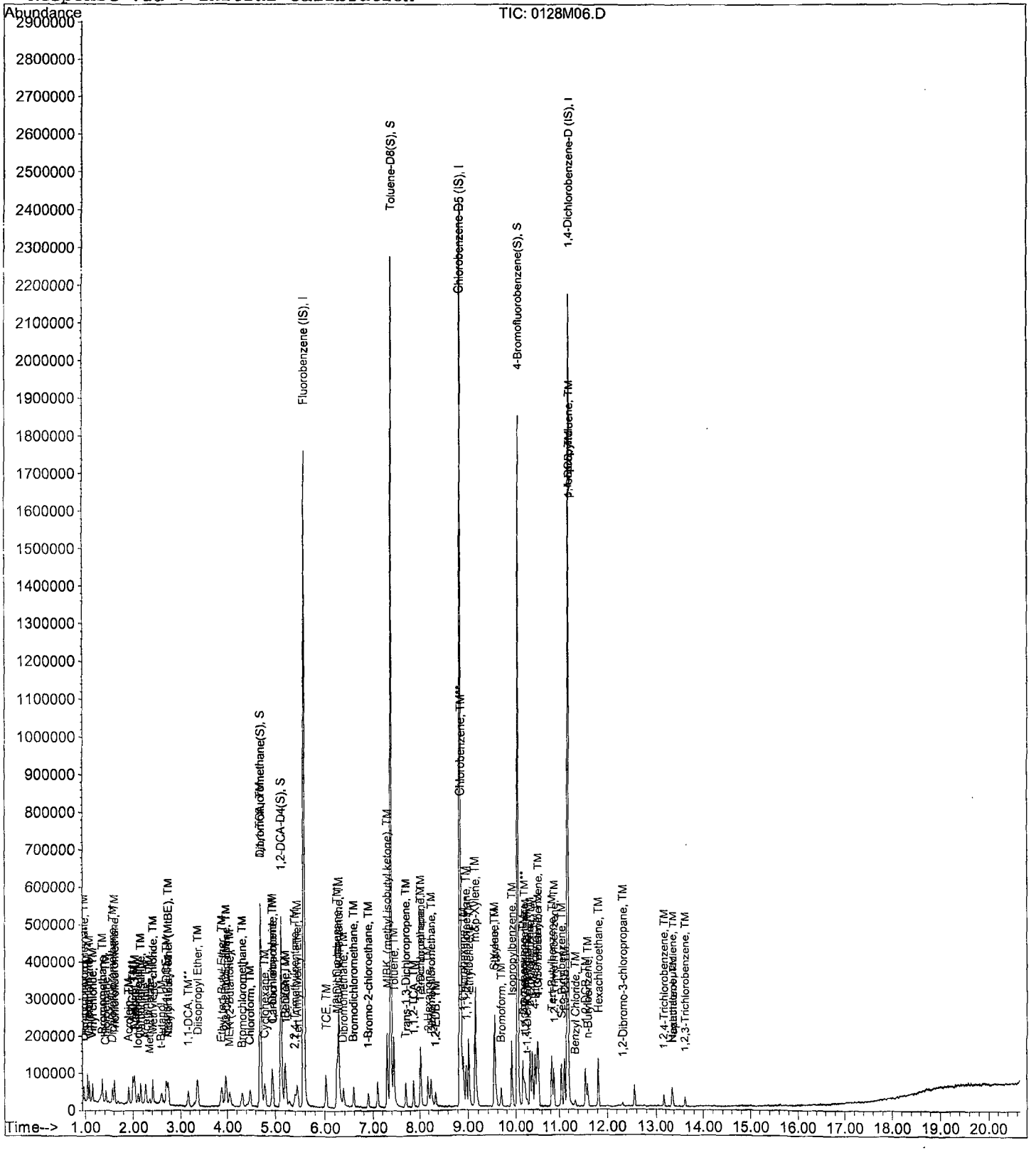
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M06.D
Acq On : 28 Jan 21 19:22
Sample : 5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 6
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D Vial: 7
Acq On : 28 Jan 21 19:51 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1794396	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1470371	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	775353	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	393894	26.72	ppb	0.00
Spiked Amount 25.000			Recovery =	106.872%		
44) 1,2-DCA-D4(S)	5.11	65	430179	25.83	ppb	0.00
Spiked Amount 25.000			Recovery =	103.300%		
64) Toluene-D8(S)	7.37	98	1631791	26.63	ppb	0.00
Spiked Amount 25.000			Recovery =	106.524%		
72) 4-Bromofluorobenzene(S)	10.02	95	677231	26.68	ppb	0.00
Spiked Amount 25.000			Recovery =	106.736%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	47674	8.63	ppb	100
4) Freon 114	1.05	85	39378	9.02	ppb	100
5) Chloromethane	1.08	50	64954	9.17	ppb	100
6) Vinyl chloride	1.15	62	60673	9.18	ppb	100
8) Bromomethane	1.34	94	27805	10.11	ppb	100
9) Chloroethane	1.42	64	37725	9.89	ppb	100
10) Dichlorofluoromethane	1.56	67	66336	9.84	ppb	100
11) Trichlorofluoromethane	1.60	101	75449	9.43	ppb	100
13) Acrolein	1.90	56	21212	121.68	ppb	100
14) Acetone	2.03	43	68224	50.63	ppb	100
15) Freon-113	2.02	103	14585	9.61	ppb	100
16) Acetonitrile	2.25	41	74366	120.47	ppb	100
18) 1,1-DCE	1.99	61	68717	8.82	ppb	100
19) t-Butanol	2.59	59	53834	127.12	ppb	100
20) Methyl Acetate	2.34	43	35417	9.43	ppb	100
21) Iodomethane	2.10	142	68655	9.29	ppb	100
22) Acrylonitrile	2.72	53	2236	3.67	ppb	100
24) Methylene chloride	2.41	84	55197	9.22	ppb	100
25) Carbon disulfide	2.15	76	98336	9.78	ppb	100
26) Methyl t-butyl ether (MtBE	2.73	73	162542	10.11	ppb	100
27) Trans-1,2-DCE	2.69	96	60900	9.06	ppb	100
29) Diisopropyl Ether	3.36	45	185490	10.13	ppb	100
30) 1,1-DCA	3.16	63	95679	9.08	ppb	100
32) Ethyl tert Butyl Ether	3.87	59	161251	10.10	ppb	100
34) MEK (2-Butanone)	4.05	43	94845	52.66	ppb	100
35) Cis-1,2-DCE	3.97	96	65485	9.54	ppb	100
36) 2,2-Dichloropropane	3.96	77	80312	8.89	ppb	100
37) Chloroform	4.48	83	100362	9.13	ppb	100
38) Bromochloromethane	4.31	130	43068	8.86	ppb	100
40) 1,1,1-TCA	4.70	97	87271	8.92	ppb	100
41) Cyclohexane	4.78	41	43301	10.08	ppb	100
42) 1,1-Dichloropropene	4.95	75	70848	9.04	ppb	100
43) 2,2,4-Trimethylpentane	5.39	57	105283	9.14	ppb	99
45) Carbon Tetrachloride	4.94	117	80858	9.48	ppb	100
46) Tert Amyl Methyl Ether	5.44	73	127554	9.91	ppb	100
47) 1,2-DCA	5.21	62	71873	8.99	ppb	100
48) Benzene	5.19	78	220689	8.99	ppb	100
49) TCE	6.02	95	64016	9.42	ppb	100
50) 2-Pentanone	6.28	43	405801	128.78	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D Vial: 7
Acq On : 28 Jan 21 19:51 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
51)	1,2-Dichloropropane	6.25	63	31168	9.90 ppb	100
52)	Bromodichloromethane	6.58	83	74910	8.92 ppb	100
53)	Methyl Cyclohexane	6.24	83	75585	9.00 ppb	100
54)	Dibromomethane	6.37	93	34176	9.44 ppb	100
55)	MIBK (methyl isobutyl ket	7.29	43	207512	50.12 ppb	100
56)	1-Bromo-2-chloroethane	6.89	144	11370	9.52 ppb	100
59)	Toluene	7.44	91	247468	9.32 ppb	100
60)	Trans-1,3-Dichloropropene	7.69	75	78128	8.95 ppb	100
61)	1,1,2-TCA	7.87	83	40591	9.06 ppb	100
62)	2-Hexanone	8.17	43	124878	47.75 ppb	100
65)	1,2-EDB	8.34	107	53307	9.50 ppb	100
66)	Tetrachloroethene	8.01	164	39936	9.23 ppb	100
67)	1-Chlorohexane	8.90	91	76428	9.75 ppb	100
68)	1,1,1,2-Tetrachloroethane	8.96	131	64751	9.04 ppb	100
69)	m&p-Xylene	9.14	106	244470	18.88 ppb	100
70)	o-Xylene	9.52	106	124743	9.36 ppb	100
71)	Styrene	9.54	104	200936	9.58 ppb	100
73)	1,3-Dichloropropane	8.03	76	80014	9.27 ppb	100
74)	Dibromochloromethane	8.25	129	67369	9.58 ppb	100
75)	Chlorobenzene	8.87	112	183468	9.45 ppb	100
76)	Ethylbenzene	9.01	91	282009	9.26 ppb	100
77)	Bromoform	9.67	173	52950	9.30 ppb	100
79)	Isopropylbenzene	9.91	105	301352	10.11 ppb	100
80)	1,1,2,2-Tetrachloroethane	10.19	83	53514	9.89 ppb	100
81)	1,2,3-Trichloropropane	10.21	110	20442	10.00 ppb	100
82)	t-1,4-Dichloro-2-Butene	10.25	53	10028	9.54 ppb	100
83)	Bromobenzene	10.16	156	96904	10.34 ppb	100
84)	n-Propylbenzene	10.32	91	302503	8.75 ppb	100
85)	4-Ethyltoluene	10.44	105	288129	10.47 ppb	100
86)	2-Chlorotoluene	10.37	91	232222	8.46 ppb	100
87)	1,3,5-Trimethylbenzene	10.50	105	222776	9.70 ppb	100
88)	4-Chlorotoluene	10.48	91	223687	9.80 ppb	100
89)	Tert-Butylbenzene	10.81	119	109200	9.65 ppb	100
90)	1,2,4-Trimethylbenzene	10.87	105	177866	9.26 ppb	100
91)	Sec-Butylbenzene	11.04	105	221705	9.56 ppb	100
92)	p-Isopropyltoluene	11.19	119	162853	8.53 ppb	100
93)	Benzyl Chloride	11.33	91	31897	8.65 ppb	100
94)	1,3-DCB	11.10	146	153426	9.41 ppb	100
95)	1,4-DCB	11.20	146	143064	8.97 ppb	100
96)	n-Butylbenzene	11.59	91	87437	8.19 ppb	100
97)	1,2-DCB	11.55	146	129486	9.37 ppb	100
98)	Hexachloroethane	11.81	117	46708	10.08 ppb	100
99)	1,2-Dibromo-3-chloropropan	12.31	157	8693	8.71 ppb	100
100)	1,2,4-Trichlorobenzene	13.15	180	17104	7.98 ppb	100
101)	Hexachlorobutadiene	13.36	225	27363	8.64 ppb	100
102)	Naphthalene	13.37	128	50503	8.17 ppb	100
103)	1,2,3-Trichlorobenzene	13.62	180	21402	8.05 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

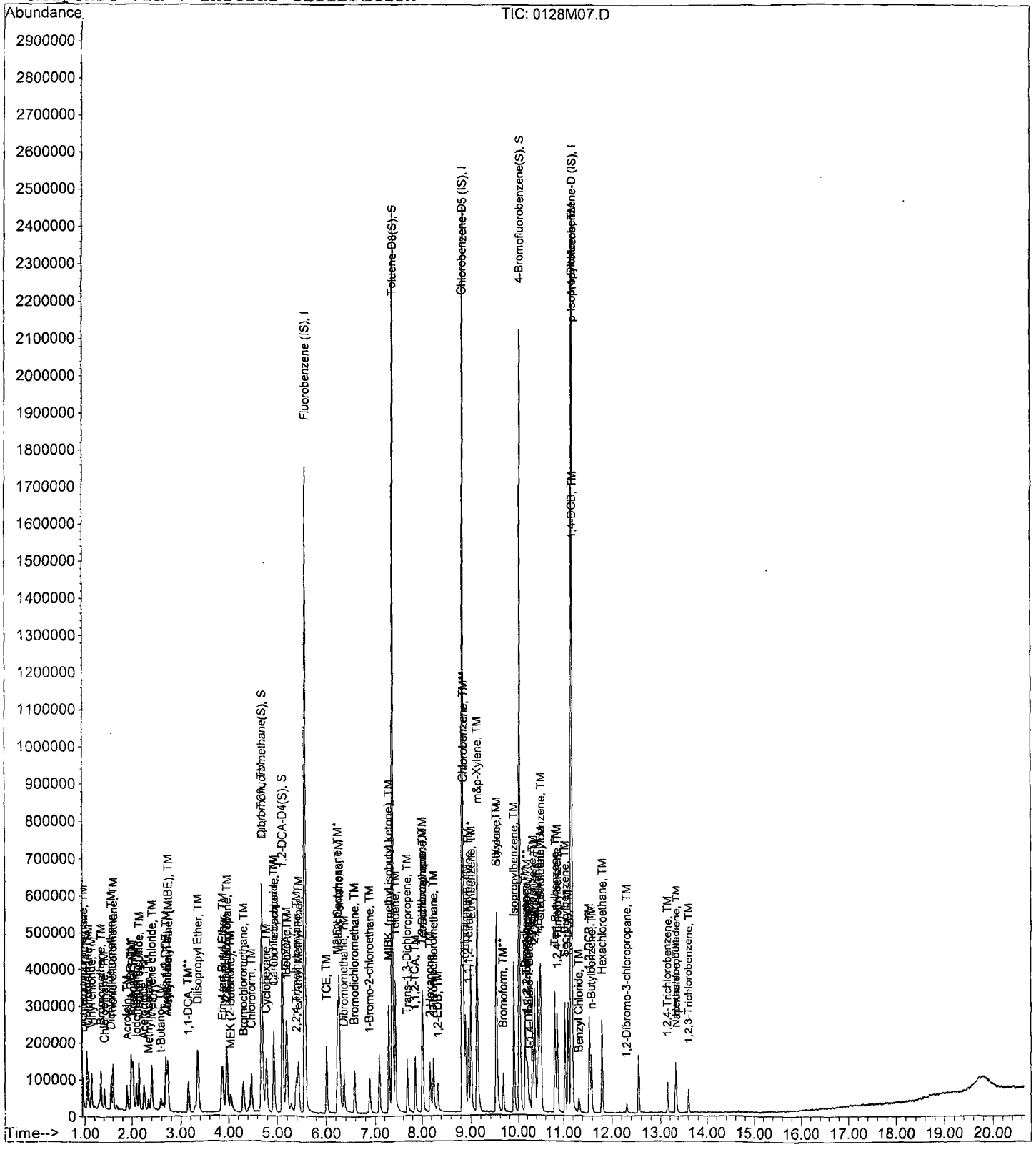
Data File : M:\MAX\DATA\210128\0128M07.D
Acq On : 28 Jan 21 19:51
Sample : 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1759511	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1465524	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	854648	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	692089	52.02	ppb		0.00
Spiked Amount 25.000			Recovery = 208.080%				
44) 1,2-DCA-D4(S)	5.11	65	774296	49.68	ppb		0.00
Spiked Amount 25.000			Recovery = 198.712%				
64) Toluene-D8(S)	7.37	98	2858593	49.69	ppb		0.00
Spiked Amount 25.000			Recovery = 198.764%				
72) 4-Bromofluorobenzene(S)	10.02	95	1177537	49.12	ppb		0.00
Spiked Amount 25.000			Recovery = 196.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	123603	22.81	ppb		96
4) Freon 114	1.04	85	82478	19.28	ppb		99
5) Chloromethane	1.08	50	134971	19.44	ppb		94
6) Vinyl chloride	1.15	62	124220	19.17	ppb		94
8) Bromomethane	1.34	94	52424	20.20	ppb		97
9) Chloroethane	1.41	64	73783	19.72	ppb		99
10) Dichlorofluoromethane	1.56	67	126846	18.58	ppb		94
11) Trichlorofluoromethane	1.60	101	161079	20.53	ppb		97
13) Acrolein	1.90	56	26800	156.78	ppb		100
14) Acetone	2.03	43	81564	61.73	ppb		100
15) Freon-113	2.01	103	29304	19.20	ppb		94
16) Acetonitrile	2.25	41	91747	151.57	ppb		94
18) 1,1-DCE	1.99	61	144496	18.91	ppb		98
19) t-Butanol	2.60	59	67990	163.74	ppb		98
20) Methyl Acetate	2.34	43	72689	20.14	ppb		98
21) Iodomethane	2.10	142	147910	19.22	ppb		95
22) Acrylonitrile	2.64	53	42235	24.10	ppb	#	67
24) Methylene chloride	2.41	84	116261	20.60	ppb		96
25) Carbon disulfide	2.15	76	190600	19.34	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	310567	19.69	ppb		96
27) Trans-1,2-DCE	2.69	96	125372	19.03	ppb		97
29) Diisopropyl Ether	3.36	45	360677	20.10	ppb		95
30) 1,1-DCA	3.16	63	206078	19.94	ppb	#	98
32) Ethyl tert Butyl Ether	3.87	59	322927	20.64	ppb		96
34) MEK (2-Butanone)	4.05	43	110264	62.43	ppb		93
35) Cis-1,2-DCE	3.97	96	132800	19.75	ppb		99
36) 2,2-Dichloropropane	3.96	77	171391	19.34	ppb		99
37) Chloroform	4.48	83	207228	19.24	ppb		99
38) Bromochloromethane	4.31	130	95495	20.03	ppb		95
40) 1,1,1-TCA	4.70	97	179664	18.73	ppb		91
41) Cyclohexane	4.78	41	82809	19.26	ppb		98
42) 1,1-Dichloropropene	4.94	75	147043	19.13	ppb		95
43) 2,2,4-Trimethylpentane	5.39	57	223770	18.46	ppb		96
45) Carbon Tetrachloride	4.93	117	161778	19.33	ppb		94
46) Tert Amyl Methyl Ether	5.44	73	261887	20.76	ppb		98
47) 1,2-DCA	5.21	62	155201	19.80	ppb		96
48) Benzene	5.20	78	465720	19.35	ppb		97
49) TCE	6.02	95	132301	19.86	ppb		93
50) 2-Pentanone	6.27	43	501004	162.15	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	57752	18.71	ppb		97
52)	Bromodichloromethane	6.58	83	162476	19.73	ppb		100
53)	Methyl Cyclohexane	6.24	83	156457	18.99	ppb		99
54)	Dibromomethane	6.37	93	73019	20.57	ppb		98
55)	MIBK (methyl isobutyl ket	7.29	43	256610	61.52	ppb		97
56)	1-Bromo-2-chloroethane	6.89	144	22787	19.45	ppb		94
59)	Toluene	7.44	91	520316	19.99	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	173444	20.27	ppb		98
61)	1,1,2-TCA	7.86	83	85598	19.48	ppb		91
62)	2-Hexanone	8.17	43	167480	62.01	ppb		99
65)	1,2-EDB	8.34	107	113090	20.23	ppb		96
66)	Tetrachloroethene	8.01	164	86472	20.44	ppb		95
67)	1-Chlorohexane	8.90	91	151230	19.36	ppb		94
68)	1,1,1,2-Tetrachloroethane	8.96	131	142231	19.91	ppb		96
69)	m&p-Xylene	9.14	106	527429	40.87	ppb		99
70)	o-Xylene	9.52	106	258820	19.49	ppb		91
71)	Styrene	9.53	104	438931	20.99	ppb		96
73)	1,3-Dichloropropane	8.03	76	174301	20.26	ppb		99
74)	Dibromochloromethane	8.25	129	142514	20.33	ppb		95
75)	Chlorobenzene	8.87	112	385566	19.93	ppb		94
76)	Ethylbenzene	9.01	91	601449	19.81	ppb		96
77)	Bromoform	9.67	173	116105	20.45	ppb		97
79)	Isopropylbenzene	9.91	105	652958	21.74	ppb		100
80)	1,1,2,2-Tetrachloroethane	10.19	83	120077	21.14	ppb		94
81)	1,2,3-Trichloropropane	10.21	110	43340	21.08	ppb		87
82)	t-1,4-Dichloro-2-Butene	10.25	53	25898	22.35	ppb		78
83)	Bromobenzene	10.15	156	206439	21.81	ppb		98
84)	n-Propylbenzene	10.31	91	690224	20.64	ppb		97
85)	4-Ethyltoluene	10.44	105	604260	20.47	ppb		99
86)	2-Chlorotoluene	10.37	91	441910	18.82	ppb		97
87)	1,3,5-Trimethylbenzene	10.50	105	521060	20.57	ppb		95
88)	4-Chlorotoluene	10.48	91	501437	21.30	ppb		99
89)	Tert-Butylbenzene	10.81	119	264320	21.19	ppb		98
90)	1,2,4-Trimethylbenzene	10.86	105	448421	21.17	ppb		99
91)	Sec-Butylbenzene	11.04	105	545568	21.35	ppb		99
92)	p-Isopropyltoluene	11.19	119	431479	18.55	ppb		98
93)	Benzyl Chloride	11.33	91	96402	17.43	ppb	#	91
94)	1,3-DCB	11.10	146	351244	19.54	ppb		95
95)	1,4-DCB	11.19	146	338685	19.27	ppb		96
96)	n-Butylbenzene	11.59	91	249855	17.37	ppb		99
97)	1,2-DCB	11.55	146	323969	21.27	ppb		98
98)	Hexachloroethane	11.81	117	100399	20.65	ppb		92
99)	1,2-Dibromo-3-chloropropan	12.31	157	23709	18.89	ppb		99
100)	1,2,4-Trichlorobenzene	13.15	180	57880	16.52	ppb		91
101)	Hexachlorobutadiene	13.36	225	77417	17.19	ppb		98
102)	Naphthalene	13.37	128	141483	17.00	ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	69041	17.08	ppb		95

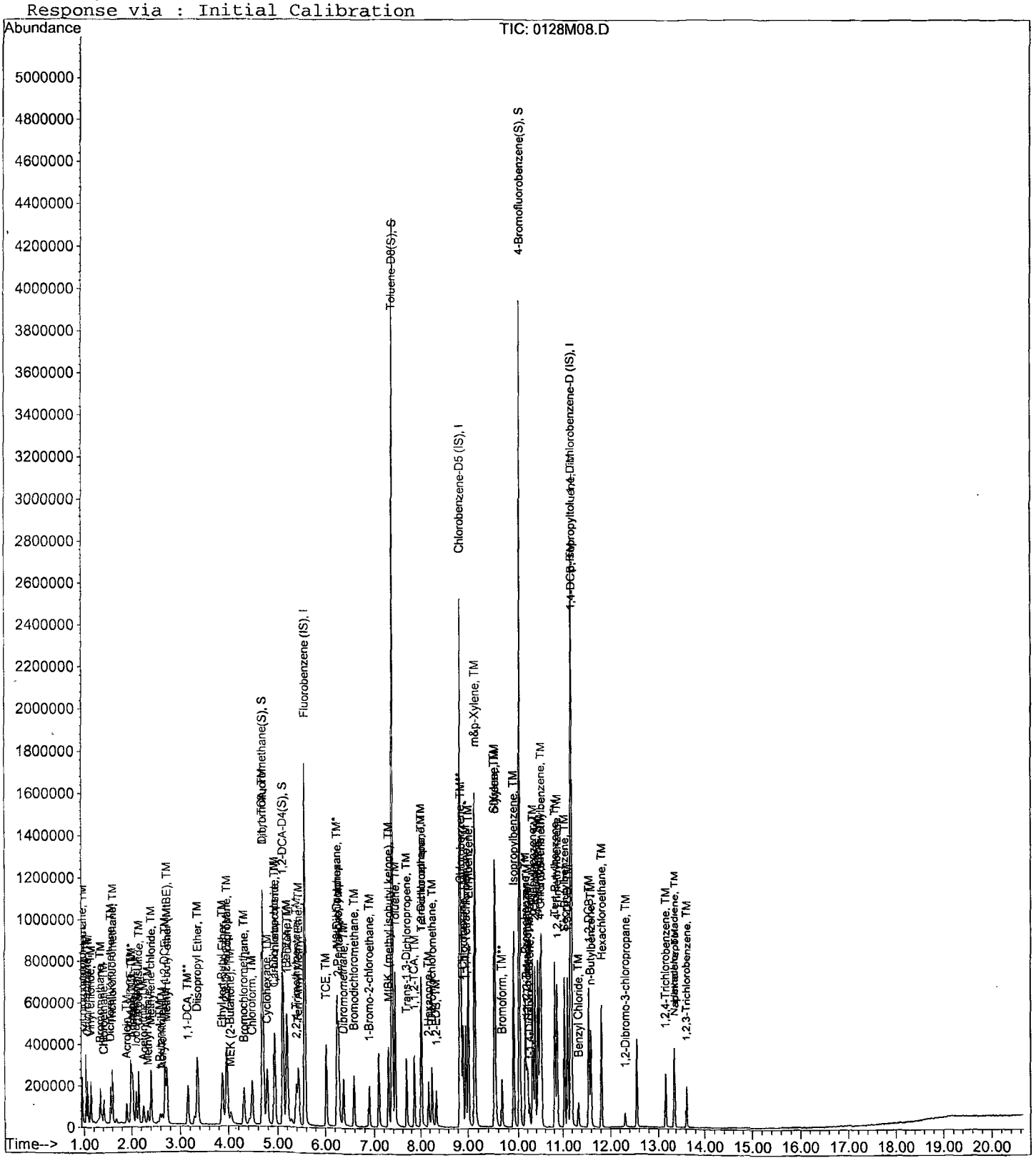
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1774235	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1454760	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	897871	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	706217	52.70	ppb		0.00
Spiked Amount 25.000			Recovery = 210.816%				
44) 1,2-DCA-D4(S)	5.11	65	811024	51.71	ppb		0.00
Spiked Amount 25.000			Recovery = 206.832%				
64) Toluene-D8(S)	7.37	98	2987917	52.52	ppb		0.00
Spiked Amount 25.000			Recovery = 210.100%				
72) 4-Bromofluorobenzene(S)	10.02	95	1220621	51.45	ppb		0.00
Spiked Amount 25.000			Recovery = 205.792%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	233311	42.70	ppb		96
4) Freon 114	1.04	85	189503	43.92	ppb		99
5) Chloromethane	1.08	50	266061	38.00	ppb		95
6) Vinyl chloride	1.15	62	254791	38.99	ppb		95
8) Bromomethane	1.34	94	105736	41.22	ppb		99
9) Chloroethane	1.41	64	143498	38.04	ppb		96
10) Dichlorofluoromethane	1.56	67	273509	39.00	ppb		97
11) Trichlorofluoromethane	1.60	101	325076	41.09	ppb		96
13) Acrolein	1.90	56	31460	182.51	ppb	#	58
14) Acetone	2.03	43	101566	76.23	ppb		99
15) Freon-113	2.01	103	60808	39.01	ppb		90
16) Acetonitrile	2.25	41	106936	175.20	ppb		98
18) 1,1-DCE	1.99	61	309769	40.19	ppb		99
19) t-Butanol	2.60	59	82620	197.32	ppb		98
20) Methyl Acetate	2.34	43	141576	39.25	ppb		97
21) Iodomethane	2.10	142	322413	40.37	ppb		96
22) Acrylonitrile	2.64	53	79555	42.81	ppb	#	70
24) Methylene chloride	2.41	84	232113	41.45	ppb		99
25) Carbon disulfide	2.15	76	400465	40.30	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	620805	39.04	ppb		97
27) Trans-1,2-DCE	2.69	96	259160	39.01	ppb		100
29) Diisopropyl Ether	3.36	45	731731	40.43	ppb		96
30) 1,1-DCA	3.16	63	417431	40.06	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	653292	41.40	ppb		95
34) MEK (2-Butanone)	4.04	43	143967	80.83	ppb		95
35) Cis-1,2-DCE	3.97	96	280685	41.42	ppb		98
36) 2,2-Dichloropropane	3.96	77	348056	38.96	ppb		99
37) Chloroform	4.48	83	431364	39.71	ppb		99
38) Bromochloromethane	4.31	130	196436	40.85	ppb		98
40) 1,1,1-TCA	4.70	97	383500	39.64	ppb		96
41) Cyclohexane	4.78	41	172570	39.36	ppb		98
42) 1,1-Dichloropropene	4.94	75	301918	38.96	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	491916	38.89	ppb		94
45) Carbon Tetrachloride	4.94	117	345305	40.92	ppb		95
46) Tert Amyl Methyl Ether	5.44	73	512934	40.32	ppb		100
47) 1,2-DCA	5.21	62	309510	39.16	ppb		98
48) Benzene	5.19	78	961227	39.61	ppb		98
49) TCE	6.02	95	271865	40.47	ppb		92
50) 2-Pentanone	6.27	43	565198	181.40	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
51)	1,2-Dichloropropane	6.25	63	125368	40.28	ppb	99
52)	Bromodichloromethane	6.58	83	337975	40.70	ppb	93
53)	Methyl Cyclohexane	6.24	83	334571	40.27	ppb	99
54)	Dibromomethane	6.37	93	143474	40.09	ppb	98
55)	MIBK (methyl isobutyl ket	7.29	43	333501	77.42	ppb	99
56)	1-Bromo-2-chloroethane	6.89	144	48365	40.94	ppb	90
59)	Toluene	7.44	91	1072255	40.84	ppb	99
60)	Trans-1,3-Dichloropropene	7.69	75	356344	41.29	ppb	97
61)	1,1,2-TCA	7.86	83	169987	38.37	ppb	95
62)	2-Hexanone	8.17	43	218798	77.68	ppb	98
65)	1,2-EDB	8.34	107	226334	40.79	ppb	97
66)	Tetrachloroethene	8.01	164	176768	42.44	ppb	97
67)	1-Chlorohexane	8.91	91	322060	41.54	ppb	94
68)	1,1,1,2-Tetrachloroethane	8.96	131	289768	40.87	ppb	99
69)	m&p-Xylene	9.14	106	1050246	81.99	ppb	96
70)	o-Xylene	9.52	106	532430	40.39	ppb	94
71)	Styrene	9.53	104	883864	42.59	ppb	95
73)	1,3-Dichloropropane	8.03	76	347500	40.70	ppb	99
74)	Dibromochloromethane	8.25	129	282409	40.58	ppb	95
75)	Chlorobenzene	8.87	112	778975	40.56	ppb	94
76)	Ethylbenzene	9.01	91	1239636	41.14	ppb	96
77)	Bromoform	9.67	173	227320	40.34	ppb	99
79)	Isopropylbenzene	9.91	105	1354070	44.78	ppb	100
80)	1,1,2,2-Tetrachloroethane	10.18	83	234772	40.19	ppb	93
81)	1,2,3-Trichloropropane	10.20	110	89387	43.30	ppb	90
82)	t-1,4-Dichloro-2-Butene	10.25	53	44295	36.39	ppb	89
83)	Bromobenzene	10.15	156	415560	43.59	ppb	99
84)	n-Propylbenzene	10.31	91	1451383	43.68	ppb	96
85)	4-Ethyltoluene	10.43	105	1310844	42.92	ppb	100
86)	2-Chlorotoluene	10.37	91	911794	42.57	ppb	96
87)	1,3,5-Trimethylbenzene	10.50	105	1119539	42.07	ppb	97
88)	4-Chlorotoluene	10.48	91	1059128	44.16	ppb	100
89)	Tert-Butylbenzene	10.81	119	600256	45.82	ppb	99
90)	1,2,4-Trimethylbenzene	10.86	105	1047680	47.09	ppb	98
91)	Sec-Butylbenzene	11.03	105	1281961	47.75	ppb	98
92)	p-Isopropyltoluene	11.19	119	1021759	40.05	ppb	99
93)	Benzyl Chloride	11.33	91	230204	35.04	ppb	96
94)	1,3-DCB	11.10	146	751052	39.77	ppb	97
95)	1,4-DCB	11.19	146	718848	38.93	ppb	96
96)	n-Butylbenzene	11.59	91	614493	37.40	ppb	99
97)	1,2-DCB	11.55	146	706140	44.14	ppb	99
98)	Hexachloroethane	11.81	117	207807	41.69	ppb	93
99)	1,2-Dibromo-3-chloropropan	12.31	157	54436	39.14	ppb	97
100)	1,2,4-Trichlorobenzene	13.15	180	158912	36.98	ppb	90
101)	Hexachlorobutadiene	13.36	225	199000	37.45	ppb	97
102)	Naphthalene	13.37	128	348529	36.58	ppb	98
103)	1,2,3-Trichlorobenzene	13.62	180	181424	37.68	ppb	95

(#) = qualifier out of range (m) = manual integration

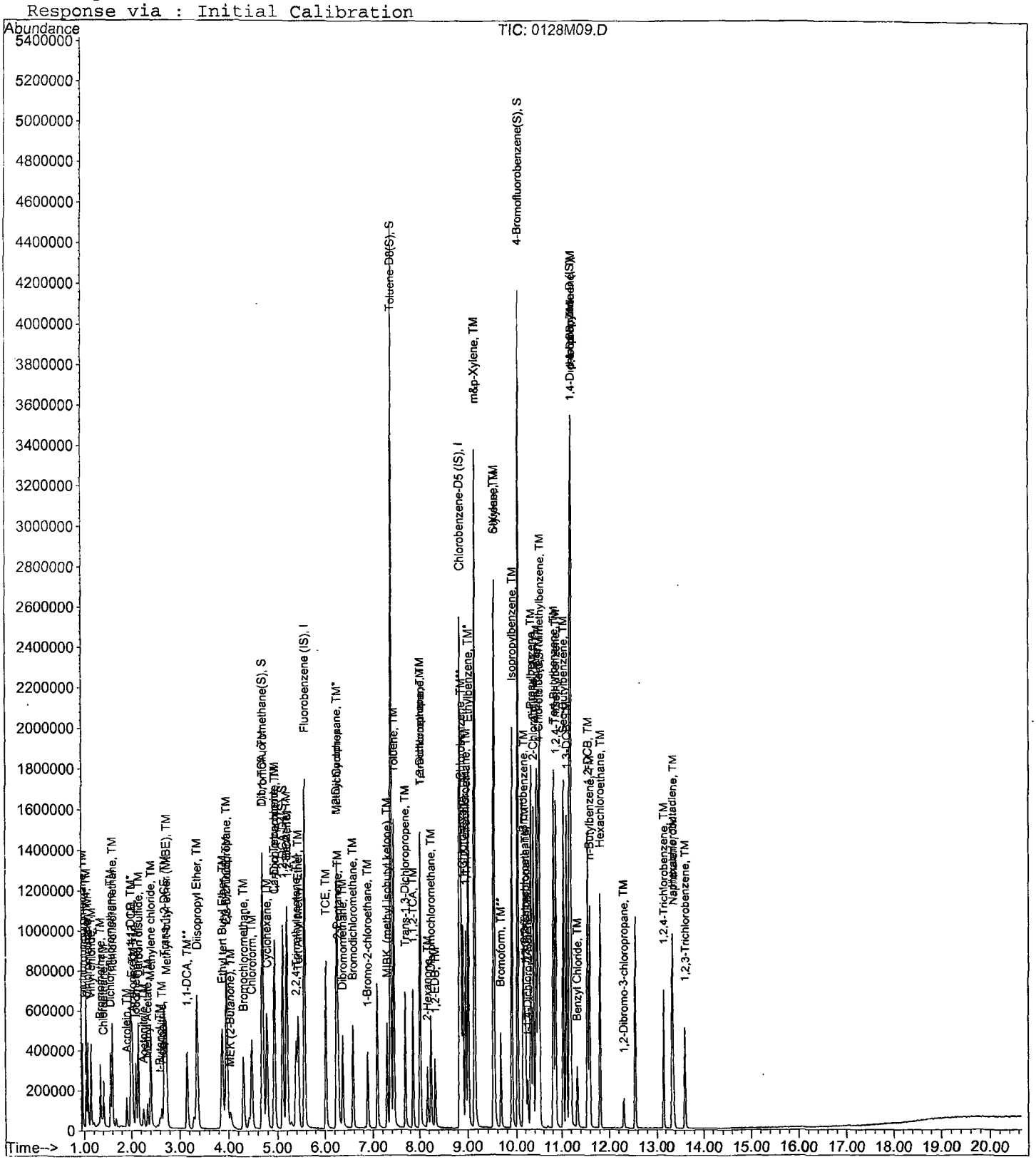
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M09.D
Acq On : 28 Jan 21 20:49
Sample : 40ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 9
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1714227	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1451958	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	1006428	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	1209203	97.44	ppb		0.00
Spiked Amount 25.000			Recovery = 389.768%				
44) 1,2-DCA-D4(S)	5.11	65	1470467	99.42	ppb		0.00
Spiked Amount 25.000			Recovery = 397.672%				
64) Toluene-D8(S)	7.37	98	5427895	98.72	ppb		0.00
Spiked Amount 25.000			Recovery = 394.896%				
72) 4-Bromofluorobenzene(S)	10.02	95	2283448	99.45	ppb		0.00
Spiked Amount 25.000			Recovery = 397.800%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	536299	101.59	ppb		97
4) Freon 114	1.04	85	476084	114.21	ppb		98
5) Chloromethane	1.07	50	619249	91.54	ppb		97
6) Vinyl chloride	1.14	62	623750	98.79	ppb		95
8) Bromomethane	1.34	94	243701	99.47	ppb		96
9) Chloroethane	1.41	64	273142	74.94	ppb		99
10) Dichlorofluoromethane	1.56	67	689229	100.69	ppb		98
11) Trichlorofluoromethane	1.59	101	783641	102.51	ppb		96
13) Acrolein	1.90	56	33808	203.00	ppb	#	1
14) Acetone	2.04	43	125521	97.51	ppb		99
15) Freon-113	2.01	103	152640	100.60	ppb		90
16) Acetonitrile	2.26	41	116262	197.14	ppb		94
18) 1,1-DCE	1.98	61	726705	97.59	ppb		98
19) t-Butanol	2.61	59	136546	337.52	ppb		97
20) Methyl Acetate	2.34	43	347575	100.30	ppb		100
21) Iodomethane	2.09	142	784016	100.10	ppb		97
22) Acrylonitrile	2.64	53	183686	98.75	ppb	#	69
24) Methylene chloride	2.40	84	532827	99.42	ppb		97
25) Carbon disulfide	2.14	76	956672	99.64	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	1504622	97.92	ppb		99
27) Trans-1,2-DCE	2.69	96	601604	93.73	ppb		98
29) Diisopropyl Ether	3.36	45	1719909	98.36	ppb		97
30) 1,1-DCA	3.15	63	996025	98.94	ppb		98
32) Ethyl tert Butyl Ether	3.87	59	1582244	103.78	ppb		95
34) MEK (2-Butanone)	4.04	43	172963	100.52	ppb		97
35) Cis-1,2-DCE	3.96	96	651540	99.54	ppb		98
36) 2,2-Dichloropropane	3.95	77	821064	95.11	ppb		100
37) Chloroform	4.47	83	1019428	97.13	ppb		100
38) Bromochloromethane	4.31	130	459587	98.92	ppb		99
40) 1,1,1-TCA	4.70	97	918055	98.22	ppb		97
41) Cyclohexane	4.78	41	428093	100.42	ppb		99
42) 1,1-Dichloropropene	4.94	75	711653	95.04	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	1255357	100.83	ppb		93
45) Carbon Tetrachloride	4.93	117	808665	99.19	ppb		93
46) Tert Amyl Methyl Ether	5.44	73	1310329	106.61	ppb		99
47) 1,2-DCA	5.21	62	729971	95.60	ppb		98
48) Benzene	5.19	78	2244202	95.72	ppb		98
49) TCE	6.01	95	635044	97.85	ppb		92
50) 2-Pentanone	6.27	43	598738	198.90	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
51)	1,2-Dichloropropane	6.24	63	294400	97.89 ppb	99
52)	Bromodichloromethane	6.58	83	794843	99.07 ppb	97
53)	Methyl Cyclohexane	6.24	83	820258	102.19 ppb	98
54)	Dibromomethane	6.37	93	336695	97.37 ppb	95
55)	MIBK (methyl isobutyl ket	7.29	43	434008	102.02 ppb	98
56)	1-Bromo-2-chloroethane	6.89	144	118785	104.08 ppb	93
59)	Toluene	7.44	91	2518307	99.28 ppb	99
60)	Trans-1,3-Dichloropropene	7.69	75	862841	103.48 ppb	95
61)	1,1,2-TCA	7.86	83	397732	92.91 ppb	95
62)	2-Hexanone	8.17	43	289490	103.06 ppb	99
65)	1,2-EDB	8.33	107	538616	97.25 ppb	100
66)	Tetrachloroethene	8.01	164	409984	99.05 ppb	96
67)	1-Chlorohexane	8.90	91	787551	101.79 ppb	95
68)	1,1,1,2-Tetrachloroethane	8.96	131	696718	98.45 ppb	97
69)	m&p-Xylene	9.13	106	2470888	193.27 ppb	95
70)	o-Xylene	9.52	106	1252215	95.19 ppb	94
71)	Styrene	9.53	104	2137318	103.19 ppb	98
73)	1,3-Dichloropropane	8.02	76	824055	96.70 ppb	98
74)	Dibromochloromethane	8.24	129	678191	97.64 ppb	94
75)	Chlorobenzene	8.87	112	1837710	95.88 ppb	95
76)	Ethylbenzene	9.01	91	2932561	97.50 ppb	96
77)	Bromoform	9.67	173	573111	101.91 ppb	98
79)	Isopropylbenzene	9.90	105	3240886	97.81 ppb	99
80)	1,1,2,2-Tetrachloroethane	10.18	83	643806	99.72 ppb	91
81)	1,2,3-Trichloropropane	10.21	110	222339	98.54 ppb	90
82)	t-1,4-Dichloro-2-Butene	10.24	53	131930	96.70 ppb	88
83)	Bromobenzene	10.15	156	1024683	98.23 ppb	96
84)	n-Propylbenzene	10.31	91	3562608	98.46 ppb	96
85)	4-Ethyltoluene	10.43	105	3353971	98.76 ppb	99
86)	2-Chlorotoluene	10.37	91	2217315	99.17 ppb	96
87)	1,3,5-Trimethylbenzene	10.50	105	2827226	94.79 ppb	100
88)	4-Chlorotoluene	10.48	91	2596919	98.17 ppb	99
89)	Tert-Butylbenzene	10.81	119	1608192	109.51 ppb	99
90)	1,2,4-Trimethylbenzene	10.86	105	2824559	113.25 ppb	99
91)	Sec-Butylbenzene	11.03	105	3369992	111.99 ppb	97
92)	p-Isopropyltoluene	11.19	119	2933560	100.41 ppb	99
93)	Benzyl Chloride	11.33	91	811847	102.51 ppb	94
94)	1,3-DCB	11.10	146	1956093	92.41 ppb	97
95)	1,4-DCB	11.19	146	1949545	94.19 ppb	96
96)	n-Butylbenzene	11.59	91	1955333	101.70 ppb	100
97)	1,2-DCB	11.55	146	2023250	112.82 ppb	98
98)	Hexachloroethane	11.81	117	546401	99.20 ppb	91
99)	1,2-Dibromo-3-chloropropan	12.31	157	161574	100.66 ppb	96
100)	1,2,4-Trichlorobenzene	13.15	180	527680	101.99 ppb	90
101)	Hexachlorobutadiene	13.35	225	640771	101.63 ppb	99
102)	Naphthalene	13.37	128	1140040	102.08 ppb	99
103)	1,2,3-Trichlorobenzene	13.62	180	582277	101.62 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

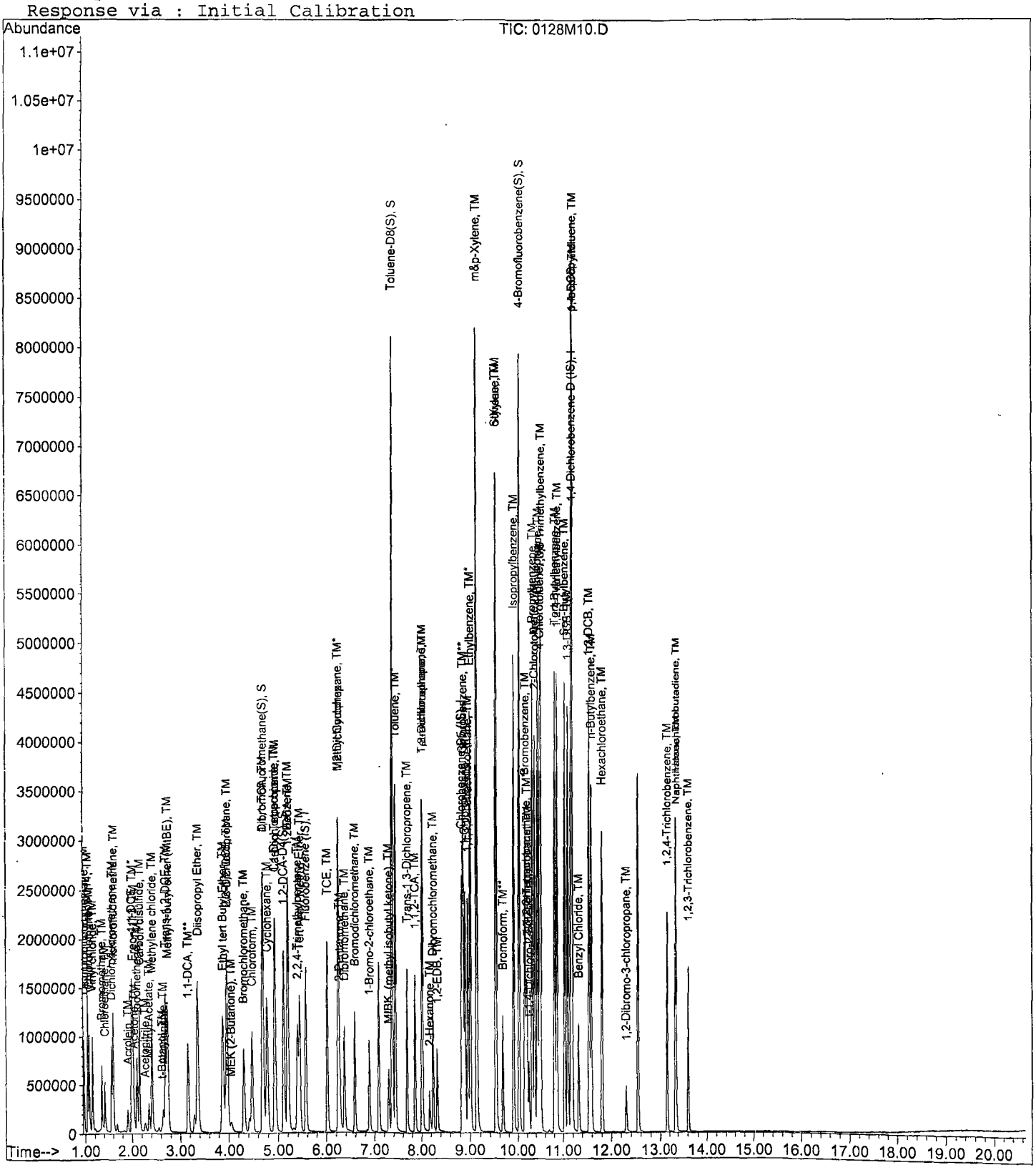
Data File : M:\MAX\DATA\210128\0128M10.D
Acq On : 28 Jan 21 21:19
Sample : 100ug/L VOC STD 1/28/21
Misc : IS 10/16/20

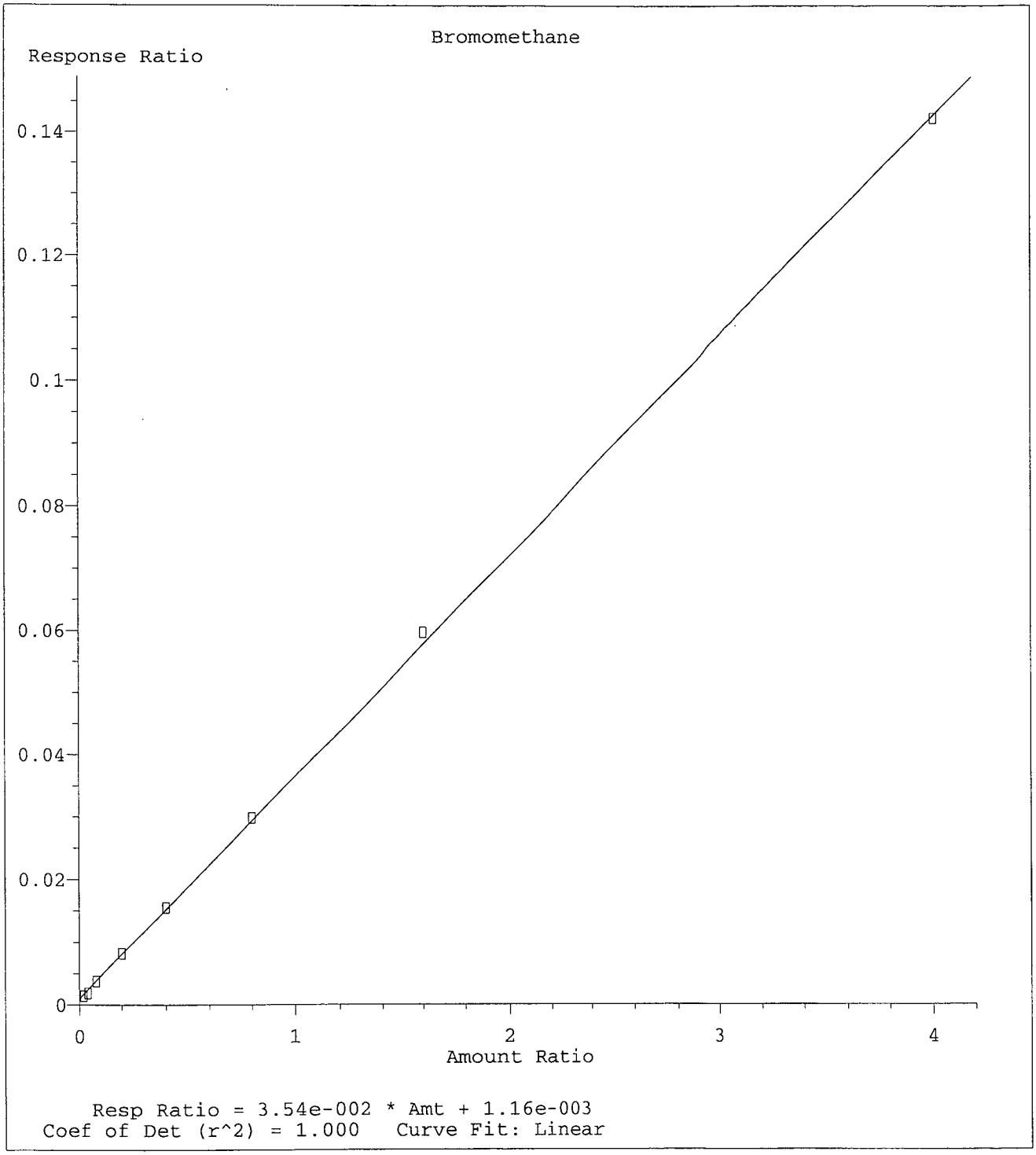
Vial: 10
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

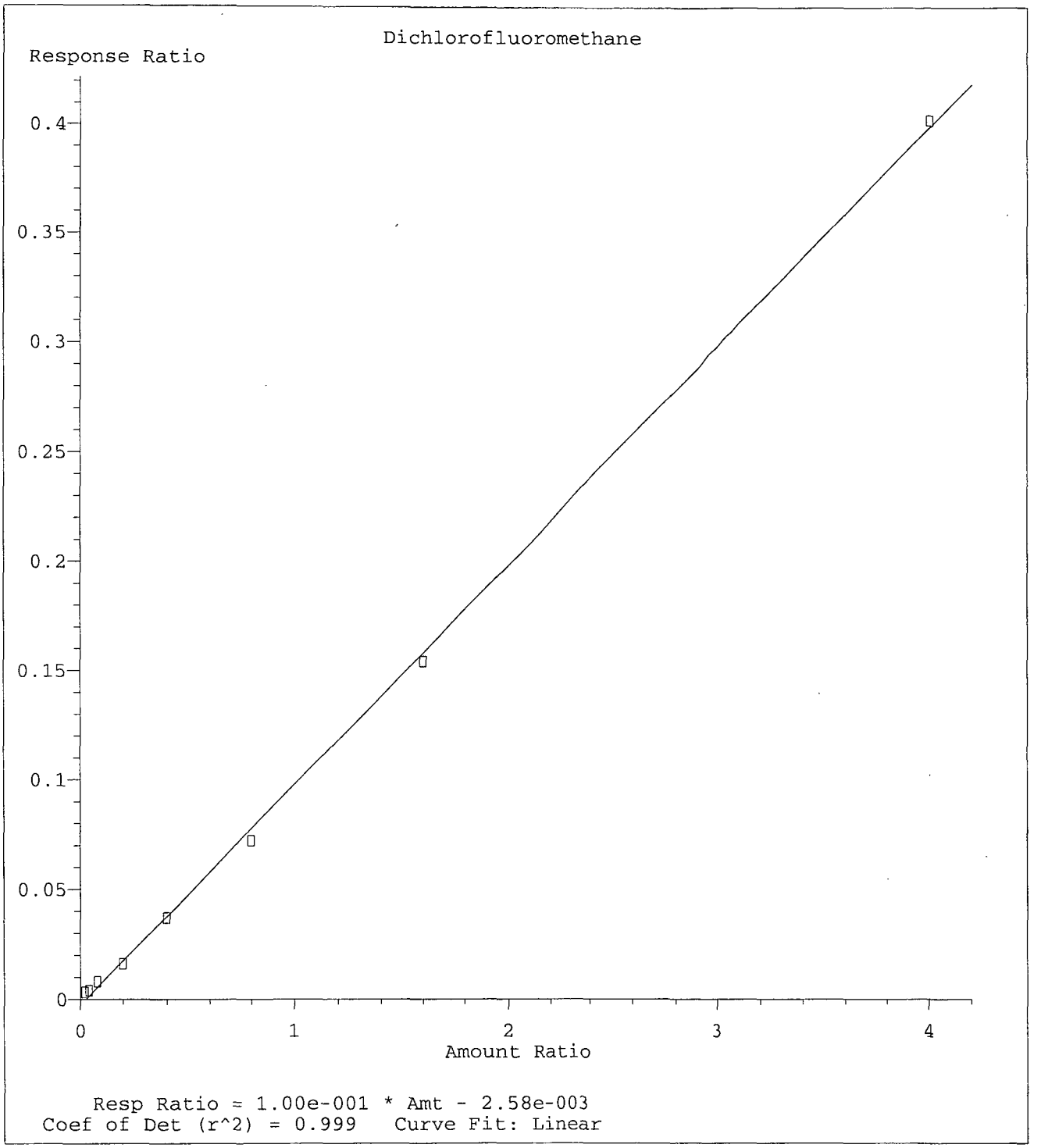
Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration

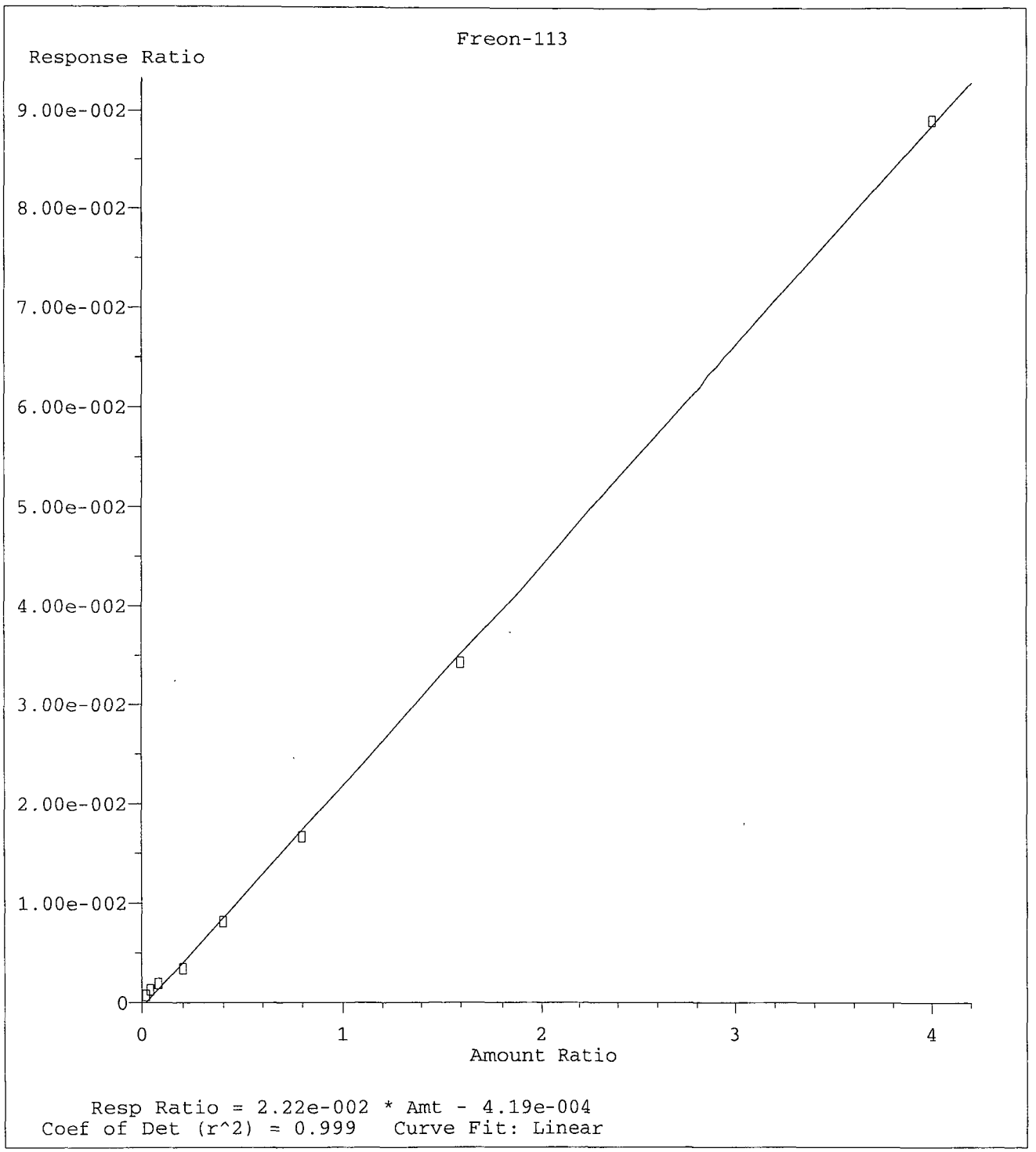




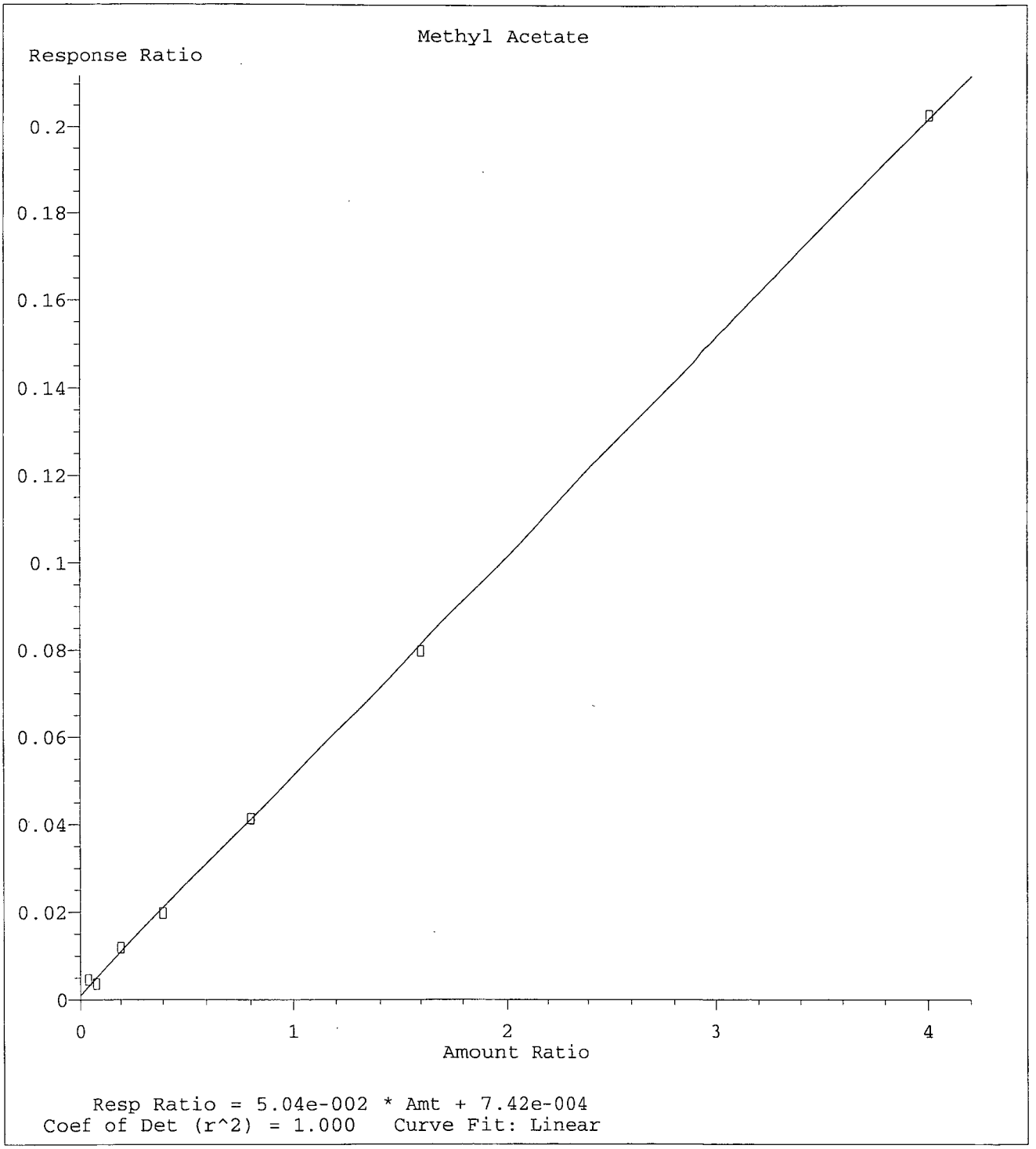
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



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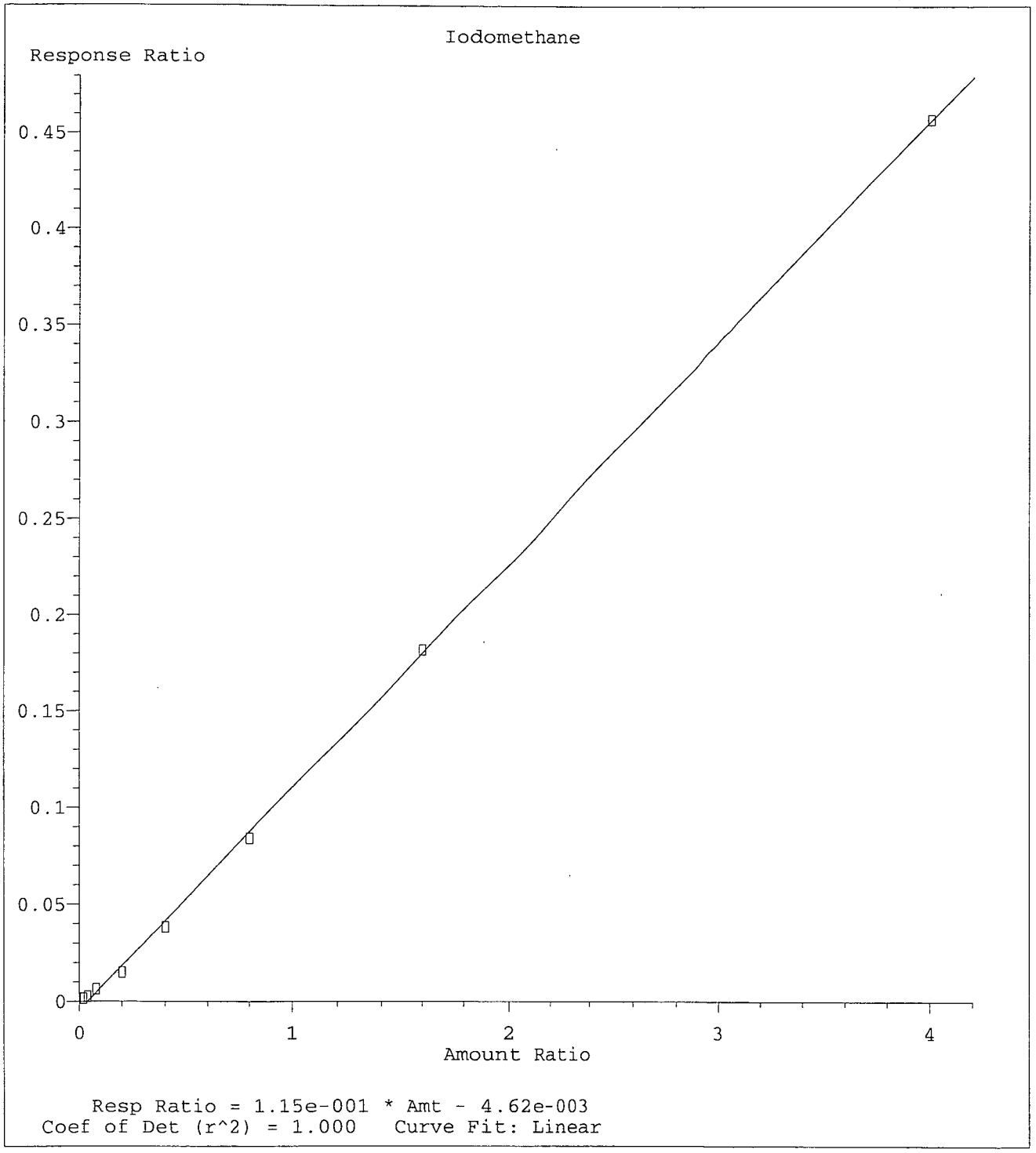
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



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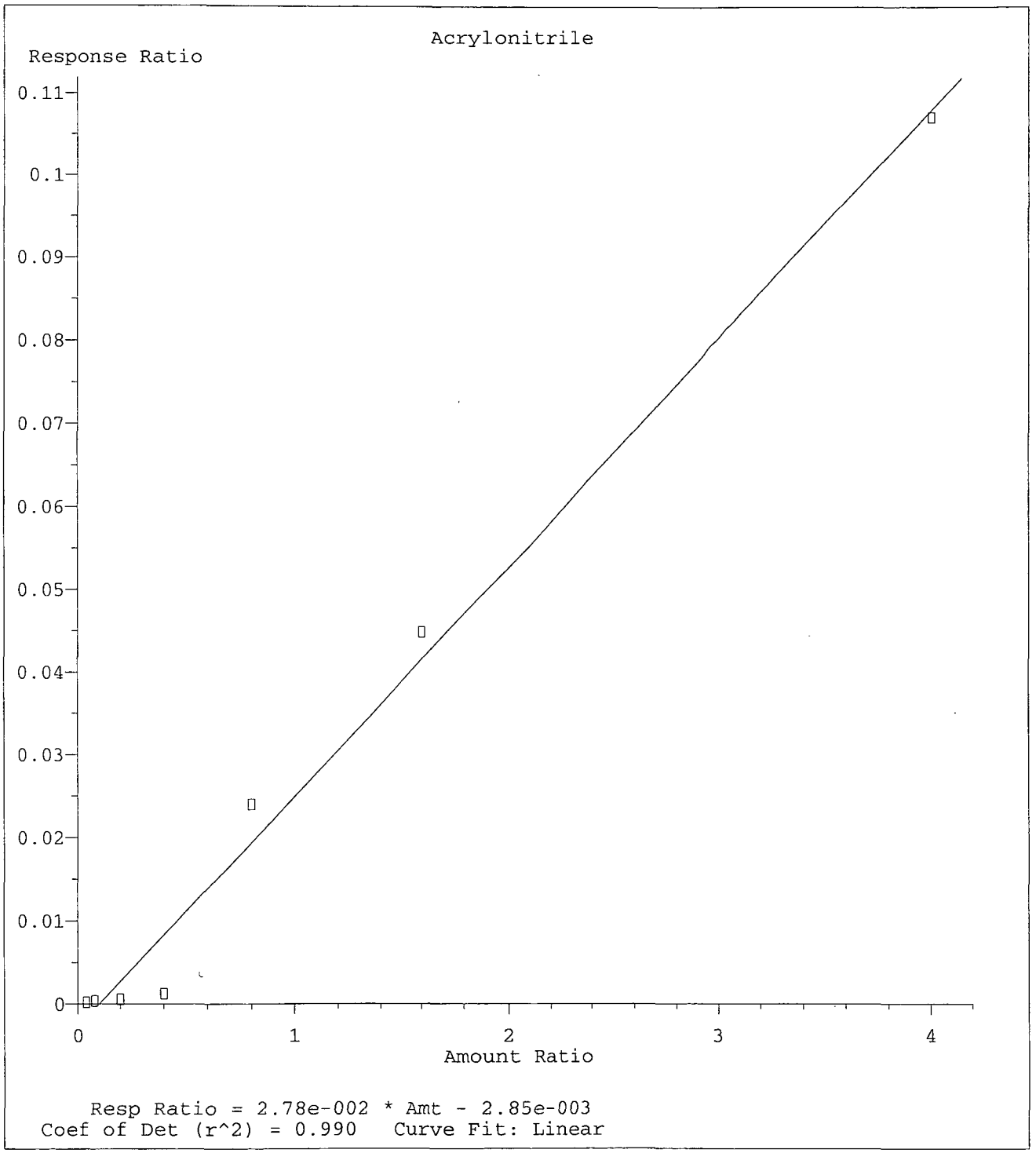
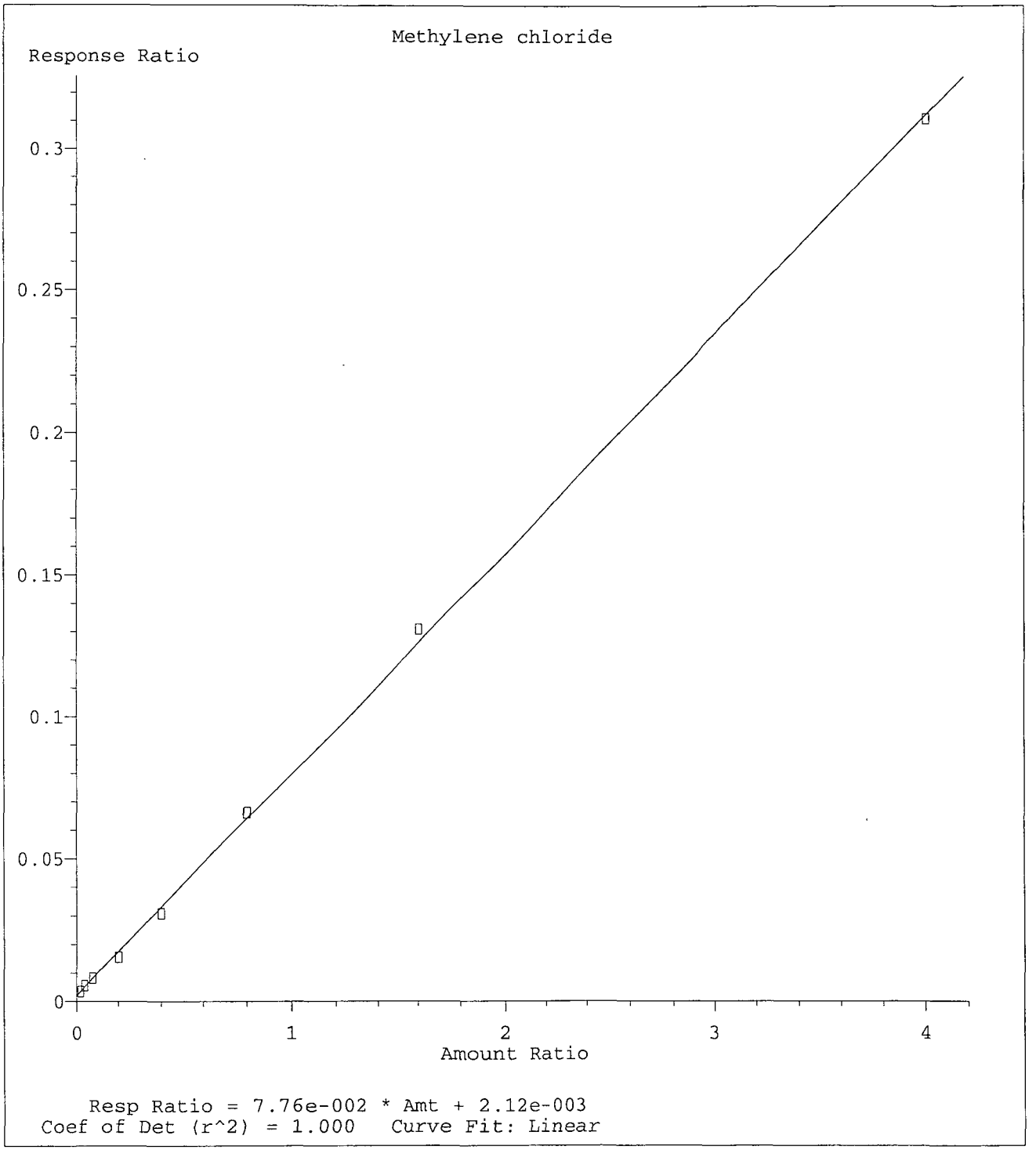
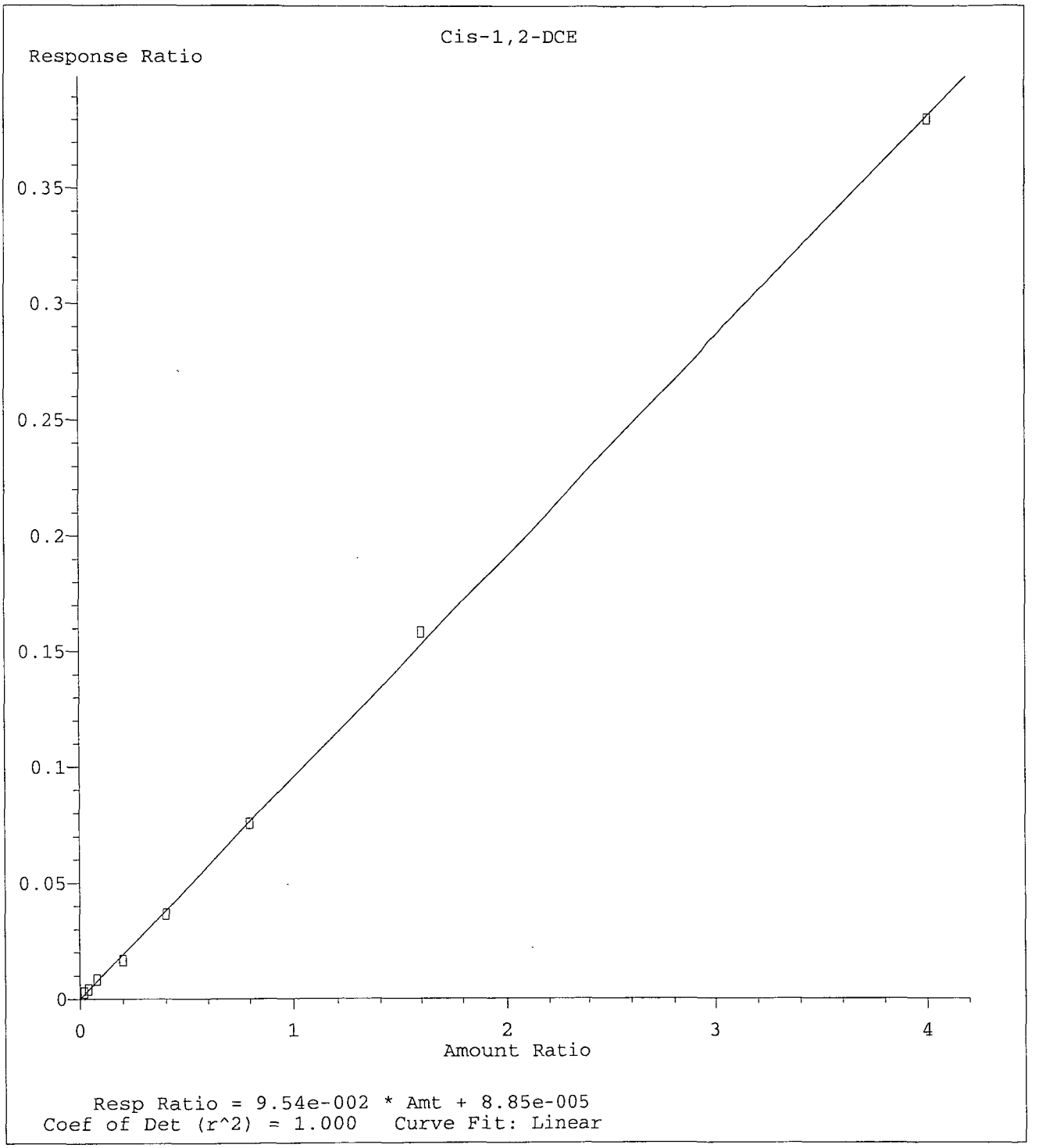
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



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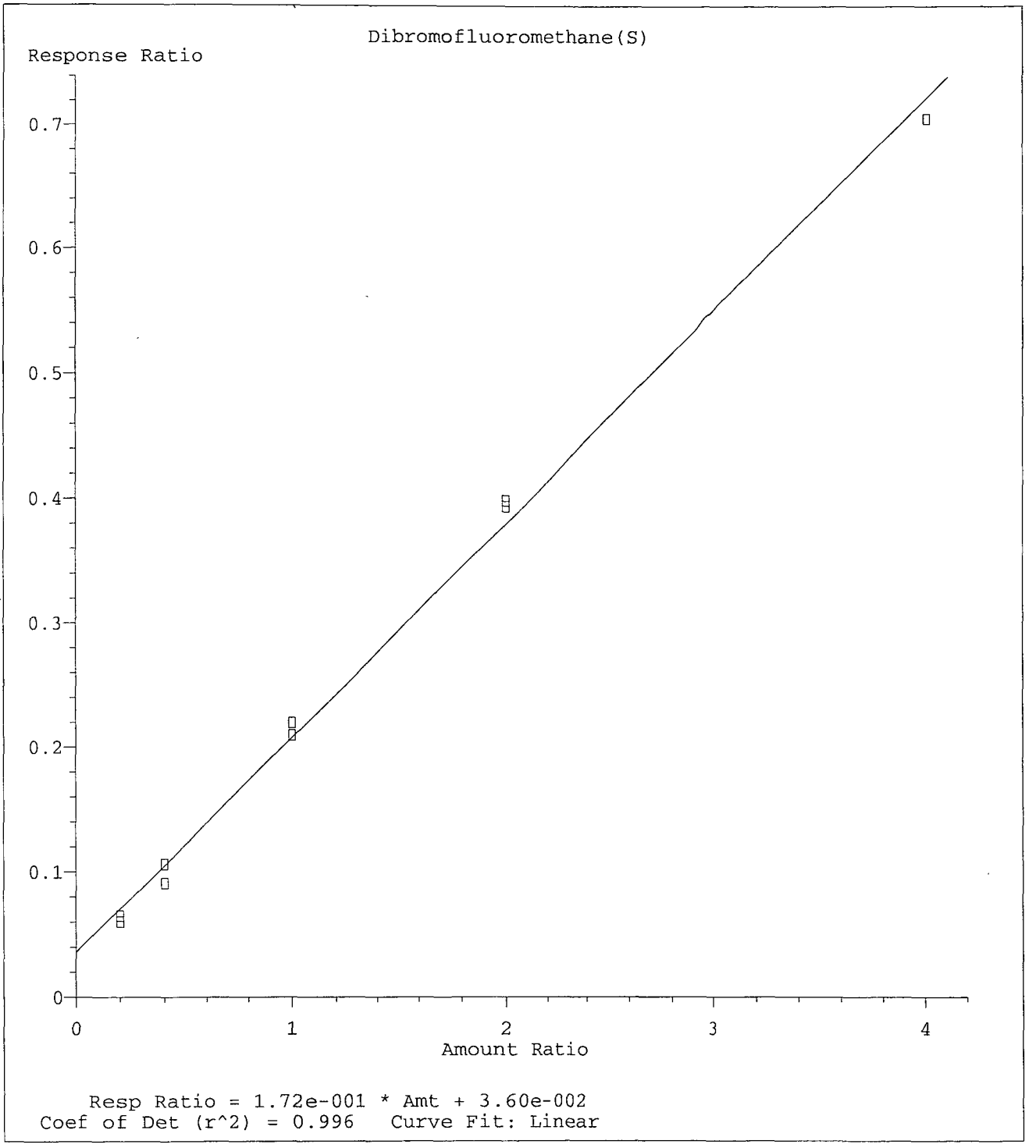
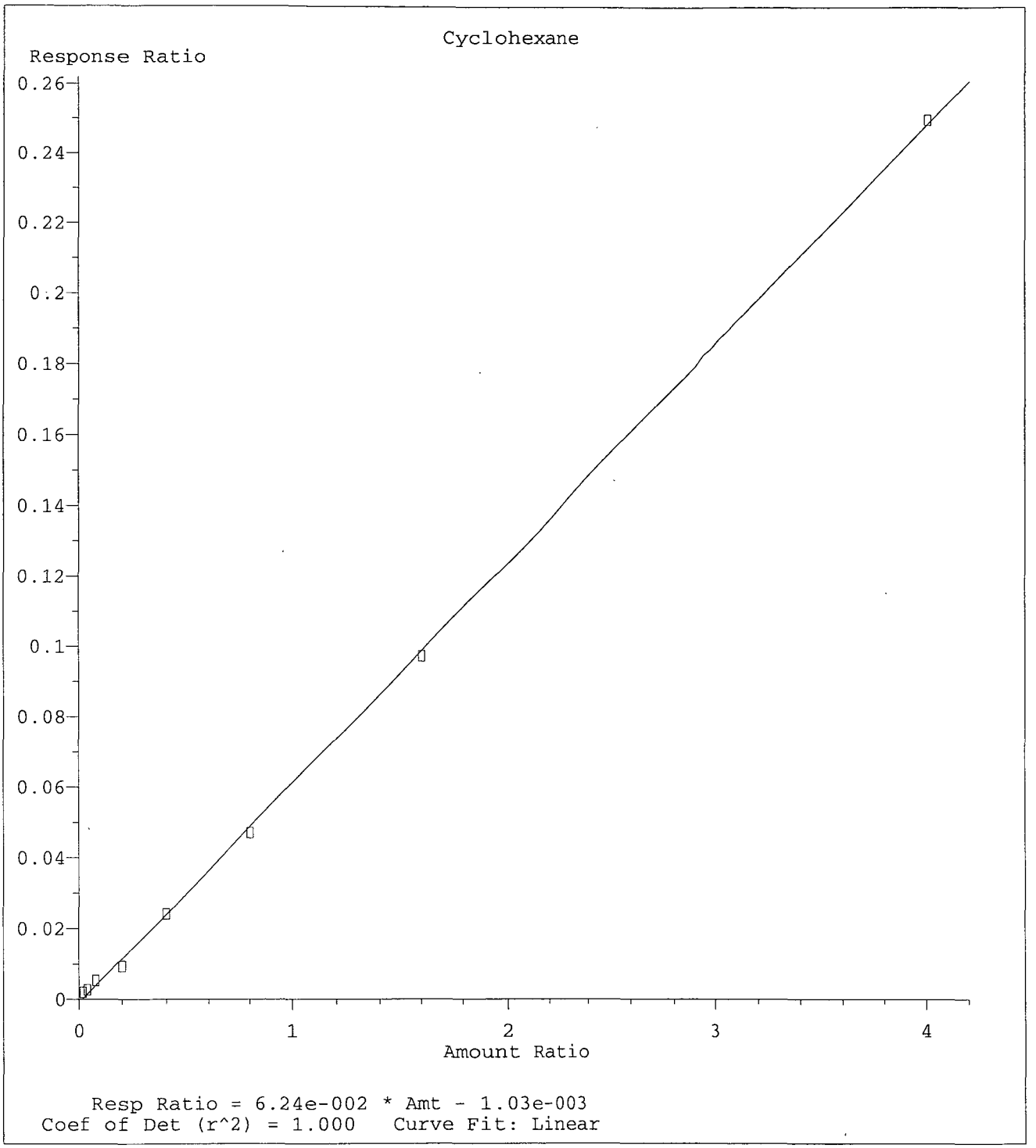
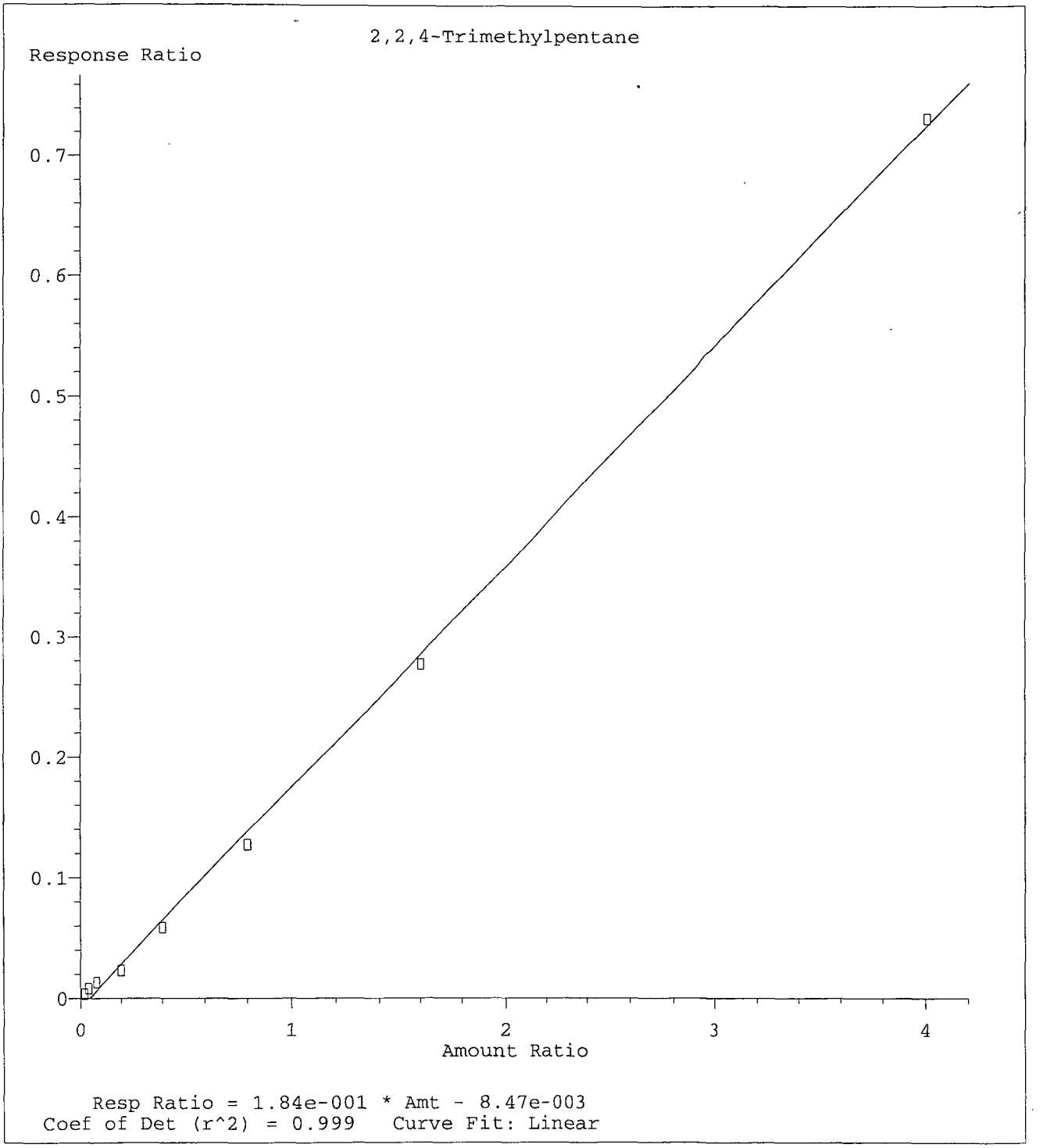
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



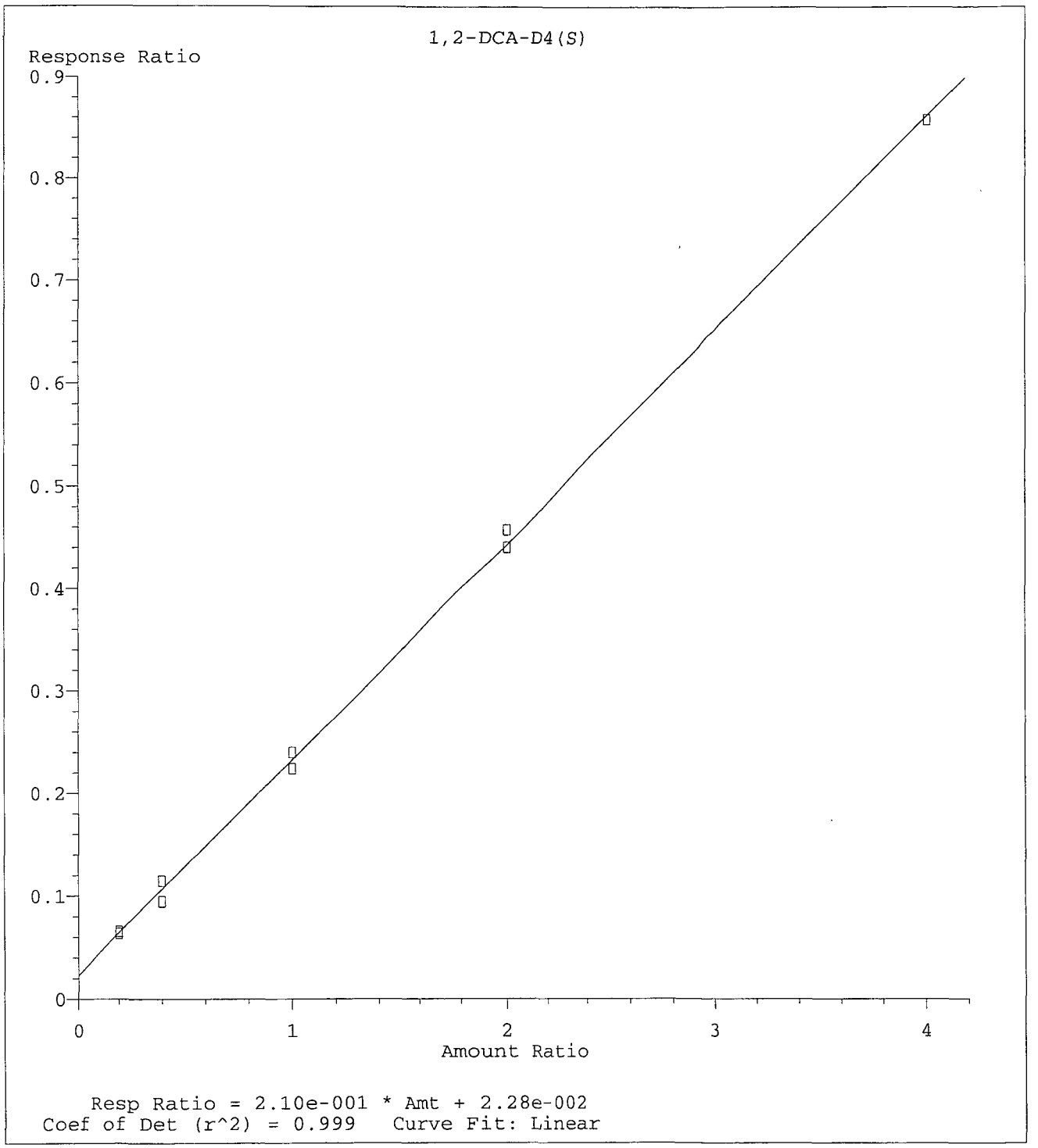
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



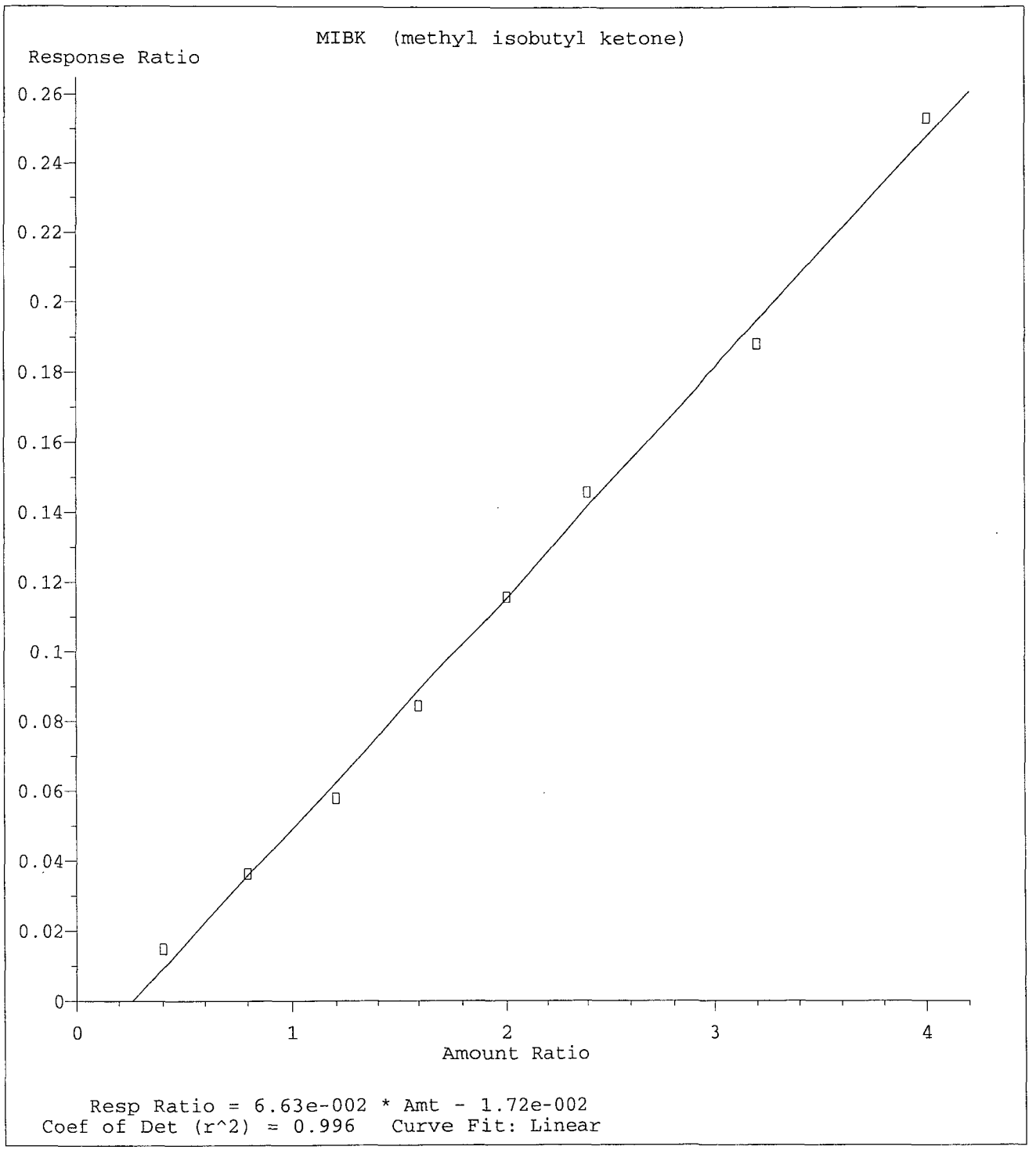
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



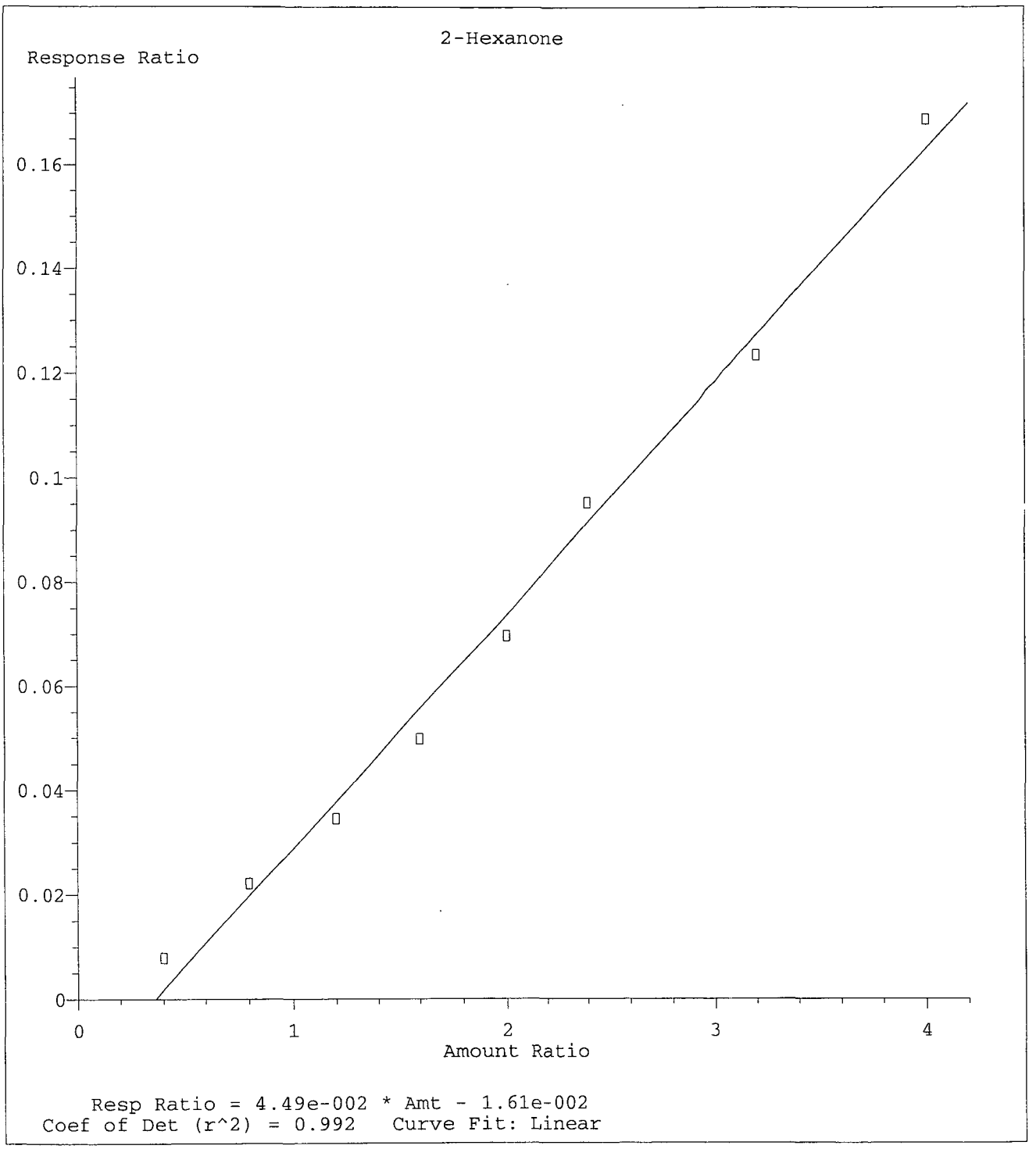
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



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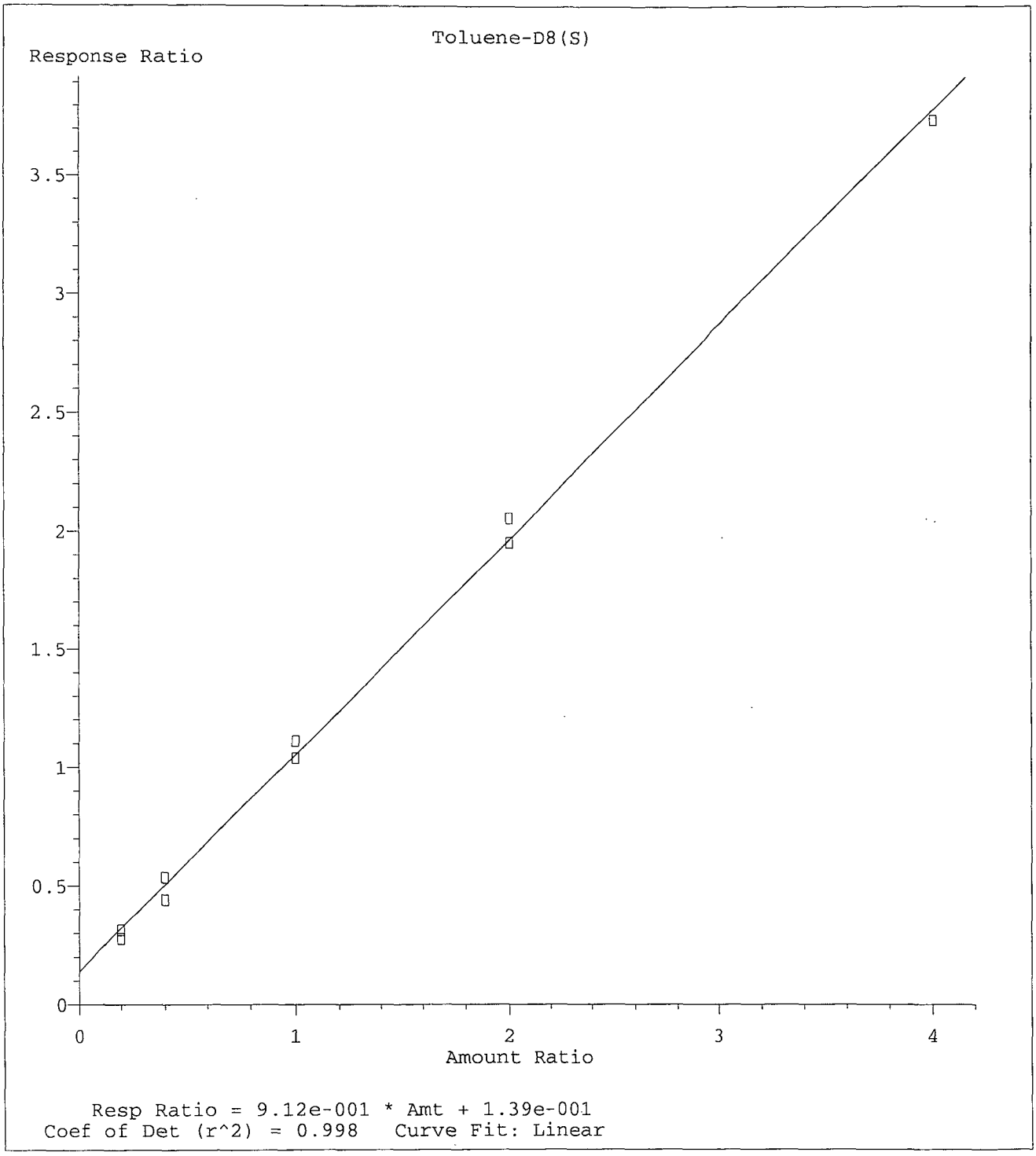
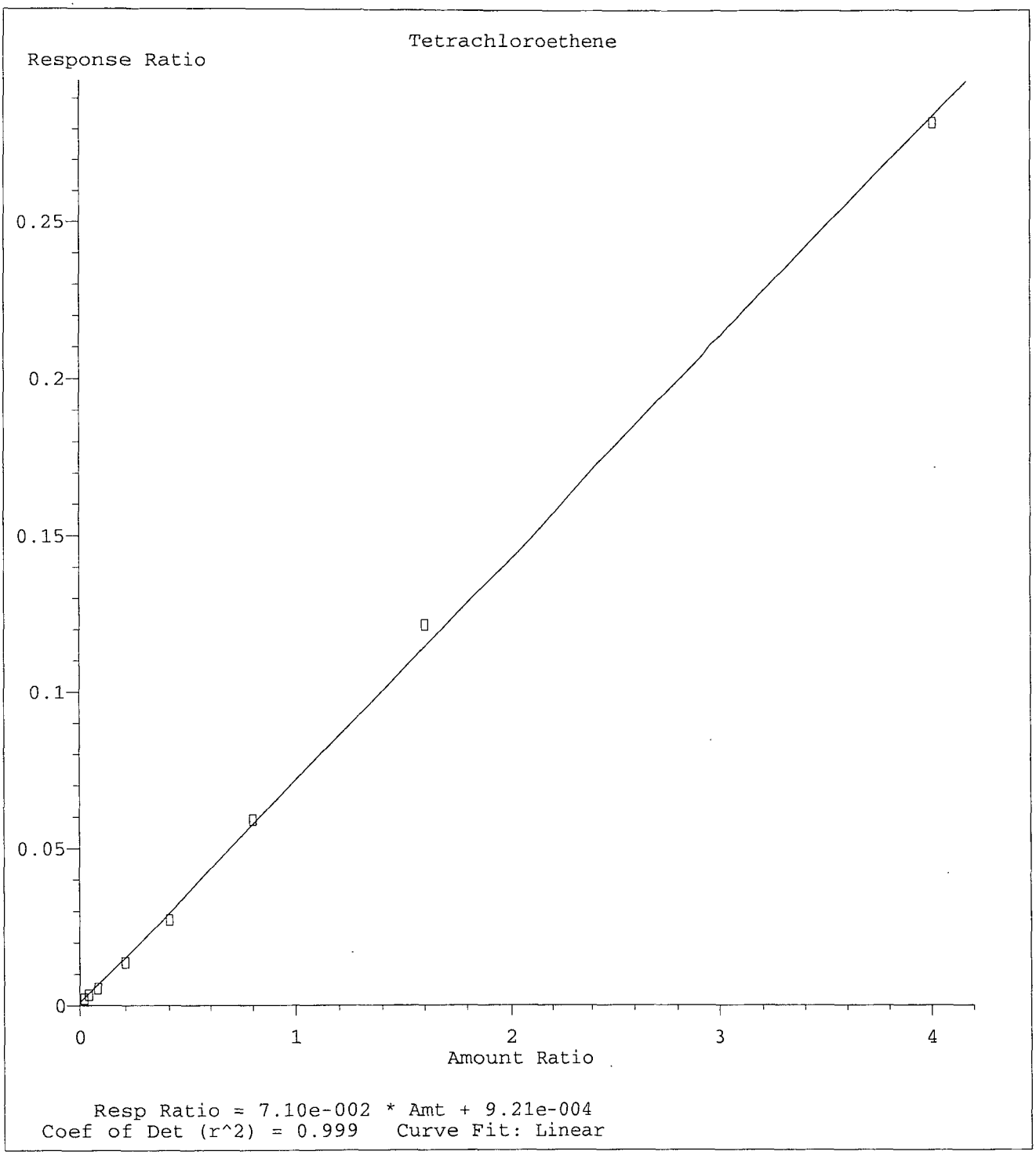
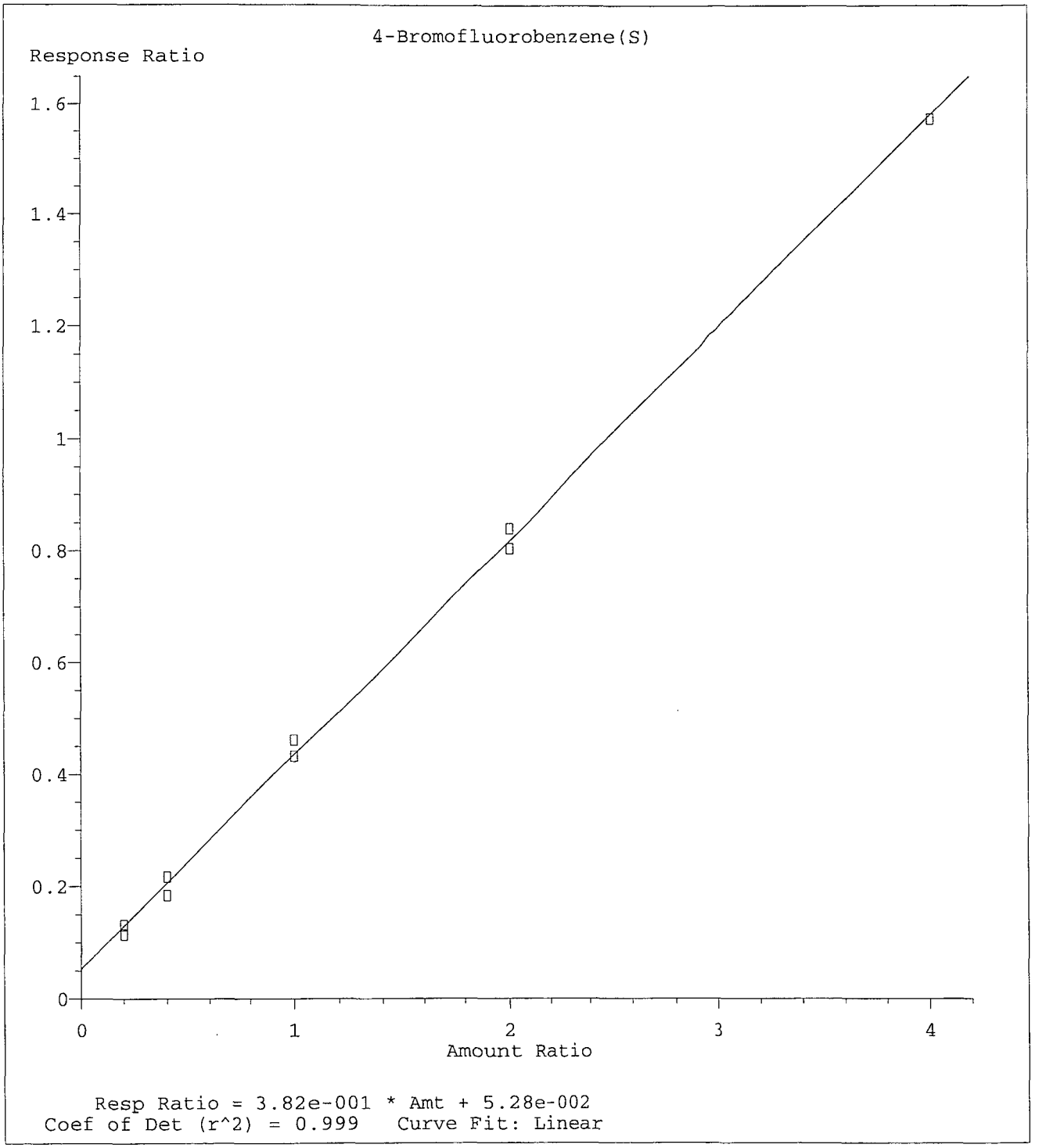
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



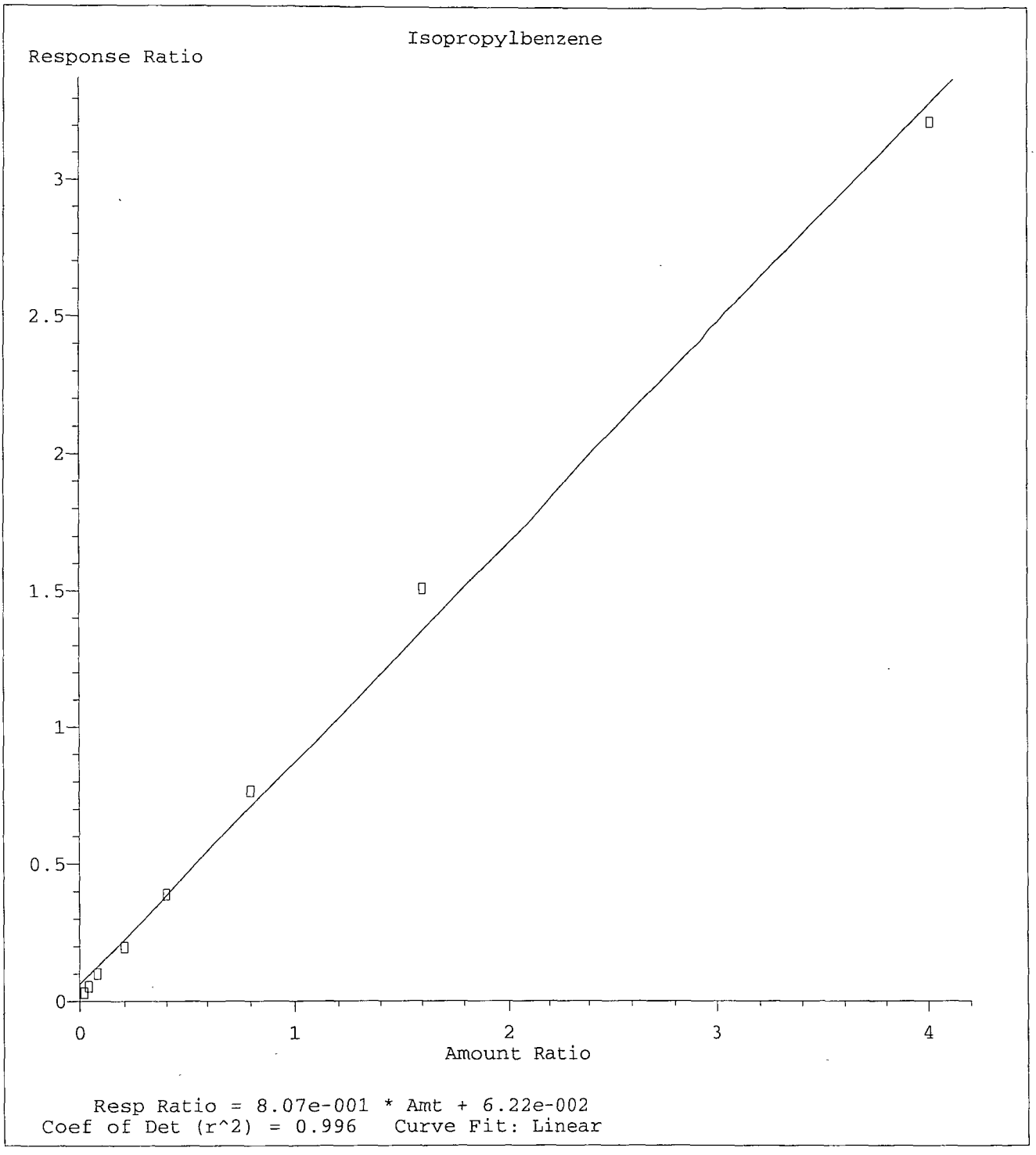
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



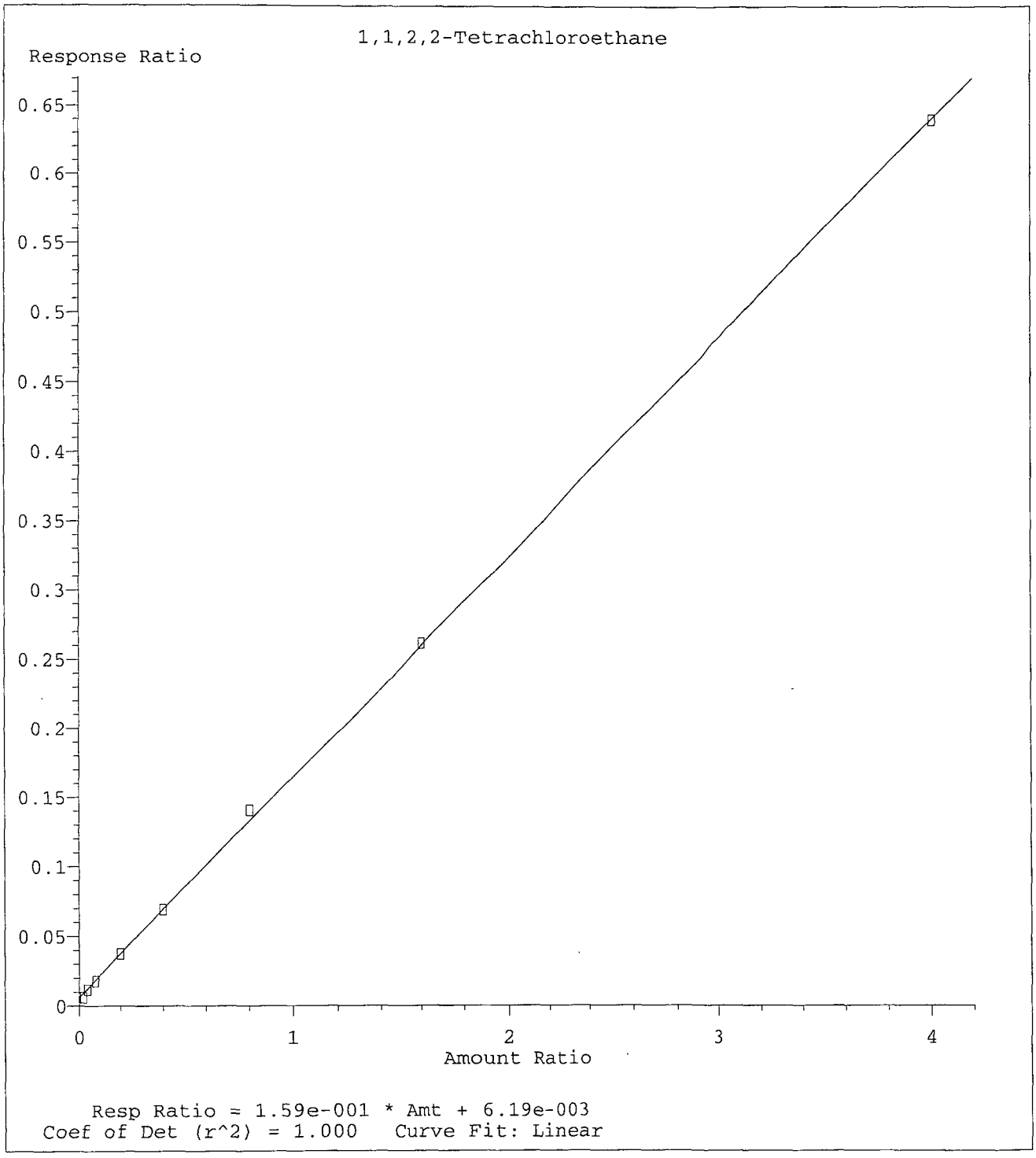
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



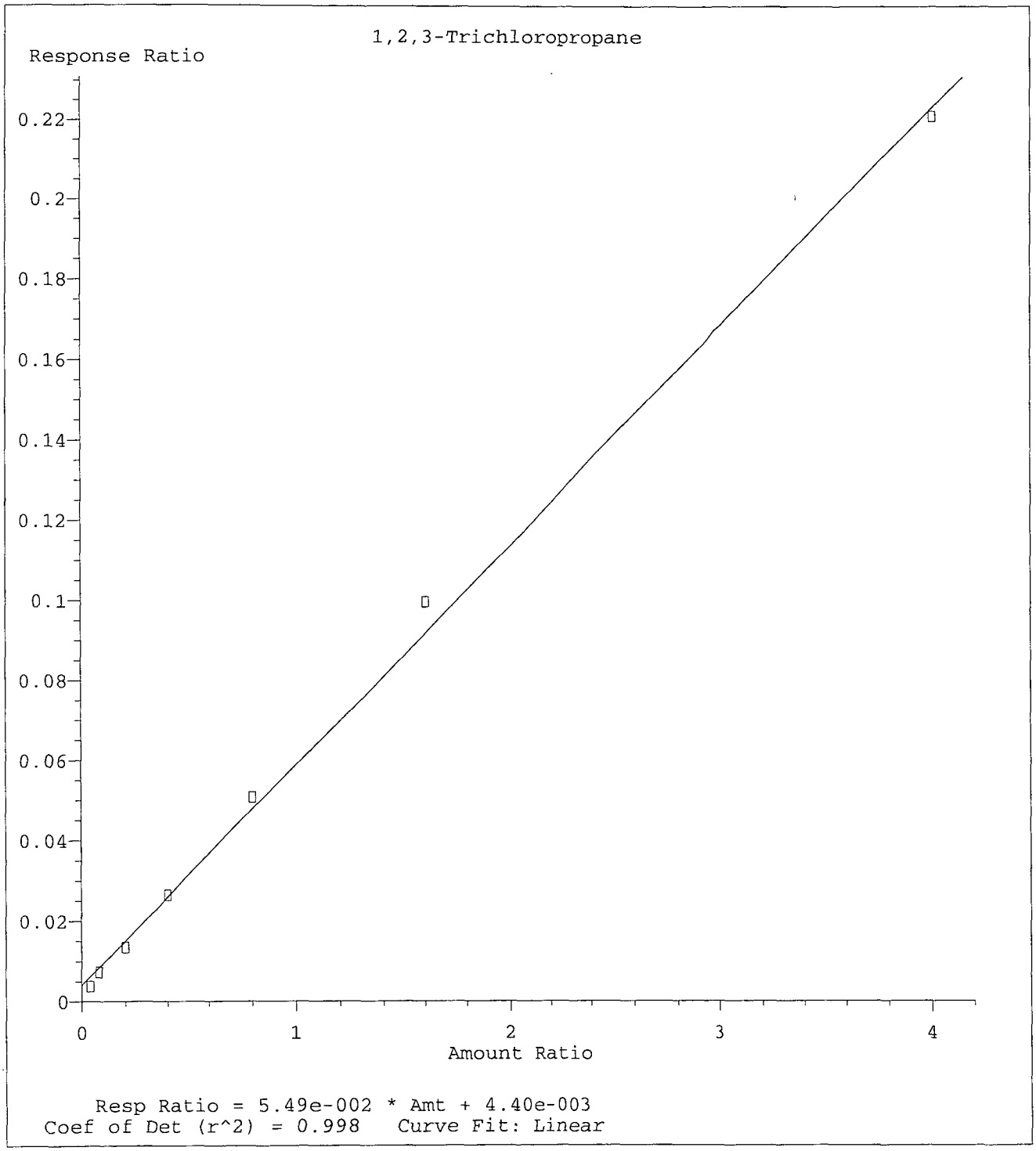
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



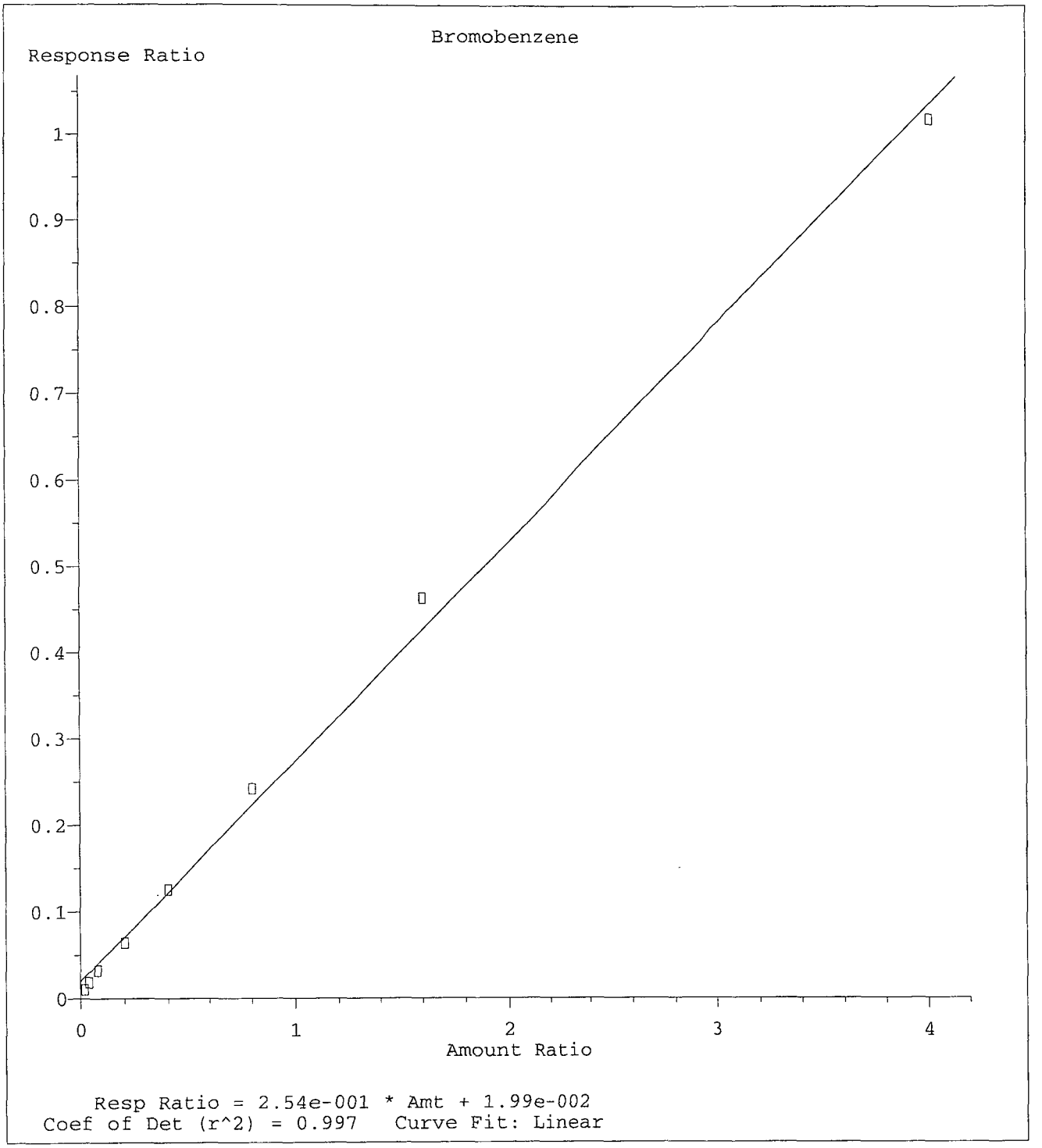
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



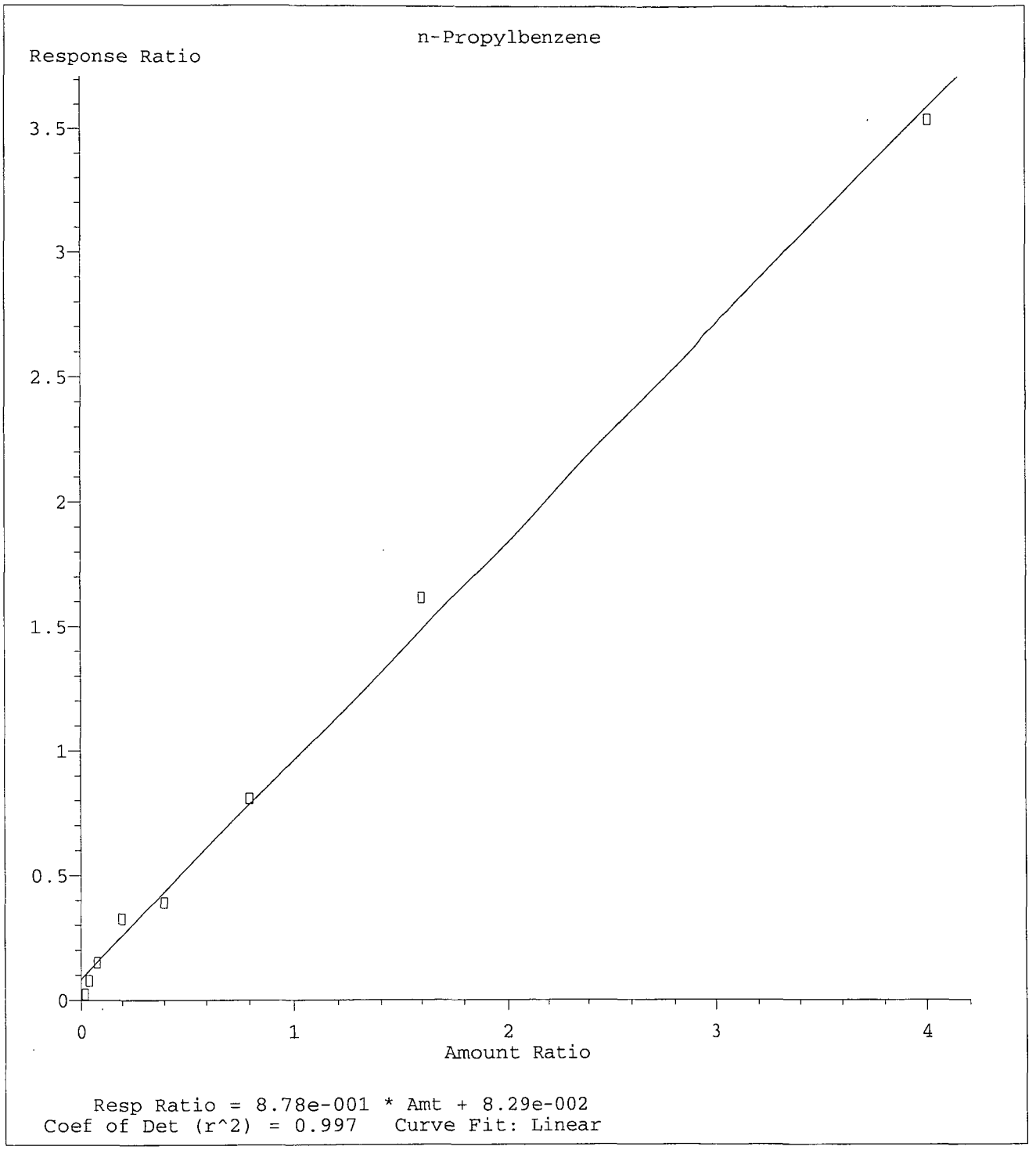
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



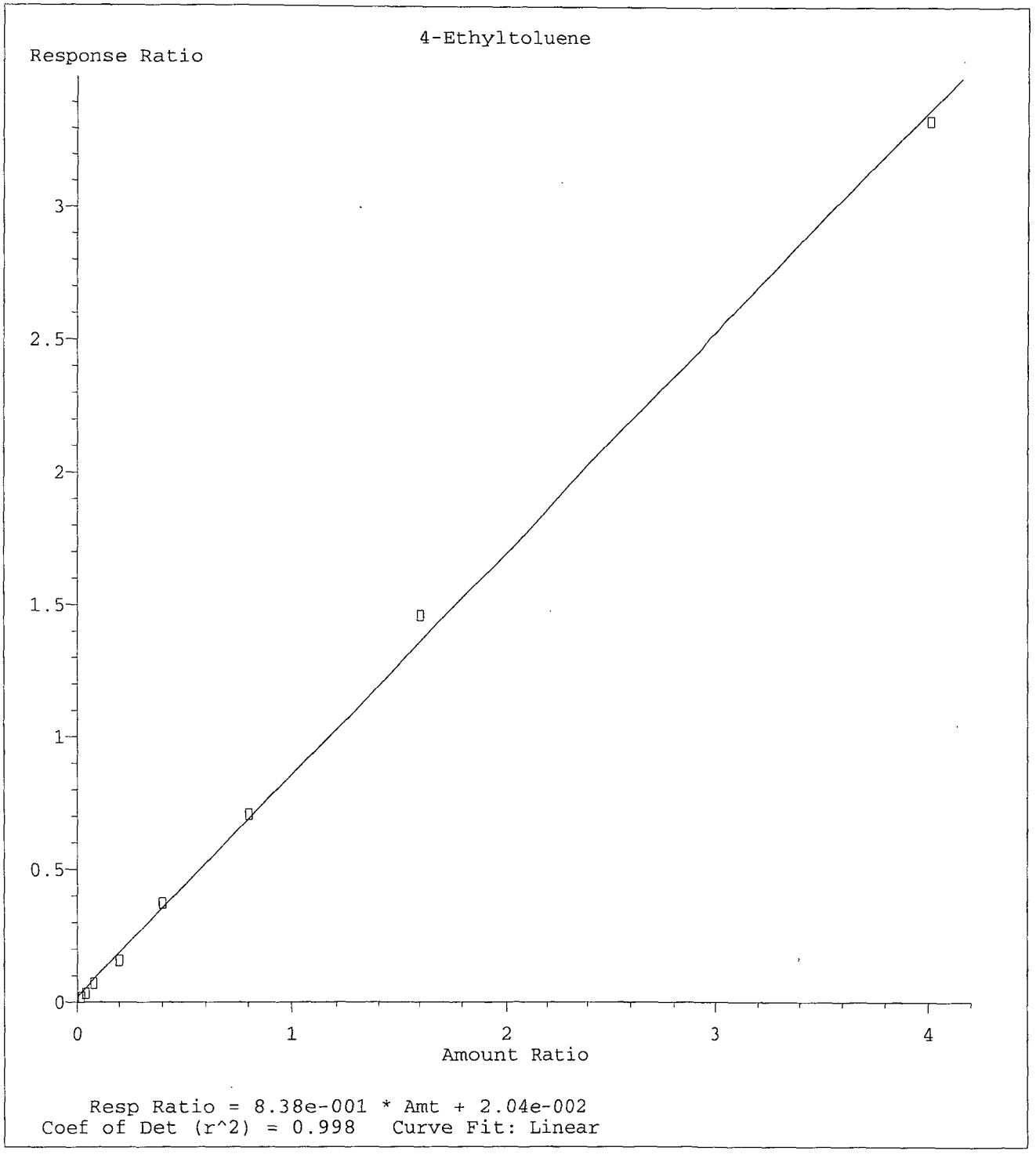
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



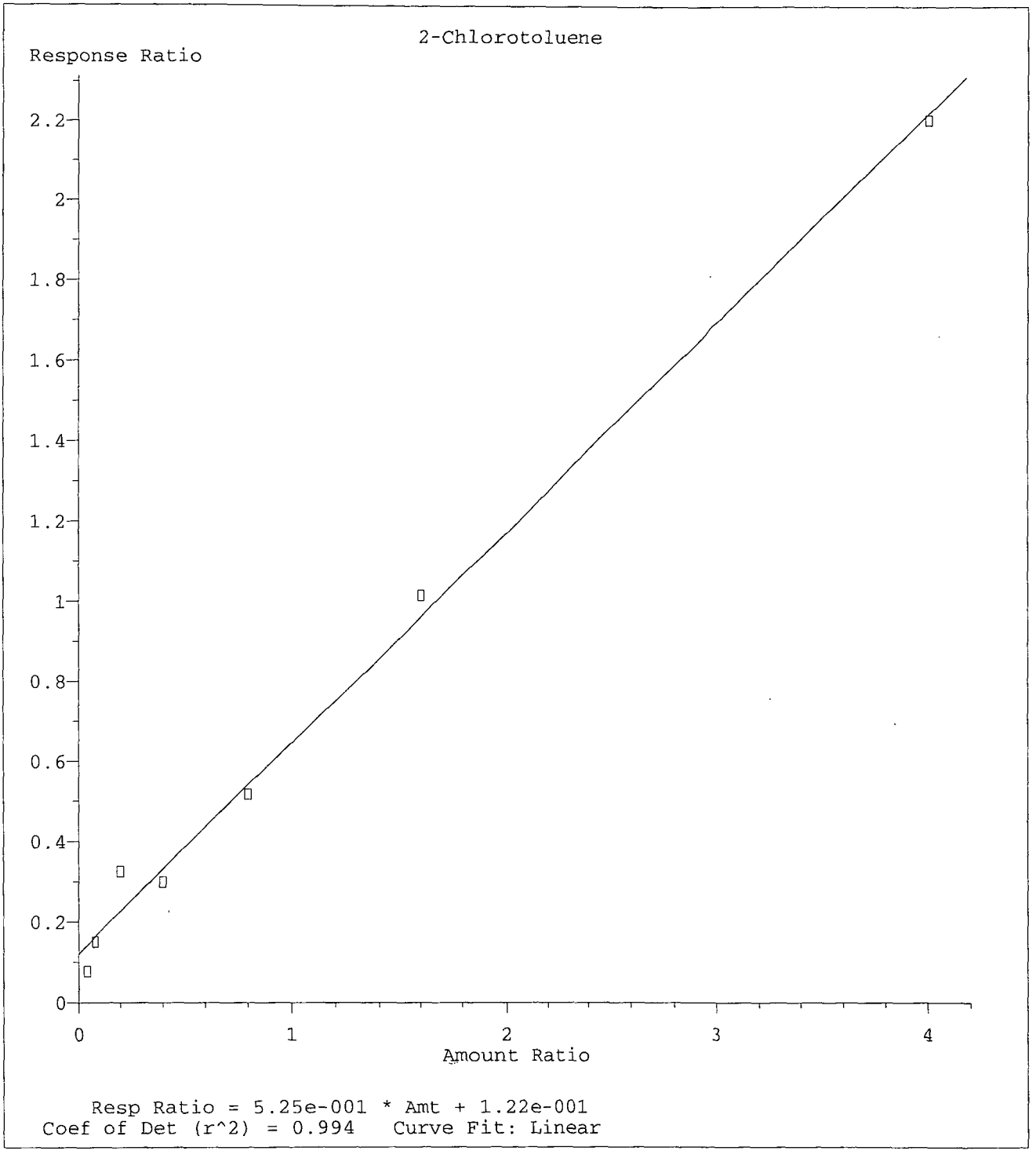
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



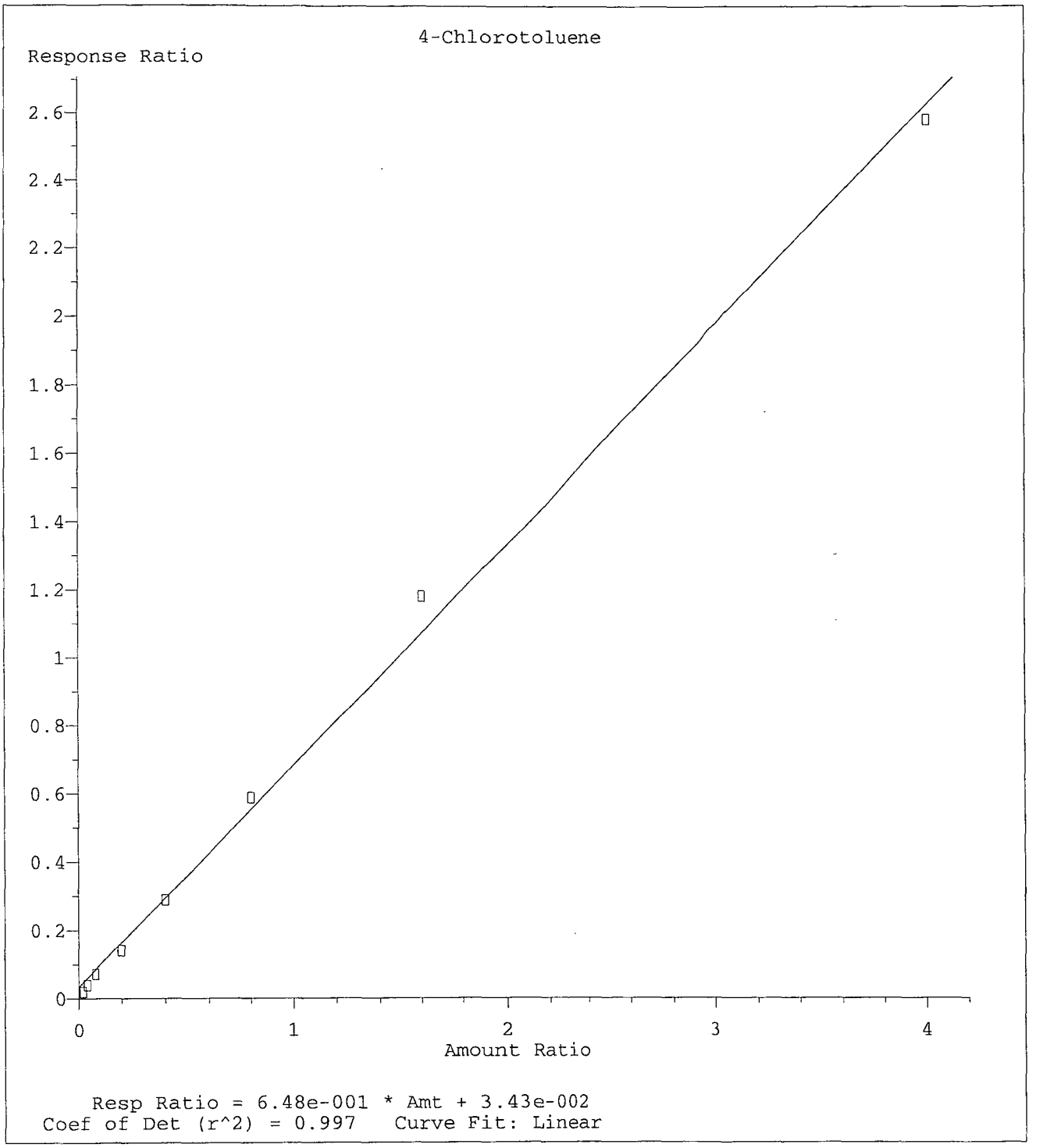
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



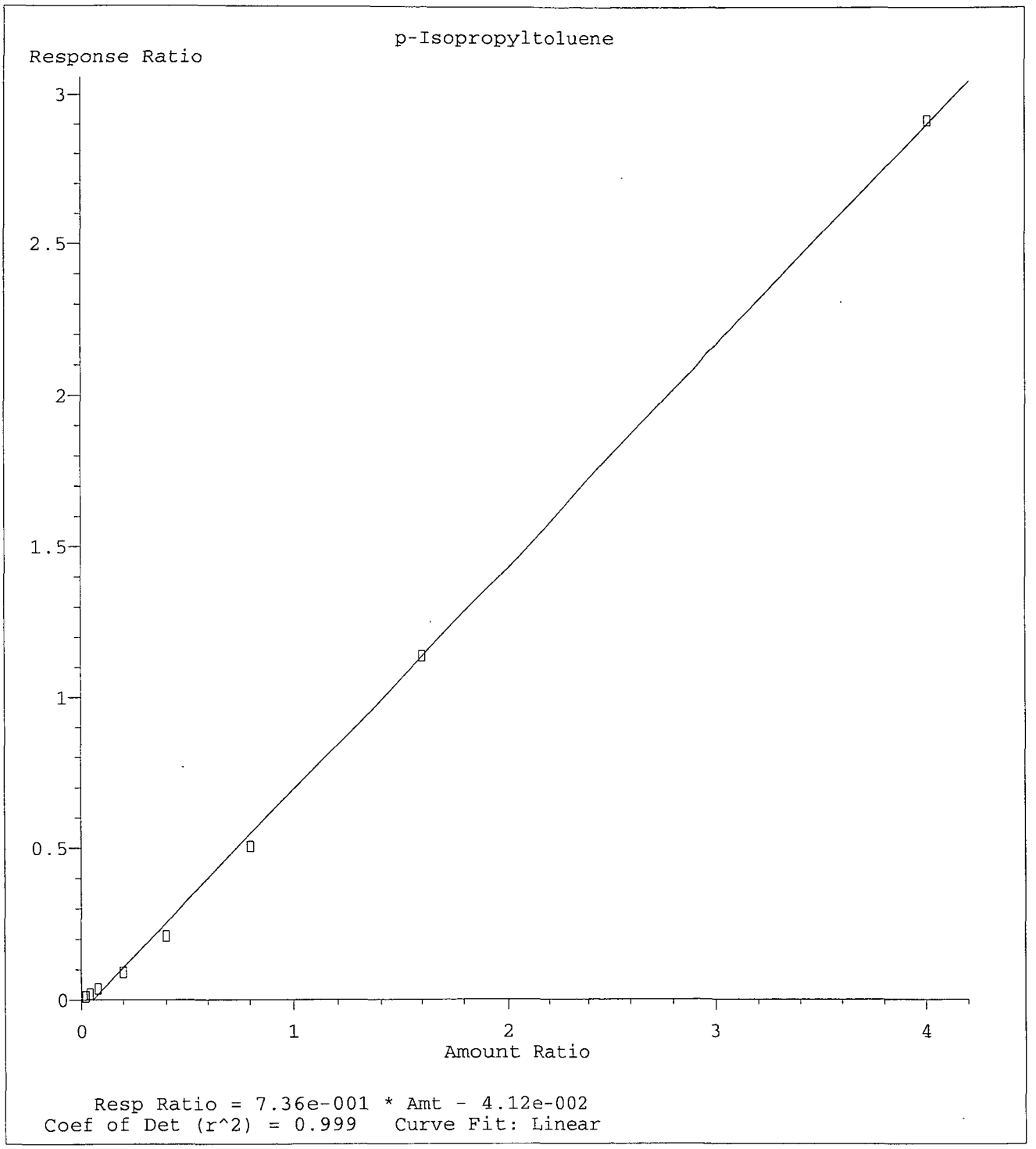
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



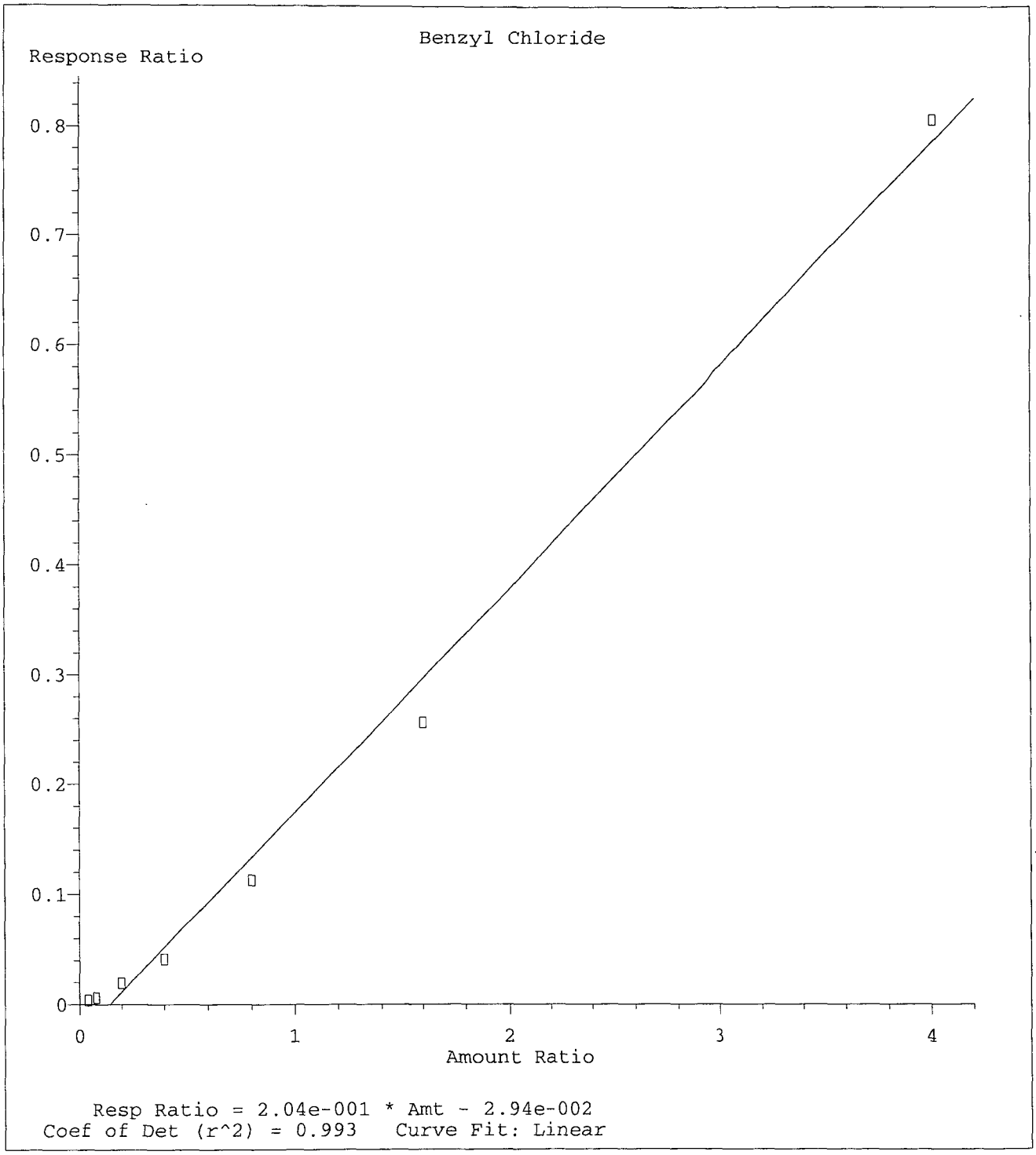
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



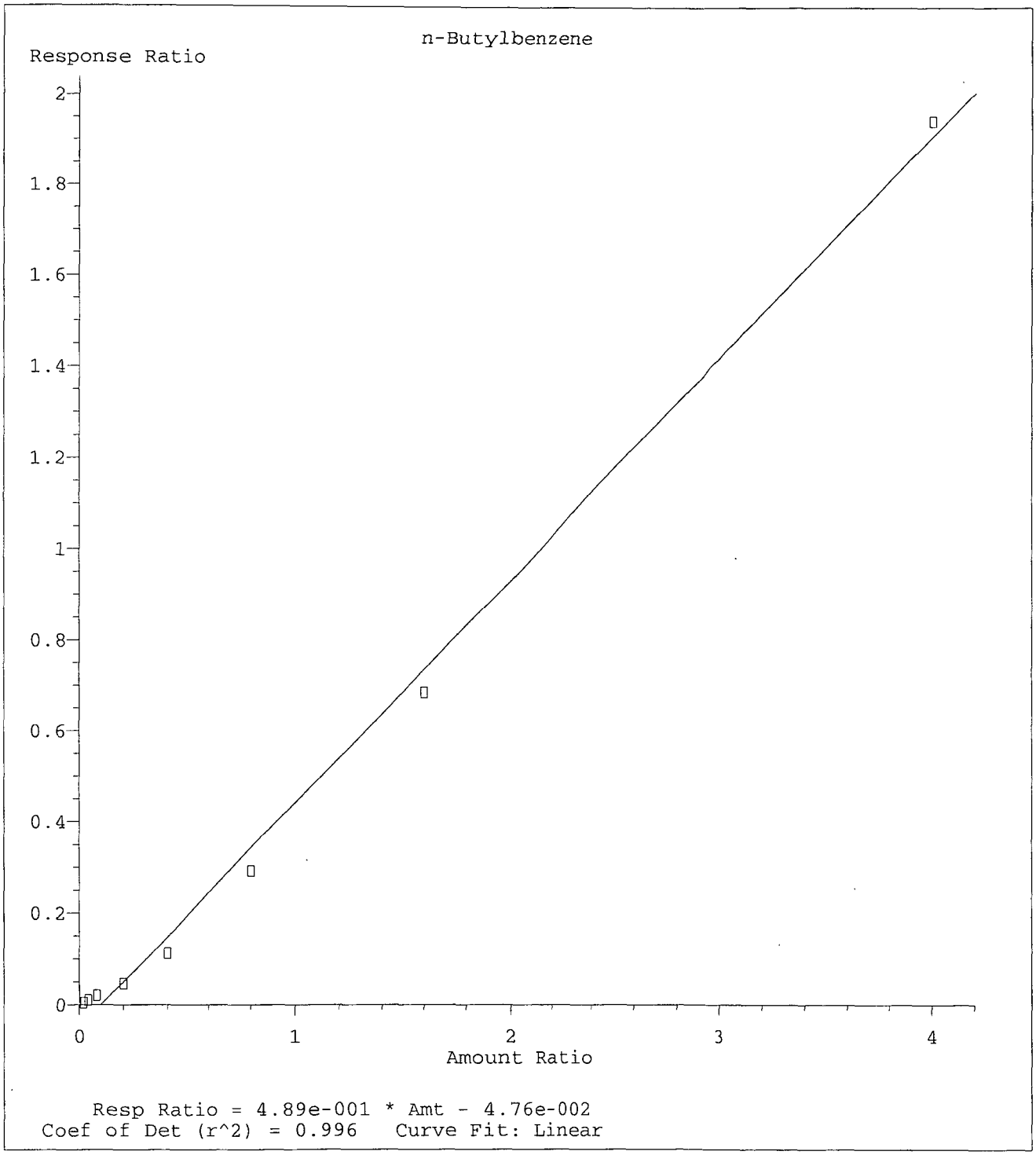
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



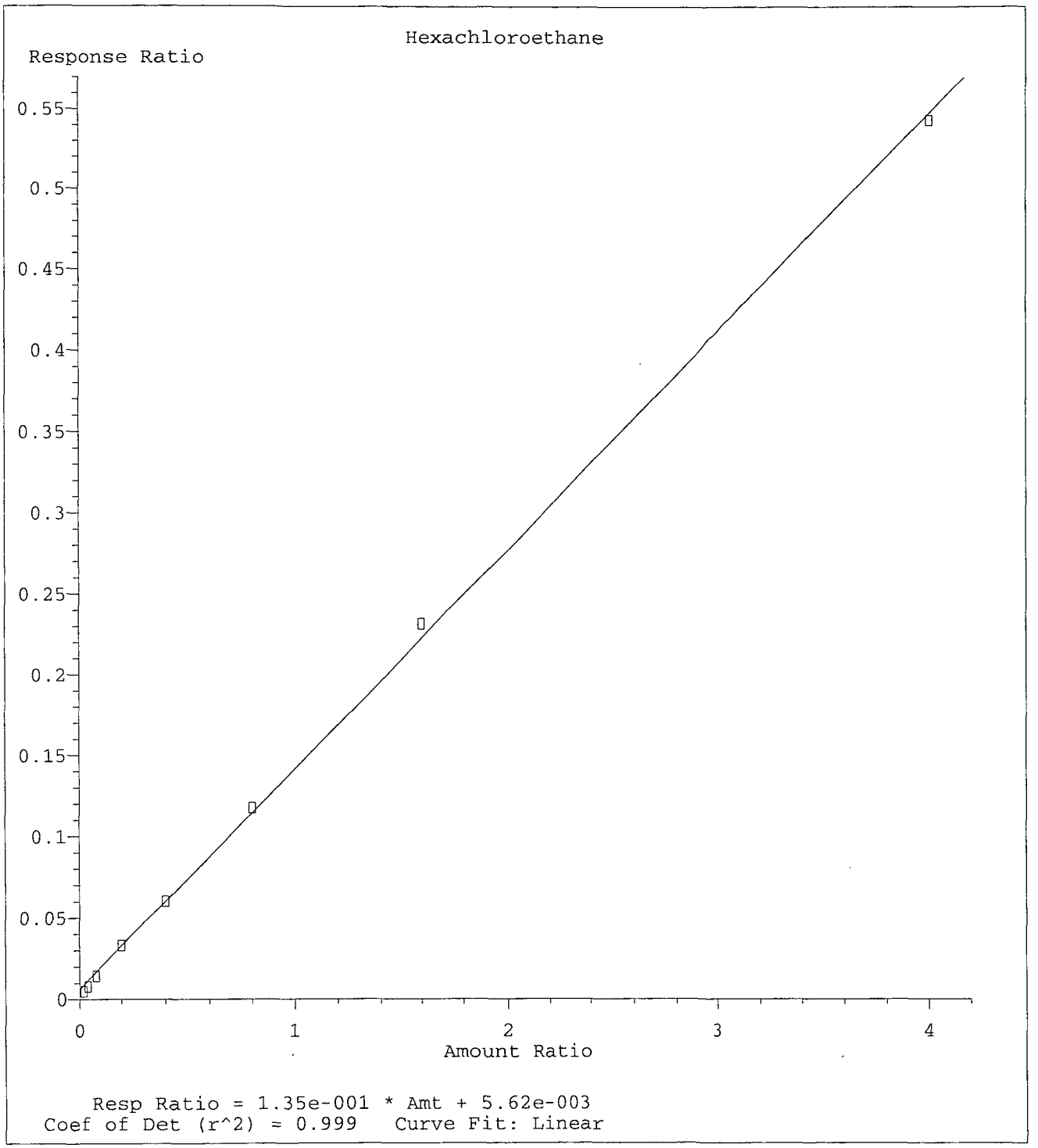
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



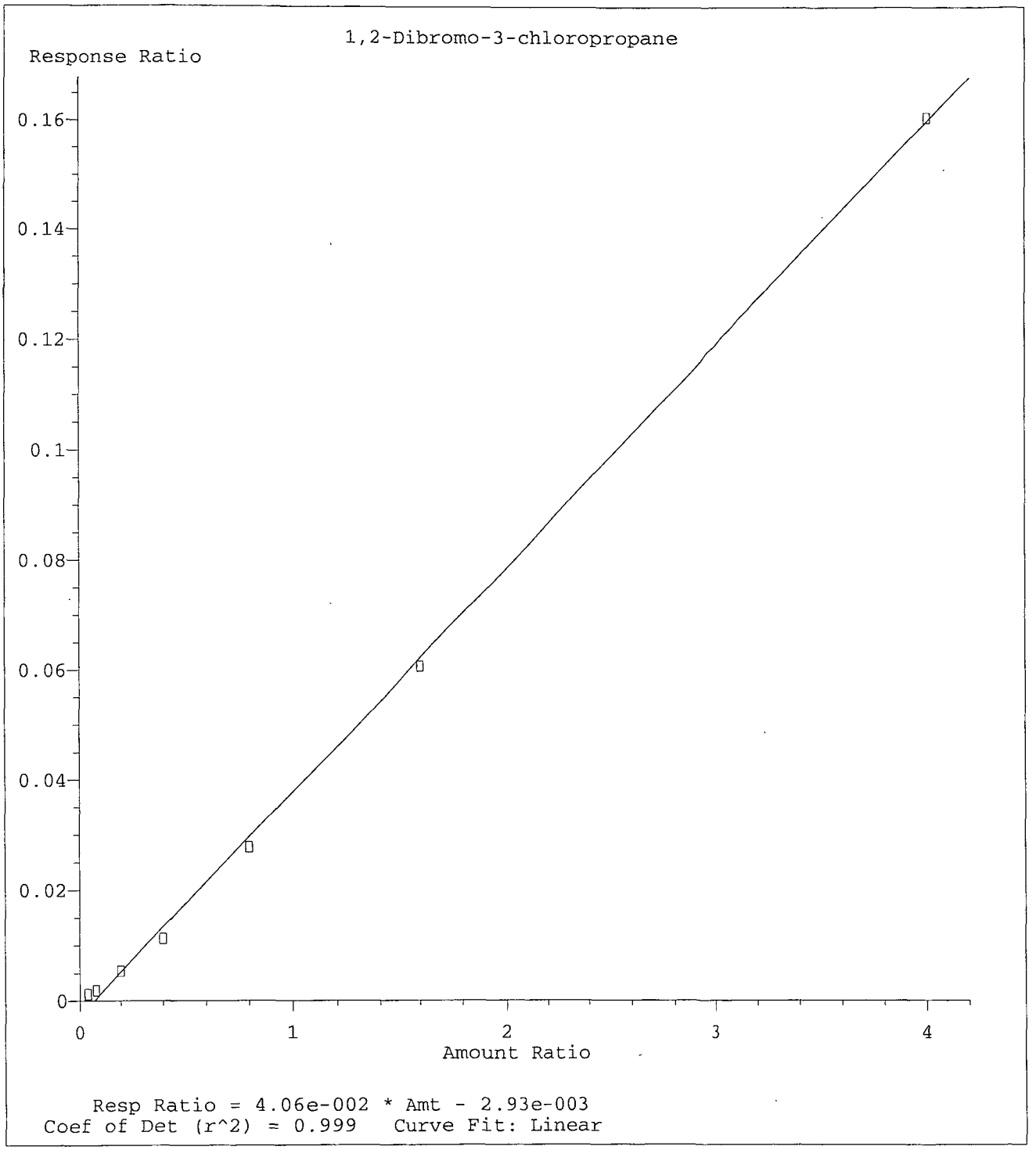
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



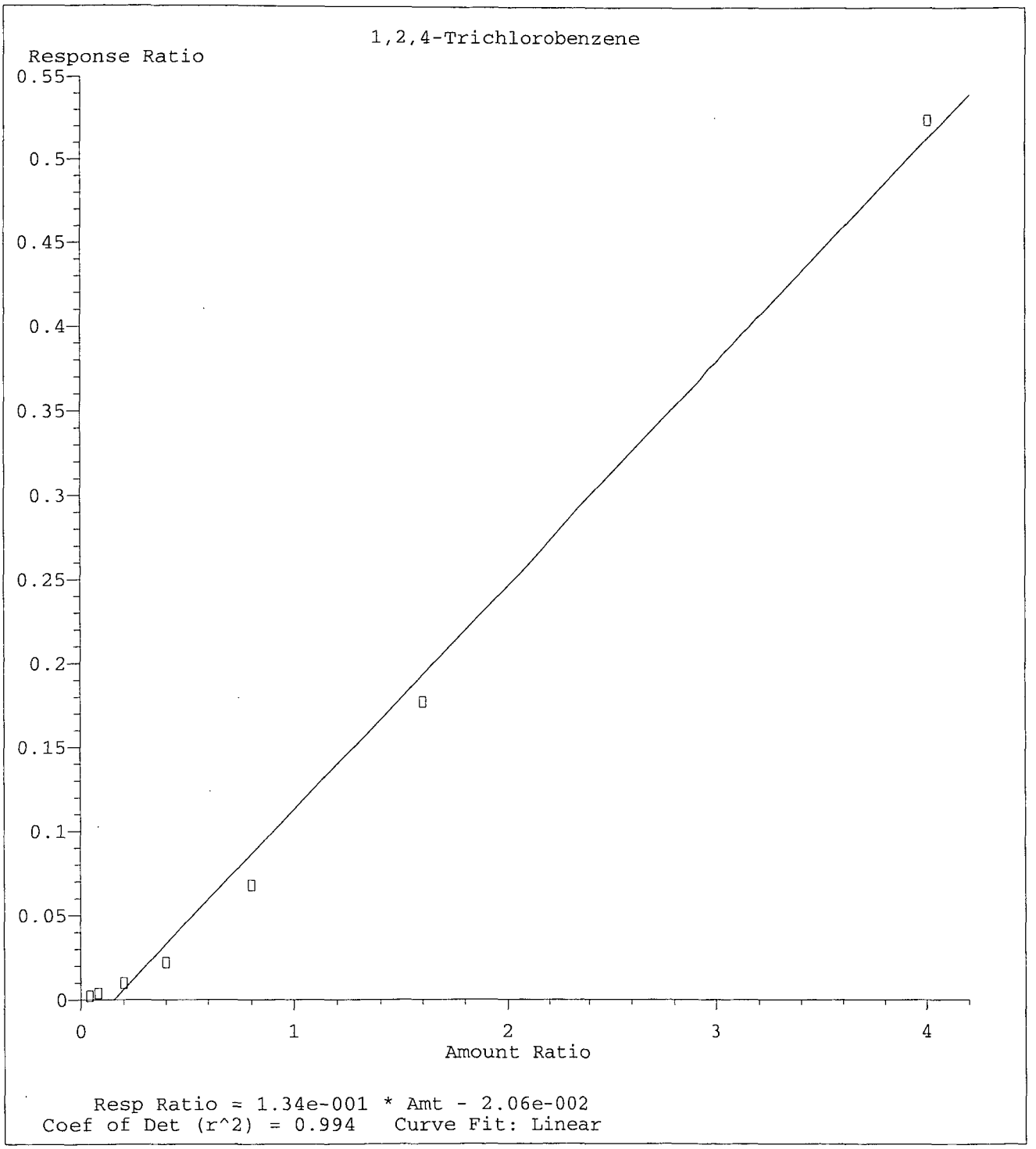
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



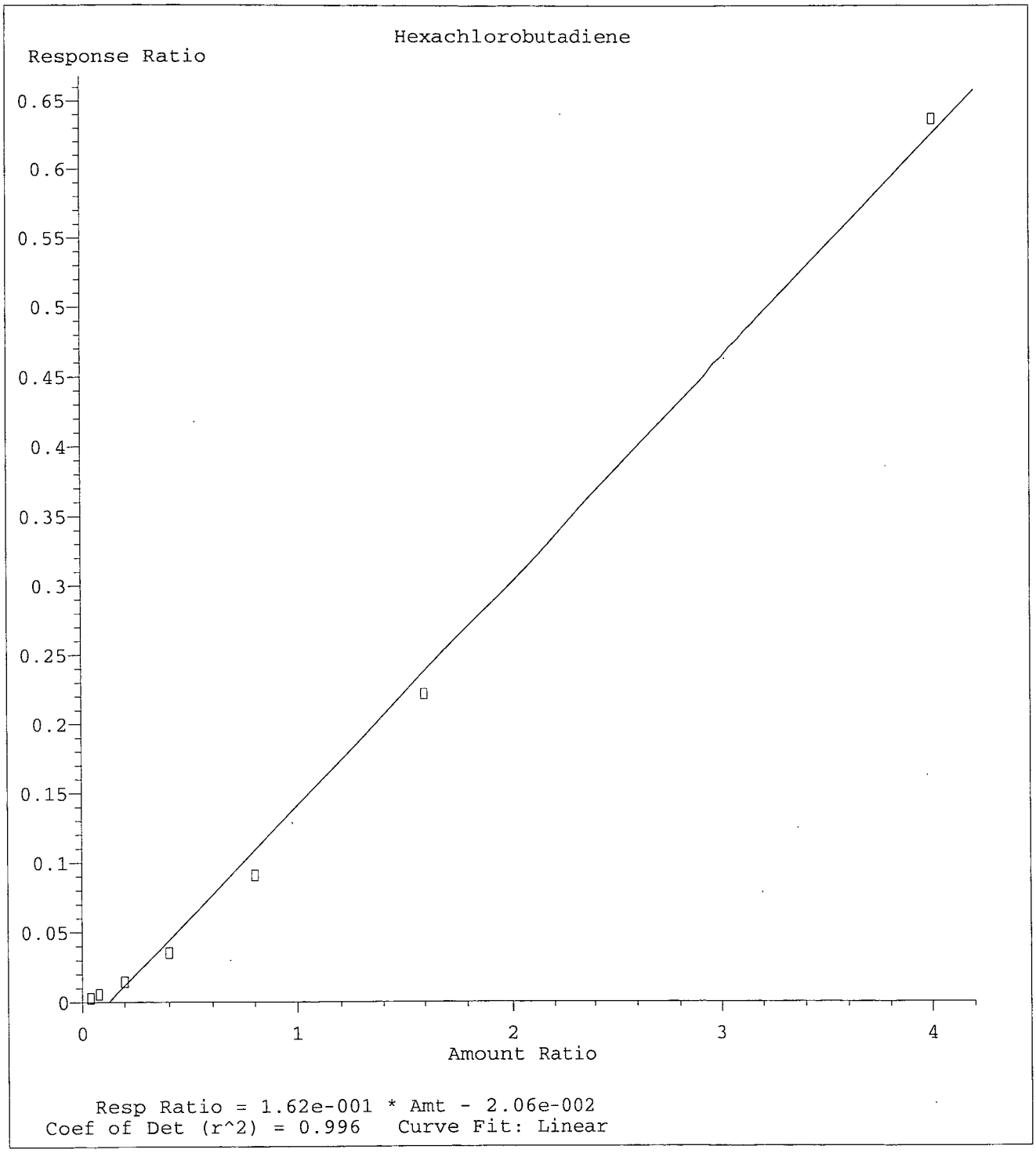
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



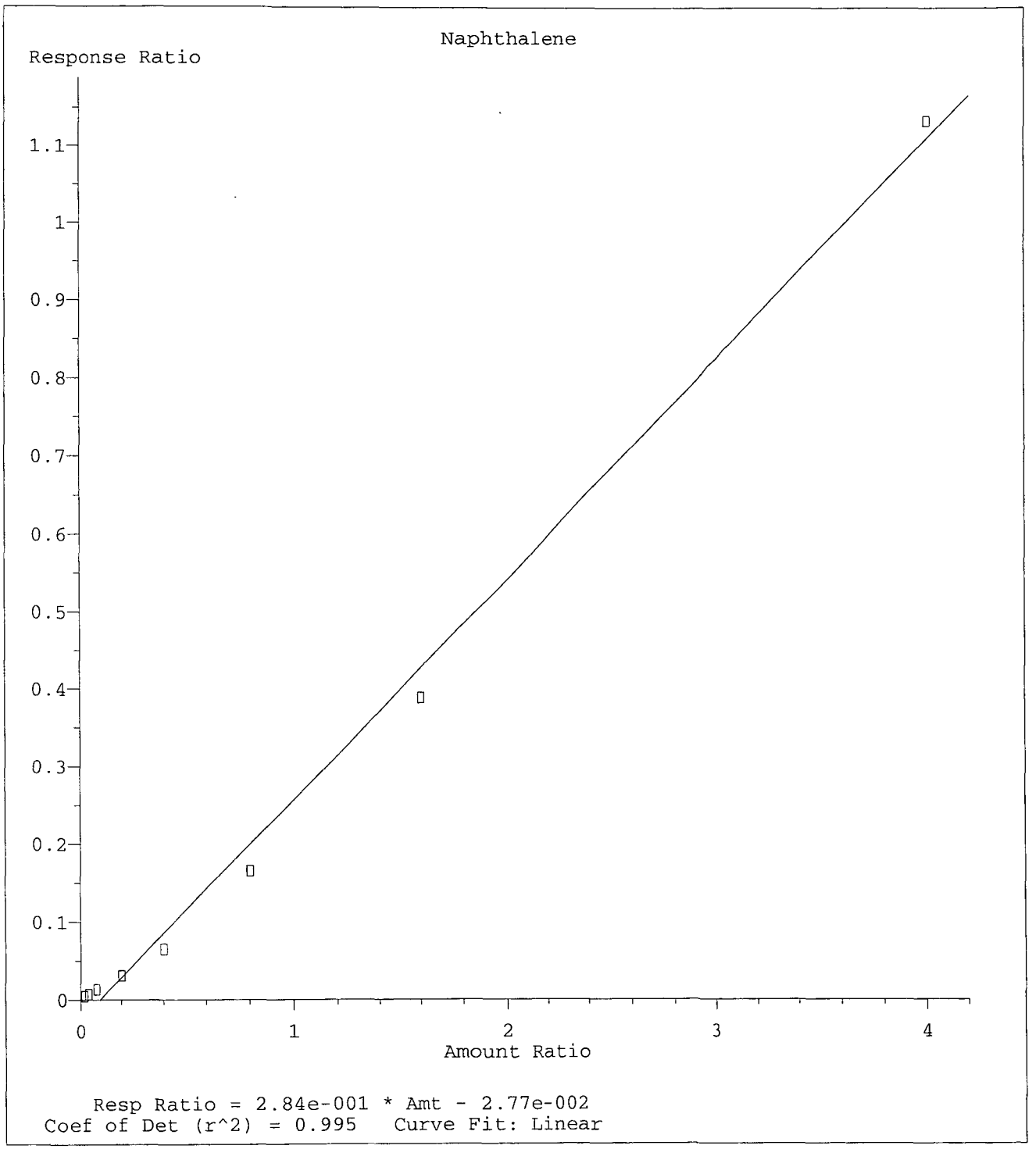
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



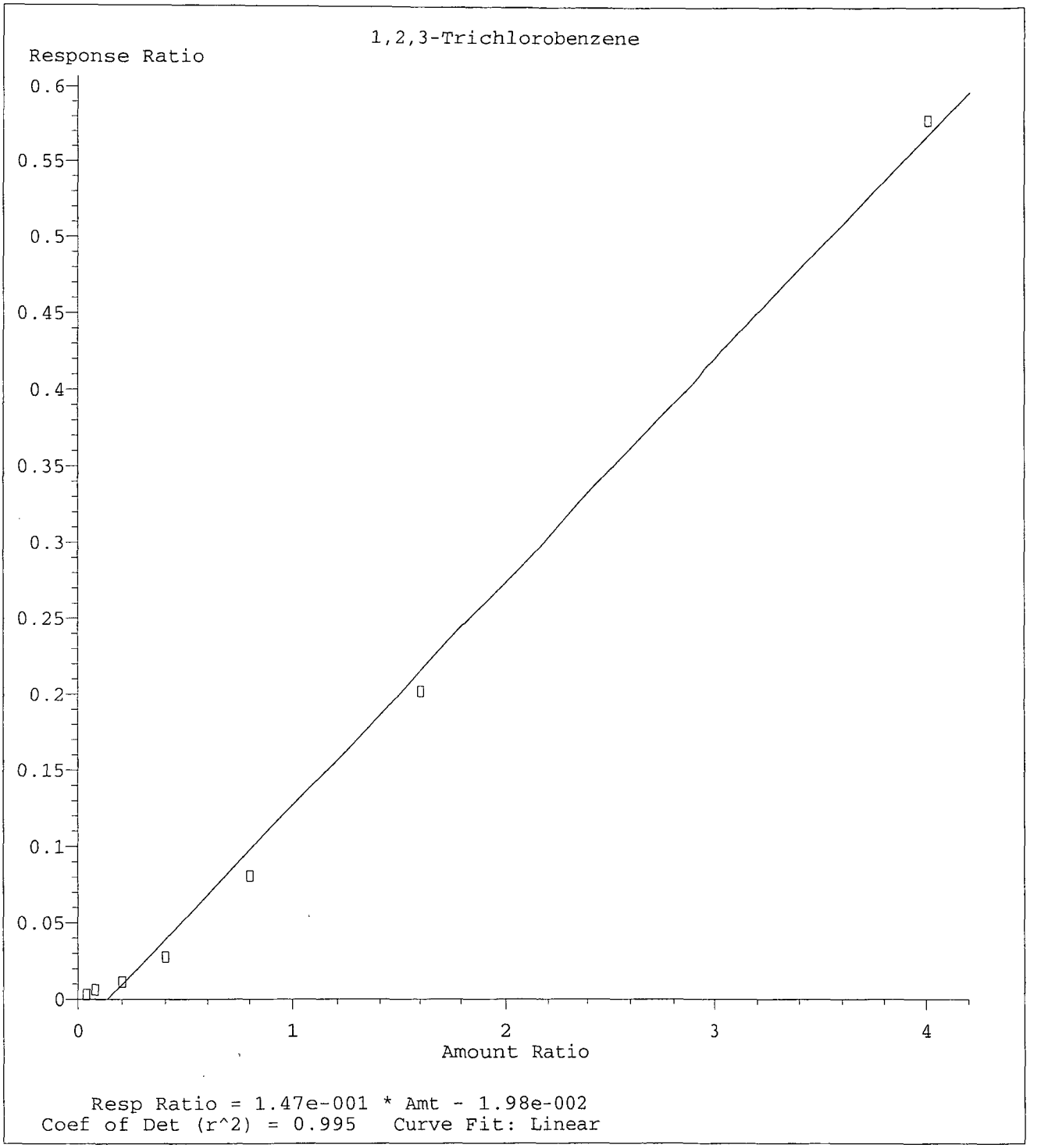
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/28/21
Matrix: Water Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM		
2	TM	Dichlorodifluoromethane	0.0770	0.0867	13	TM		
3	TM	Freon 114	0.0608	0.0554	8.8	TM		
4	TM**	Chloromethane	0.0987	0.0949	3.8	TM**		
5	TM*	Vinyl chloride	0.0921	0.0951	3.3	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
7	TML	Bromomethane	0.0443	0.0461	4.2	TML	22	*NT
8	TM	Chloroethane	0.0532	0.0506	4.7	TM		
9	TML	Dichlorofluoromethane	0.1025	0.0990	3.5	TML	4.9	
10	TM	Trichlorofluoromethane	0.1115	0.1214	8.9	TM		
11	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0005	0.00	TM		
12	TM	Acrolein	0.0024	0.0023	6.2	TM		
13	TM	Acetone	0.0188	0.0182	3.2	TM		
14	TML	Freon-113	0.0241	0.0206	15	TML	2.8	
15	TM	Acetonitrile	0.0086	0.0083	2.9	TM		
16	TM	2-propanol	0.0000	0.0001	0.00	TM		
17	TM*	1,1-DCE	0.1086	0.1199	10	TM*		
18	TM	t-Butanol	0.0059	0.0058	2.1	TM		
19	TML	Methyl Acetate	0.0601	0.0517	14	TML	1.0	
20	TML	Iodomethane	0.0905	0.0863	4.6	TML	15	
21	TML	Acrylonitrile	0.0144	0.0276	92	TML	24	*NT
22	TM	2-Methylpentane	0.0000	0.0007	0.00	TM		
23	TML	Methylene chloride	0.1021	0.0986	3.4	TML	20	
24	TM	Carbon disulfide	0.1400	0.1595	14	TM		
25	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2254	0.60	TM		
26	TM	Trans-1,2-DCE	0.0936	0.1036	11	TM		
27	TM	3-Methylpentane	0.0000	0.0485	0.00	TM		
28	TM	Diisopropyl Ether	0.2550	0.2590	1.6	TM		
29	TM**	1,1-DCA	0.1468	0.1637	12	TM**		
30	TM	Vinyl Acetate	0.0000	0.0495	0.00	TM		
31	TM	Ethyl tert Butyl Ether	0.2223	0.2217	0.27	TM		
32	TML	Methylcyclopentane	0.0000	0.0000	0.00	TML		
33	TM	MEK (2-Butanone)	0.0251	0.0268	7.0	TM		
34	TML	Cis-1,2-DCE	0.1011	0.1117	10	TML	17	
35	TM	2,2-Dichloropropane	0.1259	0.1308	3.9	TM		
36	TM*	Chloroform	0.1531	0.1699	11	TM*		
37	TM	Bromochloromethane	0.0678	0.0744	9.8	TM		
38	TM	1,1,1-TCA	0.1363	0.1450	6.3	TM		
39	TML	Cyclohexane	0.0653	0.0591	9.6	TML	1.3	
40	TM	1,1-Dichloropropene	0.1092	0.1243	14	TM		
		Average			7.9			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/28/21
Matrix: Water Instrument: Max
Cal. Date: 01/28/21
Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TML	2,2,4-Trimethylpentane	0.1657	0.1457	12	TML	9.1	
42	TM	Carbon Tetrachloride	0.1189	0.1324	11	TM		
43	TM	Tert Amyl Methyl Ether	0.1793	0.1797	0.23	TM		
44	TM	1,2-DCA	0.1114	0.1227	10	TM		
45	TM	Benzene	0.3419	0.3742	9.4	TM		
46	TM	TCE	0.0946	0.1058	12	TM		
47	TM	2-Pentanone	0.0439	0.0440	0.15	TM		
48	TM*	1,2-Dichloropropane	0.0439	0.0464	5.8	TM*		
49	TM	Bromodichloromethane	0.1170	0.1280	9.4	TM		
50	TM	Methyl Cyclohexane	0.1171	0.1086	7.2	TM		
51	TM	Dibromomethane	0.0504	0.0538	6.7	TM		
52	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0534	0.82	TML	6.4	
53	TM	1-Bromo-2-chloroethane	0.0166	0.0150	10	TM		
54	TM	2-Chloroethyl vinyl ether	0.0000	0.0002	0.00	TM		
55	TM	Cis-1,3-Dichloropropene	0.0000	0.0741	0.00	TM		
56	TM*	Toluene	0.3699	0.4150	12	TM*		
57	TM	Trans-1,3-Dichloropropene	0.1216	0.1289	6.0	TM		
58	TM	1,1,2-TCA	0.0624	0.0644	3.2	TM		
59	TML	2-Hexanone	0.0328	0.0320	2.5	TML	11	
60	TM	1,2-EDB	0.0954	0.1061	11	TM		
61	TML	Tetrachloroethene	0.0768	0.0833	8.5	TML	14	
62	TM	1-Chlorohexane	0.1332	0.1360	2.1	TM		
63	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1362	12	TM		
64	TM	m&p-Xylene	0.2201	0.2468	12	TM		
65	TM	o-Xylene	0.2265	0.2447	8.0	TM		
66	TM	Styrene	0.3566	0.4166	17	TM		
67	TM	1,3-Dichloropropane	0.1467	0.1712	17	TM		
68	TM	Dibromochloromethane	0.1196	0.1290	7.9	TM		
69	TM**	Chlorobenzene	0.3300	0.3643	10	TM**		
70	TM*	Ethylbenzene	0.5179	0.5765	11	TM*		
71	TM**	Bromoform	0.0968	0.1081	12	TM**		
72	TML	Isopropylbenzene	1.093	1.150	5.3	TML	23	*NT
73	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.2109	0.68	TM**L	23	*NT
74	TML	1,2,3-Trichloropropane	0.0711	0.0768	8.1	TML	20	
75	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0382	13	TM		
76	TML	Bromobenzene	0.3590	0.3761	4.7	TML	28	*NT
77	TML	n-Propylbenzene	1.314	1.182	10	TML	11	
78	TML	4-Ethyltoluene	0.8718	0.9568	9.7	TML	8.0	
79	TML	2-Chlorotoluene	1.149	0.8658	25	TML	6.9	
80	TM	1,3,5-Trimethylbenzene	0.7409	0.8514	15	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/28/21
Instrument: Max
Cal. Date: 01/28/21
Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	4-Chlorotoluene	0.7947	0.9062	14	TML	27	*NT
82	TM	Tert-Butylbenzene	0.3648	0.4242	16	TM		
83	TM	1,2,4-Trimethylbenzene	0.6195	0.7272	17	TM		
84	TM	Sec-Butylbenzene	0.7475	0.8738	17	TM		
85	TML	p-Isopropyltoluene	0.5659	0.6753	19	TML	5.7	
86	TML	Benzyl Chloride	0.1244	0.1144	8.1	TML	7.9	
87	TM	1,3-DCB	0.5258	0.5938	13	TM		
88	TM	1,4-DCB	0.5141	0.5705	11	TM		
89	TML	n-Butylbenzene	0.3139	0.3848	23	TML	3.0	
90	TM	1,2-DCB	0.4455	0.5139	15	TM		
91	TML	Hexachloroethane	0.1691	0.1542	8.8	TML	3.5	
92	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0310	1.8	TML	5.7	
93	TML	1,2,4-Trichlorobenzene	0.0764	0.0935	22	TML	8.5	
94	TML	Hexachlorobutadiene	0.1018	0.1169	15	TML	4.1	
95	TML	Naphthalene	0.2026	0.3051	51	TML	32	*NT
96	TML	1,2,3-Trichlorobenzene	0.0930	0.1182	27	TML	14	
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			17.4			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M12.D Vial: 12
Acq On : 28 Jan 21 22:16 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1767153	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1453370	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	769204	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	373119	25.50	ppb		0.00
Spiked Amount 25.000			Recovery = 102.000%				
44) 1,2-DCA-D4(S)	5.11	65	390923	23.62	ppb		0.00
Spiked Amount 25.000			Recovery = 94.480%				
64) Toluene-D8(S)	7.37	98	1510009	24.69	ppb		0.00
Spiked Amount 25.000			Recovery = 98.756%				
72) 4-Bromofluorobenzene(S)	10.03	95	626192	24.74	ppb		0.00
Spiked Amount 25.000			Recovery = 98.956%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	61252	11.26	ppb		99
4) Freon 114	1.04	85	39171	9.12	ppb		94
5) Chloromethane	1.08	50	67096	9.62	ppb		97
6) Vinyl chloride	1.15	62	67242	10.33	ppb		95
8) Bromomethane	1.34	94	32608	12.20	ppb		96
9) Chloroethane	1.42	64	35790	9.53	ppb		94
10) Dichlorofluoromethane	1.56	67	69953	10.49	ppb		100
11) Trichlorofluoromethane	1.60	101	85846	10.89	ppb		99
13) Acrolein	1.90	56	20136	117.29	ppb		91
14) Acetone	2.03	43	64211	48.39	ppb		99
15) Freon-113	2.01	103	14528	9.72	ppb		96
16) Acetonitrile	2.25	41	73777	121.36	ppb		97
18) 1,1-DCE	1.99	61	84730	11.04	ppb		99
19) t-Butanol	2.59	59	51022	122.34	ppb	#	90
20) Methyl Acetate	2.34	43	36535	9.90	ppb		99
21) Iodomethane	2.10	142	61031	8.48	ppb		99
22) Acrylonitrile	2.64	53	19475	12.45	ppb	#	62
24) Methylene chloride	2.41	84	69693	12.02	ppb		95
25) Carbon disulfide	2.15	76	112768	11.39	ppb		99
26) Methyl t-butyl ether (MtBE	2.73	73	159354	10.06	ppb		94
27) Trans-1,2-DCE	2.69	96	73228	11.07	ppb		96
29) Diisopropyl Ether	3.35	45	183064	10.16	ppb		98
30) 1,1-DCA	3.16	63	115744	11.15	ppb	#	95
32) Ethyl tert Butyl Ether	3.87	59	156746	9.97	ppb		97
34) MEK (2-Butanone)	4.04	43	94877	53.49	ppb		99
35) Cis-1,2-DCE	3.97	96	78922	11.68	ppb		93
36) 2,2-Dichloropropane	3.96	77	92450	10.39	ppb		98
37) Chloroform	4.48	83	120103	11.10	ppb		96
38) Bromochloromethane	4.31	130	52598	10.98	ppb		96
40) 1,1,1-TCA	4.70	97	102465	10.63	ppb		94
41) Cyclohexane	4.78	41	41755	9.87	ppb		94
42) 1,1-Dichloropropene	4.94	75	87887	11.39	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	102990	9.09	ppb		99
45) Carbon Tetrachloride	4.93	117	93620	11.14	ppb		100
46) Tert Amyl Methyl Ether	5.44	73	127002	10.02	ppb		97
47) 1,2-DCA	5.21	62	86724	11.02	ppb		100
48) Benzene	5.19	78	264496	10.94	ppb		98
49) TCE	6.02	95	74814	11.18	ppb		93
50) 2-Pentanone	6.27	43	388495	125.19	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M12.D Vial: 12
Acq On : 28 Jan 21 22:16 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.24	63	32792	10.58	ppb		96
52)	Bromodichloromethane	6.59	83	90474	10.94	ppb		92
53)	Methyl Cyclohexane	6.24	83	76776	9.28	ppb		96
54)	Dibromomethane	6.37	93	38052	10.67	ppb		86
55)	MIBK (methyl isobutyl ket	7.29	43	188871	46.82	ppb		97
56)	1-Bromo-2-chloroethane	6.89	144	10570	8.98	ppb		100
59)	Toluene	7.44	91	293357	11.22	ppb		99
60)	Trans-1,3-Dichloropropene	7.69	75	91121	10.60	ppb		99
61)	1,1,2-TCA	7.86	83	45542	10.32	ppb		94
62)	2-Hexanone	8.17	43	112938	44.58	ppb		92
65)	1,2-EDB	8.34	107	61689	11.13	ppb		99
66)	Tetrachloroethene	8.01	164	48432	11.40	ppb		94
67)	1-Chlorohexane	8.91	91	79044	10.21	ppb		97
68)	1,1,1,2-Tetrachloroethane	8.96	131	79158	11.17	ppb		98
69)	m&p-Xylene	9.14	106	286963	22.42	ppb		95
70)	o-Xylene	9.52	106	142237	10.80	ppb		96
71)	Styrene	9.53	104	242163	11.68	ppb		98
73)	1,3-Dichloropropane	8.03	76	99499	11.66	ppb		99
74)	Dibromochloromethane	8.24	129	75008	10.79	ppb		96
75)	Chlorobenzene	8.87	112	211764	11.04	ppb		95
76)	Ethylbenzene	9.01	91	335125	11.13	ppb		99
77)	Bromoform	9.67	173	62820	11.16	ppb		95
79)	Isopropylbenzene	9.90	105	353984	12.33	ppb		100
80)	1,1,2,2-Tetrachloroethane	10.19	83	64888	12.31	ppb		94
81)	1,2,3-Trichloropropane	10.20	110	23639	11.98	ppb	#	83
82)	t-1,4-Dichloro-2-Butene	10.25	53	11766	11.28	ppb		91
83)	Bromobenzene	10.15	156	115704	12.85	ppb		98
84)	n-Propylbenzene	10.31	91	363563	11.10	ppb		97
85)	4-Ethyltoluene	10.44	105	294386	10.80	ppb		100
86)	2-Chlorotoluene	10.37	91	266385	10.69	ppb		97
87)	1,3,5-Trimethylbenzene	10.50	105	261946	11.49	ppb		98
88)	4-Chlorotoluene	10.48	91	278826	12.65	ppb		98
89)	Tert-Butylbenzene	10.81	119	130512	11.63	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	223755	11.74	ppb		97
91)	Sec-Butylbenzene	11.04	105	268845	11.69	ppb		100
92)	p-Isopropyltoluene	11.19	119	207778	10.57	ppb		100
93)	Benzyl Chloride	11.33	91	35187	9.21	ppb		95
94)	1,3-DCB	11.11	146	182692	11.29	ppb		97
95)	1,4-DCB	11.19	146	175523	11.10	ppb		98
96)	n-Butylbenzene	11.59	91	118411	10.30	ppb		97
97)	1,2-DCB	11.55	146	158125	11.54	ppb		98
98)	Hexachloroethane	11.81	117	47458	10.35	ppb		91
99)	1,2-Dibromo-3-chloropropan	12.31	157	9532	9.43	ppb		91
100)	1,2,4-Trichlorobenzene	13.15	180	28776	10.85	ppb		93
101)	Hexachlorobutadiene	13.36	225	35963	10.41	ppb		93
102)	Naphthalene	13.38	128	93871	13.17	ppb		97
103)	1,2,3-Trichlorobenzene	13.62	180	36361	11.39	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

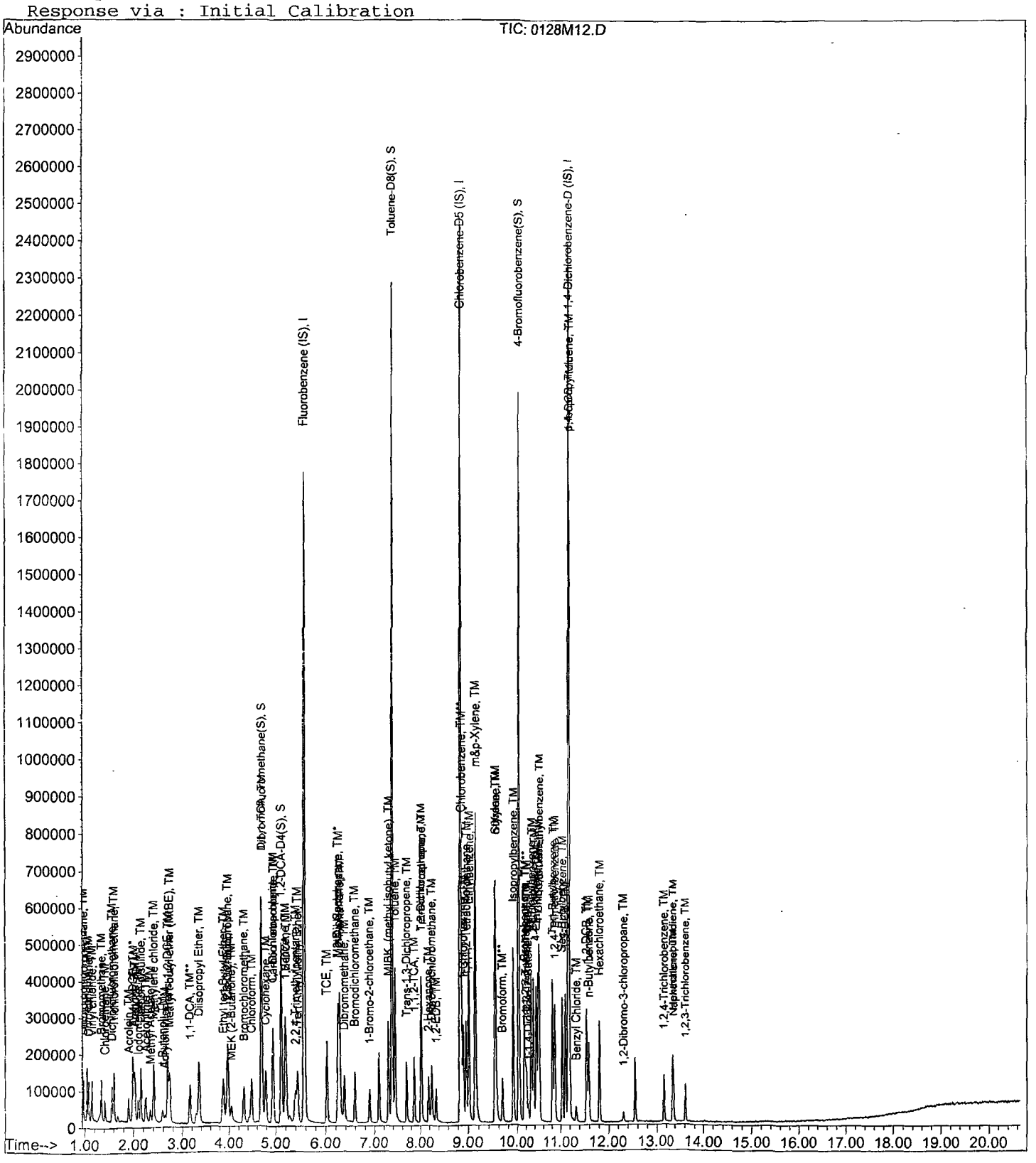
Data File : M:\MAX\DATA\210128\0128M12.D
Acq On : 28 Jan 21 22:16
Sample : (SS) 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 12
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/29/21

Matrix: Instrument: Max

Initial Cal. Date: 01/28/21

Data File: 0129M04.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0002	0.00	TM		
3	TM	Dichlorodifluoromethane	0.0770	0.1008	31	TM		*nt
4	TM	Freon 114	0.0608	0.0884	45	TM		*
5	TM**	Chloromethane	0.0987	0.1096	11	TM**		
6	TM*	Vinyl chloride	0.0921	0.1080	17	TM*		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
8	TML	Bromomethane	0.0443	0.0508	15	TML	35	*nt
9	TM	Chloroethane	0.0532	0.0587	10	TM		
10	TML	Dichlorofluoromethane	0.1025	0.1199	17	TML	26	*nt
11	TM	Trichlorofluoromethane	0.1115	0.1450	30	TM		*nt
12	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0002	0.00	TM		
13	TM	Acrolein	0.0024	0.0027	9.1	TM		
14	TM	Acetone	0.0188	0.0197	5.0	TM		
15	TML	Freon-113	0.0241	0.0277	15	TML	29	*nt
16	TM	Acetonitrile	0.0086	0.0085	1.1	TM		
17	TM	2-propanol	0.0000	0.0000	0.00	TM		
18	TM*	1,1-DCE	0.1086	0.1271	17	TM*		
19	TM	t-Butanol	0.0059	0.0064	8.9	TM		
20	TML	Methyl Acetate	0.0601	0.0600	0.15	TML	16	
21	TML	Iodomethane	0.0905	0.1044	15	TML	0.52	
22	TML	Acrylonitrile	0.0144	0.0024	83	TML	66	*nt
23	TM	2-Methylpentane	0.0000	0.0011	0.00	TM		
24	TML	Methylene chloride	0.1021	0.0973	4.7	TML	18	
25	TM	Carbon disulfide	0.1400	0.1664	19	TM		
26	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2444	9.1	TM		
27	TM	Trans-1,2-DCE	0.0936	0.1078	15	TM		
28	TM	3-Methylpentane	0.0000	0.0535	0.00	TM		
29	TM	Diisopropyl Ether	0.2550	0.2860	12	TM		
30	TM**	1,1-DCA	0.1468	0.1714	17	TM**		
31	TM	Vinyl Acetate	0.0000	0.0560	0.00	TM		
32	TM	Ethyl tert Butyl Ether	0.2223	0.2587	16	TM		
33	TML	Methylcyclopentane	0.0000	0.0001	0.00	TML		
34	TM	MEK (2-Butanone)	0.0251	0.0293	17	TM		
35	TML	Cis-1,2-DCE	0.1011	0.1156	14	TML	21	*nt
36	TM	2,2-Dichloropropane	0.1259	0.1470	17	TM		
37	TM*	Chloroform	0.1531	0.1778	16	TM*		
38	TM	Bromochloromethane	0.0678	0.0766	13	TM		
39	SL	Dibromofluoromethane(S)	0.2351	0.2357	0.24	SL	16	
40	TM	1,1,1-TCA	0.1363	0.1604	18	TM		
		Average			13.3			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/29/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M04.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TML	Cyclohexane	0.0653	0.0778	19	TML	29	*nt
42	TM	1,1-Dichloropropene	0.1092	0.1315	20	TM		
43	TML	2,2,4-Trimethylpentane	0.1657	0.2493	50	TML	47	*nt
44	SL	1,2-DCA-D4(S)	0.2551	0.2427	4.9	SL	4.7	
45	TM	Carbon Tetrachloride	0.1189	0.1458	23	TM		*nt
46	TM	Tert Amyl Methyl Ether	0.1793	0.2161	21	TM		*nt
47	TM	1,2-DCA	0.1114	0.1300	17	TM		
48	TM	Benzene	0.3419	0.3918	15	TM		
49	TM	TCE	0.0946	0.1058	12	TM		
50	TM	2-Pentanone	0.0439	0.0485	11	TM		
51	TM*	1,2-Dichloropropane	0.0439	0.0488	11	TM*		
52	TM	Bromodichloromethane	0.1170	0.1334	14	TM		
53	TM	Methyl Cyclohexane	0.1171	0.1542	32	TM		*nt
54	TM	Dibromomethane	0.0504	0.0586	16	TM		
55	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0625	18	TML	7.3	
56	TM	1-Bromo-2-chloroethane	0.0166	0.0184	11	TM		
57	TM	2-Chloroethyl vinyl ether	0.0000	0.0021	0.00	TM		
58	TM	Cis-1,3-Dichloropropene	0.0000	0.0737	0.00	TM		
59	TM*	Toluene	0.3699	0.4359	18	TM*		
60	TM	Trans-1,3-Dichloropropene	0.1216	0.1413	16	TM		
61	TM	1,1,2-TCA	0.0624	0.0645	3.4	TM		
62	TML	2-Hexanone	0.0328	0.0390	19	TML	4.8	
63	I	Chlorobenzene-D5 (IS)	ISTD			I		
64	SL	Toluene-D8(S)	1.165	1.093	6.2	SL	4.6	
65	TM	1,2-EDB	0.0954	0.1044	9.5	TM		
66	TML	Tetrachloroethene	0.0768	0.0896	17	TML	23	*nt
67	TM	1-Chlorohexane	0.1332	0.1588	19	TM		
68	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1408	16	TM		
69	TM	m&p-Xylene	0.2201	0.2644	20	TM		
70	TM	o-Xylene	0.2265	0.2664	18	TM		
71	TM	Styrene	0.3566	0.4350	22	TM		*nt
72	SL	4-Bromofluorobenzene(S)	0.4819	0.4585	4.9	SL	6.2	
73	TM	1,3-Dichloropropane	0.1467	0.1649	12	TM		
74	TM	Dibromochloromethane	0.1196	0.1391	16	TM		
75	TM**	Chlorobenzene	0.3300	0.3815	16	TM**		
76	TM*	Ethylbenzene	0.5179	0.6192	20	TM*		
77	TM**	Bromoform	0.0968	0.1057	9.1	TM**		
78	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
79	TML	Isopropylbenzene	1.093	1.179	7.9	TML	27	*nt
80	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.2113	0.87	TM**L	23	*nt
		Average			14.9			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M04.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	1,2,3-Trichloropropane	0.0711	0.0778	9.5	TML	22	*nt
82	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0439	30	TM		*nt
83	TML	Bromobenzene	0.3590	0.3755	4.6	TML	28	*nt
84	TML	n-Propylbenzene	1.314	1.234	6.1	TML	17	
85	TML	4-Ethyltoluene	0.8718	1.069	23	TML	21	*nt
86	TML	2-Chlorotoluene	1.149	0.8075	30	TML	4.2	
87	TM	1,3,5-Trimethylbenzene	0.7409	0.9209	24	TM		*nt
88	TML	4-Chlorotoluene	0.7947	0.9118	15	TML	27	*nt
89	TM	Tert-Butylbenzene	0.3648	0.4535	24	TM		*nt
90	TM	1,2,4-Trimethylbenzene	0.6195	0.7649	23	TM		*nt
91	TM	Sec-Butylbenzene	0.7475	0.9556	28	TM		*nt
92	TML	p-Isopropyltoluene	0.5659	0.7143	26	TML	11	
93	TML	Benzyl Chloride	0.1244	0.1642	32	TML	17	
94	TM	1,3-DCB	0.5258	0.6307	20	TM		
95	TM	1,4-DCB	0.5141	0.5980	16	TM		
96	TML	n-Butylbenzene	0.3139	0.4064	29	TML	7.4	
97	TM	1,2-DCB	0.4455	0.5477	23	TM		*nt
98	TML	Hexachloroethane	0.1691	0.1678	0.71	TML	14	
99	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0338	7.0	TML	1.2	
100	TML	1,2,4-Trichlorobenzene	0.0764	0.0888	16	TML	4.9	
101	TML	Hexachlorobutadiene	0.1018	0.1299	28	TML	12	
102	TML	Naphthalene	0.2026	0.2137	5.5	TML	0.42	
103	TML	1,2,3-Trichlorobenzene	0.0930	0.1031	11	TML	3.7	
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			18.8			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475866	25.0000 ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1231358	25.0000 ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	677527	25.0000 ppb		0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	347870	29.0753 ppb		0.00
Spiked Amount 25.000			Recovery = 116.300%			
44) 1,2-DCA-D4(S)	5.11	65	358124	26.1726 ppb		0.00
Spiked Amount 25.000			Recovery = 104.692%			
64) Toluene-D8(S)	7.37	98	1345448	26.1614 ppb		0.00
Spiked Amount 25.000			Recovery = 104.644%			
72) 4-Bromofluorobenzene(S)	10.03	95	564564	26.5467 ppb		0.00
Spiked Amount 25.000			Recovery = 106.188%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	59520	13.0956 ppb		90
4) Freon 114	1.04	85	52200	14.5449 ppb		100
5) Chloromethane	1.08	50	64712	11.1105 ppb		97
6) Vinyl chloride	1.15	62	63769	11.7310 ppb		96
8) Bromomethane	1.34	94	30016	13.5308 ppb		96
9) Chloroethane	1.42	64	34657	11.0441 ppb		90
10) Dichlorofluoromethane	1.56	67	70774	12.5750 ppb		100
11) Trichlorofluoromethane	1.60	101	85624	13.0096 ppb		96
13) Acrolein	1.90	56	19560	136.4180 ppb	#	78
14) Acetone	2.03	43	58211	52.5228 ppb		98
15) Freon-113	2.02	103	16357	12.9343 ppb		92
16) Acetonitrile	2.25	41	62755	123.5996 ppb		92
18) 1,1-DCE	1.99	61	75013	11.7008 ppb		97
19) t-Butanol	2.59	59	47414	136.1291 ppb		92
20) Methyl Acetate	2.34	43	35433	11.5519 ppb		95
21) Iodomethane	2.10	142	61650	10.0517 ppb		98
22) Acrylonitrile	2.72	53	1412	3.4136 ppb	#	13
24) Methylene chloride	2.41	84	57414	11.8442 ppb		90
25) Carbon disulfide	2.15	76	98256	11.8867 ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	144270	10.9057 ppb		96
27) Trans-1,2-DCE	2.70	96	63652	11.5186 ppb		94
29) Diisopropyl Ether	3.35	45	168837	11.2153 ppb		99
30) 1,1-DCA	3.16	63	101184	11.6748 ppb	#	95
32) Ethyl tert Butyl Ether	3.87	59	152750	11.6369 ppb	#	86
34) MEK (2-Butanone)	4.04	43	86493	58.3822 ppb		95
35) Cis-1,2-DCE	3.97	96	68267	12.0935 ppb		95
36) 2,2-Dichloropropane	3.96	77	86810	11.6805 ppb		95
37) Chloroform	4.48	83	104987	11.6183 ppb		98
38) Bromochloromethane	4.31	130	45208	11.3022 ppb		98
40) 1,1,1-TCA	4.70	97	94681	11.7658 ppb		97
41) Cyclohexane	4.79	41	45953	12.8811 ppb		97
42) 1,1-Dichloropropene	4.95	75	77648	12.0449 ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	147166	14.7256 ppb		94
45) Carbon Tetrachloride	4.94	117	86067	12.2623 ppb		96
46) Tert Amyl Methyl Ether	5.44	73	127546	12.0530 ppb		99
47) 1,2-DCA	5.21	62	76760	11.6760 ppb		99
48) Benzene	5.19	78	231281	11.4575 ppb		99
49) TCE	6.02	95	62441	11.1751 ppb		91
50) 2-Pentanone	6.28	43	358225	138.2188 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	28832	11.1356	ppb		98
52)	Bromodichloromethane	6.59	83	78757	11.4013	ppb		95
53)	Methyl Cyclohexane	6.24	83	91006	13.1694	ppb		96
54)	Dibromomethane	6.37	93	34615	11.6266	ppb		99
55)	MIBK (methyl isobutyl ket	7.29	43	184508	53.6610	ppb		96
56)	1-Bromo-2-chloroethane	6.90	144	10858	11.0504	ppb		94
59)	Toluene	7.44	91	257353	11.7848	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	83403	11.6178	ppb		98
61)	1,1,2-TCA	7.86	83	38099	10.3371	ppb		93
62)	2-Hexanone	8.18	43	115008	52.3900	ppb		94
65)	1,2-EDB	8.34	107	51411	10.9457	ppb		94
66)	Tetrachloroethene	8.01	164	44144	12.2926	ppb		96
67)	1-Chlorohexane	8.91	91	78214	11.9198	ppb		99
68)	1,1,1,2-Tetrachloroethane	8.96	131	69328	11.5516	ppb		96
69)	m&p-Xylene	9.14	106	260432	24.0199	ppb		97
70)	o-Xylene	9.52	106	131191	11.7590	ppb		99
71)	Styrene	9.53	104	214247	12.1964	ppb		97
73)	1,3-Dichloropropane	8.03	76	81238	11.2406	ppb		96
74)	Dibromochloromethane	8.25	129	68497	11.6283	ppb		98
75)	Chlorobenzene	8.87	112	187894	11.5596	ppb		93
76)	Ethylbenzene	9.01	91	304967	11.9563	ppb		95
77)	Bromoform	9.68	173	52039	10.9108	ppb		99
79)	Isopropylbenzene	9.91	105	319522	12.6793	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	57258	12.3292	ppb		92
81)	1,2,3-Trichloropropane	10.21	110	21085	12.1607	ppb	#	79
82)	t-1,4-Dichloro-2-Butene	10.25	53	11907	12.9644	ppb		79
83)	Bromobenzene	10.15	156	101752	12.8231	ppb		99
84)	n-Propylbenzene	10.32	91	334395	11.6955	ppb		98
85)	4-Ethyltoluene	10.44	105	289668	12.1395	ppb		98
86)	2-Chlorotoluene	10.37	91	218847	9.5752	ppb		98
87)	1,3,5-Trimethylbenzene	10.50	105	249587	12.4302	ppb		99
88)	4-Chlorotoluene	10.48	91	247113	12.7389	ppb		96
89)	Tert-Butylbenzene	10.82	119	122904	12.4316	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	207283	12.3457	ppb		99
91)	Sec-Butylbenzene	11.04	105	258977	12.7835	ppb		99
92)	p-Isopropyltoluene	11.19	119	193587	11.1050	ppb		99
93)	Benzyl Chloride	11.33	91	44507	11.6557	ppb	#	91
94)	1,3-DCB	11.10	146	170936	11.9953	ppb		98
95)	1,4-DCB	11.19	146	162054	11.6303	ppb		96
96)	n-Butylbenzene	11.59	91	110141	10.7365	ppb		98
97)	1,2-DCB	11.55	146	148427	12.2943	ppb		97
98)	Hexachloroethane	11.81	117	45489	11.3584	ppb		88
99)	1,2-Dibromo-3-chloropropan	12.31	157	9152	10.1217	ppb		98
100)	1,2,4-Trichlorobenzene	13.15	180	24056	10.4944	ppb		88
101)	Hexachlorobutadiene	13.35	225	35194	11.2147	ppb		97
102)	Naphthalene	13.38	128	57907	9.9576	ppb		100
103)	1,2,3-Trichlorobenzene	13.62	180	27952	10.3656	ppb		96

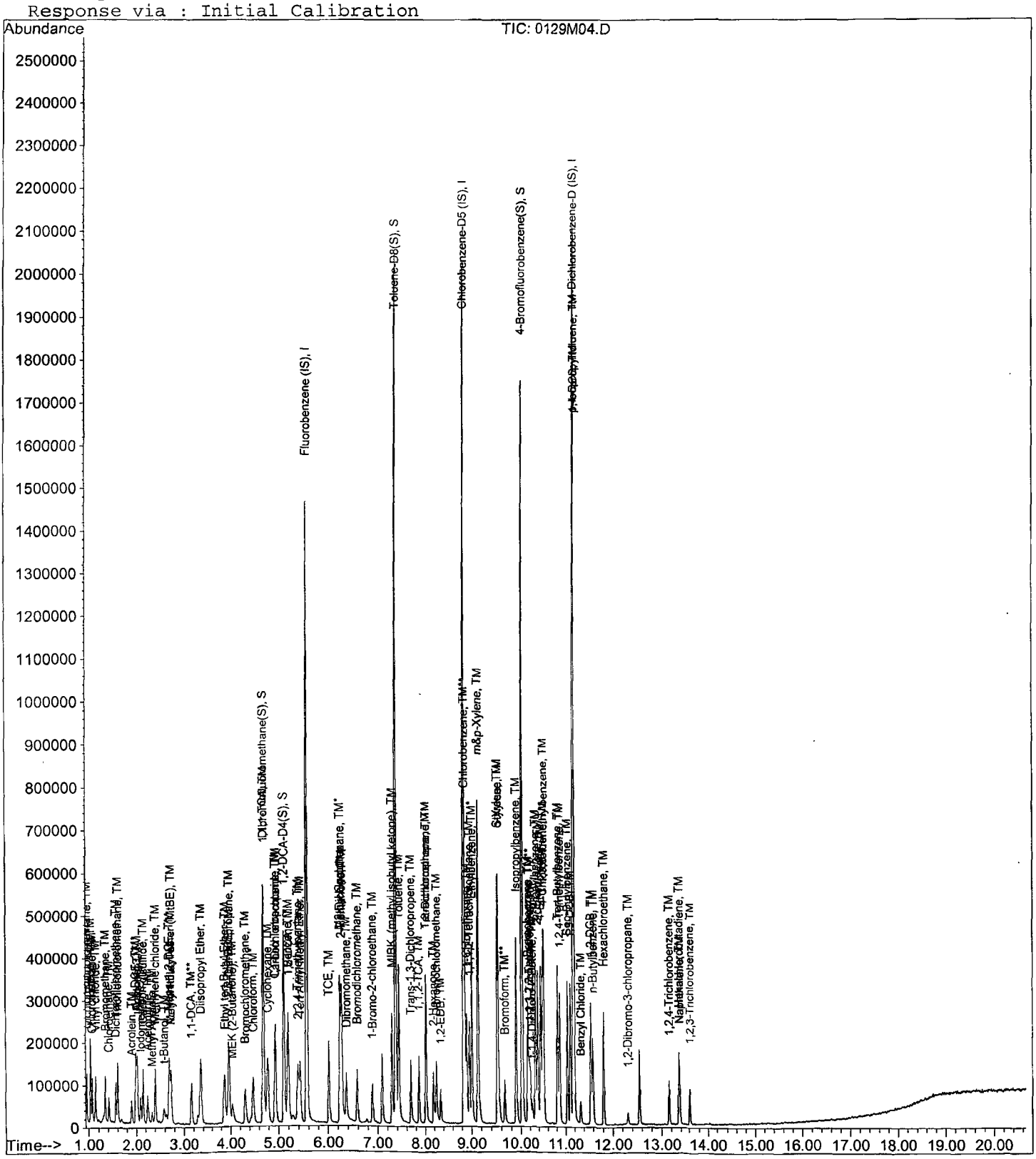
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0002	0.00	TM	
3	TM	Dichlorodifluoromethane	0.0770	0.1003	30	TM	
4	TM	Freon 114	0.0608	0.0827	36	TM	
5	TM**	Chloromethane	0.0987	0.1047	6.1	TM**	
6	TM*	Vinyl chloride	0.0921	0.0964	4.7	TM*	
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0443	0.0533	20	TML	42
9	TM	Chloroethane	0.0532	0.0574	8.0	TM	
10	TML	Dichlorofluoromethane	0.1025	0.1141	11	TML	20
11	TM	Trichlorofluoromethane	0.1115	0.1463	31	TM	
12	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM	
13	TM	Acrolein	0.0024	0.0027	11	TM	
14	TM	Acetone	0.0188	0.0191	1.5	TM	
15	TML	Freon-113	0.0241	0.0260	8.1	TML	22
16	TM	Acetonitrile	0.0086	0.0085	0.85	TM	
17	TM	2-propanol	0.0000	0.0000	0.00	TM	
18	TM*	1,1-DCE	0.1086	0.1190	9.6	TM*	
19	TM	t-Butanol	0.0059	0.0064	8.8	TM	
20	TML	Methyl Acetate	0.0601	0.0556	7.5	TML	6.7
21	TML	Iodomethane	0.0905	0.0835	7.7	TML	18
22	TML	Acrylonitrile	0.0144	0.0310	116	TML	37
23	TM	2-Methylpentane	0.0000	0.0011	0.00	TM	
24	TML	Methylene chloride	0.1021	0.0919	9.9	TML	12
25	TM	Carbon disulfide	0.1400	0.1489	6.3	TM	
26	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2451	9.4	TM	
27	TM	Trans-1,2-DCE	0.0936	0.1007	7.6	TM	
28	TM	3-Methylpentane	0.0000	0.0541	0.00	TM	
29	TM	Diisopropyl Ether	0.2550	0.2798	9.7	TM	
30	TM**	1,1-DCA	0.1468	0.1609	9.6	TM**	
31	TM	Vinyl Acetate	0.0000	0.0548	0.00	TM	
32	TM	Ethyl tert Butyl Ether	0.2223	0.2550	15	TM	
33	TML	Methylcyclopentane	0.0000	0.0005	0.00	TML	
34	TM	MEK (2-Butanone)	0.0251	0.0274	9.1	TM	
35	TML	Cis-1,2-DCE	0.1011	0.1107	9.5	TML	16
36	TM	2,2-Dichloropropane	0.1259	0.1273	1.1	TM	
37	TM*	Chloroform	0.1531	0.1733	13	TM*	
38	TM	Bromochloromethane	0.0678	0.0780	15	TM	
39	SL	Dibromofluoromethane(S)	0.2351	0.2437	3.6	SL	21
40	TM	1,1,1-TCA	0.1363	0.1578	16	TM	
		Average			11.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
41	TML	Cyclohexane	0.0653	0.0776	19	TML	28
42	TM	1,1-Dichloropropene	0.1092	0.1215	11	TM	
43	TML	2,2,4-Trimethylpentane	0.1657	0.2110	27	TML	26
44	SL	1,2-DCA-D4(S)	0.2551	0.2585	1.3	SL	12
45	TM	Carbon Tetrachloride	0.1189	0.1422	20	TM	
46	TM	Tert Amyl Methyl Ether	0.1793	0.2215	24	TM	
47	TM	1,2-DCA	0.1114	0.1278	15	TM	
48	TM	Benzene	0.3419	0.3802	11	TM	
49	TM	TCE	0.0946	0.1115	18	TM	
50	TM	2-Pentanone	0.0439	0.0461	5.1	TM	
51	TM*	1,2-Dichloropropane	0.0439	0.0467	6.4	TM*	
52	TM	Bromodichloromethane	0.1170	0.1369	17	TM	
53	TM	Methyl Cyclohexane	0.1171	0.1484	27	TM	
54	TM	Dibromomethane	0.0504	0.0586	16	TM	
55	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0566	6.8	TML	1.6
56	TM	1-Bromo-2-chloroethane	0.0166	0.0199	19	TM	
57	TM	2-Chloroethyl vinyl ether	0.0000	0.0012	0.00	TM	
58	TM	Cis-1,3-Dichloropropene	0.0000	0.0717	0.00	TM	
59	TM*	Toluene	0.3699	0.4332	17	TM*	
60	TM	Trans-1,3-Dichloropropene	0.1216	0.1320	8.5	TM	
61	TM	1,1,2-TCA	0.0624	0.0659	5.5	TM	
62	TML	2-Hexanone	0.0328	0.0342	4.4	TML	5.7
63	I	Chlorobenzene-D5 (IS)	ISTD			I	
64	SL	Toluene-D8(S)	1.165	1.147	1.6	SL	11
65	TM	1,2-EDB	0.0954	0.1061	11	TM	
66	TML	Tetrachloroethene	0.0768	0.0914	19	TML	25
67	TM	1-Chlorohexane	0.1332	0.1418	6.4	TM	
68	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1390	14	TM	
69	TM	m&p-Xylene	0.2201	0.2527	15	TM	
70	TM	o-Xylene	0.2265	0.2560	13	TM	
71	TM	Styrene	0.3566	0.4272	20	TM	
72	SL	4-Bromofluorobenzene(S)	0.4819	0.4749	1.4	SL	10
73	TM	1,3-Dichloropropane	0.1467	0.1648	12	TM	
74	TM	Dibromochloromethane	0.1196	0.1432	20	TM	
75	TM**	Chlorobenzene	0.3300	0.3765	14	TM**	
76	TM*	Ethylbenzene	0.5179	0.5976	15	TM*	
77	TM**	Bromoform	0.0968	0.1107	14	TM**	
78	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
79	TML	Isopropylbenzene	1.093	1.097	0.40	TML	17
80	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.1918	8.4	TM**L	11
		Average			12.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
81	TML	1,2,3-Trichloropropane	0.0711	0.0787	11	TML	23
82	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0333	1.6	TM	
83	TML	Bromobenzene	0.3590	0.3595	0.13	TML	22
84	TML	n-Propylbenzene	1.314	1.141	13	TML	6.4
85	TML	4-Ethyltoluene	0.8718	1.000	15	TML	13
86	TML	2-Chlorotoluene	1.149	0.7694	33	TML	12
87	TM	1,3,5-Trimethylbenzene	0.7409	0.8527	15	TM	
88	TML	4-Chlorotoluene	0.7947	0.8759	10	TML	22
89	TM	Tert-Butylbenzene	0.3648	0.4432	21	TM	
90	TM	1,2,4-Trimethylbenzene	0.6195	0.7512	21	TM	
91	TM	Sec-Butylbenzene	0.7475	0.8619	15	TM	
92	TML	p-Isopropyltoluene	0.5659	0.6739	19	TML	5.6
93	TML	Benzyl Chloride	0.1244	0.1269	2.0	TML	1.8
94	TM	1,3-DCB	0.5258	0.6015	14	TM	
95	TM	1,4-DCB	0.5141	0.5621	9.3	TM	
96	TML	n-Butylbenzene	0.3139	0.3314	5.6	TML	8.0
97	TM	1,2-DCB	0.4455	0.5130	15	TM	
98	TML	Hexachloroethane	0.1691	0.1740	2.9	TML	18
99	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0338	7.0	TML	1.2
100	TML	1,2,4-Trichlorobenzene	0.0764	0.0733	4.0	TML	6.6
101	TML	Hexachlorobutadiene	0.1018	0.1055	3.7	TML	2.9
102	TML	Naphthalene	0.2026	0.1708	16	TML	16
103	TML	1,2,3-Trichlorobenzene	0.0930	0.0891	4.1	TML	5.9
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			11.2		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M29.D Vial: 29
Acq On : 30 Jan 21 5:35 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1437245	25.0000	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1188390	25.0000	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	668167	25.0000	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	350279	30.2412	ppb		0.00
Spiked Amount 25.000			Recovery = 120.964%				
44) 1,2-DCA-D4(S)	5.11	65	371552	28.0614	ppb		0.00
Spiked Amount 25.000			Recovery = 112.244%				
64) Toluene-D8(S)	7.37	98	1362510	27.6387	ppb		0.00
Spiked Amount 25.000			Recovery = 110.556%				
72) 4-Bromofluorobenzene(S)	10.03	95	564378	27.6212	ppb		0.00
Spiked Amount 25.000			Recovery = 110.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	57668	13.0290	ppb		95
4) Freon 114	1.04	85	47539	13.6022	ppb		97
5) Chloromethane	1.08	50	60180	10.6101	ppb		94
6) Vinyl chloride	1.15	62	55430	10.4710	ppb		98
8) Bromomethane	1.34	94	30647	14.2261	ppb		94
9) Chloroethane	1.42	64	33004	10.8000	ppb		94
10) Dichlorofluoromethane	1.56	67	65573	11.9951	ppb		98
11) Trichlorofluoromethane	1.60	101	84089	13.1197	ppb		95
13) Acrolein	1.90	56	19408	138.9951	ppb	#	76
14) Acetone	2.03	43	54793	50.7673	ppb		98
15) Freon-113	2.02	103	14949	12.1675	ppb	#	79
16) Acetonitrile	2.25	41	61281	123.9398	ppb		92
18) 1,1-DCE	1.99	61	68399	10.9558	ppb		97
19) t-Butanol	2.59	59	46142	136.0369	ppb		97
20) Methyl Acetate	2.34	43	31956	10.6710	ppb		97
21) Iodomethane	2.10	142	48017	8.2396	ppb		96
22) Acrylonitrile	2.64	53	17811	13.6800	ppb	#	77
24) Methylene chloride	2.41	84	52858	11.1600	ppb		92
25) Carbon disulfide	2.15	76	85584	10.6319	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	140880	10.9356	ppb		99
27) Trans-1,2-DCE	2.69	96	57902	10.7596	ppb		95
29) Diisopropyl Ether	3.35	45	160860	10.9726	ppb		99
30) 1,1-DCA	3.15	63	92501	10.9598	ppb		98
32) Ethyl tert Butyl Ether	3.87	59	146571	11.4663	ppb		91
34) MEK (2-Butanone)	4.05	43	78665	54.5252	ppb		95
35) Cis-1,2-DCE	3.97	96	63643	11.5763	ppb		93
36) 2,2-Dichloropropane	3.96	77	73200	10.1139	ppb		94
37) Chloroform	4.48	83	99658	11.3249	ppb		98
38) Bromochloromethane	4.31	130	44861	11.5168	ppb		94
40) 1,1,1-TCA	4.70	97	90700	11.5740	ppb		96
41) Cyclohexane	4.78	41	44589	12.8361	ppb		99
42) 1,1-Dichloropropene	4.94	75	69835	11.1241	ppb		91
43) 2,2,4-Trimethylpentane	5.39	57	121306	12.6412	ppb		97
45) Carbon Tetrachloride	4.93	117	81723	11.9563	ppb		98
46) Tert Amyl Methyl Ether	5.44	73	127365	12.3593	ppb	#	97
47) 1,2-DCA	5.21	62	73492	11.4793	ppb		97
48) Benzene	5.19	78	218552	11.1179	ppb		97
49) TCE	6.02	95	64100	11.7803	ppb		92
50) 2-Pentanone	6.28	43	331457	131.3272	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M29.D Vial: 29
Acq On : 30 Jan 21 5:35 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	26832	10.6417 ppb		100
52)	Bromodichloromethane	6.59	83	78690	11.6977 ppb		95
53)	Methyl Cyclohexane	6.24	83	85321	12.6785 ppb		95
54)	Dibromomethane	6.37	93	33705	11.6252 ppb		97
55)	MIBK (methyl isobutyl ket	7.30	43	162746	49.2152 ppb		96
56)	1-Bromo-2-chloroethane	6.90	144	11424	11.9389 ppb		93
59)	Toluene	7.44	91	249045	11.7108 ppb		99
60)	Trans-1,3-Dichloropropene	7.69	75	75879	10.8537 ppb		99
61)	1,1,2-TCA	7.86	83	37866	10.5500 ppb		94
62)	2-Hexanone	8.18	43	98423	47.1278 ppb		98
65)	1,2-EDB	8.34	107	50437	11.1266 ppb		100
66)	Tetrachloroethene	8.01	164	43448	12.5426 ppb		89
67)	1-Chlorohexane	8.91	91	67398	10.6428 ppb		95
68)	1,1,1,2-Tetrachloroethane	8.96	131	66063	11.4056 ppb		99
69)	m&p-Xylene	9.14	106	240199	22.9548 ppb		95
70)	o-Xylene	9.52	106	121685	11.3013 ppb		92
71)	Styrene	9.53	104	203050	11.9770 ppb		96
73)	1,3-Dichloropropane	8.03	76	78358	11.2341 ppb		100
74)	Dibromochloromethane	8.25	129	68092	11.9775 ppb		98
75)	Chlorobenzene	8.87	112	178992	11.4101 ppb		96
76)	Ethylbenzene	9.01	91	284089	11.5404 ppb		95
77)	Bromoform	9.68	173	52636	11.4350 ppb		98
79)	Isopropylbenzene	9.91	105	293274	11.6672 ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	51254	11.1011 ppb		99
81)	1,2,3-Trichloropropane	10.21	110	21025	12.3183 ppb		92
82)	t-1,4-Dichloro-2-Butene	10.25	53	8911	9.8383 ppb		87
83)	Bromobenzene	10.15	156	96082	12.1950 ppb		95
84)	n-Propylbenzene	10.32	91	305057	10.6419 ppb		96
85)	4-Ethyltoluene	10.44	105	267341	11.3218 ppb		98
86)	2-Chlorotoluene	10.37	91	205637	8.8487 ppb		95
87)	1,3,5-Trimethylbenzene	10.51	105	227907	11.5095 ppb		98
88)	4-Chlorotoluene	10.48	91	234086	12.1842 ppb		96
89)	Tert-Butylbenzene	10.82	119	118440	12.1479 ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	200782	12.1260 ppb		98
91)	Sec-Butylbenzene	11.04	105	230348	11.5296 ppb		98
92)	p-Isopropyltoluene	11.19	119	180104	10.5555 ppb		98
93)	Benzyl Chloride	11.34	91	33910	9.8239 ppb		95
94)	1,3-DCB	11.11	146	160764	11.4395 ppb		99
95)	1,4-DCB	11.20	146	150240	10.9335 ppb		93
96)	n-Butylbenzene	11.59	91	88573	9.2036 ppb		99
97)	1,2-DCB	11.55	146	137113	11.5162 ppb		99
98)	Hexachloroethane	11.81	117	46514	11.8152 ppb		91
99)	1,2-Dibromo-3-chloropropan	12.31	157	9024	10.1203 ppb	#	81
100)	1,2,4-Trichlorobenzene	13.15	180	19592	9.3370 ppb		92
101)	Hexachlorobutadiene	13.36	225	28200	9.7087 ppb		98
102)	Naphthalene	13.38	128	45643	8.4485 ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	23821	9.4137 ppb		86

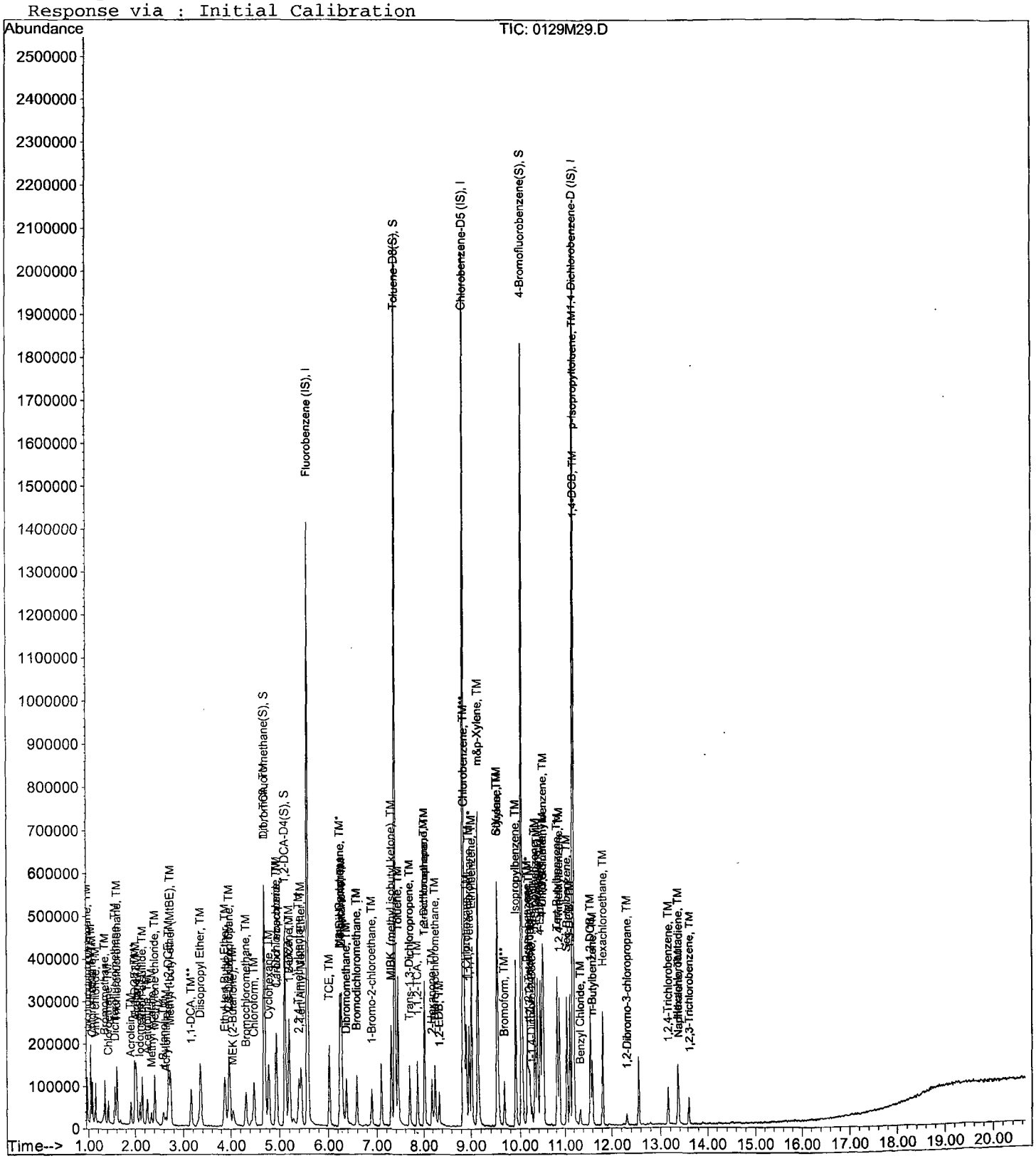
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M29.D Vial: 29
Acq On : 30 Jan 21 5:35 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M15.D Vial: 15
Acq On : 29 Jan 21 22:49 Operator: LP,DG,CH
Sample : BA26000W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:41 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1459300	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1256544	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	529365	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	342138	28.89	ppb	0.00
Spiked Amount 25.000			Recovery = 115.572%			
44) 1,2-DCA-D4(S)	5.11	65	357726	26.47	ppb	0.00
Spiked Amount 25.000			Recovery = 105.872%			
64) Toluene-D8(S)	7.37	98	1347261	25.60	ppb	0.00
Spiked Amount 25.000			Recovery = 102.400%			
72) 4-Bromofluorobenzene(S)	10.03	95	552244	25.30	ppb	0.00
Spiked Amount 25.000			Recovery = 101.216%			

Target Compounds Qvalue

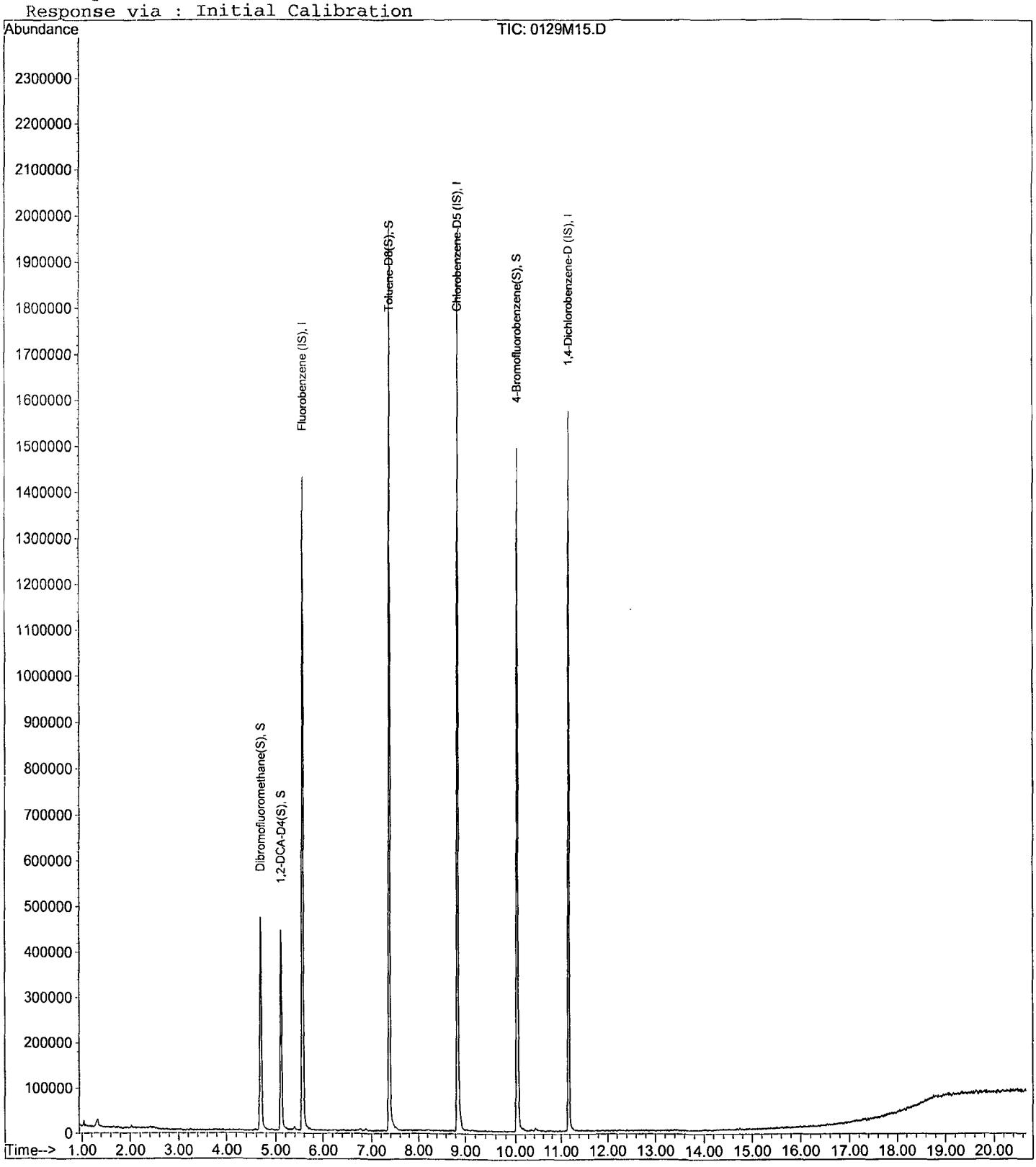
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M15.D Vial: 15
Acq On : 29 Jan 21 22:49 Operator: LP,DG,CH
Sample : BA26000W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:41 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M16.D Vial: 16
Acq On : 29 Jan 21 23:18 Operator: LP,DG,CH
Sample : BA26001W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:42 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1435734	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1226139	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	501236	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	350453	30.30	ppb	0.00
Spiked Amount 25.000			Recovery =	121.184%		
44) 1,2-DCA-D4(S)	5.11	65	361859	27.29	ppb	0.00
Spiked Amount 25.000			Recovery =	109.160%		
64) Toluene-D8(S)	7.37	98	1353573	26.47	ppb	0.00
Spiked Amount 25.000			Recovery =	105.884%		
72) 4-Bromofluorobenzene(S)	10.03	95	540479	25.39	ppb	0.00
Spiked Amount 25.000			Recovery =	101.556%		

Target Compounds Qvalue

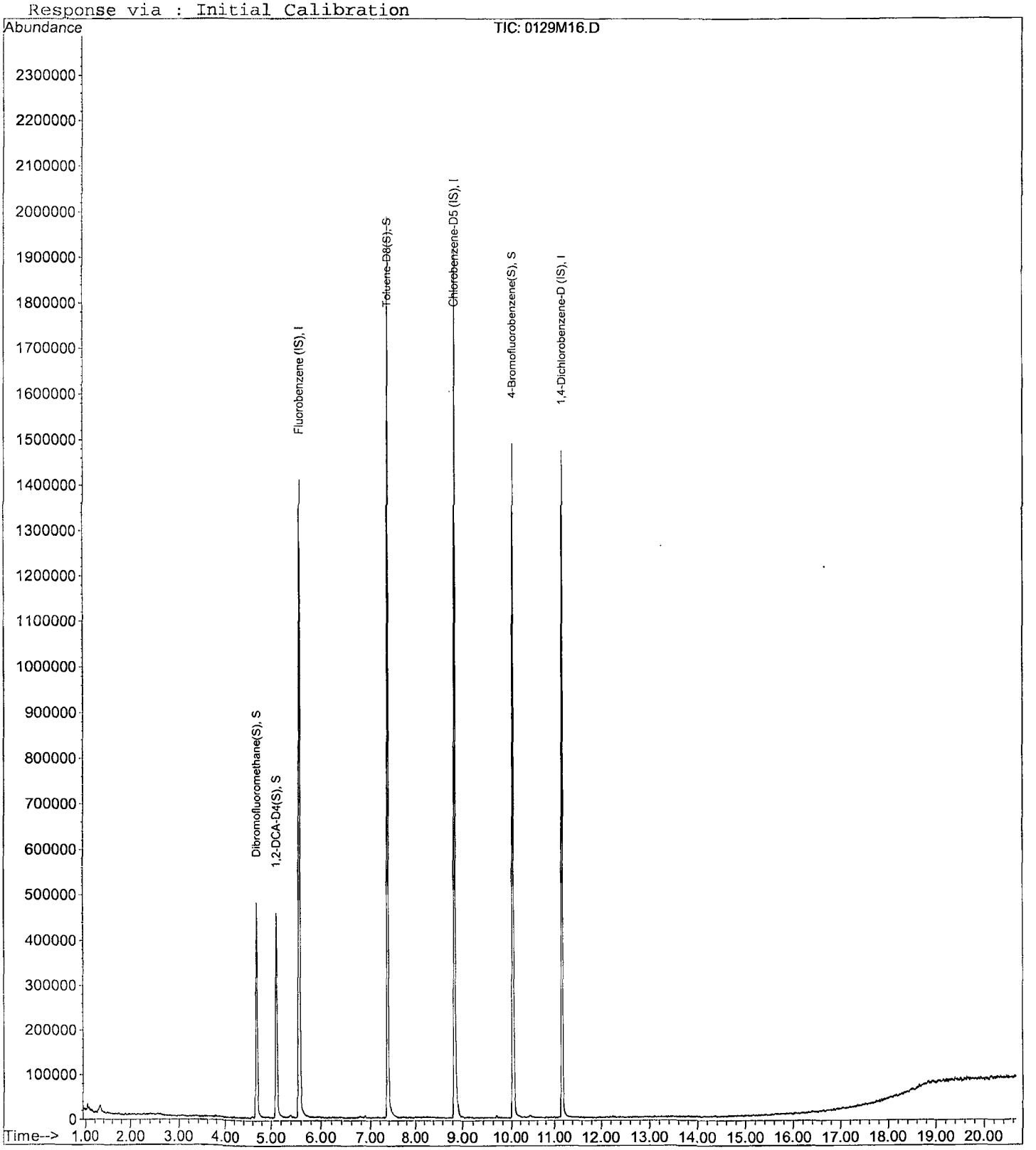
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M16.D Vial: 16
Acq On : 29 Jan 21 23:18 Operator: LP,DG,CH
Sample : BA26001W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:42 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M17.D Vial: 17
Acq On : 29 Jan 21 23:47 Operator: LP,DG,CH
Sample : BA26003W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:43 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1436481	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1231255	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	506789	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	347442	29.97	ppb	0.00
Spiked Amount 25.000			Recovery = 119.892%			
44) 1,2-DCA-D4(S)	5.11	65	362001	27.29	ppb	0.00
Spiked Amount 25.000			Recovery = 109.144%			
64) Toluene-D8(S)	7.37	98	1387140	27.09	ppb	0.00
Spiked Amount 25.000			Recovery = 108.372%			
72) 4-Bromofluorobenzene(S)	10.03	95	558322	26.22	ppb	0.00
Spiked Amount 25.000			Recovery = 104.868%			

Target Compounds Qvalue

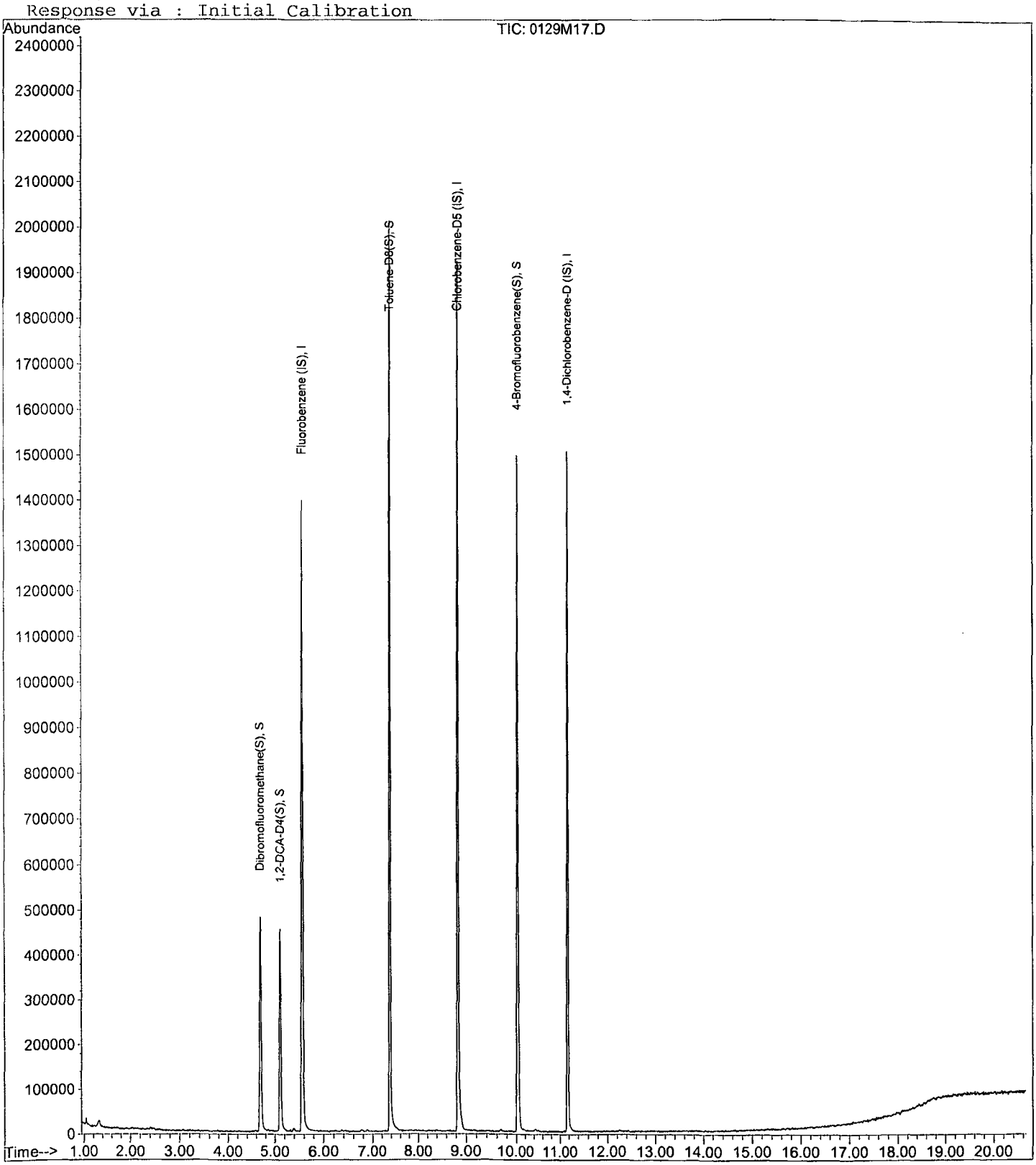
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M17.D Vial: 17
Acq On : 29 Jan 21 23:47 Operator: LP,DG,CH
Sample : BA26003W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:43 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M18.D Vial: 18
Acq On : 30 Jan 21 00:16 Operator: LP,DG,CH
Sample : BA26005W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:43 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1407872	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1205119	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	496134	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	362744	32.27	ppb	0.00
Spiked Amount 25.000			Recovery =	129.080%		
44) 1,2-DCA-D4(S)	5.11	65	376846	29.15	ppb	0.00
Spiked Amount 25.000			Recovery =	116.604%		
64) Toluene-D8(S)	7.37	98	1427504	28.68	ppb	0.00
Spiked Amount 25.000			Recovery =	114.724%		
72) 4-Bromofluorobenzene(S)	10.03	95	575715	27.81	ppb	0.00
Spiked Amount 25.000			Recovery =	111.220%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

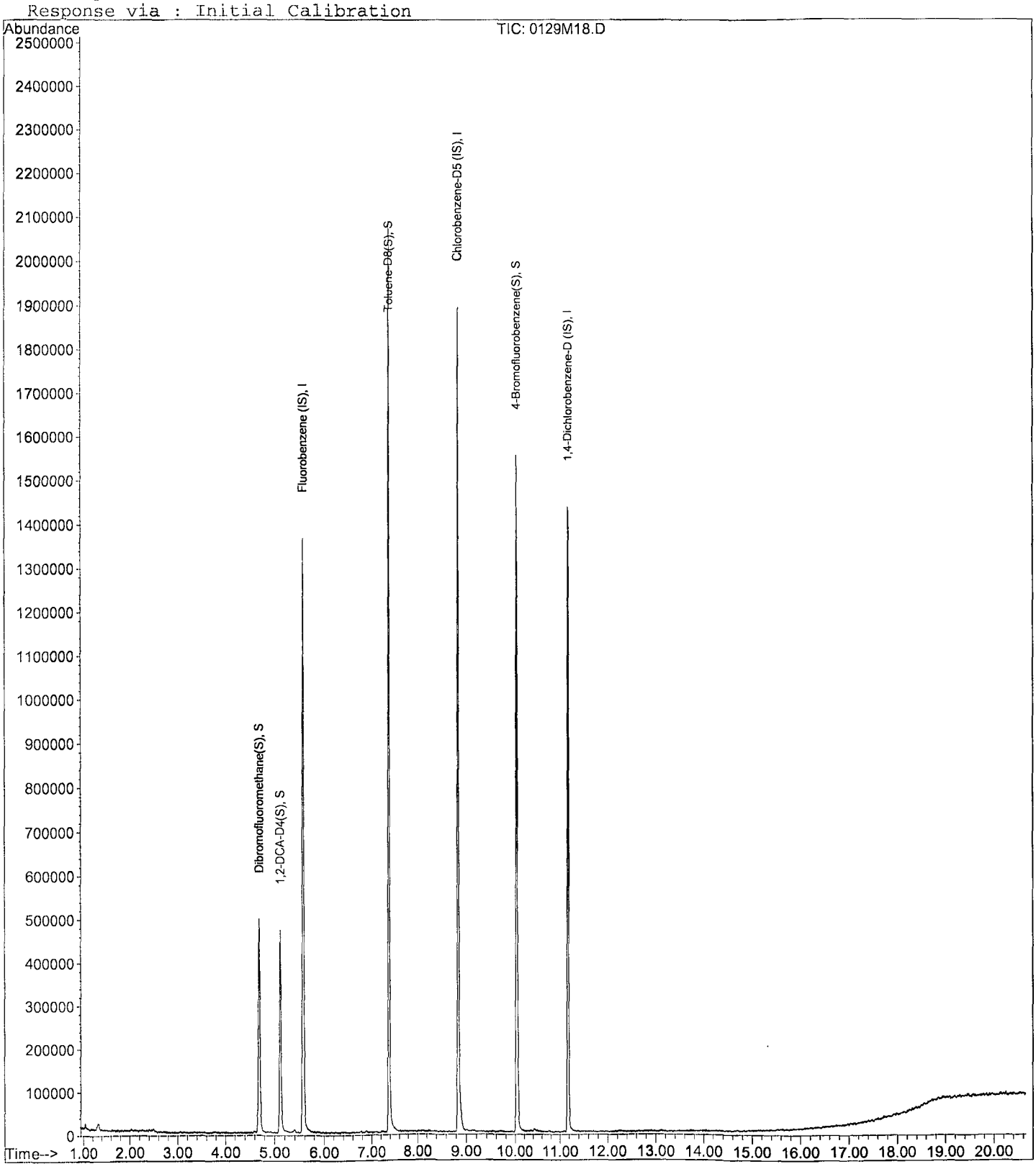
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M18.D
Acq On : 30 Jan 21 00:16
Sample : BA26005W01
Misc : IS 10/16/20

Vial: 18
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 15:43 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M19.D Vial: 19
Acq On : 30 Jan 21 00:45 Operator: LP,DG,CH
Sample : BA26006W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:47 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1407113	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1188029	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	747653	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	347148	30.68	ppb	0.00
Spiked Amount 25.000			Recovery =	122.708%		
44) 1,2-DCA-D4(S)	5.11	65	360278	27.77	ppb	0.00
Spiked Amount 25.000			Recovery =	111.068%		
64) Toluene-D8(S)	7.37	98	1344276	27.23	ppb	0.00
Spiked Amount 25.000			Recovery =	108.908%		
72) 4-Bromofluorobenzene(S)	10.02	95	572032	28.05	ppb	0.00
Spiked Amount 25.000			Recovery =	112.208%		

Target Compounds Qvalue

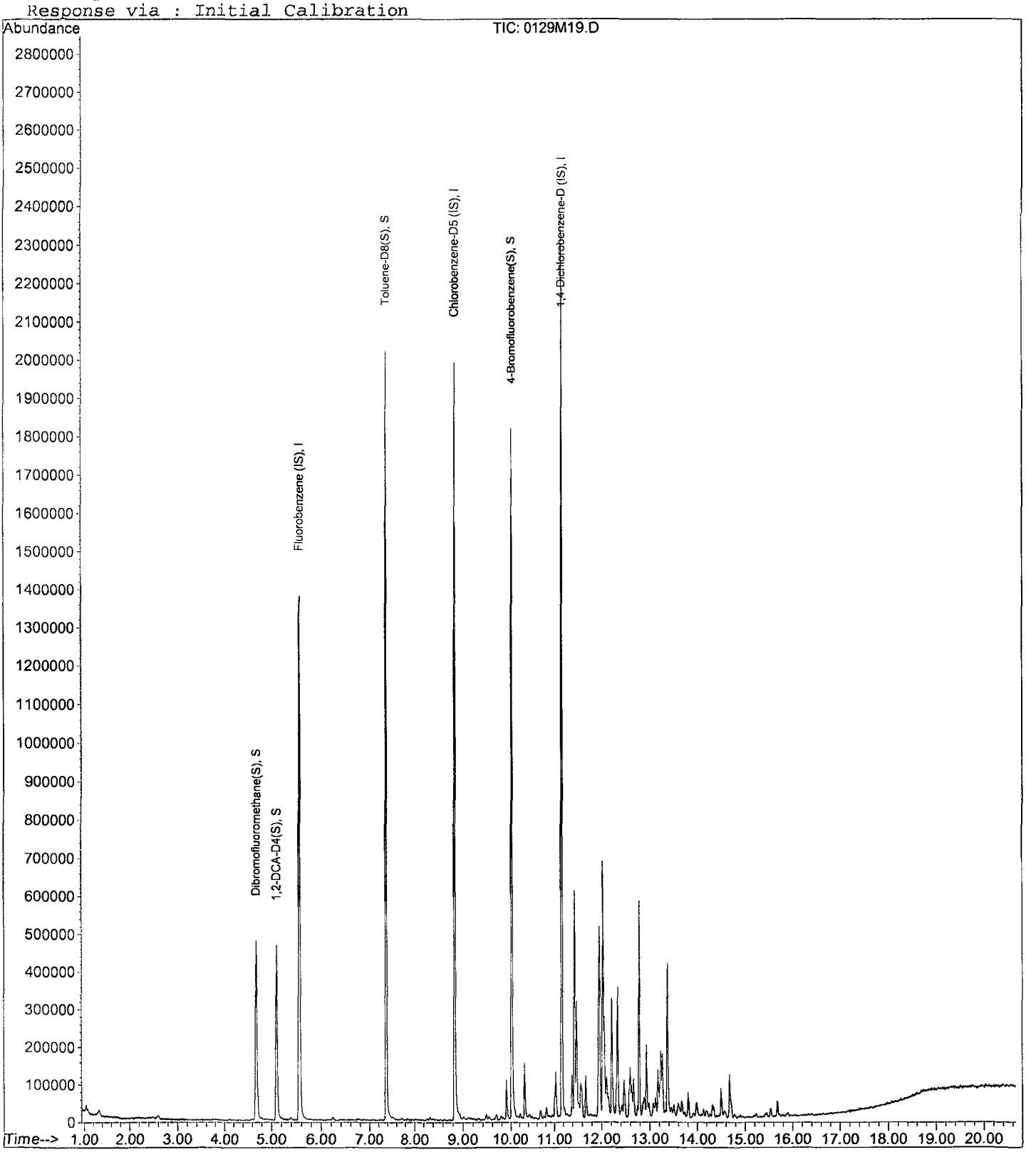
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M19.D Vial: 19
Acq On : 30 Jan 21 00:45 Operator: LP,DG,CH
Sample : BA26006W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:47 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M20.D Vial: 20
Acq On : 30 Jan 21 1:14 Operator: LP,DG,CH
Sample : BA26008W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:48 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1398787	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1170886	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	732641	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	339064	30.05	ppb	0.00
Spiked Amount 25.000			Recovery = 120.200%			
44) 1,2-DCA-D4(S)	5.11	65	351474	27.20	ppb	0.00
Spiked Amount 25.000			Recovery = 108.796%			
64) Toluene-D8(S)	7.37	98	1287410	26.35	ppb	0.00
Spiked Amount 25.000			Recovery = 105.400%			
72) 4-Bromofluorobenzene(S)	10.03	95	546161	27.07	ppb	0.00
Spiked Amount 25.000			Recovery = 108.272%			

Target Compounds Qvalue

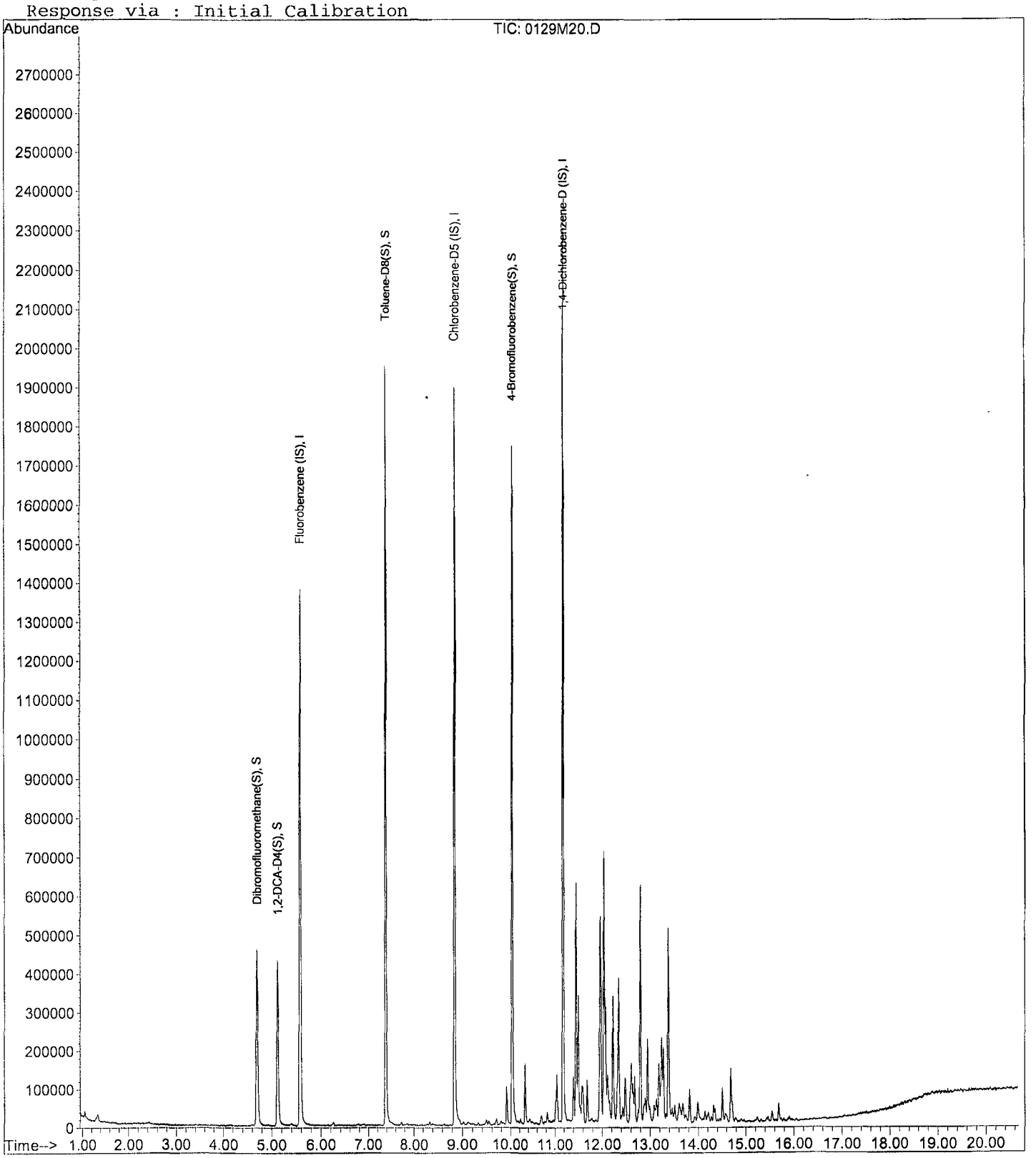
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M20.D Vial: 20
Acq On : 30 Jan 21 1:14 Operator: LP,DG,CH
Sample : BA26008W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:48 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M21.D Vial: 21
Acq On : 30 Jan 21 1:43 Operator: LP,DG,CH
Sample : BA26012W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:49 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1409054	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1206196	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	612243	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	330279	28.88	ppb	0.00
Spiked Amount 25.000			Recovery = 115.540%			
44) 1,2-DCA-D4(S)	5.11	65	351292	26.97	ppb	0.00
Spiked Amount 25.000			Recovery = 107.860%			
64) Toluene-D8(S)	7.37	98	1318616	26.18	ppb	0.00
Spiked Amount 25.000			Recovery = 104.704%			
72) 4-Bromofluorobenzene(S)	10.03	95	541937	25.95	ppb	0.00
Spiked Amount 25.000			Recovery = 103.780%			

Target Compounds Qvalue

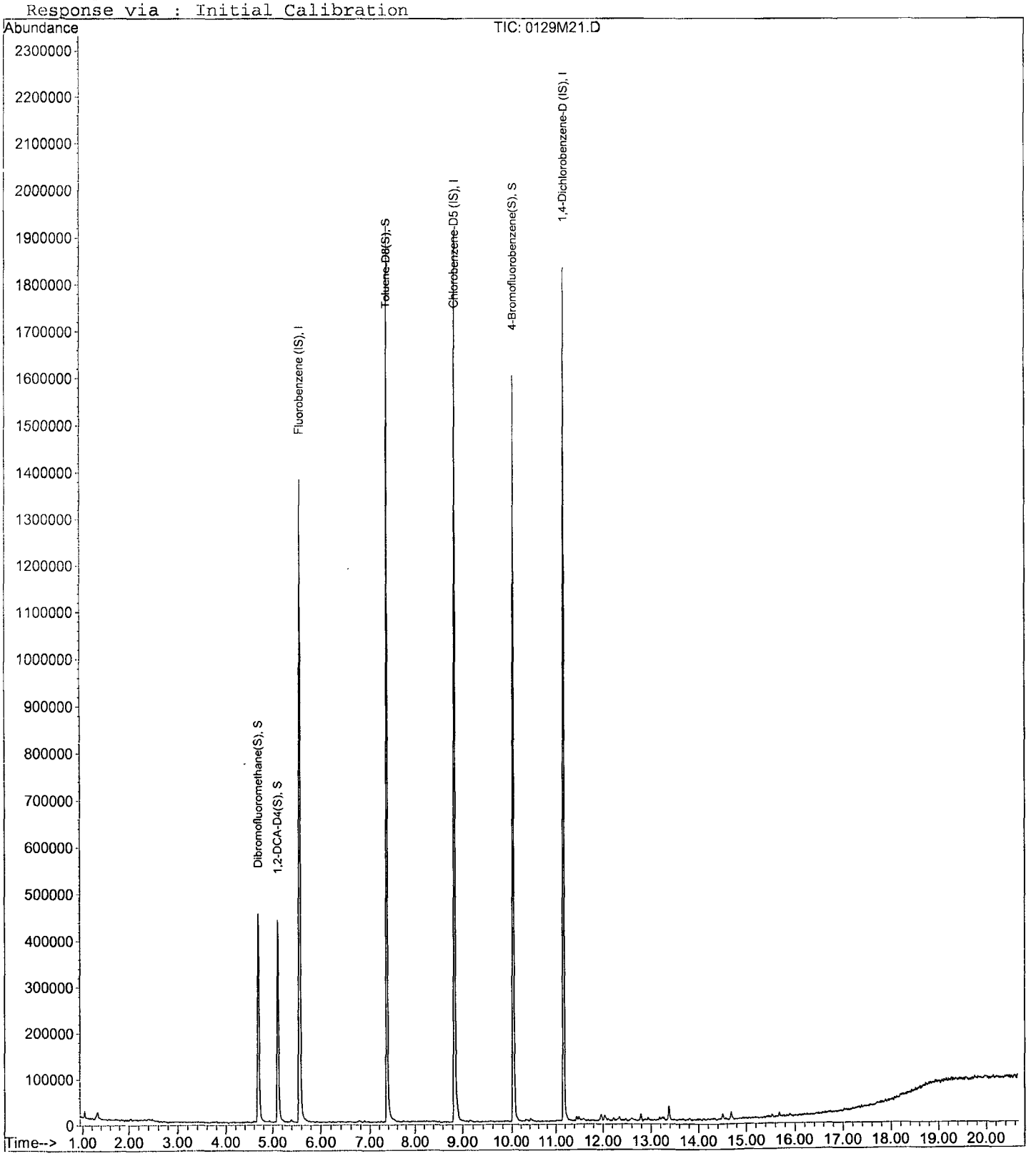
(#) = qualifier out of range (m) = manual integration
0129M21.D M0128W.M Tue Feb 09 15:16:59 2021 Page 1

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M21.D Vial: 21
Acq On : 30 Jan 21 1:43 Operator: LP,DG,CH
Sample : BA26012W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:49 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M22.D Vial: 22
Acq On : 30 Jan 21 2:12 Operator: LP,DG,CH
Sample : BA26013W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:49 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1433792	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1235761	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	585696	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	339408	29.22	ppb	0.00
Spiked Amount 25.000			Recovery =	116.892%		
44) 1,2-DCA-D4(S)	5.11	65	349844	26.33	ppb	0.00
Spiked Amount 25.000			Recovery =	105.332%		
64) Toluene-D8(S)	7.37	98	1323915	25.58	ppb	0.00
Spiked Amount 25.000			Recovery =	102.308%		
72) 4-Bromofluorobenzene(S)	10.03	95	551485	25.75	ppb	0.00
Spiked Amount 25.000			Recovery =	102.988%		

Target Compounds Qvalue

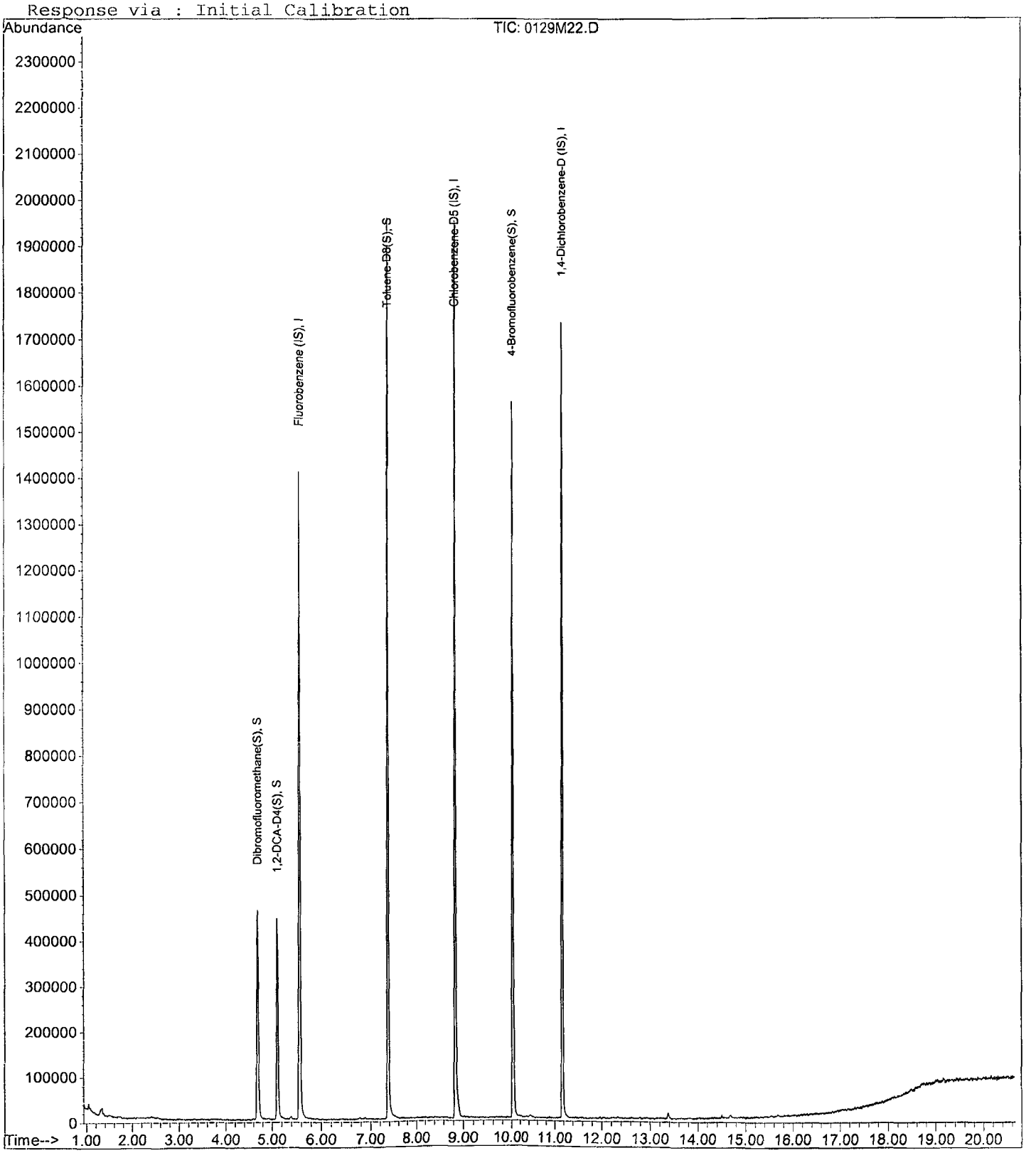
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M22.D Vial: 22
Acq On : 30 Jan 21 2:12 Operator: LP,DG,CH
Sample : BA26013W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:49 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M23.D Vial: 23
Acq On : 30 Jan 21 2:41 Operator: LP,DG,CH
Sample : BA26015W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:50 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1421830	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1215494	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	565947	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	334858	29.05	ppb	0.00
Spiked Amount 25.000			Recovery =	116.188%		
44) 1,2-DCA-D4(S)	5.11	65	346830	26.32	ppb	0.00
Spiked Amount 25.000			Recovery =	105.300%		
64) Toluene-D8(S)	7.37	98	1289984	25.30	ppb	0.00
Spiked Amount 25.000			Recovery =	101.204%		
72) 4-Bromofluorobenzene(S)	10.03	95	533242	25.25	ppb	0.00
Spiked Amount 25.000			Recovery =	101.008%		

Target Compounds Qvalue

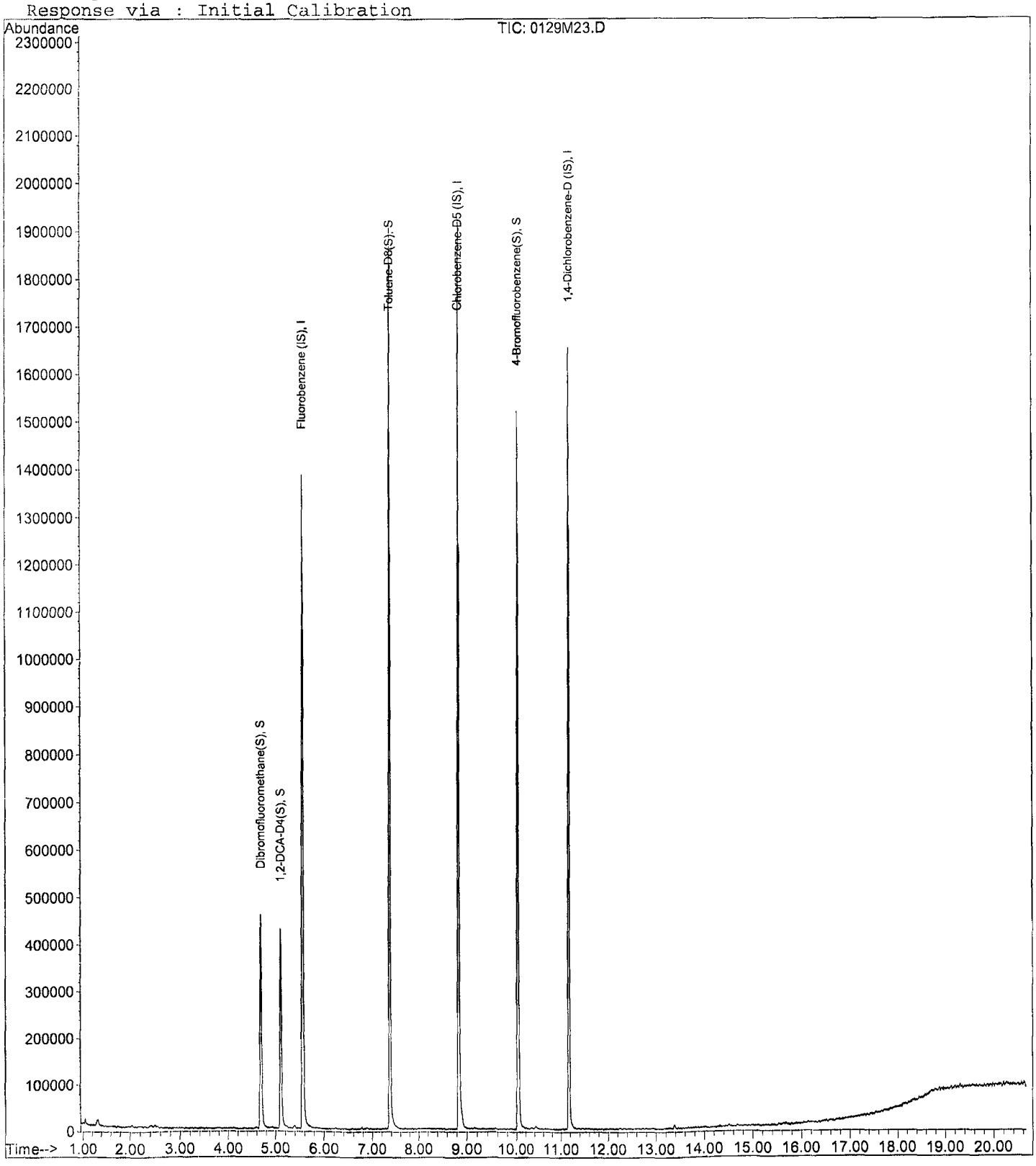
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M23.D Vial: 23
Acq On : 30 Jan 21 2:41 Operator: LP,DG,CH
Sample : BA26015W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:50 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M24.D Vial: 24
Acq On : 30 Jan 21 3:10 Operator: LP,DG,CH
Sample : BA26016W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:51 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1388764	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1197447	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	543795	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	330083	29.36	ppb	0.00
Spiked Amount 25.000			Recovery =	117.452%		
44) 1,2-DCA-D4(S)	5.11	65	347289	27.06	ppb	0.00
Spiked Amount 25.000			Recovery =	108.224%		
64) Toluene-D8(S)	7.37	98	1299446	25.96	ppb	0.00
Spiked Amount 25.000			Recovery =	103.824%		
72) 4-Bromofluorobenzene(S)	10.03	95	534670	25.76	ppb	0.00
Spiked Amount 25.000			Recovery =	103.052%		

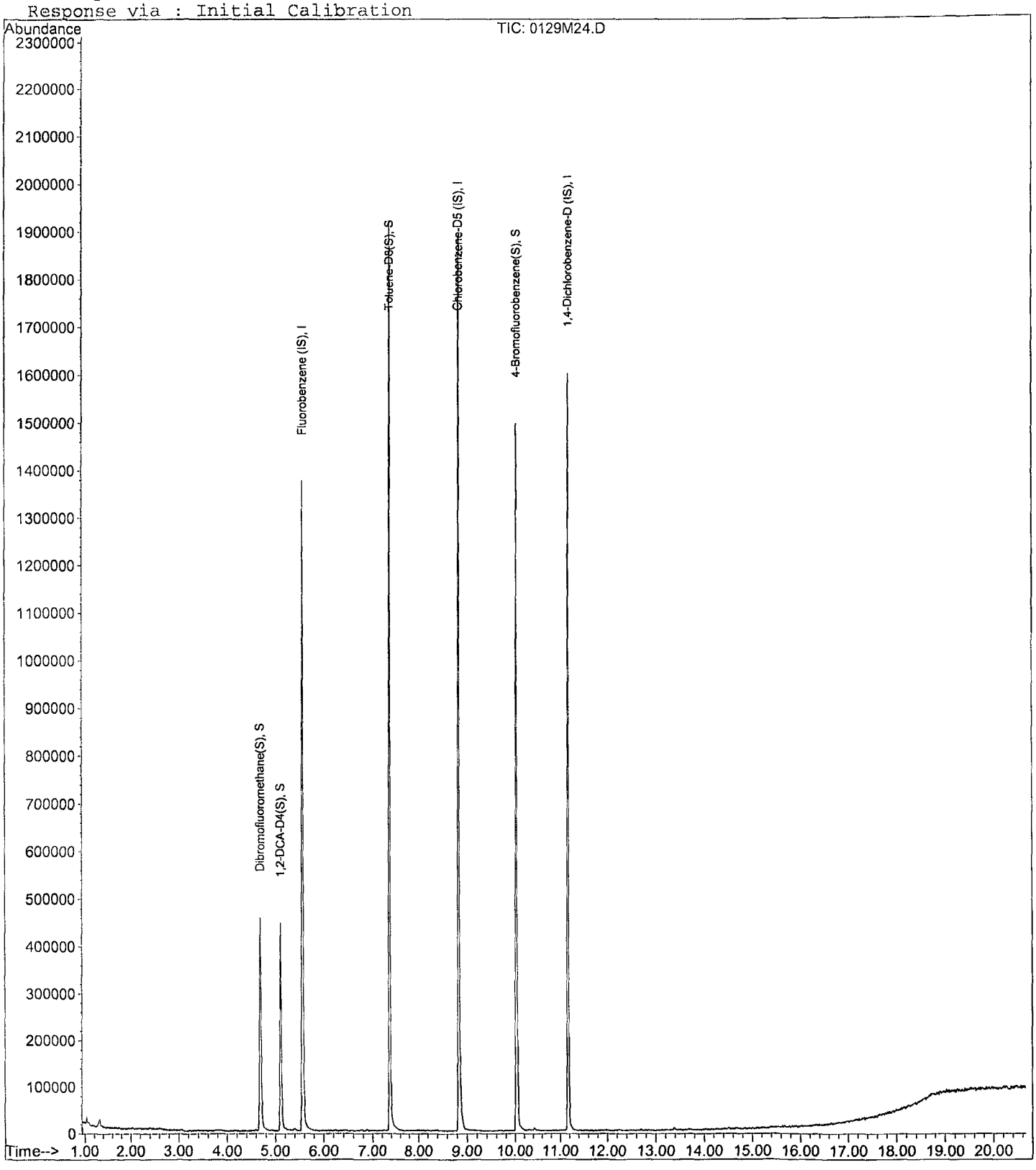
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\MAX\DATA\210128\0129M24.D Vial: 24
Acq On : 30 Jan 21 3:10 Operator: LP,DG,CH
Sample : BA26016W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:51 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D Vial: 8
Acq On : 29 Jan 21 19:26 Operator: LP,DG,CH
Sample : 210129A BLK Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:35 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1463100	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1262639	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	519641	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	349346	29.5215 ppb	0.00
Spiked Amount 25.000			Recovery	= 118.084%	
44) 1,2-DCA-D4(S)	5.11	65	368864	27.2987 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.196%	
64) Toluene-D8(S)	7.37	98	1412296	26.8710 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.484%	
72) 4-Bromofluorobenzene(S)	10.03	95	569182	26.0428 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.172%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

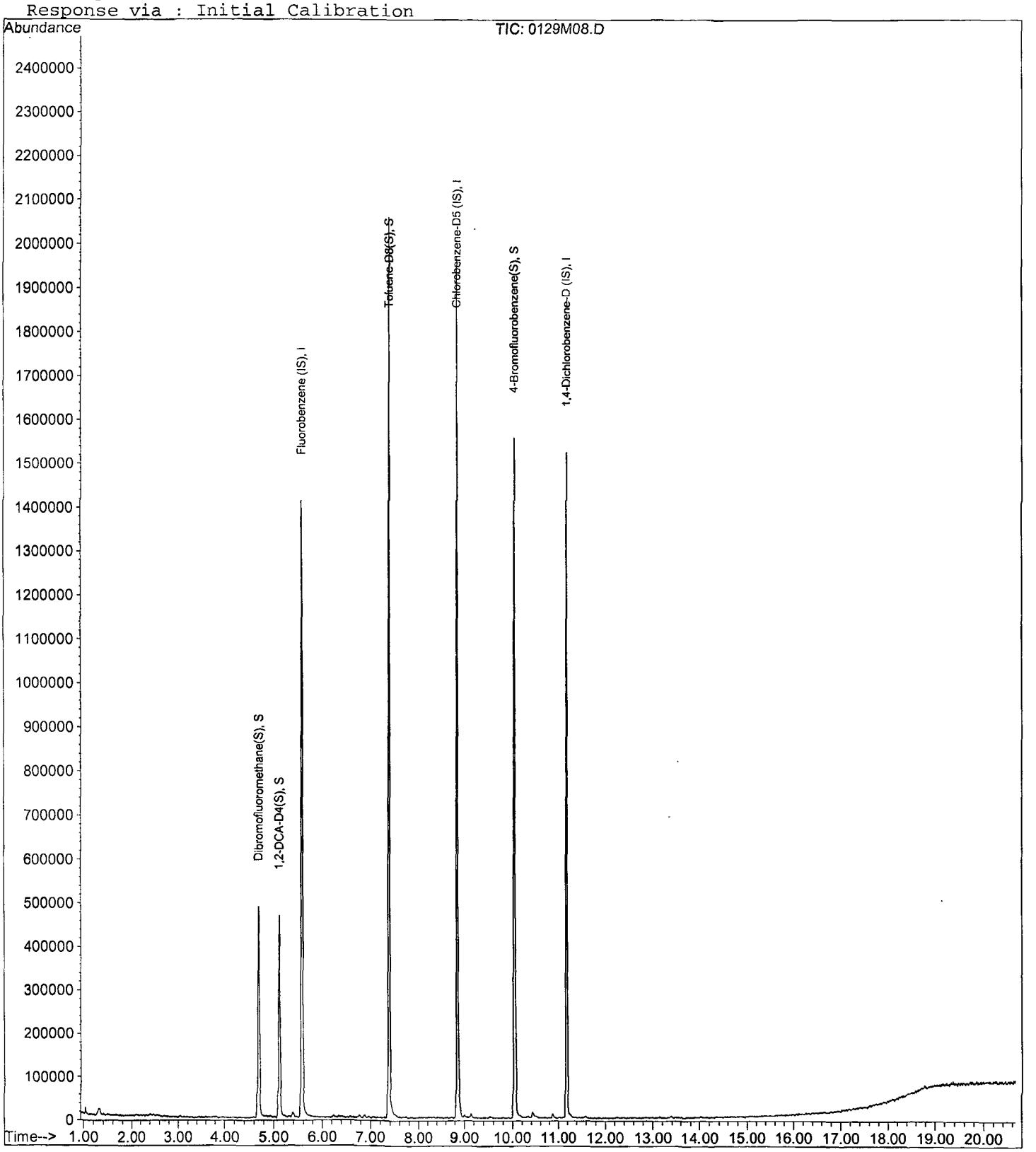
Data File : M:\MAX\DATA\210128\0129M08.D
Acq On : 29 Jan 21 19:26
Sample : 210129A BLK
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 15:35 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M25.D Vial: 25
Acq On : 30 Jan 21 3:39 Operator: LP,DG,CH
Sample : BA26001W02,3,6 MS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1410593	25.0000 ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1186303	25.0000 ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	654929	25.0000 ppb		0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	336463	29.4858 ppb		0.00
Spiked Amount 25.000			Recovery = 117.944%			
44) 1,2-DCA-D4(S)	5.11	65	349685	26.7972 ppb		0.00
Spiked Amount 25.000			Recovery = 107.188%			
64) Toluene-D8(S)	7.37	98	1278728	25.7571 ppb		0.00
Spiked Amount 25.000			Recovery = 103.028%			
72) 4-Bromofluorobenzene(S)	10.02	95	538574	26.2526 ppb		0.00
Spiked Amount 25.000			Recovery = 105.012%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	56621	13.0342 ppb		99
4) Freon 114	1.05	85	48884	14.2513 ppb		97
5) Chloromethane	1.08	50	62021	11.1412 ppb		94
6) Vinyl chloride	1.15	62	56718	10.9167 ppb		99
8) Bromomethane	1.34	94	31544	14.9589 ppb		98
9) Chloroethane	1.42	64	34095	11.3678 ppb		89
10) Dichlorofluoromethane	1.56	67	68848	12.7874 ppb		99
11) Trichlorofluoromethane	1.60	101	84680	13.4615 ppb		94
13) Acrolein	1.90	56	14204	103.6474 ppb		88
14) Acetone	2.03	43	49691	46.9101 ppb		97
15) Freon-113	2.02	103	15690	12.9793 ppb		88
16) Acetonitrile	2.25	41	58695	120.9526 ppb		92
18) 1,1-DCE	1.99	61	71640	11.6918 ppb		99
19) t-Butanol	2.59	59	51342	154.2277 ppb		99
20) Methyl Acetate	2.34	43	28093	9.5199 ppb		97
21) Iodomethane	2.10	142	41726	7.4101 ppb		99
22) Acrylonitrile	2.63	53	16961	13.3492 ppb	#	65
24) Methylene chloride	2.41	84	52894	11.3920 ppb		93
25) Carbon disulfide	2.15	76	88456	11.1963 ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	136729	10.8139 ppb		98
27) Trans-1,2-DCE	2.69	96	57455	10.8783 ppb		97
29) Diisopropyl Ether	3.36	45	156974	10.9098 ppb		99
30) 1,1-DCA	3.16	63	92243	11.1357 ppb		97
32) Ethyl tert Butyl Ether	3.87	59	146859	11.7059 ppb		91
34) MEK (2-Butanone)	4.05	43	74423	52.5596 ppb		90
35) Cis-1,2-DCE	3.97	96	63961	11.8545 ppb		96
36) 2,2-Dichloropropane	3.96	77	80021	11.2653 ppb		96
37) Chloroform	4.48	83	99393	11.5082 ppb		98
38) Bromochloromethane	4.31	130	43611	11.4075 ppb		90
40) 1,1,1-TCA	4.70	97	88915	11.5606 ppb		91
41) Cyclohexane	4.78	41	45273	13.2650 ppb		97
42) 1,1-Dichloropropene	4.94	75	68593	11.1327 ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	123132	13.0345 ppb		97
45) Carbon Tetrachloride	4.94	117	84593	12.6100 ppb		97
46) Tert Amyl Methyl Ether	5.44	73	119463	11.8116 ppb		99
47) 1,2-DCA	5.21	62	72464	11.5326 ppb		100
48) Benzene	5.19	78	218686	11.3349 ppb		97
49) TCE	6.02	95	58483	10.9510 ppb		94
50) 2-Pentanone	6.27	43	301279	121.6257 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M25.D Vial: 25
Acq On : 30 Jan 21 3:39 Operator: LP,DG,CH
Sample : BA26001W02,3,6 MS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	28128	11.3664	ppb	#	94
52)	Bromodichloromethane	6.58	83	72261	10.9450	ppb		98
53)	Methyl Cyclohexane	6.24	83	85014	12.8716	ppb		94
54)	Dibromomethane	6.37	93	32156	11.3005	ppb		96
55)	MIBK (methyl isobutyl ket	7.30	43	161408	49.6646	ppb		96
56)	1-Bromo-2-chloroethane	6.89	144	11443	12.1847	ppb		85
59)	Toluene	7.44	91	249085	11.9340	ppb		97
60)	Trans-1,3-Dichloropropene	7.69	75	76278	11.1170	ppb		94
61)	1,1,2-TCA	7.87	83	37321	10.5946	ppb		98
62)	2-Hexanone	8.18	43	96364	47.0355	ppb		98
65)	1,2-EDB	8.34	107	48222	10.6567	ppb		89
66)	Tetrachloroethene	8.01	164	39760	11.4712	ppb		97
67)	1-Chlorohexane	8.90	91	71549	11.3182	ppb		94
68)	1,1,1,2-Tetrachloroethane	8.96	131	67748	11.7171	ppb		96
69)	m&p-Xylene	9.14	106	240810	23.0537	ppb		96
70)	o-Xylene	9.52	106	116748	10.8619	ppb		91
71)	Styrene	9.53	104	16217	0.9582	ppb	#	1
73)	1,3-Dichloropropane	8.03	76	79824	11.4644	ppb		91
74)	Dibromochloromethane	8.25	129	62961	11.0945	ppb		89
75)	Chlorobenzene	8.87	112	176144	11.2483	ppb		98
76)	Ethylbenzene	9.01	91	278741	11.3431	ppb		99
77)	Bromoform	9.67	173	52154	11.3503	ppb		98
79)	Isopropylbenzene	9.91	105	303097	12.4065	ppb		97
80)	1,1,2,2-Tetrachloroethane	10.19	83	55481	12.3611	ppb		91
81)	1,2,3-Trichloropropane	10.21	110	19818	11.7690	ppb		86
82)	t-1,4-Dichloro-2-Butene	10.25	53	9112	10.2635	ppb	#	71
83)	Bromobenzene	10.15	156	91570	11.8031	ppb		98
84)	n-Propylbenzene	10.32	91	298705	10.6285	ppb		97
85)	4-Ethyltoluene	10.44	105	259388	11.2009	ppb		99
86)	2-Chlorotoluene	10.37	91	206363	9.1980	ppb		98
87)	1,3,5-Trimethylbenzene	10.51	105	162376	8.3659	ppb		94
88)	4-Chlorotoluene	10.48	91	217689	11.4918	ppb		100
89)	Tert-Butylbenzene	10.81	119	110496	11.5622	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	178662	11.0082	ppb		98
91)	Sec-Butylbenzene	11.04	105	230601	11.7756	ppb		99
92)	p-Isopropyltoluene	11.19	119	168611	10.1445	ppb		99
93)	Benzyl Chloride	11.33	91	38036	10.7222	ppb		93
94)	1,3-DCB	11.11	146	144948	10.5226	ppb		93
95)	1,4-DCB	11.19	146	145859	10.8292	ppb		97
96)	n-Butylbenzene	11.59	91	83744	8.9638	ppb		98
97)	1,2-DCB	11.55	146	132825	11.3816	ppb		93
98)	Hexachloroethane	11.81	117	46665	12.1176	ppb		94
99)	1,2-Dibromo-3-chloropropan	12.31	157	8246	9.5569	ppb		97
100)	1,2,4-Trichlorobenzene	13.15	180	15225	8.1998	ppb		91
101)	Hexachlorobutadiene	13.36	225	28670	9.9516	ppb		95
102)	Naphthalene	13.37	128	40360	7.8604	ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	19219	8.3427	ppb		95

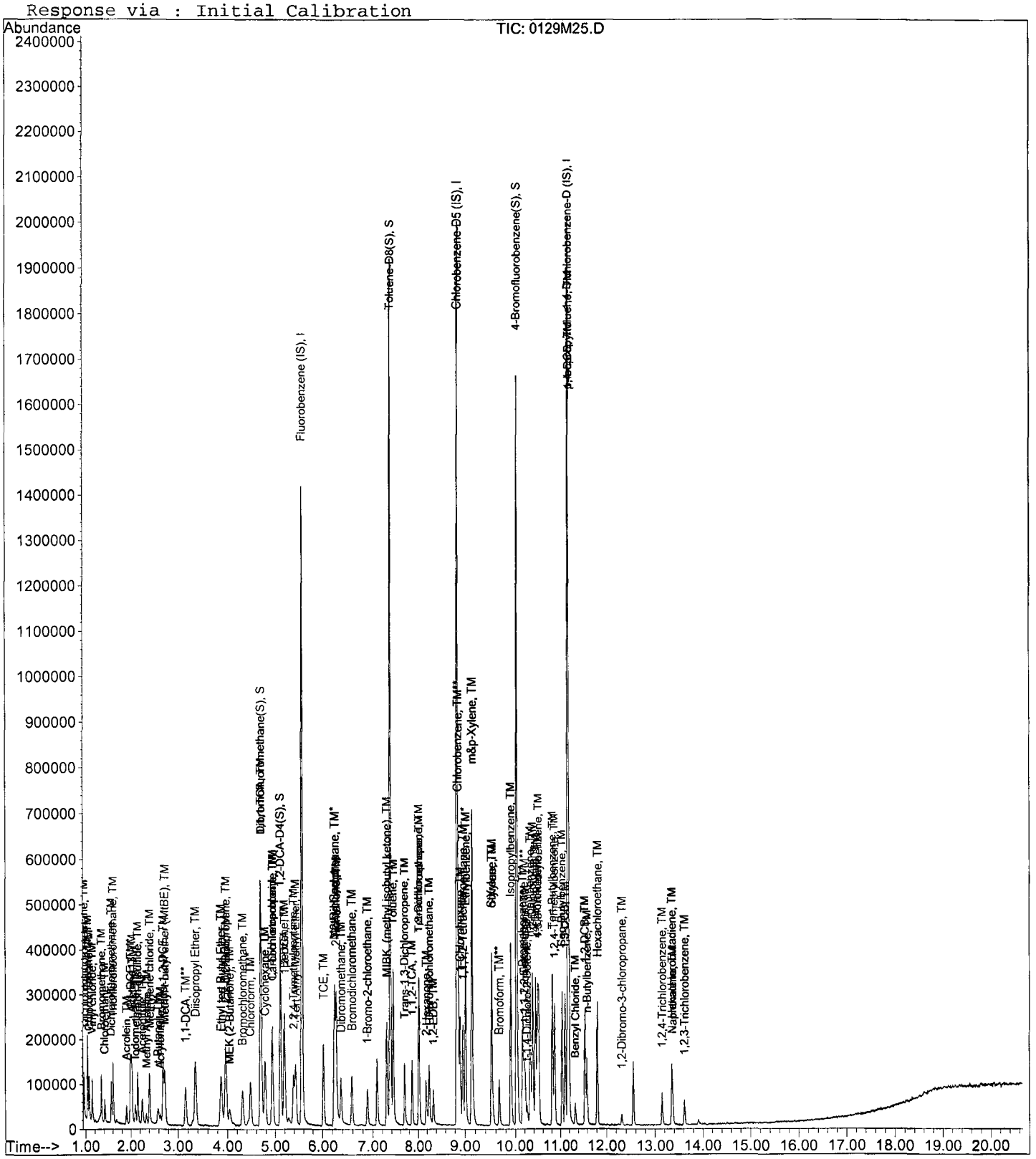
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M25.D Vial: 25
Acq On : 30 Jan 21 3:39 Operator: LP,DG,CH
Sample : BA26001W02,3,6 MS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M26.D Vial: 26
Acq On : 30 Jan 21 4:08 Operator: LP,DG,CH
Sample : BA26001W03,2,6 MSD 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1397632	25.0000 ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1164007	25.0000 ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	653600	25.0000 ppb		0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	327771	28.9025 ppb		0.00
Spiked Amount 25.000			Recovery = 115.612%			
44) 1,2-DCA-D4(S)	5.11	65	340765	26.3110 ppb		0.00
Spiked Amount 25.000			Recovery = 105.244%			
64) Toluene-D8(S)	7.37	98	1279215	26.3348 ppb		0.00
Spiked Amount 25.000			Recovery = 105.340%			
72) 4-Bromofluorobenzene(S)	10.02	95	531903	26.4466 ppb		0.00
Spiked Amount 25.000			Recovery = 105.788%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	54915	12.7587 ppb		94
4) Freon 114	1.04	85	48981	14.4120 ppb		97
5) Chloromethane	1.08	50	59212	10.7353 ppb		98
6) Vinyl chloride	1.15	62	54534	10.5937 ppb		99
8) Bromomethane	1.34	94	29336	13.9907 ppb		97
9) Chloroethane	1.42	64	34403	11.5768 ppb		96
10) Dichlorofluoromethane	1.56	67	66059	12.4034 ppb		95
11) Trichlorofluoromethane	1.60	101	83589	13.4113 ppb		93
13) Acrolein	1.90	56	15372	113.2106 ppb	#	75
14) Acetone	2.03	43	54451	51.8804 ppb		97
15) Freon-113	2.02	103	14629	12.2416 ppb		79
16) Acetonitrile	2.25	41	62166	129.2932 ppb		97
18) 1,1-DCE	1.99	61	71774	11.8223 ppb		95
19) t-Butanol	2.59	59	46898	142.1846 ppb		94
20) Methyl Acetate	2.34	43	27008	9.2261 ppb		91
21) Iodomethane	2.10	142	48002	8.4425 ppb		96
22) Acrylonitrile	2.72	53	1351	3.4225 ppb	#	71
24) Methylene chloride	2.41	84	53285	11.5941 ppb		95
25) Carbon disulfide	2.15	76	90712	11.5884 ppb		99
26) Methyl t-butyl ether (MtBE	2.73	73	142605	11.3832 ppb		100
27) Trans-1,2-DCE	2.69	96	57585	11.0040 ppb		98
29) Diisopropyl Ether	3.35	45	159364	11.1786 ppb		97
30) 1,1-DCA	3.15	63	91854	11.1916 ppb		96
32) Ethyl tert Butyl Ether	3.87	59	142894	11.4954 ppb		92
34) MEK (2-Butanone)	4.04	43	77218	55.0392 ppb		99
35) Cis-1,2-DCE	3.97	96	63242	11.8299 ppb		97
36) 2,2-Dichloropropane	3.96	77	74921	10.6451 ppb		99
37) Chloroform	4.47	83	99659	11.6460 ppb		100
38) Bromochloromethane	4.31	130	43832	11.5716 ppb		89
40) 1,1,1-TCA	4.70	97	90930	11.9322 ppb		95
41) Cyclohexane	4.78	41	44505	13.1642 ppb		94
42) 1,1-Dichloropropene	4.94	75	71073	11.6421 ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	124906	13.3174 ppb		96
45) Carbon Tetrachloride	4.93	117	84136	12.6582 ppb		92
46) Tert Amyl Methyl Ether	5.44	73	125991	12.5725 ppb		96
47) 1,2-DCA	5.21	62	73204	11.7584 ppb		95
48) Benzene	5.19	78	216894	11.3463 ppb		98
49) TCE	6.02	95	60228	11.3824 ppb		88
50) 2-Pentanone	6.27	43	316418	128.9218 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M26.D Vial: 26
Acq On : 30 Jan 21 4:08 Operator: LP,DG,CH
Sample : BA26001W03,2,6 MSD 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.24	63	25664	10.4669	ppb		96
52)	Bromodichloromethane	6.58	83	77301	11.8169	ppb		90
53)	Methyl Cyclohexane	6.24	83	83517	12.7622	ppb		97
54)	Dibromomethane	6.37	93	32959	11.6901	ppb		95
55)	MIBK (methyl isobutyl ket	7.30	43	167143	51.6133	ppb		97
56)	1-Bromo-2-chloroethane	6.90	144	11828	12.7114	ppb		100
59)	Toluene	7.44	91	246136	11.9021	ppb		98
60)	Trans-1,3-Dichloropropene	7.69	75	77125	11.3446	ppb		97
61)	1,1,2-TCA	7.86	83	38793	11.1146	ppb		95
62)	2-Hexanone	8.18	43	100196	48.9159	ppb		95
65)	1,2-EDB	8.34	107	51731	11.6511	ppb		100
66)	Tetrachloroethene	8.01	164	40984	12.0672	ppb		95
67)	1-Chlorohexane	8.90	91	74043	11.9370	ppb		93
68)	1,1,1,2-Tetrachloroethane	8.96	131	67725	11.9375	ppb		100
69)	m&p-Xylene	9.14	106	243564	23.7639	ppb		99
70)	o-Xylene	9.52	106	118265	11.2138	ppb		94
71)	Styrene	9.53	104	15765	0.9494	ppb	#	1
73)	1,3-Dichloropropane	8.03	76	80333	11.7585	ppb		96
74)	Dibromochloromethane	8.25	129	66570	11.9551	ppb		98
75)	Chlorobenzene	8.87	112	179114	11.6571	ppb		96
76)	Ethylbenzene	9.01	91	284375	11.7940	ppb		96
77)	Bromoform	9.67	173	53112	11.7801	ppb		95
79)	Isopropylbenzene	9.91	105	303901	12.4737	ppb		97
80)	1,1,2,2-Tetrachloroethane	10.19	83	55976	12.5074	ppb		99
81)	1,2,3-Trichloropropane	10.21	110	21248	12.7927	ppb		98
82)	t-1,4-Dichloro-2-Butene	10.25	53	8414	9.4966	ppb		81
83)	Bromobenzene	10.16	156	97743	12.7605	ppb		95
84)	n-Propylbenzene	10.32	91	307714	11.0475	ppb		97
85)	4-Ethyltoluene	10.44	105	268434	11.6375	ppb		98
86)	2-Chlorotoluene	10.37	91	201293	8.8589	ppb		97
87)	1,3,5-Trimethylbenzene	10.50	105	169666	8.7592	ppb		97
88)	4-Chlorotoluene	10.48	91	226301	12.0260	ppb		99
89)	Tert-Butylbenzene	10.81	119	120024	12.5847	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	195680	12.0813	ppb		98
91)	Sec-Butylbenzene	11.04	105	239199	12.2395	ppb		97
92)	p-Isopropyltoluene	11.19	119	182389	10.8783	ppb		99
93)	Benzyl Chloride	11.33	91	38714	10.8638	ppb	#	90
94)	1,3-DCB	11.11	146	157575	11.4625	ppb		95
95)	1,4-DCB	11.19	146	158004	11.7548	ppb		95
96)	n-Butylbenzene	11.59	91	96692	9.9892	ppb		96
97)	1,2-DCB	11.55	146	140108	12.0300	ppb		99
98)	Hexachloroethane	11.81	117	46873	12.2031	ppb		96
99)	1,2-Dibromo-3-chloropropan	12.31	157	9518	10.7710	ppb		95
100)	1,2,4-Trichlorobenzene	13.15	180	19544	9.4455	ppb		88
101)	Hexachlorobutadiene	13.36	225	31552	10.6472	ppb		97
102)	Naphthalene	13.37	128	47728	8.8630	ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	23387	9.4359	ppb		86

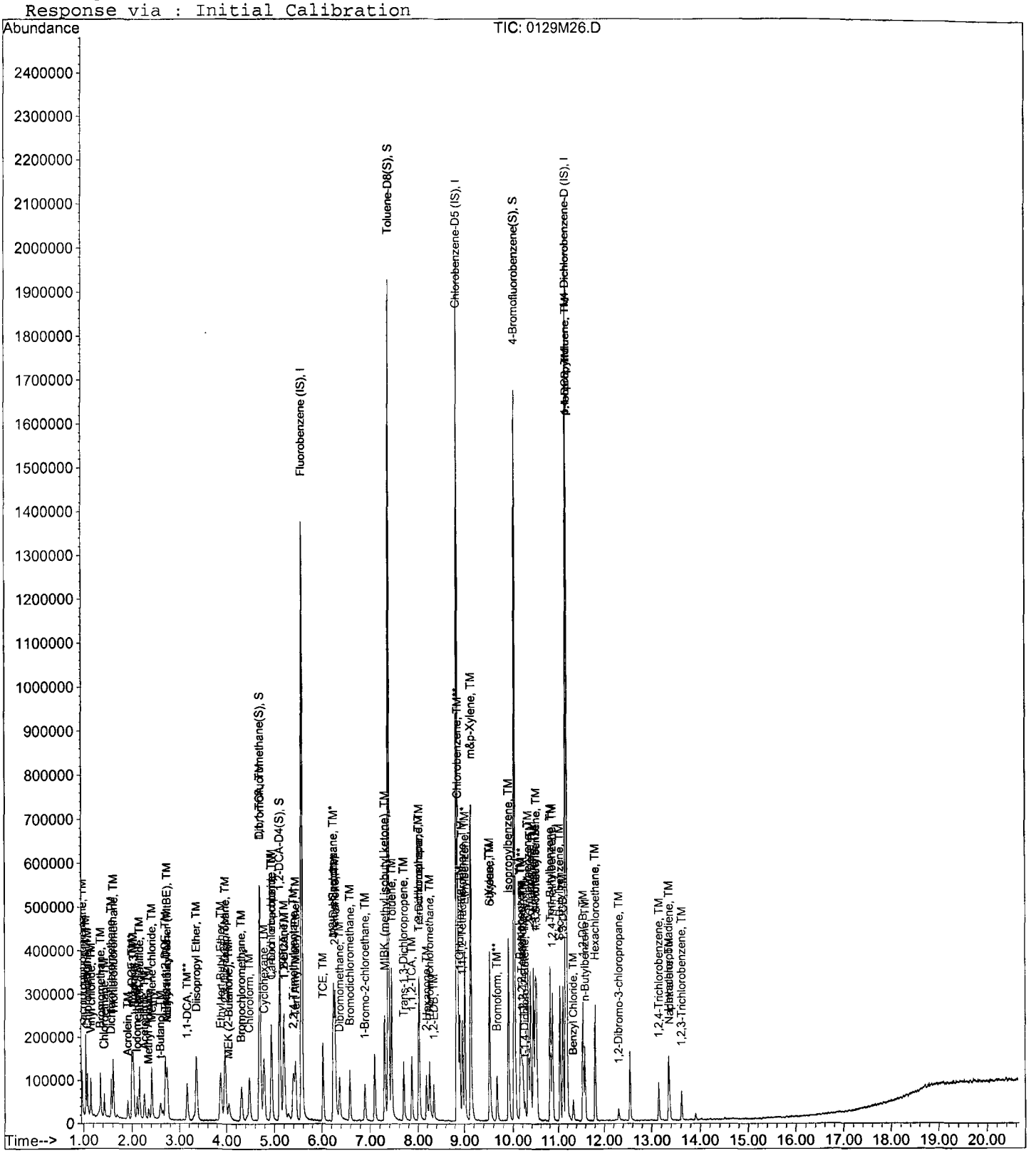
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M26.D Vial: 26
Acq On : 30 Jan 21 4:08 Operator: LP,DG,CH
Sample : BA26001W03,2,6 MSD 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

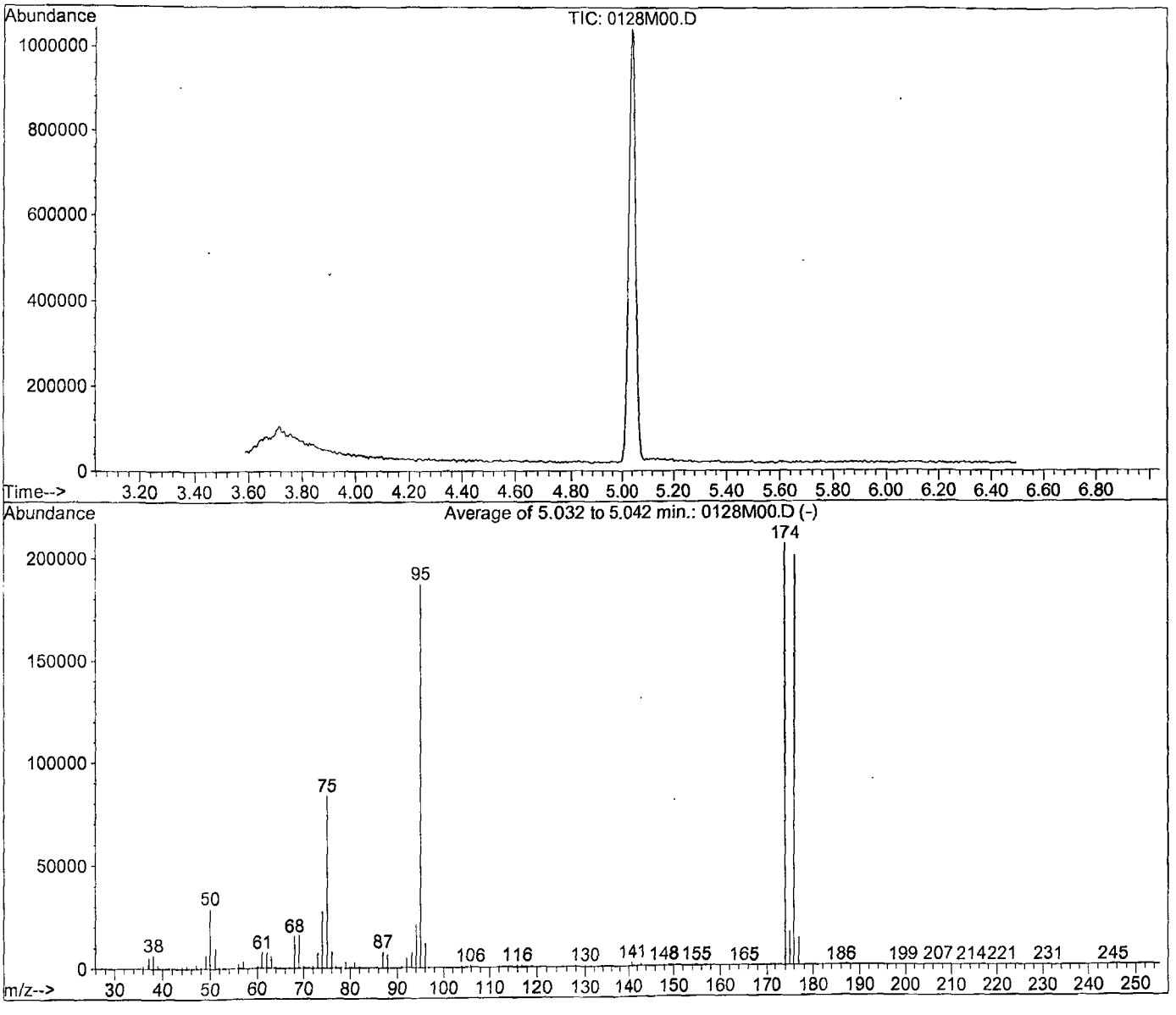
Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Data File : M:\MAX\DATA\210128\0128M00.D
Acq On : 28 Jan 21 14:41
Sample : 25ug/L BFB STD 12/22/20
Misc : 2ul

Vial: 1
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 289, 290, 291; Background Corrected with Scan 279

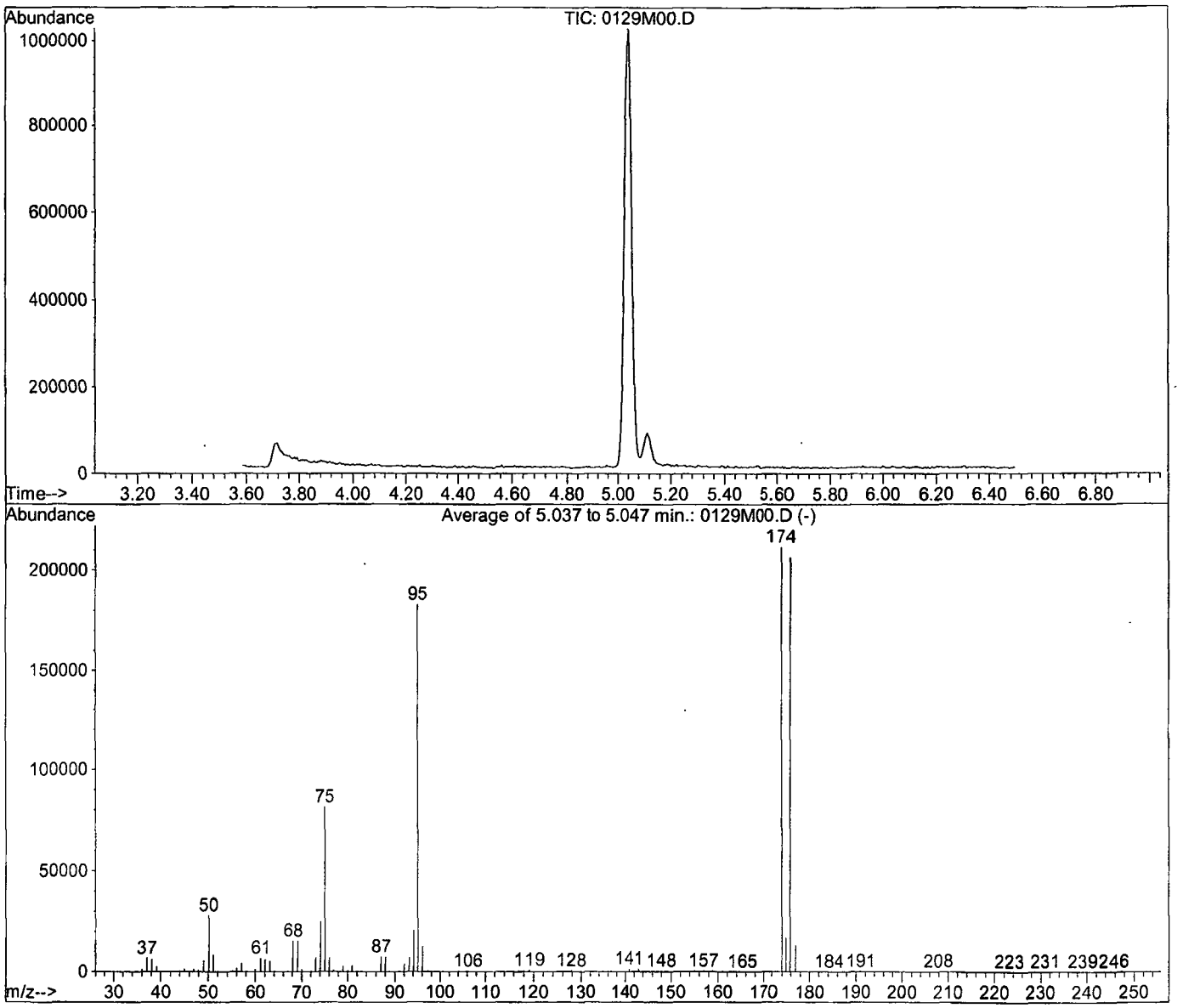
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.6	29227	PASS
75	95	30	60	44.7	83837	PASS
95	95	100	200	100.0	187532	PASS
96	95	5	9	6.5	12118	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	110.2	206741	PASS
175	174	5	9	7.8	16213	PASS
176	174	95	101	97.2	200853	PASS
177	176	5	9	6.7	13448	PASS

0128M00.D M0128W.M Fri Jan 29 11:38:28 2021

Data File : M:\MAX\DATA\210128\0129M00.D
Acq On : 29 Jan 21 15:38
Sample : 25ug/L BFB STD 12/22/20
Misc : 2ul

Vial: 1
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Method : M:\THOR\DATA\210128\T0128S.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 5.037 to 5.047 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	27925	PASS
75	95	30	60	44.5	81504	PASS
95	95	100	100	100.0	183083	PASS
96	95	5	9	6.9	12652	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	115.6	211712	PASS
175	174	5	9	8.0	16962	PASS
176	174	95	100	97.6	206661	PASS
177	176	5	9	6.3	12998	PASS

0129M00.D T0128S.M Fri Jan 29 15:46:38 2021

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 01/28/21 A
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	219061767-50972	01/18/22	06/28/29	200uL			50
Benzyl Chloride	Absolute	70037	1,000	082720-51148	01/04/22	08/27/21	200uL			50

VOA STD 8

Prepared: 01/28/21 B
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-51043	01/04/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16071-51542	01/04/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16248-51598	01/04/22	01/27/21	100uL			50

VOA STD TBA

Prepared: 01/28/21 C
Expires: 01/27/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL15725-51582	01/18/22	09/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16253-51600	01/04/22	01/27/21	100uL			250

VOA STD 1

Prepared: 01/28/21 D
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-51156	01/04/22	11/14/22	50	2mL	Methanol	50

VOA STD 2

Prepared: 01/28/21 E
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	*Final Standard* Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16074-51593	01/04/22	11/30/30	100	4mL	Methanol	50

VOA STD 9

Prepared: 01/28/21 F
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 01/28/21	01/04/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 01/28/21	01/04/22	N/A	200uL			5

VOA STD. 10

Prepared: 01/28/21 G
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 01/28/21	01/04/22	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 01/28/21 H
Expires: 03/29/21
Prepared By (Initials): DP
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 01/28/21	01/04/22	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 01/28/21 I
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16067-51588	01/04/22	11/30/30	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 01/28/21 J
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14505-51077	01/04/22	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 01/28/21 K
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14381-51056	01/04/22	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16187-51524	01/04/22	01/13/22	50uL			50
Hoxachloroethane	Accustan	AS-E0011	1,000	091818-51617	01/18/22	09/18/23	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-51626	01/28/22	01/30/23	500uL			50

VOA STD. TBA

Prepared: 01/28/21 L
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL16012-51128	01/04/22	11/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16193-51526	01/04/22	01/13/22	50uL			250

VOA STD. 0

Prepared: 01/28/21 M
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-51568	01/04/22	09/30/22	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 01/28/21 N
Expires: 03/29/21
Methanol Lot No. DW117-US-0095

Prepared By (Initials): DP

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-51151	01/04/22	12/11/22	50uL	2mL	Methanol	50

MAX 8260 Standard Prep

MAX 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/28/21	03/29/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/28/21	03/29/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/28/21	03/29/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	40uL			200

MAX 8260 Water Second Source (SS)

Prepared: 01/28/21

Expires: 01/27/21

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/28/21	03/29/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/28/21	01/28/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/28/21	03/29/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/28/21

Expires: 01/29/21

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/28/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\MAX\DATA\210128\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0128M00.D	1	25ug/L BFB STD 12/22/20	2ul	28 Jan 21 14:41
2	2	0128M02.D	1	0.3ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:26
3	3	0128M03.D	1	0.5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:55
4	4	0128M04.D	1	1ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:24
5	5	0128M05.D	1	2ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:53
6	6	0128M06.D	1	5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:22
7	7	0128M07.D	1	10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:51
8	8	0128M08.D	1	20ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:20
9	9	0128M09.D	1	40ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:49
10	10	0128M10.D	1	100ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 21:19
11	12	0128M12.D	1	(SS) 10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 22:16
12	1	0129M00.D	1	25ug/L BFB STD 12/22/20	2ul	29 Jan 21 15:38
13	4	0129M04.D	1	210129A CCV/LCS 10ug/L	IS 10/16/20	29 Jan 21 17:30
14	8	0129M08.D	1	210129A BLK	IS 10/16/20	29 Jan 21 19:26
15	15	0129M15.D	1	BA26000W01	IS 10/16/20	29 Jan 21 22:49
16	16	0129M16.D	1	BA26001W01	IS 10/16/20	29 Jan 21 23:18
17	17	0129M17.D	1	BA26003W01	IS 10/16/20	29 Jan 21 23:47
18	18	0129M18.D	1	BA26005W01	IS 10/16/20	30 Jan 21 00:16
19	19	0129M19.D	1	BA26006W01	IS 10/16/20	30 Jan 21 00:45
20	20	0129M20.D	1	BA26008W01	IS 10/16/20	30 Jan 21 1:14
21	21	0129M21.D	1	BA26012W01	IS 10/16/20	30 Jan 21 1:43
22	22	0129M22.D	1	BA26013W01	IS 10/16/20	30 Jan 21 2:12
23	23	0129M23.D	1	BA26015W01	IS 10/16/20	30 Jan 21 2:41
24	24	0129M24.D	1	BA26016W01	IS 10/16/20	30 Jan 21 3:10
25	25	0129M25.D	1	BA26001W02,3,6 MS 10ug/L	IS 10/16/20	30 Jan 21 3:39
26	26	0129M26.D	1	BA26001W03,2,6 MSD 10ug/L	IS 10/16/20	30 Jan 21 4:08
27	29	0129M29.D	1	Ending CCV 10ug/L 1/29/21	IS 10/16/20	30 Jan 21 5:35

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Instrument: Max
Initials: SS

		Compound	0128M02.D	0128M03.D	0128M04.D	0128M05.D	0128M06.D	0128M07.D	0128M08.D	0128M09.D	0128M10.D		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	SL	Dibromofluoromethane(S)	0.3233	0.2998	0.2270	0.2652	0.2095	0.2195	0.1967	0.1990	0.1763		0.24	21	S	0.996		
3	SL	1,2-DCA-D4(S)	0.3286	0.3183	0.2362	0.2862	0.2241	0.2397	0.2200	0.2286	0.2145		0.26	17	S	0.999		
4	I	Chlorobenzene-D5 (IS)																
5	SL	Toluene-D8(S)	1.389	1.567	1.104	1.337	1.038	1.110	0.9753	1.027	0.9346		1.2	19	S	0.998		
6	SL	4-Bromofluorobenzene(S)	0.5733	0.6541	0.4599	0.5424	0.4320	0.4606	0.4017	0.4195	0.3932		0.48	18	S	0.999		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.56	96	1849966	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1440324	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	420605	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.68	111	119602	4.1770 ppb	0.00
Spiked Amount 25.000			Recovery	= 16.708%	
3) 1,2-DCA-D4(S)	5.11	65	121587	5.1057 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.424%	
5) Toluene-D8(S)	7.37	98	400207	3.8143 ppb	0.00
Spiked Amount 25.000			Recovery	= 15.256%	
6) 4-Bromofluorobenzene(S)	10.03	95	165161	4.0497 ppb	0.00
Spiked Amount 25.000			Recovery	= 16.200%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

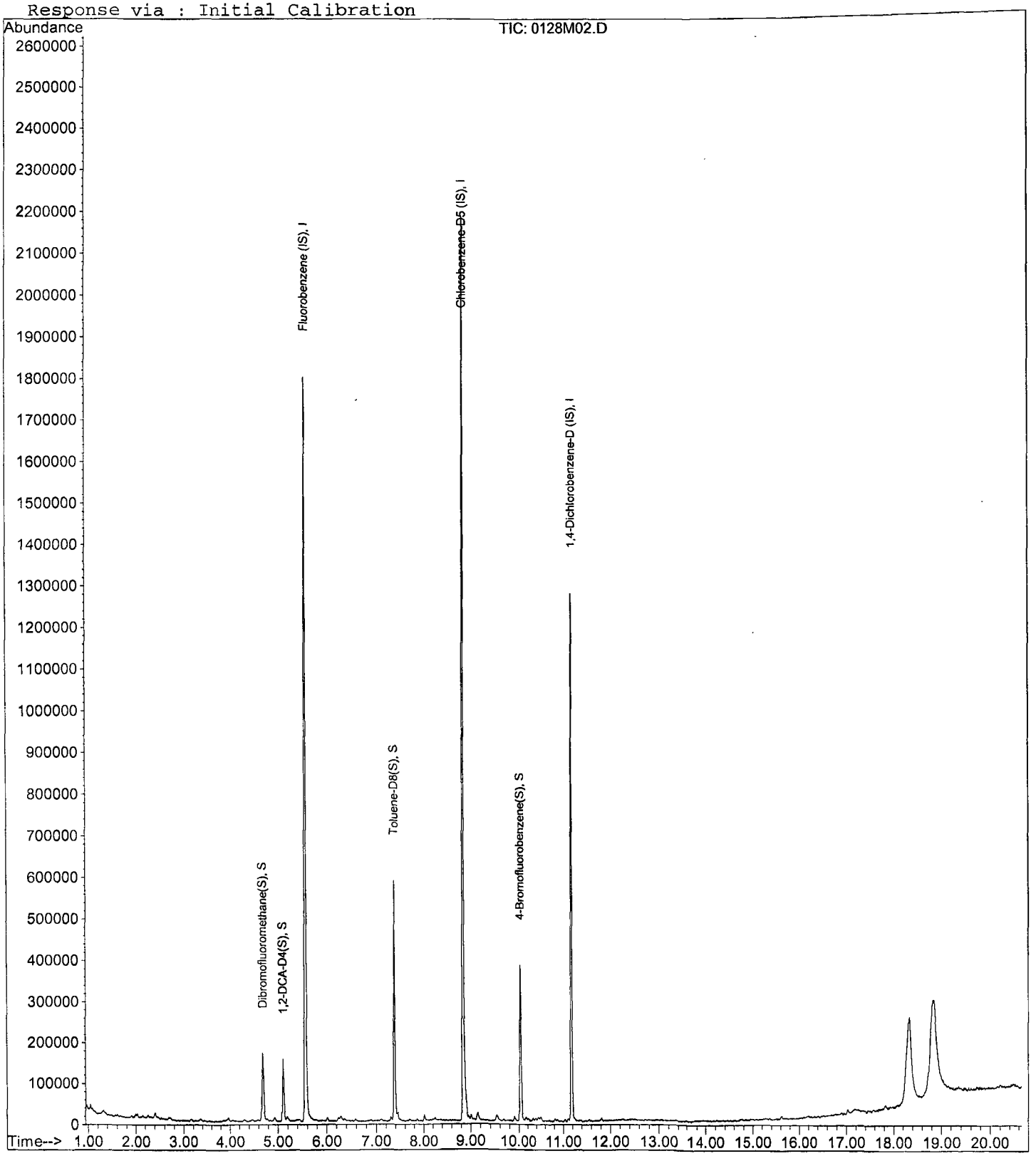
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M02.D
Acq On : 28 Jan 21 17:26
Sample : 0.3ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 2
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1703128	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1442379	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	506390	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	102134	3.4954 ppb	0.00
Spiked Amount 25.000			Recovery	= 13.980%	
3) 1,2-DCA-D4(S)	5.11	65	108428	4.8604 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.440%	
5) Toluene-D8(S)	7.37	98	452170	4.7915 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.164%	
6) 4-Bromofluorobenzene(S)	10.03	95	188679	5.1058 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.424%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

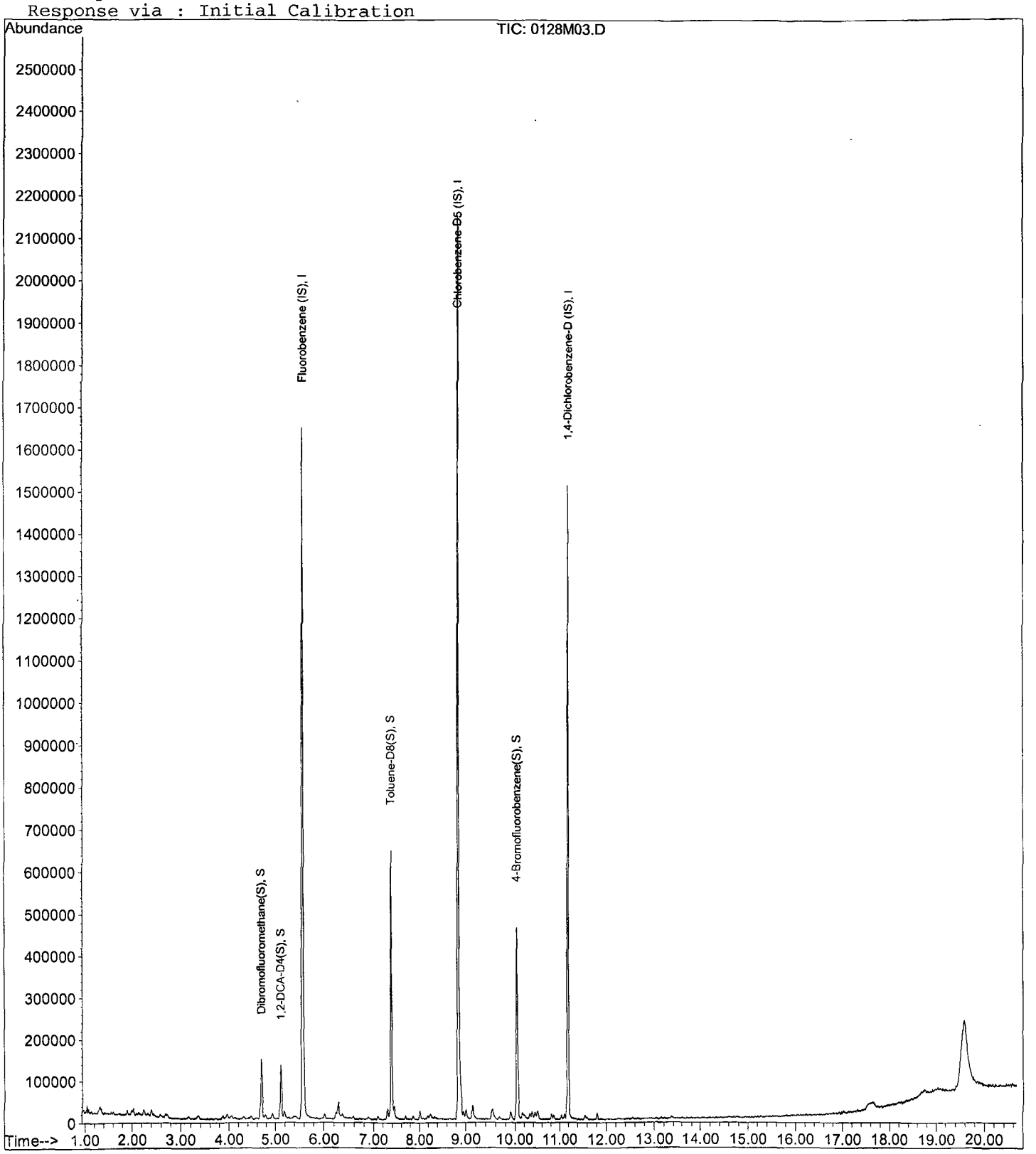
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M03.D
Acq On : 28 Jan 21 17:55
Sample : 0.5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 3
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1780184	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1490103	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	579540	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	161611	7.9807 ppb	0.00
Spiked Amount 25.000			Recovery	= 31.924%	
3) 1,2-DCA-D4(S)	5.11	65	168204	8.5305 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.120%	
5) Toluene-D8(S)	7.37	98	657981	8.3043 ppb	0.00
Spiked Amount 25.000			Recovery	= 33.216%	
6) 4-Bromofluorobenzene(S)	10.03	95	274125	8.5838 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.336%	

Target Compounds Qvalue

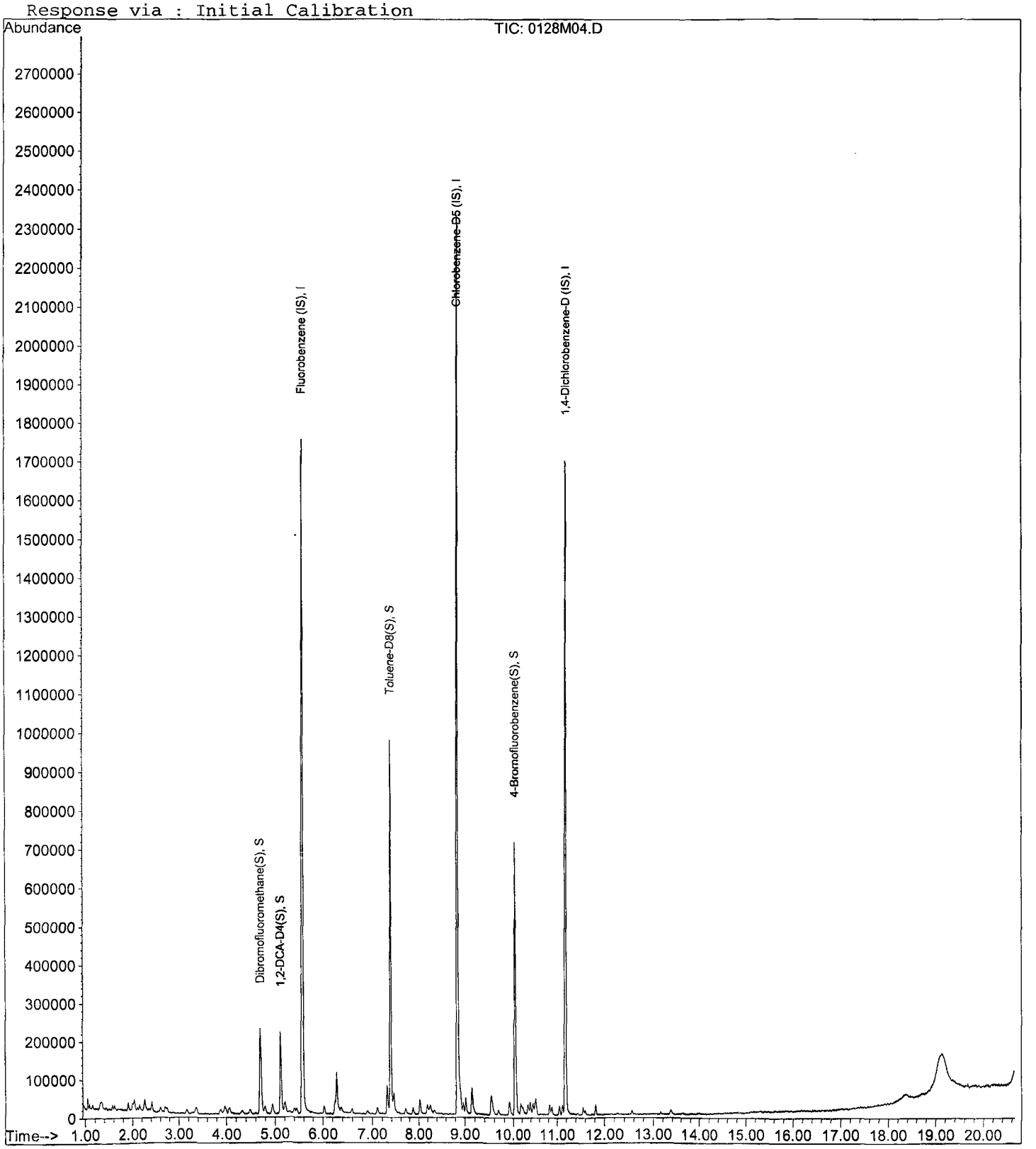
(#) = qualifier out of range (m) = manual integration
0128M04.D M012SUR.M Wed Feb 10 10:11:22 2021 Page 1

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1793882	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1489443	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	621742	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	190286	10.2066 ppb	0.00
Spiked Amount 25.000			Recovery =	40.828%	
3) 1,2-DCA-D4(S)	5.11	65	205399	10.9134 ppb	0.00
Spiked Amount 25.000			Recovery =	43.652%	
5) Toluene-D8(S)	7.37	98	796795	10.8658 ppb	0.00
Spiked Amount 25.000			Recovery =	43.464%	
6) 4-Bromofluorobenzene(S)	10.03	95	323162	10.7434 ppb	0.00
Spiked Amount 25.000			Recovery =	42.972%	

Target Compounds Qvalue

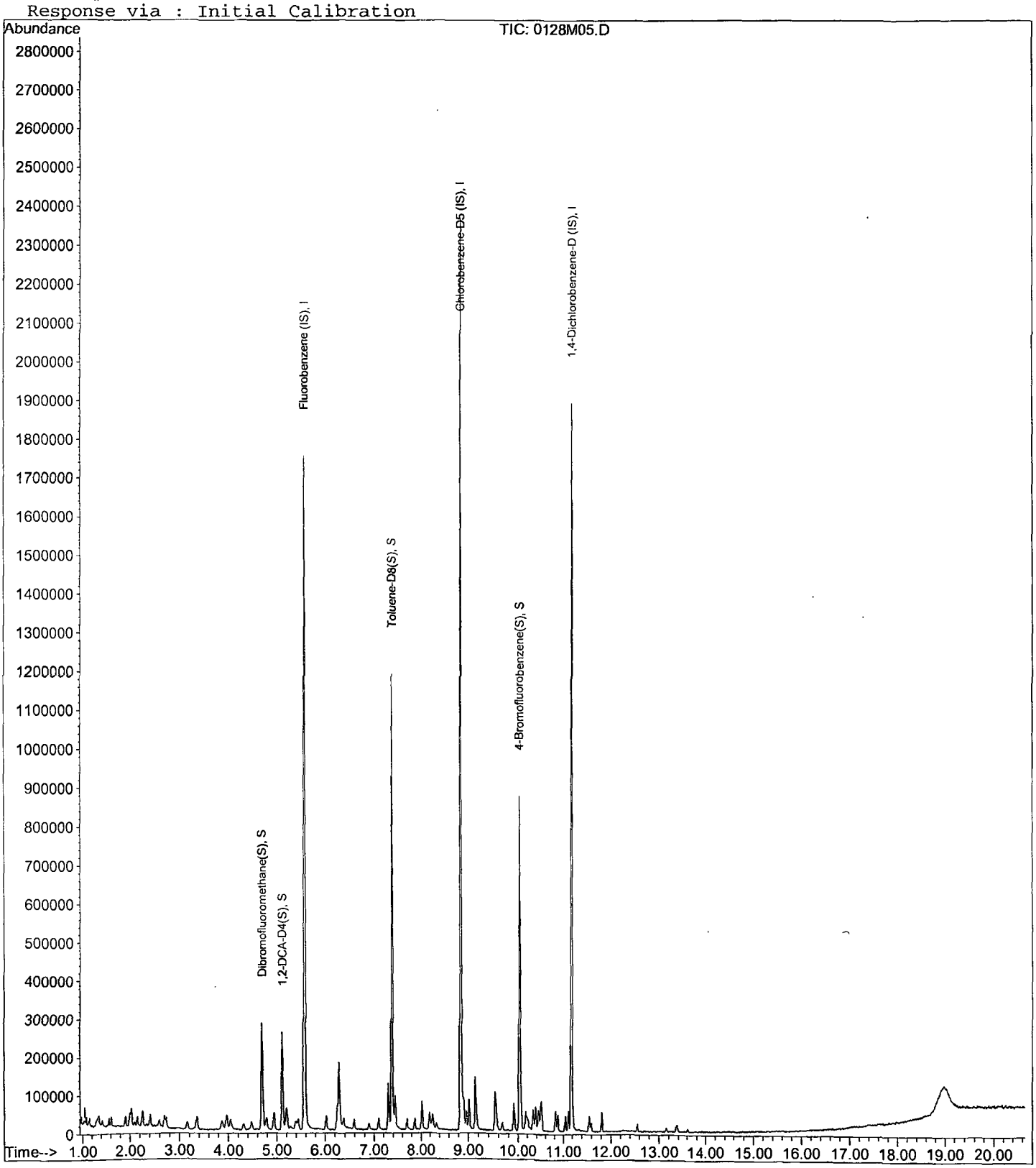
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1785695	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1469528	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	713253	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	374035	25.2553 ppb	0.00
Spiked Amount 25.000			Recovery = 101.020%		
3) 1,2-DCA-D4(S)	5.11	65	400143	23.9613 ppb	0.00
Spiked Amount 25.000			Recovery = 95.844%		
5) Toluene-D8(S)	7.37	98	1524890	24.6535 ppb	0.00
Spiked Amount 25.000			Recovery = 98.612%		
6) 4-Bromofluorobenzene(S)	10.03	95	634843	24.8138 ppb	0.00
Spiked Amount 25.000			Recovery = 99.256%		

Target Compounds Qvalue

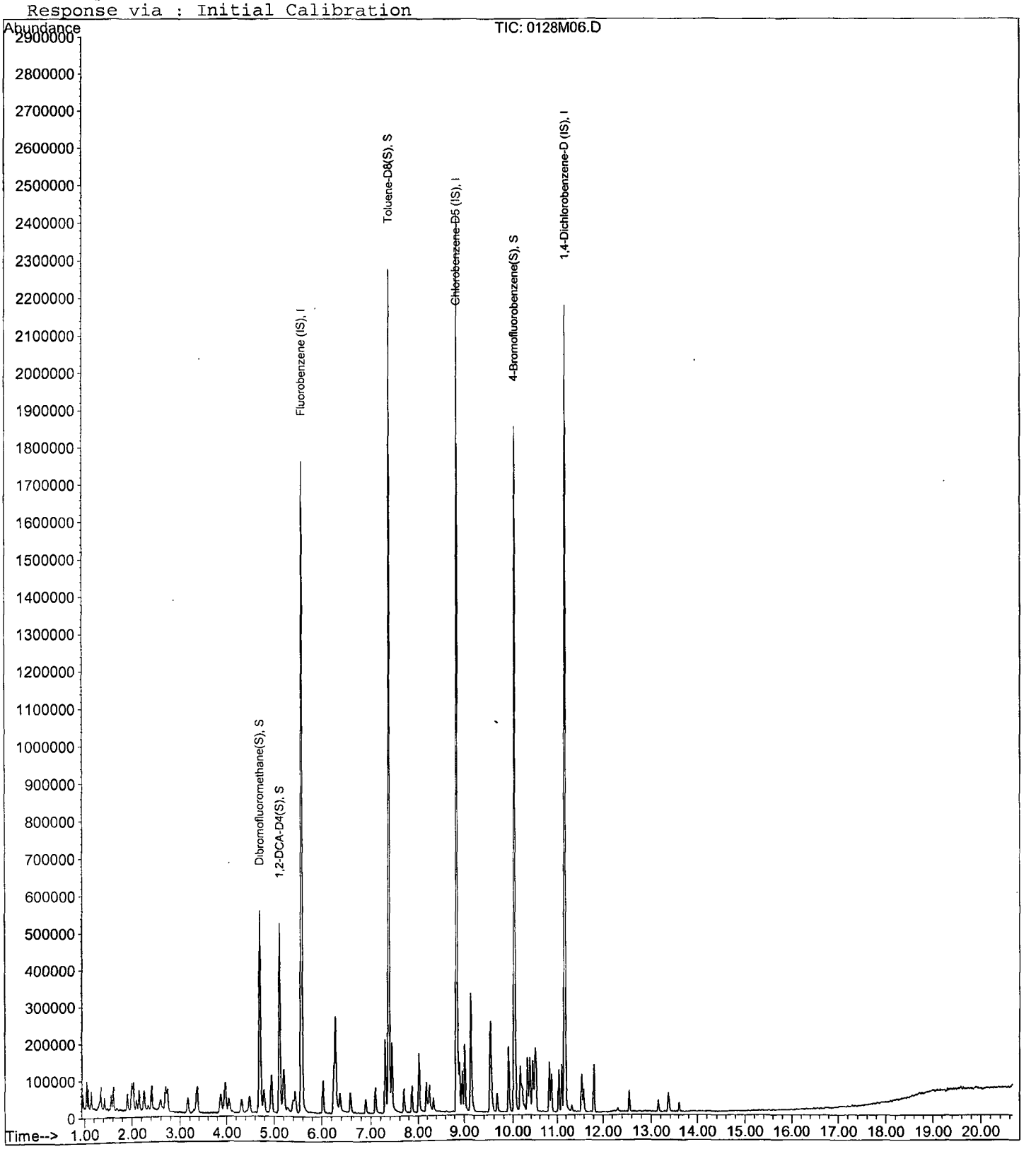
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D Vial: 7
Acq On : 28 Jan 21 19:51 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1794396	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1470371	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	775353	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	393894	26.7184 ppb	0.00
Spiked Amount 25.000			Recovery = 106.872%		
3) 1,2-DCA-D4(S)	5.11	65	430179	25.8250 ppb	0.00
Spiked Amount 25.000			Recovery = 103.300%		
5) Toluene-D8(S)	7.37	98	1631791	26.6312 ppb	0.00
Spiked Amount 25.000			Recovery = 106.524%		
6) 4-Bromofluorobenzene(S)	10.02	95	677231	26.6839 ppb	0.00
Spiked Amount 25.000			Recovery = 106.736%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

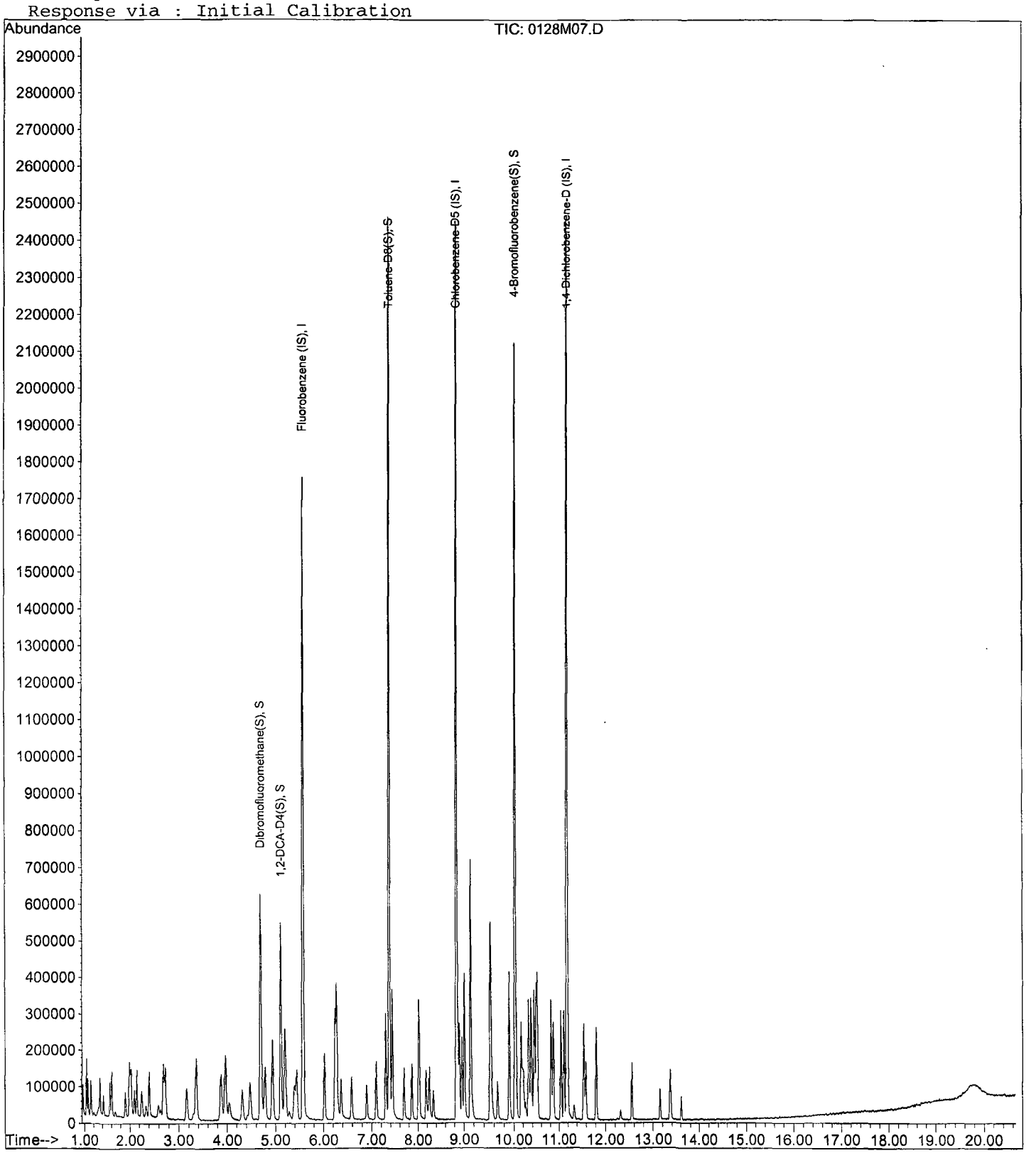
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M07.D
Acq On : 28 Jan 21 19:51
Sample : 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1759511	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1465524	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	854648	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	692089	52.0204 ppb	0.00
Spiked Amount 25.000			Recovery	= 208.080%	
3) 1,2-DCA-D4(S)	5.11	65	774296	49.6780 ppb	0.00
Spiked Amount 25.000			Recovery	= 198.712%	
5) Toluene-D8(S)	7.37	98	2858593	49.6910 ppb	0.00
Spiked Amount 25.000			Recovery	= 198.764%	
6) 4-Bromofluorobenzene(S)	10.02	95	1177537	49.1212 ppb	0.00
Spiked Amount 25.000			Recovery	= 196.484%	

Target Compounds Qvalue

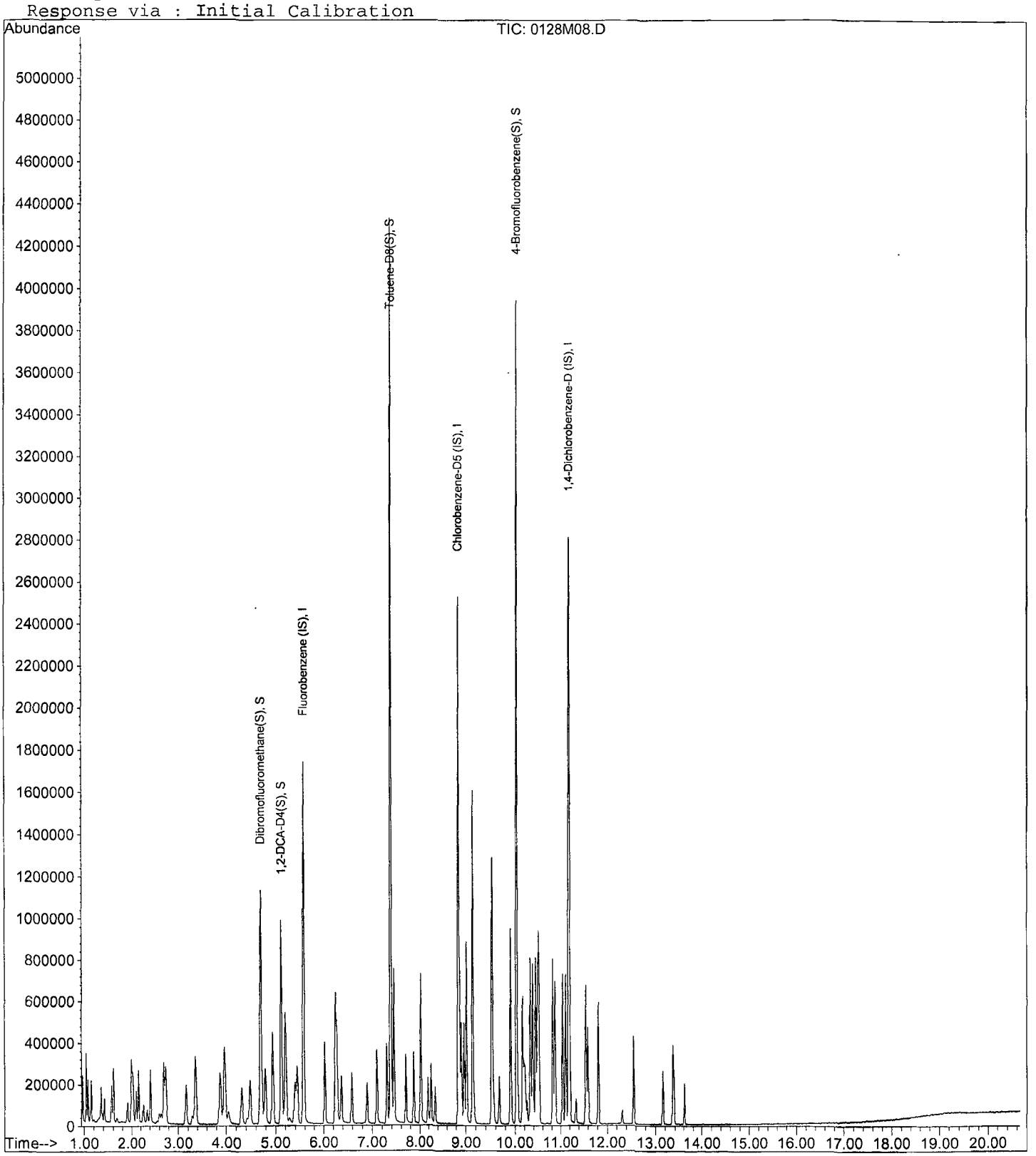
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1774235	25.0000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1454760	25.0000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	897871	25.0000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.69	111	706217	52.7043	ppb	0.00
Spiked Amount 25.000			Recovery = 210.816%			
3) 1,2-DCA-D4(S)	5.11	65	811024	51.7079	ppb	0.00
Spiked Amount 25.000			Recovery = 206.832%			
5) Toluene-D8(S)	7.37	98	2987917	52.5250	ppb	0.00
Spiked Amount 25.000			Recovery = 210.100%			
6) 4-Bromofluorobenzene(S)	10.02	95	1220621	51.4481	ppb	0.00
Spiked Amount 25.000			Recovery = 205.792%			

Target Compounds Qvalue

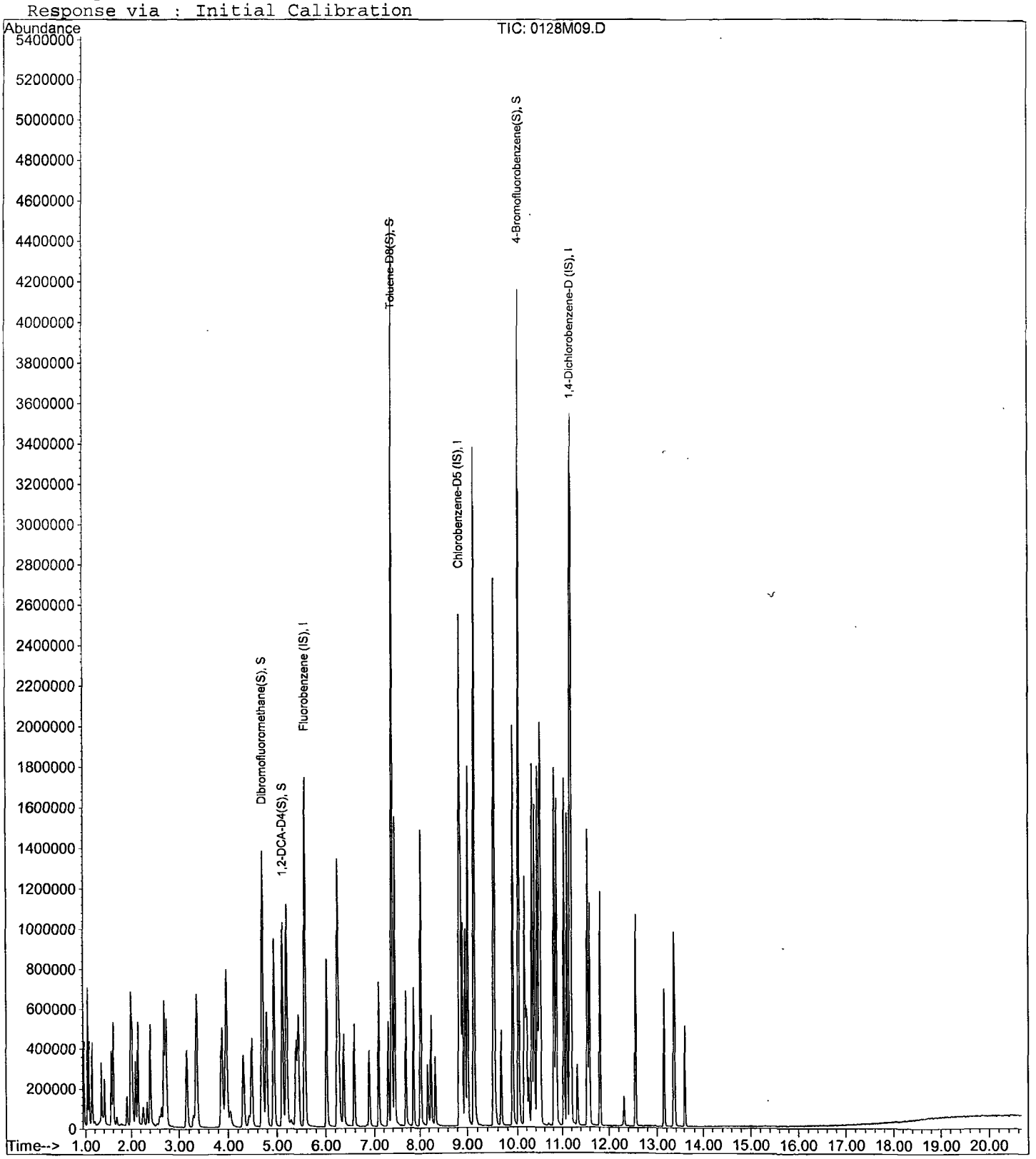
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1714227	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1451958	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	1006428	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	1209203	97.4418 ppb	0.00
Spiked Amount 25.000			Recovery	= 389.768%	
3) 1,2-DCA-D4(S)	5.11	65	1470467	99.4178 ppb	0.00
Spiked Amount 25.000			Recovery	= 397.672%	
5) Toluene-D8(S)	7.37	98	5427895	98.7236 ppb	0.00
Spiked Amount 25.000			Recovery	= 394.896%	
6) 4-Bromofluorobenzene(S)	10.02	95	2283448	99.4505 ppb	0.00
Spiked Amount 25.000			Recovery	= 397.800%	

Target Compounds Qvalue

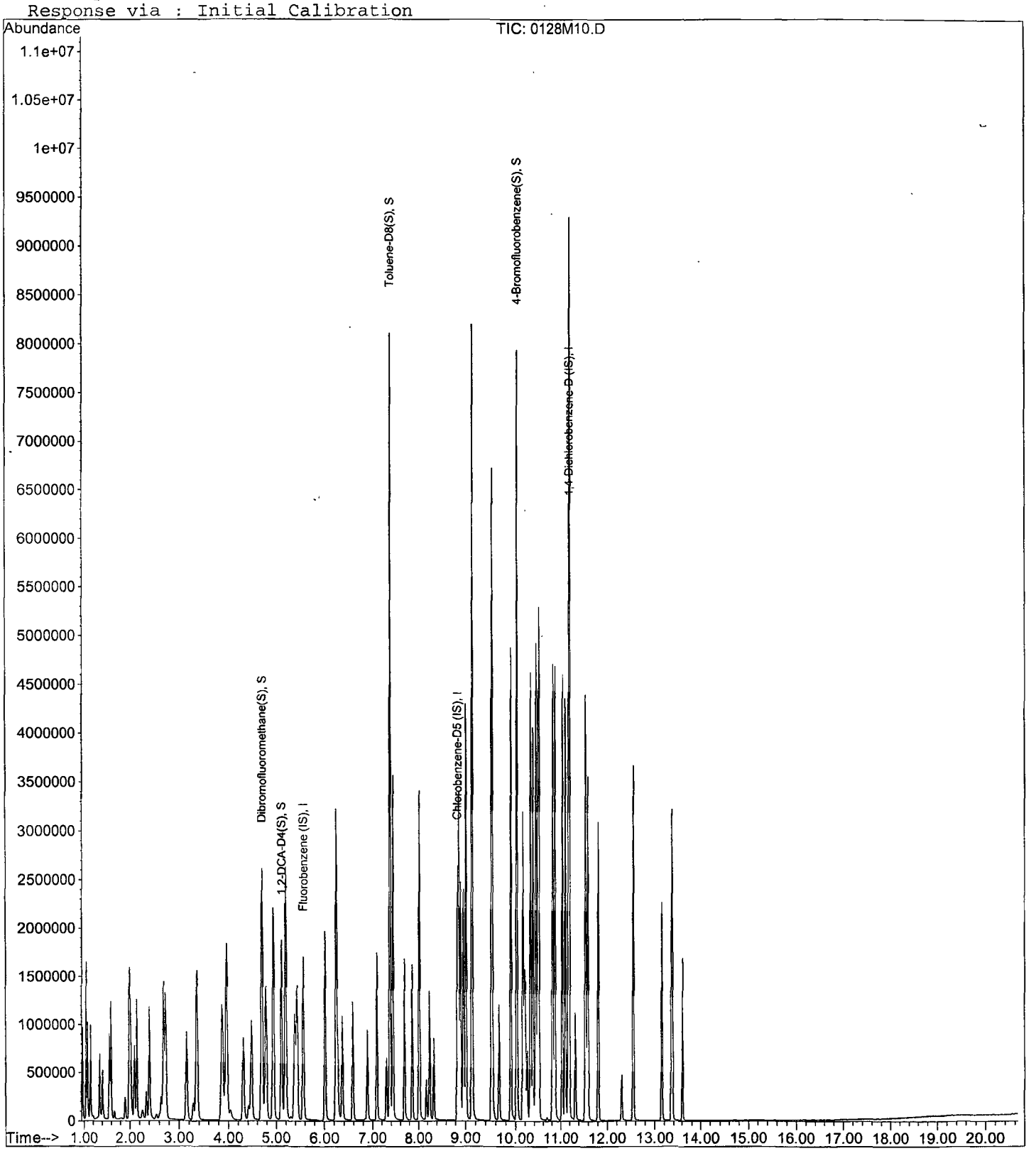
(#) = qualifier out of range (m) = manual integration

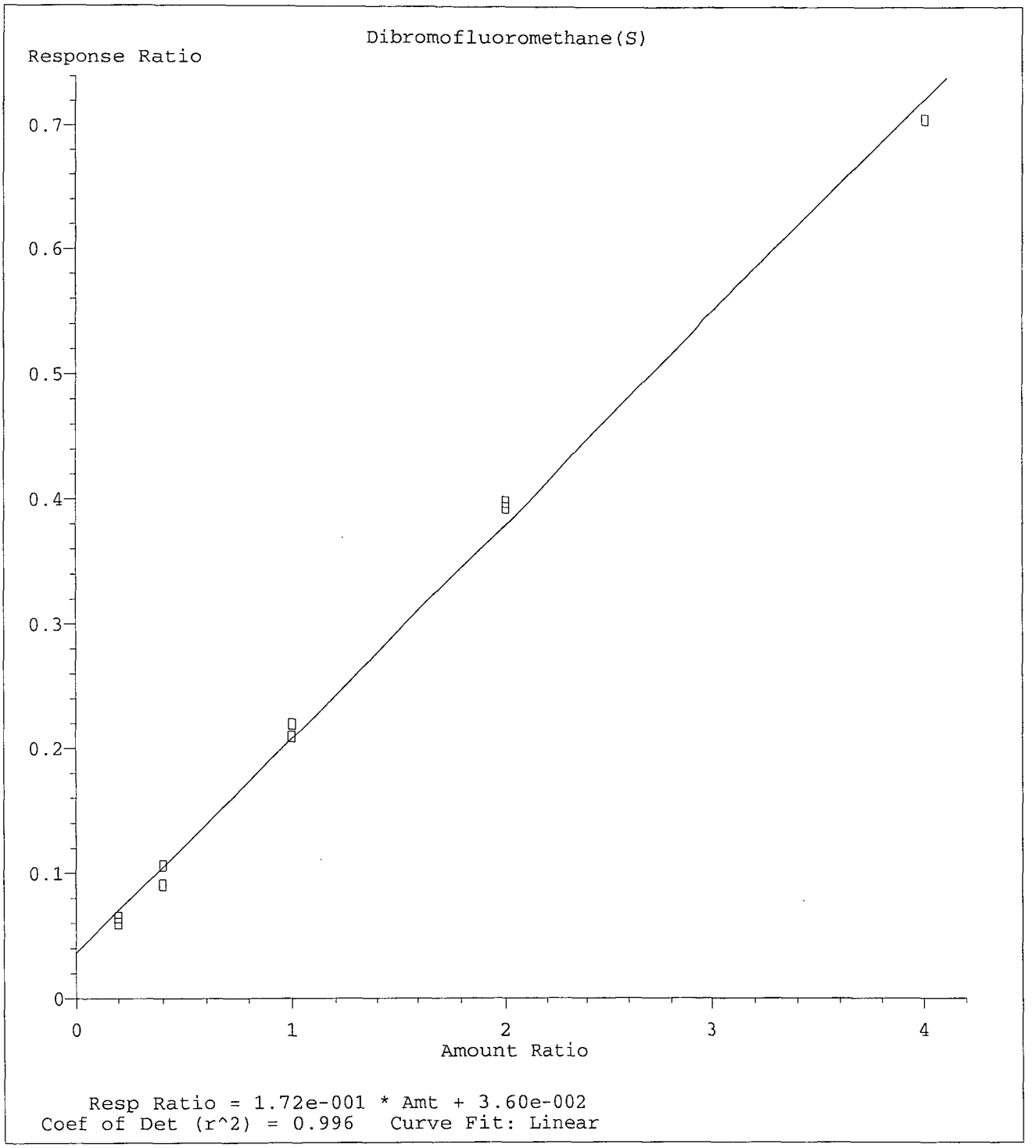
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

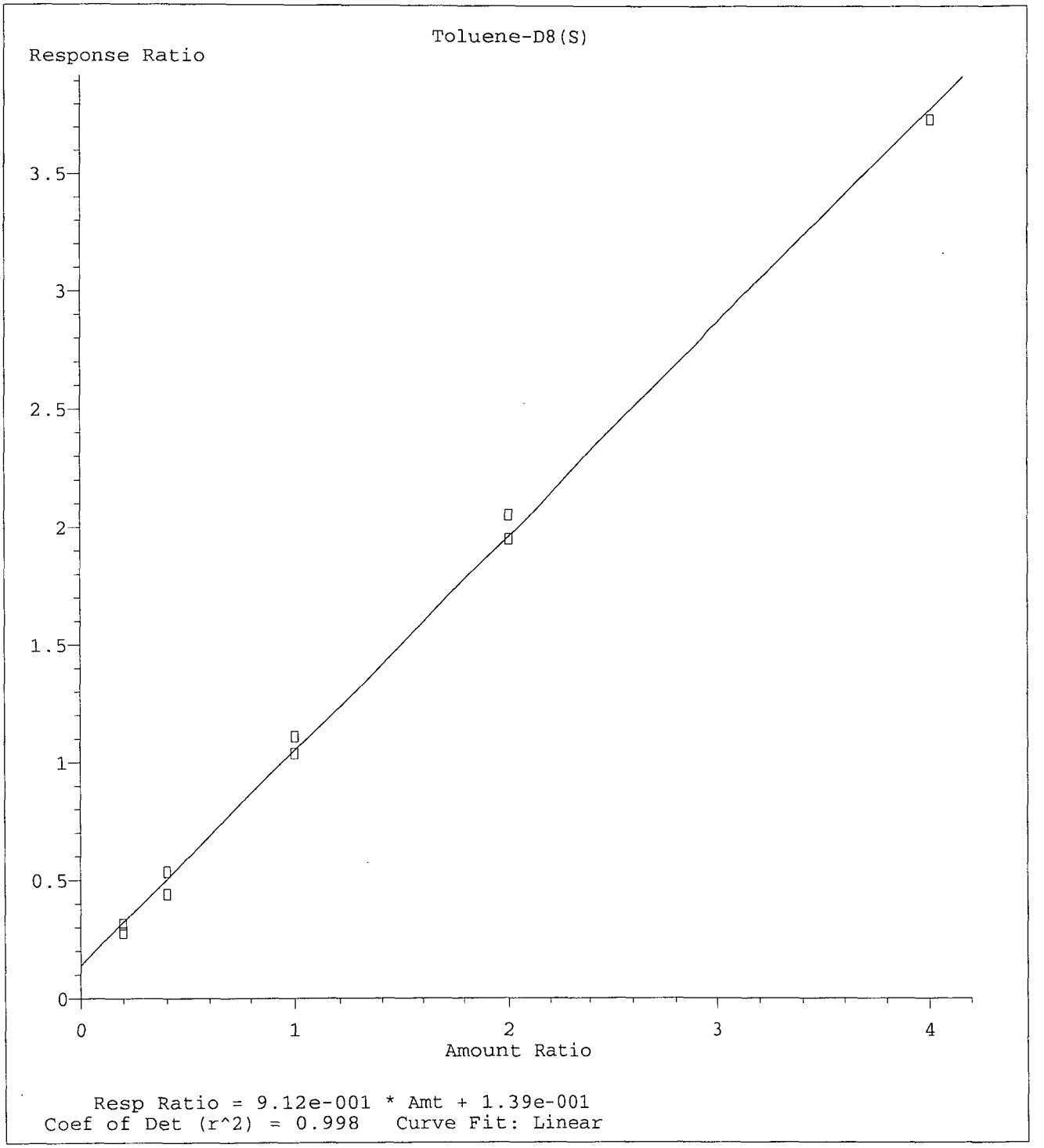
Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration

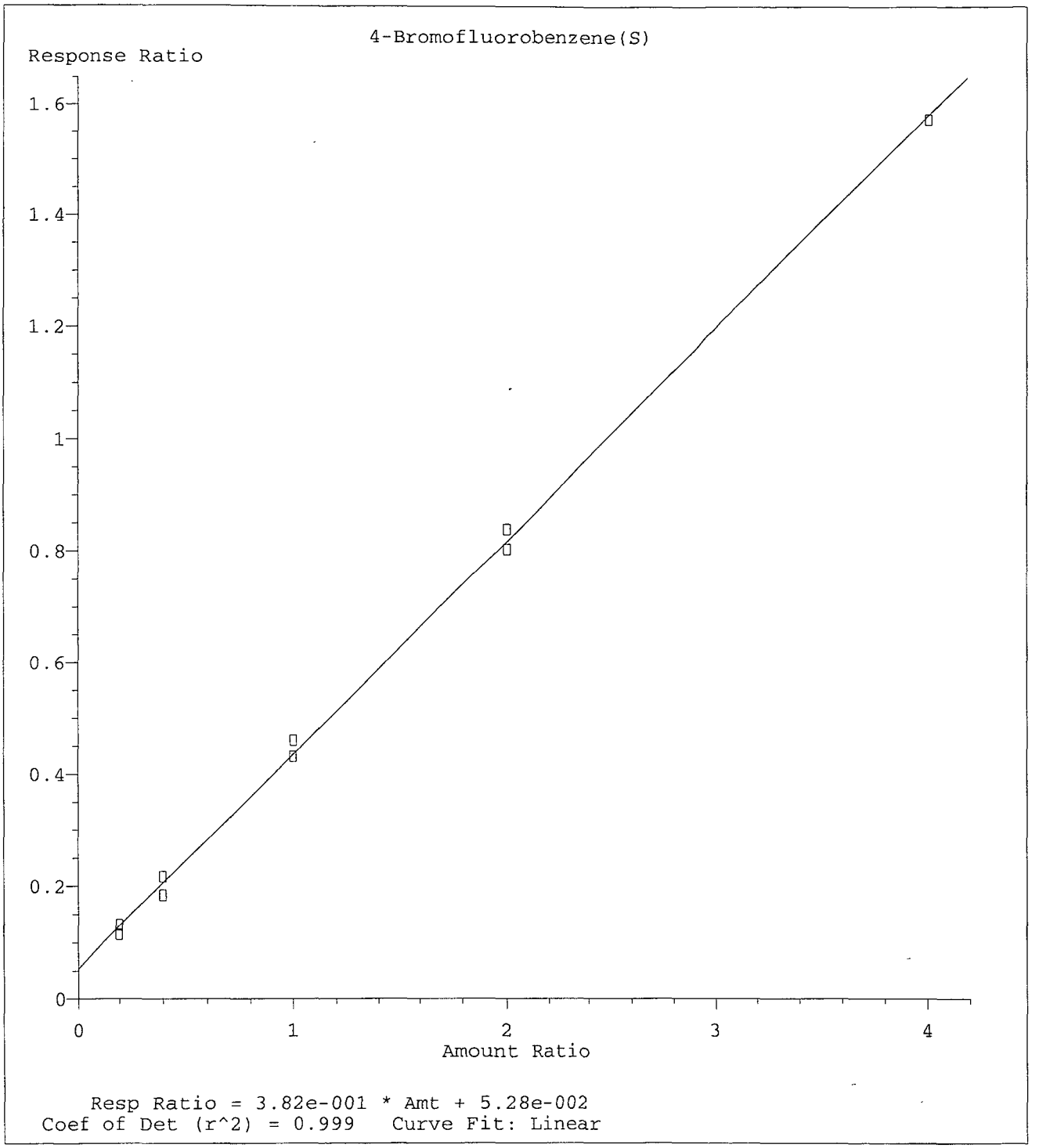




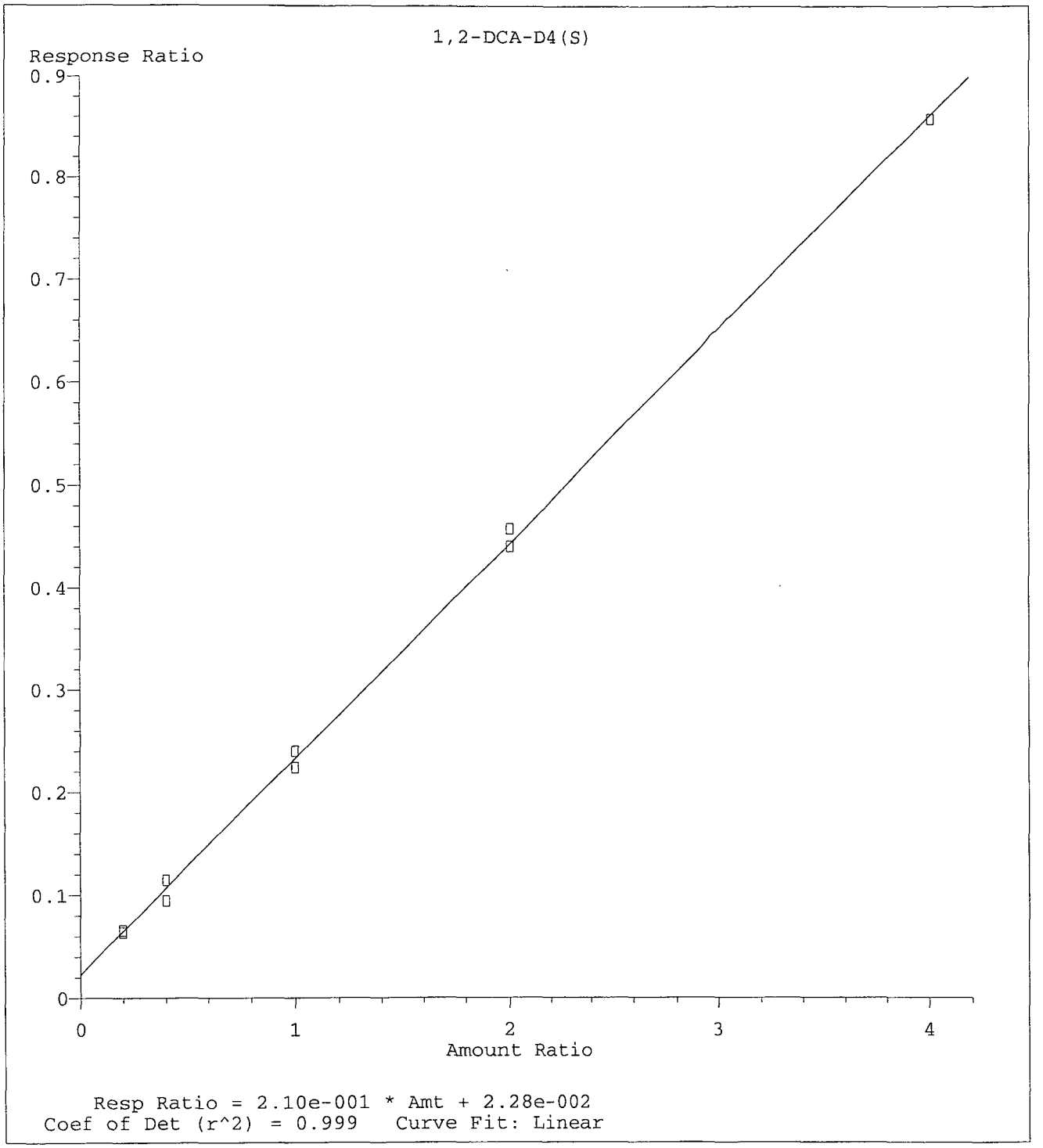
Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 01/28/21
Instrument: Max
Initials: CH

0128M13.D 0128M14.D 0128M15.D 0128M16.D 0128M17.D 0128M18.D 0128M19.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	13.3	5.751	3.015	1.307	0.8278	0.7042	0.6496				3.7	127	TMHB	0.998		
3	TMHB	Chlorobenzene-D5 (IS)																
4	TMHB	1,4-Dichlorobenzene (IS)																
5																		
6																		
7																		
8																		
9																		
10																		
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Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M13.D Vial: 13
Acq On : 28 Jan 21 22:45 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:30 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1722386	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1457753m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	18563m	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Gasoline C6-C10	8.84	TIC	18360305m	-43.4618 ppb	100

(#) = qualifier out of range (m) = manual integration
0128M13.D MGAS0128.M Wed Feb 10 10:14:18 2021 Page 1

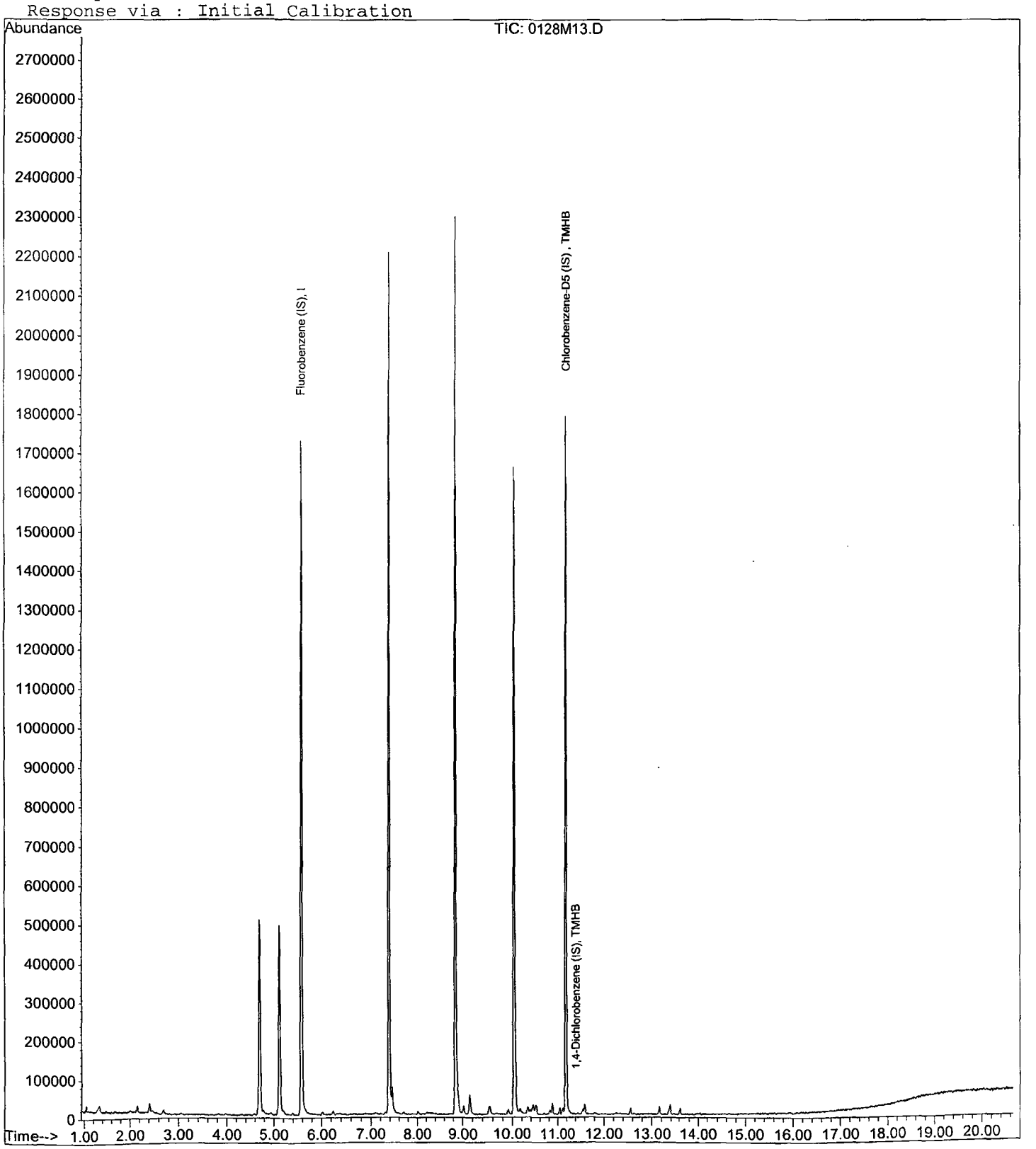
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M13.D
Acq On : 28 Jan 21 22:45
Sample : 20ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 13
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:30 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M14.D Vial: 14
Acq On : 28 Jan 21 23:14 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:31 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1704437	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1330521m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	18966m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	19605184m	19.8230	ppb	100

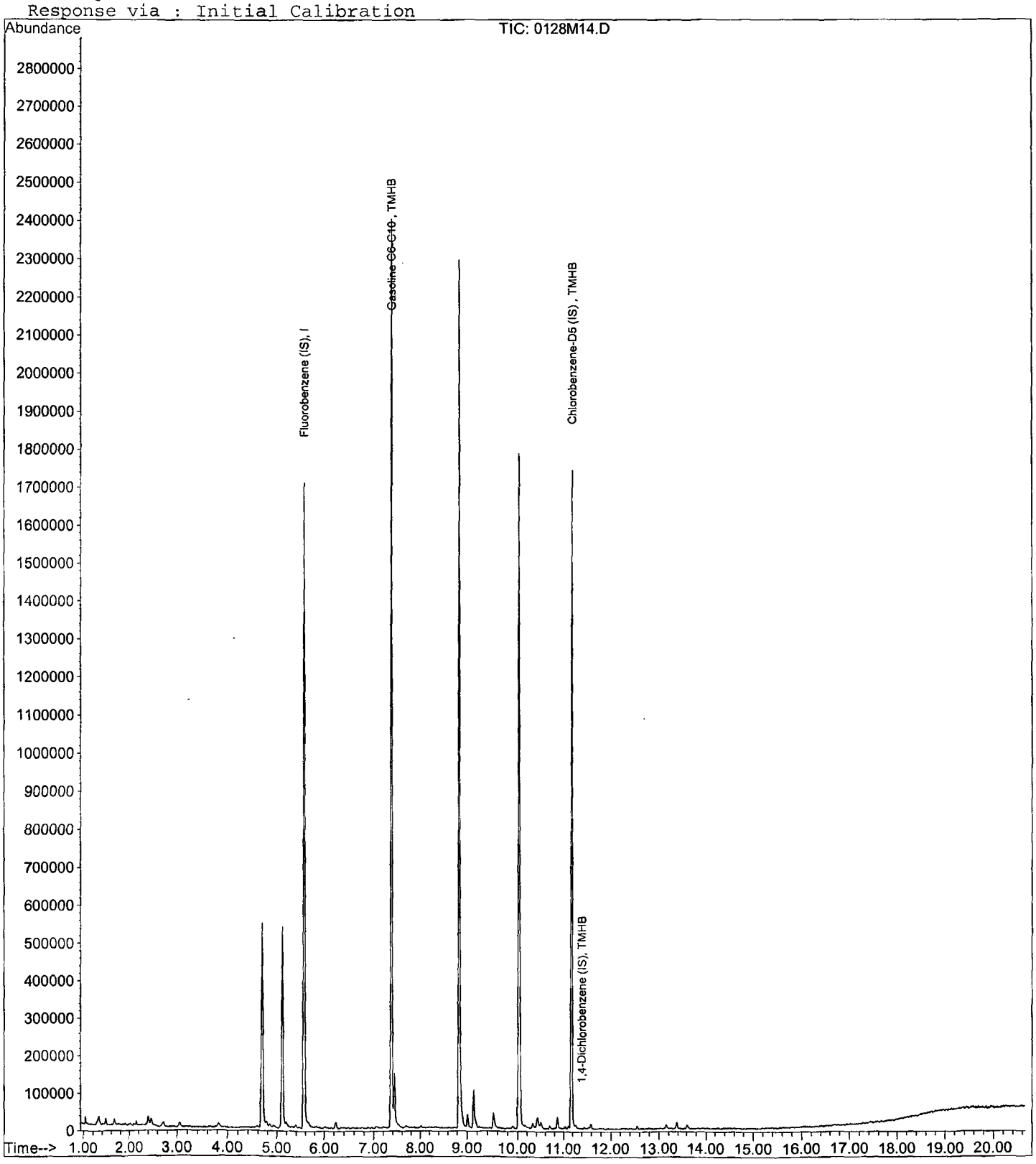
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M14.D Vial: 14
Acq On : 28 Jan 21 23:14 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:31 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M15.D Vial: 15
Acq On : 28 Jan 21 23:43 Operator: LP,DG,CH
Sample : 100ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:32 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1681042	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1348586m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	20997m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	20273948m	61.7239	ppb	100

(#) = qualifier out of range (m) = manual integration

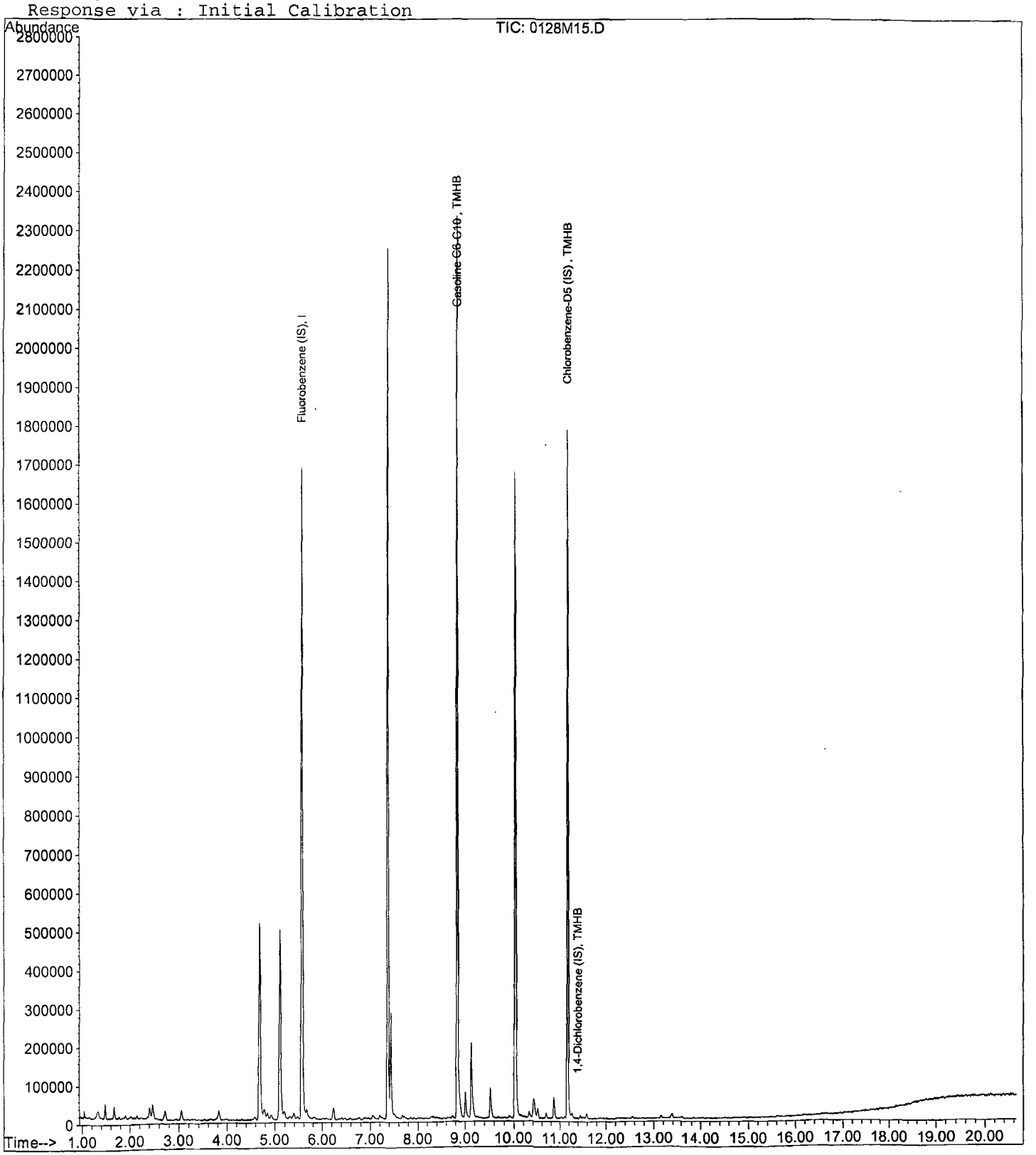
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M15.D
Acq On : 28 Jan 21 23:43
Sample : 100ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 15
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:32 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M16.D Vial: 16
Acq On : 29 Jan 21 00:12 Operator: LP,DG,CH
Sample : 300ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1667850	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1395262m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	106930m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	26156509m	333.7817	ppb	100

(#) = qualifier out of range (m) = manual integration

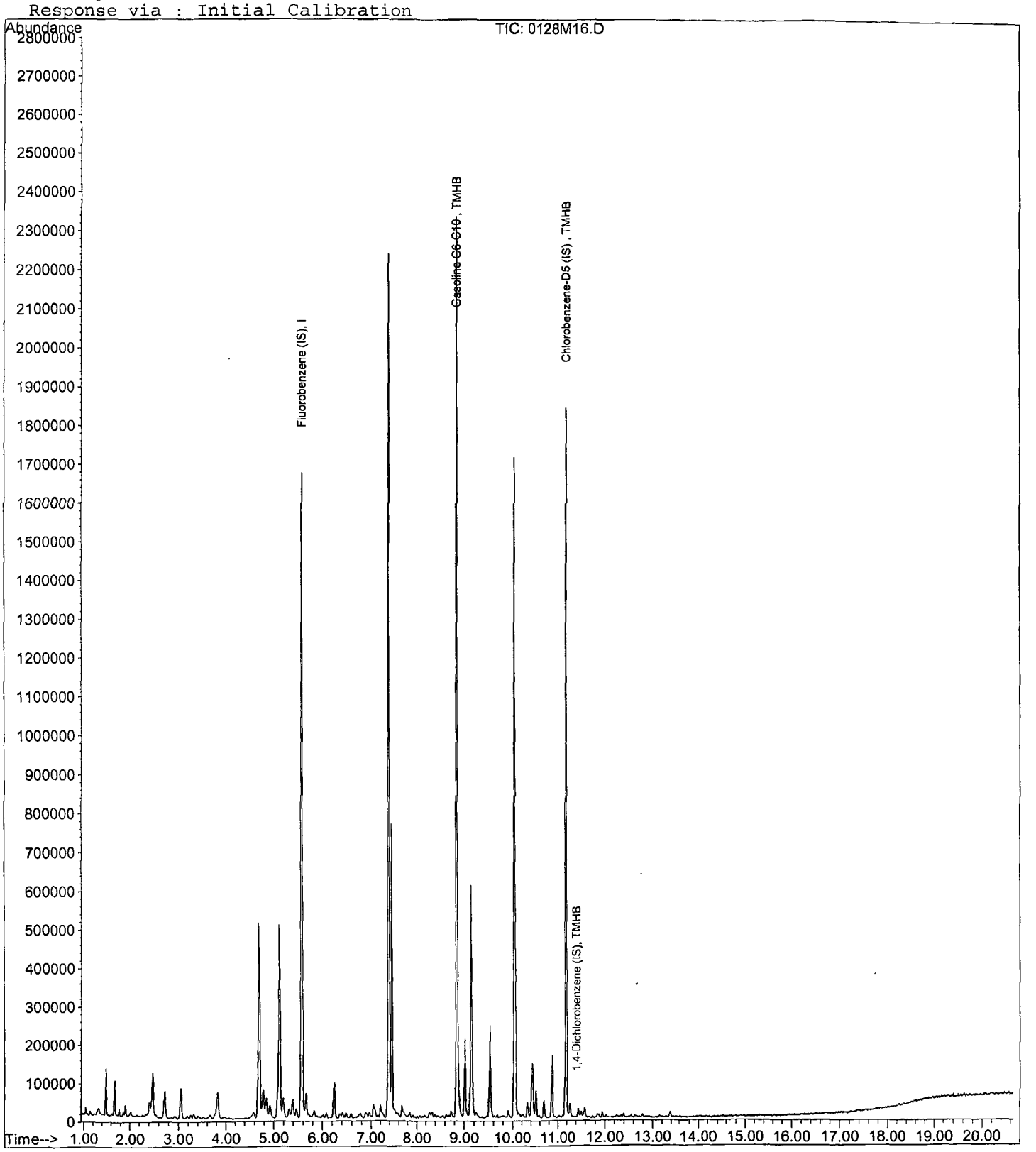
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M16.D
Acq On : 29 Jan 21 00:12
Sample : 300ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 16
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M17.D Vial: 17
Acq On : 29 Jan 21 00:41 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1657067	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1589532m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	204739m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	32922352m	648.0967	ppb	100

(#) = qualifier out of range (m) = manual integration
0128M17.D MGAS0128.M Wed Feb 10 10:14:25 2021 Page 1

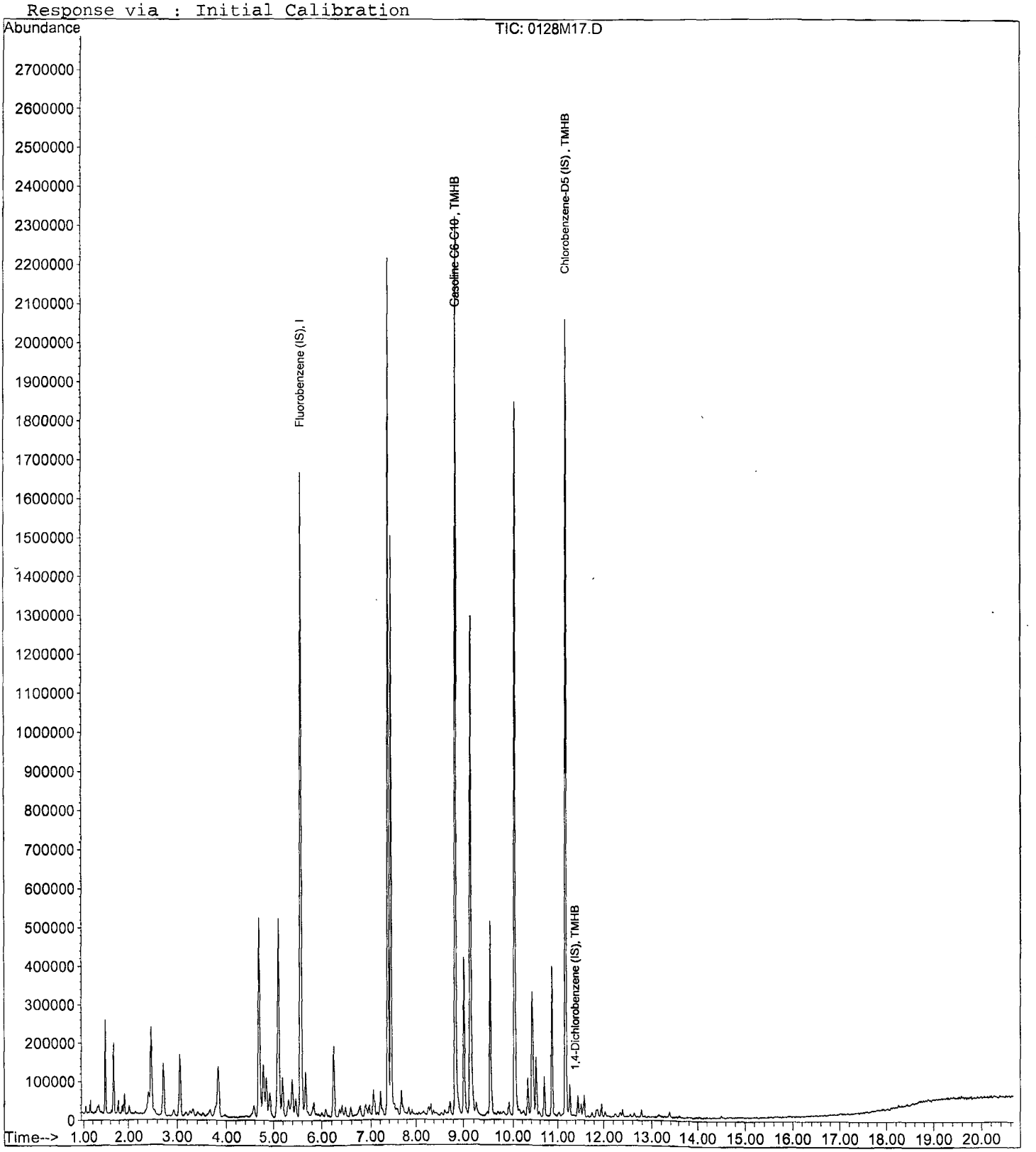
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M17.D
Acq On : 29 Jan 21 00:41
Sample : 600ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 17
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M18.D Vial: 18
Acq On : 29 Jan 21 1:10 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1679963	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1712081m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	316505m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	37859615m	848.4838	ppb	100

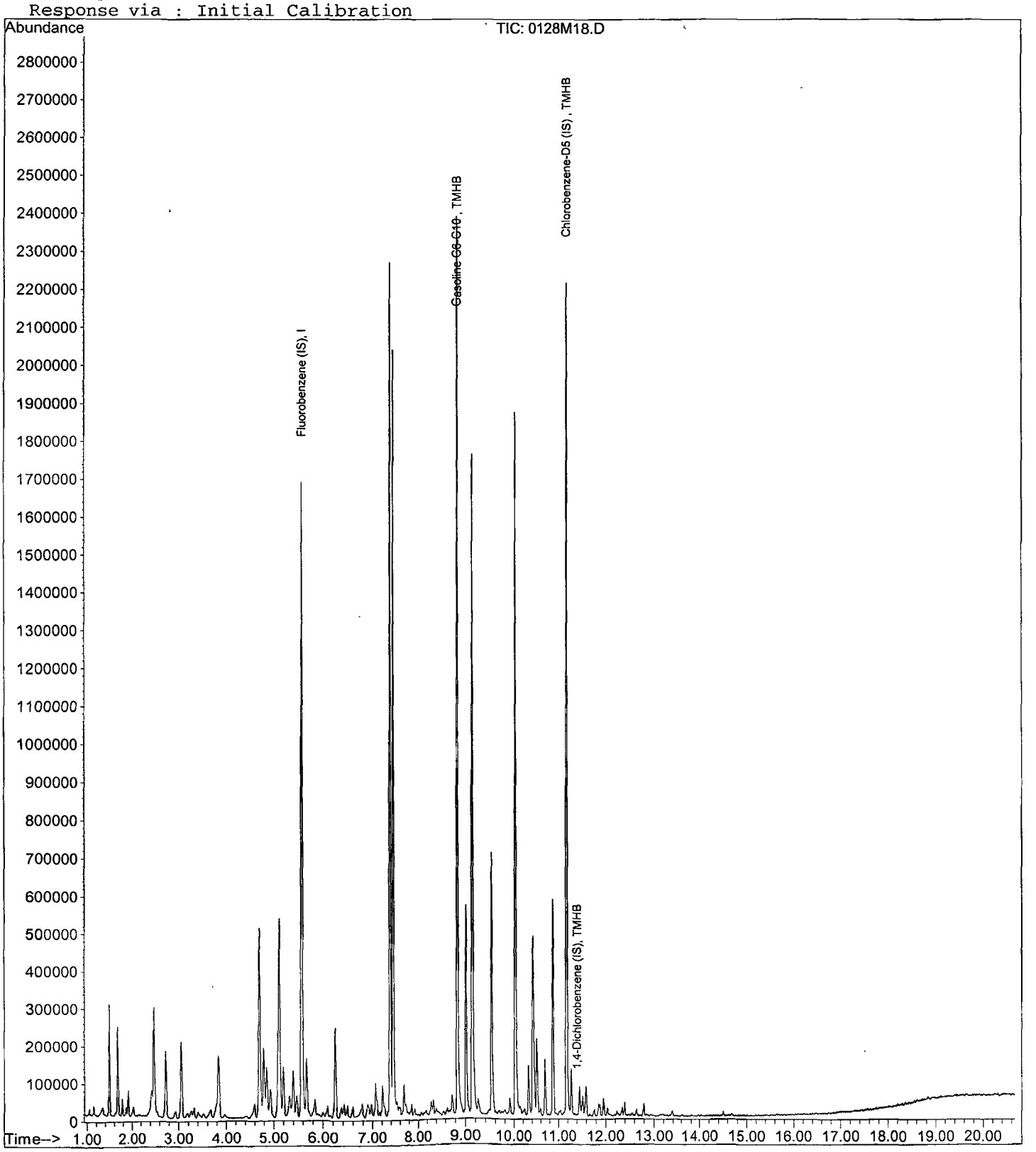
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M18.D Vial: 18
Acq On : 29 Jan 21 1:10 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M19.D Vial: 19
Acq On : 29 Jan 21 1:39 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1688574	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1889550m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	461343m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.44	TIC	43876631m	1107.4753	ppb	100

(#) = qualifier out of range (m) = manual integration
0128M19.D MGAS0128.M Wed Feb 10 10:14:28 2021 Page 1

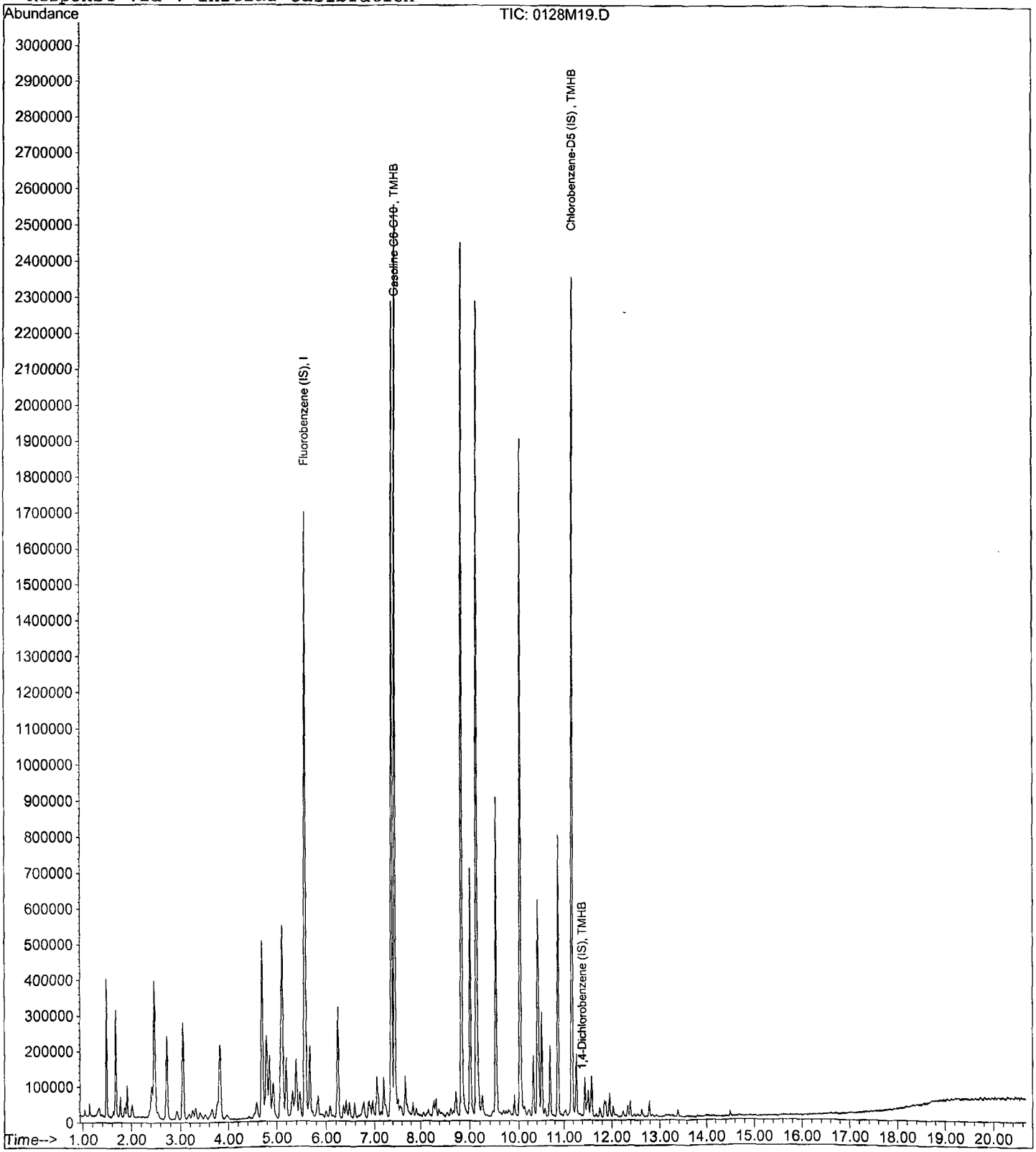
Quantitation Report

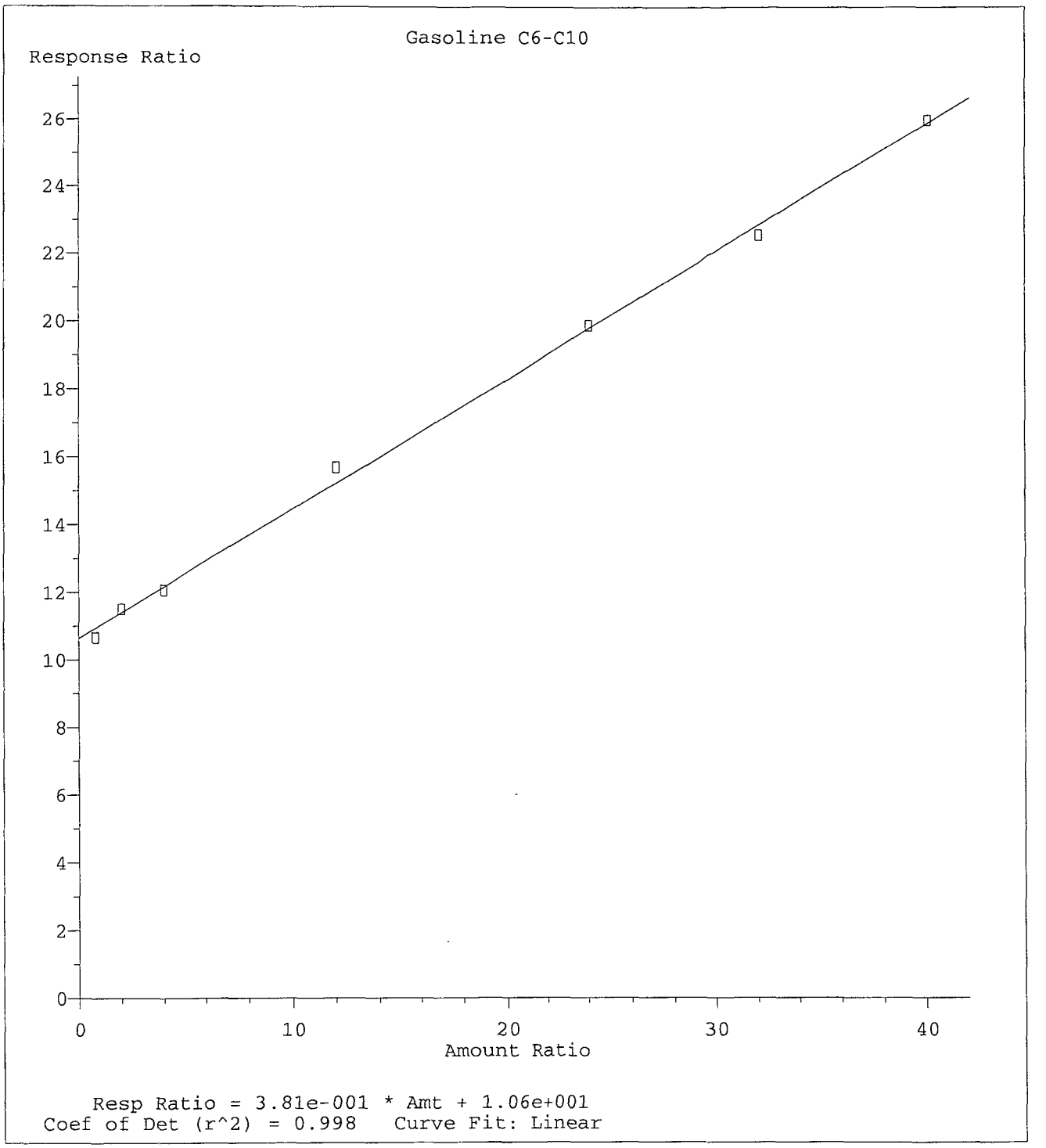
Data File : M:\MAX\DATA\210128\0128M19.D
Acq On : 29 Jan 21 1:39
Sample : 1000ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 19
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration





Method Name: M:\MAX\DATA\210128\MGAS0128.M
Calibration Table Last Updated: Fri Jan 29 10:35:03 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0128M21.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	3.654	1.218	67	TMHBL	13
2							
3							
4							
5							
6							
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38							
39							
40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M21.D Vial: 21
Acq On : 29 Jan 21 2:38 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:37 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1714608	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1529265m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	93993m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	25060989m	260.3865	ppb	100

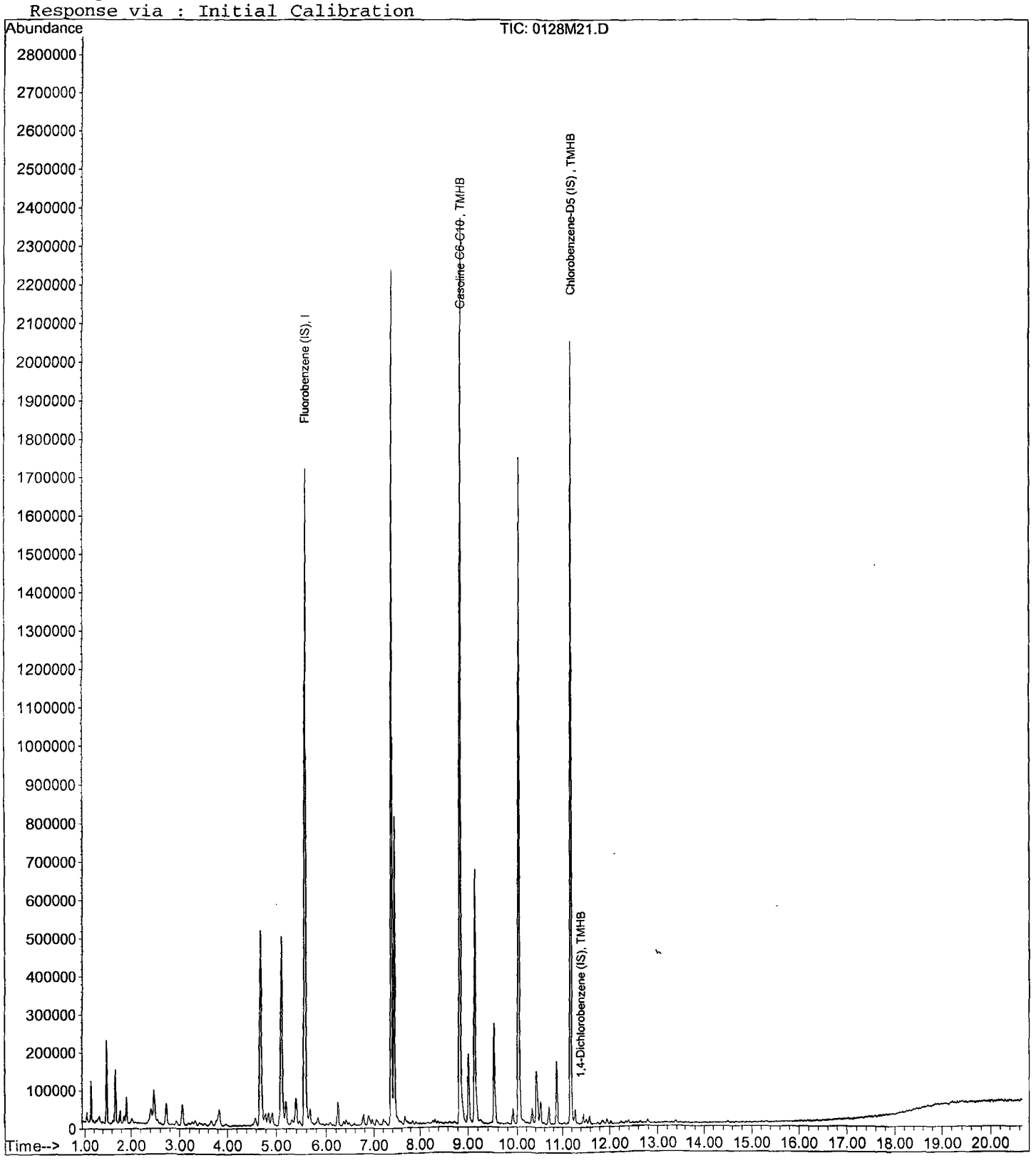
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M21.D Vial: 21
Acq On : 29 Jan 21 2:38 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:37 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.654	1.335	63	TMHBL	18
3	TMHB	Chlorobenzene-D5 (IS)	ISTD			TMHB	
4	TMHB	1,4-Dichlorobenzene (IS)	ISTD			TMHB	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2351	0.2369	0.76	SL	17
3	SL	1,2-DCA-D4(S)	0.2551	0.2516	1.4	SL	8.9
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.165	1.116	4.2	SL	7.2
6	SL	4-Bromofluorobenzene(S)	0.4819	0.4598	4.6	SL	6.5
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
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38							
39							
40							
		Average			2.7		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1443905	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1455310m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	107293m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	23138993m	352.7347	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475281	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1254183	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	616517	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	349527	29.2524 ppb	0.00
Spiked Amount 25.000			Recovery	= 117.008%	
3) 1,2-DCA-D4(S)	5.11	65	371150	27.2353 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.940%	
5) Toluene-D8(S)	7.37	98	1399460	26.7972 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.188%	
6) 4-Bromofluorobenzene(S)	10.03	95	576684	26.6330 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.532%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

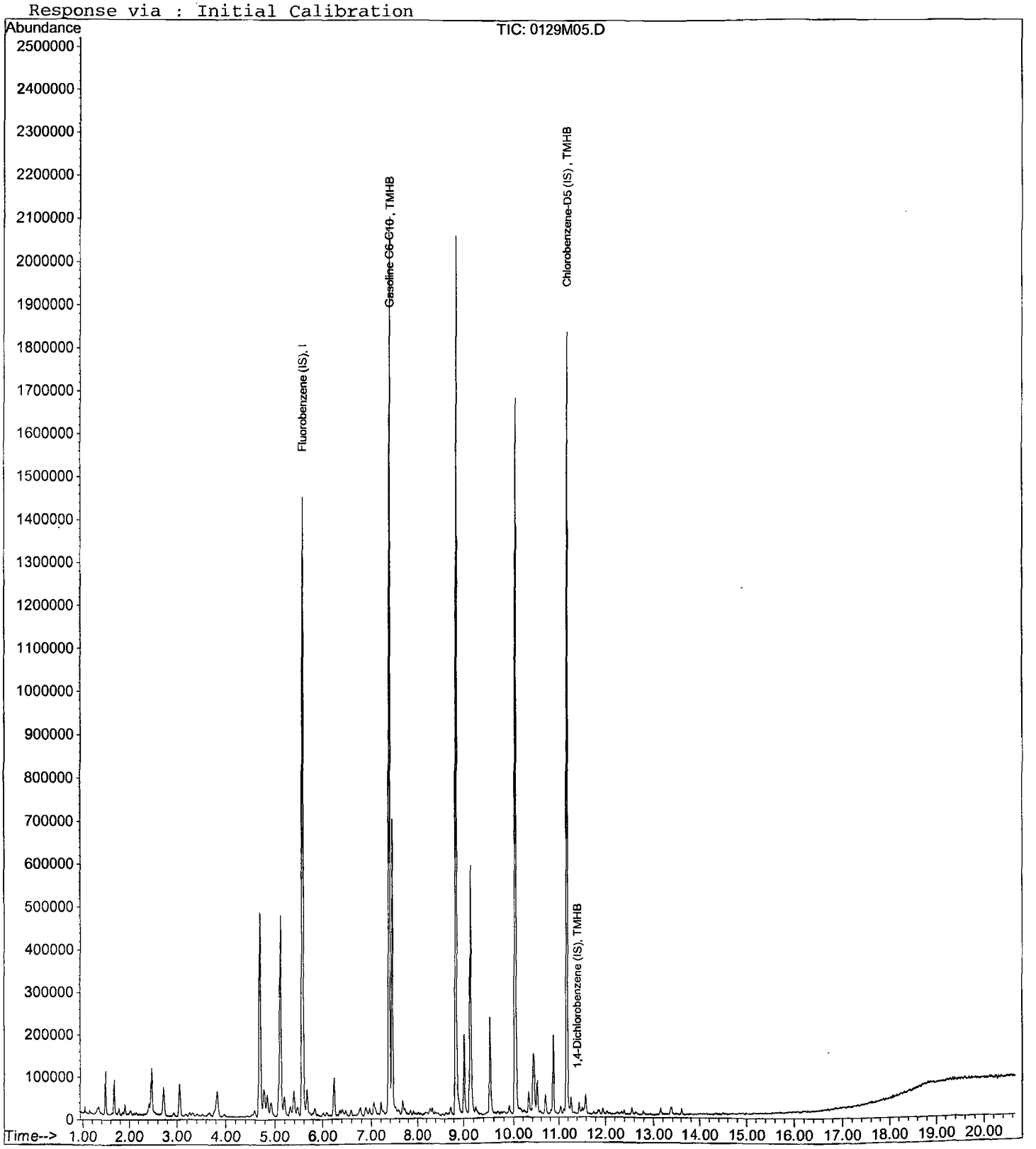
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M05.D
Acq On : 29 Jan 21 17:59
Sample : 210129A CCV/LCS 300ug/L
Misc : IS 10/16/20

Vial: 5
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/30/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M30.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.654	1.353	63	TMHBL	22
3	TMHB	Chlorobenzene-D5 (IS)	ISTD			TMHB	
4	TMHB	1,4-Dichlorobenzene (IS)	ISTD			TMHB	
5							
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39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2351	0.2399	2.0	SL	19
3	SL	1,2-DCA-D4(S)	0.2551	0.2414	5.4	SL	4.1
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.165	1.077	7.5	SL	2.9
6	SL	4-Bromofluorobenzene(S)	0.4819	0.4509	6.4	SL	4.2
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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40							
		Average			5.3		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M30.D Vial: 30
Acq On : 30 Jan 21 6:04 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:08 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1390380	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1322827m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	86529m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	22582456m	366.9326	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M30.D Vial: 30
Acq On : 30 Jan 21 6:04 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1433043	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1233005	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	587802	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	343778	29.6849 ppb	0.00
Spiked Amount 25.000			Recovery	= 118.740%	
3) 1,2-DCA-D4(S)	5.11	65	345966	26.0257 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.104%	
5) Toluene-D8(S)	7.37	98	1327698	25.7266 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.908%	
6) 4-Bromofluorobenzene(S)	10.03	95	555925	26.0482 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.192%	

Target Compounds Qvalue

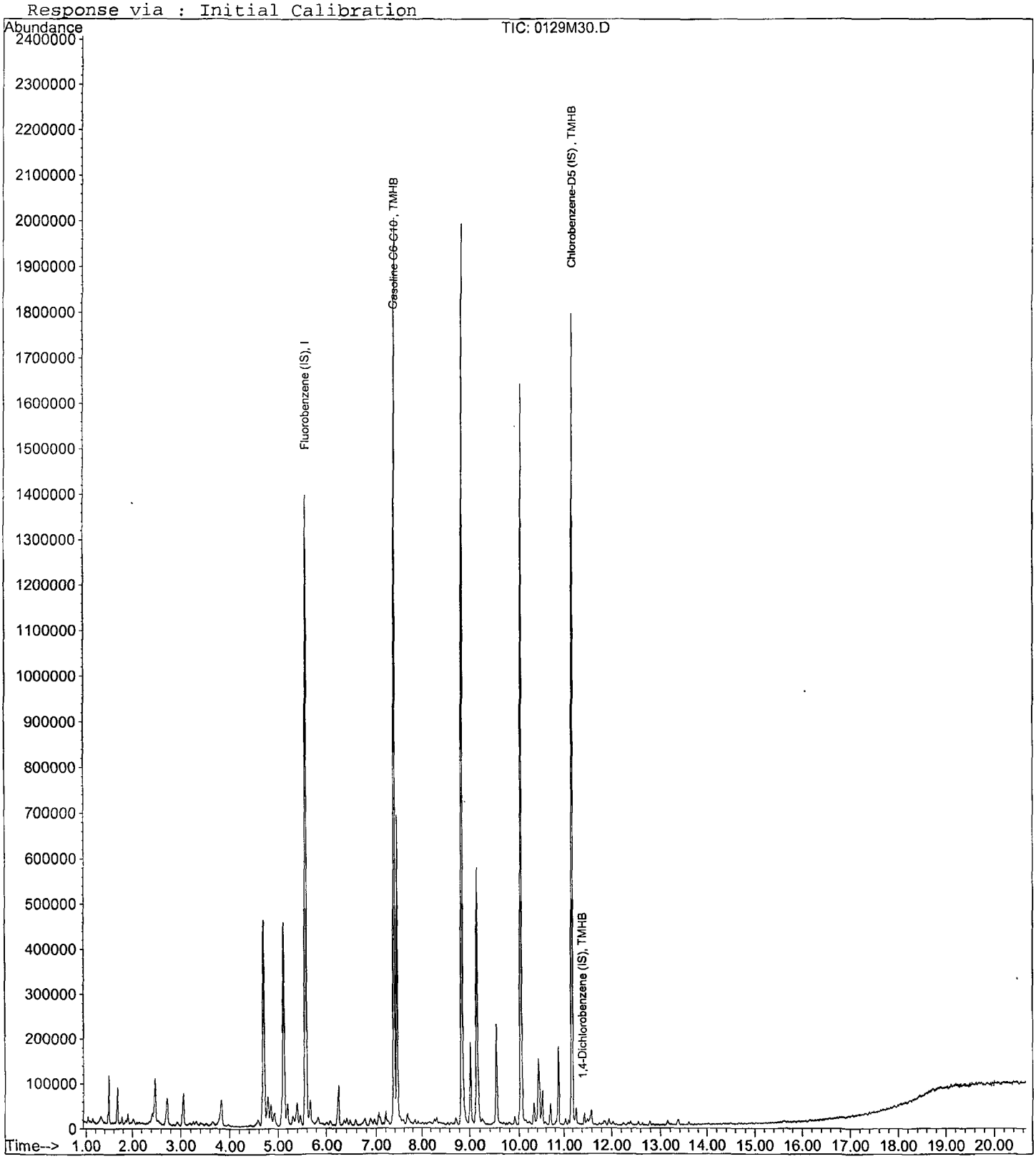
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M30.D Vial: 30
Acq On : 30 Jan 21 6:04 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:08 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M15.D Vial: 15
Acq On : 29 Jan 21 22:49 Operator: LP,DG,CH
Sample : BA26000W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1425913	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1148160m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	10592m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M15.D Vial: 15
Acq On : 29 Jan 21 22:49 Operator: LP,DG,CH
Sample : BA26000W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1459300	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1256544	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	529365	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	342138	28.8930 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.572%	
3) 1,2-DCA-D4(S)	5.11	65	357726	26.4681 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.872%	
5) Toluene-D8(S)	7.37	98	1347261	25.6003 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.400%	
6) 4-Bromofluorobenzene(S)	10.03	95	552244	25.3038 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.216%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

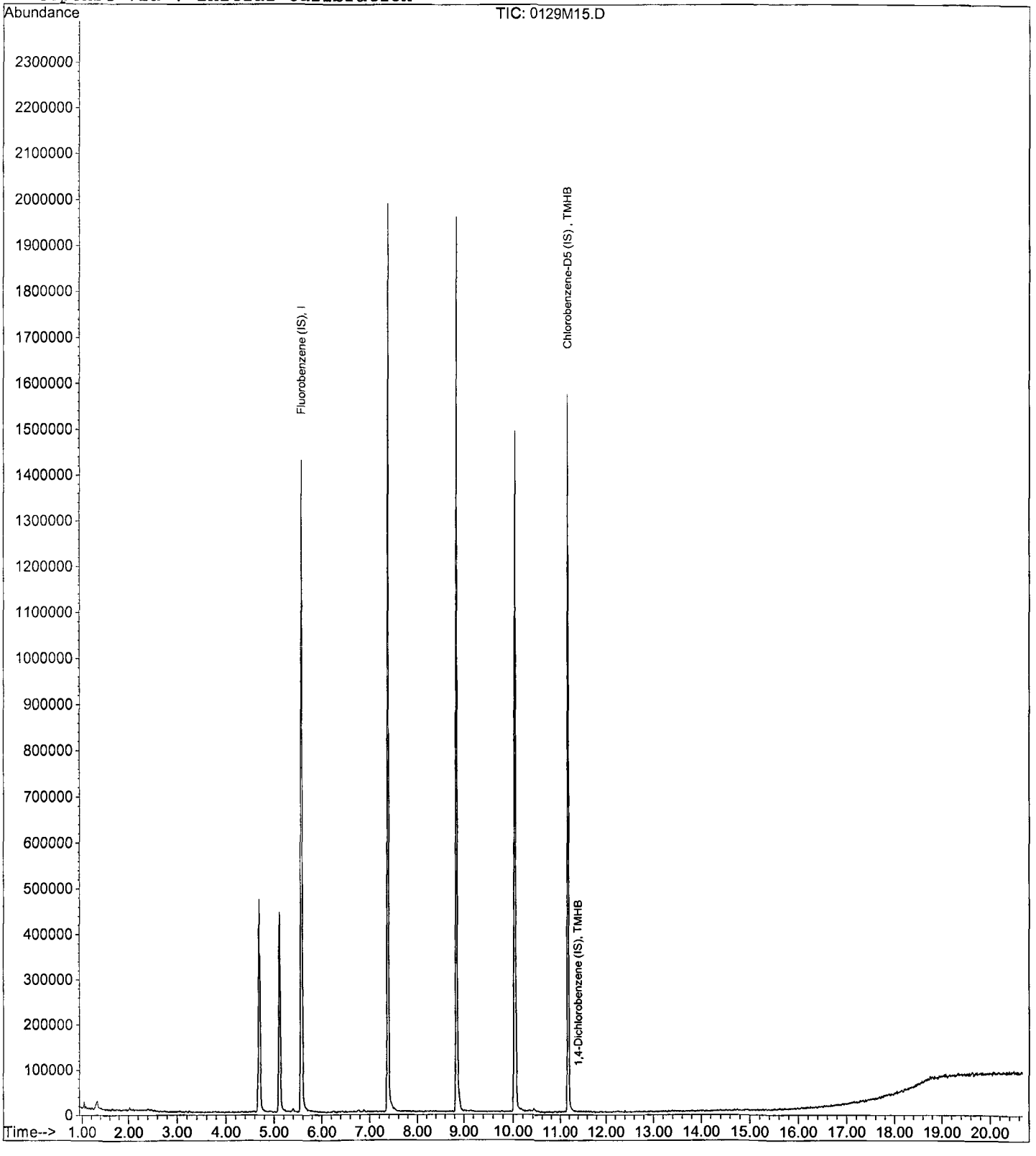
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M15.D
Acq On : 29 Jan 21 22:49
Sample : BA26000W01
Misc : IS 10/16/20

Vial: 15
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M16.D Vial: 16
Acq On : 29 Jan 21 23:18 Operator: LP,DG,CH
Sample : BA26001W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1405738	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1143089m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	11156m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M16.D Vial: 16
Acq On : 29 Jan 21 23:18 Operator: LP,DG,CH
Sample : BA26001W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1435734	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1226139	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	501236	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	350453	30.2962 ppb	0.00
Spiked Amount 25.000			Recovery = 121.184%		
3) 1,2-DCA-D4(S)	5.11	65	361859	27.2899 ppb	0.00
Spiked Amount 25.000			Recovery = 109.160%		
5) Toluene-D8(S)	7.37	98	1353573	26.4707 ppb	0.00
Spiked Amount 25.000			Recovery = 105.884%		
6) 4-Bromofluorobenzene(S)	10.03	95	540479	25.3891 ppb	0.00
Spiked Amount 25.000			Recovery = 101.556%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

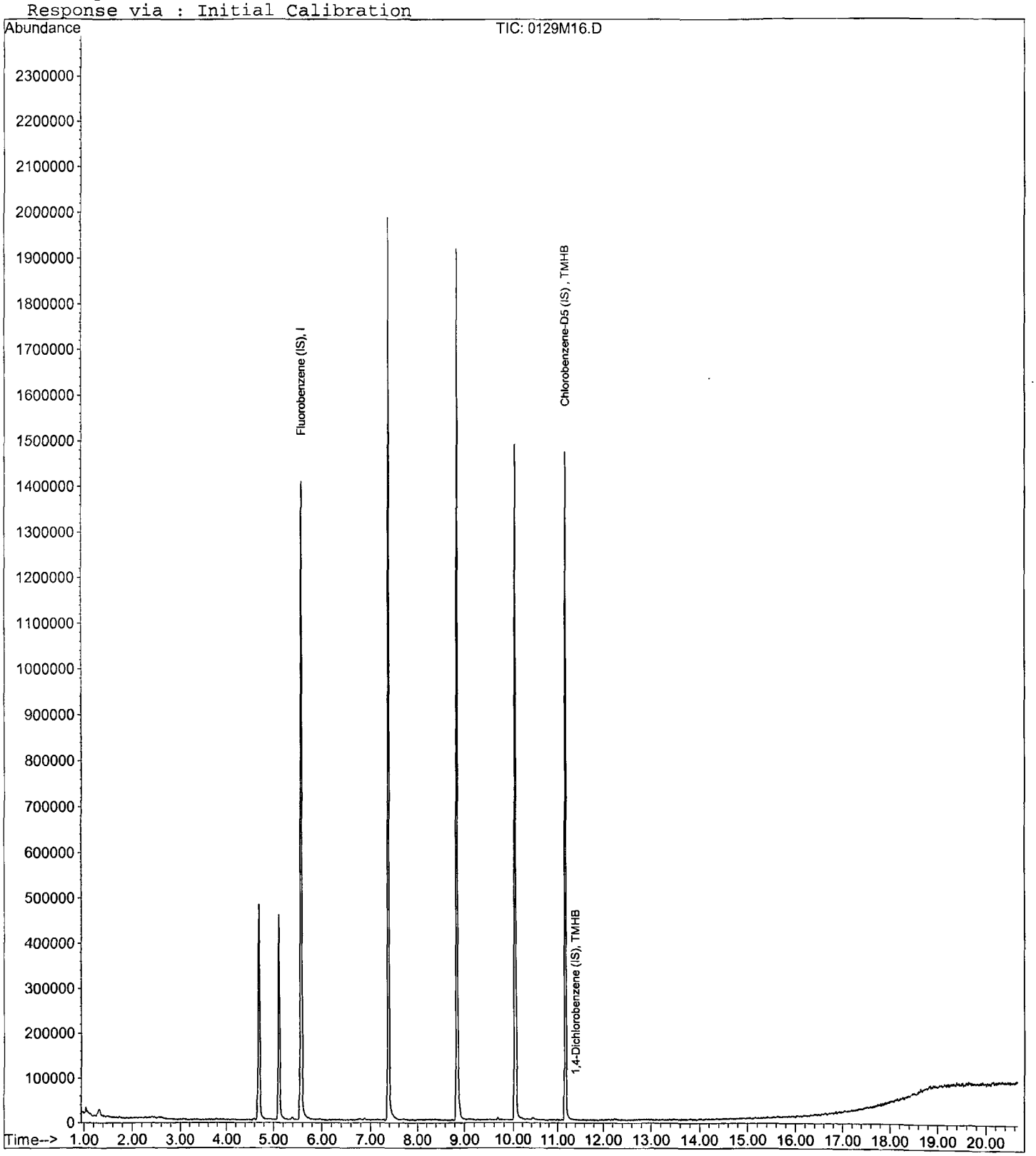
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M16.D
Acq On : 29 Jan 21 23:18
Sample : BA26001W01
Misc : IS 10/16/20

Vial: 16
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M17.D Vial: 17
Acq On : 29 Jan 21 23:47 Operator: LP,DG,CH
Sample : BA26003W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1392950	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1104053m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	14829m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M17.D MGAS0128.M Tue Feb 02 10:21:52 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M17.D Vial: 17
Acq On : 29 Jan 21 23:47 Operator: LP,DG,CH
Sample : BA26003W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1436481	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1231255	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	506789	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	347442	29.9726 ppb	0.00
Spiked Amount 25.000			Recovery = 119.892%		
3) 1,2-DCA-D4(S)	5.11	65	362001	27.2861 ppb	0.00
Spiked Amount 25.000			Recovery = 109.144%		
5) Toluene-D8(S)	7.37	98	1387140	27.0926 ppb	0.00
Spiked Amount 25.000			Recovery = 108.372%		
6) 4-Bromofluorobenzene(S)	10.03	95	558322	26.2175 ppb	0.00
Spiked Amount 25.000			Recovery = 104.868%		

Target Compounds Qvalue

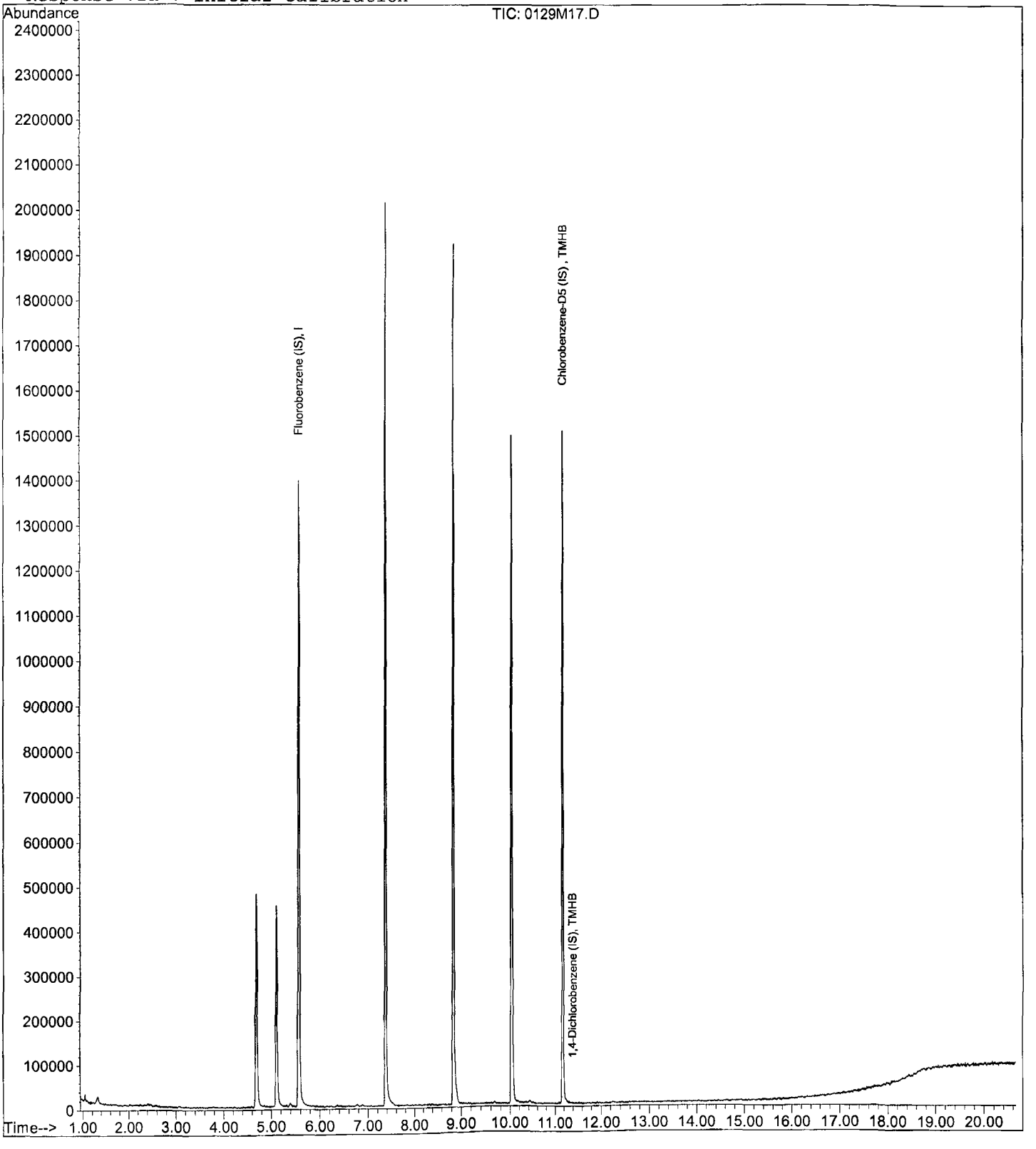
(#) = qualifier out of range (m) = manual integration

Data File : M:\MAX\DATA\210128\0129M17.D
Acq On : 29 Jan 21 23:47
Sample : BA26003W01
Misc : IS 10/16/20

Vial: 17
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M18.D Vial: 18
Acq On : 30 Jan 21 00:16 Operator: LP,DG,CH
Sample : BA26005W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1361880	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1131092m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	3517m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M18.D MGAS0128.M Tue Feb 02 10:21:54 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M18.D Vial: 18
Acq On : 30 Jan 21 00:16 Operator: LP,DG,CH
Sample : BA26005W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1407872	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1205119	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	496134	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	362744	32.2701 ppb	0.00
Spiked Amount 25.000			Recovery	= 129.080%	
3) 1,2-DCA-D4(S)	5.11	65	376846	29.1513 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.604%	
5) Toluene-D8(S)	7.37	98	1427504	28.6814 ppb	0.00
Spiked Amount 25.000			Recovery	= 114.724%	
6) 4-Bromofluorobenzene(S)	10.03	95	575715	27.8053 ppb	0.00
Spiked Amount 25.000			Recovery	= 111.220%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

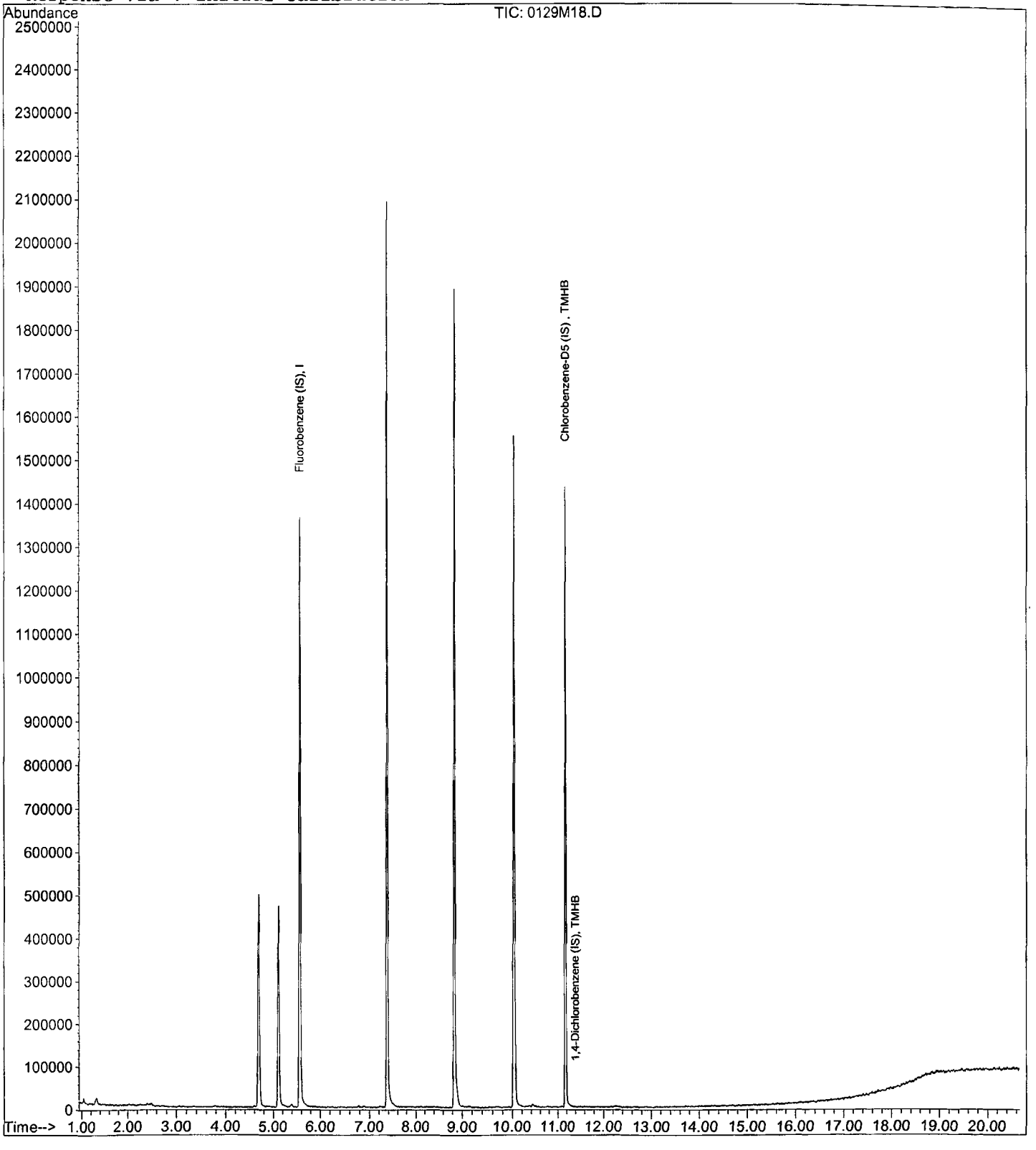
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M18.D
Acq On : 30 Jan 21 00:16
Sample : BA26005W01
Misc : IS 10/16/20

Vial: 18
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:12 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M19.D Vial: 19
Acq On : 30 Jan 21 00:45 Operator: LP,DG,CH
Sample : BA26006W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:17 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1376672	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1737774m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	1036532m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M19.D MGAS0128.M Tue Feb 02 10:21:55 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M19.D Vial: 19
Acq On : 30 Jan 21 00:45 Operator: LP,DG,CH
Sample : BA26006W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1407113	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1188029	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	747653	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	347148	30.6770 ppb	0.00
Spiked Amount 25.000			Recovery = 122.708%		
3) 1,2-DCA-D4(S)	5.11	65	360278	27.7665 ppb	0.00
Spiked Amount 25.000			Recovery = 111.068%		
5) Toluene-D8(S)	7.37	98	1344276	27.2273 ppb	0.00
Spiked Amount 25.000			Recovery = 108.908%		
6) 4-Bromofluorobenzene(S)	10.02	95	572032	28.0522 ppb	0.00
Spiked Amount 25.000			Recovery = 112.208%		

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

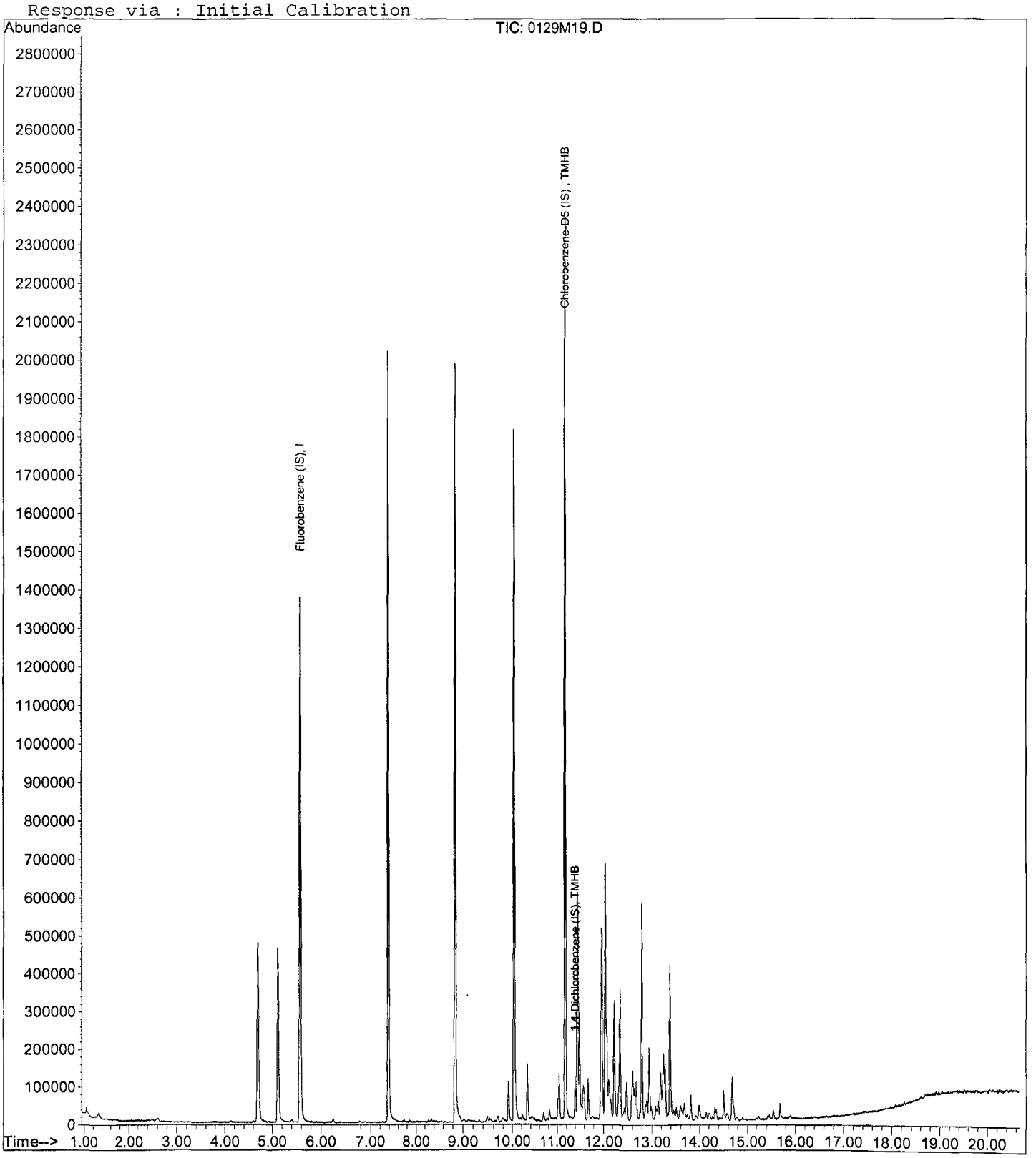
Data File : M:\MAX\DATA\210128\0129M19.D
Acq On : 30 Jan 21 00:45
Sample : BA26006W01
Misc : IS 10/16/20

Vial: 19
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:17 2021

Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M20.D Vial: 20
Acq On : 30 Jan 21 1:14 Operator: LP,DG,CH
Sample : BA26008W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1380128	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1623302m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	1090108m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M20.D Vial: 20
Acq On : 30 Jan 21 1:14 Operator: LP,DG,CH
Sample : BA26008W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1398787	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1170886	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	732641	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	339064	30.0495 ppb	0.00
Spiked Amount 25.000			Recovery	= 120.200%	
3) 1,2-DCA-D4(S)	5.11	65	351474	27.1986 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.796%	
5) Toluene-D8(S)	7.37	98	1287410	26.3497 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.400%	
6) 4-Bromofluorobenzene(S)	10.03	95	546161	27.0677 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.272%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

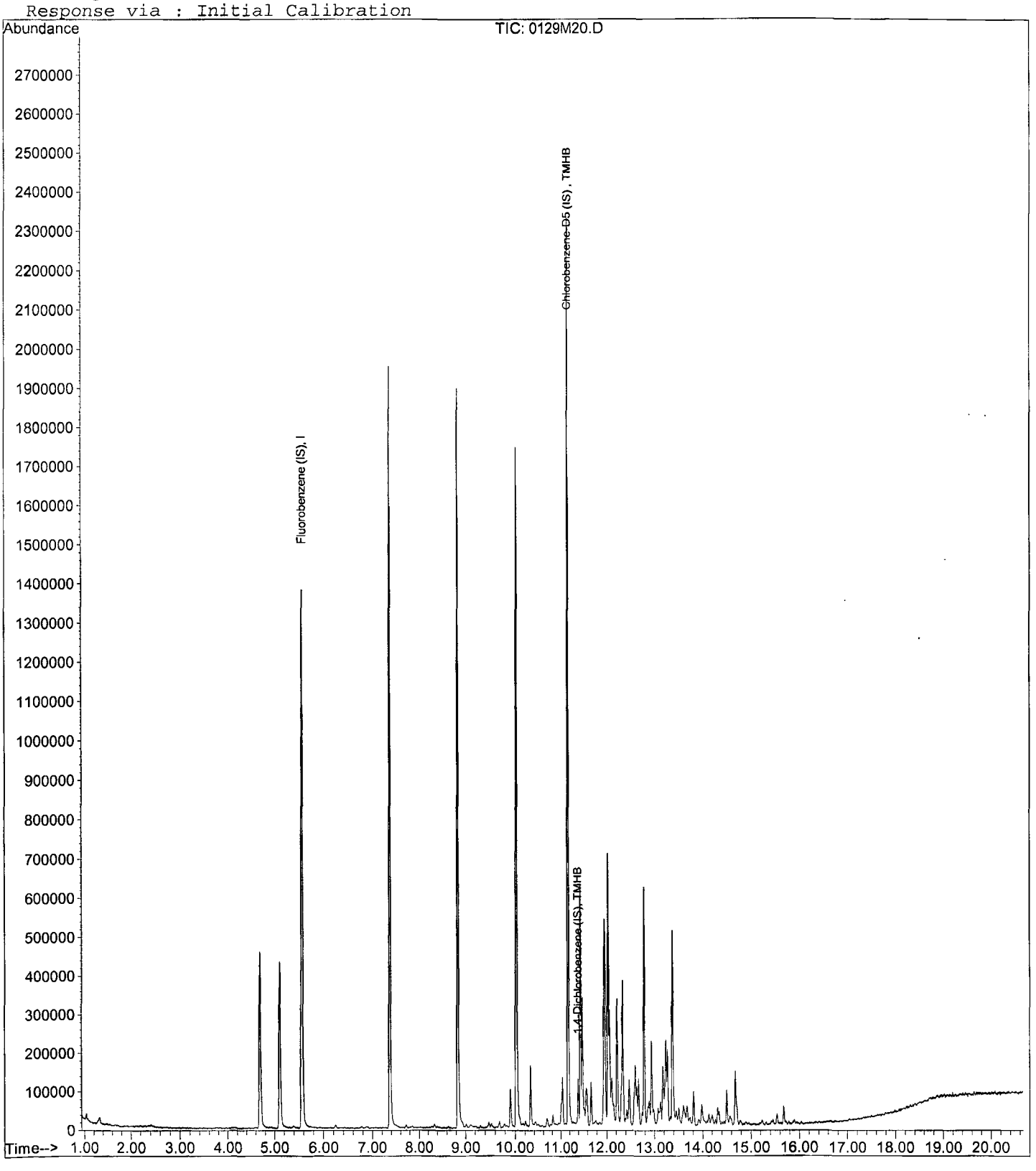
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M20.D
Acq On : 30 Jan 21 1:14
Sample : BA26008W01
Misc : IS 10/16/20

Vial: 20
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M21.D Vial: 21
Acq On : 30 Jan 21 1:43 Operator: LP,DG,CH
Sample : BA26012W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1377342	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1329828m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	28615m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M21.D Vial: 21
Acq On : 30 Jan 21 1:43 Operator: LP,DG,CH
Sample : BA26012W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1409054	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1206196	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	612243	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	330279	28.8849 ppb	0.00
Spiked Amount 25.000			Recovery = 115.540%		
3) 1,2-DCA-D4(S)	5.11	65	351292	26.9652 ppb	0.00
Spiked Amount 25.000			Recovery = 107.860%		
5) Toluene-D8(S)	7.37	98	1318616	26.1765 ppb	0.00
Spiked Amount 25.000			Recovery = 104.704%		
6) 4-Bromofluorobenzene(S)	10.03	95	541937	25.9451 ppb	0.00
Spiked Amount 25.000			Recovery = 103.780%		

Target Compounds Qvalue

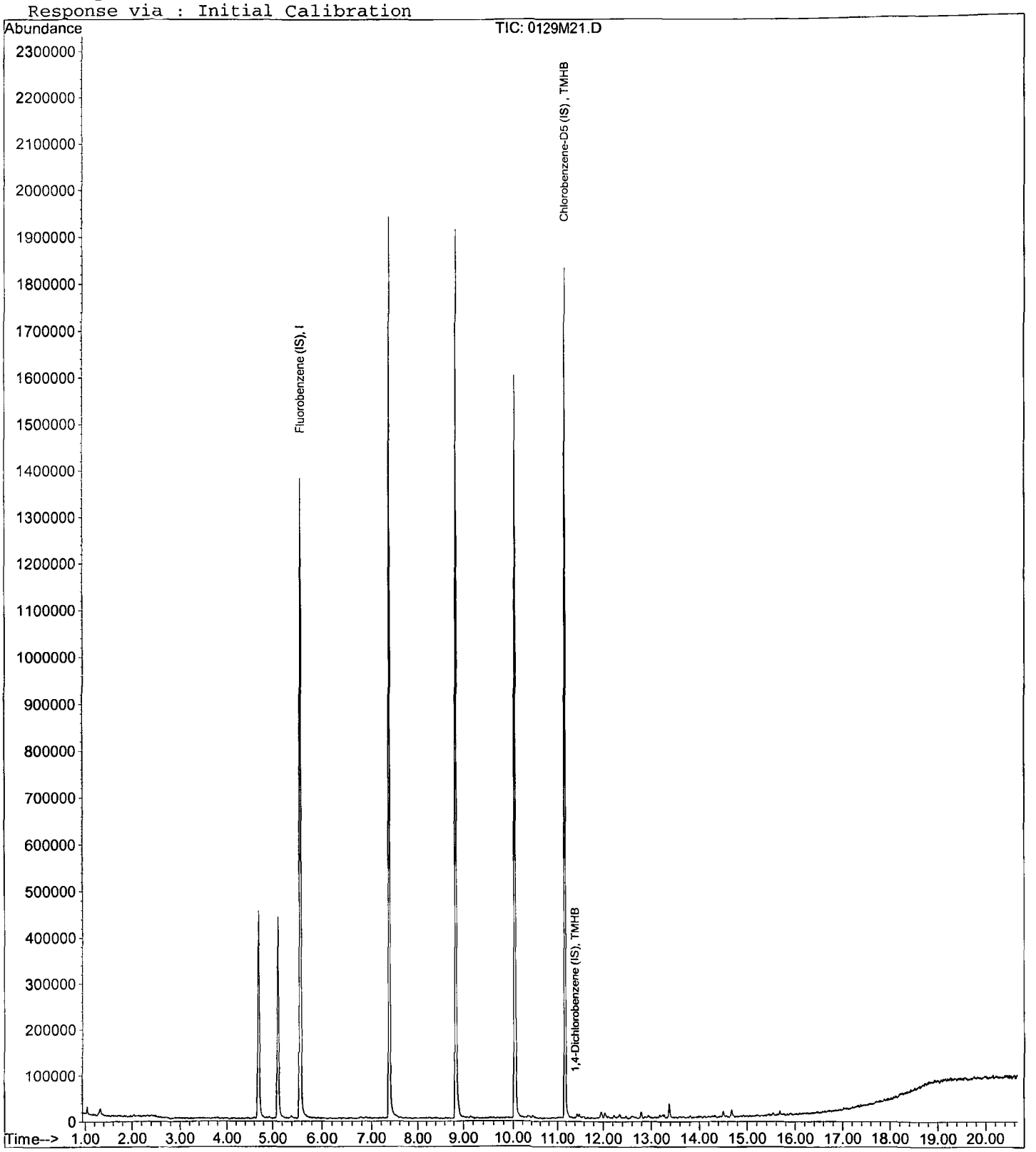
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M21.D Vial: 21
Acq On : 30 Jan 21 1:43 Operator: LP,DG,CH
Sample : BA26012W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M22.D Vial: 22
Acq On : 30 Jan 21 2:12 Operator: LP,DG,CH
Sample : BA26013W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1406194	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1278134m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	3525m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M22.D Vial: 22
Acq On : 30 Jan 21 2:12 Operator: LP,DG,CH
Sample : BA26013W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1433792	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1235761	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	585696	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	339408	29.2230 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.892%	
3) 1,2-DCA-D4(S)	5.11	65	349844	26.3328 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.332%	
5) Toluene-D8(S)	7.37	98	1323915	25.5767 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.308%	
6) 4-Bromofluorobenzene(S)	10.03	95	551485	25.7473 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.988%	

Target Compounds Qvalue

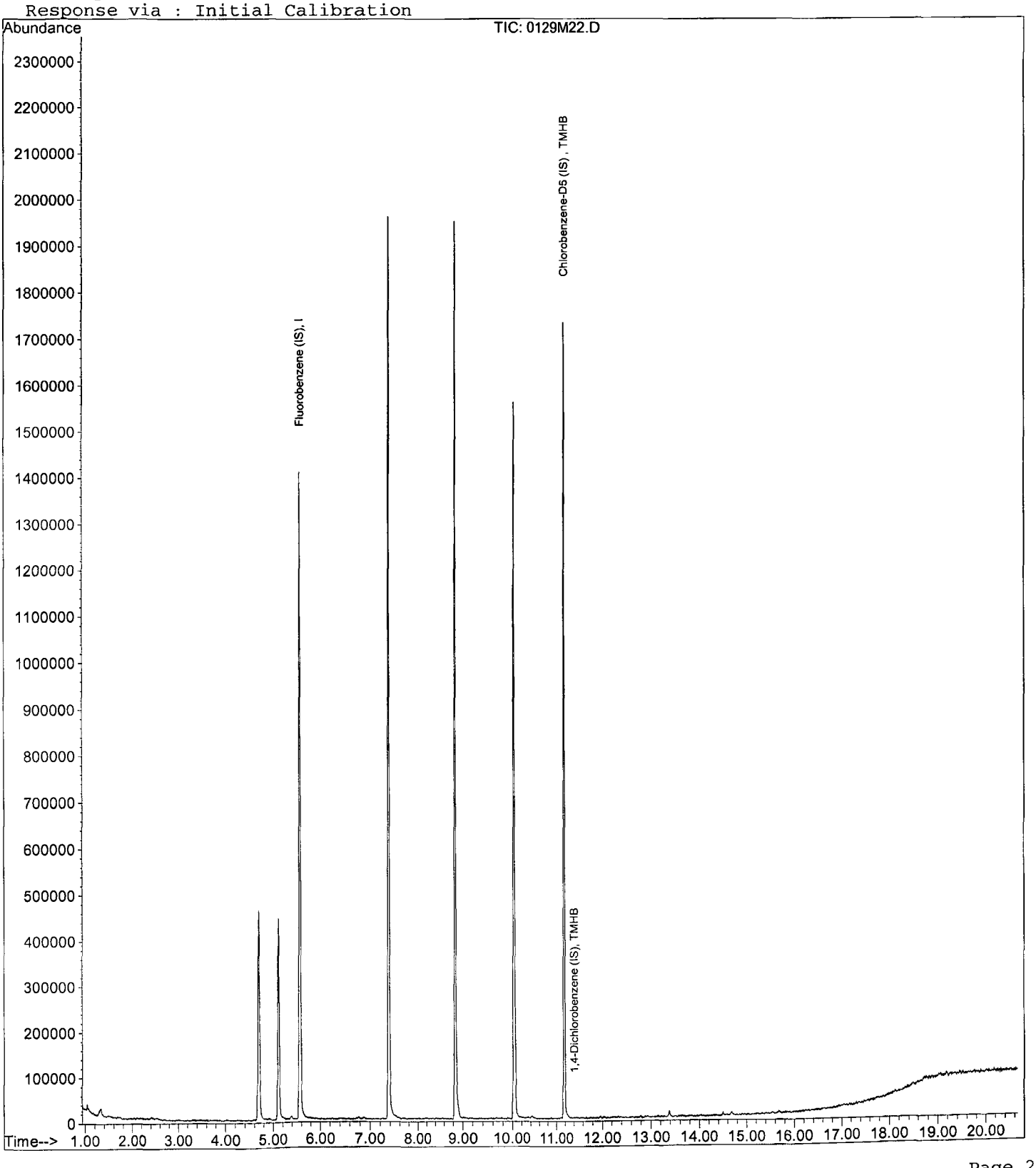
(#) = qualifier out of range (m) = manual integration
0129M22.D M012SUR.M Tue Feb 02 10:24:14 2021 Page 1

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M22.D Vial: 22
Acq On : 30 Jan 21 2:12 Operator: LP,DG,CH
Sample : BA26013W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M23.D
Acq On : 30 Jan 21 2:41
Sample : BA26015W01
Misc : IS 10/16/20

Vial: 23
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1383751	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1215828m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	16716m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M23.D MGAS0128.M Tue Feb 02 10:22:02 2021

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M23.D Vial: 23
Acq On : 30 Jan 21 2:41 Operator: LP,DG,CH
Sample : BA26015W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1421830	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1215494	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	565947	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	334858	29.0471 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.188%	
3) 1,2-DCA-D4(S)	5.11	65	346830	26.3248 ppb	0.00
Spiked Amount 25.000			Recovery	= 105.300%	
5) Toluene-D8(S)	7.37	98	1289984	25.3010 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.204%	
6) 4-Bromofluorobenzene(S)	10.03	95	533242	25.2521 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.008%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

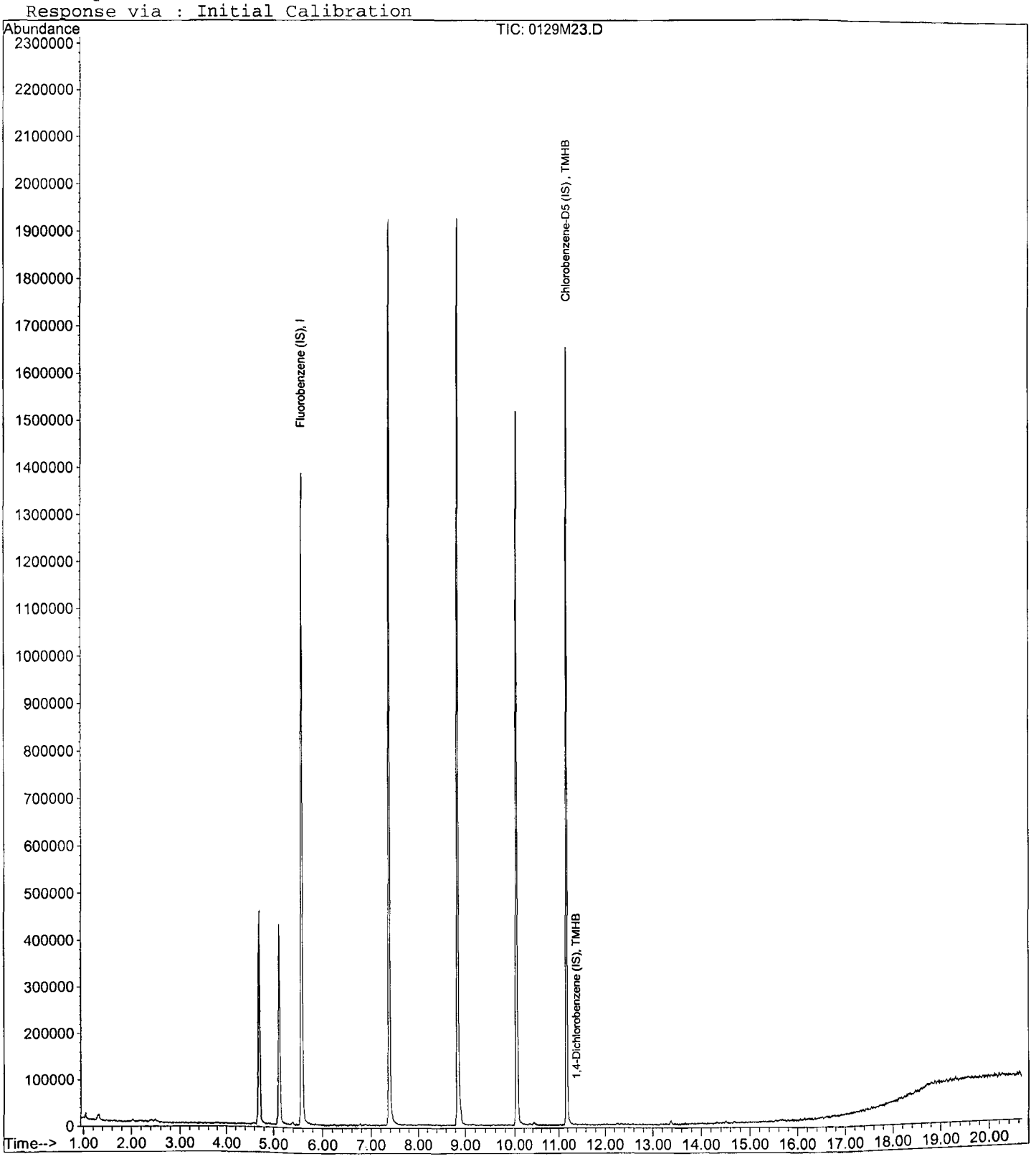
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M23.D
Acq On : 30 Jan 21 2:41
Sample : BA26015W01
Misc : IS 10/16/20

Vial: 23
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M24.D Vial: 24
Acq On : 30 Jan 21 3:10 Operator: LP,DG,CH
Sample : BA26016W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1370786	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1192978m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	5193m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M24.D Vial: 24
Acq On : 30 Jan 21 3:10 Operator: LP,DG,CH
Sample : BA26016W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1388764	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1197447	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	543795	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	330083	29.3628 ppb	0.00
Spiked Amount 25.000			Recovery = 117.452%		
3) 1,2-DCA-D4(S)	5.11	65	347289	27.0557 ppb	0.00
Spiked Amount 25.000			Recovery = 108.224%		
5) Toluene-D8(S)	7.37	98	1299446	25.9565 ppb	0.00
Spiked Amount 25.000			Recovery = 103.824%		
6) 4-Bromofluorobenzene(S)	10.03	95	534670	25.7628 ppb	0.00
Spiked Amount 25.000			Recovery = 103.052%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

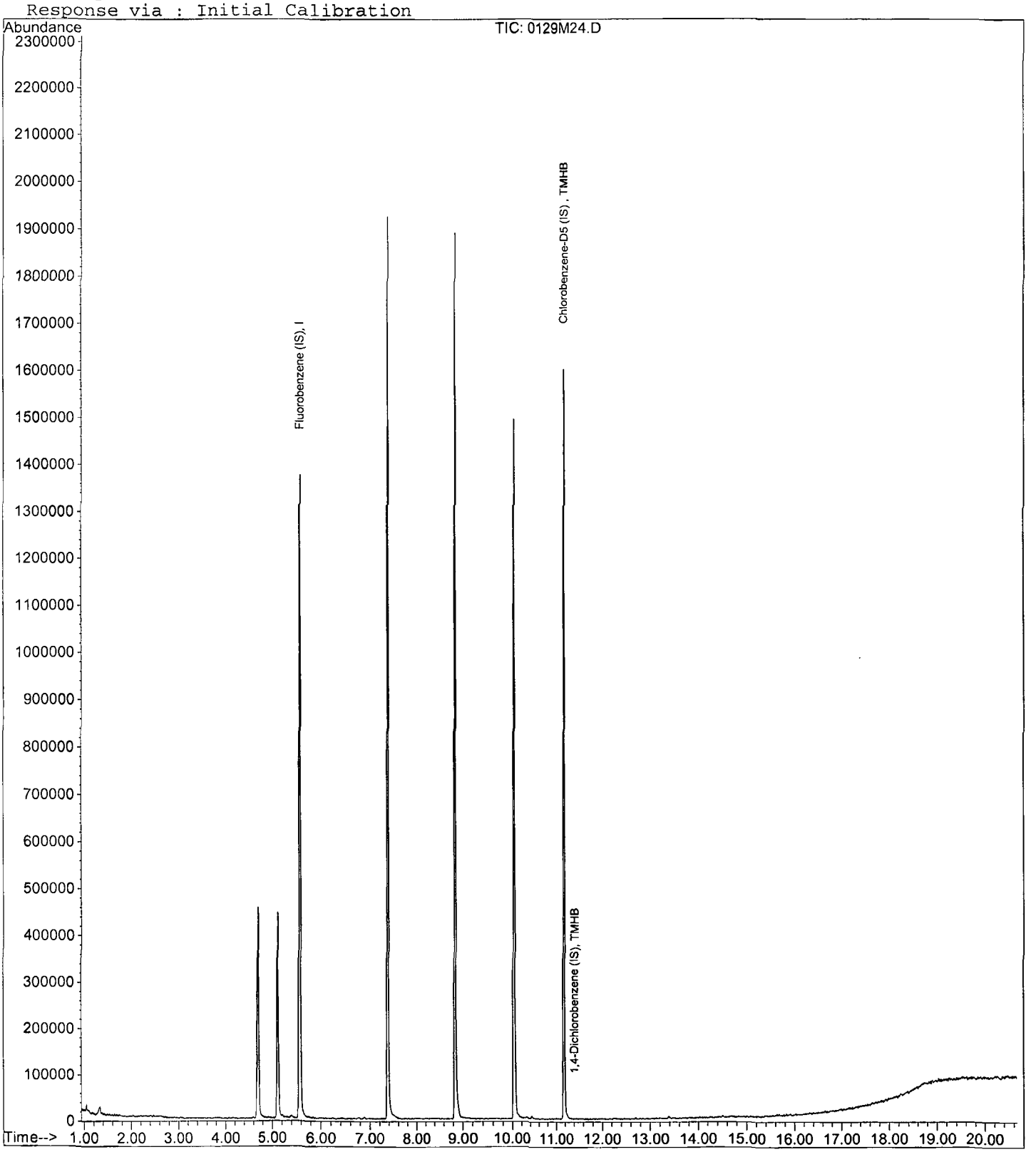
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M24.D
Acq On : 30 Jan 21 3:10
Sample : BA26016W01
Misc : IS 10/16/20

Vial: 24
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:19 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D Vial: 8
Acq On : 29 Jan 21 19:26 Operator: LP,DG,CH
Sample : 210129A BLK Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:06 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1408441	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1151322m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	5632m	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D Vial: 8
Acq On : 29 Jan 21 19:26 Operator: LP,DG,CH
Sample : 210129A BLK Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1463100	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1262639	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	519641	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	349346	29.5215 ppb	0.00
Spiked Amount 25.000			Recovery	= 118.084%	
3) 1,2-DCA-D4(S)	5.11	65	368864	27.2987 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.196%	
5) Toluene-D8(S)	7.37	98	1412296	26.8710 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.484%	
6) 4-Bromofluorobenzene(S)	10.03	95	569182	26.0428 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.172%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

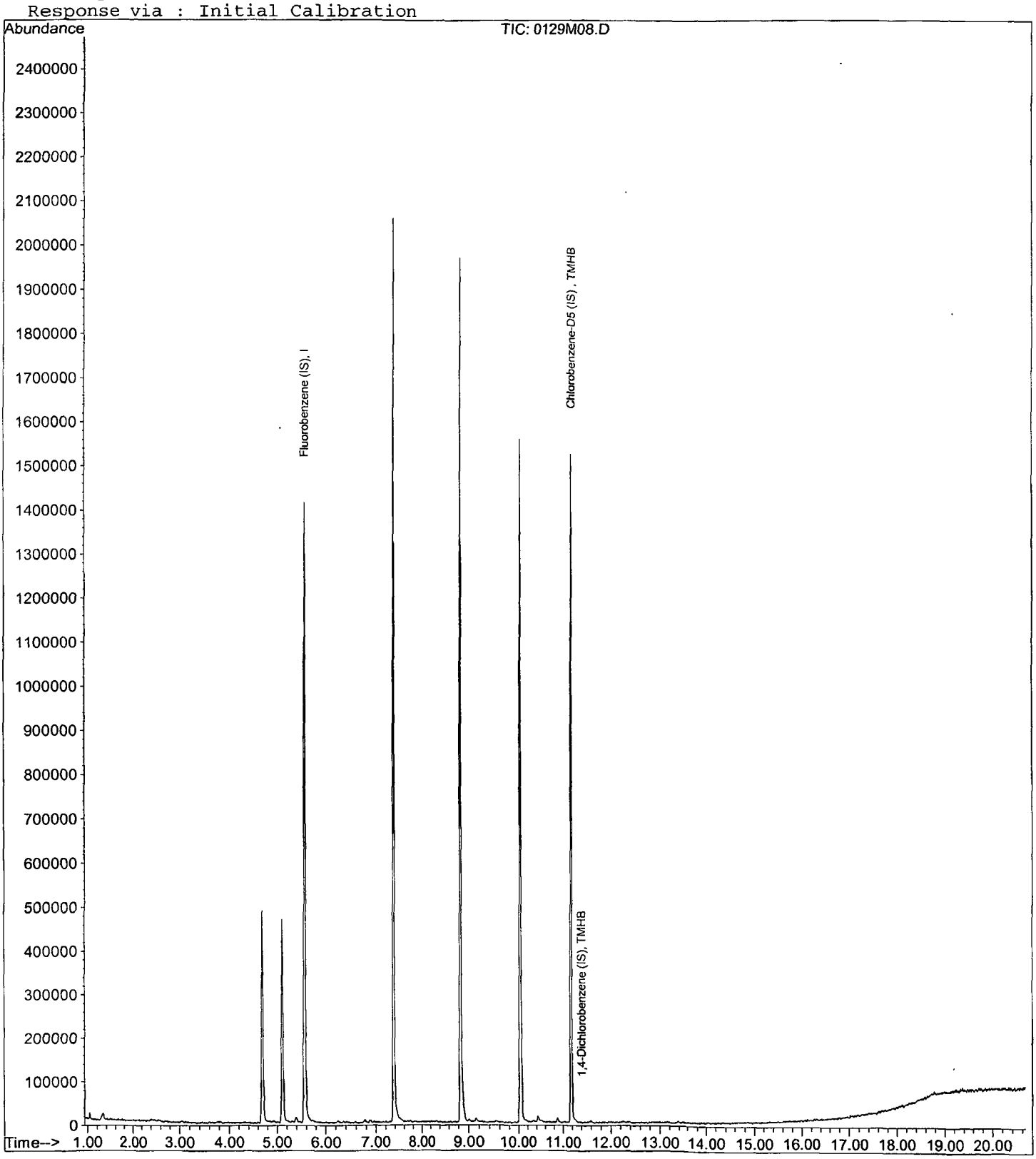
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M08.D
Acq On : 29 Jan 21 19:26
Sample : 210129A BLK
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:06 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1443905	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1455310m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	107293m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	23138993m	352.7347	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475281	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1254183	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	616517	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	349527	29.2524 ppb	0.00
Spiked Amount 25.000			Recovery	= 117.008%	
3) 1,2-DCA-D4(S)	5.11	65	371150	27.2353 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.940%	
5) Toluene-D8(S)	7.37	98	1399460	26.7972 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.188%	
6) 4-Bromofluorobenzene(S)	10.03	95	576684	26.6330 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.532%	

Target Compounds Qvalue

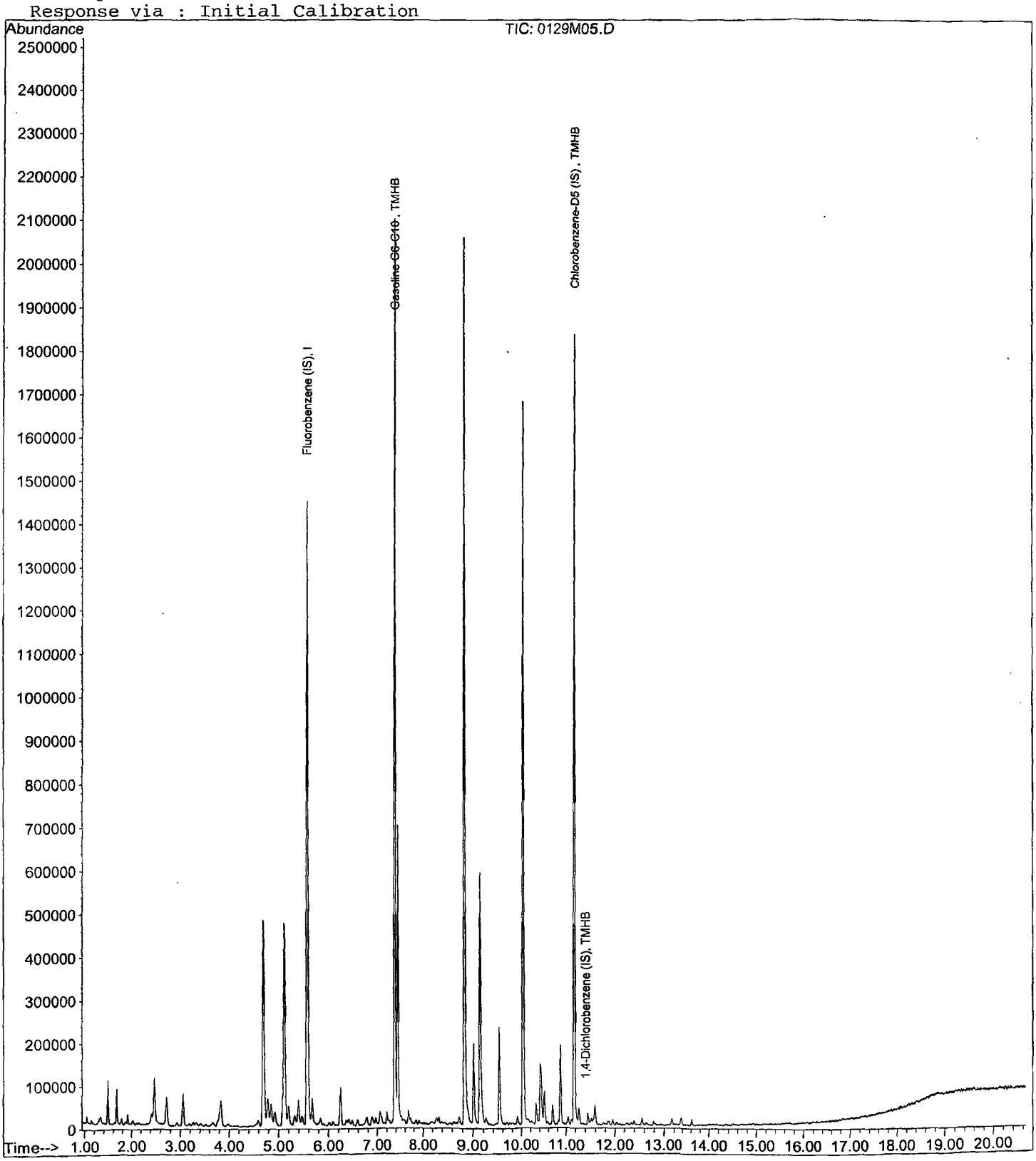
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M07.D Vial: 7
Acq On : 29 Jan 21 18:57 Operator: LP,DG,CH
Sample : 210129A LCSD 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:05 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1469350	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1312601m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	116658m	25.0000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.37	TIC	23479439m	349.7322 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M07.D Vial: 7
Acq On : 29 Jan 21 18:57 Operator: LP,DG,CH
Sample : 210129A LCSD 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1509286	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1291415	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	588855	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	356691	29.1663 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.664%	
3) 1,2-DCA-D4(S)	5.11	65	367113	26.2419 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.968%	
5) Toluene-D8(S)	7.37	98	1404481	26.0215 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.084%	
6) 4-Bromofluorobenzene(S)	10.03	95	572722	25.5649 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.260%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

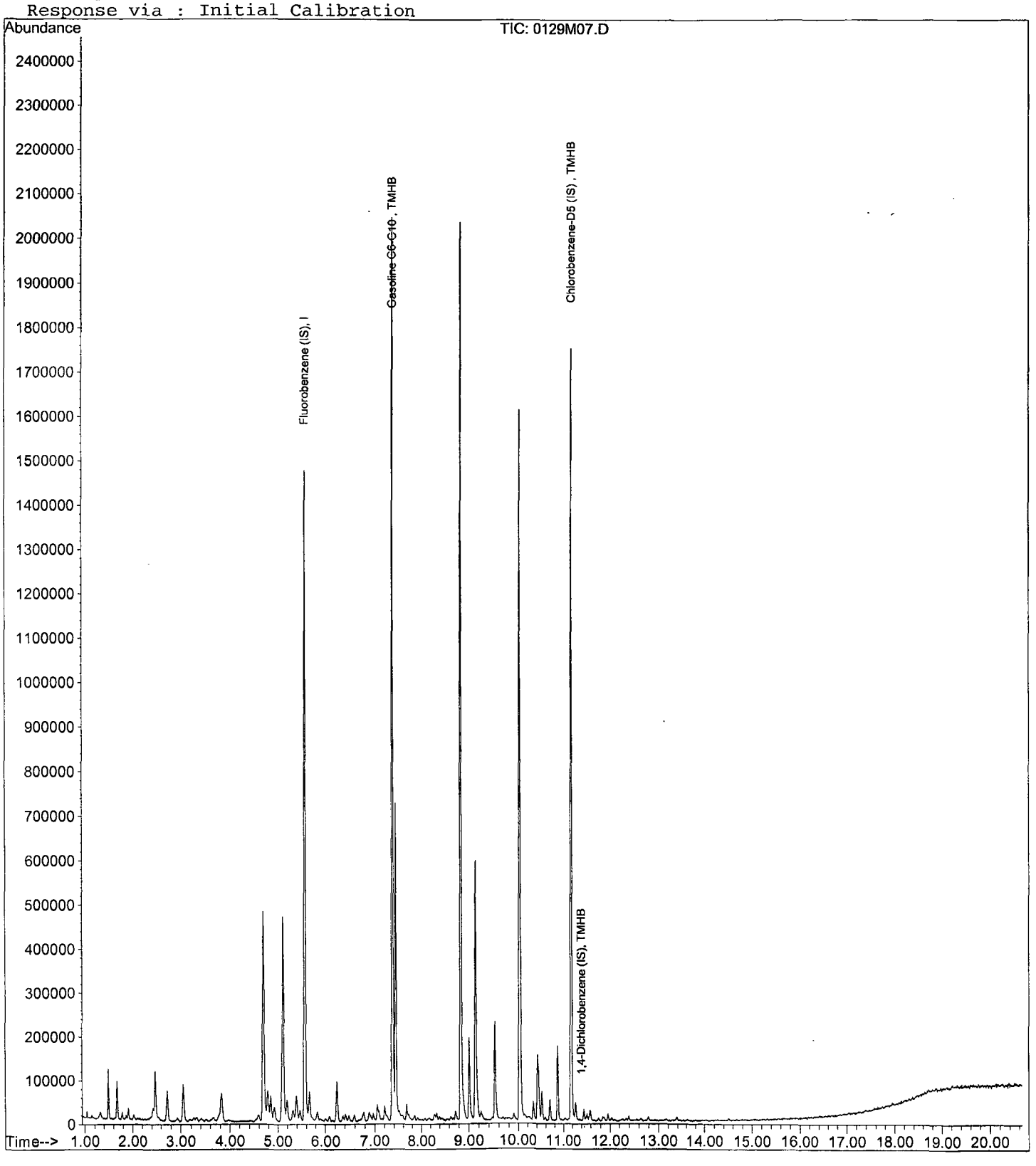
Data File : M:\MAX\DATA\210128\0129M07.D
Acq On : 29 Jan 21 18:57
Sample : 210129A LCSD 300ug/L
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 30 10:05 2021

Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M27.D Vial: 27
Acq On : 30 Jan 21 4:37 Operator: LP,DG,CH
Sample : BA26001W04,5,6 MS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:20 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1395301	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1348524m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	75894m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	21242294m	300.2325	ppb	100

(#) = qualifier out of range (m) = manual integration
0129M27.D MGAS0128.M Tue Feb 02 10:22:06 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M27.D Vial: 27
Acq On : 30 Jan 21 4:37 Operator: LP,DG,CH
Sample : BA26001W04,5,6 MS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1451734	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1233061	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	613161	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	327261	27.5793 ppb	0.00
Spiked Amount 25.000			Recovery = 110.316%		
3) 1,2-DCA-D4(S)	5.11	65	336156	24.8510 ppb	0.00
Spiked Amount 25.000			Recovery = 99.404%		
5) Toluene-D8(S)	7.37	98	1294596	24.9889 ppb	0.00
Spiked Amount 25.000			Recovery = 99.956%		
6) 4-Bromofluorobenzene(S)	10.03	95	527888	24.5590 ppb	0.00
Spiked Amount 25.000			Recovery = 98.236%		

Target Compounds Qvalue

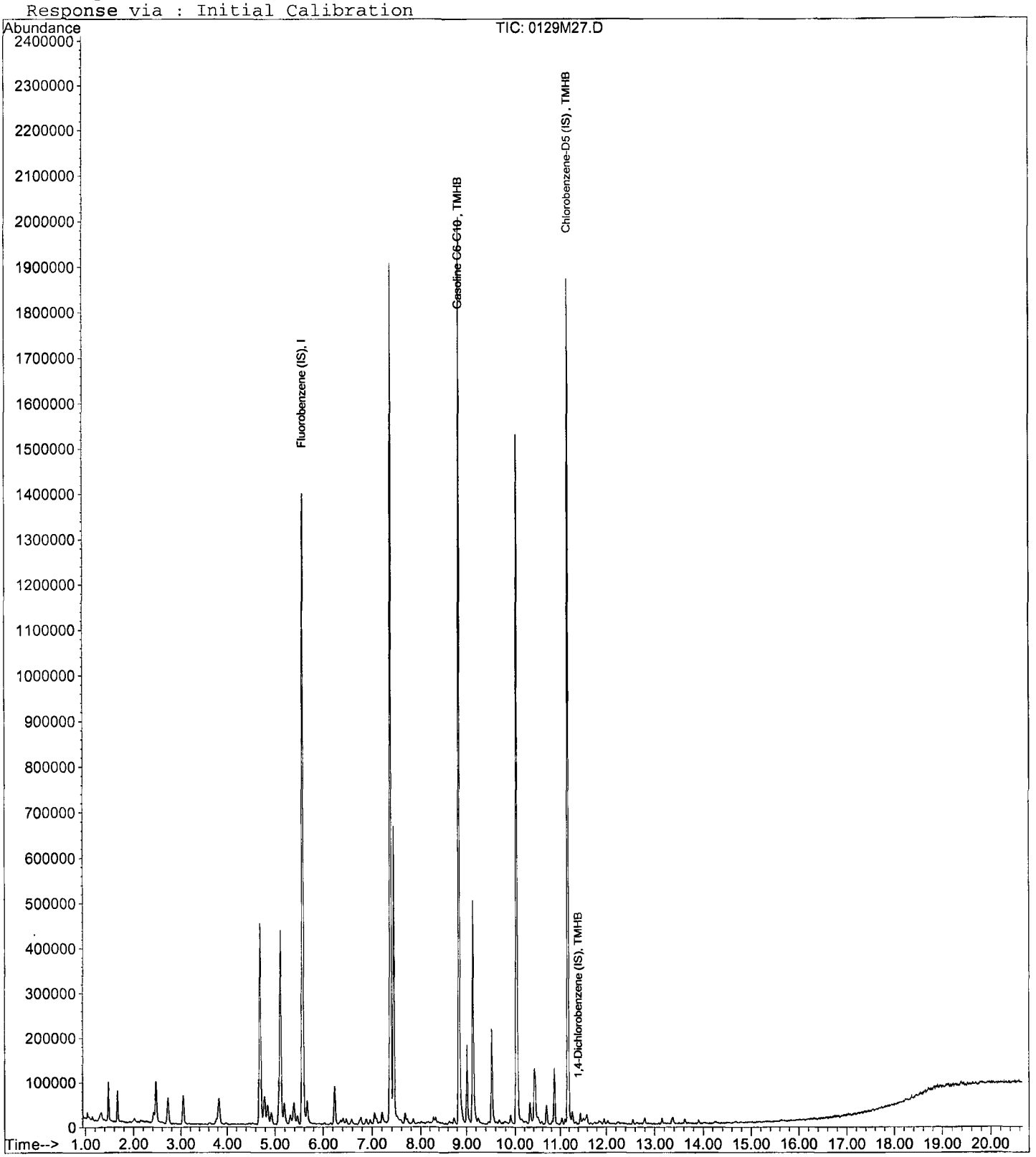
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M27.D Vial: 27
Acq On : 30 Jan 21 4:37 Operator: LP,DG,CH
Sample : BA26001W04,5,6 MS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:20 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M28.D
Acq On : 30 Jan 21 5:06
Sample : BA26001W05,4,6 MSD 300ug/L
Misc : IS 10/16/20

Vial: 28
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:20 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1373119	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1288693m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	59506m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	21507404m	329.0034	ppb	100

(#) = qualifier out of range (m) = manual integration
0129M28.D MGAS0128.M Tue Feb 02 10:22:08 2021

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M28.D Vial: 28
Acq On : 30 Jan 21 5:06 Operator: LP,DG,CH
Sample : BA26001W05,4,6 MSD 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1419522	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1212956	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	596936	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	339175	29.5455 ppb	0.00
Spiked Amount 25.000			Recovery = 118.184%		
3) 1,2-DCA-D4(S)	5.11	65	350150	26.6505 ppb	0.00
Spiked Amount 25.000			Recovery = 106.604%		
5) Toluene-D8(S)	7.37	98	1326240	26.1818 ppb	0.00
Spiked Amount 25.000			Recovery = 104.728%		
6) 4-Bromofluorobenzene(S)	10.03	95	547262	26.0685 ppb	0.00
Spiked Amount 25.000			Recovery = 104.272%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

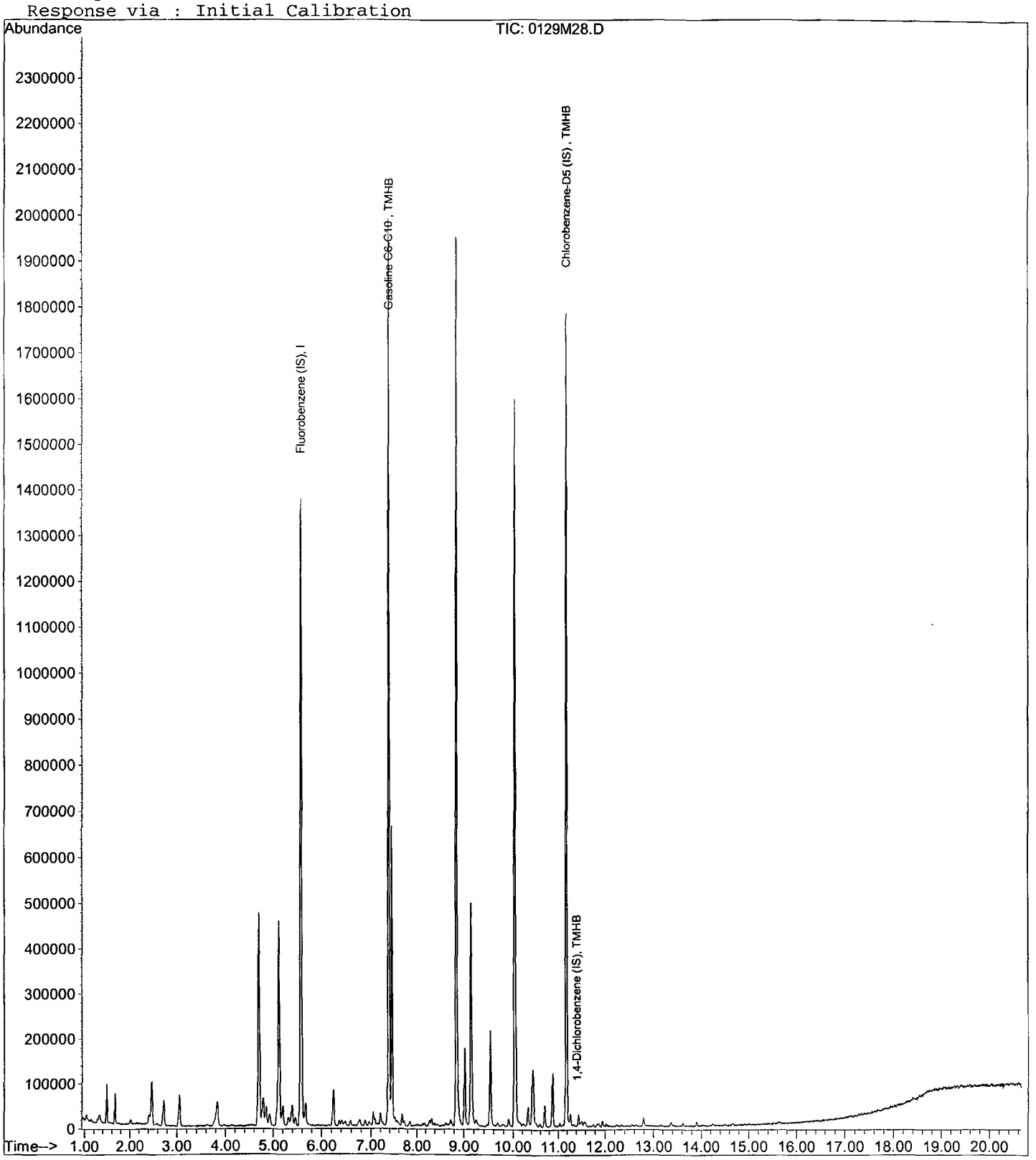
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M28.D
Acq On : 30 Jan 21 5:06
Sample : BA26001W05,4,6 MSD 300ug/L
Misc : IS 10/16/20

Vial: 28
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:20 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



MAX Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 **Prepared By (Initials):** CH

Expires: 01/04/22

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 **Prepared By (Initials):** CH

Expires: 01/31/30

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

MAX Gas Calibration Curve

Prepared: 01/28/21 **Prepared By (Initials):** CH

Expires: 03/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/28/21 **Prepared By (Initials):** CH

Expires: 03/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

MAX Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/28/21 **Prepared By (Initials):** CH

Expires: 01/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

MAX 8260 Standard Prep

MAX 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/28/21	03/29/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD 7	Various	40ug/L	50	Prepared 01/28/21	03/29/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/28/21	03/29/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	40uL			200

MAX 8260 Water Second Source (SS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/28/21	03/29/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/28/21	01/28/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/28/21	03/29/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD 8	Phenova	CCV/ LCS	50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/28/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\MAX\DATA\210128\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0128M02.D	1	0.3ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:26
2	3	0128M03.D	1	0.5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:55
3	4	0128M04.D	1	1ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:24
4	5	0128M05.D	1	2ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:53
5	6	0128M06.D	1	5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:22
6	7	0128M07.D	1	10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:51
7	8	0128M08.D	1	20ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:20
8	9	0128M09.D	1	40ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:49
9	10	0128M10.D	1	100ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 21:19
10	12	0128M12.D	1	(SS) 10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 22:16
11	13	0128M13.D	1	20ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 22:45
12	14	0128M14.D	1	50ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 23:14
13	15	0128M15.D	1	100ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 23:43
14	16	0128M16.D	1	300ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 00:12
15	17	0128M17.D	1	600ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 00:41
16	18	0128M18.D	1	800ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 1:10
17	19	0128M19.D	1	1000ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 1:39
18	21	0128M21.D	1	(SS) 300ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 2:38
19	5	0129M05.D	1	210129A CCV/LCS 300ug/L	IS 10/16/20	29 Jan 21 17:59
20	7	0129M07.D	1	210129A LCSD 300ug/L	IS 10/16/20	29 Jan 21 18:57
21	8	0129M08.D	1	210129A BLK	IS 10/16/20	29 Jan 21 19:26
22	15	0129M15.D	1	BA26000W01	IS 10/16/20	29 Jan 21 22:49
23	16	0129M16.D	1	BA26001W01	IS 10/16/20	29 Jan 21 23:18
24	17	0129M17.D	1	BA26003W01	IS 10/16/20	29 Jan 21 23:47
25	18	0129M18.D	1	BA26005W01	IS 10/16/20	30 Jan 21 00:16
26	19	0129M19.D	1	BA26006W01	IS 10/16/20	30 Jan 21 00:45
27	20	0129M20.D	1	BA26008W01	IS 10/16/20	30 Jan 21 1:14
28	21	0129M21.D	1	BA26012W01	IS 10/16/20	30 Jan 21 1:43
29	22	0129M22.D	1	BA26013W01	IS 10/16/20	30 Jan 21 2:12
30	23	0129M23.D	1	BA26015W01	IS 10/16/20	30 Jan 21 2:41
31	24	0129M24.D	1	BA26016W01	IS 10/16/20	30 Jan 21 3:10
32	27	0129M27.D	1	BA26001W04,5,6 MS 300ug/L	IS 10/16/20	30 Jan 21 4:37
33	28	0129M28.D	1	BA26001W05,4,6 MSD 300ug/L	IS 10/16/20	30 Jan 21 5:06
34	30	0129M30.D	1	Ending CCV 300ug/L 1/29/21	IS 10/16/20	30 Jan 21 6:04

ORGANICS

Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/14/20
Matrix: Instrument: 7890
Initials: CD

			0914R07.D	0914R08.D	0914R09.D	0914R10.D	0914R11.D	0914R12.D	0914R13.D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
4																	
5																	
6																	
7																	
8																	
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35																	

0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

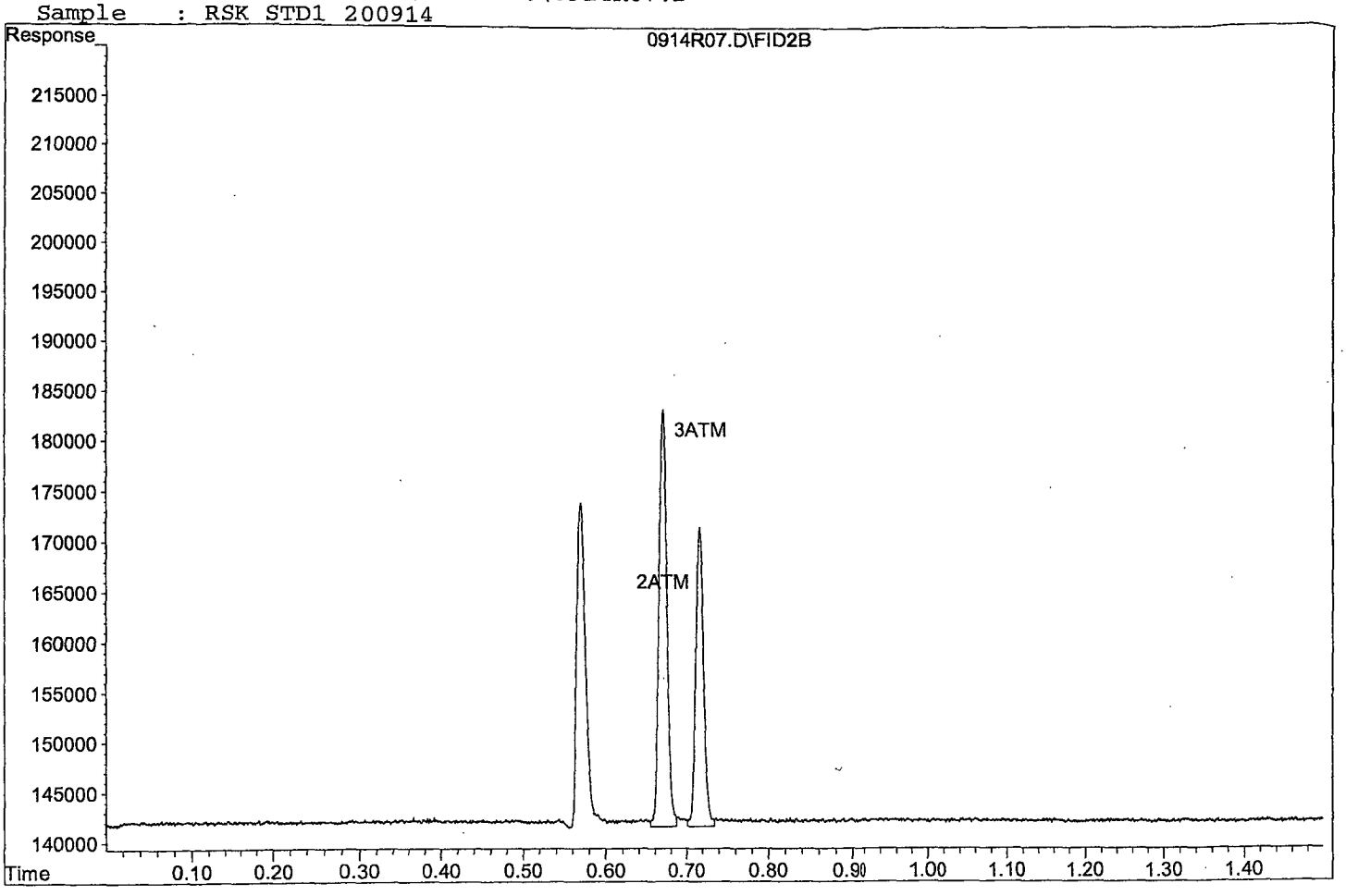
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	41762	102628.492 ppb
3) ATM Ethene	0.72	29966	4.139 ppb
Target Compounds			
1) ATM Methane	0.57	32423	N.D. ppb

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

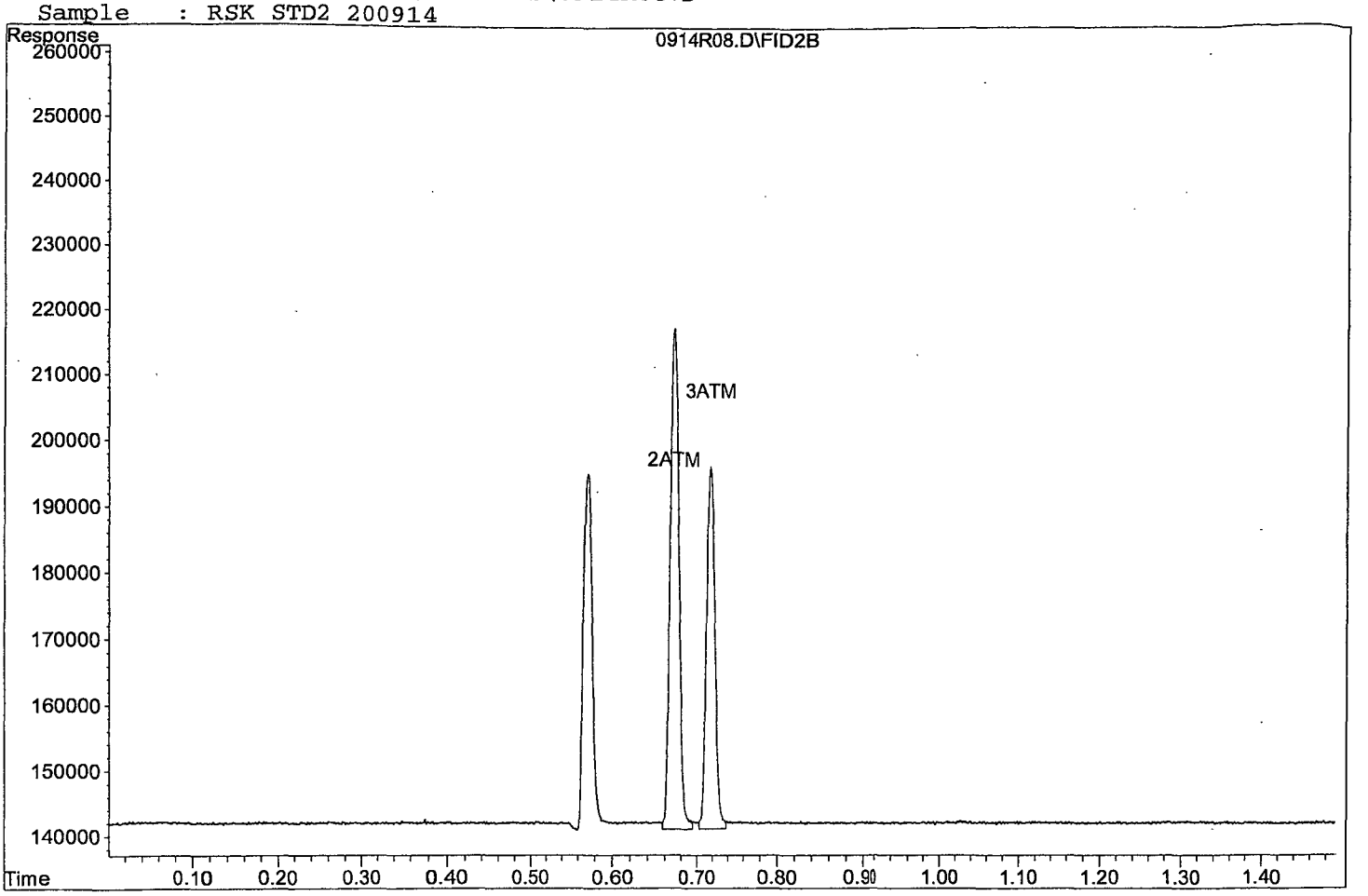
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	76271	190289.144 ppb
3) ATM Ethene	0.72	54983	7.686 ppb
Target Compounds			
1) ATM Methane	0.57	54196	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

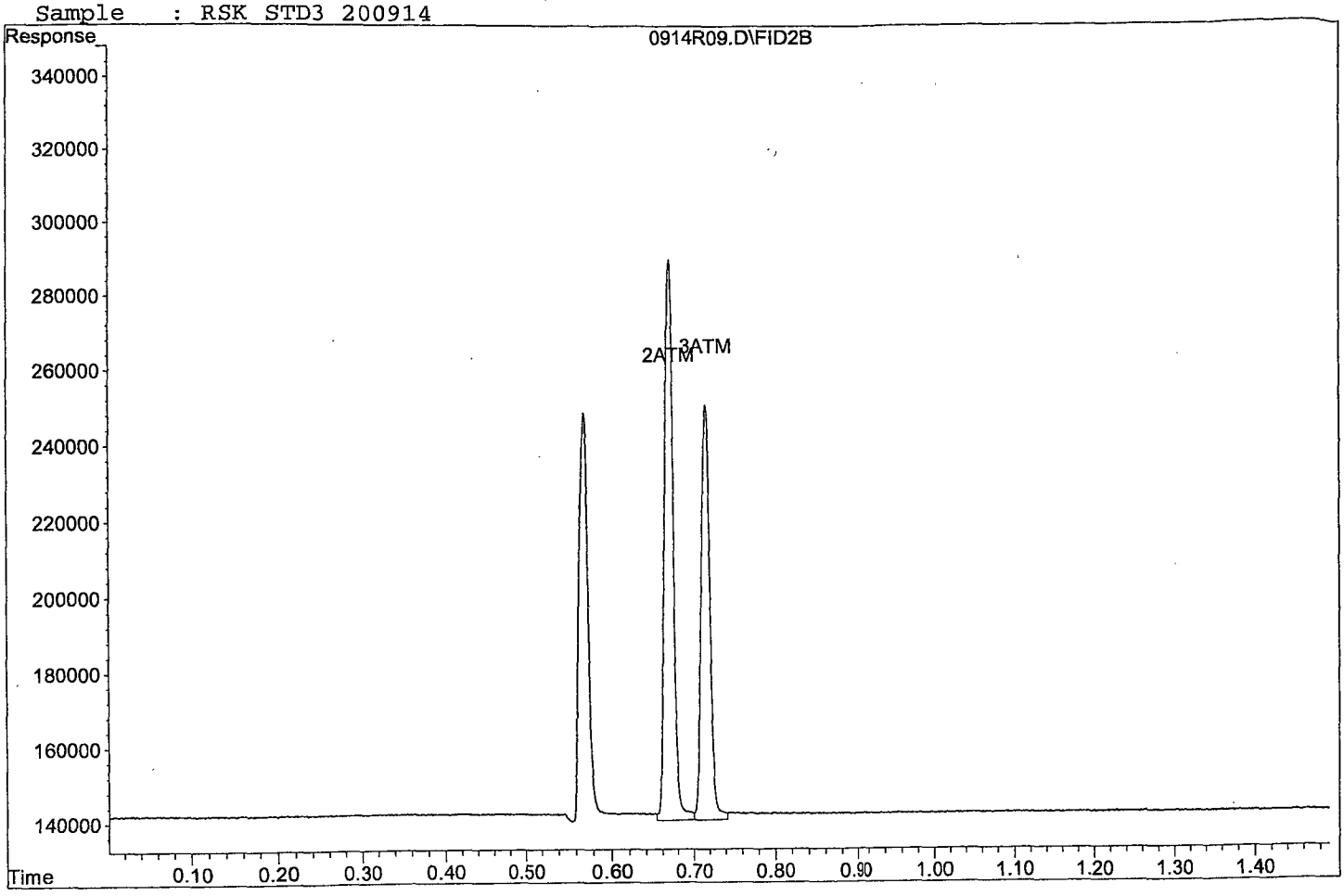
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	149612	376595.524	ppb
3) ATM Ethene	0.72	110455	15.551	ppb
Target Compounds				
1) ATM Methane	0.57	108403	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

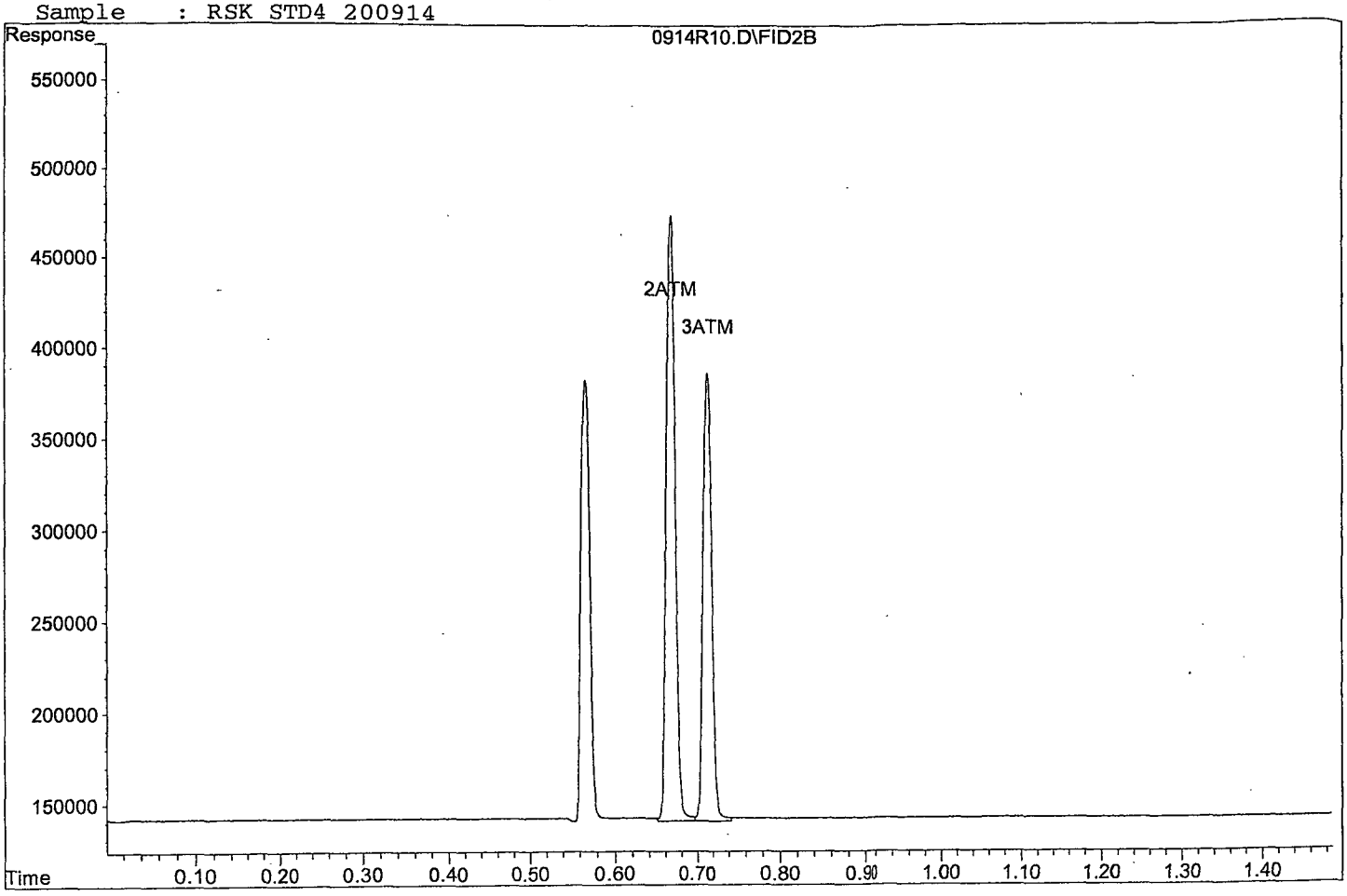
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	333873	844667.853 ppb
3) ATM Ethene	0.71	246286	34.810 ppb
Target Compounds			
1) ATM Methane	0.57	242197	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

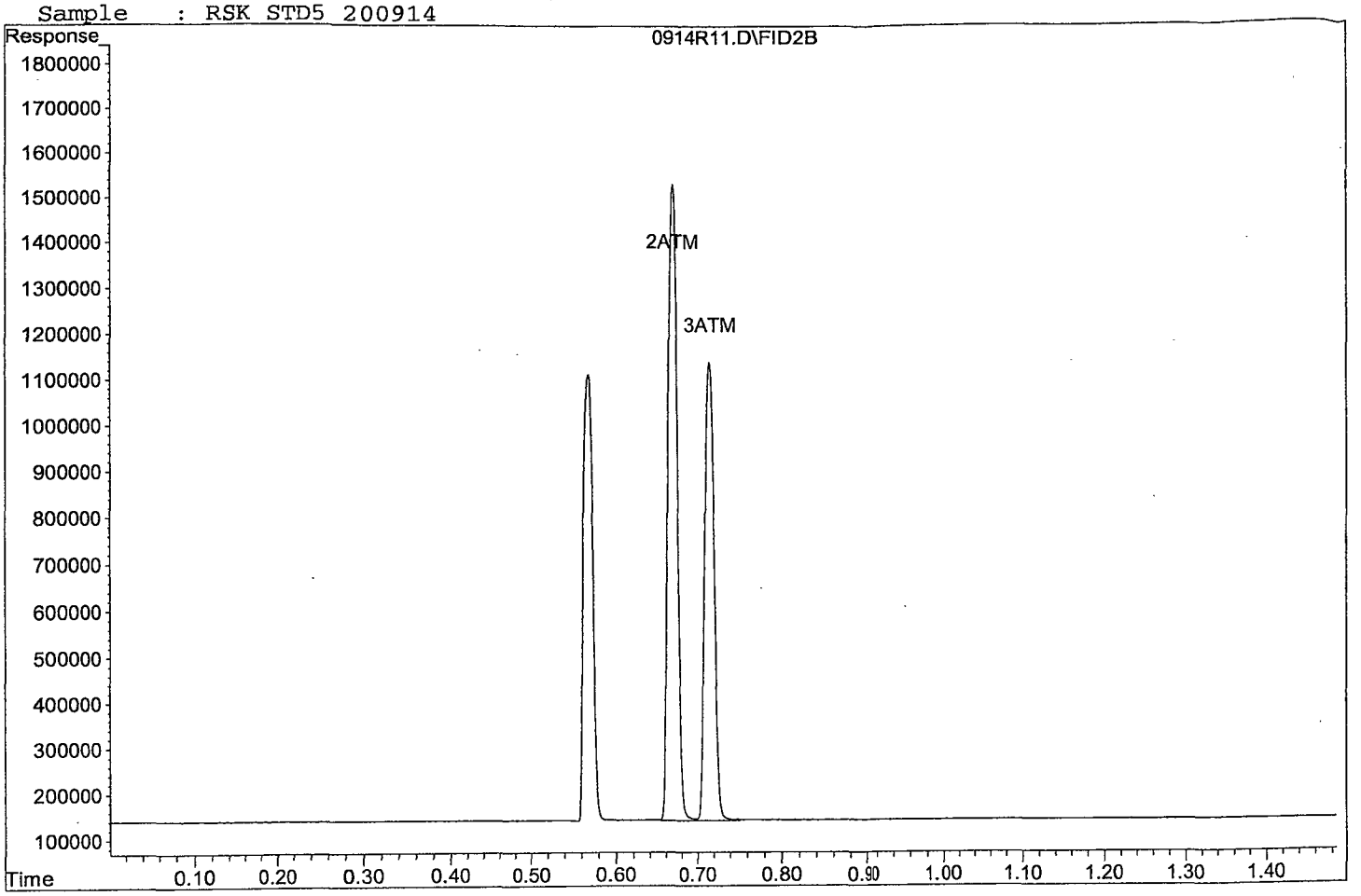
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	1392673	3534302.847 ppb
3) ATM Ethene	0.71	999836	141.654 ppb
Target Compounds			
1) ATM Methane	0.57	973152	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

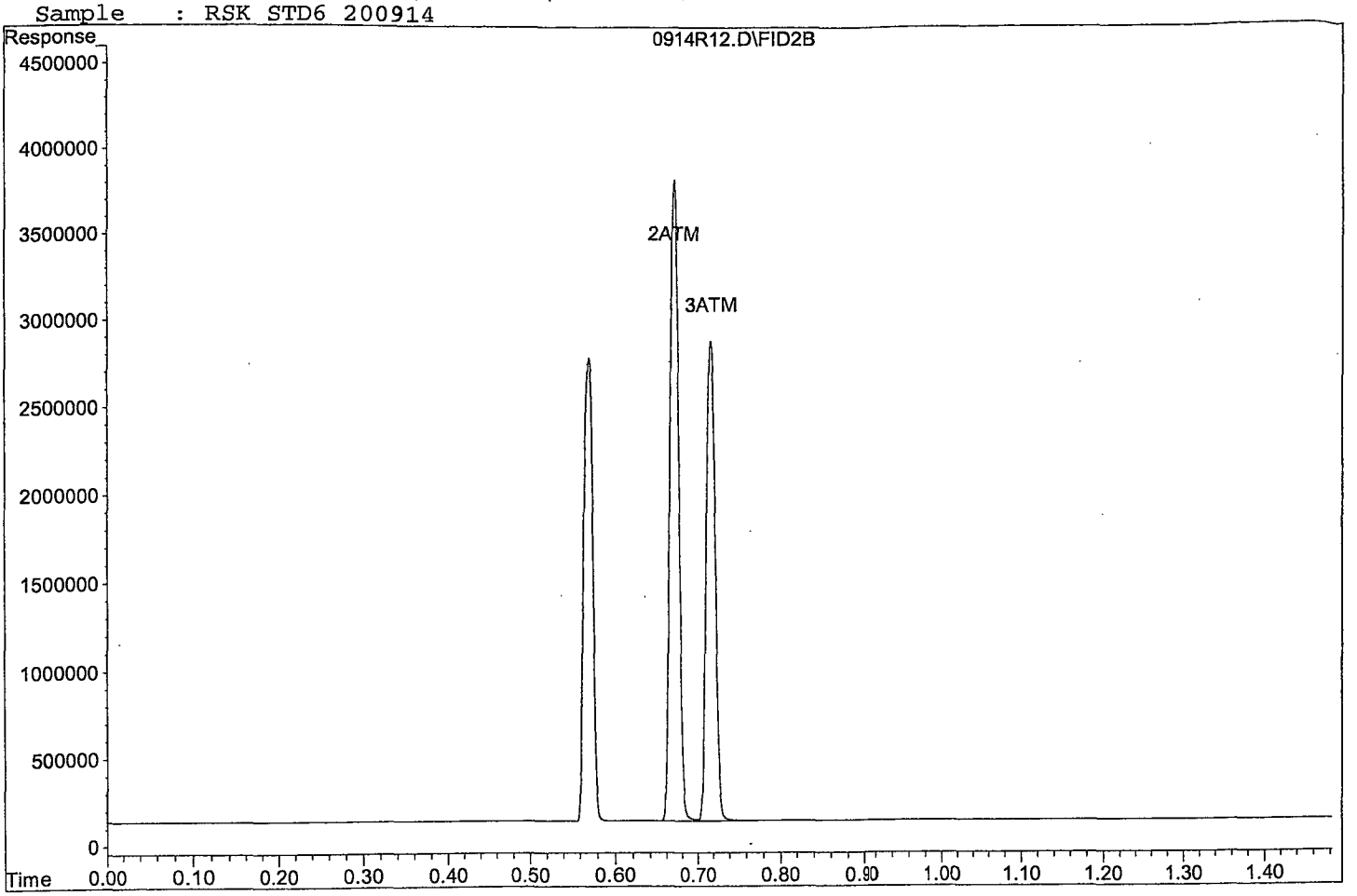
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

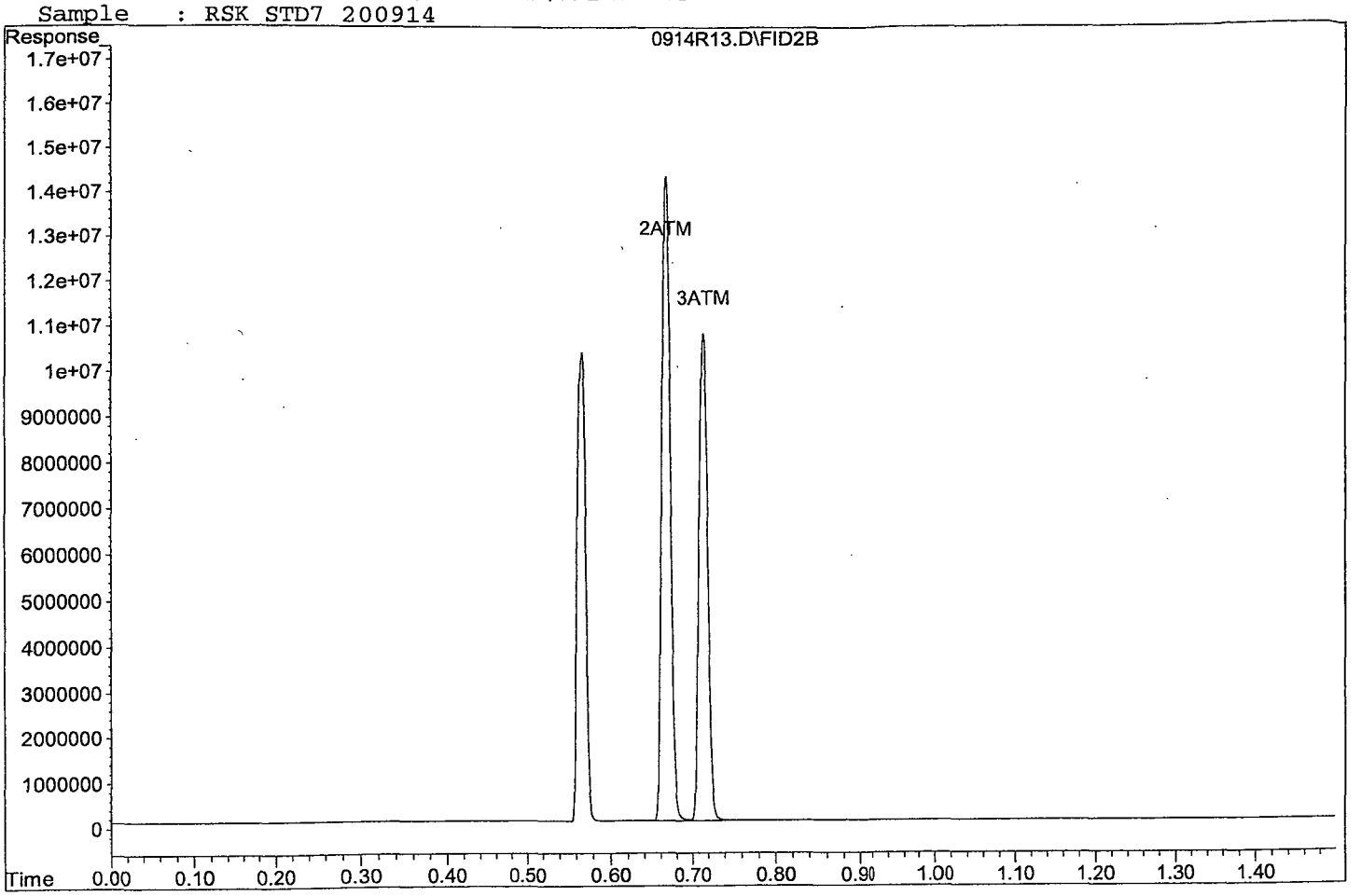
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

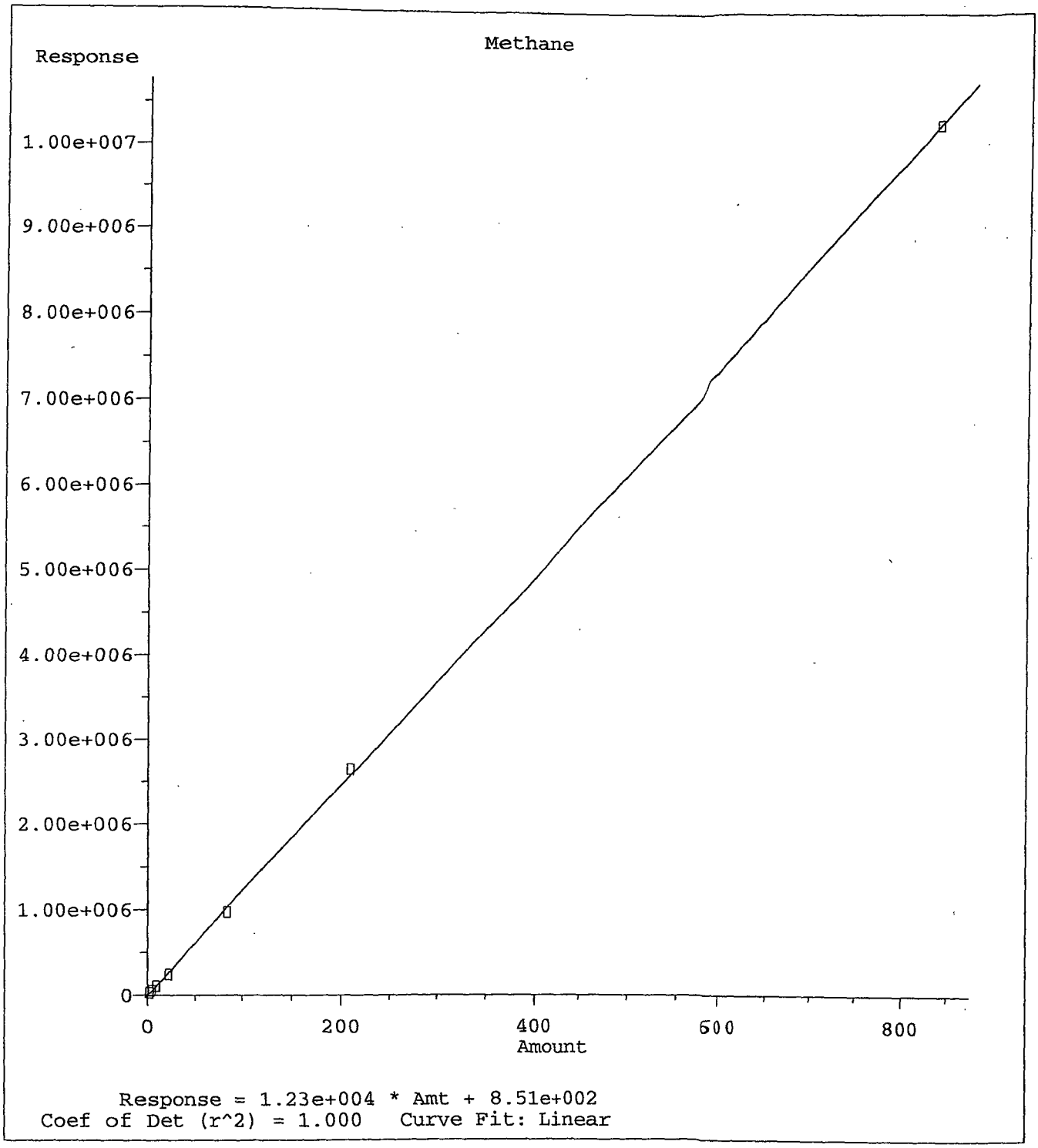
Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	3616 8407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

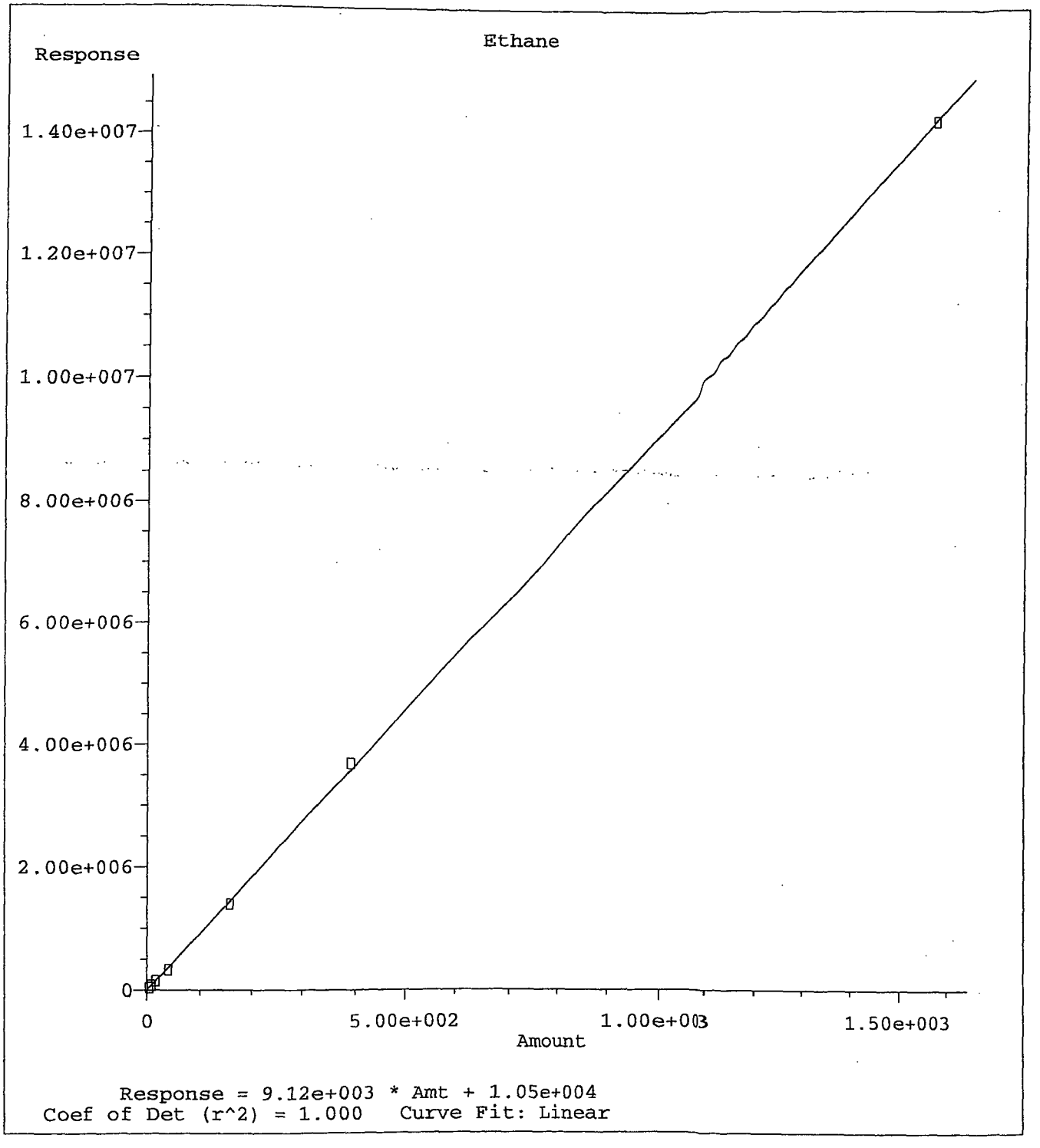
Quantitation Report

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

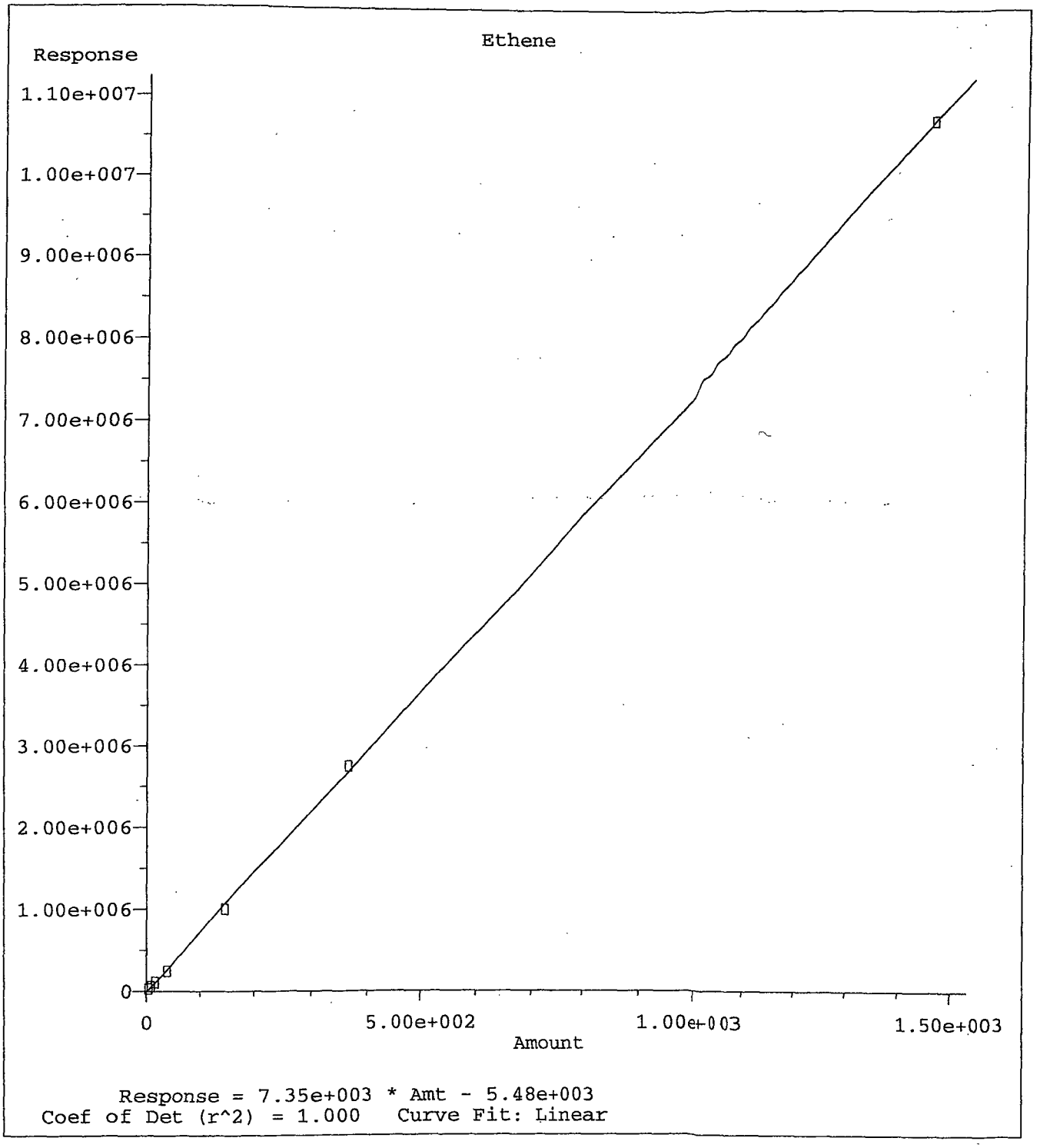




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

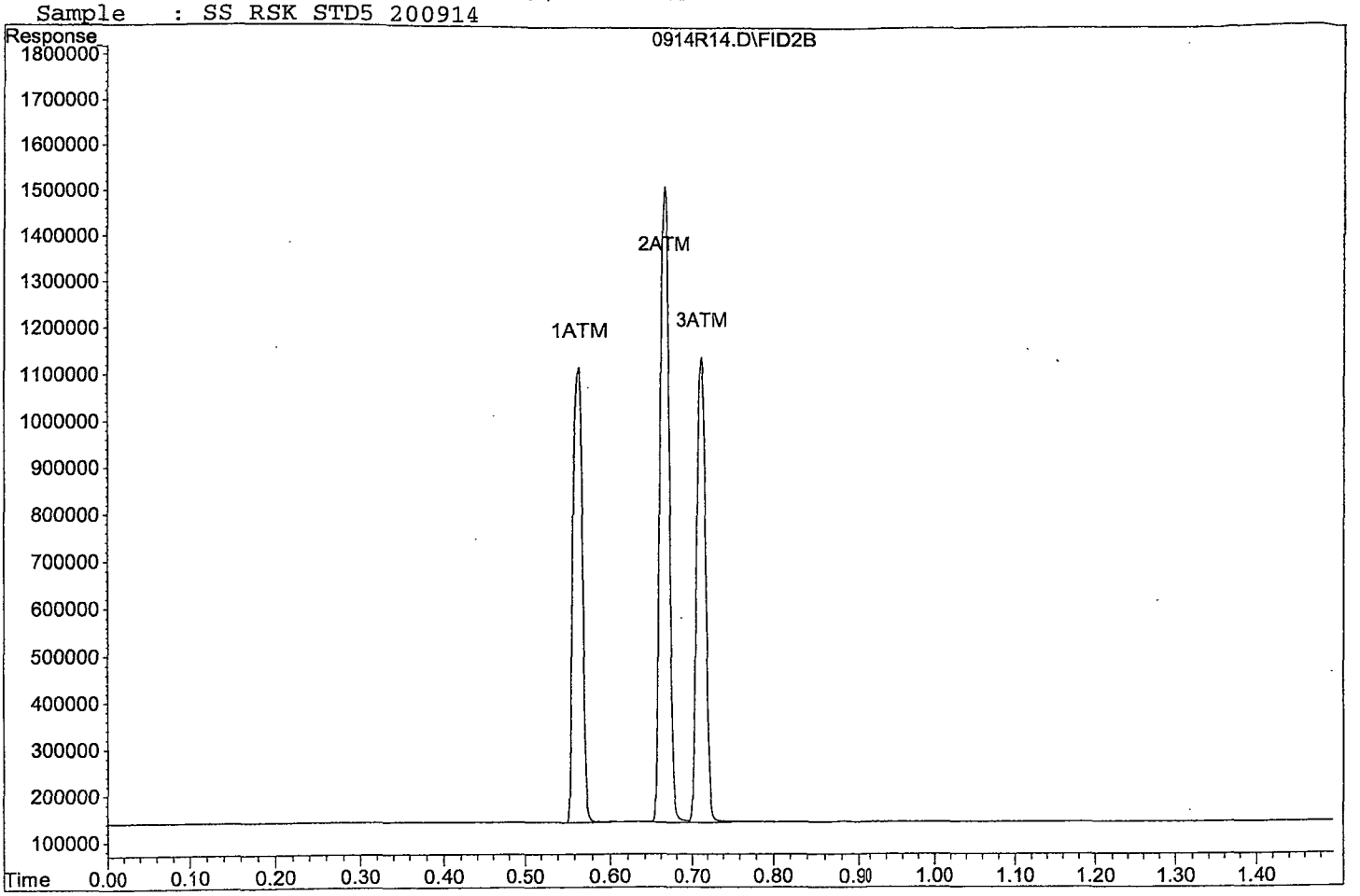
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



RSK 175

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 11:57
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0201R01.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	25290	1.5	ATML	2.4
2	ATML	Ethane	18863	20250	7.4	ATML	10
3	ATML	Ethene	14798	17362	17	ATML	19
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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17							
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19							
20							
21							
22							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R01.D Vial: 1
Acq On : 1 Feb 21 11:57 Operator: LS
Sample : 210201A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:00 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

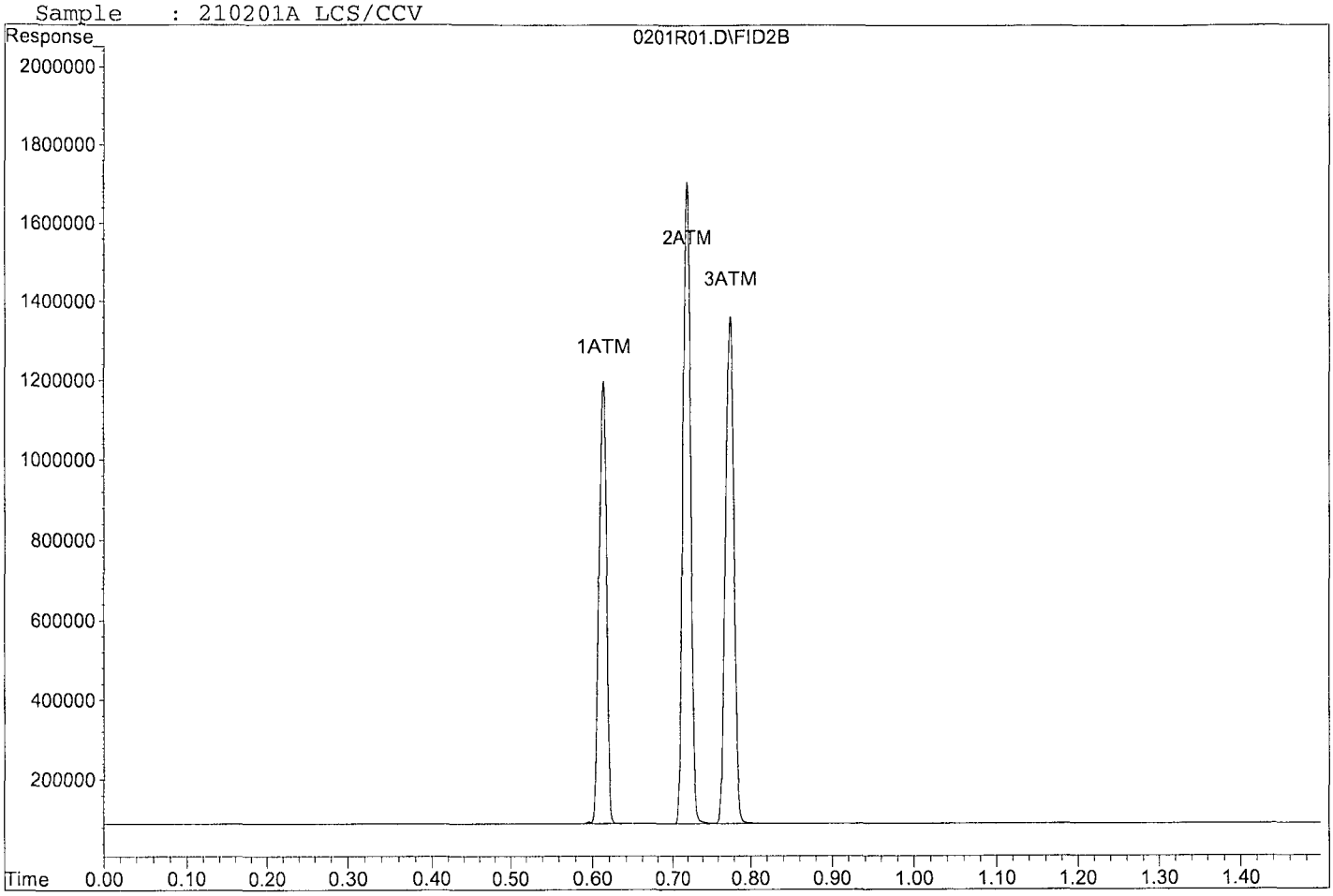
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1054610	85.442	ppb
2) ATM Ethane	0.72	1583074	172.527	ppb
3) ATM Ethene	0.77	1266017	172.909	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R01.D
Sample : 210201A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 13:17
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0201R20.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24391	5.0	ATML	1.2
2	ATML	Ethane	18863	19928	5.6	ATML	8.6
3	ATML	Ethene	14798	15947	7.8	ATML	8.9
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R20.D Vial: 20
Acq On : 1 Feb 21 13:17 Operator: LS
Sample : 210201A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:22 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

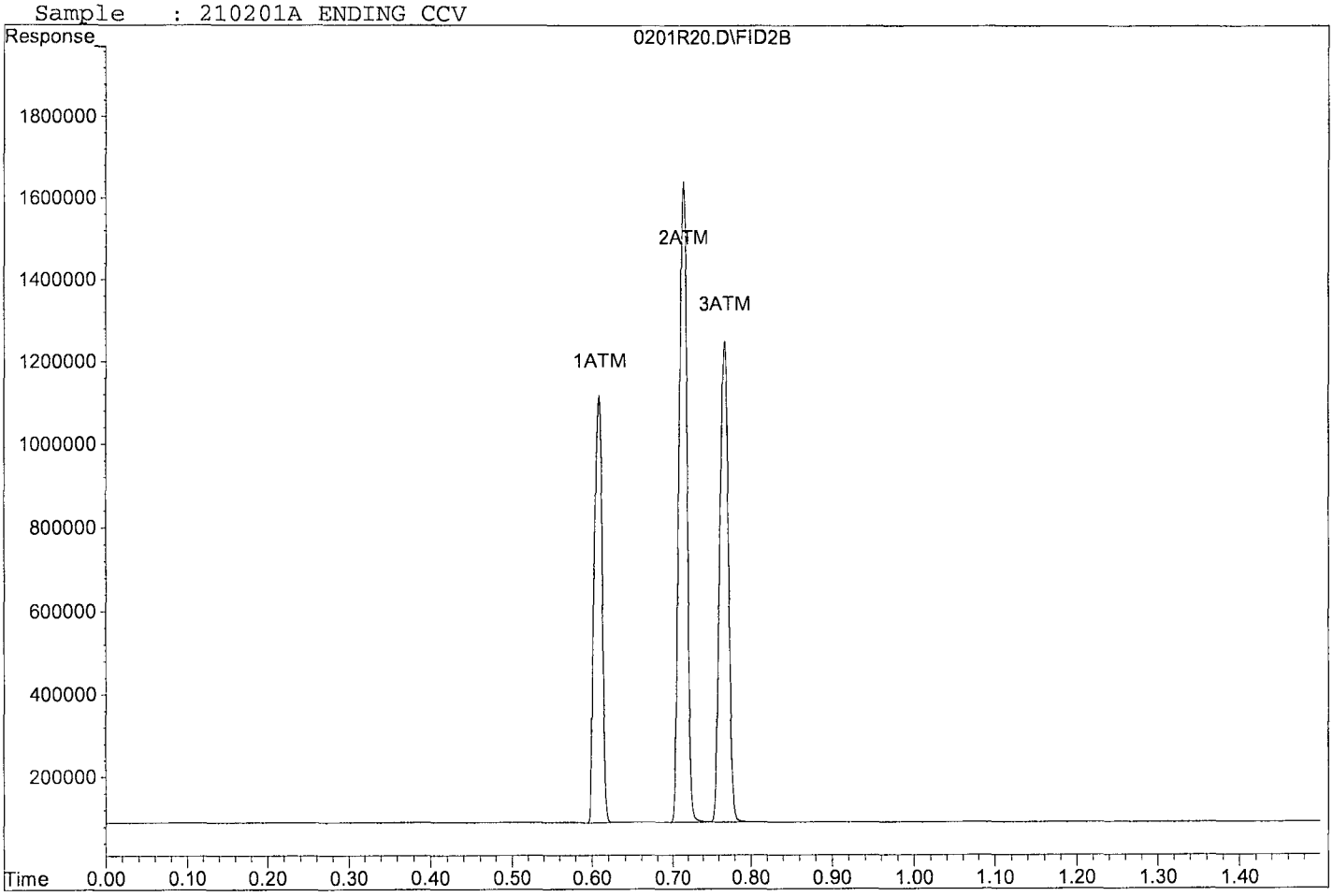
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1017112	82.402 ppb
2) ATM Ethane	0.71	1557839	169.758 ppb
3) ATM Ethene	0.77	1162869	158.882 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R20.D
Sample : 210201A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R05.D Vial: 5
Acq On : 1 Feb 21 12:11 Operator: LS
Sample : BA26000W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:14 2021 Quant Results File: RSK0914A.RES

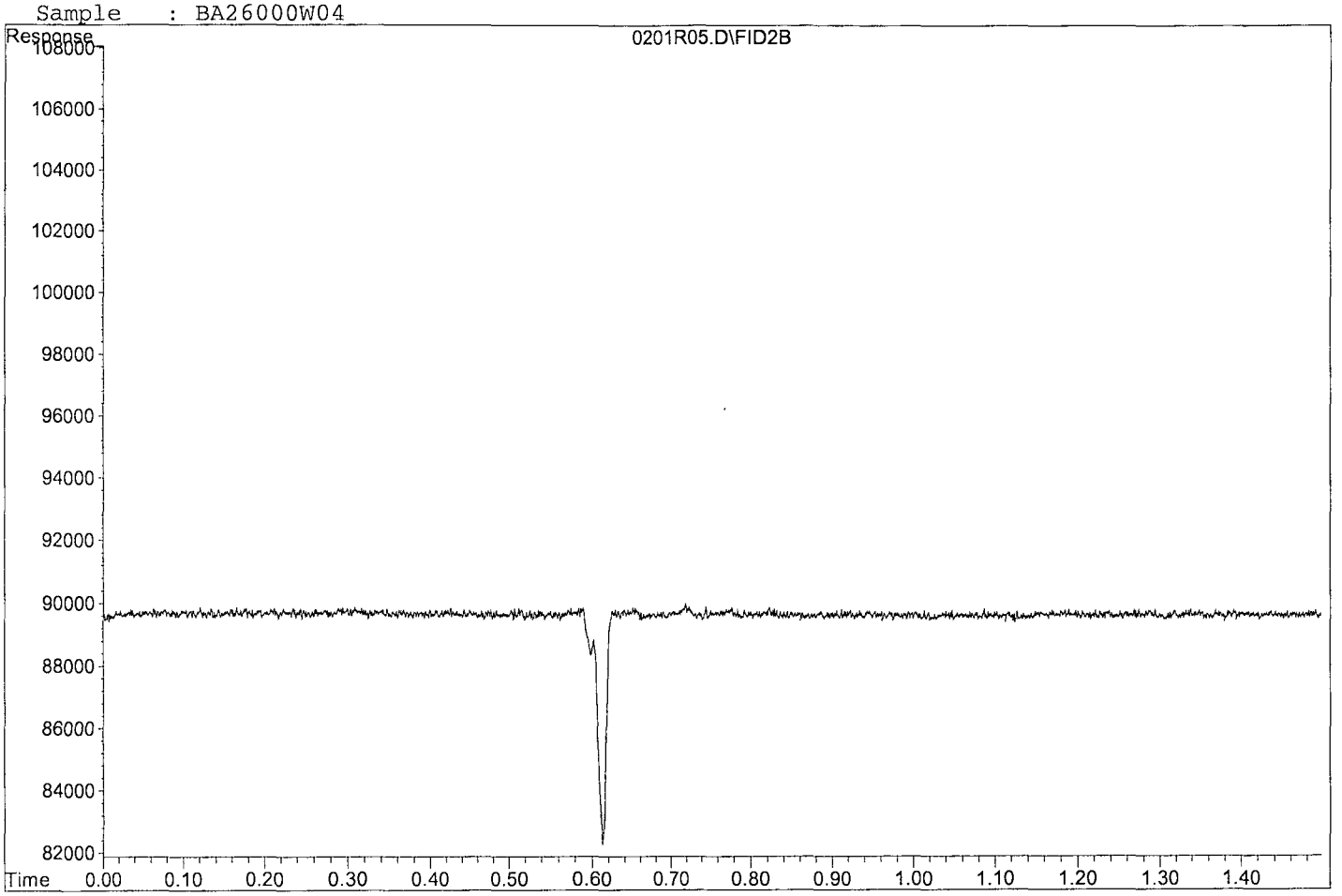
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R05.D
Sample : BA26000W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R06.D Vial: 6
Acq On : 1 Feb 21 12:15 Operator: LS
Sample : BA26001W07 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:17 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R06.D
Sample : BA26001W07

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R09.D Vial: 9
Acq On : 1 Feb 21 12:27 Operator: LS
Sample : BA26005W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:29 2021 Quant Results File: RSK0914A.RES

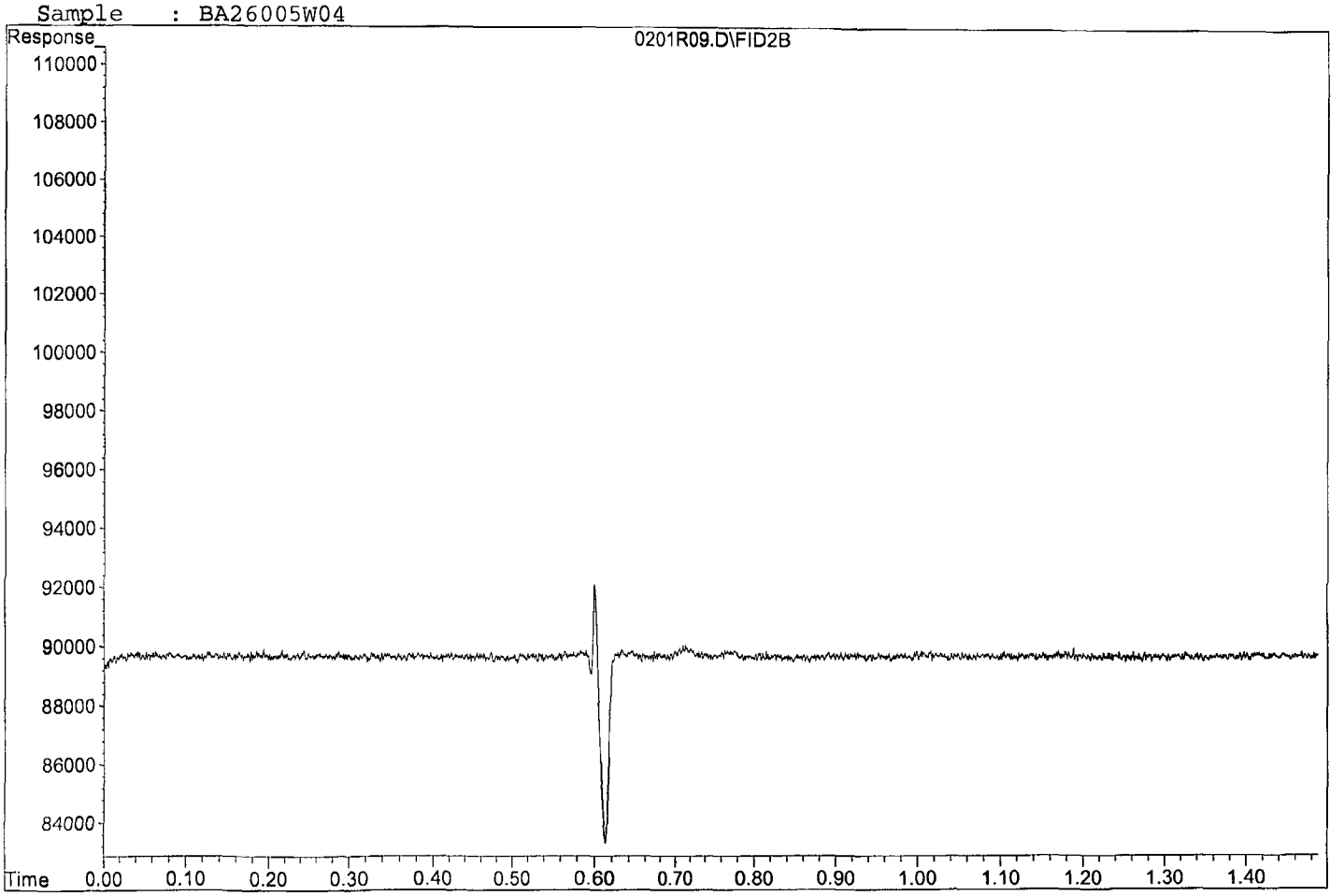
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R09.D
Sample : BA26005W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R10.D Vial: 10
Acq On : 1 Feb 21 12:30 Operator: LS
Sample : BA26006W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:36 2021 Quant Results File: RSK0914A.RES

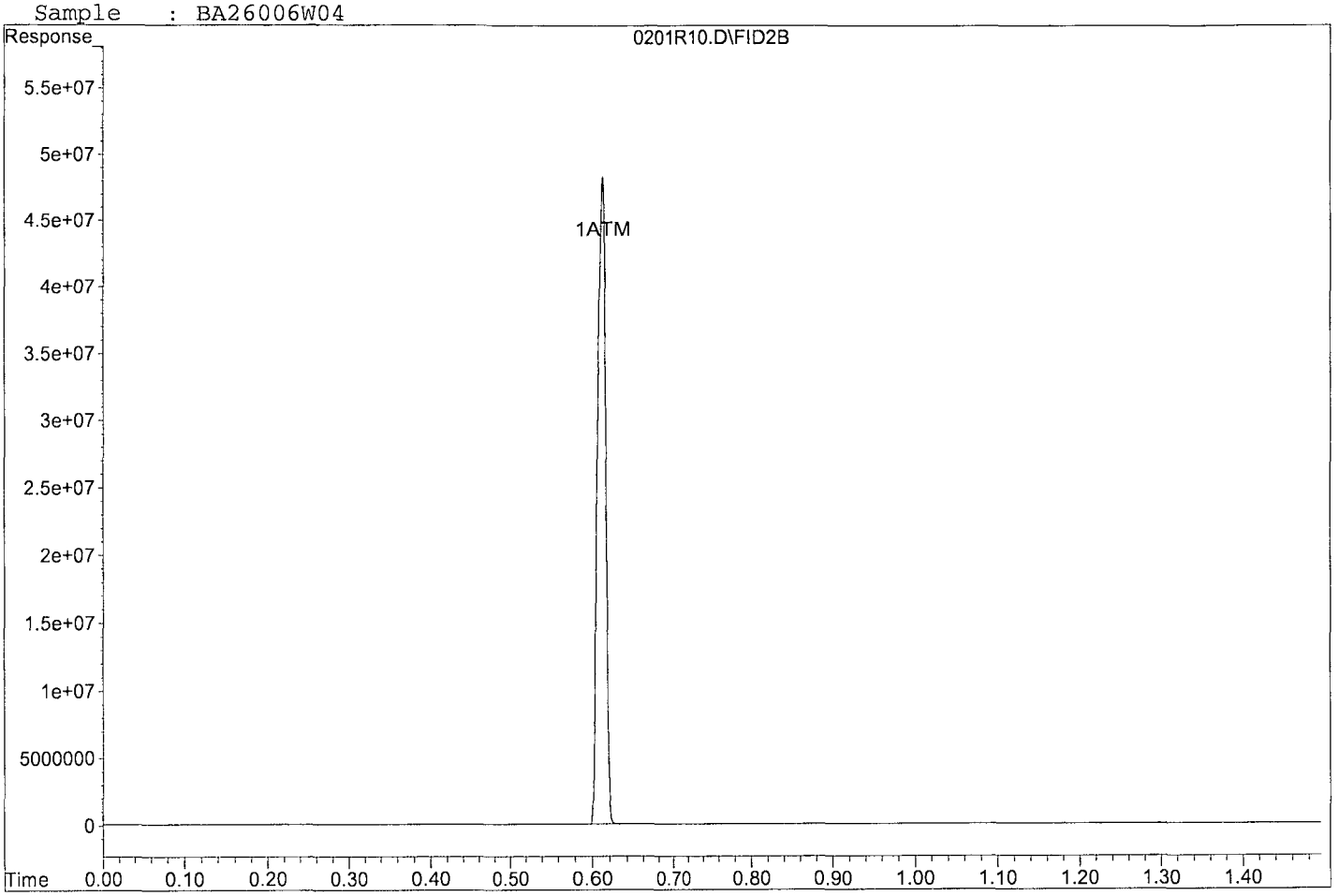
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	47920623	3885.489	ppb
Target Compounds				
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R10.D
Sample : BA26006W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R11.D Vial: 11
Acq On : 1 Feb 21 12:38 Operator: LS
Sample : BA26006W04 DF10 Inst : 7890
Misc : Multiplr: 10.00
IntFile : autoint1.e
Quant Time: Feb 1 12:41 2021 Quant Results File: RSK0914A.RES

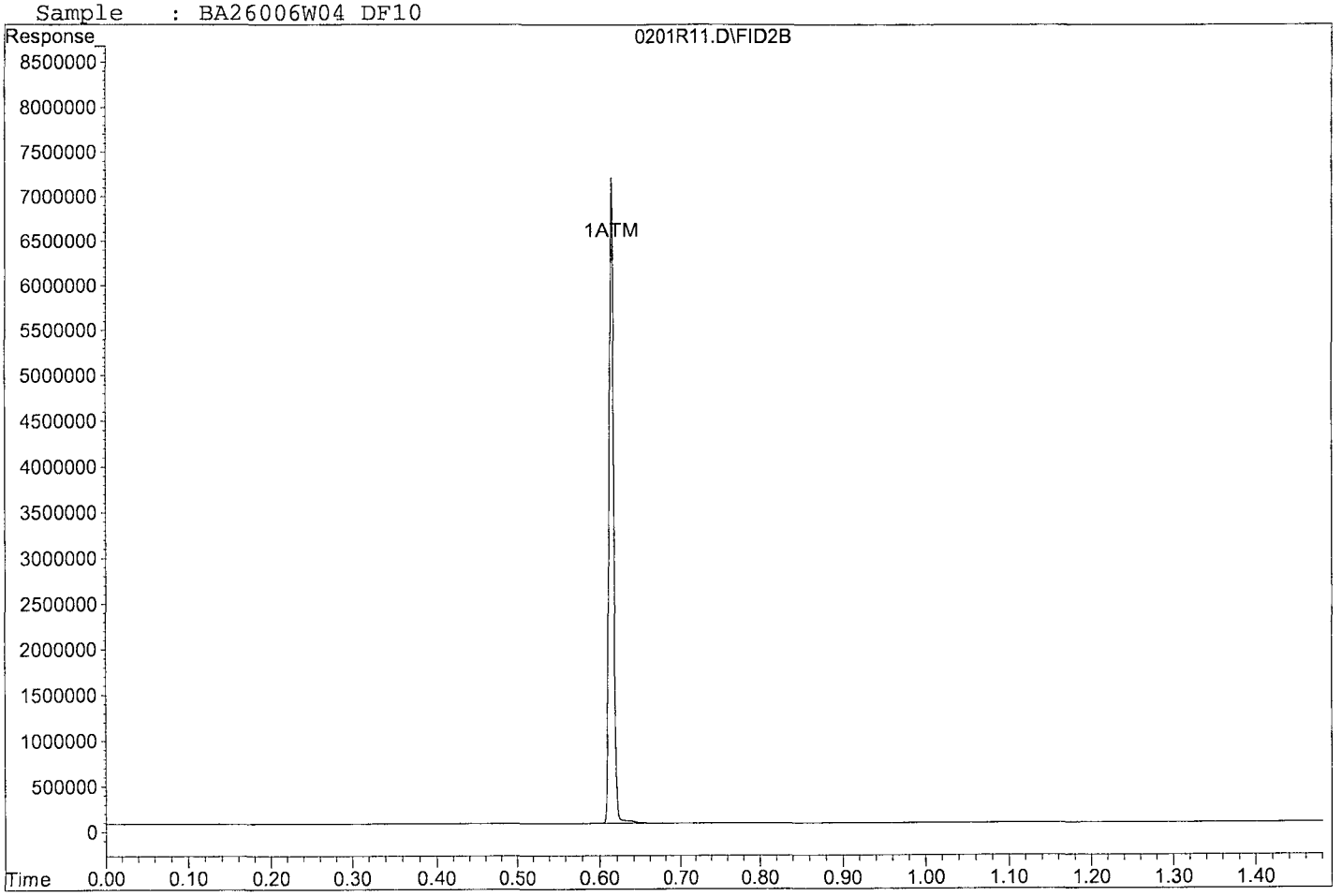
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	6719854	5447.983	ppb
Target Compounds				
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R11.D
Sample : BA26006W04 DF10



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R12.D Vial: 12
Acq On : 1 Feb 21 12:42 Operator: LS
Sample : BA26012W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:45 2021 Quant Results File: RSK0914A.RES

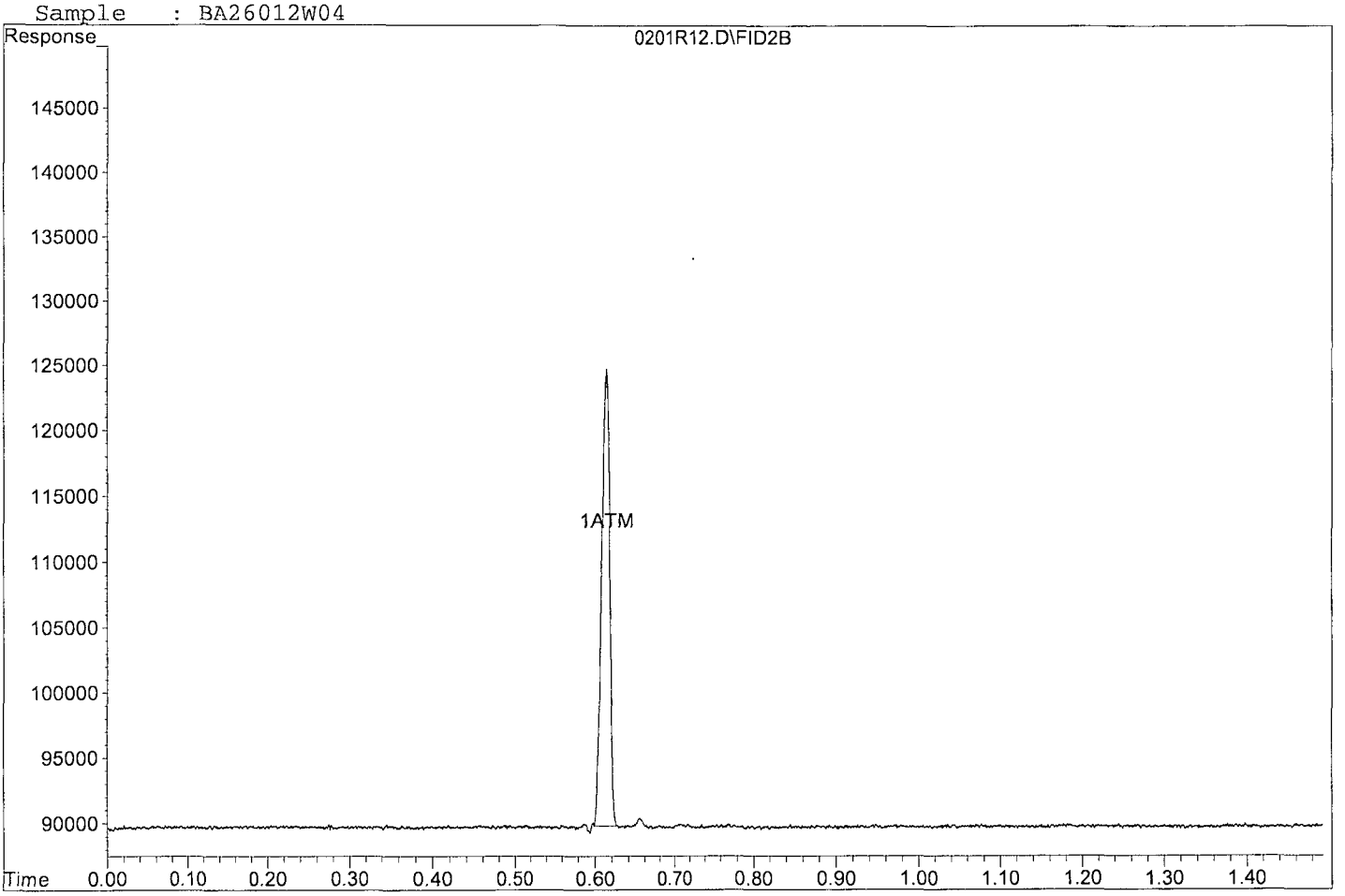
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
1) ATM Methane	0.61	34934	2.764	ppb	m
Target Compounds					
2) ATM Ethane	0.00	0	N.D.	ppb	
3) ATM Ethene	0.00	0	N.D.	ppb	

(f)=RT Delta > 1/2 Window (m)=manual int.

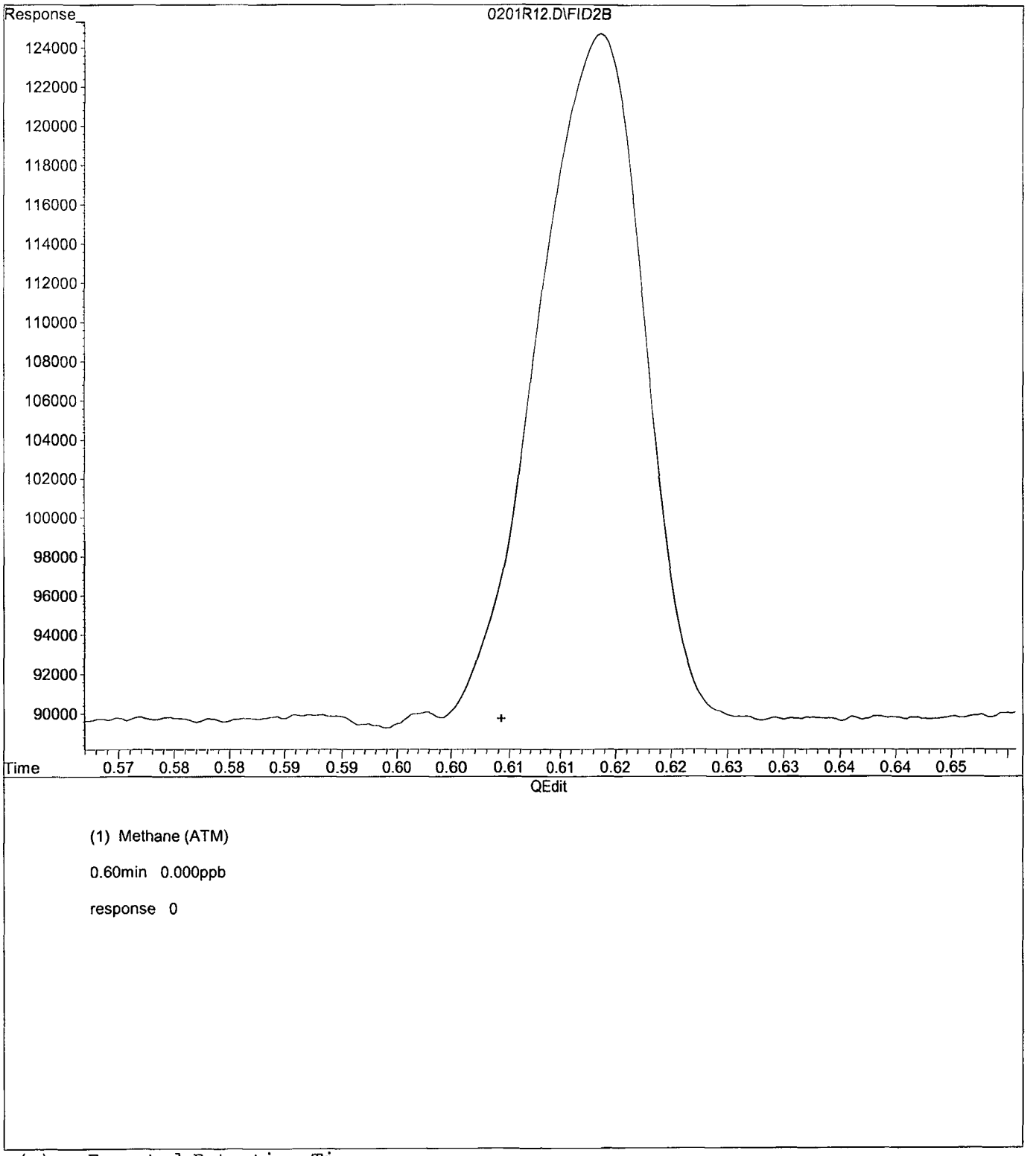
Data File: G:\ROCKY\DATA\200914RS\0201R12.D
Sample : BA26012W04



Quantitation Report

Data File : G:\ROCKY\DATA\200914RS\0201R12.D Vial: 12
Acq On : 1 Feb 21 12:42 Operator: LS
Sample : BA26012W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:44 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

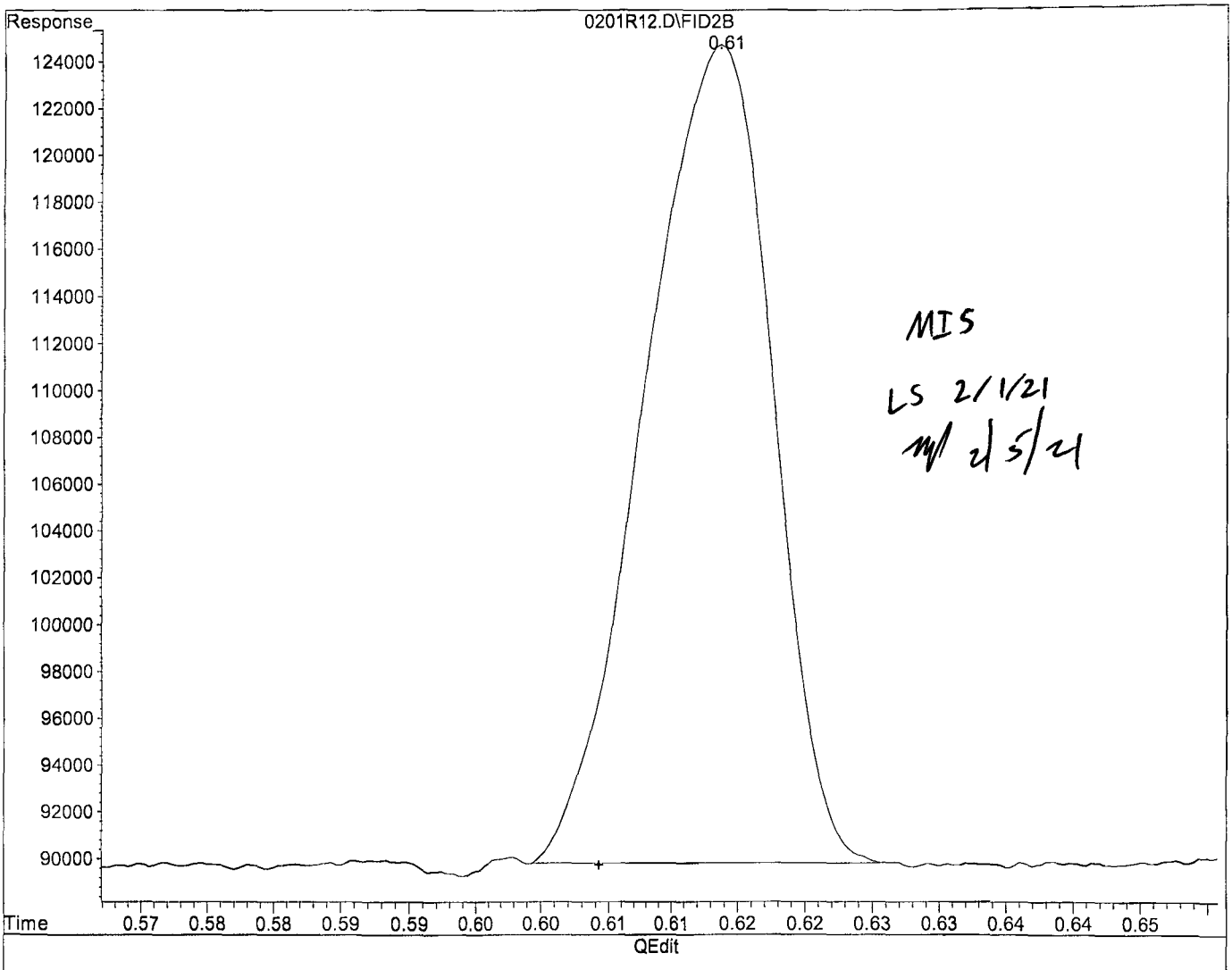


(+) = Expected Retention Time
0201R12.D RSK0914A.M Mon Feb 01 12:45:40 2021

Quantitation Report

Data File : G:\ROCKY\DATA\200914RS\0201R12.D Vial: 12
Acq On : 1 Feb 21 12:42 Operator: LS
Sample : BA26012W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:44 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration



MIS
LS 2/1/21
MM 2/5/21

(1) Methane (ATM)

0.61min 2.764ppb m

response 34934

(+) = Expected Retention Time
0201R12.D RSK0914A.M Mon Feb 01 12:45:53 2021

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R13.D Vial: 13
Acq On : 1 Feb 21 12:46 Operator: LS
Sample : BA26013W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:48 2021 Quant Results File: RSK0914A.RES

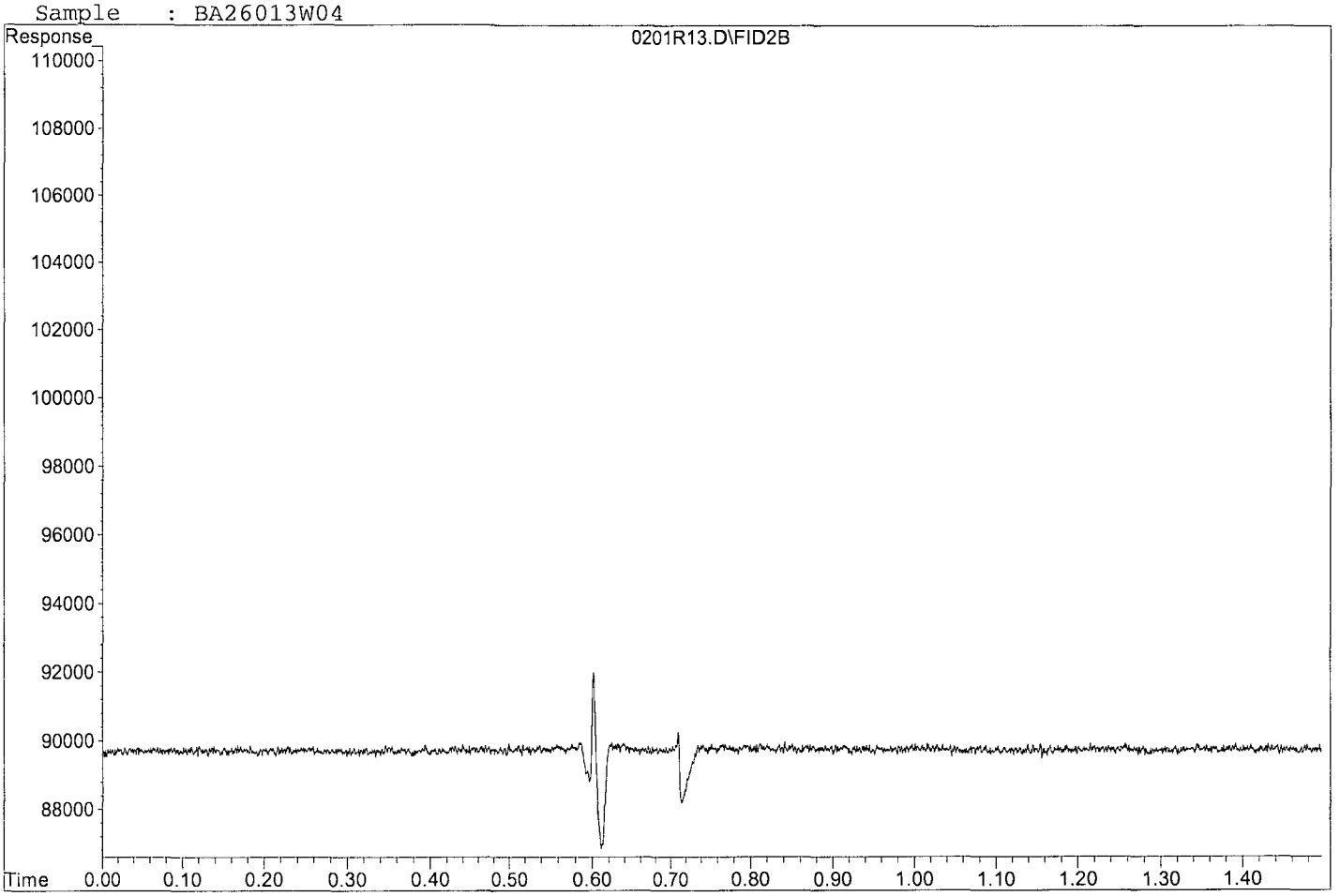
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R13.D
Sample : BA26013W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R14.D Vial: 14
Acq On : 1 Feb 21 12:50 Operator: LS
Sample : BA26015W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:53 2021 Quant Results File: RSK0914A.RES

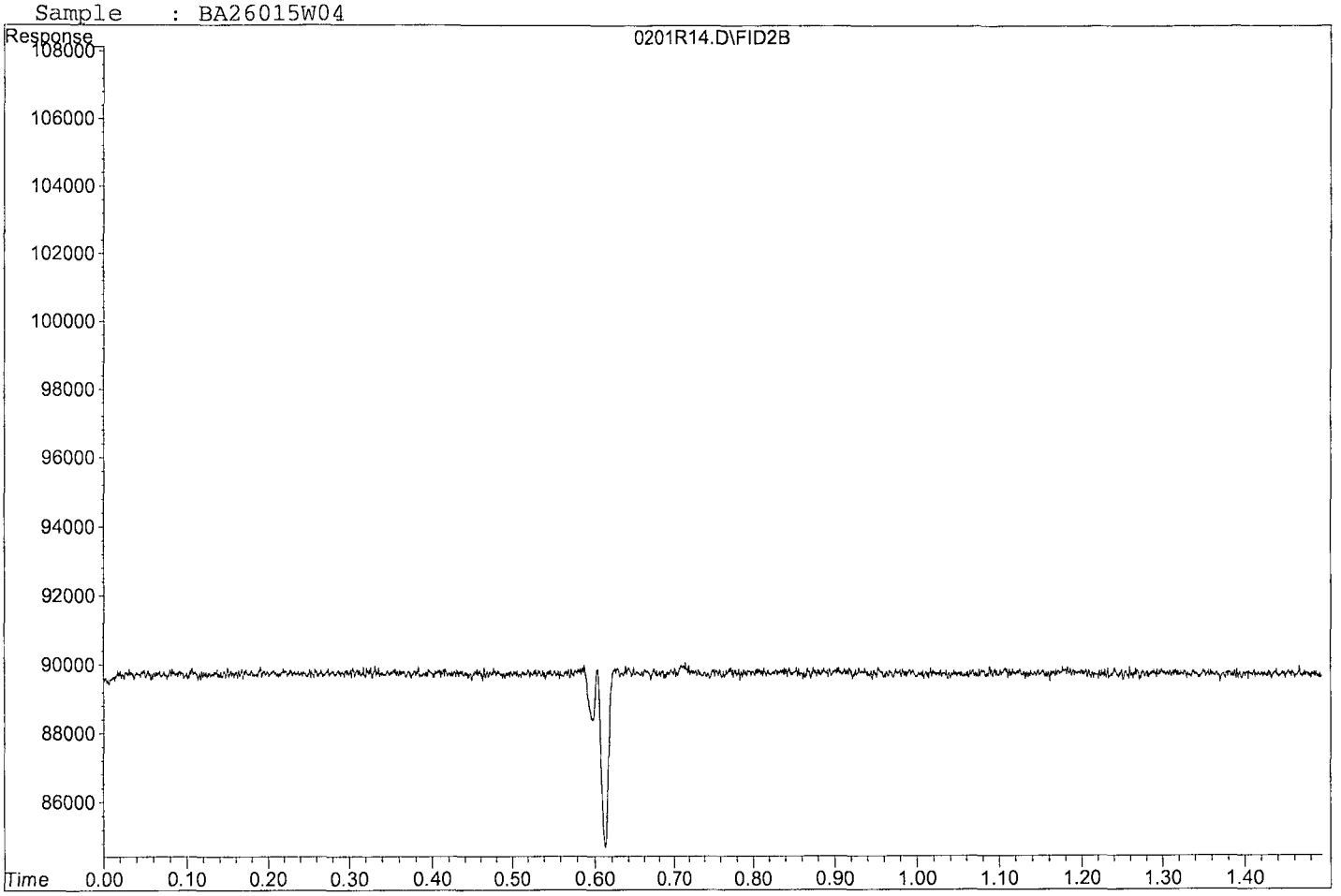
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R14.D
Sample : BA26015W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R15.D Vial: 15
Acq On : 1 Feb 21 12:54 Operator: LS
Sample : BA26016W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:58 2021 Quant Results File: RSK0914A.RES

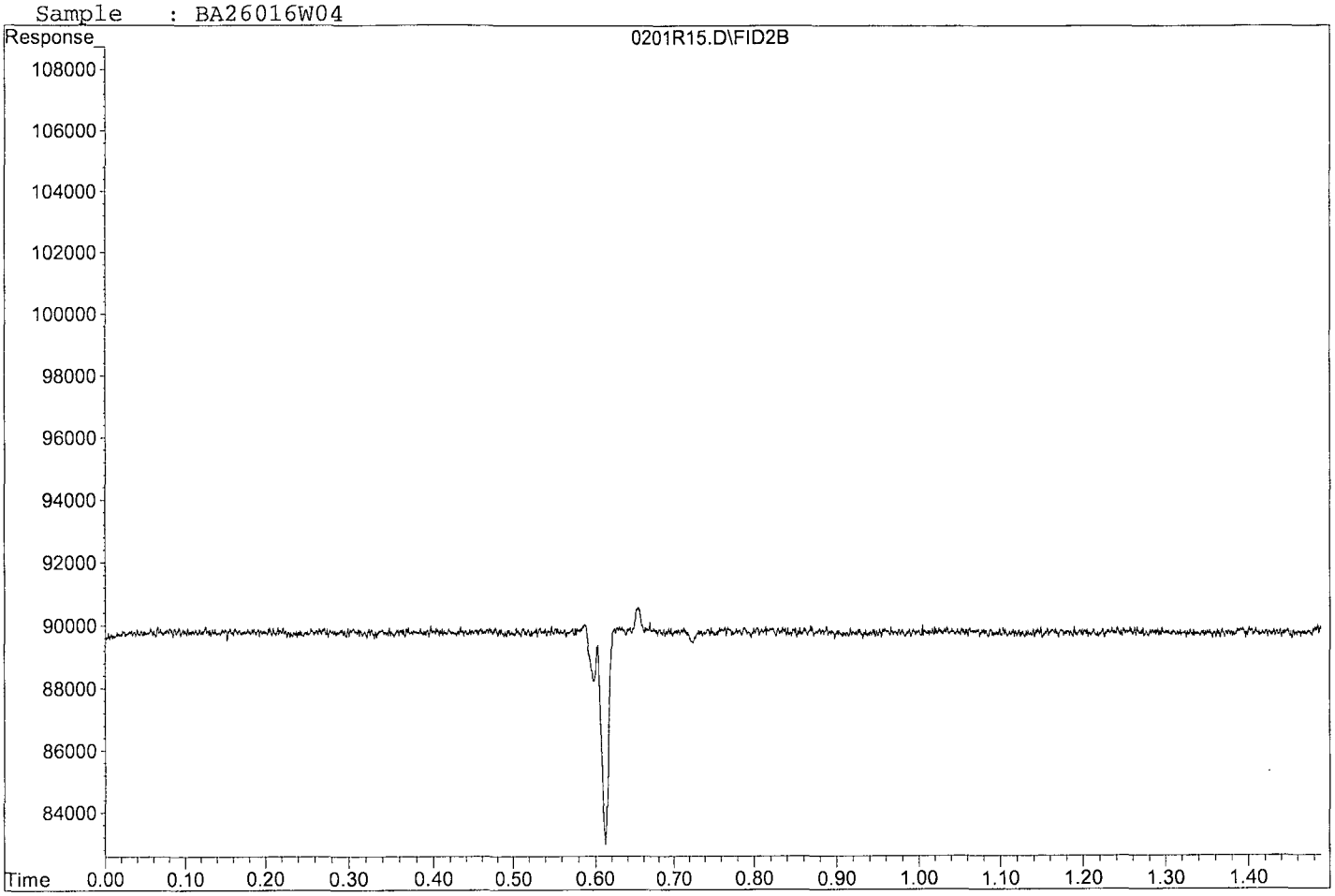
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R15.D
Sample : BA26016W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R04.D Vial: 4
Acq On : 1 Feb 21 12:08 Operator: LS
Sample : 210201A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:11 2021 Quant Results File: RSK0914A.RES

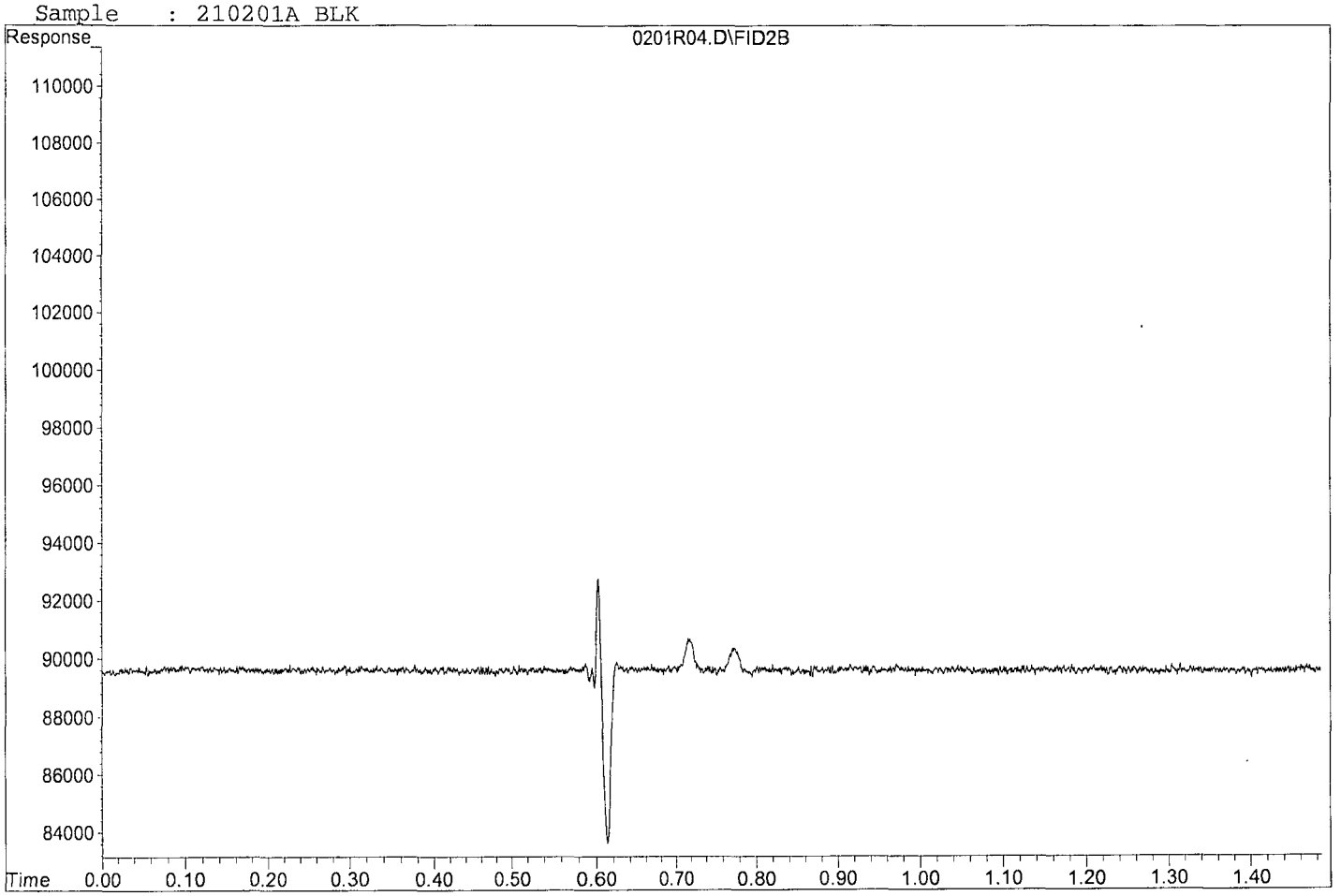
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R04.D
Sample : 210201A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R01.D Vial: 1
Acq On : 1 Feb 21 11:57 Operator: LS
Sample : 210201A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:00 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

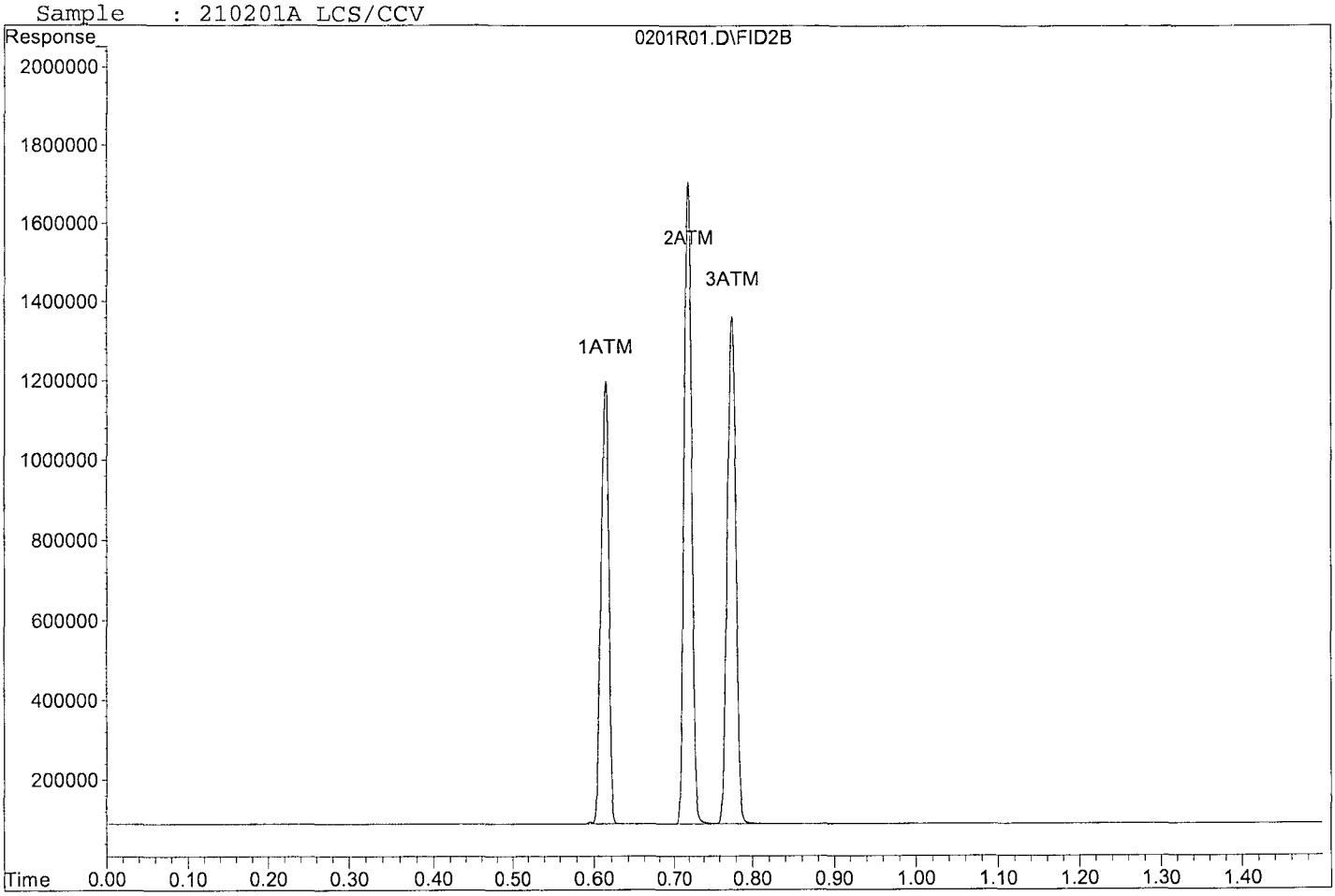
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1054610	85.442 ppb
2) ATM Ethane	0.72	1583074	172.527 ppb
3) ATM Ethene	0.77	1266017	172.909 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R01.D
Sample : 210201A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R03.D Vial: 3
Acq On : 1 Feb 21 12:04 Operator: LS
Sample : 210201A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:06 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

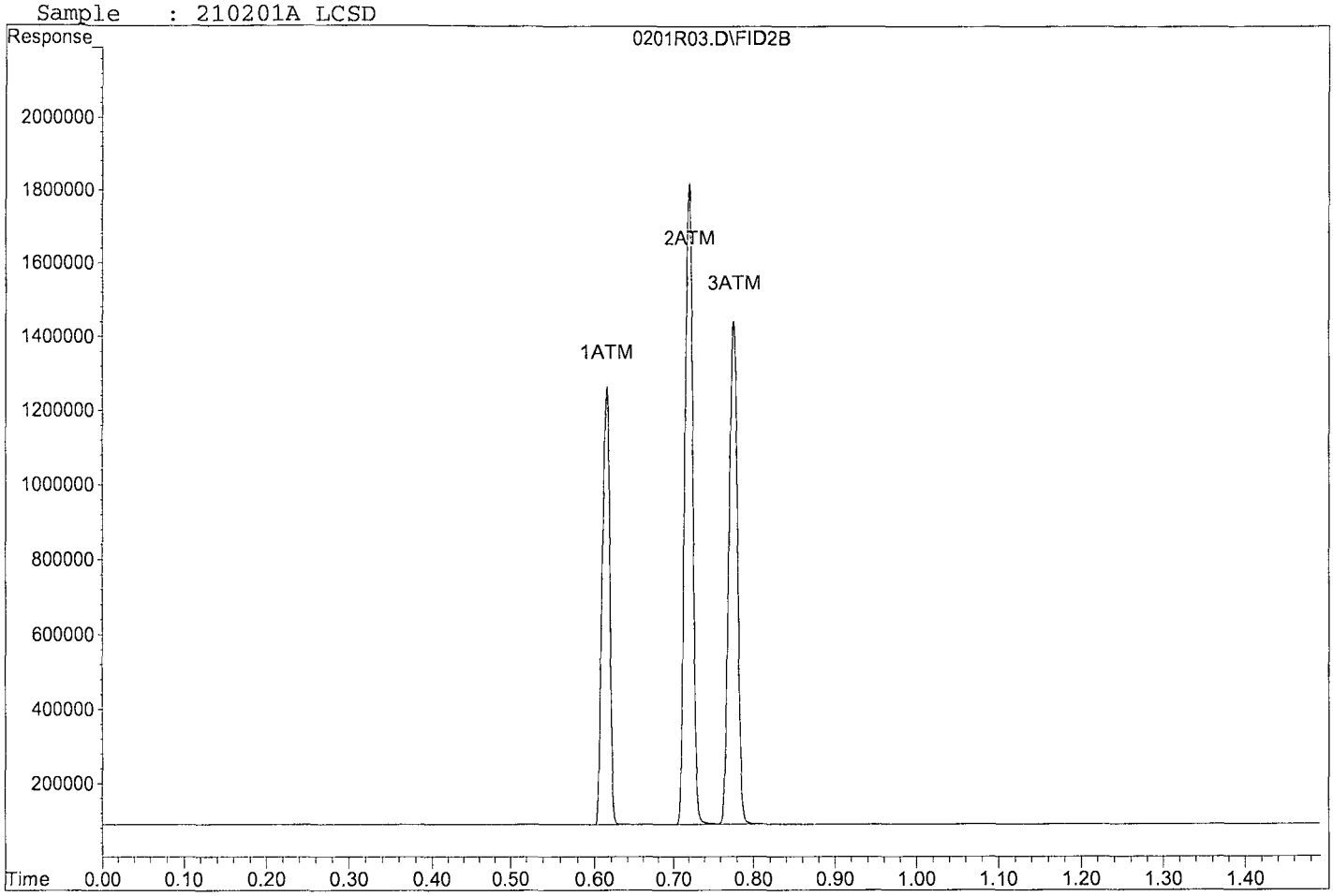
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1180222	95.627 ppb
2) ATM Ethane	0.72	1733912	189.075 ppb
3) ATM Ethene	0.78	1335255	182.324 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R03.D
Sample : 210201A LCSD



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R07.D Vial: 7
Acq On : 1 Feb 21 12:18 Operator: LS
Sample : BA26001W08 MS Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:20 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

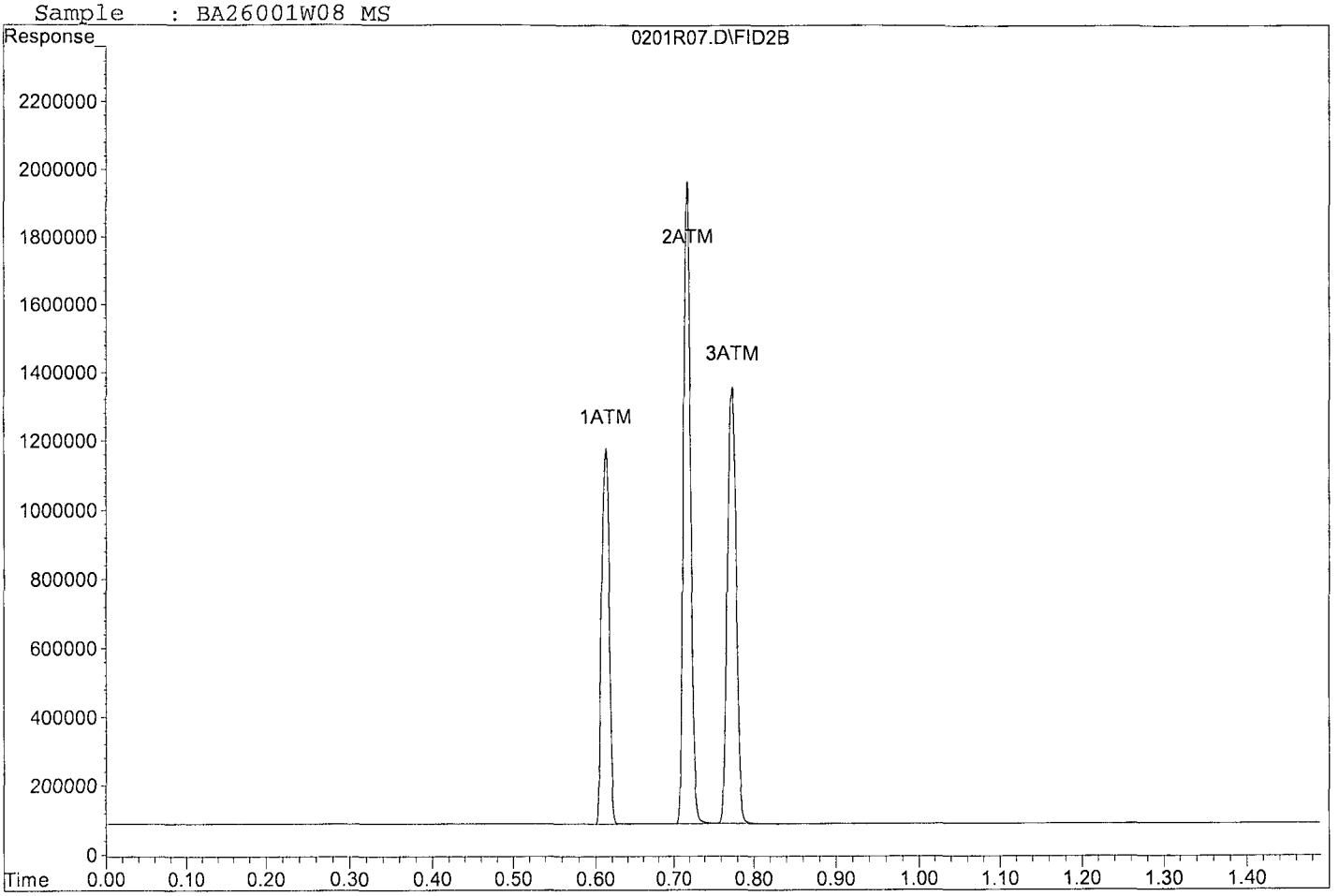
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1062906	86.115 ppb
2) ATM Ethane	0.72	1863651	203.308 ppb
3) ATM Ethene	0.77	1267199	173.070 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R07.D
Sample : BA26001W08 MS



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R08.D Vial: 8
Acq On : 1 Feb 21 12:21 Operator: LS
Sample : BA26001W08 MSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:26 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

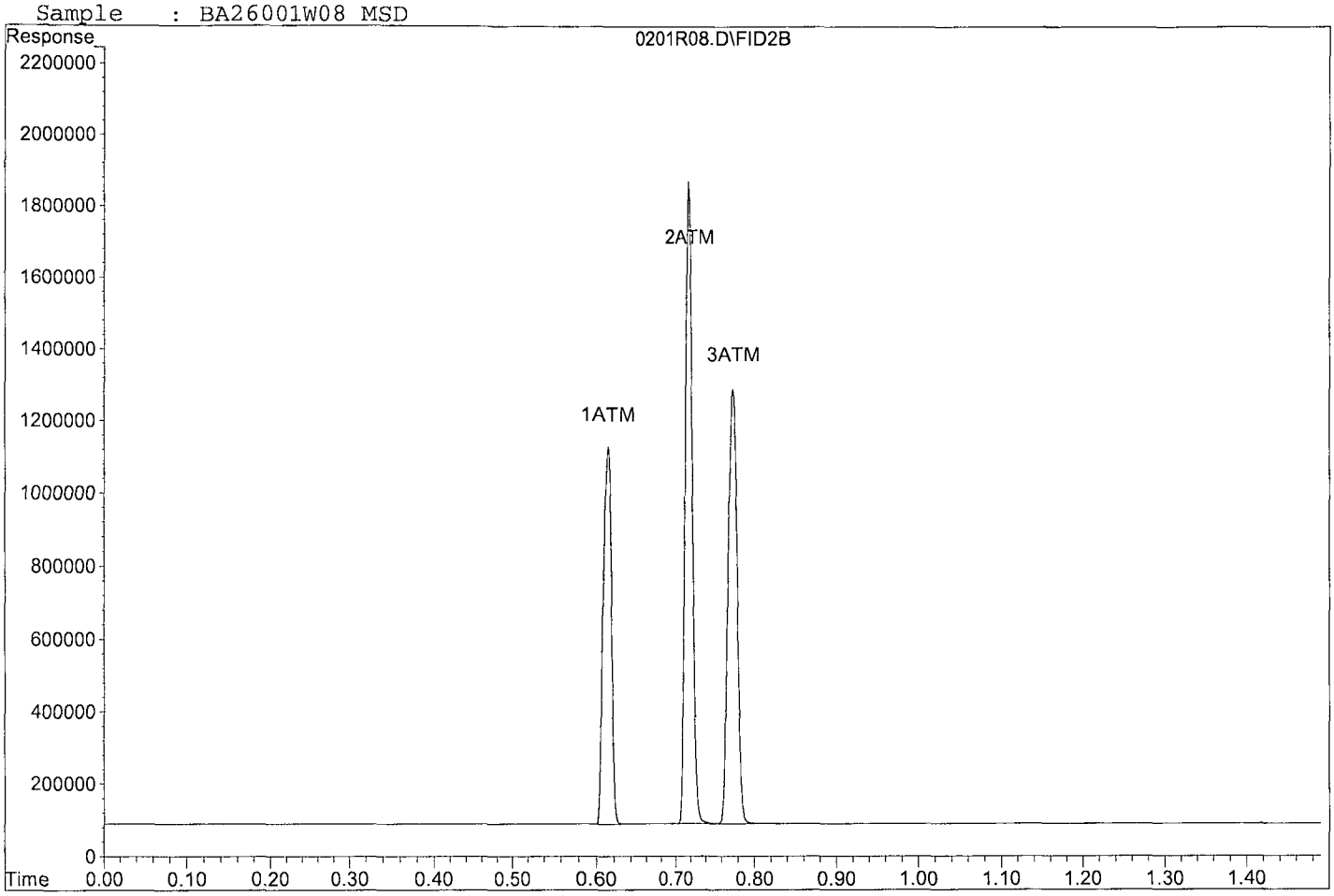
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1013545	82.113 ppb
2) ATM Ethane	0.72	1766405	192.639 ppb
3) ATM Ethene	0.77	1200435	163.991 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R08.D
Sample : BA26001W08 MSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 09/15/2020** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 2/01/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA26001W08 MS/MSD **LS 2/01/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0201R01.D	1	210201A LCS/CCV		1 Feb 21 11:57
2	3	0201R03.D	1	210201A LCSD		1 Feb 21 12:04
3	4	0201R04.D	1	210201A BLK		1 Feb 21 12:08
4	5	0201R05.D	1	BA26000W04		1 Feb 21 12:11
5	6	0201R06.D	1	BA26001W07		1 Feb 21 12:15
6	7	0201R07.D	1	BA26001W08 MS		1 Feb 21 12:18
7	8	0201R08.D	1	BA26001W08 MSD		1 Feb 21 12:21
8	9	0201R09.D	1	BA26005W04		1 Feb 21 12:27
9	10	0201R10.D	1	BA26006W04		1 Feb 21 12:30
10	11	0201R11.D	10	BA26006W04 DF10		1 Feb 21 12:38
11	12	0201R12.D	1	BA26012W04		1 Feb 21 12:42
12	13	0201R13.D	1	BA26013W04		1 Feb 21 12:46
13	14	0201R14.D	1	BA26015W04		1 Feb 21 12:50
14	15	0201R15.D	1	BA26016W04		1 Feb 21 12:54
15	20	0201R20.D	1	210201A ENDING CCV		1 Feb 21 13:17
16	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
17	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
18	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
19	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
20	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
21	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
22	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
23	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

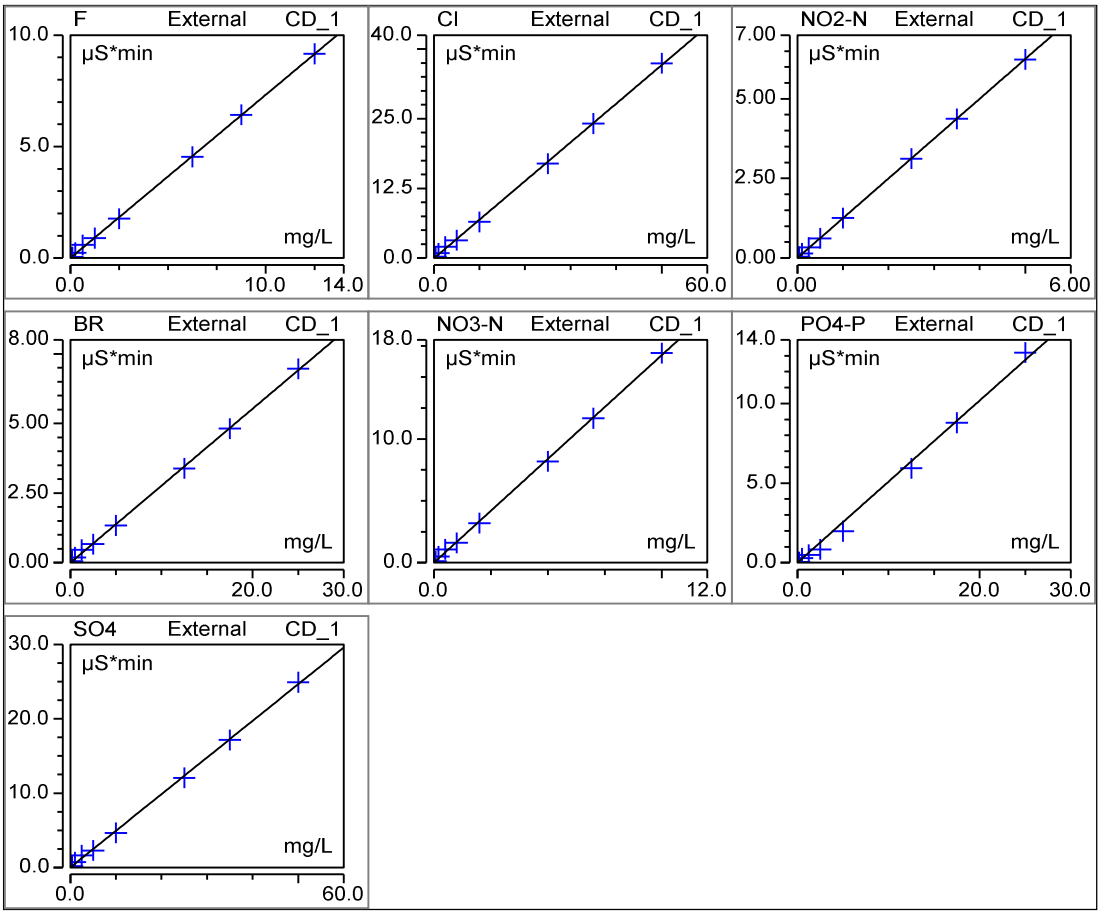
Calibration Batch Report

Sequence:	**210127**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.732	0.000	99.9686
Cl	Area	Lin, WithOffset	9.000	-0.065	0.694	0.000	99.9516
NO2-N	Area	Lin, 1/A	9.000	0.000	1.250	0.000	99.9565
BR	Area	Lin	9.000	0.000	0.276	0.000	99.9445
NO3-N	Area	Lin	9.000	0.000	1.677	0.000	99.9354
PO4-P	Area	Lin	9.000	0.000	0.509	0.000	99.4697
SO4	Area	Lin	9.000	0.000	0.493	0.000	99.9284

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2021.01.27	0.026	0.3223	0.0177	0.1242	0.0548	0.0541	0.1929
Cal 2 2021.01.27	0.054	0.4809	0.0324	0.1908	0.0758	0.0846	0.3479
Cal 3 2021.01.27	0.319	1.3363	0.1161	0.6859	0.3061	0.5562	1.4333
Cal 4 2021.01.27	0.804	3.0075	0.2642	1.6813	0.6414	0.9824	3.2763
Cal 5 2021.01.27	1.220	4.6876	0.4934	2.4106	0.9577	1.6501	4.6329
Cal 6 2021.01.27	2.412	9.4517	1.0028	4.8367	1.9099	3.8840	9.4387
Cal 7 2021.01.27	6.202	24.4866	2.4975	12.2539	4.8803	11.6439	24.4424
Cal 8 2021.01.27	8.777	34.8760	3.4968	17.4152	6.9590	17.2573	34.7830
Cal 9 2021.01.27	12.516	50.4512	4.9892	25.1987	10.1016	25.9195	50.5326

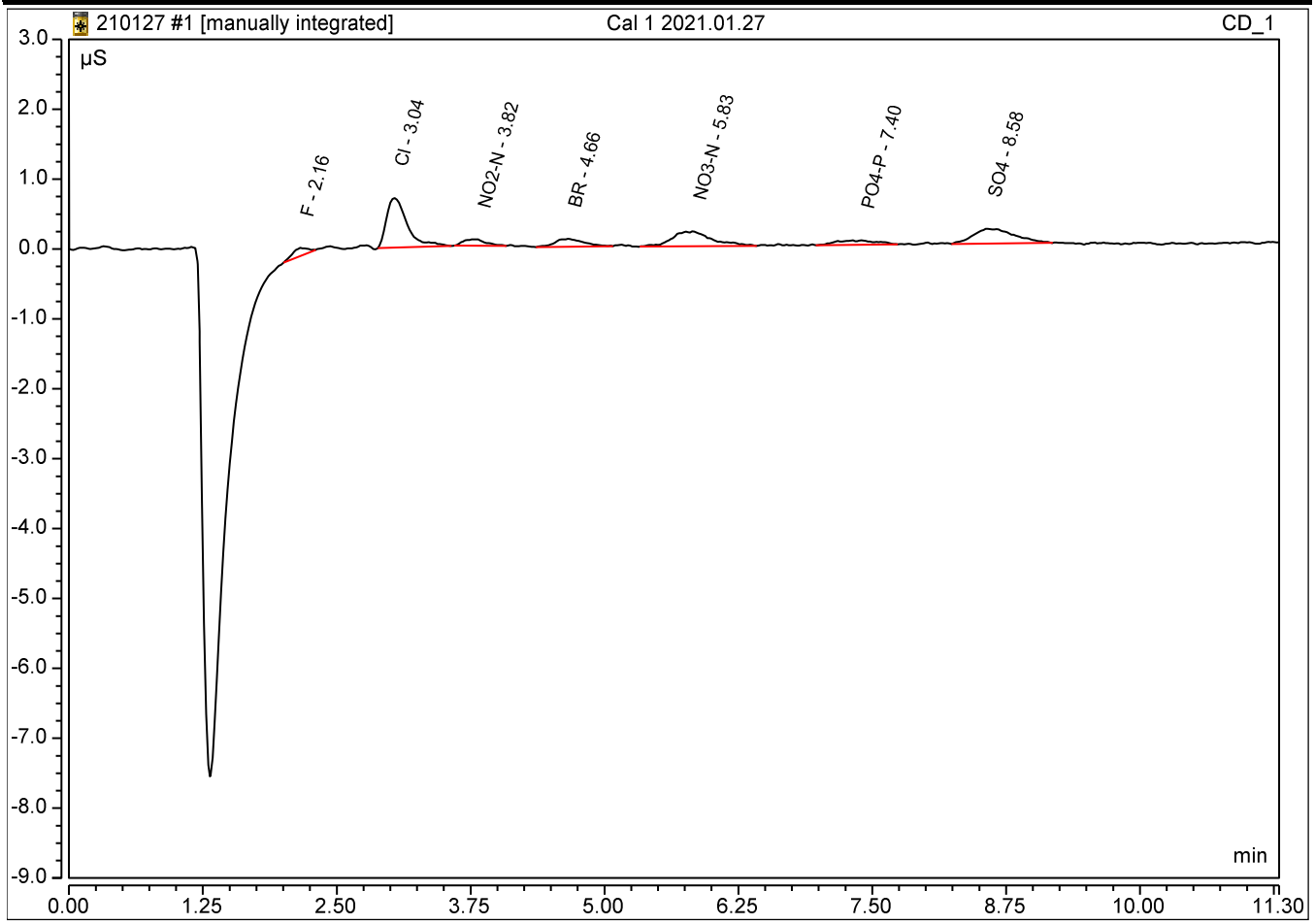


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 1 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:00**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB*	0.019	0.115	0.03	0.05	52.0%
2	3.04	**Cl**	BMB	0.158	0.712	0.32	0.2	161.1%
3	3.82	**NO2-N**	BMB*	0.022	0.092	0.02	0.02	88.6%
4	4.66	**BR**	BMB*	0.034	0.112	0.12	0.1	124.2%
5	5.83	**NO3-N**	BMB*	0.092	0.214	0.05	0.04	136.9%
6	7.40	**PO4-P**	BMB*	0.028	0.065	0.05	0.1	54.1%
7	8.58	**SO4**	BMB*	0.095	0.212	0.19	0.2	96.4%



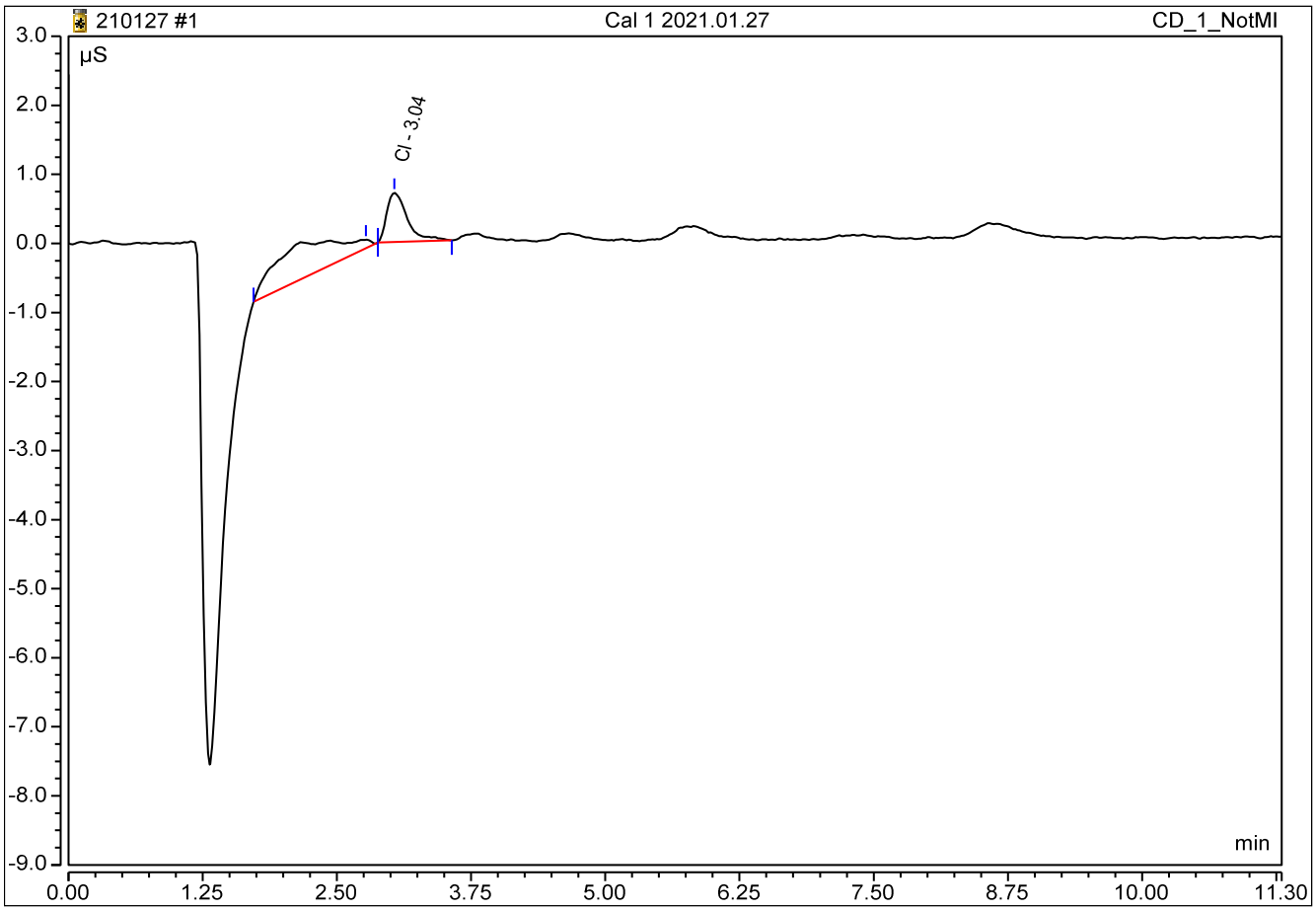
MI 5 F Br NO2 no3 PO4 SO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:00**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	n.a.	**F**	BMB*	n.a.	n.a.	n.a.
2	3.04	**Cl**	BMB	0.158	0.712	0.3024
3	n.a.	**NO2-N**	BMB*	n.a.	n.a.	n.a.
4	n.a.	**BR**	BMB*	n.a.	n.a.	n.a.
5	n.a.	**NO3-N**	BMB*	n.a.	n.a.	n.a.
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	n.a.	**SO4**	BMB*	n.a.	n.a.	n.a.

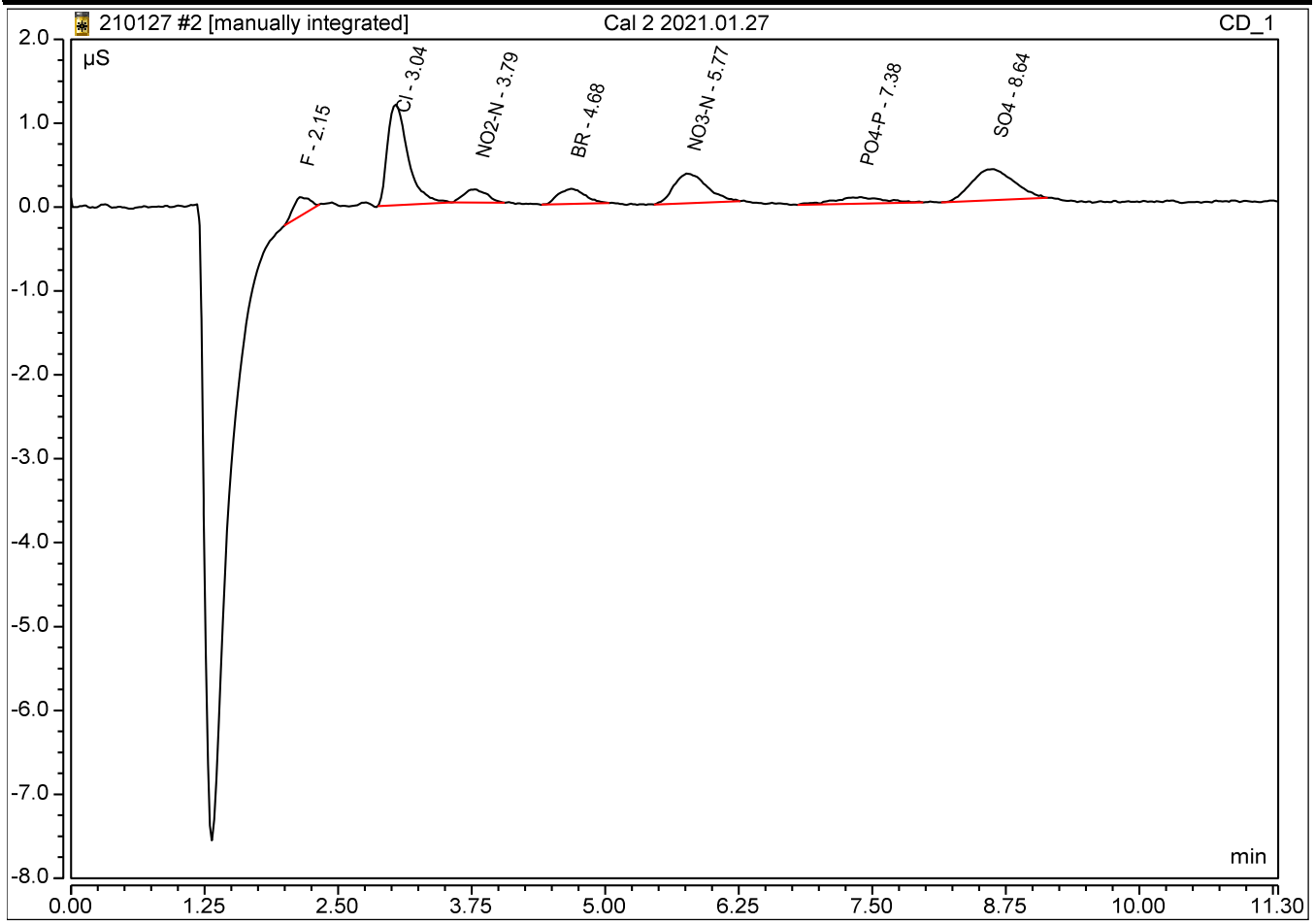


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 2 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:15**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	0.039	0.224	0.05	0.1	53.7%
2	3.04	**Cl**	BMB	0.268	1.199	0.48	0.4	120.2%
3	3.79	**NO2-N**	BMB	0.040	0.161	0.03	0.04	80.9%
4	4.68	**BR**	BMB	0.053	0.184	0.19	0.2	95.4%
5	5.77	**NO3-N**	BMB	0.127	0.356	0.08	0.08	94.8%
6	7.38	**PO4-P**	BMB*	0.043	0.080	0.08	0.2	42.3%
7	8.64	**SO4**	BMB	0.172	0.371	0.35	0.4	87.0%



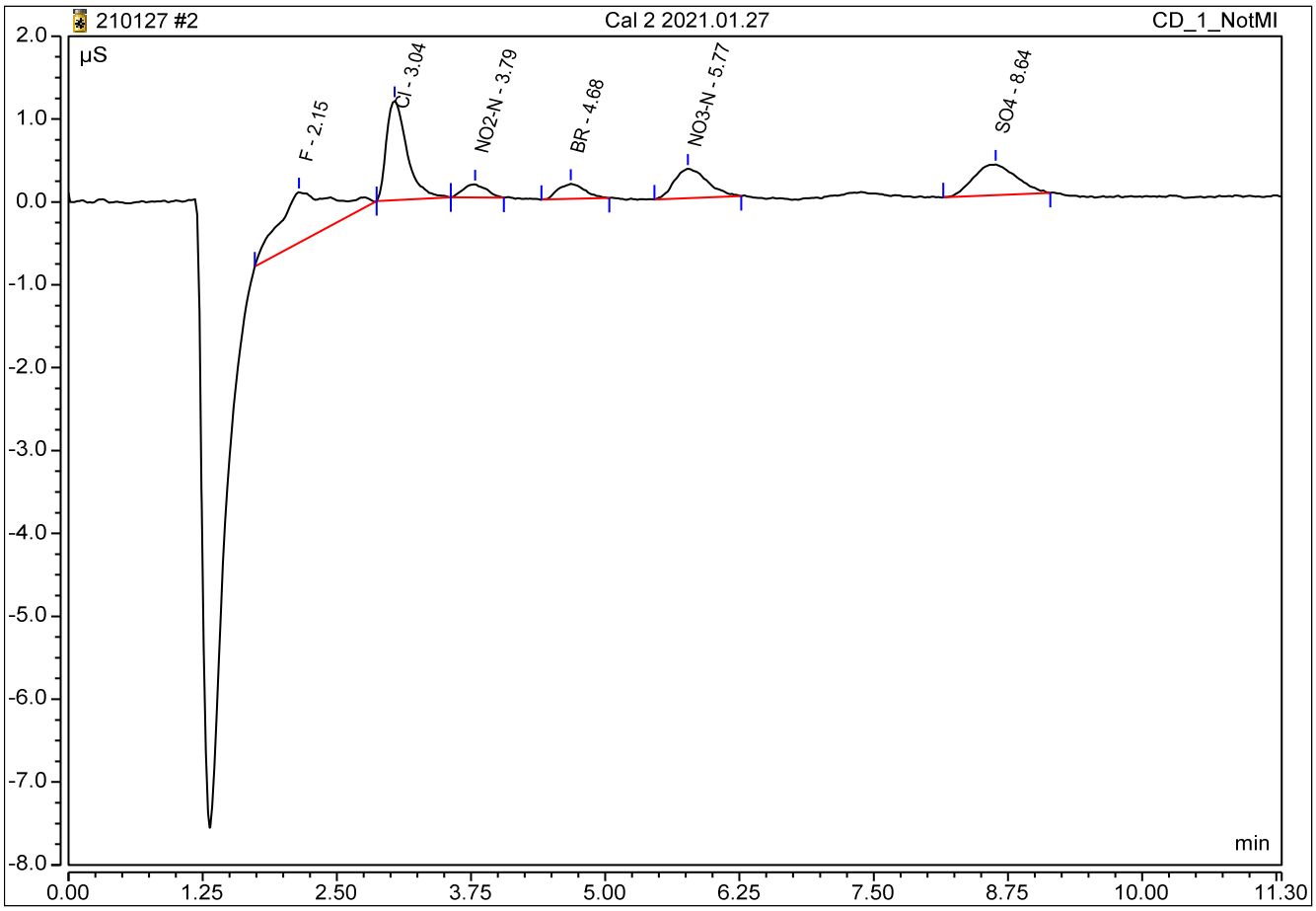
MI 5 F Br NO2 no3 PO4 SO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:15**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	0.347	0.611	0.5147
2	3.04	**Cl**	BMB	0.268	1.199	0.4673
3	3.79	**NO2-N**	BMB	0.040	0.161	0.0405
4	4.68	**BR**	BMB	0.053	0.184	0.1908
5	5.77	**NO3-N**	BMB	0.127	0.356	0.0758
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	8.64	**SO4**	BMB	0.172	0.371	0.3479

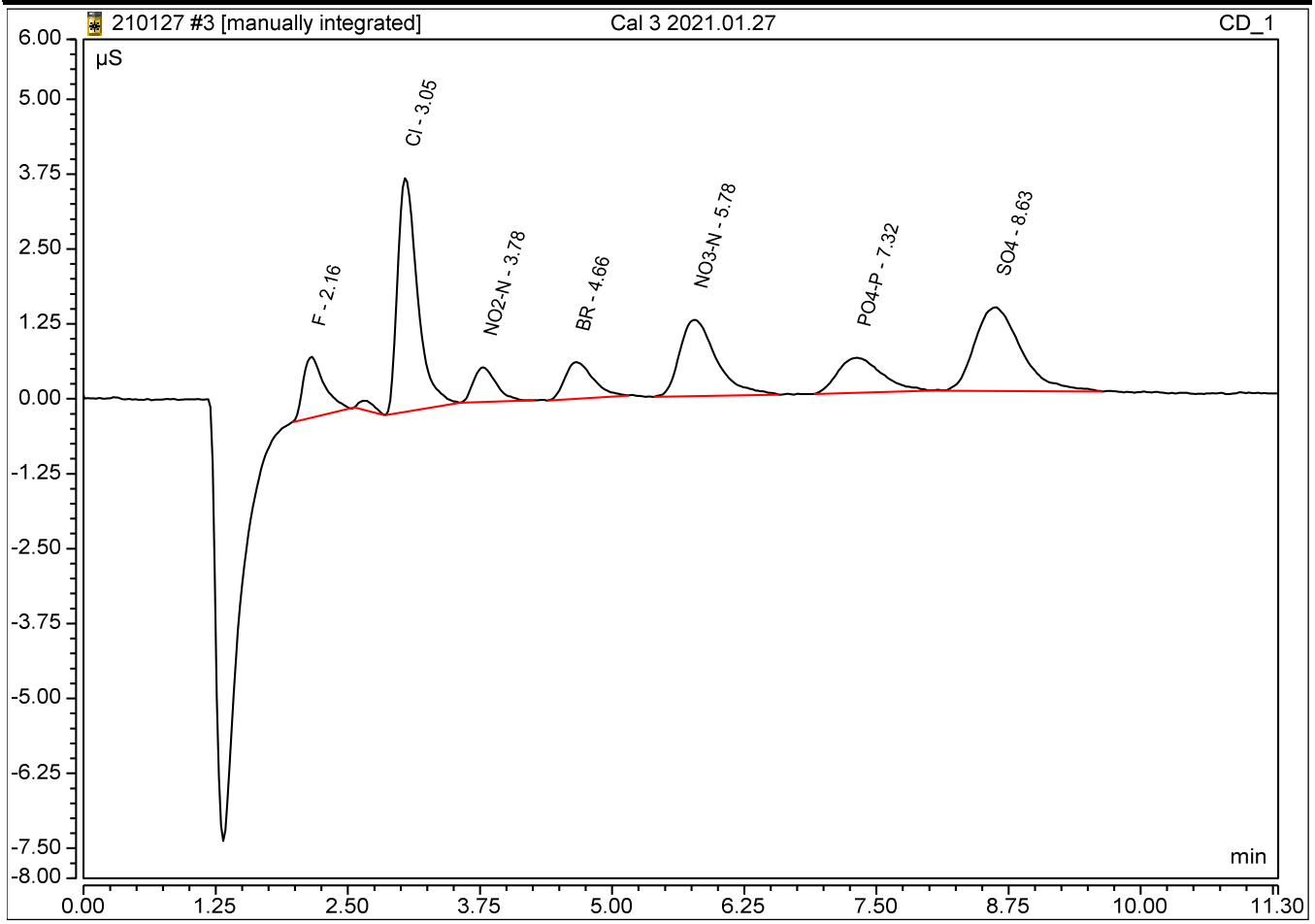


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 3 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB*	0.234	1.014	0.32	0.25	127.8%
3	3.05	**Cl**	BMB	0.862	3.903	1.34	1	133.6%
4	3.78	**NO2-N**	BMB	0.145	0.578	0.12	0.1	116.1%
5	4.66	**BR**	BMB	0.190	0.613	0.69	0.5	137.2%
6	5.78	**NO3-N**	BMB	0.513	1.275	0.31	0.2	153.1%
7	7.32	**PO4-P**	BMB	0.283	0.584	0.56	0.5	111.2%
8	8.63	**SO4**	BMB	0.707	1.396	1.43	1	143.3%

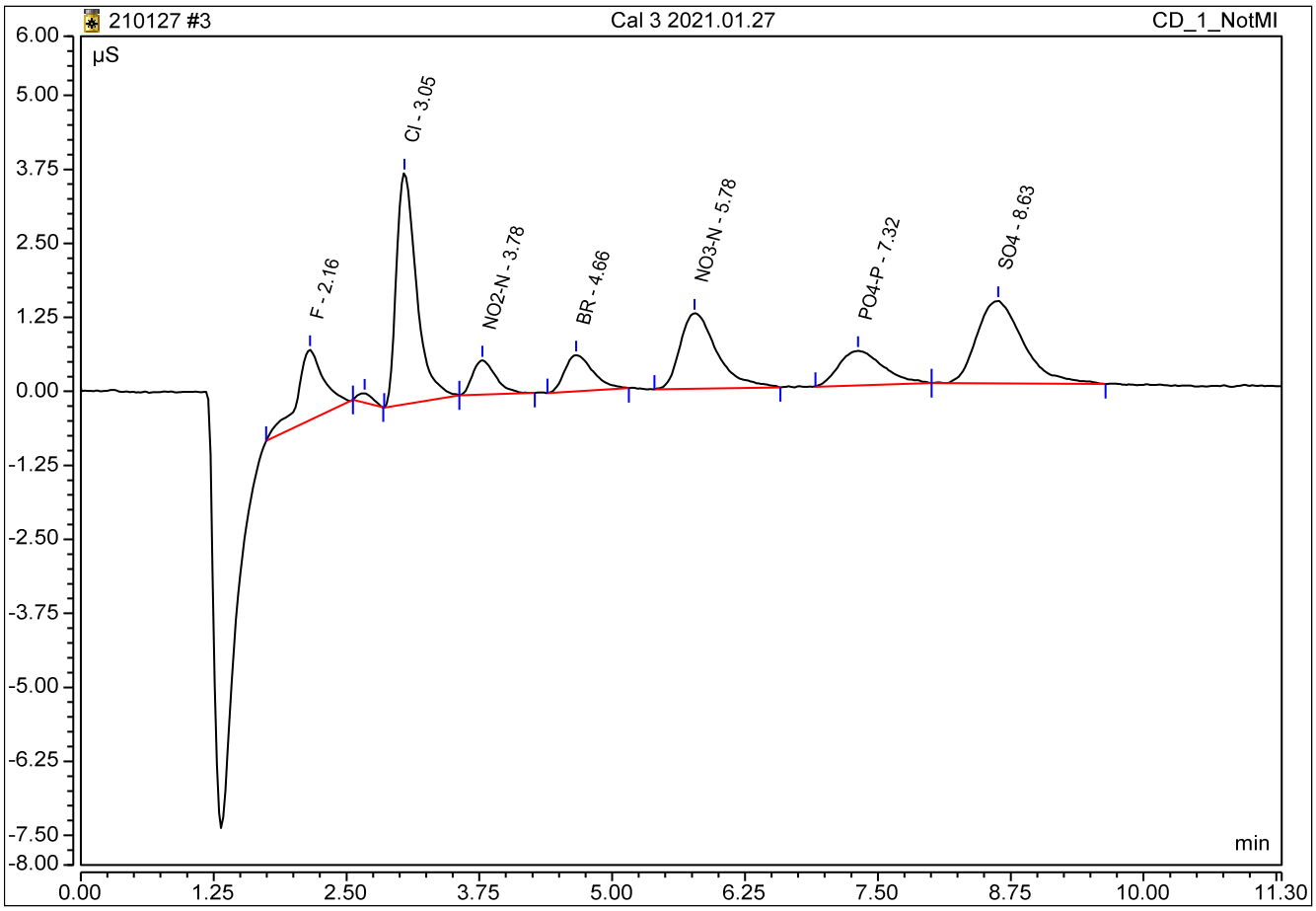


MI 5 F GA 01/27/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BMB*	0.349	1.187	0.5179
3	3.05	**Cl**	BMB	0.862	3.903	1.3567
4	3.78	**NO2-N**	BMB	0.145	0.578	0.1452
5	4.66	**BR**	BMB	0.190	0.613	0.6859
6	5.78	**NO3-N**	BMB	0.513	1.275	0.3061
7	7.32	**PO4-P**	BMB	0.283	0.584	0.5562
8	8.63	**SO4**	BMB	0.707	1.396	1.4333

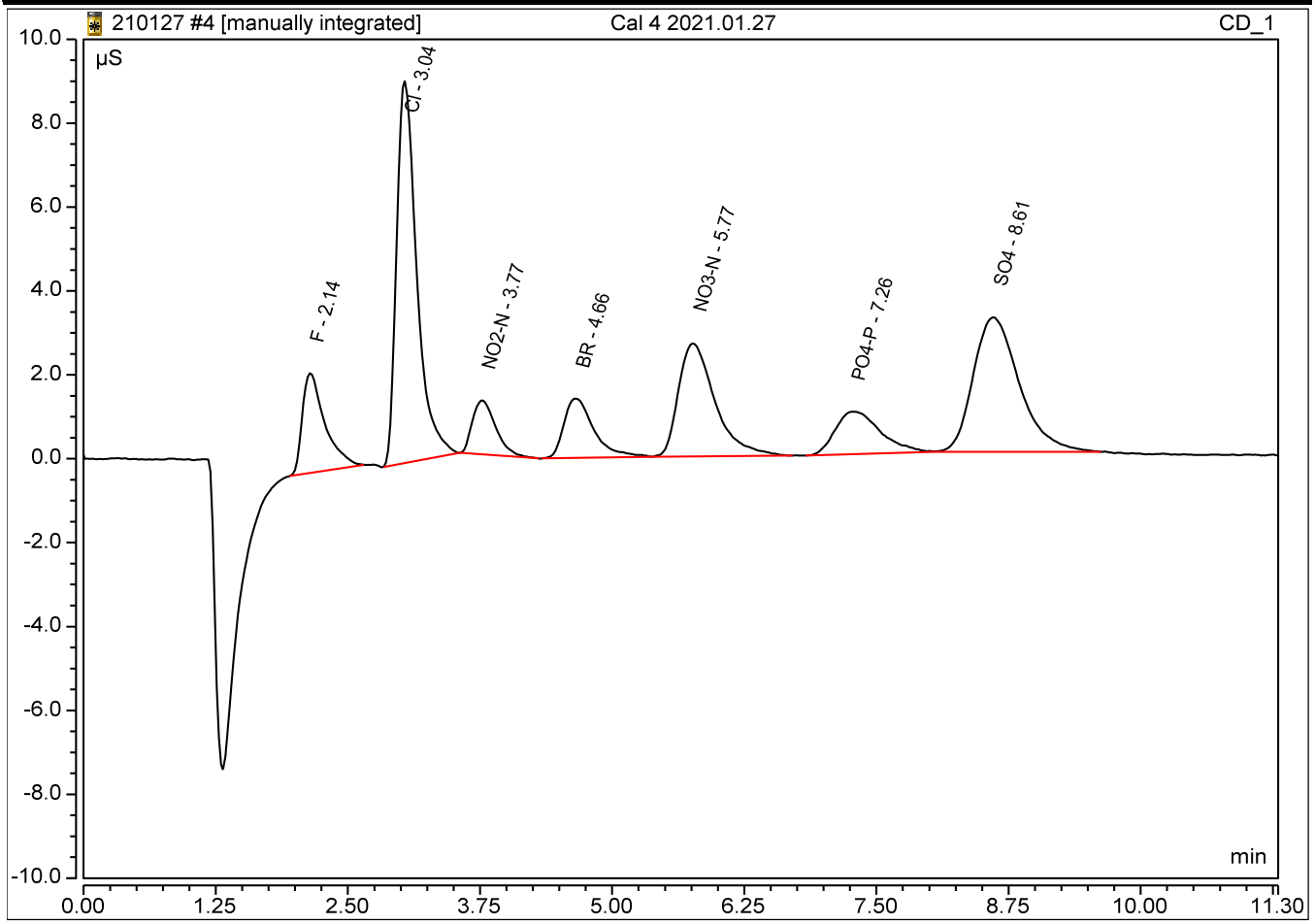


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 4 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	0.588	2.378	0.80	0.625	128.6%
2	3.04	**Cl**	BMB	2.022	9.104	3.01	2.5	120.3%
3	3.77	**NO2-N**	BMB	0.330	1.289	0.26	0.25	105.7%
4	4.66	**BR**	BMB	0.465	1.415	1.68	1.25	134.5%
5	5.77	**NO3-N**	BMB	1.075	2.696	0.64	0.5	128.3%
6	7.26	**PO4-P**	BMB	0.500	1.014	0.98	1.25	78.6%
7	8.61	**SO4**	BMB	1.616	3.204	3.28	2.5	131.1%



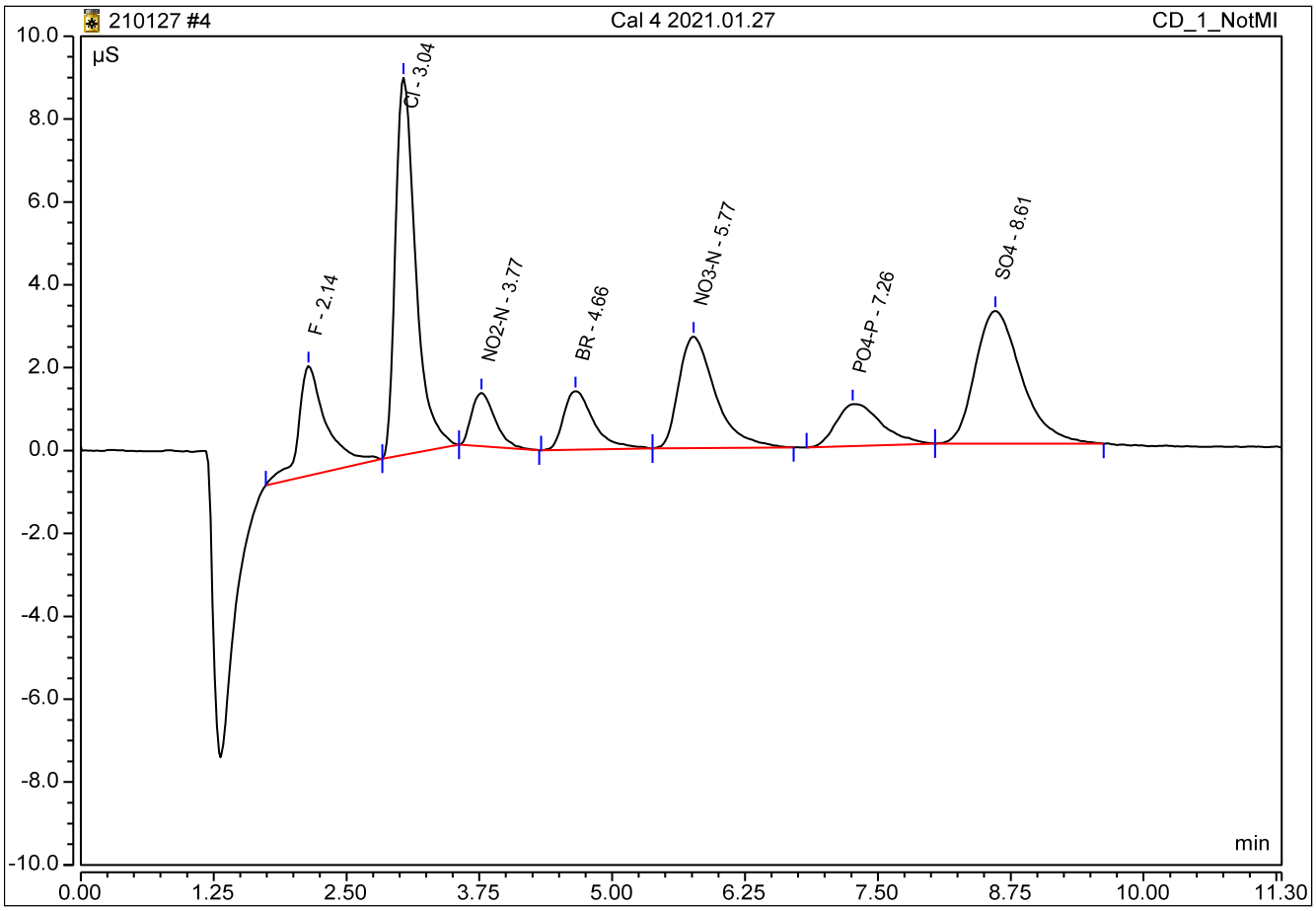
MI 5 F GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	0.811	2.641	1.2025
2	3.04	**Cl**	BMB	2.022	9.104	3.0942
3	3.77	**NO2-N**	BMB	0.330	1.289	0.3305
4	4.66	**BR**	BMB	0.465	1.415	1.6813
5	5.77	**NO3-N**	BMB	1.075	2.696	0.6414
6	7.26	**PO4-P**	BMB	0.500	1.014	0.9823
7	8.61	**SO4**	BMB	1.616	3.204	3.2763

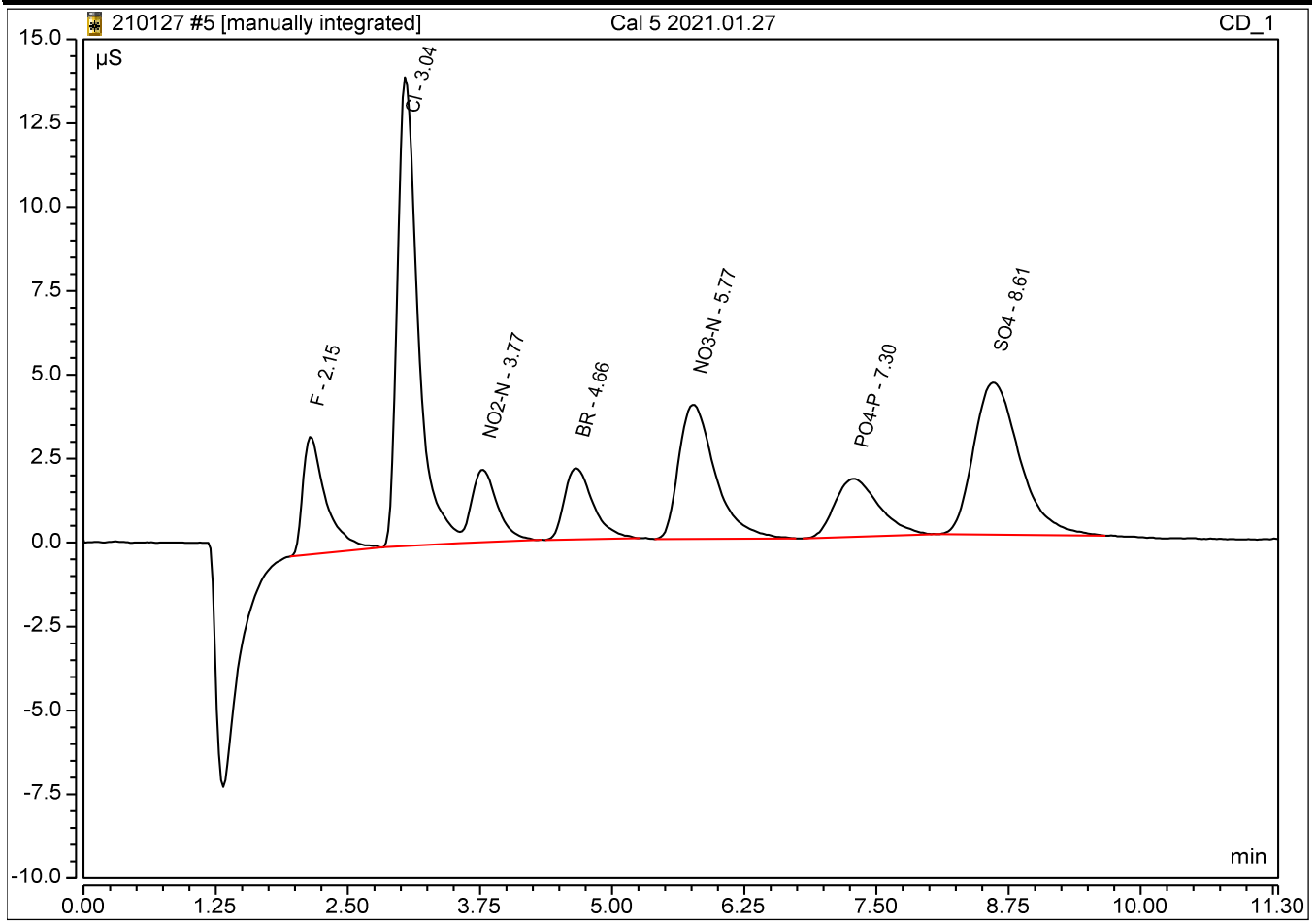


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 5 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:59**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	0.893	3.509	1.22	1.25	97.6%
2	3.04	**Cl**	bM *	3.188	13.986	4.69	5	93.8%
3	3.77	**NO2-N**	MB*	0.617	2.165	0.49	0.5	98.7%
4	4.66	**BR**	BMB	0.666	2.120	2.41	2.5	96.4%
5	5.77	**NO3-N**	BMB	1.606	4.004	0.96	1	95.8%
6	7.30	**PO4-P**	BMB	0.841	1.732	1.65	2.5	66.0%
7	8.61	**SO4**	BMB	2.286	4.532	4.63	5	92.7%



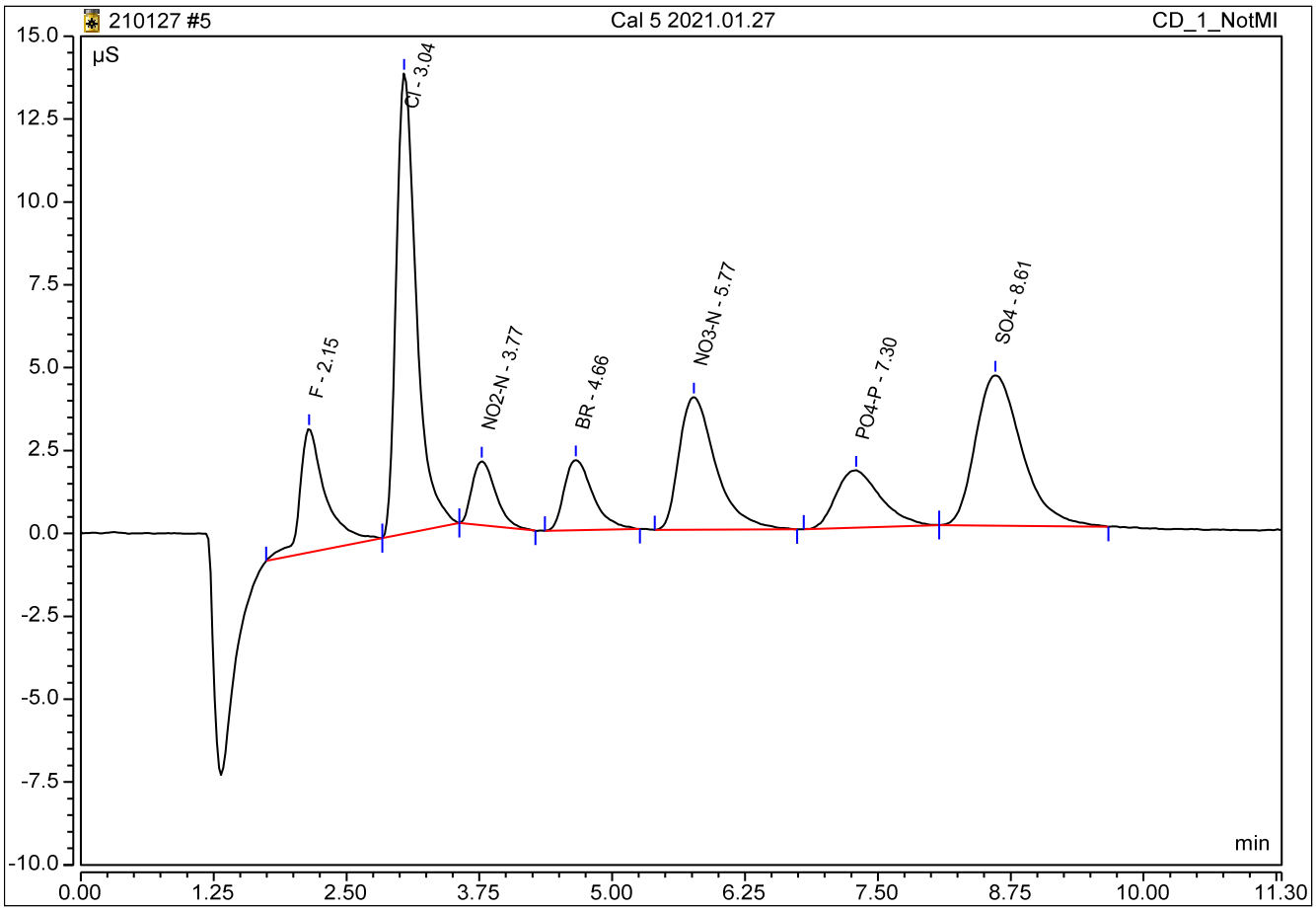
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:59**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	1.061	3.733	1.5736
2	3.04	**Cl**	bM *	3.068	13.891	4.6609
3	3.77	**NO2-N**	MB*	0.495	1.929	0.4951
4	4.66	**BR**	BMB	0.666	2.120	2.4106
5	5.77	**NO3-N**	BMB	1.606	4.004	0.9577
6	7.30	**PO4-P**	BMB	0.841	1.732	1.6501
7	8.61	**SO4**	BMB	2.286	4.532	4.6329

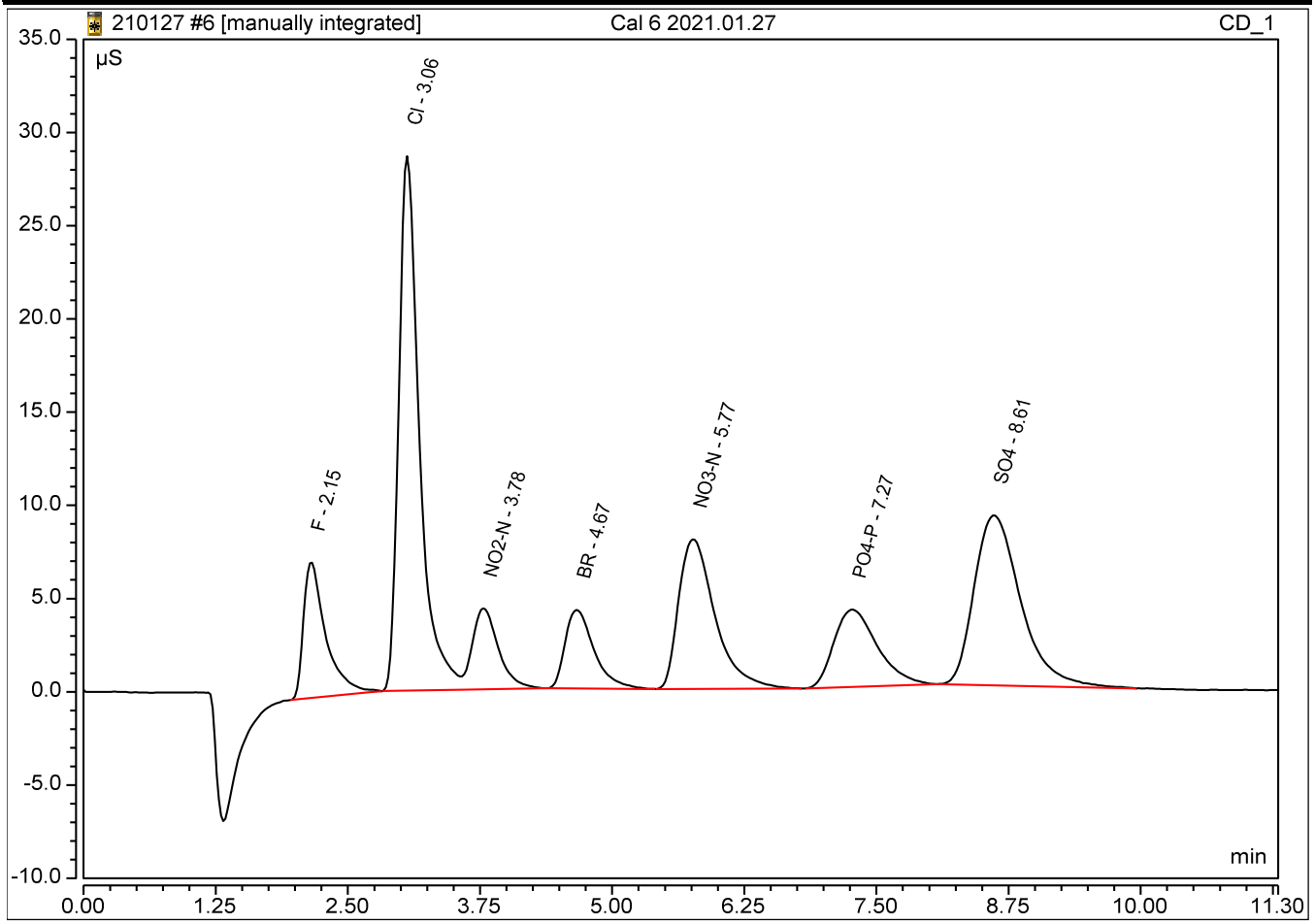


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 6 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:13**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BM *	1.766	7.298	2.41	2.5	96.5%
3	3.06	**Cl**	BM *	6.494	28.673	9.45	10	94.5%
4	3.78	**NO2-N**	Mb*	1.254	4.347	1.00	1	100.3%
5	4.67	**BR**	bMB*	1.337	4.215	4.84	5	96.7%
6	5.77	**NO3-N**	BMB	3.202	8.023	1.91	2	95.5%
7	7.27	**PO4-P**	BMB	1.979	4.159	3.88	5	77.7%
8	8.61	**SO4**	BMB	4.657	9.120	9.44	10	94.4%



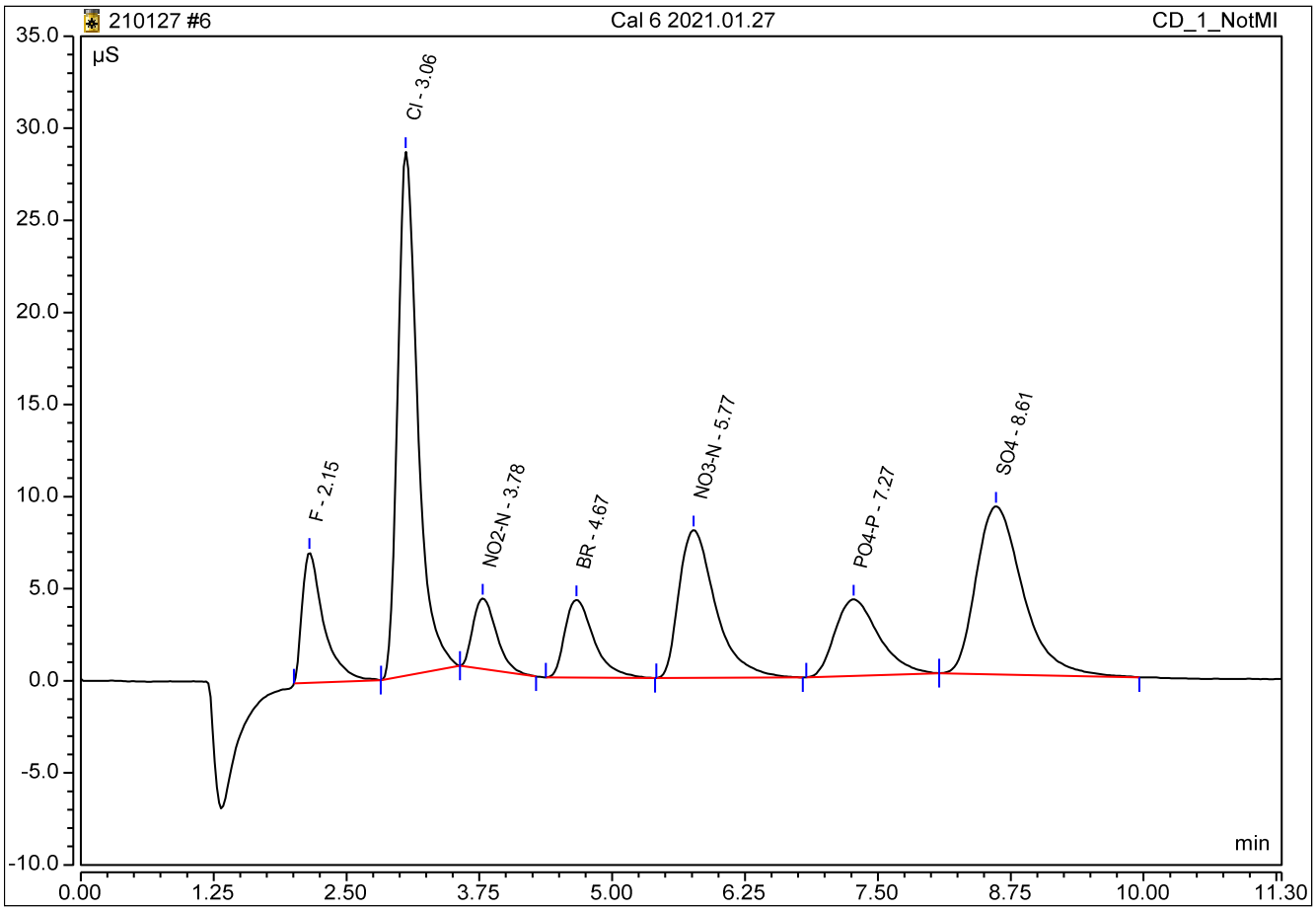
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:13**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BM *	1.664	7.081	2.4688
3	3.06	**Cl**	BM *	6.232	28.451	9.4005
4	3.78	**NO2-N**	Mb*	0.976	3.833	0.9769
5	4.67	**BR**	bMB*	1.337	4.215	4.8367
6	5.77	**NO3-N**	BMB	3.202	8.023	1.9099
7	7.27	**PO4-P**	BMB	1.979	4.159	3.8839
8	8.61	**SO4**	BMB	4.657	9.120	9.4387

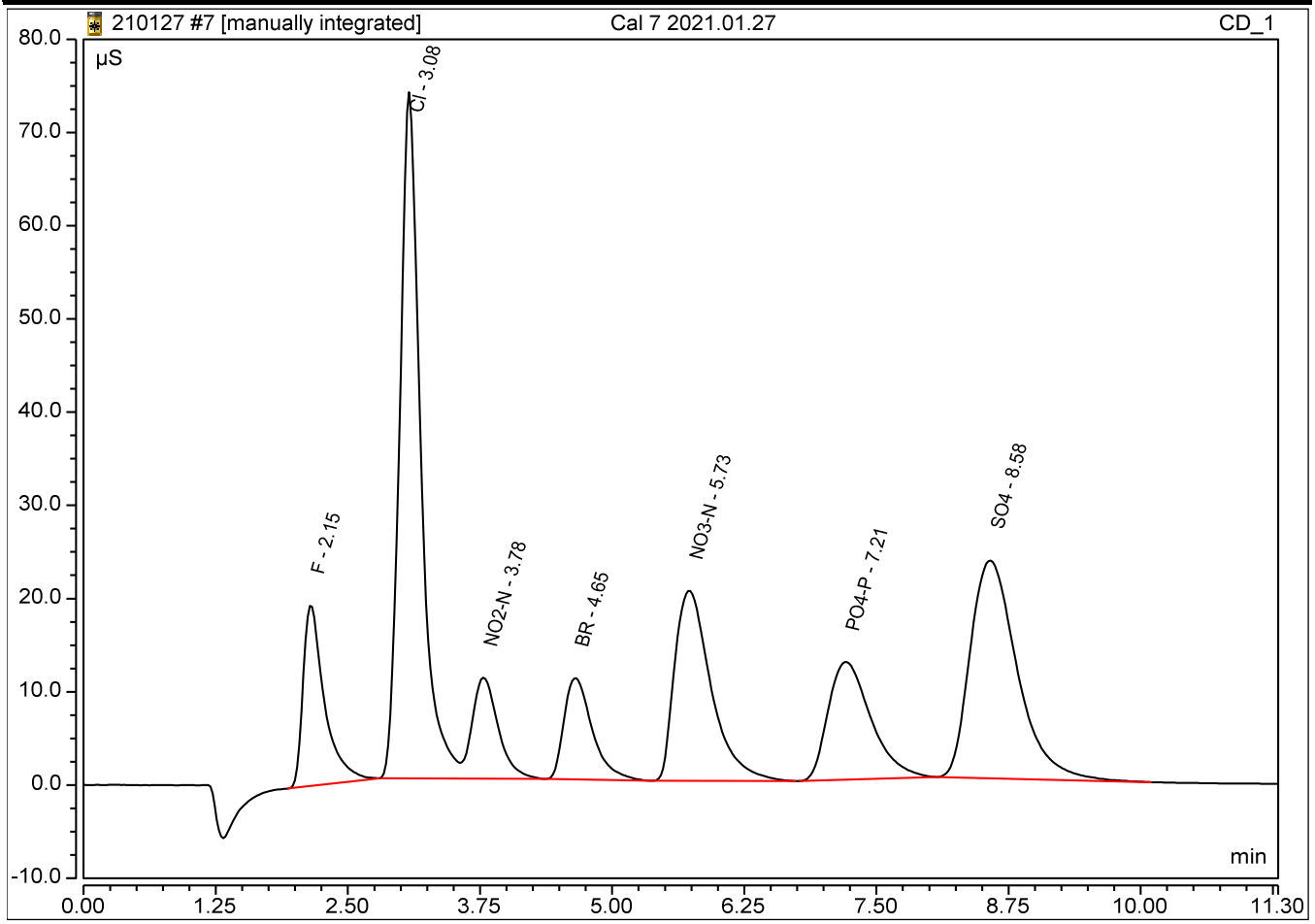


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 7 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:28**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BM *	4.541	19.418	6.20	6.25	99.2%
3	3.08	**Cl**	BM *	16.929	73.613	24.49	25	97.9%
4	3.78	**NO2-N**	Mb*	3.122	10.847	2.50	2.5	99.9%
5	4.65	**BR**	bMB*	3.387	10.890	12.25	12.5	98.0%
6	5.73	**NO3-N**	BMB	8.182	20.424	4.88	5	97.6%
7	7.21	**PO4-P**	BMB	5.932	12.626	11.64	12.5	93.2%
8	8.58	**SO4**	BMB	12.059	23.361	24.44	25	97.8%



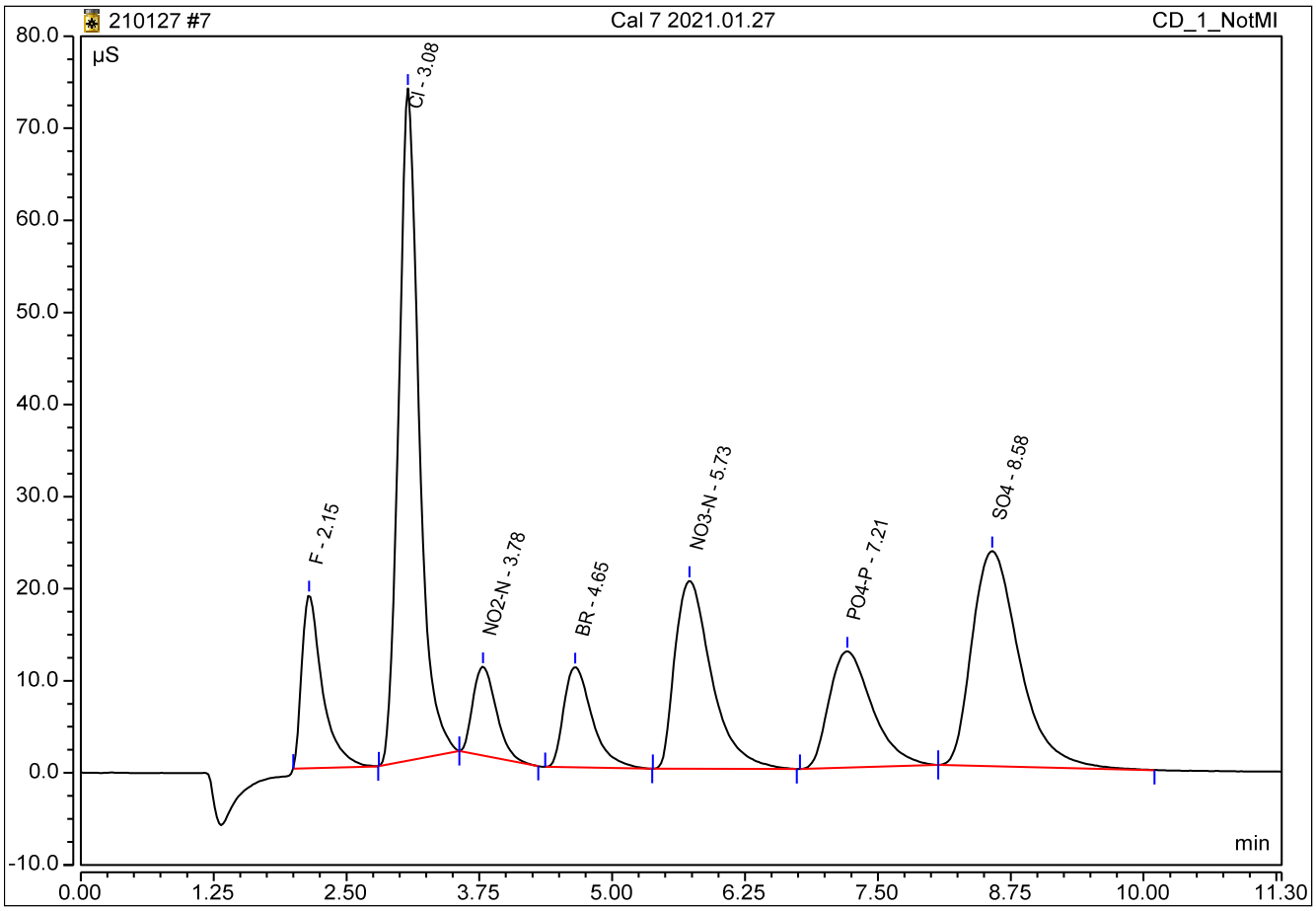
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:28**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BM *	4.240	18.808	6.2905
3	3.08	**Cl**	BM *	16.290	73.006	24.4693
4	3.78	**NO2-N**	Mb*	2.462	9.639	2.4633
5	4.65	**BR**	bMB*	3.387	10.890	12.2539
6	5.73	**NO3-N**	BMB	8.182	20.424	4.8803
7	7.21	**PO4-P**	BMB	5.932	12.626	11.6436
8	8.58	**SO4**	BMB	12.059	23.361	24.4424

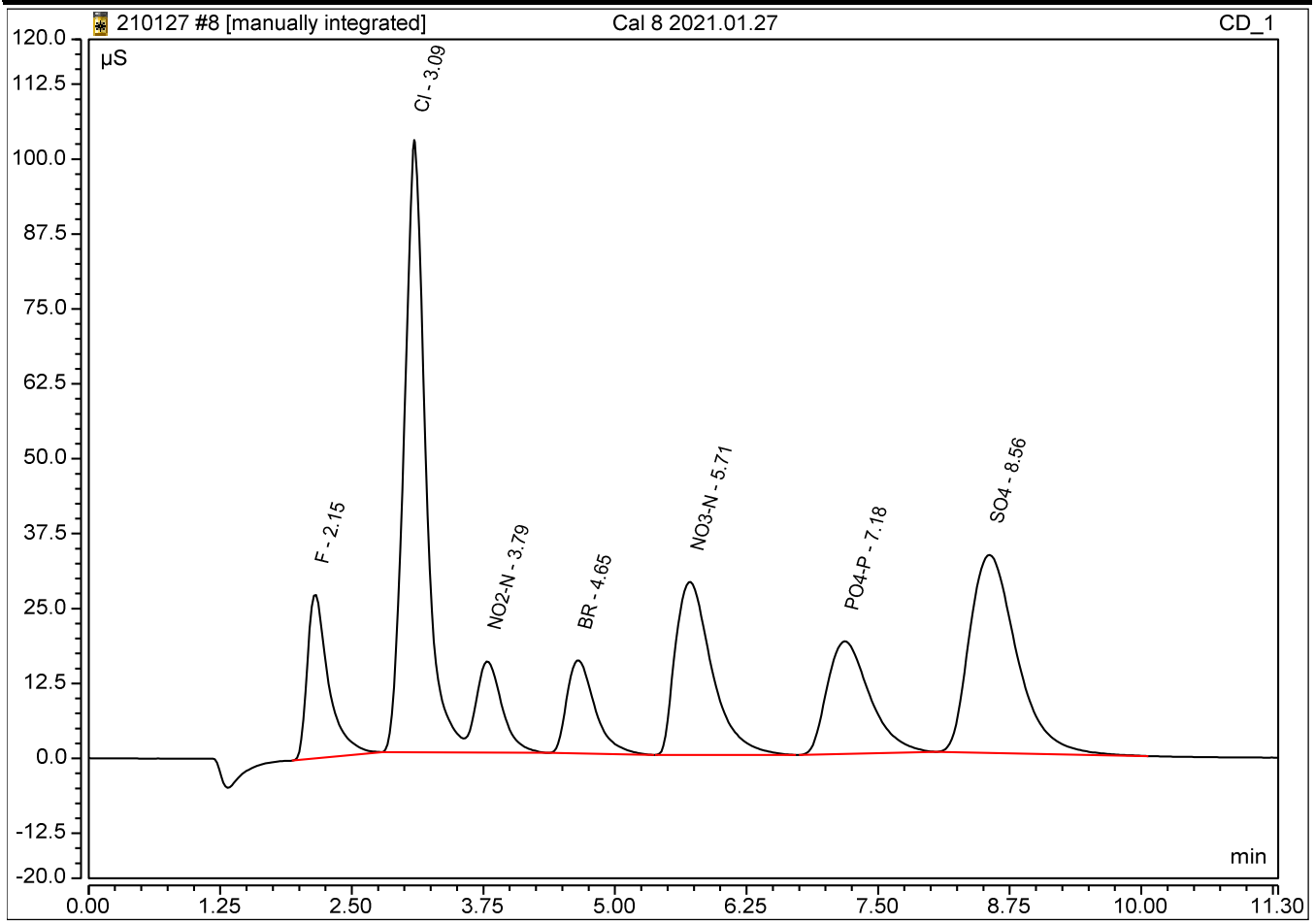


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 8 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:43**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	6.425	27.442	8.78	8.75	100.3%
2	3.09	**Cl**	BM *	24.139	102.180	34.88	35	99.6%
3	3.79	**NO2-N**	Mb*	4.372	15.217	3.50	3.5	99.9%
4	4.65	**BR**	bMB*	4.813	15.575	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMB	11.667	28.903	6.96	7	99.4%
6	7.18	**PO4-P**	BMB	8.792	18.798	17.26	17.5	98.6%
7	8.56	**SO4**	BMB	17.161	33.024	34.78	35	99.4%



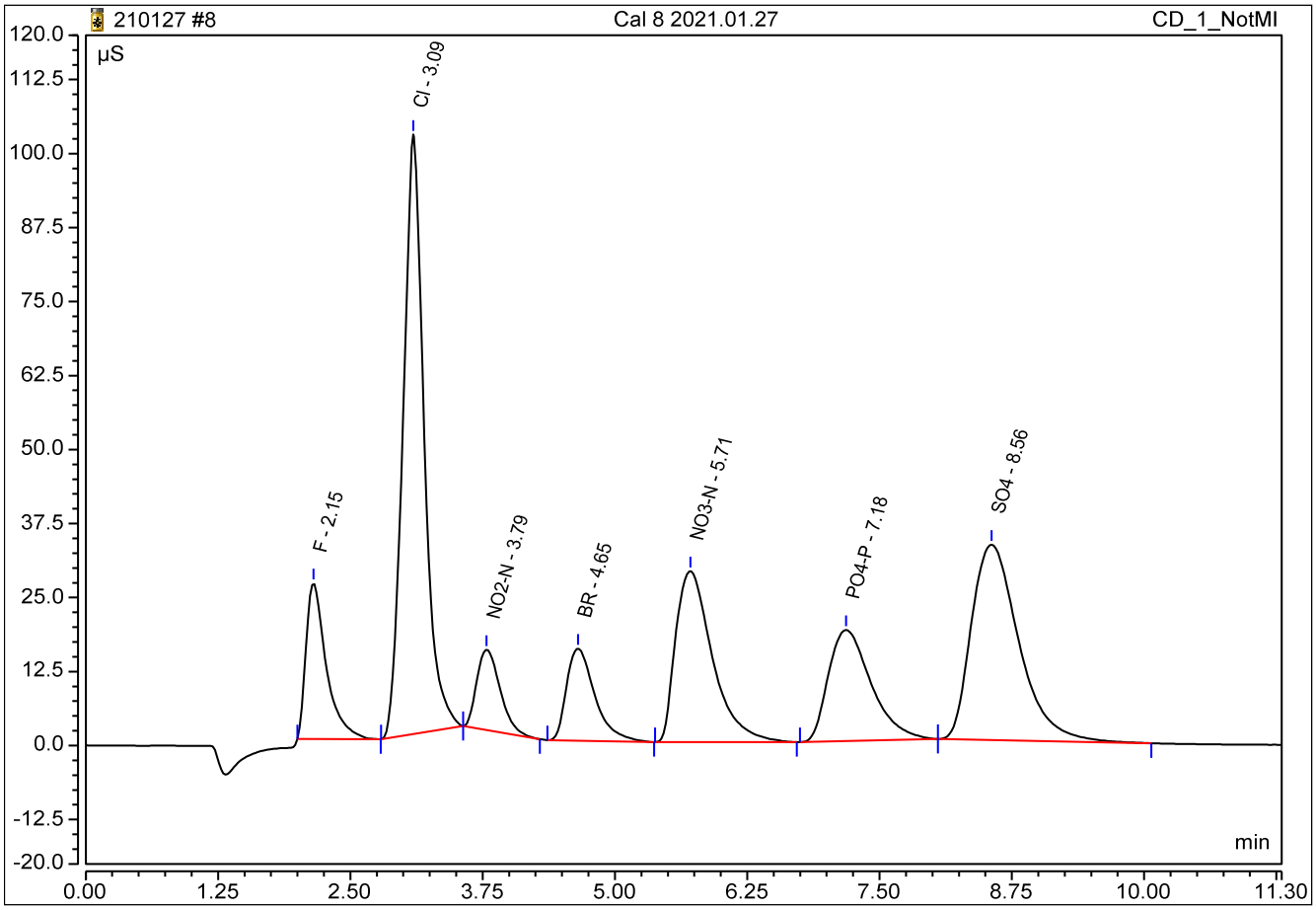
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:43**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	5.863	26.334	8.6988
2	3.09	**Cl**	BM *	23.247	101.279	34.8910
3	3.79	**NO2-N**	Mb*	3.478	13.572	3.4804
4	4.65	**BR**	bMB*	4.813	15.575	17.4152
5	5.71	**NO3-N**	BMB	11.667	28.903	6.9590
6	7.18	**PO4-P**	BMB	8.792	18.798	17.2569
7	8.56	**SO4**	BMB	17.161	33.024	34.7830

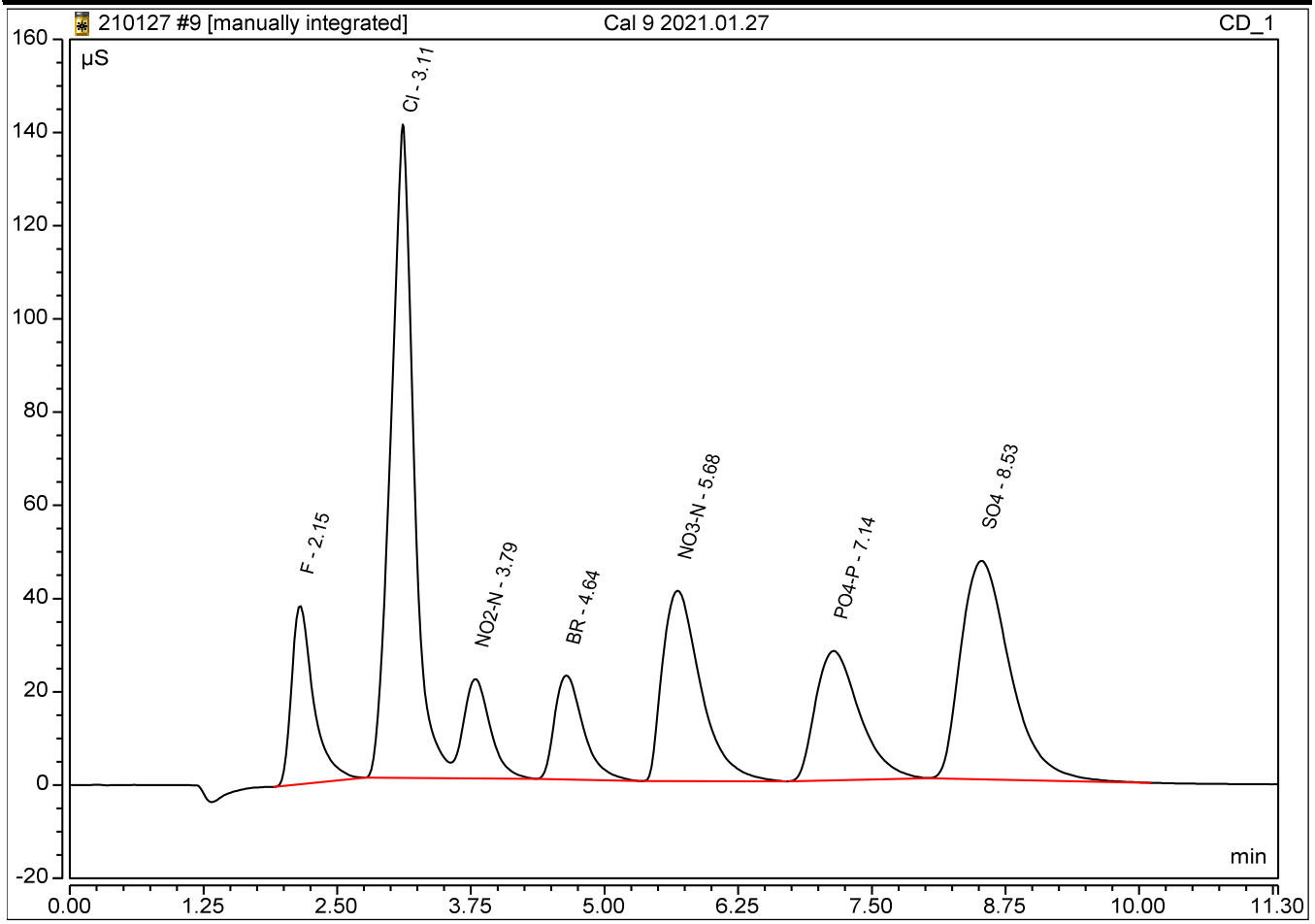


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 9 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	9.162	38.375	12.52	12.5	100.1%
2	3.11	**Cl**	bM *	34.949	140.217	50.45	50	100.9%
3	3.79	**NO2-N**	Mb*	6.237	21.339	4.99	5	99.8%
4	4.64	**BR**	bMB*	6.964	22.350	25.20	25	100.8%
5	5.68	**NO3-N**	BMB	16.936	40.916	10.10	10	101.0%
6	7.14	**PO4-P**	BMB	13.205	27.774	25.92	25	103.7%
7	8.53	**SO4**	BMB	24.931	46.883	50.53	50	101.1%



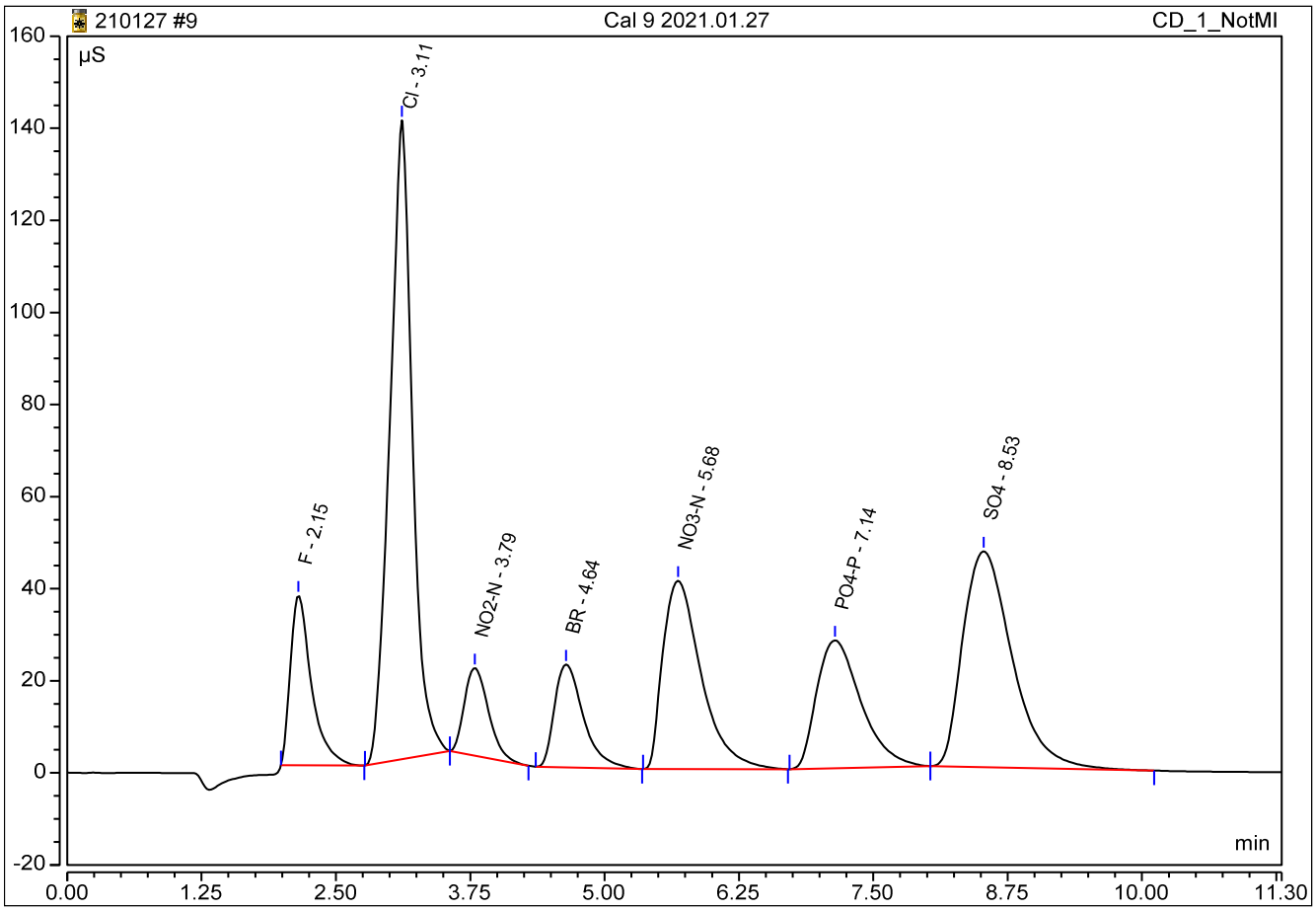
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	8.393	36.874	12.4519
2	3.11	**Cl**	bM *	33.638	138.772	50.4576
3	3.79	**NO2-N**	Mb*	4.955	19.022	4.9581
4	4.64	**BR**	bMB*	6.964	22.350	25.1988
5	5.68	**NO3-N**	BMB	16.936	40.916	10.1016
6	7.14	**PO4-P**	BMB	13.205	27.774	25.9188
7	8.53	**SO4**	BMB	24.931	46.883	50.5326

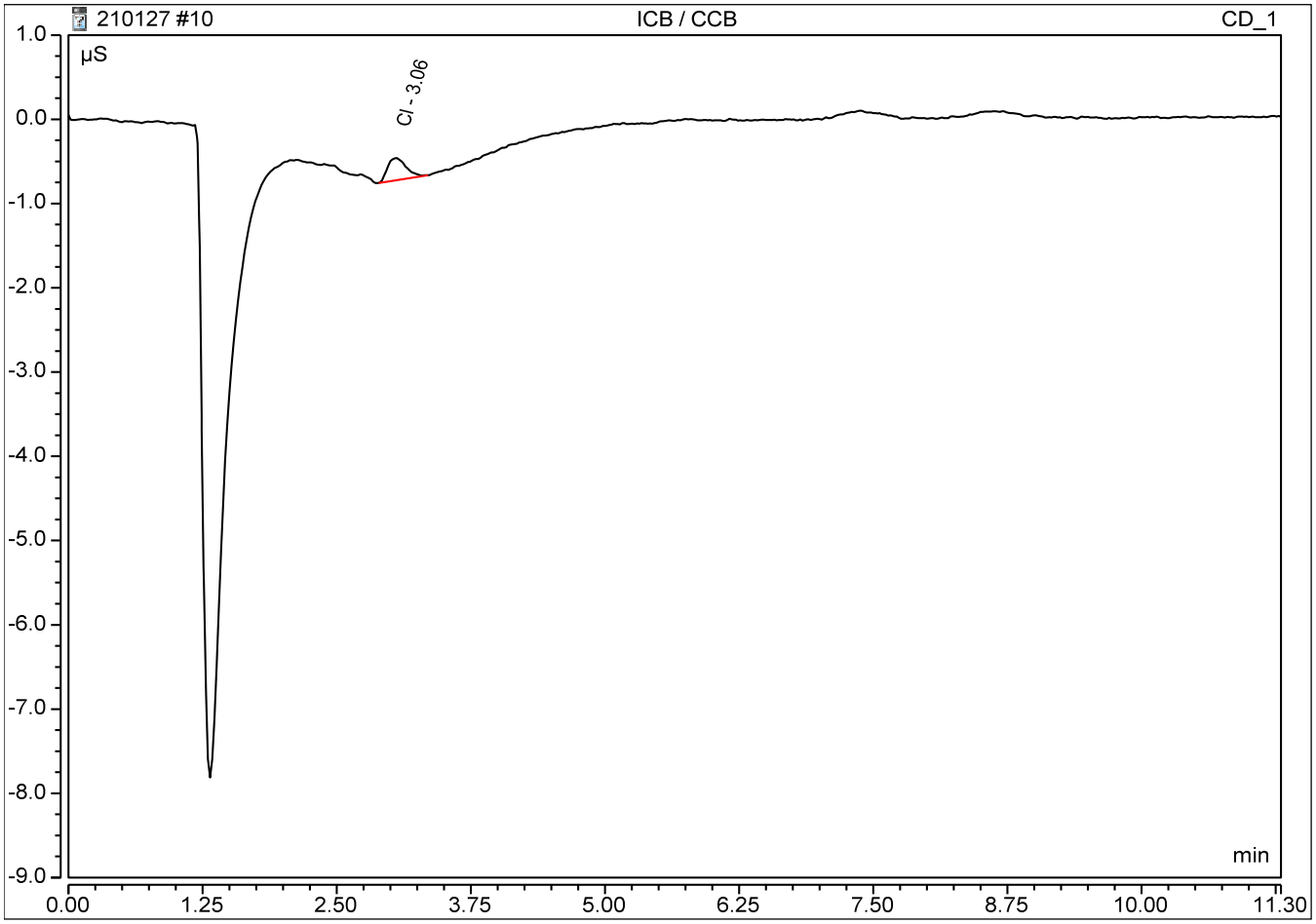


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:12**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.06	**Cl**	BMB	0.053	0.263	0.17		



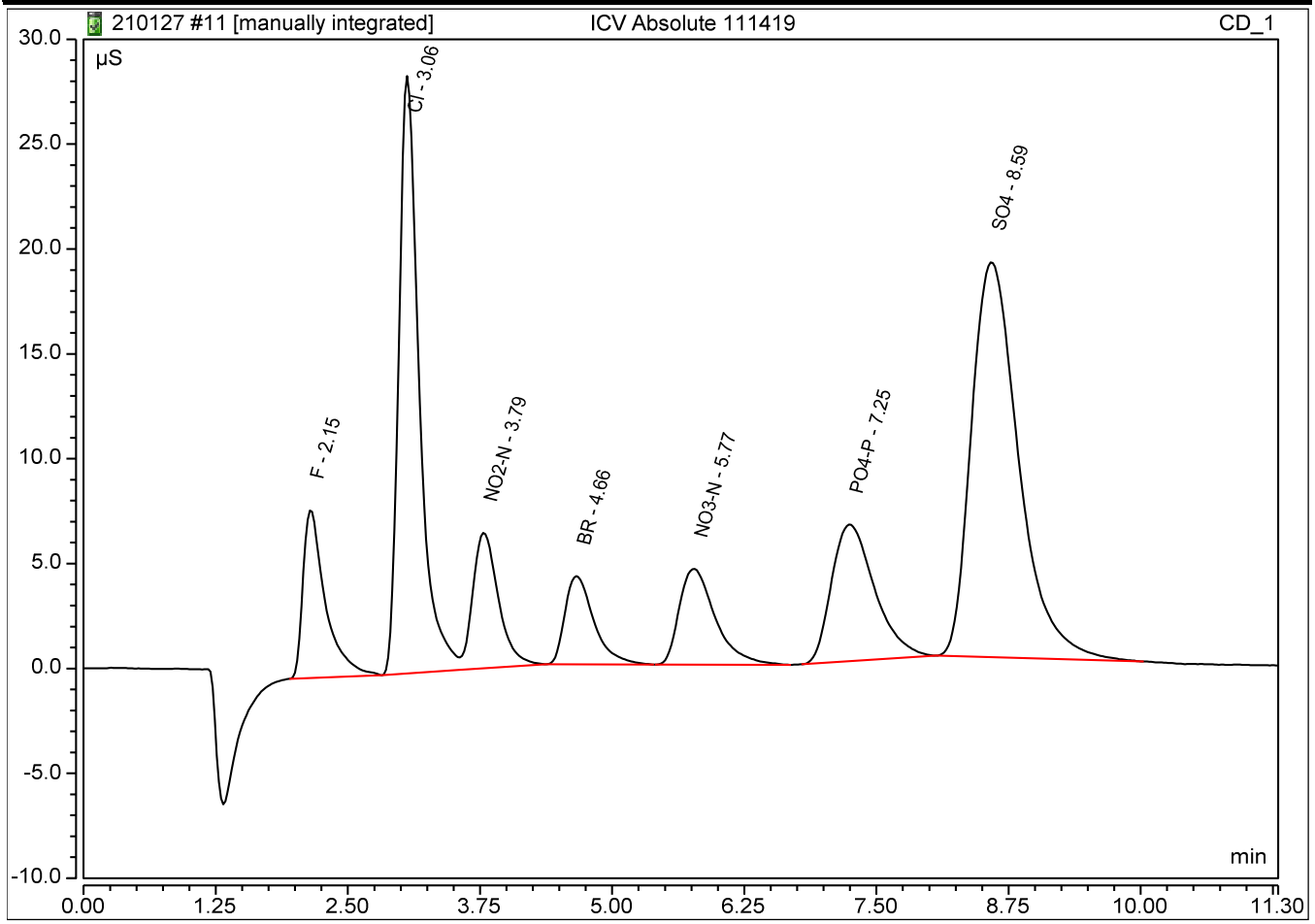
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:27**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	1.961	8.025	2.68	2.5	107.2%
2	3.06	**Cl**	bM *	6.401	28.487	9.32	10	93.2%
3	3.79	**NO2-N**	Mb*	1.824	6.464	1.46	1.522334	95.8%
4	4.66	**BR**	bMB*	1.337	4.211	4.84	5	96.8%
5	5.77	**NO3-N**	BMB	1.807	4.570	1.08	1.129525	95.4%
6	7.25	**PO4-P**	BMB	3.079	6.518	6.04	6.522	92.7%
7	8.59	**SO4**	BMB	9.776	18.832	19.81	20	99.1%



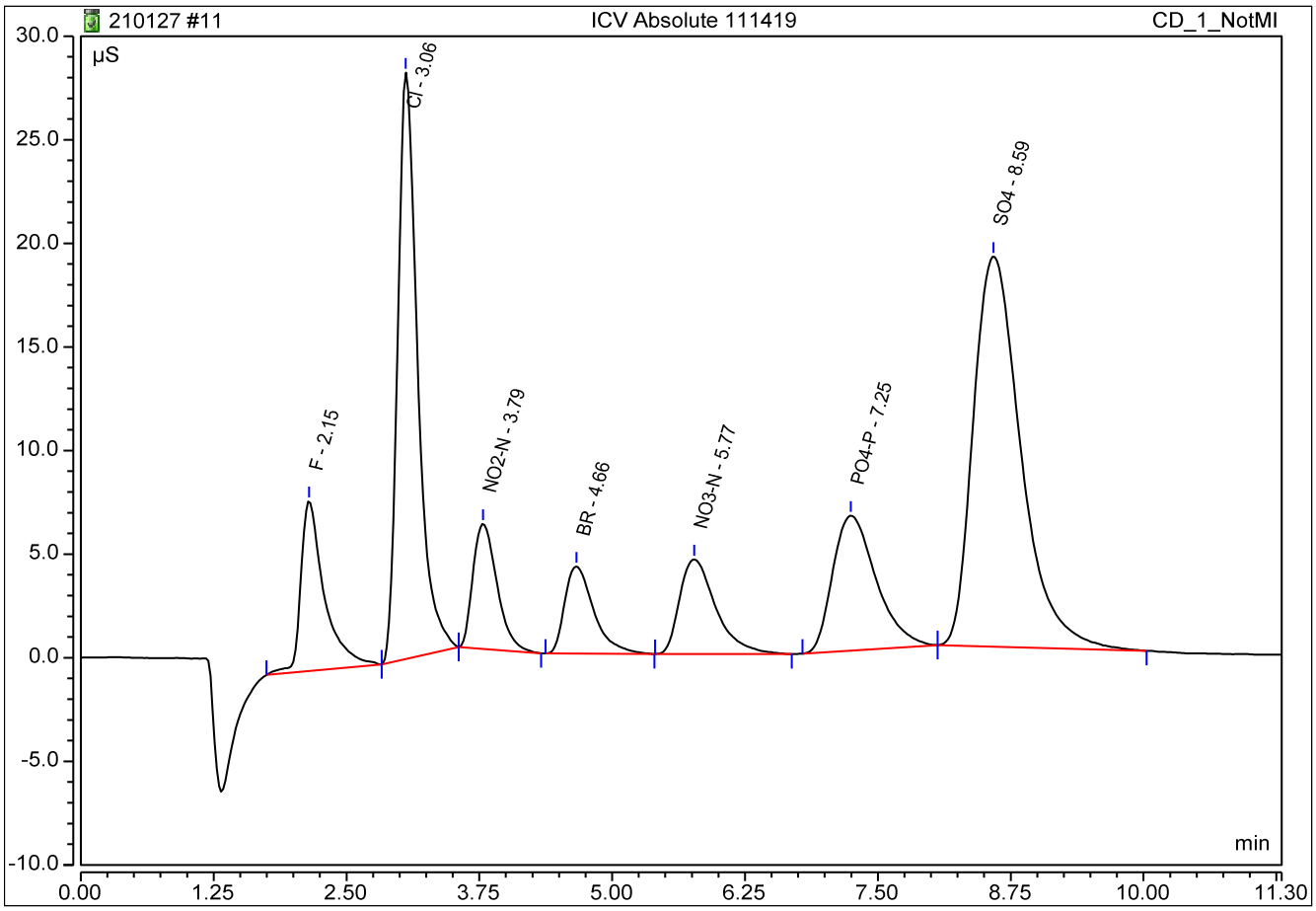
MI 1 Cl NO2 MI 5 F GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:27**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	2.098	8.209	3.1129
2	3.06	**Cl**	bM *	6.186	28.301	9.3317
3	3.79	**NO2-N**	Mb*	1.583	6.038	1.5843
4	4.66	**BR**	bMB*	1.337	4.211	4.8389
5	5.77	**NO3-N**	BMB	1.807	4.570	1.0780
6	7.25	**PO4-P**	BMB	3.079	6.518	6.0435
7	8.59	**SO4**	BMB	9.776	18.832	19.8139

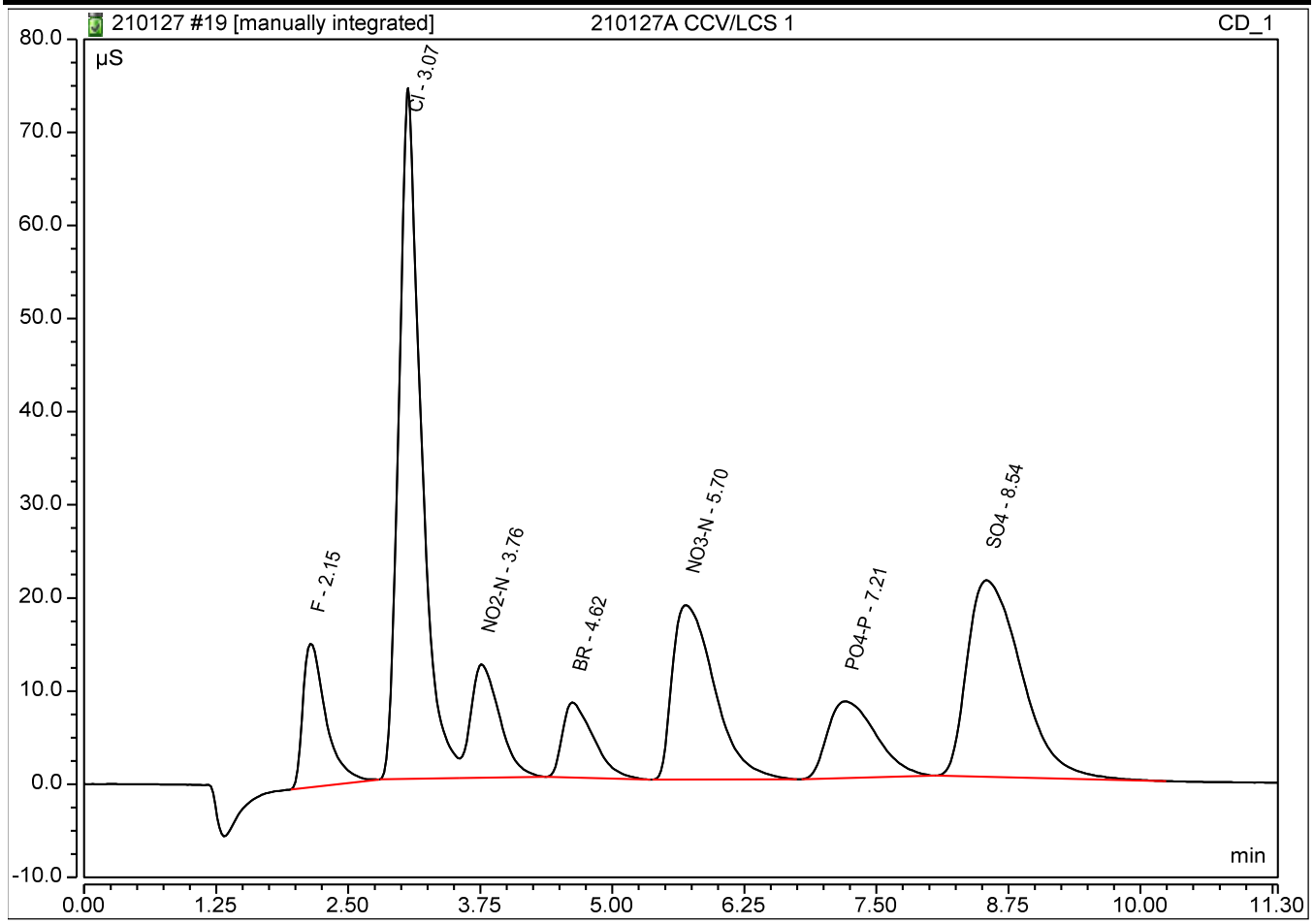


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**210127A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 20:24**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	3.883	15.439	5.30	5	106.1%
2	3.07	**Cl**	BM *	18.199	74.169	26.32	25	105.3%
3	3.76	**NO2-N**	Mb*	3.859	12.202	3.09	3.04	101.5%
4	4.62	**BR**	bMB*	2.745	8.071	9.93	10	99.3%
5	5.70	**NO3-N**	BMB	8.666	18.740	5.17	5	103.4%
6	7.21	**PO4-P**	BMB	4.383	8.244	8.60	10	86.0%
7	8.54	**SO4**	BMB	12.570	21.113	25.48	25	101.9%

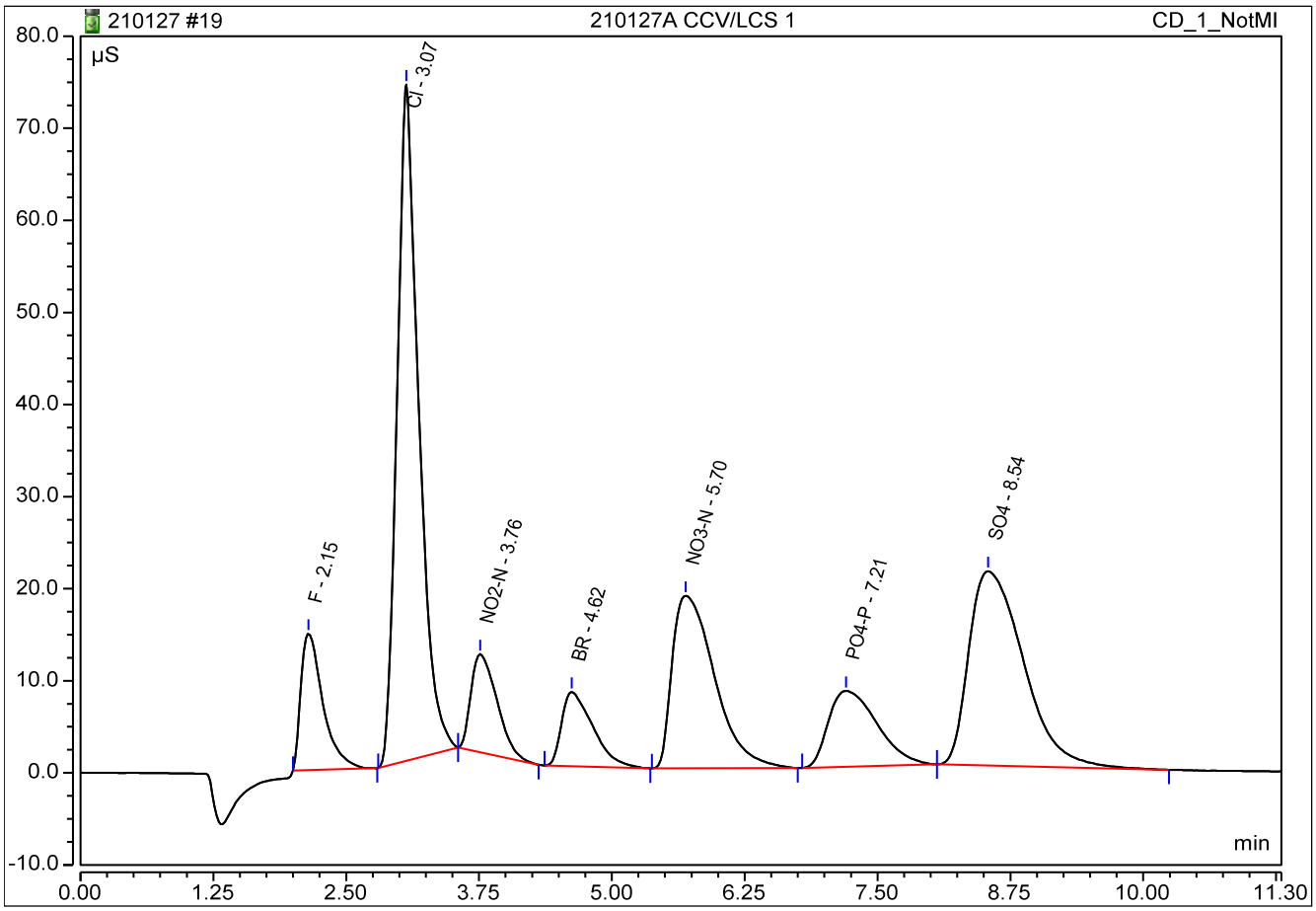


MI 1 Cl NO2 MI 5 F GA 01/28/21

Not Manipulated Peak Integration Report

Sample Name:	**210127A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 20:24**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	3.579	14.832	5.3098
2	3.07	**Cl**	BM *	17.412	73.436	26.1499
3	3.76	**NO2-N**	Mb*	3.032	10.657	3.0334
4	4.62	**BR**	bMB*	2.745	8.071	9.9310
5	5.70	**NO3-N**	BMB	8.666	18.740	5.1689
6	7.21	**PO4-P**	BMB	4.383	8.244	8.6019
7	8.54	**SO4**	BMB	12.570	21.113	25.4786

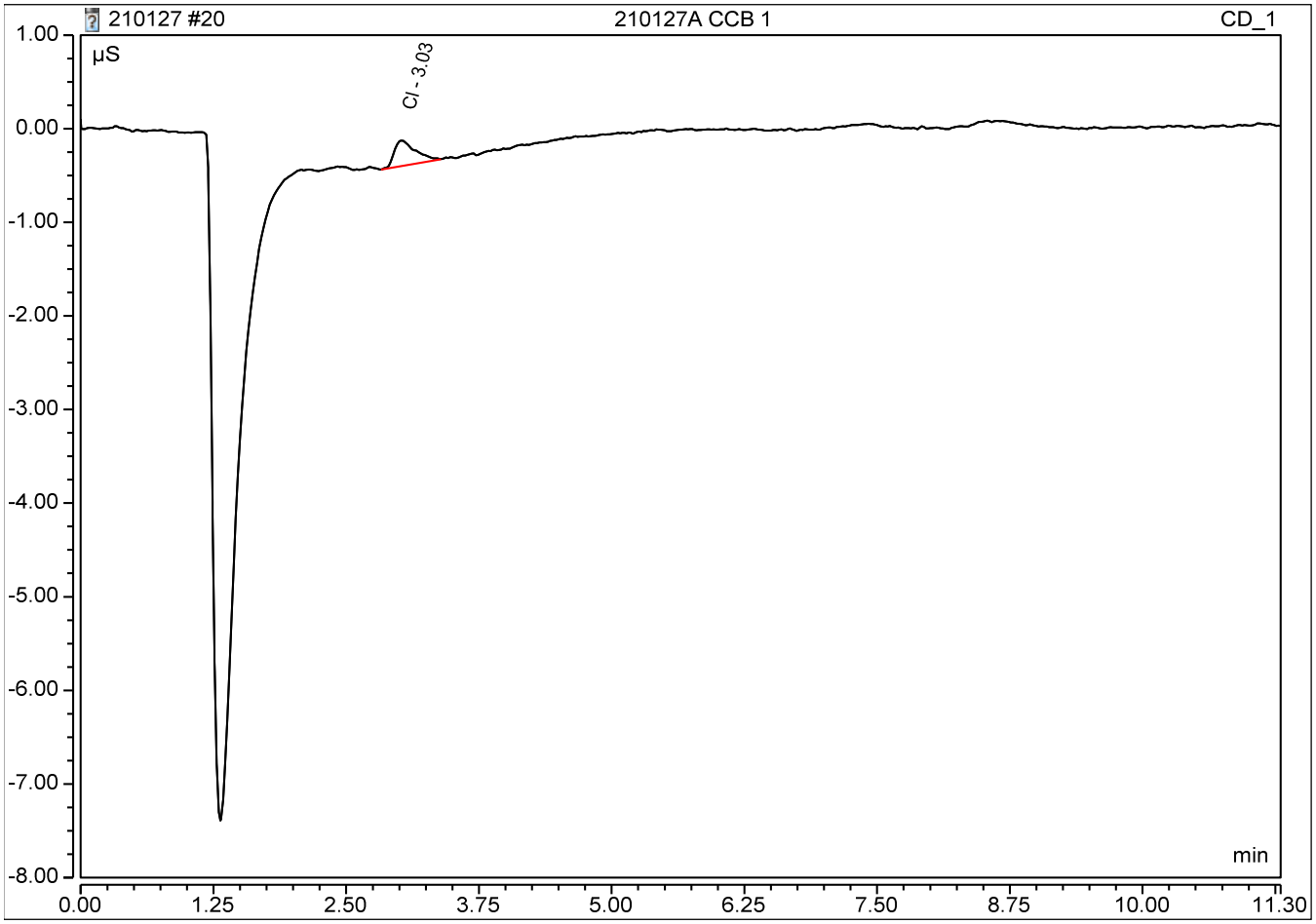


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**210127A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 20:39**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.03	**Cl**	BMB	0.063	0.271	0.18		



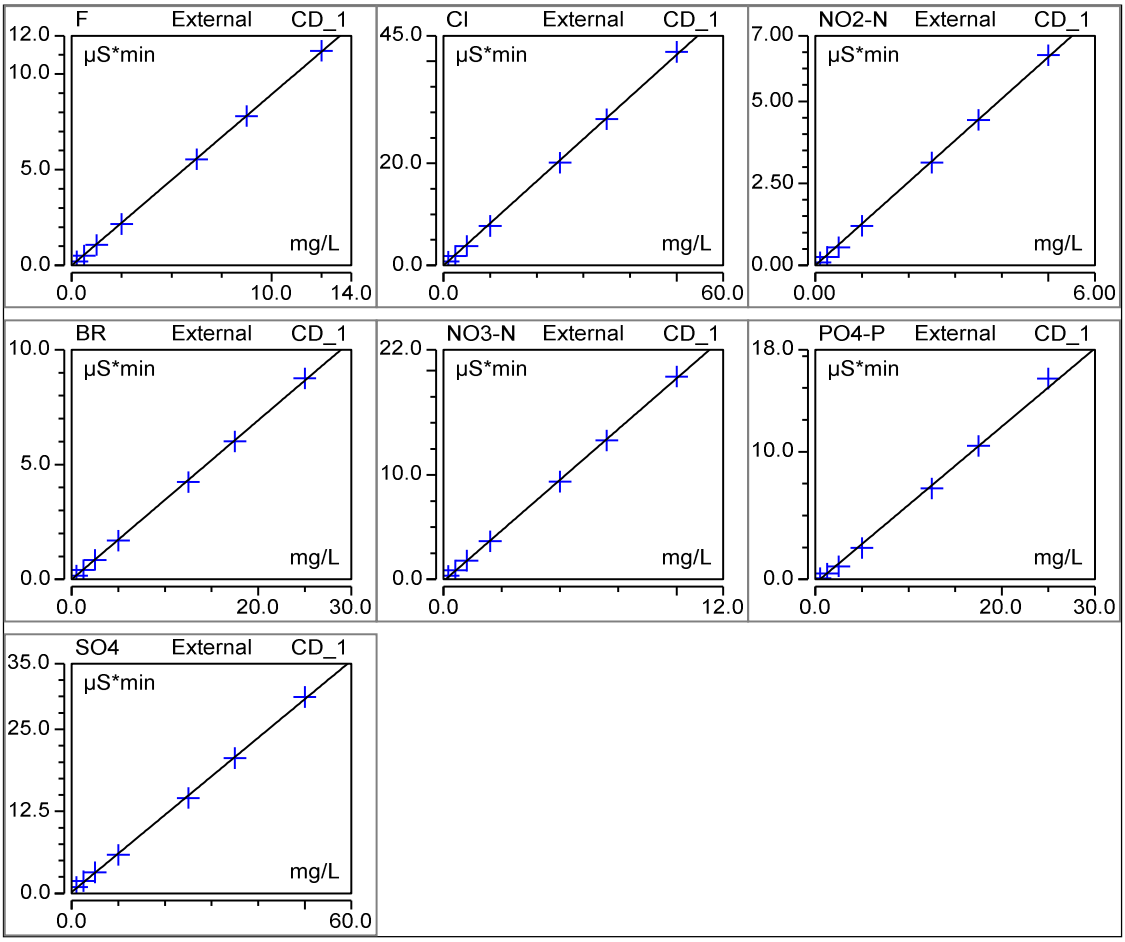
Calibration Batch Report

Sequence:	**210203A**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.5**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	7.000	0.000	0.893	0.000	99.9871
Cl	Area	Lin	7.000	0.000	0.825	0.000	99.9273
NO2-N	Area	Lin	7.000	0.000	1.271	0.000	99.9381
BR	Area	Lin	7.000	0.000	0.346	0.000	99.9644
NO3-N	Area	Lin, WithOffset	7.000	-0.165	1.942	0.000	99.9688
PO4-P	Area	Lin, WithOffset, 1/A	7.000	-0.298	0.614	0.000	99.6191
SO4	Area	Lin, WithOffset	7.000	0.204	0.588	0.000	99.9463

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 3 2021.02.02	0.237	0.9173	0.0705	0.4608	0.2625	0.6209	1.3057
Cal 4 2021.02.02	0.569	2.2144	0.2005	1.1782	0.5265	1.2294	2.8210
Cal 5 2021.02.02	1.193	4.5949	0.4335	2.4409	1.0060	2.1549	5.0945
Cal 6 2021.02.02	2.420	9.3635	0.9484	4.8795	1.9657	4.4909	9.6485
Cal 7 2021.02.02	6.210	24.3939	2.4658	12.2333	4.9072	12.0961	24.3523
Cal 8 2021.02.02	8.738	34.7080	3.4902	17.3510	6.9400	17.5274	34.7181
Cal 9 2021.02.02	12.553	50.6912	5.0440	25.2720	10.0921	26.1304	50.5599

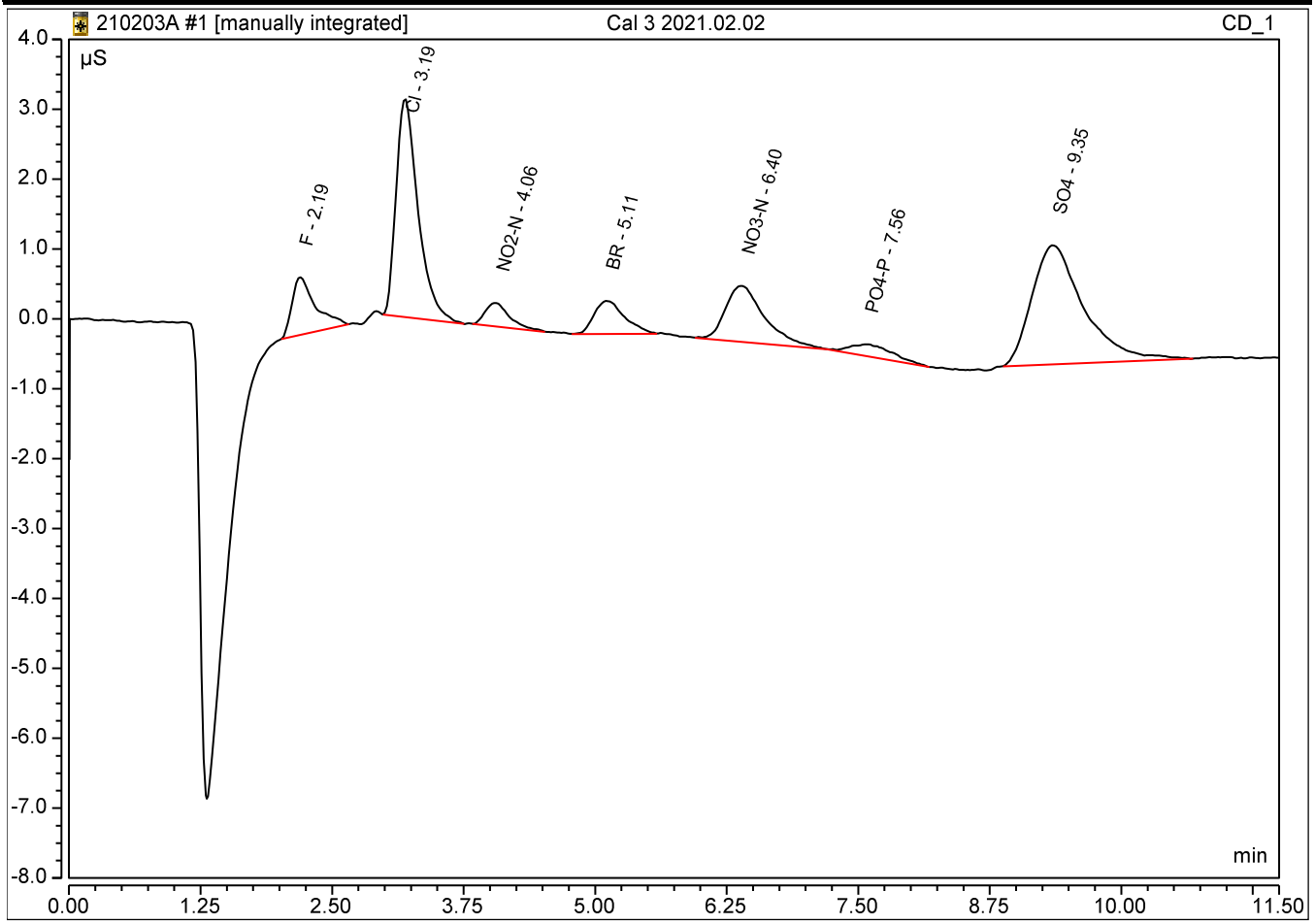


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.212	0.828	0.24	0.25	95.0%
2	3.19	**Cl**	BMB	0.757	3.125	0.92	1	91.7%
3	4.06	**NO2-N**	BMB	0.090	0.335	0.07	0.1	70.5%
4	5.11	**BR**	BMB	0.160	0.474	0.46	0.5	92.2%
5	6.40	**NO3-N**	BMB	0.345	0.799	0.26	0.2	131.2%
6	7.56	**PO4-P**	BMB	0.083	0.167	0.62	0.5	124.2%
7	9.35	**SO4**	BMB*	0.972	1.704	1.31	1	130.6%



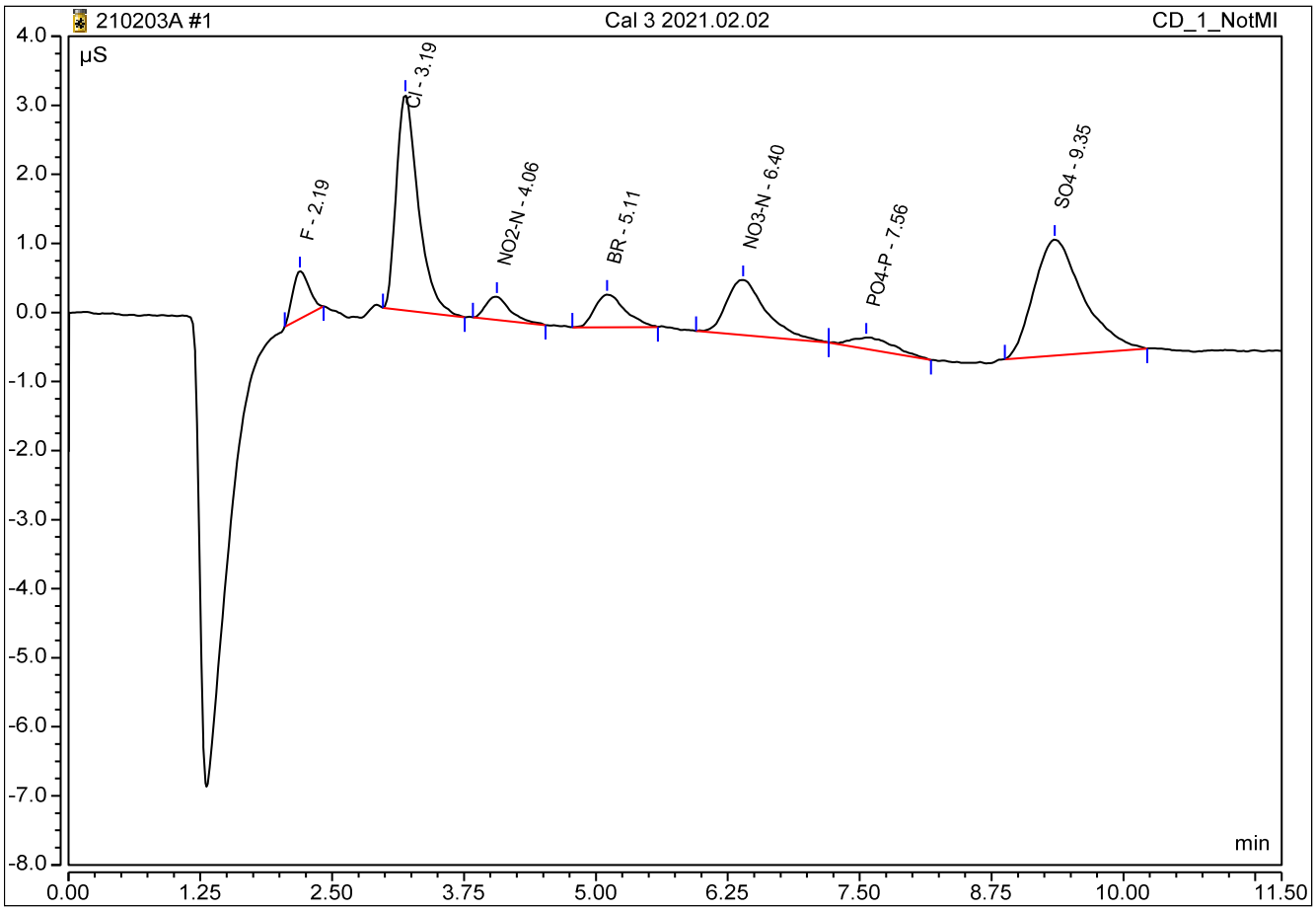
MI 5 F SO4 GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.125	0.692	0.1533
2	3.19	**Cl**	BMB	0.757	3.125	0.9173
3	4.06	**NO2-N**	BMB	0.090	0.335	0.0705
4	5.11	**BR**	BMB	0.160	0.474	0.4608
5	6.40	**NO3-N**	BMB	0.345	0.799	0.2625
6	7.56	**PO4-P**	BMB	0.083	0.167	0.6209
7	9.35	**SO4**	BMB*	0.906	1.679	1.2254

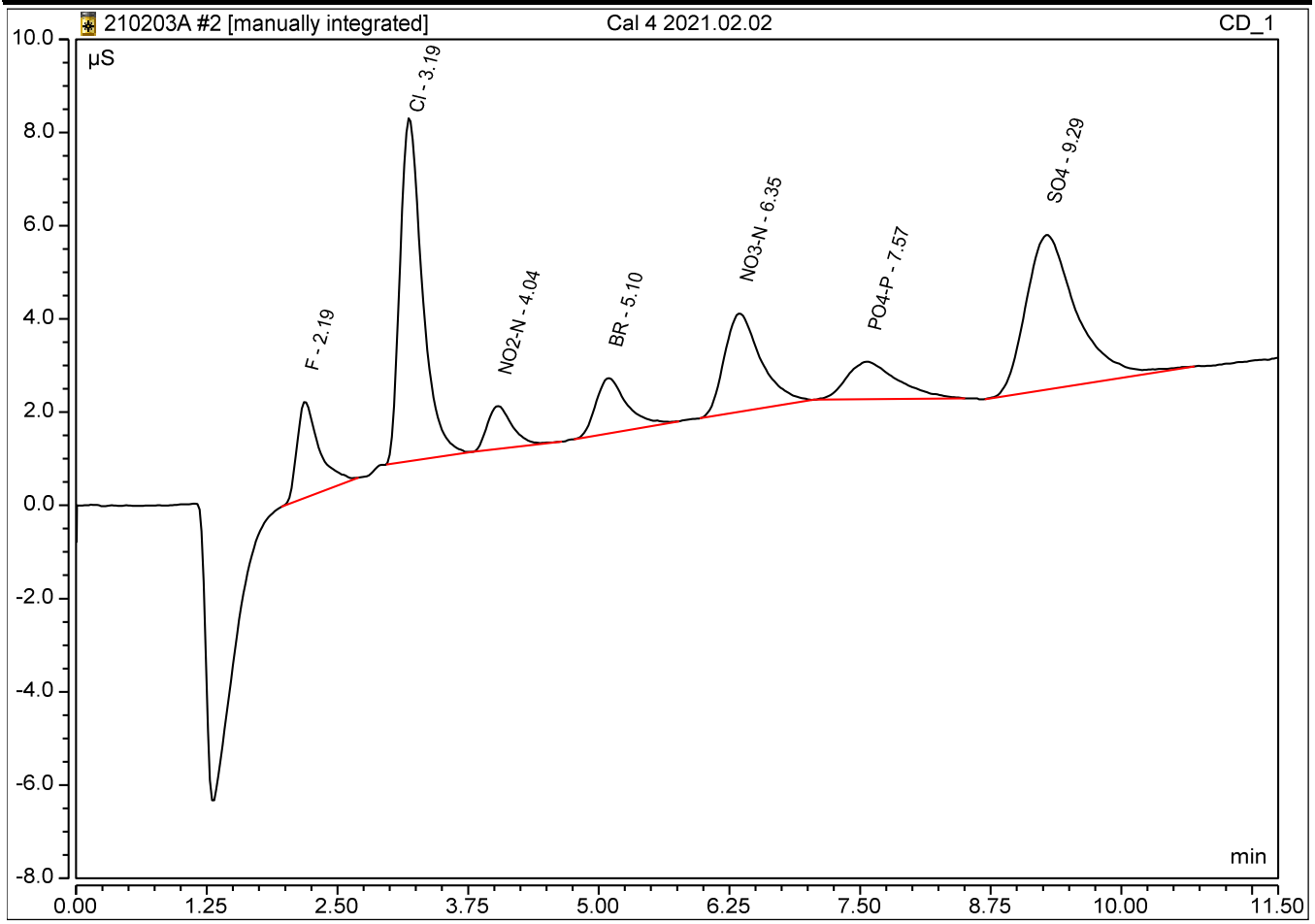


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.508	2.069	0.57	0.625	91.1%
2	3.19	**Cl**	BMB	1.828	7.371	2.21	2.5	88.6%
3	4.04	**NO2-N**	BMB	0.255	0.922	0.20	0.25	80.2%
4	5.10	**BR**	BMB	0.408	1.188	1.18	1.25	94.3%
5	6.35	**NO3-N**	BMB	0.858	2.111	0.53	0.5	105.3%
6	7.57	**PO4-P**	BMB	0.456	0.806	1.23	1.25	98.4%
7	9.29	**SO4**	BMB	1.863	3.319	2.82	2.5	112.8%

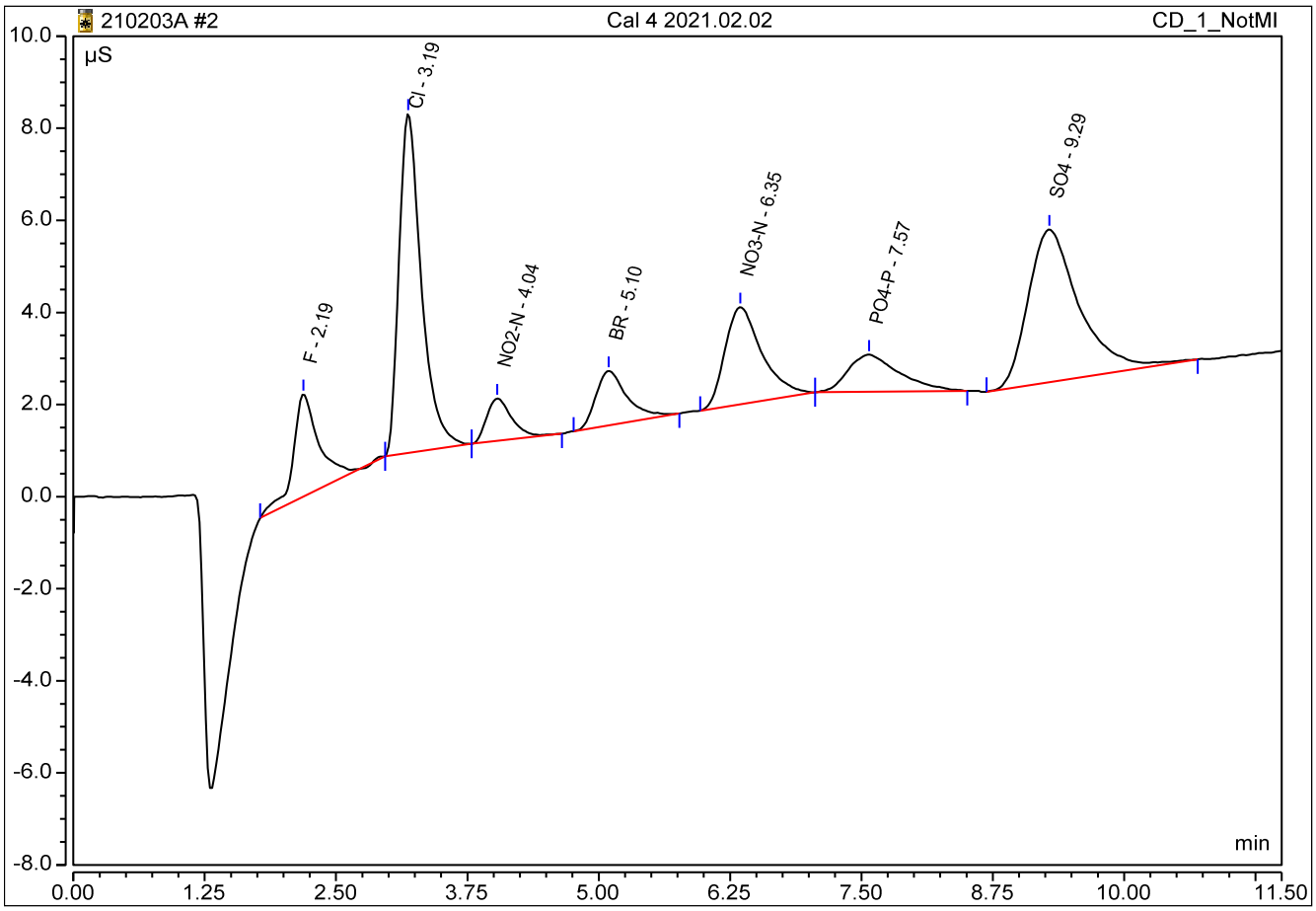


MI 5 F GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.626	2.228	0.7683
2	3.19	**Cl**	BMB	1.828	7.371	2.2144
3	4.04	**NO2-N**	BMB	0.255	0.922	0.2005
4	5.10	**BR**	BMB	0.408	1.188	1.1782
5	6.35	**NO3-N**	BMB	0.858	2.111	0.5265
6	7.57	**PO4-P**	BMB	0.456	0.806	1.2294
7	9.29	**SO4**	BMB	1.863	3.319	2.8512

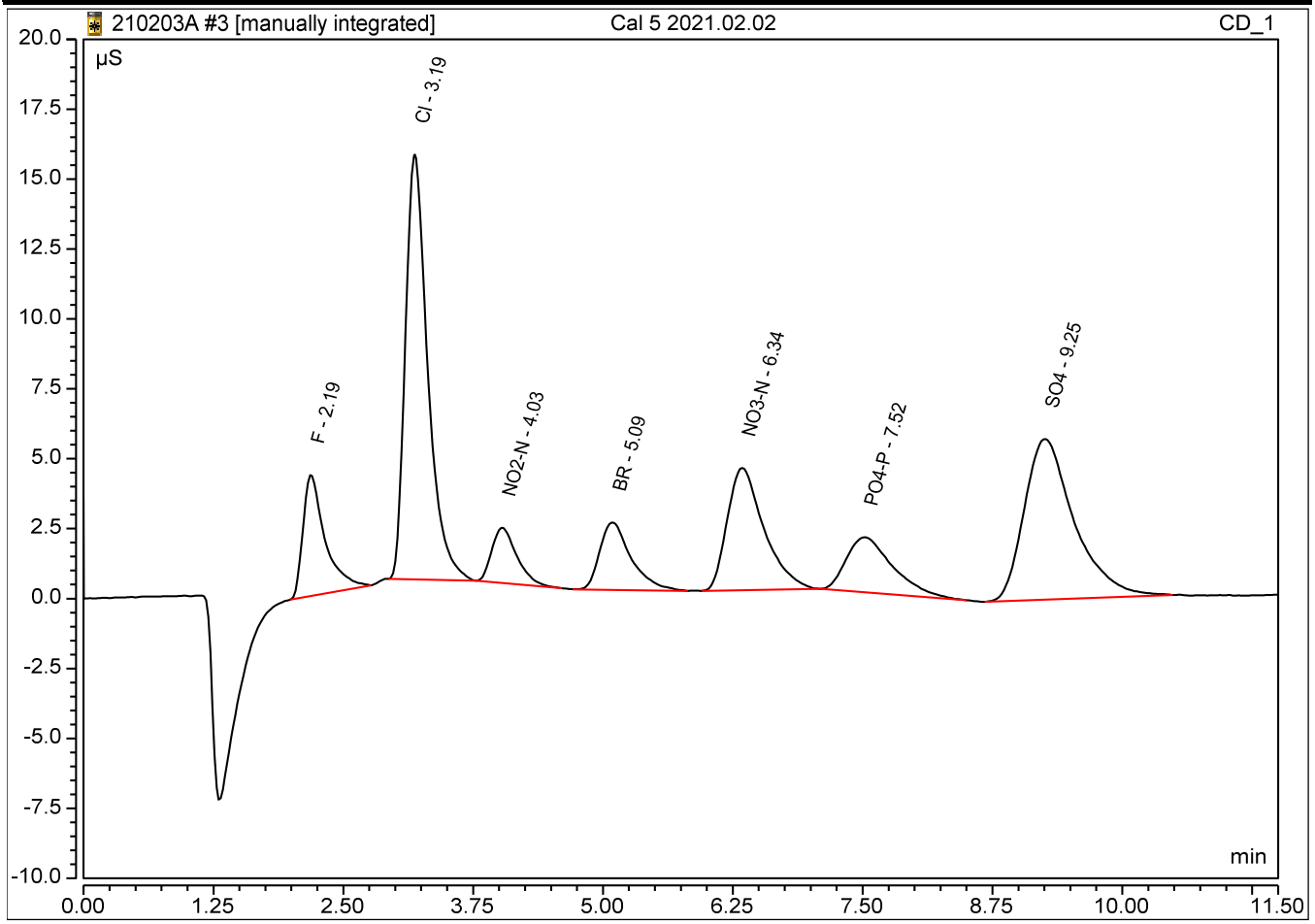


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	1.066	4.348	1.19	1.25	95.4%
2	3.19	**Cl**	BMB	3.792	15.189	4.59	5	91.9%
3	4.03	**NO2-N**	BMB	0.551	1.971	0.43	0.5	86.7%
4	5.09	**BR**	BMB	0.845	2.414	2.44	2.5	97.6%
5	6.34	**NO3-N**	BMB	1.789	4.375	1.01	1	100.6%
6	7.52	**PO4-P**	BMB	1.024	1.967	2.15	2.5	86.2%
7	9.25	**SO4**	BMB	3.199	5.751	5.09	5	101.9%

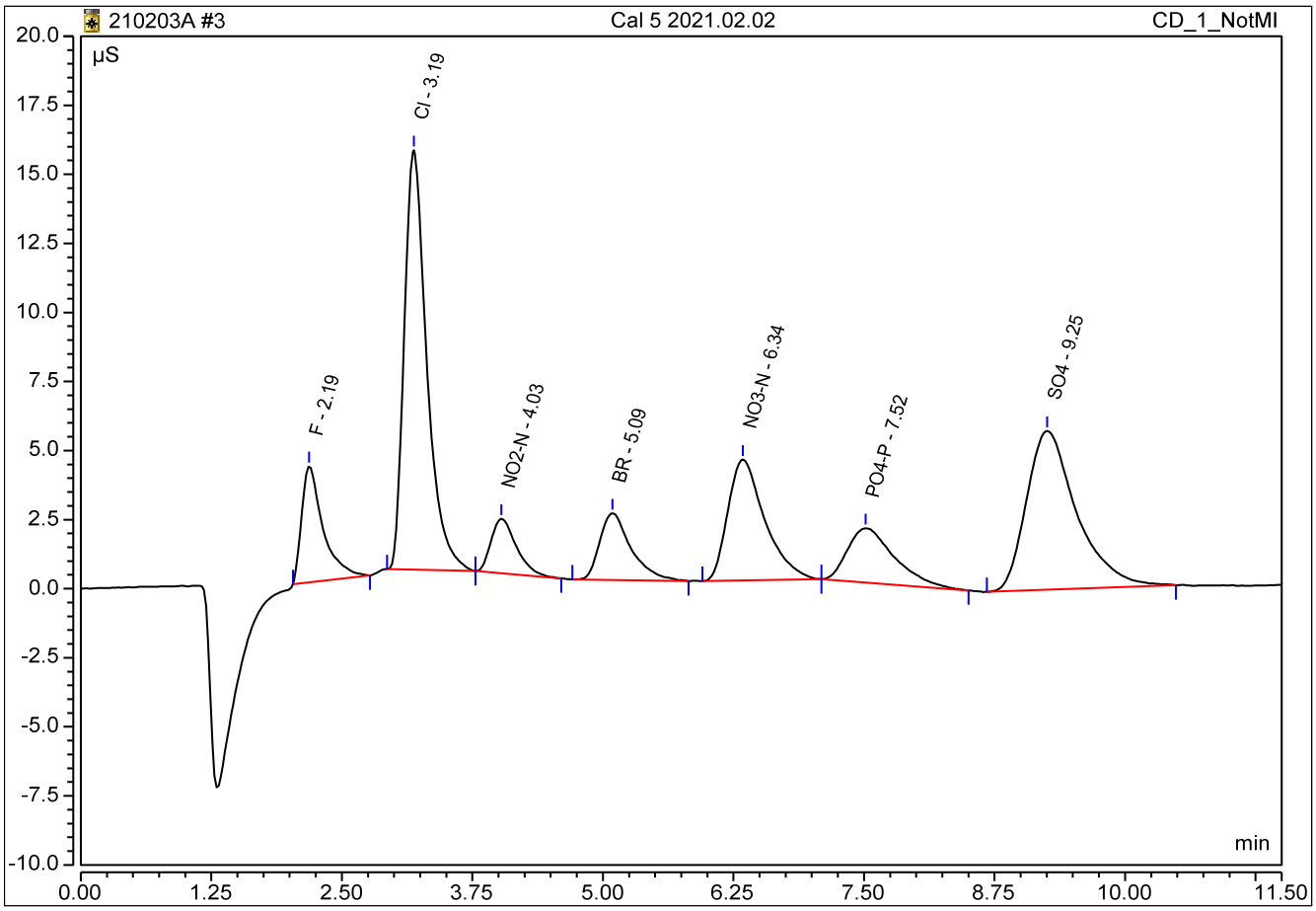


MI 5 F GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.997	4.205	1.2240
2	3.19	**Cl**	BMB	3.792	15.189	4.5949
3	4.03	**NO2-N**	BMB	0.551	1.971	0.4335
4	5.09	**BR**	BMB	0.845	2.414	2.4409
5	6.34	**NO3-N**	BMB	1.789	4.375	1.0060
6	7.52	**PO4-P**	BMB	1.024	1.967	2.1549
7	9.25	**SO4**	BMB	3.199	5.751	5.1227

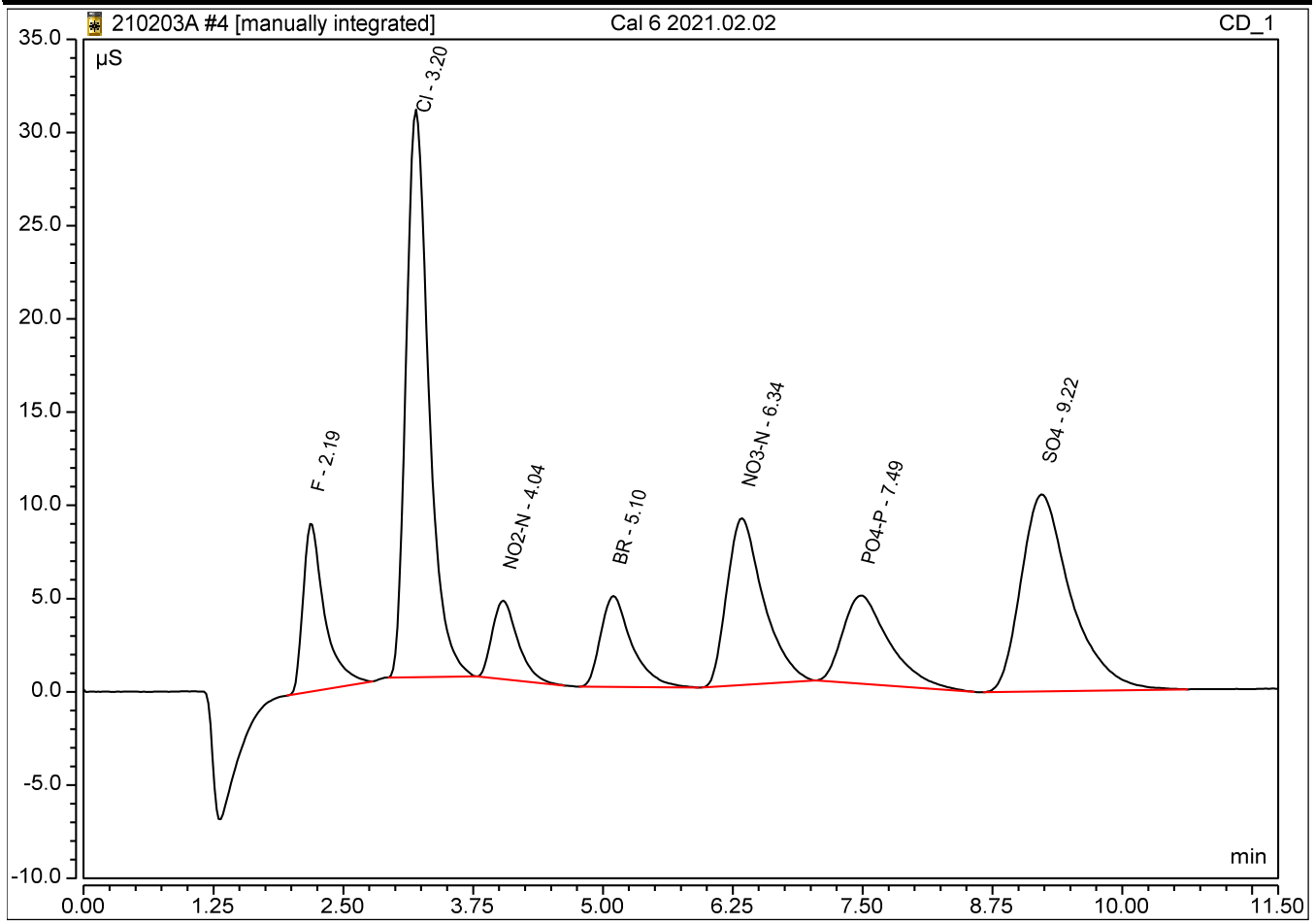


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	2.162	9.056	2.42	2.5	96.8%
2	3.20	**Cl**	BMB	7.728	30.456	9.36	10	93.6%
3	4.04	**NO2-N**	BMB	1.205	4.210	0.95	1	94.8%
4	5.10	**BR**	BMB	1.690	4.876	4.88	5	97.6%
5	6.34	**NO3-N**	BMB	3.652	8.947	1.97	2	98.3%
6	7.49	**PO4-P**	BMB	2.458	4.735	4.49	5	89.8%
7	9.22	**SO4**	BMB	5.877	10.569	9.65	10	96.5%

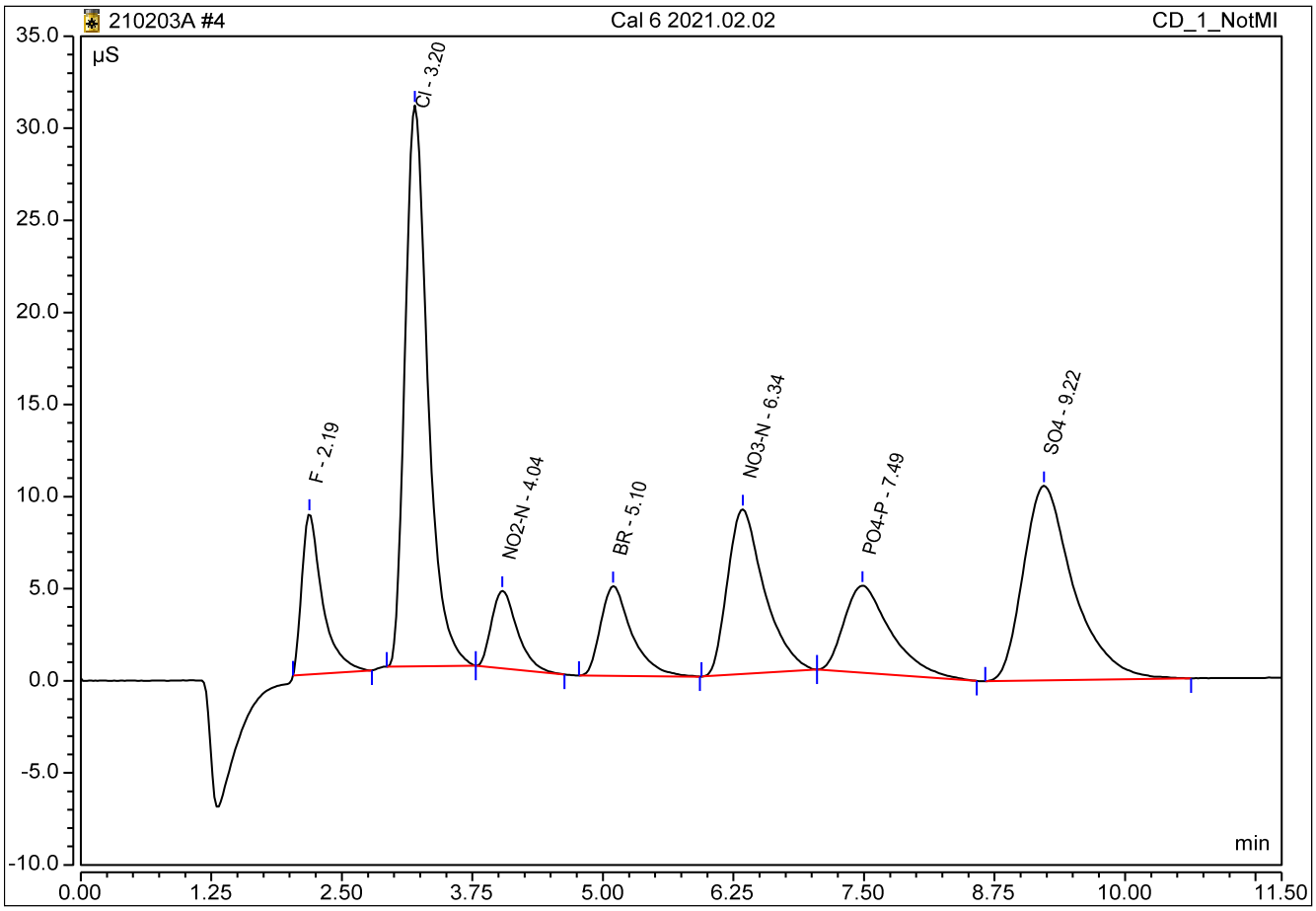


MI 5 F GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	1.996	8.721	2.4511
2	3.20	**Cl**	BMB	7.728	30.456	9.3635
3	4.04	**NO2-N**	BMB	1.205	4.210	0.9484
4	5.10	**BR**	BMB	1.690	4.876	4.8795
5	6.34	**NO3-N**	BMB	3.652	8.947	1.9657
6	7.49	**PO4-P**	BMB	2.458	4.735	4.4909
7	9.22	**SO4**	BMB	5.877	10.569	9.6724

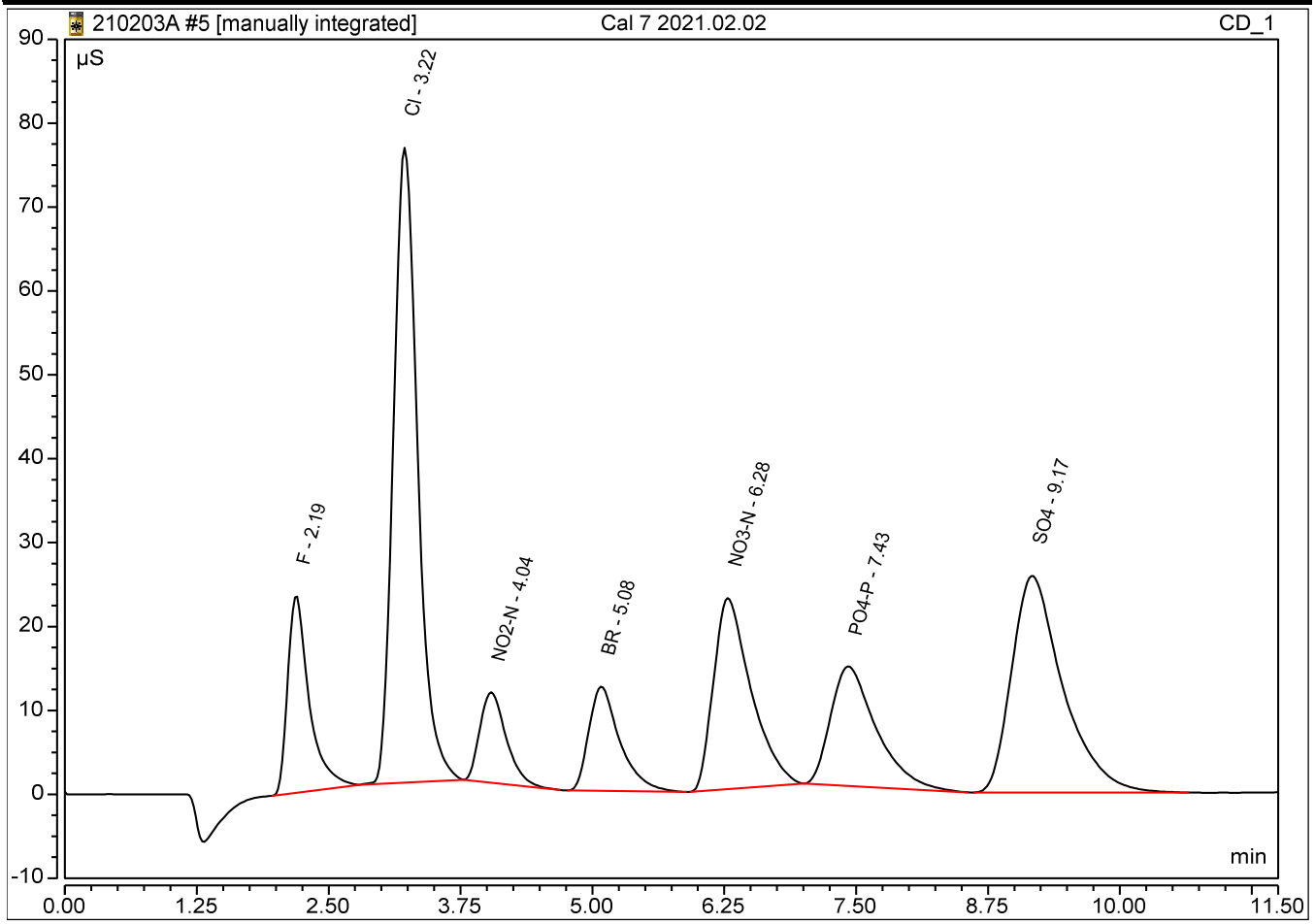


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	5.546	23.521	6.21	6.25	99.4%
2	3.22	**Cl**	BMB	20.132	75.675	24.39	25	97.6%
3	4.04	**NO2-N**	BMB	3.133	10.776	2.47	2.5	98.6%
4	5.08	**BR**	BMB	4.236	12.431	12.23	12.5	97.9%
5	6.28	**NO3-N**	BMB	9.364	22.776	4.91	5	98.1%
6	7.43	**PO4-P**	BMB	7.126	14.242	12.10	12.5	96.8%
7	9.17	**SO4**	BMB	14.521	25.835	24.35	25	97.4%



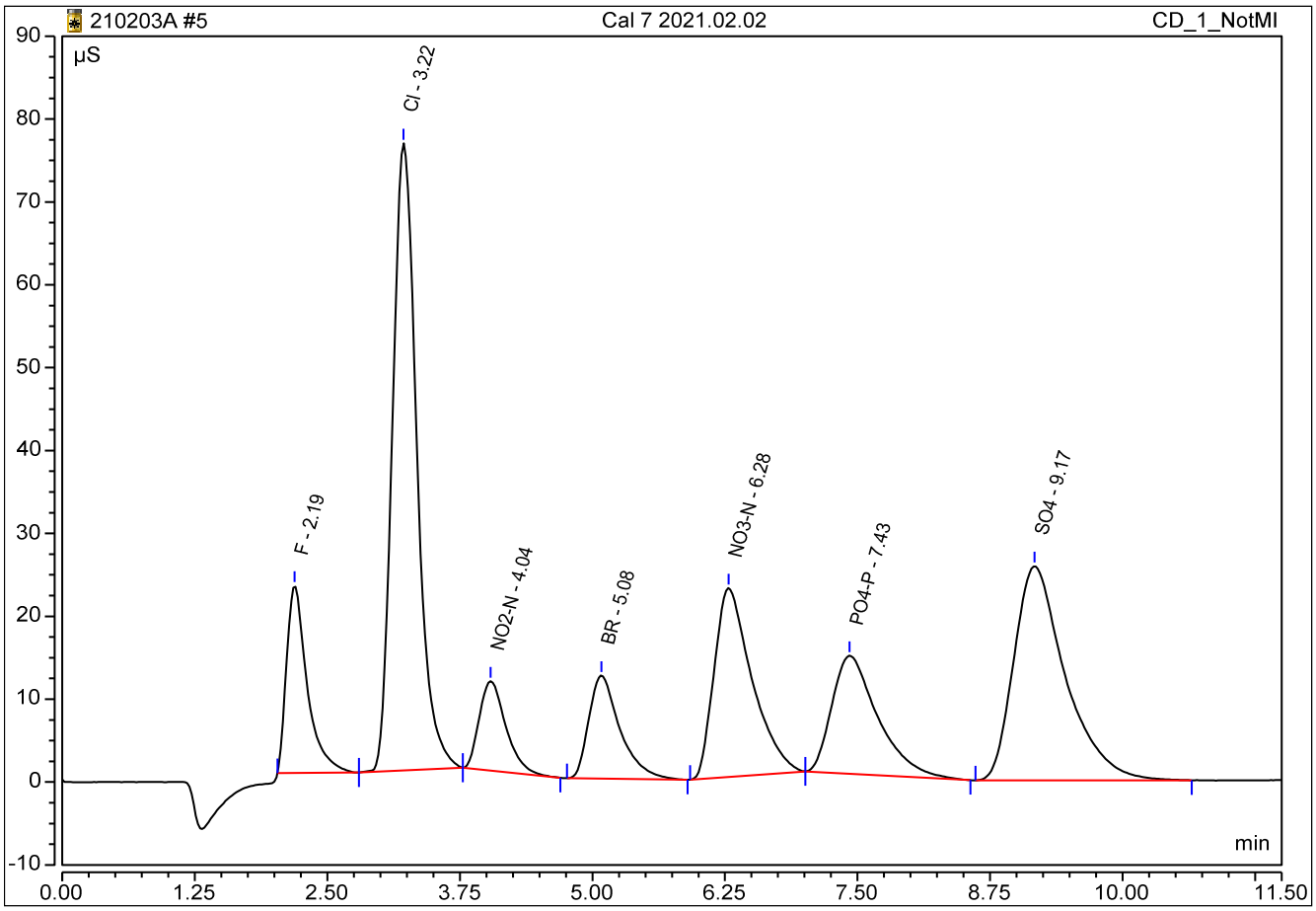
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	5.087	22.614	6.2472
2	3.22	**Cl**	BMB	20.132	75.675	24.3939
3	4.04	**NO2-N**	BMB	3.133	10.776	2.4658
4	5.08	**BR**	BMB	4.236	12.431	12.2333
5	6.28	**NO3-N**	BMB	9.364	22.776	4.9072
6	7.43	**PO4-P**	BMB	7.126	14.242	12.0961
7	9.17	**SO4**	BMB	14.521	25.835	24.3628

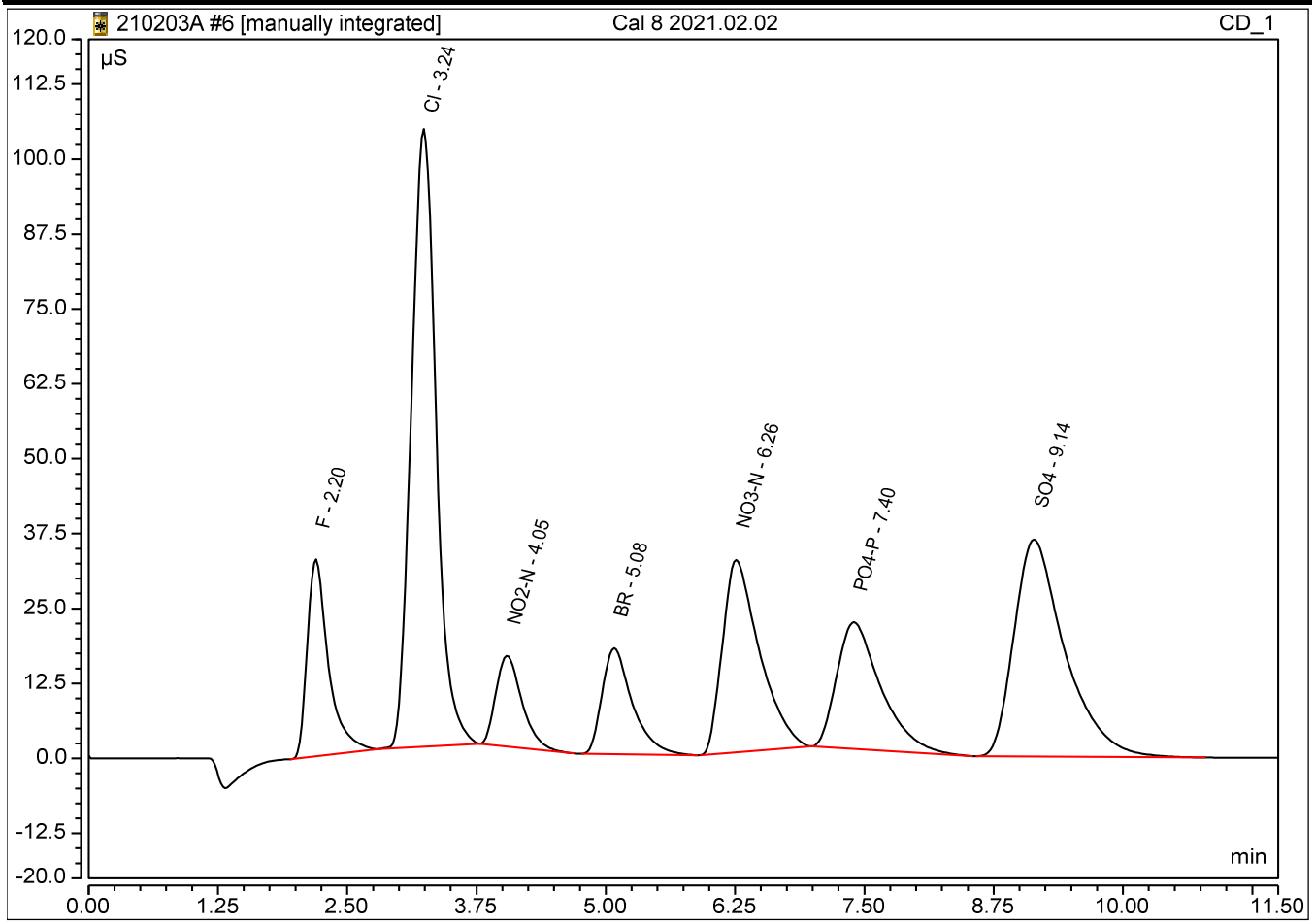


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	7.804	32.914	8.74	8.75	99.9%
2	3.24	**Cl**	BMB	28.644	103.088	34.71	35	99.2%
3	4.05	**NO2-N**	BMB	4.434	15.154	3.49	3.5	99.7%
4	5.08	**BR**	BMB	6.008	17.692	17.35	17.5	99.1%
5	6.26	**NO3-N**	BMB	13.311	32.129	6.94	7	99.1%
6	7.40	**PO4-P**	BMB	10.459	21.166	17.53	17.5	100.2%
7	9.14	**SO4**	BMB	20.615	36.256	34.72	35	99.2%



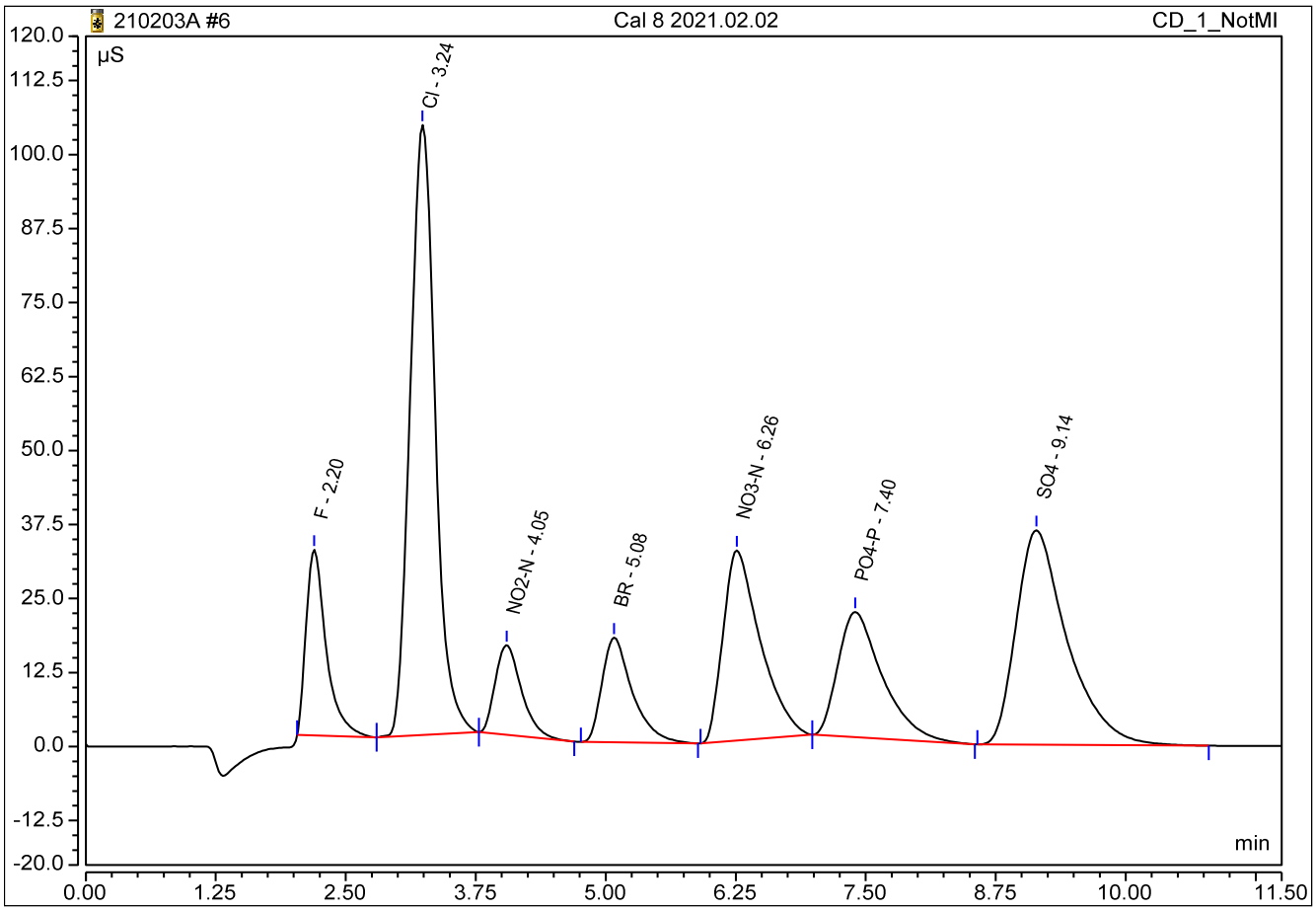
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	7.029	31.386	8.6319
2	3.24	**Cl**	BMB	28.644	103.088	34.7080
3	4.05	**NO2-N**	BMB	4.434	15.154	3.4902
4	5.08	**BR**	BMB	6.008	17.692	17.3510
5	6.26	**NO3-N**	BMB	13.311	32.129	6.9400
6	7.40	**PO4-P**	BMB	10.459	21.166	17.5274
7	9.14	**SO4**	BMB	20.615	36.256	34.7191

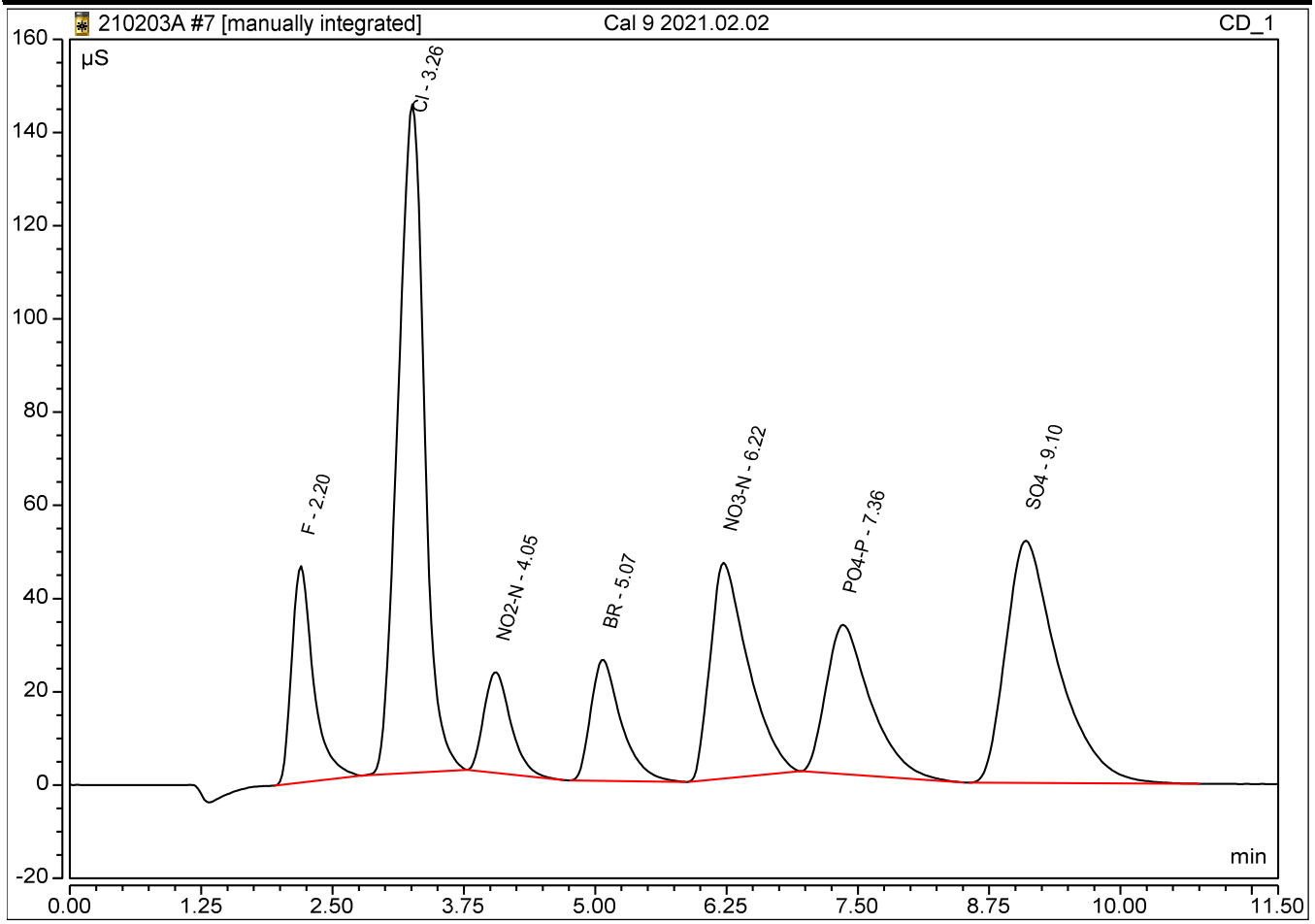


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	11.211	46.442	12.55	12.5	100.4%
2	3.26	**Cl**	BMB	41.835	143.444	50.69	50	101.4%
3	4.05	**NO2-N**	BMB	6.408	21.642	5.04	5	100.9%
4	5.07	**BR**	BMB	8.751	26.016	25.27	25	101.1%
5	6.22	**NO3-N**	BMB	19.431	46.298	10.09	10	100.9%
6	7.36	**PO4-P**	BMB	15.739	32.038	26.13	25	104.5%
7	9.10	**SO4**	BMB	29.929	51.969	50.56	50	101.1%



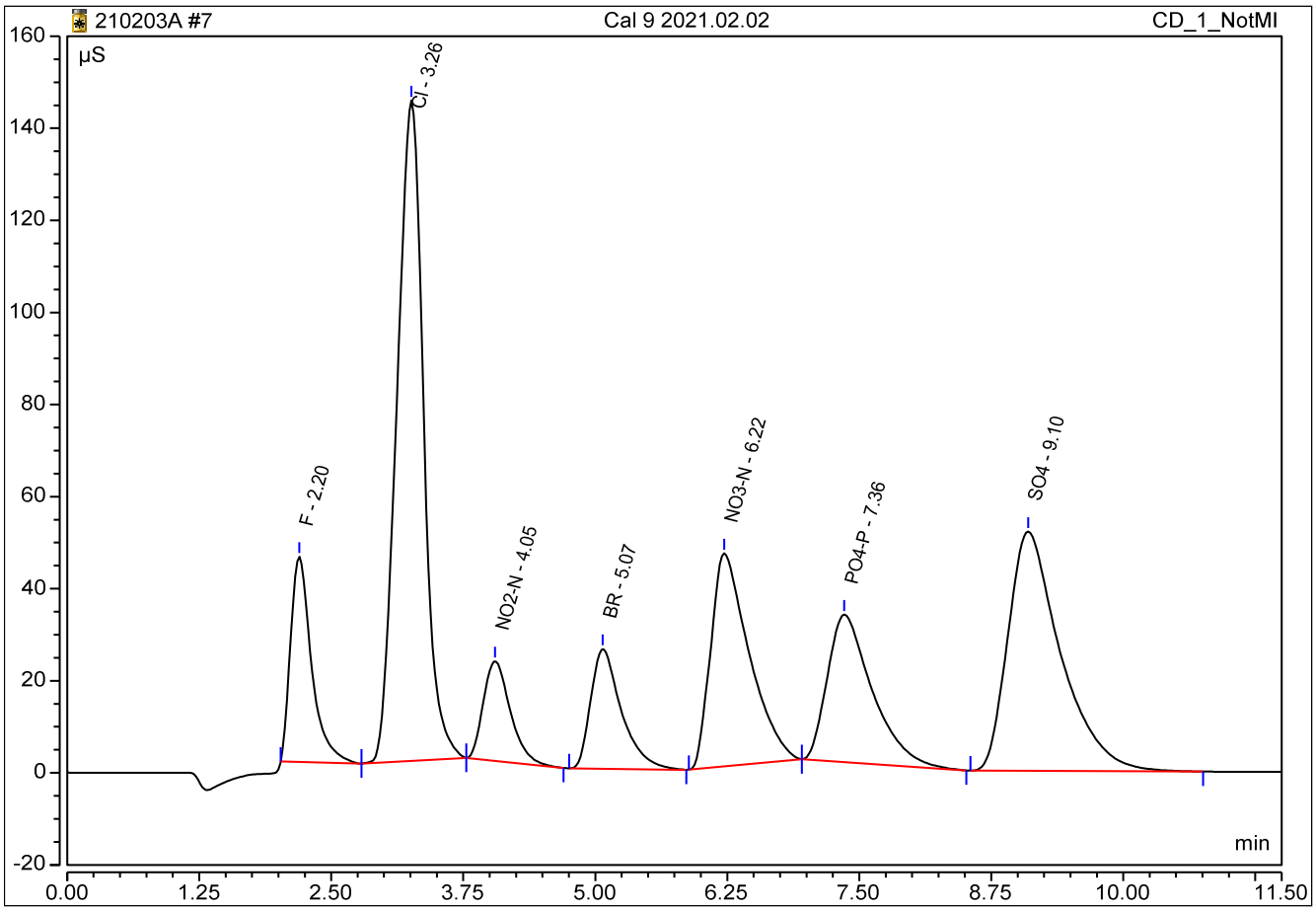
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	10.253	44.598	12.5913
2	3.26	**Cl**	BMB	41.835	143.444	50.6912
3	4.05	**NO2-N**	BMB	6.408	21.642	5.0440
4	5.07	**BR**	BMB	8.751	26.016	25.2720
5	6.22	**NO3-N**	BMB	19.431	46.298	10.0921
6	7.36	**PO4-P**	BMB	15.739	32.038	26.1304
7	9.10	**SO4**	BMB	29.929	51.969	50.5464

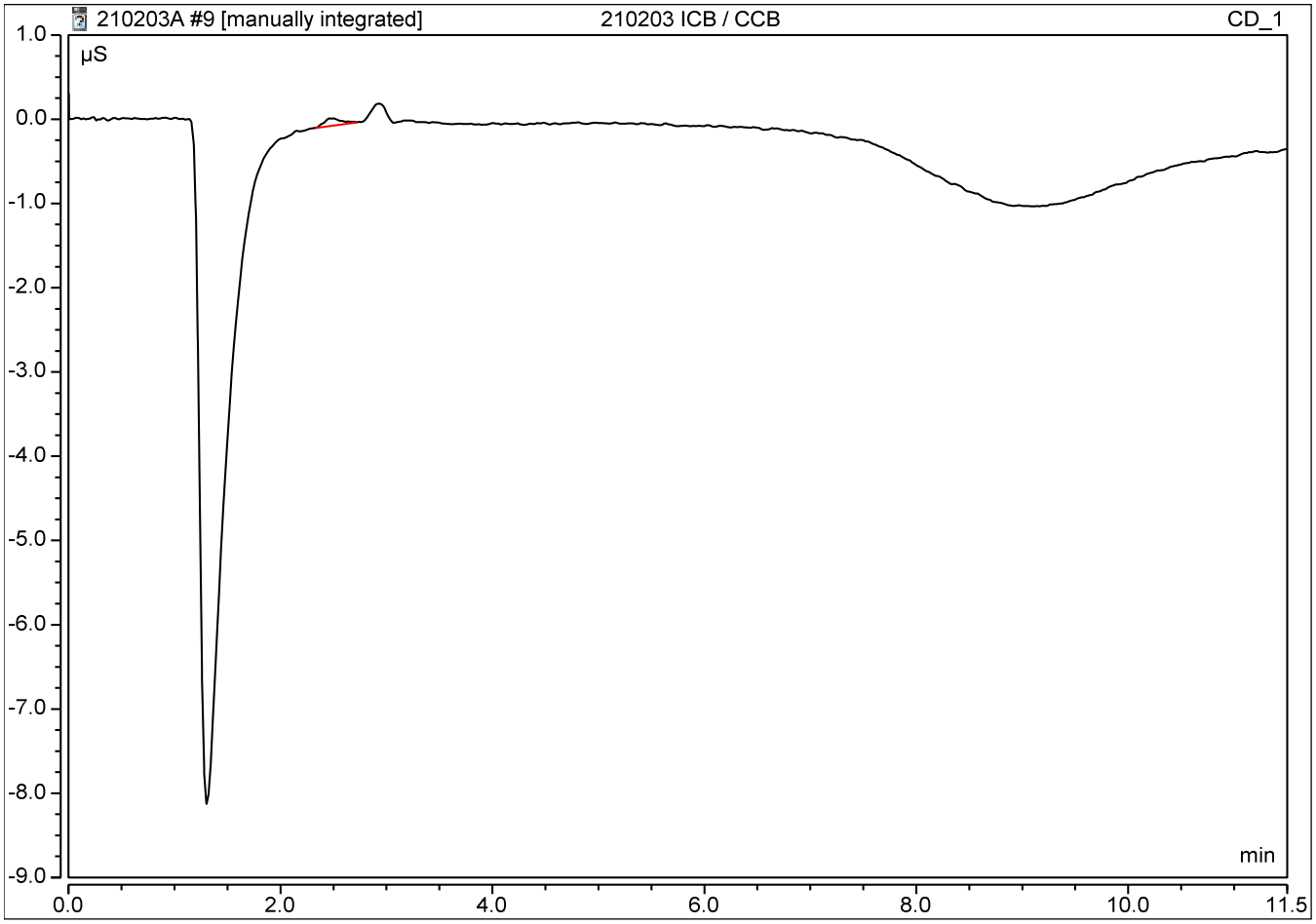


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

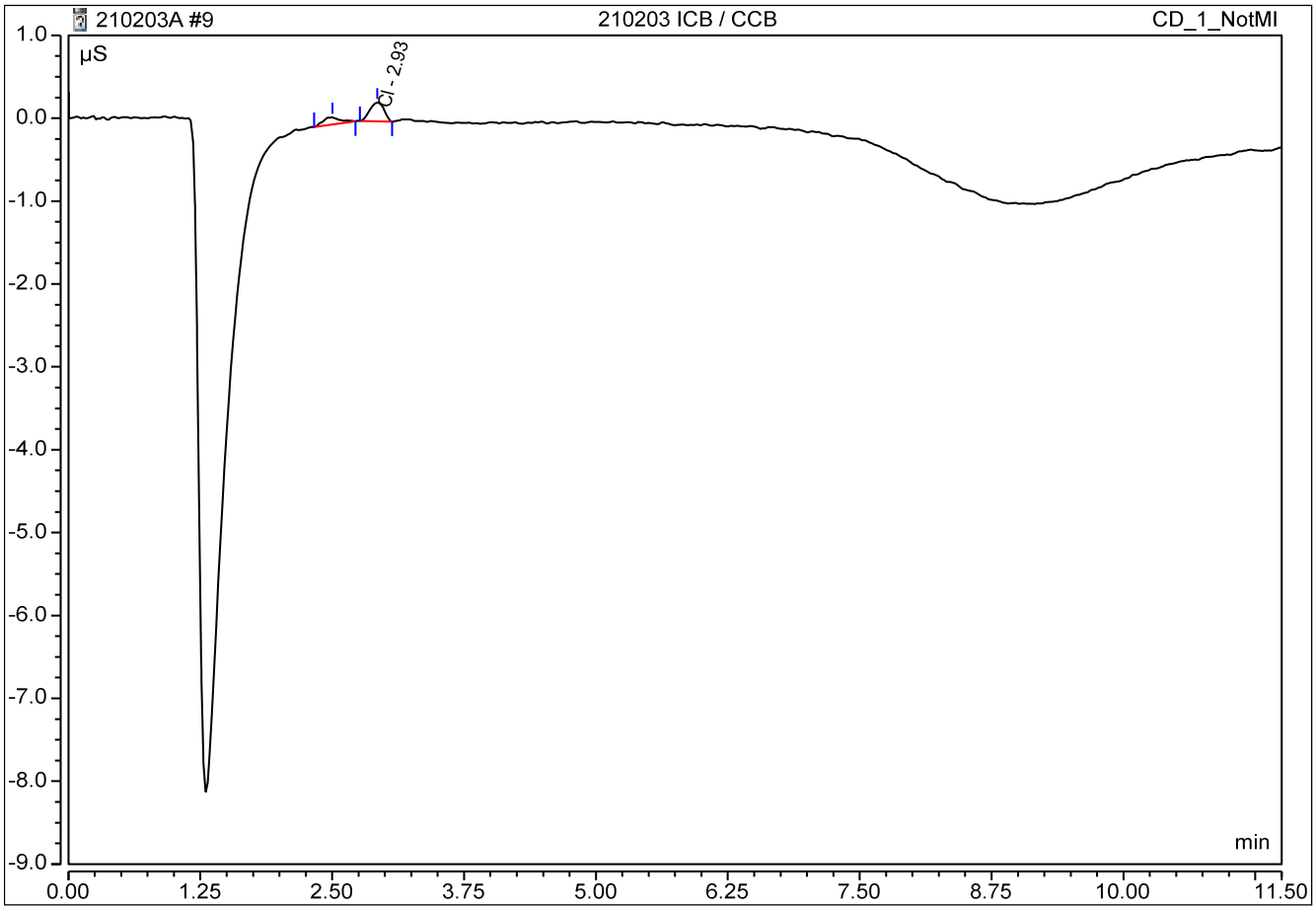


MI7 CI GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L

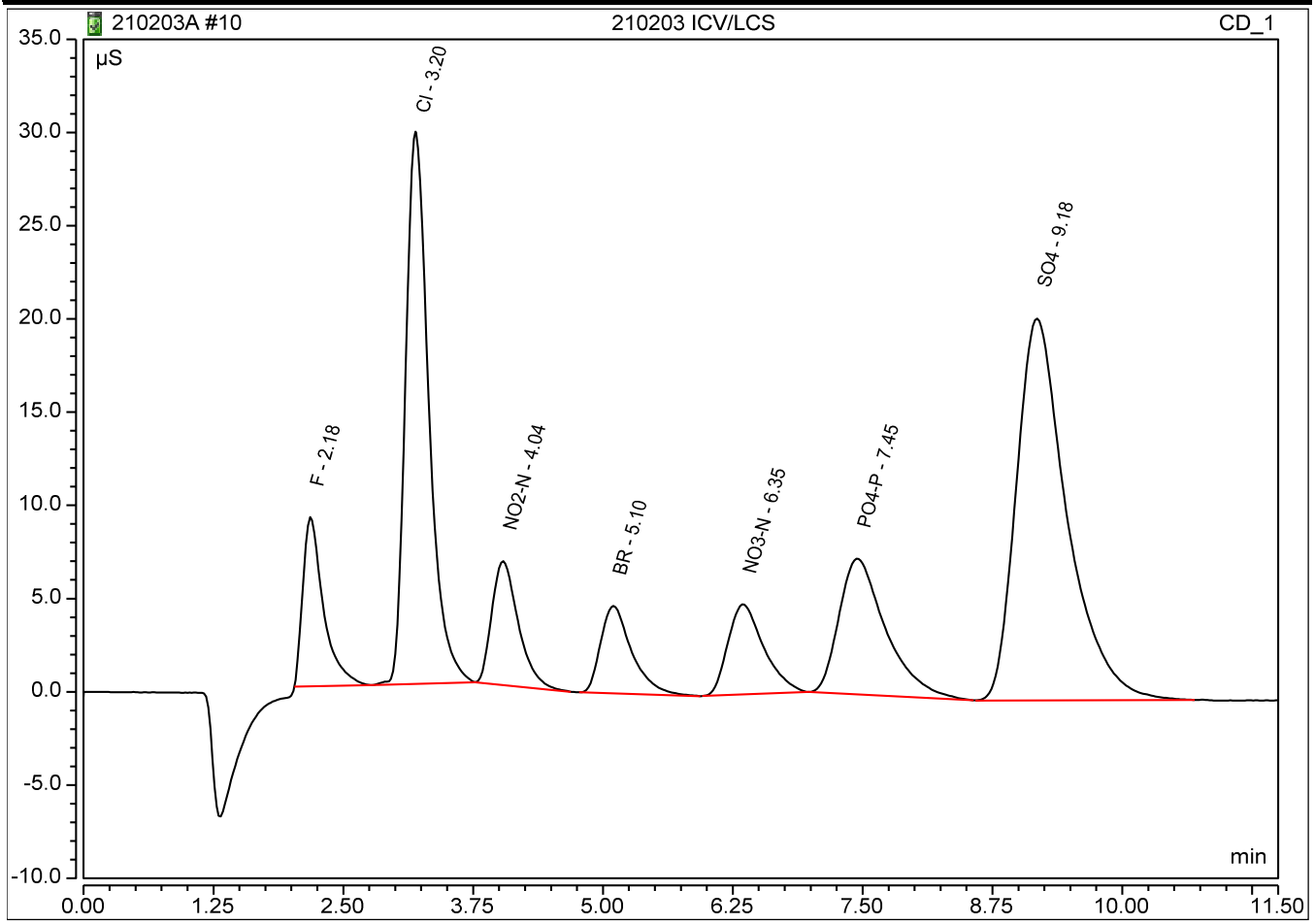


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICV/LCS**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 16:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	2.086	9.078	2.34	2.5	93.4%
2	3.20	**Cl**	BMB	7.701	29.618	9.33	10	93.3%
3	4.04	**NO2-N**	BMB	1.968	6.640	1.55	1.522334	101.7%
4	5.10	**BR**	BMB	1.627	4.686	4.70	5	94.0%
5	6.35	**NO3-N**	BMB	1.932	4.836	1.08	1.129525	95.6%
6	7.45	**PO4-P**	BMB	3.795	7.286	6.67	6.522	102.3%
7	9.18	**SO4**	BMB	11.558	20.473	19.31	20	96.6%



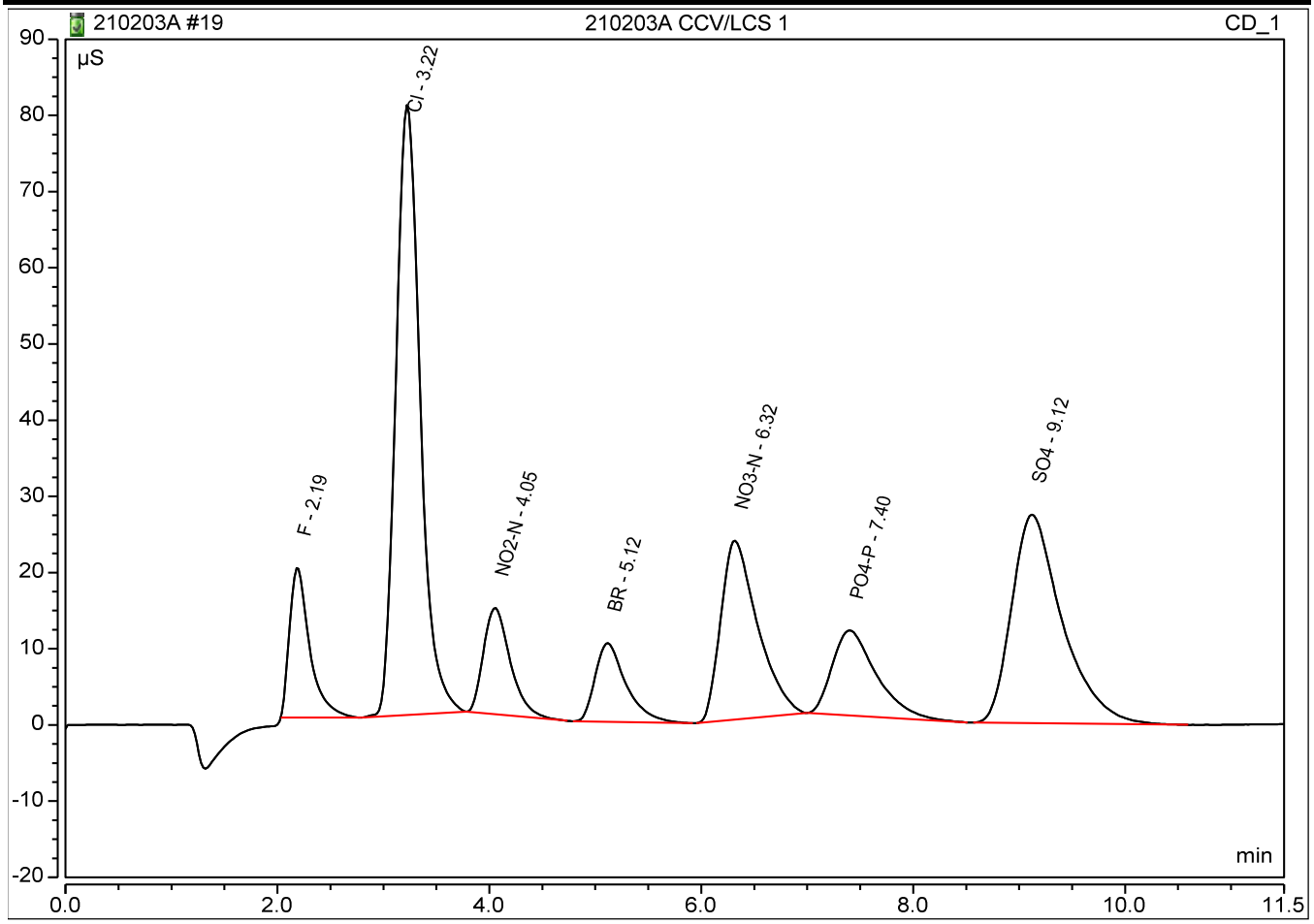
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:30**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB	4.339	19.733	4.86	5	97.2%
2	3.22	**Cl**	BMB	21.350	80.071	25.87	25	103.5%
3	4.05	**NO2-N**	BMB	4.101	13.961	3.23	3.04	106.2%
4	5.12	**BR**	BMB	3.477	10.324	10.04	10	100.4%
5	6.32	**NO3-N**	BMB	9.467	23.512	4.96	5	99.2%
6	7.40	**PO4-P**	BMB	5.382	11.154	9.25	10	92.5%
7	9.12	**SO4**	BMB	15.125	27.374	25.38	25	101.5%

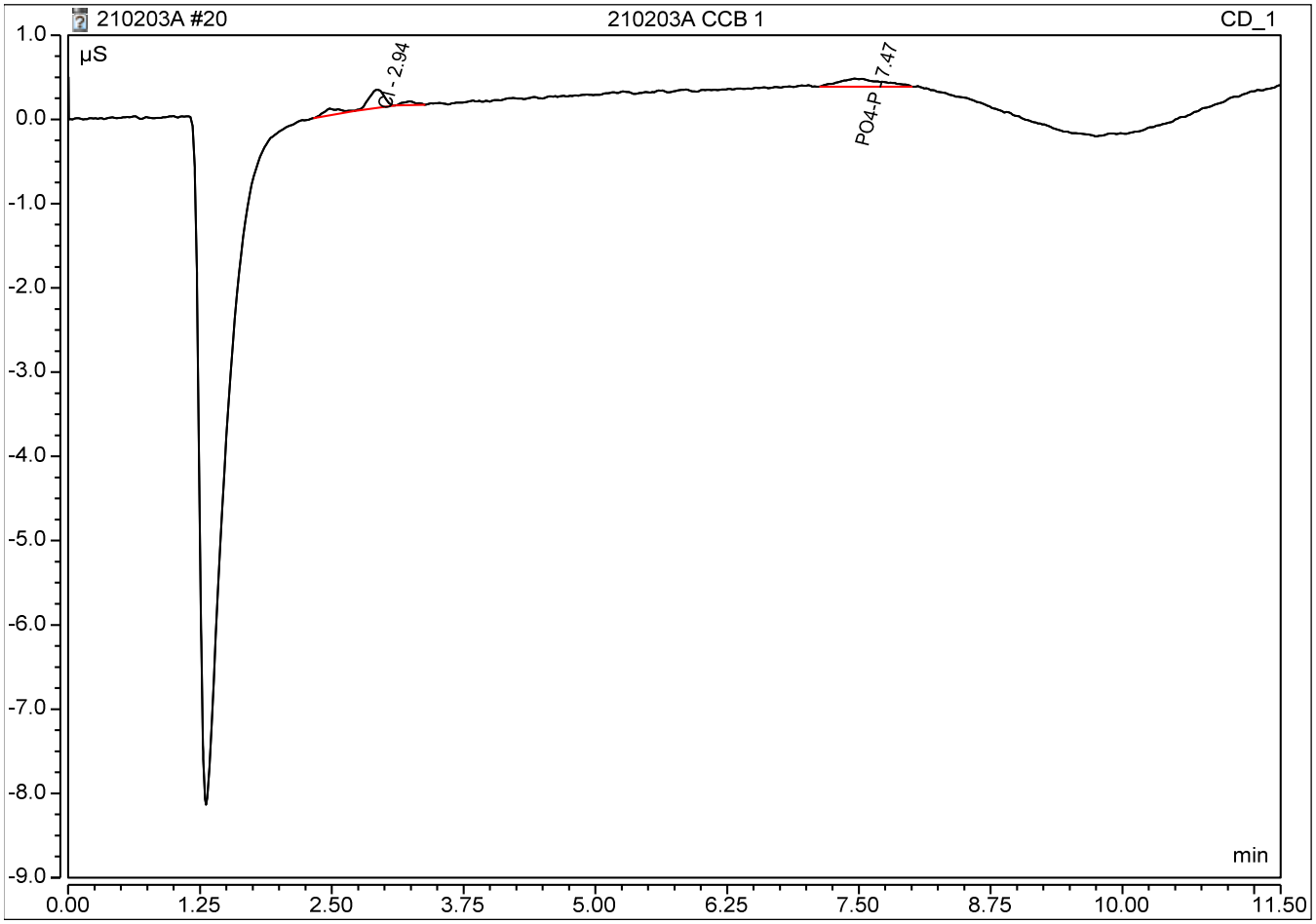


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:45**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	2.94	**Cl**	BMB	0.037	0.216	0.04		
4	7.47	**PO4-P**	BMB	0.047	0.095	0.56		



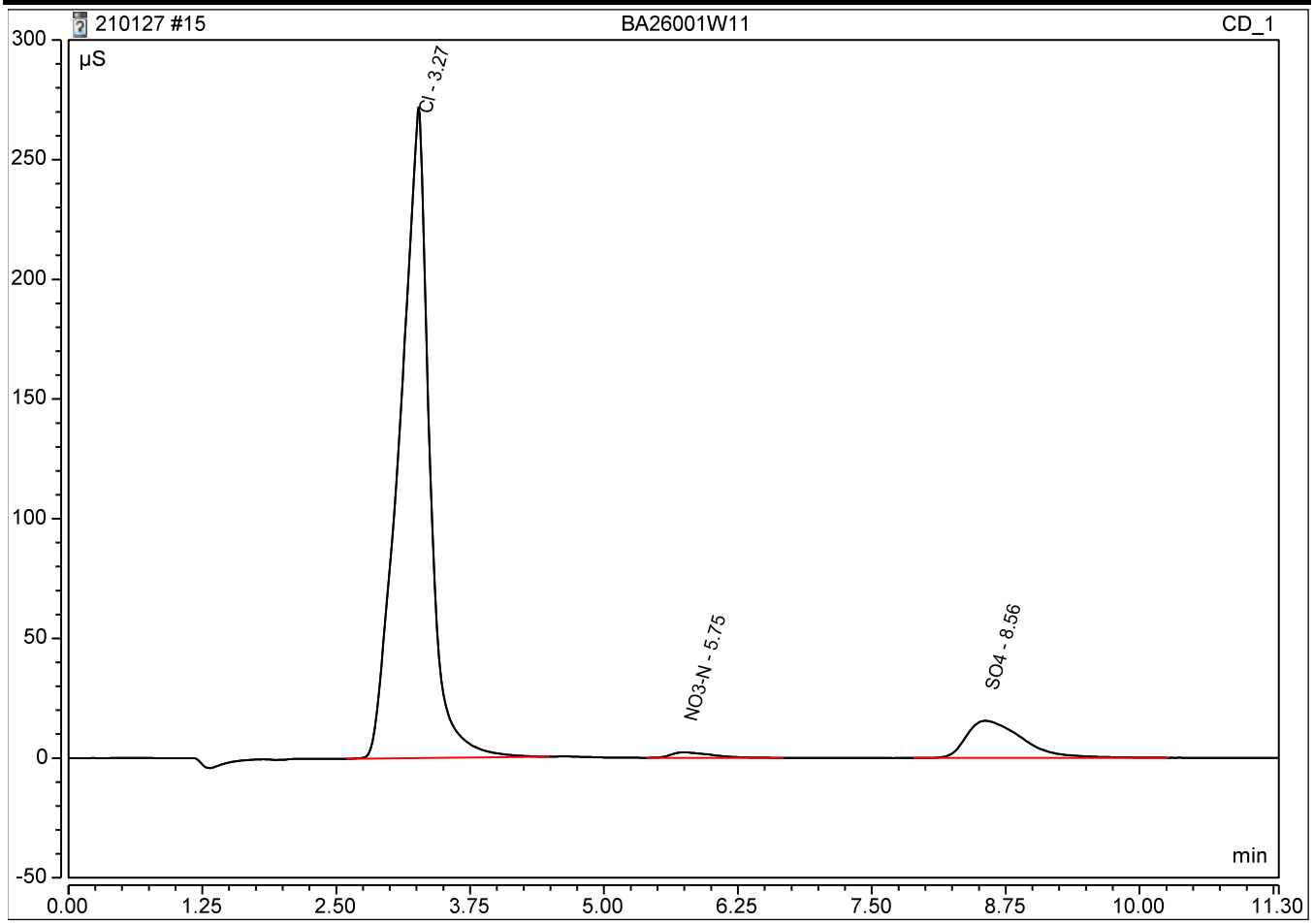
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**BA26001W11**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 19:25**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.27	**Cl**	BMB	86.783	271.843	125.14		
2	5.75	**NO3-N**	BMB	0.995	2.280	0.59		
3	8.56	**SO4**	BMB	9.389	15.525	19.03		



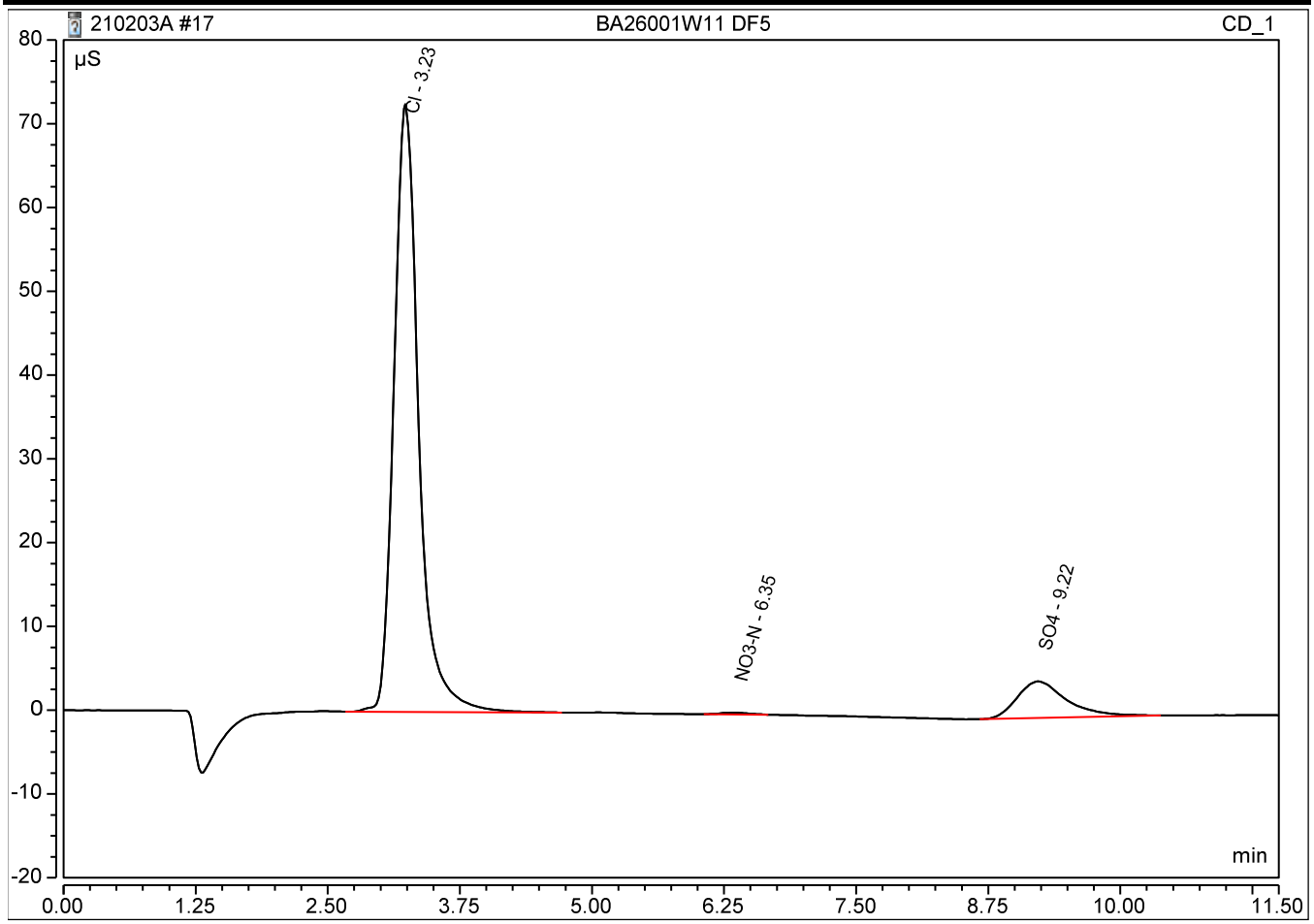
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**BA26001W11 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:00**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.23	**Cl**	BMB	19.707	72.540	119.39		
2	6.35	**NO3-N**	BMB	0.067	0.217	0.60		
3	9.22	**SO4**	BMB	2.374	4.365	18.45		



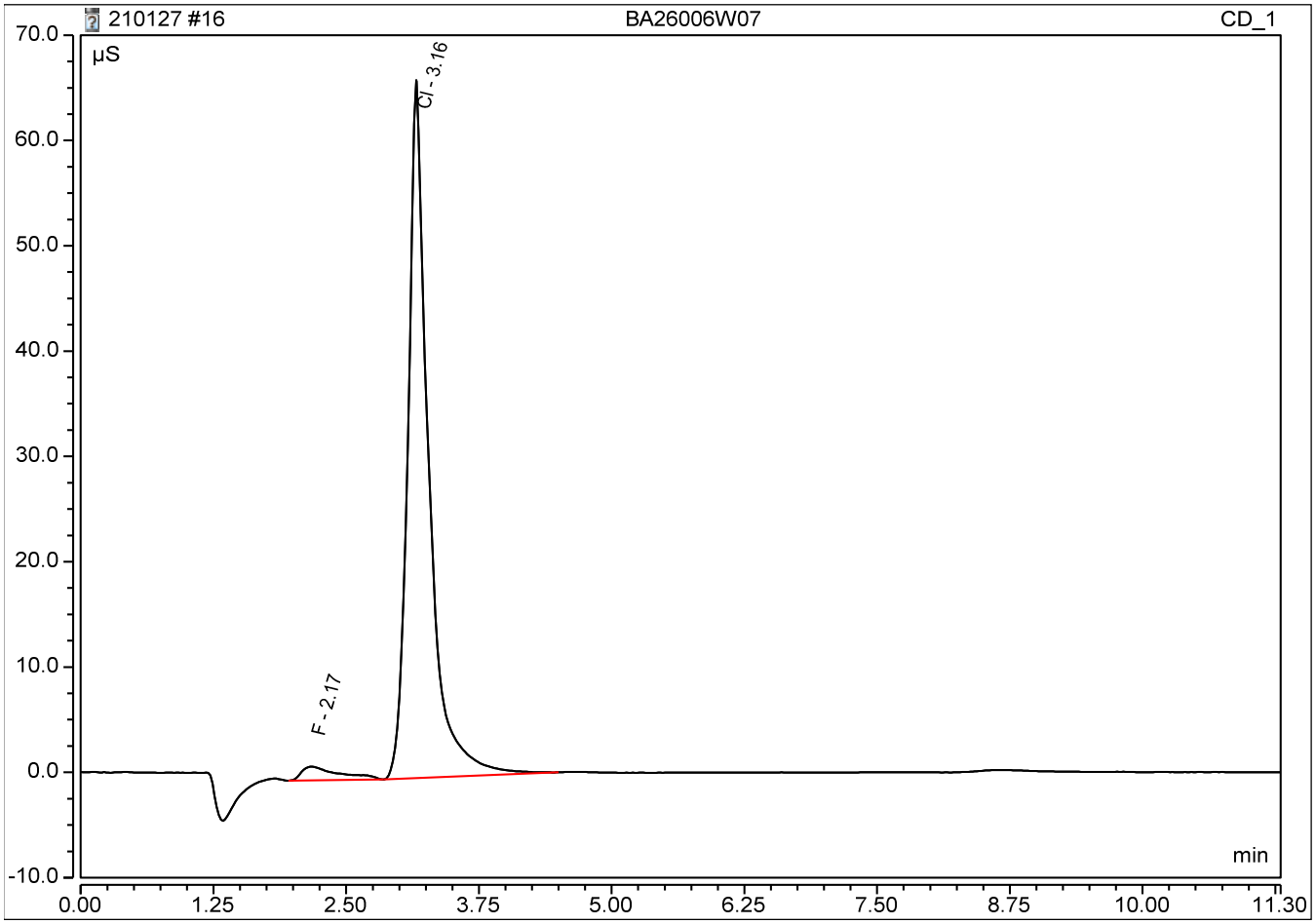
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**BA26006W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 19:40**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.17	**F**	BMB	0.541	1.317	0.74		
2	3.16	**Cl**	BMB	14.927	66.287	21.60		



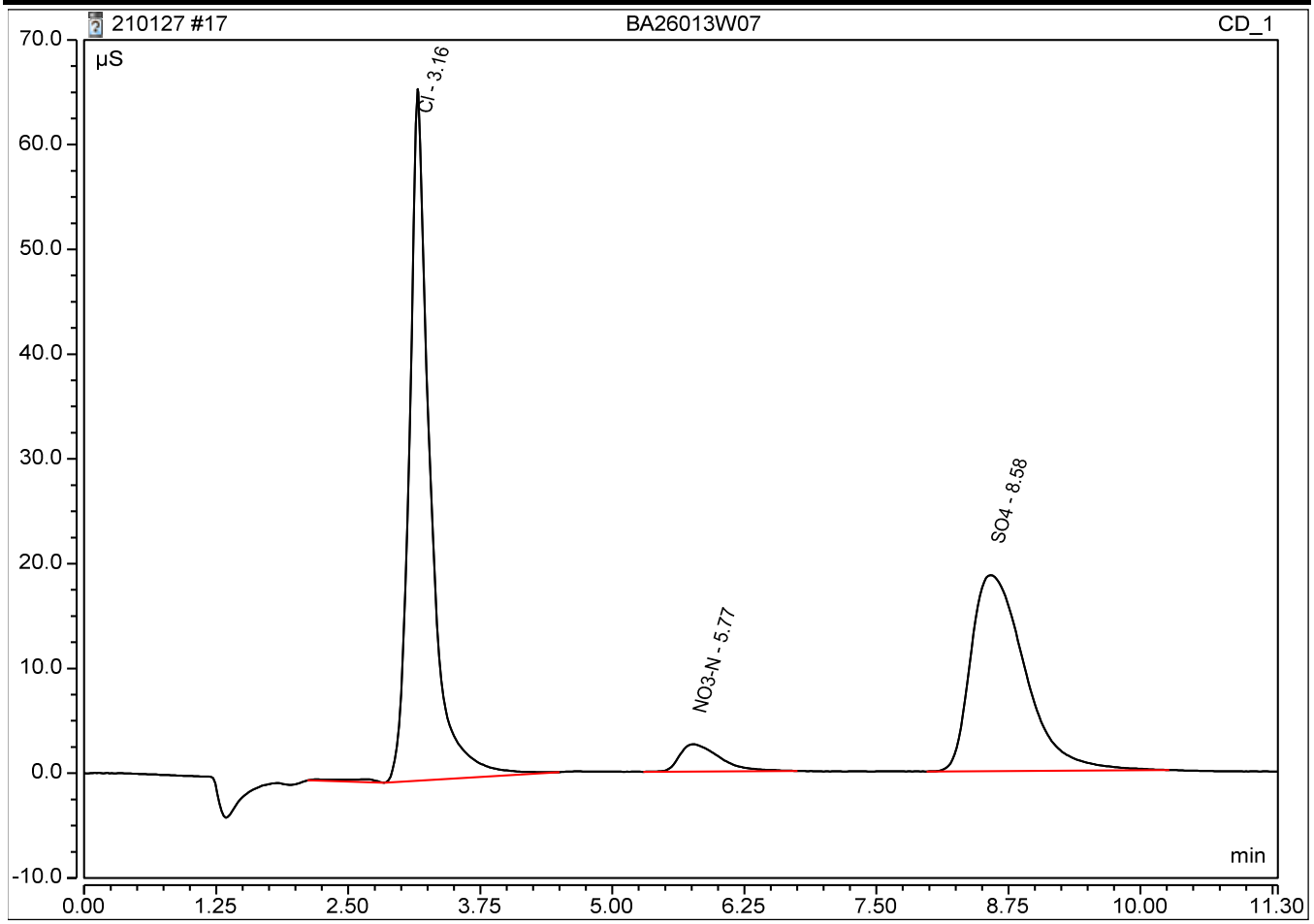
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**BA26013W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 19:55**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	3.16	**Cl**	BMB	14.993	66.032	21.70		
3	5.77	**NO3-N**	BMB	1.150	2.612	0.69		
4	8.58	**SO4**	BMB	11.150	18.714	22.60		



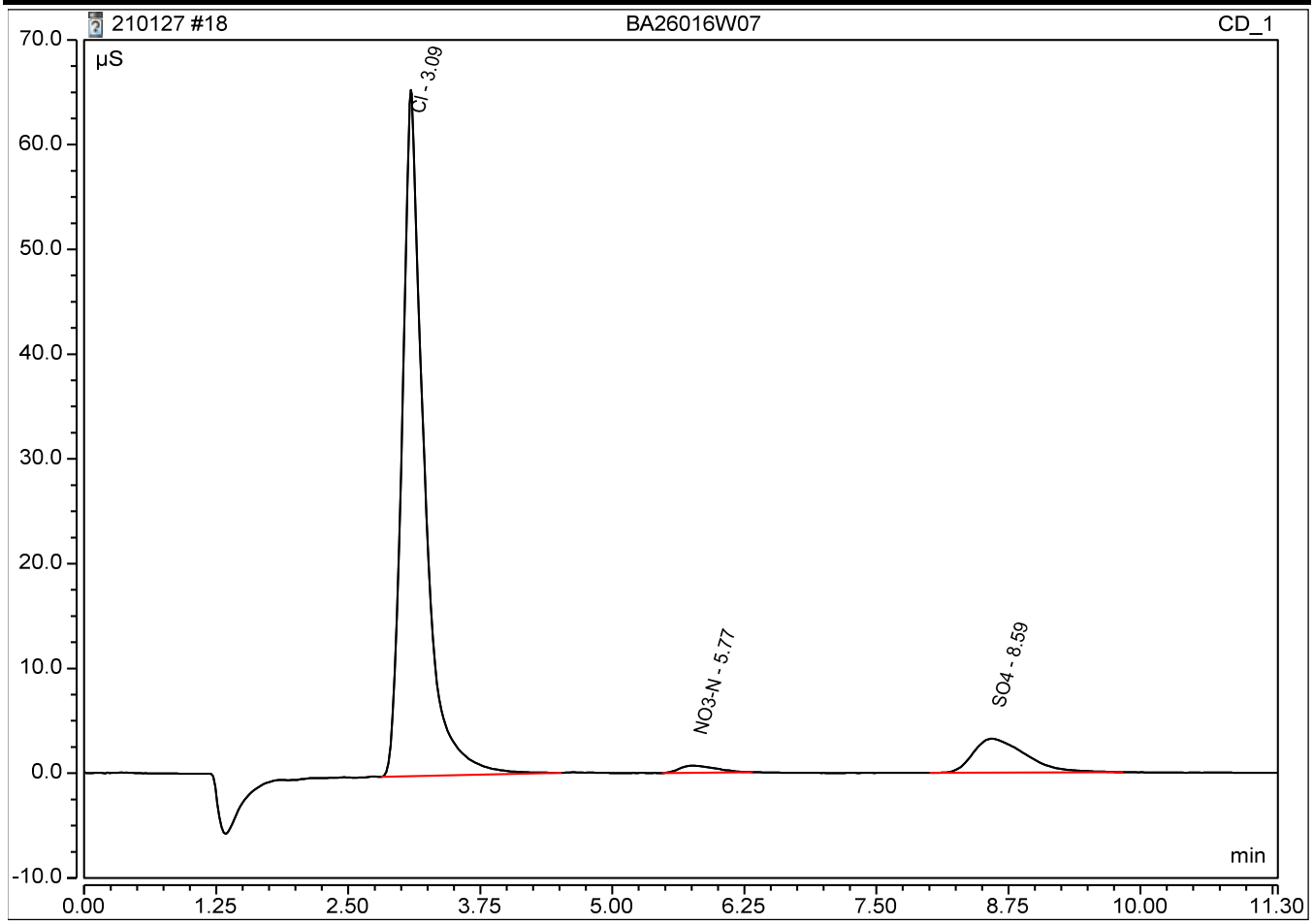
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**BA26016W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 20:09**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.09	**Cl**	BMB	15.712	65.490	22.73		
2	5.77	**NO3-N**	BMB	0.269	0.680	0.16		
3	8.59	**SO4**	BMB	1.868	3.239	3.79		



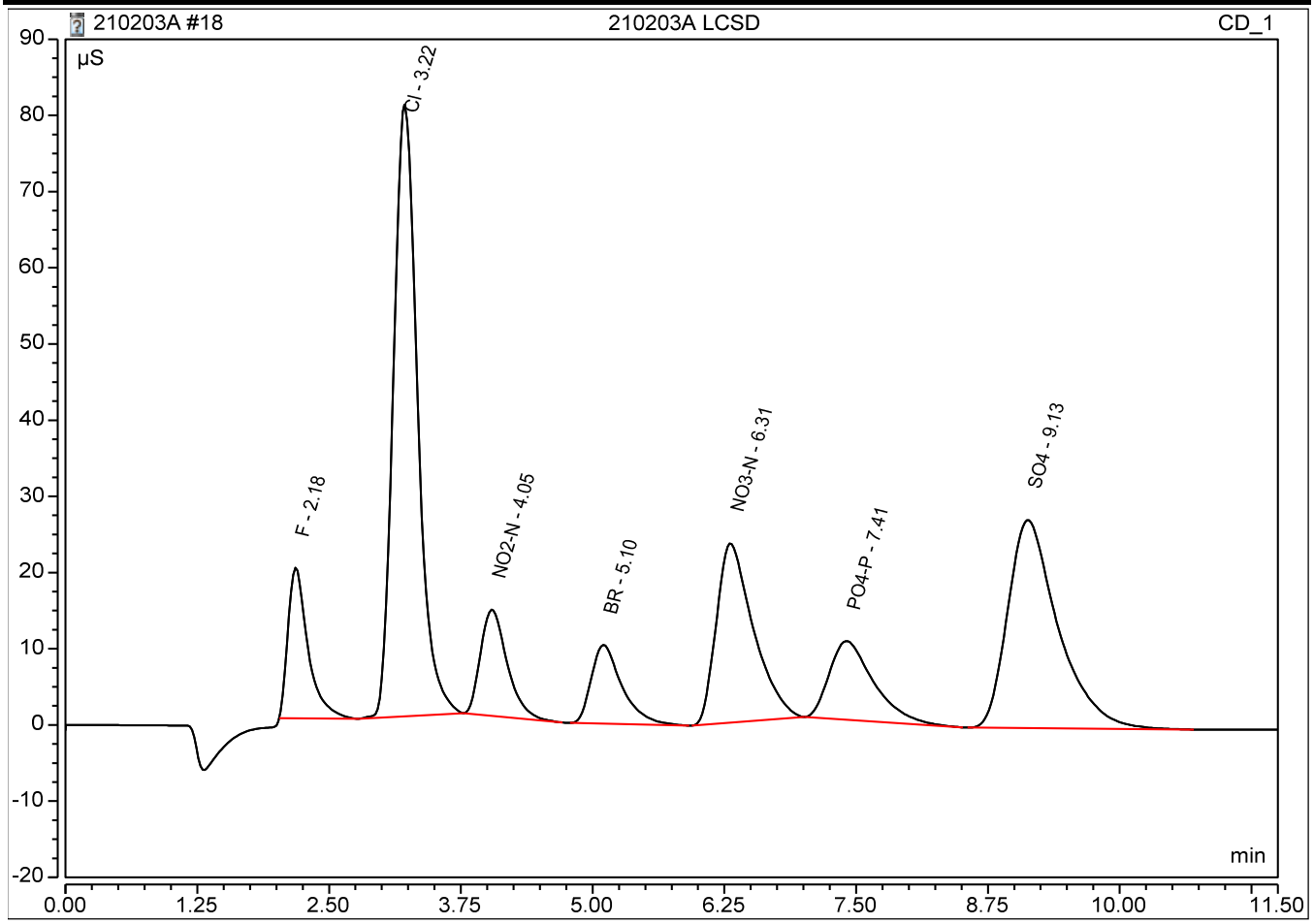
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203A LCSD**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 18:15**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	4.354	19.801	4.88		
2	3.22	**Cl**	BMB	21.392	80.269	25.92		
3	4.05	**NO2-N**	BMB	4.094	13.961	3.22		
4	5.10	**BR**	BMB	3.493	10.353	10.09		
5	6.31	**NO3-N**	BMB	9.557	23.547	5.01		
6	7.41	**PO4-P**	BMB	5.050	10.343	8.72		
7	9.13	**SO4**	BMB	15.139	27.327	25.40		



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Anion Chromatography Working Standard

Prep Date: 01/27/21

Exp Date: 01/28/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 01/27/21

Exp Date: 01/28/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 01/27/21	01/28/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 01/27/21	01/28/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 01/27/21	01/28/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 01/27/21	01/28/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 01/27/21	01/28/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 01/27/21	01/28/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 01/27/21	01/28/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 01/27/21	01/28/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 01/27/21	01/28/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Anion Chromatography Working Standard

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 02/02/21	02/03/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 02/02/21	02/03/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 02/02/21	02/03/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 02/02/21	02/03/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 02/02/21	02/03/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 02/02/21	02/03/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 02/02/21	02/03/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 02/02/21	02/03/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 02/02/21	02/03/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GA5	Cal 1 2021.01.27	27/Jan/2021	16:00	Calibration Standard	
2	GA6	Cal 2 2021.01.27	27/Jan/2021	16:15	Calibration Standard	
3	GA7	Cal 3 2021.01.27	27/Jan/2021	16:30	Calibration Standard	
4	GA8	Cal 4 2021.01.27	27/Jan/2021	16:44	Calibration Standard	
5	GB1	Cal 5 2021.01.27	27/Jan/2021	16:59	Calibration Standard	
6	GB2	Cal 6 2021.01.27	27/Jan/2021	17:13	Calibration Standard	
7	GB3	Cal 7 2021.01.27	27/Jan/2021	17:28	Calibration Standard	
8	GB4	Cal 8 2021.01.27	27/Jan/2021	17:43	Calibration Standard	
9	GB5	Cal 9 2021.01.27	27/Jan/2021	17:57	Calibration Standard	
10	R1	ICB / CCB	27/Jan/2021	18:12	Unknown	
11	GB6	ICV Absolute 111419	27/Jan/2021	18:27	Check Standard	
12	GC1	BA25956W04	27/Jan/2021	18:41	Unknown	
13	GC2	BA25957W04	27/Jan/2021	18:56	Unknown	
14	GC3	BA25955W01	27/Jan/2021	19:11	Unknown	
15	GC4	BA26001W11	27/Jan/2021	19:25	Unknown	94899 ERH1214
16	GC5	BA26006W07	27/Jan/2021	19:40	Unknown	94899 ERH1219
17	GC6	BA26013W07	27/Jan/2021	19:55	Unknown	94899 ERH1222
18	GC7	BA26016W07	27/Jan/2021	20:09	Unknown	94899 ERH1240
19	R2	210127A CCV/LCS 1	27/Jan/2021	20:24	Check Standard	
20	R1	210127A CCB 1	27/Jan/2021	20:39	Unknown	
21	R2	stop	27/Jan/2021	20:50	Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	BD3	Cal 3 2021.02.02	03/Feb/2021	13:53	Calibration Standard	F and PO4>PQL
2	BD4	Cal 4 2021.02.02	03/Feb/2021	14:08	Calibration Standard	
3	BD5	Cal 5 2021.02.02	03/Feb/2021	14:23	Calibration Standard	
4	BD6	Cal 6 2021.02.02	03/Feb/2021	14:38	Calibration Standard	
5	BD7	Cal 7 2021.02.02	03/Feb/2021	14:53	Calibration Standard	
6	BD8	Cal 8 2021.02.02	03/Feb/2021	15:07	Calibration Standard	
7	BE1	Cal 9 2021.02.02	03/Feb/2021	15:22	Calibration Standard	
8	R1	ICB / CCBxxx	03/Feb/2021	15:37	Unknown	
9	R1	210203 ICB / CCB	03/Feb/2021	15:52	Unknown	replaced ICB
10	BE2	210203 ICV/LCS	03/Feb/2021	16:07	Check Standard	Absolute 111419
11	BE3	BA26344W01	03/Feb/2021	16:22	Unknown	
12	BE4	BA26345W01	03/Feb/2021	16:46	Unknown	
13	BE5	BA26346W01	03/Feb/2021	17:01	Unknown	
14	BE6	BA26347W01	03/Feb/2021	17:16	Unknown	
15	BE7	BA26348W01	03/Feb/2021	17:30	Unknown	
16	GA6	BA25870W07 DF5	03/Feb/2021	17:45	Unknown	
17	GA7	BA26001W11 DF5	03/Feb/2021	18:00	Unknown	
18	R2	210203A LCSD	03/Feb/2021	18:15	Unknown	
19	R2	210203A CCV/LCS 1	03/Feb/2021	18:30	Check Standard	
20	R1	210203A CCB 1	03/Feb/2021	18:45	Unknown	
21	BE8	BA26349W01	03/Feb/2021	19:00	Unknown	
22	GA8	BA26385W01	03/Feb/2021	19:14	Unknown	
23	R2	210203A CCV/LCS 1	03/Feb/2021	19:29	Check Standard	
24	R1	210203A CCB 1	03/Feb/2021	19:44	Unknown	baseline shifted
25	R1	210203A CCB 1	03/Feb/2021	19:59	Unknown	
26	R2	stop	03/Feb/2021	20:11	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210202 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

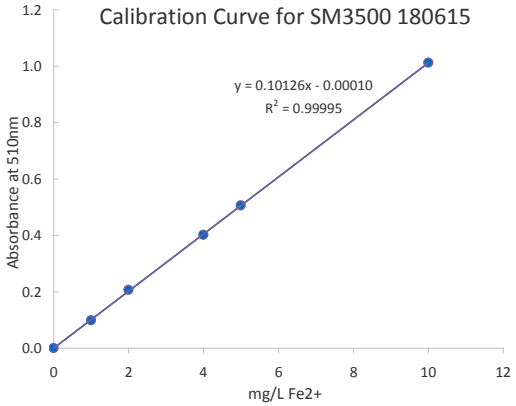
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210209	0.316	3.12

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	02/02/21	3.12



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
02/02/21	16:39	CCV 4.0 A210202	1	0.400	25mL		3.95	3.95	4.00	98.8%
02/02/21	16:37	Blk/ CCB A210202	1	0.000	25mL		0.00	0.00		
02/02/21	16:39	LCS A210209	1	0.316	25mL		3.12	3.12	3.00	104.1%
02/02/21	16:40	LCSD A210209	1	0.315	25mL		3.11	3.11	3.00	103.7%
02/02/21	16:41	BA26001W13	1	0.001	25mL		0.01	0.01		
02/02/21	16:41	BA26006W09	1	0.189	25mL		1.87	1.87		
02/02/21	16:42	BA26013W09	1	0.003	25mL		0.03	0.03		
02/02/21	16:43	BA26016W09	1	0.001	25mL		0.01	0.01		
02/02/21	16:44	BA26160W09	1	0.002	25mL		0.02	0.02		
02/02/21	16:45	BA26163W09	1	-0.001	25mL		-0.01	-0.01		
02/02/21	16:45	BA26163W09 MS	1	0.309	25mL		3.05	3.05		
02/02/21	16:46	BA26163W09 MSD	1	0.308	25mL		3.04	3.04		
02/02/21	16:46	CCV 4.0 A210202	1	0.412	25mL		4.07	4.07	4.00	101.7%
02/02/21	16:47	Blk/ CCB A210202	1	-0.002	25mL		-0.02	-0.02		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

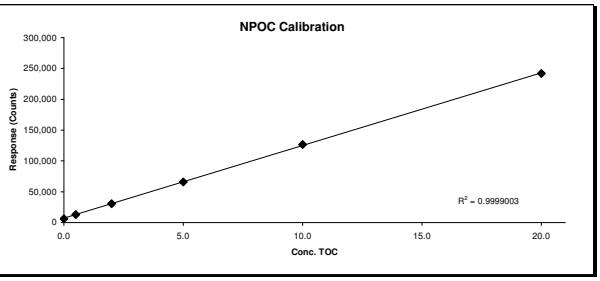
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210128A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-29	10:12 AM	CCV	1	62502	40mL	0.000	5.1	5.10	0.21	5.00	102.0%
2021-01-29	10:52 AM	CCB	1	2042	40mL	0.000	0	0.00	0.00		
2021-01-29	11:31 AM	210128A LCS	1	63548	40mL	0.000	5.189	5.19	0.13	5.00	103.8%
2021-01-29	12:11 PM	210128A LCSD	1	63079	40mL	0.000	5.149	5.15	0.19	5.00	103.0%
2021-01-29	12:51 PM	BA25956W01	1	45496	40mL	0.000	3.718	3.72	0.28		
2021-01-29	01:30 PM	BA25957W01	1	27747	40mL	0.000	2.212	2.21	0.02		
2021-01-29	02:09 PM	BA26001W09	1	4039	40mL	0.000	0.199	0.20	0.03		
2021-01-29	02:45 PM	BA26006W05	1	39397	40mL	0.000	3.2	3.20	0.48		
2021-01-29	03:23 PM	BA26013W05	1	18644	40mL	0.000	1.439	1.44	0.07		
2021-01-29	03:59 PM	BA26016W06	1	3886	40mL	0.000	0.186	0.19	0.02		
2021-01-29	04:36 PM	BA26094M03 DF400	*	1200657	40mL	*	101.77	#VALUE!	#VALUE!		
2021-01-29	05:15 PM	BA26082W02	1	56811	40mL	0.000	4.679	4.68	0.57		
2021-01-29	05:54 PM	BA26130W03	1	81169	40mL	0.000	6.746	6.75	0.59		
2021-01-29	06:33 PM	BA26131W04	1	102235	40mL	0.000	8.534	8.53	0.12		
2021-01-29	07:12 PM	BA26131W04 DUP	1	103390	40mL	0.000	8.632	8.63	0.10		
2021-01-29	07:51 PM	CCV	1	64184	40mL	0.000	5.242	5.24	0.10	5.00	104.8%
2021-01-29	08:32 PM	CCB	1	1715	40mL	0.000	0	0.00	0.00		
2021-01-29	09:11 PM	BA26132W01	1	108304	40mL	0.000	9.05	9.05	0.43		
2021-01-29	09:50 PM	BA26133W02	1	100442	40mL	0.000	8.382	8.38	0.84		
2021-01-29	10:30 PM	BA26134W03	1	95713	40mL	0.000	7.981	7.98	1.05		
2021-01-29	11:09 PM	BA26135W01	1	87027	40mL	0.000	7.244	7.24	0.78		
2021-01-29	11:48 PM	BA26136W01	*	422516	40mL	*	35.72	#VALUE!	#VALUE!		
2021-01-30	12:27 AM	BA26136W01 DUP	*	411180	40mL	*	34.758	#VALUE!	#VALUE!		
2021-01-30	01:06 AM	BA26136W02 MS	*	416312	40mL	*	35.194	#VALUE!	#VALUE!		
2021-01-30	01:45 AM	BA26136W02 MSD	*	485726	40mL	*	41.085	#VALUE!	#VALUE!		
2021-01-30	02:24 AM	BA26137W02	1	105217	40mL	0.000	8.787	8.79	0.65		
2021-01-30	03:03 AM	BA26160W06	1	7662	40mL	0.000	0.507	0.51	0.02		
2021-01-30	03:40 AM	BA26163W05	1	7737	40mL	0.000	0.513	0.51	0.04		
2021-01-30	04:19 AM	CCV	1	64714	40mL	0.000	5.288	5.29	0.10	5.00	105.8%
2021-01-30	04:59 AM	CCB	1	1529	40mL	0.000	0	0.00	0.00		

Name of Final Standard TOC Calibration Curve — **Prep'd By (Initials)** AR

Prep Date 06/11/20

Exp Date 06/11/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	20 uL	40 mL	DI Water	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	100 uL	40 mL	DI Water	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	250 uL	40 mL	DI Water	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	500 uL	40 mL	DI Water	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	1000 uL	40 mL	DI Water	20 ppm

Name of Final Standard ICV (TOC) — **Prep'd By (Initials)** AR

Prep Date 06/11/20

Exp Date 06/11/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	6465171-49409	06/30/21	500 uL	40mL	DI Water	10 ppm

Name of Final Standard CCV (TOC) — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_LCS/LCSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_MS/MSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	sample	5 ppm

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94899 SDG: 94899
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 02/02/21

Analyte	Calibration Verification									M
	True ICV	Found 18:41	%R(1)	True CCV1	Found 10:59	%R(1)	True CCV1	Found 11:19	%R(1)	
TOXN	3	3.0189	101	3	3.0747	102	3	3.0022	100	

(1) Control Limits: 90-110

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94899 SDG: 94899
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 02/03/21

Analyte	Calibration Verification									M
	True CCV1	Found 11:46	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
TOXN	3	3.1737	106							

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94899 SDG: 94899

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 02/02/21 18:43	C	CCB 02/03/21 11:01	C	CCB 02/03/21 11:21	C	CCB 02/03/21 11:48	C		C	
TOXN	.100	U	.100	U	.034	J	.031	J			

AQ2 Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-02-03 17:04:12
Tray Number:	2
Tray Name:	210202A TOXN

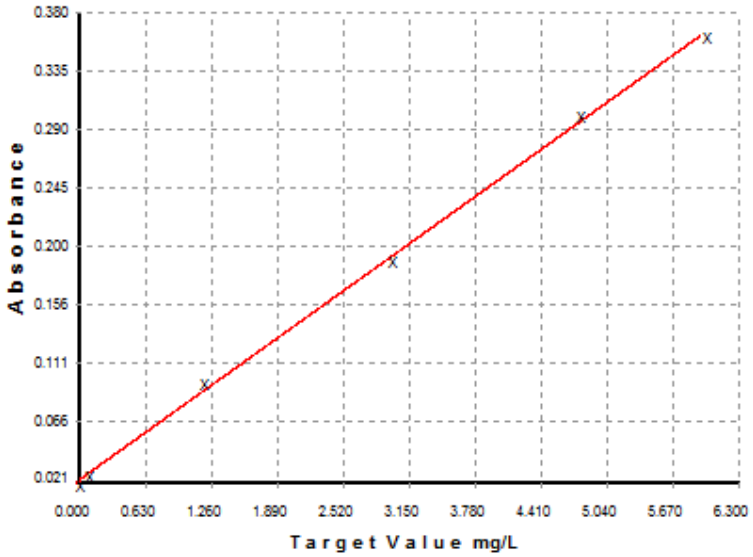
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0211	-0.0461	0.0000	
S90	0.0276	0.0679	0.1000	-32.12
S91	0.0981	1.3059	1.2000	8.83
S92	0.1917	2.9498	3.0000	-1.67
S93	0.3023	4.8904	4.8000	1.88
S94	0.3616	5.9321	6.0000	-1.13
S0	0.0228	-0.0163	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9995
Carryover(%):	0.5
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-4.159974E-001
b =:	1.755366E+001
Date & Time:	2021-02-03 16:09:39

Calibration Graph



Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0211			0.021070			ERR	2021-02-02 18:21:46
	S90	Standard 90	0.0276			0.027566			ERR	2021-02-02 18:23:57
	S91	Standard 91	0.0981			0.098094			ERR	2021-02-02 18:26:09
	S92	Standard 92	0.1917			0.191745			ERR	2021-02-02 18:28:20
	S93	Standard 93	0.3023			0.302298			ERR	2021-02-02 18:30:32
	S94	Standard 94	0.3616			0.361639			ERR	2021-02-02 18:32:43
	S0	Standard 0	0.0228			0.022770			ERR	2021-02-02 18:34:55
	CCV	CCV	-0.0133	mg/L		0.022940			ERR	2021-02-02 18:37:07
	CCB	CCB	-0.0451	mg/L		0.021127			ERR	2021-02-02 18:39:19
3	U1	ICV TOXN	3.0189	mg/L		0.195679			ERR	2021-02-02 18:41:31
4	U2	ICB TOXN	-0.0268	mg/L		0.022174			ERR	2021-02-02 18:43:43
5	U3	210202A Blk TOXN	-0.0397	mg/L		0.021438			ERR	2021-02-02 18:45:56
6	U4	210202A Blk_S TOXN	0.2370	mg/L		0.037201			ERR	2021-02-02 18:48:08
7	U5	210202A LCS TOXN	3.0453	mg/L		0.197183			ERR	2021-02-02 18:50:20
8	U6	210202A LCSD TOXN	3.0241	mg/L		0.195975			ERR	2021-02-02 18:52:32
9	U7	210202A LCS_S TOXN	2.8302	mg/L		0.184929			ERR	2021-02-02 18:54:44
10	U8	1 ppm TOXN	0.9586	mg/L		0.078309			ERR	2021-02-02 18:56:56
11	U9	BA26001W12 pH 6.91	0.6618	mg/L		0.061399			ERR	2021-02-02 18:59:09
12	U10	BA26006W08 pH 7.84	-0.0290	mg/L		0.022047			ERR	2021-02-02 19:01:21
	CCV	CCV	-0.0290	mg/L		0.022047			ERR	2021-02-02 19:03:34
	CCB	CCB	-0.0265	mg/L		0.022188			ERR	2021-02-02 19:05:47
13	U11	BA26013W08 pH 7.27	1.3938	mg/L		0.103103			ERR	2021-02-02 19:08:00
14	U12	BA26016W08 pH 7.51	0.4451	mg/L		0.049056			ERR	2021-02-02 19:10:12
15	U13	BA26165W02 pH 6.44	0.1770	mg/L		0.033781			ERR	2021-02-02 19:12:25
16	U14	BA26166W02 pH 6.17	0.0533	mg/L		0.026734			ERR	2021-02-02 19:14:38
17	U15	BA26167W02 pH 6.89	0.0987	mg/L		0.029320			ERR	2021-02-02 19:16:50
18	U16	BA26168W02 pH 6.05	0.0848	mg/L		0.028528			ERR	2021-02-02 19:19:03

19	U17	BA26169W02 pH 6.24	0.0252	mg/L	0.025133	ERR	2021-02-02 19:21:15
20	U18	BA26170W02 pH 6.10	0.4438	mg/L	0.048981	ERR	2021-02-02 19:23:27
21	U19	BA26171W02 pH 6.46	0.0545	mg/L	0.026806	ERR	2021-02-02 19:25:39
22	U20	BA26172W02 pH 5.79	0.0724	mg/L	0.027824	ERR	2021-02-02 19:27:51
	CCV	CCV	-0.0255	mg/L	0.022245	ERR	2021-02-02 19:30:04
	CCB	CCB	-0.0506	mg/L	0.020816	ERR	2021-02-02 19:32:18
23	U21	BA26173W02 pH 7.39	0.3494	mg/L	0.043602	ERR	2021-02-02 19:33:26
24	U22	BA26174W02 pH 7.32	0.1177	mg/L	0.030402	ERR	2021-02-02 19:34:22
25	U23	BA26175W02 pH 5.99	0.2329	mg/L	0.036967	ERR	2021-02-02 19:35:18
26	U24	BA26176W02 pH 6.41	0.2242	mg/L	0.036468	ERR	2021-02-02 19:36:14
27	U25	BA26160W08 pH 8.01	0.6790	mg/L	0.062378	ERR	2021-02-02 19:37:10
28	U26	BA26163W08 pH 5.69	1.8494	mg/L	0.129053	ERR	2021-02-02 19:38:06
29	U27	BA26092M01	0.0177	mg/L	0.024705	ERR	2021-02-02 19:39:02
	CCV	CCV	-0.0320	mg/L	0.021877	ERR	2021-02-02 19:39:58
	CCB	CCB	-0.0474	mg/L	0.020999	ERR	2021-02-02 19:40:55
	CCV	CCV	2.9727	mg/L	0.193045		2021-02-03 09:27:41
	CCB	CCB	-0.0305	mg/L	0.021962		2021-02-03 09:29:57
5	U3	210202A Blk TOXN	-0.0422	mg/L	0.021296	ERR	2021-02-03 09:32:12
6	U4	210202A Blk_S TOXN	0.0873	mg/L	0.028672	ERR	2021-02-03 09:34:27
7	U5	210202A LCS TOXN	3.2943	mg/L	0.211367	ERR	2021-02-03 09:36:44
8	U6	210202A LCSD TOXN	3.4024	mg/L	0.217524	ERR	2021-02-03 09:39:02
9	U7	210202A LCS_S TOXN	3.2406	mg/L	0.208310	ERR	2021-02-03 09:41:21
10	U8	1 ppm TOXN	1.0857	mg/L	0.085547	ERR	2021-02-03 09:43:39
11	U9	BA26001W12 pH 6.91	0.7779	mg/L	0.068012	ERR	2021-02-03 09:45:58
12	U10	BA26006W08 pH 7.84	-0.0292	mg/L	0.022033	ERR	2021-02-03 09:48:17
	CCV	CCV	3.0182	mg/L	0.195637	ERR	2021-02-03 09:50:36
	CCV	CCV	3.0673	mg/L	0.198436		2021-02-03 10:18:21
	CCB	CCB	-0.0357	mg/L	0.021664		2021-02-03 10:20:37
5	U3	210202A Blk TOXN	-0.0422	mg/L	0.021296	ERR	2021-02-03 10:22:53
6	U4	210202A Blk_S TOXN	0.0722	mg/L	0.027810	ERR	2021-02-03 10:25:07
7	U5	210202A LCS TOXN	3.4808	mg/L	0.221992	ERR	2021-02-03 10:27:21
	CCV	CCV	3.0747	mg/L	0.198861		2021-02-03 10:59:33
	CCB	CCB	0.0179	mg/L	0.024719		2021-02-03 11:01:48
5	U3	210202A Blk TOXN	0.0324	mg/L	0.025547	ERR	2021-02-03 11:04:01
6	U4	210202A Blk_S TOXN	1.1691	mg/L	0.030359	ERR	2021-02-03 11:06:14
7	U5	210202A LCS TOXN	3.0905	mg/L	0.199756	ERR	2021-02-03 11:08:26
8	U6	210202A LCSD TOXN	3.1148	mg/L	0.201145	ERR	2021-02-03 11:10:39
9	U7	210202A LCS_S TOXN	33.2356	mg/L	0.213036	ERR	2021-02-03 11:12:51
11	U9	BA26001W12 pH 6.91	0.8211	mg/L	0.070477	ERR	2021-02-03 11:15:04
12	U10	BA26006W08 pH 7.84	0.0387	mg/L	0.025904	ERR	2021-02-03 11:17:17
	CCV	CCV	3.0022	mg/L	0.194729	ERR	2021-02-03 11:19:30
	CCB	CCB	0.0342	mg/L	0.025647	ERR	2021-02-03 11:21:43
13	U11	BA26013W08 pH 7.27	1.7901	mg/L	0.125676	ERR	2021-02-03 11:23:56
14	U12	BA26016W08 pH 7.51	0.5894	mg/L	0.057277	ERR	2021-02-03 11:26:08
15	U13	BA26165W02 pH 6.44	0.2781	mg/L	0.039541	ERR	2021-02-03 11:28:22
16	U14	BA26166W02 pH 6.17	0.1058	mg/L	0.029724	ERR	2021-02-03 11:30:34
17	U15	BA26167W02 pH 6.89	0.1946	mg/L	0.034787	ERR	2021-02-03 11:32:47
18	U16	BA26168W02 pH 6.05	0.1446	mg/L	0.031936	ERR	2021-02-03 11:35:00
19	U17	BA26169W02 pH 6.24	0.0929	mg/L	0.028989	ERR	2021-02-03 11:37:11
20	U18	BA26170W02 pH 6.10	0.5948	mg/L	0.057584	ERR	2021-02-03 11:39:24
21	U19	BA26171W02 pH 6.46	0.1032	mg/L	0.029580	ERR	2021-02-03 11:41:35
22	U20	BA26172W02 pH 5.79	0.1543	mg/L	0.032487	ERR	2021-02-03 11:43:47
	CCV	CCV	3.1737	mg/L	0.204497	ERR	2021-02-03 11:46:00
	CCB	CCB	0.0314	mg/L	0.025490	ERR	2021-02-03 11:48:14
23	U21	BA26173W02 pH 7.39	0.4343	mg/L	0.048439	ERR	2021-02-03 11:50:27
24	U22	BA26174W02 pH 7.32	0.2249	mg/L	0.036512	ERR	2021-02-03 11:52:41
25	U23	BA26175W02 pH 5.99	0.3235	mg/L	0.042130	ERR	2021-02-03 11:54:53
26	U24	BA26176W02 pH 6.41	0.3449	mg/L	0.043349	ERR	2021-02-03 11:57:07
27	U25	BA26160W08 pH 8.01	0.8297	mg/L	0.070968	ERR	2021-02-03 11:59:19
28	U26	BA26163W08 pH 5.69	2.2110	mg/L	0.149658	ERR	2021-02-03 12:01:33
29	U27	BA26092M01	152.3789	mg/L	0.027164	ERR	2021-02-03 12:02:40
	CCV	CCV	3.1820	mg/L	0.204972	ERR	2021-02-03 12:03:36
	CCB	CCB	0.0084	mg/L	0.024178	ERR	2021-02-03 12:04:33
	CCV	CCV	3.0804	mg/L	0.199181		2021-02-03 12:05:30
	CCB	CCB	0.0184	mg/L	0.024748		2021-02-03 12:06:27
	CCV	CCV	3.1058	mg/L	0.200632		2021-02-03 12:07:25
	CCB	CCB	0.0077	mg/L	0.024135		2021-02-03 12:08:22
	CCV	CCV	3.0856	mg/L	0.199479		2021-02-03 12:09:20
	CCB	CCB	0.0254	mg/L	0.025147		2021-02-03 12:10:17

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3/TOXN

Prep Date: 02/02/21

Exp Date: 02/09/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

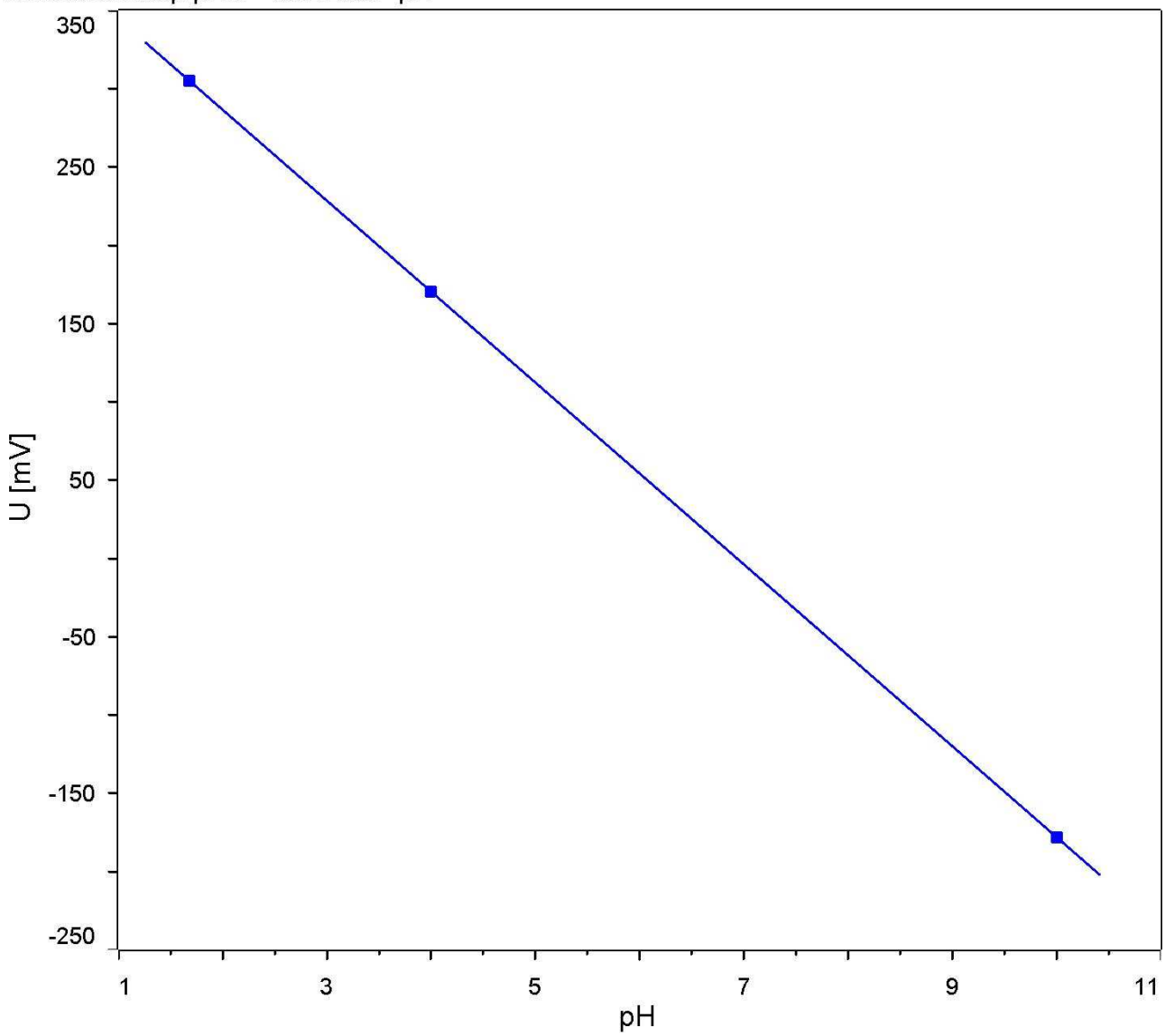
Timao Calibration Curve

2021-02-01 16:12:58

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0423	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.93	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.931	
Res19	21.1	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.1171	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA26302W01	2021-02-01 18:21:52 UTC-8	Alkalinity	0.000	4.680	0.00	0.00	187.20	187.20	mg/L	25 mL	0.0200	210201A	AR
BA26163W07	2021-02-01 18:15:11 UTC-8	Alkalinity	0.000	4.020	0.00	0.00	160.80	160.80	mg/L	25 mL	0.0200	210201A	AR
BA26160W07	2021-02-01 18:10:33 UTC-8	Alkalinity	0.000	2.054	0.00	0.00	82.16	82.16	mg/L	25 mL	0.0200	210201A	AR
BA26016W07	2021-02-01 18:06:16 UTC-8	Alkalinity	0.000	1.606	0.00	0.00	64.24	64.24	mg/L	25 mL	0.0200	210201A	AR
BA26013W07	2021-02-01 17:56:22 UTC-8	Alkalinity	0.000	6.936	0.00	0.00	277.44	277.44	mg/L	25 mL	0.0200	210201A	AR
BA26006W07	2021-02-01 17:48:33 UTC-8	Alkalinity	0.000	4.734	0.00	0.00	189.36	189.36	mg/L	25 mL	0.0200	210201A	AR
BA26001W11	2021-02-01 17:44:23 UTC-8	Alkalinity	0.000	1.564	0.00	0.00	62.56	62.56	mg/L	25 mL	0.0200	210201A	AR
BA25870W07	2021-02-01 17:39:46 UTC-8	Alkalinity	0.000	1.914	0.00	0.00	76.56	76.56	mg/L	25 mL	0.0200	210201A	AR
BA25867W07	2021-02-01 17:34:53 UTC-8	Alkalinity	0.000	2.030	0.00	0.00	81.20	81.20	mg/L	25 mL	0.0200	210201A	AR
210201A LCSD	2021-02-01 17:26:12 UTC-8	Alkalinity	0.272	6.292	0.00	21.76	229.92	251.68	mg/L	25 mL	0.0200	210201A	AR
210201A LCS	2021-02-01 17:16:36 UTC-8	Alkalinity	0.278	6.460	0.00	22.24	236.16	258.40	mg/L	25 mL	0.0200	210201A	AR
210201A BLK	2021-02-01 17:13:35 UTC-8	Alkalinity	0.000	0.086	0.00	0.00	3.44	3.44	mg/L	25 mL	0.0200	210201A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA
ORP standard	Thermo Fisher Scientific	mV	NA	WZ1-40222	01/11/19	1/31/20	20mL	20mL	ORP STD	220mV

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

February 19, 2021

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Brooke Gottmeier

Title: Report of Data: Case 94920

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Gottmeier:

Four water samples were received January 28, 2021. Written results for the requested analyses are being provided on this February 19, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 94920
TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

Case Narrative	3
Sample Management Records	7
Sample Results	14
QC Forms	39
Method 8015B Calibration Data	109
Method 8015B Raw Data	138
Method 8270D Calibration Data	156
Method 8270D Raw Data	204
Method 8270D SIM Calibration Data	230
Method 8270D SIM Raw Data	257
APPL SOP 2-MEE Calibration Data	281
APPL SOP 2-MEE Raw Data	308
Method 8260B Calibration Data	332
Method 8260B Raw Data	415
Method 8260B GRO Calibration Data	434
Method 8260B GRO Raw Data	487
Method RSK-175 Calibration Data	513
Method RSK-175 Raw Data	541
Method 300 Calibration Data	558
Method 300 Raw Data	609
Inorganic Analyses and Calibration Raw Data	620

CASE NARRATIVE

Case Narrative

ARF: 94920

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Four water samples were received January 28, 2021 at 3.0°C, 3.0°C, and 4.0°C. The sample group was assigned Analytical Request Form (ARF) number 94920.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the sample was extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the sample was extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the sample was extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the sample was allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 8260B: One surrogate recovered above the upper control limit in one sample. No target analytes were detected in the associated samples.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
94920	01/28/21	ERH1225	BA26159	01/26/21 12:30:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94920	01/28/21	ERH1225	BA26159	01/26/21 12:30:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94920	01/28/21	ERH1225	BA26159	01/26/21 12:30:00 PM	WATER	RSK 175	METHANE BY RSK 175
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	SM3500FeB	Ferrous Iron
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	RSK 175	METHANE BY RSK 175
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94920	01/28/21	ERH1226	BA26160	01/26/21 12:50:00 PM	WATER	SW846 9060A	9060A TOC
94920	01/28/21	ERH1237	BA26162	01/27/21 9:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94920	01/28/21	ERH1237	BA26162	01/27/21 9:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
94920	01/28/21	ERH1237	BA26162	01/27/21 9:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	SM 2320B	Wetlab 2320B - Water
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 300.0	Wetlab 300.0 - Water
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 353.2	WETLAB 353.2 TOXN- WATER
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	SM3500FeB	Ferrous Iron
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 8260B	EPA 8260B BTEX WATER
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 8270D	EPA 8270D WATER
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	EPA 8260B	EPA 8260B GRO WATER
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	RSK 175	METHANE BY RSK 175
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
94920	01/28/21	ERH1238	BA26163	01/27/21 12:00:00 PM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 94921

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Brooke Gottmeier**
Phone: **808-954-4536** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **124,123**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **01/28/21** Time: **10:00**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **3.0,3.0°C**
Color: **VFRG/K-PurYellow**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **02/04/21**

vL

Comments:
PM: login and F1s to Margie.Pascua@aecom.com & brooke.gottmeier@aecom.com
PM: For Drinking Water DOC, use $5310CD.
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Report MS/MSD/DUPs when AECOM sample used
Wetlab: EPA 300 (NO3,CL,SO4). EPA 353.2 (TOXN).
8260: BTEX & TPH-G only; 8270 SIM: 1-methylnaphthalene, 2-methylnaphthalene & naphthalene only.
TPH-D/O both with and w/o SGC, reverse surrog for SGC; analyze SGC if detections. For LTM, DO NOT Q-DE
RSK: Methane only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com

Sample Distribution:
GC: 2-$DOC53W5LIQ, 2-$SIM53LIQ51
Extractions: 4-_LIQ003, 4-_LIQ005
VOA: 6-$86BTOTXDOD5W, 6-$GASBL, 6-$GRO86BW
Other: 2-HOLD

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID	APPL ID	Sampled		Analyses Requested
1.	ERH1271	LCSD BA26149W	01/26/21	13:46	$86BTOTXDOD5W, $GASBL, $GRO86BW -- See Comments
2.	ERH1272	LCSD BA26150W	01/26/21	13:55	$86BTOTXDOD5W, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
3.	ERH1273	LCSD BA26152W	01/26/21	13:50	$86BTOTXDOD5W, $GASBL, $GRO86BW, HOLD -- Extract & Hold; See Comments
4.	ERH1274	LCSD BA26154W	01/26/21	14:35	$86BTOTXDOD5W, $GASBL, $GRO86BW -- See Comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

5.	ERH1275	LCSD BA26155W	01/26/21	14:44	$86BTOTXDOD5W, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See Comments
6.	ERH1276	LCSD BA26157W	01/26/21	14:37	$86BTOTXDOD5W, $GASBL, $GRO86BW, HOLD -- Extract & Hold; See Comments

APPL Sample Receipt Form

ARF# **94921**

Sample	Container Type	Count	p
BA26149	[13] VOAs - HCL	3	NA
BA26150	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[39] Amber Liter, HCL prsvd	2	1.6
BA26152	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[39] Amber Liter, HCL prsvd	2	1.6
BA26154	[13] VOAs - HCL	3	NA
BA26155	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[39] Amber Liter, HCL prsvd	1	3
	[39] Amber Liter, HCL prsvd	1	5
BA26157	[13] VOAs - HCL	3	NA
	[17] Amber Liter	2	NA
	[39] Amber Liter, HCL prsvd	2	1.6

Sample	Container Type	Count	p

94921

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 124

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-954-4536	Company Name: AECOM Phone: 512-419-6709
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Brooke Gottmeier	Attn: Sheree Smith
Email: brooke.gottmeier@aecom.com	Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): EC
Sampler (Signature):

Date Shipped: 1/27/21
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1271	Trip Blank	1/26/21	1346	HST	0	X			X														Analyze
ERH1272	Potable	1/26/21	1355	HST	4	X			X		X	X*	X										ambient if
ERH1273	Ambient	1/26/21	1390	HST	4	X			X		X	X*	X										Potable is
ERH1274	Trip Blank	1/26/21	1435	HST	0	X			X														detect
ERH1275	Potable	1/26/21	1444	HST	0	X			X		X	X*	X										
ERH1276	Ambient	1/26/21	1437	HST	0	X			X		X	X*	X										

BB 1/27/21

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: 3.0/3.0°C R1 @ 3.0/3.0°C

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: (AECOM)	Date 1/27/21	Time 1430	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 1/28/21	Time 1000	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 123

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-954-4536

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Brooke Gottmeier

Email: brooke.gottmeier@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 512-419-6709

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Sheree Smith

Email: sheree.smith@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Sampler (Print): EC

Purchase Order Number: 102604

Sampler (Signature):

Date Shipped: 1/27/21

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270D SIM PAHs short list	8270D Phenol	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	9060A DOC	
ERH1271	Trip Blank	1/26/21	1346	HST	3	X			X														
ERH1272	Potable	1/26/21	1355	HST	3	X			X		X	X*	X										Analyze ambients if potable is detect
ERH1273	Ambient	1/26/21	1350	HST	3	X			X		X	X*	X										
ERH1274	Trip Blank	1/26/21	1435	HST	3	X			X														
ERH1275	Potable	1/26/21	1444	HST	7	X			X		X	X*	X										
ERH1276	Ambient	1/26/21	1437	HST	7	X			X		X	X*	X										

*Analyze TPH w/SGT only if TPH-d/o detected.

** MS/MSD: 8011, 8015, 8260, 8270, 8270SIM

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
(AECOM)	1/27/21	1430					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					1/28/21	1000	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94921**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 01/28/21

2) Coolers: Number of Coolers: 2

3) YES Were custody seals present and intact?
How many? 4 Name/Date on seal? SEE BELOW

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R1 CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 3.0/3.0 2: 3.0/3.0 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA26149all, BA26154w02-03, BA26155w02-03
Smaller than a pea: BA26150w02-03, BA26152w02-03, BA26155w01, BA26157all

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) No Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC908519
Lab notified if pH was not adequate: extractions to further preserve

Notes/Deficiencies:

CUSTODY SEAL
AECOM (808)521-3051
Initials RB Date 1/27/21

Personnel receiving samples: RB Second reviewer: MA
Personnel labeling samples: MS
Project manager notified: RB Date/Time of notification 01/28/21
Name of client notified: ____ Date/Time of notification ____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	90.2	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	81.9	56-125			%	02/01/21	02/02/21

Quant Method: DOC1218.M
Run #: 201070
Instrument: Apollo
Sequence: 210201
Dilution Factor: 1
Initials: SSE

Printed: 02/09/21 3:49:54 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #DOC53-210201A-260823

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	90.6	60-142			%	02/01/21	02/02/21
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	82.8	56-125			%	02/01/21	02/02/21

Quant Method:	DOC1218.M
Run #:	201071
Instrument:	Apollo
Sequence:	210201
Dilution Factor:	1
Initials:	SSE

Printed: 02/09/21 3:49:54 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	80.6	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	79.6	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	78.0	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	83.2	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	82.8	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	106	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y164
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 2:44:40 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #87DC5-210129A-260802

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	81.9	43-140			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	79.1	44-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	79.0	19-119			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	84.9	44-120			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: PHENOL-D6 (S)	84.7	10-115			%	01/29/21	02/01/21
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	105	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y165
Instrument: Yoda
Sequence: Y210105
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 2:44:40 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	86.2	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	91.7	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L088
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 5:21:46 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #SIM53-210129A-260807

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	81.0	39-114			%	01/29/21	02/01/21
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	88.5	58-120			%	01/29/21	02/01/21

Quant Method: L0118.M
Run #: 0118L089
Instrument: Linus
Sequence: L210118
Dilution Factor: 1
Initials: MA

Printed: 02/02/21 5:21:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1226

Sample Collection Date: 01/26/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94920

APPL ID: BA26160

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K069
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 02/03/21 2:58:22 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1238

Sample Collection Date: 01/27/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94920

APPL ID: BA26163

QCG: #87DME-210201A-260816

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:	KMEE0125.M
Run #:	0125K070
Instrument:	KYLO
Sequence:	210125M
Dilution Factor:	1
Initials:	MA

Printed: 02/03/21 2:58:22 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1225

APPL ID: BA26159

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	108	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	120 #	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/29/21	01/29/21

= Recovery (or RPD) is outside QC limits.

Quant Method:	M0128W.M
Run #:	0129M09
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

Printed: 02/05/21 11:00:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	116	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	105	89-112			%	01/29/21	01/29/21

Quant Method: M0128W.M
Run #: 0129M10
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

Printed: 02/05/21 11:00:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1237

APPL ID: BA26162

Sample Collection Date: 01/27/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.4	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	113	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	01/29/21	01/29/21

Quant Method: M0128W.M
Run #: 0129M11
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

Printed: 02/05/21 11:00:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #86BTO-210129AM-260845

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	106	81-118			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	117	80-119			%	01/29/21	01/29/21
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	89-112			%	01/29/21	01/29/21

Quant Method: M0128W.M
Run #: 0129M12
Instrument: Max
Sequence: 210128
Dilution Factor: 1
Initials: SSE

Printed: 02/05/21 11:00:52 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1225

APPL ID: BA26159

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M09
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

Printed: 02/05/21 11:03:48 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	101	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M10
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

Printed: 02/05/21 11:03:48 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1237

APPL ID: BA26162

Sample Collection Date: 01/27/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.4	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M11
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

Printed: 02/05/21 11:03:48 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #GRO86-210129AM-260846

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100.0	85-114			%	01/29/21	01/29/21

Quant Method:	MGAS0128.M
Run #:	0129M12
Instrument:	Max
Sequence:	210128
Dilution Factor:	1
Initials:	SSE

Printed: 02/05/21 11:03:48 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1225

APPL ID: BA26159

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R16
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 2:57:18 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R17
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 2:57:18 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1237

APPL ID: BA26162

Sample Collection Date: 01/27/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R18
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 94920

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

QCG: #RSKME-210201A-260777

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method:	RSK0914A.M
Run #:	0201R19
Instrument:	Rocky
Sequence:	200914
Dilution Factor:	1
Initials:	LSI

Printed: 02/01/21 2:57:18 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

ARF: 94920

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	134	5.0	1.00	0.40	mg/L	5	02/04/21	02/04/21
EPA 300.0	NITRATE	1.3	0.5	0.18	0.04	mg/L	1	01/28/21	01/28/21
EPA 300.0	SULFATE	15.4	1.0	0.20	0.09	mg/L	1	01/28/21	01/28/21

Printed: 02/04/21 3:19:24 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

ARF: 94920

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	1230	40.0	8.00	3.20	mg/L	40	02/04/21	02/04/21
EPA 300.0	SULFATE	351	40.0	8.00	3.60	mg/L	40	02/04/21	02/04/21
EPA 300.0	NITRATE	2.6	0.5	0.18	0.04	mg/L	1	01/28/21	01/28/21

Printed: 02/04/21 3:19:24 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1226

APPL ID: BA26160

Sample Collection Date: 01/26/21

ARF: 94920

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	0.83	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	82.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	82.2	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	0.51 J	0.93	0.350	0.130	mg/L	1	01/30/21	01/30/21

J = Estimated value.

Printed: 02/04/21 2:50:37 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Brooke Gottmeier

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1238

APPL ID: BA26163

Sample Collection Date: 01/27/21

ARF: 94920

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE AS N	2.2	0.10	0.090	0.028	mg/L	1	02/03/21	02/03/21
SM 2320B	BICARBONATE AS CACO3	161	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM 2320B	TOTAL ALKALINITY AS CACO	161	2.0	1.70	0.85	mg/L	1	02/01/21	02/01/21
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	02/02/21	02/02/21
SW846 9060A	TOTAL ORGANIC CARBON	0.51 J	0.93	0.350	0.130	mg/L	1	01/30/21	01/30/21

J = Estimated value.

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APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210201A-BLK	Blank	60-142	89.5		56-125	81.4	
210201A-LCS	Lab Control Spike	60-142	88.7		56-125	89.3	
BA26160	ERH1226	60-142	90.2		56-125	81.9	
BA26163	ERH1238	60-142	90.6		56-125	82.8	

Comments: Batch: #DOC53-210201A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/02/21
Matrix:	WATER	Instrument:	Apollo
Blank ID:	210201A-BLK	Time Analyzed:	1455

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	201052	02/02/21 1455
210201A-LCS	Lab Control Spike	201053	02/02/21 1523
BA26160	ERH1226	201070	02/02/21 2322
BA26163	ERH1238	201071	02/02/21 2351

Comments: Batch: #DOC53-210201A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **210201W-26001 - 260823**
Batch ID: #DOC53-210201A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	02/01/21	02/02/21
BLANK	SURROGATE: OCTACOSANE (S)	89.5	60-142			%	02/01/21	02/02/21
BLANK	SURROGATE: ORTHO-TERPHEN	81.4	56-125			%	02/01/21	02/02/21

Quant Method: DOC1218.M
Run #: 201052
Instrument: Apollo
Sequence: 210201
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/09/21 3:50:00 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/02/21
Matrix:	WATER	Instrument:	Apollo
LCS ID:	210201A-LCS	Time Analyzed:	1523

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	201052	02/02/21 1455
210201A-LCS	Lab Control Spike	201053	02/02/21 1523
BA26160	ERH1226	201070	02/02/21 2322
BA26163	ERH1238	201071	02/02/21 2351

Comments: Batch: #DOC53-210201A

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **210201W-26001 LCS - 260823**
Batch ID: #DOC53-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	2000	1700	85.0	36-132
OIL (C24-C40)	2000	1770	88.5	41-113
SURROGATE: OCTACOSANE (S)	150	133	88.7	60-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	56-125

Comments:

Primary	SPK
Quant Method :	DOC1218.M
Extraction Date :	02/01/21
Analysis Date :	02/02/21
Instrument :	Apollo
Run :	201053
Initials :	SSE

Printed: 02/09/21 3:49:44 PM
APPL Standard LCS

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	43-140	80.5		44-119	77.5	
210129A-LCS	Lab Control Spike	43-140	83.5		44-119	76.9	
BA26160	ERH1226	43-140	80.6		44-119	79.6	
BA26163	ERH1238	43-140	81.9		44-119	79.1	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	19-119	77.8		44-120	82.1	
210129A-LCS	Lab Control Spike	19-119	82.5		44-120	82.5	
BA26160	ERH1226	19-119	78.0		44-120	83.2	
BA26163	ERH1238	19-119	79.0		44-120	84.9	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	10-115	79.5		50-134	102	
210129A-LCS	Lab Control Spike	10-115	81.5		50-134	98.0	
BA26160	ERH1226	10-115	82.8		50-134	106	
BA26163	ERH1238	10-115	84.7		50-134	105	

Comments: Batch: #87DC5-210129A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Yoda
Blank ID:	210129A-BLK	Time Analyzed:	1540

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0105Y149	02/01/21 1540
210129A-LCS	Lab Control Spike	0105Y153	02/01/21 1723
BA26160	ERH1226	0105Y164	02/01/21 2205
BA26163	ERH1238	0105Y165	02/01/21 2231

Comments: Batch: #87DC5-210129A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-26001 - 260802**
Batch ID: #87DC5-210129A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	01/29/21	02/01/21
BLANK	SURROGATE: 2,4,6-TRIBROMOP	80.5	43-140			%	01/29/21	02/01/21
BLANK	SURROGATE: 2-FLUORBIPHENY	77.5	44-119			%	01/29/21	02/01/21
BLANK	SURROGATE: 2-FLUOROPHENO	77.8	19-119			%	01/29/21	02/01/21
BLANK	SURROGATE: NITROBENZENE-	82.1	44-120			%	01/29/21	02/01/21
BLANK	SURROGATE: PHENOL-D6 (S)	79.5	10-115			%	01/29/21	02/01/21
BLANK	SURROGATE: TERPHENYL-D14 (	102	50-134			%	01/29/21	02/01/21

Quant Method: Y0105.M
Run #: 0105Y149
Instrument: Yoda
Sequence: Y210105
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 2:44:39 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Yoda
LCS ID:	210129A-LCS	Time Analyzed:	1723

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0105Y149	02/01/21 1540
210129A-LCS	Lab Control Spike	0105Y153	02/01/21 1723
BA26160	ERH1226	0105Y164	02/01/21 2205
BA26163	ERH1238	0105Y165	02/01/21 2231

Comments: Batch: #87DC5-210129A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **210129W-26001 LCS - 260802**
Batch ID: #87DC5-210129A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	50.0	40.1	80.2	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	200	167	83.5	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	100	76.9	76.9	44-119
SURROGATE: 2-FLUOROPHENOL (S)	200	165	82.5	19-119
SURROGATE: NITROBENZENE-D5 (S)	100	82.5	82.5	44-120
SURROGATE: PHENOL-D6 (S)	200	163	81.5	10-115
SURROGATE: TERPHENYL-D14 (S)	100	98.0	98.0	50-134

Comments:

Primary	SPK
Quant Method :	Y0105.M
Extraction Date :	01/29/21
Analysis Date :	02/01/21
Instrument :	Yoda
Run :	0105Y153
Initials :	MA

Printed: 02/02/21 2:44:42 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0105Y002.D

SDG No:
Date Analyzed: 01/05/21
Instrument: Yoda
Time Analyzed: 11:04

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/mL 8270 01/05/21	0105Y003.D	01/05/21 11:25
2		5ug/mL 8270 01/05/21	0105Y004.D	01/05/21 11:50
3		10ug/mL 8270 01/05/2	0105Y005.D	01/05/21 12:15
4		20ug/mL 8270 01/05/2	0105Y006.D	01/05/21 12:40
5		40ug/mL 8270 01/05/2	0105Y007.D	01/05/21 13:06
6		50ug/mL 8270 01/05/2	0105Y008.D	01/05/21 13:31
7		60ug/mL 8270 01/05/2	0105Y009.D	01/05/21 13:56
8		80ug/mL 8270 01/05/2	0105Y010.D	01/05/21 14:21
9		100ug/mL 8270 01/05/	0105Y011.D	01/05/21 14:46
10		SS 50ug/mL 8270 01/0	0105Y012.D	01/05/21 15:11
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	29.8
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	48.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.5
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	10.6
442	50 - 500% of mass 198	100.2
443	15 - 24% of mass 442	19.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94920
Case No: 94920 Date Analyzed: 02/01/21
Matrix: Water Instrument: Yoda
ID: 0105Y147.D Time Analyzed: 14:59

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/mL 8270 01/05/2	0105Y148.D	02/01/21 15:15
2	Blank	210129A BLK 1/1000	0105Y149.D	02/01/21 15:40
3	Lab Control Spike	210129A LCS-1 1/1000	0105Y153.D	02/01/21 17:23
4	ERH1226	BA26160W12 1/1030	0105Y164.D	02/01/21 22:05
5	ERH1238	BA26163W14 1/1020	0105Y165.D	02/01/21 22:31
6		50ug/mL 8270 08/12/2	0105Y166.D	02/01/21 22:56
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	28.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	45.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.0
275	10 - 60% of mass 198	30.5
365	1 - 100% of mass 198	4.3
441	0.01 - 24% of mass 442	17.2
442	50 - 500% of mass 198	104.0
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y148.D Date Analyzed: 1 Feb 21 15:15

Instrument ID: Yoda Time Analyzed: 1 Feb 21 15:15

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	518055	5.06	2067070	6.47	1300070	8.48
	UPPER LIMIT	1036110	5.23	4134140	6.64	2600140	8.65
	LOWER LIMIT	259028	4.89	1033535	6.30	650035	8.31
	SAMPLE NO.						
01	210129A BLK 1/1000	413306	5.05	1601350	6.46	1016460	8.47
02	210129A LCS-1 1/1000	420096	5.05	1660370	6.46	1051570	8.47
03	BA26160W12 1/1030	456459	5.05	1786610	6.46	1137210	8.47
04	BA26163W14 1/1020	431023	5.05	1712420	6.46	1081610	8.47
05	50ug/mL 8270 08/12/20	597519	5.05	2483140	6.47	1595730	8.48
06							
07							
08							
09							
10							
11							
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16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0105Y148.D Date Analyzed: 1 Feb 21 15:15

Instrument ID: Yoda Time Analyzed: 1 Feb 21 15:15

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2640410	10.21	2697490	13.29	2522970	14.97
	UPPER LIMIT	5280820	10.38	5394980	13.46	5045940	15.14
	LOWER LIMIT	1320205	10.04	1348745	13.12	1261485	14.80
	SAMPLE NO.						
01	210129A BLK 1/1000	2094300	10.20	1896320	13.28	1799000	14.97
02	210129A LCS-1 1/1000	2163010	10.20	2031350	13.28	1789450	14.97
03	BA26160W12 1/1030	2323430	10.20	2099960	13.28	1988630	14.96
04	BA26163W14 1/1020	2238440	10.20	2023800	13.28	1925280	14.96
05	50ug/mL 8270 08/12/20	3256000	10.21	3161600	13.29	2954150	14.97
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129A-BLK	Blank	39-114	84.8		58-120	88.9	
210129A-LCS	Lab Control Spike	39-114	83.4		58-120	88.0	
BA26160	ERH1226	39-114	86.2		58-120	91.7	
BA26163	ERH1238	39-114	81.0		58-120	88.5	

Comments: Batch: #SIM53-210129A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Linus
Blank ID:	210129A-BLK	Time Analyzed:	1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0118L074	02/01/21 1544
210129A-LCS	Lab Control Spike	0118L075	02/01/21 1606
BA26160	ERH1226	0118L088	02/01/21 2053
BA26163	ERH1238	0118L089	02/01/21 2115

Comments: Batch: #SIM53-210129A

Method Blank
EPA 8270D SIM LIQ-LIQ

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-26001 - 260807**
Batch ID: #SIM53-210129A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	01/29/21	02/01/21
BLANK	SURROGATE: 2-METHYLNAPHT	84.8	39-114			%	01/29/21	02/01/21
BLANK	SURROGATE: FLUORANTHENE-	88.9	58-120			%	01/29/21	02/01/21

Quant Method:L0118.M
Run #:0118L074
Instrument:Linus
Sequence:L210118
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/02/21 5:21:46 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Linus
LCS ID:	210129A-LCS	Time Analyzed:	1606

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129A-BLK	Blank	0118L074	02/01/21 1544
210129A-LCS	Lab Control Spike	0118L075	02/01/21 1606
BA26160	ERH1226	0118L088	02/01/21 2053
BA26163	ERH1238	0118L089	02/01/21 2115

Comments: Batch: #SIM53-210129A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **210129W-26001 LCS - 260807**
Batch ID: #SIM53-210129A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	5.00	4.12	82.4	41-115
2-METHYLNAPHTHALENE	5.00	4.11	82.2	39-114
NAPHTHALENE	5.00	4.04	80.8	43-114
SURROGATE: 2-METHYLNAPHTHALEN	5.00	4.17	83.4	39-114
SURROGATE: FLUORANTHENE-D10 (S)	5.00	4.40	88.0	58-120

Comments:

Primary	SPK
Quant Method :	L0118.M
Extraction Date :	01/29/21
Analysis Date :	02/01/21
Instrument :	Linus
Run :	0118L075
Initials :	MA

Printed: 02/02/21 5:21:51 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0118L002.D

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Time Analyzed: 11:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 01/15/21	0118L003.D	01/18/21 11:33
2		0.2 SIM 01/15/21	0118L004.D	01/18/21 11:55
3		0.5 SIM 01/15/21	0118L005.D	01/18/21 12:17
4		1 SIM 01/15/21	0118L006.D	01/18/21 12:39
5		5 SIM 01/15/21	0118L007.D	01/18/21 13:01
6		10 SIM 01/15/21	0118L008.D	01/18/21 13:23
7		50 SIM 01/15/21	0118L009.D	01/18/21 13:45
8		100 SIM 01/15/21	0118L010.D	01/18/21 14:07
9		SS SIM 01/15/21	0118L011.D	01/18/21 14:29
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	38.7
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	55.7
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	24.3
365	1 - 100% of mass 198	3.3
441	0.01 - 24% of mass 442	16.3
442	50 - 500% of mass 198	80.9
443	15 - 24% of mass 442	20.1

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 94920
Matrix: Water
ID: 0118L071.D

SDG No: 94920
Date Analyzed: 02/01/21
Instrument: Linus
Time Analyzed: 14:44

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 01/15/21	0118L072.D	02/01/21 15:00
2	Blank	210129A BLK 1/1000	0118L074.D	02/01/21 15:44
3	Lab Control Spike	210129A LCS-2 1/1000	0118L075.D	02/01/21 16:06
4	ERH1226	BA26160W12 1/1030	0118L088.D	02/01/21 20:53
5	ERH1238	BA26163W14 1/1020	0118L089.D	02/01/21 21:15
6		5 SIM 01/15/21	0118L090.D	02/01/21 21:37
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	39.0
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	54.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	25.0
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	15.6
442	50 - 500% of mass 198	93.2
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L072.D Date Analyzed: 1 Feb 21 15:00

Instrument ID: Linus Time Analyzed: 1 Feb 21 15:00

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	66665	4.25	33162	6.25	59700	7.98
	UPPER LIMIT	133330	4.42	66324	6.42	119400	8.15
	LOWER LIMIT	33333	4.08	16581	6.08	29850	7.81
	SAMPLE NO.						
01	210129A BLK 1/1000	66632	4.25	31782	6.25	59744	7.98
02	210129A LCS-2 1/1000	67204	4.25	31665	6.25	60381	7.98
03	BA26160W12 1/1030	69085	4.25	32802	6.25	62729	7.98
04	BA26163W14 1/1020	70878	4.25	33938	6.25	63560	7.98
05	5 SIM 01/15/21	67763	4.25	32122	6.25	57990	7.98
06							
07							
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14							
15							
16							
17							
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20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0118L072.D Date Analyzed: 1 Feb 21 15:00

Instrument ID: Linus Time Analyzed: 1 Feb 21 15:00

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	72038	11.12	66209	13.57		
	UPPER LIMIT	144076	11.29	132418	13.74		
	LOWER LIMIT	36019	10.95	33105	13.40		
	SAMPLE NO.						
01	210129A BLK 1/1000	67854	11.12	62412	13.56		
02	210129A LCS-2 1/1000	72838	11.12	68395	13.56		
03	BA26160W12 1/1030	75309	11.12	73953	13.56		
04	BA26163W14 1/1020	76761	11.12	75064	13.56		
05	5 SIM 01/15/21	70197	11.12	68908	13.56		
06							
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16							
17							
18							
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20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/02/21

Matrix: WATER Instrument: KYLO

Blank ID: 210201A-BLK Time Analyzed: 1232

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	0125K059	02/02/21 1232
210201A-LCS	Lab Control Spike	0125K060	02/02/21 1253
BA26160	ERH1226	0125K069	02/02/21 1707
BA26163	ERH1238	0125K070	02/02/21 1728

Comments: Batch: #87DME-210201A

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26001 - 260816**
Batch ID: #87DME-210201A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	02/01/21	02/02/21

Quant Method:KMEE0125.M
Run #:0125K059
Instrument:KYLO
Sequence:210125M
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 02/03/21 2:58:50 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/02/21
Matrix:	WATER	Instrument:	KYLO
LCS ID:	210201A-LCS	Time Analyzed:	1253

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	0125K059	02/02/21 1232
210201A-LCS	Lab Control Spike	0125K060	02/02/21 1253
BA26160	ERH1226	0125K069	02/02/21 1707
BA26163	ERH1238	0125K070	02/02/21 1728

Comments: Batch: #87DME-210201A

Laboratory Control Spike Recovery
EPA 8270D MODIFIED WATER

APPL ID: **210201W-26001 LCS - 260816**
Batch ID: #87DME-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	73.4	91.8	30-130

Comments:

Primary	SPK
Quant Method :	KMEE0125.M
Extraction Date :	02/01/21
Analysis Date :	02/02/21
Instrument :	KYLO
Run :	0125K060
Initials :	MA

Printed: 02/03/21 2:58:15 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0125K002.D

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Time Analyzed: 12:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2MEE 500 5/1/20	0125K003.D	01/25/21 12:45
2		2MEE 50 5/1/20	0125K004.D	01/25/21 13:07
3		2MEE 100 5/1/20	0125K005.D	01/25/21 13:27
4		2MEE 200 5/1/20	0125K006.D	01/25/21 13:54
5		2MEE 400 5/1/20	0125K007.D	01/25/21 14:14
6		2MEE 600 5/1/20	0125K008.D	01/25/21 14:35
7		2MEE 800 5/1/20	0125K009.D	01/25/21 14:56
8		2MEE 1000 5/1/20	0125K010.D	01/25/21 15:17
9		2MEE SS 5/1/20	0125K011.D	01/25/21 15:38
10				
11				
12				
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17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	31.5
68	0 - 2.04% of mass 69	1.8
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	53.0
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	28.5
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	13.7
442	50 - 500% of mass 198	124.2
443	15 - 24% of mass 442	18.4

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94920
Case No: 94920 Date Analyzed: 02/02/21
Matrix: Water Instrument: KYLO
ID: 0125K057.D Time Analyzed: 11:37

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		2 MEE 500 1/26/21 (2	0125K058.D	02/02/21 12:08
2	Blank	210201A BLK 2/500	0125K059.D	02/02/21 12:32
3	Lab Control Spike	210201A LCS-1 2/500	0125K060.D	02/02/21 12:53
4	ERH1226	BA26160W11 2/500	0125K069.D	02/02/21 17:07
5	ERH1238	BA26163W11 2/500	0125K070.D	02/02/21 17:28
6		2 MEE 500 1/26/21 (1	0125K071.D	02/02/21 17:49
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14				
15				
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17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	58.3
68	0 - 2.04% of mass 69	2.0
70	0 - 2.04% of mass 69	0.2
127	10 - 80% of mass 198	67.1
197	0 - 2% of mass 198	0.3
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	22.4
365	1 - 100% of mass 198	2.4
441	0.01 - 24% of mass 442	14.0
442	50 - 500% of mass 198	62.1
443	15 - 24% of mass 442	19.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0125K058.D Date Analyzed: 2 Feb 21 12:08

Instrument ID: KYLO Time Analyzed: 2 Feb 21 12:08

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	158559	5.32					
	UPPER LIMIT	317118	5.49					
	LOWER LIMIT	79280	5.15					
	SAMPLE NO.							
01	210201A BLK 2/500	204607	5.32					
02	210201A LCS-1 2/500	183301	5.32					
03	BA26160W11 2/500	161095	5.32					
04	BA26163W11 2/500	170042	5.32					
05	2 MEE 500 1/26/21 (1)	154456	5.33					
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	81-118	105		85-114	106	
210129AM-BLK	Blank	81-118	109		85-114	104	
BA26159	ERH1225	81-118	108		85-114	101	
BA26160	ERH1226	81-118	103		85-114	101	
BA26162	ERH1237	81-118	102		85-114	98.4	
BA26163	ERH1238	81-118	106		85-114	100	

Comments: Batch: #86BTO-210129AM

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	80-119	116		89-112	105	
210129AM-BLK	Blank	80-119	118		89-112	107	
BA26159	ERH1225	80-119	120	#	89-112	107	
BA26160	ERH1226	80-119	116		89-112	105	
BA26162	ERH1237	80-119	113		89-112	104	
BA26163	ERH1238	80-119	117		89-112	104	

Comments: Batch: #86BTO-210129AM

= Recovery outside of Control Limits on Sample.

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
Blank ID:	210129AM-BLK	Time Analyzed:	1926

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M04	01/29/21 1730
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26159	ERH1225	0129M09	01/29/21 1955
BA26160	ERH1226	0129M10	01/29/21 2024
BA26162	ERH1237	0129M11	01/29/21 2053
BA26163	ERH1238	0129M12	01/29/21 2122

Comments: Batch: #86BTO-210129AM

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **210129W-26001 - 260845**
Batch ID: #86BTO-210129AM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	01/29/21	01/29/21
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	01/29/21	01/29/21
BLANK	SURROGATE: 1,2-DICHLOROET	109	81-118			%	01/29/21	01/29/21
BLANK	SURROGATE: 4-BROMOFLUORO	104	85-114			%	01/29/21	01/29/21
BLANK	SURROGATE: DIBROMOFLUOR	118	80-119			%	01/29/21	01/29/21
BLANK	SURROGATE: TOLUENE-D8 (S)	107	89-112			%	01/29/21	01/29/21

Quant Method:M0128W.M
Run #:0129M08
Instrument:Max
Sequence:210128
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/05/21 11:01:04 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
LCS ID:	210129AM-LCS	Time Analyzed:	1730

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M04	01/29/21 1730
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26159	ERH1225	0129M09	01/29/21 1955
BA26160	ERH1226	0129M10	01/29/21 2024
BA26162	ERH1237	0129M11	01/29/21 2053
BA26163	ERH1238	0129M12	01/29/21 2122

Comments: Batch: #86BTO-210129AM

Laboratory Control Spike Recovery
EPA 8260B BTEX WATER

APPL ID: **210129W-26001 LCS - 260845**
Batch ID: #86BTO-210129AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
BENZENE	10.00	11.5	115	79-120
ETHYLBENZENE	10.00	12.0	120	79-121
TOLUENE	10.00	11.8	118	80-121
XYLENES (TOTAL)	30.0	35.8	119	79-121
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	26.2	105	81-118
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.5	106	85-114
SURROGATE: DIBROMOFLUOROMETH	25.0	29.1	116	80-119
SURROGATE: TOLUENE-D8 (S)	25.0	26.2	105	89-112

Comments:

Primary	SPK
Quant Method :	M0128W.M
Extraction Date :	01/29/21
Analysis Date :	01/29/21
Instrument :	Max
Run :	0129M04
Initials :	SSE

Printed: 02/05/21 11:00:45 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/28/21
Matrix: Water Instrument: Max
ID: 0128M00.D Time Analyzed: 14:41

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 1/28	0128M02.D	01/28/21 17:26
2		0.5ug/L VOC STD 1/28	0128M03.D	01/28/21 17:55
3		1ug/L VOC STD 1/28/2	0128M04.D	01/28/21 18:24
4		2ug/L VOC STD 1/28/2	0128M05.D	01/28/21 18:53
5		5ug/L VOC STD 1/28/2	0128M06.D	01/28/21 19:22
6		10ug/L VOC STD 1/28/	0128M07.D	01/28/21 19:51
7		20ug/L VOC STD 1/28/	0128M08.D	01/28/21 20:20
8		40ug/L VOC STD 1/28/	0128M09.D	01/28/21 20:49
9		100ug/L VOC STD 1/28	0128M10.D	01/28/21 21:19
10		(SS) 10ug/L VOC STD	0128M12.D	01/28/21 22:16
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.6
75	30 - 60.04% of mass 95	44.7
95	100 - 200% of mass 95	100.0
96	5 - 9% of mass 95	6.5
173	0 - 2% of mass 174	0.0
174	50 - 200% of mass 95	110.2
175	5 - 9.02% of mass 174	7.8
176	94.9 - 101% of mass 174	97.2
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94920
Case No: 94920 Date Analyzed: 01/29/21
Matrix: Water Instrument: Max
ID: 0129M00.D Time Analyzed: 15:38

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	210129A CCV/LCS 10ug	0129M04.D	01/29/21 17:30
2	Blank	210129A BLK	0129M08.D	01/29/21 19:26
3	ERH1225	BA26159W01	0129M09.D	01/29/21 19:55
4	ERH1226	BA26160W01	0129M10.D	01/29/21 20:24
5	ERH1237	BA26162W01	0129M11.D	01/29/21 20:53
6	ERH1238	BA26163W01	0129M12.D	01/29/21 21:22
7		Ending CCV 10ug/L 1/	0129M29.D	01/30/21 5:35
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.3
75	30 - 60.04% of mass 95	44.5
95	100 - 200% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.0
174	50 - 200% of mass 95	115.6
175	5 - 9.02% of mass 174	8.0
176	94.9 - 101% of mass 174	97.6
177	5 - 9% of mass 176	6.3

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0129M04.D Date Analyzed: 01/29/21

Instrument ID: Max Time Analyzed: 17:30

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1475870	5.57	1231360	8.84	677527	11.17
	UPPER LIMIT	2951740	5.74	2462720	9.01	1355054	11.34
	LOWER LIMIT	737935	5.40	615680	8.67	338764	11.00
	SAMPLE NO.						
01	210129A BLK	1463100	5.57	1262640	8.84	519641	11.17
02	BA26159W01	1516780	5.57	1300040	8.84	531458	11.17
03	BA26160W01	1505630	5.57	1280220	8.84	529237	11.17
04	BA26162W01	1491870	5.57	1275940	8.84	502180	11.17
05	BA26163W01	1450750	5.57	1234820	8.84	502057	11.17
06	Ending CCV 10ug/L 1/29	1437250	5.57	1188390	8.84	668167	11.17
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 01/29/21

Matrix: WATER Instrument: Max

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
210129AM-LCS	Lab Control Spike	85-114	106				
210129AM-LCSD	Lab Control SpikeD	85-114	102				
210129AM-BLK	Blank	85-114	104				
BA26159	ERH1225	85-114	101				
BA26160	ERH1226	85-114	101				
BA26162	ERH1237	85-114	98.4				
BA26163	ERH1238	85-114	100.0				

Comments: Batch: #GRO86-210129AM

EPA 8260B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
Blank ID:	210129AM-BLK	Time Analyzed:	1926

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M05	01/29/21 1759
210129AM-LCSD	Lab Control SpikeD	0129M07	01/29/21 1857
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26159	ERH1225	0129M09	01/29/21 1955
BA26160	ERH1226	0129M10	01/29/21 2024
BA26162	ERH1237	0129M11	01/29/21 2053
BA26163	ERH1238	0129M12	01/29/21 2122

Comments: Batch: #GRO86-210129AM

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210129W-26001 - 260846**
Batch ID: #GRO86-210129AM

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	01/29/21	01/29/21
BLANK	SURROGATE: 4-BROMOFLUORO	104	85-114			%	01/29/21	01/29/21

Quant Method:MGAS0128.M
Run #:0129M08
Instrument:Max
Sequence:210128
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 02/05/21 11:03:55 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	Max
LCS ID:	210129AM-LCS	Time Analyzed:	1759

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210129AM-LCS	Lab Control Spike	0129M05	01/29/21 1759
210129AM-LCSD	Lab Control SpikeD	0129M07	01/29/21 1857
210129AM-BLK	Blank	0129M08	01/29/21 1926
BA26159	ERH1225	0129M09	01/29/21 1955
BA26160	ERH1226	0129M10	01/29/21 2024
BA26162	ERH1237	0129M11	01/29/21 2053
BA26163	ERH1238	0129M12	01/29/21 2122

Comments: Batch: #GRO86-210129AM

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **210129W-26001 LCS - 260846**
Batch ID: #GRO86-210129AM

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	353	350	118	117	78-122	0.85	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	26.6	25.6	106	102	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	MGAS0128.M	MGAS0128.M
Extraction Date :	01/29/21	01/29/21
Analysis Date :	01/29/21	01/29/21
Instrument :	Max	Max
Run :	0129M05	0129M07
Initials :	SSE	

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Rocky

Blank ID: 210201A-BLK Time Analyzed: 1208

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-LCS	Lab Control Spike	0201R01	02/01/21 1157
210201A-LCSD	Lab Control SpikeD	0201R03	02/01/21 1204
210201A-BLK	Blank	0201R04	02/01/21 1208
BA26159	ERH1225	0201R16	02/01/21 1301
BA26160	ERH1226	0201R17	02/01/21 1306
BA26162	ERH1237	0201R18	02/01/21 1311
BA26163	ERH1238	0201R19	02/01/21 1314

Comments: Batch: #RSKME-210201A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210201W-26001 - 260777**
Batch ID: #RSKME-210201A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	02/01/21	02/01/21

Quant Method: RSK0914A.M
Run #: 0201R04
Instrument: Rocky
Sequence: 200914
Initials: LSI

GC SC-Blank-REG MDLs-DOD
Printed: 02/01/21 2:57:22 PM

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/01/21

Matrix: WATER Instrument: Rocky

LCS ID: 210201A-LCS Time Analyzed: 1157

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-LCS	Lab Control Spike	0201R01	02/01/21 1157
210201A-LCSD	Lab Control SpikeD	0201R03	02/01/21 1204
210201A-BLK	Blank	0201R04	02/01/21 1208
BA26159	ERH1225	0201R16	02/01/21 1301
BA26160	ERH1226	0201R17	02/01/21 1306
BA26162	ERH1237	0201R18	02/01/21 1311
BA26163	ERH1238	0201R19	02/01/21 1314

Comments: Batch: #RSKME-210201A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **210201W-26001 LCS - 260777**
Batch ID: #RSKME-210201A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	85.4	95.6	102	115	72-125	11.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0914A.M	RSK0914A.M
Extraction Date :	02/01/21	02/01/21
Analysis Date :	02/01/21	02/01/21
Instrument :	Rocky	Rocky
Run :	0201R01	0201R03
Initials :	LSI	

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210128A-BLK	Time Analyzed:	1119

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-LCS	Lab Control Spike	1	01/28/21 1104
210128A-BLK	Blank	2	01/28/21 1119
BA26160	ERH1226	3	01/28/21 1150
BA26163	ERH1238	4	01/28/21 1204
210128A-LCSD	Lab Control SpikeD	5	01/28/21 1236

Comments: Batch: #300W-210128A

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/04/21
Matrix:	WATER	Instrument:	Charlie
Blank ID:	210204A-BLK	Time Analyzed:	1216

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210204A-LCS	Lab Control Spike	1	02/04/21 1201
BA26163	ERH1238	10	02/04/21 1415
210204A-LCSD	Lab Control SpikeD	11	02/04/21 1430
210204A-BLK	Blank	2	02/04/21 1216
BA26160	ERH1226	3	02/04/21 1231

Comments: Batch: #300WD-210204A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	01/28/21	01/28/21	#300W-210128A-BA26160
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	01/28/21	01/28/21	#300W-210128A-BA26160
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	02/04/21	02/04/21	#300WD-210204A-BA26163
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	02/04/21	02/04/21	#300WD-210204A-BA26163

Wetlab SC-Blank-REG MDLs
Printed: 02/04/21 3:19:24 PM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/28/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210128A-LCS	Time Analyzed:	1104

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-LCS	Lab Control Spike	1	01/28/21 1104
210128A-BLK	Blank	2	01/28/21 1119
BA26160	ERH1226	3	01/28/21 1150
BA26163	ERH1238	4	01/28/21 1204
210128A-LCSD	Lab Control SpikeD	5	01/28/21 1236

Comments: Batch: #300W-210128A

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/04/21
Matrix:	WATER	Instrument:	Charlie
LCS ID:	210204A-LCS	Time Analyzed:	1201

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210204A-LCS	Lab Control Spike	1	02/04/21 1201
BA26163	ERH1238	10	02/04/21 1415
210204A-LCSD	Lab Control SpikeD	11	02/04/21 1430
210204A-BLK	Blank	2	02/04/21 1216
BA26160	ERH1226	3	02/04/21 1231

Comments: Batch: #300WD-210204A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	NITRATE	22.1	20.8	21.6	94.1	97.7	3.8	20	90-110	01/28/21	01/28/21	01/28/21	01/28/21	#300W-210128A-BA26160
EPA 300.0	SULFATE	25.0	23.4	24.1	93.6	96.4	2.9	20	90-110	01/28/21	01/28/21	01/28/21	01/28/21	#300W-210128A-BA26160

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	25.4	25.4	102	102	0.0	20	90-110	02/04/21	02/04/21	02/04/21	02/04/21	#300WD-210204A-BA2616
EPA 300.0	SULFATE	25.0	25.7	25.9	103	104	0.78	20	90-110	02/04/21	02/04/21	02/04/21	02/04/21	#300WD-210204A-BA2616

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/03/21

Matrix: WATER Instrument: EVE

Blank ID: 210202A-BLK Time Analyzed: 1104

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210202A-BLK	Blank	19	02/03/21 1104
210202A-LCS	Lab Control Spike	21	02/03/21 1108
210202A-LCSD	Lab Control SpikeD	22	02/03/21 1110
BA26160	ERH1226	44	02/03/21 1159
BA26163	ERH1238	45	02/03/21 1201

Comments: Batch: #353TO-210202A

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	210201A-BLK	Time Analyzed:	1713

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
BA26160	ERH1226	10	02/01/21 1810
BA26163	ERH1238	11	02/01/21 1815
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Manual Spec

Blank ID: A210202-BLK Time Analyzed: 1637

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210202-BLK	Blank	19	02/02/21 1637
A210202-LCS	Lab Control Spike	20	02/02/21 1639
A210202-LCSD	Lab Control SpikeD	22	02/02/21 1640
BA26160	ERH1226	27	02/02/21 1644
BA26163	ERH1238	28	02/02/21 1645
A210202-MS	Matrix Spike	29	02/02/21 1645
A210202-MSD	Matrix SpikeD	31	02/02/21 1646

Comments: Batch: #35FE-A210202

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 01/29/21

Matrix: WATER Instrument: TICTOC

Blank ID: 210128A-BLK Time Analyzed: 1052

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-BLK	Blank	12	01/29/21 1052
210128A-LCS	Lab Control Spike	13	01/29/21 1131
210128A-LCSD	Lab Control SpikeD	14	01/29/21 1211
BA26160	ERH1226	37	01/30/21 0303
BA26163	ERH1238	38	01/30/21 0340

Comments: Batch: #TOCW5-210128A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY	3.4	2.0	1.70	0.85	mg/L	02/01/21	02/01/21	#232W-210201A-BA25867
EPA 353.2	NITRATE-NITRITE A	0.032 J	0.10	0.090	0.028	mg/L	02/03/21	02/03/21	#353TO-210202A-BA26165
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	01/29/21	01/29/21	#TOCW5-210128A-BA26001
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	02/02/21	02/02/21	#35FE-A210202-BA26163

Wetlab SC-Blank-REG MDLs
Printed: 02/04/21 2:49:22 PM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/03/21
Matrix:	WATER	Instrument:	EVE
LCS ID:	210202A-LCS	Time Analyzed:	1108

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210202A-BLK	Blank	19	02/03/21 1104
210202A-LCS	Lab Control Spike	21	02/03/21 1108
210202A-LCSD	Lab Control SpikeD	22	02/03/21 1110
BA26160	ERH1226	44	02/03/21 1159
BA26163	ERH1238	45	02/03/21 1201

Comments: Batch: #353TO-210202A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	02/01/21
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	210201A-LCS	Time Analyzed:	1716

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210201A-BLK	Blank	1	02/01/21 1713
BA26160	ERH1226	10	02/01/21 1810
BA26163	ERH1238	11	02/01/21 1815
210201A-LCS	Lab Control Spike	2	02/01/21 1716
210201A-LCSD	Lab Control SpikeD	3	02/01/21 1726

Comments: Batch: #232W-210201A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 94920

Case No: 94920 Date Analyzed: 02/02/21

Matrix: WATER Instrument: Manual Spec

LCS ID: A210202-LCS Time Analyzed: 1639

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A210202-BLK	Blank	19	02/02/21 1637
A210202-LCS	Lab Control Spike	20	02/02/21 1639
A210202-LCSD	Lab Control SpikeD	22	02/02/21 1640
BA26160	ERH1226	27	02/02/21 1644
BA26163	ERH1238	28	02/02/21 1645
A210202-MS	Matrix Spike	29	02/02/21 1645
A210202-MSD	Matrix SpikeD	31	02/02/21 1646

Comments: Batch: #35FE-A210202

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94920
Case No:	94920	Date Analyzed:	01/29/21
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	210128A-LCS	Time Analyzed:	1131

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210128A-BLK	Blank	12	01/29/21 1052
210128A-LCS	Lab Control Spike	13	01/29/21 1131
210128A-LCSD	Lab Control SpikeD	14	01/29/21 1211
BA26160	ERH1226	37	01/30/21 0303
BA26163	ERH1238	38	01/30/21 0340

Comments: Batch: #TOCW5-210128A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE AS N	3.00	3.09	3.11	103	104	0.65	20	90-110	02/03/21	02/03/21	02/03/21	02/03/21	#353TO-210202A-BA2616
SM 2320B	BICARBONATE AS CACO3	250	236	230	94.4	92.0	2.6	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SM 2320B	TOTAL ALKALINITY AS CA	250	258	252	103	101	2.4	20	90-110	02/01/21	02/01/21	02/01/21	02/01/21	#232W-210201A-BA25867
SW846 90	TOTAL ORGANIC CARBO	5.00	5.19	5.15	104	103	0.77	20	80-120	01/29/21	01/29/21	01/29/21	01/29/21	#TOCW5-210128A-BA260

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM3500Fe	FERROUS IRON	3.00	3.12	3.11	104	104	0.32	20	80-120	02/02/21	02/02/21	02/02/21	02/02/21	#35FE-A210202-BA26163

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **210202W-26163 MS - 260818**

Sample ID: BA26163

Client ID: ERH1238

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	ND	3.05	3.04	102	101	0.33	20	80-120	02/02/21	02/02/21	02/02/21	02/02/21	260818	BA26163

Comments:

ORGANICS

Calibration Data

TPH Extractables
DOC1218

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/18/20
Matrix: Water Instrument: Apollo
Initials: SS/MV

			1218004.D	1218005.D	1218006.D	1218007.D	1218008.D	1218009.D	1218003.D								
		Compound	1	2	3	4	5	6	1A				Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	2490067	2454378	2288780	2283675	2273381	2326101	3047433				2451973	11	HATM		
2	HBTML	Motor Oil (C24-C40)	1943538	1659705	1485357	1433409	1426647	1453115	2686229				1726857	27	HBTM	1.000	
3	SA	Ortho-Terphenyl(S)	3169916	3134532	2847913	2655196	2655620	2763871	3449012				2953723	10	SA		
4	SA	Octacosane(S)	2398049	2363852	2202168	2148767	2157573	2193980	2432624				2271002	5.4	SA		
5																	
6																	
7																	
8																	
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1.533186

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218003.D Vial: 3
Acq On : 12-18-20 13:53:54 Operator:
Sample : Diesel Motor Oil-1A 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

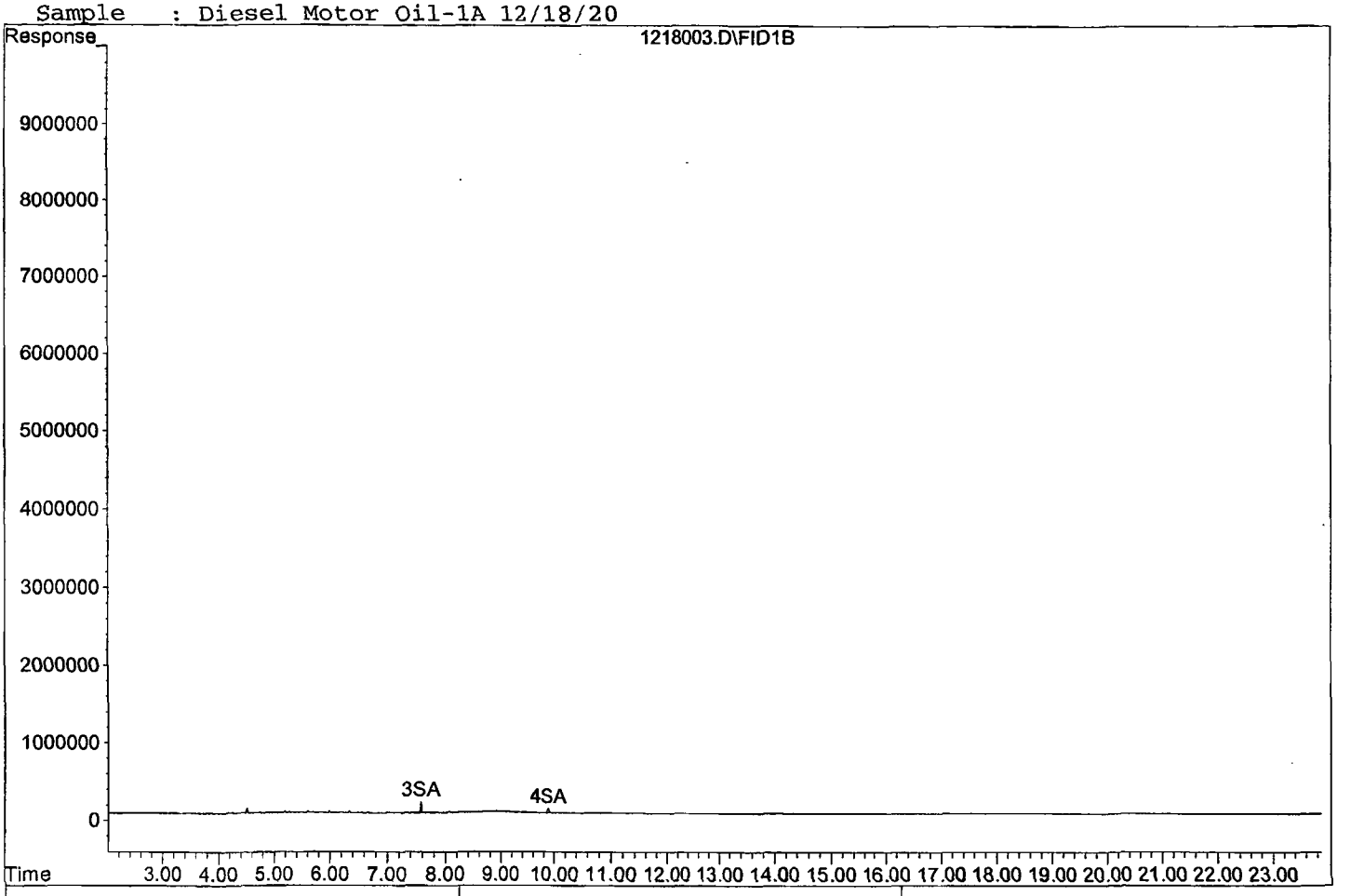
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

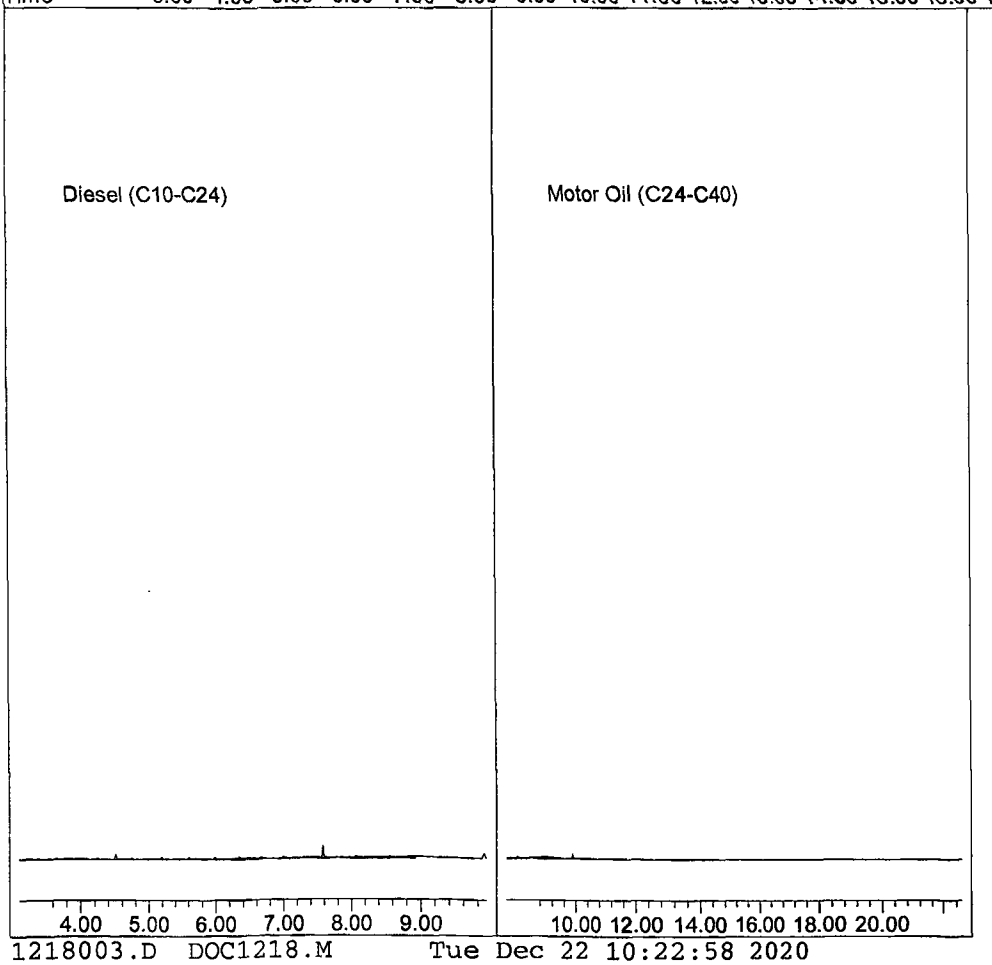
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	1724506	0.292 ppb
Surrogate Spike 30.000	Recovery =		0.97%
4) SA Octacosane(S)	9.89	1216312	0.268 ppb
Surrogate Spike 30.000	Recovery =		0.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	30474328	6.214 ppb
2) HBTM Motor Oil (C24-C40)	15.16	26862289	5.614 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218003.D
Sample : Diesel Motor Oil-1A 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218004.D Vial: 4
Acq On : 12-18-20 14:21:52 Operator:
Sample : Diesel Motor Oil-1 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

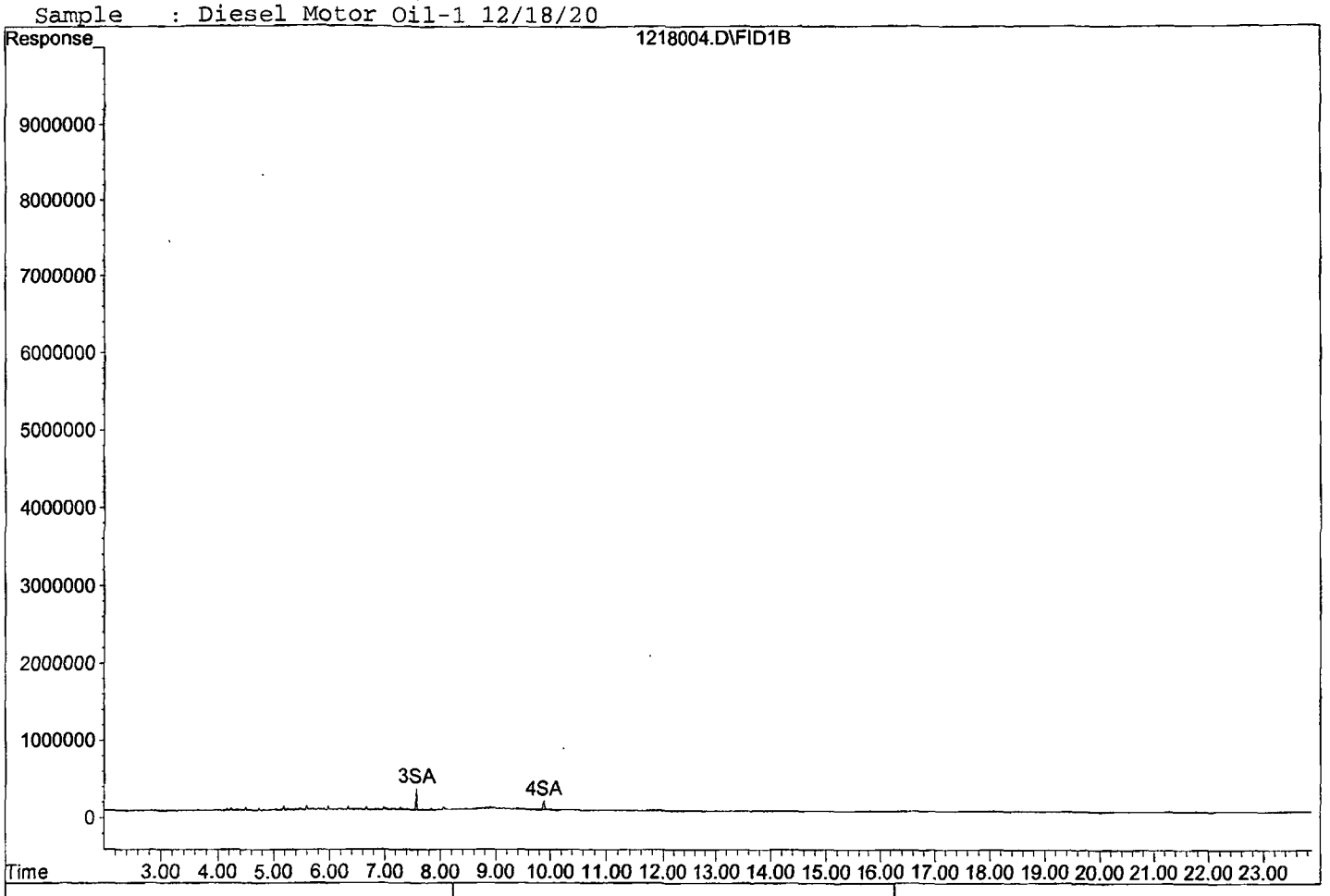
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

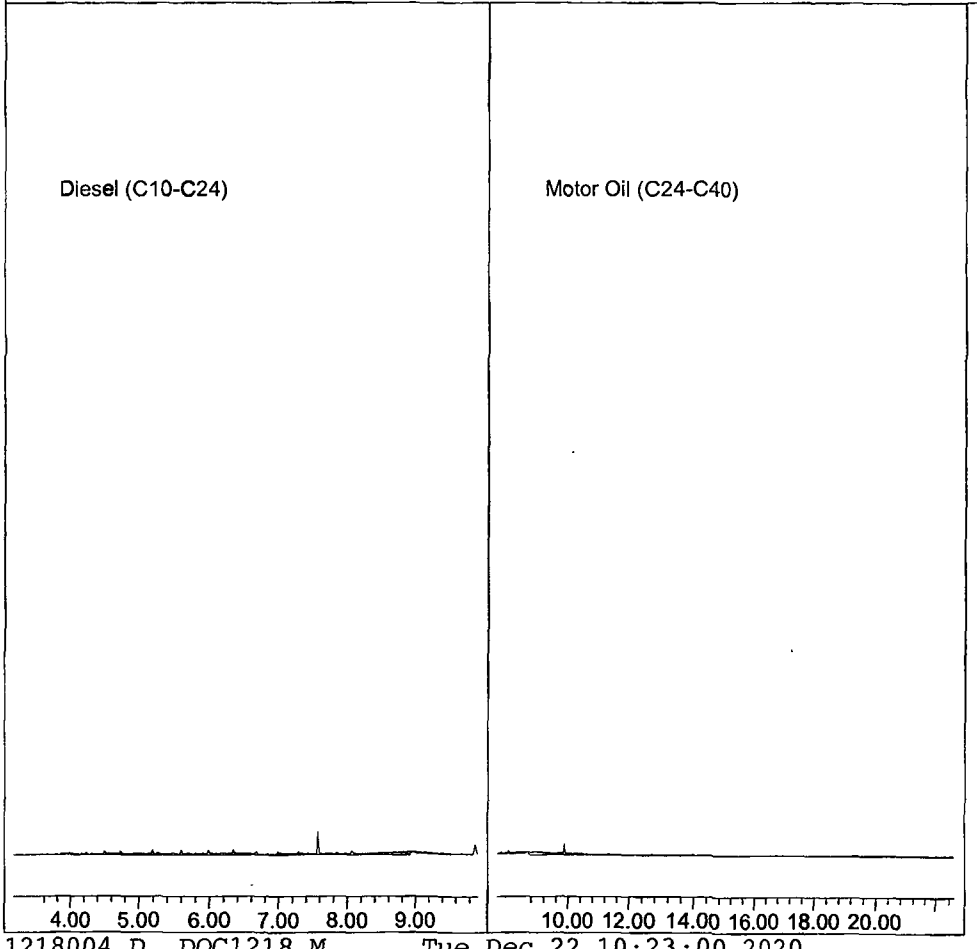
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	3169916	0.537 ppb
Surrogate Spike 30.000		Recovery =	1.79%
4) SA Octacosane(S)	9.89	2398049	0.528 ppb
Surrogate Spike 30.000		Recovery =	1.76%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	49801335	10.155 ppb
2) HBTM Motor Oil (C24-C40)	15.16	38870757	9.786 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218004.D
Sample : Diesel Motor Oil-1 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218005.D Vial: 5
Acq On : 12-18-20 14:49:55 Operator:
Sample : Diesel Motor Oil-2 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

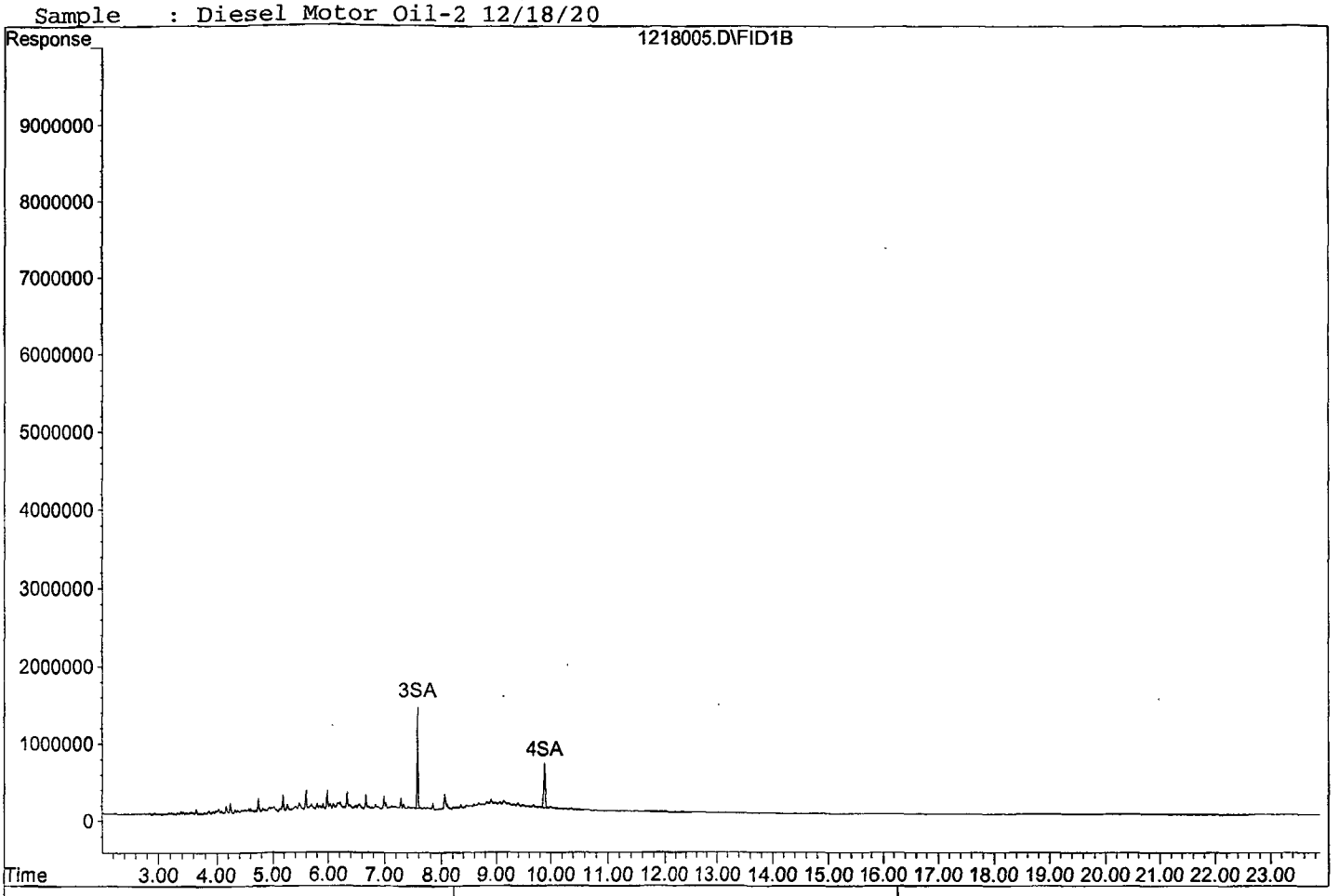
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

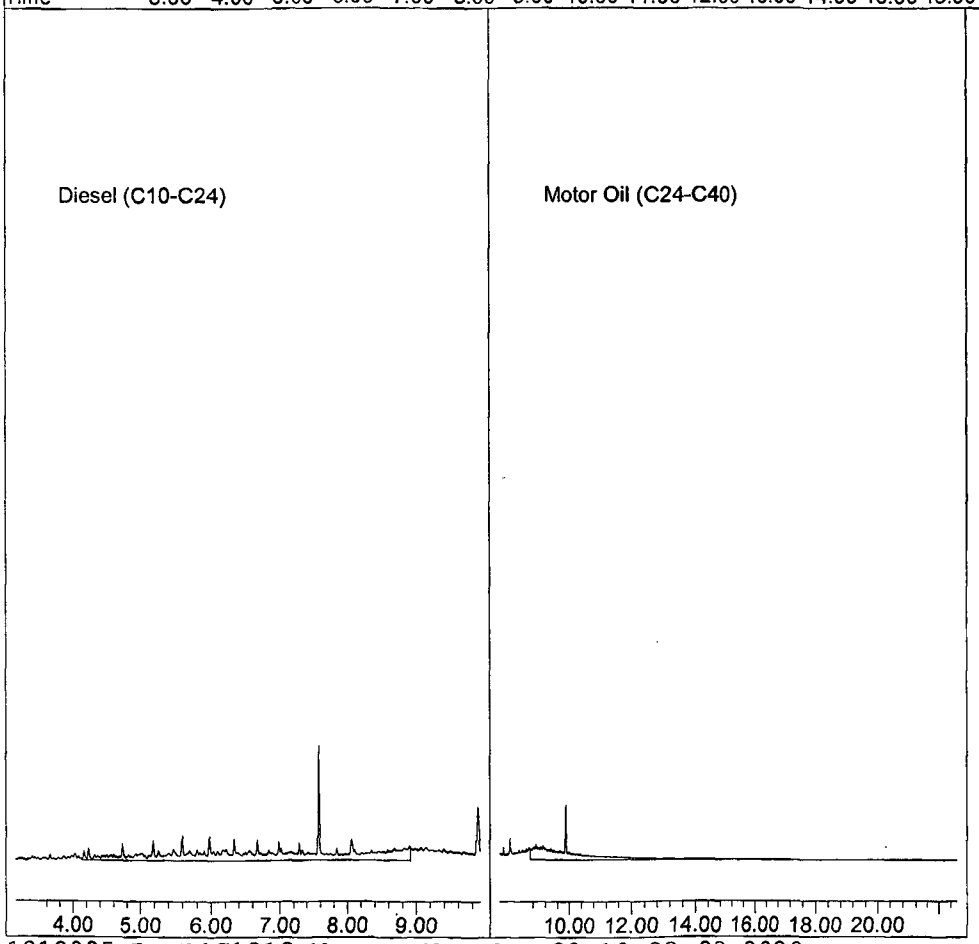
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	15672658	2.653 ppb
Surrogate Spike 30.000	Recovery =		8.84%
4) SA Octacosane(S)	9.89	11819258	2.602 ppb
Surrogate Spike 30.000	Recovery =		8.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	245437779	50.049 ppb
2) HBTM Motor Oil (C24-C40)	15.16	165970498	53.945 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218005.D
Sample : Diesel Motor Oil-2 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218006.D Vial: 6
Acq On : 12-18-20 15:17:56 Operator:
Sample : Diesel Motor Oil-3 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

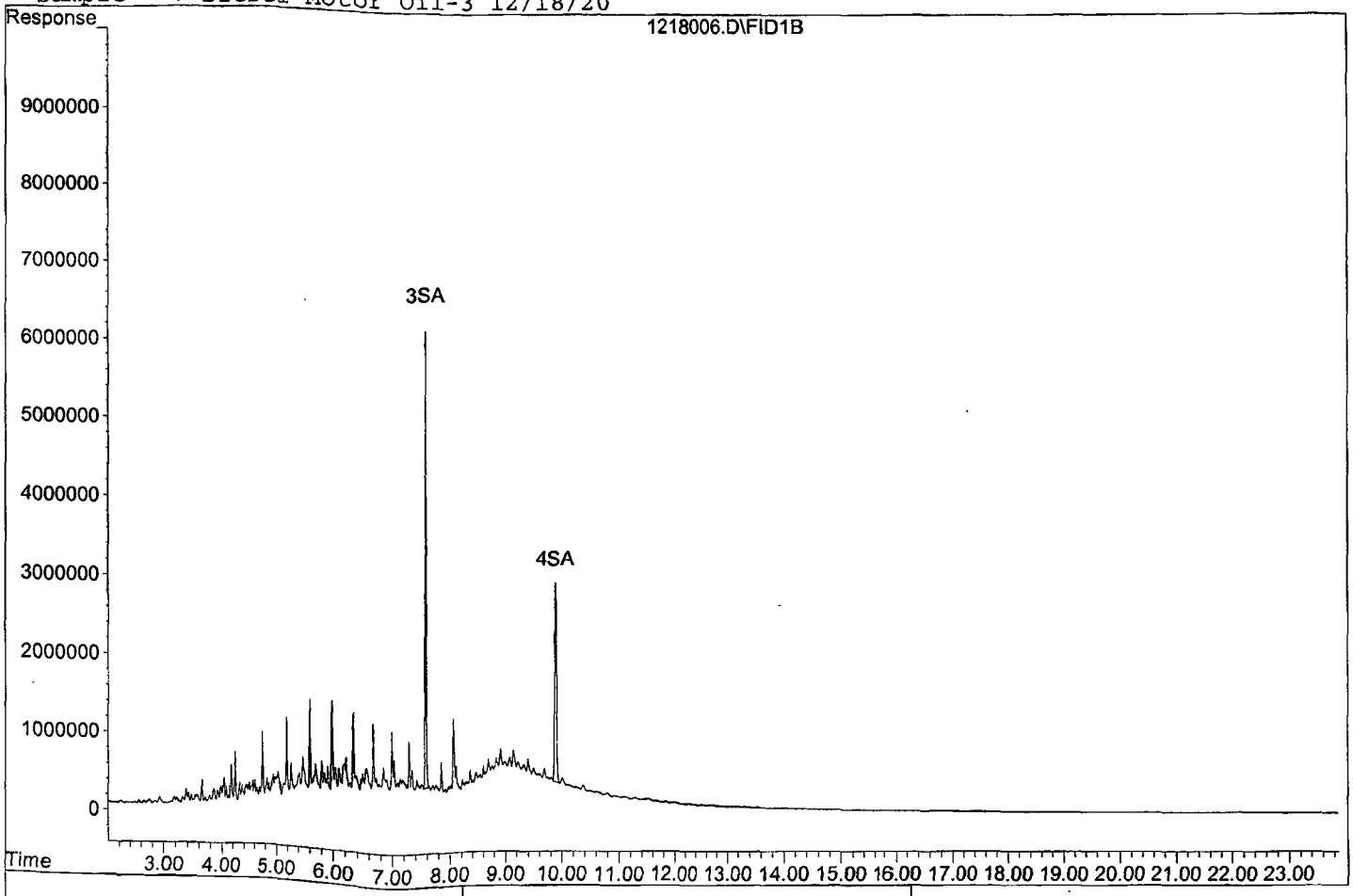
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	71197835	12.052 ppb
Surrogate Spike 30.000	Recovery =		40.17%
4) SA Octacosane(S)	9.89	55054210	12.121 ppb
Surrogate Spike 30.000	Recovery =		40.40%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1144389768	233.361 ppb
2) HBTM Motor Oil (C24-C40)	15.16	742678650	254.314 ppb

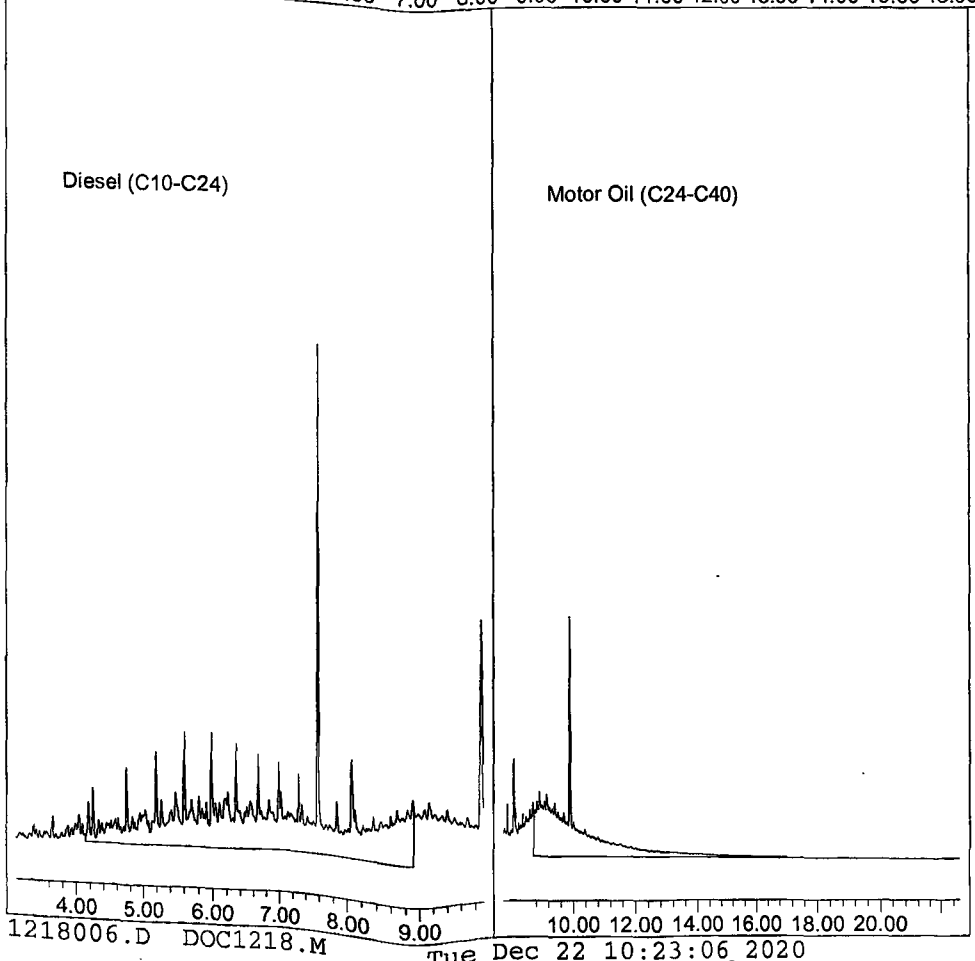
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218006.D
Sample : Diesel Motor Oil-3 12/18/20





1218006.D DOC1218.M Tue Dec 22 10:23:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218007.D Vial: 7
Acq On : 12-18-20 15:45:58 Operator:
Sample : Diesel Motor Oil-4 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

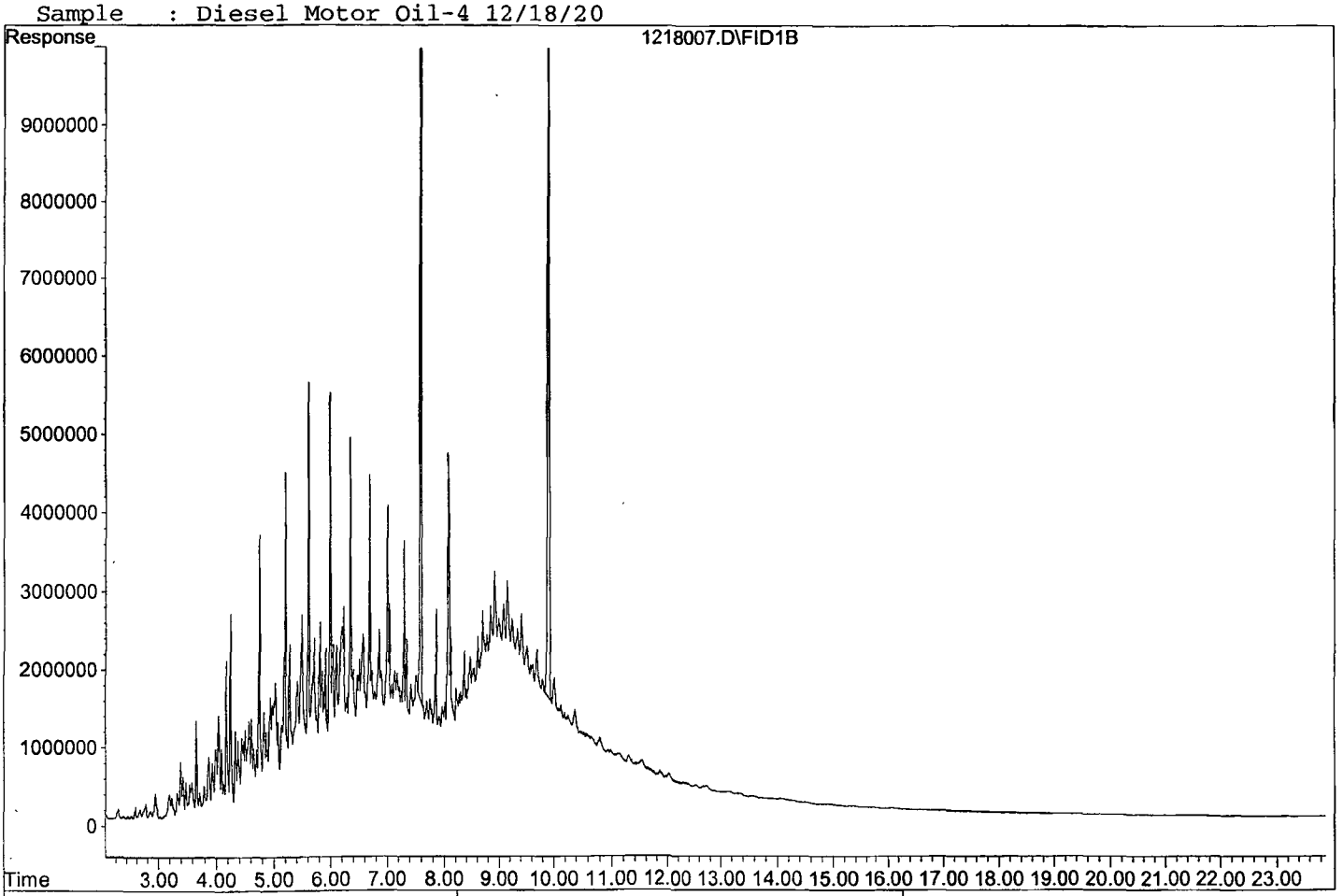
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

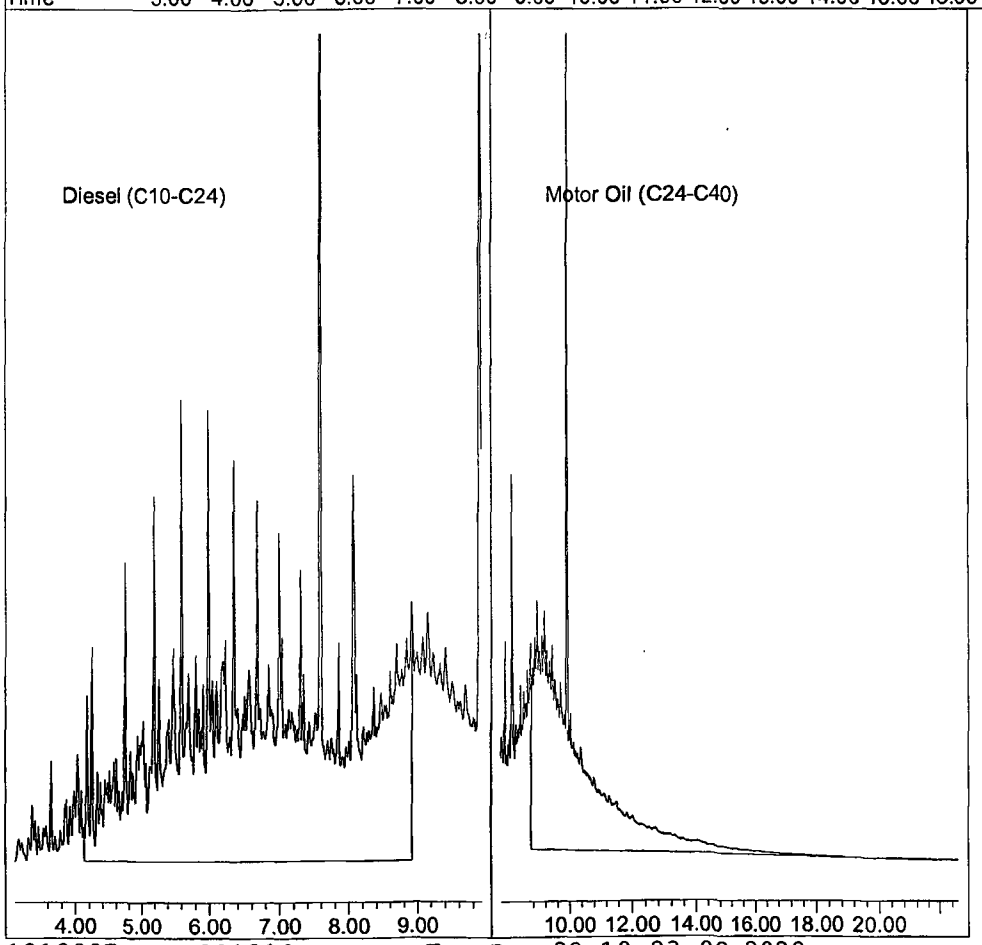
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	265519590	44.947 ppb
Surrogate Spike 30.000	Recovery =		149.82%
4) SA Octacosane(S)	9.90	214876729	47.309 ppb
Surrogate Spike 30.000	Recovery =		157.70%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	4567349198	931.362 ppb
2) HBTM Motor Oil (C24-C40)	15.16	2866817636	992.317 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218007.D
Sample : Diesel Motor Oil-4 12/18/20





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218008.D Vial: 8
Acq On : 12-18-20 16:13:59 Operator:
Sample : Diesel Motor Oil-5 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

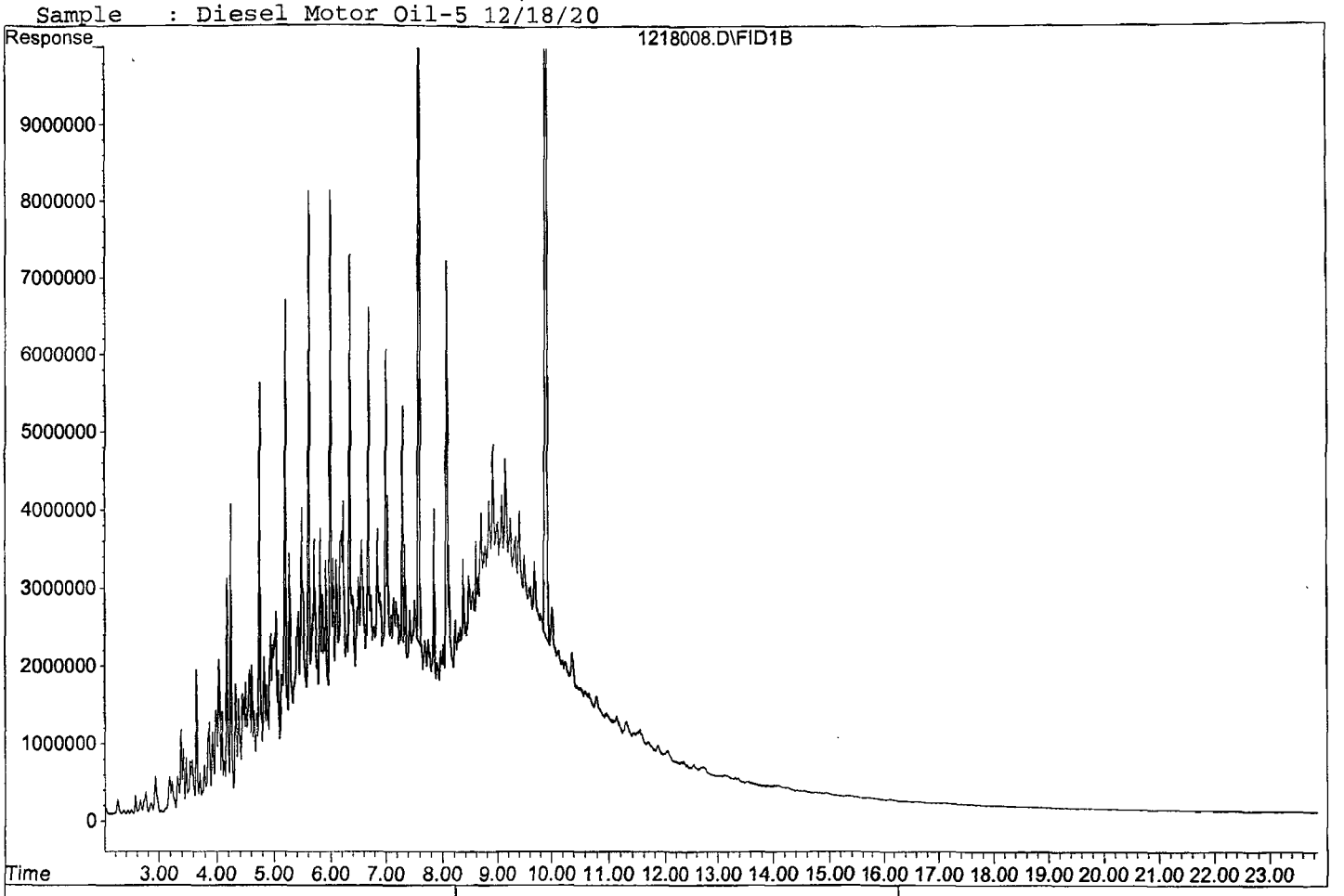
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.59	398342978	67.431 ppb
Surrogate Spike 30.000		Recovery =	224.77%
4) SA Octacosane(S)	9.91	323635971	71.254 ppb
Surrogate Spike 30.000		Recovery =	237.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	6820144349	1390.746 ppb
2) HBTM Motor Oil (C24-C40)	15.16	4279940610	1483.286 ppb

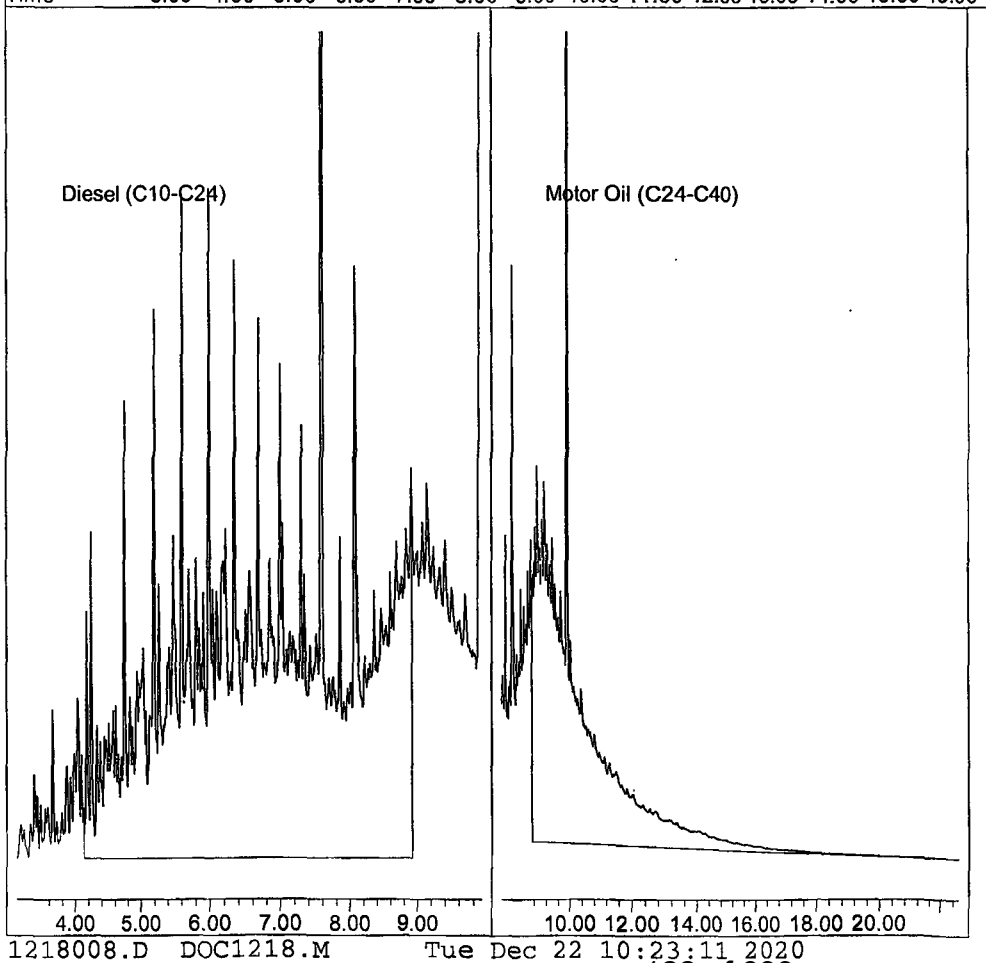
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218008.D
Sample : Diesel Motor Oil-5 12/18/20





1218008.D DOC1218.M Tue Dec 22 10:23:11 2020

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218009.D Vial: 9
Acq On : 12-18-20 16:42:03 Operator:
Sample : Diesel Motor Oil-6 12/18/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:21 2020 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

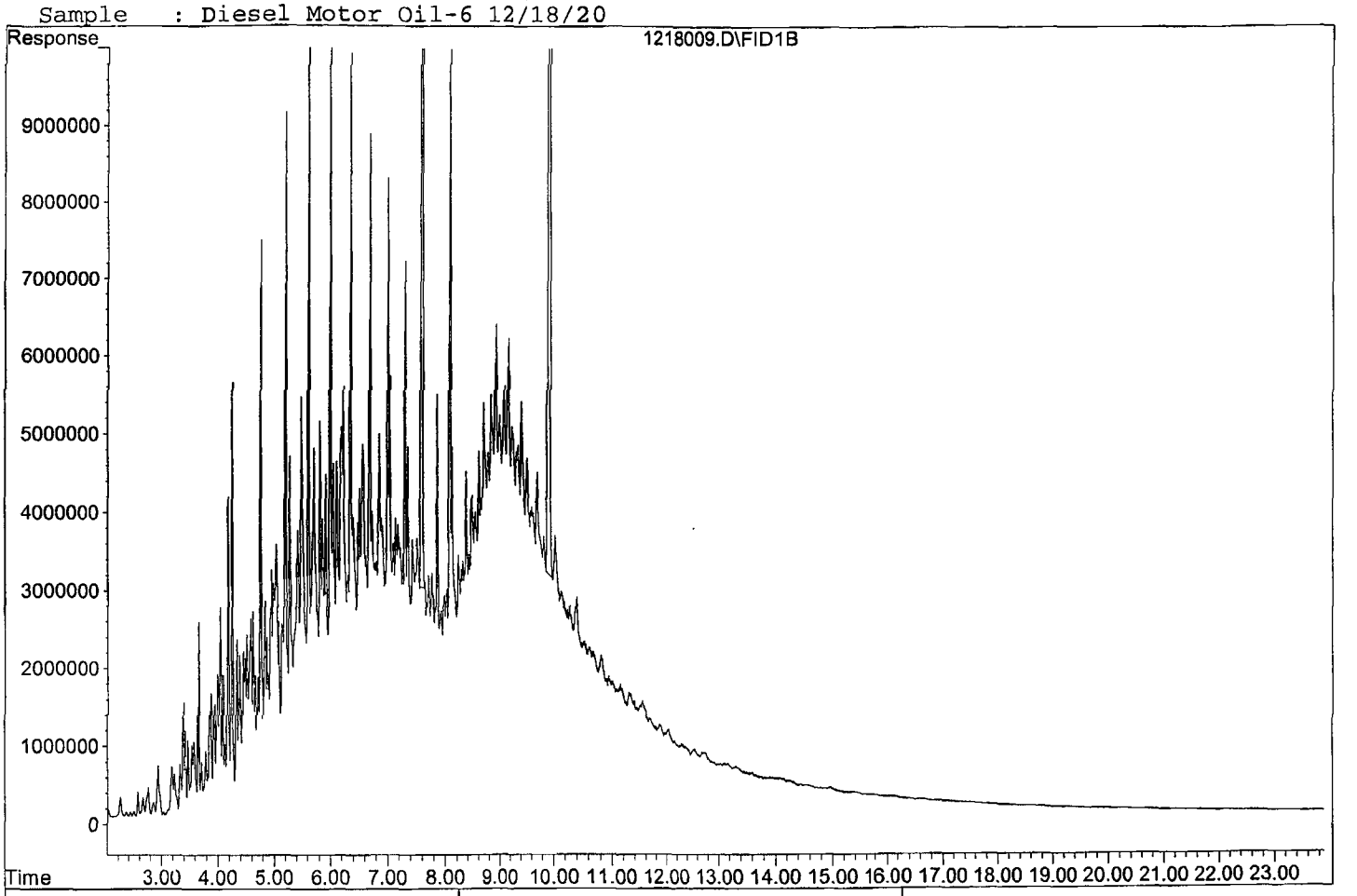
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.59	552774103	93.572	ppb
Surrogate Spike 30.000	Recovery =		311.91%	
4) SA Octacosane(S)	9.91	438795924	96.608	ppb
Surrogate Spike 30.000	Recovery =		322.03%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.53	9304402839	1897.330	ppb
2) HBTM Motor Oil (C24-C40)	15.16	5812458611	2015.739	ppb

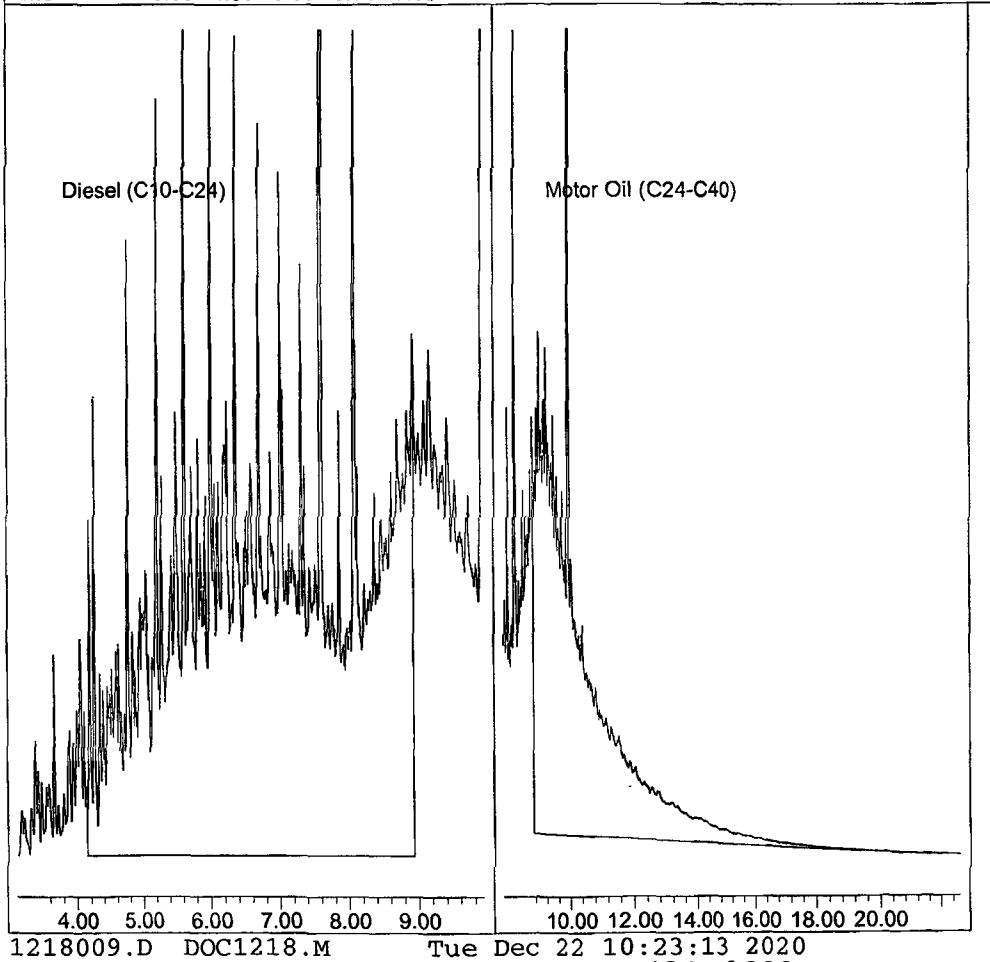
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

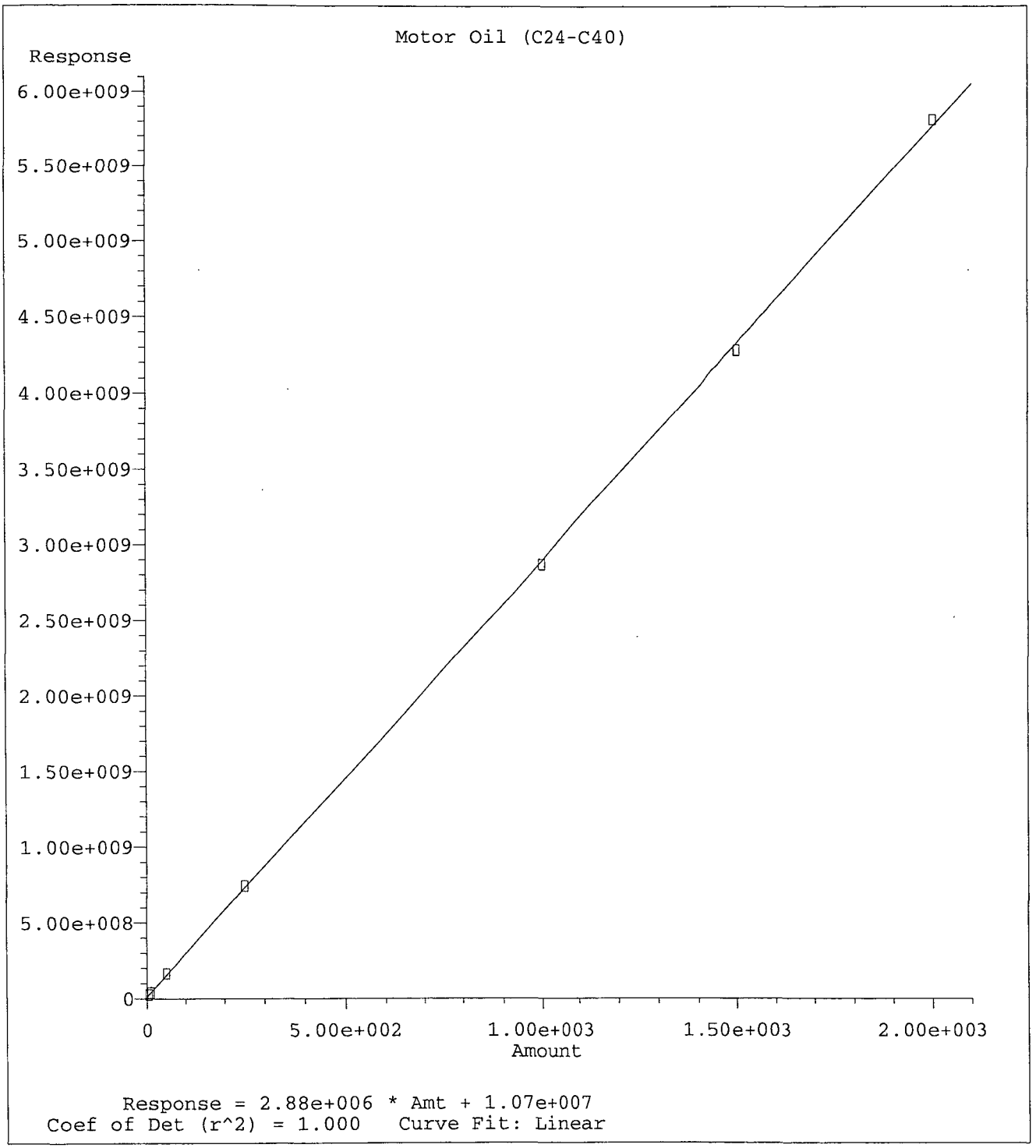
Quantitation Report

Data File: G:\APOLLO\DATA\201218\1218009.D
Sample : Diesel Motor Oil-6 12/18/20





1218009.D DOC1218.M Tue Dec 22 10:23:13 2020



Method Name: G:\APOLLO\DATA\201218\DOC1218.M
Calibration Table Last Updated: Tue Dec 22 10:21:03 2020

TPH Extractables
DOC1218

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 12/18/20
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 1218010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2360180	3.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1489740	14	HBTML	2.0
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		Average			8.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\201218\1218010.D Vial: 10
Acq On : 12-18-20 17:10:04 Operator:
Sample : Diesel Motor Oil-SS 7/21/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 22 10:22 2020 Quant Results File: DOC1218.RES

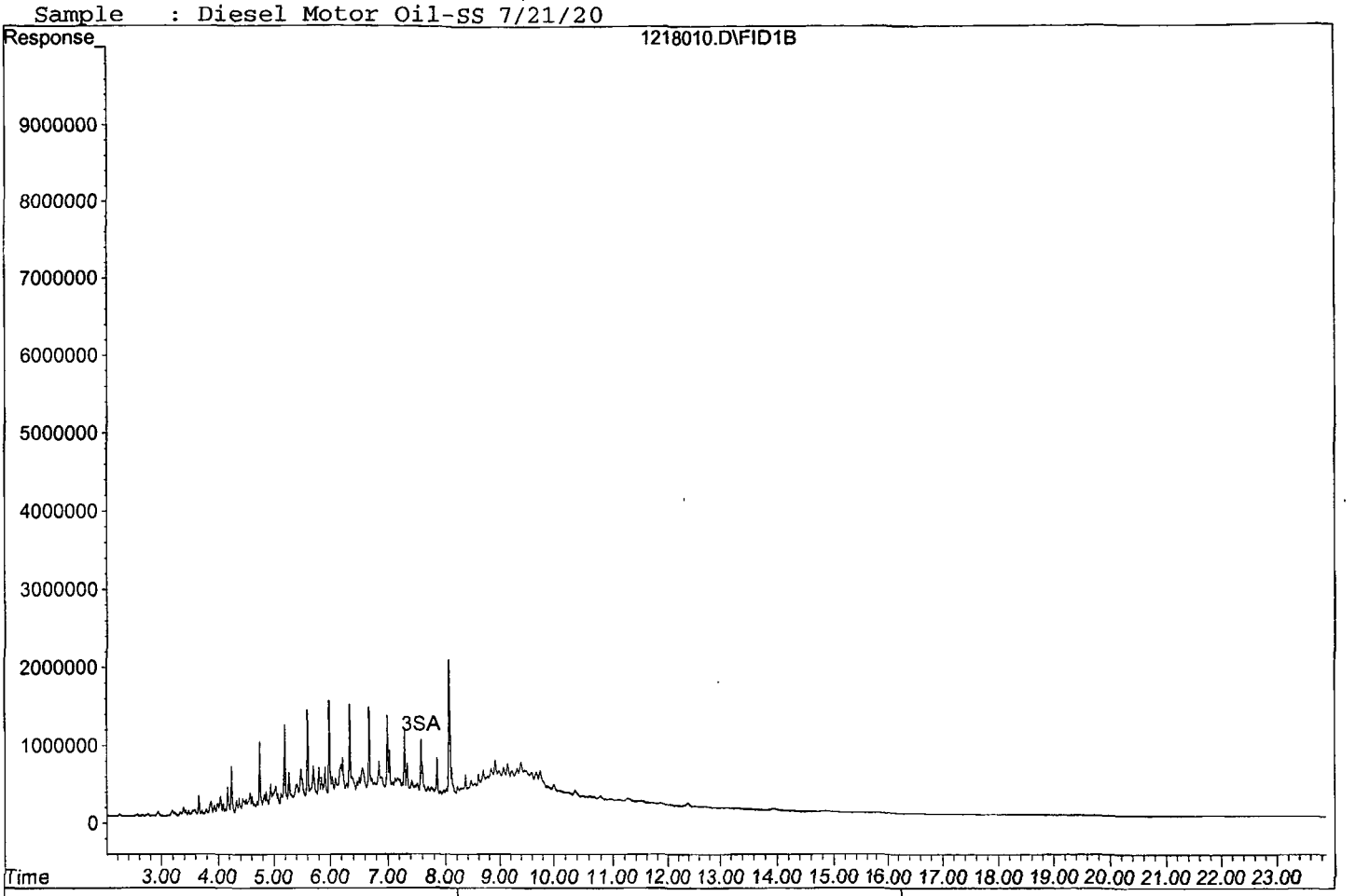
Method : G:\APOLLO\DATA\201218\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Dec 22 10:21:03 2020
Response via : Multiple Level Calibration

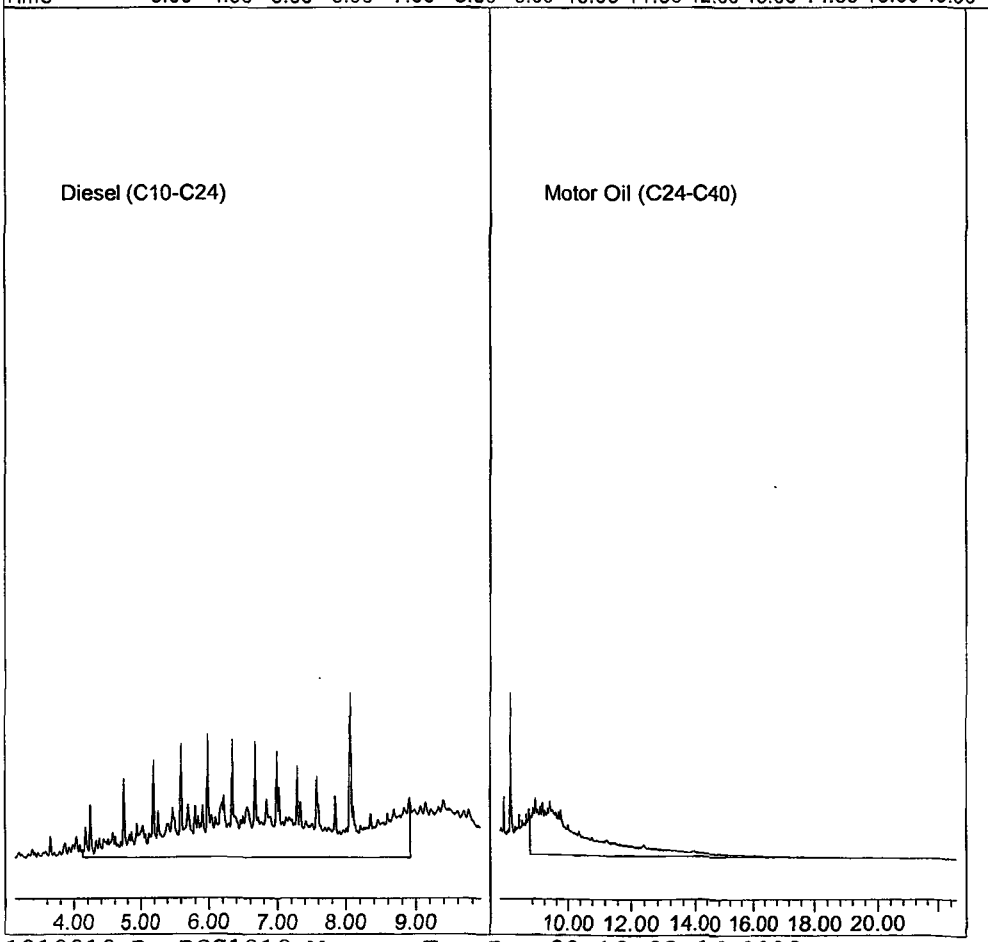
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.58	4438886	0.751 ppb
Surrogate Spike 30.000	Recovery =		2.50%
4) SA Octacosane(S)	9.88	-108660	N.D. ppb
Surrogate Spike 30.000	Recovery =		0.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1180089510	240.641 ppb
2) HBTM Motor Oil (C24-C40)	15.16	744868844	255.075 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\201218\1218010.D
Sample : Diesel Motor Oil-SS 7/21/20





1218010.D DOC1218.M Tue Dec 22 10:23:16 2020

TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/02/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 201050.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	2451970	2327120	5.1	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1438200	17	HBTML	1.6
3	SA	Ortho-Terphenyl(S)	2953720	2896690	1.9	SA	
4	SA	Octacosane(S)	2271000	2188910	3.6	SA	
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		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210201\201050.D Vial: 50
Acq On : 2-2-21 13:52:22 Operator:
Sample : Diesel Motor Oil-CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 14:22 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

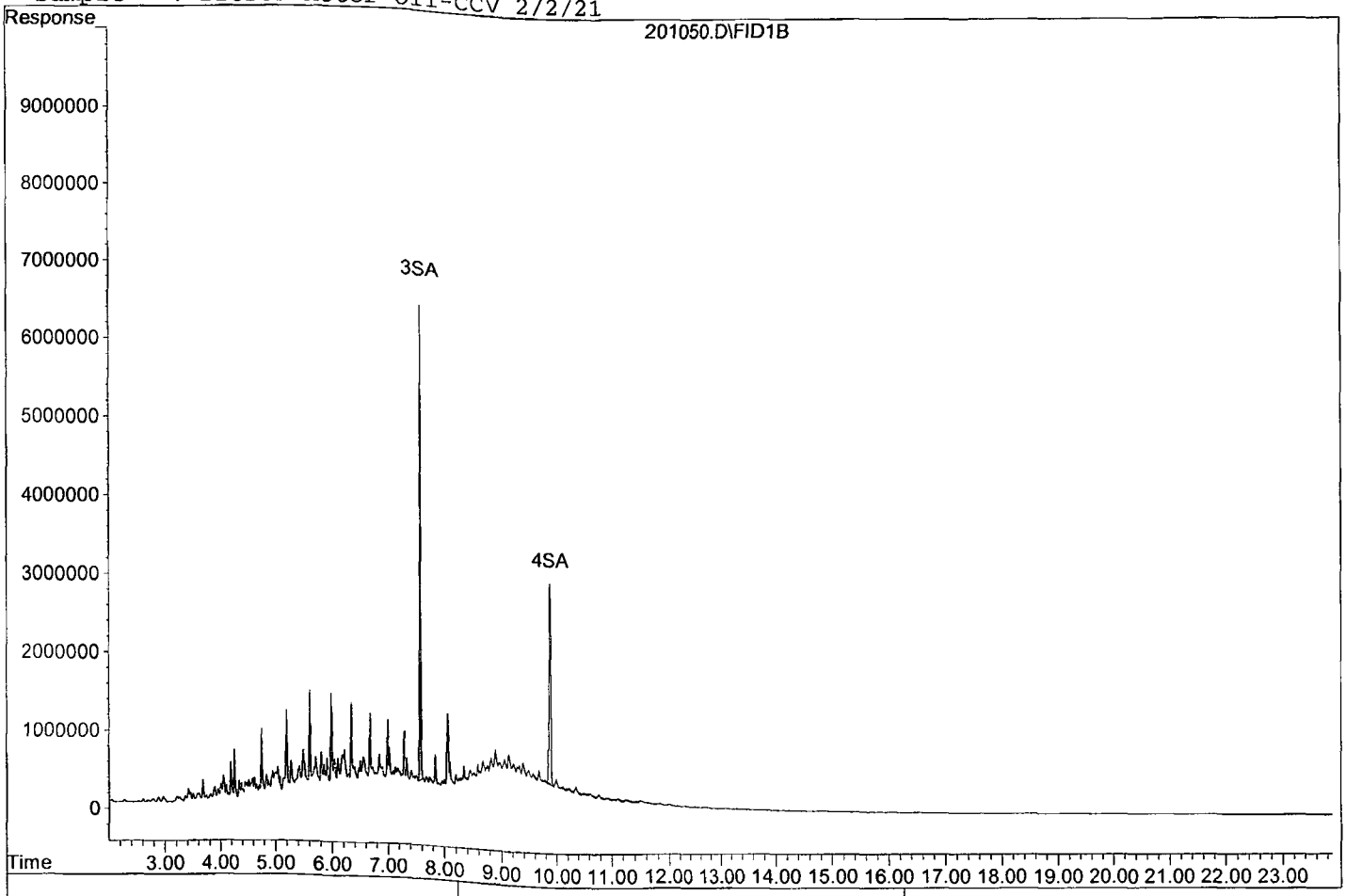
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

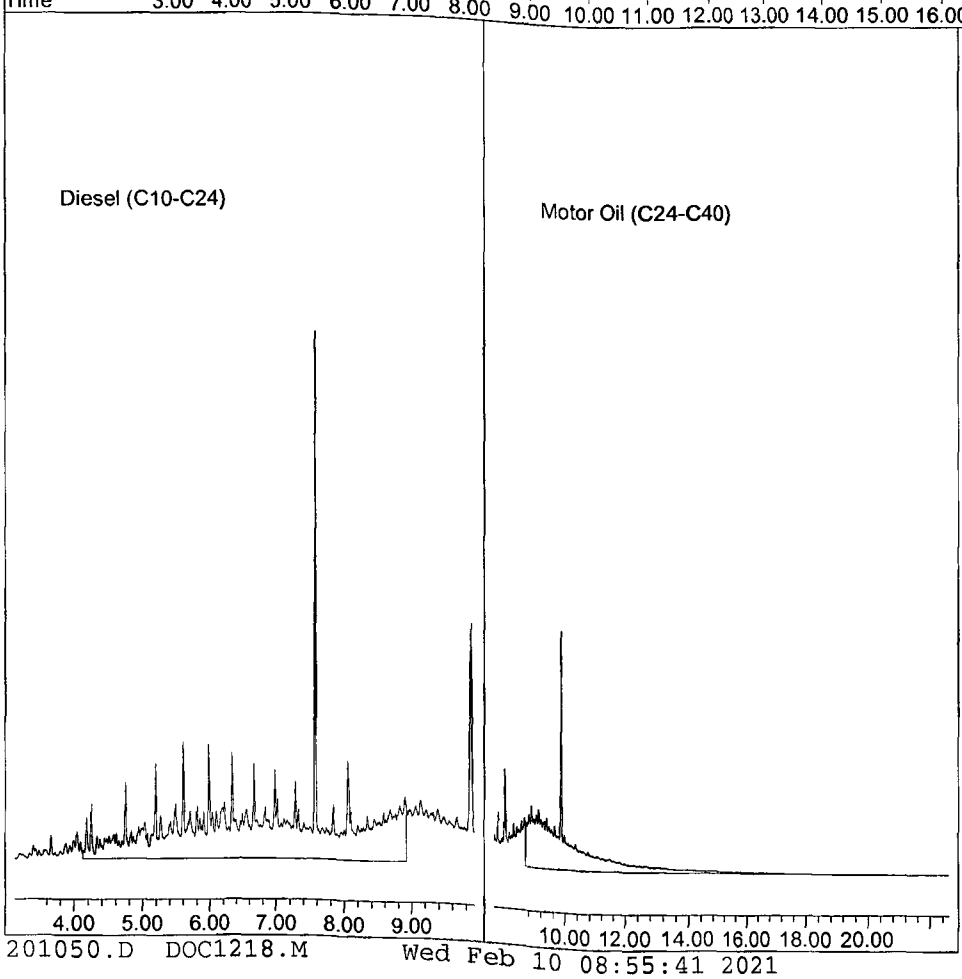
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	72417168	12.259 ppb
Surrogate Spike 30.000		Recovery =	40.86%
4) SA Octacosane(S)	9.87	54722795	12.048 ppb
Surrogate Spike 30.000		Recovery =	40.16%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1163559242	237.270 ppb
2) HBTM Motor Oil (C24-C40)	15.16	719100288	246.122 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201050.D
Sample : Diesel Motor Oil-CCV 2/2/21





201050.D DOC1218.M Wed Feb 10 08:55:41 2021

TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/02/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 201064.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2516540	2.6	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1547120	10	HBTML	6.0
3	SA	Ortho-Terphenyl(S)	2953720	3223430	9.1	SA	
4	SA	Octacosane(S)	2271000	2363920	4.1	SA	
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		Average			6.5		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210201\201064.D Vial: 64
Acq On : 2-2-21 20:34:08 Operator:
Sample : Diesel Motor Oil-CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

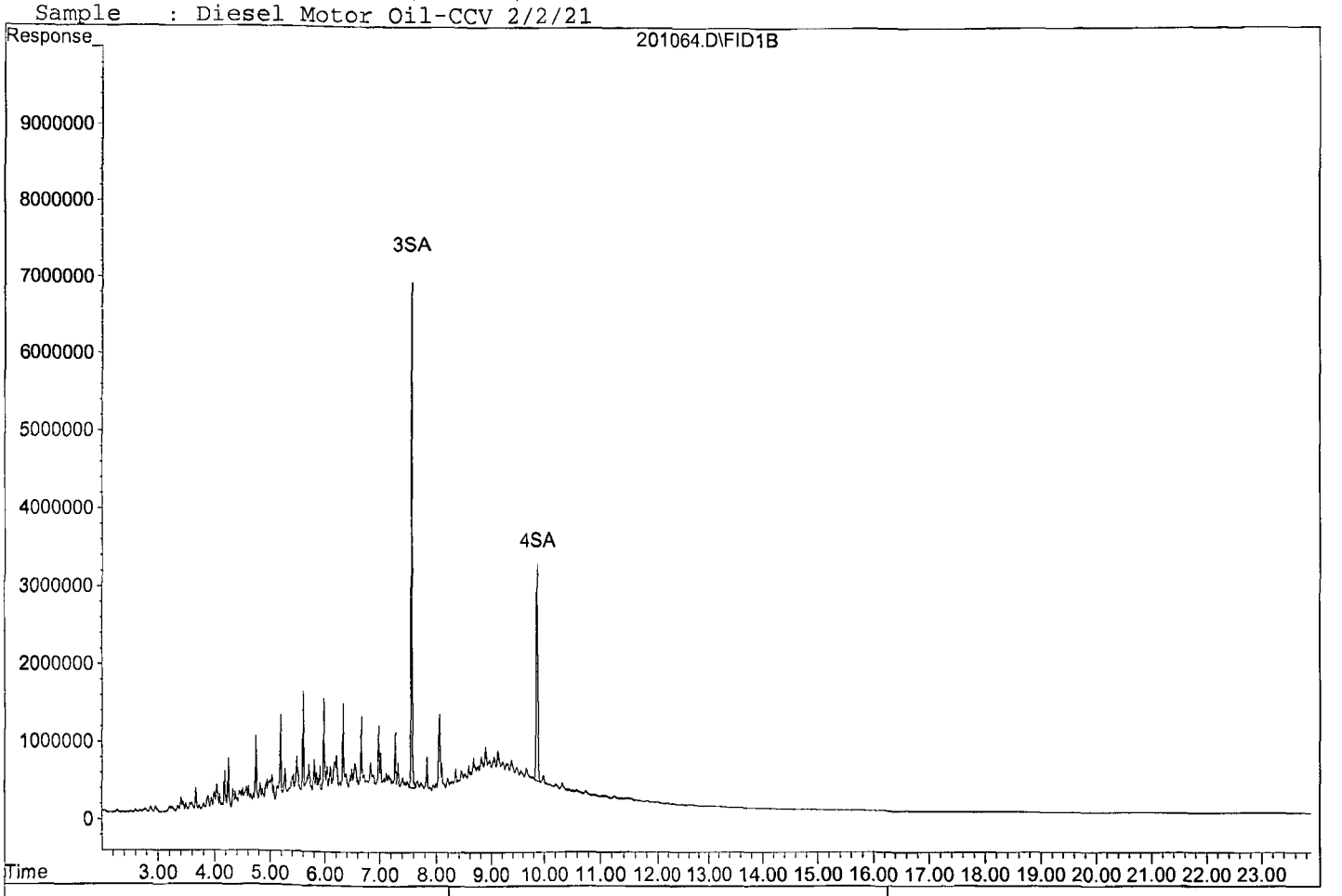
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

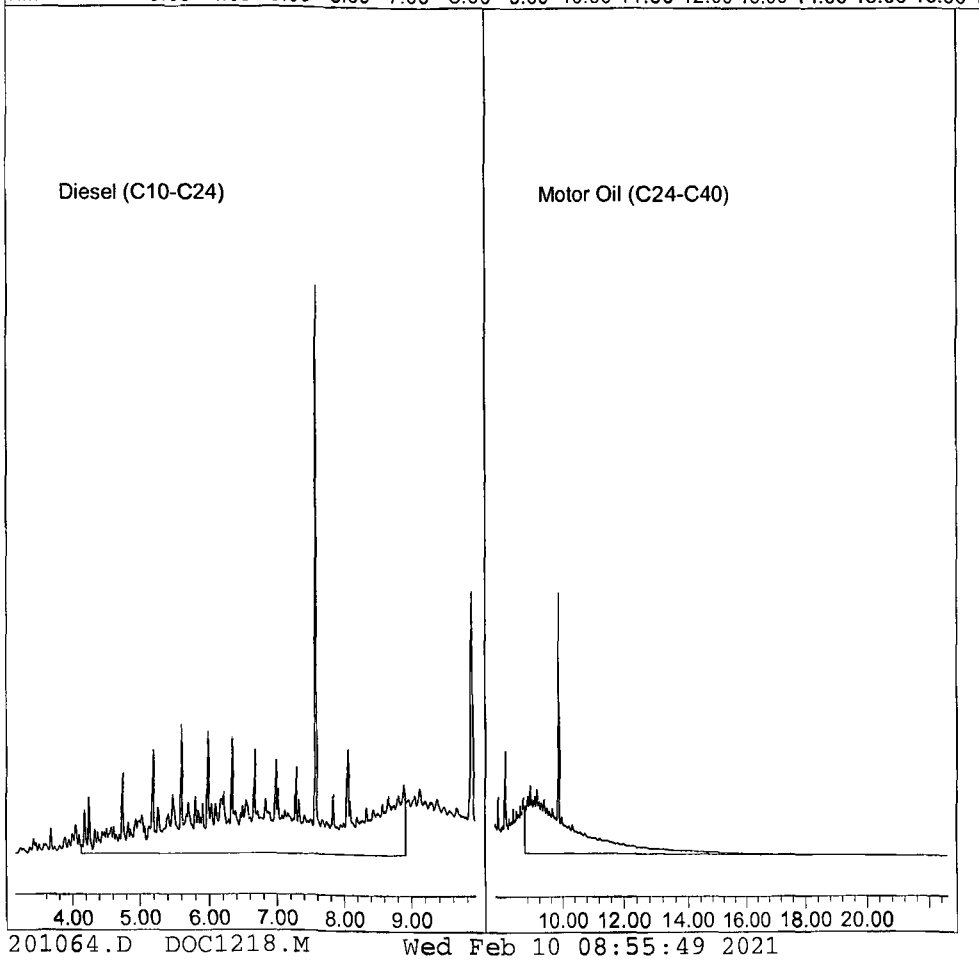
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	80585763	13.641 ppb
Surrogate Spike 30.000		Recovery =	45.47%
4) SA Octacosane(S)	9.87	59097891	13.011 ppb
Surrogate Spike 30.000		Recovery =	43.37%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1258268431	256.583 ppb
2) HBTM Motor Oil (C24-C40)	15.16	773559334	265.043 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201064.D
Sample : Diesel Motor Oil-CCV 2/2/21





201064.D DOC1218.M Wed Feb 10 08:55:49 2021

TPH Extractables
DOC1218

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 02/03/21
Instrument: Apollo
Initial Cal. Date: 12/18/20
Data File: 201072.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	2451970	2555710	4.2	HATM	
2	HBTM	Motor Oil (C24-C40)	1726860	1555920	9.9	HBTML	6.6
3	SA	Ortho-Terphenyl(S)	2953720	3149070	6.6	SA	
4	SA	Octacosane(S)	2271000	2355860	3.7	SA	
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		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\210201\201072.D Vial: 72
Acq On : 2-3-21 0:19:17 Operator:
Sample : Diesel Motor Oil-CCV 2/2/21 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

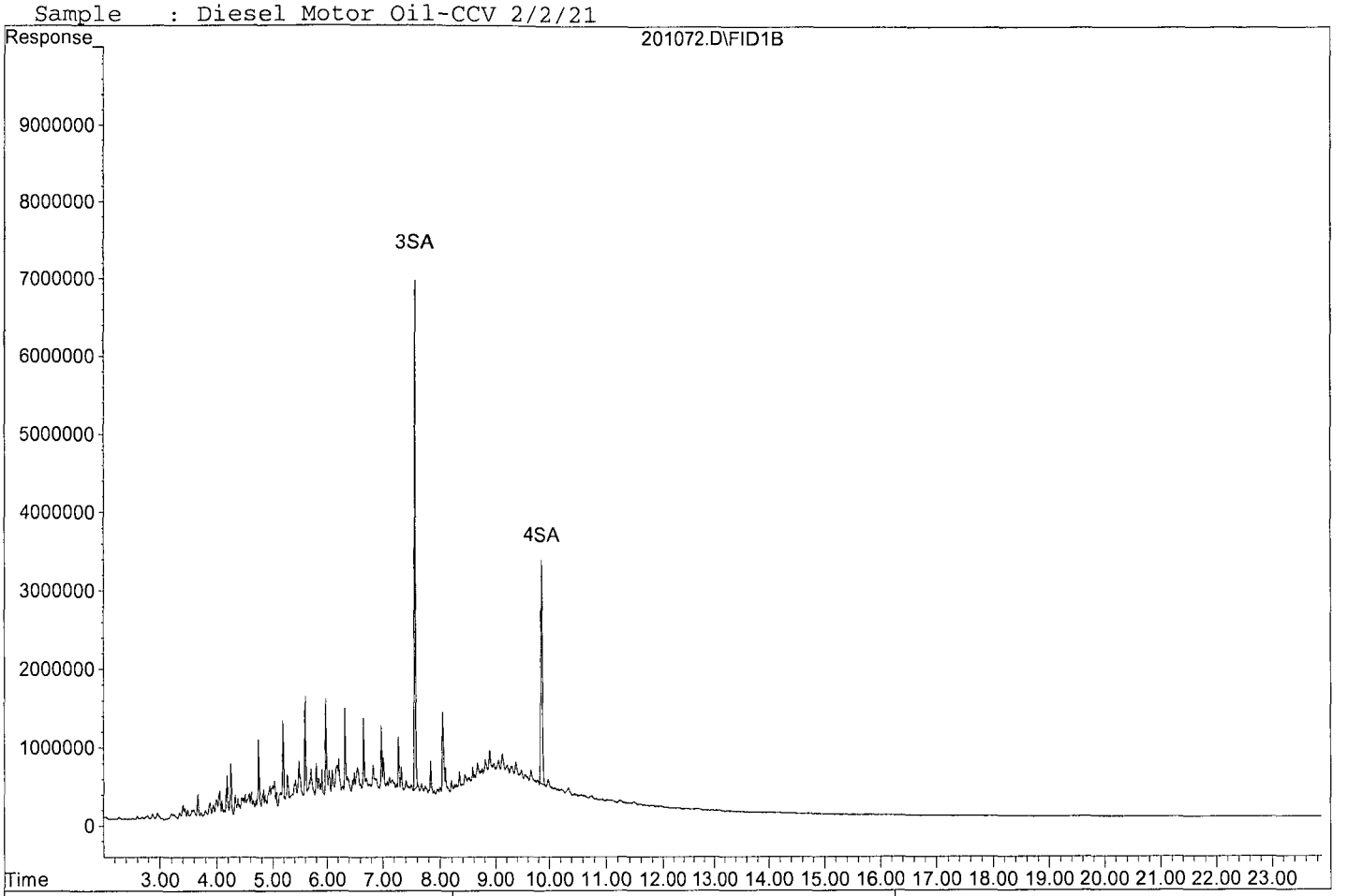
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

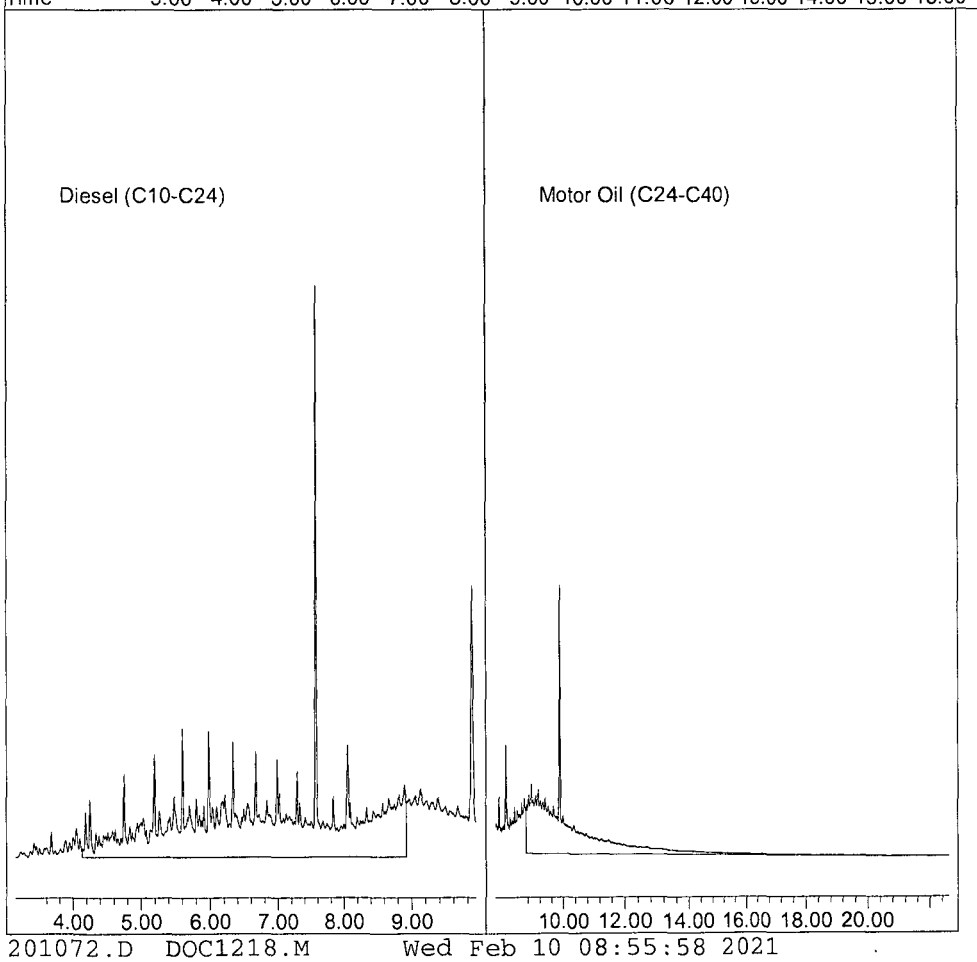
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	78726860	13.327 ppb
Surrogate Spike 30.000	Recovery =		44.42%
4) SA Octacosane(S)	9.86	58896559	12.967 ppb
Surrogate Spike 30.000	Recovery =		43.22%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1277855471	260.577 ppb
2) HBTM Motor Oil (C24-C40)	15.16	777961176	266.573 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201072.D
Sample : Diesel Motor Oil-CCV 2/2/21





201072.D DOC1218.M Wed Feb 10 08:55:58 2021

ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201070.D Vial: 70
Acq On : 2-2-21 23:22:58 Operator:
Sample : BA26160W17 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

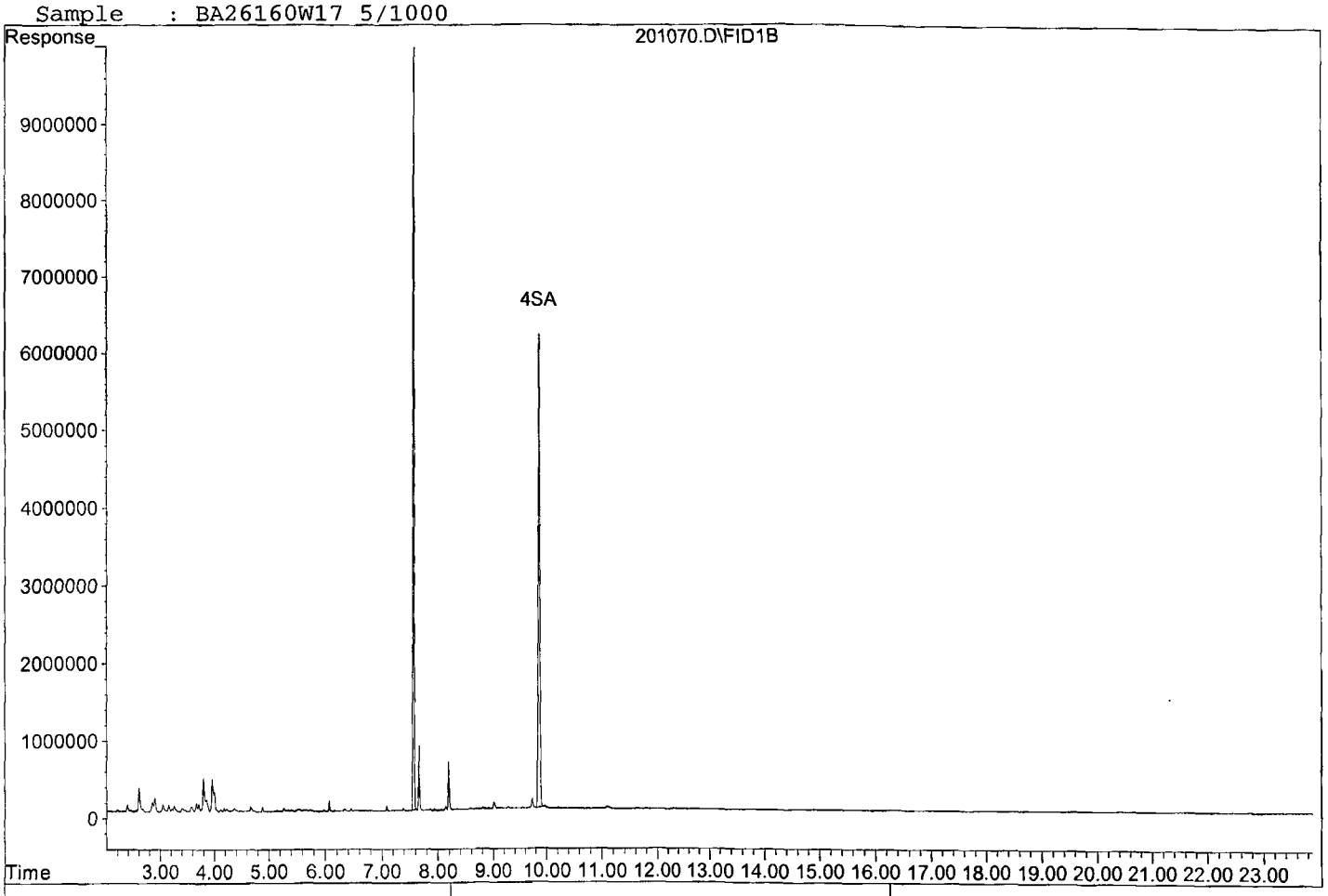
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

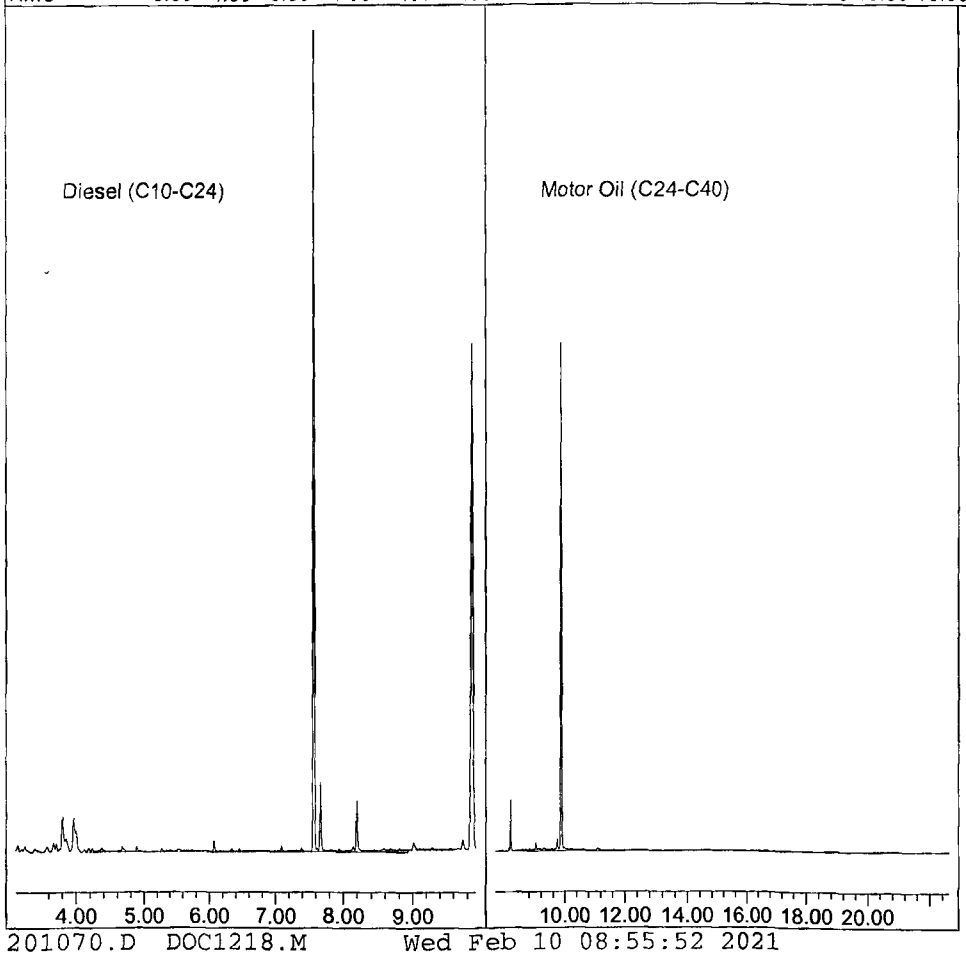
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	145111677	122.821 ppb
Surrogate Spike 150.000		Recovery =	81.88%
4) SA Octacosane(S)	9.86	122850900	135.239 ppb
Surrogate Spike 150.000		Recovery =	90.16%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	61360312	62.562 ppb
2) HBTM Motor Oil (C24-C40)	15.16	64137072	92.821 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201070.D
Sample : BA26160W17 5/1000





201070.D DOC1218.M Wed Feb 10 08:55:52 2021

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201071.D Vial: 71
Acq On : 2-2-21 23:51:07 Operator:
Sample : BA26163W17 5/1050 Inst : Apollo
Misc : water Multiplr: 4.76
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

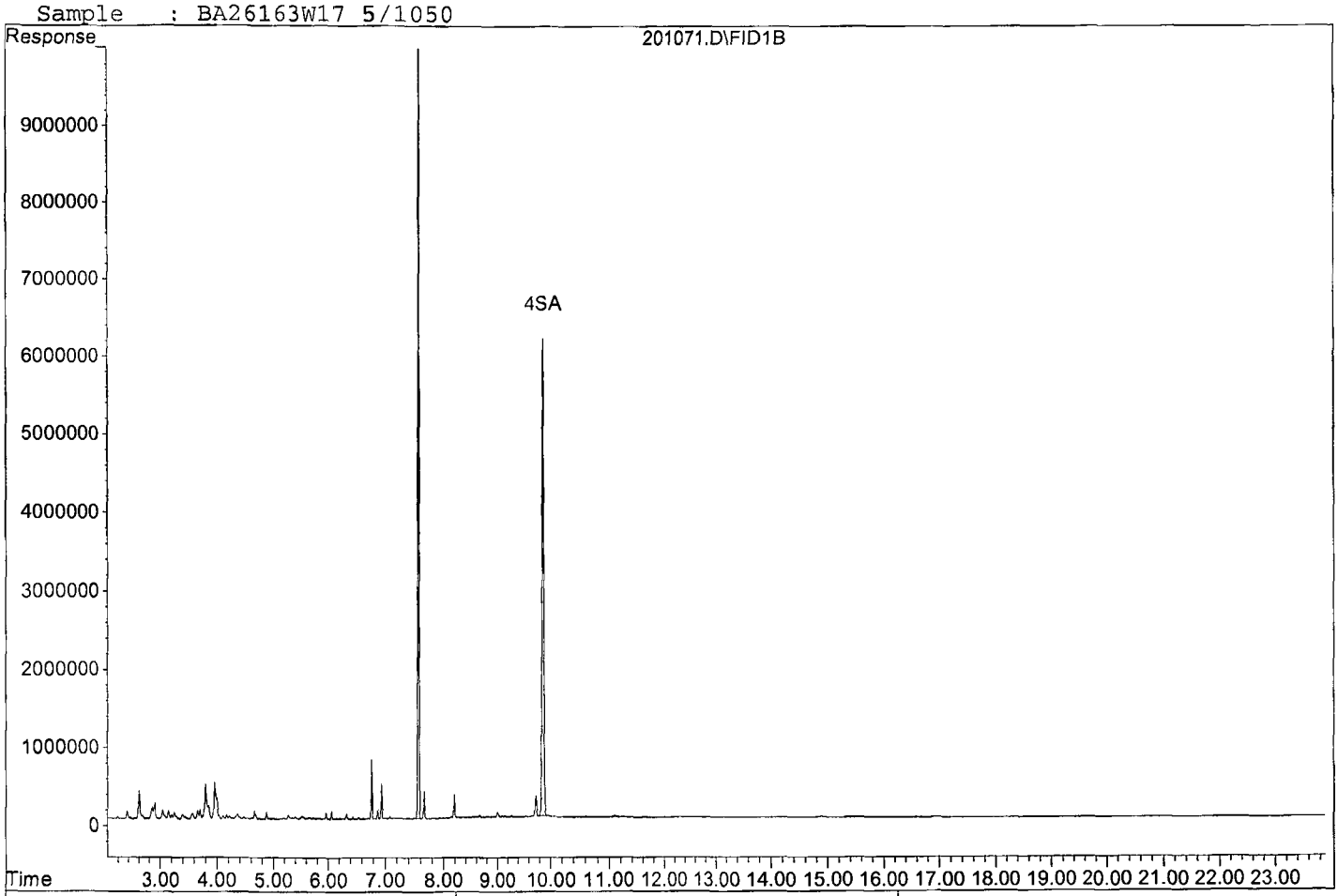
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

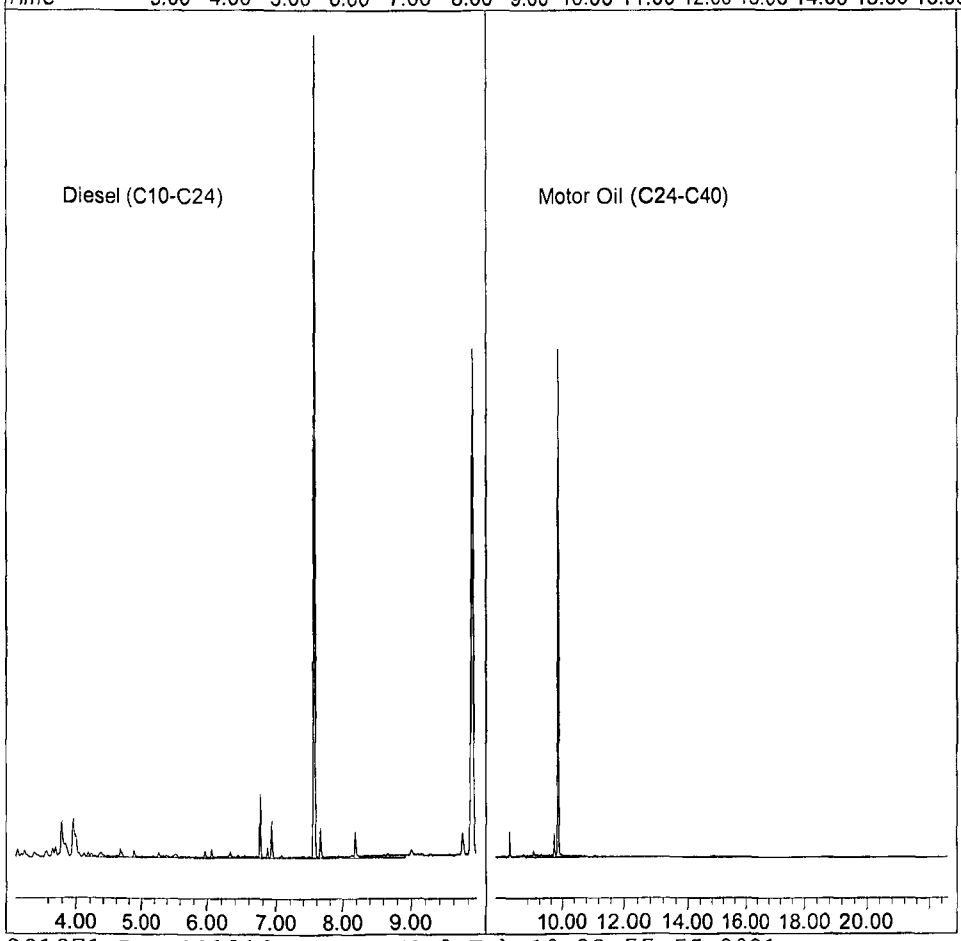
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	146666028	118.225 ppb
Surrogate Spike 142.857		Recovery =	82.76%
4) SA Octacosane(S)	9.87	123477958	129.456 ppb
Surrogate Spike 142.857		Recovery =	90.62%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	71592819	69.519 ppb
2) HBTM Motor Oil (C24-C40)	15.16	55483876	74.085 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201071.D
Sample : BA26163W17 5/1050





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201052.D Vial: 52
Acq On : 2-2-21 14:55:08 Operator:
Sample : 210201A BLK 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

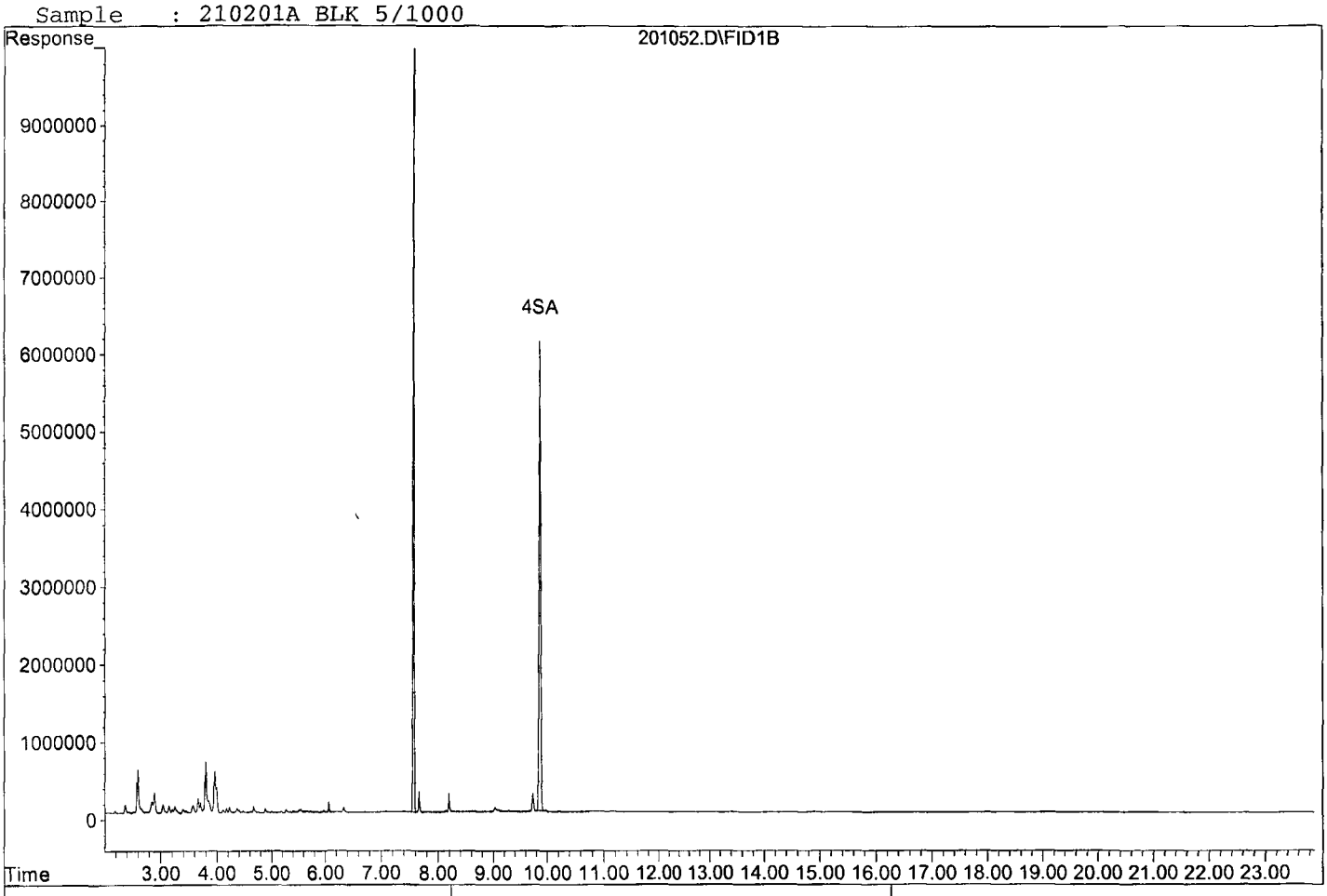
Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

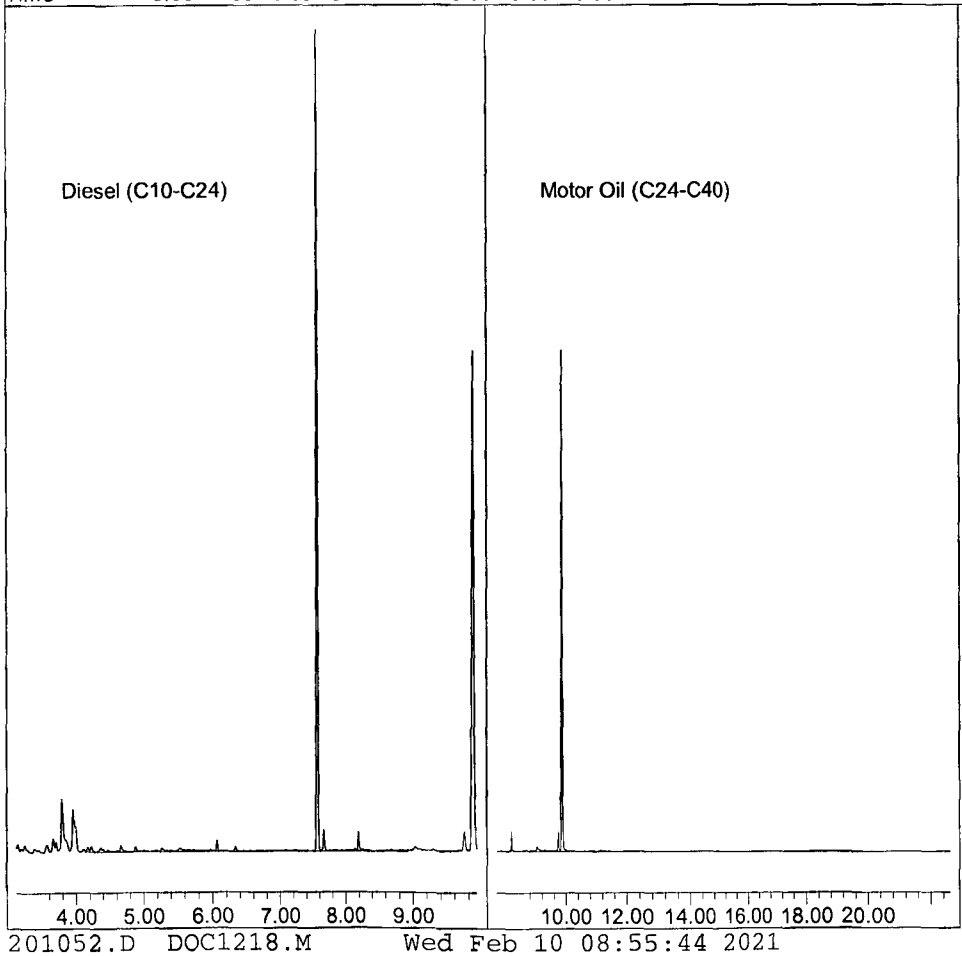
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	144180913	122.033 ppb
Surrogate Spike 150.000		Recovery =	81.36%
4) SA Octacosane(S)	9.87	121985254	134.286 ppb
Surrogate Spike 150.000		Recovery =	89.52%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	40958294	41.761 ppb
2) HBTM Motor Oil (C24-C40)	15.16	37896125	47.236 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201052.D
Sample : 210201A BLK 5/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\210201\201053.D Vial: 53
Acq On : 2-2-21 15:23:34 Operator:
Sample : 210201A LCS-1 5/1000 Inst : Apollo
Misc : water Multiplr: 5.00
IntFile : events.e
Quant Time: Feb 3 8:04 2021 Quant Results File: DOC1218.RES

Method : G:\APOLLO\DATA\210201\DOC1218.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Feb 09 10:03:04 2021
Response via : Multiple Level Calibration

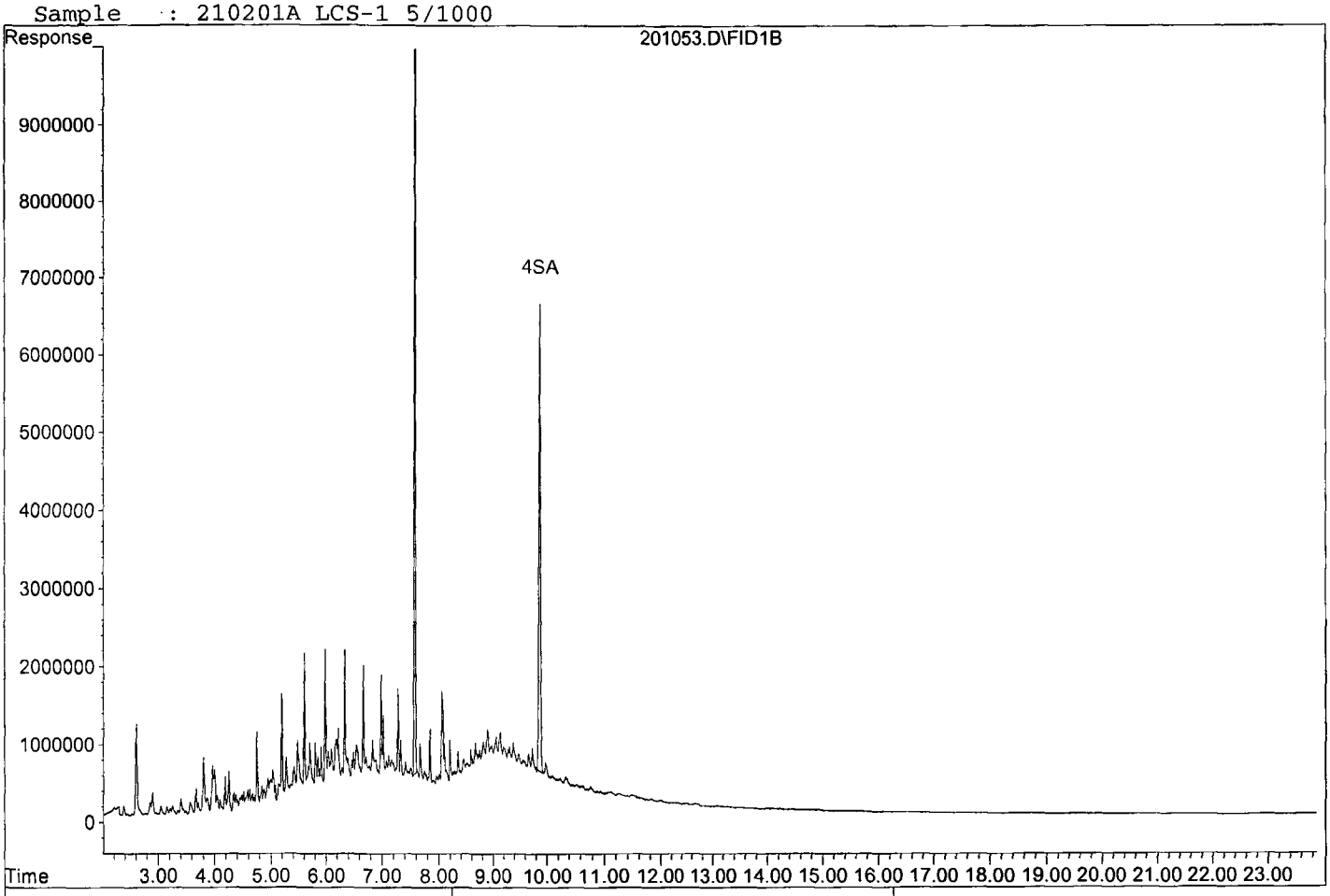
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

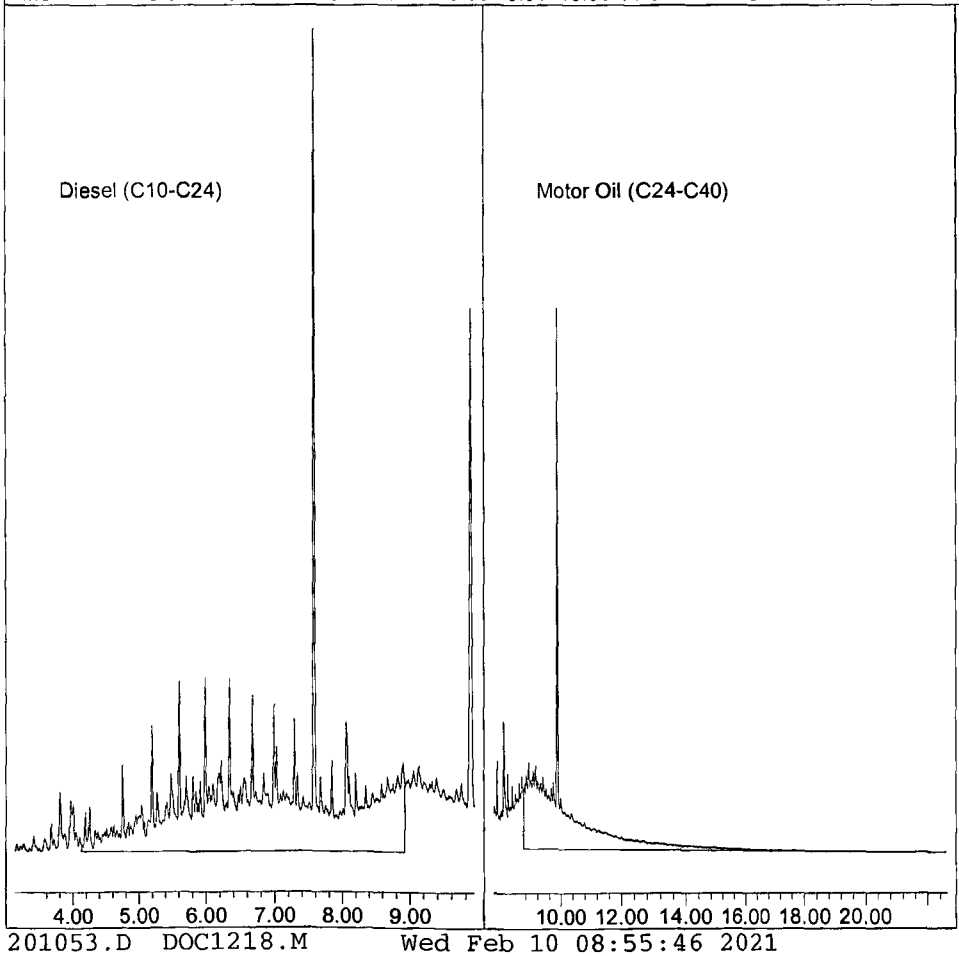
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.57	157826880	133.583 ppb
Surrogate Spike 150.000		Recovery =	89.06%
4) SA Octacosane(S)	9.87	121100688	133.312 ppb
Surrogate Spike 150.000		Recovery =	88.87%
Target Compounds			
1) HATM Diesel (C10-C24)	6.53	1666043113	1698.676 ppb
2) HBTM Motor Oil (C24-C40)	15.16	1030161512	1770.980 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\210201\201053.D
Sample : 210201A LCS-1 5/1000





201053.D DOC1218.M Wed Feb 10 08:55:46 2021

Diesel / Motor Oil CCV

Prepared: 02/02/21

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155668-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	1250uL	10mL	MC	250

Diesel / Motor Oil Second Source

Prepared: 07/21/20

Expires: 07/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	Phenova	ALO-101287	50,000	**CL13327-40550**	**07/21/21**	**02/28/22**	50uL	10mL	MC	250
Motor Oil Second Source	Absolute	51094	50,000	**010918-39581**	**07/21/21**	**01/09/23**	50uL			

Diesel / Motor Oil Calibration Standard

Prepared: 09/05/20

Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0154201-50381,50522,50526**	**08/11/21**	**11/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0155668-50515,50518,50519**	**08/11/21**	**01/31/27**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL15440-50421**	**08/05/21**	**06/30/25**	1666uL			100

Diesel / Motor Oil Calibration Curve

Prepared: 12/18/20
Expires: 08/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Conc. (ug/mL)	APPL Mix Name	Reference to APPL Prep Date and Lot #'s	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc.
Diesel / Motor Oil - 1	APPL	10	Diesel / Motor Oil - 1A	Perp'd: 09/05/20 A0154201-50381,50522,50526 A0155658-50515,50518,50519 CL15440-50421	08/05/21	06/30/25	100uL	200uL	MC	5
Diesel / Motor Oil -2		50	Diesel / Motor Oil - 1				200uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	2,000	Diesel / Motor Oil -2				25uL	1mL	MC	50
			Diesel / Motor Oil - 3				125uL	1mL	MC	250
			Diesel / Motor Oil - 4				500uL	1mL	MC	1000
			Diesel / Motor Oil - 5				750uL	1mL	MC	1500
			Diesel / Motor Oil - 6				100uL	100uL	N/A	2,000

THC Surrogate

Prepared: 01/28/21
Expires: 01/28/22

Prepared By (Initials): ss

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL15440-50949**	**01/28/22**	**06/30/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 01/28/21

Expires: 01/28/22

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	A0156490-50991,50992,51528	01/28/22	02/28/27	4.05 mL	8.1 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	A0155668-50514 A0160024-5153 A0157842-50994	01/28/22	01/31/27	4.05 mL			25,000

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210201A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-28-21 1-28-22		Surrogate ID 1	THC Surrogate 1-28-21 1-28-22	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 12-1-20 12-1-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 12:05	
Spiked ID 8			Ext. End Time:	02/02/21 6:30	
			GC Requires Extract By:		

pH1	2	02/01/20 10:25	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 02/01/21 **Witnessed By:** DL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210201A Blk		0.050	2	0.250	1	1000	5	2	02/01/21 10:30	*
						equip	E-HP51 E-WB1				
2	210201A LCS-1		0.080,0.05	1,2	0.250	1	1000	5	2	02/01/21 10:30	*
						equip	E-HP50 E-WB2				
3	BA26001 MS-1	BA26001W35	0.080	1	0.250	1	1010	5	2	02/01/21 10:30	94899
						equip	E-HP12 E-WB3				
4	BA26001 MSD-1	BA26001W37	0.080	1	0.250	1	1010	5	2	02/01/21 10:30	94899
						equip	E-HP11 E-WB1				
5	BA26001	BA26001W34			0.250	1	1000	5	2	02/01/21 10:30	94899
						equip	E-HP49 E-WB2				
6	BA26003	BA26003W11			0.250	1	1020	5	2	02/01/21 10:30	94899
						equip	E-HP48 E-WB3				
7	BA26006	BA26006W16	0.050	2	0.250	1	1040	5	2	02/01/21 10:30	94899 *
						equip	E-HP47 E-WB1				
8	BA26008	BA26008W12	0.050	2	0.250	1	1050	5	2	02/01/21 10:30	94899 *
						equip	E-HP25 E-WB2				
9	BA26010	BA26010W01	0.050	2	0.250	1	1070	5	2	02/01/21 10:30	94899 *
						equip	E-HP26 E-WB3				
10	BA26013	BA26013W16	0.050	2	0.250	1	1050	5	2	02/01/21 10:30	94899 *
						equip	E-HP27 E-WB1				
11	BA26016	BA26016W14			0.250	1	1000	5	2	02/01/21 10:30	94899
						equip	E-HP28 E-WB2				
12	BA26019	BA26019W08			0.250	1	980	5	2	02/01/21 10:30	94912
						equip	E-HP10 E-WB3				
13	BA26020	BA26020W07			0.250	1	1040	5	2	02/01/21 10:30	94912
						equip	E-HP9 E-WB1				
14	BA26150	BA26150W06	0.050	2	0.250	1	970	5	2	02/01/21 10:30	94921 *
						equip	E-HP29 E-WB2				
15	BA26152	BA26152W07			0.250	1	980	5	2	02/01/21 10:30	94921
						equip	E-HP30 E-WB3				
16	BA26155	BA26155W06	0.050	2	0.250	1	500	5	2	02/01/21 10:30	94921 *
						equip	E-HP16 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279
Silica gel (*)	05D627T

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	2/2/21
Time	1145
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	02/09/21 6:17:14 AM

Reviewed By: SS **Date** 02/10/21

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	210201A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 1-28-21 1-28-22		Surrogate ID 1	THC Surrogate 1-28-21 1-28-22	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 12-1-20 12-1-21		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 12:05	
Spiked ID 8			Ext. End Time:	02/02/21 6:30	
			GC Requires Extract By:		

pH1	2	02/01/20 10:25	Water Bath Temp 1 °C	35/33.5 °C
pH2			Water Bath Temp 2 °C	35/38.1
pH3			Water Bath Temp 3 °C	35/34.5 °C

Spiked By: KY **Date** 02/01/21 **Witnessed By:** DL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W07			0.250	1	990	5	2	02/01/21 10:30	94921
						equip	E-HP15 E-WB2				
18	BA26160	BA26160W17			0.250	1	1000	5	2	02/01/21 10:30	94920
						equip	E-HP14 E-WB3				
19	BA26163	BA26163W17			0.250	1	1050	5	2	02/01/21 10:30	94920
						equip	E-HP13 E-WB1				

Solvent and Lot#	
1+1 HCL (5mLs)	59072
PH Strips	HC025486
Dicholormethane	60182
Filter Paper	400178
Sodium Sulfate	2019070279
Silica gel (*)	05D627T

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	
Time	
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	02/09/21 6:17:14 AM

Reviewed By: SS **Date** 02/10/21

Injection Log

Directory: G:\APOLLO\DATA\201218\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	1218003.D	1	Diesel Motor Oil-1A 12/18/20	water	12-18-20 13:53:54
2	4	1218004.D	1	Diesel Motor Oil-1 12/18/20	water	12-18-20 14:21:52
3	5	1218005.D	1	Diesel Motor Oil-2 12/18/20	water	12-18-20 14:49:55
4	6	1218006.D	1	Diesel Motor Oil-3 12/18/20	water	12-18-20 15:17:56
5	7	1218007.D	1	Diesel Motor Oil-4 12/18/20	water	12-18-20 15:45:58
6	8	1218008.D	1	Diesel Motor Oil-5 12/18/20	water	12-18-20 16:13:59
7	9	1218009.D	1	Diesel Motor Oil-6 12/18/20	water	12-18-20 16:42:03
8	10	1218010.D	1	Diesel Motor Oil-SS 7/21/20	water	12-18-20 17:10:04
9	50	201050.D	1	Diesel Motor Oil-CCV 2/2/21	water	2-2-21 13:52:22
10	52	201052.D	5	210201A BLK 5/1000	water	2-2-21 14:55:08
11	53	201053.D	5	210201A LCS-1 5/1000	water	2-2-21 15:23:34
12	64	201064.D	1	Diesel Motor Oil-CCV 2/2/21	water	2-2-21 20:34:08
13	70	201070.D	5	BA26160W17 5/1000	water	2-2-21 23:22:58
14	71	201071.D	4.7619	BA26163W17 5/1050	water	2-2-21 23:51:07
15	72	201072.D	1	Diesel Motor Oil-CCV 2/2/21	water	2-3-21 0:19:17

ORGANICS

Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda
Initials: MA

			0105Y003.D	0105Y004.D	0105Y005.D	0105Y006.D	0105Y007.D	0105Y008.D	0105Y009.D	0105Y010.D	0105Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.3386	0.3948	0.3548	0.2735	0.2965	0.2779	0.2980			0.32	14				
3	TM	n-Nitrosodimethylamine		0.7063	0.5438	0.5535	0.6148	0.6255	0.6152	0.6297	0.5953		0.61	8.2	TM			
4	TM	Pyridine		1.253	1.350	1.223	1.409	1.381	1.358	1.375	1.339		1.3	4.8	TM			
5	S	2-Fluorophenol (S)		1.563	1.640	1.630	1.613	1.576	1.602	1.603	1.578		1.6	1.7	S			
6	S	Phenol-D6 (S)		2.021	2.078	2.102	2.055	1.998	2.045	2.050	2.022		2.0	1.6	S			
7	*TM	Phenol		2.326	2.405	2.472	2.478	2.394	2.420	2.449	2.399		2.4	2.0	*TM			0.800
8	TM	Aniline		1.637	1.816	1.998	1.691	1.755	1.809	1.740	1.684		1.8	6.3	TM			
9	TM	Bis (2-chloroethyl) ether		1.015	1.051	1.035	1.048	1.013	1.025	1.042	1.025		1.0	1.4	TM			0.700
10	TM	2-Chlorophenol		1.763	1.812	1.859	1.863	1.820	1.825	1.849	1.843		1.8	1.8	TM			0.800
11	TM	1,3-DCB		2.024	2.119	2.142	2.143	2.085	2.114	2.122	2.104		2.1	1.8	TM			
12	*TM	1,4-DCB		2.072	2.121	2.130	2.133	2.093	2.147	2.139	2.141		2.1	1.2	*TM			
13	TM	Benzyl alcohol		1.041	1.055	1.064	1.092	1.077	1.067	1.102	1.082		1.1	1.9	TM			
14	TM	1,2-DCB		1.905	2.055	2.010	1.974	1.984	1.984	2.012	2.010		2.0	2.2	TM			
15	TM	2-Methylphenol		1.327	1.371	1.413	1.426	1.395	1.413	1.426	1.433		1.4	2.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		0.9584	0.9878	0.9889	0.9867	0.9645	0.9718	0.9743	0.9683		0.98	1.2	TM			0.010
17	TM	Acetophenone		2.493	2.547	2.581	2.574	2.552	2.564	2.607	2.583		2.6	1.3	TM			0.010
18	TM	3&4-Methylphenol		1.791	1.877	1.894	1.922	1.887	1.875	1.949	1.939		1.9	2.6	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.464	1.479	1.509	1.514	1.489	1.490	1.516	1.502		1.5	1.2	**TM			0.500
20	TM	Hexachloroethane		0.8416	0.8556	0.8822	0.8628	0.8527	0.8719	0.8917	0.8888		0.87	2.1	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.5605	0.6223	0.5971	0.5866	0.5819	0.5805	0.5977	0.5919		0.59	3.0	S			
23	TM	Nitrobenzene		0.5885	0.6127	0.6094	0.6032	0.6117	0.6009	0.6213	0.6066		0.61	1.6	TM			0.200
24	TM	Isophorone		0.9275	0.9742	0.9875	0.9886	0.9811	0.9674	0.9880	0.9822		0.97	2.1	TM			0.400
25	*TM	2-Nitrophenol		0.2152	0.2455	0.2585	0.2636	0.2625	0.2625	0.2709	0.2705		0.26	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3940	0.4279	0.4260	0.4226	0.4288	0.4254	0.4364	0.4280		0.42	3.0	TM			0.200
27	TML	Benzoic acid			0.2178	0.2878	0.3556	0.3730	0.3729	0.4150	0.4168		0.35	21	TM	0.997		
28	TM	Bis (2-chloroethoxy) methane		0.5311	0.5587	0.5612	0.5551	0.5551	0.5365	0.5572	0.5541		0.55	2.0	TM			0.300
29	*TM	2,4-Dichlorophenol		0.4115	0.4304	0.4350	0.4388	0.4462	0.4364	0.4544	0.4555		0.44	3.2	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.4756	0.5158	0.5121	0.5107	0.5130	0.5096	0.5292	0.5231		0.51	3.1	TM			
31	TM	3,4-Dimethylphenol		0.6374	0.6649	0.6772	0.6846	0.6874	0.6659	0.6830	0.7094		0.68	3.1	TM			
32	TM	Naphthalene		1.302	1.406	1.390	1.384	1.384	1.364	1.418	1.422		1.4	2.8	TM			0.700
33	TM	4-Chloroaniline		0.4336	0.4890	0.5455	0.5456	0.5419	0.5270	0.5466	0.5219		0.52	7.6	TM			0.010
34	TM	2,6-Dichlorophenol		0.3964	0.4177	0.4251	0.4235	0.4309	0.4221	0.4464	0.4498		0.43	3.9	TM			
35	TM	Hexachloropropene		0.3949	0.4303	0.4472	0.4692	0.4701	0.4679	0.4878	0.4936		0.46	7.1	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.3336	0.3545	0.3592	0.3563	0.3637	0.3603	0.3796	0.3858		0.36	4.4	*TM			0.010
37	TM	Caprolactum		0.1372	0.1398	0.1396	0.1409	0.1404	0.1371	0.1438	0.1382		0.14	1.6	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.4270	0.4540	0.4581	0.4643	0.4617	0.4526	0.4748	0.4754		0.46	3.3	*TM			0.200
39	TM	2-Methylnaphthalene		0.8434	0.9273	0.9159	0.9195	0.9026	0.8863	0.9347	0.9470		0.91	3.6	TM			0.400
40	TM	1-Methylnaphthalene		0.8880	0.9257	0.9380	0.9381	0.9283	0.9321	0.9709	0.9811		0.94	3.0	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene			0.3645	0.4448	0.5730	0.6260	0.6637	0.6730	0.6422		0.57	21	**TM	0.996		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.8485	0.8708	0.8942	0.9055	0.9092	0.9179	0.9307	0.9249		0.90	3.1	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4952	0.5546	0.5448	0.5681	0.5643	0.5781	0.5960	0.5800		0.56	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.5772	0.5871	0.5925	0.6246	0.6173	0.6120	0.6520	0.6327		0.61	4.1	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.837	1.895	1.874	1.848	1.828	1.877	1.927	1.913		1.9	1.9	S			
47	TM	1,1'-Biphenyl		1.850	1.998	1.991	2.008	2.016	2.050	2.117	2.064		2.0	3.8	TM			0.010
48	TM	2-Chloronaphthalene		1.479	1.554	1.536	1.571	1.577	1.593	1.618	1.589		1.6	2.7	TM			0.800
49	TM	2-Nitroaniline		0.4377	0.4708	0.4962	0.5101	0.5193	0.5190	0.5137	0.5163		0.50	5.9	TM			0.010
50	TM	Dimethyl phthalate		1.775	1.871	1.908	1.942	1.924	1.971	1.966	1.951		1.9	3.4	TM			0.010
51	TM	2,6-DNT		0.3445	0.3844	0.4178	0.4334	0.4350	0.4449	0.4440	0.4447		0.42	8.6	TM			0.200
52	TM	Acenaphthylene		2.181	2.310	2.372	2.418	2.447	2.442	2.488	2.401		2.4	4.1	TM			0.900
53	TM	3-Nitroaniline		0.3334	0.3794	0.4015	0.4080	0.4022	0.4076	0.4109	0.3836		0.39	6.6	TM			0.010
54	*TM	Acenaphthene		1.499	1.559	1.555	1.592	1.598	1.623	1.631	1.616		1.6	2.8	*TM			0.900
55	**TML	2,4-Dinitrophenol				0.1407	0.2012	0.2152	0.2324	0.2737	0.2755		0.22	23	**TM	0.994		0.010
56	**TM	4-Nitrophenol			0.3136	0.3510	0.3949	0.3958	0.4010	0.4262	0.4170		0.39	10	**TM			0.010
57	TM	Dibenzofuran		2.237	2.346	2.352	2.344	2.347	2.359	2.463	2.413		2.4	2.7	TM			0.800
58	TM	2,4-DNT		0.4715	0.5637	0.5893	0.6139	0.6220	0.6401	0.6450	0.6663		0.60	10	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.4092	0.4471	0.4692	0.5019	0.5006	0.5037	0.5218	0.5229		0.48	8.2	TM			0.010
60	TM	Diethyl phthalate		1.790	1.944	1.952	1.984	1.951	1.981	2.034	2.012		2.0	3.8	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.9537	1.060	1.043	1.105	1.089	1.088	1.163	1.143		1.1	6.0	TM			0.400
62	TM	Fluorene		1.796	1.909	1.939	1.988	1.960	1.992	2.138	2.153		2.0	5.9	TM			0.900
63	TM	4-Nitroaniline		0.4059	0.4037	0.4222	0.4399	0.4298	0.4320	0.4425	0.4250		0.43	3.4	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.2579	0.2765	0.2895	0.3008	0.3037	0.3118	0.3287	0.3432		0.30	9.1	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol				0.1555	0.1831	0.1950	0.1939	0.2134	0.2102		0.19	11	TM			0.010
67	TM	Diphenyl amine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6815	0.7253	0.7420	0.7499	0.7929	0.7589	0.7689	0.7993		0.75	5.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.9196	0.9595	0.9609	0.9662	0.9894	0.9376	0.9469	0.9493		0.95	2.2	TM			
70	TM	4-Bromophenyl phenyl ether		0.2782	0.3010	0.3008	0.3058	0.3098	0.2969	0.3187	0.3265		0.30	4.8	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/05/21
Matrix: Instrument: Yoda Initials: MA

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2844	0.3035	0.3082	0.3151	0.3243	0.3123	0.3273	0.3277		0.31	4.7	TM			0.100
72	TM	Atrazine		0.2237	0.2558	0.2664	0.2759	0.2782	0.2623	0.2763	0.2802		0.26	7.1	TM			0.010
73	*TM	Pentachlorophenol			0.1664	0.1879	0.2079	0.2172	0.2113	0.2281	0.2319		0.21	11	*TM			0.050
74	TM	Phenanthrene		1.303	1.369	1.386	1.396	1.434	1.405	1.433	1.359		1.4	3.1	TM			0.700
75	TM	Anthracene		1.318	1.412	1.437	1.471	1.498	1.442	1.468	1.517		1.4	4.3	TM			0.700
76	TM	Carbazol		1.179	1.243	1.266	1.297	1.335	1.287	1.319	1.313		1.3	3.9	TM			0.010
77	TM	Di-n-butylphthalate		1.396	1.529	1.586	1.608	1.632	1.574	1.646	1.591		1.6	5.1	TM			0.010
78	*TM	Fluoranthene		1.460	1.621	1.644	1.664	1.705	1.652	1.682	1.508		1.6	5.4	*TM			0.600
79	I	Chrysene-D12(IS)	ISTD															
80	TM	Benzidine		0.3308	0.3406	0.4129	0.4287	0.4299	0.4188	0.4077	0.4129		0.40	9.8	TM			
81	TM	Pyrene		1.584	1.630	1.670	1.734	1.767	1.710	1.655	1.591		1.7	4.0	TM			0.600
82	S	Terphenyl-D14(S)		1.156	1.177	1.209	1.203	1.205	1.186	1.252	1.216		1.2	2.4	S			
83	TM	Butyl benzylphthalate		0.6569	0.7019	0.7063	0.7240	0.7303	0.7216	0.7337	0.7445		0.71	3.8	TM			0.010
84	TM	3,3'-Dichlorobenzidine		0.4757	0.4842	0.5804	0.5953	0.5968	0.5728	0.5740	0.5560		0.55	8.6	TM			0.010
85	TM	Benz (a) anthracene		1.593	1.667	1.690	1.734	1.734	1.679	1.786	1.788		1.7	3.8	TM			0.800
86	TM	Bis (2-ethylhexyl) phthalate		0.9109	0.9622	1.003	1.034	1.033	1.039	1.120	1.126		1.0	7.1	TM			0.010
87	TM	Chrysene		1.558	1.520	1.590	1.673	1.686	1.680	1.600	1.568		1.6	3.9	TM			0.700
88	*TM	Di-n-octylphthalate		1.567	1.610	1.675	1.742	1.771	1.713	1.781	1.631		1.7	4.7	*TM			0.010
89	I	Perylene-D12(IS)	ISTD															
90	TM	Benzo (b) fluoranthene		1.349	1.396	1.611	1.555	1.554	1.731	1.710	1.663		1.6	8.8	TM			0.700
91	TM	Benzo (k) fluoranthene		1.374	1.518	1.394	1.568	1.625	1.422	1.578	1.652		1.5	7.1	TM			0.700
92	*TM	Benzo (a) pyrene	1.404	1.277	1.370	1.452	1.494	1.535	1.506	1.587	1.576		1.5	6.9	*TM			0.700
93	TM	Indeno (1,2,3-cd) pyrene		1.507	1.623	1.665	1.702	1.735	1.725	1.783	1.784		1.7	5.5	TM			0.500
94	TM	Dibenz (a,h) anthracene		1.307	1.382	1.454	1.488	1.513	1.504	1.590	1.597		1.5	6.6	TM			0.400
95	TM	Benzo (g,h,i) perylene		1.294	1.381	1.433	1.466	1.473	1.462	1.529	1.524		1.4	5.3	TM			0.500
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	464022	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1802202	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1158816	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2443922	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.27	240	2316825	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2421106	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
82) Terphenyl-D14(S)	0.00	244	0d	0.00000 ppb	
Spiked Amount 100.000			Recovery =	0.000%	
Target Compounds					Qvalue
92) Benzo (a) pyrene	14.89	252	339827	3.82784 ppb	98

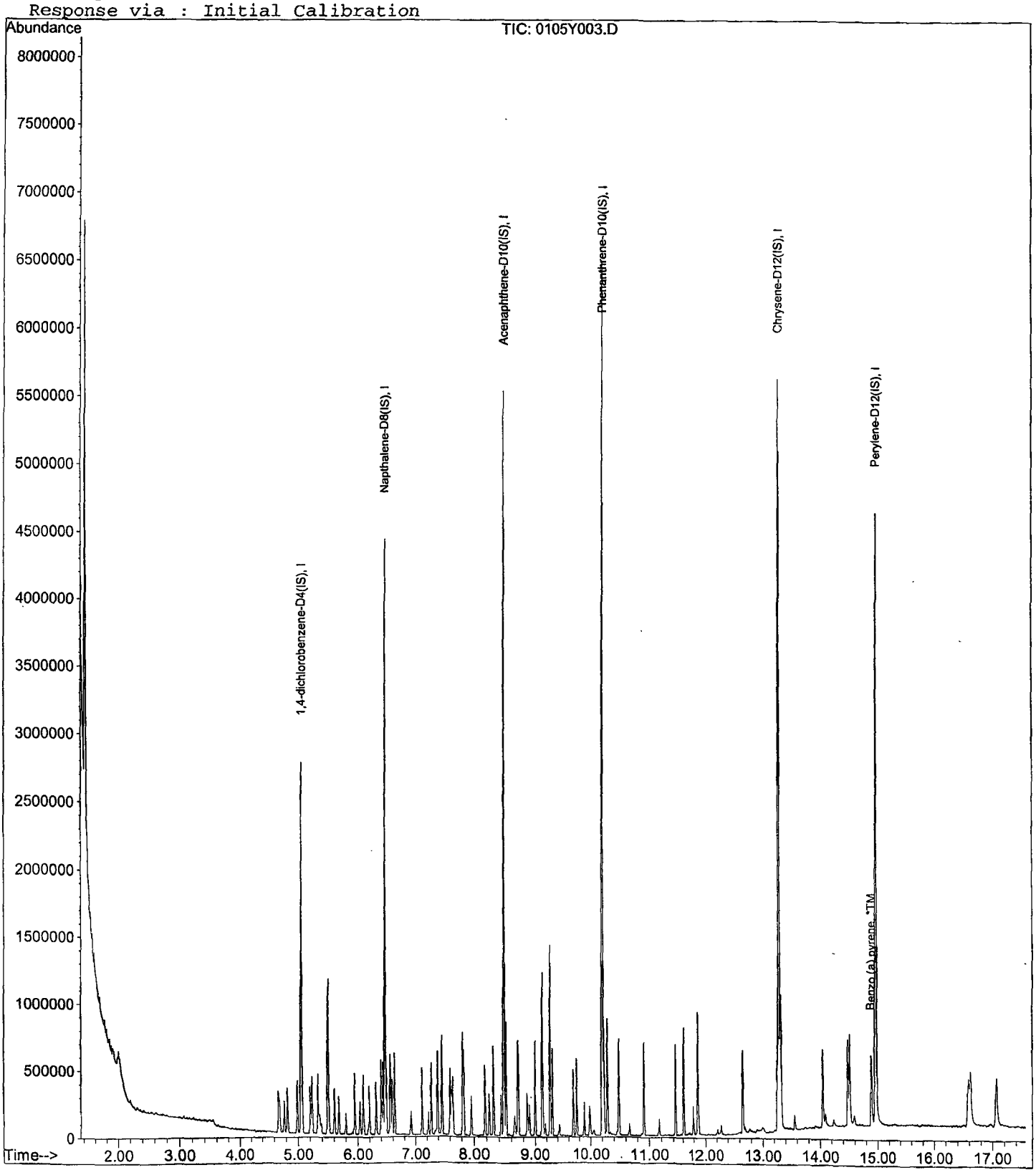
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y003.D Vial: 3
Acq On : 5 Jan 21 11:25 Operator: MA
Sample : 4ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 17:45 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 15:11:11 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473785	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1833247	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1162761	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2408794	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2379732	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2505086	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	185118	9.76501 ppb	0.00
Spiked Amount 200.000			Recovery =	4.883%	
6) Phenol-D6 (S)	4.65	99	239373	9.87526 ppb	-0.02
Spiked Amount 200.000			Recovery =	4.938%	
22) Nitrobenzene-D5(S)	5.65	82	128447	4.75176 ppb	0.00
Spiked Amount 100.000			Recovery =	4.752%	
46) 2-Fluorobiphenyl(S)	7.70	172	266951	4.89806 ppb	0.00
Spiked Amount 100.000			Recovery =	4.898%	
64) 2,4,6-Tribromophenol(S)	9.40	330	74979	8.55416 ppb	0.00
Spiked Amount 200.000			Recovery =	4.277%	
82) Terphenyl-D14(S)	12.07	244	344009	4.81621 ppb	0.00
Spiked Amount 100.000			Recovery =	4.816%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	2005	0.53037 #	1
3) n-Nitrosodimethylamine	1.99	42	41830	5.78462 ppb	92
4) Pyridine	2.01	79	74211	4.68965 ppb	99
7) Phenol	4.67	94	137737	4.80972 ppb	92
8) Aniline	4.69	93	96936	4.63435 ppb	96
9) Bis (2-chloroethyl) ether	4.76	63	60097	4.91740 ppb	94
10) 2-Chlorophenol	4.82	128	104408	4.81894 ppb	98
11) 1,3-DCB	4.99	146	119844	4.80322 ppb	96
12) 1,4-DCB	5.07	146	122695	4.88177 ppb	97
13) Benzyl alcohol	5.20	108	61651	4.85288 ppb	94
14) 1,2-DCB	5.23	146	112831	4.78236 ppb	96
15) 2-Methylphenol	5.33	107	78593	4.73763 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	56758	4.91437 ppb	98
17) Acetophenone	5.49	105	147622	4.86338 ppb	99
18) 3&4-Methylphenol	5.50	107	212119	9.46680 ppb	94
19) n-Nitrosodi-n-propylamine	5.50	70	86675	4.89375 ppb	92
20) Hexachloroethane	5.60	117	49844	4.84575 ppb	81
23) Nitrobenzene	5.67	77	134869	4.84962 ppb	100
24) Isophorone	5.94	82	212536	4.75841 ppb	95
25) 2-Nitrophenol	6.03	139	49320	4.20107 ppb	87
26) 2,4-Dimethylphenol	6.09	122	90285	4.64983 ppb	96
27) Benzoic acid	6.17	105	34220	8.81029 ppb	97
28) Bis (2-chloroethoxy) metha	6.19	93	121711	4.81866 ppb	99
29) 2,4-Dichlorophenol	6.30	162	94306	4.69226 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	108980	4.65216 ppb	99
31) 3,4-Dimethylphenol	6.42	107	146063	4.71278 ppb	98
32) Naphthalene	6.48	128	298398	4.70534 ppb	98
33) 4-Chloroaniline	6.55	127	99354	4.17791 ppb	99
34) 2,6-Dichlorophenol	6.55	162	90845	4.64761 ppb	99
35) Hexachloropropene	6.58	213	90498	4.31483 ppb	96
36) Hexachlorobutadiene	6.63	225	76436	4.61189 ppb	96
37) Caprolactum	6.92	55	31443	4.91371 ppb	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	97857	4.65686	ppb		100
39)	2-Methylnaphthalene	7.27	142	193260	4.63596	ppb		100
40)	1-Methylnaphthalene	7.39	142	203484	4.73455	ppb		99
42)	Hexachlorocyclopentadiene	7.45	237	54936	8.29825	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	123318	4.71248	ppb		97
44)	2,4,6-Trichlorophenol	7.60	196	71972	4.42028	ppb		100
45)	2,4,5-Trichlorophenol	7.65	196	83897	4.71646	ppb		91
47)	1,1'-Biphenyl	7.82	154	268941	4.59868	ppb		98
48)	2-Chloronaphthalene	7.84	162	214902	4.72546	ppb		99
49)	2-Nitroaniline	7.96	65	63614	4.39540	ppb		95
50)	Dimethyl phthalate	8.17	163	258009	4.63821	ppb		99
51)	2,6-DNT	8.23	165	50074	4.11500	ppb	#	57
52)	Acenaphthylene	8.31	152	316996	4.57714	ppb		99
53)	3-Nitroaniline	8.43	138	48453	4.26485	ppb	#	90
54)	Acenaphthene	8.51	154	217834	4.73032	ppb		97
55)	2,4-Dinitrophenol	8.56	184	4474	14.33186	ppb		98
56)	4-Nitrophenol	8.64	65	37113	3.31066	ppb		92
57)	Dibenzofuran	8.71	168	325158	4.74455	ppb		100
58)	2,4-DNT	8.70	165	68529	3.91956	ppb		87
59)	2,3,4,6-Tetrachlorophenol	8.86	232	59472	4.22225	ppb		94
60)	Diethyl phthalate	9.00	149	260147	4.57553	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	138609	4.41311	ppb		94
62)	Fluorene	9.11	166	261083	4.52567	ppb		100
63)	4-Nitroaniline	9.14	138	58994	4.77382	ppb	#	81
66)	4,6-Dinitro-2-methylphenol	9.17	198	21189	1.83412	ppb	#	86
67)	Diphenyl amine	9.26	169	410428	9.05899	ppb		97
68)	n-Nitrosodiphenylamine	9.26	169	410428	9.05899	ppb		97
69)	1,2-Diphenylhydrazine	9.30	77	276877	4.82113	ppb		99
70)	4-Bromophenyl phenyl ether	9.68	248	83765	4.56496	ppb		92
71)	Hexachlorobenzene	9.75	284	85647	4.54590	ppb		89
72)	Atrazine	9.89	200	33683	2.11185	ppb		97
73)	Pentachlorophenol	9.98	266	39983	3.20371	ppb		94
74)	Phenanthrene	10.22	178	392391	4.70240	ppb		99
75)	Anthracene	10.29	178	396737	4.55787	ppb		99
76)	Carbazol	10.48	167	354948	4.60507	ppb		98
77)	Di-n-butylphthalate	10.90	149	420196	4.44361	ppb		98
78)	Fluoranthene	11.60	202	439738	4.51599	ppb		98
80)	Benzidine	11.78	184	98403	4.15791	ppb		97
81)	Pyrene	11.87	202	471275	4.75000	ppb		99
83)	Butyl benzylphthalate	12.64	149	195411	4.59441	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	141508	4.29037	ppb		97
85)	Benz (a) anthracene	13.27	228	473726	4.65914	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	270976	4.42858	ppb	#	94
87)	Chrysene	13.30	228	463382	4.83904	ppb		98
88)	Di-n-octylphthalate	14.04	149	466062	4.64620	ppb		99
90)	Benzo (b) fluoranthene	14.47	252	422450	4.29302	ppb	#	98
91)	Benzo (k) fluoranthene	14.51	252	430226	4.34768	ppb		98
92)	Benzo (a) pyrene	14.88	252	399993	4.35451	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.58	276	471765	4.45733	ppb		98
94)	Dibenz (a,h) anthracene	16.62	278	409379	4.42012	ppb		99
95)	Benzo (g,h,i) perylene	17.05	276	405258	4.47766	ppb		98

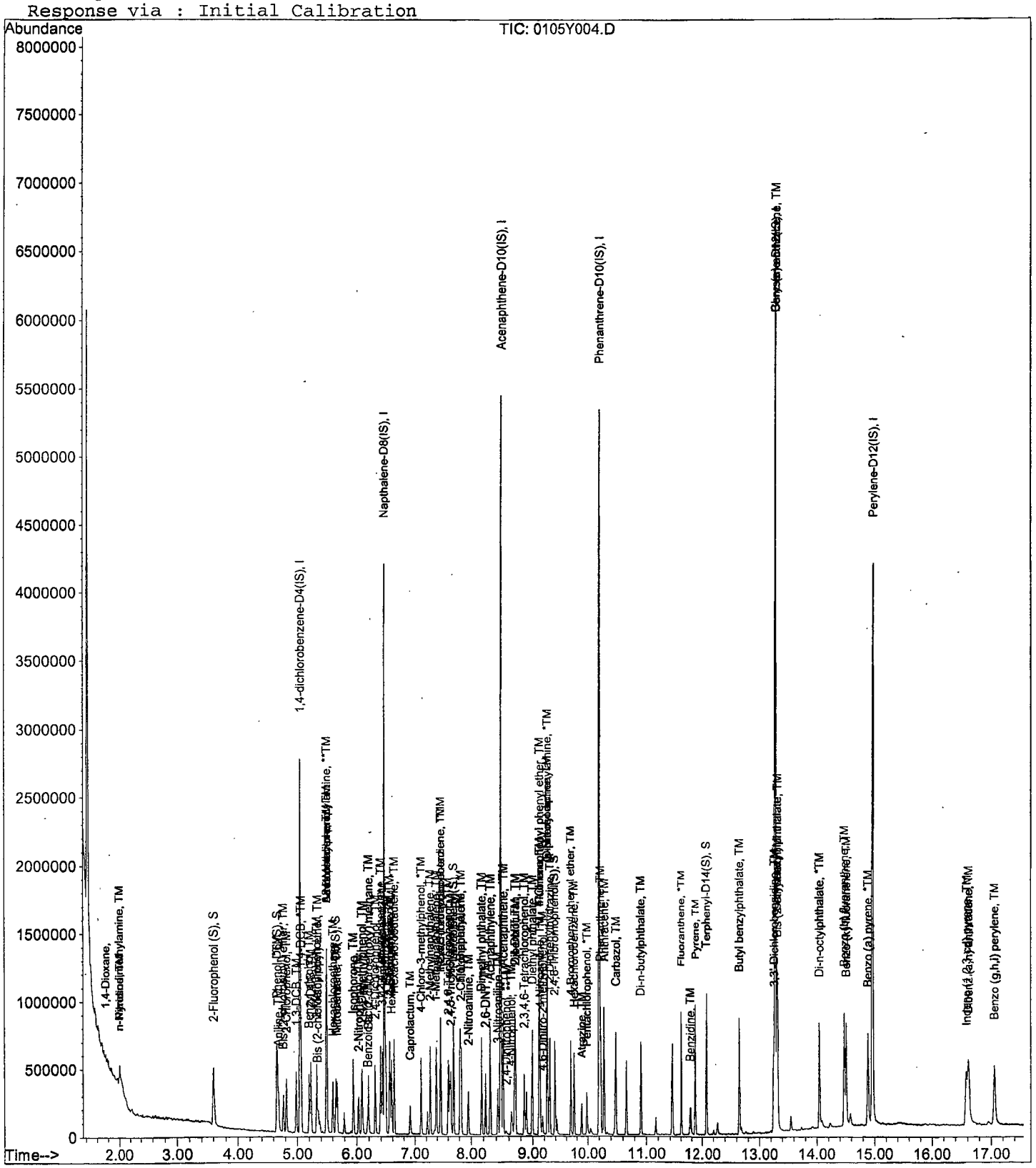
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y004.D Vial: 4
Acq On : 5 Jan 21 11:50 Operator: MA
Sample : 5ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	473705	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1781675	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1140110	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2367999	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2446347	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2495910	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	388447	20.49411	ppb		0.00
Spiked Amount 200.000			Recovery =	10.247%			
6) Phenol-D6 (S)	4.66	99	492275	20.31208	ppb		0.00
Spiked Amount 200.000			Recovery =	10.156%			
22) Nitrobenzene-D5(S)	5.65	82	277169	10.55036	ppb		0.00
Spiked Amount 100.000			Recovery =	10.550%			
46) 2-Fluorobiphenyl(S)	7.70	172	540189	10.10840	ppb		0.00
Spiked Amount 100.000			Recovery =	10.108%			
64) 2,4,6-Tribromophenol(S)	9.39	330	157639	18.34194	ppb		0.00
Spiked Amount 200.000			Recovery =	9.171%			
82) Terphenyl-D14(S)	12.07	244	719678	9.80130	ppb		0.00
Spiked Amount 100.000			Recovery =	9.801%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	4676	1.23713			91
3) n-Nitrosodimethylamine	1.98	42	64401	8.90743	ppb		80
4) Pyridine	2.00	79	159922	10.10773	ppb		95
7) Phenol	4.67	94	284850	9.94852	ppb		94
8) Aniline	4.69	93	215040	10.28244	ppb		92
9) Bis (2-chloroethyl) ether	4.76	63	124427	10.18288	ppb		96
10) 2-Chlorophenol	4.82	128	214545	9.90397	ppb		94
11) 1,3-DCB	4.98	146	250935	10.05890	ppb		98
12) 1,4-DCB	5.07	146	251185	9.99580	ppb		99
13) Benzyl alcohol	5.21	108	124972	9.83889	ppb		89
14) 1,2-DCB	5.23	146	243420	10.31913	ppb		95
15) 2-Methylphenol	5.33	107	162405	9.79152	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	116981	10.13047	ppb		96
17) Acetophenone	5.49	105	301622	9.93857	ppb		80
18) 3&4-Methylphenol	5.50	107	444511	19.84173	ppb		99
19) n-Nitrosodi-n-propylamine	5.49	70	175150	9.89080	ppb		99
20) Hexachloroethane	5.60	117	101321	9.85192	ppb		88
23) Nitrobenzene	5.68	77	272922	10.09780	ppb		91
24) Isophorone	5.95	82	433948	9.99676	ppb		99
25) 2-Nitrophenol	6.03	139	109329	9.58219	ppb		90
26) 2,4-Dimethylphenol	6.09	122	190600	10.10036	ppb		99
27) Benzoic acid	6.19	105	96995	12.03014	ppb		97
28) Bis (2-chloroethoxy) metha	6.19	93	248839	10.13695	ppb		98
29) 2,4-Dichlorophenol	6.31	162	191693	9.81390	ppb		97
30) 1,2,4-Trichlorobenzene	6.39	180	229765	10.09216	ppb		98
31) 3,4-Dimethylphenol	6.42	107	296159	9.83228	ppb		98
32) Naphthalene	6.49	128	626299	10.16177	ppb		99
33) 4-Chloroaniline	6.55	127	217799	9.42372	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	186072	9.79495	ppb		92
35) Hexachloropropene	6.59	213	191664	9.40280	ppb		98
36) Hexachlorobutadiene	6.63	225	157919	9.80411	ppb		94
37) Caprolactum	6.93	55	62259	10.01107	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	202210	9.90140 ppb		94
39)	2-Methylnaphthalene	7.28	142	413056	10.19527 ppb		99
40)	1-Methylnaphthalene	7.39	142	412326	9.87146 ppb		98
42)	Hexachlorocyclopentadiene	7.46	237	103896	10.80489 ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.46	216	248205	9.67336 ppb		96
44)	2,4,6-Trichlorophenol	7.60	196	158075	9.90132 ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	167338	9.59419 ppb		98
47)	1,1'-Biphenyl	7.81	154	569608	9.93335 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	442830	9.93080 ppb		96
49)	2-Nitroaniline	7.95	65	134183	9.45556 ppb		94
50)	Dimethyl phthalate	8.18	163	533243	9.77652 ppb		98
51)	2,6-DNT	8.24	165	109565	9.18275 ppb		92
52)	Acenaphthylene	8.31	152	658505	9.69712 ppb		99
53)	3-Nitroaniline	8.43	138	108142	9.70781 ppb		98
54)	Acenaphthene	8.51	154	444318	9.84017 ppb		100
55)	2,4-Dinitrophenol	8.56	184	22525	16.32977 ppb		78
56)	4-Nitrophenol	8.64	65	89372	8.13081 ppb		85
57)	Dibenzofuran	8.71	168	668695	9.95113 ppb		95
58)	2,4-DNT	8.71	165	160665	9.37192 ppb		89
59)	2,3,4,6-Tetrachlorophenol	8.86	232	127428	9.22657 ppb		93
60)	Diethyl phthalate	8.99	149	554222	9.94145 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.12	204	302022	9.80698 ppb		92
62)	Fluorene	9.11	166	544214	9.62094 ppb		100
63)	4-Nitroaniline	9.13	138	115068	9.49634 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.17	198	68893	6.06611 ppb	#	67
67)	Diphenyl amine	9.25	169	858721	19.28027 ppb		98
68)	n-Nitrosodiphenylamine	9.25	169	858721	19.28027 ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	568049	10.06157 ppb		92
70)	4-Bromophenyl phenyl ether	9.69	248	178203	9.87887 ppb		89
71)	Hexachlorobenzene	9.74	284	179662	9.70023 ppb	#	88
72)	Atrazine	9.88	200	75725	4.82959 ppb		95
73)	Pentachlorophenol	9.99	266	98501	8.02855 ppb		99
74)	Phenanthrene	10.23	178	810729	9.88313 ppb		100
75)	Anthracene	10.28	178	836112	9.77106 ppb		98
76)	Carbazol	10.48	167	736110	9.71477 ppb		96
77)	Di-n-butylphthalate	10.91	149	905031	9.73566 ppb		98
78)	Fluoranthene	11.61	202	959518	10.02374 ppb		97
80)	Benzidine	11.78	184	208309	8.56218 ppb		99
81)	Pyrene	11.87	202	997155	9.77669 ppb		100
83)	Butyl benzylphthalate	12.65	149	429249	9.81749 ppb		88
84)	3,3'-Dichlorobenzidine	13.24	252	296119	8.73353 ppb	#	96
85)	Benz (a) anthracene	13.26	228	1019711	9.75586 ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	588489	9.35583 ppb		98
87)	Chrysene	13.31	228	929904	9.44644 ppb		99
88)	Di-n-octylphthalate	14.04	149	984479	9.54708 ppb		96
90)	Benzo (b) fluoranthene	14.48	252	871268	8.88654 ppb		99
91)	Benzo (k) fluoranthene	14.51	252	947026	9.60542 ppb		98
92)	Benzo (a) pyrene	14.89	252	855081	9.34304 ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.58	276	1012608	9.60249 ppb		98
94)	Dibenz (a,h) anthracene	16.61	278	862058	9.34197 ppb		98
95)	Benzo (g,h,i) perylene	17.06	276	861526	9.55392 ppb		99

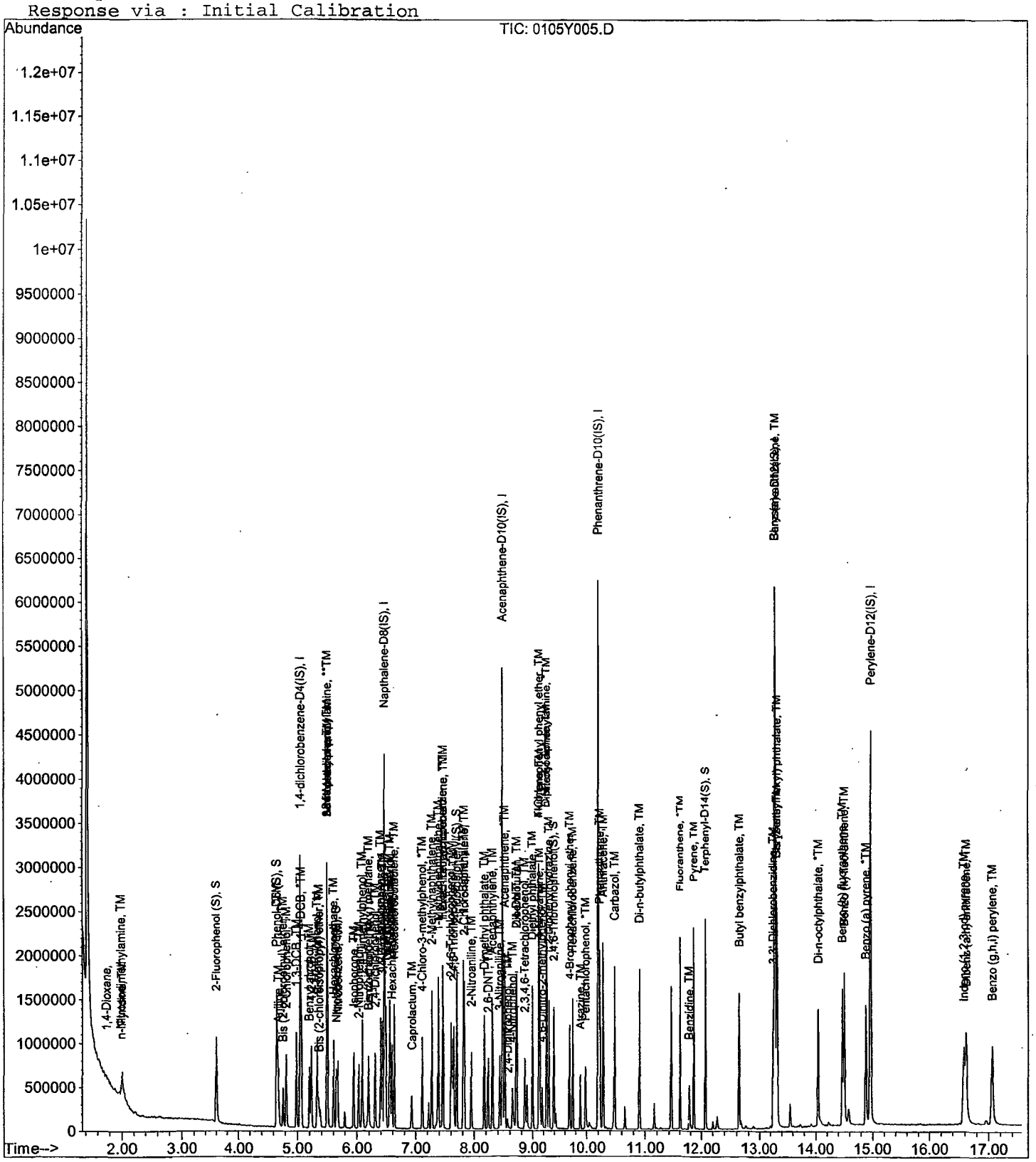
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y005.D Vial: 5
Acq On : 5 Jan 21 12:15 Operator: MA
Sample : 10ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	467189	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1782732	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1144461	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2387039	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2423960	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2479274	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	761435	40.73291 ppb	0.00
Spiked Amount 200.000			Recovery =	20.367%	
6) Phenol-D6 (S)	4.66	99	982259	41.09491 ppb	0.00
Spiked Amount 200.000			Recovery =	20.548%	
22) Nitrobenzene-D5(S)	5.66	82	532219	20.24676 ppb	0.00
Spiked Amount 100.000			Recovery =	20.247%	
46) 2-Fluorobiphenyl(S)	7.70	172	1072248	19.98838 ppb	0.00
Spiked Amount 100.000			Recovery =	19.988%	
64) 2,4,6-Tribromophenol(S)	9.39	330	331335	38.40560 ppb	0.00
Spiked Amount 200.000			Recovery =	19.203%	
82) Terphenyl-D14(S)	12.07	244	1465560	20.14382 ppb	0.00
Spiked Amount 100.000			Recovery =	20.144%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	8289	2.22361	95
3) n-Nitrosodimethylamine	1.98	42	129292	18.13205 ppb	77
4) Pyridine	2.00	79	285742	18.31197 ppb	93
7) Phenol	4.67	94	577332	20.44481 ppb	98
8) Aniline	4.69	93	466624	22.62348 ppb	93
9) Bis (2-chloroethyl) ether	4.77	63	241785	20.06322 ppb	92
10) 2-Chlorophenol	4.82	128	434351	20.33045 ppb	94
11) 1,3-DCB	4.98	146	500414	20.33920 ppb	98
12) 1,4-DCB	5.07	146	497570	20.07675 ppb	98
13) Benzyl alcohol	5.21	108	248624	19.84685 ppb	97
14) 1,2-DCB	5.23	146	469564	20.18353 ppb	98
15) 2-Methylphenol	5.33	107	330171	20.18390 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	230991	20.28265 ppb	99
17) Acetophenone	5.49	105	602936	20.14408 ppb	87
18) 3&4-Methylphenol	5.50	107	884877	40.04933 ppb	97
19) n-Nitrosodi-n-propylamine	5.49	70	352411	20.17837 ppb	98
20) Hexachloroethane	5.60	117	206088	20.31841 ppb	98
23) Nitrobenzene	5.68	77	543197	20.08574 ppb	92
24) Isophorone	5.95	82	880199	20.26492 ppb	99
25) 2-Nitrophenol	6.03	139	230427	20.18391 ppb	91
26) 2,4-Dimethylphenol	6.09	122	379766	20.11280 ppb	97
27) Benzoic acid	6.20	105	256511	20.08076 ppb	99
28) Bis (2-chloroethoxy) metha	6.20	93	500205	20.36476 ppb	98
29) 2,4-Dichlorophenol	6.31	162	387759	19.83992 ppb	97
30) 1,2,4-Trichlorobenzene	6.39	180	456468	20.03794 ppb	97
31) 3,4-Dimethylphenol	6.42	107	603638	20.02850 ppb	98
32) Naphthalene	6.49	128	1239162	20.09363 ppb	100
33) 4-Chloroaniline	6.55	127	486213	21.02498 ppb	94
34) 2,6-Dichlorophenol	6.56	162	378936	19.93561 ppb	96
35) Hexachloropropene	6.59	213	398602	19.54334 ppb	99
36) Hexachlorobutadiene	6.63	225	320176	19.86574 ppb	97
37) Caprolactum	6.94	55	124469	20.00238 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.11	107	408352	19.98349	ppb		97
39)	2-Methylnaphthalene	7.28	142	816358	20.13784	ppb		98
40)	1-Methylnaphthalene	7.39	142	836058	20.00412	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	254528	18.30345	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	511687	19.86630	ppb		98
44)	2,4,6-Trichlorophenol	7.60	196	311733	19.45174	ppb		97
45)	2,4,5-Trichlorophenol	7.65	196	339035	19.36439	ppb		94
47)	1,1'-Biphenyl	7.81	154	1139314	19.79287	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	878898	19.63502	ppb		95
49)	2-Nitroaniline	7.95	65	283932	19.93195	ppb		90
50)	Dimethyl phthalate	8.18	163	1091755	19.94023	ppb		98
51)	2,6-DNT	8.24	165	239106	19.96351	ppb		85
52)	Acenaphthylene	8.31	152	1357394	19.91294	ppb		99
53)	3-Nitroaniline	8.43	138	229752	20.54621	ppb	#	90
54)	Acenaphthene	8.51	154	889768	19.63050	ppb		99
55)	2,4-Dinitrophenol	8.56	184	80496	22.68157	ppb		82
56)	4-Nitrophenol	8.64	65	200836	18.20201	ppb		93
57)	Dibenzofuran	8.71	168	1345654	19.94912	ppb		94
58)	2,4-DNT	8.71	165	337218	19.59583	ppb		95
59)	2,3,4,6-Tetrachlorophenol	8.86	232	268509	19.36779	ppb		93
60)	Diethyl phthalate	9.00	149	1116856	19.95763	ppb		94
61)	4-Chlorophenyl phenyl ethe	9.12	204	596616	19.29911	ppb		94
62)	Fluorene	9.11	166	1109731	19.54391	ppb		99
63)	4-Nitroaniline	9.14	138	241585	19.86174	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.18	198	185558	16.20829	ppb		94
67)	Diphenyl amine	9.26	169	1771185	39.45000	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1771185	39.45000	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1146813	20.15090	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	359003	19.74297	ppb		91
71)	Hexachlorobenzene	9.75	284	367810	19.70022	ppb	#	85
72)	Atrazine	9.88	200	158971	10.05799	ppb		93
73)	Pentachlorophenol	9.99	266	224312	18.13723	ppb		98
74)	Phenanthrene	10.23	178	1654103	20.00337	ppb		99
75)	Anthracene	10.28	178	1715659	19.88979	ppb		99
76)	Carbazol	10.48	167	1511452	19.78820	ppb		97
77)	Di-n-butylphthalate	10.91	149	1893480	20.20619	ppb		99
78)	Fluoranthene	11.61	202	1962068	20.33353	ppb		98
80)	Benzidine	11.78	184	500470	20.76094	ppb		99
81)	Pyrene	11.87	202	2024473	20.03244	ppb		99
83)	Butyl benzylphthalate	12.65	149	856045	19.75969	ppb		90
84)	3,3'-Dichlorobenzidine	13.25	252	703425	20.93793	ppb	#	99
85)	Benz (a) anthracene	13.26	228	2047959	19.77435	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	1215016	19.49478	ppb		98
87)	Chrysene	13.31	228	1927311	19.75942	ppb		99
88)	Di-n-octylphthalate	14.04	149	2029530	19.86333	ppb		97
90)	Benzo (b) fluoranthene	14.48	252	1997618	20.51152	ppb		99
91)	Benzo (k) fluoranthene	14.51	252	1728511	17.64945	ppb		99
92)	Benzo (a) pyrene	14.89	252	1799932	19.79892	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.59	276	2064013	19.70423	ppb		99
94)	Dibenz (a,h) anthracene	16.62	278	1802317	19.66245	ppb		99
95)	Benzo (g,h,i) perylene	17.07	276	1775876	19.82577	ppb		98

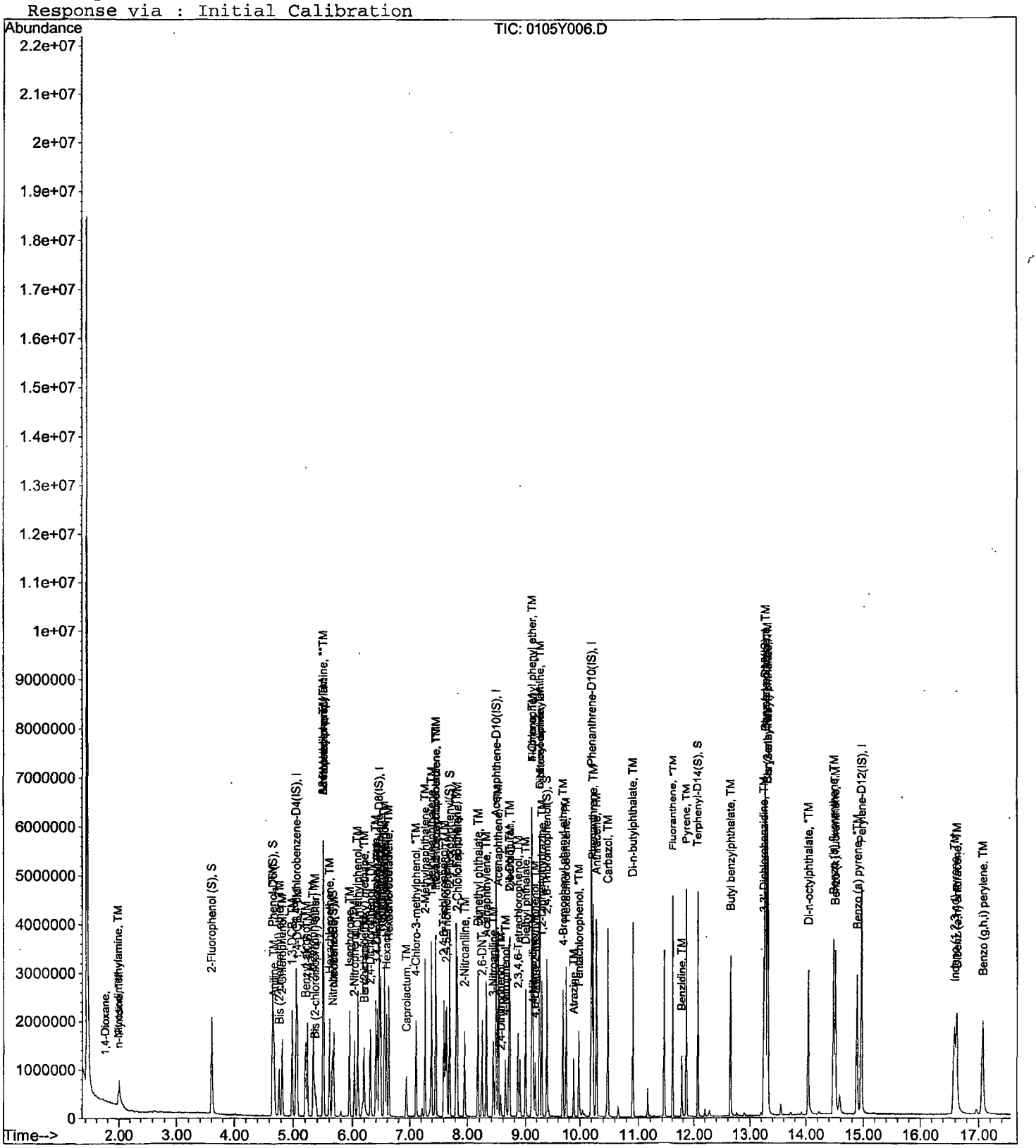
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y006.D Vial: 6
Acq On : 5 Jan 21 12:40 Operator: MA
Sample : 20ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	504389	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1951806	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1240573	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2613574	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2649985	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2721088	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	1627254	80.62967 ppb	0.00
Spiked Amount 200.000			Recovery =	40.315%	
6) Phenol-D6 (S)	4.67	99	2073058	80.33420 ppb	0.00
Spiked Amount 200.000			Recovery =	40.167%	
22) Nitrobenzene-D5(S)	5.66	82	1144899	39.78156 ppb	0.00
Spiked Amount 100.000			Recovery =	39.782%	
46) 2-Fluorobiphenyl(S)	7.70	172	2292344	39.42219 ppb	0.00
Spiked Amount 100.000			Recovery =	39.422%	
64) 2,4,6-Tribromophenol(S)	9.40	330	746380	79.81158 ppb	0.00
Spiked Amount 200.000			Recovery =	39.906%	
82) Terphenyl-D14(S)	12.08	244	3188654	40.08922 ppb	0.00
Spiked Amount 100.000			Recovery =	40.089%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	13794	3.42747	54
3) n-Nitrosodimethylamine	1.97	42	310078	40.27850 ppb	93
4) Pyridine	1.99	79	710577	42.17927 ppb	100
7) Phenol	4.68	94	1249780	40.99379 ppb	96
8) Aniline	4.69	93	852672	38.29141 ppb	98
9) Bis (2-chloroethyl) ether	4.77	63	528803	40.64360 ppb	99
10) 2-Chlorophenol	4.82	128	939426	40.72826 ppb	97
11) 1,3-DCB	4.98	146	1080678	40.68439 ppb	98
12) 1,4-DCB	5.07	146	1075980	40.21338 ppb	99
13) Benzyl alcohol	5.21	108	550599	40.71093 ppb	99
14) 1,2-DCB	5.23	146	995724	39.64316 ppb	99
15) 2-Methylphenol	5.34	107	719167	40.72142 ppb	97
16) Bis (2-chloroisopropyl) et	5.35	45	497690	40.47767 ppb	98
17) Acetophenone	5.49	105	1298420	40.18079 ppb	99
18) 3&4-Methylphenol	5.50	107	1938616	81.27017 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	763828	40.50972 ppb	98
20) Hexachloroethane	5.60	117	435184	39.74083 ppb	96
23) Nitrobenzene	5.68	77	1177349	39.76355 ppb	99
24) Isophorone	5.95	82	1929574	40.57653 ppb	93
25) 2-Nitrophenol	6.03	139	514464	41.16009 ppb	97
26) 2,4-Dimethylphenol	6.09	122	824889	39.90262 ppb	95
27) Benzoic acid	6.22	105	694050	39.13552 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1083388	40.28698 ppb	99
29) 2,4-Dichlorophenol	6.31	162	856498	40.02706 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	996744	39.96464 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1336285	40.49676 ppb	97
32) Naphthalene	6.49	128	2700428	39.99560 ppb	99
33) 4-Chloroaniline	6.55	127	1064824	42.05681 ppb	99
34) 2,6-Dichlorophenol	6.56	162	826541	39.71710 ppb	99
35) Hexachloropropene	6.59	213	915804	41.01202 ppb	100
36) Hexachlorobutadiene	6.63	225	695373	39.40790 ppb	96
37) Caprolactum	6.96	55	275073	40.37550 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	906292	40.50925	ppb		97
39)	2-Methylnaphthalene	7.28	142	1794618	40.43465	ppb		100
40)	1-Methylnaphthalene	7.39	142	1830959	40.01391	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	710848	38.33054	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1123286	40.23293	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	704814	40.57223	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	774819	40.82613	ppb		95
47)	1,1'-Biphenyl	7.81	154	2491512	39.93070	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1949010	40.16849	ppb		93
49)	2-Nitroaniline	7.96	65	632805	40.98115	ppb		93
50)	Dimethyl phthalate	8.18	163	2409135	40.59240	ppb		99
51)	2,6-DNT	8.24	165	537722	41.41742	ppb	#	60
52)	Acenaphthylene	8.32	152	3000026	40.60066	ppb		99
53)	3-Nitroaniline	8.44	138	506143	41.75653	ppb		95
54)	Acenaphthene	8.52	154	1975373	40.20521	ppb		100
55)	2,4-Dinitrophenol	8.56	184	249612	39.11683	ppb		93
56)	4-Nitrophenol	8.65	65	489954	40.96490	ppb		98
57)	Dibenzofuran	8.71	168	2907849	39.76865	ppb		98
58)	2,4-DNT	8.71	165	761528	40.82417	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	622651	41.43283	ppb		97
60)	Diethyl phthalate	9.00	149	2460969	40.56922	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1370549	40.89927	ppb		96
62)	Fluorene	9.11	166	2466397	40.07148	ppb		99
63)	4-Nitroaniline	9.15	138	545714	41.38960	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	478455	38.17010	ppb	#	66
67)	Diphenyl amine	9.26	169	3919764	79.73844	ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	3919764	79.73844	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2525273	40.52612	ppb		99
70)	4-Bromophenyl phenyl ether	9.69	248	799126	40.13787	ppb		95
71)	Hexachlorobenzene	9.75	284	823625	40.29043	ppb		98
72)	Atrazine	9.89	200	360501	20.83169	ppb		96
73)	Pentachlorophenol	9.99	266	543363	40.12667	ppb		99
74)	Phenanthrene	10.23	178	3649012	40.30330	ppb		99
75)	Anthracene	10.29	178	3844090	40.70216	ppb		99
76)	Carbazol	10.49	167	3390343	40.53968	ppb		99
77)	Di-n-butylphthalate	10.91	149	4202987	40.96439	ppb		100
78)	Fluoranthene	11.61	202	4349370	41.16705	ppb		99
80)	Benzidine	11.78	184	1136122	43.10981	ppb		99
81)	Pyrene	11.88	202	4593979	41.58081	ppb		100
83)	Butyl benzylphthalate	12.65	149	1918537	40.50753	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	1577474	42.94970	ppb		98
85)	Benz (a) anthracene	13.27	228	4595772	40.59023	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.32	149	2740443	40.21974	ppb		99
87)	Chrysene	13.31	228	4433612	41.57786	ppb		99
88)	Di-n-octylphthalate	14.04	149	4617171	41.33468	ppb		98
90)	Benzo (b) fluoranthene	14.48	252	4231744	39.59011	ppb	#	98
91)	Benzo (k) fluoranthene	14.52	252	4267336	39.70066	ppb		99
92)	Benzo (a) pyrene	14.89	252	4064389	40.73452	ppb	#	98
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4630539	40.27731	ppb		99
94)	Dibenz (a,h) anthracene	16.63	278	4048576	40.24304	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	3989690	40.58248	ppb		99

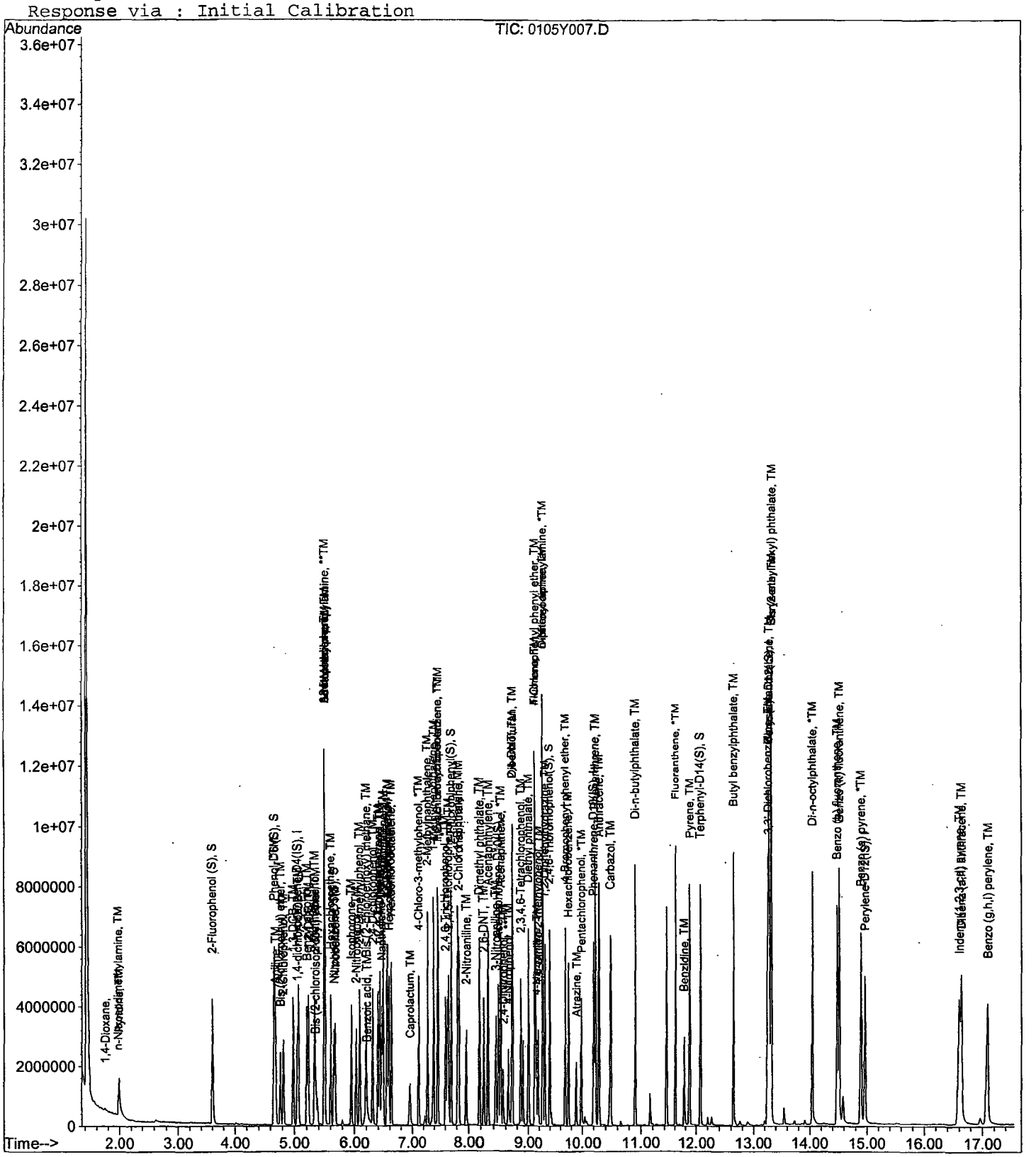
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y007.D Vial: 7
Acq On : 5 Jan 21 13:06 Operator: MA
Sample : 40ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483009	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1833485	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1171141	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2409338	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2483900	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	2514559	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	1902590	98.44534 ppb	0.00
Spiked Amount 200.000			Recovery =	49.223%	
6) Phenol-D6 (S)	4.67	99	2412618	97.63105 ppb	0.00
Spiked Amount 200.000			Recovery =	48.816%	
22) Nitrobenzene-D5(S)	5.66	82	1333660	49.33090 ppb	0.00
Spiked Amount 100.000			Recovery =	49.331%	
46) 2-Fluorobiphenyl(S)	7.70	172	2676220	48.75239 ppb	0.00
Spiked Amount 100.000			Recovery =	48.752%	
64) 2,4,6-Tribromophenol(S)	9.40	330	889313	100.73345 ppb	0.00
Spiked Amount 200.000			Recovery =	50.367%	
82) Terphenyl-D14(S)	12.07	244	3741011	50.17860 ppb	0.00
Spiked Amount 100.000			Recovery =	50.179%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	17904	4.64562	100
3) n-Nitrosodimethylamine	1.97	42	377642	51.22630 ppb	100
4) Pyridine	1.99	79	833708	51.67878 ppb	100
7) Phenol	4.68	94	1445696	49.51900 ppb	100
8) Aniline	4.69	93	1059328	49.67756 ppb	100
9) Bis (2-chloroethyl) ether	4.77	63	611825	49.10614 ppb	100
10) 2-Chlorophenol	4.82	128	1099096	49.75987 ppb	100
11) 1,3-DCB	4.98	146	1258895	49.49159 ppb	100
12) 1,4-DCB	5.07	146	1263436	49.30943 ppb	100
13) Benzyl alcohol	5.21	108	650423	50.22059 ppb	100
14) 1,2-DCB	5.23	146	1197973	49.80658 ppb	100
15) 2-Methylphenol	5.34	107	841955	49.78430 ppb	100
16) Bis (2-chloroisopropyl) et	5.35	45	582343	49.45906 ppb	100
17) Acetophenone	5.49	105	1540991	49.79821 ppb	100
18) 3&4-Methylphenol	5.51	107	2278427	99.74356 ppb	100
19) n-Nitrosodi-n-propylamine	5.50	70	898816	49.77885 ppb	100
20) Hexachloroethane	5.60	117	514817	49.09387 ppb	100
23) Nitrobenzene	5.68	77	1401902	50.40306 ppb	100
24) Isophorone	5.96	82	2248599	50.33670 ppb	100
25) 2-Nitrophenol	6.03	139	601663	51.24292 ppb	100
26) 2,4-Dimethylphenol	6.10	122	982838	50.61125 ppb	100
27) Benzoic acid	6.23	105	854906	49.09730 ppb	100
28) Bis (2-chloroethoxy) metha	6.20	93	1272164	50.35970 ppb	100
29) 2,4-Dichlorophenol	6.31	162	1022573	50.87225 ppb	100
30) 1,2,4-Trichlorobenzene	6.40	180	1175629	50.17898 ppb	100
31) 3,4-Dimethylphenol	6.43	107	1575521	50.82820 ppb	100
32) Naphthalene	6.49	128	3170910	49.99457 ppb	100
33) 4-Chloroaniline	6.55	127	1241912	52.21661 ppb	100
34) 2,6-Dichlorophenol	6.56	162	987516	50.51456 ppb	100
35) Hexachloropropene	6.59	213	1077466	51.36550 ppb	100
36) Hexachlorobutadiene	6.63	225	833553	50.28726 ppb	100
37) Caprolactum	6.97	55	321668	50.26169 ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1058062	50.34501	ppb	100
39)	2-Methylnaphthalene	7.28	142	2068715	49.61827	ppb	100
40)	1-Methylnaphthalene	7.39	142	2127577	49.49678	ppb	100
42)	Hexachlorocyclopentadiene	7.46	237	916416	50.29760	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1331036	50.50033	ppb	100
44)	2,4,6-Trichlorophenol	7.61	196	826042	50.36973	ppb	100
45)	2,4,5-Trichlorophenol	7.66	196	903644	50.43691	ppb	100
47)	1,1'-Biphenyl	7.82	154	2951838	50.11290	ppb	100
48)	2-Chloronaphthalene	7.84	162	2307937	50.38584	ppb	100
49)	2-Nitroaniline	7.96	65	760196	52.14983	ppb	100
50)	Dimethyl phthalate	8.18	163	2817088	50.28022	ppb	100
51)	2,6-DNT	8.25	165	636862	51.96174	ppb	100
52)	Acenaphthylene	8.32	152	3582464	51.35741	ppb	100
53)	3-Nitroaniline	8.44	138	588850	51.45990	ppb	100
54)	Acenaphthene	8.52	154	2339552	50.44046	ppb	100
55)	2,4-Dinitrophenol	8.56	184	315068	47.63381	ppb	100
56)	4-Nitrophenol	8.65	65	579479	51.32245	ppb	100
57)	Dibenzofuran	8.71	168	3436428	49.78395	ppb	100
58)	2,4-DNT	8.71	165	910497	51.70389	ppb	100
59)	2,3,4,6-Tetrachlorophenol	8.86	232	732904	51.66069	ppb	100
60)	Diethyl phthalate	9.00	149	2855655	49.86656	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.12	204	1593608	50.37506	ppb	100
62)	Fluorene	9.11	166	2868571	49.36863	ppb	100
63)	4-Nitroaniline	9.15	138	629238	50.55384	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.19	198	587370	50.83128	ppb	100
67)	Diphenyl amine	9.27	169	4775795	105.38785	ppb	100
68)	n-Nitrosodiphenylamine	9.27	169	4775795	105.38785	ppb	100
69)	1,2-Diphenylhydrazine	9.31	77	2979614	51.87089	ppb	100
70)	4-Bromophenyl phenyl ether	9.69	248	932915	50.82978	ppb	100
71)	Hexachlorobenzene	9.75	284	976793	51.83367	ppb	100
72)	Atrazine	9.89	200	418889	26.25754	ppb	100
73)	Pentachlorophenol	9.99	266	654155	52.40356	ppb	100
74)	Phenanthrene	10.23	178	4318111	51.73640	ppb	100
75)	Anthracene	10.29	178	4512131	51.82540	ppb	100
76)	Carbazol	10.49	167	4021683	52.16528	ppb	100
77)	Di-n-butylphthalate	10.91	149	4916119	51.97661	ppb	100
78)	Fluoranthene	11.61	202	5133455	52.70724	ppb	100
80)	Benzidine	11.78	184	1334887	54.03870	ppb	100
81)	Pyrene	11.88	202	5487771	52.99187	ppb	100
83)	Butyl benzylphthalate	12.65	149	2267469	51.07593	ppb	100
84)	3,3'-Dichlorobenzidine	13.25	252	1852953	53.82347	ppb	100
85)	Benz (a) anthracene	13.27	228	5384652	50.73761	ppb	100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3205836	50.19599	ppb	100
87)	Chrysene	13.31	228	5235913	52.38491	ppb	100
88)	Di-n-octylphthalate	14.04	149	5498384	52.51495	ppb	100
90)	Benzo (b) fluoranthene	14.49	252	4884813	49.45338	ppb	100
91)	Benzo (k) fluoranthene	14.52	252	5106179	51.40646	ppb	100
92)	Benzo (a) pyrene	14.90	252	4825780	52.33782	ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.60	276	5454560	51.34159	ppb	100
94)	Dibenz (a,h) anthracene	16.63	278	4754316	51.13960	ppb	100
95)	Benzo (g,h,i) perylene	17.09	276	4629289	50.95590	ppb	100

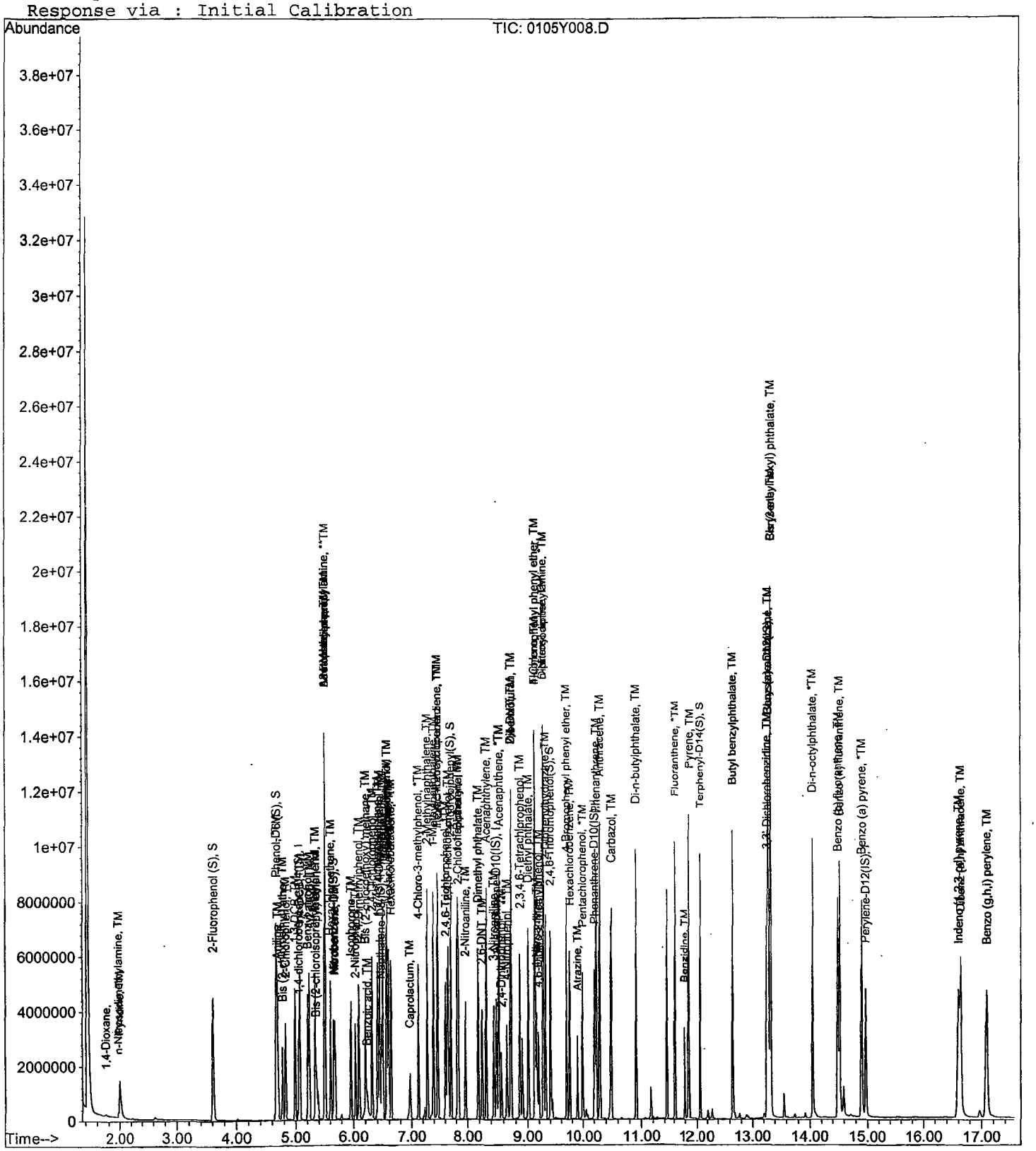
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y008.D Vial: 8
Acq On : 5 Jan 21 13:31 Operator: MA
Sample : 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	442552	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1726194	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1080461	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2319317	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2373377	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.96	264	2378731	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.60	112	2127279	120.13382	ppb		-0.01
Spiked Amount 200.000			Recovery = 60.067%				
6) Phenol-D6 (S)	4.67	99	2714982	119.91052	ppb		0.00
Spiked Amount 200.000			Recovery = 59.956%				
22) Nitrobenzene-D5(S)	5.66	82	1503073	59.05297	ppb		0.00
Spiked Amount 100.000			Recovery = 59.053%				
46) 2-Fluorobiphenyl(S)	7.70	172	3042283	60.07223	ppb		0.00
Spiked Amount 100.000			Recovery = 60.072%				
64) 2,4,6-Tribromophenol(S)	9.40	330	1010597	124.07868	ppb		0.00
Spiked Amount 200.000			Recovery = 62.039%				
82) Terphenyl-D14(S)	12.07	244	4222449	59.27361	ppb		0.00
Spiked Amount 100.000			Recovery = 59.274%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	18446	5.22380			95
3) n-Nitrosodimethylamine	1.97	42	408401	60.46310	ppb		92
4) Pyridine	1.99	79	901311	60.97669	ppb		97
7) Phenol	4.68	94	1606167	60.04495	ppb		96
8) Aniline	4.69	93	1200640	61.45164	ppb		100
9) Bis (2-chloroethyl) ether	4.77	63	680389	59.60145	ppb		96
10) 2-Chlorophenol	4.82	128	1211193	59.84776	ppb		99
11) 1,3-DCB	4.98	146	1403295	60.21182	ppb		98
12) 1,4-DCB	5.07	146	1425250	60.70978	ppb		99
13) Benzyl alcohol	5.20	108	708080	59.67043	ppb		93
14) 1,2-DCB	5.23	146	1317063	59.76365	ppb		99
15) 2-Methylphenol	5.33	107	938317	60.55416	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	645113	59.79897	ppb		96
17) Acetophenone	5.50	105	1702308	60.04028	ppb		82
18) 3&4-Methylphenol	5.51	107	2489491	118.94638	ppb		100
19) n-Nitrosodi-n-propylamine	5.50	70	989058	59.78425	ppb		97
20) Hexachloroethane	5.60	117	578785	60.23967	ppb		96
23) Nitrobenzene	5.69	77	1555973	59.41951	ppb		89
24) Isophorone	5.96	82	2504820	59.55758	ppb		97
25) 2-Nitrophenol	6.04	139	679714	61.48859	ppb	#	79
26) 2,4-Dimethylphenol	6.10	122	1101537	60.24930	ppb		99
27) Benzoic acid	6.23	105	965560	57.47534	ppb		100
28) Bis (2-chloroethoxy) metha	6.20	93	1389170	58.40945	ppb		100
29) 2,4-Dichlorophenol	6.31	162	1129983	59.70990	ppb		96
30) 1,2,4-Trichlorobenzene	6.40	180	1319568	59.82340	ppb		98
31) 3,4-Dimethylphenol	6.43	107	1724303	59.08563	ppb		100
32) Naphthalene	6.49	128	3532998	59.16571	ppb		99
33) 4-Chloroaniline	6.56	127	1364680	60.94476	ppb	#	91
34) 2,6-Dichlorophenol	6.56	162	1092849	59.37729	ppb		99
35) Hexachloropropene	6.59	213	1211561	61.34808	ppb		99
36) Hexachlorobutadiene	6.63	225	932972	59.78347	ppb		98
37) Caprolactum	6.98	55	354905	58.90188	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	1171961	59.23061	ppb		97
39)	2-Methylnaphthalene	7.27	142	2294995	58.46696	ppb		99
40)	1-Methylnaphthalene	7.39	142	2413459	59.63749	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1075712	62.47073	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1487700	61.18147	ppb		98
44)	2,4,6-Trichlorophenol	7.61	196	936858	61.92149	ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	991928	60.01107	ppb		95
47)	1,1'-Biphenyl	7.82	154	3322266	61.13523	ppb		99
48)	2-Chloronaphthalene	7.84	162	2581569	61.08976	ppb		98
49)	2-Nitroaniline	7.96	65	841116	62.54367	ppb		91
50)	Dimethyl phthalate	8.18	163	3194891	61.80917	ppb		97
51)	2,6-DNT	8.25	165	721094	63.77204	ppb		92
52)	Acenaphthylene	8.31	152	3958165	61.50568	ppb		100
53)	3-Nitroaniline	8.44	138	660556	62.57113	ppb		99
54)	Acenaphthene	8.52	154	2630476	61.47248	ppb		99
55)	2,4-Dinitrophenol	8.56	184	376642	57.62611	ppb		93
56)	4-Nitrophenol	8.65	65	649860	62.38635	ppb		93
57)	Dibenzofuran	8.71	168	3822801	60.02938	ppb		98
58)	2,4-DNT	8.71	165	1037342	63.85086	ppb		97
59)	2,3,4,6-Tetrachlorophenol	8.86	232	816289	62.36733	ppb		98
60)	Diethyl phthalate	9.01	149	3210549	60.76914	ppb		95
61)	4-Chlorophenyl phenyl ethe	9.12	204	1763500	60.42403	ppb		98
62)	Fluorene	9.11	166	3228662	60.22935	ppb		100
63)	4-Nitroaniline	9.15	138	700111	60.96860	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.19	198	674462	60.63375	ppb	#	85
67)	Diphenyl amine	9.27	169	5280666	121.05178	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	5280666	121.05178	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	3261853	58.98828	ppb		96
70)	4-Bromophenyl phenyl ether	9.69	248	1032926	58.46326	ppb		96
71)	Hexachlorobenzene	9.75	284	1086377	59.88631	ppb		96
72)	Atrazine	9.89	200	456257	29.70998	ppb		98
73)	Pentachlorophenol	9.99	266	735018	61.16679	ppb		99
74)	Phenanthrene	10.24	178	4886948	60.82438	ppb		99
75)	Anthracene	10.29	178	5016441	59.85415	ppb		100
76)	Carbazol	10.49	167	4476193	60.31428	ppb		98
77)	Di-n-butylphthalate	10.90	149	5475467	60.13735	ppb		99
78)	Fluoranthene	11.62	202	5746073	61.28713	ppb	#	97
80)	Benzidine	11.78	184	1491099	63.17340	ppb		99
81)	Pyrene	11.88	202	6087066	61.51608	ppb		100
83)	Butyl benzylphthalate	12.65	149	2569042	60.56385	ppb		99
84)	3,3'-Dichlorobenzidine	13.25	252	2039164	61.99074	ppb		99
85)	Benz (a) anthracene	13.27	228	5978879	58.96028	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	3699503	60.62315	ppb		98
87)	Chrysene	13.32	228	5981915	62.63562	ppb		99
88)	Di-n-octylphthalate	14.04	149	6096920	60.94328	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	6176337	66.09910	ppb		100
91)	Benzo (k) fluoranthene	14.52	252	5075280	54.01298	ppb	#	97
92)	Benzo (a) pyrene	14.90	252	5373613	61.60713	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	6153242	61.22519	ppb		100
94)	Dibenz (a,h) anthracene	16.64	278	5366968	61.02598	ppb		98
95)	Benzo (g,h,i) perylene	17.10	276	5217365	60.70828	ppb		97

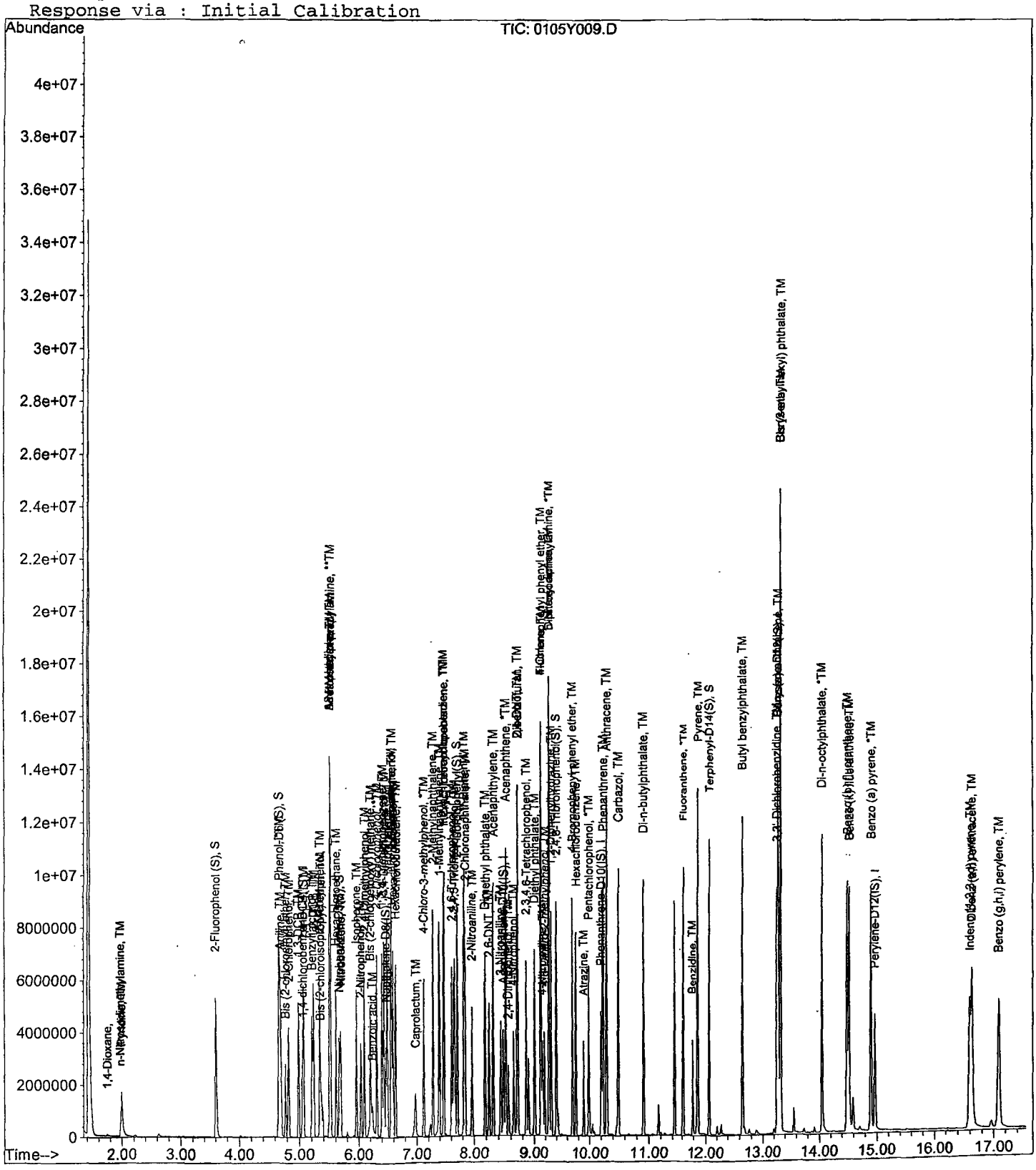
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y009.D Vial: 9
Acq On : 5 Jan 21 13:56 Operator: MA
Sample : 60ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	483002	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	1850453	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1180324	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2502207	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2580643	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2565244	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	3096099	160.20316 ppb	0.00
Spiked Amount 200.000			Recovery =	80.102%	
6) Phenol-D6 (S)	4.67	99	3959767	160.24162 ppb	0.00
Spiked Amount 200.000			Recovery =	80.121%	
22) Nitrobenzene-D5(S)	5.67	82	2211859	81.06449 ppb	0.00
Spiked Amount 100.000			Recovery =	81.064%	
46) 2-Fluorobiphenyl(S)	7.71	172	4549743	82.23731 ppb	0.00
Spiked Amount 100.000			Recovery =	82.237%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1552077	174.43767 ppb	0.00
Spiked Amount 200.000			Recovery =	87.219%	
82) Terphenyl-D14(S)	12.08	244	6464475	83.45820 ppb	0.00
Spiked Amount 100.000			Recovery =	83.458%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.75	58	28787	7.46958	96
3) n-Nitrosodimethylamine	1.98	42	608291	82.51452 ppb	75
4) Pyridine	1.99	79	1328390	82.34366 ppb	100
7) Phenol	4.69	94	2365327	81.02002 ppb	89
8) Aniline	4.70	93	1680384	78.80334 ppb	89
9) Bis (2-chloroethyl) ether	4.78	63	1006465	80.78181 ppb	95
10) 2-Chlorophenol	4.83	128	1786173	80.86740 ppb	98
11) 1,3-DCB	4.99	146	2049823	80.58691 ppb	96
12) 1,4-DCB	5.07	146	2066159	80.63930 ppb	99
13) Benzyl alcohol	5.22	108	1064902	82.22462 ppb	96
14) 1,2-DCB	5.23	146	1944014	80.82493 ppb	98
15) 2-Methylphenol	5.34	107	1377280	81.43893 ppb	98
16) Bis (2-chloroisopropyl) et	5.35	45	941134	79.93275 ppb	95
17) Acetophenone	5.50	105	2517933	81.36996 ppb	96
18) 3&4-Methylphenol	5.51	107	3766372	164.88429 ppb	93
19) n-Nitrosodi-n-propylamine	5.51	70	1464384	81.10271 ppb	98
20) Hexachloroethane	5.60	117	861430	82.14869 ppb	95
23) Nitrobenzene	5.69	77	2299188	81.90549 ppb	94
24) Isophorone	5.96	82	3656514	81.10344 ppb	94
25) 2-Nitrophenol	6.04	139	1002718	84.61721 ppb	84
26) 2,4-Dimethylphenol	6.10	122	1615139	82.40894 ppb	97
27) Benzoic acid	6.25	105	1535713	81.82663 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	2062265	80.88794 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1681665	82.89445 ppb	95
30) 1,2,4-Trichlorobenzene	6.40	180	1958497	82.82735 ppb	98
31) 3,4-Dimethylphenol	6.43	107	2527807	80.80230 ppb	98
32) Naphthalene	6.49	128	5246511	81.96130 ppb	100
33) 4-Chloroaniline	6.56	127	2022992	84.27743 ppb	93
34) 2,6-Dichlorophenol	6.57	162	1652227	83.74164 ppb	94
35) Hexachloropropene	6.59	213	1805372	85.27740 ppb	99
36) Hexachlorobutadiene	6.64	225	1404892	83.97828 ppb	98
37) Caprolactum	6.99	55	532060	82.37382 ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	1757311	82.85014	ppb		95
39)	2-Methylnaphthalene	7.28	142	3459124	82.20655	ppb		99
40)	1-Methylnaphthalene	7.40	142	3593073	82.82416	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1588736	82.48711	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2197083	82.71015	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1406978	85.12611	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1539176	85.24077	ppb		94
47)	1,1'-Biphenyl	7.82	154	4996593	84.16644	ppb		99
48)	2-Chloronaphthalene	7.84	162	3818801	82.72172	ppb		97
49)	2-Nitroaniline	7.96	65	1212662	82.54202	ppb		86
50)	Dimethyl phthalate	8.19	163	4640967	82.18890	ppb		98
51)	2,6-DNT	8.25	165	1048094	84.84896	ppb	#	70
52)	Acenaphthylene	8.32	152	5872848	83.53682	ppb		100
53)	3-Nitroaniline	8.45	138	970087	84.11683	ppb		89
54)	Acenaphthene	8.52	154	3851188	82.38516	ppb		100
55)	2,4-Dinitrophenol	8.57	184	646050	82.58648	ppb		85
56)	4-Nitrophenol	8.66	65	1006121	88.41538	ppb		98
57)	Dibenzofuran	8.72	168	5814574	83.58107	ppb		93
58)	2,4-DNT	8.71	165	1522687	85.79525	ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	1231857	86.15517	ppb		95
60)	Diethyl phthalate	9.01	149	4802052	83.20290	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	2746107	86.13100	ppb		98
62)	Fluorene	9.12	166	5047941	86.20009	ppb		100
63)	4-Nitroaniline	9.16	138	1044475	83.26169	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1068122	89.00506	ppb		94
67)	Diphenyl amine	9.27	169	7695934	163.52370	ppb		100
68)	n-Nitrosodiphenylamine	9.27	169	7695934	163.52370	ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	4738711	79.43254	ppb		93
70)	4-Bromophenyl phenyl ether	9.69	248	1595083	83.68237	ppb		94
71)	Hexachlorobenzene	9.75	284	1638073	83.69840	ppb		91
72)	Atrazine	9.89	200	691470	41.73525	ppb		96
73)	Pentachlorophenol	9.99	266	1141709	88.06636	ppb		99
74)	Phenanthrene	10.24	178	7171707	82.73693	ppb		100
75)	Anthracene	10.29	178	7347310	81.25757	ppb		99
76)	Carbazol	10.49	167	6600362	82.43582	ppb		97
77)	Di-n-butylphthalate	10.91	149	8239567	83.88116	ppb		99
78)	Fluoranthene	11.62	202	8419757	83.24048	ppb		96
80)	Benzidine	11.78	184	2104059	81.98313	ppb		99
81)	Pyrene	11.88	202	8540731	79.38062	ppb		97
83)	Butyl benzylphthalate	12.65	149	3787000	82.10628	ppb		97
84)	3,3'-Dichlorobenzidine	13.25	252	2962816	82.83581	ppb	#	98
85)	Benz (a) anthracene	13.27	228	9220058	83.62040	ppb		99
86)	Bis (2-ethylhexyl) phthala	13.33	149	5782117	87.14065	ppb	#	92
87)	Chrysene	13.32	228	8258962	79.53264	ppb		96
88)	Di-n-octylphthalate	14.04	149	9191727	84.49893	ppb		97
90)	Benzo (b) fluoranthene	14.49	252	8773373	87.06584	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	8095753	79.89361	ppb		99
92)	Benzo (a) pyrene	14.91	252	8140836	86.54664	ppb		100
93)	Indeno (1,2,3-cd) pyrene	16.62	276	9146234	84.38885	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	8158645	86.02416	ppb		98
95)	Benzo (g,h,i) perylene	17.11	276	7843995	84.63513	ppb		99

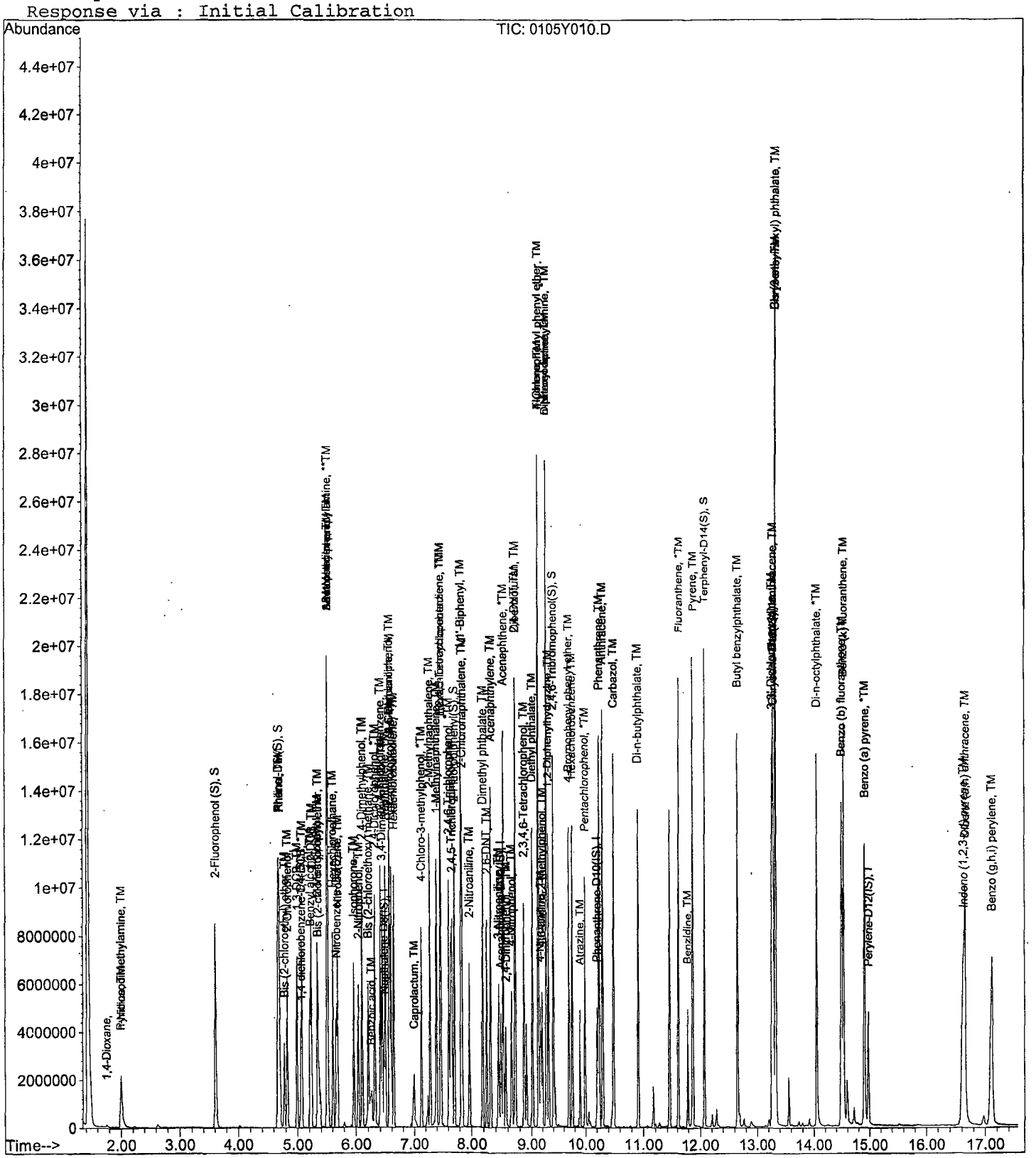
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y010.D Vial: 10
Acq On : 5 Jan 21 14:21 Operator: MA
Sample : 80ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	478537	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.47	136	1833942	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.48	164	1187008	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.21	188	2466869	40.00000	ppb		0.00
79) Chrysene-D12(IS)	13.29	240	2571570	40.00000	ppb		0.00
89) Perylene-D12(IS)	14.97	264	2544800	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.61	112	3774962	197.15247	ppb		0.00
Spiked Amount 200.000			Recovery = 98.576%				
6) Phenol-D6 (S)	4.68	99	4838998	197.64897	ppb		0.00
Spiked Amount 200.000			Recovery = 98.825%				
22) Nitrobenzene-D5(S)	5.67	82	2713892	100.35945	ppb		0.00
Spiked Amount 100.000			Recovery = 100.359%				
46) 2-Fluorobiphenyl(S)	7.71	172	5677045	102.03565	ppb		0.00
Spiked Amount 100.000			Recovery = 102.036%				
64) 2,4,6-Tribromophenol(S)	9.41	330	2036819	227.62871	ppb		0.00
Spiked Amount 200.000			Recovery = 113.815%				
82) Terphenyl-D14(S)	12.08	244	7815113	101.25130	ppb		0.00
Spiked Amount 100.000			Recovery = 101.251%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.75	58	29359	7.68908			81
3) n-Nitrosodimethylamine	1.97	42	712186	97.50926	ppb		96
4) Pyridine	1.99	79	1601618	100.20673	ppb		96
7) Phenol	4.69	94	2870003	99.22404	ppb		81
8) Aniline	4.69	93	2014720	95.36394	ppb	#	66
9) Bis (2-chloroethyl) ether	4.78	63	1226647	99.37289	ppb		95
10) 2-Chlorophenol	4.82	128	2204945	100.75836	ppb		97
11) 1,3-DCB	4.99	146	2516825	99.86989	ppb		96
12) 1,4-DCB	5.07	146	2561089	100.88837	ppb		99
13) Benzyl alcohol	5.21	108	1294294	100.86920	ppb		99
14) 1,2-DCB	5.23	146	2404085	100.88560	ppb		98
15) 2-Methylphenol	5.34	107	1714391	102.31825	ppb		99
16) Bis (2-chloroisopropyl) et	5.35	45	1158374	99.30143	ppb	#	92
17) Acetophenone	5.50	105	3090292	100.79822	ppb		98
18) 3&4-Methylphenol	5.52	107	4639159	204.98813	ppb		99
19) n-Nitrosodi-n-propylamine	5.51	70	1797385	100.47428	ppb		99
20) Hexachloroethane	5.60	117	1063329	102.34856	ppb		96
23) Nitrobenzene	5.69	77	2781285	99.97156	ppb		99
24) Isophorone	5.97	82	4503216	100.78300	ppb		97
25) 2-Nitrophenol	6.04	139	1240183	105.59859	ppb		89
26) 2,4-Dimethylphenol	6.10	122	1962428	101.03007	ppb		95
27) Benzoic acid	6.27	105	1910824	100.90862	ppb		98
28) Bis (2-chloroethoxy) metha	6.21	93	2540370	100.53765	ppb		99
29) 2,4-Dichlorophenol	6.32	162	2088379	103.86942	ppb		97
30) 1,2,4-Trichlorobenzene	6.40	180	2398199	102.33602	ppb		97
31) 3,4-Dimethylphenol	6.44	107	3252453	104.90189	ppb		99
32) Naphthalene	6.49	128	6519693	102.76799	ppb		100
33) 4-Chloroaniline	6.56	127	2392845	100.58290	ppb		96
34) 2,6-Dichlorophenol	6.57	162	2062147	105.45905	ppb		96
35) Hexachloropropene	6.59	213	2262961	107.85413	ppb		99
36) Hexachlorobutadiene	6.64	225	1768853	106.68620	ppb		98
37) Caprolactum	7.01	55	633770	99.00399	ppb		98

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:09:35 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.13	107	2179668	103.68774	ppb	100
39)	2-Methylnaphthalene	7.28	142	4341810	104.11266	ppb	99
40)	1-Methylnaphthalene	7.40	142	4498104	104.61957	ppb	99
42)	Hexachlorocyclopentadiene	7.46	237	1905664	97.30568	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	2744750	102.74549	ppb	98
44)	2,4,6-Trichlorophenol	7.61	196	1721055	103.54230	ppb	99
45)	2,4,5-Trichlorophenol	7.67	196	1877617	103.39837	ppb	98
47)	1,1'-Biphenyl	7.82	154	6123975	102.57605	ppb	99
48)	2-Chloronaphthalene	7.84	162	4716704	101.59650	ppb	96
49)	2-Nitroaniline	7.96	65	1532235	103.70705	ppb	85
50)	Dimethyl phthalate	8.19	163	5790930	101.97662	ppb	98
51)	2,6-DNT	8.25	165	1319759	106.24011	ppb #	60
52)	Acenaphthylene	8.32	152	7124816	100.77445	ppb	100
53)	3-Nitroaniline	8.45	138	1138354	98.15154	ppb	96
54)	Acenaphthene	8.52	154	4795569	102.00983	ppb	99
55)	2,4-Dinitrophenol	8.57	184	817658	100.35520	ppb	96
56)	4-Nitrophenol	8.66	65	1237411	108.12825	ppb	92
57)	Dibenzofuran	8.72	168	7159718	102.33720	ppb	95
58)	2,4-DNT	8.71	165	1977249	110.78005	ppb	81
59)	2,3,4,6-Tetrachlorophenol	8.87	232	1551608	107.90726	ppb #	90
60)	Diethyl phthalate	9.01	149	5969311	102.84505	ppb	99
61)	4-Chlorophenyl phenyl ethe	9.12	204	3392437	105.80384	ppb	94
62)	Fluorene	9.12	166	6390371	108.50934	ppb	99
63)	4-Nitroaniline	9.17	138	1261280	99.97842	ppb	99
66)	4,6-Dinitro-2-methylphenol	9.20	198	1296205	109.55814	ppb #	78
67)	Diphenyl amine	9.27	169	9859114	212.48800	ppb	99
68)	n-Nitrosodiphenylamine	9.27	169	9859114	212.48800	ppb	99
69)	1,2-Diphenylhydrazine	9.31	77	5854721	99.54548	ppb	91
70)	4-Bromophenyl phenyl ether	9.70	248	2013583	107.15128	ppb #	82
71)	Hexachlorobenzene	9.75	284	2021158	104.75176	ppb #	82
72)	Atrazine	9.90	200	864021	52.89701	ppb	99
73)	Pentachlorophenol	9.99	266	1429911	111.87699	ppb	97
74)	Phenanthrene	10.24	178	8381398	98.07775	ppb	95
75)	Anthracene	10.29	178	9355388	104.94806	ppb	99
76)	Carbazol	10.49	167	8095783	102.56147	ppb	96
77)	Di-n-butylphthalate	10.91	149	9809668	101.29581	ppb	98
78)	Fluoranthene	11.62	202	9298740	93.24730	ppb	92
80)	Benzidine	11.79	184	2654497	103.79547	ppb #	97
81)	Pyrene	11.88	202	10226323	95.38246	ppb	90
83)	Butyl benzylphthalate	12.65	149	4786614	104.14515	ppb	94
84)	3,3'-Dichlorobenzidine	13.25	252	3574279	100.28396	ppb #	98
85)	Benz (a) anthracene	13.27	228	11497510	104.64342	ppb	99
86)	Bis (2-ethylhexyl) phthala	13.33	149	7239571	109.49047	ppb #	90
87)	Chrysene	13.32	228	10082415	97.43480	ppb	92
88)	Di-n-octylphthalate	14.04	149	10484809	96.72622	ppb #	92
90)	Benzo (b) fluoranthene	14.49	252	10579909	105.83716	ppb #	98
91)	Benzo (k) fluoranthene	14.53	252	10507964	104.53179	ppb	99
92)	Benzo (a) pyrene	14.91	252	10026318	107.44785	ppb	100
93)	Indeno (1,2,3-cd) pyrene	16.61	276	11348505	105.54957	ppb	99
94)	Dibenz (a,h) anthracene	16.66	278	10158911	107.97534	ppb	97
95)	Benzo (g,h,i) perylene	17.12	276	9693983	105.43641	ppb	98

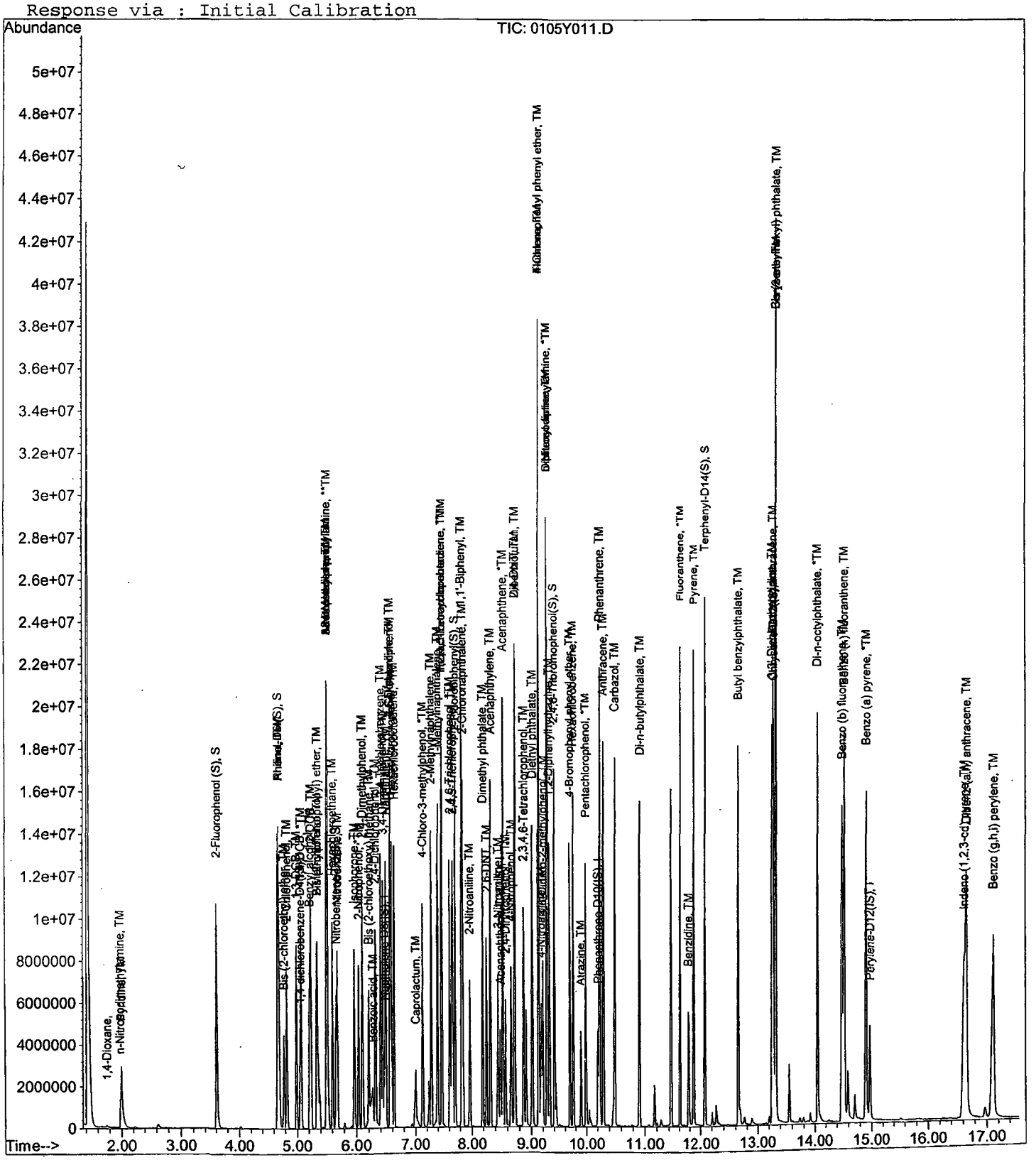
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y011.D Vial: 11
Acq On : 5 Jan 21 14:46 Operator: MA
Sample : 100ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:10 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.3192	0.2756	14		
2	TM	n-Nitrosodimethylamine	0.6105	0.6937	14	TM	
3	TM	Pyridine	1.336	1.405	5.1	TM	
4	*TM	Phenol	2.418	2.471	2.2	*TM	
5	TM	Aniline	1.766	1.915	8.5	TM	
6	TM	Bis (2-chloroethyl) ether	1.032	1.047	1.5	TM	
7	TM	2-Chlorophenol	1.829	1.893	3.5	TM	
8	TM	1,3-DCB	2.107	2.214	5.1	TM	
9	*TM	1,4-DCB	2.122	2.259	6.5	*TM	
10	TM	Benzyl alcohol	1.073	1.086	1.3	TM	
11	TM	1,2-DCB	1.992	2.115	6.2	TM	
12	TM	2-Methylphenol	1.401	1.436	2.5	TM	
13	TM	Bis (2-chloroisopropyl) ether	0.9751	0.9709	0.43	TM	
14	TM	Acetophenone	2.563	2.558	0.17	TM	
15	TM	3&4-Methylphenol	1.892	1.899	0.40	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.495	1.491	0.26	**TM	
17	TM	Hexachloroethane	0.8684	0.9218	6.2	TM	
18	TM	Nitrobenzene	0.6068	0.6176	1.8	TM	
19	TM	Isophorone	0.9746	1.005	3.2	TM	
20	*TM	2-Nitrophenol	0.2562	0.2615	2.1	*TM	
21	TM	2,4-Dimethylphenol	0.4237	0.4146	2.1	TM	
22	TML	Benzoic acid	0.3484	0.3960	14	TML	3.2
23	TM	Bis (2-chloroethoxy) methane	0.5511	0.5372	2.5	TM	
24	*TM	2,4-Dichlorophenol	0.4385	0.4402	0.39	*TM	
25	TM	1,2,4-Trichlorobenzene	0.5111	0.5291	3.5	TM	
26	TM	3,4-Dimethylphenol	0.6762	0.6699	0.93	TM	
27	TM	Naphthalene	1.384	1.383	0.06	TM	
28	TM	4-Chloroaniline	0.5189	0.5279	1.7	TM	
29	TM	2,6-Dichlorophenol	0.4265	0.4191	1.7	TM	
30	TM	Hexachloropropene	0.4576	0.4673	2.1	TM	
31	*TM	Hexachlorobutadiene	0.3616	0.3724	3.0	*TM	
32	TM	Caprolactum	0.1396	0.1366	2.1	TM	
33	*TM	4-Chloro-3-methylphenol	0.4585	0.4647	1.3	*TM	
34	TM	2-Methylnaphthalene	0.9096	0.9606	5.6	TM	
35	TM	1-Methylnaphthalene	0.9378	0.8937	4.7	TM	
36	**TML	Hexachlorocyclopentadiene	0.5696	0.6139	7.8	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8730	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.5601	0.5511	1.6	*TM	
39	TM	2,4,5-Trichlorophenol	0.6119	0.5802	5.2	TM	
40	TM	1,1'-Biphenyl	2.012	1.918	4.6	TM	
		Average			3.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.564	1.542	1.5	TM	
42	TM	2-Nitroaniline	0.4979	0.5067	1.8	TM	
43	TM	Dimethyl phthalate	1.914	1.801	5.9	TM	
44	TM	2,6-DNT	0.4186	0.4350	3.9	TM	
45	TM	Acenaphthylene	2.382	2.334	2.1	TM	
46	TM	3-Nitroaniline	0.3908	0.3969	1.6	TM	
47	*TM	Acenaphthene	1.584	1.501	5.3	*TM	
48	**TML	2,4-Dinitrophenol	0.2231	0.2304	3.3	**TML	0.05
49	**TM	4-Nitrophenol	0.3856	0.3989	3.4	**TM	
50	TM	Dibenzofuran	2.358	2.240	5.0	TM	
51	TM	2,4-DNT	0.6015	0.6173	2.6	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4880	0.72	TM	
53	TM	Diethyl phthalate	1.956	1.885	3.6	TM	
54	TM	4-Chlorophenyl phenyl ether	1.080	1.022	5.4	TM	
55	TM	Fluorene	1.985	1.891	4.7	TM	
56	TM	4-Nitroaniline	0.4251	0.4330	1.9	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1926	0.38	TM	
58	TM	Diphenyl amine	0.7523	0.7187	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.7523	0.7187	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.9537	0.9886	3.7	TM	
61	TM	4-Bromophenyl phenyl ether	0.3047	0.2914	4.4	TM	
62	TM	Hexachlorobenzene	0.3129	0.3082	1.5	TM	
63	TM	Atrazine	0.2649	0.2571	2.9	TM	
64	*TM	Pentachlorophenol	0.2072	0.2081	0.40	*TM	
65	TM	Phenanthrene	1.386	1.320	4.8	TM	
66	TM	Anthracene	1.445	1.413	2.2	TM	
67	TM	Carbazol	1.280	1.234	3.6	TM	
68	TM	Di-n-butylphthalate	1.570	1.556	0.90	TM	
69	*TM	Fluoranthene	1.617	1.602	0.90	*TM	
70	TM	Benzidine	0.3978	0.3687	7.3	TM	
71	TM	Pyrene	1.668	1.630	2.3	TM	
72	TM	Butyl benzylphthalate	0.7149	0.6871	3.9	TM	
73	TM	3,3'-Dichlorobenzidine	0.5544	0.5649	1.9	TM	
74	TM	Benz (a) anthracene	1.709	1.569	8.2	TM	
75	TM	Bis (2-ethylhexyl) phthalate	1.028	0.9637	6.3	TM	
76	TM	Chrysene	1.610	1.542	4.2	TM	
77	*TM	Di-n-octylphthalate	1.686	1.634	3.1	*TM	
78	TM	Benzo (b) fluoranthene	1.571	1.501	4.5	TM	
79	TM	Benzo (k) fluoranthene	1.516	1.591	4.9	TM	
80	*TM	Benzo (a) pyrene	1.467	1.445	1.5	*TM	
		Average			3.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Jan 21 15:11
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Indeno (1,2,3-cd) pyrene	1.690	1.584	6.3	TM	
82	TM	Dibenz (a,h) anthracene	1.479	1.442	2.5	TM	
83	TM	Benzo (g,h,i) perylene	1.445	1.401	3.1	TM	
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
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116							
117							
118							
119							
120							
		Average			4.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	418995	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.46	136	1640350	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.47	164	1071501	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.20	188	2236494	40.00000 ppb		0.00
79) Chrysene-D12(IS)	13.28	240	2352253	40.00000 ppb		0.00
89) Perylene-D12(IS)	14.96	264	2338024	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
22) Nitrobenzene-D5(S)	5.61	82	163280	6.75068 ppb		-0.05
Spiked Amount 100.000			Recovery =	6.751%		
46) 2-Fluorobiphenyl(S)	7.66	172	2198	0.04376 ppb		-0.05
Spiked Amount 100.000			Recovery =	0.044%		
64) 2,4,6-Tribromophenol(S)	9.40	330	243	0.03008 ppb		0.00
Spiked Amount 200.000			Recovery =	0.015%		
82) Terphenyl-D14(S)	12.07	244	552	0.00782 ppb		0.00
Spiked Amount 100.000			Recovery =	0.008%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.75	58	14433	4.31714		89
3) n-Nitrosodimethylamine	1.98	42	363328	56.81434 ppb		91
4) Pyridine	1.99	79	735710	52.57161 ppb		96
7) Phenol	4.68	94	1293943	51.09241 ppb		98
8) Aniline	4.69	93	1003200	54.23301 ppb	#	88
9) Bis (2-chloroethyl) ether	4.77	63	548378	50.73820 ppb		98
10) 2-Chlorophenol	4.82	128	991267	51.73455 ppb		93
11) 1,3-DCB	4.98	146	1159736	52.55903 ppb		99
12) 1,4-DCB	5.07	146	1183032	53.22548 ppb		98
13) Benzyl alcohol	5.21	108	568879	50.63516 ppb		100
14) 1,2-DCB	5.23	146	1107821	53.09525 ppb		97
15) 2-Methylphenol	5.34	107	751972	51.25681 ppb		98
16) Bis (2-chloroisopropyl) et	5.35	45	508516	49.78723 ppb		98
17) Acetophenone	5.49	105	1339909	49.91549 ppb		96
18) 3&4-Methylphenol	5.50	107	1989386	100.39572 ppb		95
19) n-Nitrosodi-n-propylamine	5.50	70	781102	49.86872 ppb		98
20) Hexachloroethane	5.61	117	482808	53.07564 ppb		93
23) Nitrobenzene	5.68	77	1266417	50.89285 ppb		97
24) Isophorone	5.95	82	2061471	51.58112 ppb		94
25) 2-Nitrophenol	6.03	139	536277	51.05174 ppb		97
26) 2,4-Dimethylphenol	6.09	122	850185	48.93498 ppb		93
27) Benzoic acid	6.23	105	812071	51.60901 ppb		97
28) Bis (2-chloroethoxy) metha	6.20	93	1101398	48.73322 ppb		99
29) 2,4-Dichlorophenol	6.31	162	902651	50.19348 ppb		99
30) 1,2,4-Trichlorobenzene	6.40	180	1084928	51.75988 ppb		97
31) 3,4-Dimethylphenol	6.43	107	1373639	49.53292 ppb		98
32) Naphthalene	6.49	128	2835600	49.97177 ppb		99
33) 4-Chloroaniline	6.55	127	1082401	50.86826 ppb		99
34) 2,6-Dichlorophenol	6.56	162	859365	49.13500 ppb		96
35) Hexachloropropene	6.59	213	958072	51.05132 ppb		99
36) Hexachlorobutadiene	6.63	225	763624	51.49264 ppb		98
37) Caprolactum	6.97	55	280159	48.92994 ppb		96

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.12	107	952736	50.67091 ppb		98
39)	2-Methylnaphthalene	7.28	142	1969657	52.80468 ppb		100
40)	1-Methylnaphthalene	7.39	142	1832523	47.65209 ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	822272	49.43526 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1169239	48.48689 ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	738127	49.19435 ppb		100
45)	2,4,5-Trichlorophenol	7.66	196	777172	47.41163 ppb		95
47)	1,1'-Biphenyl	7.81	154	2569366	47.67598 ppb	#	98
48)	2-Chloronaphthalene	7.83	162	2064877	49.27145 ppb		94
49)	2-Nitroaniline	7.95	65	678686	50.88770 ppb		80
50)	Dimethyl phthalate	8.18	163	2412778	47.06854 ppb		100
51)	2,6-DNT	8.24	165	582646	51.95887 ppb	#	54
52)	Acenaphthylene	8.32	152	3125486	48.97285 ppb		100
53)	3-Nitroaniline	8.44	138	531591	50.77600 ppb		94
54)	Acenaphthene	8.52	154	2009992	47.36497 ppb		99
55)	2,4-Dinitrophenol	8.56	184	308644	50.02262 ppb		92
56)	4-Nitrophenol	8.65	65	534214	51.71322 ppb		99
57)	Dibenzofuran	8.72	168	3000484	47.51054 ppb		99
58)	2,4-DNT	8.71	165	826836	51.31929 ppb		83
59)	2,3,4,6-Tetrachlorophenol	8.86	232	653680	50.36106 ppb		98
60)	Diethyl phthalate	9.00	149	2525176	48.19610 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1368436	47.27975 ppb		97
62)	Fluorene	9.11	166	2532549	47.63871 ppb		99
63)	4-Nitroaniline	9.15	138	580000	50.93119 ppb		88
66)	4,6-Dinitro-2-methylphenol	9.18	198	538338	50.18852 ppb	#	63
67)	Diphenyl amine	9.26	169	4018517	95.53020 ppb		100
68)	n-Nitrosodiphenylamine	9.26	169	4018517	95.53020 ppb		100
69)	1,2-Diphenylhydrazine	9.31	77	2763622	51.82896 ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	814651	47.81650 ppb		96
71)	Hexachlorobenzene	9.76	284	861582	49.25338 ppb		95
72)	Atrazine	9.89	200	359433	24.27186 ppb		99
73)	Pentachlorophenol	9.99	266	581707	50.20124 ppb		99
74)	Phenanthrene	10.23	178	3689664	47.62327 ppb		100
75)	Anthracene	10.29	178	3950822	48.88531 ppb		100
76)	Carbazol	10.48	167	3450310	48.21274 ppb		95
77)	Di-n-butylphthalate	10.91	149	4350430	49.55046 ppb		100
78)	Fluoranthene	11.61	202	4479761	49.55019 ppb		99
80)	Benzidine	11.78	184	1084184	46.34613 ppb		98
81)	Pyrene	11.88	202	4791836	48.86133 ppb		100
83)	Butyl benzylphthalate	12.65	149	2020265	48.05442 ppb		95
84)	3,3'-Dichlorobenzidine	13.25	252	1660886	50.94448 ppb		98
85)	Benz (a) anthracene	13.27	228	4614296	45.91218 ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2833587	46.85052 ppb		99
87)	Chrysene	13.31	228	4533491	47.89571 ppb		99
88)	Di-n-octylphthalate	14.04	149	4805218	48.46309 ppb		99
90)	Benzo (b) fluoranthene	14.49	252	4386819	47.76510 ppb		100
91)	Benzo (k) fluoranthene	14.52	252	4650779	52.47301 ppb		100
92)	Benzo (a) pyrene	14.90	252	4224415	49.27330 ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	4628502	46.84717 ppb		98
94)	Dibenz (a,h) anthracene	16.63	278	4214207	48.73820 ppb		99
95)	Benzo (g,h,i) perylene	17.09	276	4093267	48.45774 ppb		98

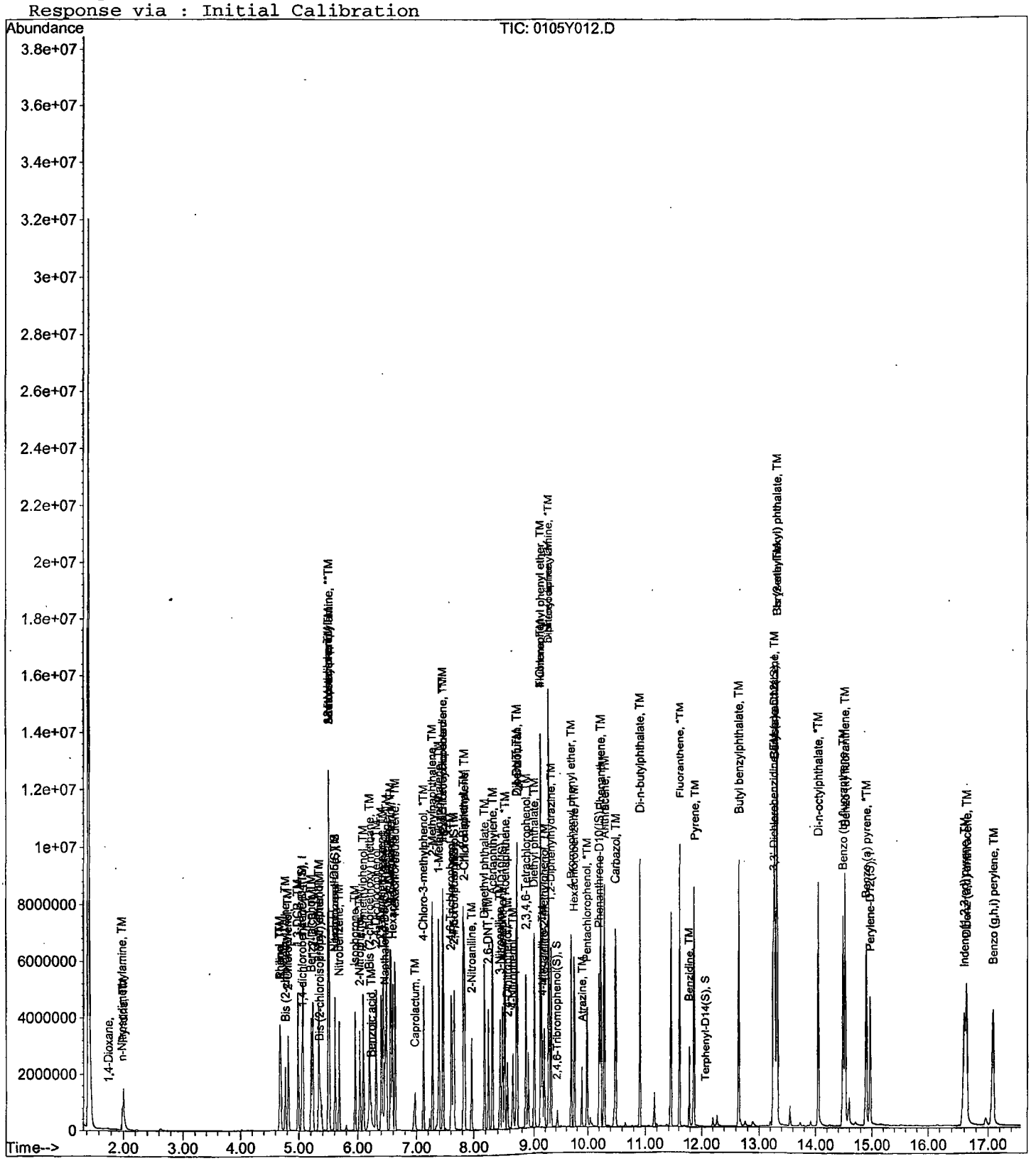
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y012.D Vial: 12
Acq On : 5 Jan 21 15:11 Operator: MA
Sample : SS 50ug/mL 8270 01/05/21 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Jan 5 18:25 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.3192	0.2758	14			
3	TM	n-Nitrosodimethylamine	0.6105	0.5863	4.0	TM		
4	TM	Pyridine	1.336	1.268	5.1	TM		
5	S	2-Fluorophenol (S)	1.601	1.664	3.9	S		
6	S	Phenol-D6 (S)	2.046	2.183	6.7	S		
7	*TM	Phenol	2.418	2.651	9.6	*TM		
8	TM	Aniline	1.766	1.947	10	TM		
9	TM	Bis (2-chloroethyl) ether	1.032	1.128	9.3	TM		
10	TM	2-Chlorophenol	1.829	1.956	6.9	TM		
11	TM	1,3-DCB	2.107	2.140	1.6	TM		
12	*TM	1,4-DCB	2.122	2.190	3.2	*TM		
13	TM	Benzyl alcohol	1.073	1.127	5.1	TM		
14	TM	1,2-DCB	1.992	2.067	3.8	TM		
15	TM	2-Methylphenol	1.401	1.494	6.6	TM		
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.086	11	TM		
17	TM	Acetophenone	2.563	2.769	8.1	TM		
18	TM	3&4-Methylphenol	1.892	2.057	8.7	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.645	10.0	**TM		
20	TM	Hexachloroethane	0.8684	0.9075	4.5	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.5898	0.5990	1.6	S		
23	TM	Nitrobenzene	0.6068	0.6079	0.19	TM		
24	TM	Isophorone	0.9746	0.9874	1.3	TM		
25	*TM	2-Nitrophenol	0.2562	0.2550	0.44	*TM		
26	TM	2,4-Dimethylphenol	0.4237	0.4264	0.65	TM		
27	TML	Benzoic acid	0.3484	0.2632	24	TML	27	*NT
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5637	2.3	TM		
29	*TM	2,4-Dichlorophenol	0.4385	0.4398	0.28	*TM		
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5097	0.28	TM		
31	TM	3,4-Dimethylphenol	0.6762	0.6879	1.7	TM		
32	TM	Naphthalene	1.384	1.419	2.6	TM		
33	TM	4-Chloroaniline	0.5189	0.5474	5.5	TM		
34	TM	2,6-Dichlorophenol	0.4265	0.4316	1.2	TM		
35	TM	Hexachloropropene	0.4576	0.4418	3.5	TM		
36	*TM	Hexachlorobutadiene	0.3616	0.3599	0.48	*TM		
37	TM	Caprolactum	0.1396	0.1472	5.4	TM		
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4713	2.8	*TM		
39	TM	2-Methylnaphthalene	0.9096	0.9449	3.9	TM		
40	TM	1-Methylnaphthalene	0.9378	0.9795	4.5	TM		
		Average			5.1			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5319	6.6	**TML	13
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.9060	0.64	TM	
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5614	0.22	*TM	
45	TM	2,4,5-Trichlorophenol	0.6119	0.6229	1.8	TM	
46	S	2-Fluorobiphenyl(S)	1.875	1.915	2.2	S	
47	TM	1,1'-Biphenyl	2.012	2.109	4.8	TM	
48	TM	2-Chloronaphthalene	1.564	1.622	3.7	TM	
49	TM	2-Nitroaniline	0.4979	0.5213	4.7	TM	
50	TM	Dimethyl phthalate	1.914	1.978	3.4	TM	
51	TM	2,6-DNT	0.4186	0.4349	3.9	TM	
52	TM	Acenaphthylene	2.382	2.458	3.2	TM	
53	TM	3-Nitroaniline	0.3908	0.4149	6.2	TM	
54	*TM	Acenaphthene	1.584	1.613	1.8	*TM	
55	**TML	2,4-Dinitrophenol	0.2231	0.1723	23	**TML	18
56	**TM	4-Nitrophenol	0.3856	0.3602	6.6	**TM	
57	TM	Dibenzofuran	2.358	2.405	2.0	TM	
58	TM	2,4-DNT	0.6015	0.6274	4.3	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4779	1.4	TM	
60	TM	Diethyl phthalate	1.956	1.991	1.8	TM	
61	TM	4-Chlorophenyl phenyl ether	1.080	1.132	4.7	TM	
62	TM	Fluorene	1.985	2.086	5.1	TM	
63	TM	4-Nitroaniline	0.4251	0.4395	3.4	TM	
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2931	2.8	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1781	7.2	TM	
67	TM	Diphenyl amine	0.7523	0.7935	5.5	TM	
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7935	5.5	*TM	
69	TM	1,2-Diphenylhydrazine	0.9537	0.9875	3.5	TM	
70	TM	4-Bromophenyl phenyl ether	0.3047	0.3148	3.3	TM	
71	TM	Hexachlorobenzene	0.3129	0.3163	1.1	TM	
72	TM	Atrazine	0.2649	0.2514	5.1	TM	
73	*TM	Pentachlorophenol	0.2072	0.2030	2.1	*TM	
74	TM	Phenanthrene	1.386	1.438	3.8	TM	
75	TM	Anthracene	1.445	1.517	5.0	TM	
76	TM	Carbazol	1.280	1.323	3.3	TM	
77	TM	Di-n-butylphthalate	1.570	1.711	9.0	TM	
78	*TM	Fluoranthene	1.617	1.718	6.2	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.3978	0.3612	9.2	TM	
		Average			4.5		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 15:15
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y148.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.758	5.4	TM	
82	S	Terphenyl-D14(S)	1.201	1.245	3.7	S	
83	TM	Butyl benzylphthalate	0.7149	0.7587	6.1	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6027	8.7	TM	
85	TM	Benz (a) anthracene	1.709	1.765	3.3	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.150	12	TM	
87	TM	Chrysene	1.610	1.754	9.0	TM	
88	*TM	Di-n-octylphthalate	1.686	1.776	5.4	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.613	2.7	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.712	13	TM	
92	*TM	Benzo (a) pyrene	1.467	1.564	6.6	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.660	1.8	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.454	1.7	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.392	3.6	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.9		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.06	152	518055	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2067067	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1300068	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	2640413	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	2697493	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2522965	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2154615	103.94389 ppb	0.00
Spiked Amount 200.000			Recovery =	51.972%	
6) Phenol-D6 (S)	4.67	99	2826908	106.65726 ppb	0.00
Spiked Amount 200.000			Recovery =	53.329%	
22) Nitrobenzene-D5(S)	5.67	82	1547833	50.78329 ppb	0.00
Spiked Amount 100.000			Recovery =	50.783%	
46) 2-Fluorobiphenyl(S)	7.71	172	3112793	51.08194 ppb	0.00
Spiked Amount 100.000			Recovery =	51.082%	
64) 2,4,6-Tribromophenol(S)	9.41	330	952545	97.19584 ppb	0.00
Spiked Amount 200.000			Recovery =	48.598%	
82) Terphenyl-D14(S)	12.07	244	4198476	51.85552 ppb	0.00
Spiked Amount 100.000			Recovery =	51.856%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.97	42	379638	48.01332 ppb	80
4) Pyridine	1.99	79	820927	47.44409 ppb	94
7) Phenol	4.68	94	1716430	54.81511 ppb	92
8) Aniline	4.69	93	1261056	55.13705 ppb	94
9) Bis (2-chloroethyl) ether	4.77	63	730232	54.64480 ppb	92
10) 2-Chlorophenol	4.82	128	1266492	53.45957 ppb	99
11) 1,3-DCB	4.99	146	1385918	50.79942 ppb	96
12) 1,4-DCB	5.07	146	1418477	51.61529 ppb	96
13) Benzyl alcohol	5.21	108	729863	52.54200 ppb	95
14) 1,2-DCB	5.23	146	1338348	51.87858 ppb	97
15) 2-Methylphenol	5.33	107	967259	53.32436 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	703111	55.67628 ppb	92
17) Acetophenone	5.50	105	1793129	54.02621 ppb	98
18) 3&4-Methylphenol	5.51	107	2664149	108.73957 ppb	94
19) n-Nitrosodi-n-propylamine	5.51	70	1065108	54.99802 ppb	96
20) Hexachloroethane	5.60	117	587685	52.25145 ppb	87
23) Nitrobenzene	5.69	77	1570835	50.09479 ppb	96
24) Isophorone	5.96	82	2551349	50.66003 ppb	94
25) 2-Nitrophenol	6.04	139	658930	49.77860 ppb	88
26) 2,4-Dimethylphenol	6.10	122	1101787	50.32521 ppb	97
27) Benzoic acid	6.24	105	680072	36.66114 ppb	98
28) Bis (2-chloroethoxy) metha	6.20	93	1456499	51.14144 ppb	99
29) 2,4-Dichlorophenol	6.32	162	1136298	50.14200 ppb	96
30) 1,2,4-Trichlorobenzene	6.40	180	1316990	49.86052 ppb	98
31) 3,4-Dimethylphenol	6.43	107	1777513	50.86465 ppb	98
32) Naphthalene	6.49	128	3666950	51.28221 ppb	99
33) 4-Chloroaniline	6.56	127	1414406	52.74906 ppb	95
34) 2,6-Dichlorophenol	6.57	162	1115271	50.60293 ppb	94
35) Hexachloropropene	6.59	213	1141511	48.26928 ppb	99
36) Hexachlorobutadiene	6.63	225	929916	49.76125 ppb	98
37) Caprolactum	6.99	55	380329	52.71225 ppb	96
38) 4-Chloro-3-methylphenol	7.13	107	1217821	51.39863 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	2441456	51.94128	ppb		99
40)	1-Methylnaphthalene	7.40	142	2530915	52.22663	ppb		99
42)	Hexachlorocyclopentadiene	7.46	237	864384	43.57873	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1472289	50.32000	ppb		96
44)	2,4,6-Trichlorophenol	7.61	196	912270	50.11111	ppb		98
45)	2,4,5-Trichlorophenol	7.66	196	1012210	50.89380	ppb		97
47)	1,1'-Biphenyl	7.82	154	3426868	52.40799	ppb		99
48)	2-Chloronaphthalene	7.84	162	2635437	51.82990	ppb		96
49)	2-Nitroaniline	7.96	65	847181	52.35362	ppb		82
50)	Dimethyl phthalate	8.18	163	3214146	51.67797	ppb		99
51)	2,6-DNT	8.25	165	706770	51.94689	ppb	#	62
52)	Acenaphthylene	8.31	152	3994761	51.58877	ppb		99
53)	3-Nitroaniline	8.44	138	674269	53.08118	ppb		96
54)	Acenaphthene	8.52	154	2621356	50.91145	ppb		100
55)	2,4-Dinitrophenol	8.57	184	279984	40.89434	ppb		96
56)	4-Nitrophenol	8.66	65	585341	46.70052	ppb		93
57)	Dibenzofuran	8.72	168	3908467	51.00722	ppb		93
58)	2,4-DNT	8.71	165	1019636	52.15944	ppb		82
59)	2,3,4,6-Tetrachlorophenol	8.87	232	776560	49.30957	ppb		95
60)	Diethyl phthalate	9.01	149	3235138	50.89084	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.12	204	1838997	52.36707	ppb		93
62)	Fluorene	9.12	166	3390288	52.56119	ppb		99
63)	4-Nitroaniline	9.16	138	714173	51.68753	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	587859	46.42141	ppb	#	95
67)	Diphenyl amine	9.27	169	5237719	105.46611	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	5237719	105.46611	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3259332	51.77478	ppb		90
70)	4-Bromophenyl phenyl ether	9.70	248	1039075	51.65935	ppb	#	85
71)	Hexachlorobenzene	9.75	284	1043815	50.54274	ppb	#	77
72)	Atrazine	9.89	200	414853	23.72877	ppb		96
73)	Pentachlorophenol	9.99	266	669903	48.96863	ppb		98
74)	Phenanthrene	10.24	178	4746148	51.88831	ppb		100
75)	Anthracene	10.29	178	5008404	52.49116	ppb		99
76)	Carbazol	10.49	167	4365250	51.66646	ppb		96
77)	Di-n-butylphthalate	10.91	149	5647409	54.48295	ppb		98
78)	Fluoranthene	11.62	202	5669705	53.11863	ppb		98
80)	Benzidine	11.79	184	1217967	45.40145	ppb		99
81)	Pyrene	11.88	202	5926906	52.70054	ppb		99
83)	Butyl benzylphthalate	12.65	149	2558334	53.06473	ppb		92
84)	3,3'-Dichlorobenzidine	13.25	252	2032152	54.35472	ppb	#	98
85)	Benz (a) anthracene	13.28	228	5952291	51.64524	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	3878275	55.91652	ppb	#	93
87)	Chrysene	13.32	228	5914541	54.48897	ppb		99
88)	Di-n-octylphthalate	14.04	149	5989527	52.67618	ppb		96
90)	Benzo (b) fluoranthene	14.50	252	5087114	51.32987	ppb		100
91)	Benzo (k) fluoranthene	14.53	252	5398281	56.44215	ppb		98
92)	Benzo (a) pyrene	14.91	252	4931940	53.30900	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	5233563	49.08831	ppb		99
94)	Dibenz (a,h) anthracene	16.65	278	4585696	49.14696	ppb		100
95)	Benzo (g,h,i) perylene	17.11	276	4391478	48.17719	ppb		98

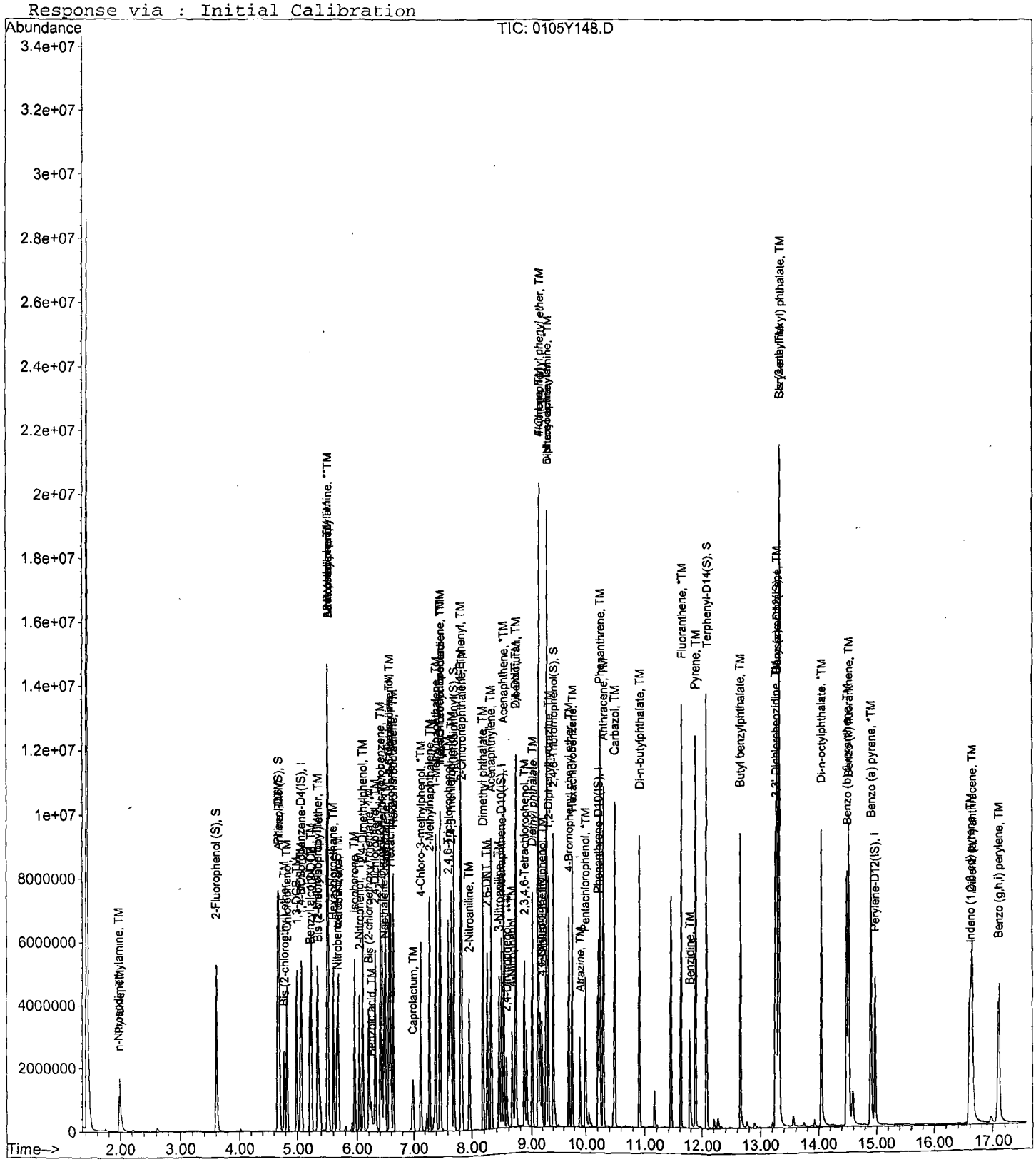
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y148.D Vial: 48
Acq On : 1 Feb 21 15:15 Operator: MA
Sample : 50ug/mL 8270 01/05/21 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:14 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Initial Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.3192	0.2671	16		
3	TM	n-Nitrosodimethylamine	0.6105	0.5502	9.9	TM	
4	TM	Pyridine	1.336	1.235	7.6	TM	
5	S	2-Fluorophenol (S)	1.601	1.684	5.2	S	
6	S	Phenol-D6 (S)	2.046	2.288	12	S	
7	*TM	Phenol	2.418	2.728	13	*TM	
8	TM	Aniline	1.766	1.912	8.3	TM	
9	TM	Bis (2-chloroethyl) ether	1.032	1.147	11	TM	
10	TM	2-Chlorophenol	1.829	1.979	8.2	TM	
11	TM	1,3-DCB	2.107	2.062	2.1	TM	
12	*TM	1,4-DCB	2.122	2.150	1.3	*TM	
13	TM	Benzyl alcohol	1.073	1.180	10	TM	
14	TM	1,2-DCB	1.992	2.034	2.1	TM	
15	TM	2-Methylphenol	1.401	1.544	10	TM	
16	TM	Bis (2-chloroisopropyl) ether	0.9751	1.115	14	TM	
17	TM	Acetophenone	2.563	2.879	12	TM	
18	TM	3&4-Methylphenol	1.892	2.171	15	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.495	1.771	18	**TM	
20	TM	Hexachloroethane	0.8684	0.8952	3.1	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.5898	0.6031	2.3	S	
23	TM	Nitrobenzene	0.6068	0.6242	2.9	TM	
24	TM	Isophorone	0.9746	0.9869	1.3	TM	
25	*TM	2-Nitrophenol	0.2562	0.2683	4.7	*TM	
26	TM	2,4-Dimethylphenol	0.4237	0.4229	0.18	TM	
27	TML	Benzoic acid	0.3484	0.4082	17	TML	6.0
28	TM	Bis (2-chloroethoxy) methane	0.5511	0.5659	2.7	TM	
29	*TM	2,4-Dichlorophenol	0.4385	0.4419	0.77	*TM	
30	TM	1,2,4-Trichlorobenzene	0.5111	0.5014	1.9	TM	
31	TM	3,4-Dimethylphenol	0.6762	0.6786	0.35	TM	
32	TM	Naphthalene	1.384	1.398	1.0	TM	
33	TM	4-Chloroaniline	0.5189	0.5720	10	TM	
34	TM	2,6-Dichlorophenol	0.4265	0.4329	1.5	TM	
35	TM	Hexachloropropene	0.4576	0.4402	3.8	TM	
36	*TM	Hexachlorobutadiene	0.3616	0.3520	2.7	*TM	
37	TM	Caprolactum	0.1396	0.1461	4.7	TM	
38	*TM	4-Chloro-3-methylphenol	0.4585	0.4775	4.1	*TM	
39	TM	2-Methylnaphthalene	0.9096	0.9187	1.0	TM	
40	TM	1-Methylnaphthalene	0.9378	0.9607	2.4	TM	
		Average			6.4		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.5696	0.5660	0.63	**TML	8.0	
43	TM	1,2,4,5-Tetrachlorobenzene	0.9002	0.8792	2.3	TM		
44	*TM	2,4,6-Trichlorophenol	0.5601	0.5614	0.23	*TM		
45	TM	2,4,5-Trichlorophenol	0.6119	0.5988	2.1	TM		
46	S	2-Fluorobiphenyl(S)	1.875	1.818	3.0	S		
47	TM	1,1'-Biphenyl	2.012	2.083	3.5	TM		
48	TM	2-Chloronaphthalene	1.564	1.576	0.71	TM		
49	TM	2-Nitroaniline	0.4979	0.5173	3.9	TM		
50	TM	Dimethyl phthalate	1.914	1.917	0.17	TM		
51	TM	2,6-DNT	0.4186	0.4299	2.7	TM		
52	TM	Acenaphthylene	2.382	2.349	1.4	TM		
53	TM	3-Nitroaniline	0.3908	0.4133	5.8	TM		
54	*TM	Acenaphthene	1.584	1.590	0.36	*TM		
55	**TML	2,4-Dinitrophenol	0.2231	0.2291	2.7	**TML	0.38	
56	**TM	4-Nitrophenol	0.3856	0.3868	0.31	**TM		
57	TM	Dibenzofuran	2.358	2.382	1.0	TM		
58	TM	2,4-DNT	0.6015	0.6243	3.8	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.4845	0.4693	3.2	TM		
60	TM	Diethyl phthalate	1.956	1.930	1.3	TM		
61	TM	4-Chlorophenyl phenyl ether	1.080	1.123	4.0	TM		
62	TM	Fluorene	1.985	2.065	4.0	TM		
63	TM	4-Nitroaniline	0.4251	0.4390	3.3	TM		
64	S	2,4,6-Tribromophenol(S)	0.3015	0.2857	5.3	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1918	0.1877	2.2	TM		
67	TM	Diphenyl amine	0.7523	0.7816	3.9	TM		
68	*TM	n-Nitrosodiphenylamine	0.7523	0.7816	3.9	*TM		
69	TM	1,2-Diphenylhydrazine	0.9537	0.9548	0.12	TM		
70	TM	4-Bromophenyl phenyl ether	0.3047	0.2961	2.8	TM		
71	TM	Hexachlorobenzene	0.3129	0.3119	0.30	TM		
72	TM	Atrazine	0.2649	0.2391	9.7	TM		
73	*TM	Pentachlorophenol	0.2072	0.2029	2.1	*TM		
74	TM	Phenanthrene	1.386	1.415	2.1	TM		
75	TM	Anthracene	1.445	1.445	0.03	TM		
76	TM	Carbazol	1.280	1.273	0.51	TM		
77	TM	Di-n-butylphthalate	1.570	1.623	3.4	TM		
78	*TM	Fluoranthene	1.617	1.662	2.8	*TM		
79	I	Chrysene-D12(IS)	ISTD			I		
80	TM	Benzidine	0.3978	0.2625	34	TM		*NT
		Average			3.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 1 Feb 21 22:56
Instrument: Yoda
Cal. Date: 01/05/21
Data File: 0105Y166.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Pyrene	1.668	1.744	4.6	TM	
82	S	Terphenyl-D14(S)	1.201	1.263	5.2	S	
83	TM	Butyl benzylphthalate	0.7149	0.7726	8.1	TM	
84	TM	3,3'-Dichlorobenzidine	0.5544	0.6280	13	TM	
85	TM	Benz (a) anthracene	1.709	1.775	3.9	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.028	1.168	14	TM	
87	TM	Chrysene	1.610	1.709	6.2	TM	
88	*TM	Di-n-octylphthalate	1.686	1.829	8.5	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.571	1.640	4.4	TM	
91	TM	Benzo (k) fluoranthene	1.516	1.619	6.8	TM	
92	*TM	Benzo (a) pyrene	1.467	1.553	5.9	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.690	1.657	2.0	TM	
94	TM	Dibenz (a,h) anthracene	1.479	1.455	1.7	TM	
95	TM	Benzo (g,h,i) perylene	1.445	1.379	4.6	TM	
96							
97							
98							
99							
100							
101							
102							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	597519	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.47	136	2483138	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.48	164	1595725	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.21	188	3256004	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.29	240	3161604	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	2954151	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2515522	105.21594 ppb	0.00
Spiked Amount 200.000			Recovery =	52.608%	
6) Phenol-D6 (S)	4.67	99	3418464	111.82372 ppb	0.00
Spiked Amount 200.000			Recovery =	55.912%	
22) Nitrobenzene-D5(S)	5.66	82	1872038	51.12874 ppb	0.00
Spiked Amount 100.000			Recovery =	51.129%	
46) 2-Fluorobiphenyl(S)	7.71	172	3626780	48.48936 ppb	0.00
Spiked Amount 100.000			Recovery =	48.489%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1139612	94.73865 ppb	0.00
Spiked Amount 200.000			Recovery =	47.370%	
82) Terphenyl-D14(S)	12.08	244	4990569	52.59038 ppb	0.00
Spiked Amount 100.000			Recovery =	52.590%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.97	42	410941	45.06047 ppb	75
4) Pyridine	1.99	79	922141	46.20608 ppb	92
7) Phenol	4.69	94	2037557	56.41676 ppb	86
8) Aniline	4.69	93	1427968	54.13171 ppb	95
9) Bis (2-chloroethyl) ether	4.77	63	856695	55.58254 ppb	94
10) 2-Chlorophenol	4.82	128	1478368	54.10404 ppb	98
11) 1,3-DCB	4.98	146	1539839	48.93512 ppb	99
12) 1,4-DCB	5.07	146	1605908	50.66416 ppb	99
13) Benzyl alcohol	5.21	108	881472	55.01713 ppb	94
14) 1,2-DCB	5.23	146	1519016	51.05115 ppb	99
15) 2-Methylphenol	5.34	107	1152856	55.10387 ppb	99
16) Bis (2-chloroisopropyl) et	5.35	45	833141	57.19908 ppb	95
17) Acetophenone	5.50	105	2150334	56.17241 ppb	95
18) 3&4-Methylphenol	5.51	107	3243712	114.78775 ppb	94
19) n-Nitrosodi-n-propylamine	5.51	70	1322814	59.22109 ppb	94
20) Hexachloroethane	5.60	117	668598	51.53983 ppb	97
23) Nitrobenzene	5.69	77	1937330	51.43033 ppb	95
24) Isophorone	5.96	82	3063289	50.63341 ppb	95
25) 2-Nitrophenol	6.04	139	832678	52.36416 ppb	83
26) 2,4-Dimethylphenol	6.10	122	1312633	49.90970 ppb	97
27) Benzoic acid	6.25	105	1267152	52.98115 ppb	96
28) Bis (2-chloroethoxy) metha	6.20	93	1756572	51.34314 ppb	99
29) 2,4-Dichlorophenol	6.31	162	1371611	50.38417 ppb	94
30) 1,2,4-Trichlorobenzene	6.40	180	1556348	49.04952 ppb	99
31) 3,4-Dimethylphenol	6.43	107	2106264	50.17297 ppb	97
32) Naphthalene	6.49	128	4339317	50.51692 ppb	99
33) 4-Chloroaniline	6.56	127	1775552	55.12235 ppb	93
34) 2,6-Dichlorophenol	6.56	162	1343541	50.74578 ppb	98
35) Hexachloropropene	6.59	213	1366378	48.09670 ppb	100
36) Hexachlorobutadiene	6.64	225	1092517	48.66642 ppb	97
37) Caprolactum	6.99	55	453540	52.32646 ppb	96
38) 4-Chloro-3-methylphenol	7.13	107	1482053	52.06976 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.28	142	2851515	50.50021	ppb		99
40)	1-Methylnaphthalene	7.40	142	2981835	51.22144	ppb		100
42)	Hexachlorocyclopentadiene	7.46	237	1128960	46.01296	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	1753677	48.83207	ppb		99
44)	2,4,6-Trichlorophenol	7.61	196	1119849	50.11620	ppb		98
45)	2,4,5-Trichlorophenol	7.67	196	1194393	48.92711	ppb		95
47)	1,1'-Biphenyl	7.82	154	4155035	51.77056	ppb		99
48)	2-Chloronaphthalene	7.84	162	3142850	50.35695	ppb		98
49)	2-Nitroaniline	7.96	65	1031887	51.95300	ppb		83
50)	Dimethyl phthalate	8.19	163	3823670	50.08738	ppb		99
51)	2,6-DNT	8.25	165	857463	51.34579	ppb	#	70
52)	Acenaphthylene	8.32	152	4684674	49.28920	ppb		99
53)	3-Nitroaniline	8.45	138	824468	52.87973	ppb		94
54)	Acenaphthene	8.52	154	3171407	50.18217	ppb		100
55)	2,4-Dinitrophenol	8.57	184	456941	49.80975	ppb		89
56)	4-Nitrophenol	8.66	65	771570	50.15291	ppb		91
57)	Dibenzofuran	8.72	168	4750987	50.51462	ppb		91
58)	2,4-DNT	8.71	165	1245359	51.90275	ppb		84
59)	2,3,4,6-Tetrachlorophenol	8.86	232	936002	48.42181	ppb		92
60)	Diethyl phthalate	9.01	149	3849856	49.34002	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.12	204	2240829	51.98690	ppb		99
62)	Fluorene	9.12	166	4118050	52.01496	ppb		99
63)	4-Nitroaniline	9.16	138	875610	51.62988	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.20	198	763769	48.90960	ppb		96
67)	Diphenyl amine	9.27	169	6362466	103.89225	ppb		99
68)	n-Nitrosodiphenylamine	9.27	169	6362466	103.89225	ppb		99
69)	1,2-Diphenylhydrazine	9.31	77	3886067	50.05955	ppb		95
70)	4-Bromophenyl phenyl ether	9.69	248	1204990	48.58167	ppb		92
71)	Hexachlorobenzene	9.75	284	1269546	49.85063	ppb	#	90
72)	Atrazine	9.89	200	486645	22.57253	ppb		96
73)	Pentachlorophenol	9.99	266	826005	48.96386	ppb		99
74)	Phenanthrene	10.24	178	5760076	51.06736	ppb		100
75)	Anthracene	10.29	178	5881189	49.98491	ppb		99
76)	Carbazol	10.49	167	5182827	49.74544	ppb		97
77)	Di-n-butylphthalate	10.91	149	6607607	51.69429	ppb		99
78)	Fluoranthene	11.62	202	6764096	51.39053	ppb		98
80)	Benzidine	11.79	184	1037367	32.99282	ppb		98
81)	Pyrene	11.88	202	6893694	52.29882	ppb		99
83)	Butyl benzylphthalate	12.65	149	3053173	54.03224	ppb		96
84)	3,3'-Dichlorobenzidine	13.25	252	2481804	56.63715	ppb	#	98
85)	Benz (a) anthracene	13.27	228	7016264	51.94036	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.33	149	4614438	56.76403	ppb	#	91
87)	Chrysene	13.32	228	6753956	53.08828	ppb		100
88)	Di-n-octylphthalate	14.04	149	7229096	54.24486	ppb		99
90)	Benzo (b) fluoranthene	14.49	252	6055988	52.18699	ppb	#	98
91)	Benzo (k) fluoranthene	14.53	252	5978190	53.38218	ppb		99
92)	Benzo (a) pyrene	14.91	252	5735319	52.94426	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.61	276	6118221	49.00996	ppb		98
94)	Dibenz (a,h) anthracene	16.65	278	5371287	49.16412	ppb		99
95)	Benzo (g,h,i) perylene	17.11	276	5090690	47.69644	ppb		99

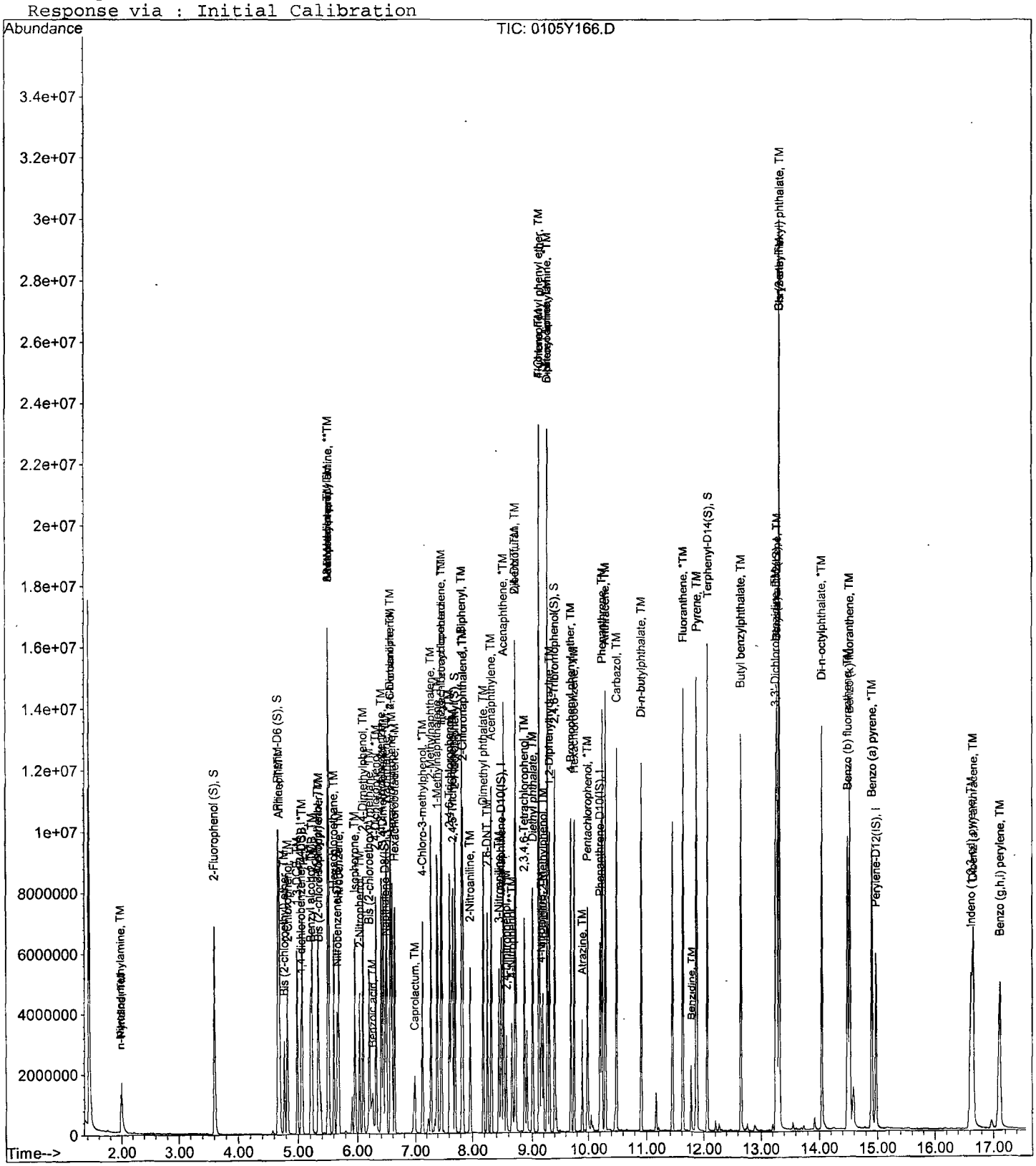
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y166.D Vial: 66
Acq On : 1 Feb 21 22:56 Operator: MA
Sample : 50ug/mL 8270 08/12/20 (5) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:49 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y164.D Vial: 64
Acq On : 1 Feb 21 22:05 Operator: MA
Sample : BA26160W12 1/1030 Inst : Yoda
Misc : Multiplr: 0.97

Quant Time: Feb 2 10:44 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	456459	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1786609	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1137205	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2323429	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2099955	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1988625	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2850902	151.54679 ppb	0.00
Spiked Amount 194.175			Recovery	= 78.047%	
6) Phenol-D6 (S)	4.66	99	3866939	160.76121 ppb	0.00
Spiked Amount 194.175			Recovery	= 82.792%	
22) Nitrobenzene-D5(S)	5.66	82	2191323	80.75869 ppb	0.00
Spiked Amount 97.087			Recovery	= 83.182%	
46) 2-Fluorobiphenyl(S)	7.70	172	4242199	77.26746 ppb	0.00
Spiked Amount 97.087			Recovery	= 79.585%	
64) 2,4,6-Tribromophenol(S)	9.39	330	1381585	156.46895 ppb	0.00
Spiked Amount 194.175			Recovery	= 80.582%	
82) Terphenyl-D14(S)	12.08	244	6696631	103.15045 ppb	0.00
Spiked Amount 97.087			Recovery	= 106.245%	

Target Compounds Qvalue

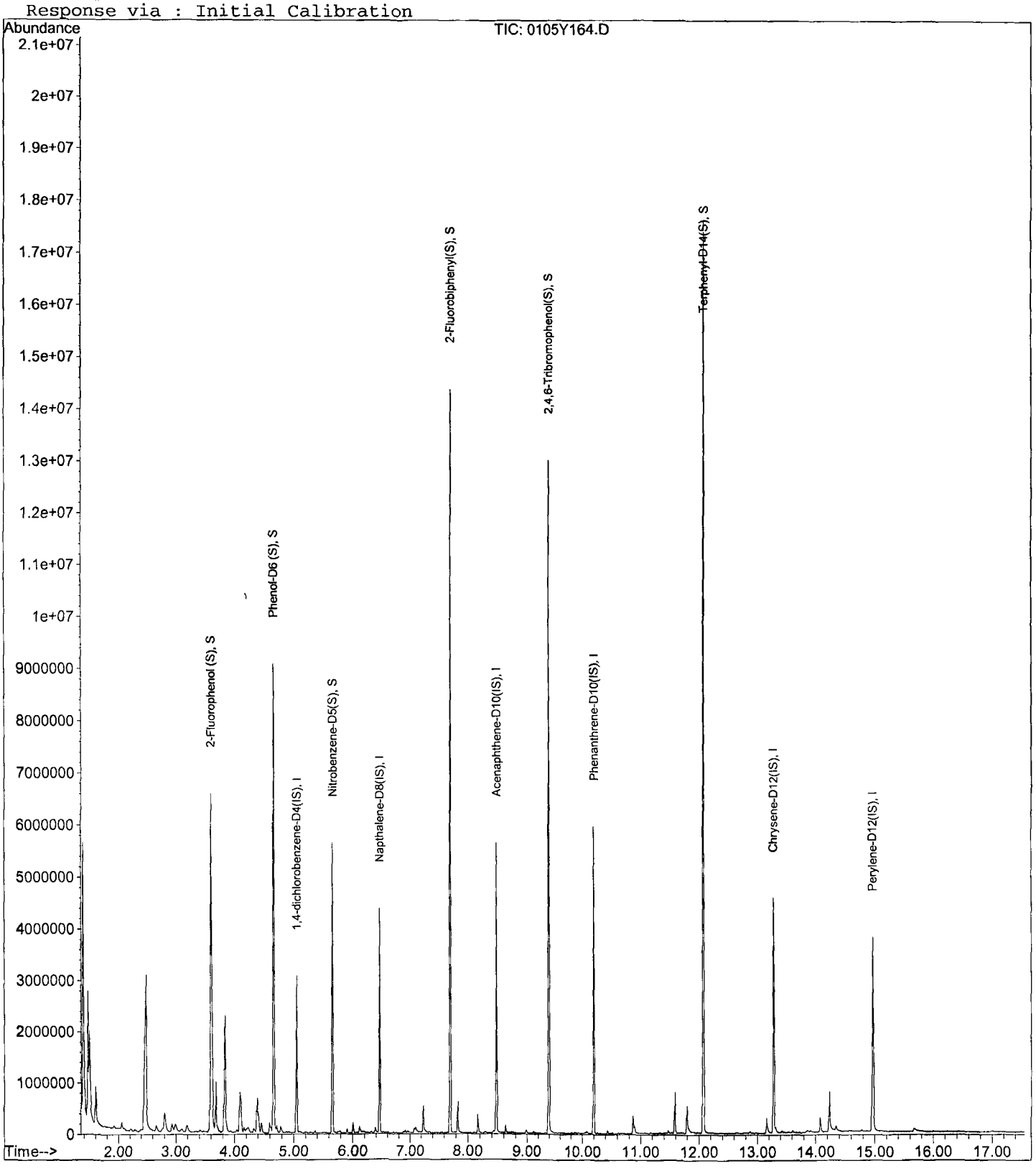
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y164.D Vial: 64
Acq On : 1 Feb 21 22:05 Operator: MA
Sample : BA26160W12 1/1030 Inst : Yoda
Misc : Multiplr: 0.97

Quant Time: Feb 2 10:44 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y165.D Vial: 65
Acq On : 1 Feb 21 22:31 Operator: MA
Sample : BA26163W14 1/1020 Inst : Yoda
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:44 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	431023	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1712417	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1081607	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2238438	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2023801	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.96	264	1925282	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2724898	154.90086 ppb	0.00
Spiked Amount 196.078			Recovery =	79.000%	
6) Phenol-D6 (S)	4.67	99	3735399	166.06957 ppb	0.00
Spiked Amount 196.078			Recovery =	84.696%	
22) Nitrobenzene-D5(S)	5.66	82	2142774	83.19879 ppb	0.00
Spiked Amount 98.039			Recovery =	84.863%	
46) 2-Fluorobiphenyl(S)	7.70	172	4011440	77.57342 ppb	0.00
Spiked Amount 98.039			Recovery =	79.124%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1335620	160.59815 ppb	0.00
Spiked Amount 196.078			Recovery =	81.905%	
82) Terphenyl-D14(S)	12.08	244	6373717	102.86971 ppb	0.00
Spiked Amount 98.039			Recovery =	104.927%	
Target Compounds					Qvalue

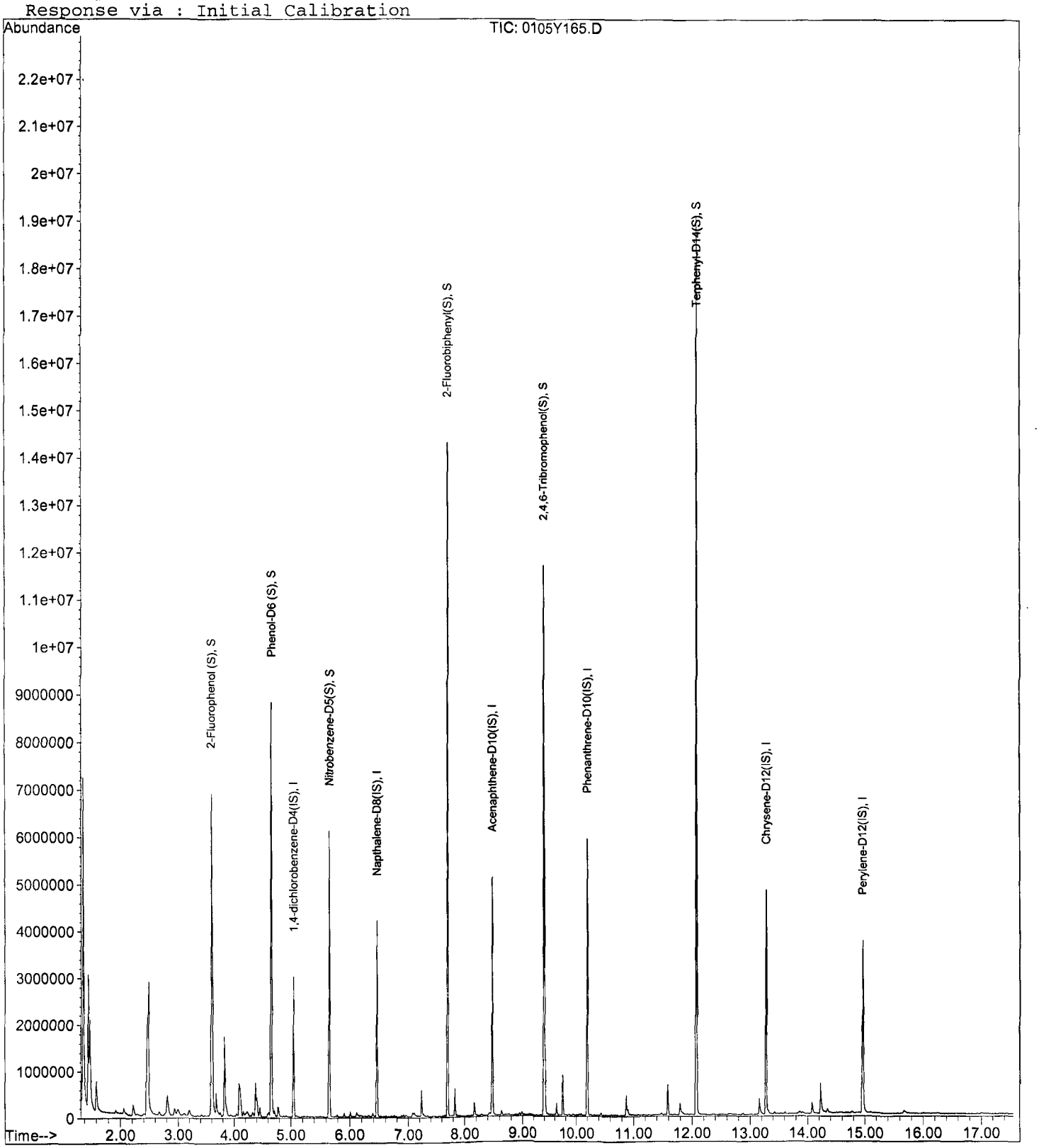
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y165.D Vial: 65
Acq On : 1 Feb 21 22:31 Operator: MA
Sample : BA26163W14 1/1020 Inst : Yoda
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:44 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y149.D Vial: 49
Acq On : 1 Feb 21 15:40 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:01 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	413306	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1601345	40.00000 ppb	-0.01
41) Acenaphthene-D10(IS)	8.47	164	1016462	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2094303	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	1896323	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1799002	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.60	112	2571665	155.50625 ppb	-0.01
Spiked Amount 200.000			Recovery =	77.753%	
6) Phenol-D6 (S)	4.67	99	3360530	158.92444 ppb	0.00
Spiked Amount 200.000			Recovery =	79.462%	
22) Nitrobenzene-D5(S)	5.66	82	1939638	82.14612 ppb	0.00
Spiked Amount 100.000			Recovery =	82.146%	
46) 2-Fluorobiphenyl(S)	7.70	172	3690537	77.46074 ppb	0.00
Spiked Amount 100.000			Recovery =	77.461%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1233107	160.93031 ppb	0.00
Spiked Amount 200.000			Recovery =	80.465%	
82) Terphenyl-D14(S)	12.07	244	5815050	102.16563 ppb	0.00
Spiked Amount 100.000			Recovery =	102.166%	

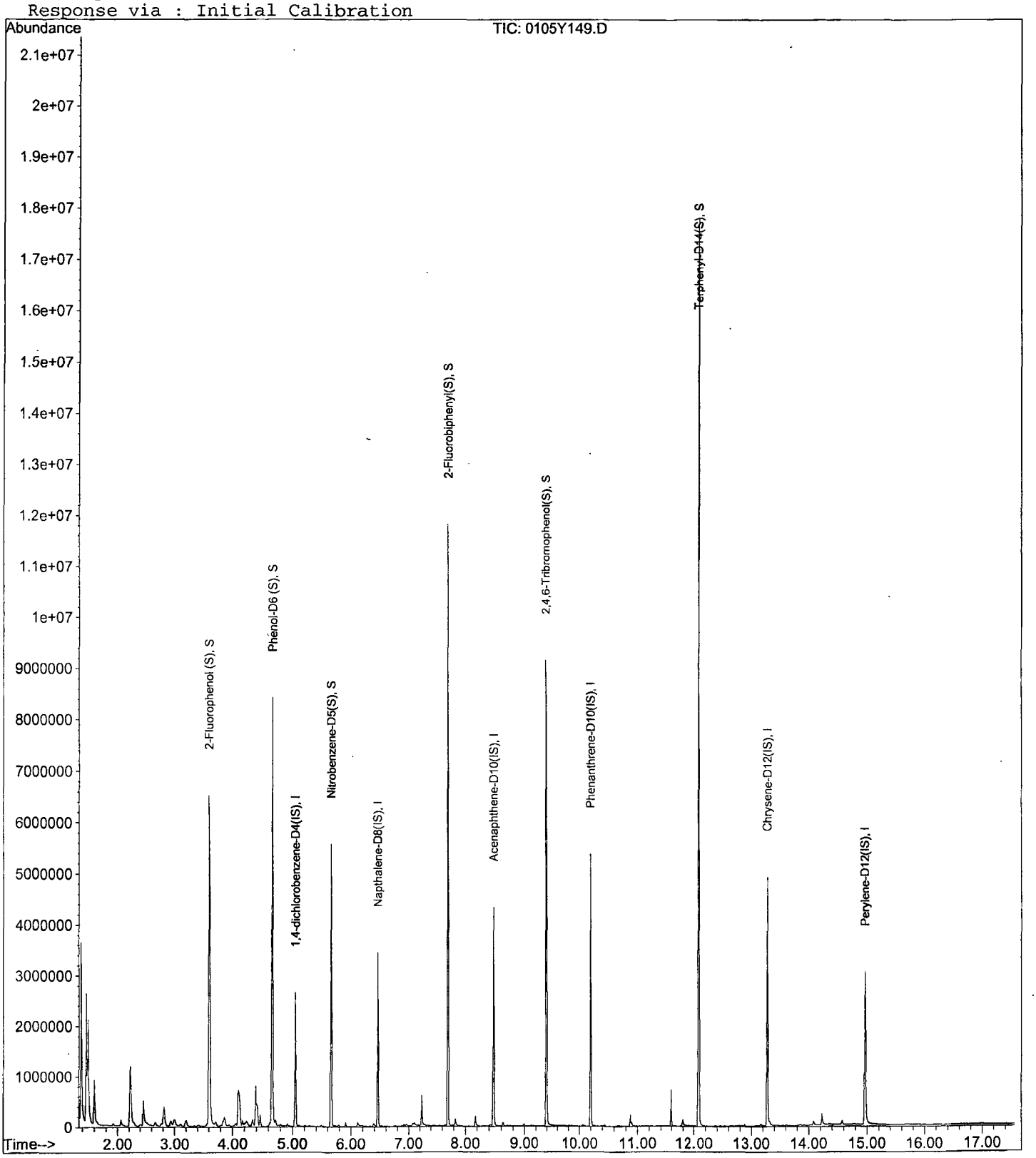
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y210105\0105Y149.D Vial: 49
Acq On : 1 Feb 21 15:40 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:01 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.05	152	420096	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.46	136	1660369	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.47	164	1051569	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.20	188	2163014	40.00000 ppb	0.00
79) Chrysene-D12(IS)	13.28	240	2031349	40.00000 ppb	0.00
89) Perylene-D12(IS)	14.97	264	1789445	40.00000 ppb	0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.61	112	2773482	164.99925 ppb	0.00
Spiked Amount 200.000			Recovery =	82.500%	
6) Phenol-D6 (S)	4.67	99	3508957	163.26163 ppb	0.00
Spiked Amount 200.000			Recovery =	81.631%	
22) Nitrobenzene-D5(S)	5.66	82	2020544	82.53060 ppb	0.00
Spiked Amount 100.000			Recovery =	82.531%	
46) 2-Fluorobiphenyl(S)	7.70	172	3787987	76.85178 ppb	0.00
Spiked Amount 100.000			Recovery =	76.852%	
64) 2,4,6-Tribromophenol(S)	9.40	330	1326221	167.30402 ppb	0.00
Spiked Amount 200.000			Recovery =	83.652%	
82) Terphenyl-D14(S)	12.08	244	5974737	97.99365 ppb	0.00
Spiked Amount 100.000			Recovery =	97.994%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.98	42	240764	37.55009 ppb	76
4) Pyridine	2.00	79	252952	18.02781 ppb	89
7) Phenol	4.69	94	1019034	40.13195 ppb	88
9) Bis (2-chloroethyl) ether	4.77	63	469032	43.28304 ppb	99
10) 2-Chlorophenol	4.83	128	772827	40.22839 ppb	97
11) 1,3-DCB	4.98	146	751890	33.98622 ppb	99
12) 1,4-DCB	5.07	146	781851	35.08386 ppb	99
13) Benzyl alcohol	5.21	108	445867	39.58202 ppb	99
14) 1,2-DCB	5.23	146	752538	35.97284 ppb	100
15) 2-Methylphenol	5.34	107	612479	41.63911 ppb	98
16) Bis (2-chloroisopropyl) et	5.36	45	455962	44.52484 ppb	97
17) Acetophenone	5.49	105	1118075	41.54237 ppb	98
18) 3&4-Methylphenol	5.50	107	1644398	82.76818 ppb	93
19) n-Nitrosodi-n-propylamine	5.50	70	665697	42.38941 ppb	97
20) Hexachloroethane	5.61	117	282234	30.94499 ppb	97
23) Nitrobenzene	5.68	77	1031413	40.94912 ppb	99
24) Isophorone	5.95	82	1616604	39.96218 ppb	93
25) 2-Nitrophenol	6.03	139	428379	40.28854 ppb	97
26) 2,4-Dimethylphenol	6.09	122	690823	39.28300 ppb	95
27) Benzoic acid	6.23	105	655997	42.61015 ppb	97
28) Bis (2-chloroethoxy) metha	6.20	93	882306	38.56843 ppb	99
29) 2,4-Dichlorophenol	6.31	162	712752	39.15596 ppb	99
30) 1,2,4-Trichlorobenzene	6.40	180	734283	34.60890 ppb	96
31) 3,4-Dimethylphenol	6.43	107	1106298	39.41172 ppb	98
32) Naphthalene	6.49	128	2261064	39.36629 ppb	99
34) 2,6-Dichlorophenol	6.56	162	703826	39.75672 ppb	96
35) Hexachloropropene	6.59	213	415550	21.87580 ppb	99
36) Hexachlorobutadiene	6.63	225	438990	29.24503 ppb	98
37) Caprolactum	6.96	55	236094	40.73680 ppb	93
38) 4-Chloro-3-methylphenol	7.12	107	762014	40.03879 ppb	98
39) 2-Methylnaphthalene	7.28	142	1490255	39.47065 ppb	100
40) 1-Methylnaphthalene	7.39	142	1457765	37.45001 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Quant Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
43)	1,2,4,5-Tetrachlorobenzene	7.47	216	836544	35.34798	ppb		100
44)	2,4,6-Trichlorophenol	7.61	196	580664	39.43337	ppb		99
45)	2,4,5-Trichlorophenol	7.66	196	619388	38.50218	ppb		97
47)	1,1'-Biphenyl	7.82	154	2012581	38.05238	ppb	#	97
48)	2-Chloronaphthalene	7.83	162	1565501	38.06356	ppb		95
49)	2-Nitroaniline	7.95	65	426142	32.55765	ppb		80
50)	Dimethyl phthalate	8.18	163	2106250	41.86760	ppb		99
51)	2,6-DNT	8.24	165	444655	40.40480	ppb	#	58
52)	Acenaphthylene	8.32	152	2335421	37.28703	ppb		100
54)	Acenaphthene	8.51	154	1587048	38.10727	ppb		99
55)	2,4-Dinitrophenol	8.56	184	221967	40.35693	ppb		98
56)	4-Nitrophenol	8.66	65	420143	41.44176	ppb		84
57)	Dibenzofuran	8.72	168	2329030	37.57756	ppb		98
58)	2,4-DNT	8.71	165	635543	40.19398	ppb		86
59)	2,3,4,6-Tetrachlorophenol	8.86	232	495909	38.93019	ppb		97
60)	Diethyl phthalate	9.00	149	2119627	41.22252	ppb		96
61)	4-Chlorophenyl phenyl ethe	9.12	204	1128145	39.71645	ppb		95
62)	Fluorene	9.12	166	2034087	38.98759	ppb		100
66)	4,6-Dinitro-2-methylphenol	9.18	198	340023	32.77676	ppb	#	78
67)	Diphenyl amine	9.26	169	1500137	36.87349	ppb		98
68)	n-Nitrosodiphenylamine	9.26	169	1500137	36.87349	ppb		98
69)	1,2-Diphenylhydrazine	9.30	77	1530170	29.67166	ppb		90
70)	4-Bromophenyl phenyl ether	9.69	248	627761	38.09859	ppb		93
71)	Hexachlorobenzene	9.75	284	634986	37.53289	ppb	#	71
73)	Pentachlorophenol	9.99	266	422094	37.66411	ppb		99
74)	Phenanthrene	10.23	178	2951017	39.38333	ppb		100
75)	Anthracene	10.29	178	2922276	37.38700	ppb		99
76)	Carbazol	10.48	167	2244381	32.42714	ppb		96
77)	Di-n-butylphthalate	10.91	149	3594807	42.33499	ppb		99
78)	Fluoranthene	11.61	202	3389473	38.76422	ppb		99
81)	Pyrene	11.88	202	3572937	42.18793	ppb		100
83)	Butyl benzylphthalate	12.65	149	1616705	44.53026	ppb		94
85)	Benz (a) anthracene	13.27	228	3307221	38.10528	ppb		100
86)	Bis (2-ethylhexyl) phthala	13.32	149	2304265	44.11738	ppb		98
87)	Chrysene	13.31	228	3381556	41.36947	ppb		99
88)	Di-n-octylphthalate	14.04	149	3774366	44.07999	ppb		98
90)	Benzo (b) fluoranthene	14.49	252	2936701	41.77835	ppb		99
91)	Benzo (k) fluoranthene	14.52	252	3328114	49.06131	ppb		99
92)	Benzo (a) pyrene	14.90	252	2628699	40.06051	ppb		99
93)	Indeno (1,2,3-cd) pyrene	16.60	276	2930976	38.76018	ppb		98
94)	Dibenz (a,h) anthracene	16.64	278	2696174	40.74105	ppb		98
95)	Benzo (g,h,i) perylene	17.09	276	2574665	39.82396	ppb		99

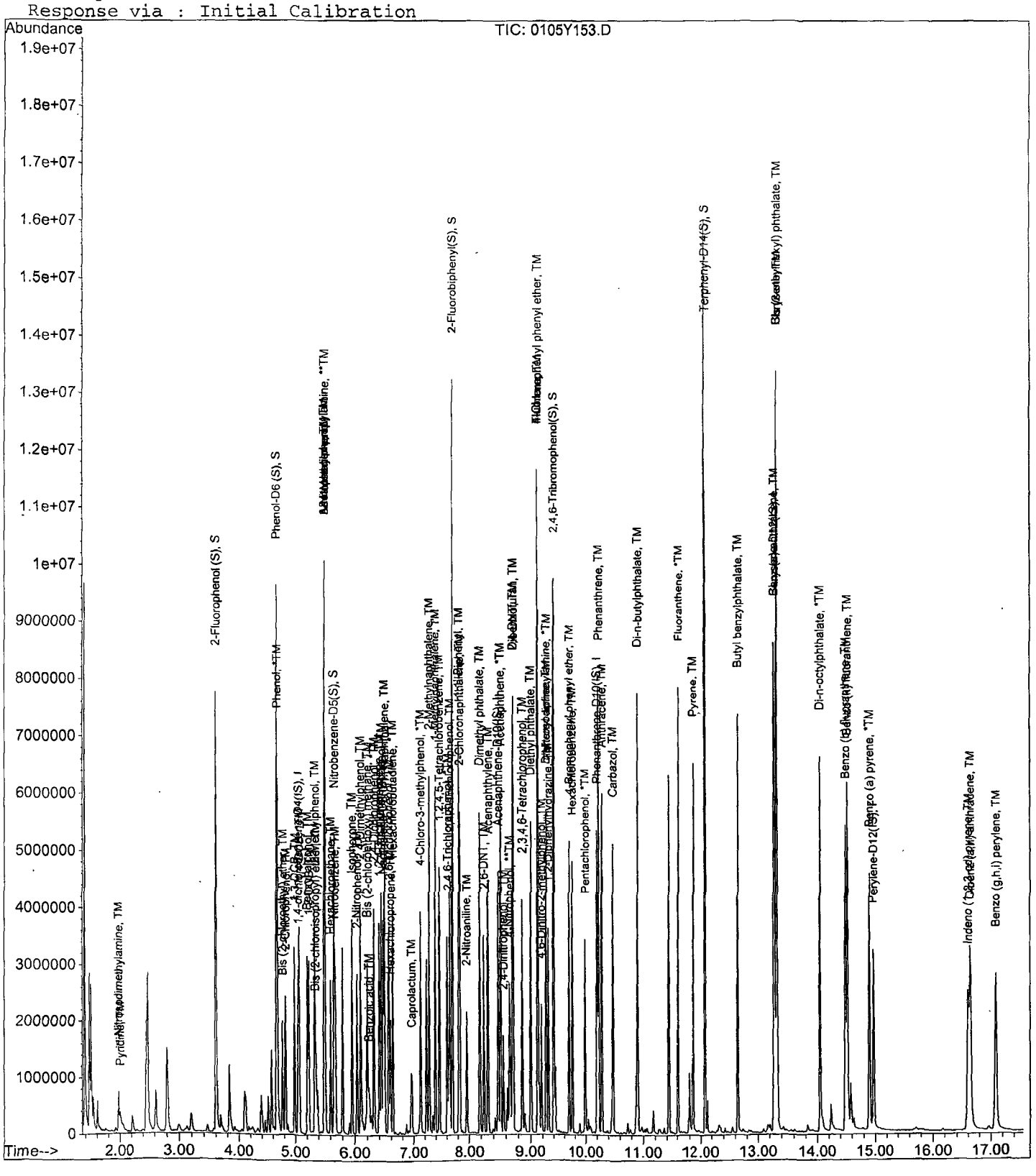
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y153.D Vial: 53
Acq On : 1 Feb 21 17:23 Operator: MA
Sample : 210129A LCS-1 1/1000 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Feb 2 10:09 2021 Quant Results File: Y0105.RES

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Jan 05 18:16:17 2021
Response via : Initial Calibration

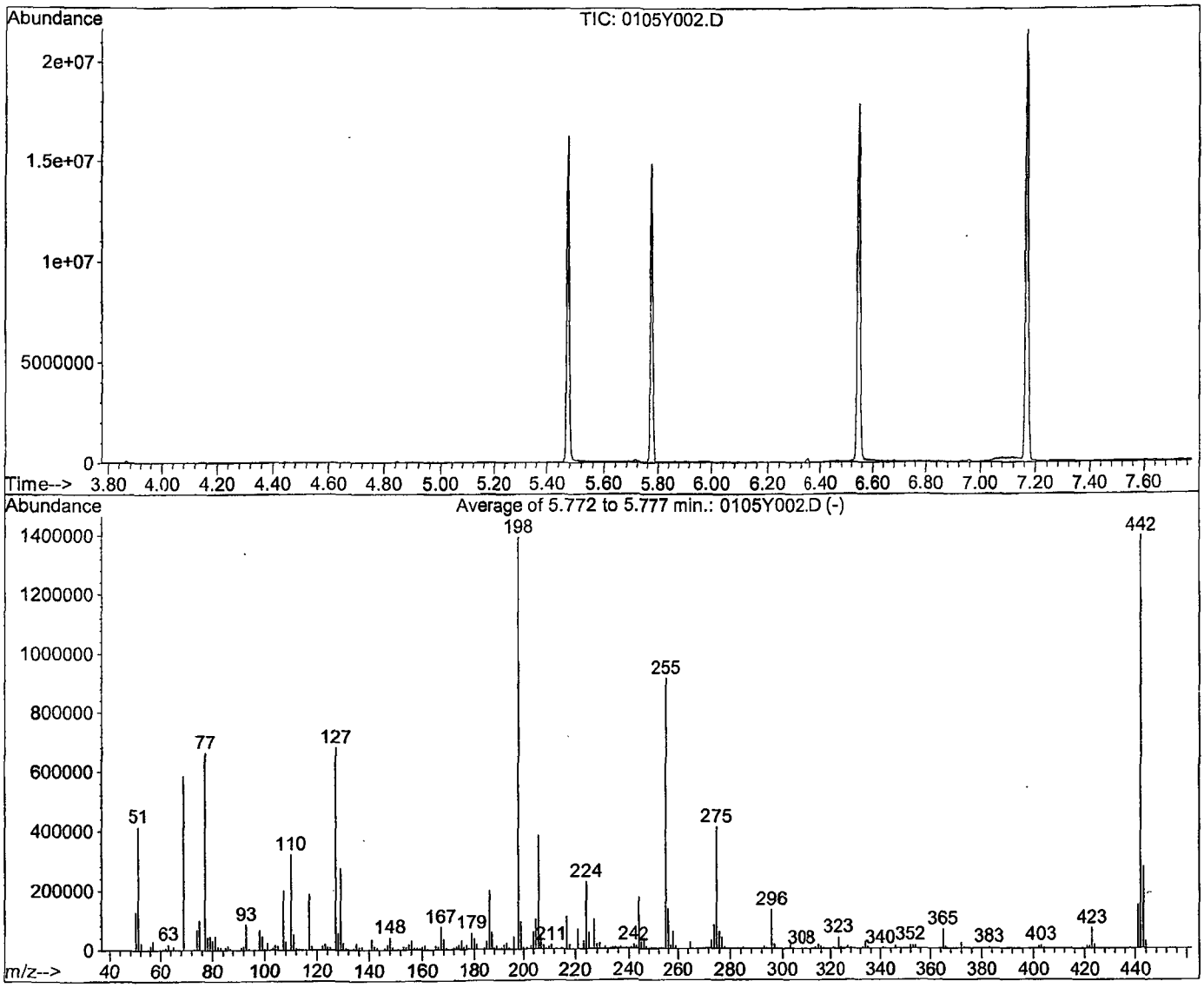


DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y002.D
Acq On : 5 Jan 21 11:04
Sample : SV TUNE 10/02/20
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 875, 876, 877; Background Corrected with Scan 867

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.8	415695	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2772	PASS
127	198	10	80	48.9	681301	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1393664	PASS
199	198	5	9	6.7	92723	PASS
275	198	10	60	29.5	410496	PASS
365	198	1	100	4.7	65771	PASS
441	442	0.01	24	10.6	147904	PASS
442	198	50	500	100.2	1395819	PASS
443	442	15	24	19.7	275179	PASS

Data File Name:	**0105Y002.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**5 Jan 21 11:04**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**Yoda**

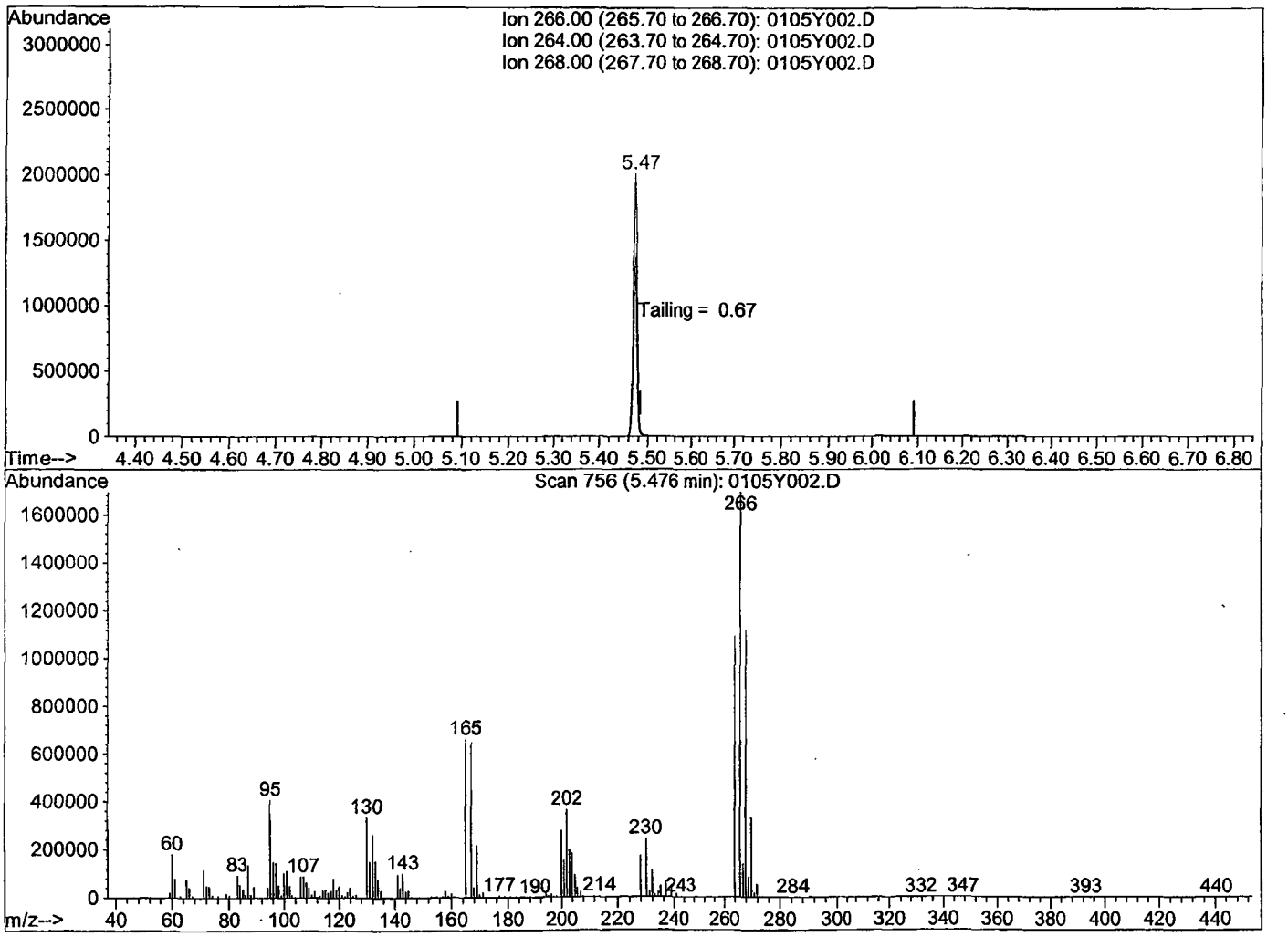
#	Name	Ret Time	Target Response
1)	DDT	7.25	151142000
2)	DDD	7.01	145804
3)	DDE	5.89	144993

Breakdown **0.19**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration



TIC: 0105Y002.D

(5) Pentachlorophenol

5.47min 0.0000

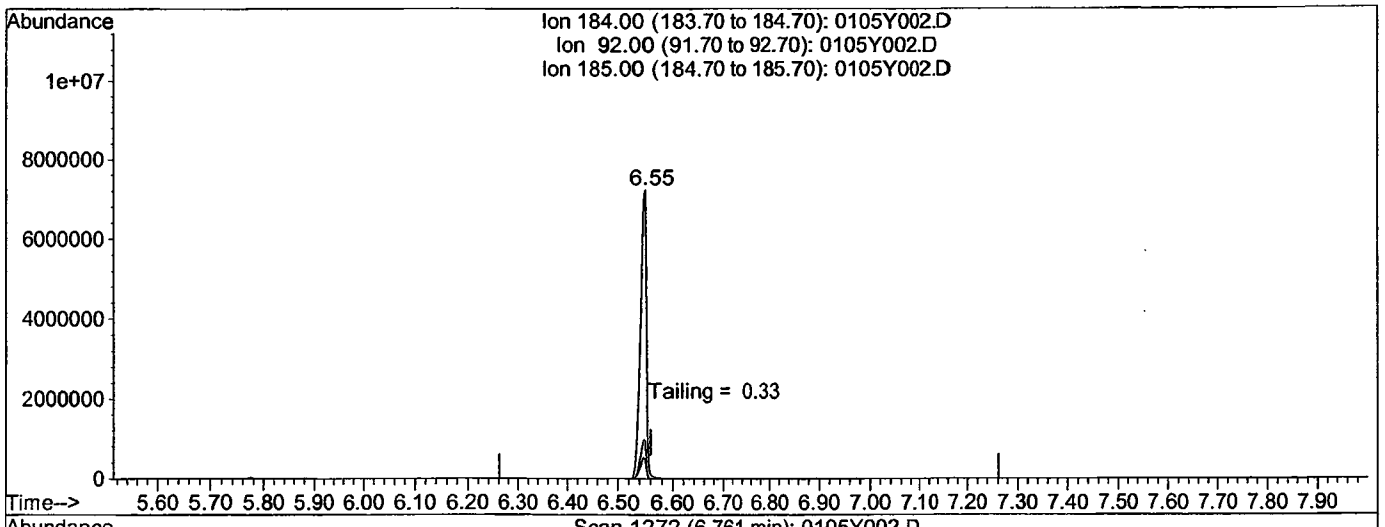
response 10909057

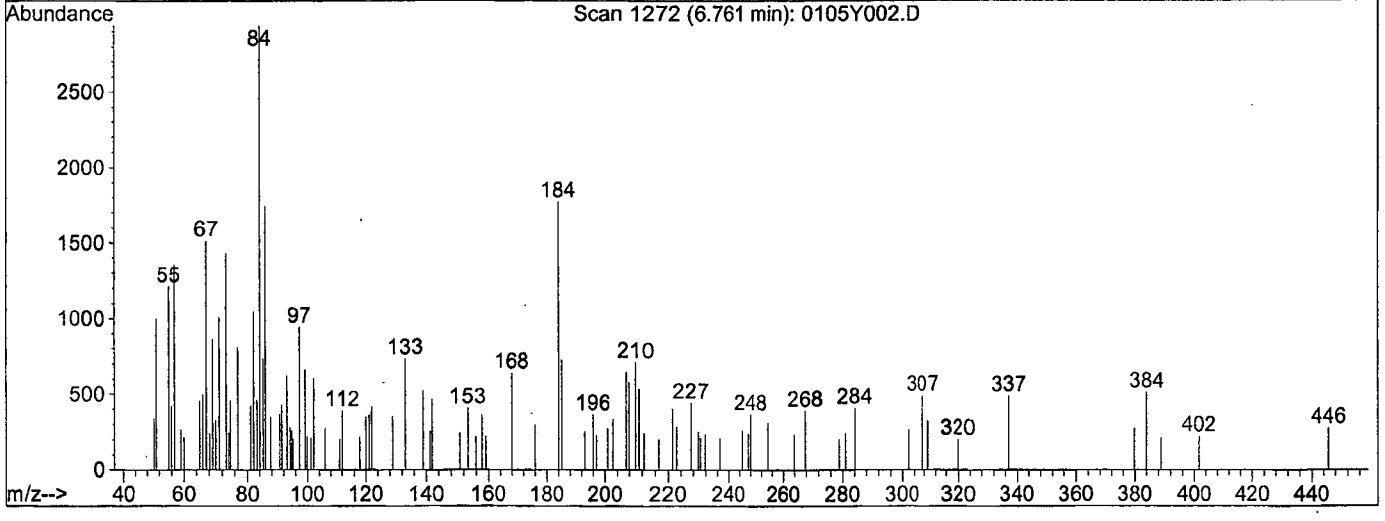
Ion	Exp%	Act%
266.00	100	100
264.00	61.70	64.26
268.00	63.80	64.83
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y002.D Vial: 2
Acq On : 5 Jan 21 11:04 Operator: MA
Sample : SV TUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 5 15:26 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 04 14:17:36 2021
Response via : Single Level Calibration





TIC: 0105Y002.D

(6) Benzidine

6.76min 0.0000

response 0

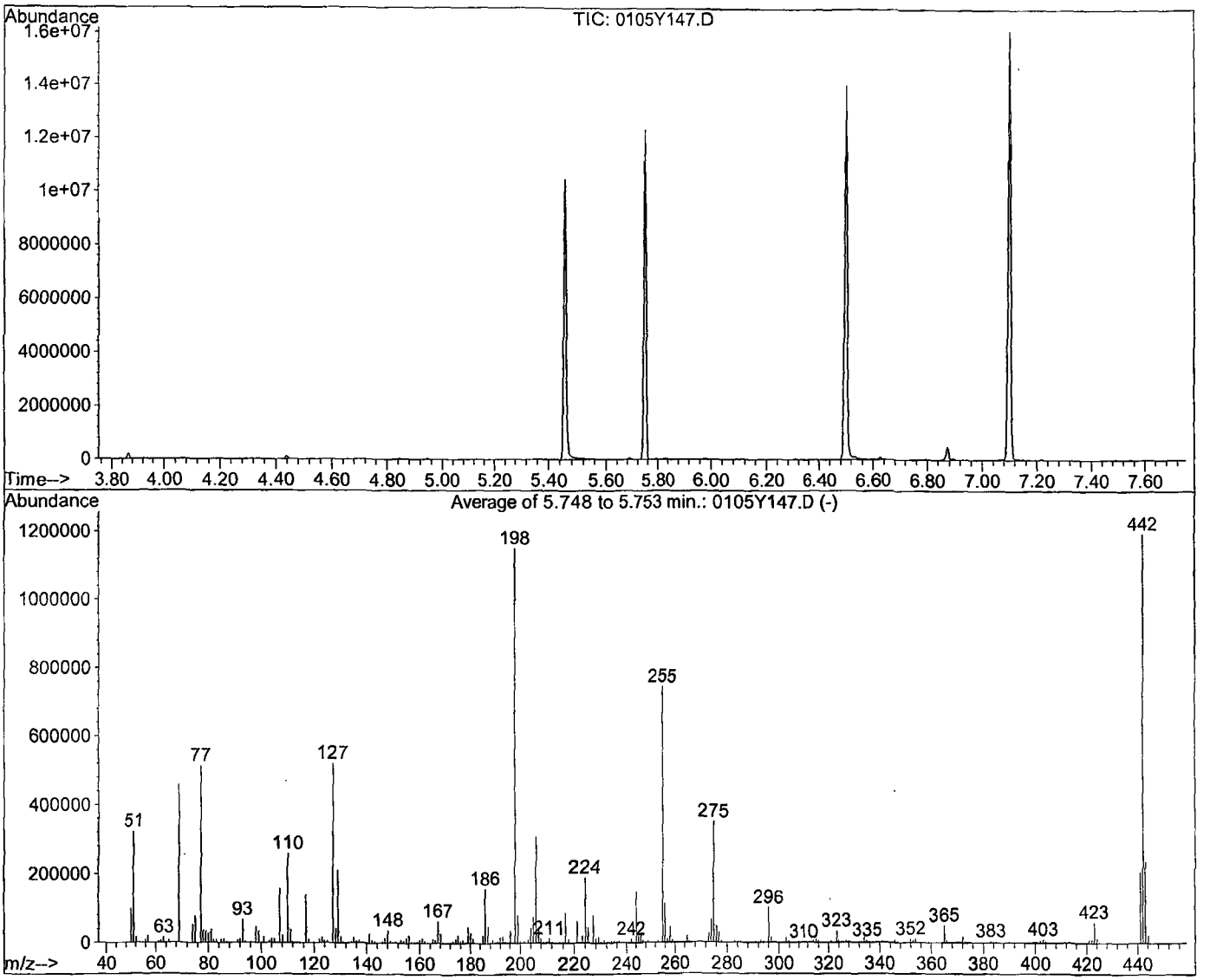
Ion	Exp%	Act%
184.00	100	0.00
92.00	9.70	0.00#
185.00	14.10	0.00#
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y210105\0105Y147.D
Acq On : 1 Feb 21 14:59
Sample : SVTUNE 10/02/20
Misc :

Vial: 47
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y210105\Y0105.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 866, 867, 868; Background Corrected with Scan 857

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	28.0	322091	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	2173	PASS
127	198	10	80	45.3	521408	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1150805	PASS
199	198	5	9	7.0	80048	PASS
275	198	10	60	30.5	351104	PASS
365	198	1	100	4.3	49960	PASS
441	442	0.01	24	17.2	206165	PASS
442	198	50	500	104.0	1196736	PASS
443	442	15	24	19.7	235776	PASS

Data File Name:	**0105Y147.D**
Data File Path:	**M:\YODA\DATA\Y210105**
Operator:	**MA**
Date Acquired:	**1 Feb 21 14:59**
Method File:	**DFTPP2.M**
Sample Name:	**SVTUNE 10/02/20**
Vial Number:	**47**
Instrument Name:	**Yoda**

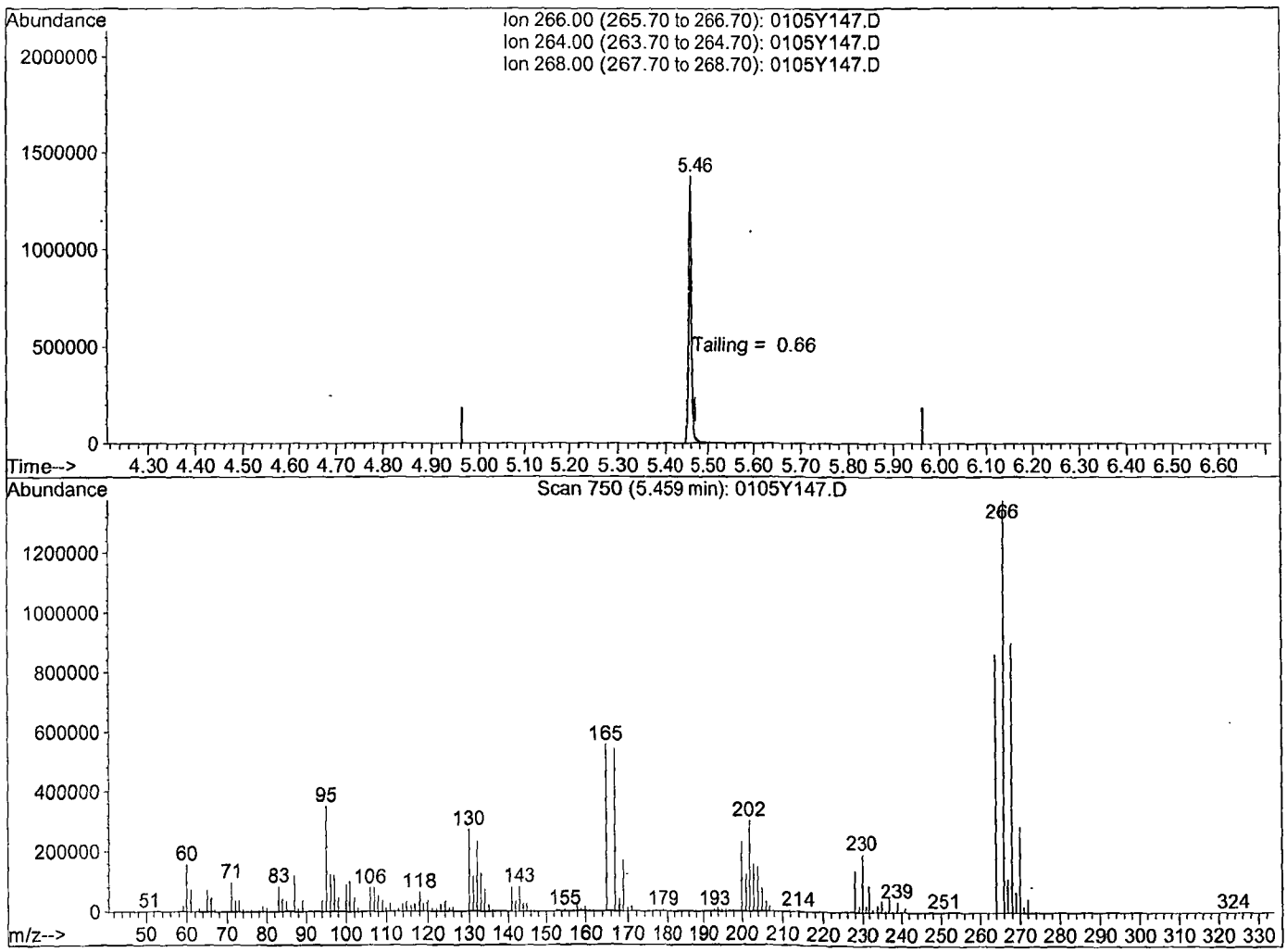
#	Name	Ret Time	Target Response
1)	DDT	7.12	105036000
2)	DDD	6.84	3530120
3)	DDE	5.89	0

Breakdown **3.25**

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y147.D Vial: 47
Acq On : 1 Feb 21 14:59 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Feb 1 14:58 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration



TIC: 0105Y147.D

(5) Pentachlorophenol

5.46min 0.0000

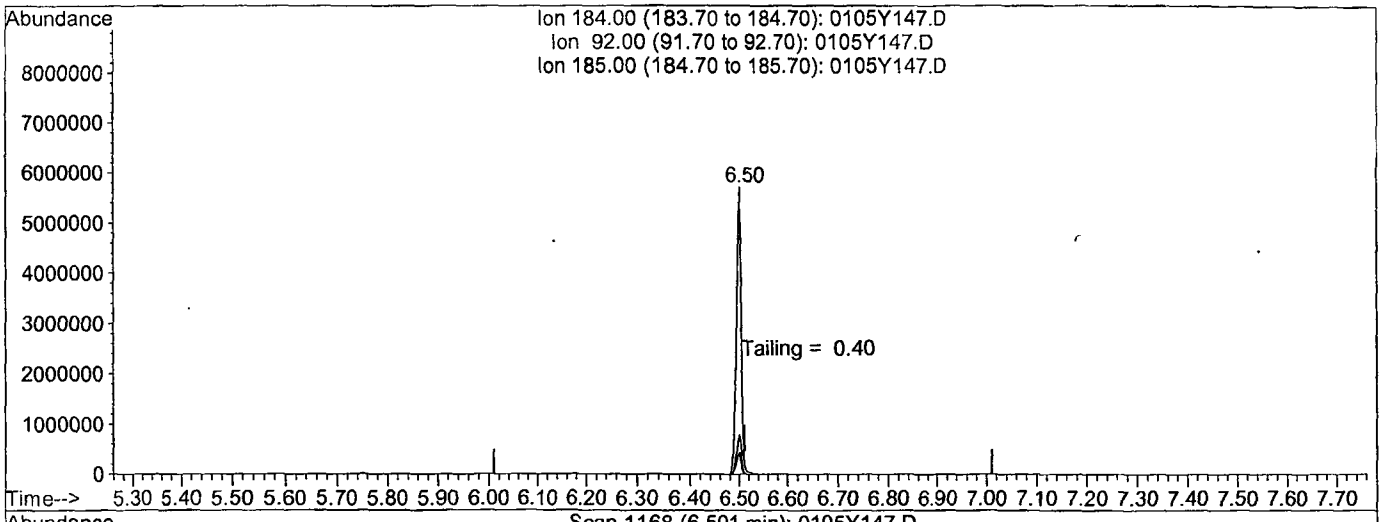
response 7209317

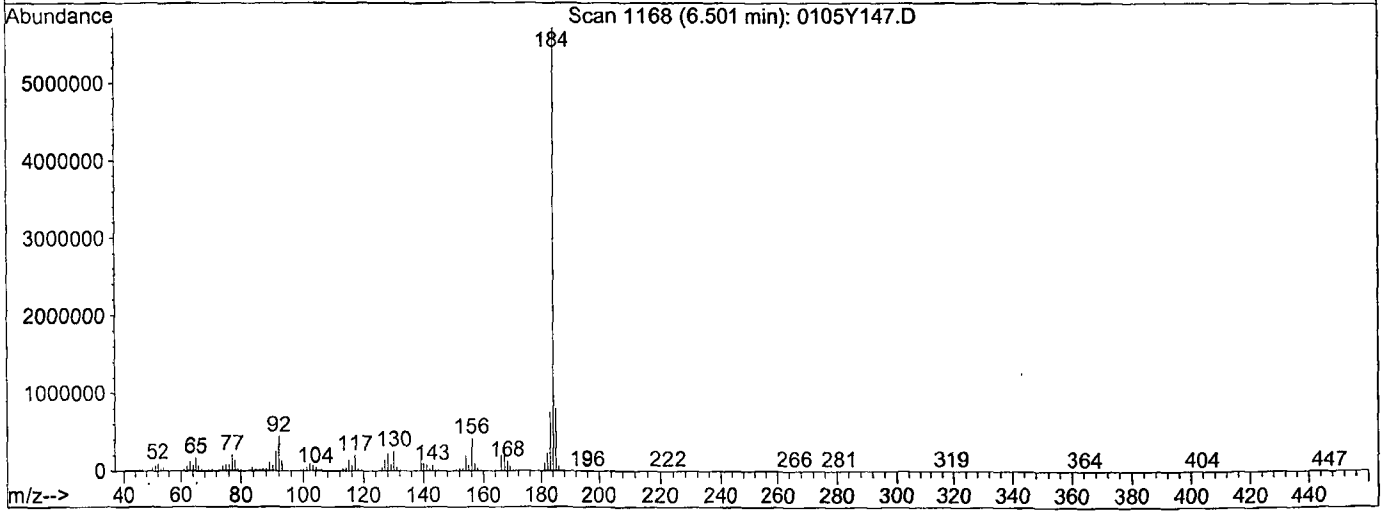
Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.74
268.00	64.30	65.66
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y210105\0105Y147.D Vial: 47
Acq On : 1 Feb 21 14:59 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Feb 1 14:58 2021 Quant Results File: temp.res

Method : M:\YODA\DATA\Y210105\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Jan 20 11:28:48 2021
Response via : Single Level Calibration





TIC: 0105Y147.D

(6) Benzidine

6.50min 0.0000

response 38655361

Ion	Exp%	Act%
184.00	100	100
92.00	7.30	7.52
185.00	14.10	14.03
0.00	0.00	0.00

Name of Final Standard 8270 Full Scan Standard Curve **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	4 uL	200uL	MC 56258 196uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	0 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	200uL	MC 56258 190uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	5 uL	100uL	MC 56258 90uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	5 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	10 uL	100uL	MC 56258 80uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	20 uL	100uL	MC 56258 60uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200 uL	MC 56258 100uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	30 uL	100uL	MC 56258 40uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	40 uL	100uL	MC 56258 20uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	200 ug/mL	07/20/20	07/20/21	50 uL	100uL	na	100 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200/400 ug/mL	03/03/20	03/03/22	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	2 uL	*	*	*

Name of Final Standard 8270 Full Scan Second Source **Prep'd By (Initials)** MA

Prep Date 01/05/21

Exp Date 07/20/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	o2si	8270 SS Stock	200 ug/mL	07/20/20	07/20/21	50 uL	200uL	MC 56258 150uL	50 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	05/29/20	12/20/25	4 uL	*	*	*

Name of Final Standard	8270 Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	07/20/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50312	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	042820-50317	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	103119-50322	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	031618-50362	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	050420-50327	07/20/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	060118-50332	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	022620-50337	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	112119-50342	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	050620-50352	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	032520-50356	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 2nd Source Stock	Prep'd By (Initials)	CD
Prep Date	07/20/20		
Exp Date	01/17/21		

Initial Standard Information						Final Standard Information			
Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	031618-39204	07/20/21	1.0 mL	10 mL	NA	200 ug/mL
10002	Absolute	10002	2000	041619-50074	07/20/21	1.0 mL	*	*	200 ug/mL
10004	Absolute	10004	2000	071618-50210	07/20/21	1.0 mL	*	*	200 ug/mL
10005	Absolute	10005	2000	011620-49804	07/20/21	1.0 mL	*	*	200 ug/mL
10006	Absolute	10006	2000	011718-39209	1/17/21	1.0 mL	*	*	200 ug/mL
10007	Absolute	10007	2000	011620-49809	07/20/21	1.0 mL	*	*	200 ug/mL
10018	Absolute	10018	2000	091919-49568	07/20/21	1.0 mL	*	*	200 ug/mL
70023	Absolute	70023	1000	051618-39216	07/20/21	1.0 mL	*	*	100 ug/mL
82705	Absolute	82705	2000	081418-50071	07/20/21	1.0 mL	*	*	200 ug/mL
94552	Absolute	94552	various	053119-50061	07/20/21	1.0 mL	*	*	various

Name of Final Standard	8270 Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Acid Surrogate Mix	Restek	33029	10,000 ug/mL	A0152714-49437	09/30/27	10 mL	50 mL	MC DW717 30 mL	2000 ug/mL
8270 B/N Surrogate Mix	Restek	31086	5000 ug/mL	A0153473-49443	08/31/25	10 mL	"	"	1000 ug/mL

Name of Final Standard	8270 Working Surrogate Stock	Prep'd By (Initials)	JP
Prep Date	03/03/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate Stock	APPL	8270 Surrogate Stock	2000:1000 ug/mL	03/03/20	03/03/22	1.5 mL	7.5 mL	MC DW717 6 mL	400:200 ug/mL

8270 Internal Standard Ampules

Name of Final Standard	(4)
Prep Date	05/29/20
Exp Date	12/31/25

Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49996to49999**	**12/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard	8270 Spike	Prep'd By (Initials)	MA
Prep Date	01/07/21		
Exp Date	01/07/22		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	041720-50719,50720	04/17/23	2.0 mL	80 mL	Acetone 60 mL Lot# 0242320	50 ug/mL
10002	Absolute	10002	2000	042820-59643,59644	04/28/23	2.0 mL	"	"	50 ug/mL
10004	Absolute	10004	2000	103119-50653,50654	10/31/24	2.0 mL	"	"	50 ug/mL
10005	Absolute	10005	2000	031618-50063,011620-50668	3/16/23	2.0 mL	"	"	50 ug/mL
10006	Absolute	10006	2000	030119-51092,51093	3/1/22	2.0 mL	"	"	50 ug/mL
10007	Absolute	10007	2000	060118-50674,50675	06/01/23	2.0 mL	"	"	50 ug/mL
10018	Absolute	10018	2000	072420-51087,51088	07/24/25	2.0 mL	"	"	50 ug/mL
70023	Absolute	70023	1000	072420-51087,51088	7/24/25	2.0 mL	"	"	25 ug/mL
82705	Absolute	82705	2000	050620-50699,50700	5/6/23	2.0 mL	"	"	50 ug/mL
94552	Absolute	94552	various	032520-51102,51103	03/25/22	2.0 mL	"	"	various

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	
			GC Requires Extract By:		

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210129A Blk				0.2,0.05	1,2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP51				
2	210129A LCS-1		1	1	0.2	1	1000	1	2/1	01/29/21 10:25	
						equip	E-HP50				
3	210129A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP49				
4	BA26001 MS-1	BA26001W21	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP48				
5	BA26001 MSD-1	BA26001W23	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP47				
6	BA26001 MS-2	BA26001W30	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP25				
7	BA26001 MSD-2	BA26001W31	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP26				
8	BA26001	BA26001W20			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP27				
9	BA26003	BA26003W09			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP28				
10	BA26006	BA26006W13			0.2,0.05	1,2	1040	1	2/1	01/29/21 10:25	94899
						equip	E-HP29				
11	BA26008	BA26008W07			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP30				
12	BA26013	BA26013W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP16				
13	BA26016	BA26016W12			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP15				
14	BA26150	BA26150W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP14				
15	BA26152	BA26152W04			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94921
						equip	E-HP13				
16	BA26155	BA26155W05			0.2,0.05	1,2	400	1	2/1	01/29/21 10:25	94921
						equip	E-HP12				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/1/21
Time	12:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	

GC Requires Extract By:				
pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	70/69.1 e-wb5 °C
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	70/68 e-wb6
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP11 E-WB5				
18	BA26160	BA26160W12			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94920
						equip	E-HP10 E-WB5				
19	BA26163	BA26163W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94920
						equip	E-HP9 E-WB5				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	
Time	
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	02/02/21 10:31:06 AM

Reviewed By: **Date**

Injection Log

Directory: M:\YODA\DATA\Y210105\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0105Y002.D	1	SV TUNE 10/02/20		5 Jan 21 11:04
3	0105Y003.D	1	4ug/mL 8270 01/05/21		5 Jan 21 11:25
4	0105Y004.D	1	5ug/mL 8270 01/05/21		5 Jan 21 11:50
5	0105Y005.D	1	10ug/mL 8270 01/05/21		5 Jan 21 12:15
6	0105Y006.D	1	20ug/mL 8270 01/05/21		5 Jan 21 12:40
7	0105Y007.D	1	40ug/mL 8270 01/05/21		5 Jan 21 13:06
8	0105Y008.D	1	50ug/mL 8270 01/05/21		5 Jan 21 13:31
9	0105Y009.D	1	60ug/mL 8270 01/05/21		5 Jan 21 13:56
10	0105Y010.D	1	80ug/mL 8270 01/05/21		5 Jan 21 14:21
11	0105Y011.D	1	100ug/mL 8270 01/05/21		5 Jan 21 14:46
12	0105Y012.D	1	SS 50ug/mL 8270 01/05/21		5 Jan 21 15:11
47	0105Y147.D	1	SVTUNE 10/02/20		1 Feb 21 14:59
48	0105Y148.D	1	50ug/mL 8270 01/05/21 (1)		1 Feb 21 15:15
49	0105Y149.D	1	210129A BLK 1/1000		1 Feb 21 15:40
53	0105Y153.D	1	210129A LCS-1 1/1000		1 Feb 21 17:23
64	0105Y164.D	0.97087	BA26160W12 1/1030		1 Feb 21 22:05
65	0105Y165.D	0.98039	BA26163W14 1/1020		1 Feb 21 22:31
66	0105Y166.D	1	50ug/mL 8270 08/12/20 (5)		1 Feb 21 22:56

ORGANICS

Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 01/18/21
Instrument: Linus
Initials: MA/MM

		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
			0118L003.D	0118L004.D	0118L005.D	0118L006.D	0118L007.D	0118L008.D	0118L009.D	0118L010.D								
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.093	1.090	1.082	1.055	1.014	0.9608	0.9375	0.9049			1.0	7.3	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.151	1.133	1.115	1.090	1.058	1.054	1.004	0.9793			1.1	5.7	S			
4	TM	2-Methylnaphthalene	0.6834	0.6871	0.6832	0.6714	0.6486	0.6067	0.5695	0.5445			0.64	8.8	TM			0.400
5	TM	1-Methylnaphthalene	0.6877	0.6891	0.6710	0.6747	0.6476	0.5960	0.5679	0.5413			0.63	9.1	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	4.468	4.365	4.265	4.279	4.294	3.968	3.659	3.230			4.1	10	TM			0.900
8	*TM	Acenaphthene	1.377	1.306	1.278	1.257	1.216	1.096	1.044	0.9276			1.2	13	*TM			0.900
9	TM	Fluorene	1.470	1.471	1.465	1.460	1.470	1.337	1.264	1.144			1.4	9.0	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.283	1.258	1.243	1.244	1.222	1.076	0.9914	0.9519			1.2	11	TM			0.700
12	TM	Anthracene	1.084	1.056	1.098	1.103	1.116	1.005	0.9170	0.9306			1.0	7.6	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.468	1.376	1.337	1.359	1.359	1.372	1.313	1.228			1.4	5.0	S			
14	*TM	Fluoranthene	1.692	1.595	1.585	1.653	1.682	1.518	1.323	1.240			1.5	11	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.492	1.441	1.428	1.405	1.414	1.272	1.244	1.196			1.4	7.9	TM			0.600
17	TM	Benz (a) anthracene	1.330	1.213	1.167	1.101	1.108	1.025	1.166	1.092			1.2	8.0	TM			0.800
18	TM	Chrysene	1.406	1.316	1.279	1.239	1.251	1.137	1.070	1.108			1.2	9.2	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	0.9884	0.9111	0.9524	0.9652	1.119	1.095	1.319	1.340			1.1	15	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.9135	0.8113	0.8341	0.9255	1.051	1.049	1.108	1.140			0.98	13	TM			0.700
22	TM	Benzo (k) fluoranthene	1.236	1.379	1.421	1.325	1.402	1.227	1.064	1.076			1.3	11	TM			0.700
23	*TM	Benzo (a) pyrene	0.8262	0.8160	0.8363	0.8717	1.084	1.018	1.070	1.031			0.94	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.7681	0.7671	0.7838	0.8115	0.9652	0.9374	1.029	1.019			0.89	13	TM			0.400
25	TM	Benzo (g,h,i) perylene	0.9253	0.8998	0.9367	0.9813	1.089	1.053	1.109	1.079			1.0	8.2	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:09 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75905	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	36587	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65960	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	76637	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	76163	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	1748	0.05365	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
13) Fluoranthene-D10 (FRT)	9.37	212	1936	0.05430	ppb		0.00
Spiked Amount 5.000			Recovery =	1.080%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	3319	0.10747	ppb		99
4) 2-Methylnaphthalene	5.06	142	2075	0.10732	ppb		96
5) 1-Methylnaphthalene	5.17	142	2088	0.10840	ppb		97
7) Acenaphthylene	6.08	152	6539	0.10989	ppb		99
8) Acenaphthene	6.29	154	2015	0.11591	ppb		99
9) Fluorene	6.89	166	2152	0.10616	ppb		99
11) Phenanthrene	8.00	178	3385	0.11073	ppb		99
12) Anthracene	8.06	178	2860	0.10435	ppb		99
14) Fluoranthene	9.39	202	4464	0.11015	ppb		96
16) Pyrene	9.64	202	4575	0.10974	ppb	#	80
17) Benz (a) anthracene	11.11	228	4076	0.11559	ppb		98
18) Chrysene	11.15	228	4309	0.11468	ppb		99
19) Indeno (1,2,3-cd) pyrene	15.04	276	3030	0.09100	ppb	#	91
21) Benzo (b) fluoranthene	12.93	252	2783	0.09329	ppb		98
22) Benzo (k) fluoranthene	12.98	252	3764	0.09757	ppb		98
23) Benzo (a) pyrene	13.47	252	2517	0.08750	ppb		98
24) Dibenz (a,h) anthracene	15.10	278	2340	0.08678	ppb		96
25) Benzo (g,h,i) perylene	15.42	276	2819	0.09168	ppb		94

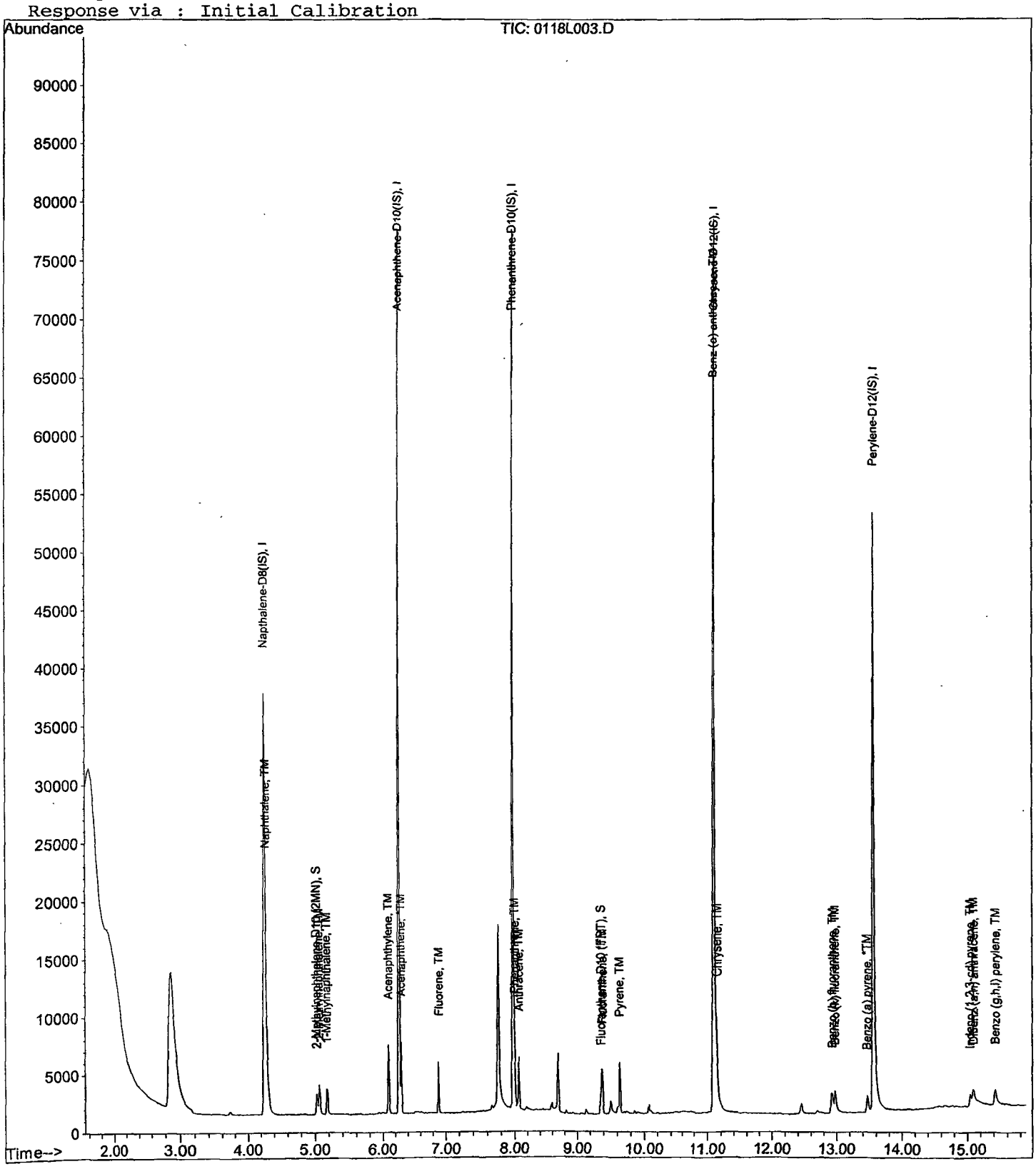
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L003.D Vial: 3
Acq On : 18 Jan 21 11:33 Operator: MA
Sample : 0.1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L004.D Vial: 4
Acq On : 18 Jan 21 11:55 Operator: MA
Sample : 0.2 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	75176	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	35704	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	65736	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	75057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	73542	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	3408	0.10562	ppb		0.00
Spiked Amount 5.000			Recovery =	2.120%			
13) Fluoranthene-D10 (FRT)	9.37	212	3618	0.10183	ppb		0.00
Spiked Amount 5.000			Recovery =	2.040%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	6554	0.21427	ppb		99
4) 2-Methylnaphthalene	5.06	142	4132	0.21578	ppb		99
5) 1-Methylnaphthalene	5.17	142	4144	0.21723	ppb		95
7) Acenaphthylene	6.08	152	12469	0.21472	ppb		99
8) Acenaphthene	6.29	154	3730	0.21987	ppb		98
9) Fluorene	6.89	166	4201	0.21236	ppb		99
11) Phenanthrene	8.00	178	6614	0.21709	ppb		99
12) Anthracene	8.06	178	5555	0.20337	ppb		100
14) Fluoranthene	9.38	202	8388	0.20768	ppb	#	84
16) Pyrene	9.64	202	8654	0.21194	ppb	#	81
17) Benz (a) anthracene	11.10	228	7286	0.21097	ppb		96
18) Chrysene	11.15	228	7901	0.21470	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	5471	0.16777	ppb		98
21) Benzo (b) fluoranthene	12.92	252	4773	0.16570	ppb		98
22) Benzo (k) fluoranthene	12.98	252	8116	0.21787	ppb		97
23) Benzo (a) pyrene	13.46	252	4801	0.17285	ppb	#	94
24) Dibenz (a,h) anthracene	15.08	278	4513	0.17333	ppb		98
25) Benzo (g,h,i) perylene	15.41	276	5294	0.17832	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

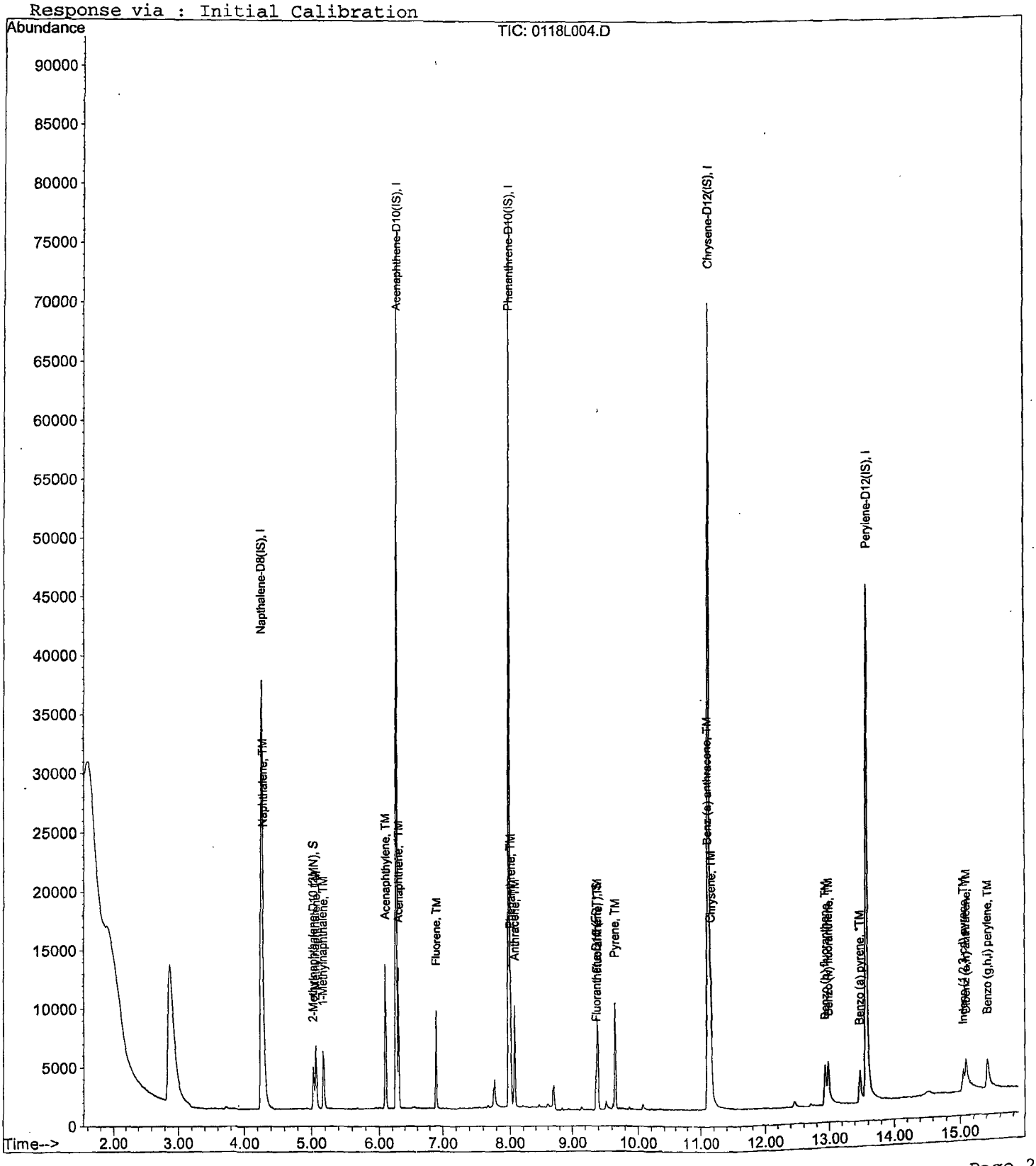
Data File : M:\LINUS\DATA\L210118\0118L004.D
Acq On : 18 Jan 21 11:55
Sample : 0.2 SIM 01/15/21
Misc :

Vial: 4
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Jan 18 16:20 2021

Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33273	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	61210	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	69450	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	67094	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	7806	0.25979	ppb		0.00
Spiked Amount 5.000			Recovery =	5.200%			
13) Fluoranthene-D10 (FRT)	9.37	212	8181	0.24727	ppb		0.00
Spiked Amount 5.000			Recovery =	4.940%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	15152	0.53197	ppb		99
4) 2-Methylnaphthalene	5.06	142	9565	0.53641	ppb		100
5) 1-Methylnaphthalene	5.18	142	9394	0.52883	ppb		98
7) Acenaphthylene	6.08	152	28385	0.52452	ppb		99
8) Acenaphthene	6.29	154	8507	0.53809	ppb		99
9) Fluorene	6.89	166	9747	0.52871	ppb		100
11) Phenanthrene	8.00	178	15220	0.53650	ppb		99
12) Anthracene	8.06	178	13445	0.52863	ppb		99
14) Fluoranthene	9.39	202	19405	0.51598	ppb		97
16) Pyrene	9.64	202	19829	0.52483	ppb	#	78
17) Benz (a) anthracene	11.10	228	16206	0.50713	ppb		97
18) Chrysene	11.15	228	17766	0.52174	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.04	276	13229	0.43842	ppb	#	99
21) Benzo (b) fluoranthene	12.92	252	11193	0.42592	ppb		97
22) Benzo (k) fluoranthene	12.98	252	19074	0.56124	ppb		97
23) Benzo (a) pyrene	13.46	252	11222	0.44285	ppb		96
24) Dibenz (a,h) anthracene	15.08	278	10518	0.44279	ppb		98
25) Benzo (g,h,i) perylene	15.42	276	12570	0.46408	ppb		92

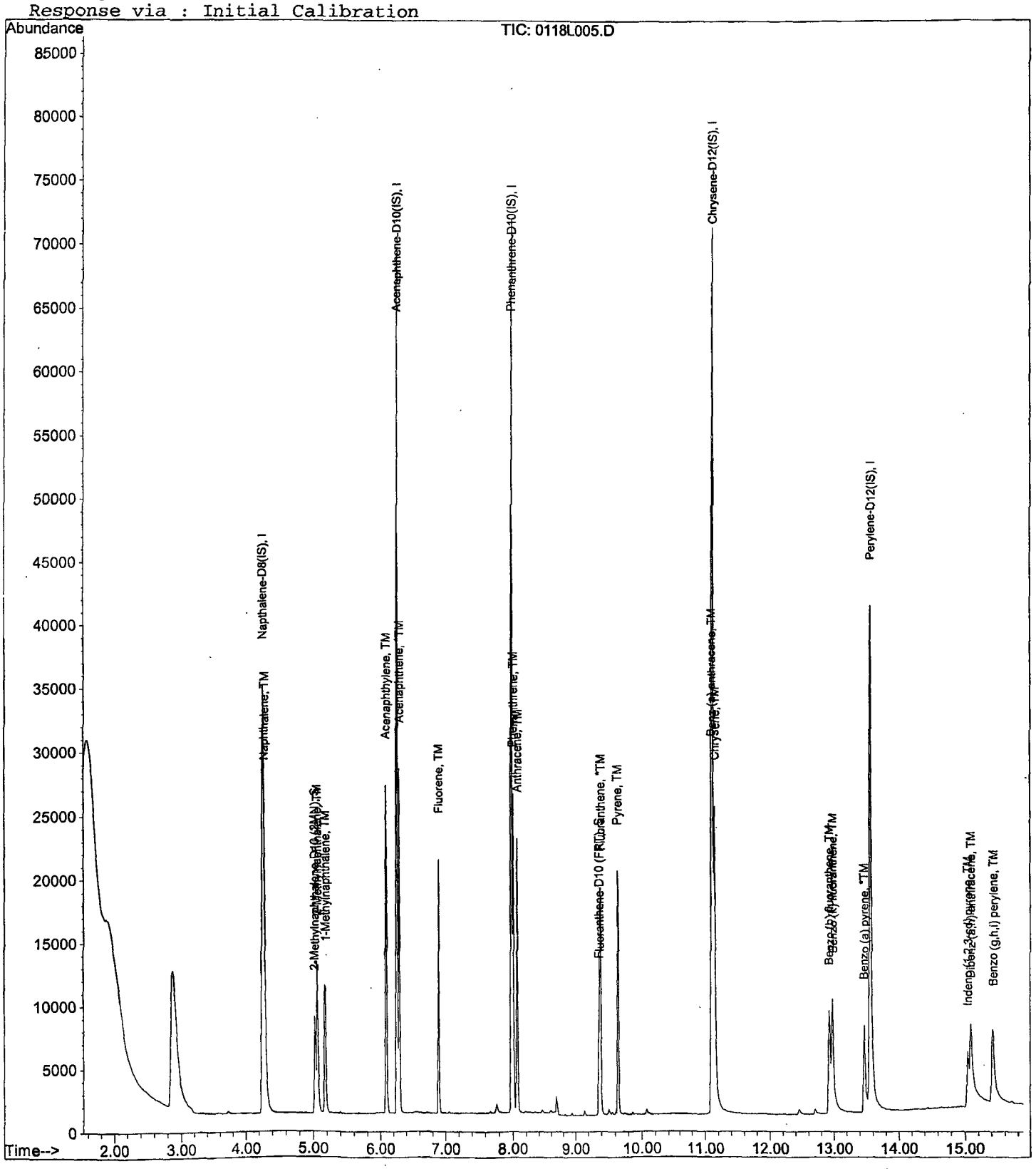
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L005.D Vial: 5
Acq On : 18 Jan 21 12:17 Operator: MA
Sample : 0.5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69102	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32364	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	58341	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.12	240	68452	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.56	264	64590	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	5.02	152	15061	0.50779 ppb	0.00
Spiked Amount 5.000			Recovery	= 10.160%	
13) Fluoranthene-D10 (FRT)	9.37	212	15853	0.50272 ppb	0.00
Spiked Amount 5.000			Recovery	= 10.060%	
Target Compounds					Qvalue
2) Naphthalene	4.27	128	29158	1.03706 ppb	100
4) 2-Methylnaphthalene	5.06	142	18559	1.05438 ppb	99
5) 1-Methylnaphthalene	5.18	142	18650	1.06359 ppb	99
7) Acenaphthylene	6.08	152	55396	1.05240 ppb	99
8) Acenaphthene	6.29	154	16277	1.05847 ppb	100
9) Fluorene	6.89	166	18901	1.05405 ppb	99
11) Phenanthrene	8.00	178	29034	1.07377 ppb	100
12) Anthracene	8.06	178	25745	1.06201 ppb	100
14) Fluoranthene	9.39	202	38564	1.07584 ppb	98
16) Pyrene	9.65	202	38462	1.03286 ppb	100
17) Benz (a) anthracene	11.11	228	30159	0.95752 ppb	99
18) Chrysene	11.15	228	33925	1.01080 ppb	99
19) Indeno (1,2,3-cd) pyrene	15.04	276	26429	0.88864 ppb #	89
21) Benzo (b) fluoranthene	12.93	252	23911	0.94514 ppb	99
22) Benzo (k) fluoranthene	12.98	252	34224	1.04606 ppb	99
23) Benzo (a) pyrene	13.46	252	22522	0.92324 ppb	98
24) Dibenz (a,h) anthracene	15.10	278	20966	0.91684 ppb	98
25) Benzo (g,h,i) perylene	15.42	276	25353	0.97232 ppb	94

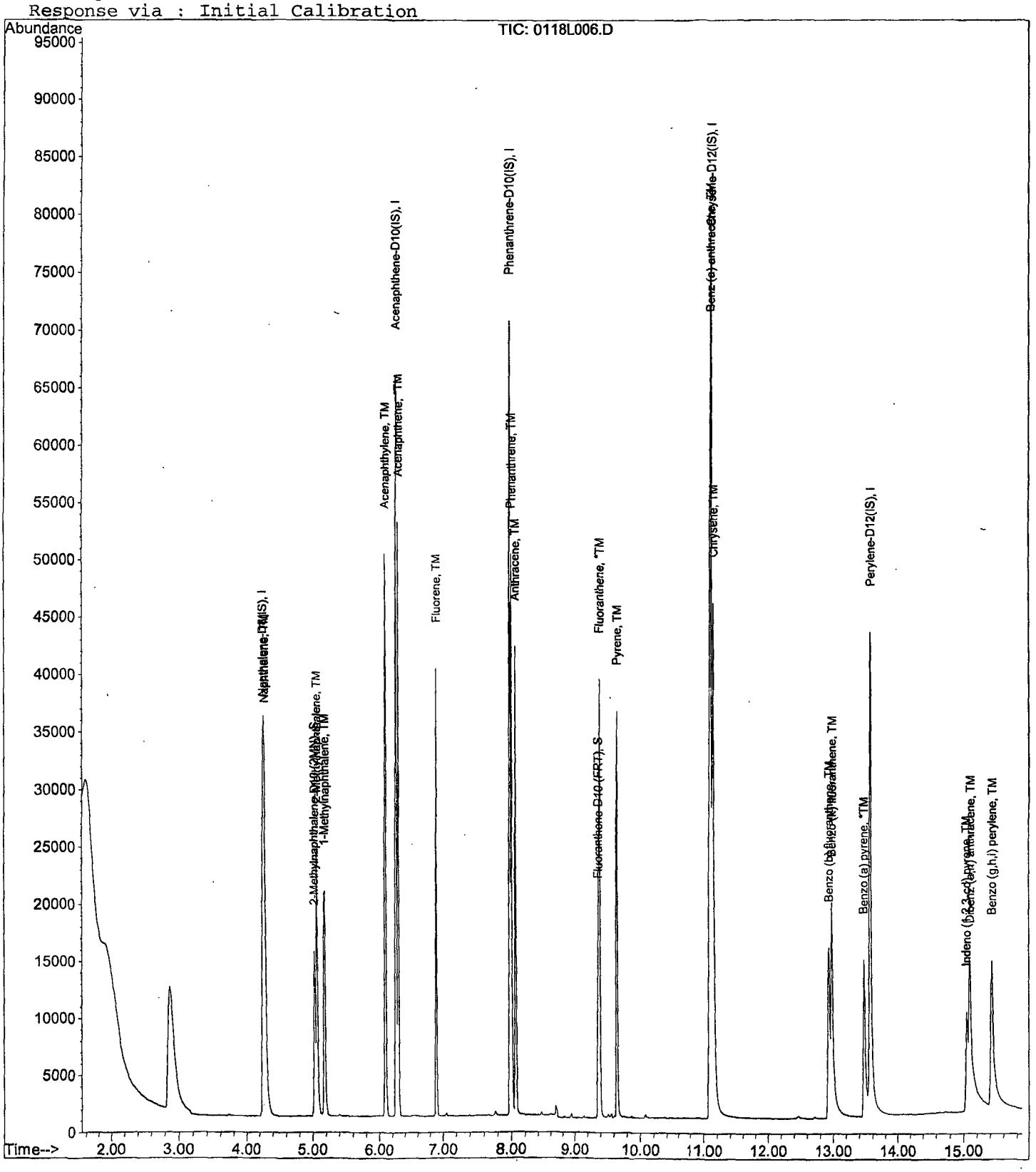
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L006.D Vial: 6
Acq On : 18 Jan 21 12:39 Operator: MA
Sample : 1 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66320	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31071	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55922	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	67174	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62574	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	70159	2.46467	ppb		0.00
Spiked Amount 5.000			Recovery = 49.300%				
13) Fluoranthene-D10 (FRT)	9.37	212	75977	2.51357	ppb		0.00
Spiked Amount 5.000			Recovery = 50.280%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	134538	4.98585	ppb		100
4) 2-Methylnaphthalene	5.06	142	86036	5.09293	ppb		100
5) 1-Methylnaphthalene	5.18	142	85895	5.10401	ppb		100
7) Acenaphthylene	6.08	152	266808	5.27969	ppb		100
8) Acenaphthene	6.29	154	75592	5.12022	ppb		100
9) Fluorene	6.89	166	91323	5.30474	ppb		100
11) Phenanthrene	8.00	178	136722	5.27514	ppb		100
12) Anthracene	8.06	178	124850	5.37298	ppb		100
14) Fluoranthene	9.39	202	188170	5.47654	ppb		100
16) Pyrene	9.65	202	189979	5.19874	ppb		100
17) Benz (a) anthracene	11.11	228	148868	4.81636	ppb		100
18) Chrysene	11.15	228	168073	5.10305	ppb		100
19) Indeno (1,2,3-cd) pyrene	15.05	276	150339	5.15112	ppb	#	100
21) Benzo (b) fluoranthene	12.93	252	131578	5.36853	ppb		100
22) Benzo (k) fluoranthene	12.98	252	175420	5.53449	ppb		100
23) Benzo (a) pyrene	13.46	252	135637	5.73925	ppb		100
24) Dibenz (a,h) anthracene	15.10	278	120799	5.45274	ppb		100
25) Benzo (g,h,i) perylene	15.42	276	136309	5.39602	ppb		100

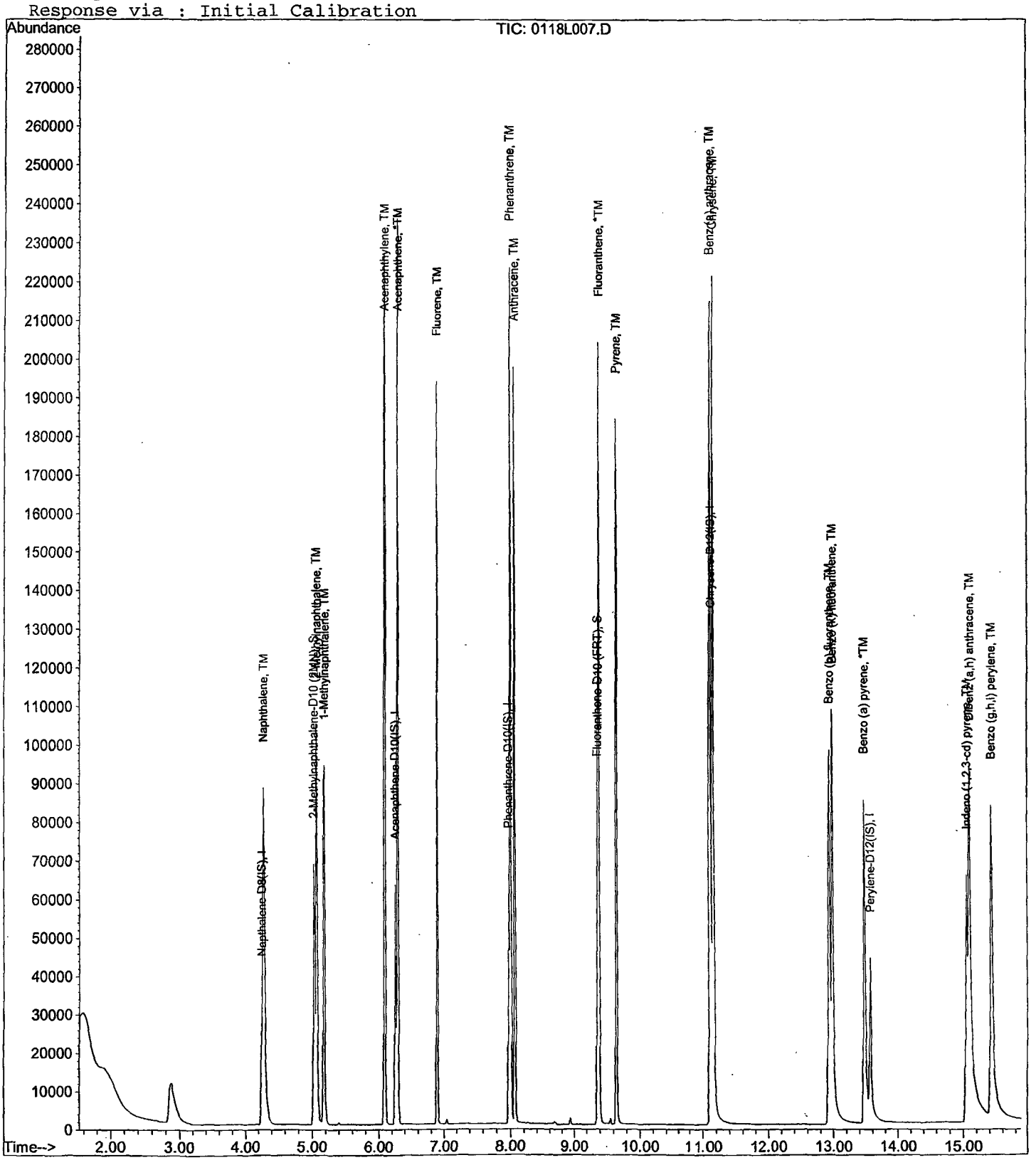
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L007.D Vial: 7
Acq On : 18 Jan 21 13:01 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69879	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32773	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	58674	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70454	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	66636	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	147237	4.90897 ppb		0.00
Spiked Amount 5.000			Recovery	= 98.180%		
13) Fluoranthene-D10 (FRT)	9.37	212	161033	5.07763 ppb		0.00
Spiked Amount 5.000			Recovery	= 101.560%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	268559	9.44564 ppb		100
4) 2-Methylnaphthalene	5.06	142	169585	9.52736 ppb		100
5) 1-Methylnaphthalene	5.18	142	166584	9.39451 ppb		99
7) Acenaphthylene	6.08	152	520201	9.75932 ppb		100
8) Acenaphthene	6.29	154	143677	9.22655 ppb		99
9) Fluorene	6.89	166	175331	9.65565 ppb		99
11) Phenanthrene	8.00	178	252445	9.28323 ppb		99
12) Anthracene	8.06	178	235818	9.67255 ppb		99
14) Fluoranthene	9.39	202	356187	9.88031 ppb		97
16) Pyrene	9.65	202	358384	9.35054 ppb		97
17) Benz (a) anthracene	11.11	228	288911	8.91203 ppb		99
18) Chrysene	11.16	228	320451	9.27660 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	308478	10.07742 ppb		95
21) Benzo (b) fluoranthene	12.93	252	279644	10.71427 ppb	#	97
22) Benzo (k) fluoranthene	12.99	252	327084	9.69043 ppb		98
23) Benzo (a) pyrene	13.48	252	271361	10.78225 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	249870	10.59132 ppb		97
25) Benzo (g,h,i) perylene	15.44	276	280748	10.43641 ppb	#	90

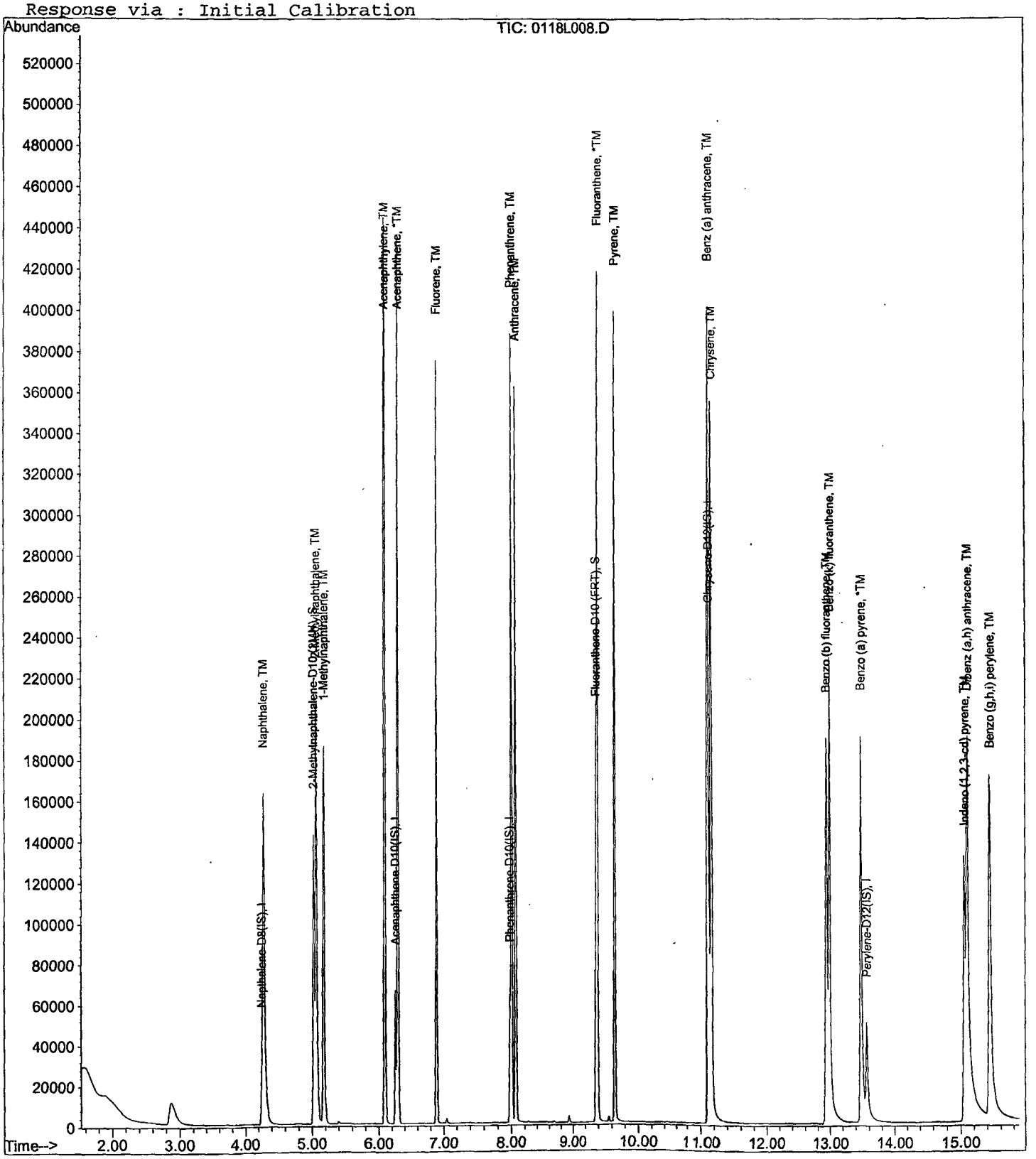
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L008.D Vial: 8
Acq On : 18 Jan 21 13:23 Operator: MA
Sample : 10 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:19:49 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	63837	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30221	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	55112	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.14	240	62512	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.57	264	65441	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	640964	23.39275	ppb		0.00
Spiked Amount 5.000			Recovery = 467.860%				
13) Fluoranthene-D10 (FRT)	9.38	212	723669	24.29323	ppb		0.01
Spiked Amount 5.000			Recovery = 485.860%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	1196891	46.08087	ppb		99
4) 2-Methylnaphthalene	5.07	142	727096	44.71476	ppb		94
5) 1-Methylnaphthalene	5.18	142	725002	44.75633	ppb		100
7) Acenaphthylene	6.10	152	2211372	44.99017	ppb		97
8) Acenaphthene	6.30	154	631316	43.96491	ppb		89
9) Fluorene	6.89	166	764075	45.63163	ppb		100
11) Phenanthrene	8.02	178	1092740	42.78079	ppb		98
12) Anthracene	8.08	178	1010706	44.13554	ppb		98
14) Fluoranthene	9.40	202	1458545	43.07367	ppb	#	92
16) Pyrene	9.66	202	1555640	45.74458	ppb		93
17) Benz (a) anthracene	11.12	228	1457978	50.68809	ppb		97
18) Chrysene	11.17	228	1338368	43.66618	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.10	276	1648785	60.70600	ppb		93
21) Benzo (b) fluoranthene	12.97	252	1450789	56.60049	ppb		99
22) Benzo (k) fluoranthene	12.97	252	1393061	42.02551	ppb		95
23) Benzo (a) pyrene	13.51	252	1400966	56.68246	ppb	#	91
24) Dibenz (a,h) anthracene	15.14	278	1346328	58.10934	ppb		98
25) Benzo (g,h,i) perylene	15.49	276	1451807	54.95437	ppb		99

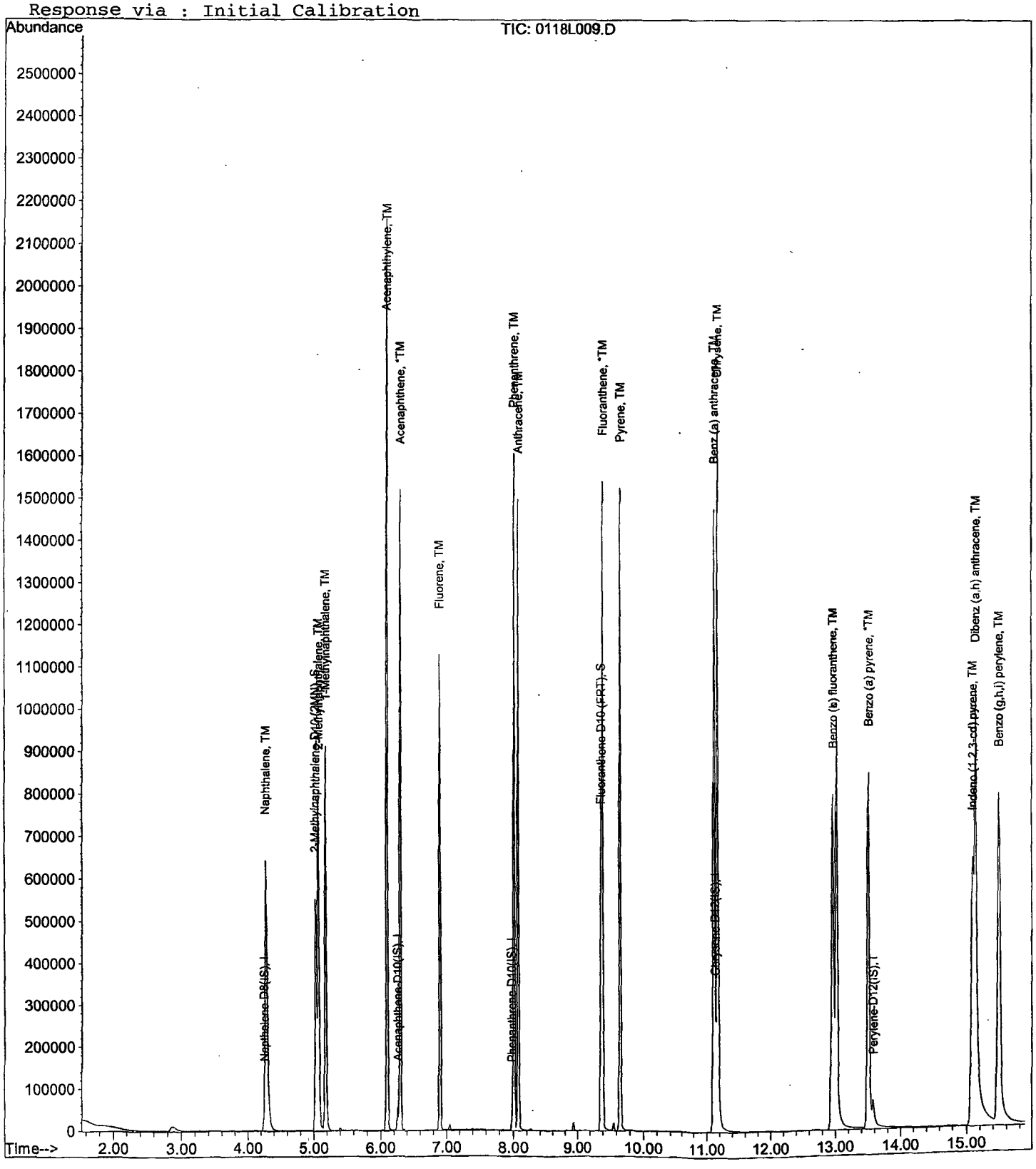
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L009.D Vial: 9
Acq On : 18 Jan 21 13:45 Operator: MA
Sample : 50 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:20 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:18:28 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	61444	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	30393	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.99	188	54818	2.50000	ppb		0.01
15) Chrysene-D12(IS)	11.15	240	60994	2.50000	ppb		0.03
20) Perylene-D12(IS)	13.58	264	65496	2.50000	ppb		0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.03	152	1203455	45.63210	ppb		0.01
Spiked Amount 5.000			Recovery = 912.640%				
13) Fluoranthene-D10 (FRT)	9.38	212	1345920	45.42423	ppb		0.01
Spiked Amount 5.000			Recovery = 908.480%				
Target Compounds							Qvalue
2) Naphthalene	4.27	128	2224048	88.96172	ppb		99
4) 2-Methylnaphthalene	5.07	142	1338328	85.50956	ppb		94
5) 1-Methylnaphthalene	5.18	142	1330317	85.32247	ppb		100
7) Acenaphthylene	6.10	152	3926852	79.43934	ppb		98
8) Acenaphthene	6.30	154	1127762	78.09300	ppb		96
9) Fluorene	6.90	166	1390953	82.59956	ppb		97
11) Phenanthrene	8.03	178	2087238	82.15367	ppb		97
12) Anthracene	8.09	178	2040467	89.58105	ppb		98
14) Fluoranthene	9.41	202	2719774	80.75099	ppb	#	92
16) Pyrene	9.67	202	2917055	87.91549	ppb	#	91
17) Benz (a) anthracene	11.13	228	2664099	94.92522	ppb		96
18) Chrysene	11.19	228	2703165	90.38960	ppb		97
19) Indeno (1,2,3-cd) pyrene	15.15	276	3269175	123.36219	ppb	#	76
21) Benzo (b) fluoranthene	12.98	252	2987297	116.44732	ppb		100
22) Benzo (k) fluoranthene	13.05	252	2819890	84.99829	ppb		100
23) Benzo (a) pyrene	13.53	252	2701476	109.20873	ppb	#	92
24) Dibenz (a,h) anthracene	15.17	278	2669606	115.12705	ppb		97
25) Benzo (g,h,i) perylene	15.53	276	2826930	106.91621	ppb		99

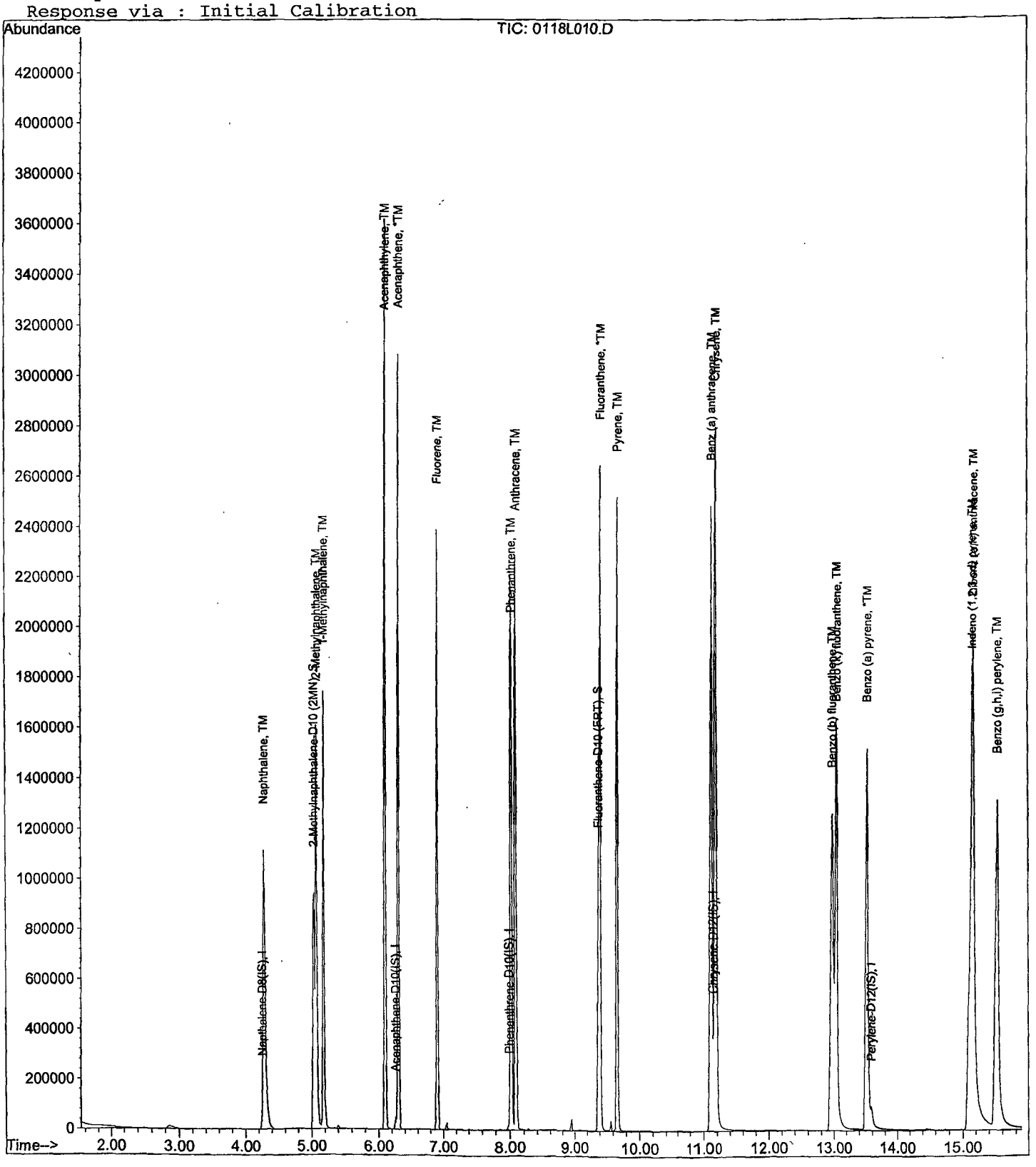
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L010.D Vial: 10
Acq On : 18 Jan 21 14:07 Operator: MA
Sample : 100 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:18 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/18/21
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.017	1.074	5.5	TM	
2	TM	2-Methylnaphthalene	0.6368	0.6761	6.2	TM	
3	TM	1-Methylnaphthalene	0.6344	0.6629	4.5	TM	
4	TM	Acenaphthylene	4.066	4.336	6.6	TM	
5	*TM	Acenaphthene	1.188	1.242	4.5	*TM	
6	TM	Fluorene	1.385	1.476	6.6	TM	
7	TM	Phenanthrene	1.159	1.162	0.29	TM	
8	TM	Anthracene	1.039	1.162	12	TM	
9	*TM	Fluoranthene	1.536	1.618	5.3	*TM	
10	TM	Pyrene	1.361	1.393	2.3	TM	
11	TM	Benz (a) anthracene	1.150	1.081	6.0	TM	
12	TM	Chrysene	1.226	1.210	1.2	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.086	1.105	1.8	TM	
14	TM	Benzo (b) fluoranthene	0.9792	0.9818	0.27	TM	
15	TM	Benzo (k) fluoranthene	1.266	1.443	14	TM	
16	*TM	Benzo (a) pyrene	0.9442	1.105	17	*TM	
17	TM	Dibenz (a,h) anthracene	0.8851	0.9518	7.5	TM	
18	TM	Benzo (g,h,i) perylene	1.009	1.087	7.7	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	64004	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31265	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57177	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	68500	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.56	264	62506	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	19	0.00069	ppb		0.00
Spiked Amount 5.000			Recovery =	0.020%			
13) Fluoranthene-D10 (FRT)	9.37	212	350	0.01132	ppb		0.00
Spiked Amount 5.000			Recovery =	0.220%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	137423	5.27705	ppb		100
4) 2-Methylnaphthalene	5.06	142	86543	5.30831	ppb		99
5) 1-Methylnaphthalene	5.18	142	84851	5.22437	ppb		99
7) Acenaphthylene	6.08	152	271146	5.33224	ppb		100
8) Acenaphthene	6.29	154	77645	5.22665	ppb		99
9) Fluorene	6.89	166	92294	5.32787	ppb		100
11) Phenanthrene	8.00	178	132877	5.01426	ppb		100
12) Anthracene	8.06	178	132921	5.59477	ppb		99
14) Fluoranthene	9.39	202	184979	5.26550	ppb		100
16) Pyrene	9.65	202	190804	5.11487	ppb		99
17) Benz (a) anthracene	11.11	228	148165	4.70082	ppb		100
18) Chrysene	11.15	228	165836	4.93766	ppb		98
19) Indeno (1,2,3-cd) pyrene	15.05	276	151420	5.08773	ppb		96
21) Benzo (b) fluoranthene	12.93	252	122738	5.01329	ppb		99
22) Benzo (k) fluoranthene	12.99	252	180438	5.69901	ppb		96
23) Benzo (a) pyrene	13.48	252	138169	5.85275	ppb	#	95
24) Dibenz (a,h) anthracene	15.10	278	118991	5.37697	ppb		97
25) Benzo (g,h,i) perylene	15.43	276	135851	5.38374	ppb		93

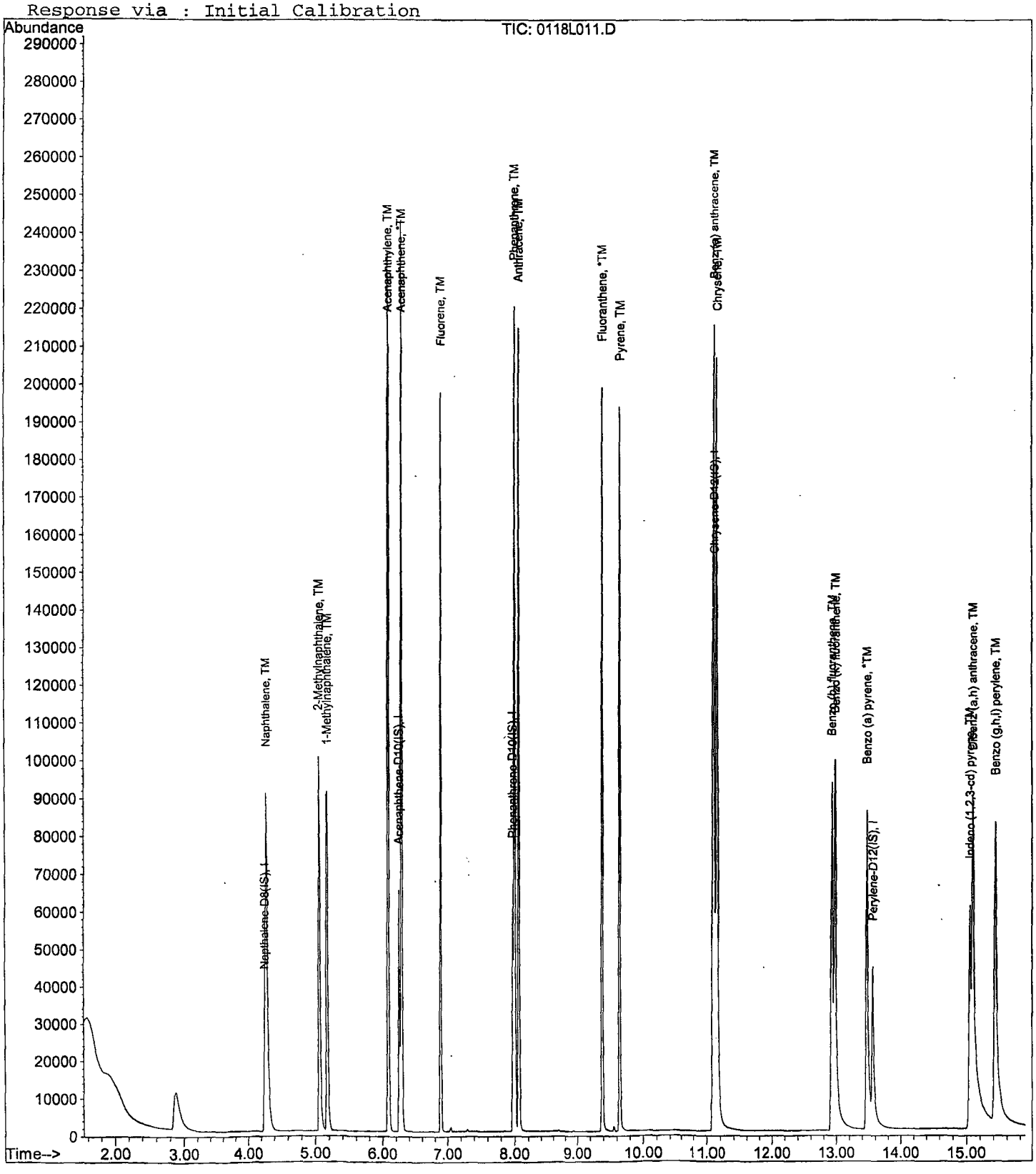
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L011.D Vial: 11
Acq On : 18 Jan 21 14:29 Operator: MA
Sample : SS SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jan 18 16:27 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 15:00
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L072.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	1.062	4.4	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.061	1.1	S	
4	TM	2-Methylnaphthalene	0.6368	0.6878	8.0	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6764	6.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.099	0.82	TM	
8	*TM	Acenaphthene	1.188	1.202	1.2	*TM	
9	TM	Fluorene	1.385	1.433	3.4	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.181	1.9	TM	
12	TM	Anthracene	1.039	1.084	4.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.309	3.1	S	
14	*TM	Fluoranthene	1.536	1.625	5.8	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.374	0.95	TM	
17	TM	Benz (a) anthracene	1.150	1.018	11	TM	
18	TM	Chrysene	1.226	1.235	0.78	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.053	3.1	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.026	4.8	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.353	6.9	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.041	10	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	0.9398	6.2	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.065	5.5	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.5		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L072.D Vial: 72
Acq On : 1 Feb 21 15:00 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:17 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66665	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	33162	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	59700	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72038	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.57	264	66209	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	5.02	152	70715	2.47135	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.420%			
13) Fluoranthene-D10 (FRT)	9.37	212	78149	2.42181	ppb		0.00
Spiked Amount 5.000			Recovery	= 48.440%			
Target Compounds							Qvalue
2) Naphthalene	4.27	128	141650	5.22224	ppb		99
4) 2-Methylnaphthalene	5.06	142	91710	5.40070	ppb		98
5) 1-Methylnaphthalene	5.17	142	90190	5.33144	ppb		95
7) Acenaphthylene	6.08	152	271877	5.04076	ppb		99
8) Acenaphthene	6.29	154	79744	5.06087	ppb		98
9) Fluorene	6.89	166	95011	5.17097	ppb		99
11) Phenanthrene	8.00	178	141005	5.09610	ppb		100
12) Anthracene	8.06	178	129383	5.21570	ppb		100
14) Fluoranthene	9.39	202	194084	5.29119	ppb		99
16) Pyrene	9.65	202	198023	5.04767	ppb		99
17) Benz (a) anthracene	11.11	228	146690	4.42545	ppb		98
18) Chrysene	11.16	228	177988	5.03921	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	15.06	276	151687	4.84638	ppb		98
21) Benzo (b) fluoranthene	12.94	252	135869	5.23925	ppb		100
22) Benzo (k) fluoranthene	12.99	252	179197	5.34326	ppb		99
23) Benzo (a) pyrene	13.48	252	137877	5.51373	ppb		98
24) Dibenz (a,h) anthracene	15.11	278	124449	5.30908	ppb		98
25) Benzo (g,h,i) perylene	15.44	276	141027	5.27629	ppb	#	91

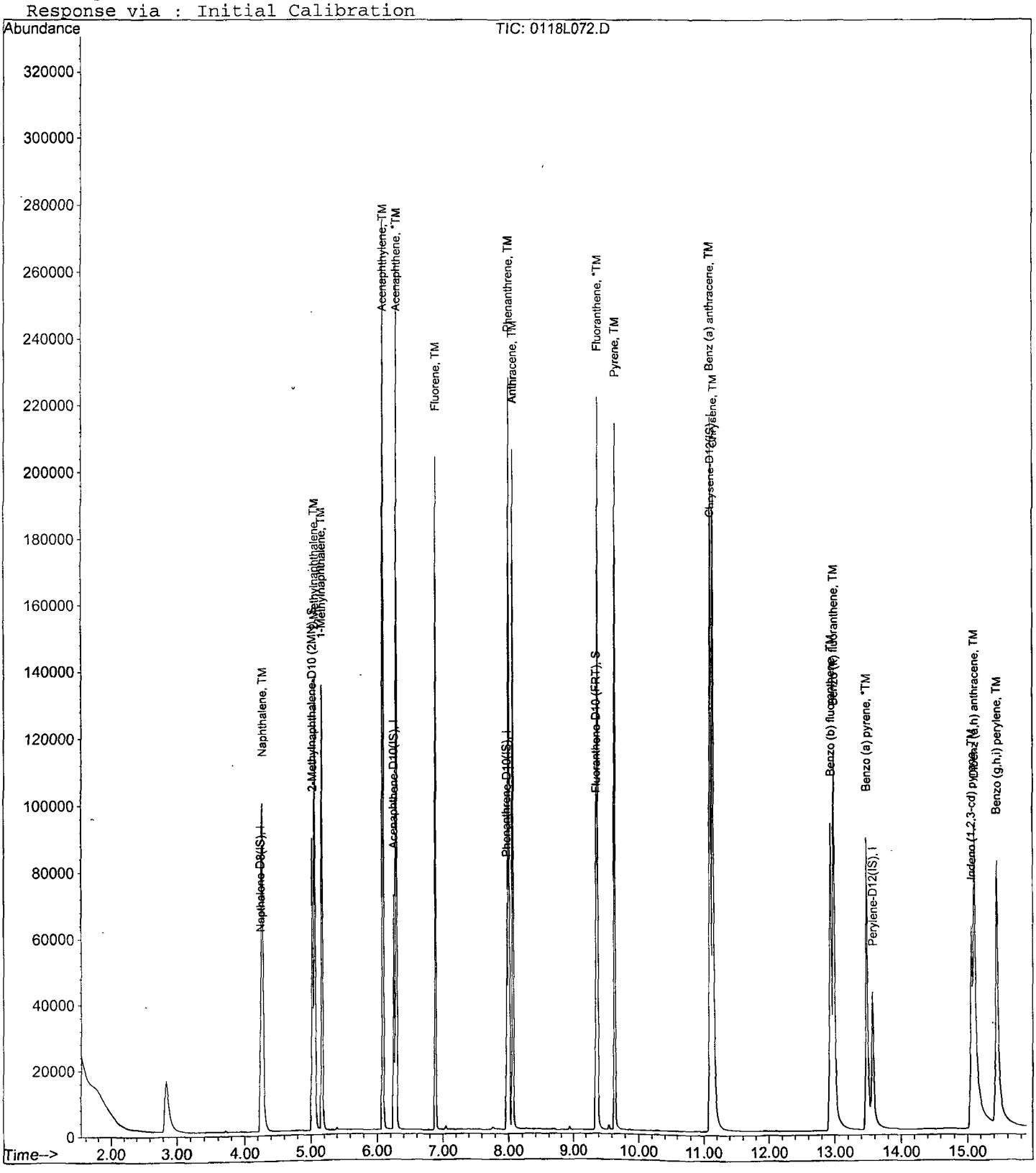
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L072.D Vial: 72
Acq On : 1 Feb 21 15:00 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 15:17 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 21:37
Instrument: Linus
Initial Cal. Date: 01/18/21
Data File: 0118L090.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.017	0.9987	1.8	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.073	1.059	1.3	S	
4	TM	2-Methylnaphthalene	0.6368	0.6461	1.5	TM	
5	TM	1-Methylnaphthalene	0.6344	0.6373	0.46	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	4.066	4.186	2.9	TM	
8	*TM	Acenaphthene	1.188	1.185	0.28	*TM	
9	TM	Fluorene	1.385	1.453	4.9	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.159	1.194	3.1	TM	
12	TM	Anthracene	1.039	1.123	8.1	TM	
13	S	Fluoranthene-D10 (FRT)	1.351	1.375	1.8	S	
14	*TM	Fluoranthene	1.536	1.693	10	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.361	1.406	3.3	TM	
17	TM	Benz (a) anthracene	1.150	1.161	0.94	TM	
18	TM	Chrysene	1.226	1.242	1.4	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.086	1.239	14	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9792	1.172	20	TM	
22	TM	Benzo (k) fluoranthene	1.266	1.271	0.38	TM	
23	*TM	Benzo (a) pyrene	0.9442	1.092	16	*TM	
24	TM	Dibenz (a,h) anthracene	0.8851	1.048	18	TM	
25	TM	Benzo (g,h,i) perylene	1.009	1.108	9.8	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L090.D Vial: 90
Acq On : 1 Feb 21 21:37 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:51 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67763	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	32122	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	57990	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	70197	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	68908	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	71743	2.46665 ppb		0.00
Spiked Amount 5.000			Recovery = 49.340%			
13) Fluoranthene-D10 (FRT)	9.37	212	79750	2.54430 ppb		0.00
Spiked Amount 5.000			Recovery = 50.880%			
Target Compounds						Qvalue
2) Naphthalene	4.27	128	135356	4.90934 ppb		99
4) 2-Methylnaphthalene	5.06	142	87569	5.07329 ppb		98
5) 1-Methylnaphthalene	5.17	142	86370	5.02289 ppb		94
7) Acenaphthylene	6.08	152	268909	5.14716 ppb		99
8) Acenaphthene	6.29	154	76103	4.98617 ppb		99
9) Fluorene	6.89	166	93317	5.24321 ppb		99
11) Phenanthrene	8.00	178	138520	5.15392 ppb		100
12) Anthracene	8.06	178	130195	5.40320 ppb		100
14) Fluoranthene	9.39	202	196394	5.51205 ppb		99
16) Pyrene	9.65	202	197405	5.16389 ppb		98
17) Benz (a) anthracene	11.11	228	163010	5.04678 ppb		99
18) Chrysene	11.15	228	174424	5.06781 ppb		97
19) Indeno (1,2,3-cd) pyrene	15.06	276	173963	5.70387 ppb		94
21) Benzo (b) fluoranthene	12.93	252	161581	5.98669 ppb	#	96
22) Benzo (k) fluoranthene	12.99	252	175176	5.01878 ppb		98
23) Benzo (a) pyrene	13.48	252	150560	5.78510 ppb		96
24) Dibenz (a,h) anthracene	15.11	278	144378	5.91802 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	152654	5.48759 ppb		99

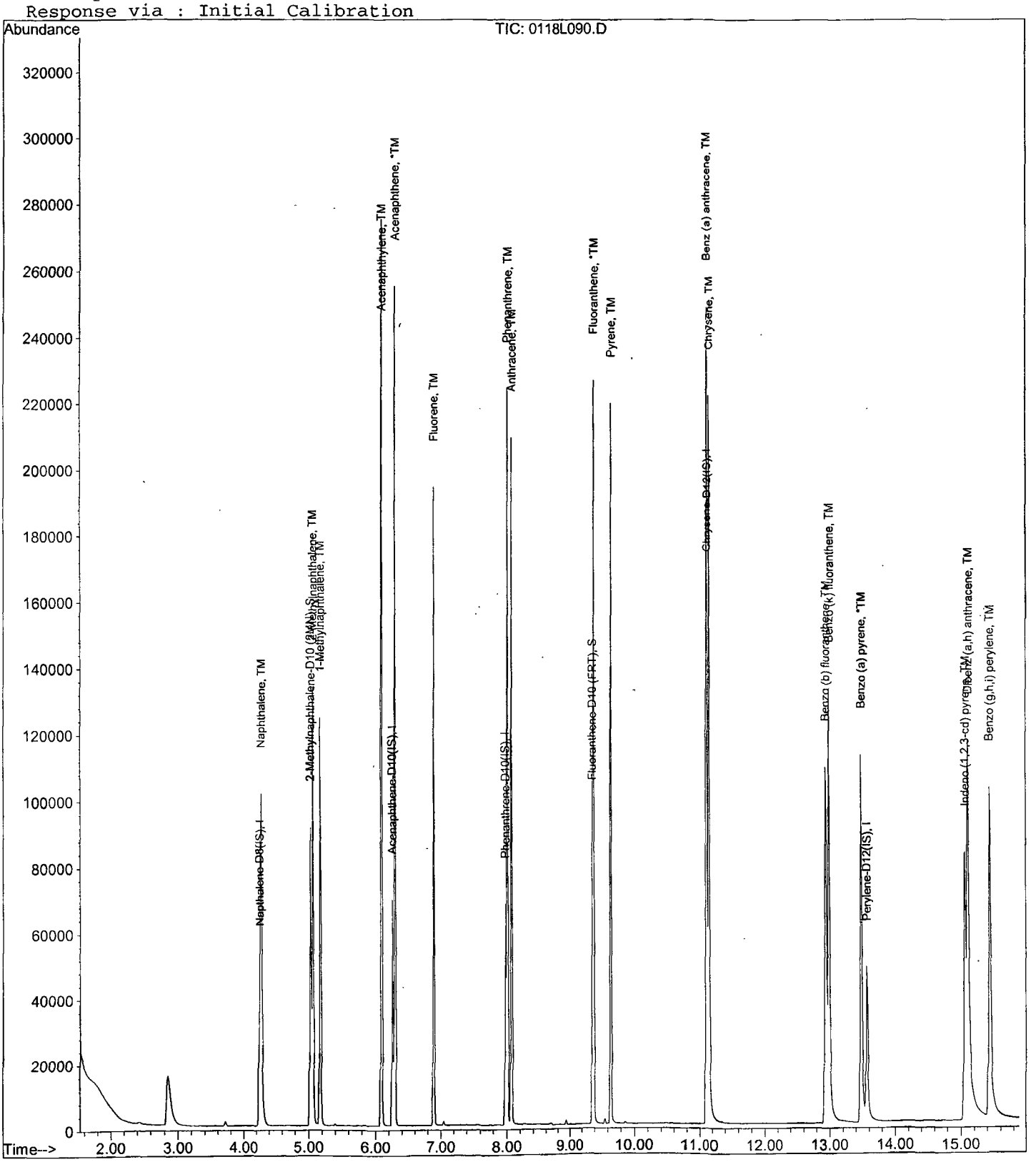
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L090.D Vial: 90
Acq On : 1 Feb 21 21:37 Operator: MA
Sample : 5 SIM 01/15/21 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 2 9:51 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L088.D Vial: 88
Acq On : 1 Feb 21 20:53 Operator: MA
Sample : BA26160W12 1/1030 Inst : Linus
Misc : Multiplr: 0.97

Quant Time: Feb 2 10:34 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	69085	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	32802	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	62729	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	75309	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	73953	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	127765	4.18321	ppb	0.00
Spiked Amount 4.854			Recovery	= 86.170%		
13) Fluoranthene-D10 (FRT)	9.37	212	155409	4.45000	ppb	0.00
Spiked Amount 4.854			Recovery	= 91.670%		

Target Compounds Qvalue

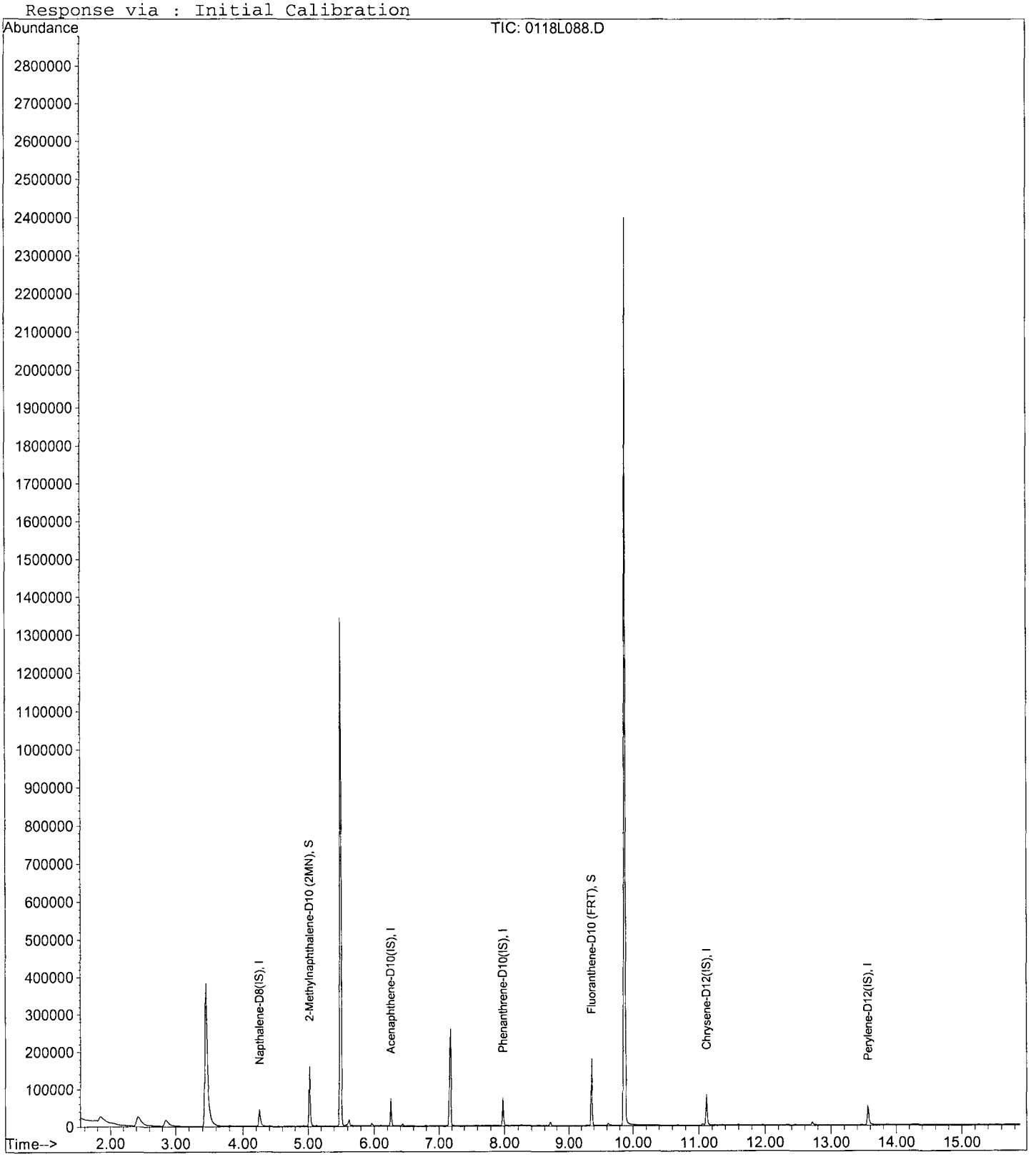
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L088.D Vial: 88
Acq On : 1 Feb 21 20:53 Operator: MA
Sample : BA26160W12 1/1030 Inst : Linus
Misc : Multiplr: 0.97

Quant Time: Feb 2 10:34 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L089.D Vial: 89
Acq On : 1 Feb 21 21:15 Operator: MA
Sample : BA26163W14 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:35 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	70878	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	33938	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	63560	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	76761	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	75064	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	123247	3.97177	ppb	0.00
Spiked Amount 4.902			Recovery =	81.029%		
13) Fluoranthene-D10 (FRT)	9.37	212	152058	4.33926	ppb	0.00
Spiked Amount 4.902			Recovery =	88.516%		

Target Compounds Qvalue

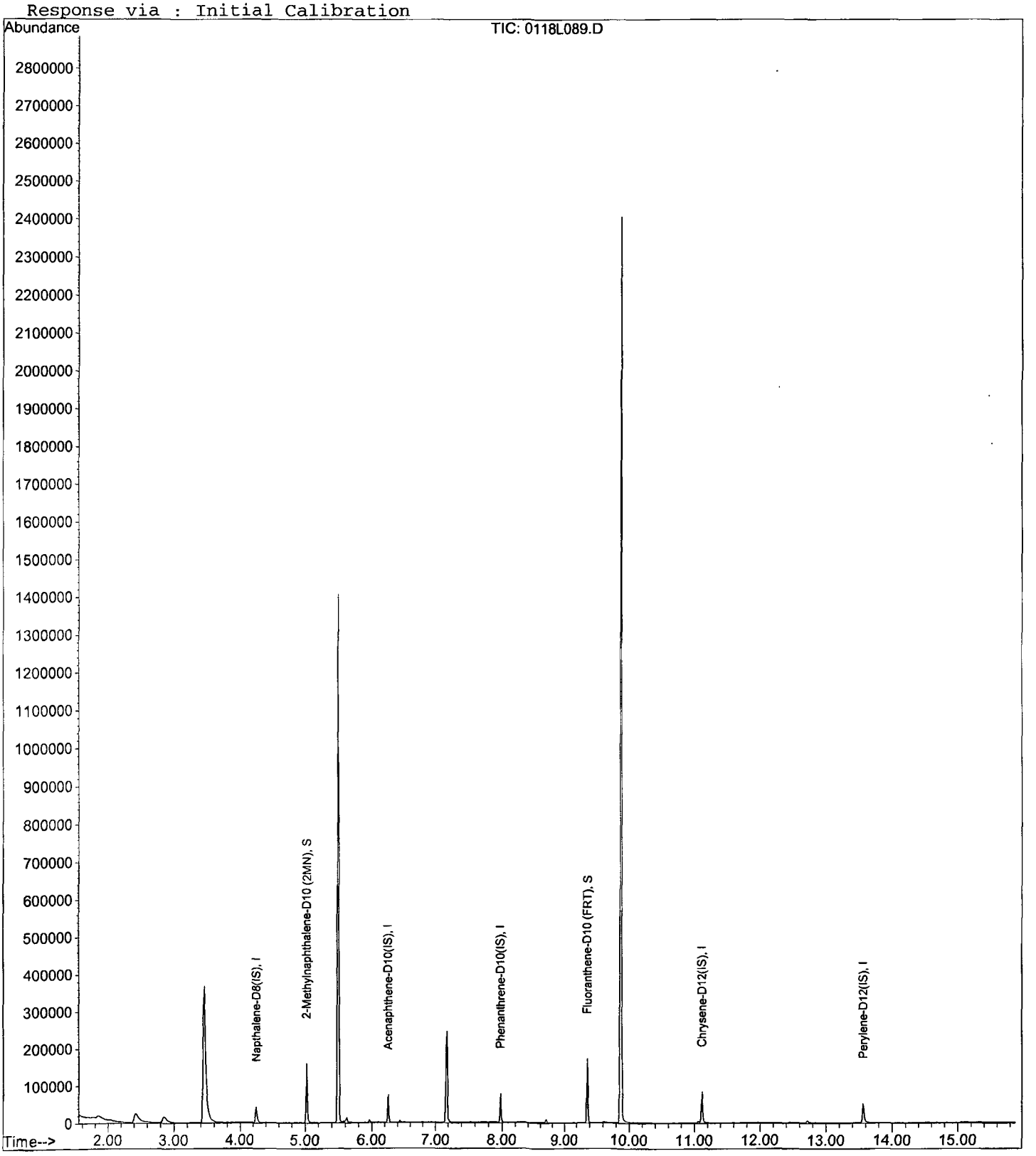
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L089.D Vial: 89
Acq On : 1 Feb 21 21:15 Operator: MA
Sample : BA26163W14 1/1020 Inst : Linus
Misc : Multiplr: 0.98

Quant Time: Feb 2 10:35 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L074.D Vial: 74
Acq On : 1 Feb 21 15:44 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:02 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.25	136	66632	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.25	164	31782	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.98	188	59744	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.12	240	67854	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.56	264	62412	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	121240	4.23919	ppb	0.00
Spiked Amount 5.000			Recovery =	84.780%		
13) Fluoranthene-D10 (FRT)	9.37	212	143602	4.44690	ppb	0.00
Spiked Amount 5.000			Recovery =	88.940%		

Target Compounds	Qvalue

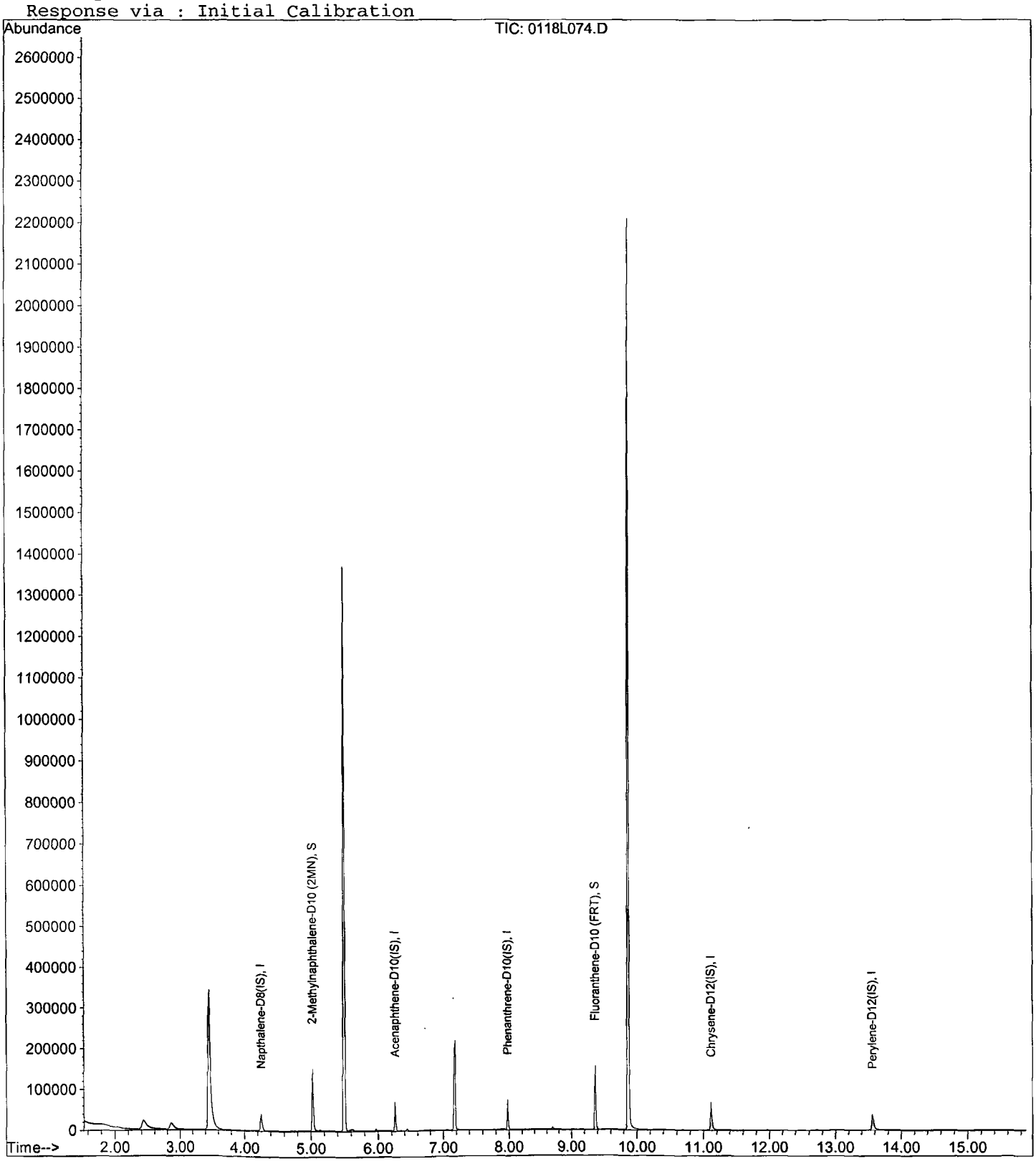
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L074.D Vial: 74
Acq On : 1 Feb 21 15:44 Operator: MA
Sample : 210129A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:02 2021 Quant Results File: L0118.RES

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L210118\0118L075.D Vial: 75
Acq On : 1 Feb 21 16:06 Operator: MA
Sample : 210129A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:33 2021 Quant Results File: L0118.RES

Quant Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.25	136	67204	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.25	164	31665	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.98	188	60381	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.12	240	72838	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.56	264	68395	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	5.02	152	120301	4.17056 ppb		0.00
Spiked Amount 5.000			Recovery =	83.420%		
13) Fluoranthene-D10 (FRT)	9.37	212	143656	4.40164 ppb		0.00
Spiked Amount 5.000			Recovery =	88.040%		
Target Compounds						Qvalue
2) Naphthalene	4.27	128	110466	4.03991 ppb		100
4) 2-Methylnaphthalene	5.06	142	70371	4.11084 ppb		98
5) 1-Methylnaphthalene	5.17	142	70339	4.12463 ppb		95
7) Acenaphthylene	6.08	152	212592	4.12793 ppb		100
8) Acenaphthene	6.29	154	62102	4.12757 ppb		99
9) Fluorene	6.89	166	76989	4.38822 ppb		99
11) Phenanthrene	8.00	178	115247	4.11820 ppb		100
12) Anthracene	8.06	178	97755	3.89626 ppb		100
14) Fluoranthene	9.39	202	162248	4.37338 ppb		100
16) Pyrene	9.65	202	164483	4.14668 ppb		100
17) Benz (a) anthracene	11.11	228	133858	3.99397 ppb		100
18) Chrysene	11.15	228	146691	4.10751 ppb		99
19) Indeno (1,2,3-cd) pyrene	15.05	276	135927	4.29515 ppb		89
21) Benzo (b) fluoranthene	12.93	252	119298	4.45323 ppb		98
22) Benzo (k) fluoranthene	12.99	252	161948	4.67460 ppb		96
23) Benzo (a) pyrene	13.48	252	104011	4.02648 ppb	#	94
24) Dibenz (a,h) anthracene	15.11	278	111518	4.60538 ppb		97
25) Benzo (g,h,i) perylene	15.43	276	122003	4.41865 ppb		95

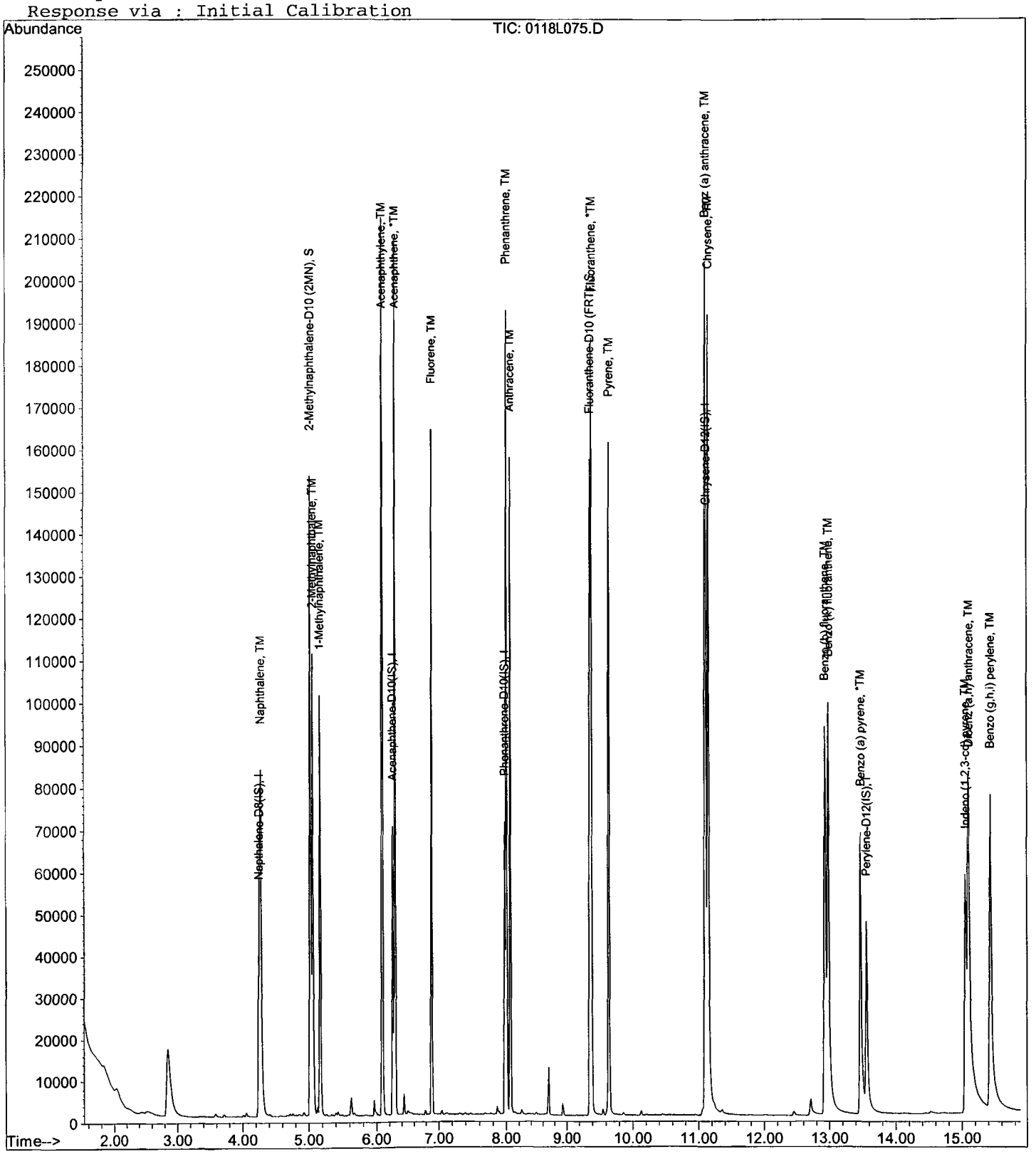
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L210118\0118L075.D Vial: 75
Acq On : 1 Feb 21 16:06 Operator: MA
Sample : 210129A LCS-2 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 1 16:33 2021 Quant Results File: L0118.RES

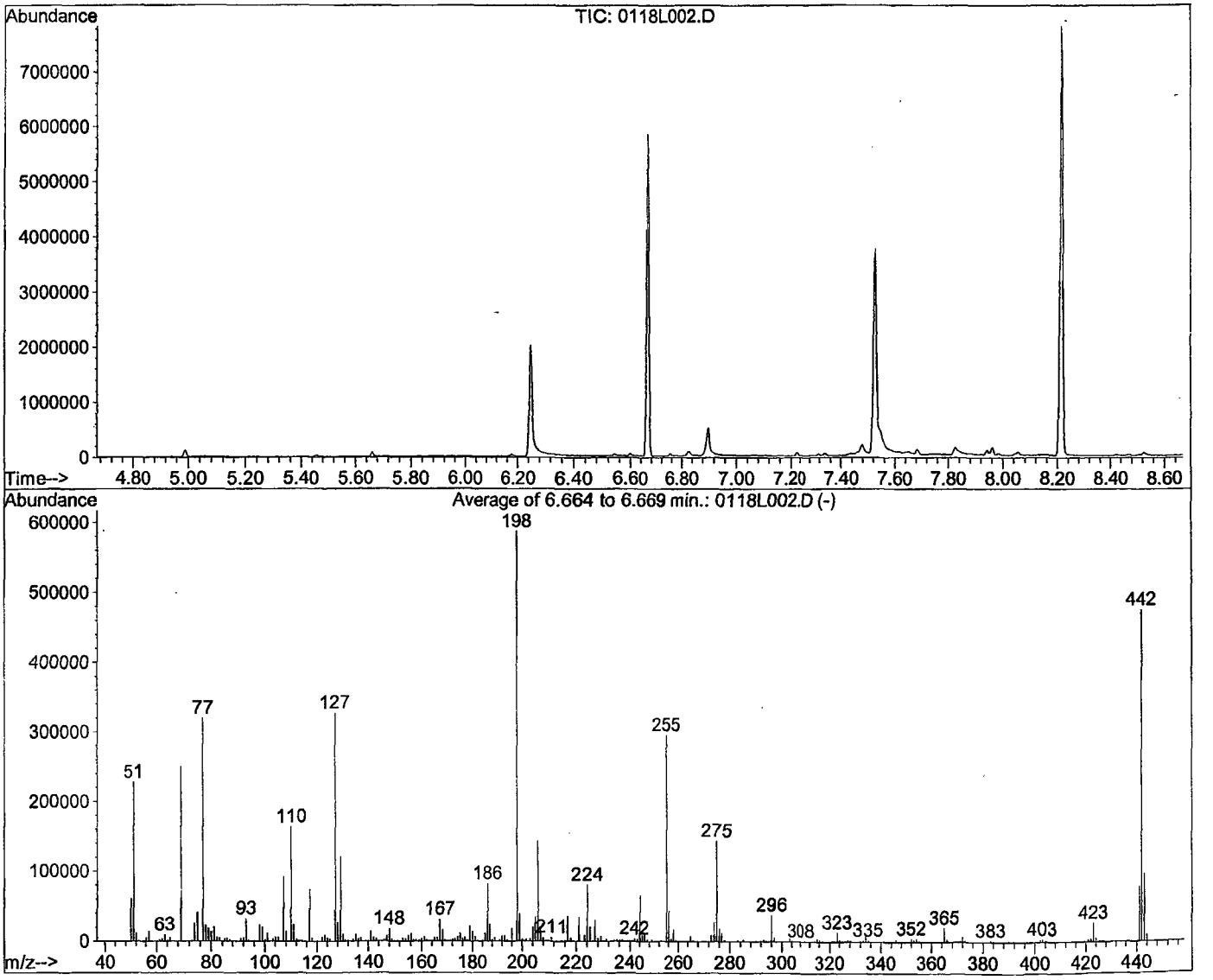
Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270
Last Update : Mon Jan 18 16:20:25 2021
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L210118\0118L002.D Vial: 2
Acq On : 18 Jan 21 11:17 Operator: MA
Sample : SV Tune 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	227683	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1126	PASS
127	198	10	80	55.7	327253	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	587733	PASS
199	198	5	9	6.7	39435	PASS
275	198	10	60	24.3	143096	PASS
365	198	1	100	3.3	19647	PASS
441	442	0.01	24	16.3	77357	PASS
442	198	50	500	80.9	475648	PASS
443	442	15	24	20.1	95496	PASS

0118L002.D L0118.M Mon Jan 18 16:16:32 2021

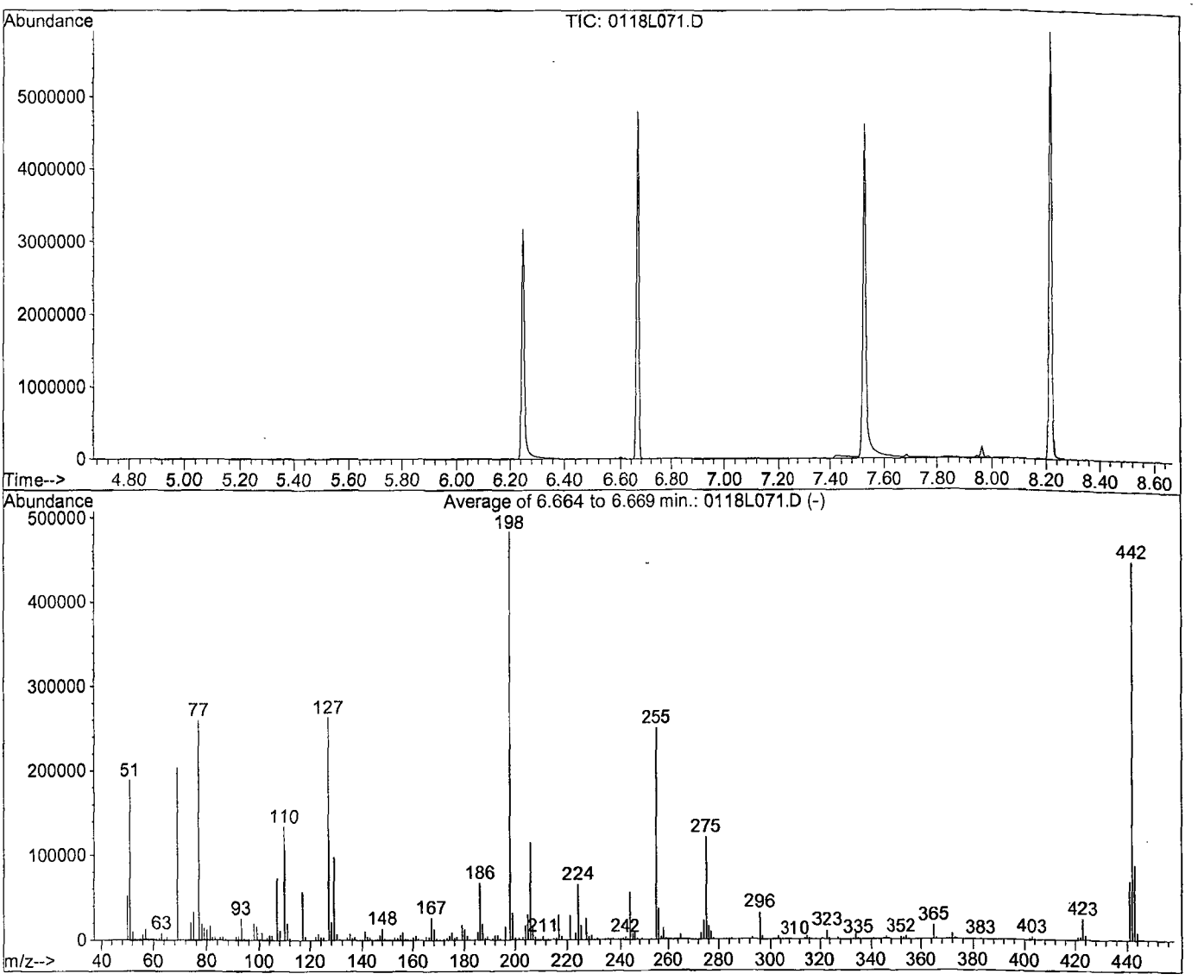
Data File Name:	**0118L002.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**18 Jan 2021 11:17**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/02/20**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	51849900
2)	DDD	7.98	293452
3)	DDE	7.69	568097

Breakdown **1.63**

Data File : M:\LINUS\DATA\L210118\0118L071.D Vial: 71
Acq On : 1 Feb 21 14:44 Operator: MA
Sample : SVTUNE 10/02/20 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L210118\L0118.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.0	188267	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1207	PASS
127	198	10	80	54.5	263040	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	482944	PASS
199	198	5	9	6.6	31997	PASS
275	198	10	60	25.0	120824	PASS
365	198	1	100	3.5	16772	PASS
441	442	0.01	24	15.6	70267	PASS
442	198	50	500	93.2	449941	PASS
443	442	15	24	19.7	88693	PASS

Data File Name:	**0118L071.D**
Data File Path:	**M:\LINUS\DATA\L210118**
Operator:	**MA**
Date Acquired:	**1 Feb 21 14:44**
Method File:	**DFTPP2.M**
Sample Name:	**SVTUNE 10/02/20**
Vial Number:	**71**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.24	40152000
2)	DDD	7.98	1025770
3)	DDE	7.69	220978

Breakdown **3.01**

Name of Final Standard	**SIM Curve**	**Prep'd By (Initials)**	**MA**
Prep Date	**01/15/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80uL**	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	10 uL	100uL	**MC 56258 90uL**	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	**01/15/20**	**06/19/21**	20 uL	100uL	**MC 56258 80 uL**	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	200uL	**MC 56258 190 uL**	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	5 uL	100 uL	**MC 56258 90 uL**	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	5 uL	*	*	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	25 uL	100uL	**MC 56258 50 uL**	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	25 uL	*	*	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL
SIM STOCK	APPL	SIM STOCK	200 ug/mL	**08/20/20**	**08/20/21**	50 uL	100uL	**na**	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	**08/11/20**	**08/11/21**	50 uL	*	*	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	2 uL	*	*	2.5ug/mL

Name of Final Standard 8270 PAH SIM Second Source

Prep Date 01/15/21

Exp Date 06/19/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	**01/14/21**	**01/14/22**	5 uL	200uL	**MC 56258 195uL**	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	**06/19/20**	**06/19/21**	4 uL	*	*	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/20/20**
Exp Date	**08/20/21**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41383**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	SIM Spike
Prep Date	09/11/20
Exp Date	09/11/21

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41545 41546 41547 49548	12/31/22	5 mL	25 mL	Acetone 0246130	40 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**	**Prep'd By (Initials)**	**CD**
Prep Date	**06/19/20**		
Exp Date	**06/19/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0157142-49875**	**12/31/25**	625uL	10mL	**MC DW717**	125 ug/mL

Name of Final Standard	SIM Surrogate	Prep'd By (Initials)	CD
Prep Date	08/11/20		
Exp Date	04/01/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-49995,49992,50255,50256,50257	10/01/25	5mL	100 mL	Acetone #0234320	100 ug/mL

Name of Final Standard	SIM Surrogate
Prep Date	11/30/20
Exp Date	11/30/21

Prep'd By (Initials) LS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	A0154854-50257, 50258, 50259 A0161454-50790, 50794	10/31/2025 5/31/26	5mL	100 mL	Acetone #246130	100 ug/mL

Name of Final Standard	**SIM SS Stock (Ampule second source)**
Prep Date	**01/14/21**
Exp Date	**01/14/22**

Prep'd By **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13127-41106**	**12/31/22**	1000 uL	1mL	**NA**	200ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	
			GC Requires Extract By:		

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210129A Blk				0.2,0.05	1,2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP51				
2	210129A LCS-1		1	1	0.2	1	1000	1	2/1	01/29/21 10:25	
						equip	E-HP50				
3	210129A LCS-2		0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	
						equip	E-HP49				
4	BA26001 MS-1	BA26001W21	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP48				
5	BA26001 MSD-1	BA26001W23	1	1	0.2	1	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP47				
6	BA26001 MS-2	BA26001W30	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP25				
7	BA26001 MSD-2	BA26001W31	0.125	2	0.05	2	1000	1	2/1	01/29/21 10:25	94899
						equip	E-HP26				
8	BA26001	BA26001W20			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP27				
9	BA26003	BA26003W09			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP28				
10	BA26006	BA26006W13			0.2,0.05	1,2	1040	1	2/1	01/29/21 10:25	94899
						equip	E-HP29				
11	BA26008	BA26008W07			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP30				
12	BA26013	BA26013W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94899
						equip	E-HP16				
13	BA26016	BA26016W12			0.2,0.05	1,2	1010	1	2/1	01/29/21 10:25	94899
						equip	E-HP15				
14	BA26150	BA26150W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP14				
15	BA26152	BA26152W04			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94921
						equip	E-HP13				
16	BA26155	BA26155W05			0.2,0.05	1,2	400	1	2/1	01/29/21 10:25	94921
						equip	E-HP12				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/1/21
Time	12:00
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	210129A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-7-21 1-7-22		Surrogate ID 1	8270 Surrogate 10-6-20 10-6-21	
Spiked ID 2	Sim Spike 9-11-20 9-11-21		Surrogate ID 2	SIM Surrogate 11-30-20 11-30-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	yes	
Spiked ID 7			Ext. Start Time:	01/29/21 12:00	
Spiked ID 8			Ext. End Time:	01/30/21 6:00	
			GC Requires Extract By:		

pH1	2	01/29/21 10:40	Water Bath Temp 1 °C	
pH2	14	01/30/21 7:30	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 01/29/21 **Witnessed By:** DL **Date** 01/29/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA26157	BA26157W05			0.2,0.05	1,2	1050	1	2/1	01/29/21 10:25	94921
						equip	E-HP11				
18	BA26160	BA26160W12			0.2,0.05	1,2	1030	1	2/1	01/29/21 10:25	94920
						equip	E-HP10				
19	BA26163	BA26163W14			0.2,0.05	1,2	1020	1	2/1	01/29/21 10:25	94920
						equip	E-HP9				

Solvent and Lot#	
PH Strips	hc025486
Dichloromethane (DCM)	60182
1+1 H2SO4 (10mLs)	12-1-20
10N NaOH (40mLs)	12-29-20
Filter Paper	400178
Na2SO4	2019070279

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	
Time	
Refrigerator	GC_C

	Technician's Initials
Scanned By	YL
Sample Preparation	DL
Extraction	DL
Concentration	DL,YL

Modified	01/30/21 7:50:22 AM

Reviewed By: **Date**

Injection Log

Directory: M:\LINUS\DATA\L210118\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0118L002.D	1	SV Tune 10/02/20		18 Jan 21 11:17
3	0118L003.D	1	0.1 SIM 01/15/21		18 Jan 21 11:33
4	0118L004.D	1	0.2 SIM 01/15/21		18 Jan 21 11:55
5	0118L005.D	1	0.5 SIM 01/15/21		18 Jan 21 12:17
6	0118L006.D	1	1 SIM 01/15/21		18 Jan 21 12:39
7	0118L007.D	1	5 SIM 01/15/21		18 Jan 21 13:01
8	0118L008.D	1	10 SIM 01/15/21		18 Jan 21 13:23
9	0118L009.D	1	50 SIM 01/15/21		18 Jan 21 13:45
10	0118L010.D	1	100 SIM 01/15/21		18 Jan 21 14:07
11	0118L011.D	1	SS SIM 01/15/21		18 Jan 21 14:29
71	0118L071.D	1	SVTUNE 10/02/20		1 Feb 21 14:44
72	0118L072.D	1	5 SIM 01/15/21		1 Feb 21 15:00
74	0118L074.D	1	210129A BLK 1/1000		1 Feb 21 15:44
75	0118L075.D	1	210129A LCS-2 1/1000		1 Feb 21 16:06
88	0118L088.D	0.97087	BA26160W12 1/1030		1 Feb 21 20:53
89	0118L089.D	0.98039	BA26163W14 1/1020		1 Feb 21 21:15
90	0118L090.D	1	5 SIM 01/15/21		1 Feb 21 21:37

ORGANICS

Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/25/21
Matrix: Instrument: KYLO
Initials: HA

0125K004 D 0125K005 D 0125K006 D 0125K007 D 0125K003 D 0125K008 D 0125K009 D 0125K010 D

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.2222	0.2369	0.2684	0.2698	0.2404	0.2694	0.2791	0.2711			0.26	8.1	TM			
3																		
4																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	484103	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1455001	467.49647	ppb	100

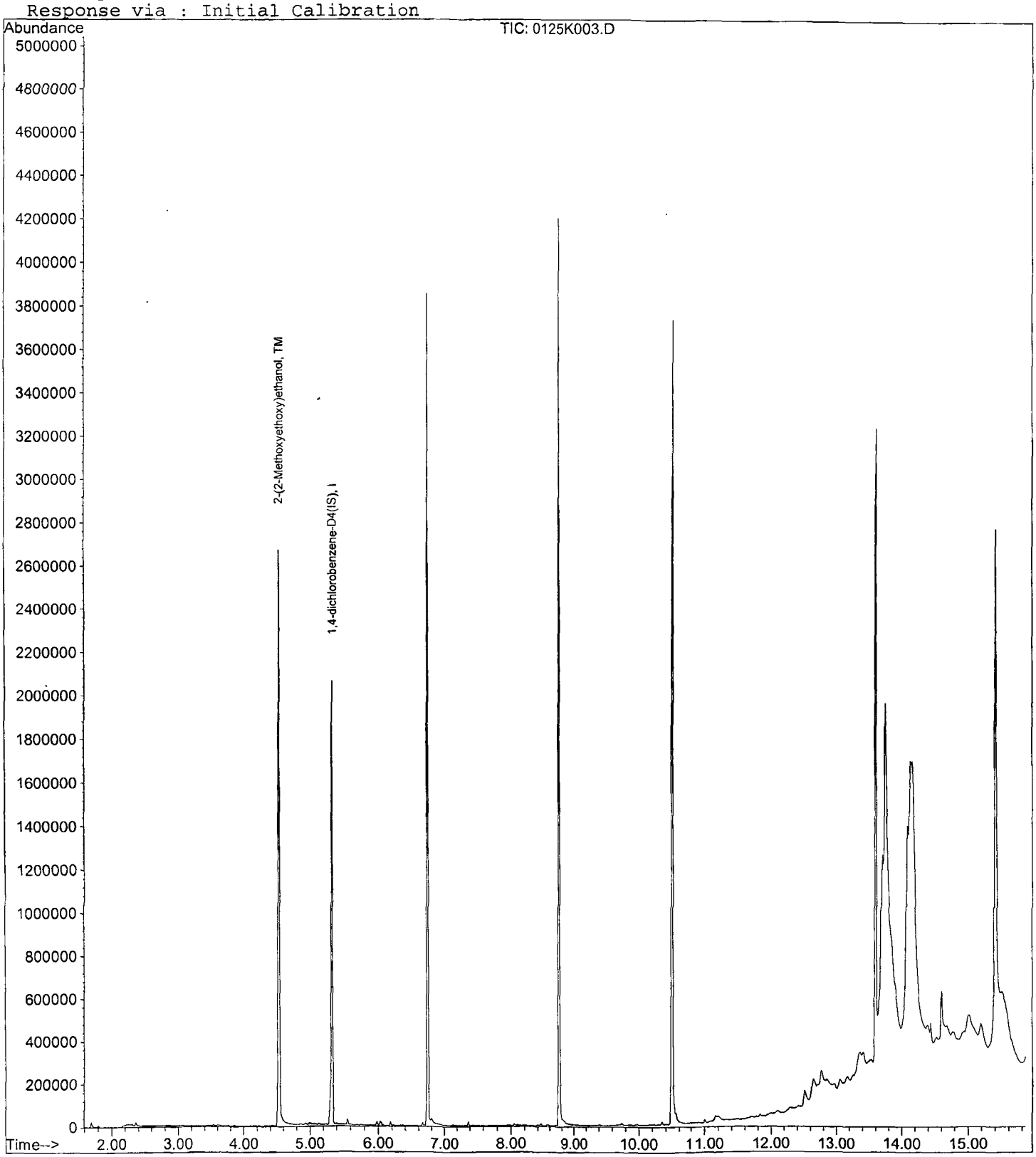
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K003.D Vial: 3
Acq On : 25 Jan 21 12:45 Operator:
Sample : 2MEE 500 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	475280	40.00000	ppb	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	131983	43.19379	ppb	99

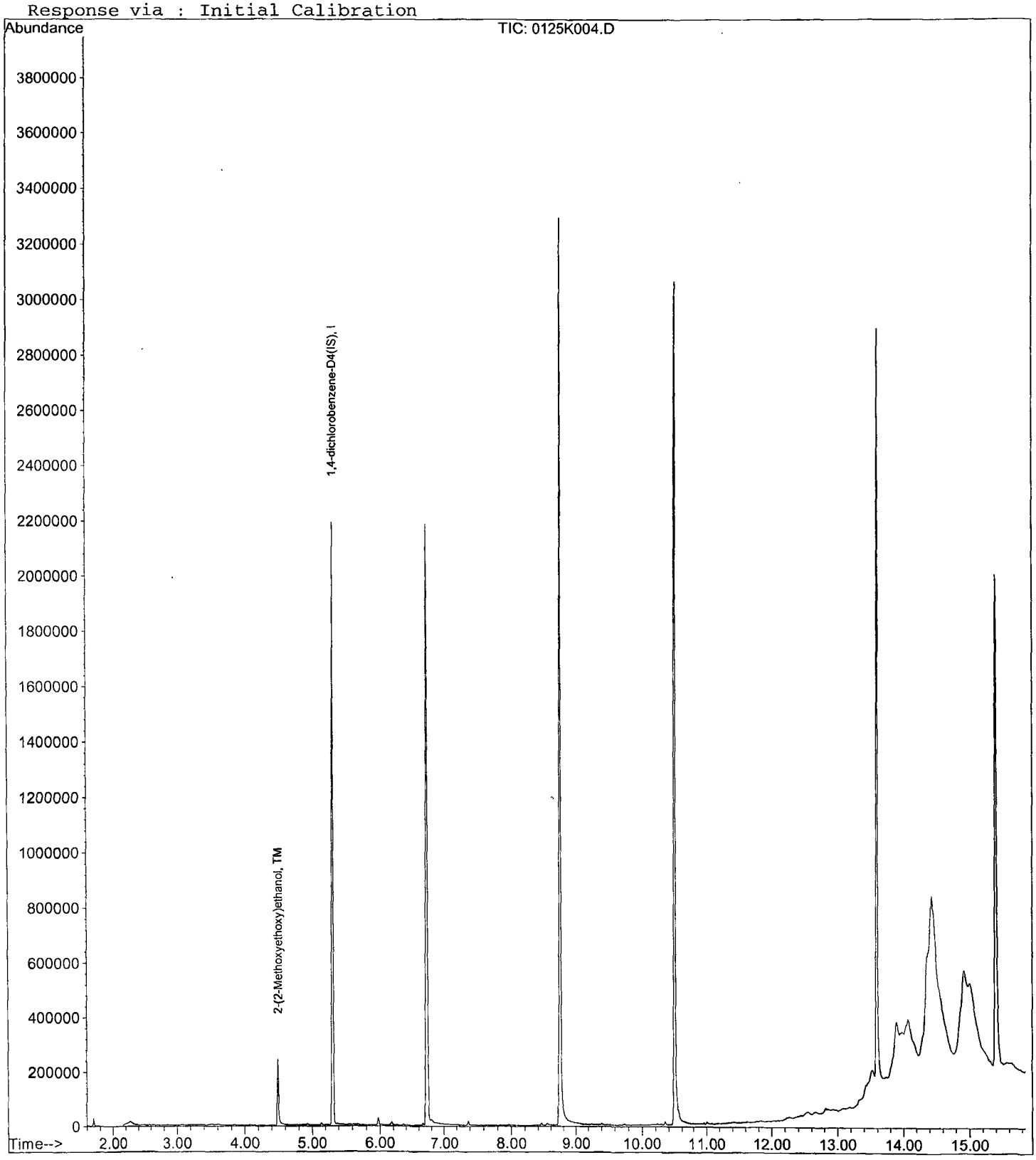
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K004.D Vial: 4
Acq On : 25 Jan 21 13:07 Operator:
Sample : 2MEE 50 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	422972	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	250481	92.11195	ppb	98

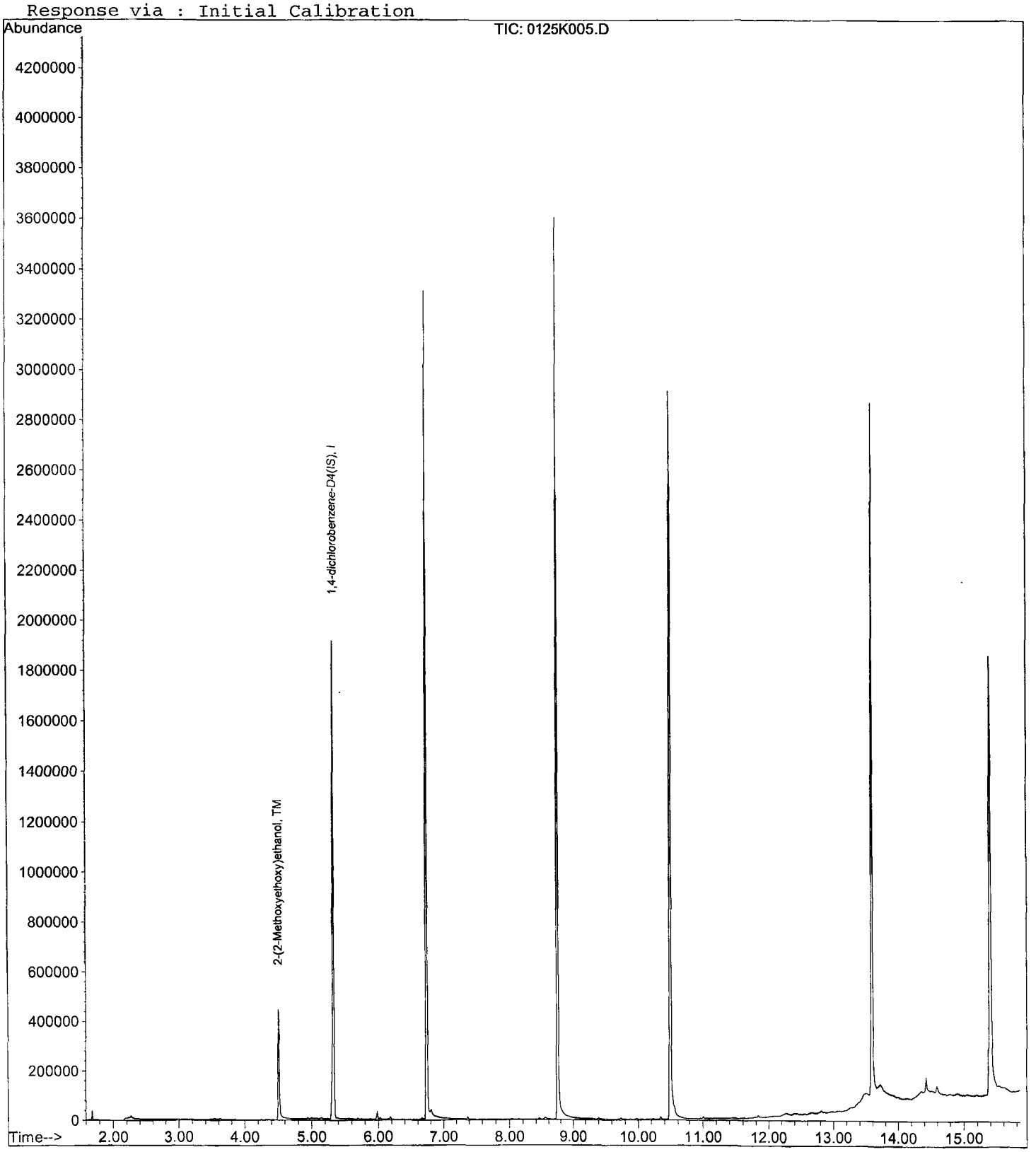
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K005.D Vial: 5
Acq On : 25 Jan 21 13:27 Operator:
Sample : 2MEE 100 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	403909	40.00000	ppb	-0.03

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	542019	208.72948	ppb	100

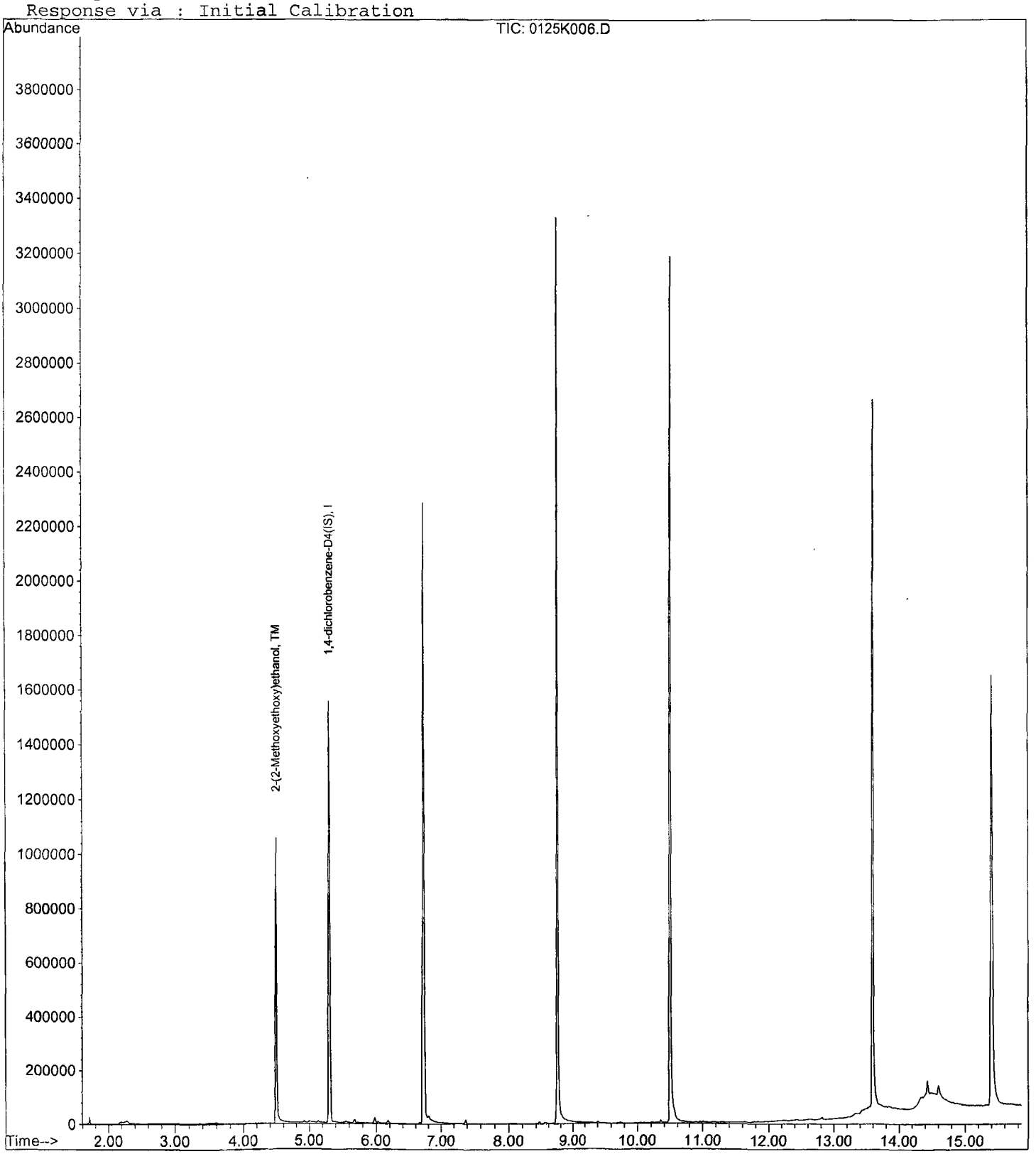
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K006.D Vial: 6
Acq On : 25 Jan 21 13:54 Operator:
Sample : 2MEE 200 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.31	152	385235	40.00000	ppb	-0.02
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.51	45	1039328	419.64274	ppb	99

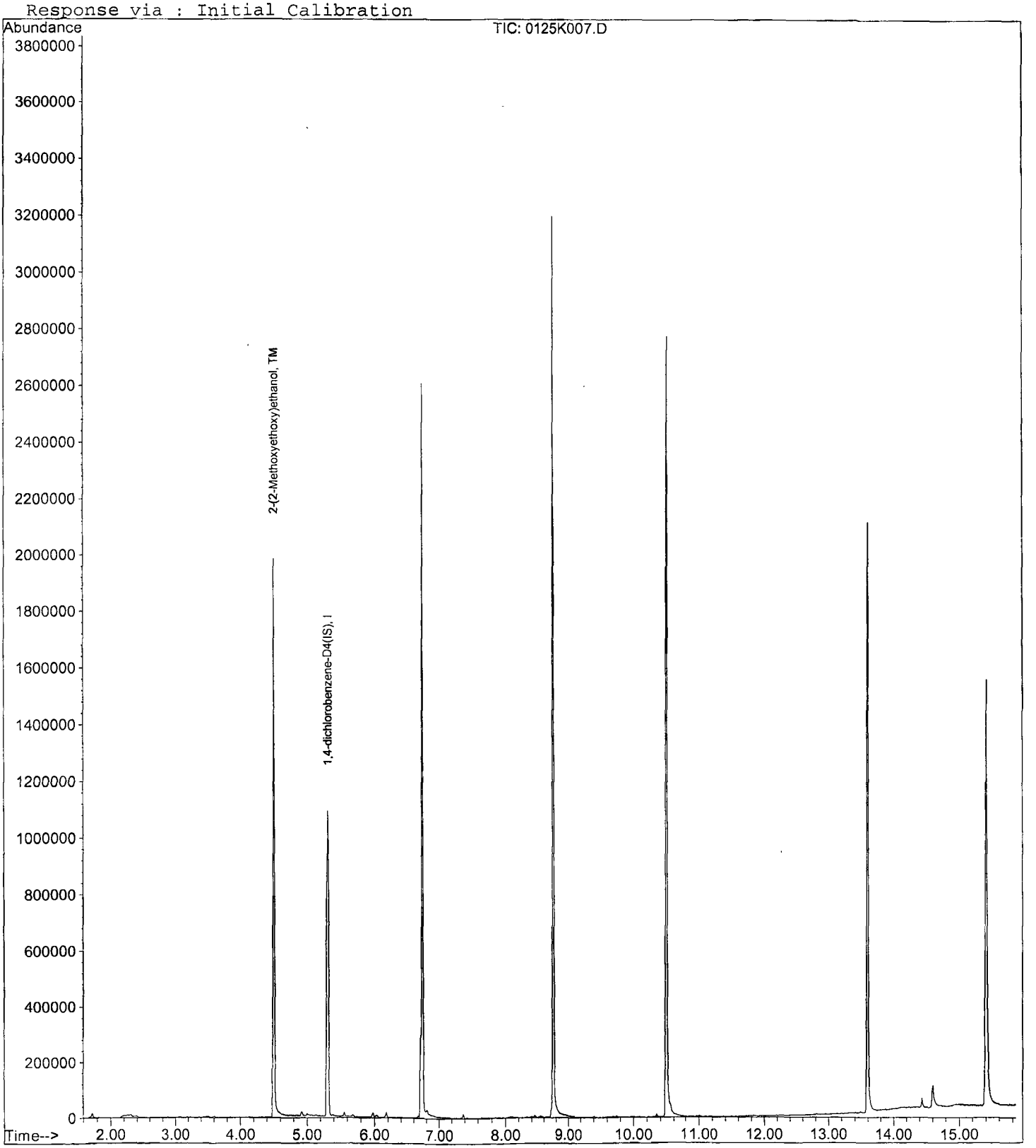
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K007.D Vial: 7
Acq On : 25 Jan 21 14:14 Operator:
Sample : 2MEE 400 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	371159	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.54	45	1499869	628.55915	ppb	100

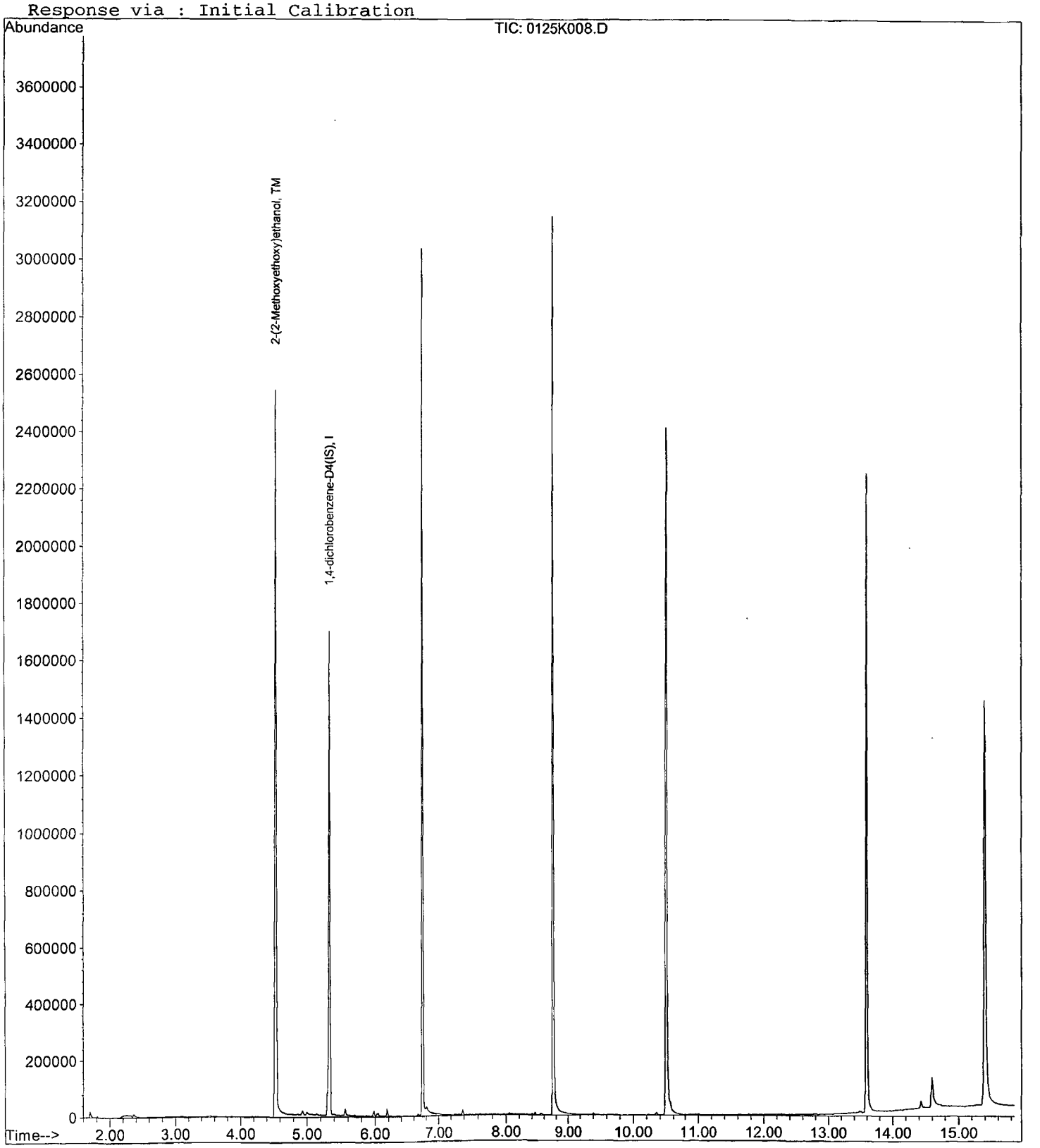
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K008.D Vial: 8
Acq On : 25 Jan 21 14:35 Operator:
Sample : 2MEE 600 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	347821	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	1941710	868.32317	ppb	99

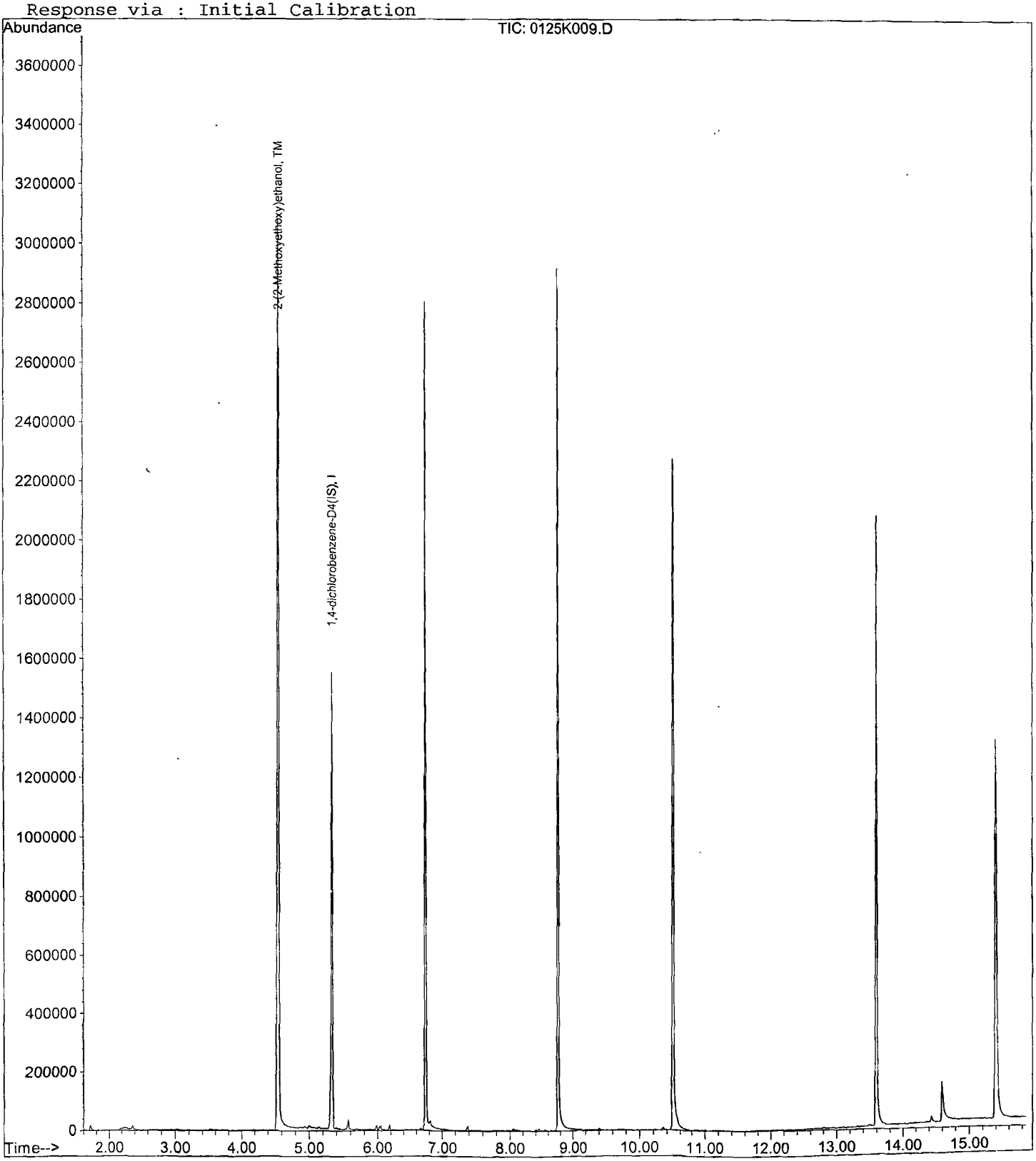
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K009.D Vial: 9
Acq On : 25 Jan 21 14:56 Operator:
Sample : 2MEE 800 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	336708	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	2282161	1054.25499	ppb	98

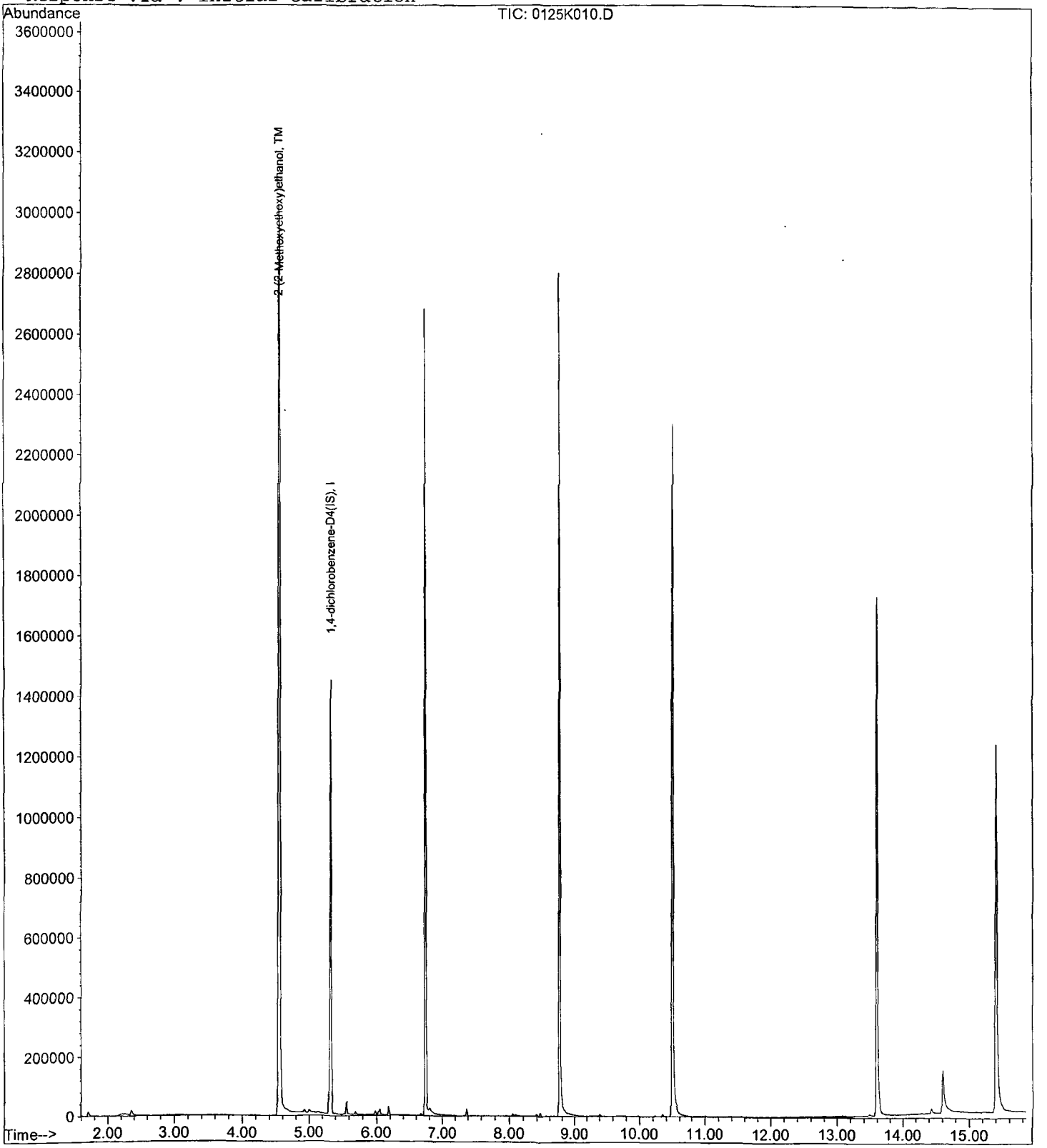
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K010.D Vial: 10
Acq On : 25 Jan 21 15:17 Operator:
Sample : 2MEE 1000 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:36 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/25/21
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2914	13	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	386030	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	1406245	566.62112	ppb	99

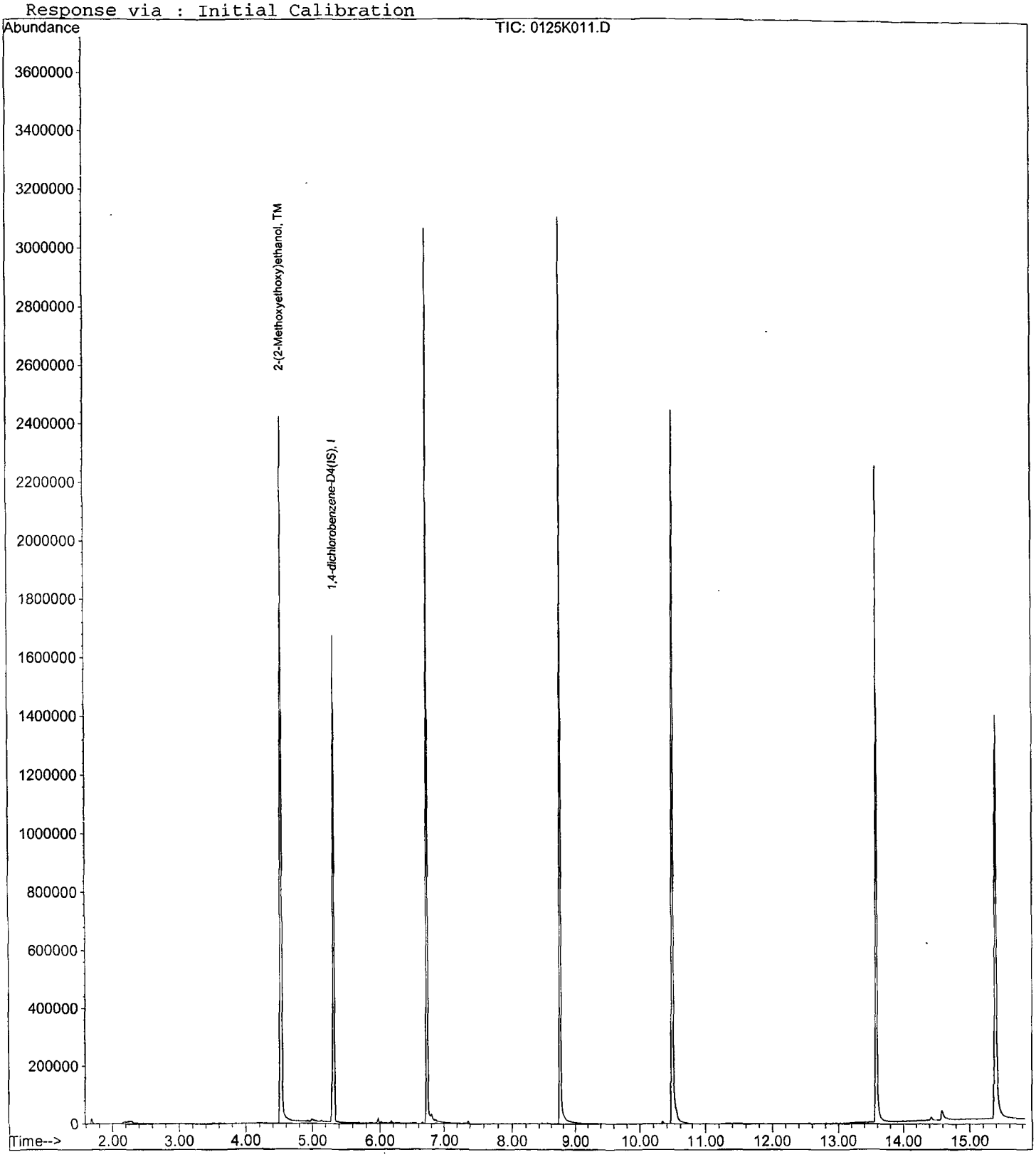
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K011.D Vial: 11
Acq On : 25 Jan 21 15:38 Operator:
Sample : 2MEE SS 5/1/20 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Jan 25 15:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Jan 25 13:58:46 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 2 Feb 21 12:08
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K058.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.3065	19	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			19.0		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K058.D Vial: 58
Acq On : 2 Feb 21 12:08 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 12:25 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	158559	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.56	45	607455	595.90363 ppb	97

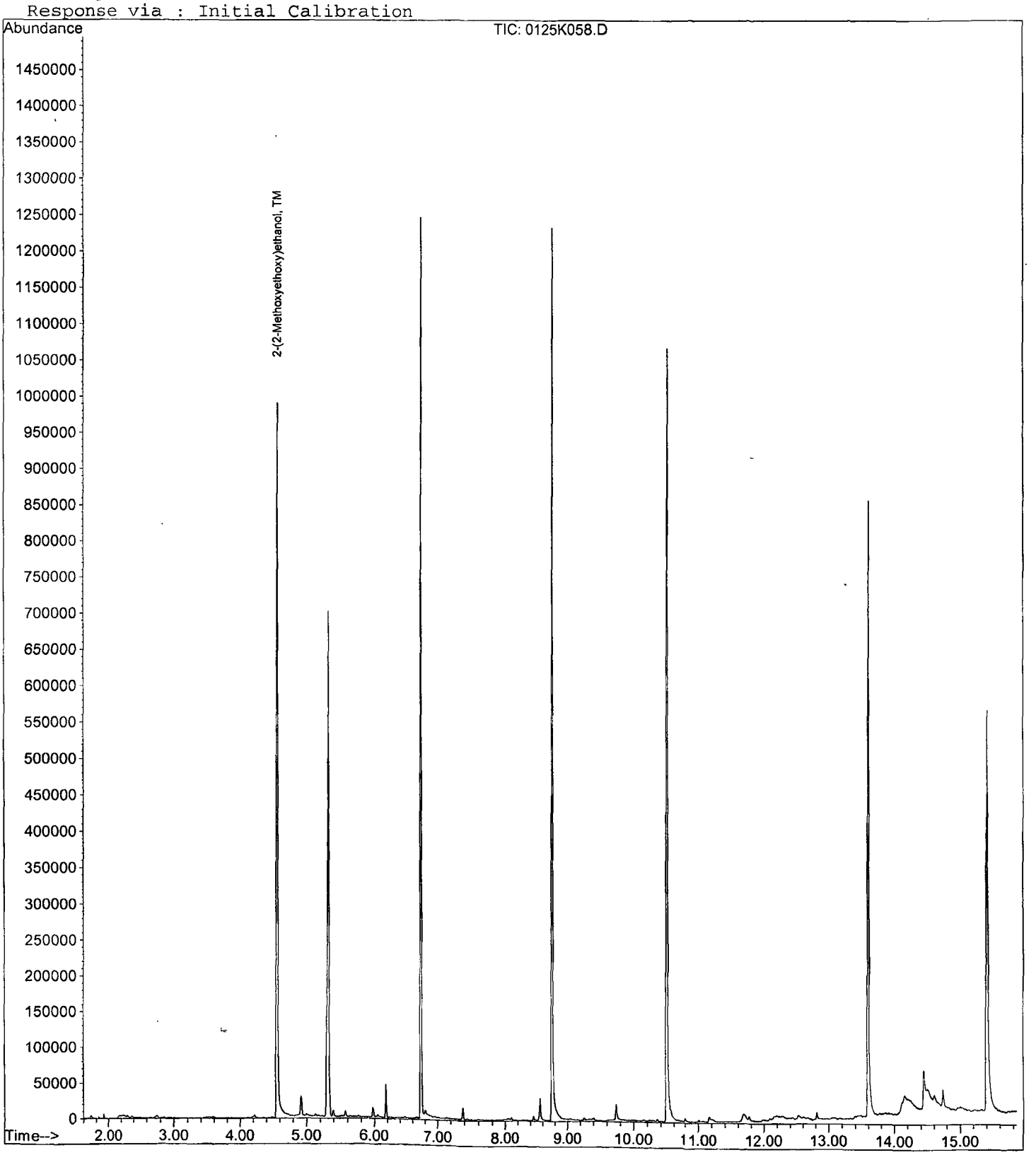
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K058.D Vial: 58
Acq On : 2 Feb 21 12:08 Operator:
Sample : 2 MEE 500 1/26/21 (2) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 12:25 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 2 Feb 21 17:49
Instrument: KYLO
Initial Cal. Date: 01/25/21
Data File: 0125K071.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2572	0.2787	8.4	TM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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22							
23							
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26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.4		

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K071.D Vial: 71
Acq On : 2 Feb 21 17:49 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 18:17 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	154456	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.57	45	538112	541.90195	ppb	98

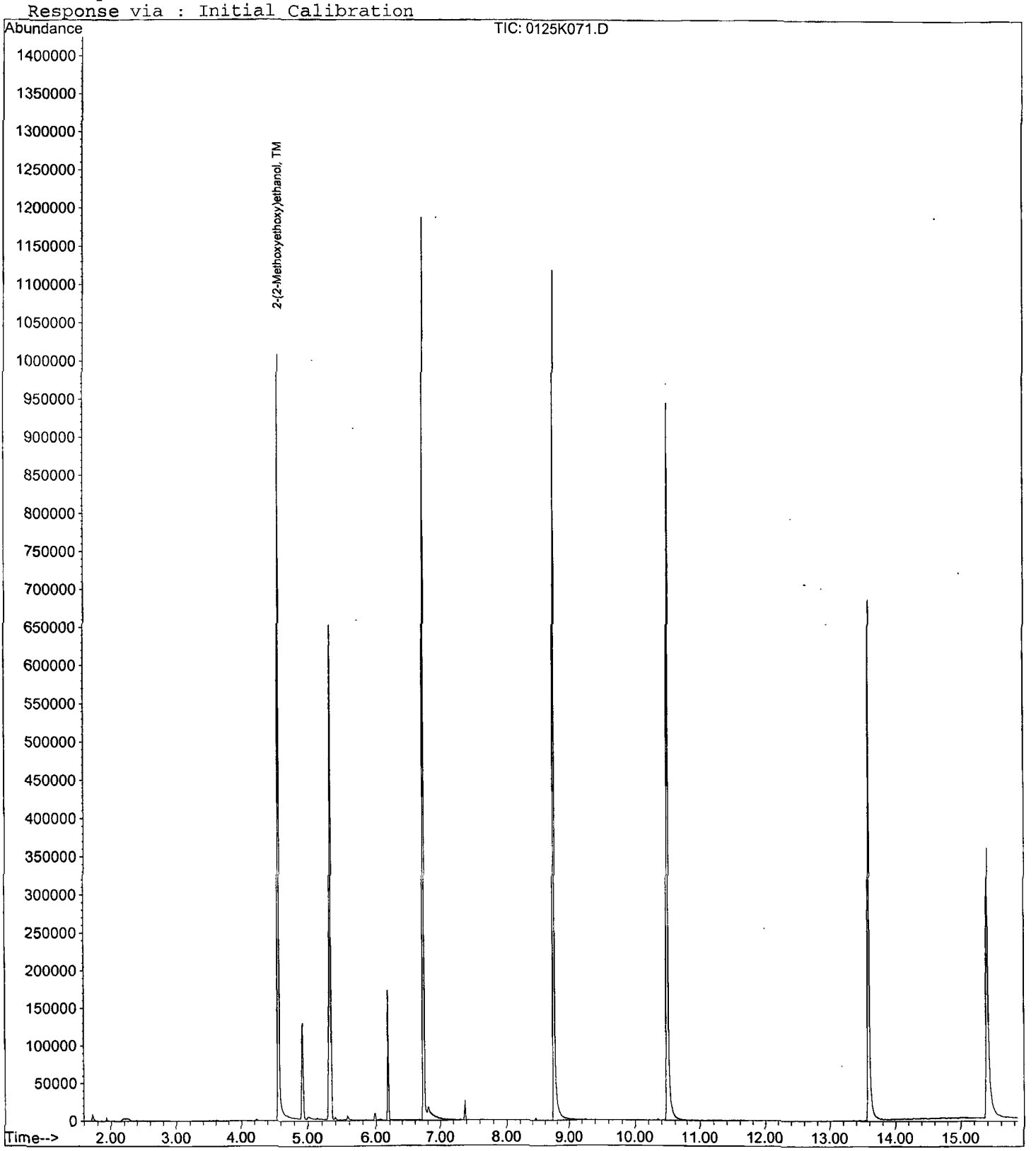
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K071.D Vial: 71
Acq On : 2 Feb 21 17:49 Operator:
Sample : 2 MEE 500 1/26/21 (1) Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 18:17 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K069.D Vial: 69
Acq On : 2 Feb 21 17:07 Operator:
Sample : BA26160W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	161095	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

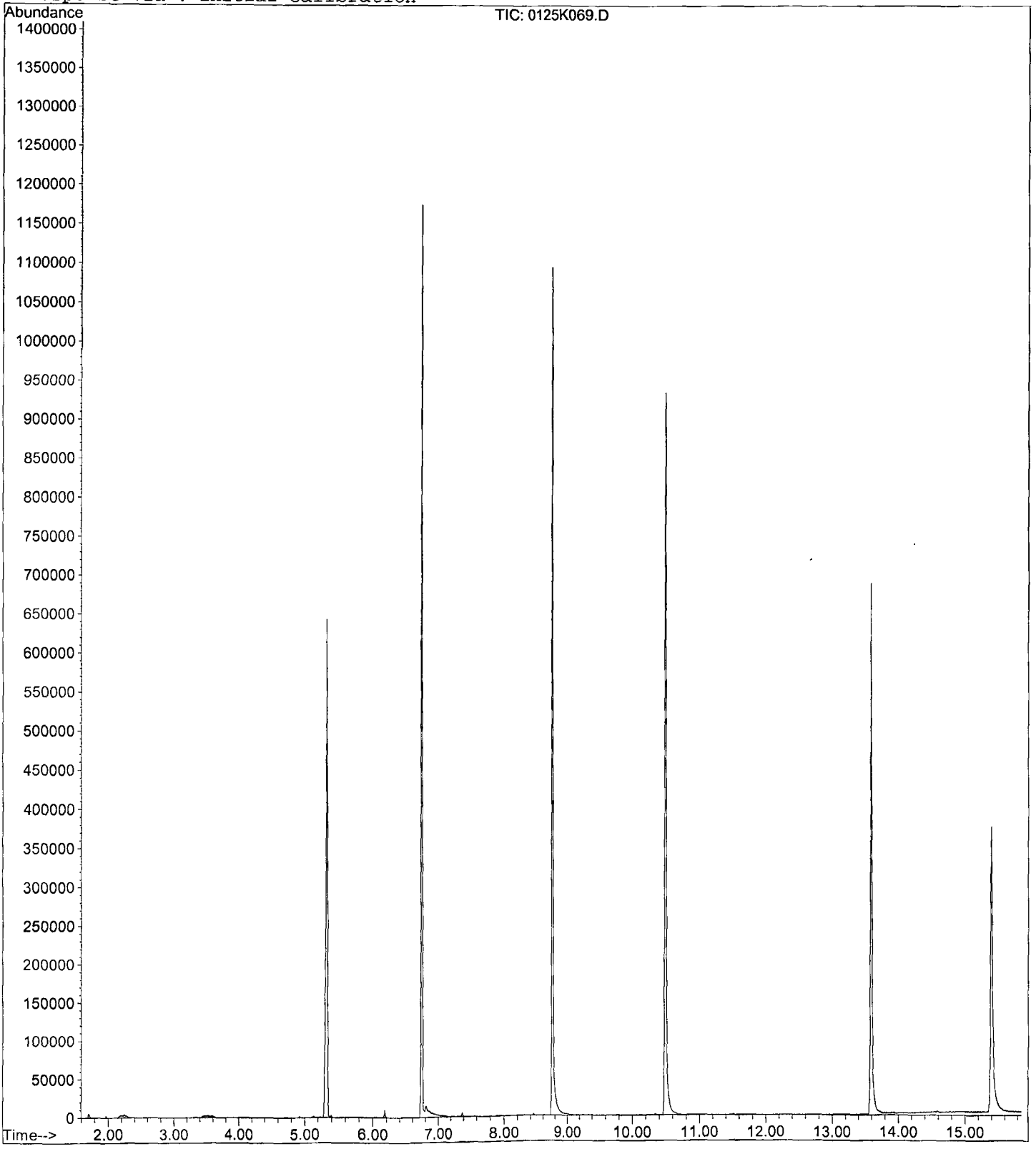
(#) = qualifier out of range (m) = manual integration
0125K069.D KMEE0125.M Wed Feb 03 14:15:20 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K069.D Vial: 69
Acq On : 2 Feb 21 17:07 Operator:
Sample : BA26160W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:27 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K070.D Vial: 70
Acq On : 2 Feb 21 17:28 Operator:
Sample : BA26163W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:46 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	170042	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

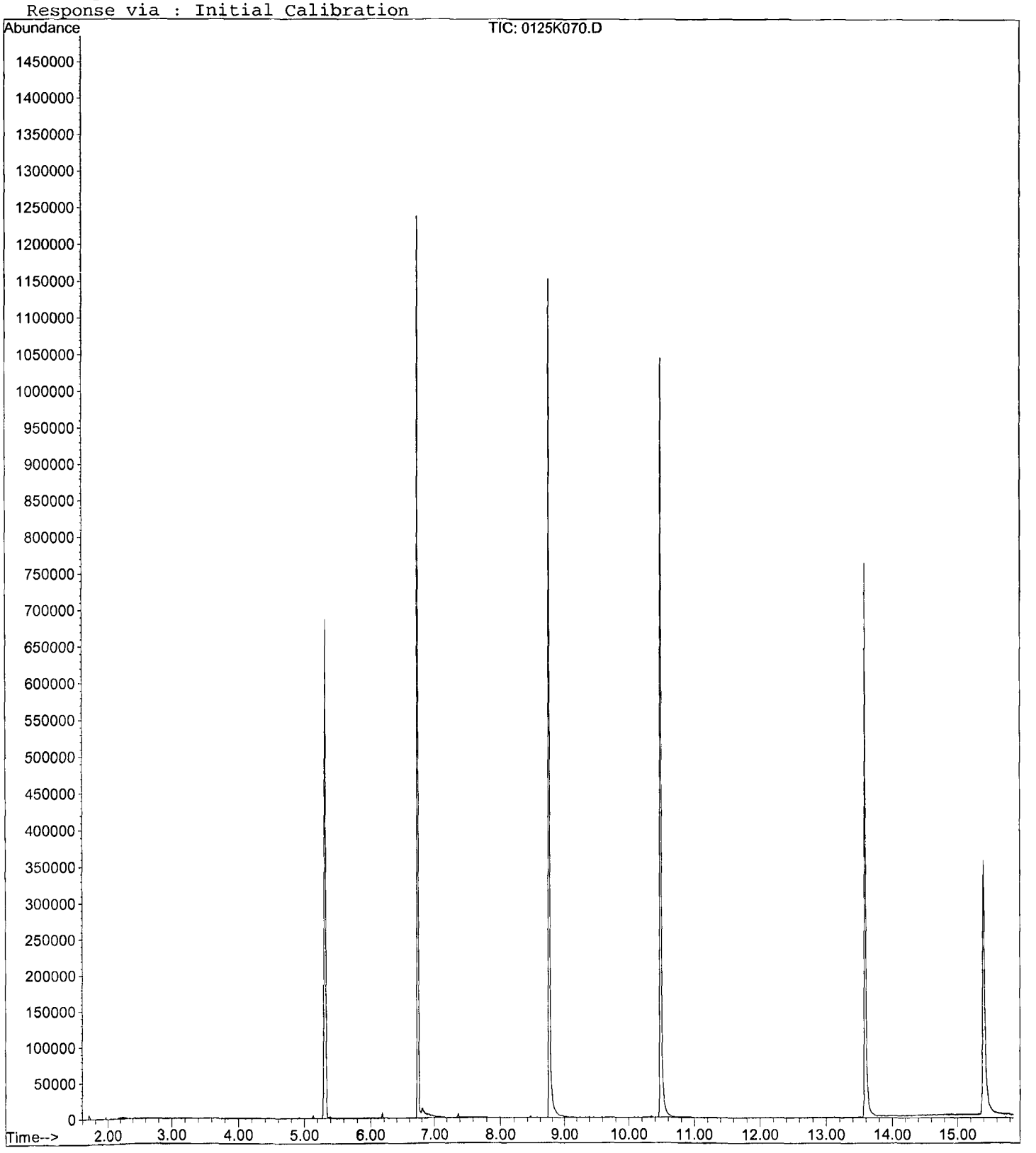
(#) = qualifier out of range (m) = manual integration
0125K070.D KMEE0125.M Wed Feb 03 14:15:24 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K070.D Vial: 70
Acq On : 2 Feb 21 17:28 Operator:
Sample : BA26163W11 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 17:46 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K059.D Vial: 59
Acq On : 2 Feb 21 12:32 Operator:
Sample : 210201A BLK 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	204607	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

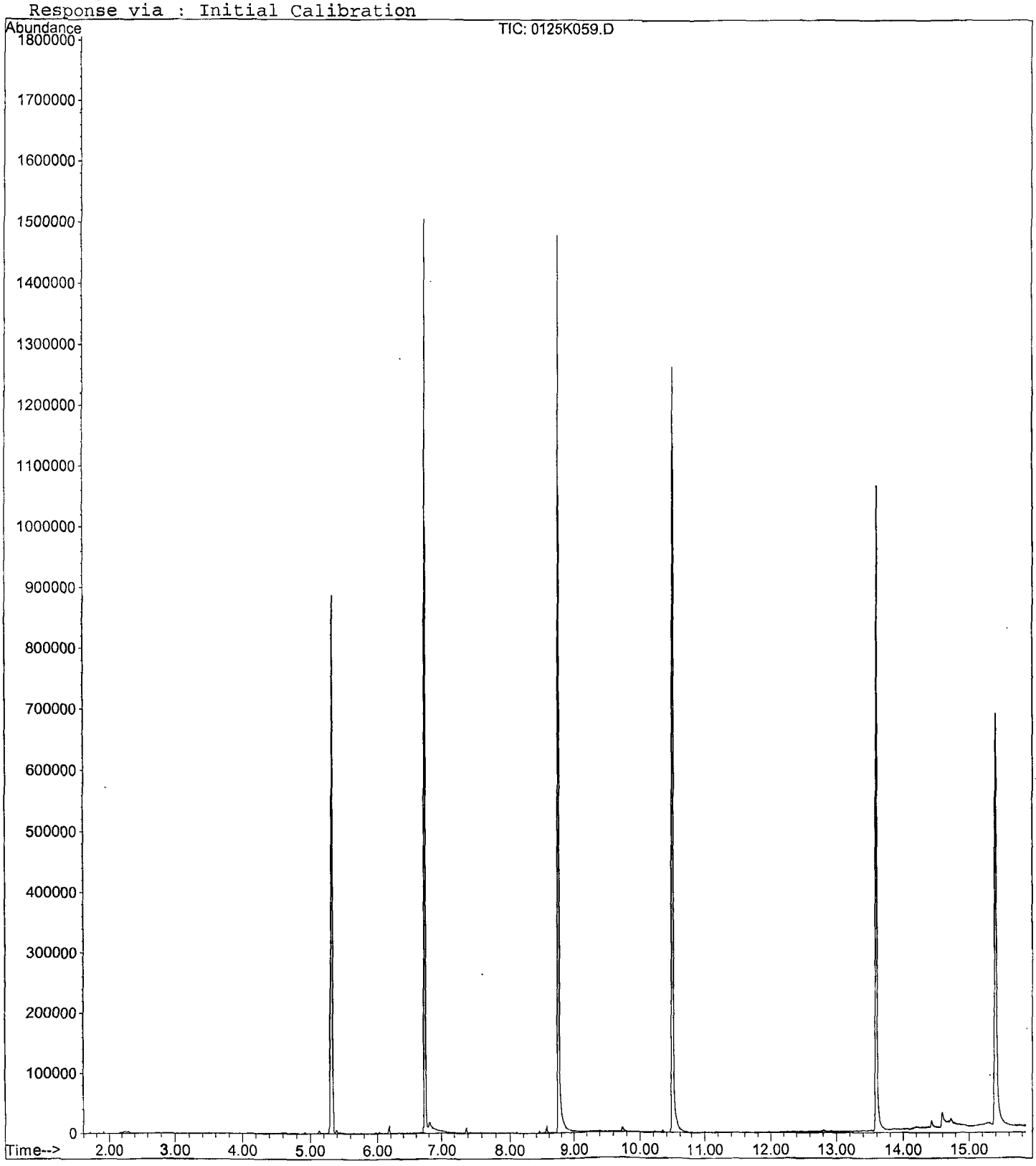
(#) = qualifier out of range (m) = manual integration
0125K059.D KMEE0125.M Wed Feb 03 14:14:32 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K059.D Vial: 59
Acq On : 2 Feb 21 12:32 Operator:
Sample : 210201A BLK 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\KYLO\DATA\210125M\0125K060.D Vial: 60
Acq On : 2 Feb 21 12:53 Operator:
Sample : 210201A LCS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

Quant Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.32	152	183301	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.58	45	86452	73.36063	ppb	97

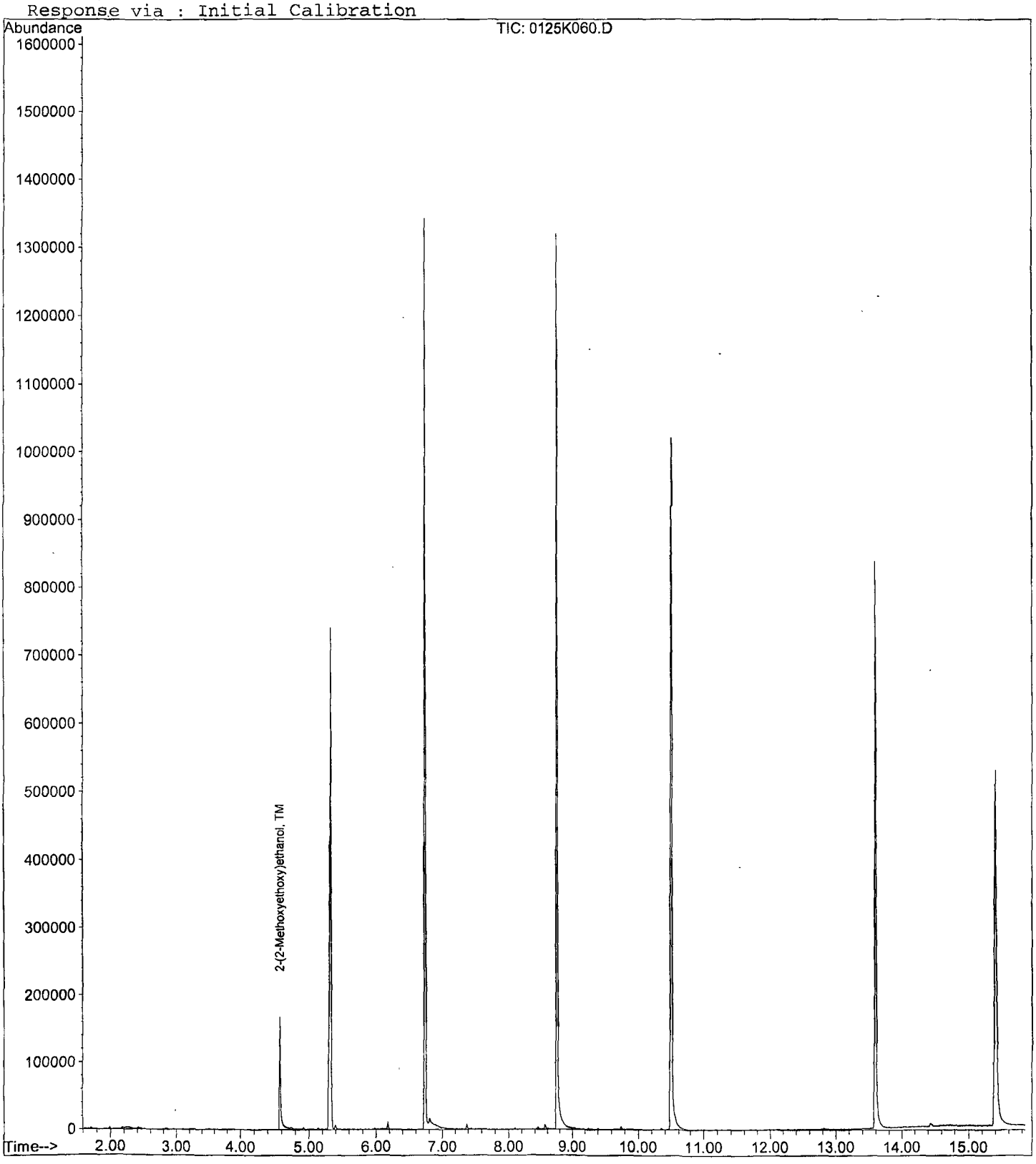
(#) = qualifier out of range (m) = manual integration
0125K060.D KMEE0125.M Wed Feb 03 14:14:40 2021 Page 1

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K060.D Vial: 60
Acq On : 2 Feb 21 12:53 Operator:
Sample : 210201A LCS-1 2/500 Inst : KYLO
Misc : Multiplr: 1.00

Quant Time: Feb 2 13:54 2021 Quant Results File: KMEE0125.RES

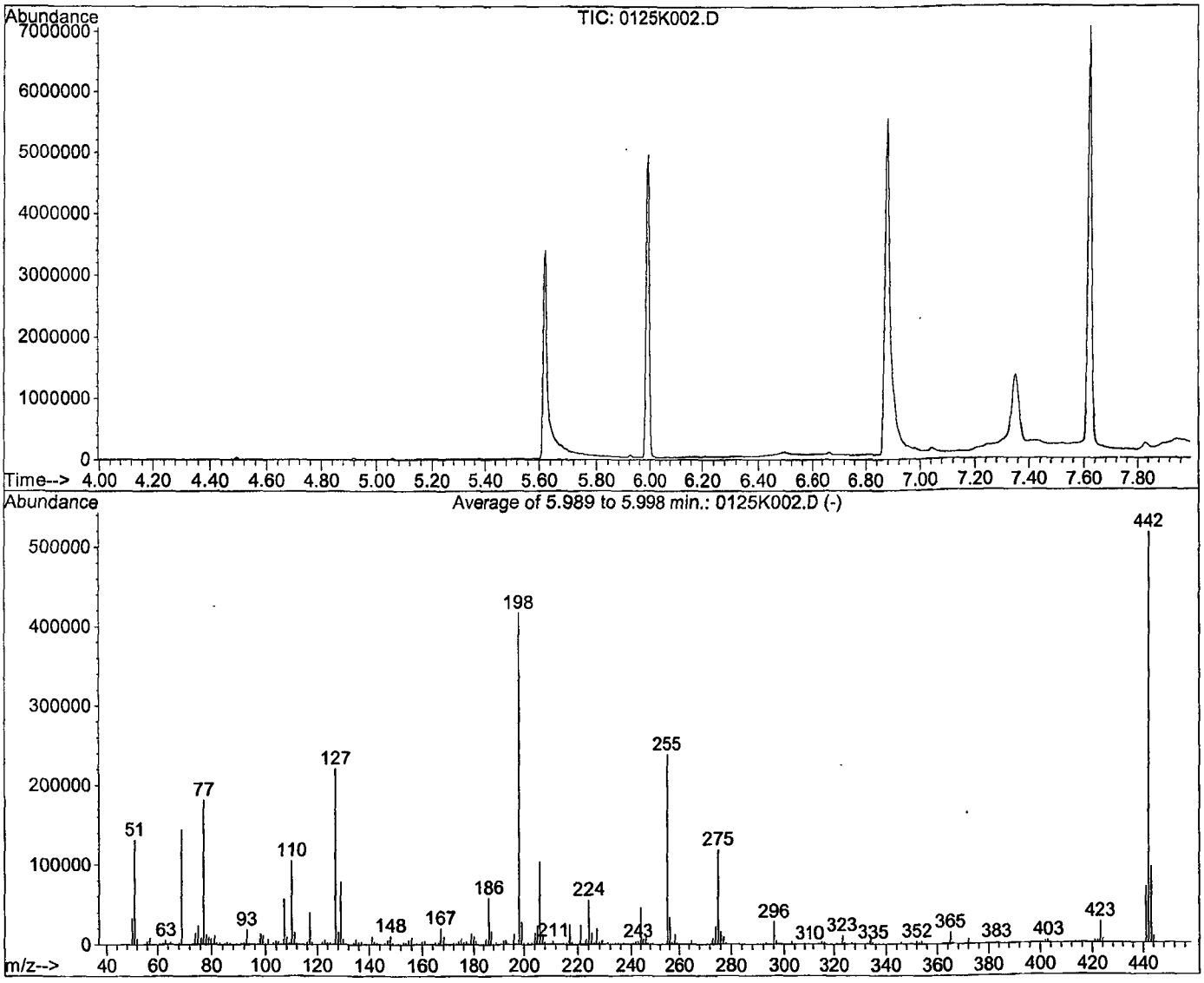
Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Jan 29 09:50:24 2021
Response via : Initial Calibration



DFTPP

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 516, 517, 518; Background Corrected with Scan 509

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.5	131252	PASS
68	69	0.00	2	1.8	2588	PASS
70	69	0.00	2	0.3	486	PASS
127	198	10	80	53.0	220878	PASS
197	198	0.00	2	0.3	1244	PASS
198	198	100	100	100.0	416597	PASS
199	198	5	9	6.6	27562	PASS
275	198	10	60	28.5	118725	PASS
365	198	1	100	3.5	14698	PASS
441	442	0.01	24	13.7	70760	PASS
442	198	50	500	124.2	517227	PASS
443	442	15	24	18.4	95376	PASS

Data File Name:	**0125K002.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**25 Jan 2021 12:32**
Method File:	**KMEE0125.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**2**
Instrument Name:	**KYLO**

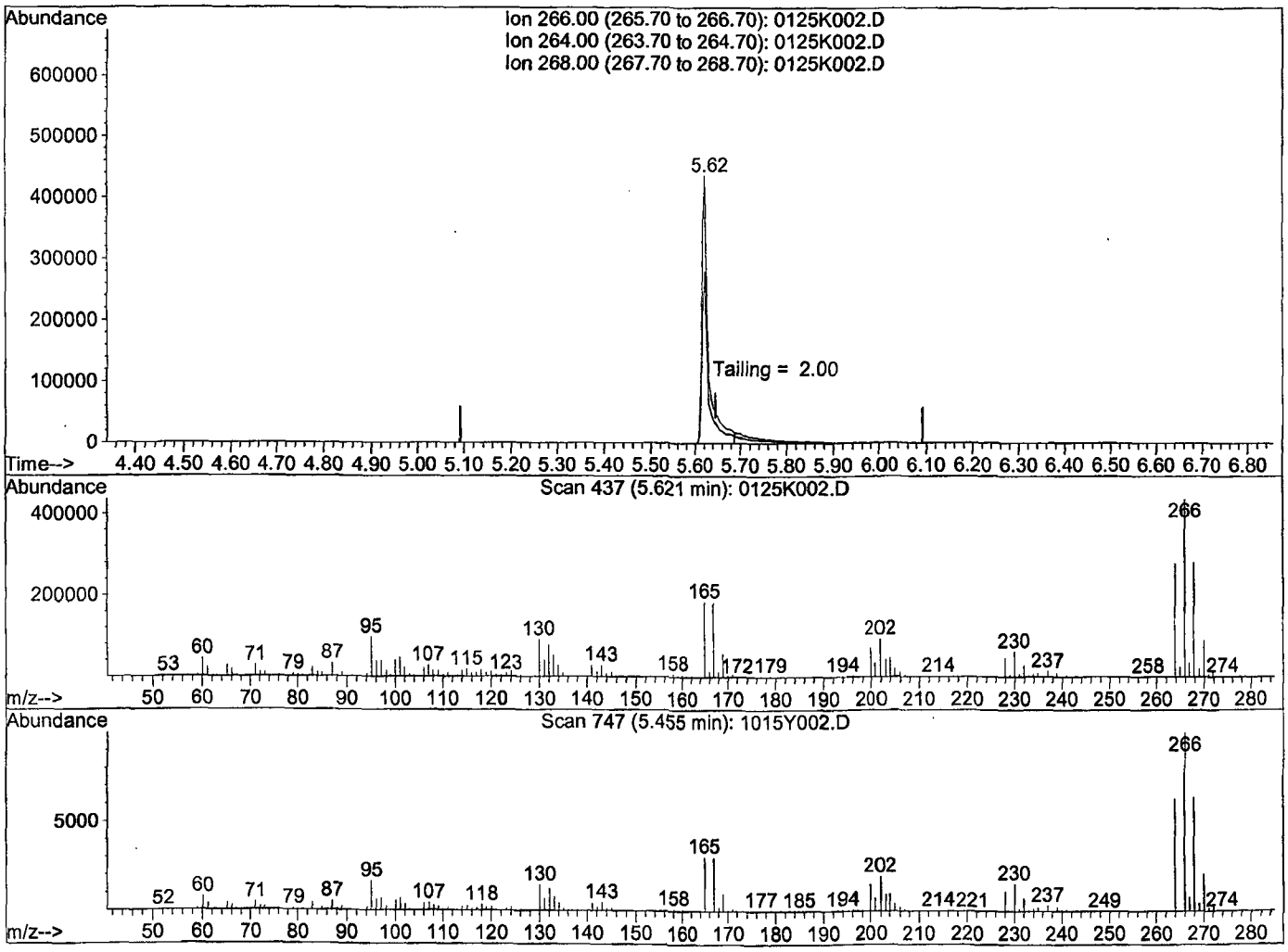
#	Name	Ret Time	Target Response
1)	DDT	7.62	72337400
2)	DDD	7.36	0
3)	DDE	6.09	0

Breakdown **0.00**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(5) Pentachlorophenol

5.62min 0.0000

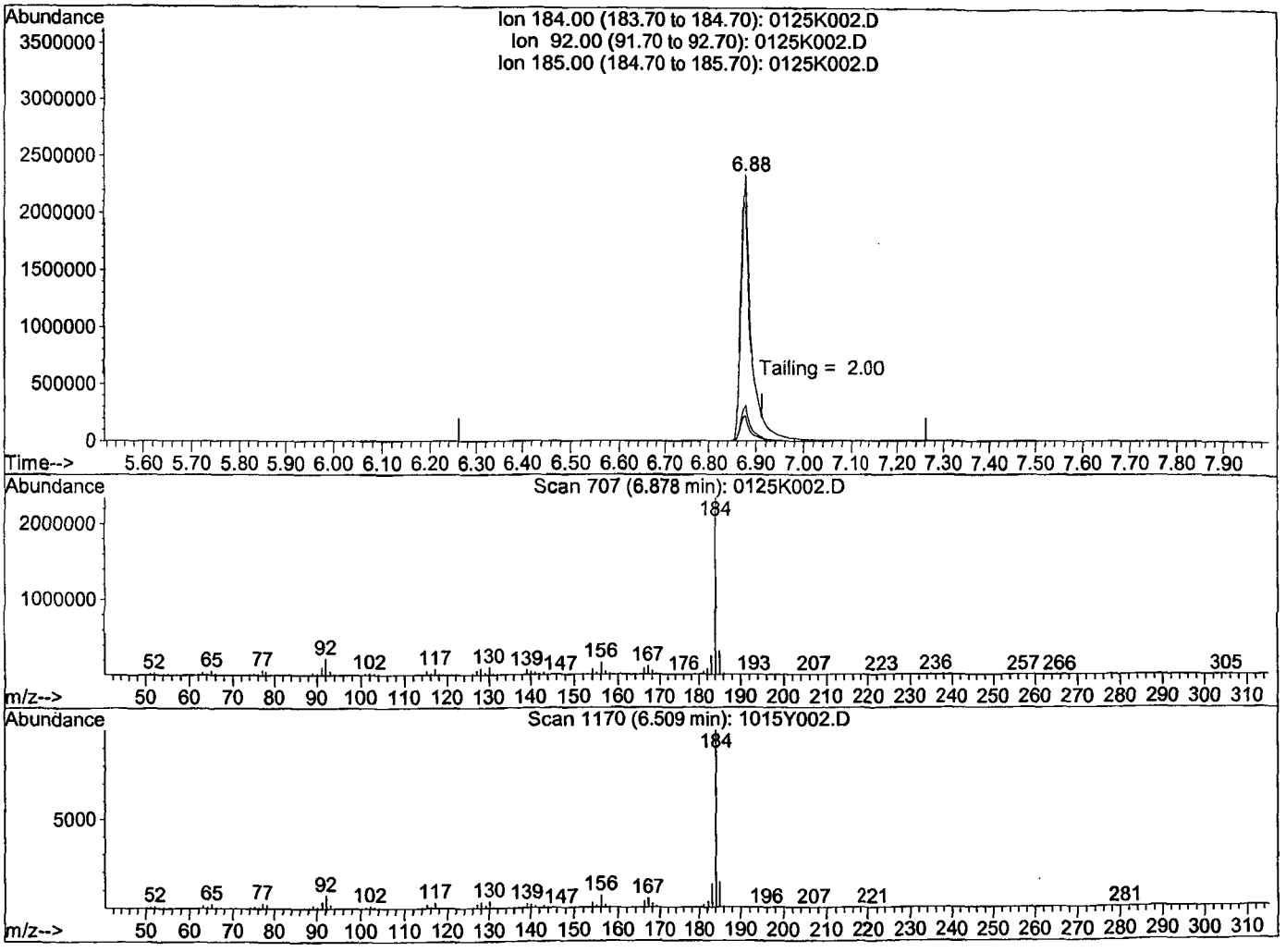
response 5133644

Ion	Exp%	Act%
266.00	100	100
264.00	61.70	53.35
268.00	63.80	61.71
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K002.D Vial: 2
Acq On : 25 Jan 21 12:32 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Jan 25 12:50 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Jan 25 12:49:50 2021
Response via : Single Level Calibration



TIC: 0125K002.D

(6) Benzidine

6.88min 0.0000

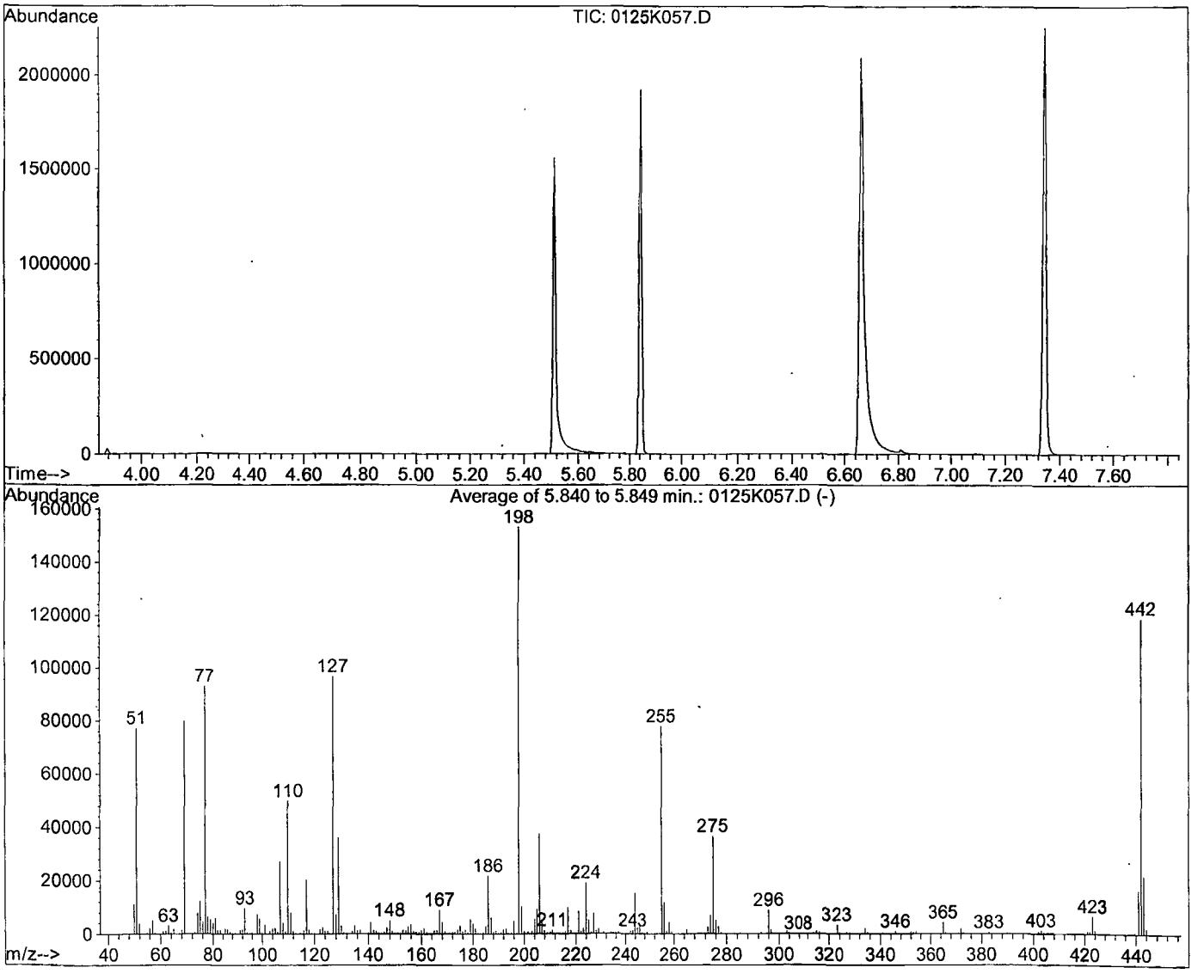
response 34626758

Ion	Exp%	Act%
184.00	100	100
92.00	9.70	9.48
185.00	14.10	13.06
0.00	0.00	0.00

DFTPP

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 10:51 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00

Method : M:\KYLO\DATA\210125M\KMEE0125.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 484, 485, 486; Background Corrected with Scan 479

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	50.3	77133	PASS
68	69	0.00	2	1.8	1405	PASS
70	69	0.00	2	0.4	325	PASS
127	198	10	80	63.1	96747	PASS
197	198	0.00	2	0.2	286	PASS
198	198	100	100	100.0	153243	PASS
199	198	5	9	6.6	10184	PASS
275	198	10	60	23.8	36488	PASS
365	198	1	100	2.7	4210	PASS
441	442	0.01	24	13.7	16277	PASS
442	198	50	500	77.5	118739	PASS
443	442	15	24	18.2	21634	PASS

Data File Name:	**0125K057.D**
Data File Path:	**M:\KYLO\DATA\210125M**
Operator:	
Date Acquired:	**2 Feb 21 11:37**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/02/20**
Vial Number:	**57**
Instrument Name:	**KYLO**

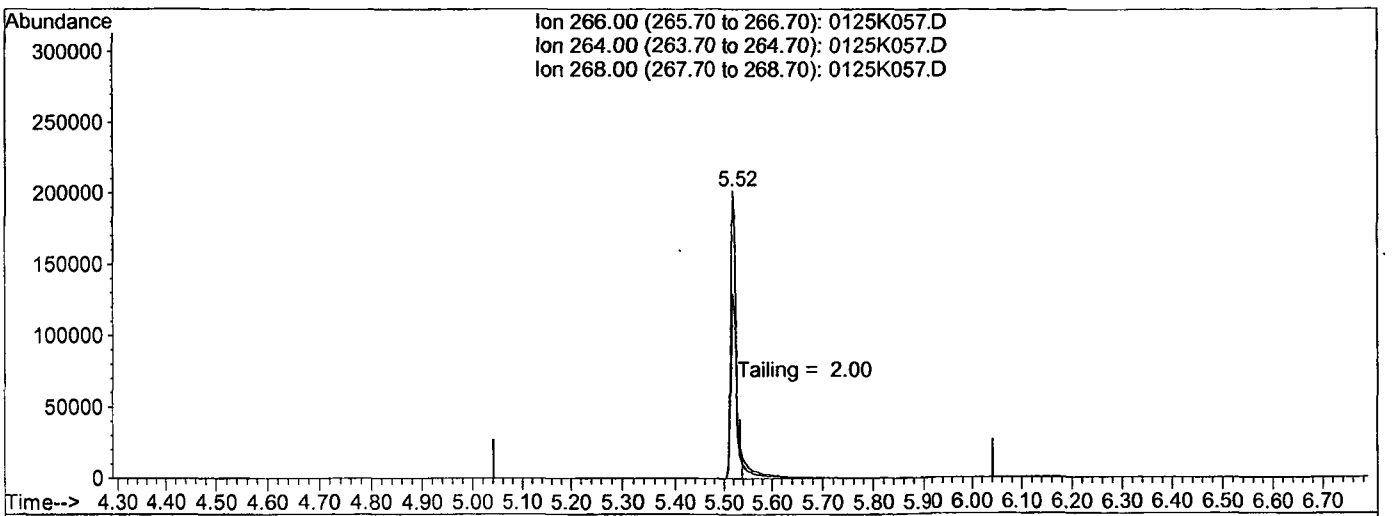
#	Name	Ret Time	Target Response
1)	DDT	7.43	24084700
2)	DDD	7.19	0
3)	DDE	6.09	184408

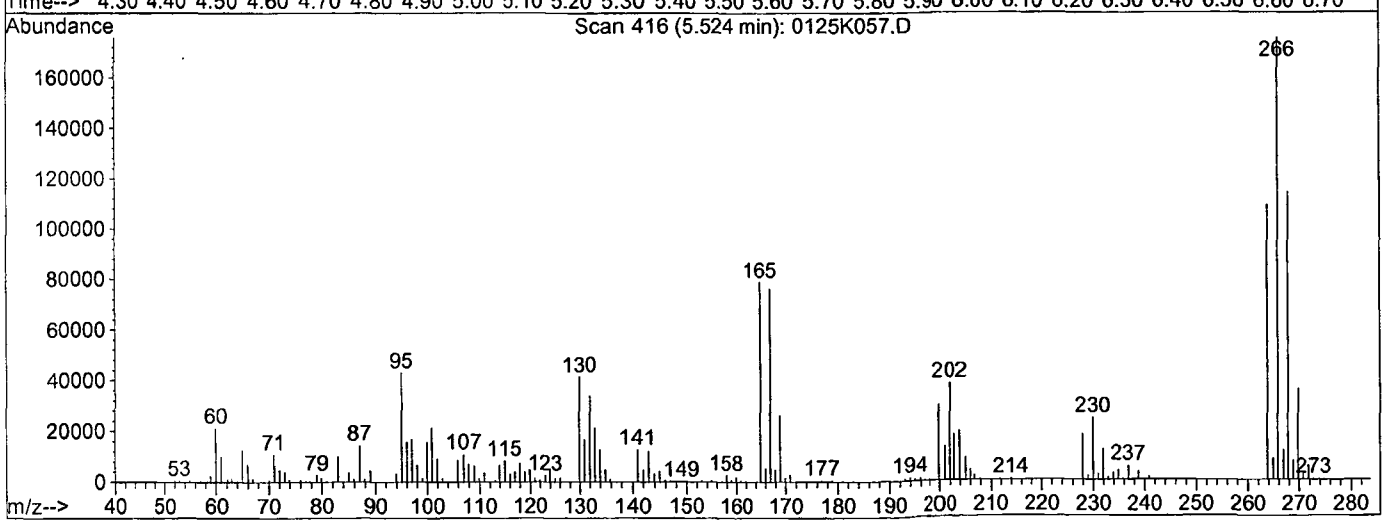
Breakdown **0.76**

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 11:37 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Feb 2 12:06 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K057.D

(5) Pentachlorophenol

5.52min 0.0000

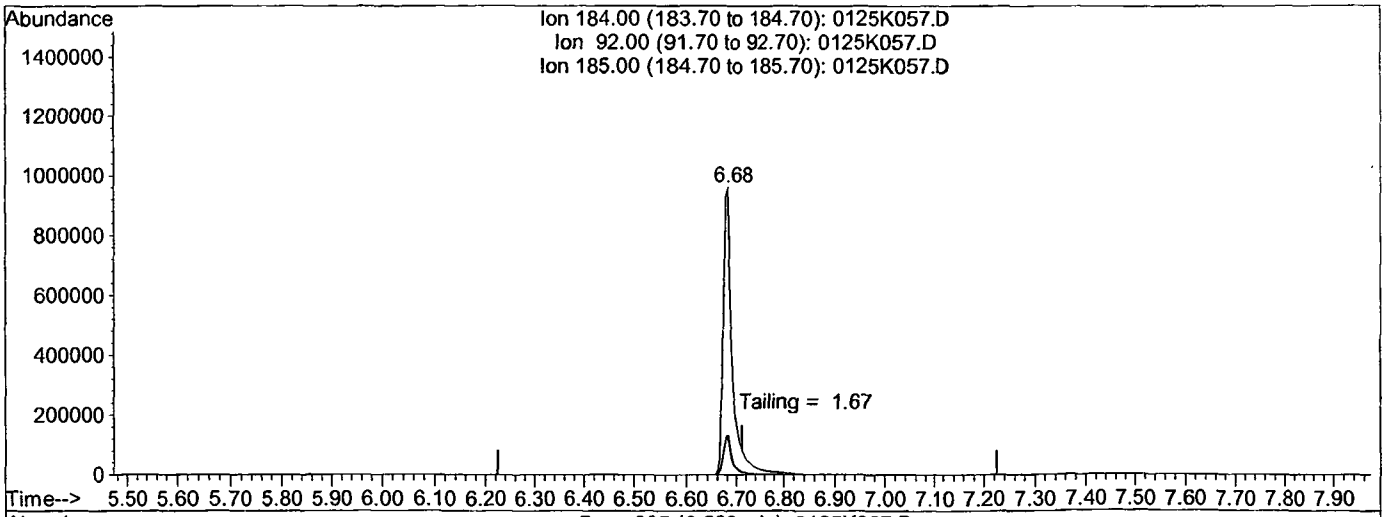
response 1764537

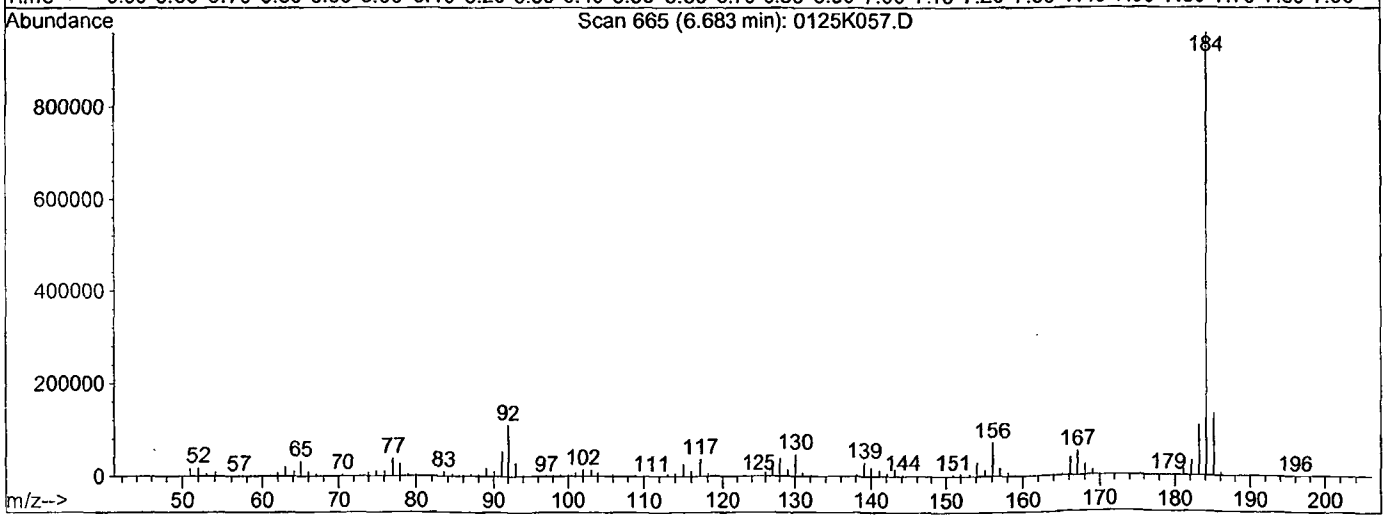
Ion	Exp%	Act%
266.00	100	100
264.00	62.70	60.36
268.00	65.00	62.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\KYLO\DATA\210125M\0125K057.D Vial: 57
Acq On : 2 Feb 21 11:37 Operator:
Sample : SV TUNE 10/02/20 Inst : KYLO
Misc : Multiplr: 1.00
Quant Time: Feb 2 12:06 2021 Quant Results File: temp.res

Method : M:\KYLO\DATA\210125M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Jan 26 10:15:43 2021
Response via : Single Level Calibration





TIC: 0125K057.D

(6) Benzidine

6.68min 0.0000

response 12838216

Ion	Exp%	Act%
184.00	100	100
92.00	9.50	12.23
185.00	13.40	14.00
0.00	0.00	0.00

Name of Final Standard: MEE Curve
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/06/19	04/25/21	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep Date: 05/01/20
Exp Date: 03/03/21
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	11/06/19	10/28/21	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	*	*	*

Name of Final Standard	8270 Internal Standard Ampules (3)
Prep Date	03/03/20
Exp Date	07/31/25

Prep'd By (Initials) JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**AO157142-49871,872,873**	**07/31/25**	3 mL	3 mL	**NA**	2000ug/mL

Name of Final Standard **2MEE Second Source Stock** **Prep'd By (Initials)** **JP**

Prep Date **10/28/19**
Exp Date **10/28/21**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water. Final concentration is 2000ug/L

Name of Final Standard: Diethylene Glycol

Prep'd By (Initials): MA

Prep Date: 11/05/19

Exp Date: 04/25/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**04/25/21**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

This Standard is compared with the second source on 1/25/21. The expiration date is extended to 4/25/21.

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	210201A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	2MEE Stock 01-20-21 01-20-22		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	02/01/21 9:00	
Spiked ID 8			Ext. End Time:	02/02/21 7:30	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 02/01/21 **Witnessed By:** YL **Date** 02/01/21

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	210201A Blk				NA	NA equip	500	2	7	02/01/21 9:00	
2	210201A LCS-1		0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	
3	BA26001 MS-1	BA26001W17	0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	94899
4	BA26001 MSD-1	BA26001W19	0.040	1	NA	NA equip	500	2	7	02/01/21 9:00	94899
5	BA26001	BA26001W14			NA	NA equip	500	2	7	02/01/21 9:00	94899
6	BA26003	BA26003W05			NA	NA equip	500	2	7	02/01/21 9:00	94899
7	*BA26006*	*BA26006W11*			NA	NA equip	500	2	7	02/01/21 9:00	94899
8	BA26008	BA26008W06			NA	NA equip	500	2	7	02/01/21 9:00	94899
9	BA26013	BA26013W11			NA	NA equip	500	2	7	02/01/21 9:00	94899
10	BA26016	BA26016W10			NA	NA equip	500	2	7	02/01/21 9:00	94899
11	BA26160	BA26160W11			NA	NA equip	500	2	7	02/01/21 9:00	94920
12	BA26163	BA26163W11			NA	NA equip	500	2	7	02/01/21 9:00	94920

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	047266-EY
PH Strip	hc025486
Dicholormethane	60182
Methanol	60268
Di Water	2-1-21
MeOH:DCM MIX	1-27-21

Extraction COC Transfer	
Extraction lab employee Initials	YL
GC analyst's initials	MA
Date	2/2/21
Time	10:30
Refrigerator	Hobart

	Technician's Initials
Scanned By	YL
Sample Preparation	YL
Extraction	YL
Concentration	YL,KY

Modified	02/01/21 1:26:25 PM

Reviewed By: **Date**

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 1-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: **Date**

02/15/21 10:22:27 AM Ext_ID 64996 Page 1 of 1

Injection Log

Directory: M:\KYLO\DATA\210125M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0125K002.D	1	SV TUNE 10/02/20		25 Jan 21 12:32
3	0125K003.D	1	2MEE 500 5/1/20		25 Jan 21 12:45
4	0125K004.D	1	2MEE 50 5/1/20		25 Jan 21 13:07
5	0125K005.D	1	2MEE 100 5/1/20		25 Jan 21 13:27
6	0125K006.D	1	2MEE 200 5/1/20		25 Jan 21 13:54
7	0125K007.D	1	2MEE 400 5/1/20		25 Jan 21 14:14
8	0125K008.D	1	2MEE 600 5/1/20		25 Jan 21 14:35
9	0125K009.D	1	2MEE 800 5/1/20		25 Jan 21 14:56
10	0125K010.D	1	2MEE 1000 5/1/20		25 Jan 21 15:17
11	0125K011.D	1	2MEE SS 5/1/20		25 Jan 21 15:38
57	0125K057.D	1	SV TUNE 10/02/20		2 Feb 21 11:37
58	0125K058.D	1	2 MEE 500 1/26/21 (2)		2 Feb 21 12:08
59	0125K059.D	1	210201A BLK 2/500		2 Feb 21 12:32
60	0125K060.D	1	210201A LCS-1 2/500		2 Feb 21 12:53
69	0125K069.D	1	BA26160W11 2/500		2 Feb 21 17:07
70	0125K070.D	1	BA26163W11 2/500		2 Feb 21 17:28
71	0125K071.D	1	2 MEE 500 1/26/21 (1)		2 Feb 21 17:49

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
			0128M02.D	0128M03 D	0128M04.D	0128M05.D	0128M06.D	0128M07.D	0128M08.D	0128M09.D	0128M10 D							
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.0817	0.0881	0.0724	0.0592	0.0664	0.0878	0.0822	0.0782		0.08	13	TM			
4	TM	Freon 114		0.0617	0.0642	0.0667	0.0441	0.0549	0.0586	0.0668	0.0694		0.06	14	TM			
5	TM**	Chloromethane		0.1269	0.1029	0.0927	0.0963	0.0905	0.0959	0.0937	0.0903		0.10	12	TM**			
6	TM*	Vinyl chloride		0.0978	0.1049	0.0914	0.0890	0.0845	0.0882	0.0898	0.0910		0.09	6.9	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TML	Bromomethane		0.0705	0.0468	0.0471	0.0410	0.0387	0.0372	0.0372	0.0355		0.04	26	TM	1.000		
9	TM	Chloroethane		0.0575	0.0580	0.0588	0.0555	0.0526	0.0524	0.0505	0.0398		0.05	12	TM			
10	TML	Dichlorofluoromethane		0.1586	0.1013	0.1001	0.0809	0.0924	0.0901	0.0963	0.1005		0.10	23	TM	0.999		
11	TM	Trichlorofluoromethane		0.1197	0.0972	0.1137	0.1130	0.1051	0.1144	0.1145	0.1143		0.11	6.3	TM			
12	TM	2,2-Dichloro-1,1,1-trifluoroethane													TM			
13	TM	Acrolein		0.0026	0.0023	0.0021	0.0025	0.0024	0.0025	0.0025	0.0025		0.00	6.6	TM			
14	TM	Acetone		0.0194	0.0229	0.0142	0.0191	0.0190	0.0193	0.0179	0.0183		0.02	13	TM			
15	TML	Freon-113		0.0353	0.0314	0.0237	0.0171	0.0203	0.0208	0.0214	0.0223		0.02	26	TM	1.000		
16	TM	Acetonitrile		0.0091	0.0090	0.0083	0.0084	0.0083	0.0087	0.0086	0.0085		0.01	3.7	TM			
17	TM	2-propanol													TM			
18	TM*	1,1-DCE		0.1307	0.1194	0.1100	0.0951	0.0957	0.1027	0.1091	0.1060		0.11	11	TM*			
19	TM	t-Butanol		0.0055	0.0054	0.0060	0.0054	0.0060	0.0064	0.0067			0.01	8.8	TM			
20	TML	Methyl Acetate			0.1145	0.0452	0.0595	0.0493	0.0516	0.0499	0.0507		0.06	41	TM	1.000		
21	TML	Iodomethane		0.0759	0.0645	0.0802	0.0748	0.0957	0.1051	0.1136	0.1143		0.09	21	TM	1.000		
22	TML	Acrylonitrile			0.0054	0.0045	0.0027	0.0031	0.0300	0.0280	0.0268		0.01	91	TM	0.990		
23	TM	2-Methylpentane													TM			
24	TML	Methylene chloride		0.1787	0.1391	0.1026	0.0772	0.0769	0.0826	0.0818	0.0777		0.10	37	TM	1.000		
25	TM	Carbon disulfide		0.1538	0.1518	0.1408	0.1209	0.1370	0.1354	0.1411	0.1395		0.14	7.3	TM			
26	TM	Methyl t-butyl ether (MtBE)		0.2756	0.2191	0.2197	0.1930	0.2265	0.2206	0.2187	0.2194		0.22	10	TM			
27	TM	Trans-1,2-DCE		0.1191	0.0990	0.0979	0.0799	0.0848	0.0891	0.0913	0.0877		0.09	13	TM			
28	TM	3-Methylpentane													TM			
29	TM	Diisopropyl Ether		0.2609	0.2700	0.2602	0.2257	0.2584	0.2562	0.2578	0.2508		0.26	5.1	TM			
30	TM**	1,1-DCA		0.1695	0.1565	0.1488	0.1277	0.1333	0.1464	0.1470	0.1453		0.15	8.8	TM**			
31	TM	Vinyl Acetate													TM			
32	TM	Ethyl tert Butyl Ether		0.2436	0.2210	0.2113	0.1879	0.2247	0.2294	0.2301	0.2308		0.22	7.5	TM			
33	TML	Methylcyclopentane													TM			
34	TM	MEK (2-Butanone)		0.0218	0.0251	0.0261	0.0247	0.0264	0.0261	0.0254	0.0252		0.03	5.8	TM			
35	TML	Cis-1,2-DCE		0.1387	0.1035	0.1045	0.0826	0.0912	0.0943	0.0989	0.0950		0.10	17	TM	1.000		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	2,2-Dichloropropane		0.1413	0.1438	0.1325	0.1136	0.1119	0.1218	0.1226	0.1197		0.13	9.6	TM			
37	TM*	Chloroform		0.1977	0.1560	0.1528	0.1304	0.1398	0.1472	0.1520	0.1487		0.15	13	TM*			
38	TM	Bromochloromethane		0.0834	0.0726	0.0651	0.0568	0.0600	0.0678	0.0692	0.0670		0.07	12	TM			
39	SL	Dibromofluoromethane(S)	0.3233	0.2998	0.2270	0.2652	0.2095	0.2195	0.1967	0.1990	0.1763		0.24	21	S	0.996		
40	TM	1,1,1-TCA		0.1514	0.1662	0.1368	0.1179	0.1216	0.1276	0.1351	0.1339		0.14	12	TM			
41	TML	Cyclohexane		0.1003	0.0674	0.0661	0.0466	0.0603	0.0588	0.0608	0.0624		0.07	24	TM	1.000		
42	TM	1,1-Dichloropropene		0.1356	0.1111	0.1163	0.0973	0.0987	0.1045	0.1064	0.1038		0.11	11	TM			
43	TML	2,2,4-Trimethylpentane		0.1767	0.2038	0.1676	0.1155	0.1467	0.1590	0.1733	0.1831		0.17	16	TM	0.999		
44	SL	1,2-DCA-D4(S)	0.3286	0.3183	0.2362	0.2862	0.2241	0.2397	0.2200	0.2286	0.2145		0.26	17	S	0.999		
45	TM	Carbon Tetrachloride		0.1391	0.1239	0.1197	0.1012	0.1127	0.1149	0.1216	0.1179		0.12	9.0	TM			
46	TM	Tert Amyl Methyl Ether		0.1974	0.1769	0.1805	0.1436	0.1777	0.1861	0.1807	0.1911		0.18	8.9	TM			
47	TM	1,2-DCA		0.1335	0.1235	0.1095	0.0985	0.1001	0.1103	0.1090	0.1065		0.11	11	TM			
48	TM	Benzene		0.4267	0.3647	0.3409	0.2990	0.3075	0.3309	0.3386	0.3273		0.34	12	TM			
49	TM	TCE		0.1125	0.1047	0.0858	0.0826	0.0892	0.0940	0.0958	0.0926		0.09	10	TM			
50	TM	2-Pentanone		0.0416	0.0413	0.0429	0.0436	0.0452	0.0475	0.0455	0.0437		0.04	4.8	TM			
51	TM*	1,2-Dichloropropane		0.0530	0.0465	0.0407	0.0391	0.0434	0.0410	0.0442	0.0429		0.04	9.9	TM*			
52	TM	Bromodichloromethane		0.1384	0.1234	0.1189	0.1006	0.1044	0.1154	0.1191	0.1159		0.12	9.9	TM			
53	TM	Methyl Cyclohexane		0.1515	0.1231	0.1181	0.0899	0.1053	0.1112	0.1179	0.1196		0.12	15	TM			
54	TM	Dibromomethane		0.0599	0.0512	0.0505	0.0427	0.0476	0.0519	0.0505	0.0491		0.05	9.5	TM			
55	TML	MIBK (methyl isobutyl ketone)		0.0371	0.0454	0.0482	0.0528	0.0578	0.0608	0.0587	0.0633		0.05	17	TM	0.996		
56	TM	1-Bromo-2-chloroethane			0.0179	0.0190	0.0133	0.0158	0.0162	0.0170	0.0173		0.02	11	TM			
57	TM	2-Chloroethyl vinyl ether													TM			
58	TM	Cis-1,3-Dichloropropene													TM			
59	TM*	Toluene		0.4063	0.3982	0.3646	0.3308	0.3448	0.3696	0.3777	0.3673		0.37	6.8	TM*			
60	TM	Trans-1,3-Dichloropropene		0.1522	0.1241	0.1114	0.1018	0.1089	0.1232	0.1255	0.1258		0.12	13	TM			
61	TM	1,1,2-TCA		0.0838	0.0637	0.0630	0.0537	0.0566	0.0608	0.0599	0.0580		0.06	15	TM			
62	TML	2-Hexanone		0.0196	0.0276	0.0287	0.0311	0.0348	0.0397	0.0385	0.0422		0.03	23	TM	0.992		
63	I	Chlorobenzene-D5 (IS)																
64	SL	Toluene-D8(S)	1.389	1.567	1.104	1.337	1.038	1.110	0.9753	1.027	0.9346		1.2	19	S	0.998		
65	TM	1,2-EDB		0.1040	0.1011	0.0971	0.0836	0.0906	0.0965	0.0972	0.0927		0.10	6.7	TM			
66	TML	Tetrachloroethene		0.1053	0.0848	0.0676	0.0681	0.0679	0.0738	0.0759	0.0706		0.08	17	TM	0.999		
67	TM	1-Chlorohexane		0.1741	0.1262	0.1195	0.1131	0.1299	0.1290	0.1384	0.1356		0.13	14	TM			
68	TM	1,1,1,2-Tetrachloroethane		0.1404	0.1417	0.1096	0.1072	0.1101	0.1213	0.1245	0.1200		0.12	11	TM			
69	TM	m&p-Xylene		0.2361	0.2315	0.2228	0.1996	0.2078	0.2249	0.2256	0.2127		0.22	5.6	TM			
70	TM	o-Xylene		0.2626	0.2565	0.2258	0.1900	0.2121	0.2208	0.2287	0.2156		0.23	10	TM			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Water Instrument: Max
Initials: CH

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	Styrene		0.3733	0.3535	0.3474	0.3152	0.3416	0.3744	0.3797	0.3680		0.36	6.1	TM			
72	SL	4-Bromofluorobenzene(S)	0.5733	0.6541	0.4599	0.5424	0.4320	0.4606	0.4017	0.4195	0.3932		0.48	18	S	0.999		
73	TM	1,3-Dichloropropane		0.1409	0.1629	0.1601	0.1341	0.1360	0.1487	0.1493	0.1419		0.15	7.2	TM			
74	TM	Dibromochloromethane		0.1330	0.1256	0.1206	0.1034	0.1145	0.1216	0.1213	0.1168		0.12	7.2	TM			
75	TM**	Chlorobenzene		0.3889	0.3453	0.3330	0.2810	0.3119	0.3289	0.3347	0.3164		0.33	9.3	TM**			
76	TM*	Ethylbenzene		0.6053	0.5505	0.5014	0.4557	0.4795	0.5130	0.5326	0.5049		0.52	8.9	TM*			
77	TM**	Bromoform		0.1173	0.0960	0.0914	0.0846	0.0900	0.0990	0.0977	0.0987		0.10	10.0	TM**			
78	I	1,4-Dichlorobenzene-D (IS)																
79	TML	Isopropylbenzene		1.503	1.331	1.253	0.9831	0.9717	0.9550	0.9426	0.8050		1.1	22	TM	0.996		
80	TM**L	1,1,2,2-Tetrachloroethane		0.3050	0.2916	0.2208	0.1867	0.1725	0.1756	0.1634	0.1599		0.21	28	TM**	1.000		
81	TML	1,2,3-Trichloropropane			0.0931	0.0906	0.0670	0.0659	0.0634	0.0622	0.0552		0.07	21	TM	0.998		
82	TM	t-1,4-Dichloro-2-Butene			0.0388	0.0323	0.0324	0.0323	0.0379	0.0308	0.0328		0.03	9.2	TM			
83	TML	Bromobenzene		0.5208	0.4709	0.4026	0.3198	0.3125	0.3019	0.2893	0.2545		0.36	26	TM	0.997		
84	TML	n-Propylbenzene		1.192	1.932	1.879	1.626	0.9754	1.010	1.010	0.8850		1.3	33	TM	0.997		
85	TML	4-Ethyltoluene		0.9170	0.8286	0.8912	0.7795	0.9290	0.8838	0.9125	0.8331		0.87	6.0	TM	0.999		
86	TML	2-Chlorotoluene			1.947	1.888	1.628	0.7488	0.6463	0.6347	0.5508		1.1	56	TM	0.994		
87	TM	1,3,5-Trimethylbenzene		0.8192	0.7571	0.7490	0.6399	0.7183	0.7621	0.7793	0.7023		0.74	7.3	TM			
88	TML	4-Chlorotoluene		0.9664	0.9646	0.8904	0.6992	0.7212	0.7334	0.7373	0.6451		0.79	16	TM	0.997		
89	TM	Tert-Butylbenzene		0.3950	0.3442	0.3300	0.2932	0.3521	0.3866	0.4178	0.3995		0.36	12	TM			
90	TM	1,2,4-Trimethylbenzene		0.6576	0.5813	0.5718	0.4852	0.5735	0.6559	0.7293	0.7016		0.62	13	TM			
91	TM	Sec-Butylbenzene		0.7355	0.7025	0.6646	0.6353	0.7149	0.7979	0.8924	0.8371		0.75	12	TM			
92	TML	p-Isopropyltoluene		0.5184	0.5025	0.4579	0.4526	0.5251	0.6311	0.7112	0.7287		0.57	19	TM	0.999		
93	TML	Benzyl Chloride			0.0926	0.0754	0.0971	0.1028	0.1410	0.1602	0.2017		0.12	36	TM	0.993		
94	TM	1,3-DCB		0.6453	0.5550	0.5201	0.4690	0.4947	0.5137	0.5228	0.4859		0.53	10	TM			
95	TM	1,4-DCB		0.6398	0.5771	0.5121	0.4428	0.4613	0.4954	0.5004	0.4843		0.51	13	TM			
96	TML	n-Butylbenzene		0.2219	0.2439	0.2543	0.2305	0.2819	0.3654	0.4277	0.4857		0.31	32	TM	0.996		
97	TM	1,2-DCB		0.4658	0.4268	0.4277	0.3580	0.4175	0.4738	0.4915	0.5026		0.45	11	TM			
98	TML	Hexachloroethane		0.2405	0.1917	0.1772	0.1652	0.1506	0.1468	0.1447	0.1357		0.17	20	TM	0.999		
99	TML	1,2-Dibromo-3-chloropropane			0.0299	0.0233	0.0269	0.0280	0.0347	0.0379	0.0401		0.03	20	TM	0.999		
100	TML	1,2,4-Trichlorobenzene			0.0553	0.0487	0.0493	0.0551	0.0847	0.1106	0.1311		0.08	44	TM	0.994		
101	TML	Hexachlorobutadiene			0.0704	0.0708	0.0721	0.0882	0.1132	0.1385	0.1592		0.10	35	TM	0.996		
102	TML	Naphthalene		0.2255	0.1808	0.1637	0.1549	0.1628	0.2069	0.2426	0.2832		0.20	22	TM	0.995		
103	TML	1,2,3-Trichlorobenzene			0.0742	0.0788	0.0568	0.0690	0.1010	0.1263	0.1446		0.09	35	TM	0.996		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.56	96	1849966	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1440324	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	420605	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.68	111	119602	4.18	ppb		0.00
Spiked Amount 25.000			Recovery =	16.708%			
44) 1,2-DCA-D4(S)	5.11	65	121587	5.11	ppb		0.00
Spiked Amount 25.000			Recovery =	20.424%			
64) Toluene-D8(S)	7.37	98	400207	3.81	ppb		0.00
Spiked Amount 25.000			Recovery =	15.256%			
72) 4-Bromofluorobenzene(S)	10.03	95	165161	4.05	ppb		0.00
Spiked Amount 25.000			Recovery =	16.200%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	1253	0.22	ppb		91
4) Freon 114	1.05	85	1244	0.28	ppb		79
5) Chloromethane	1.08	50	3054	0.42	ppb	#	71
6) Vinyl chloride	1.14	62	2181	0.32	ppb		94
8) Bromomethane	1.35	94	1307	-0.32	ppb		94
9) Chloroethane	1.43	64	1882	0.48	ppb	#	67
10) Dichlorofluoromethane	1.56	67	2580	0.99	ppb	#	74
11) Trichlorofluoromethane	1.60	101	3359	0.41	ppb		94
13) Acrolein	1.89	56	1455	8.10	ppb	#	48
14) Acetone	2.03	43	16534	11.90	ppb		97
15) Freon-113	2.00	103	573	0.82	ppb	#	64
16) Acetonitrile	2.25	41	6860	10.78	ppb	#	80
18) 1,1-DCE	1.98	61	3300	0.41	ppb	#	76
19) t-Butanol	2.59	59	3634	8.32	ppb	#	91
20) Methyl Acetate	2.33	43	7736	1.71	ppb	#	78
21) Iodomethane	2.09	142	1310	1.15	ppb	#	60
22) Acrylonitrile	2.72	53	184	2.64	ppb	#	57
24) Methylene chloride	2.40	84	7023	0.54	ppb	#	79
25) Carbon disulfide	2.15	76	4414	0.43	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	5553	0.33	ppb	#	71
27) Trans-1,2-DCE	2.69	96	3153	0.46	ppb	#	68
29) Diisopropyl Ether	3.35	45	6377	0.34	ppb		92
30) 1,1-DCA	3.16	63	4132	0.38	ppb	#	75
32) Ethyl tert Butyl Ether	3.87	59	4238	0.26	ppb	#	86
34) MEK (2-Butanone)	4.05	43	7021	3.78	ppb		88
35) Cis-1,2-DCE	3.97	96	3313	0.45	ppb	#	67
36) 2,2-Dichloropropane	3.95	77	4834	0.52	ppb		94
37) Chloroform	4.46	83	4310	0.38	ppb		80
38) Bromochloromethane	4.31	130	1570	0.31	ppb	#	65
40) 1,1,1-TCA	4.69	97	4584	0.45	ppb	#	90
41) Cyclohexane	4.77	41	2215	0.89	ppb	#	38
42) 1,1-Dichloropropene	4.95	75	2816	0.35	ppb	#	73
43) 2,2,4-Trimethylpentane	5.40	57	2517	1.34	ppb	#	48
45) Carbon Tetrachloride	4.93	117	3619	0.41	ppb		89
46) Tert Amyl Methyl Ether	5.45	73	3253	0.25	ppb	#	92
48) Benzene	5.19	78	8829	0.35	ppb		95
49) TCE	6.00	95	2952	0.42	ppb	#	81
50) 2-Pentanone	6.28	43	21838	6.72	ppb		89
51) 1,2-Dichloropropane	6.24	63	887	0.27	ppb	#	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	Bromodichloromethane	6.58	83	2960	0.34	ppb		93
53)	Methyl Cyclohexane	6.23	83	1917	0.22	ppb		99
54)	Dibromomethane	6.36	93	792	0.21	ppb		77
55)	MIBK (methyl isobutyl ket	7.30	43	10491	8.63	ppb	#	75
56)	1-Bromo-2-chloroethane	6.90	144	613	0.50	ppb	#	33
59)	Toluene	7.44	91	10289	0.38	ppb		82
60)	Trans-1,3-Dichloropropene	7.69	75	2619	0.29	ppb	#	80
61)	1,1,2-TCA	7.87	83	1396	0.30	ppb	#	39
62)	2-Hexanone	8.16	43	152	9.02	ppb	#	31
65)	1,2-EDB	8.34	107	1159	0.21	ppb	#	55
66)	Tetrachloroethene	8.01	164	1882	0.14	ppb		95
67)	1-Chlorohexane	8.90	91	2154	0.28	ppb	#	67
68)	1,1,1,2-Tetrachloroethane	8.96	131	2215	0.32	ppb		87
69)	m&p-Xylene	9.14	106	8641	0.68	ppb		94
70)	o-Xylene	9.53	106	3818	0.29	ppb		79
71)	Styrene	9.55	104	5584	0.27	ppb	#	88
73)	1,3-Dichloropropane	8.02	76	2275	0.27	ppb	#	81
74)	Dibromochloromethane	8.25	129	2505	0.36	ppb		98
75)	Chlorobenzene	8.87	112	6069	0.32	ppb	#	89
76)	Ethylbenzene	9.01	91	10538	0.35	ppb		99
77)	Bromoform	9.68	173	1914	0.34	ppb	#	70
79)	Isopropylbenzene	9.91	105	8148	-1.33	ppb		96
80)	1,1,2,2-Tetrachloroethane	10.19	83	1046	-0.58	ppb	#	69
81)	1,2,3-Trichloropropane	10.20	110	932	-0.99	ppb	#	53
82)	t-1,4-Dichloro-2-Butene	10.26	53	76	0.13	ppb	#	16
83)	Bromobenzene	10.16	156	2942	-1.27	ppb		96
84)	n-Propylbenzene	10.33	91	6822	-1.90	ppb		93
85)	4-Ethyltoluene	10.45	105	5491	-0.22	ppb	#	71
86)	2-Chlorotoluene	10.38	91	4490	-5.31	ppb	#	66
87)	1,3,5-Trimethylbenzene	10.52	105	3711	0.30	ppb	#	76
88)	4-Chlorotoluene	10.49	91	3575	-1.00	ppb		95
89)	Tert-Butylbenzene	10.82	119	1783	0.29	ppb		82
90)	1,2,4-Trimethylbenzene	10.87	105	2992	0.29	ppb	#	72
91)	Sec-Butylbenzene	11.04	105	3175	0.25	ppb		92
92)	p-Isopropyltoluene	11.19	119	2047	1.56	ppb	#	64
93)	Benzyl Chloride	11.35	91	119	3.64	ppb	#	15
94)	1,3-DCB	11.11	146	2541	0.29	ppb	#	63
95)	1,4-DCB	11.19	146	3223	0.37	ppb	#	72
96)	n-Butylbenzene	11.59	91	637	2.51	ppb	#	37
97)	1,2-DCB	11.55	146	1948	0.26	ppb	#	62
98)	Hexachloroethane	11.81	117	1280	-0.48	ppb	#	79
99)	1,2-Dibromo-3-chloropropan	12.32	157	45	1.87	ppb	#	16
100)	1,2,4-Trichlorobenzene	13.15	180	516	4.08	ppb	#	65
101)	Hexachlorobutadiene	13.35	225	284	3.29	ppb	#	50
102)	Naphthalene	13.38	128	897	2.63	ppb	#	68
103)	1,2,3-Trichlorobenzene	13.61	180	166	3.43	ppb	#	73

(#) = qualifier out of range (m) = manual integration

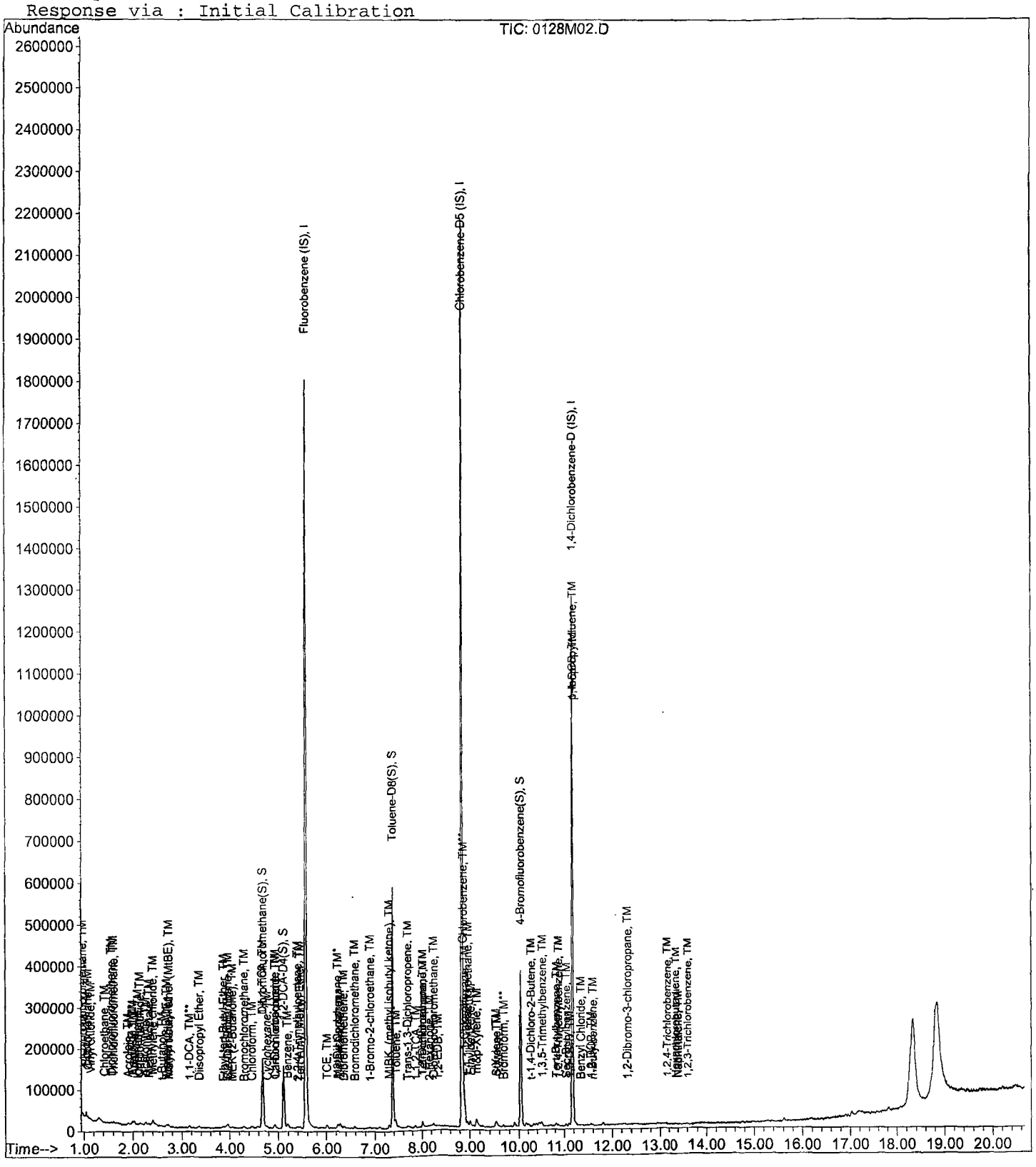
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M02.D
Acq On : 28 Jan 21 17:26
Sample : 0.3ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 2
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:10 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1703128	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1442379	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	506390	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	102134	3.50	ppb		0.00
Spiked Amount 25.000			Recovery = 13.980%				
44) 1,2-DCA-D4(S)	5.11	65	108428	4.86	ppb		0.00
Spiked Amount 25.000			Recovery = 19.440%				
64) Toluene-D8(S)	7.37	98	452170	4.79	ppb		0.00
Spiked Amount 25.000			Recovery = 19.164%				
72) 4-Bromofluorobenzene(S)	10.03	95	188679	5.11	ppb		0.00
Spiked Amount 25.000			Recovery = 20.424%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	2784	0.53	ppb	#	87
4) Freon 114	1.04	85	2102	0.51	ppb		96
5) Chloromethane	1.08	50	4324	0.64	ppb		97
6) Vinyl chloride	1.14	62	3330	0.53	ppb		91
8) Bromomethane	1.35	94	2401	0.18	ppb	#	69
9) Chloroethane	1.42	64	1960	0.54	ppb		93
10) Dichlorofluoromethane	1.56	67	5403	1.43	ppb		93
11) Trichlorofluoromethane	1.60	101	4078	0.54	ppb		79
13) Acrolein	1.90	56	4403	26.61	ppb	#	68
14) Acetone	2.03	43	13207	10.33	ppb		98
15) Freon-113	2.01	103	1204	1.27	ppb	#	69
16) Acetonitrile	2.25	41	15511	26.47	ppb		96
18) 1,1-DCE	1.99	61	4451	0.60	ppb	#	89
19) t-Butanol	2.59	59	9288	23.11	ppb		100
20) Methyl Acetate	2.34	43	2363	0.32	ppb	#	69
21) Iodomethane	2.10	142	2587	1.33	ppb	#	86
22) Acrylonitrile	2.71	53	166	2.64	ppb	#	82
24) Methylene chloride	2.41	84	6087	0.47	ppb		83
25) Carbon disulfide	2.15	76	5238	0.55	ppb		93
26) Methyl t-butyl ether (MtBE	2.73	73	9388	0.61	ppb	#	86
27) Trans-1,2-DCE	2.69	96	4058	0.64	ppb		94
29) Diisopropyl Ether	3.35	45	8887	0.51	ppb	#	90
30) 1,1-DCA	3.15	63	5772	0.58	ppb	#	96
32) Ethyl tert Butyl Ether	3.88	59	8297	0.55	ppb	#	79
34) MEK (2-Butanone)	4.05	43	14845	8.68	ppb		100
35) Cis-1,2-DCE	3.97	96	4725	0.70	ppb	#	74
36) 2,2-Dichloropropane	3.96	77	4814	0.56	ppb		97
37) Chloroform	4.47	83	6734	0.65	ppb		80
38) Bromochloromethane	4.31	130	2841	0.62	ppb		85
40) 1,1,1-TCA	4.71	97	5157	0.56	ppb		89
41) Cyclohexane	4.78	41	3416	1.22	ppb	#	57
42) 1,1-Dichloropropene	4.95	75	4618	0.62	ppb	#	75
43) 2,2,4-Trimethylpentane	5.40	57	6020	1.63	ppb	#	75
45) Carbon Tetrachloride	4.93	117	4738	0.58	ppb		98
46) Tert Amyl Methyl Ether	5.44	73	6725	0.55	ppb	#	94
47) 1,2-DCA	5.22	62	4549	0.60	ppb	#	72
48) Benzene	5.19	78	14534	0.62	ppb	#	91
49) TCE	6.02	95	3833	0.59	ppb		78
50) 2-Pentanone	6.28	43	70774	23.66	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

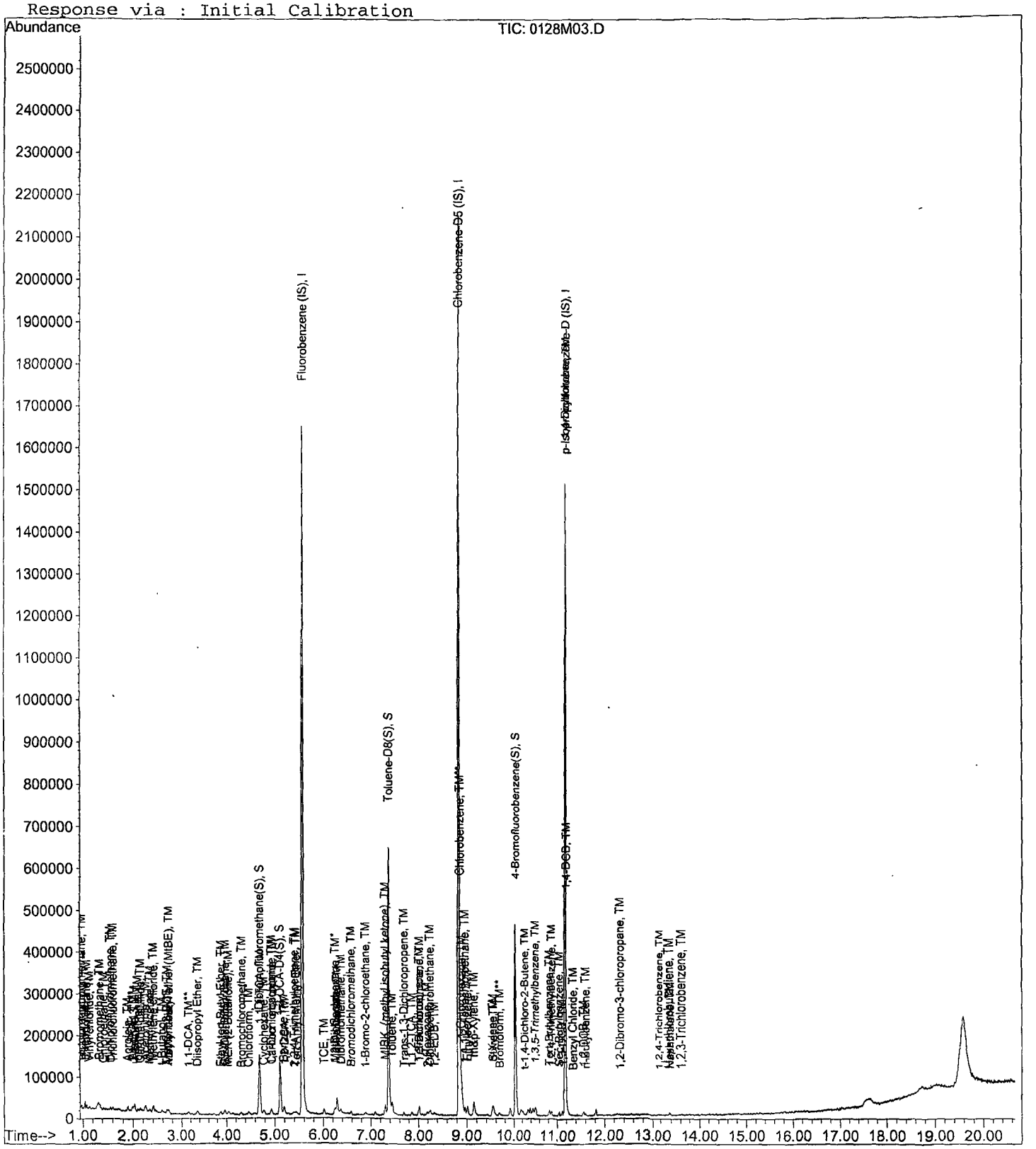
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	1805	0.60	ppb	#	72
52)	Bromodichloromethane	6.58	83	4715	0.59	ppb		96
53)	Methyl Cyclohexane	6.24	83	5159	0.65	ppb		78
54)	Dibromomethane	6.36	93	2040	0.59	ppb	#	68
55)	MIBK (methyl isobutyl ket	7.30	43	25261	12.08	ppb		98
56)	1-Bromo-2-chloroethane	6.89	144	760	0.67	ppb	#	50
59)	Toluene	7.44	91	13841	0.55	ppb		98
60)	Trans-1,3-Dichloropropene	7.70	75	5185	0.63	ppb	#	65
61)	1,1,2-TCA	7.87	83	2854	0.67	ppb	#	64
62)	2-Hexanone	8.19	43	13374	13.35	ppb	#	96
65)	1,2-EDB	8.34	107	2999	0.55	ppb	#	76
66)	Tetrachloroethene	8.01	164	3038	0.42	ppb		84
67)	1-Chlorohexane	8.90	91	5023	0.65	ppb	#	88
68)	1,1,1,2-Tetrachloroethane	8.96	131	4051	0.58	ppb		81
69)	m&p-Xylene	9.14	106	13622	1.07	ppb		87
70)	o-Xylene	9.52	106	7575	0.58	ppb		78
71)	Styrene	9.55	104	10770	0.52	ppb	#	84
73)	1,3-Dichloropropane	8.03	76	4066	0.48	ppb	#	77
74)	Dibromochloromethane	8.25	129	3837	0.56	ppb		99
75)	Chlorobenzene	8.87	112	11218	0.59	ppb	#	82
76)	Ethylbenzene	9.01	91	17462	0.58	ppb		91
77)	Bromoform	9.68	173	3384	0.61	ppb		82
79)	Isopropylbenzene	9.91	105	15219	-1.00	ppb	#	88
81)	1,2,3-Trichloropropane	10.22	110	1090	-1.02	ppb	#	31
82)	t-1,4-Dichloro-2-Butene	10.26	53	315	0.46	ppb		77
83)	Bromobenzene	10.16	156	5275	-0.93	ppb		86
84)	n-Propylbenzene	10.32	91	12074	-1.68	ppb		96
86)	2-Chlorotoluene	10.37	91	13312	-4.56	ppb		100
87)	1,3,5-Trimethylbenzene	10.51	105	8297	0.55	ppb		97
88)	4-Chlorotoluene	10.49	91	9788	-0.58	ppb		95
89)	Tert-Butylbenzene	10.81	119	4000	0.54	ppb		88
90)	1,2,4-Trimethylbenzene	10.87	105	6660	0.53	ppb		88
91)	Sec-Butylbenzene	11.04	105	7449	0.49	ppb		89
92)	p-Isopropyltoluene	11.19	119	5250	1.75	ppb	#	88
93)	Benzyl Chloride	11.33	91	355	3.69	ppb	#	61
94)	1,3-DCB	11.11	146	6535	0.61	ppb		93
95)	1,4-DCB	11.20	146	6480	0.62	ppb		93
96)	n-Butylbenzene	11.59	91	2247	2.66	ppb	#	78
97)	1,2-DCB	11.56	146	4718	0.52	ppb		90
98)	Hexachloroethane	11.82	117	2436	-0.15	ppb		79
99)	1,2-Dibromo-3-chloropropan	12.32	157	149	1.99	ppb	#	16
100)	1,2,4-Trichlorobenzene	13.16	180	638	4.08	ppb	#	63
101)	Hexachlorobutadiene	13.35	225	734	3.41	ppb	#	84
102)	Naphthalene	13.38	128	2284	2.84	ppb	#	54
103)	1,2,3-Trichlorobenzene	13.62	180	933	3.67	ppb	#	52

(#) = qualifier out of range (m) = manual integration

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1780184	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1490103	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	579540	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	161611	7.98	ppb		0.00
Spiked Amount 25.000			Recovery = 31.924%				
44) 1,2-DCA-D4(S)	5.11	65	168204	8.53	ppb		0.00
Spiked Amount 25.000			Recovery = 34.120%				
64) Toluene-D8(S)	7.37	98	657981	8.30	ppb		0.00
Spiked Amount 25.000			Recovery = 33.216%				
72) 4-Bromofluorobenzene(S)	10.03	95	274125	8.58	ppb		0.00
Spiked Amount 25.000			Recovery = 34.336%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	6270	1.14	ppb		95
4) Freon 114	1.04	85	4574	1.06	ppb		97
5) Chloromethane	1.08	50	7328	1.04	ppb		91
6) Vinyl chloride	1.15	62	7471	1.14	ppb		95
8) Bromomethane	1.34	94	3336	0.51	ppb		100
9) Chloroethane	1.42	64	4132	1.09	ppb	#	81
10) Dichlorofluoromethane	1.56	67	7215	1.65	ppb		91
11) Trichlorofluoromethane	1.61	101	6922	0.87	ppb	#	66
13) Acrolein	1.90	56	8316	48.08	ppb	#	68
14) Acetone	2.03	43	32650	24.42	ppb		98
15) Freon-113	2.02	103	2239	1.89	ppb	#	69
16) Acetonitrile	2.25	41	32085	52.39	ppb	#	93
18) 1,1-DCE	1.99	61	8505	1.10	ppb		92
19) t-Butanol	2.59	59	19124	45.52	ppb	#	89
20) Methyl Acetate	2.34	43	8153	1.91	ppb		96
21) Iodomethane	2.09	142	4592	1.56	ppb		95
22) Acrylonitrile	2.71	53	382	2.75	ppb	#	57
24) Methylene chloride	2.41	84	9903	1.11	ppb		94
25) Carbon disulfide	2.15	76	10806	1.08	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	15604	0.98	ppb		98
27) Trans-1,2-DCE	2.70	96	7050	1.06	ppb		85
29) Diisopropyl Ether	3.36	45	19223	1.06	ppb	#	85
30) 1,1-DCA	3.16	63	11144	1.07	ppb		96
32) Ethyl tert Butyl Ether	3.87	59	15739	0.99	ppb	#	81
34) MEK (2-Butanone)	4.05	43	35678	19.97	ppb		87
35) Cis-1,2-DCE	3.97	96	7372	1.06	ppb		83
36) 2,2-Dichloropropane	3.96	77	10238	1.14	ppb		99
37) Chloroform	4.48	83	11106	1.02	ppb		98
38) Bromochloromethane	4.31	130	5171	1.07	ppb		94
40) 1,1,1-TCA	4.70	97	11832	1.22	ppb	#	81
41) Cyclohexane	4.78	41	4799	1.49	ppb		81
42) 1,1-Dichloropropene	4.94	75	7913	1.02	ppb		95
43) 2,2,4-Trimethylpentane	5.39	57	14515	2.26	ppb		94
45) Carbon Tetrachloride	4.93	117	8826	1.04	ppb		92
46) Tert Amyl Methyl Ether	5.44	73	12594	0.99	ppb		95
47) 1,2-DCA	5.21	62	8792	1.11	ppb	#	83
48) Benzene	5.20	78	25966	1.07	ppb		99
49) TCE	6.02	95	7456	1.11	ppb		89
50) 2-Pentanone	6.28	43	146931	47.00	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	3313	1.06	ppb	#	94
52)	Bromodichloromethane	6.58	83	8787	1.05	ppb		94
53)	Methyl Cyclohexane	6.24	83	8766	1.05	ppb		99
54)	Dibromomethane	6.37	93	3644	1.01	ppb		95
55)	MIBK (methyl isobutyl ket	7.30	43	64694	20.20	ppb		97
56)	1-Bromo-2-chloroethane	6.90	144	1275	1.08	ppb		95
59)	Toluene	7.44	91	28353	1.08	ppb		99
60)	Trans-1,3-Dichloropropene	7.70	75	8835	1.02	ppb		98
61)	1,1,2-TCA	7.87	83	4536	1.02	ppb		94
62)	2-Hexanone	8.18	43	39355	21.29	ppb	#	87
65)	1,2-EDB	8.34	107	6028	1.06	ppb		92
66)	Tetrachloroethene	8.01	164	5053	0.87	ppb		87
67)	1-Chlorohexane	8.90	91	7523	0.95	ppb		97
68)	1,1,1,2-Tetrachloroethane	8.96	131	8445	1.16	ppb		91
69)	m&p-Xylene	9.14	106	27593	2.10	ppb		96
70)	o-Xylene	9.52	106	15290	1.13	ppb		97
71)	Styrene	9.54	104	21071	0.99	ppb	#	96
73)	1,3-Dichloropropane	8.03	76	9707	1.11	ppb		95
74)	Dibromochloromethane	8.25	129	7485	1.05	ppb		86
75)	Chlorobenzene	8.87	112	20581	1.05	ppb		96
76)	Ethylbenzene	9.01	91	32813	1.06	ppb		93
77)	Bromoform	9.68	173	5720	0.99	ppb	#	76
79)	Isopropylbenzene	9.91	105	30845	-0.28	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	6760	0.86	ppb	#	93
81)	1,2,3-Trichloropropane	10.21	110	2159	-0.31	ppb	#	60
82)	t-1,4-Dichloro-2-Butene	10.27	53	899	1.14	ppb	#	16
83)	Bromobenzene	10.16	156	10916	-0.10	ppb		78
84)	n-Propylbenzene	10.32	91	44787	-0.16	ppb		97
85)	4-Ethyltoluene	10.44	105	19209	0.38	ppb		93
86)	2-Chlorotoluene	10.32	91	45143	-2.11	ppb	#	35
87)	1,3,5-Trimethylbenzene	10.51	105	17551	1.02	ppb		99
88)	4-Chlorotoluene	10.49	91	22361	0.16	ppb		96
89)	Tert-Butylbenzene	10.82	119	7979	0.94	ppb		99
90)	1,2,4-Trimethylbenzene	10.87	105	13475	0.94	ppb		98
91)	Sec-Butylbenzene	11.04	105	16285	0.94	ppb		90
92)	p-Isopropyltoluene	11.20	119	11649	2.08	ppb	#	89
93)	Benzyl Chloride	11.34	91	2146	4.06	ppb	#	74
94)	1,3-DCB	11.11	146	12866	1.06	ppb		90
95)	1,4-DCB	11.20	146	13377	1.12	ppb		95
96)	n-Butylbenzene	11.60	91	5654	2.93	ppb	#	83
97)	1,2-DCB	11.55	146	9895	0.96	ppb		93
98)	Hexachloroethane	11.81	117	4444	0.38	ppb		85
99)	1,2-Dibromo-3-chloropropan	12.31	157	694	2.54	ppb	#	42
100)	1,2,4-Trichlorobenzene	13.15	180	1281	4.26	ppb		83
101)	Hexachlorobutadiene	13.36	225	1633	3.62	ppb	#	61
102)	Naphthalene	13.38	128	4192	3.08	ppb	#	88
103)	1,2,3-Trichlorobenzene	13.62	180	1720	3.86	ppb	#	66

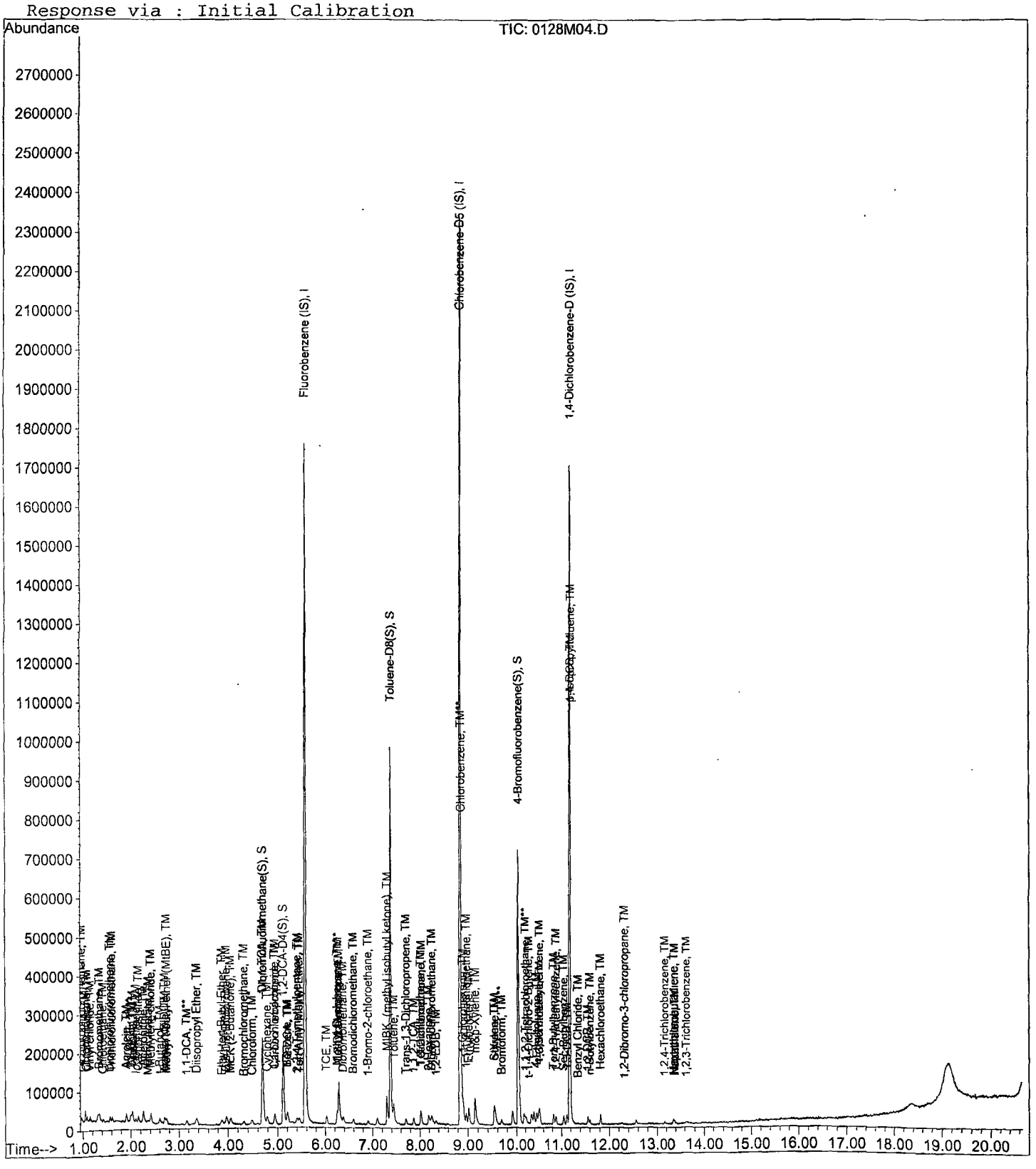
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D
Acq On : 28 Jan 21 18:53
Sample : 2ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 5
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1793882	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1489443	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	621742	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	190286	10.21	ppb		0.00
Spiked Amount 25.000			Recovery = 40.828%				
44) 1,2-DCA-D4(S)	5.11	65	205399	10.91	ppb		0.00
Spiked Amount 25.000			Recovery = 43.652%				
64) Toluene-D8(S)	7.37	98	796795	10.87	ppb		0.00
Spiked Amount 25.000			Recovery = 43.464%				
72) 4-Bromofluorobenzene(S)	10.03	95	323162	10.74	ppb		0.00
Spiked Amount 25.000			Recovery = 42.972%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	10383	1.88	ppb		91
4) Freon 114	1.05	85	9565	2.19	ppb		88
5) Chloromethane	1.08	50	13302	1.88	ppb		89
6) Vinyl chloride	1.15	62	13123	1.99	ppb		90
8) Bromomethane	1.34	94	6755	1.84	ppb		100
9) Chloroethane	1.42	64	8445	2.21	ppb		98
10) Dichlorofluoromethane	1.56	67	14361	2.63	ppb		98
11) Trichlorofluoromethane	1.60	101	16311	2.04	ppb		99
13) Acrolein	1.90	56	11265	64.64	ppb		84
14) Acetone	2.03	43	30665	22.76	ppb		88
15) Freon-113	2.02	103	3401	2.60	ppb		88
16) Acetonitrile	2.25	41	44441	72.01	ppb		96
18) 1,1-DCE	1.99	61	15792	2.03	ppb		96
19) t-Butanol	2.59	59	32233	76.14	ppb		95
20) Methyl Acetate	2.34	43	6485	1.43	ppb		99
21) Iodomethane	2.10	142	11513	2.39	ppb		91
22) Acrylonitrile	2.72	53	647	2.88	ppb	#	57
24) Methylene chloride	2.41	84	14721	1.96	ppb		93
25) Carbon disulfide	2.15	76	20200	2.01	ppb		94
26) Methyl t-butyl ether (MtBE	2.73	73	31534	1.96	ppb		97
27) Trans-1,2-DCE	2.69	96	14051	2.09	ppb		89
29) Diisopropyl Ether	3.36	45	37347	2.04	ppb		95
30) 1,1-DCA	3.16	63	21356	2.03	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	30329	1.90	ppb		93
34) MEK (2-Butanone)	4.04	43	56203	31.21	ppb		100
35) Cis-1,2-DCE	3.97	96	15001	2.17	ppb		85
36) 2,2-Dichloropropane	3.96	77	19012	2.10	ppb		94
37) Chloroform	4.47	83	21929	2.00	ppb		89
38) Bromochloromethane	4.31	130	9343	1.92	ppb		89
40) 1,1,1-TCA	4.70	97	19639	2.01	ppb	#	94
41) Cyclohexane	4.79	41	9486	2.53	ppb		84
42) 1,1-Dichloropropene	4.95	75	16691	2.13	ppb		93
43) 2,2,4-Trimethylpentane	5.40	57	24051	2.98	ppb		91
45) Carbon Tetrachloride	4.94	117	17179	2.01	ppb		81
46) Tert Amyl Methyl Ether	5.44	73	25908	2.01	ppb		98
47) 1,2-DCA	5.21	62	15718	1.97	ppb		95
48) Benzene	5.19	78	48919	1.99	ppb		95
49) TCE	6.02	95	12315	1.81	ppb		79
50) 2-Pentanone	6.28	43	231042	73.34	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	5835	1.85	ppb		100
52)	Bromodichloromethane	6.58	83	17060	2.03	ppb		96
53)	Methyl Cyclohexane	6.24	83	16947	2.02	ppb		97
54)	Dibromomethane	6.37	93	7250	2.00	ppb		95
55)	MIBK (methyl isobutyl ket	7.30	43	103694	28.30	ppb		97
56)	1-Bromo-2-chloroethane	6.90	144	2720	2.28	ppb		98
59)	Toluene	7.44	91	52322	1.97	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	15980	1.83	ppb		95
61)	1,1,2-TCA	7.87	83	9045	2.02	ppb		79
62)	2-Hexanone	8.18	43	61848	28.18	ppb		91
65)	1,2-EDB	8.34	107	11575	2.04	ppb		84
66)	Tetrachloroethene	8.01	164	8058	1.58	ppb		91
67)	1-Chlorohexane	8.90	91	14234	1.79	ppb		96
68)	1,1,1,2-Tetrachloroethane	8.97	131	13059	1.80	ppb		91
69)	m&p-Xylene	9.14	106	53097	4.05	ppb		90
70)	o-Xylene	9.52	106	26901	1.99	ppb		97
71)	Styrene	9.54	104	41391	1.95	ppb		98
73)	1,3-Dichloropropane	8.03	76	19078	2.18	ppb		97
74)	Dibromochloromethane	8.25	129	14367	2.02	ppb		89
75)	Chlorobenzene	8.87	112	39680	2.02	ppb		90
76)	Ethylbenzene	9.01	91	59743	1.94	ppb		91
77)	Bromoform	9.67	173	10891	1.89	ppb		91
79)	Isopropylbenzene	9.91	105	62315	1.18	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	10984	1.81	ppb		99
81)	1,2,3-Trichloropropane	10.21	110	4504	1.29	ppb	#	82
82)	t-1,4-Dichloro-2-Butene	10.26	53	1605	1.90	ppb		80
83)	Bromobenzene	10.16	156	20024	1.21	ppb		96
84)	n-Propylbenzene	10.32	91	93455	1.92	ppb		97
85)	4-Ethyltoluene	10.44	105	44327	1.52	ppb		96
86)	2-Chlorotoluene	10.32	91	93920	1.38	ppb	#	36
87)	1,3,5-Trimethylbenzene	10.51	105	37253	2.02	ppb		100
88)	4-Chlorotoluene	10.49	91	44287	1.42	ppb		97
89)	Tert-Butylbenzene	10.82	119	16416	1.81	ppb		100
90)	1,2,4-Trimethylbenzene	10.87	105	28443	1.85	ppb		93
91)	Sec-Butylbenzene	11.04	105	33059	1.78	ppb		97
92)	p-Isopropyltoluene	11.19	119	22775	2.64	ppb		92
93)	Benzyl Chloride	11.34	91	3750	4.34	ppb	#	70
94)	1,3-DCB	11.11	146	25871	1.98	ppb		96
95)	1,4-DCB	11.19	146	25472	1.99	ppb		97
96)	n-Butylbenzene	11.59	91	12651	3.47	ppb		92
97)	1,2-DCB	11.56	146	21272	1.92	ppb		94
98)	Hexachloroethane	11.82	117	8812	1.58	ppb		99
99)	1,2-Dibromo-3-chloropropan	12.31	157	1161	2.95	ppb	#	61
100)	1,2,4-Trichlorobenzene	13.15	180	2420	4.58	ppb	#	67
101)	Hexachlorobutadiene	13.35	225	3523	4.06	ppb		93
102)	Naphthalene	13.38	128	8142	3.59	ppb	#	93
103)	1,2,3-Trichlorobenzene	13.62	180	3918	4.43	ppb		94

(#) = qualifier out of range (m) = manual integration

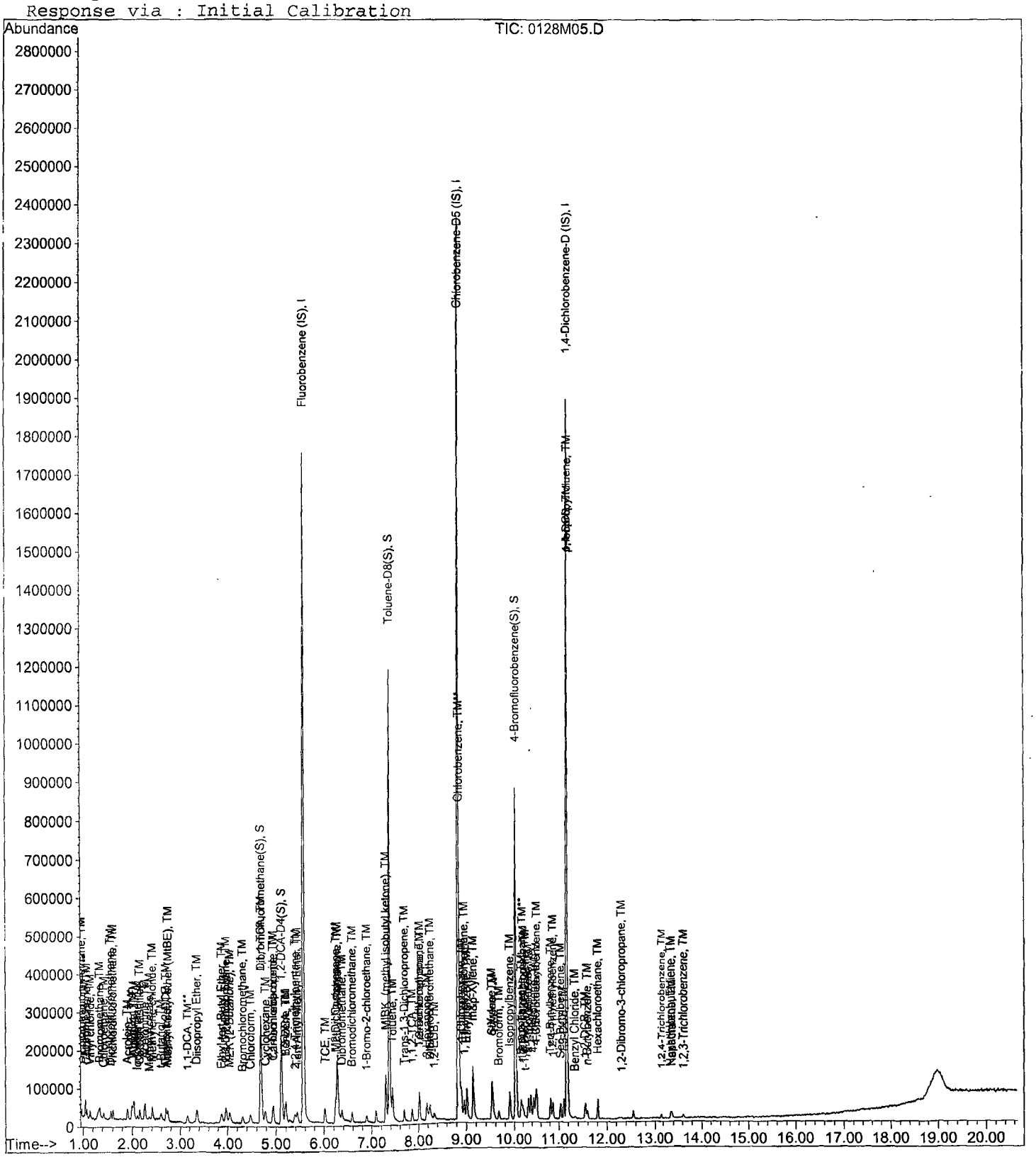
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M05.D
Acq On : 28 Jan 21 18:53
Sample : 2ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 5
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D
Acq On : 28 Jan 21 19:22
Sample : 5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 6
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1785695	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1469528	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	713253	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	374035	25.26	ppb		0.00
Spiked Amount 25.000			Recovery =	101.020%			
44) 1,2-DCA-D4(S)	5.11	65	400143	23.96	ppb		0.00
Spiked Amount 25.000			Recovery =	95.844%			
64) Toluene-D8(S)	7.37	98	1524890	24.65	ppb		0.00
Spiked Amount 25.000			Recovery =	98.612%			
72) 4-Bromofluorobenzene(S)	10.03	95	634843	24.81	ppb		0.00
Spiked Amount 25.000			Recovery =	99.256%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	21125	3.84	ppb		89
4) Freon 114	1.05	85	15751	3.63	ppb		98
5) Chloromethane	1.08	50	34401	4.88	ppb		91
6) Vinyl chloride	1.15	62	31792	4.83	ppb		91
8) Bromomethane	1.34	94	14633	4.96	ppb		94
9) Chloroethane	1.42	64	19812	5.22	ppb		100
10) Dichlorofluoromethane	1.56	67	28887	4.67	ppb		96
11) Trichlorofluoromethane	1.60	101	40343	5.07	ppb		91
13) Acrolein	1.90	56	17964	103.55	ppb	#	68
14) Acetone	2.03	43	54605	40.72	ppb		91
15) Freon-113	2.02	103	6110	4.32	ppb		92
16) Acetonitrile	2.25	41	59713	97.20	ppb		97
18) 1,1-DCE	1.99	61	33972	4.38	ppb		98
19) t-Butanol	2.59	59	38518	91.40	ppb	#	88
20) Methyl Acetate	2.34	43	21239	5.54	ppb	#	84
21) Iodomethane	2.10	142	26697	4.24	ppb		97
22) Acrylonitrile	2.73	53	958	3.04	ppb	#	35
24) Methylene chloride	2.41	84	27557	4.29	ppb		93
25) Carbon disulfide	2.15	76	43168	4.32	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	68929	4.31	ppb		97
27) Trans-1,2-DCE	2.69	96	28521	4.27	ppb		98
29) Diisopropyl Ether	3.36	45	80602	4.43	ppb		97
30) 1,1-DCA	3.16	63	45607	4.35	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	67102	4.23	ppb		95
34) MEK (2-Butanone)	4.04	43	70542	39.35	ppb		99
35) Cis-1,2-DCE	3.97	96	29514	4.31	ppb		93
36) 2,2-Dichloropropane	3.96	77	40555	4.51	ppb		97
37) Chloroform	4.48	83	46575	4.26	ppb		96
38) Bromochloromethane	4.31	130	20303	4.20	ppb		93
40) 1,1,1-TCA	4.70	97	42100	4.32	ppb		94
41) Cyclohexane	4.78	41	16648	4.15	ppb		93
42) 1,1-Dichloropropene	4.94	75	34741	4.45	ppb		92
43) 2,2,4-Trimethylpentane	5.39	57	41257	4.30	ppb		96
45) Carbon Tetrachloride	4.93	117	36156	4.26	ppb		92
46) Tert Amyl Methyl Ether	5.44	73	51301	4.01	ppb	#	94
47) 1,2-DCA	5.21	62	35165	4.42	ppb		100
48) Benzene	5.20	78	106796	4.37	ppb		96
49) TCE	6.02	95	29491	4.36	ppb		86
50) 2-Pentanone	6.28	43	311456	99.32	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	13979	4.46	ppb		98
52)	Bromodichloromethane	6.58	83	35936	4.30	ppb		95
53)	Methyl Cyclohexane	6.24	83	32094	3.84	ppb		94
54)	Dibromomethane	6.37	93	15263	4.24	ppb		97
55)	MIBK (methyl isobutyl ket	7.30	43	150717	38.34	ppb		96
56)	1-Bromo-2-chloroethane	6.89	144	4736	3.98	ppb	#	65
59)	Toluene	7.44	91	118139	4.47	ppb		98
60)	Trans-1,3-Dichloropropene	7.69	75	36344	4.18	ppb		99
61)	1,1,2-TCA	7.86	83	19176	4.30	ppb		96
62)	2-Hexanone	8.18	43	88796	36.68	ppb		98
65)	1,2-EDB	8.34	107	24563	4.38	ppb		99
66)	Tetrachloroethene	8.01	164	20016	4.47	ppb		93
67)	1-Chlorohexane	8.90	91	33231	4.24	ppb		95
68)	1,1,1,2-Tetrachloroethane	8.96	131	31513	4.40	ppb		95
69)	m&p-Xylene	9.14	106	117312	9.07	ppb		91
70)	o-Xylene	9.52	106	55843	4.19	ppb		90
71)	Styrene	9.54	104	92634	4.42	ppb		98
73)	1,3-Dichloropropane	8.03	76	39399	4.57	ppb		98
74)	Dibromochloromethane	8.25	129	30387	4.32	ppb		93
75)	Chlorobenzene	8.87	112	82586	4.26	ppb		88
76)	Ethylbenzene	9.01	91	133925	4.40	ppb		97
77)	Bromoform	9.68	173	24863	4.37	ppb		97
79)	Isopropylbenzene	9.91	105	140233	4.16	ppb		95
80)	1,1,2,2-Tetrachloroethane	10.19	83	26634	4.90	ppb		96
81)	1,2,3-Trichloropropane	10.21	110	9562	4.10	ppb		88
82)	t-1,4-Dichloro-2-Butene	10.25	53	4616	4.77	ppb		88
83)	Bromobenzene	10.16	156	45618	4.34	ppb		98
84)	n-Propylbenzene	10.32	91	231913	6.90	ppb		92
85)	4-Ethyltoluene	10.44	105	111191	4.04	ppb		98
86)	2-Chlorotoluene	10.32	91	232298	9.70	ppb	#	35
87)	1,3,5-Trimethylbenzene	10.50	105	91275	4.32	ppb		99
88)	4-Chlorotoluene	10.48	91	99746	4.07	ppb		97
89)	Tert-Butylbenzene	10.81	119	41824	4.02	ppb		95
90)	1,2,4-Trimethylbenzene	10.87	105	69221	3.92	ppb		98
91)	Sec-Butylbenzene	11.04	105	90622	4.25	ppb		96
92)	p-Isopropyltoluene	11.19	119	64559	4.47	ppb		97
93)	Benzyl Chloride	11.33	91	13847	5.98	ppb	#	92
94)	1,3-DCB	11.11	146	66909	4.46	ppb		97
95)	1,4-DCB	11.19	146	63171	4.31	ppb		97
96)	n-Butylbenzene	11.59	91	32880	4.79	ppb		95
97)	1,2-DCB	11.55	146	51066	4.02	ppb		98
98)	Hexachloroethane	11.81	117	23570	5.06	ppb		87
99)	1,2-Dibromo-3-chloropropan	12.32	157	3838	5.12	ppb		88
100)	1,2,4-Trichlorobenzene	13.15	180	7031	5.69	ppb	#	77
101)	Hexachlorobutadiene	13.36	225	10281	5.41	ppb		92
102)	Naphthalene	13.37	128	22096	5.16	ppb		95
103)	1,2,3-Trichlorobenzene	13.62	180	8107	5.29	ppb		96

(#) = qualifier out of range (m) = manual integration

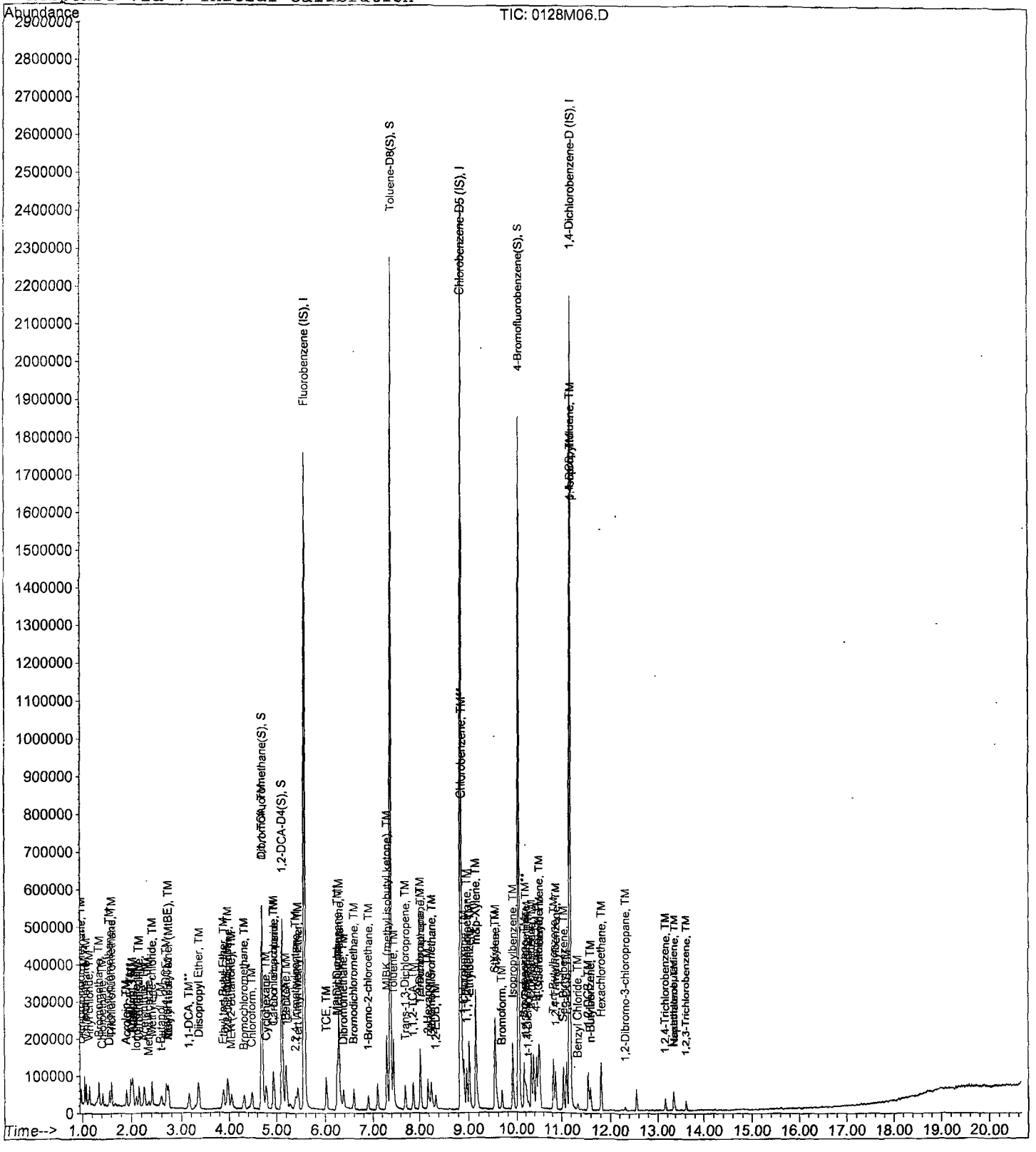
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M06.D
Acq On : 28 Jan 21 19:22
Sample : 5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 6
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D Vial: 7
Acq On : 28 Jan 21 19:51 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1794396	25.00	ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1470371	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	775353	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	393894	26.72	ppb	0.00
Spiked Amount 25.000			Recovery =	106.872%		
44) 1,2-DCA-D4(S)	5.11	65	430179	25.83	ppb	0.00
Spiked Amount 25.000			Recovery =	103.300%		
64) Toluene-D8(S)	7.37	98	1631791	26.63	ppb	0.00
Spiked Amount 25.000			Recovery =	106.524%		
72) 4-Bromofluorobenzene(S)	10.02	95	677231	26.68	ppb	0.00
Spiked Amount 25.000			Recovery =	106.736%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	47674	8.63	ppb	100
4) Freon 114	1.05	85	39378	9.02	ppb	100
5) Chloromethane	1.08	50	64954	9.17	ppb	100
6) Vinyl chloride	1.15	62	60673	9.18	ppb	100
8) Bromomethane	1.34	94	27805	10.11	ppb	100
9) Chloroethane	1.42	64	37725	9.89	ppb	100
10) Dichlorofluoromethane	1.56	67	66336	9.84	ppb	100
11) Trichlorofluoromethane	1.60	101	75449	9.43	ppb	100
13) Acrolein	1.90	56	21212	121.68	ppb	100
14) Acetone	2.03	43	68224	50.63	ppb	100
15) Freon-113	2.02	103	14585	9.61	ppb	100
16) Acetonitrile	2.25	41	74366	120.47	ppb	100
18) 1,1-DCE	1.99	61	68717	8.82	ppb	100
19) t-Butanol	2.59	59	53834	127.12	ppb	100
20) Methyl Acetate	2.34	43	35417	9.43	ppb	100
21) Iodomethane	2.10	142	68655	9.29	ppb	100
22) Acrylonitrile	2.72	53	2236	3.67	ppb	100
24) Methylene chloride	2.41	84	55197	9.22	ppb	100
25) Carbon disulfide	2.15	76	98336	9.78	ppb	100
26) Methyl t-butyl ether (MtBE	2.73	73	162542	10.11	ppb	100
27) Trans-1,2-DCE	2.69	96	60900	9.06	ppb	100
29) Diisopropyl Ether	3.36	45	185490	10.13	ppb	100
30) 1,1-DCA	3.16	63	95679	9.08	ppb	100
32) Ethyl tert Butyl Ether	3.87	59	161251	10.10	ppb	100
34) MEK (2-Butanone)	4.05	43	94845	52.66	ppb	100
35) Cis-1,2-DCE	3.97	96	65485	9.54	ppb	100
36) 2,2-Dichloropropane	3.96	77	80312	8.89	ppb	100
37) Chloroform	4.48	83	100362	9.13	ppb	100
38) Bromochloromethane	4.31	130	43068	8.86	ppb	100
40) 1,1,1-TCA	4.70	97	87271	8.92	ppb	100
41) Cyclohexane	4.78	41	43301	10.08	ppb	100
42) 1,1-Dichloropropene	4.95	75	70848	9.04	ppb	100
43) 2,2,4-Trimethylpentane	5.39	57	105283	9.14	ppb	99
45) Carbon Tetrachloride	4.94	117	80858	9.48	ppb	100
46) Tert Amyl Methyl Ether	5.44	73	127554	9.91	ppb	100
47) 1,2-DCA	5.21	62	71873	8.99	ppb	100
48) Benzene	5.19	78	220689	8.99	ppb	100
49) TCE	6.02	95	64016	9.42	ppb	100
50) 2-Pentanone	6.28	43	405801	128.78	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D
Acq On : 28 Jan 21 19:51
Sample : 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
51)	1,2-Dichloropropane	6.25	63	31168	9.90	ppb	100
52)	Bromodichloromethane	6.58	83	74910	8.92	ppb	100
53)	Methyl Cyclohexane	6.24	83	75585	9.00	ppb	100
54)	Dibromomethane	6.37	93	34176	9.44	ppb	100
55)	MIBK (methyl isobutyl ket	7.29	43	207512	50.12	ppb	100
56)	1-Bromo-2-chloroethane	6.89	144	11370	9.52	ppb	100
59)	Toluene	7.44	91	247468	9.32	ppb	100
60)	Trans-1,3-Dichloropropene	7.69	75	78128	8.95	ppb	100
61)	1,1,2-TCA	7.87	83	40591	9.06	ppb	100
62)	2-Hexanone	8.17	43	124878	47.75	ppb	100
65)	1,2-EDB	8.34	107	53307	9.50	ppb	100
66)	Tetrachloroethene	8.01	164	39936	9.23	ppb	100
67)	1-Chlorohexane	8.90	91	76428	9.75	ppb	100
68)	1,1,1,2-Tetrachloroethane	8.96	131	64751	9.04	ppb	100
69)	m&p-Xylene	9.14	106	244470	18.88	ppb	100
70)	o-Xylene	9.52	106	124743	9.36	ppb	100
71)	Styrene	9.54	104	200936	9.58	ppb	100
73)	1,3-Dichloropropane	8.03	76	80014	9.27	ppb	100
74)	Dibromochloromethane	8.25	129	67369	9.58	ppb	100
75)	Chlorobenzene	8.87	112	183468	9.45	ppb	100
76)	Ethylbenzene	9.01	91	282009	9.26	ppb	100
77)	Bromoform	9.67	173	52950	9.30	ppb	100
79)	Isopropylbenzene	9.91	105	301352	10.11	ppb	100
80)	1,1,2,2-Tetrachloroethane	10.19	83	53514	9.89	ppb	100
81)	1,2,3-Trichloropropane	10.21	110	20442	10.00	ppb	100
82)	t-1,4-Dichloro-2-Butene	10.25	53	10028	9.54	ppb	100
83)	Bromobenzene	10.16	156	96904	10.34	ppb	100
84)	n-Propylbenzene	10.32	91	302503	8.75	ppb	100
85)	4-Ethyltoluene	10.44	105	288129	10.47	ppb	100
86)	2-Chlorotoluene	10.37	91	232222	8.46	ppb	100
87)	1,3,5-Trimethylbenzene	10.50	105	222776	9.70	ppb	100
88)	4-Chlorotoluene	10.48	91	223687	9.80	ppb	100
89)	Tert-Butylbenzene	10.81	119	109200	9.65	ppb	100
90)	1,2,4-Trimethylbenzene	10.87	105	177866	9.26	ppb	100
91)	Sec-Butylbenzene	11.04	105	221705	9.56	ppb	100
92)	p-Isopropyltoluene	11.19	119	162853	8.53	ppb	100
93)	Benzyl Chloride	11.33	91	31897	8.65	ppb	100
94)	1,3-DCB	11.10	146	153426	9.41	ppb	100
95)	1,4-DCB	11.20	146	143064	8.97	ppb	100
96)	n-Butylbenzene	11.59	91	87437	8.19	ppb	100
97)	1,2-DCB	11.55	146	129486	9.37	ppb	100
98)	Hexachloroethane	11.81	117	46708	10.08	ppb	100
99)	1,2-Dibromo-3-chloropropan	12.31	157	8693	8.71	ppb	100
100)	1,2,4-Trichlorobenzene	13.15	180	17104	7.98	ppb	100
101)	Hexachlorobutadiene	13.36	225	27363	8.64	ppb	100
102)	Naphthalene	13.37	128	50503	8.17	ppb	100
103)	1,2,3-Trichlorobenzene	13.62	180	21402	8.05	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

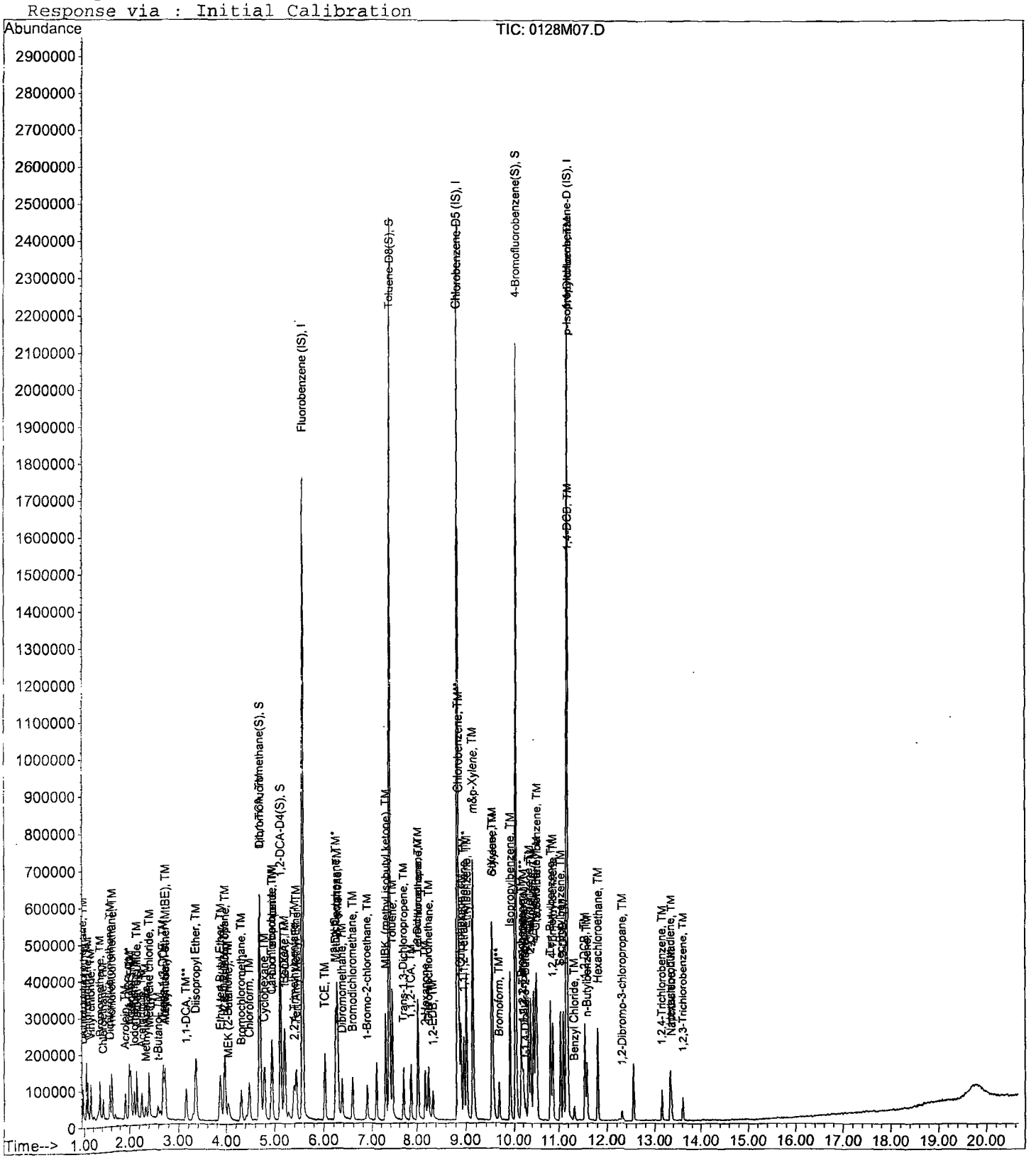
Data File : M:\MAX\DATA\210128\0128M07.D
Acq On : 28 Jan 21 19:51
Sample : 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1759511	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1465524	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	854648	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	692089	52.02	ppb		0.00
Spiked Amount 25.000			Recovery = 208.080%				
44) 1,2-DCA-D4(S)	5.11	65	774296	49.68	ppb		0.00
Spiked Amount 25.000			Recovery = 198.712%				
64) Toluene-D8(S)	7.37	98	2858593	49.69	ppb		0.00
Spiked Amount 25.000			Recovery = 198.764%				
72) 4-Bromofluorobenzene(S)	10.02	95	1177537	49.12	ppb		0.00
Spiked Amount 25.000			Recovery = 196.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	123603	22.81	ppb		96
4) Freon 114	1.04	85	82478	19.28	ppb		99
5) Chloromethane	1.08	50	134971	19.44	ppb		94
6) Vinyl chloride	1.15	62	124220	19.17	ppb		94
8) Bromomethane	1.34	94	52424	20.20	ppb		97
9) Chloroethane	1.41	64	73783	19.72	ppb		99
10) Dichlorofluoromethane	1.56	67	126846	18.58	ppb		94
11) Trichlorofluoromethane	1.60	101	161079	20.53	ppb		97
13) Acrolein	1.90	56	26800	156.78	ppb		100
14) Acetone	2.03	43	81564	61.73	ppb		100
15) Freon-113	2.01	103	29304	19.20	ppb		94
16) Acetonitrile	2.25	41	91747	151.57	ppb		94
18) 1,1-DCE	1.99	61	144496	18.91	ppb		98
19) t-Butanol	2.60	59	67990	163.74	ppb		98
20) Methyl Acetate	2.34	43	72689	20.14	ppb		98
21) Iodomethane	2.10	142	147910	19.22	ppb		95
22) Acrylonitrile	2.64	53	42235	24.10	ppb	#	67
24) Methylene chloride	2.41	84	116261	20.60	ppb		96
25) Carbon disulfide	2.15	76	190600	19.34	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	310567	19.69	ppb		96
27) Trans-1,2-DCE	2.69	96	125372	19.03	ppb		97
29) Diisopropyl Ether	3.36	45	360677	20.10	ppb		95
30) 1,1-DCA	3.16	63	206078	19.94	ppb	#	98
32) Ethyl tert Butyl Ether	3.87	59	322927	20.64	ppb		96
34) MEK (2-Butanone)	4.05	43	110264	62.43	ppb		93
35) Cis-1,2-DCE	3.97	96	132800	19.75	ppb		99
36) 2,2-Dichloropropane	3.96	77	171391	19.34	ppb		99
37) Chloroform	4.48	83	207228	19.24	ppb		99
38) Bromochloromethane	4.31	130	95495	20.03	ppb		95
40) 1,1,1-TCA	4.70	97	179664	18.73	ppb		91
41) Cyclohexane	4.78	41	82809	19.26	ppb		98
42) 1,1-Dichloropropene	4.94	75	147043	19.13	ppb		95
43) 2,2,4-Trimethylpentane	5.39	57	223770	18.46	ppb		96
45) Carbon Tetrachloride	4.93	117	161778	19.33	ppb		94
46) Tert Amyl Methyl Ether	5.44	73	261887	20.76	ppb		98
47) 1,2-DCA	5.21	62	155201	19.80	ppb		96
48) Benzene	5.20	78	465720	19.35	ppb		97
49) TCE	6.02	95	132301	19.86	ppb		93
50) 2-Pentanone	6.27	43	501004	162.15	ppb		98

(#) = qualifier out of range (m) = manual integration
0128M08.D M0128W.M Fri Jan 29 11:37:46 2021

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	57752	18.71	ppb		97
52)	Bromodichloromethane	6.58	83	162476	19.73	ppb		100
53)	Methyl Cyclohexane	6.24	83	156457	18.99	ppb		99
54)	Dibromomethane	6.37	93	73019	20.57	ppb		98
55)	MIBK (methyl isobutyl ket	7.29	43	256610	61.52	ppb		97
56)	1-Bromo-2-chloroethane	6.89	144	22787	19.45	ppb		94
59)	Toluene	7.44	91	520316	19.99	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	173444	20.27	ppb		98
61)	1,1,2-TCA	7.86	83	85598	19.48	ppb		91
62)	2-Hexanone	8.17	43	167480	62.01	ppb		99
65)	1,2-EDB	8.34	107	113090	20.23	ppb		96
66)	Tetrachloroethene	8.01	164	86472	20.44	ppb		95
67)	1-Chlorohexane	8.90	91	151230	19.36	ppb		94
68)	1,1,1,2-Tetrachloroethane	8.96	131	142231	19.91	ppb		96
69)	m&p-Xylene	9.14	106	527429	40.87	ppb		99
70)	o-Xylene	9.52	106	258820	19.49	ppb		91
71)	Styrene	9.53	104	438931	20.99	ppb		96
73)	1,3-Dichloropropane	8.03	76	174301	20.26	ppb		99
74)	Dibromochloromethane	8.25	129	142514	20.33	ppb		95
75)	Chlorobenzene	8.87	112	385566	19.93	ppb		94
76)	Ethylbenzene	9.01	91	601449	19.81	ppb		96
77)	Bromoform	9.67	173	116105	20.45	ppb		97
79)	Isopropylbenzene	9.91	105	652958	21.74	ppb		100
80)	1,1,2,2-Tetrachloroethane	10.19	83	120077	21.14	ppb		94
81)	1,2,3-Trichloropropane	10.21	110	43340	21.08	ppb		87
82)	t-1,4-Dichloro-2-Butene	10.25	53	25898	22.35	ppb		78
83)	Bromobenzene	10.15	156	206439	21.81	ppb		98
84)	n-Propylbenzene	10.31	91	690224	20.64	ppb		97
85)	4-Ethyltoluene	10.44	105	604260	20.47	ppb		99
86)	2-Chlorotoluene	10.37	91	441910	18.82	ppb		97
87)	1,3,5-Trimethylbenzene	10.50	105	521060	20.57	ppb		95
88)	4-Chlorotoluene	10.48	91	501437	21.30	ppb		99
89)	Tert-Butylbenzene	10.81	119	264320	21.19	ppb		98
90)	1,2,4-Trimethylbenzene	10.86	105	448421	21.17	ppb		99
91)	Sec-Butylbenzene	11.04	105	545568	21.35	ppb		99
92)	p-Isopropyltoluene	11.19	119	431479	18.55	ppb		98
93)	Benzyl Chloride	11.33	91	96402	17.43	ppb	#	91
94)	1,3-DCB	11.10	146	351244	19.54	ppb		95
95)	1,4-DCB	11.19	146	338685	19.27	ppb		96
96)	n-Butylbenzene	11.59	91	249855	17.37	ppb		99
97)	1,2-DCB	11.55	146	323969	21.27	ppb		98
98)	Hexachloroethane	11.81	117	100399	20.65	ppb		92
99)	1,2-Dibromo-3-chloropropan	12.31	157	23709	18.89	ppb		99
100)	1,2,4-Trichlorobenzene	13.15	180	57880	16.52	ppb		91
101)	Hexachlorobutadiene	13.36	225	77417	17.19	ppb		98
102)	Naphthalene	13.37	128	141483	17.00	ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	69041	17.08	ppb		95

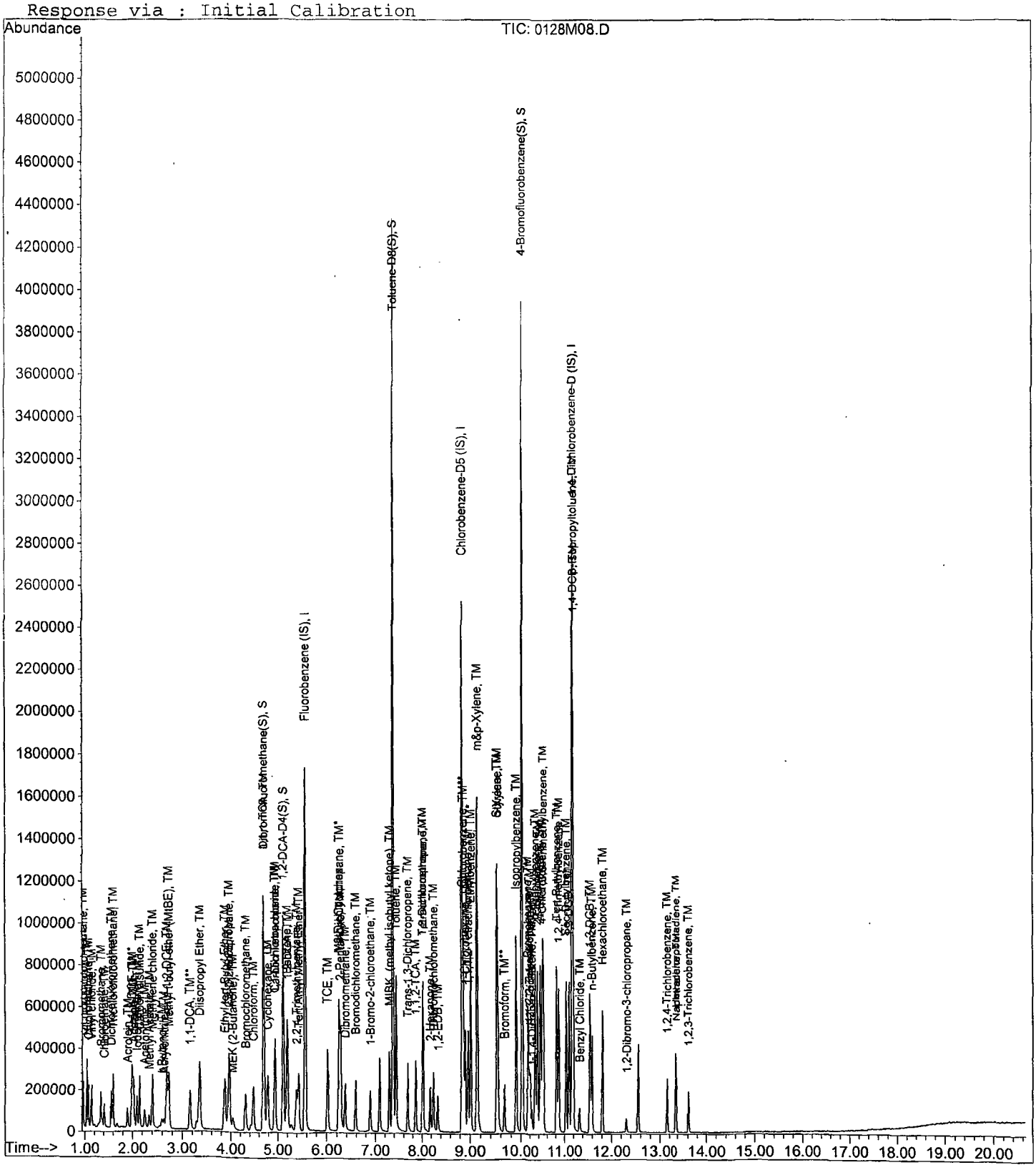
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1774235	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1454760	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	897871	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	706217	52.70	ppb		0.00
Spiked Amount 25.000			Recovery = 210.816%				
44) 1,2-DCA-D4(S)	5.11	65	811024	51.71	ppb		0.00
Spiked Amount 25.000			Recovery = 206.832%				
64) Toluene-D8(S)	7.37	98	2987917	52.52	ppb		0.00
Spiked Amount 25.000			Recovery = 210.100%				
72) 4-Bromofluorobenzene(S)	10.02	95	1220621	51.45	ppb		0.00
Spiked Amount 25.000			Recovery = 205.792%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	233311	42.70	ppb		96
4) Freon 114	1.04	85	189503	43.92	ppb		99
5) Chloromethane	1.08	50	266061	38.00	ppb		95
6) Vinyl chloride	1.15	62	254791	38.99	ppb		95
8) Bromomethane	1.34	94	105736	41.22	ppb		99
9) Chloroethane	1.41	64	143498	38.04	ppb		96
10) Dichlorofluoromethane	1.56	67	273509	39.00	ppb		97
11) Trichlorofluoromethane	1.60	101	325076	41.09	ppb		96
13) Acrolein	1.90	56	31460	182.51	ppb	#	58
14) Acetone	2.03	43	101566	76.23	ppb		99
15) Freon-113	2.01	103	60808	39.01	ppb		90
16) Acetonitrile	2.25	41	106936	175.20	ppb		98
18) 1,1-DCE	1.99	61	309769	40.19	ppb		99
19) t-Butanol	2.60	59	82620	197.32	ppb		98
20) Methyl Acetate	2.34	43	141576	39.25	ppb		97
21) Iodomethane	2.10	142	322413	40.37	ppb		96
22) Acrylonitrile	2.64	53	79555	42.81	ppb	#	70
24) Methylene chloride	2.41	84	232113	41.45	ppb		99
25) Carbon disulfide	2.15	76	400465	40.30	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	620805	39.04	ppb		97
27) Trans-1,2-DCE	2.69	96	259160	39.01	ppb		100
29) Diisopropyl Ether	3.36	45	731731	40.43	ppb		96
30) 1,1-DCA	3.16	63	417431	40.06	ppb		97
32) Ethyl tert Butyl Ether	3.88	59	653292	41.40	ppb		95
34) MEK (2-Butanone)	4.04	43	143967	80.83	ppb		95
35) Cis-1,2-DCE	3.97	96	280685	41.42	ppb		98
36) 2,2-Dichloropropane	3.96	77	348056	38.96	ppb		99
37) Chloroform	4.48	83	431364	39.71	ppb		99
38) Bromochloromethane	4.31	130	196436	40.85	ppb		98
40) 1,1,1-TCA	4.70	97	383500	39.64	ppb		96
41) Cyclohexane	4.78	41	172570	39.36	ppb		98
42) 1,1-Dichloropropene	4.94	75	301918	38.96	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	491916	38.89	ppb		94
45) Carbon Tetrachloride	4.94	117	345305	40.92	ppb		95
46) Tert Amyl Methyl Ether	5.44	73	512934	40.32	ppb		100
47) 1,2-DCA	5.21	62	309510	39.16	ppb		98
48) Benzene	5.19	78	961227	39.61	ppb		98
49) TCE	6.02	95	271865	40.47	ppb		92
50) 2-Pentanone	6.27	43	565198	181.40	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
51)	1,2-Dichloropropane	6.25	63	125368	40.28	ppb	99
52)	Bromodichloromethane	6.58	83	337975	40.70	ppb	93
53)	Methyl Cyclohexane	6.24	83	334571	40.27	ppb	99
54)	Dibromomethane	6.37	93	143474	40.09	ppb	98
55)	MIBK (methyl isobutyl ket	7.29	43	333501	77.42	ppb	99
56)	1-Bromo-2-chloroethane	6.89	144	48365	40.94	ppb	90
59)	Toluene	7.44	91	1072255	40.84	ppb	99
60)	Trans-1,3-Dichloropropene	7.69	75	356344	41.29	ppb	97
61)	1,1,2-TCA	7.86	83	169987	38.37	ppb	95
62)	2-Hexanone	8.17	43	218798	77.68	ppb	98
65)	1,2-EDB	8.34	107	226334	40.79	ppb	97
66)	Tetrachloroethene	8.01	164	176768	42.44	ppb	97
67)	1-Chlorohexane	8.91	91	322060	41.54	ppb	94
68)	1,1,1,2-Tetrachloroethane	8.96	131	289768	40.87	ppb	99
69)	m&p-Xylene	9.14	106	1050246	81.99	ppb	96
70)	o-Xylene	9.52	106	532430	40.39	ppb	94
71)	Styrene	9.53	104	883864	42.59	ppb	95
73)	1,3-Dichloropropane	8.03	76	347500	40.70	ppb	99
74)	Dibromochloromethane	8.25	129	282409	40.58	ppb	95
75)	Chlorobenzene	8.87	112	778975	40.56	ppb	94
76)	Ethylbenzene	9.01	91	1239636	41.14	ppb	96
77)	Bromoform	9.67	173	227320	40.34	ppb	99
79)	Isopropylbenzene	9.91	105	1354070	44.78	ppb	100
80)	1,1,2,2-Tetrachloroethane	10.18	83	234772	40.19	ppb	93
81)	1,2,3-Trichloropropane	10.20	110	89387	43.30	ppb	90
82)	t-1,4-Dichloro-2-Butene	10.25	53	44295	36.39	ppb	89
83)	Bromobenzene	10.15	156	415560	43.59	ppb	99
84)	n-Propylbenzene	10.31	91	1451383	43.68	ppb	96
85)	4-Ethyltoluene	10.43	105	1310844	42.92	ppb	100
86)	2-Chlorotoluene	10.37	91	911794	42.57	ppb	96
87)	1,3,5-Trimethylbenzene	10.50	105	1119539	42.07	ppb	97
88)	4-Chlorotoluene	10.48	91	1059128	44.16	ppb	100
89)	Tert-Butylbenzene	10.81	119	600256	45.82	ppb	99
90)	1,2,4-Trimethylbenzene	10.86	105	1047680	47.09	ppb	98
91)	Sec-Butylbenzene	11.03	105	1281961	47.75	ppb	98
92)	p-Isopropyltoluene	11.19	119	1021759	40.05	ppb	99
93)	Benzyl Chloride	11.33	91	230204	35.04	ppb	96
94)	1,3-DCB	11.10	146	751052	39.77	ppb	97
95)	1,4-DCB	11.19	146	718848	38.93	ppb	96
96)	n-Butylbenzene	11.59	91	614493	37.40	ppb	99
97)	1,2-DCB	11.55	146	706140	44.14	ppb	99
98)	Hexachloroethane	11.81	117	207807	41.69	ppb	93
99)	1,2-Dibromo-3-chloropropan	12.31	157	54436	39.14	ppb	97
100)	1,2,4-Trichlorobenzene	13.15	180	158912	36.98	ppb	90
101)	Hexachlorobutadiene	13.36	225	199000	37.45	ppb	97
102)	Naphthalene	13.37	128	348529	36.58	ppb	98
103)	1,2,3-Trichlorobenzene	13.62	180	181424	37.68	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

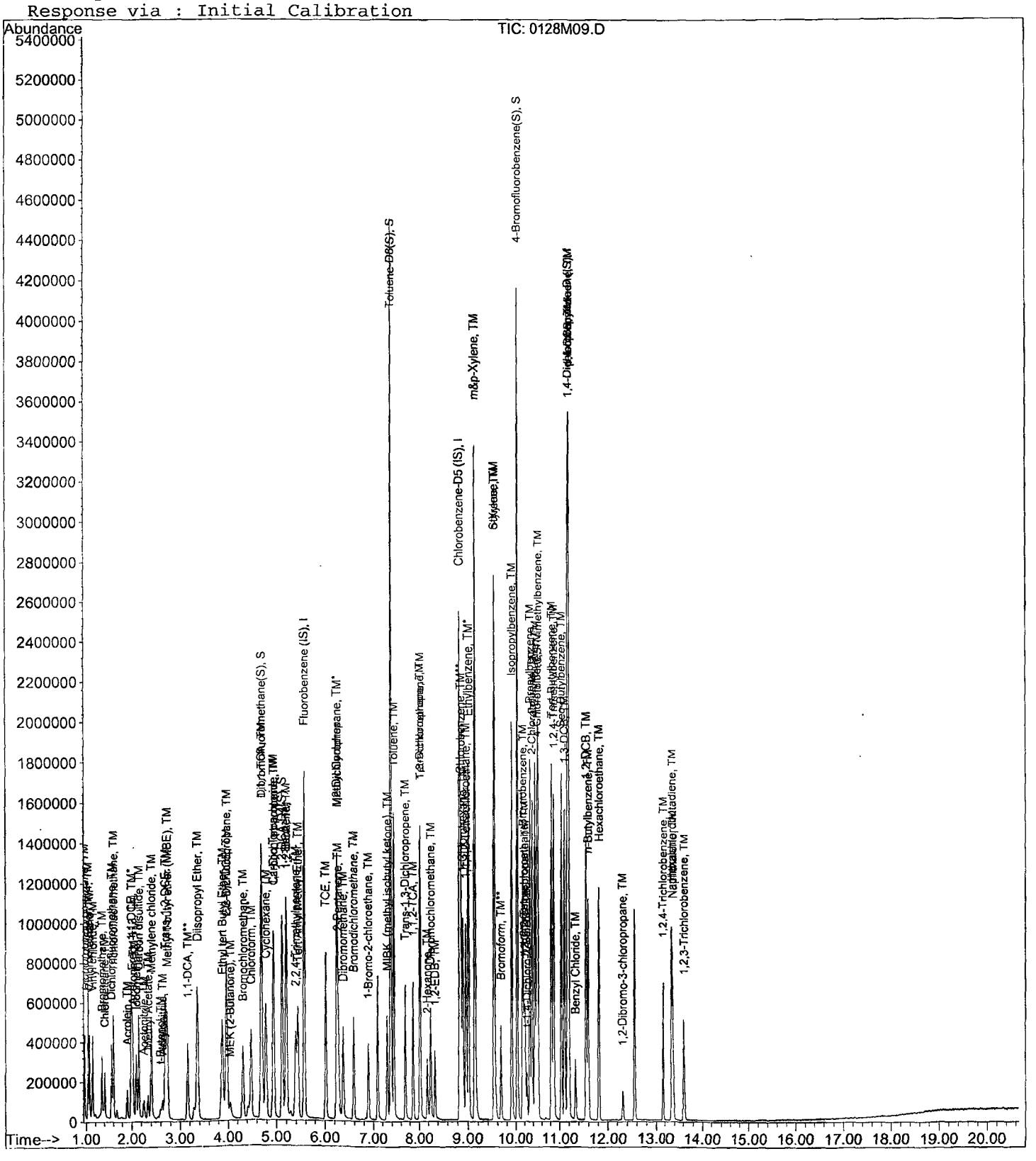
Data File : M:\MAX\DATA\210128\0128M09.D
Acq On : 28 Jan 21 20:49
Sample : 40ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 9
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1714227	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1451958	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	1006428	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	1209203	97.44	ppb		0.00
Spiked Amount 25.000			Recovery = 389.768%				
44) 1,2-DCA-D4(S)	5.11	65	1470467	99.42	ppb		0.00
Spiked Amount 25.000			Recovery = 397.672%				
64) Toluene-D8(S)	7.37	98	5427895	98.72	ppb		0.00
Spiked Amount 25.000			Recovery = 394.896%				
72) 4-Bromofluorobenzene(S)	10.02	95	2283448	99.45	ppb		0.00
Spiked Amount 25.000			Recovery = 397.800%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	536299	101.59	ppb		97
4) Freon 114	1.04	85	476084	114.21	ppb		98
5) Chloromethane	1.07	50	619249	91.54	ppb		97
6) Vinyl chloride	1.14	62	623750	98.79	ppb		95
8) Bromomethane	1.34	94	243701	99.47	ppb		96
9) Chloroethane	1.41	64	273142	74.94	ppb		99
10) Dichlorofluoromethane	1.56	67	689229	100.69	ppb		98
11) Trichlorofluoromethane	1.59	101	783641	102.51	ppb		96
13) Acrolein	1.90	56	33808	203.00	ppb	#	1
14) Acetone	2.04	43	125521	97.51	ppb		99
15) Freon-113	2.01	103	152640	100.60	ppb		90
16) Acetonitrile	2.26	41	116262	197.14	ppb		94
18) 1,1-DCE	1.98	61	726705	97.59	ppb		98
19) t-Butanol	2.61	59	136546	337.52	ppb		97
20) Methyl Acetate	2.34	43	347575	100.30	ppb		100
21) Iodomethane	2.09	142	784016	100.10	ppb		97
22) Acrylonitrile	2.64	53	183686	98.75	ppb	#	69
24) Methylene chloride	2.40	84	532827	99.42	ppb		97
25) Carbon disulfide	2.14	76	956672	99.64	ppb		100
26) Methyl t-butyl ether (MtBE	2.73	73	1504622	97.92	ppb		99
27) Trans-1,2-DCE	2.69	96	601604	93.73	ppb		98
29) Diisopropyl Ether	3.36	45	1719909	98.36	ppb		97
30) 1,1-DCA	3.15	63	996025	98.94	ppb		98
32) Ethyl tert Butyl Ether	3.87	59	1582244	103.78	ppb		95
34) MEK (2-Butanone)	4.04	43	172963	100.52	ppb		97
35) Cis-1,2-DCE	3.96	96	651540	99.54	ppb		98
36) 2,2-Dichloropropane	3.95	77	821064	95.11	ppb		100
37) Chloroform	4.47	83	1019428	97.13	ppb		100
38) Bromochloromethane	4.31	130	459587	98.92	ppb		99
40) 1,1,1-TCA	4.70	97	918055	98.22	ppb		97
41) Cyclohexane	4.78	41	428093	100.42	ppb		99
42) 1,1-Dichloropropene	4.94	75	711653	95.04	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	1255357	100.83	ppb		93
45) Carbon Tetrachloride	4.93	117	808665	99.19	ppb		93
46) Tert Amyl Methyl Ether	5.44	73	1310329	106.61	ppb		99
47) 1,2-DCA	5.21	62	729971	95.60	ppb		98
48) Benzene	5.19	78	2244202	95.72	ppb		98
49) TCE	6.01	95	635044	97.85	ppb		92
50) 2-Pentanone	6.27	43	598738	198.90	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
51) 1,2-Dichloropropane	6.24	63	294400	97.89 ppb	99
52) Bromodichloromethane	6.58	83	794843	99.07 ppb	97
53) Methyl Cyclohexane	6.24	83	820258	102.19 ppb	98
54) Dibromomethane	6.37	93	336695	97.37 ppb	95
55) MIBK (methyl isobutyl ket	7.29	43	434008	102.02 ppb	98
56) 1-Bromo-2-chloroethane	6.89	144	118785	104.08 ppb	93
59) Toluene	7.44	91	2518307	99.28 ppb	99
60) Trans-1,3-Dichloropropene	7.69	75	862841	103.48 ppb	95
61) 1,1,2-TCA	7.86	83	397732	92.91 ppb	95
62) 2-Hexanone	8.17	43	289490	103.06 ppb	99
65) 1,2-EDB	8.33	107	538616	97.25 ppb	100
66) Tetrachloroethene	8.01	164	409984	99.05 ppb	96
67) 1-Chlorohexane	8.90	91	787551	101.79 ppb	95
68) 1,1,1,2-Tetrachloroethane	8.96	131	696718	98.45 ppb	97
69) m&p-Xylene	9.13	106	2470888	193.27 ppb	95
70) o-Xylene	9.52	106	1252215	95.19 ppb	94
71) Styrene	9.53	104	2137318	103.19 ppb	98
73) 1,3-Dichloropropane	8.02	76	824055	96.70 ppb	98
74) Dibromochloromethane	8.24	129	678191	97.64 ppb	94
75) Chlorobenzene	8.87	112	1837710	95.88 ppb	95
76) Ethylbenzene	9.01	91	2932561	97.50 ppb	96
77) Bromoform	9.67	173	573111	101.91 ppb	98
79) Isopropylbenzene	9.90	105	3240886	97.81 ppb	99
80) 1,1,2,2-Tetrachloroethane	10.18	83	643806	99.72 ppb	91
81) 1,2,3-Trichloropropane	10.21	110	222339	98.54 ppb	90
82) t-1,4-Dichloro-2-Butene	10.24	53	131930	96.70 ppb	88
83) Bromobenzene	10.15	156	1024683	98.23 ppb	96
84) n-Propylbenzene	10.31	91	3562608	98.46 ppb	96
85) 4-Ethyltoluene	10.43	105	3353971	98.76 ppb	99
86) 2-Chlorotoluene	10.37	91	2217315	99.17 ppb	96
87) 1,3,5-Trimethylbenzene	10.50	105	2827226	94.79 ppb	100
88) 4-Chlorotoluene	10.48	91	2596919	98.17 ppb	99
89) Tert-Butylbenzene	10.81	119	1608192	109.51 ppb	99
90) 1,2,4-Trimethylbenzene	10.86	105	2824559	113.25 ppb	99
91) Sec-Butylbenzene	11.03	105	3369992	111.99 ppb	97
92) p-Isopropyltoluene	11.19	119	2933560	100.41 ppb	99
93) Benzyl Chloride	11.33	91	811847	102.51 ppb	94
94) 1,3-DCB	11.10	146	1956093	92.41 ppb	97
95) 1,4-DCB	11.19	146	1949545	94.19 ppb	96
96) n-Butylbenzene	11.59	91	1955333	101.70 ppb	100
97) 1,2-DCB	11.55	146	2023250	112.82 ppb	98
98) Hexachloroethane	11.81	117	546401	99.20 ppb	91
99) 1,2-Dibromo-3-chloropropan	12.31	157	161574	100.66 ppb	96
100) 1,2,4-Trichlorobenzene	13.15	180	527680	101.99 ppb	90
101) Hexachlorobutadiene	13.35	225	640771	101.63 ppb	99
102) Naphthalene	13.37	128	1140040	102.08 ppb	99
103) 1,2,3-Trichlorobenzene	13.62	180	582277	101.62 ppb	97

(#) = qualifier out of range (m) = manual integration

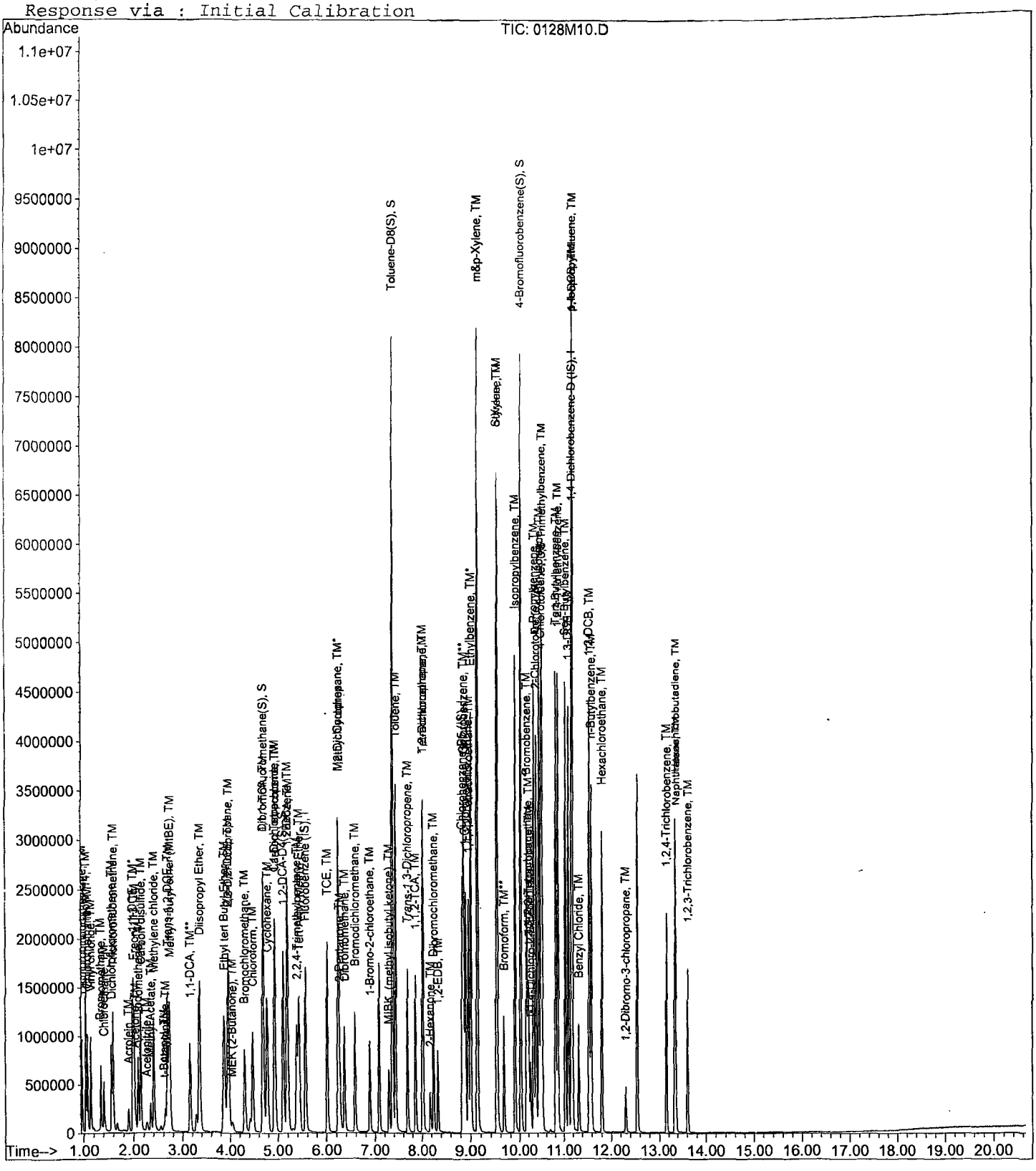
Data File : M:\MAX\DATA\210128\0128M10.D
Acq On : 28 Jan 21 21:19
Sample : 100ug/L VOC STD 1/28/21
Misc : IS 10/16/20

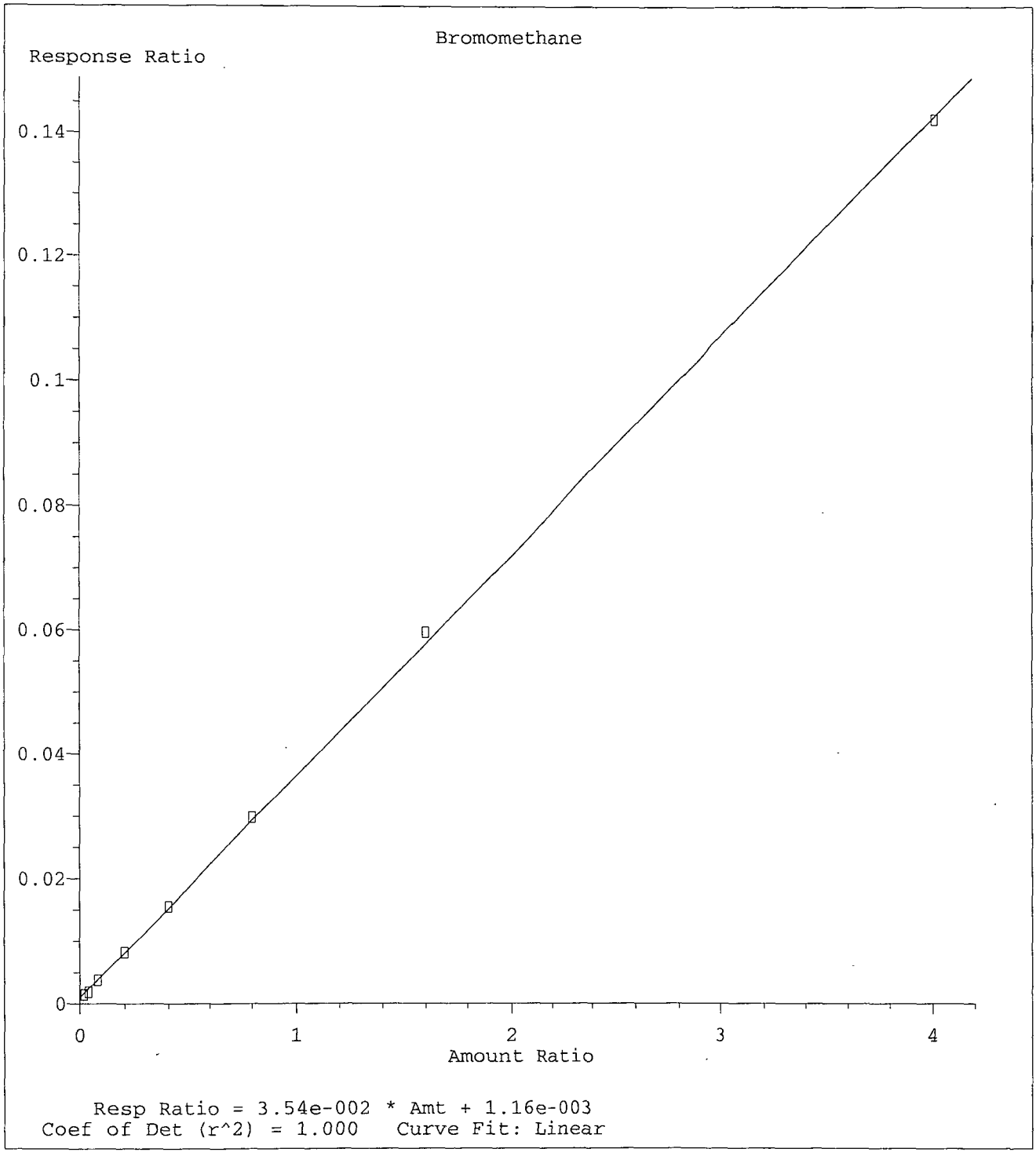
Vial: 10
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

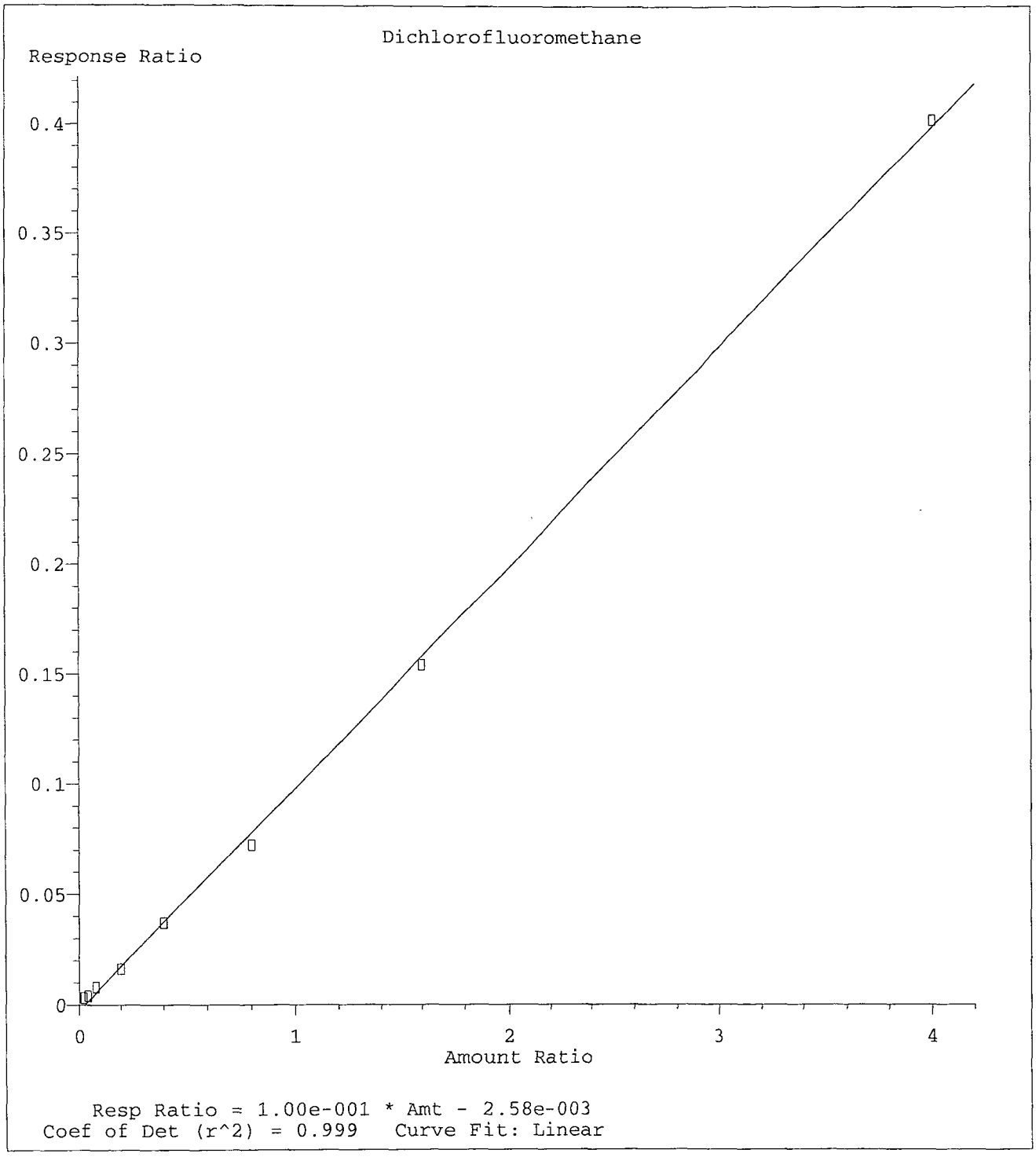
Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration

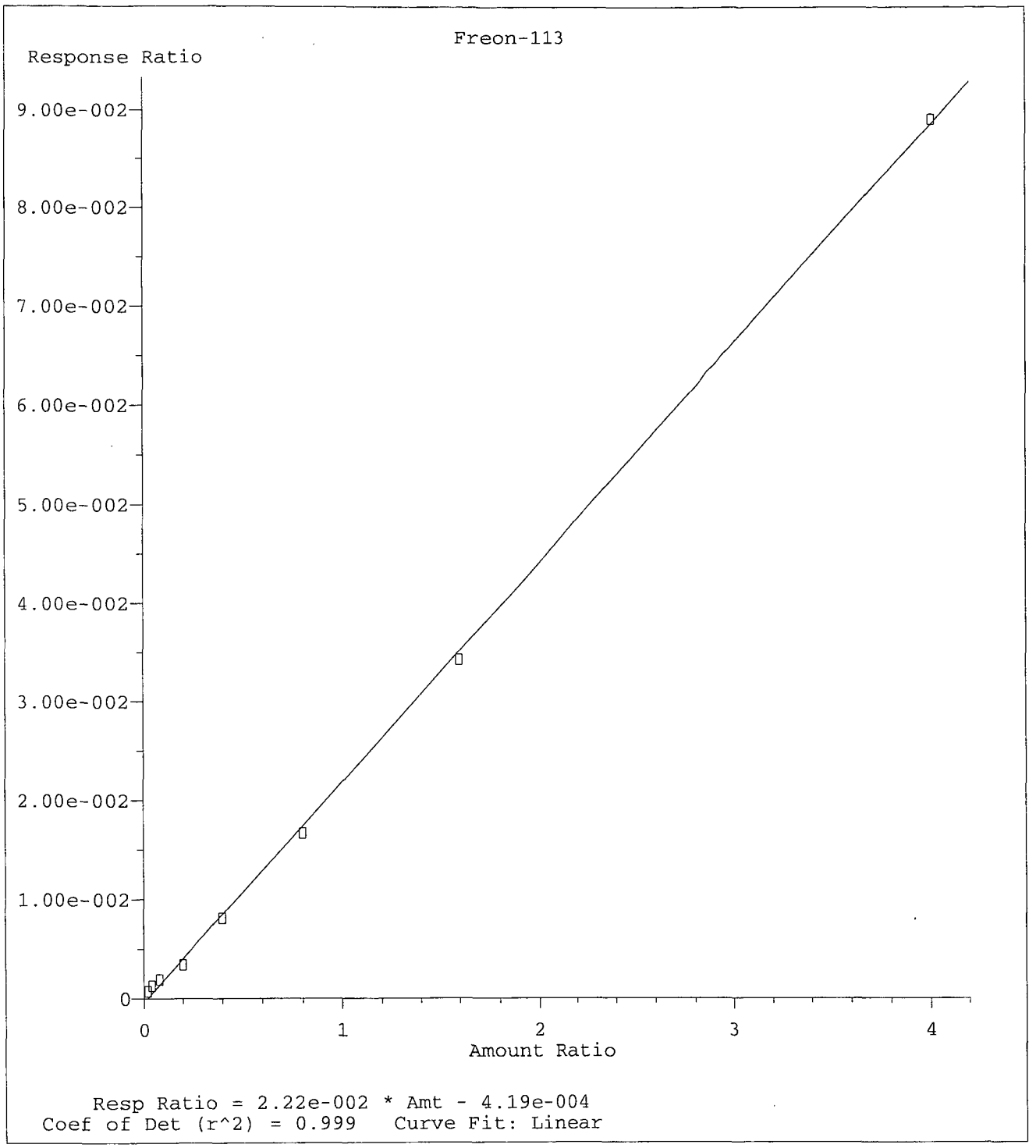




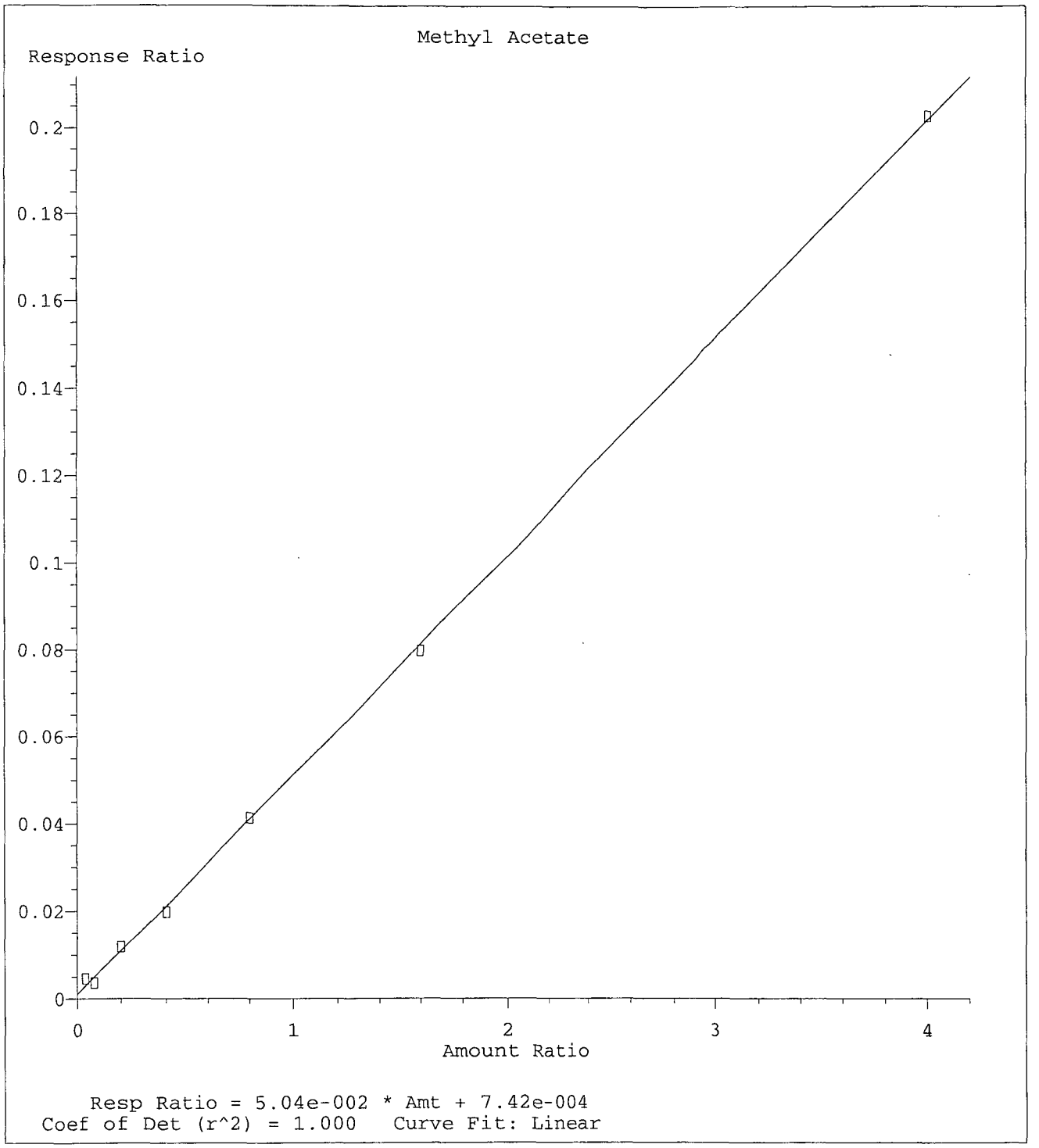
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



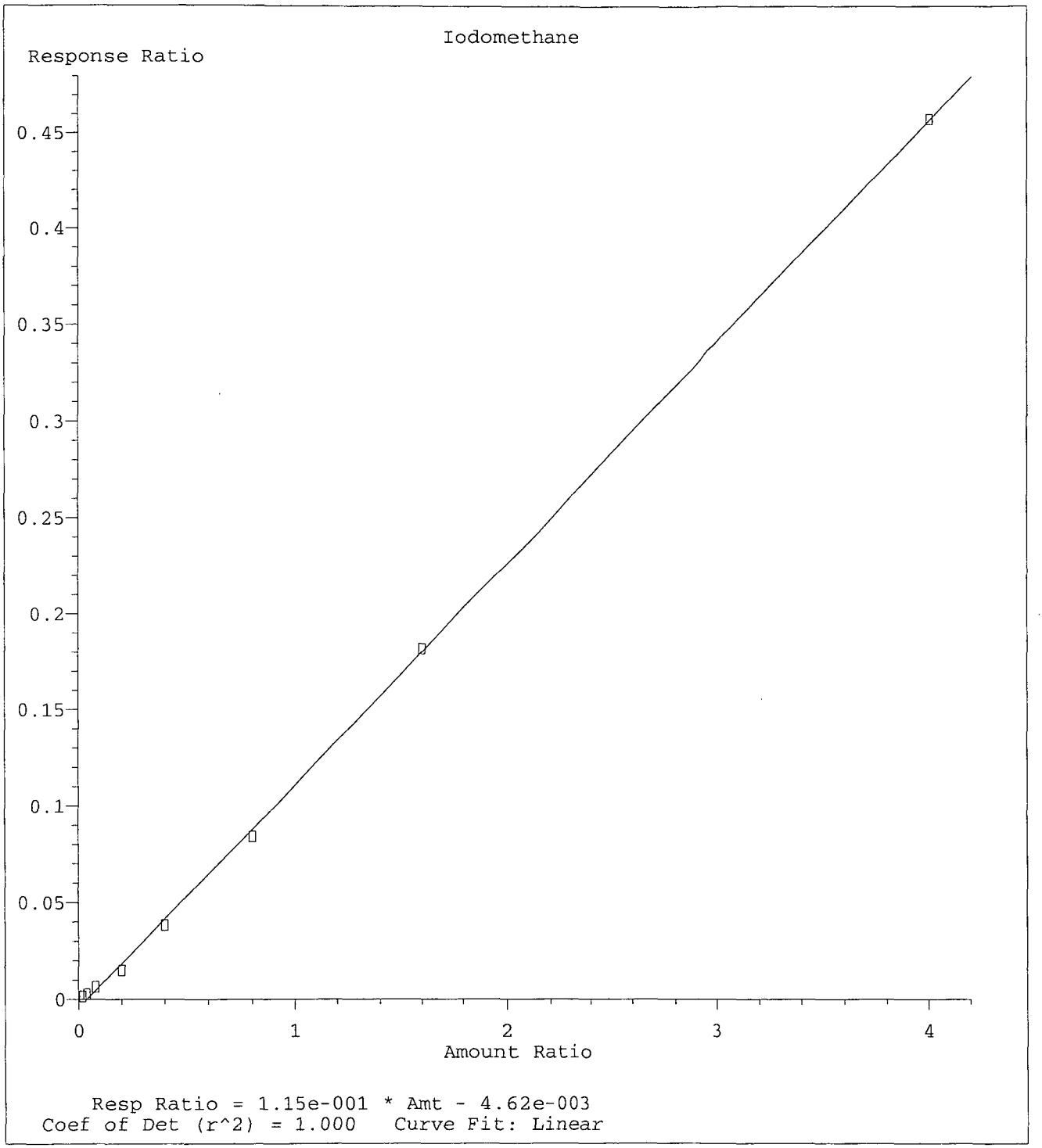
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



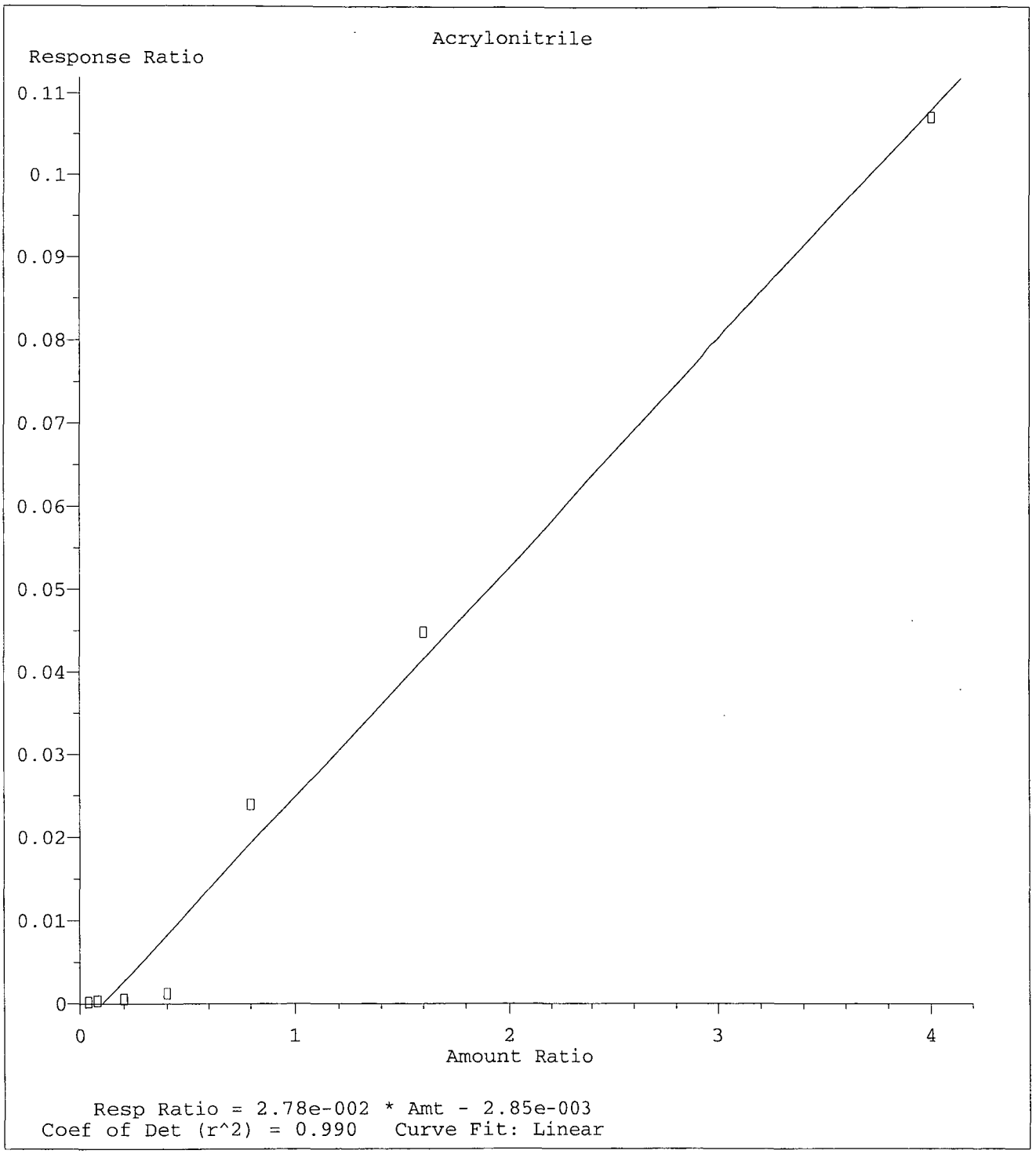
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



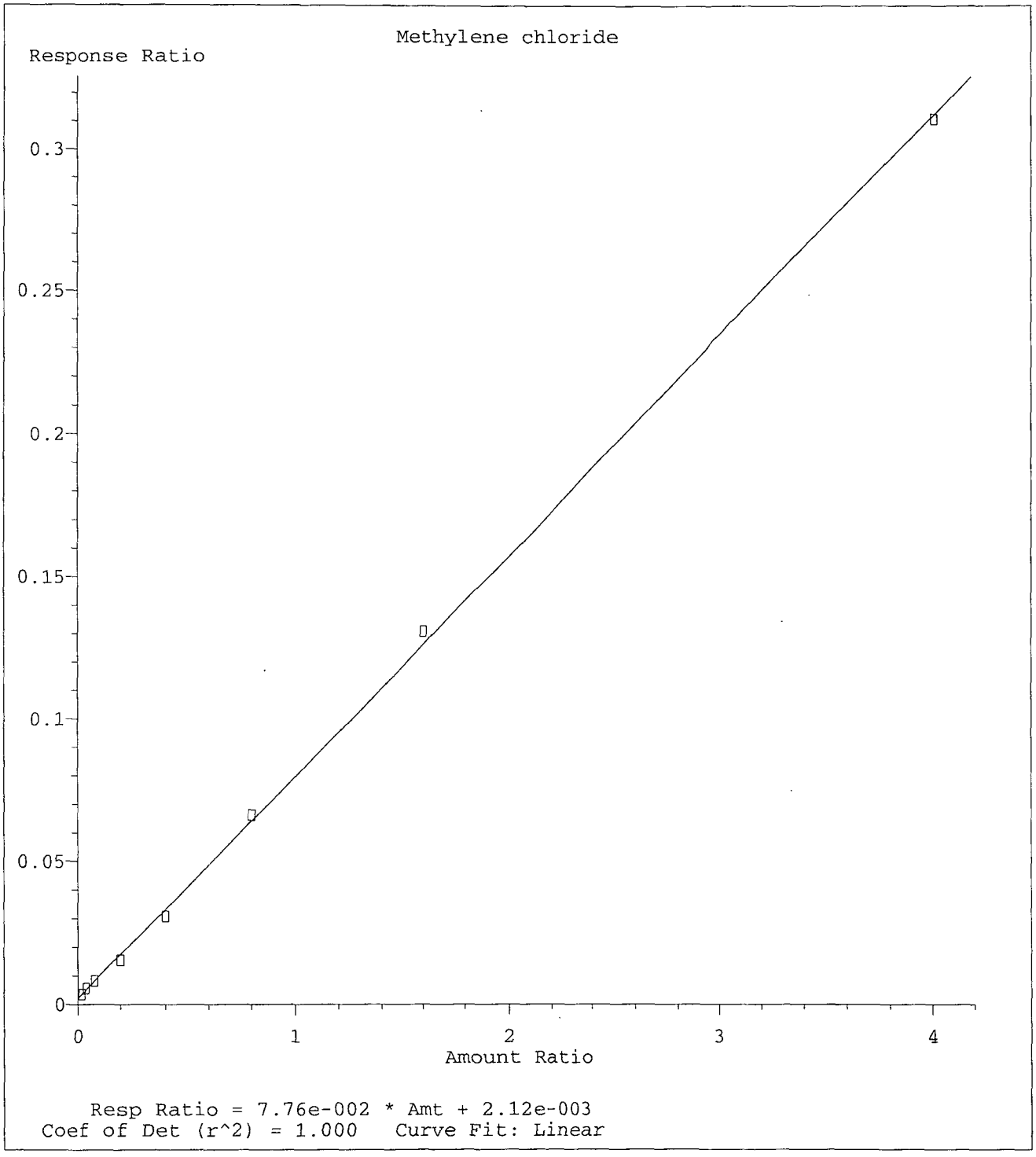
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



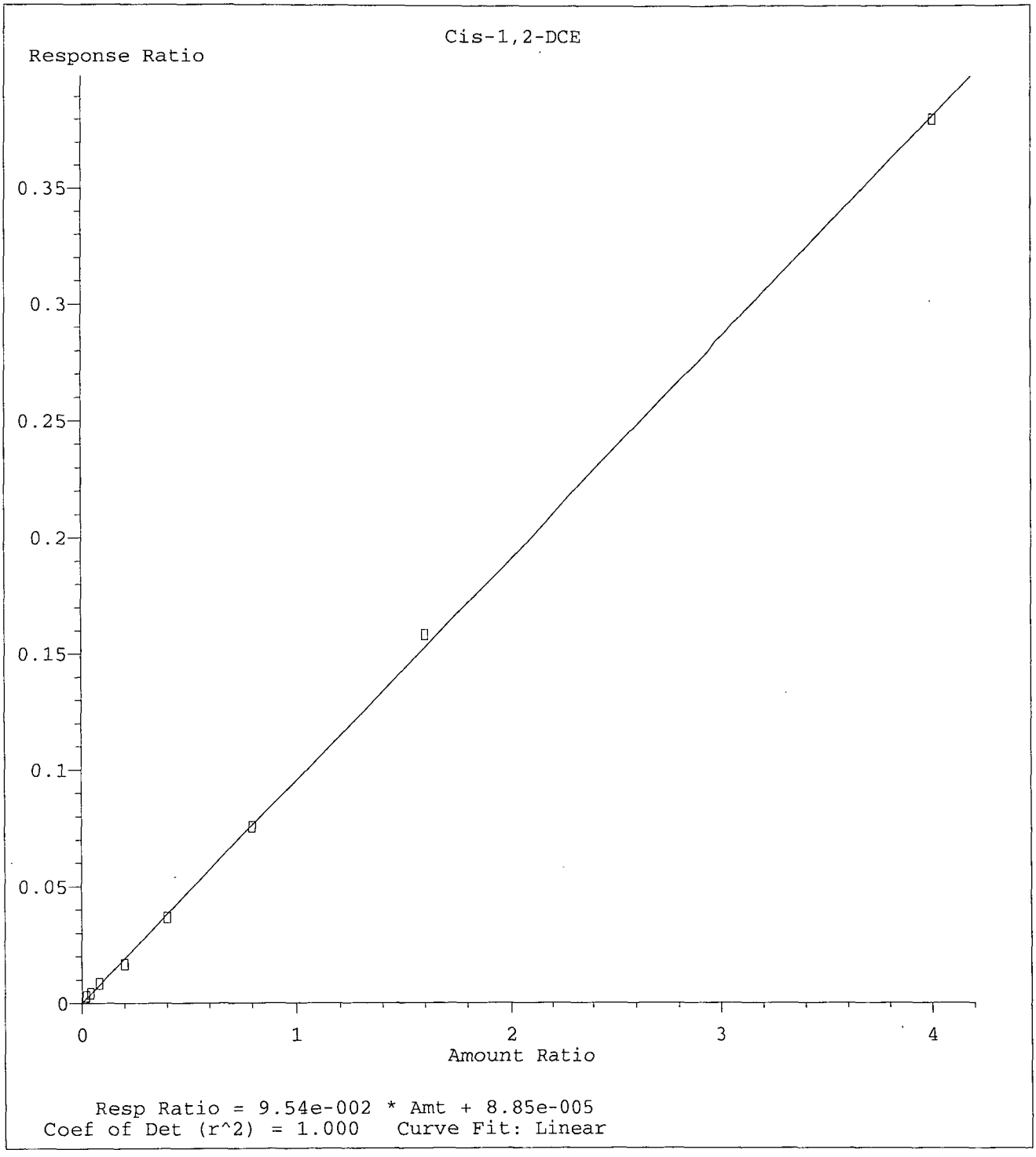
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



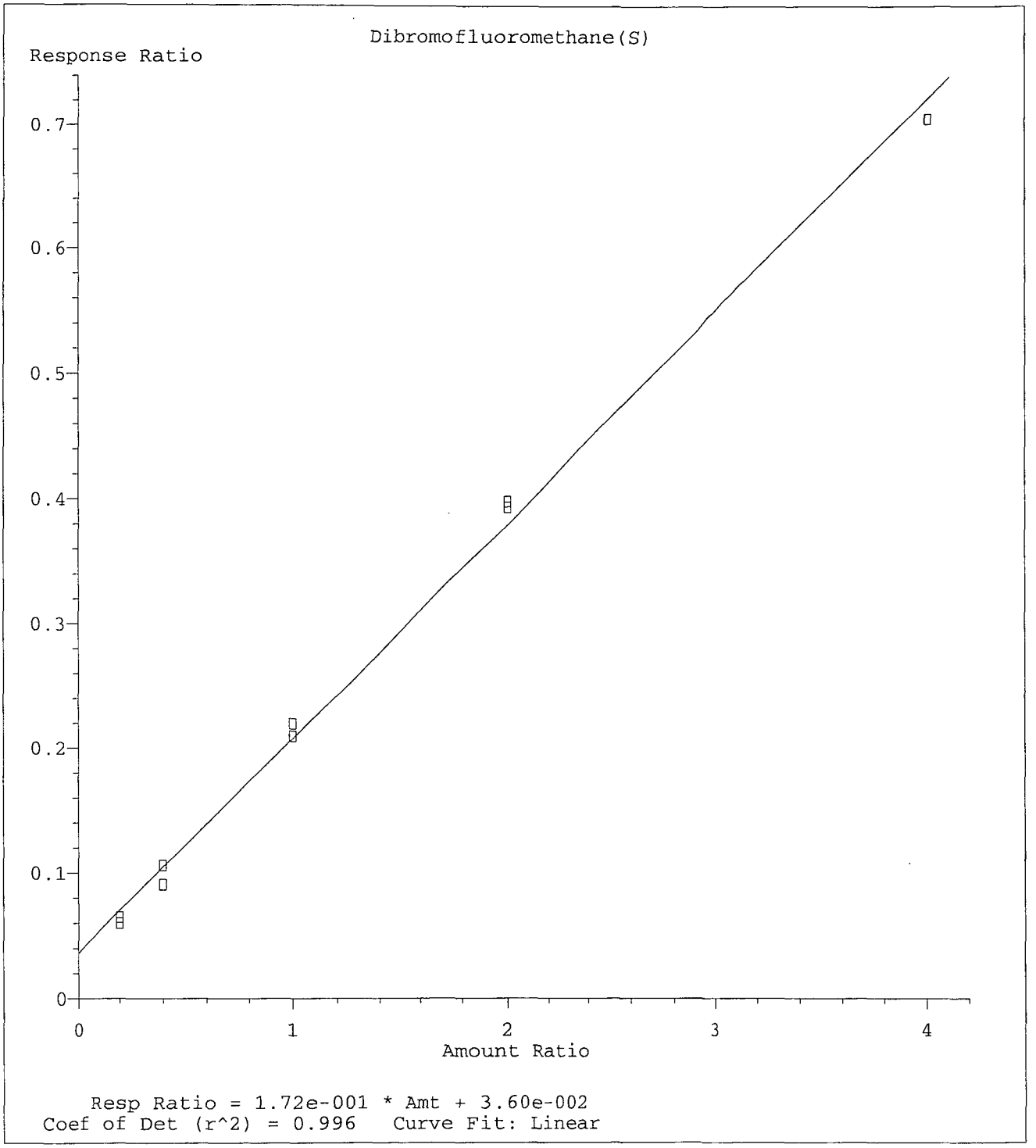
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



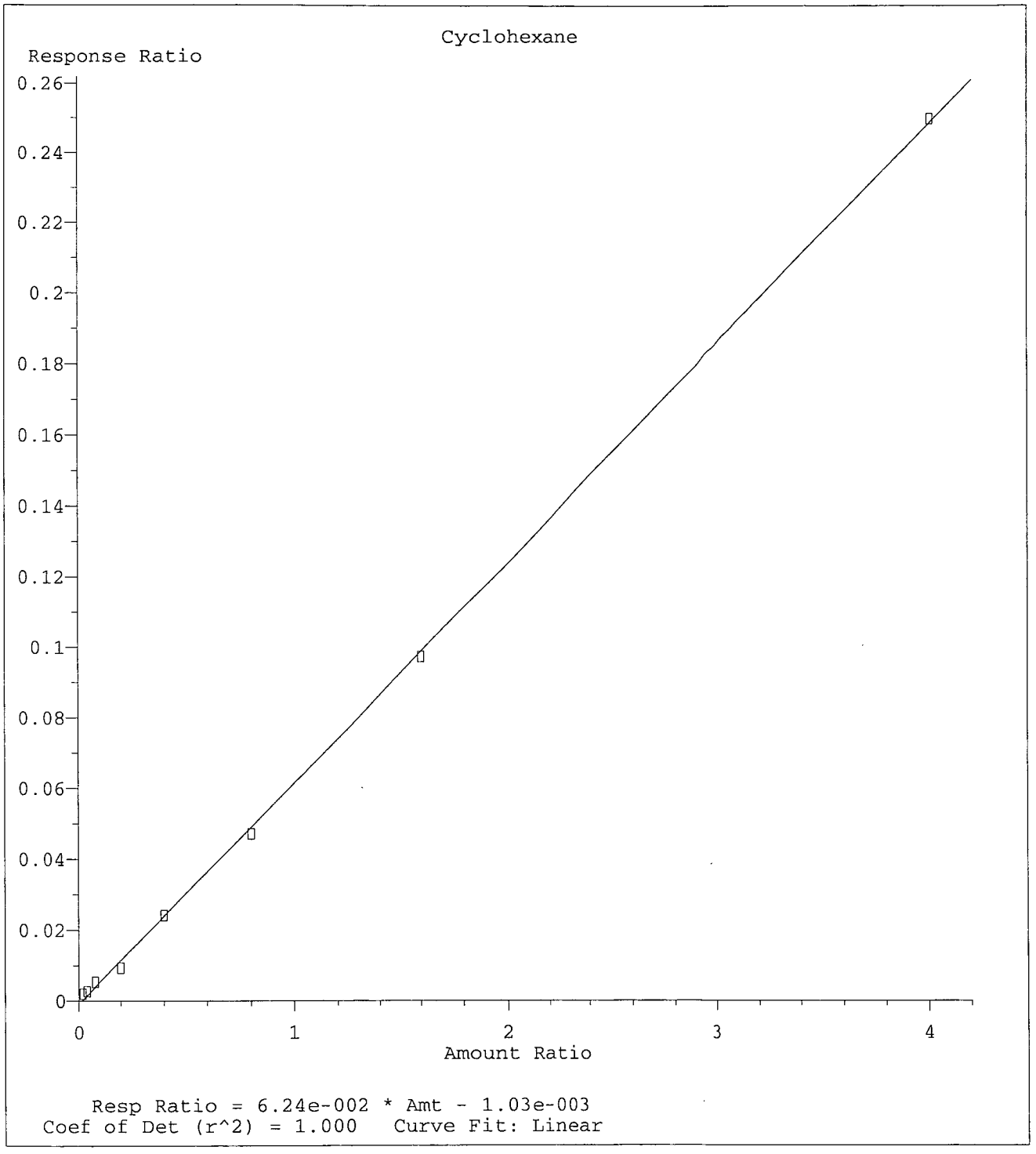
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



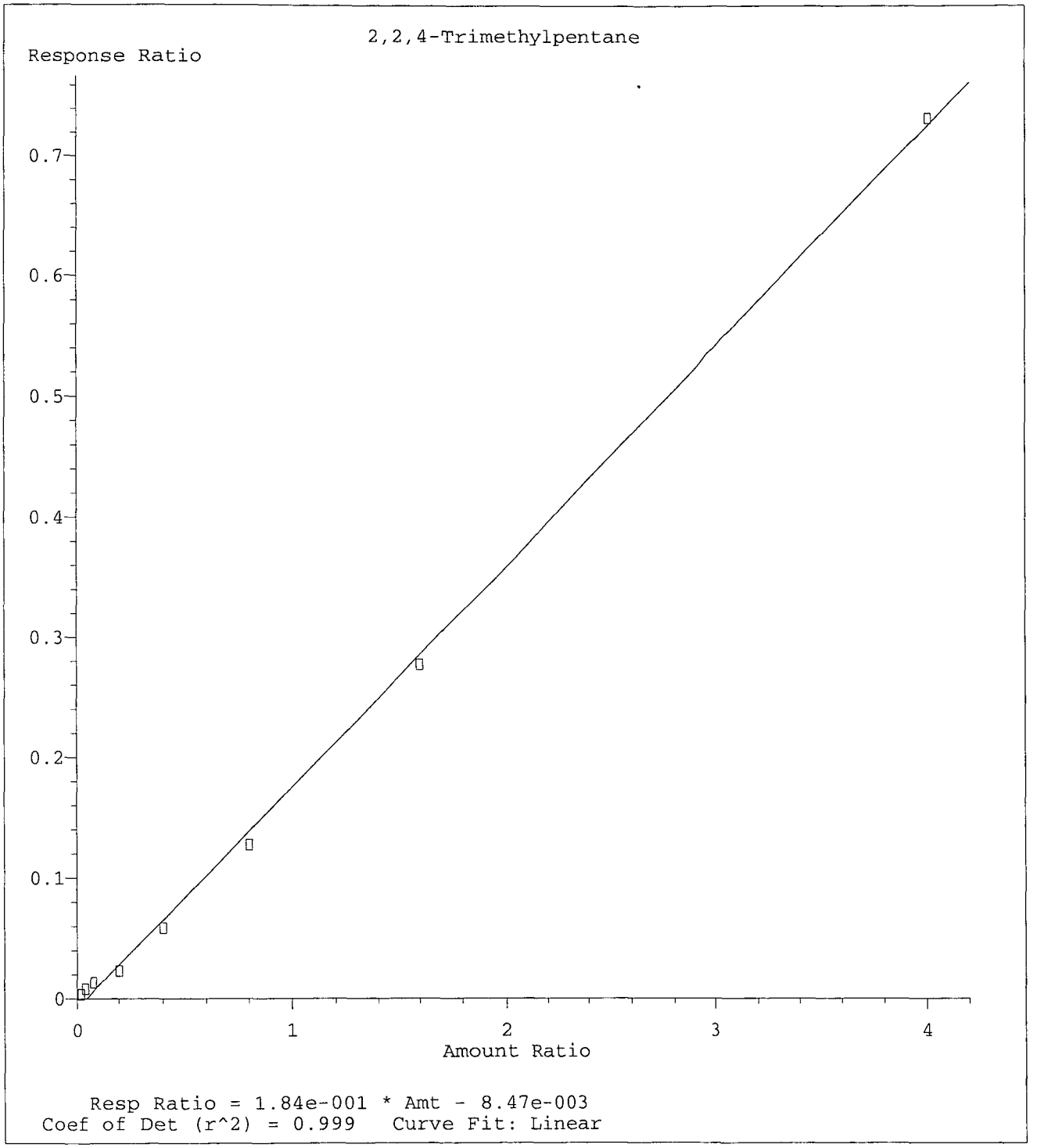
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



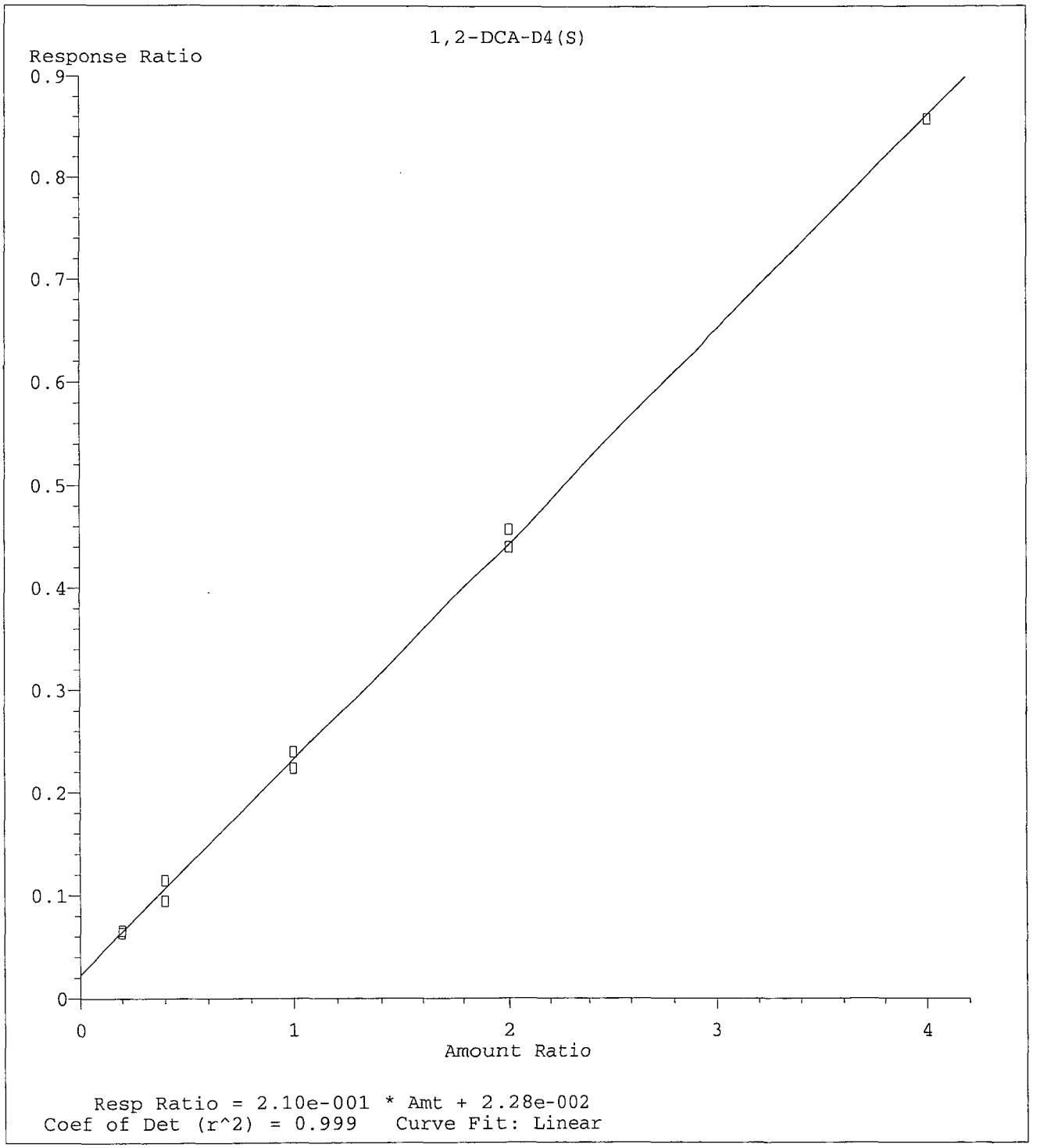
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



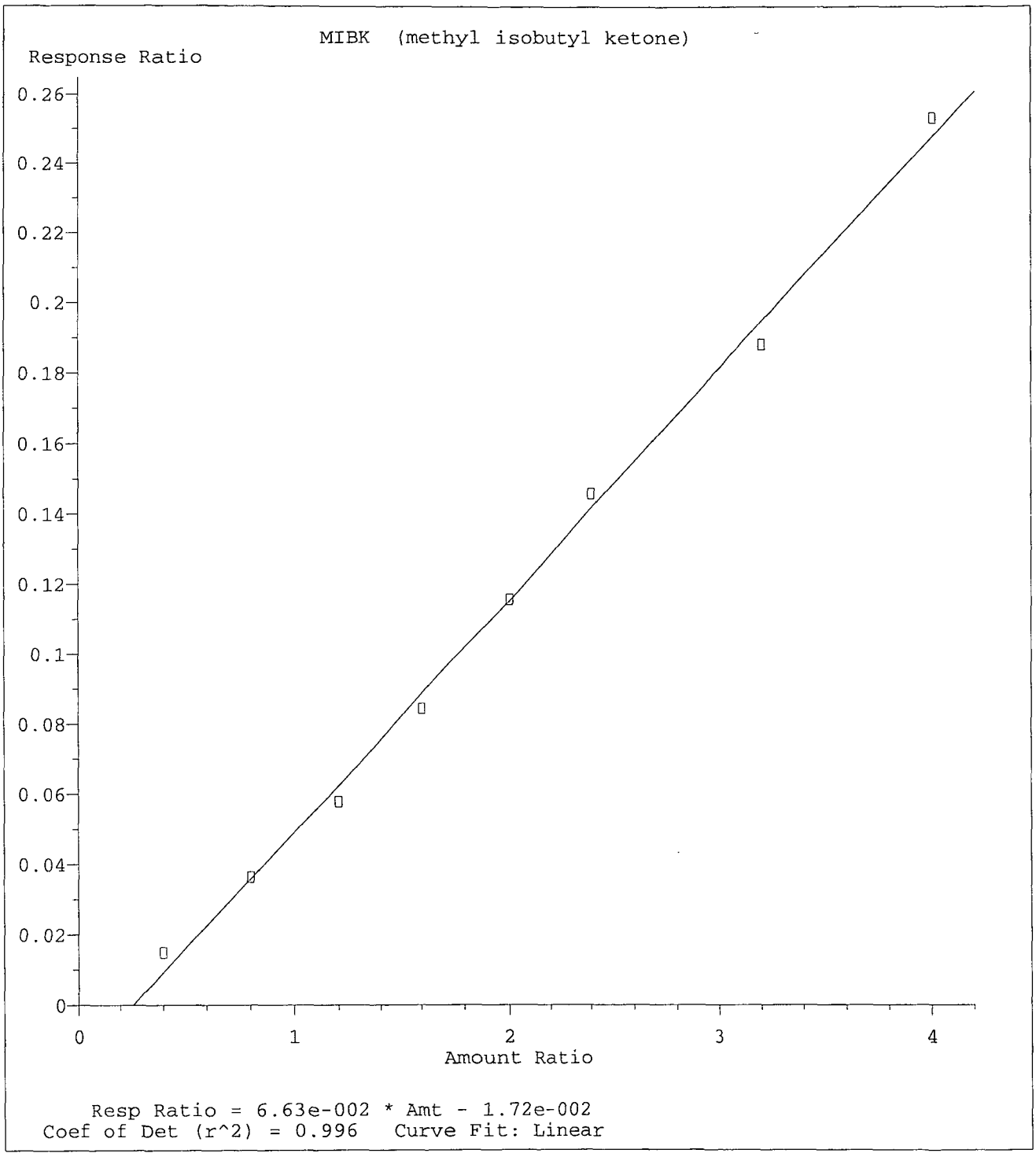
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



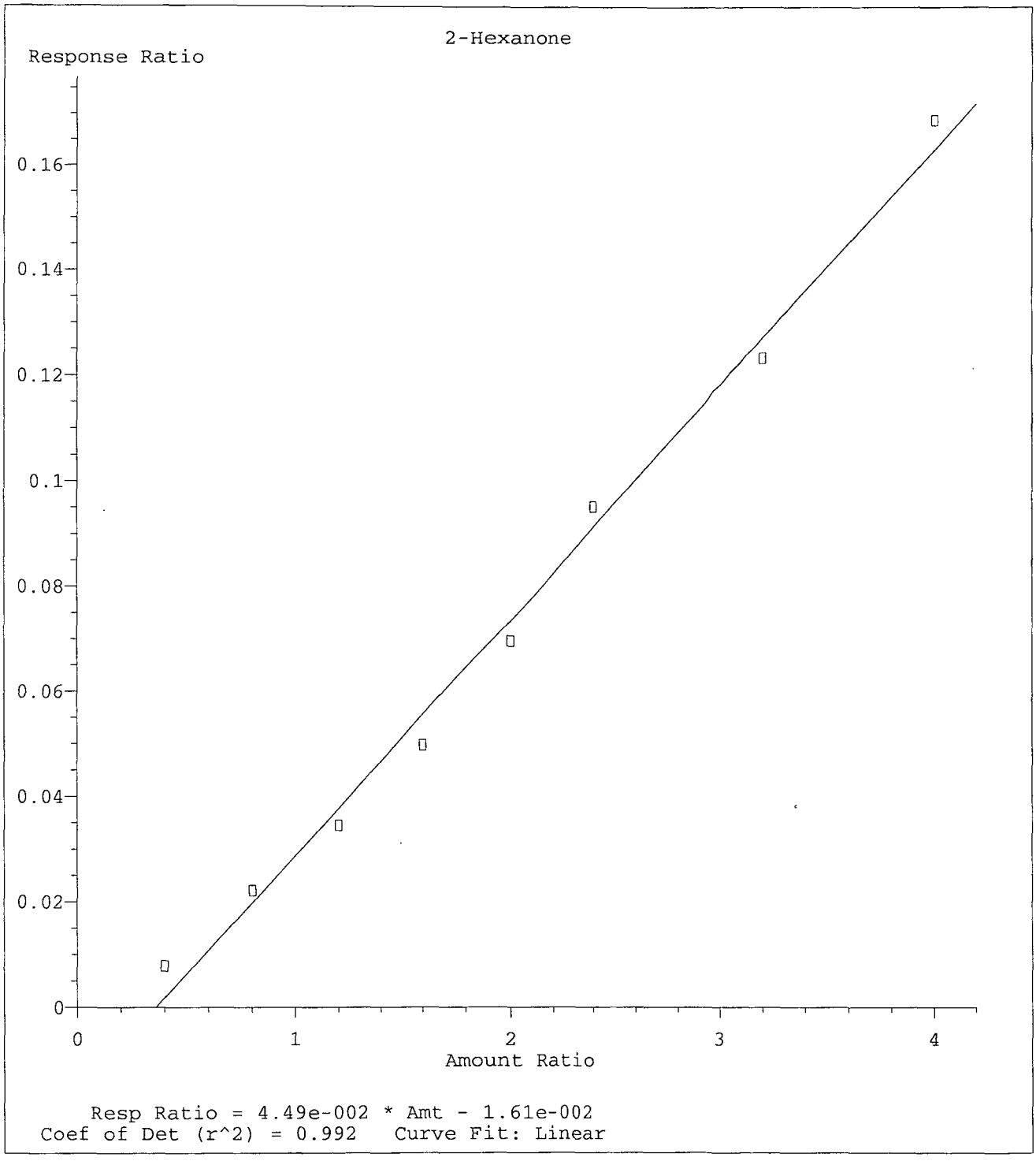
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



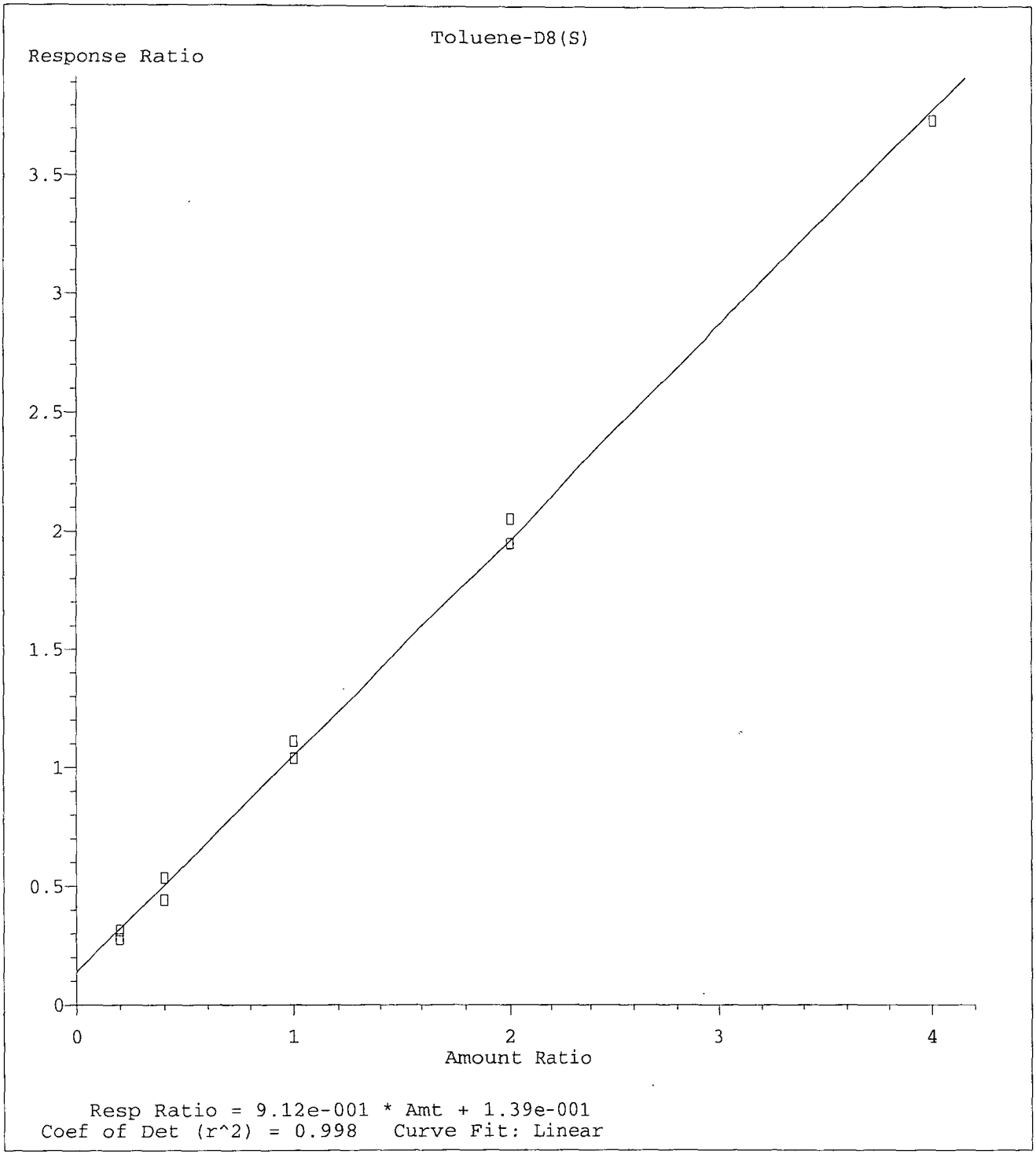
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



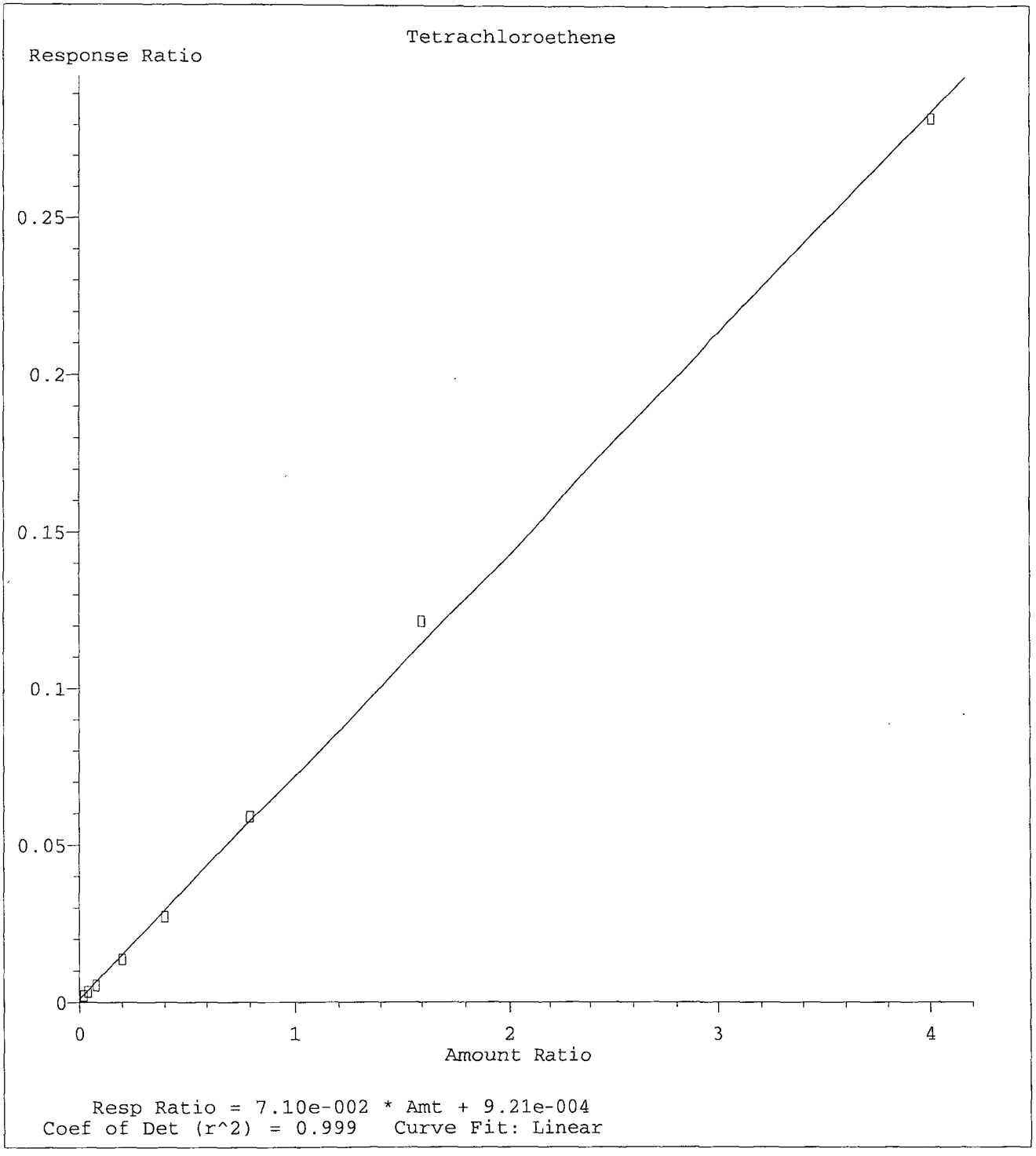
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



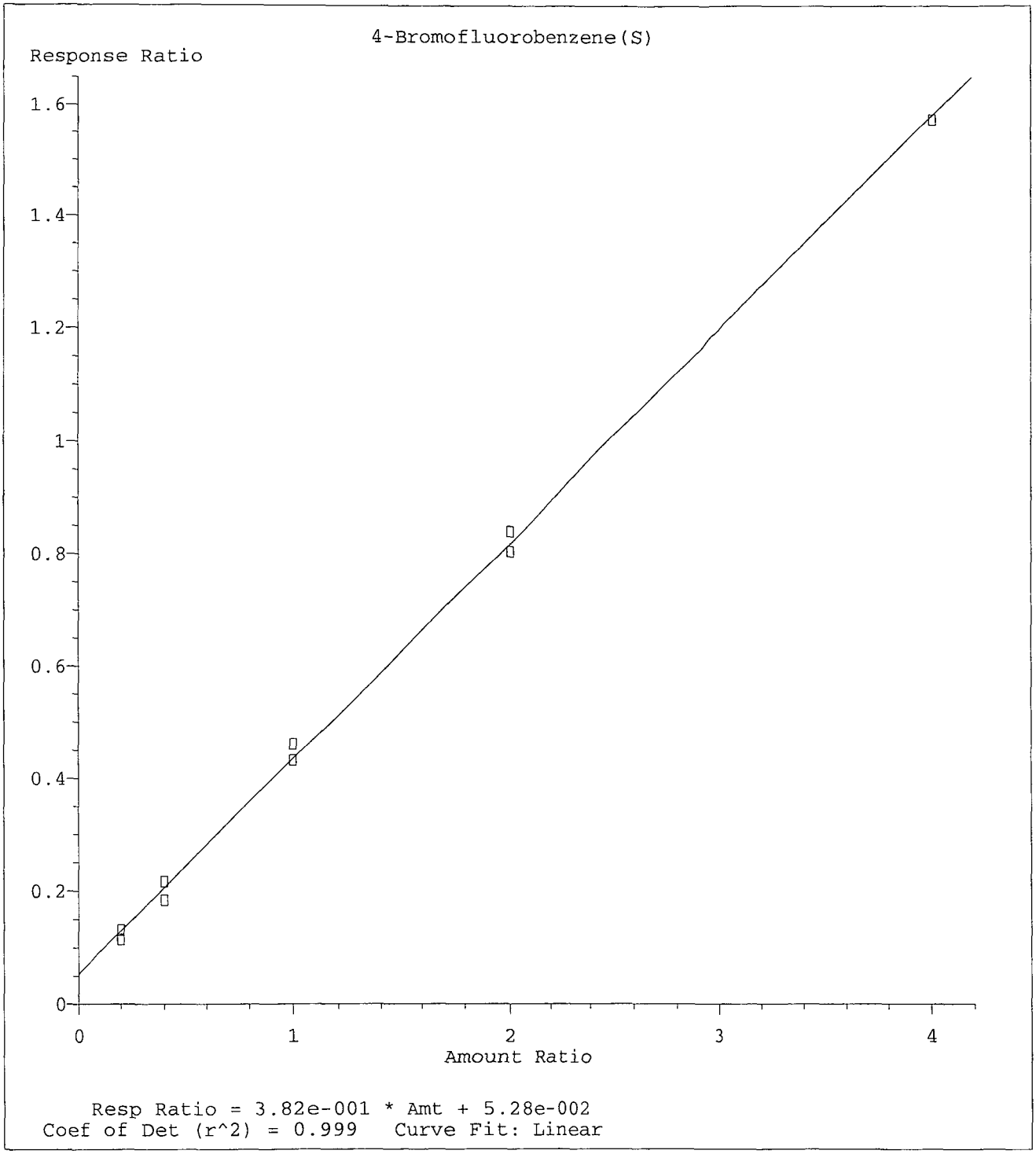
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



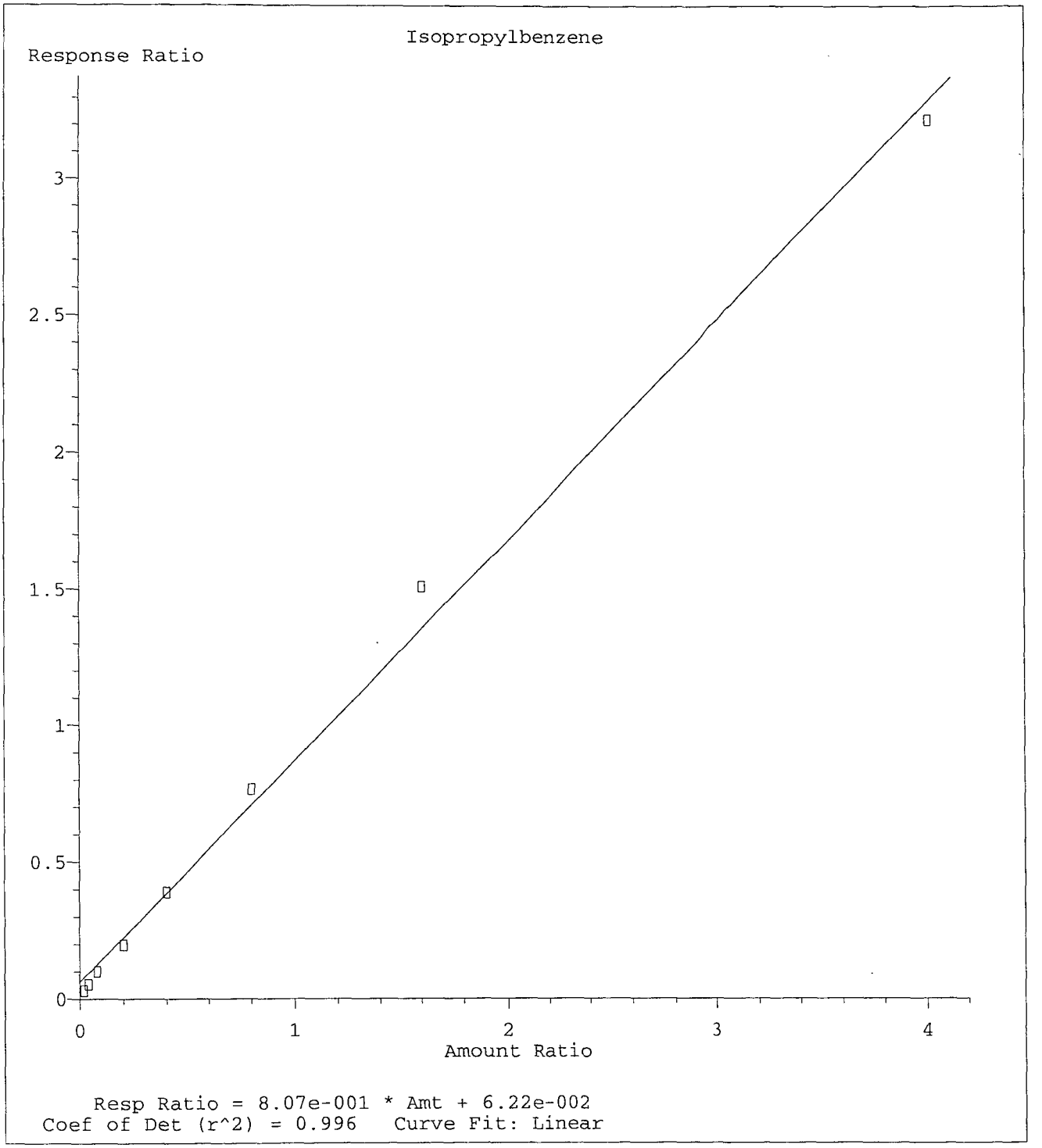
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



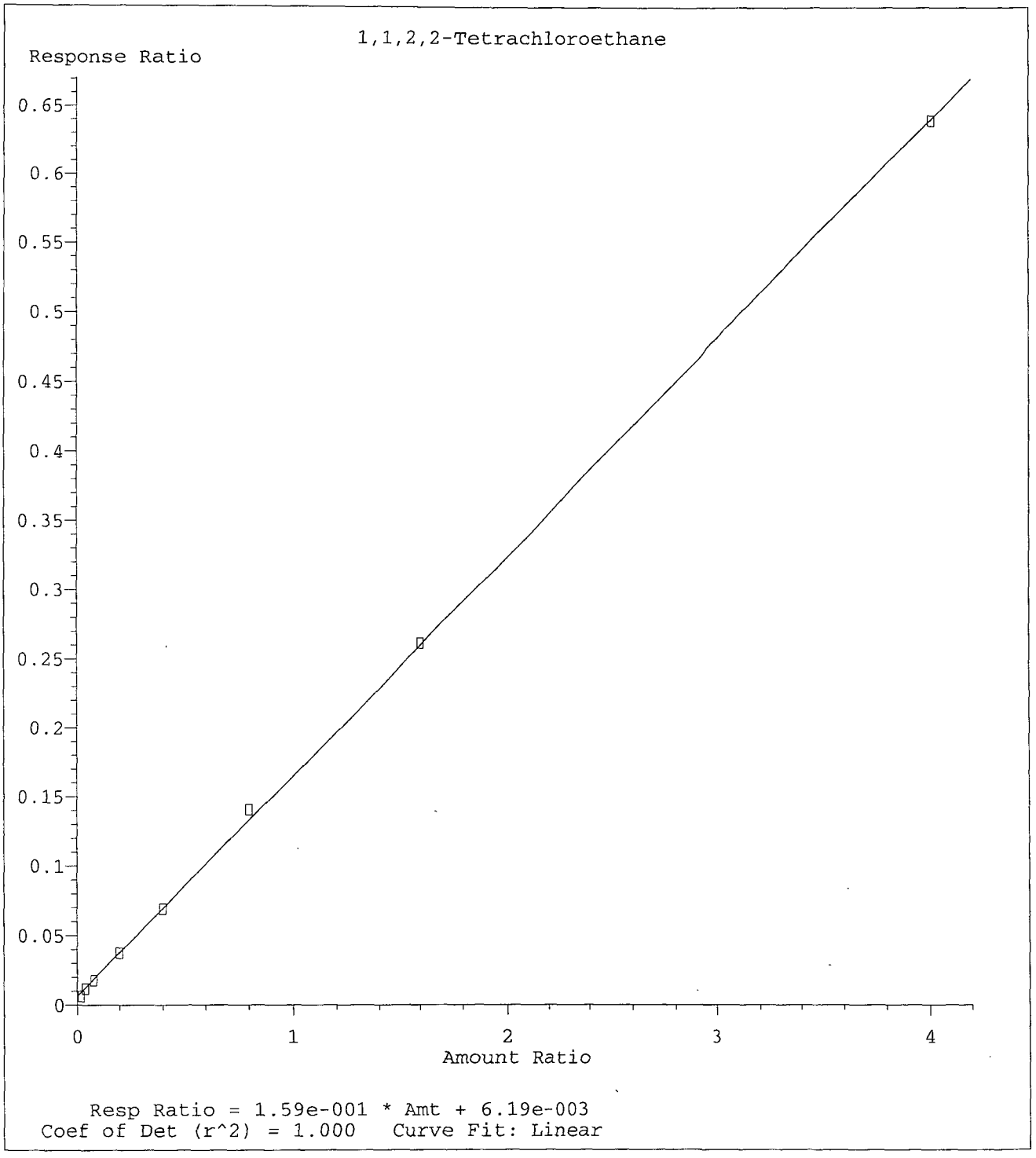
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



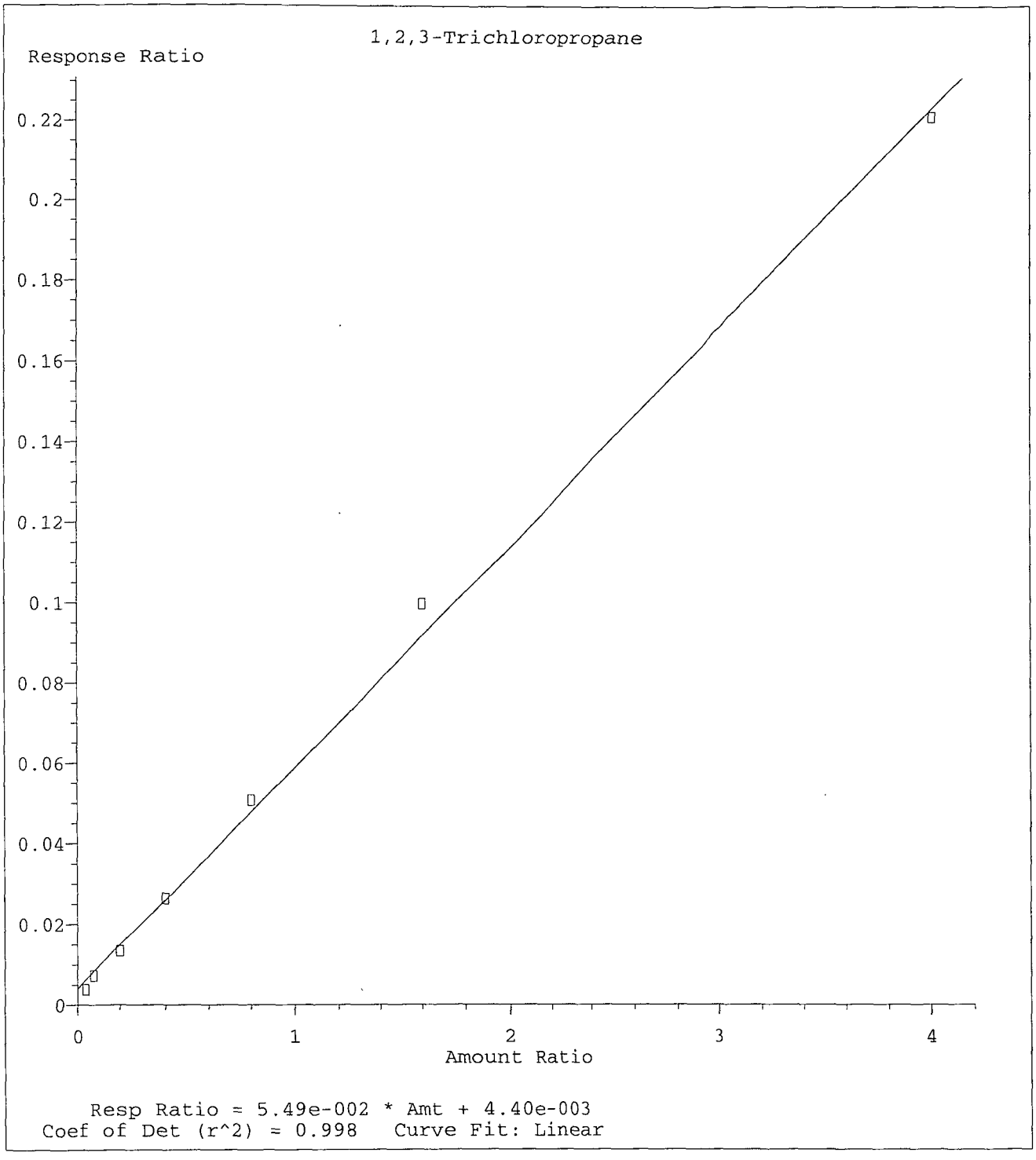
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



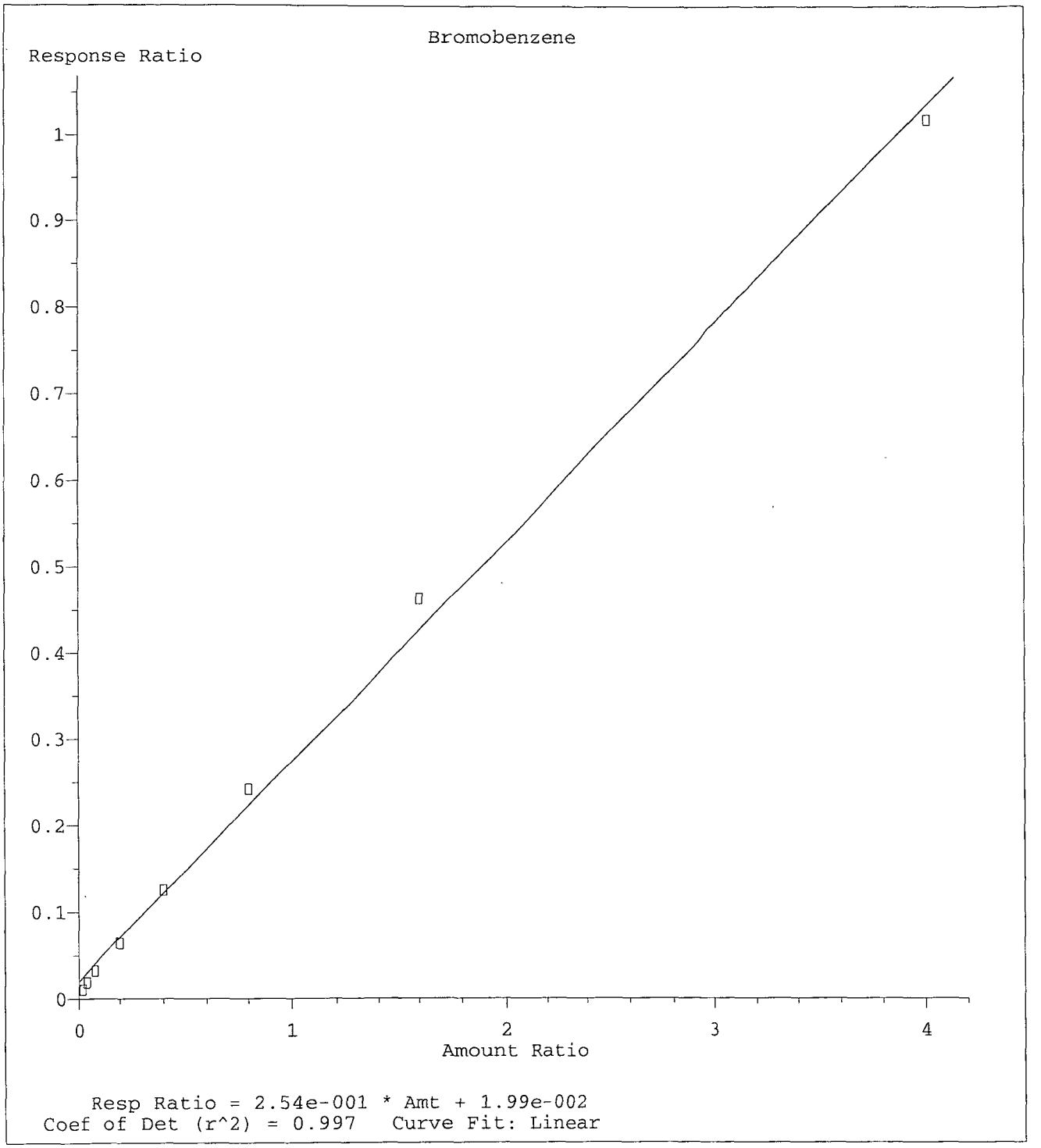
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



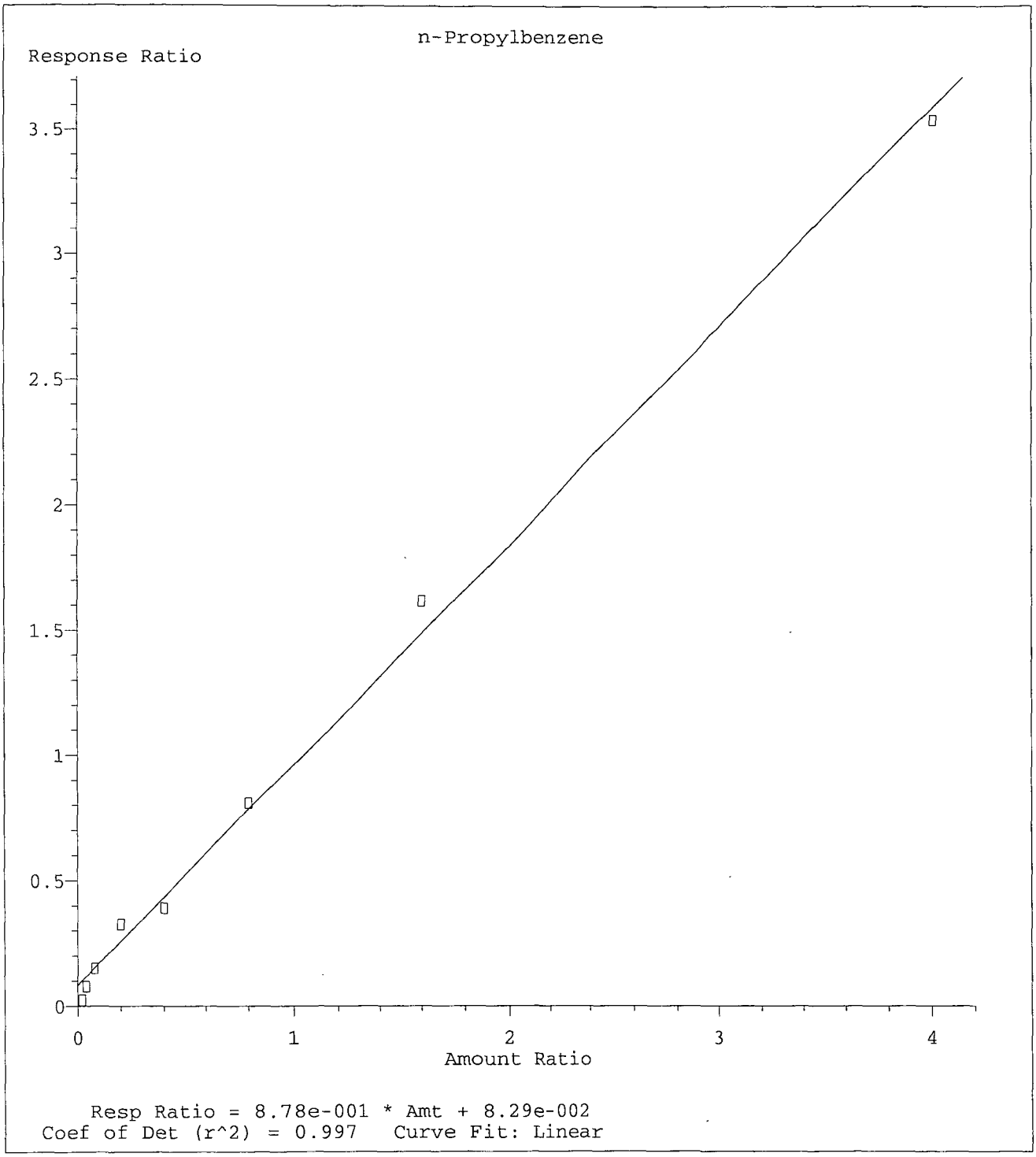
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



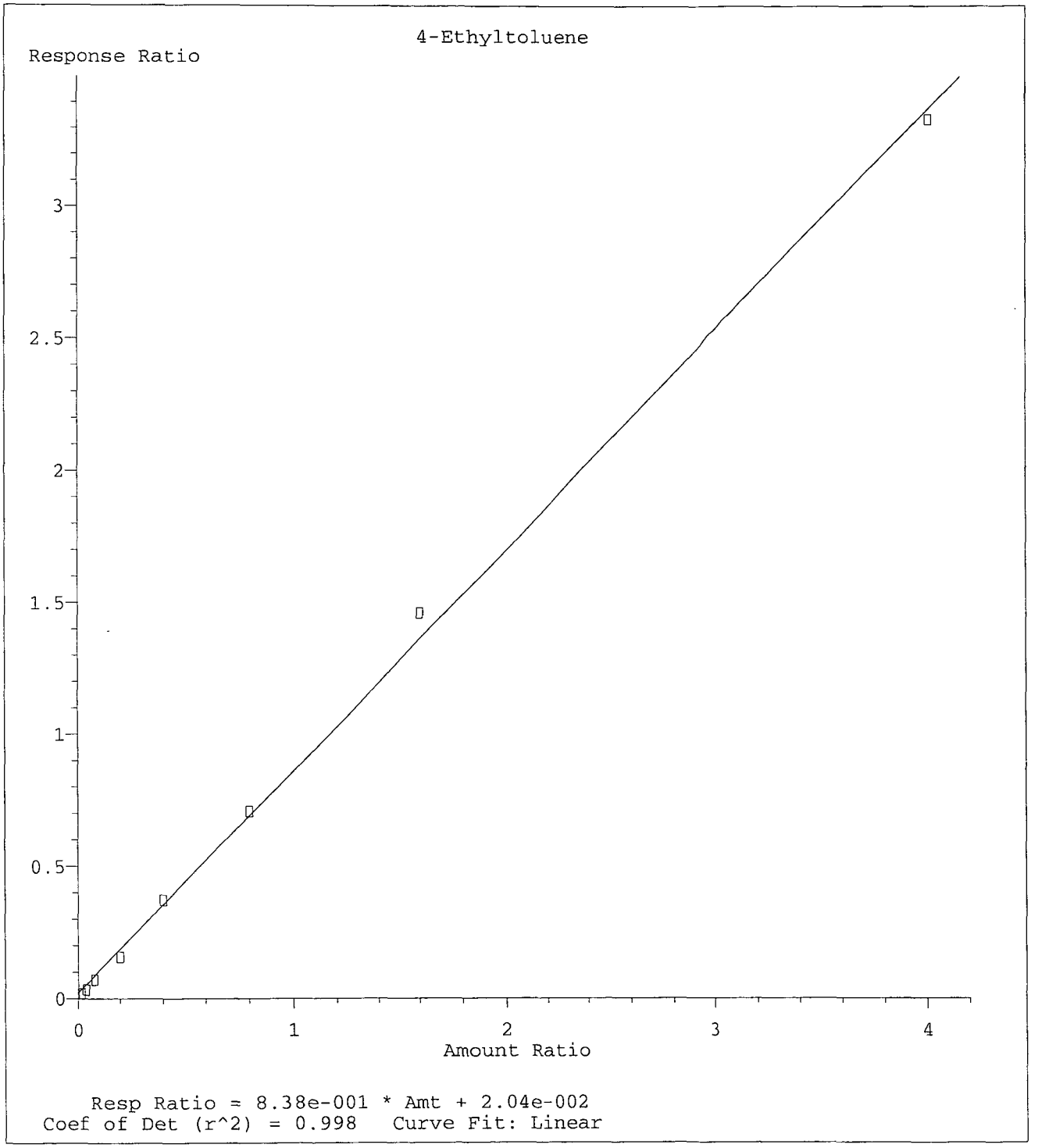
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



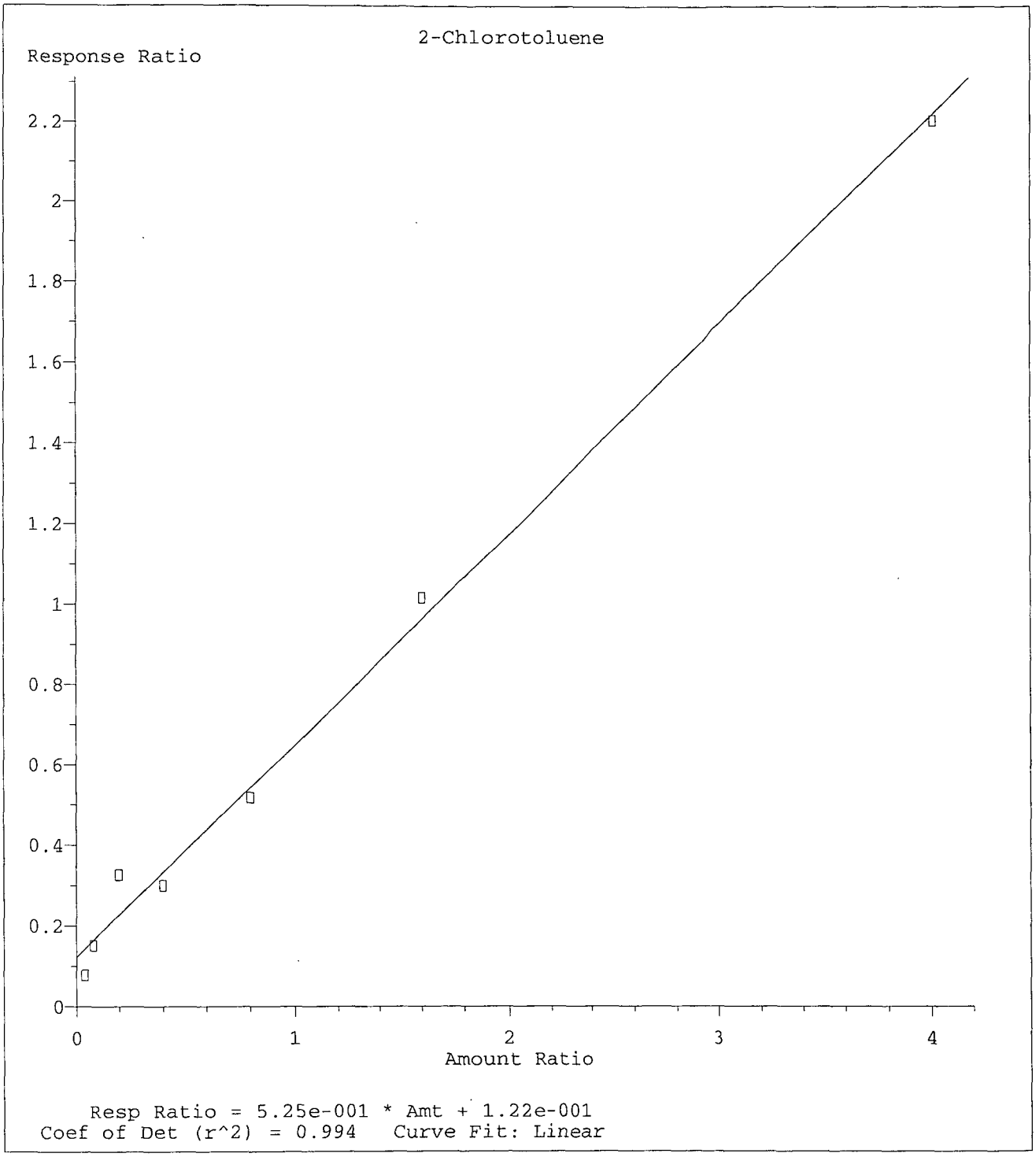
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



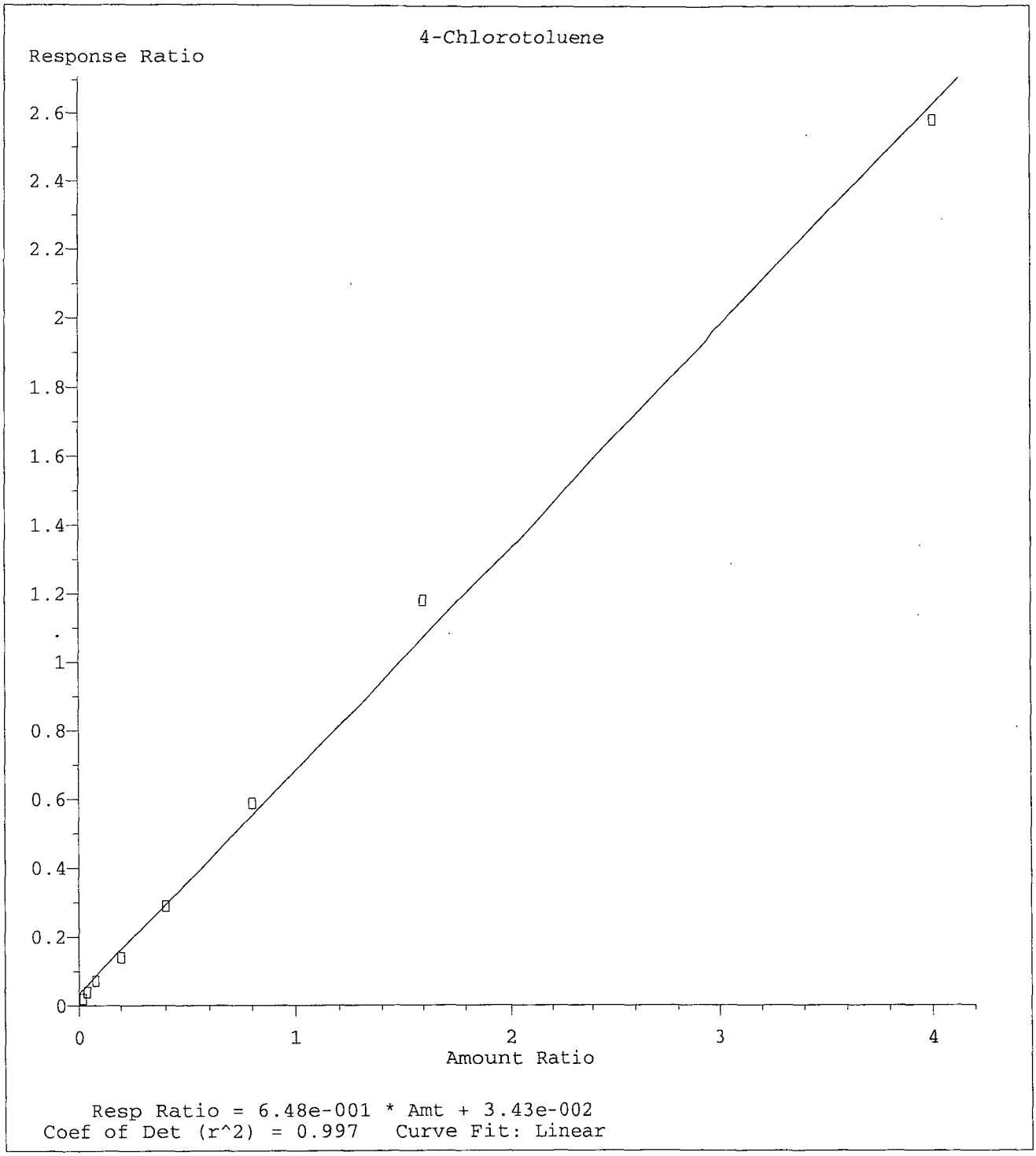
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



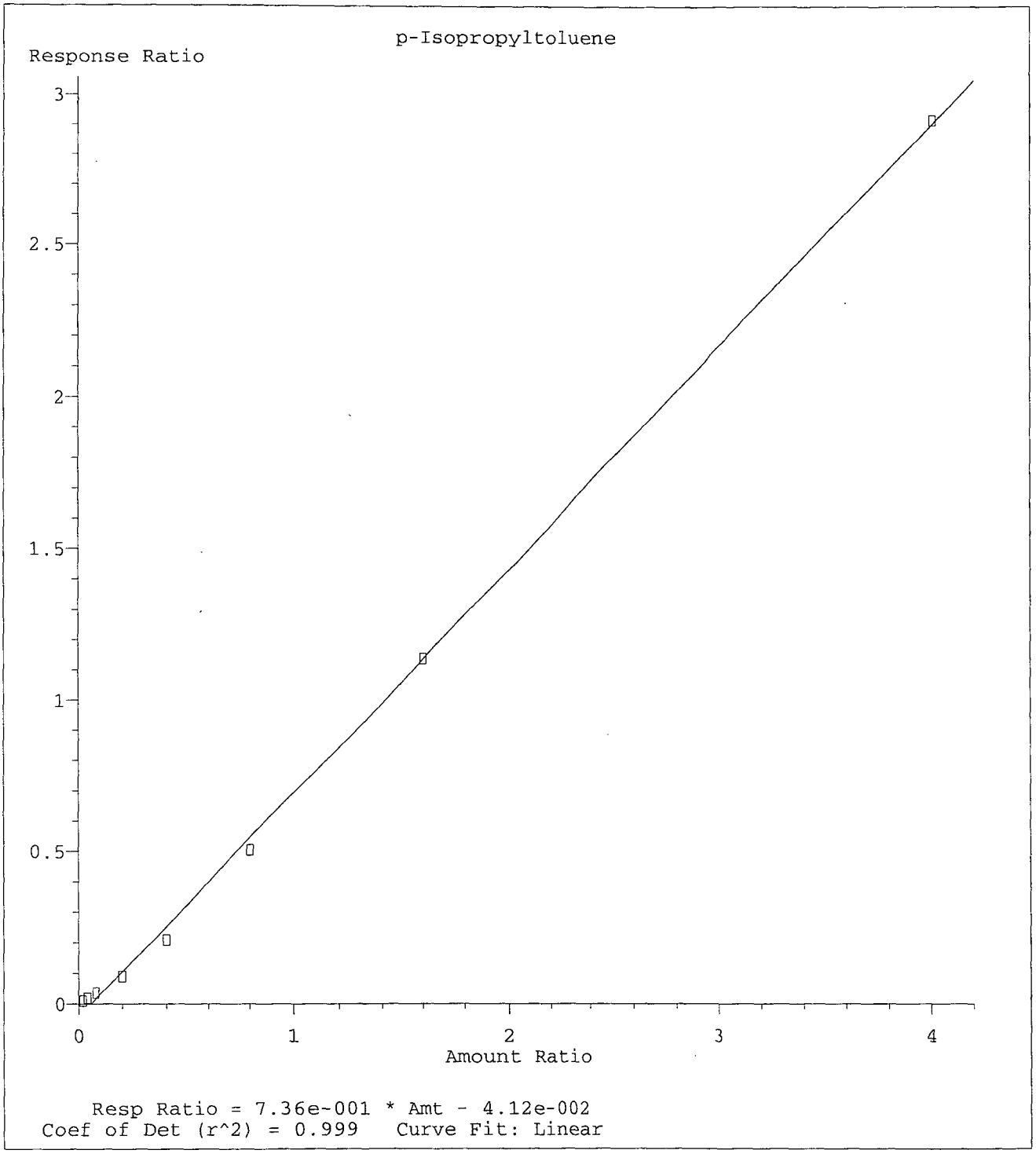
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



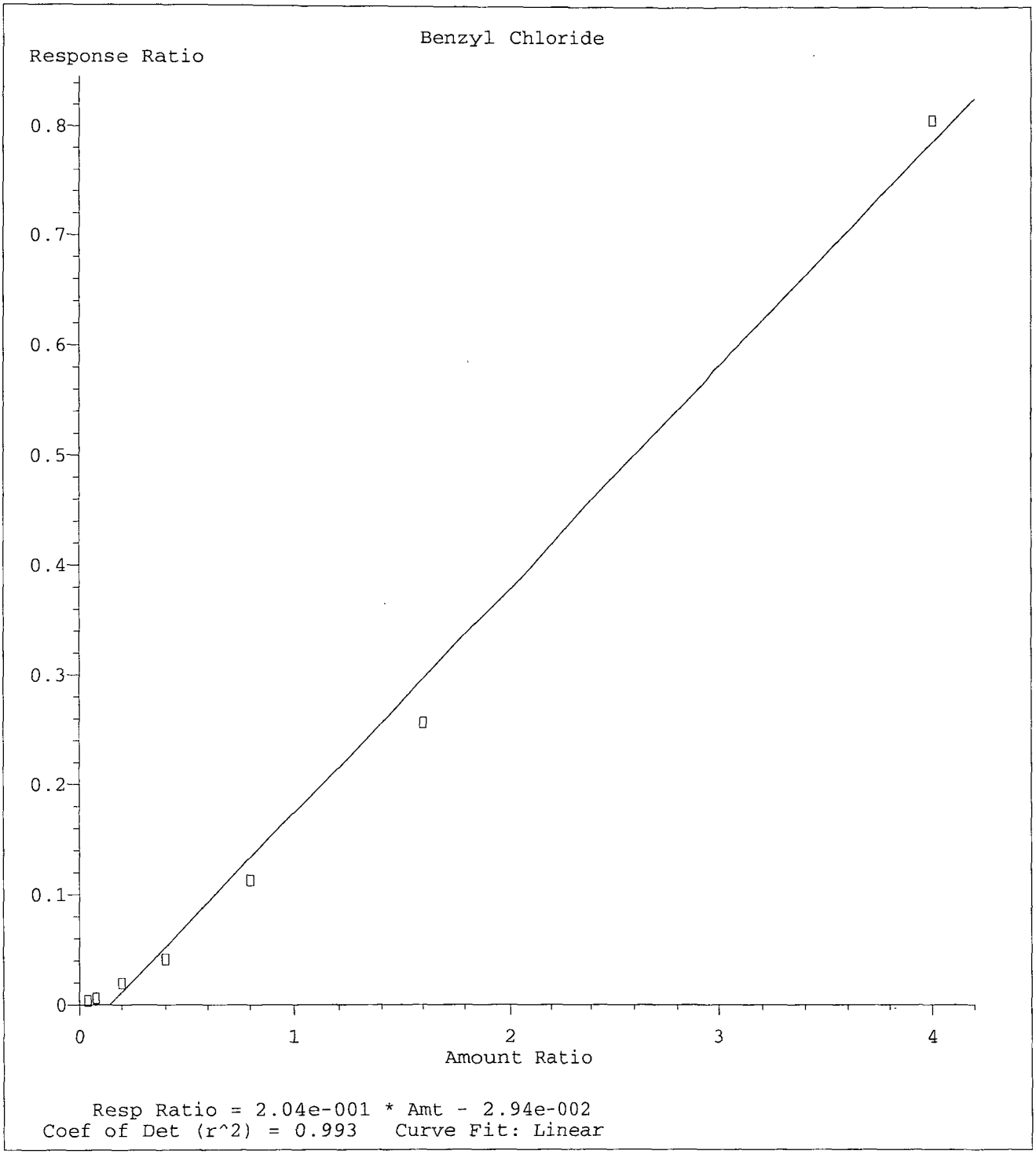
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



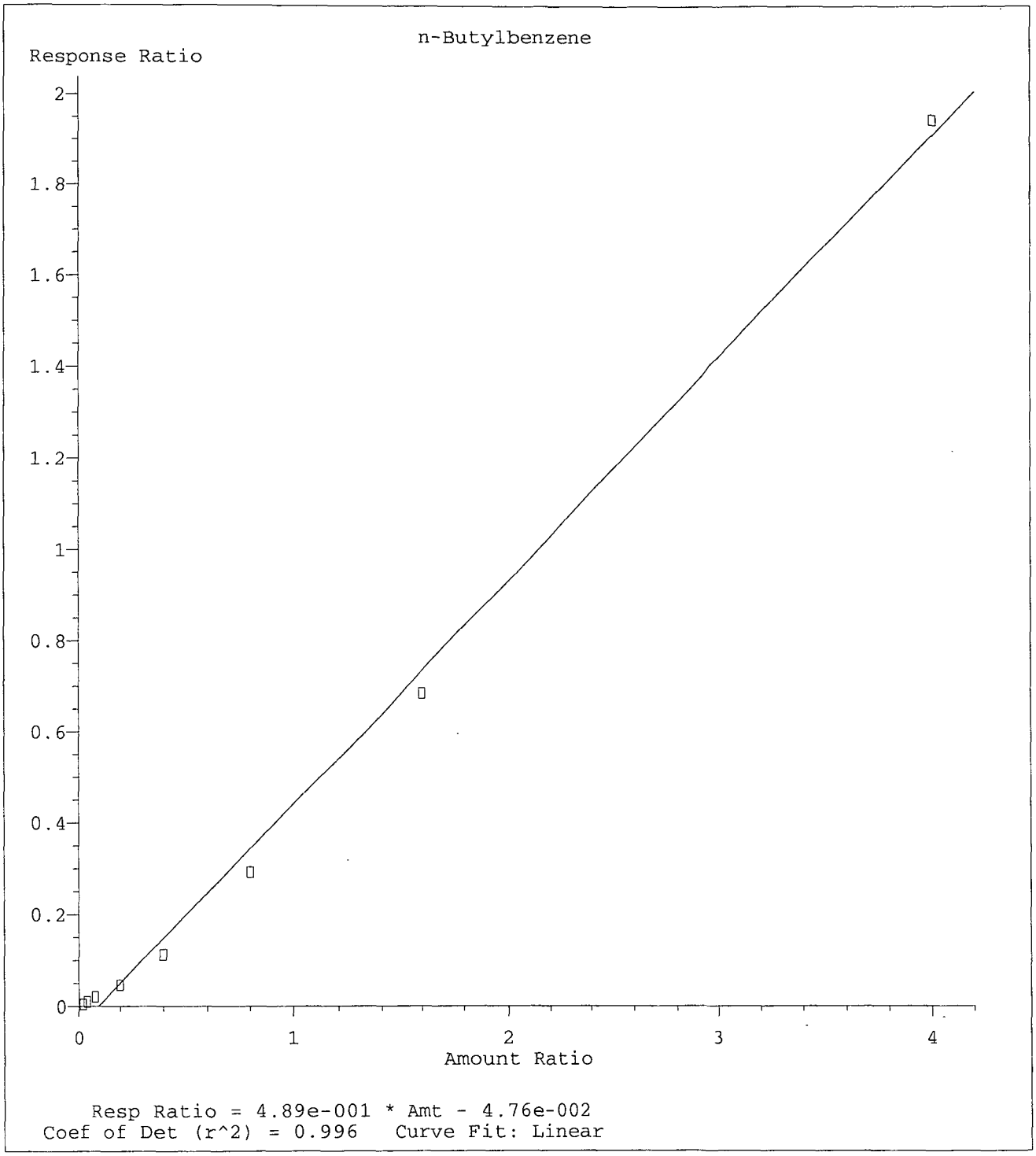
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



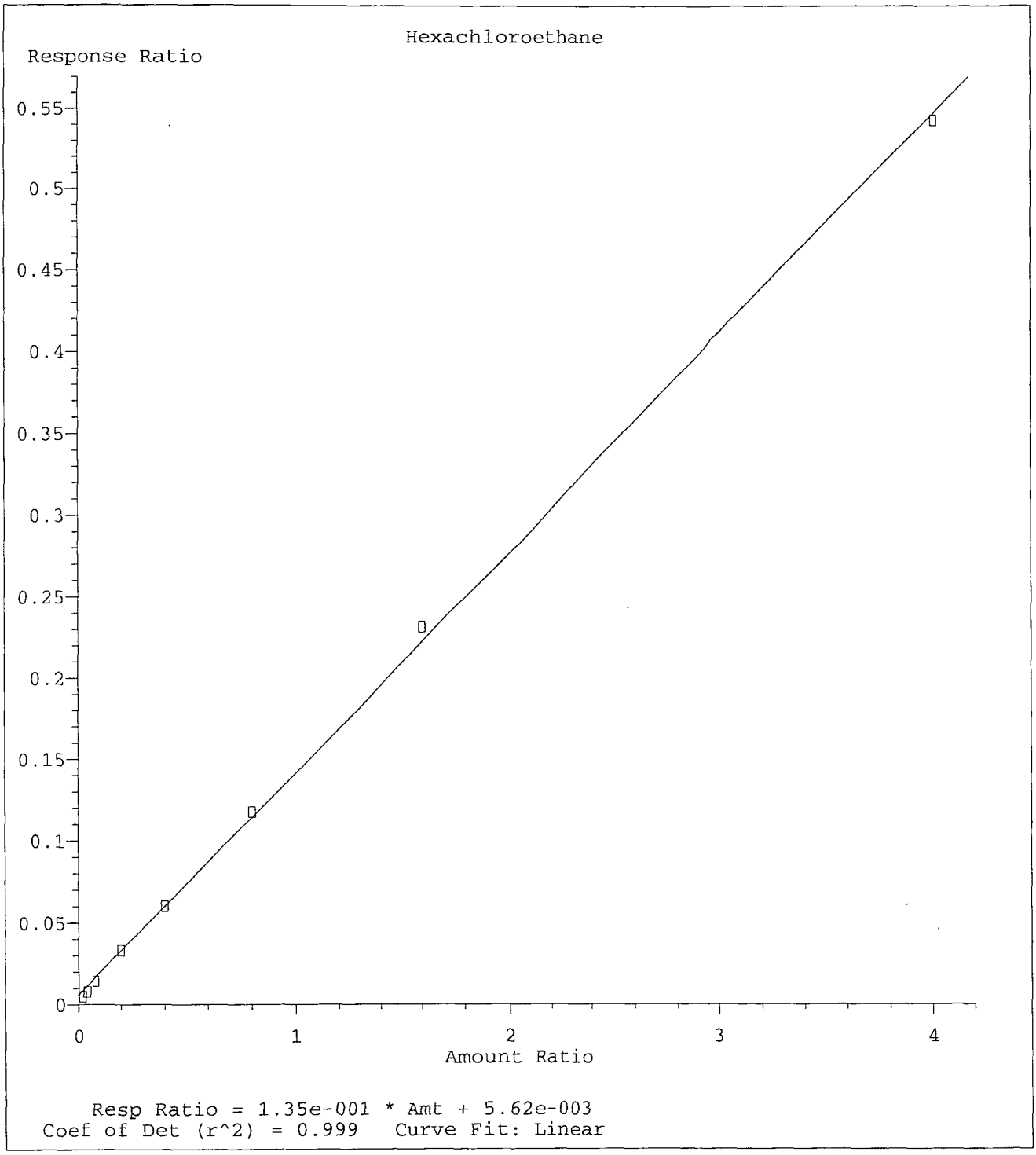
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



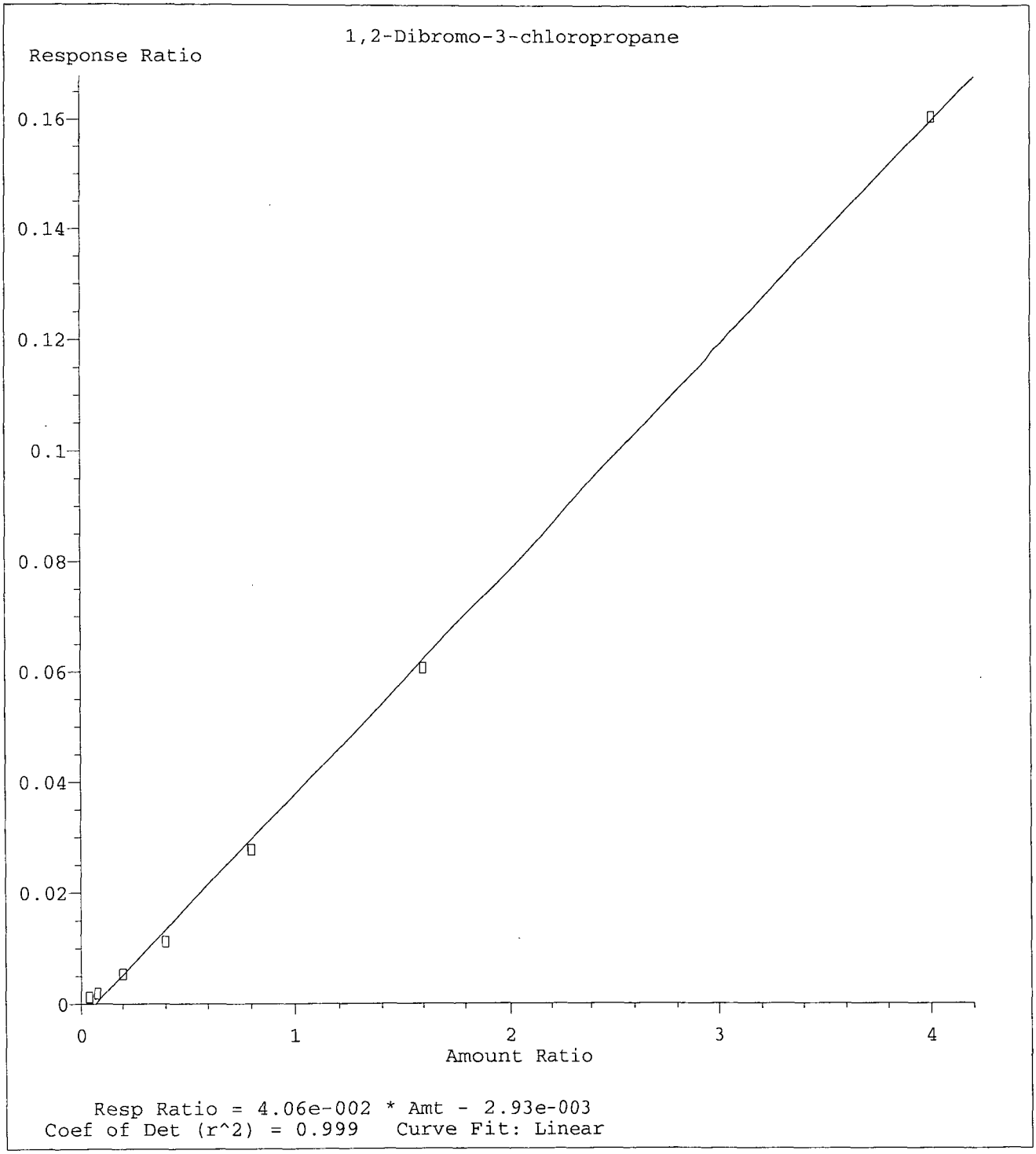
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



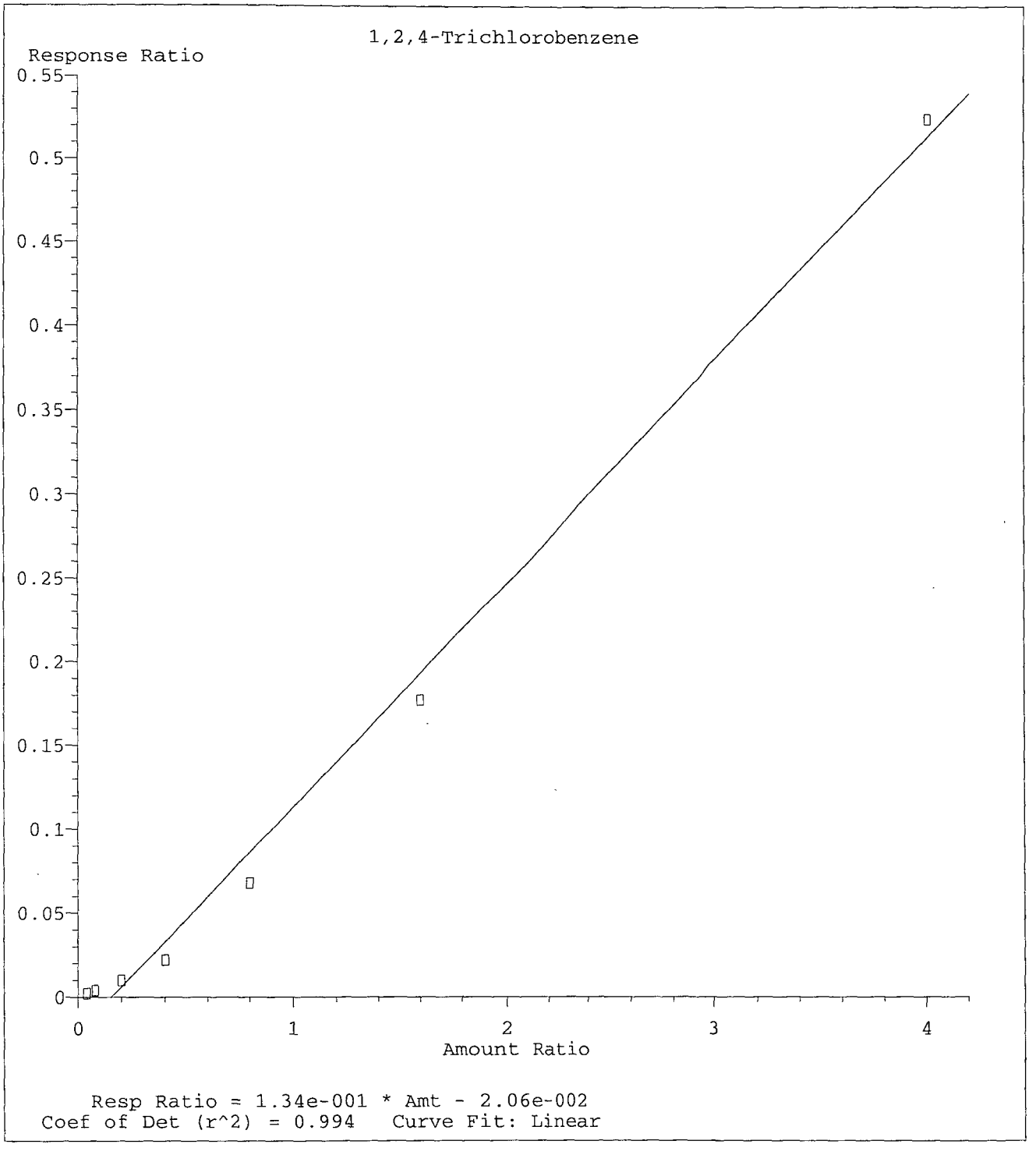
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



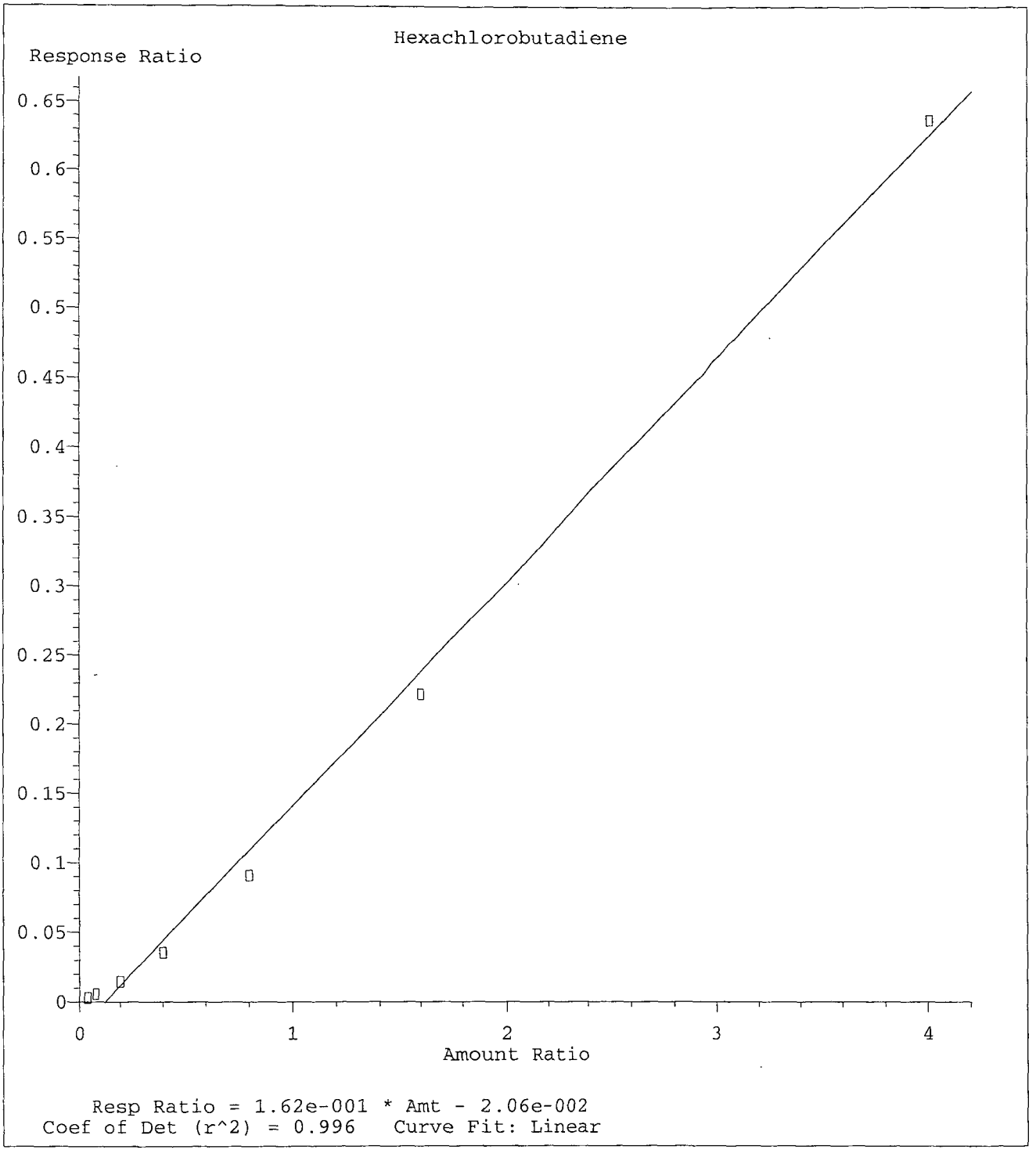
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



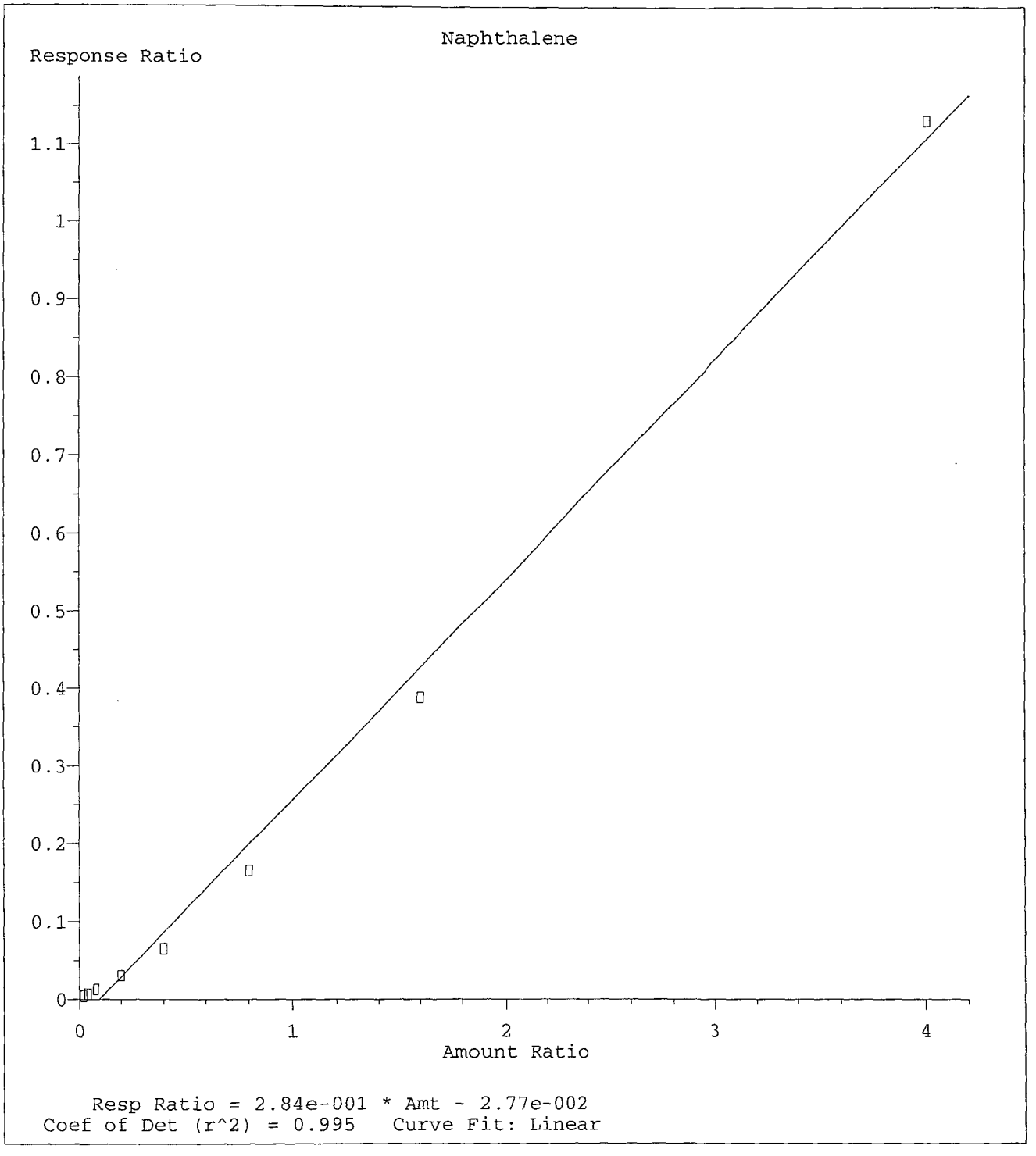
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



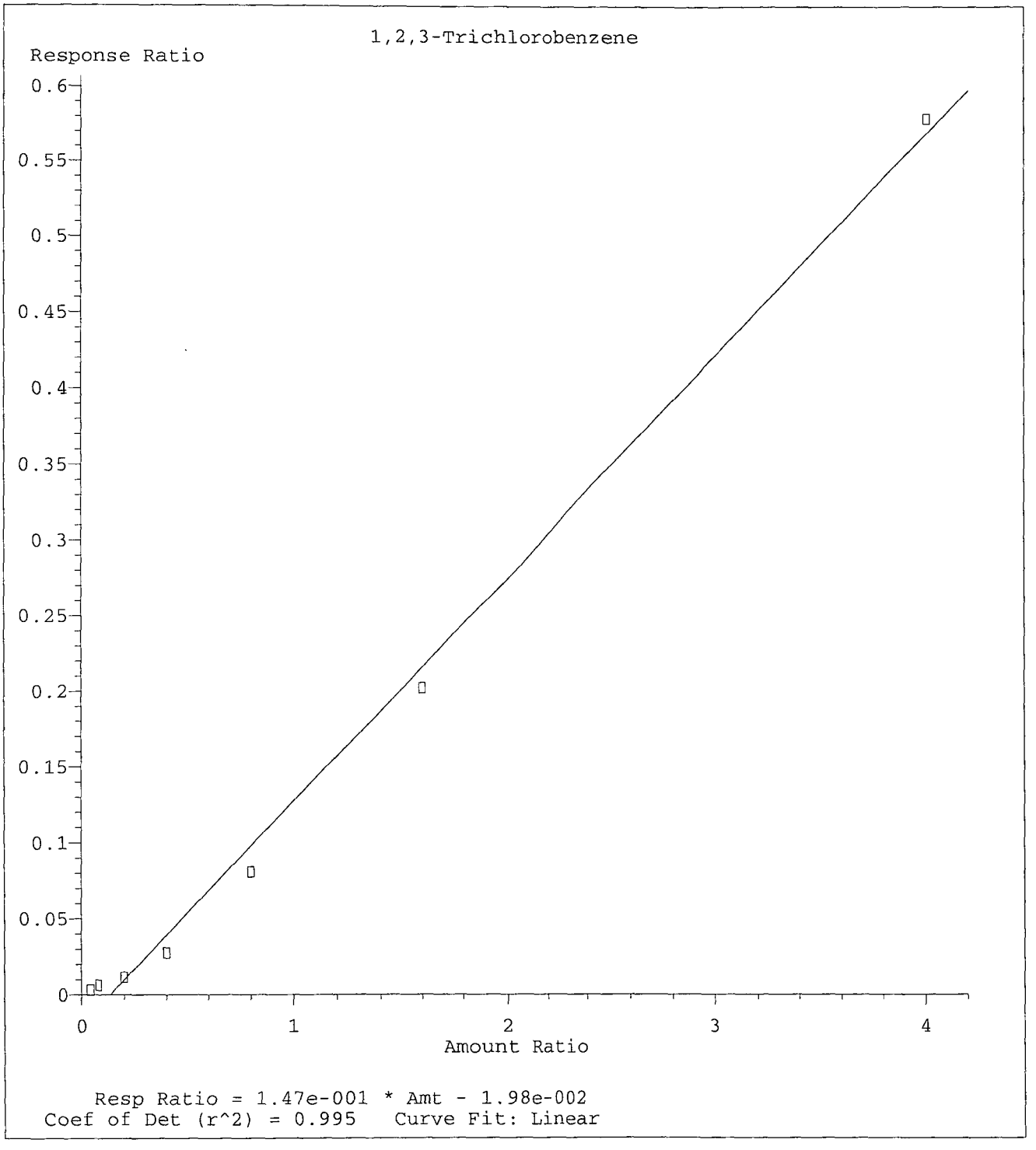
Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M0128W.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/28/21
Matrix: Water Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Chlorotrifluoroethene	0.0000	0.0001	0.00	TM		
2	TM	Dichlorodifluoromethane	0.0770	0.0867	13	TM		
3	TM	Freon 114	0.0608	0.0554	8.8	TM		
4	TM**	Chloromethane	0.0987	0.0949	3.8	TM**		
5	TM*	Vinyl chloride	0.0921	0.0951	3.3	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
7	TML	Bromomethane	0.0443	0.0461	4.2	TML	22	*NT
8	TM	Chloroethane	0.0532	0.0506	4.7	TM		
9	TML	Dichlorofluoromethane	0.1025	0.0990	3.5	TML	4.9	
10	TM	Trichlorofluoromethane	0.1115	0.1214	8.9	TM		
11	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0005	0.00	TM		
12	TM	Acrolein	0.0024	0.0023	6.2	TM		
13	TM	Acetone	0.0188	0.0182	3.2	TM		
14	TML	Freon-113	0.0241	0.0206	15	TML	2.8	
15	TM	Acetonitrile	0.0086	0.0083	2.9	TM		
16	TM	2-propanol	0.0000	0.0001	0.00	TM		
17	TM*	1,1-DCE	0.1086	0.1199	10	TM*		
18	TM	t-Butanol	0.0059	0.0058	2.1	TM		
19	TML	Methyl Acetate	0.0601	0.0517	14	TML	1.0	
20	TML	Iodomethane	0.0905	0.0863	4.6	TML	15	
21	TML	Acrylonitrile	0.0144	0.0276	92	TML	24	*NT
22	TM	2-Methylpentane	0.0000	0.0007	0.00	TM		
23	TML	Methylene chloride	0.1021	0.0986	3.4	TML	20	
24	TM	Carbon disulfide	0.1400	0.1595	14	TM		
25	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2254	0.60	TM		
26	TM	Trans-1,2-DCE	0.0936	0.1036	11	TM		
27	TM	3-Methylpentane	0.0000	0.0485	0.00	TM		
28	TM	Diisopropyl Ether	0.2550	0.2590	1.6	TM		
29	TM**	1,1-DCA	0.1468	0.1637	12	TM**		
30	TM	Vinyl Acetate	0.0000	0.0495	0.00	TM		
31	TM	Ethyl tert Butyl Ether	0.2223	0.2217	0.27	TM		
32	TML	Methylcyclopentane	0.0000	0.0000	0.00	TML		
33	TM	MEK (2-Butanone)	0.0251	0.0268	7.0	TM		
34	TML	Cis-1,2-DCE	0.1011	0.1117	10	TML	17	
35	TM	2,2-Dichloropropane	0.1259	0.1308	3.9	TM		
36	TM*	Chloroform	0.1531	0.1699	11	TM*		
37	TM	Bromochloromethane	0.0678	0.0744	9.8	TM		
38	TM	1,1,1-TCA	0.1363	0.1450	6.3	TM		
39	TML	Cyclohexane	0.0653	0.0591	9.6	TML	1.3	
40	TM	1,1-Dichloropropene	0.1092	0.1243	14	TM		
		Average			7.9			

VOLATILE ORGANIC ANALYSIS BY EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:

Case No: Date Analyzed: 01/28/21

Matrix: Water Instrument: Max

Cal. Date: 01/28/21

Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TML	2,2,4-Trimethylpentane	0.1657	0.1457	12	TML	9.1	
42	TM	Carbon Tetrachloride	0.1189	0.1324	11	TM		
43	TM	Tert Amyl Methyl Ether	0.1793	0.1797	0.23	TM		
44	TM	1,2-DCA	0.1114	0.1227	10	TM		
45	TM	Benzene	0.3419	0.3742	9.4	TM		
46	TM	TCE	0.0946	0.1058	12	TM		
47	TM	2-Pentanone	0.0439	0.0440	0.15	TM		
48	TM*	1,2-Dichloropropane	0.0439	0.0464	5.8	TM*		
49	TM	Bromodichloromethane	0.1170	0.1280	9.4	TM		
50	TM	Methyl Cyclohexane	0.1171	0.1086	7.2	TM		
51	TM	Dibromomethane	0.0504	0.0538	6.7	TM		
52	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0534	0.82	TML	6.4	
53	TM	1-Bromo-2-chloroethane	0.0166	0.0150	10	TM		
54	TM	2-Chloroethyl vinyl ether	0.0000	0.0002	0.00	TM		
55	TM	Cis-1,3-Dichloropropene	0.0000	0.0741	0.00	TM		
56	TM*	Toluene	0.3699	0.4150	12	TM*		
57	TM	Trans-1,3-Dichloropropene	0.1216	0.1289	6.0	TM		
58	TM	1,1,2-TCA	0.0624	0.0644	3.2	TM		
59	TML	2-Hexanone	0.0328	0.0320	2.5	TML	11	
60	TM	1,2-EDB	0.0954	0.1061	11	TM		
61	TML	Tetrachloroethene	0.0768	0.0833	8.5	TML	14	
62	TM	1-Chlorohexane	0.1332	0.1360	2.1	TM		
63	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1362	12	TM		
64	TM	m&p-Xylene	0.2201	0.2468	12	TM		
65	TM	o-Xylene	0.2265	0.2447	8.0	TM		
66	TM	Styrene	0.3566	0.4166	17	TM		
67	TM	1,3-Dichloropropane	0.1467	0.1712	17	TM		
68	TM	Dibromochloromethane	0.1196	0.1290	7.9	TM		
69	TM**	Chlorobenzene	0.3300	0.3643	10	TM**		
70	TM*	Ethylbenzene	0.5179	0.5765	11	TM*		
71	TM**	Bromoform	0.0968	0.1081	12	TM**		
72	TML	Isopropylbenzene	1.093	1.150	5.3	TML	23	*NT
73	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.2109	0.68	TM**L	23	*NT
74	TML	1,2,3-Trichloropropane	0.0711	0.0768	8.1	TML	20	
75	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0382	13	TM		
76	TML	Bromobenzene	0.3590	0.3761	4.7	TML	28	*NT
77	TML	n-Propylbenzene	1.314	1.182	10	TML	11	
78	TML	4-Ethyltoluene	0.8718	0.9568	9.7	TML	8.0	
79	TML	2-Chlorotoluene	1.149	0.8658	25	TML	6.9	
80	TM	1,3,5-Trimethylbenzene	0.7409	0.8514	15	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 01/28/21
Instrument: Max
Cal. Date: 01/28/21
Data File: 0128M12.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	4-Chlorotoluene	0.7947	0.9062	14	TML	27	*NT
82	TM	Tert-Butylbenzene	0.3648	0.4242	16	TM		
83	TM	1,2,4-Trimethylbenzene	0.6195	0.7272	17	TM		
84	TM	Sec-Butylbenzene	0.7475	0.8738	17	TM		
85	TML	p-Isopropyltoluene	0.5659	0.6753	19	TML	5.7	
86	TML	Benzyl Chloride	0.1244	0.1144	8.1	TML	7.9	
87	TM	1,3-DCB	0.5258	0.5938	13	TM		
88	TM	1,4-DCB	0.5141	0.5705	11	TM		
89	TML	n-Butylbenzene	0.3139	0.3848	23	TML	3.0	
90	TM	1,2-DCB	0.4455	0.5139	15	TM		
91	TML	Hexachloroethane	0.1691	0.1542	8.8	TML	3.5	
92	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0310	1.8	TML	5.7	
93	TML	1,2,4-Trichlorobenzene	0.0764	0.0935	22	TML	8.5	
94	TML	Hexachlorobutadiene	0.1018	0.1169	15	TML	4.1	
95	TML	Naphthalene	0.2026	0.3051	51	TML	32	*NT
96	TML	1,2,3-Trichlorobenzene	0.0930	0.1182	27	TML	14	
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			17.4			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M12.D Vial: 12
Acq On : 28 Jan 21 22:16 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1767153	25.00	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1453370	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	769204	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	373119	25.50	ppb		0.00
Spiked Amount 25.000			Recovery = 102.000%				
44) 1,2-DCA-D4(S)	5.11	65	390923	23.62	ppb		0.00
Spiked Amount 25.000			Recovery = 94.480%				
64) Toluene-D8(S)	7.37	98	1510009	24.69	ppb		0.00
Spiked Amount 25.000			Recovery = 98.756%				
72) 4-Bromofluorobenzene(S)	10.03	95	626192	24.74	ppb		0.00
Spiked Amount 25.000			Recovery = 98.956%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	61252	11.26	ppb		99
4) Freon 114	1.04	85	39171	9.12	ppb		94
5) Chloromethane	1.08	50	67096	9.62	ppb		97
6) Vinyl chloride	1.15	62	67242	10.33	ppb		95
8) Bromomethane	1.34	94	32608	12.20	ppb		96
9) Chloroethane	1.42	64	35790	9.53	ppb		94
10) Dichlorofluoromethane	1.56	67	69953	10.49	ppb		100
11) Trichlorofluoromethane	1.60	101	85846	10.89	ppb		99
13) Acrolein	1.90	56	20136	117.29	ppb		91
14) Acetone	2.03	43	64211	48.39	ppb		99
15) Freon-113	2.01	103	14528	9.72	ppb		96
16) Acetonitrile	2.25	41	73777	121.36	ppb		97
18) 1,1-DCE	1.99	61	84730	11.04	ppb		99
19) t-Butanol	2.59	59	51022	122.34	ppb	#	90
20) Methyl Acetate	2.34	43	36535	9.90	ppb		99
21) Iodomethane	2.10	142	61031	8.48	ppb		99
22) Acrylonitrile	2.64	53	19475	12.45	ppb	#	62
24) Methylene chloride	2.41	84	69693	12.02	ppb		95
25) Carbon disulfide	2.15	76	112768	11.39	ppb		99
26) Methyl t-butyl ether (MtBE	2.73	73	159354	10.06	ppb		94
27) Trans-1,2-DCE	2.69	96	73228	11.07	ppb		96
29) Diisopropyl Ether	3.35	45	183064	10.16	ppb		98
30) 1,1-DCA	3.16	63	115744	11.15	ppb	#	95
32) Ethyl tert Butyl Ether	3.87	59	156746	9.97	ppb		97
34) MEK (2-Butanone)	4.04	43	94877	53.49	ppb		99
35) Cis-1,2-DCE	3.97	96	78922	11.68	ppb		93
36) 2,2-Dichloropropane	3.96	77	92450	10.39	ppb		98
37) Chloroform	4.48	83	120103	11.10	ppb		96
38) Bromochloromethane	4.31	130	52598	10.98	ppb		96
40) 1,1,1-TCA	4.70	97	102465	10.63	ppb		94
41) Cyclohexane	4.78	41	41755	9.87	ppb		94
42) 1,1-Dichloropropene	4.94	75	87887	11.39	ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	102990	9.09	ppb		99
45) Carbon Tetrachloride	4.93	117	93620	11.14	ppb		100
46) Tert Amyl Methyl Ether	5.44	73	127002	10.02	ppb		97
47) 1,2-DCA	5.21	62	86724	11.02	ppb		100
48) Benzene	5.19	78	264496	10.94	ppb		98
49) TCE	6.02	95	74814	11.18	ppb		93
50) 2-Pentanone	6.27	43	388495	125.19	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M12.D Vial: 12
Acq On : 28 Jan 21 22:16 Operator: LP,DG,CH
Sample : (SS) 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.24	63	32792	10.58	ppb		96
52)	Bromodichloromethane	6.59	83	90474	10.94	ppb		92
53)	Methyl Cyclohexane	6.24	83	76776	9.28	ppb		96
54)	Dibromomethane	6.37	93	38052	10.67	ppb		86
55)	MIBK (methyl isobutyl ket	7.29	43	188871	46.82	ppb		97
56)	1-Bromo-2-chloroethane	6.89	144	10570	8.98	ppb		100
59)	Toluene	7.44	91	293357	11.22	ppb		99
60)	Trans-1,3-Dichloropropene	7.69	75	91121	10.60	ppb		99
61)	1,1,2-TCA	7.86	83	45542	10.32	ppb		94
62)	2-Hexanone	8.17	43	112938	44.58	ppb		92
65)	1,2-EDB	8.34	107	61689	11.13	ppb		99
66)	Tetrachloroethene	8.01	164	48432	11.40	ppb		94
67)	1-Chlorohexane	8.91	91	79044	10.21	ppb		97
68)	1,1,1,2-Tetrachloroethane	8.96	131	79158	11.17	ppb		98
69)	m&p-Xylene	9.14	106	286963	22.42	ppb		95
70)	o-Xylene	9.52	106	142237	10.80	ppb		96
71)	Styrene	9.53	104	242163	11.68	ppb		98
73)	1,3-Dichloropropane	8.03	76	99499	11.66	ppb		99
74)	Dibromochloromethane	8.24	129	75008	10.79	ppb		96
75)	Chlorobenzene	8.87	112	211764	11.04	ppb		95
76)	Ethylbenzene	9.01	91	335125	11.13	ppb		99
77)	Bromoform	9.67	173	62820	11.16	ppb		95
79)	Isopropylbenzene	9.90	105	353984	12.33	ppb		100
80)	1,1,2,2-Tetrachloroethane	10.19	83	64888	12.31	ppb		94
81)	1,2,3-Trichloropropane	10.20	110	23639	11.98	ppb	#	83
82)	t-1,4-Dichloro-2-Butene	10.25	53	11766	11.28	ppb		91
83)	Bromobenzene	10.15	156	115704	12.85	ppb		98
84)	n-Propylbenzene	10.31	91	363563	11.10	ppb		97
85)	4-Ethyltoluene	10.44	105	294386	10.80	ppb		100
86)	2-Chlorotoluene	10.37	91	266385	10.69	ppb		97
87)	1,3,5-Trimethylbenzene	10.50	105	261946	11.49	ppb		98
88)	4-Chlorotoluene	10.48	91	278826	12.65	ppb		98
89)	Tert-Butylbenzene	10.81	119	130512	11.63	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	223755	11.74	ppb		97
91)	Sec-Butylbenzene	11.04	105	268845	11.69	ppb		100
92)	p-Isopropyltoluene	11.19	119	207778	10.57	ppb		100
93)	Benzyl Chloride	11.33	91	35187	9.21	ppb		95
94)	1,3-DCB	11.11	146	182692	11.29	ppb		97
95)	1,4-DCB	11.19	146	175523	11.10	ppb		98
96)	n-Butylbenzene	11.59	91	118411	10.30	ppb		97
97)	1,2-DCB	11.55	146	158125	11.54	ppb		98
98)	Hexachloroethane	11.81	117	47458	10.35	ppb		91
99)	1,2-Dibromo-3-chloropropan	12.31	157	9532	9.43	ppb		91
100)	1,2,4-Trichlorobenzene	13.15	180	28776	10.85	ppb		93
101)	Hexachlorobutadiene	13.36	225	35963	10.41	ppb		93
102)	Naphthalene	13.38	128	93871	13.17	ppb		97
103)	1,2,3-Trichlorobenzene	13.62	180	36361	11.39	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

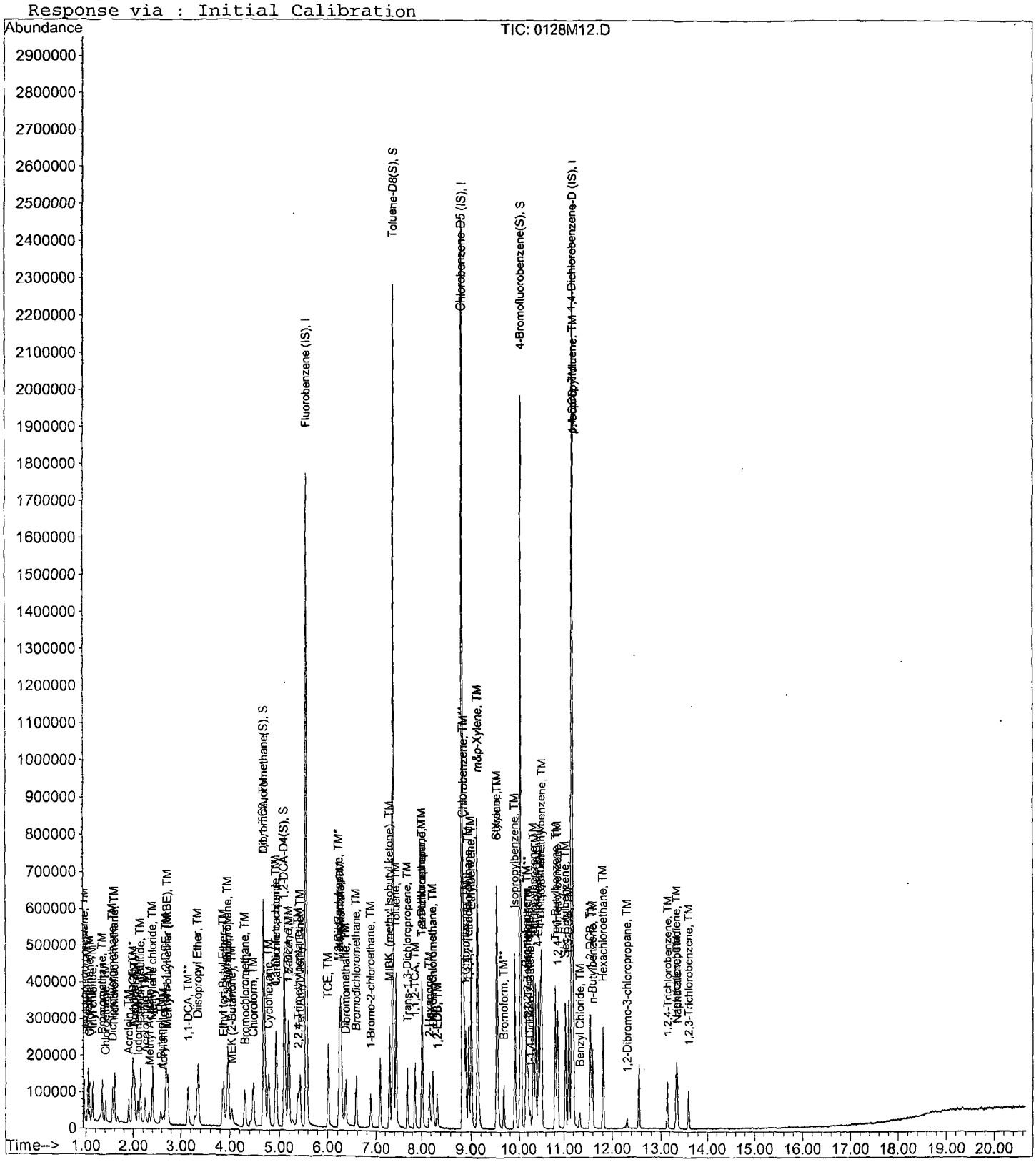
Data File : M:\MAX\DATA\210128\0128M12.D
Acq On : 28 Jan 21 22:16
Sample : (SS) 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 12
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:11 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/29/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M04.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0002	0.00	TM		
3	TM	Dichlorodifluoromethane	0.0770	0.1008	31	TM		*nt
4	TM	Freon 114	0.0608	0.0884	45	TM		*
5	TM**	Chloromethane	0.0987	0.1096	11	TM**		
6	TM*	Vinyl chloride	0.0921	0.1080	17	TM*		
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
8	TML	Bromomethane	0.0443	0.0508	15	TML	35	*nt
9	TM	Chloroethane	0.0532	0.0587	10	TM		
10	TML	Dichlorofluoromethane	0.1025	0.1199	17	TML	26	*nt
11	TM	Trichlorofluoromethane	0.1115	0.1450	30	TM		*nt
12	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0002	0.00	TM		
13	TM	Acrolein	0.0024	0.0027	9.1	TM		
14	TM	Acetone	0.0188	0.0197	5.0	TM		
15	TML	Freon-113	0.0241	0.0277	15	TML	29	*nt
16	TM	Acetonitrile	0.0086	0.0085	1.1	TM		
17	TM	2-propanol	0.0000	0.0000	0.00	TM		
18	TM*	1,1-DCE	0.1086	0.1271	17	TM*		
19	TM	t-Butanol	0.0059	0.0064	8.9	TM		
20	TML	Methyl Acetate	0.0601	0.0600	0.15	TML	16	
21	TML	Iodomethane	0.0905	0.1044	15	TML	0.52	
22	TML	Acrylonitrile	0.0144	0.0024	83	TML	66	*nt
23	TM	2-Methylpentane	0.0000	0.0011	0.00	TM		
24	TML	Methylene chloride	0.1021	0.0973	4.7	TML	18	
25	TM	Carbon disulfide	0.1400	0.1664	19	TM		
26	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2444	9.1	TM		
27	TM	Trans-1,2-DCE	0.0936	0.1078	15	TM		
28	TM	3-Methylpentane	0.0000	0.0535	0.00	TM		
29	TM	Diisopropyl Ether	0.2550	0.2860	12	TM		
30	TM**	1,1-DCA	0.1468	0.1714	17	TM**		
31	TM	Vinyl Acetate	0.0000	0.0560	0.00	TM		
32	TM	Ethyl tert Butyl Ether	0.2223	0.2587	16	TM		
33	TML	Methylcyclopentane	0.0000	0.0001	0.00	TML		
34	TM	MEK (2-Butanone)	0.0251	0.0293	17	TM		
35	TML	Cis-1,2-DCE	0.1011	0.1156	14	TML	21	*nt
36	TM	2,2-Dichloropropane	0.1259	0.1470	17	TM		
37	TM*	Chloroform	0.1531	0.1778	16	TM*		
38	TM	Bromochloromethane	0.0678	0.0766	13	TM		
39	SL	Dibromofluoromethane(S)	0.2351	0.2357	0.24	SL	16	
40	TM	1,1,1-TCA	0.1363	0.1604	18	TM		
		Average			13.3			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/29/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M04.D

		Compound	MEAN	CCRF	%D	%Drift		
41	TML	Cyclohexane	0.0653	0.0778	19	TML	29	*nt
42	TM	1,1-Dichloropropene	0.1092	0.1315	20	TM		
43	TML	2,2,4-Trimethylpentane	0.1657	0.2493	50	TML	47	*nt
44	SL	1,2-DCA-D4(S)	0.2551	0.2427	4.9	SL	4.7	
45	TM	Carbon Tetrachloride	0.1189	0.1458	23	TM		*nt
46	TM	Tert Amyl Methyl Ether	0.1793	0.2161	21	TM		*nt
47	TM	1,2-DCA	0.1114	0.1300	17	TM		
48	TM	Benzene	0.3419	0.3918	15	TM		
49	TM	TCE	0.0946	0.1058	12	TM		
50	TM	2-Pentanone	0.0439	0.0485	11	TM		
51	TM*	1,2-Dichloropropane	0.0439	0.0488	11	TM*		
52	TM	Bromodichloromethane	0.1170	0.1334	14	TM		
53	TM	Methyl Cyclohexane	0.1171	0.1542	32	TM		*nt
54	TM	Dibromomethane	0.0504	0.0586	16	TM		
55	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0625	18	TML	7.3	
56	TM	1-Bromo-2-chloroethane	0.0166	0.0184	11	TM		
57	TM	2-Chloroethyl vinyl ether	0.0000	0.0021	0.00	TM		
58	TM	Cis-1,3-Dichloropropene	0.0000	0.0737	0.00	TM		
59	TM*	Toluene	0.3699	0.4359	18	TM*		
60	TM	Trans-1,3-Dichloropropene	0.1216	0.1413	16	TM		
61	TM	1,1,2-TCA	0.0624	0.0645	3.4	TM		
62	TML	2-Hexanone	0.0328	0.0390	19	TML	4.8	
63	I	Chlorobenzene-D5 (IS)	ISTD			I		
64	SL	Toluene-D8(S)	1.165	1.093	6.2	SL	4.6	
65	TM	1,2-EDB	0.0954	0.1044	9.5	TM		
66	TML	Tetrachloroethene	0.0768	0.0896	17	TML	23	*nt
67	TM	1-Chlorohexane	0.1332	0.1588	19	TM		
68	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1408	16	TM		
69	TM	m&p-Xylene	0.2201	0.2644	20	TM		
70	TM	o-Xylene	0.2265	0.2664	18	TM		
71	TM	Styrene	0.3566	0.4350	22	TM		*nt
72	SL	4-Bromofluorobenzene(S)	0.4819	0.4585	4.9	SL	6.2	
73	TM	1,3-Dichloropropane	0.1467	0.1649	12	TM		
74	TM	Dibromochloromethane	0.1196	0.1391	16	TM		
75	TM**	Chlorobenzene	0.3300	0.3815	16	TM**		
76	TM*	Ethylbenzene	0.5179	0.6192	20	TM*		
77	TM**	Bromoform	0.0968	0.1057	9.1	TM**		
78	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
79	TML	Isopropylbenzene	1.093	1.179	7.9	TML	27	*nt
80	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.2113	0.87	TM**L	23	*nt
		Average			14.9			

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/29/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M04.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	1,2,3-Trichloropropane	0.0711	0.0778	9.5	TML	22	*nt
82	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0439	30	TM		*nt
83	TML	Bromobenzene	0.3590	0.3755	4.6	TML	28	*nt
84	TML	n-Propylbenzene	1.314	1.234	6.1	TML	17	
85	TML	4-Ethyltoluene	0.8718	1.069	23	TML	21	*nt
86	TML	2-Chlorotoluene	1.149	0.8075	30	TML	4.2	
87	TM	1,3,5-Trimethylbenzene	0.7409	0.9209	24	TM		*nt
88	TML	4-Chlorotoluene	0.7947	0.9118	15	TML	27	*nt
89	TM	Tert-Butylbenzene	0.3648	0.4535	24	TM		*nt
90	TM	1,2,4-Trimethylbenzene	0.6195	0.7649	23	TM		*nt
91	TM	Sec-Butylbenzene	0.7475	0.9556	28	TM		*nt
92	TML	p-Isopropyltoluene	0.5659	0.7143	26	TML	11	
93	TML	Benzyl Chloride	0.1244	0.1642	32	TML	17	
94	TM	1,3-DCB	0.5258	0.6307	20	TM		
95	TM	1,4-DCB	0.5141	0.5980	16	TM		
96	TML	n-Butylbenzene	0.3139	0.4064	29	TML	7.4	
97	TM	1,2-DCB	0.4455	0.5477	23	TM		*nt
98	TML	Hexachloroethane	0.1691	0.1678	0.71	TML	14	
99	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0338	7.0	TML	1.2	
100	TML	1,2,4-Trichlorobenzene	0.0764	0.0888	16	TML	4.9	
101	TML	Hexachlorobutadiene	0.1018	0.1299	28	TML	12	
102	TML	Naphthalene	0.2026	0.2137	5.5	TML	0.42	
103	TML	1,2,3-Trichlorobenzene	0.0930	0.1031	11	TML	3.7	
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			18.8			

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475866	25.0000 ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1231358	25.0000 ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	677527	25.0000 ppb		0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	347870	29.0753 ppb		0.00
Spiked Amount 25.000			Recovery = 116.300%			
44) 1,2-DCA-D4(S)	5.11	65	358124	26.1726 ppb		0.00
Spiked Amount 25.000			Recovery = 104.692%			
64) Toluene-D8(S)	7.37	98	1345448	26.1614 ppb		0.00
Spiked Amount 25.000			Recovery = 104.644%			
72) 4-Bromofluorobenzene(S)	10.03	95	564564	26.5467 ppb		0.00
Spiked Amount 25.000			Recovery = 106.188%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	59520	13.0956 ppb		90
4) Freon 114	1.04	85	52200	14.5449 ppb		100
5) Chloromethane	1.08	50	64712	11.1105 ppb		97
6) Vinyl chloride	1.15	62	63769	11.7310 ppb		96
8) Bromomethane	1.34	94	30016	13.5308 ppb		96
9) Chloroethane	1.42	64	34657	11.0441 ppb		90
10) Dichlorofluoromethane	1.56	67	70774	12.5750 ppb		100
11) Trichlorofluoromethane	1.60	101	85624	13.0096 ppb		96
13) Acrolein	1.90	56	19560	136.4180 ppb	#	78
14) Acetone	2.03	43	58211	52.5228 ppb		98
15) Freon-113	2.02	103	16357	12.9343 ppb		92
16) Acetonitrile	2.25	41	62755	123.5996 ppb		92
18) 1,1-DCE	1.99	61	75013	11.7008 ppb		97
19) t-Butanol	2.59	59	47414	136.1291 ppb		92
20) Methyl Acetate	2.34	43	35433	11.5519 ppb		95
21) Iodomethane	2.10	142	61650	10.0517 ppb		98
22) Acrylonitrile	2.72	53	1412	3.4136 ppb	#	13
24) Methylene chloride	2.41	84	57414	11.8442 ppb		90
25) Carbon disulfide	2.15	76	98256	11.8867 ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	144270	10.9057 ppb		96
27) Trans-1,2-DCE	2.70	96	63652	11.5186 ppb		94
29) Diisopropyl Ether	3.35	45	168837	11.2153 ppb		99
30) 1,1-DCA	3.16	63	101184	11.6748 ppb	#	95
32) Ethyl tert Butyl Ether	3.87	59	152750	11.6369 ppb	#	86
34) MEK (2-Butanone)	4.04	43	86493	58.3822 ppb		95
35) Cis-1,2-DCE	3.97	96	68267	12.0935 ppb		95
36) 2,2-Dichloropropane	3.96	77	86810	11.6805 ppb		95
37) Chloroform	4.48	83	104987	11.6183 ppb		98
38) Bromochloromethane	4.31	130	45208	11.3022 ppb		98
40) 1,1,1-TCA	4.70	97	94681	11.7658 ppb		97
41) Cyclohexane	4.79	41	45953	12.8811 ppb		97
42) 1,1-Dichloropropene	4.95	75	77648	12.0449 ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	147166	14.7256 ppb		94
45) Carbon Tetrachloride	4.94	117	86067	12.2623 ppb		96
46) Tert Amyl Methyl Ether	5.44	73	127546	12.0530 ppb		99
47) 1,2-DCA	5.21	62	76760	11.6760 ppb		99
48) Benzene	5.19	78	231281	11.4575 ppb		99
49) TCE	6.02	95	62441	11.1751 ppb		91
50) 2-Pentanone	6.28	43	358225	138.2188 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	28832	11.1356	ppb		98
52)	Bromodichloromethane	6.59	83	78757	11.4013	ppb		95
53)	Methyl Cyclohexane	6.24	83	91006	13.1694	ppb		96
54)	Dibromomethane	6.37	93	34615	11.6266	ppb		99
55)	MIBK (methyl isobutyl ket	7.29	43	184508	53.6610	ppb		96
56)	1-Bromo-2-chloroethane	6.90	144	10858	11.0504	ppb		94
59)	Toluene	7.44	91	257353	11.7848	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	83403	11.6178	ppb		98
61)	1,1,2-TCA	7.86	83	38099	10.3371	ppb		93
62)	2-Hexanone	8.18	43	115008	52.3900	ppb		94
65)	1,2-EDB	8.34	107	51411	10.9457	ppb		94
66)	Tetrachloroethene	8.01	164	44144	12.2926	ppb		96
67)	1-Chlorohexane	8.91	91	78214	11.9198	ppb		99
68)	1,1,1,2-Tetrachloroethane	8.96	131	69328	11.5516	ppb		96
69)	m&p-Xylene	9.14	106	260432	24.0199	ppb		97
70)	o-Xylene	9.52	106	131191	11.7590	ppb		99
71)	Styrene	9.53	104	214247	12.1964	ppb		97
73)	1,3-Dichloropropane	8.03	76	81238	11.2406	ppb		96
74)	Dibromochloromethane	8.25	129	68497	11.6283	ppb		98
75)	Chlorobenzene	8.87	112	187894	11.5596	ppb		93
76)	Ethylbenzene	9.01	91	304967	11.9563	ppb		95
77)	Bromoform	9.68	173	52039	10.9108	ppb		99
79)	Isopropylbenzene	9.91	105	319522	12.6793	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	57258	12.3292	ppb		92
81)	1,2,3-Trichloropropane	10.21	110	21085	12.1607	ppb	#	79
82)	t-1,4-Dichloro-2-Butene	10.25	53	11907	12.9644	ppb		79
83)	Bromobenzene	10.15	156	101752	12.8231	ppb		99
84)	n-Propylbenzene	10.32	91	334395	11.6955	ppb		98
85)	4-Ethyltoluene	10.44	105	289668	12.1395	ppb		98
86)	2-Chlorotoluene	10.37	91	218847	9.5752	ppb		98
87)	1,3,5-Trimethylbenzene	10.50	105	249587	12.4302	ppb		99
88)	4-Chlorotoluene	10.48	91	247113	12.7389	ppb		96
89)	Tert-Butylbenzene	10.82	119	122904	12.4316	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	207283	12.3457	ppb		99
91)	Sec-Butylbenzene	11.04	105	258977	12.7835	ppb		99
92)	p-Isopropyltoluene	11.19	119	193587	11.1050	ppb		99
93)	Benzyl Chloride	11.33	91	44507	11.6557	ppb	#	91
94)	1,3-DCB	11.10	146	170936	11.9953	ppb		98
95)	1,4-DCB	11.19	146	162054	11.6303	ppb		96
96)	n-Butylbenzene	11.59	91	110141	10.7365	ppb		98
97)	1,2-DCB	11.55	146	148427	12.2943	ppb		97
98)	Hexachloroethane	11.81	117	45489	11.3584	ppb		88
99)	1,2-Dibromo-3-chloropropan	12.31	157	9152	10.1217	ppb		98
100)	1,2,4-Trichlorobenzene	13.15	180	24056	10.4944	ppb		88
101)	Hexachlorobutadiene	13.35	225	35194	11.2147	ppb		97
102)	Naphthalene	13.38	128	57907	9.9576	ppb		100
103)	1,2,3-Trichlorobenzene	13.62	180	27952	10.3656	ppb		96

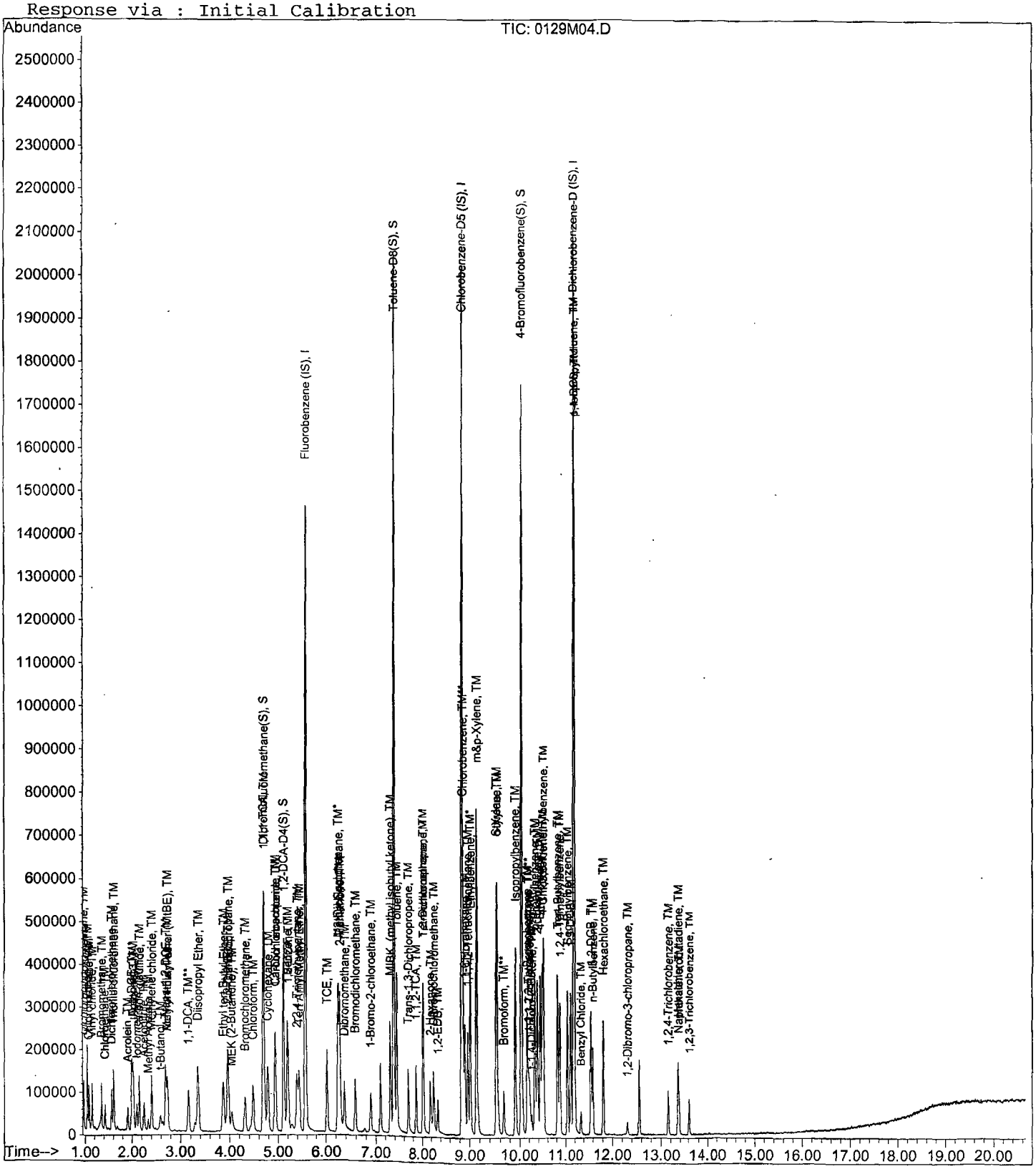
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0002	0.00	TM	
3	TM	Dichlorodifluoromethane	0.0770	0.1003	30	TM	
4	TM	Freon 114	0.0608	0.0827	36	TM	
5	TM**	Chloromethane	0.0987	0.1047	6.1	TM**	
6	TM*	Vinyl chloride	0.0921	0.0964	4.7	TM*	
7	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
8	TML	Bromomethane	0.0443	0.0533	20	TML	42
9	TM	Chloroethane	0.0532	0.0574	8.0	TM	
10	TML	Dichlorofluoromethane	0.1025	0.1141	11	TML	20
11	TM	Trichlorofluoromethane	0.1115	0.1463	31	TM	
12	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM	
13	TM	Acrolein	0.0024	0.0027	11	TM	
14	TM	Acetone	0.0188	0.0191	1.5	TM	
15	TML	Freon-113	0.0241	0.0260	8.1	TML	22
16	TM	Acetonitrile	0.0086	0.0085	0.85	TM	
17	TM	2-propanol	0.0000	0.0000	0.00	TM	
18	TM*	1,1-DCE	0.1086	0.1190	9.6	TM*	
19	TM	t-Butanol	0.0059	0.0064	8.8	TM	
20	TML	Methyl Acetate	0.0601	0.0556	7.5	TML	6.7
21	TML	Iodomethane	0.0905	0.0835	7.7	TML	18
22	TML	Acrylonitrile	0.0144	0.0310	116	TML	37
23	TM	2-Methylpentane	0.0000	0.0011	0.00	TM	
24	TML	Methylene chloride	0.1021	0.0919	9.9	TML	12
25	TM	Carbon disulfide	0.1400	0.1489	6.3	TM	
26	TM	Methyl t-butyl ether (MtBE)	0.2241	0.2451	9.4	TM	
27	TM	Trans-1,2-DCE	0.0936	0.1007	7.6	TM	
28	TM	3-Methylpentane	0.0000	0.0541	0.00	TM	
29	TM	Diisopropyl Ether	0.2550	0.2798	9.7	TM	
30	TM**	1,1-DCA	0.1468	0.1609	9.6	TM**	
31	TM	Vinyl Acetate	0.0000	0.0548	0.00	TM	
32	TM	Ethyl tert Butyl Ether	0.2223	0.2550	15	TM	
33	TML	Methylcyclopentane	0.0000	0.0005	0.00	TML	
34	TM	MEK (2-Butanone)	0.0251	0.0274	9.1	TM	
35	TML	Cis-1,2-DCE	0.1011	0.1107	9.5	TML	16
36	TM	2,2-Dichloropropane	0.1259	0.1273	1.1	TM	
37	TM*	Chloroform	0.1531	0.1733	13	TM*	
38	TM	Bromochloromethane	0.0678	0.0780	15	TM	
39	SL	Dibromofluoromethane(S)	0.2351	0.2437	3.6	SL	21
40	TM	1,1,1-TCA	0.1363	0.1578	16	TM	
		Average			11.6		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: 0 Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
41	TML	Cyclohexane	0.0653	0.0776	19	TML	28
42	TM	1,1-Dichloropropene	0.1092	0.1215	11	TM	
43	TML	2,2,4-Trimethylpentane	0.1657	0.2110	27	TML	26
44	SL	1,2-DCA-D4(S)	0.2551	0.2585	1.3	SL	12
45	TM	Carbon Tetrachloride	0.1189	0.1422	20	TM	
46	TM	Tert Amyl Methyl Ether	0.1793	0.2215	24	TM	
47	TM	1,2-DCA	0.1114	0.1278	15	TM	
48	TM	Benzene	0.3419	0.3802	11	TM	
49	TM	TCE	0.0946	0.1115	18	TM	
50	TM	2-Pentanone	0.0439	0.0461	5.1	TM	
51	TM*	1,2-Dichloropropane	0.0439	0.0467	6.4	TM*	
52	TM	Bromodichloromethane	0.1170	0.1369	17	TM	
53	TM	Methyl Cyclohexane	0.1171	0.1484	27	TM	
54	TM	Dibromomethane	0.0504	0.0586	16	TM	
55	TML	MIBK (methyl isobutyl ketone)	0.0530	0.0566	6.8	TML	1.6
56	TM	1-Bromo-2-chloroethane	0.0166	0.0199	19	TM	
57	TM	2-Chloroethyl vinyl ether	0.0000	0.0012	0.00	TM	
58	TM	Cis-1,3-Dichloropropene	0.0000	0.0717	0.00	TM	
59	TM*	Toluene	0.3699	0.4332	17	TM*	
60	TM	Trans-1,3-Dichloropropene	0.1216	0.1320	8.5	TM	
61	TM	1,1,2-TCA	0.0624	0.0659	5.5	TM	
62	TML	2-Hexanone	0.0328	0.0342	4.4	TML	5.7
63	I	Chlorobenzene-D5 (IS)	ISTD			I	
64	SL	Toluene-D8(S)	1.165	1.147	1.6	SL	11
65	TM	1,2-EDB	0.0954	0.1061	11	TM	
66	TML	Tetrachloroethene	0.0768	0.0914	19	TML	25
67	TM	1-Chlorohexane	0.1332	0.1418	6.4	TM	
68	TM	1,1,1,2-Tetrachloroethane	0.1218	0.1390	14	TM	
69	TM	m&p-Xylene	0.2201	0.2527	15	TM	
70	TM	o-Xylene	0.2265	0.2560	13	TM	
71	TM	Styrene	0.3566	0.4272	20	TM	
72	SL	4-Bromofluorobenzene(S)	0.4819	0.4749	1.4	SL	10
73	TM	1,3-Dichloropropane	0.1467	0.1648	12	TM	
74	TM	Dibromochloromethane	0.1196	0.1432	20	TM	
75	TM**	Chlorobenzene	0.3300	0.3765	14	TM**	
76	TM*	Ethylbenzene	0.5179	0.5976	15	TM*	
77	TM**	Bromoform	0.0968	0.1107	14	TM**	
78	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
79	TML	Isopropylbenzene	1.093	1.097	0.40	TML	17
80	TM**L	1,1,2,2-Tetrachloroethane	0.2095	0.1918	8.4	TM**L	11
		Average			12.2		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 01/30/21
Instrument: Max
Cal. Date: 01/28/21
Data File: 0129M29.D

		Compound	MEAN	CCRF	%D		%Drift
81	TML	1,2,3-Trichloropropane	0.0711	0.0787	11	TML	23
82	TM	t-1,4-Dichloro-2-Butene	0.0339	0.0333	1.6	TM	
83	TML	Bromobenzene	0.3590	0.3595	0.13	TML	22
84	TML	n-Propylbenzene	1.314	1.141	13	TML	6.4
85	TML	4-Ethyltoluene	0.8718	1.000	15	TML	13
86	TML	2-Chlorotoluene	1.149	0.7694	33	TML	12
87	TM	1,3,5-Trimethylbenzene	0.7409	0.8527	15	TM	
88	TML	4-Chlorotoluene	0.7947	0.8759	10	TML	22
89	TM	Tert-Butylbenzene	0.3648	0.4432	21	TM	
90	TM	1,2,4-Trimethylbenzene	0.6195	0.7512	21	TM	
91	TM	Sec-Butylbenzene	0.7475	0.8619	15	TM	
92	TML	p-Isopropyltoluene	0.5659	0.6739	19	TML	5.6
93	TML	Benzyl Chloride	0.1244	0.1269	2.0	TML	1.8
94	TM	1,3-DCB	0.5258	0.6015	14	TM	
95	TM	1,4-DCB	0.5141	0.5621	9.3	TM	
96	TML	n-Butylbenzene	0.3139	0.3314	5.6	TML	8.0
97	TM	1,2-DCB	0.4455	0.5130	15	TM	
98	TML	Hexachloroethane	0.1691	0.1740	2.9	TML	18
99	TML	1,2-Dibromo-3-chloropropane	0.0316	0.0338	7.0	TML	1.2
100	TML	1,2,4-Trichlorobenzene	0.0764	0.0733	4.0	TML	6.6
101	TML	Hexachlorobutadiene	0.1018	0.1055	3.7	TML	2.9
102	TML	Naphthalene	0.2026	0.1708	16	TML	16
103	TML	1,2,3-Trichlorobenzene	0.0930	0.0891	4.1	TML	5.9
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			11.2		

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M29.D Vial: 29
Acq On : 30 Jan 21 5:35 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1437245	25.0000	ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1188390	25.0000	ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	668167	25.0000	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	4.69	111	350279	30.2412	ppb		0.00
Spiked Amount 25.000			Recovery = 120.964%				
44) 1,2-DCA-D4(S)	5.11	65	371552	28.0614	ppb		0.00
Spiked Amount 25.000			Recovery = 112.244%				
64) Toluene-D8(S)	7.37	98	1362510	27.6387	ppb		0.00
Spiked Amount 25.000			Recovery = 110.556%				
72) 4-Bromofluorobenzene(S)	10.03	95	564378	27.6212	ppb		0.00
Spiked Amount 25.000			Recovery = 110.484%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.97	85	57668	13.0290	ppb		95
4) Freon 114	1.04	85	47539	13.6022	ppb		97
5) Chloromethane	1.08	50	60180	10.6101	ppb		94
6) Vinyl chloride	1.15	62	55430	10.4710	ppb		98
8) Bromomethane	1.34	94	30647	14.2261	ppb		94
9) Chloroethane	1.42	64	33004	10.8000	ppb		94
10) Dichlorofluoromethane	1.56	67	65573	11.9951	ppb		98
11) Trichlorofluoromethane	1.60	101	84089	13.1197	ppb		95
13) Acrolein	1.90	56	19408	138.9951	ppb	#	76
14) Acetone	2.03	43	54793	50.7673	ppb		98
15) Freon-113	2.02	103	14949	12.1675	ppb	#	79
16) Acetonitrile	2.25	41	61281	123.9398	ppb		92
18) 1,1-DCE	1.99	61	68399	10.9558	ppb		97
19) t-Butanol	2.59	59	46142	136.0369	ppb		97
20) Methyl Acetate	2.34	43	31956	10.6710	ppb		97
21) Iodomethane	2.10	142	48017	8.2396	ppb		96
22) Acrylonitrile	2.64	53	17811	13.6800	ppb	#	77
24) Methylene chloride	2.41	84	52858	11.1600	ppb		92
25) Carbon disulfide	2.15	76	85584	10.6319	ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	140880	10.9356	ppb		99
27) Trans-1,2-DCE	2.69	96	57902	10.7596	ppb		95
29) Diisopropyl Ether	3.35	45	160860	10.9726	ppb		99
30) 1,1-DCA	3.15	63	92501	10.9598	ppb		98
32) Ethyl tert Butyl Ether	3.87	59	146571	11.4663	ppb		91
34) MEK (2-Butanone)	4.05	43	78665	54.5252	ppb		95
35) Cis-1,2-DCE	3.97	96	63643	11.5763	ppb		93
36) 2,2-Dichloropropane	3.96	77	73200	10.1139	ppb		94
37) Chloroform	4.48	83	99658	11.3249	ppb		98
38) Bromochloromethane	4.31	130	44861	11.5168	ppb		94
40) 1,1,1-TCA	4.70	97	90700	11.5740	ppb		96
41) Cyclohexane	4.78	41	44589	12.8361	ppb		99
42) 1,1-Dichloropropene	4.94	75	69835	11.1241	ppb		91
43) 2,2,4-Trimethylpentane	5.39	57	121306	12.6412	ppb		97
45) Carbon Tetrachloride	4.93	117	81723	11.9563	ppb		98
46) Tert Amyl Methyl Ether	5.44	73	127365	12.3593	ppb	#	97
47) 1,2-DCA	5.21	62	73492	11.4793	ppb		97
48) Benzene	5.19	78	218552	11.1179	ppb		97
49) TCE	6.02	95	64100	11.7803	ppb		92
50) 2-Pentanone	6.28	43	331457	131.3272	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M29.D Vial: 29
Acq On : 30 Jan 21 5:35 Operator: LP,DG,CH
Sample : Ending CCV 10ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:07 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	26832	10.6417	ppb		100
52)	Bromodichloromethane	6.59	83	78690	11.6977	ppb		95
53)	Methyl Cyclohexane	6.24	83	85321	12.6785	ppb		95
54)	Dibromomethane	6.37	93	33705	11.6252	ppb		97
55)	MIBK (methyl isobutyl ket	7.30	43	162746	49.2152	ppb		96
56)	1-Bromo-2-chloroethane	6.90	144	11424	11.9389	ppb		93
59)	Toluene	7.44	91	249045	11.7108	ppb		99
60)	Trans-1,3-Dichloropropene	7.69	75	75879	10.8537	ppb		99
61)	1,1,2-TCA	7.86	83	37866	10.5500	ppb		94
62)	2-Hexanone	8.18	43	98423	47.1278	ppb		98
65)	1,2-EDB	8.34	107	50437	11.1266	ppb		100
66)	Tetrachloroethene	8.01	164	43448	12.5426	ppb		89
67)	1-Chlorohexane	8.91	91	67398	10.6428	ppb		95
68)	1,1,1,2-Tetrachloroethane	8.96	131	66063	11.4056	ppb		99
69)	m&p-Xylene	9.14	106	240199	22.9548	ppb		95
70)	o-Xylene	9.52	106	121685	11.3013	ppb		92
71)	Styrene	9.53	104	203050	11.9770	ppb		96
73)	1,3-Dichloropropane	8.03	76	78358	11.2341	ppb		100
74)	Dibromochloromethane	8.25	129	68092	11.9775	ppb		98
75)	Chlorobenzene	8.87	112	178992	11.4101	ppb		96
76)	Ethylbenzene	9.01	91	284089	11.5404	ppb		95
77)	Bromoform	9.68	173	52636	11.4350	ppb		98
79)	Isopropylbenzene	9.91	105	293274	11.6672	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	51254	11.1011	ppb		99
81)	1,2,3-Trichloropropane	10.21	110	21025	12.3183	ppb		92
82)	t-1,4-Dichloro-2-Butene	10.25	53	8911	9.8383	ppb		87
83)	Bromobenzene	10.15	156	96082	12.1950	ppb		95
84)	n-Propylbenzene	10.32	91	305057	10.6419	ppb		96
85)	4-Ethyltoluene	10.44	105	267341	11.3218	ppb		98
86)	2-Chlorotoluene	10.37	91	205637	8.8487	ppb		95
87)	1,3,5-Trimethylbenzene	10.51	105	227907	11.5095	ppb		98
88)	4-Chlorotoluene	10.48	91	234086	12.1842	ppb		96
89)	Tert-Butylbenzene	10.82	119	118440	12.1479	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	200782	12.1260	ppb		98
91)	Sec-Butylbenzene	11.04	105	230348	11.5296	ppb		98
92)	p-Isopropyltoluene	11.19	119	180104	10.5555	ppb		98
93)	Benzyl Chloride	11.34	91	33910	9.8239	ppb		95
94)	1,3-DCB	11.11	146	160764	11.4395	ppb		99
95)	1,4-DCB	11.20	146	150240	10.9335	ppb		93
96)	n-Butylbenzene	11.59	91	88573	9.2036	ppb		99
97)	1,2-DCB	11.55	146	137113	11.5162	ppb		99
98)	Hexachloroethane	11.81	117	46514	11.8152	ppb		91
99)	1,2-Dibromo-3-chloropropan	12.31	157	9024	10.1203	ppb	#	81
100)	1,2,4-Trichlorobenzene	13.15	180	19592	9.3370	ppb		92
101)	Hexachlorobutadiene	13.36	225	28200	9.7087	ppb		98
102)	Naphthalene	13.38	128	45643	8.4485	ppb		99
103)	1,2,3-Trichlorobenzene	13.62	180	23821	9.4137	ppb		86

(#) = qualifier out of range (m) = manual integration

Quantitation Report

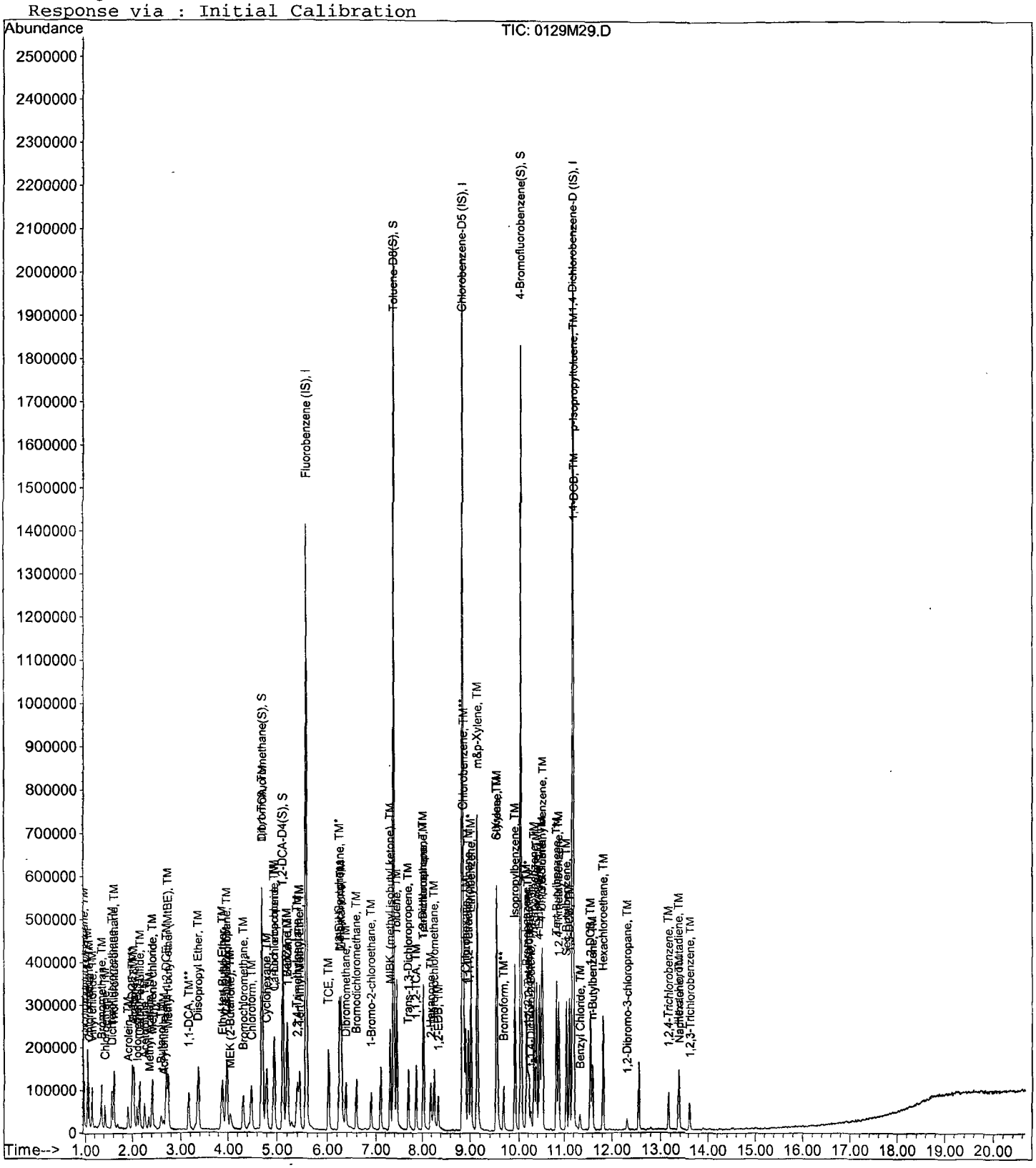
Data File : M:\MAX\DATA\210128\0129M29.D
Acq On : 30 Jan 21 5:35
Sample : Ending CCV 10ug/L 1/29/21
Misc : IS 10/16/20

Vial: 29
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 30 10:07 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M09.D Vial: 9
Acq On : 29 Jan 21 19:55 Operator: LP,DG,CH
Sample : BA26159W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 3 16:32 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1516783	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1300040	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	531458	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	366643	29.9513 ppb	0.00
Spiked Amount 25.000			Recovery	= 119.804%	
44) 1,2-DCA-D4(S)	5.11	65	378408	26.9855 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.940%	
64) Toluene-D8(S)	7.37	98	1453577	26.8594 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.436%	
72) 4-Bromofluorobenzene(S)	10.03	95	570895	25.2804 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.120%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

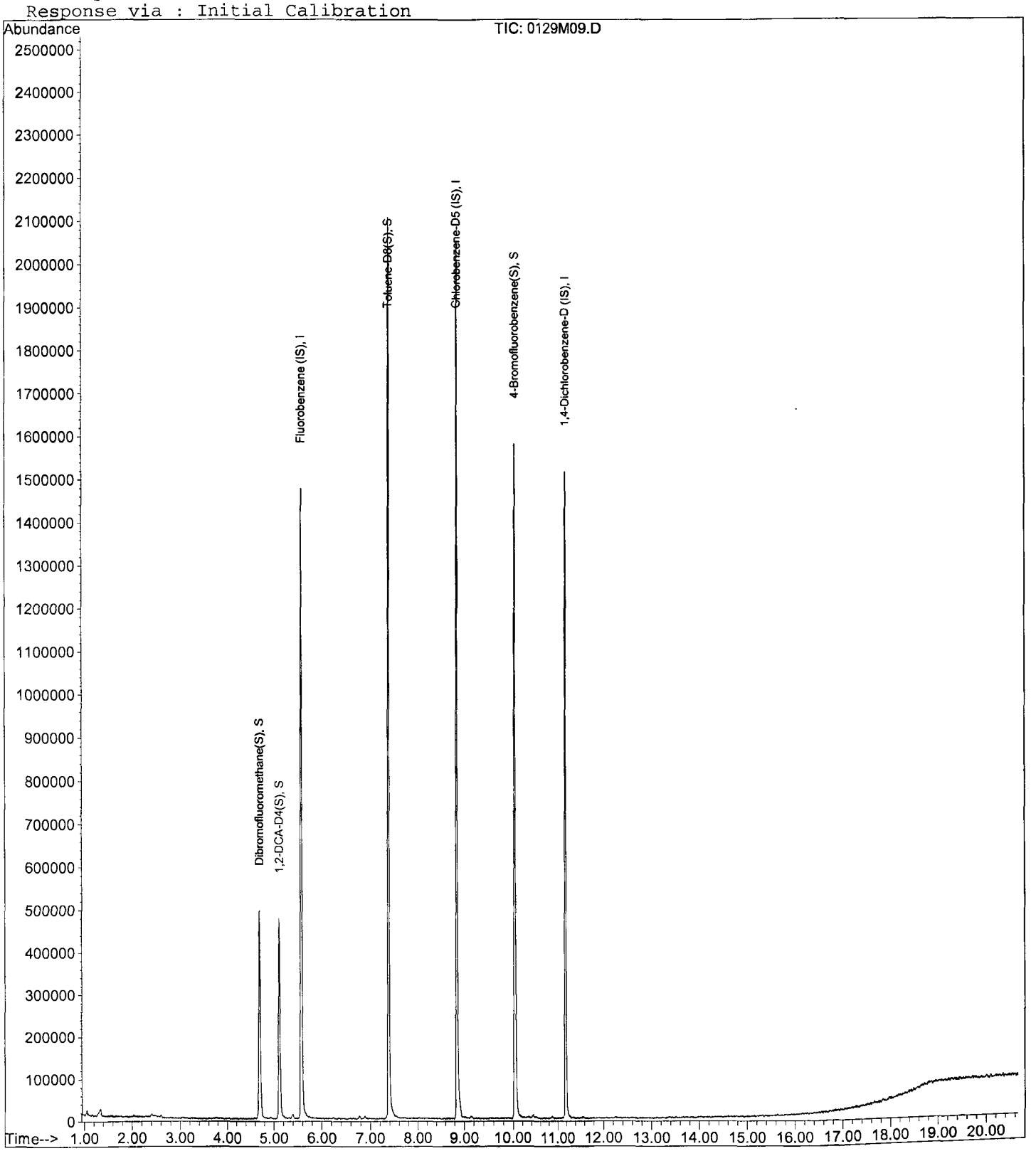
Data File : M:\MAX\DATA\210128\0129M09.D
Acq On : 29 Jan 21 19:55
Sample : BA26159W01
Misc : IS 10/16/20

Vial: 9
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 3 16:32 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M10.D Vial: 10
Acq On : 29 Jan 21 20:24 Operator: LP,DG,CH
Sample : BA26160W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:37 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1505627	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1280218	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	529237	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	353337	28.9257 ppb	0.00
Spiked Amount 25.000			Recovery = 115.704%		
44) 1,2-DCA-D4(S)	5.11	65	359647	25.7219 ppb	0.00
Spiked Amount 25.000			Recovery = 102.888%		
64) Toluene-D8(S)	7.37	98	1399888	26.1840 ppb	0.00
Spiked Amount 25.000			Recovery = 104.736%		
72) 4-Bromofluorobenzene(S)	10.03	95	561942	25.2677 ppb	0.00
Spiked Amount 25.000			Recovery = 101.072%		

Target Compounds Qvalue

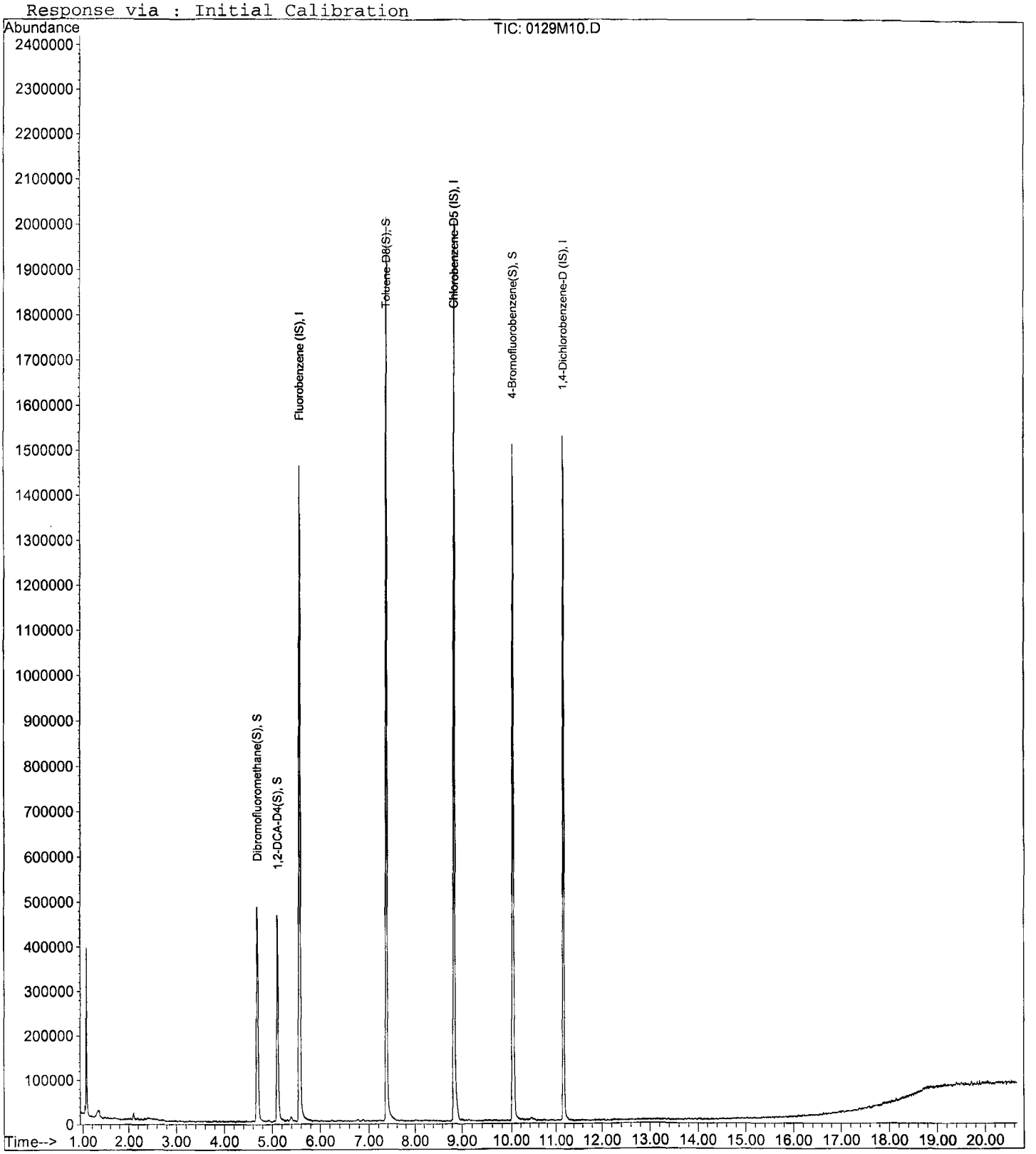
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M10.D Vial: 10
Acq On : 29 Jan 21 20:24 Operator: LP,DG,CH
Sample : BA26160W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:37 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M11.D Vial: 11
Acq On : 29 Jan 21 20:53 Operator: LP,DG,CH
Sample : BA26162W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:38 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1491865	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1275941	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	502180	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	343778	28.3081 ppb	0.00
Spiked Amount 25.000			Recovery	= 113.232%	
44) 1,2-DCA-D4(S)	5.11	65	353299	25.4776 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.912%	
64) Toluene-D8(S)	7.37	98	1384065	25.9444 ppb	0.00
Spiked Amount 25.000			Recovery	= 103.776%	
72) 4-Bromofluorobenzene(S)	10.03	95	547078	24.6017 ppb	0.00
Spiked Amount 25.000			Recovery	= 98.408%	

Target Compounds Qvalue

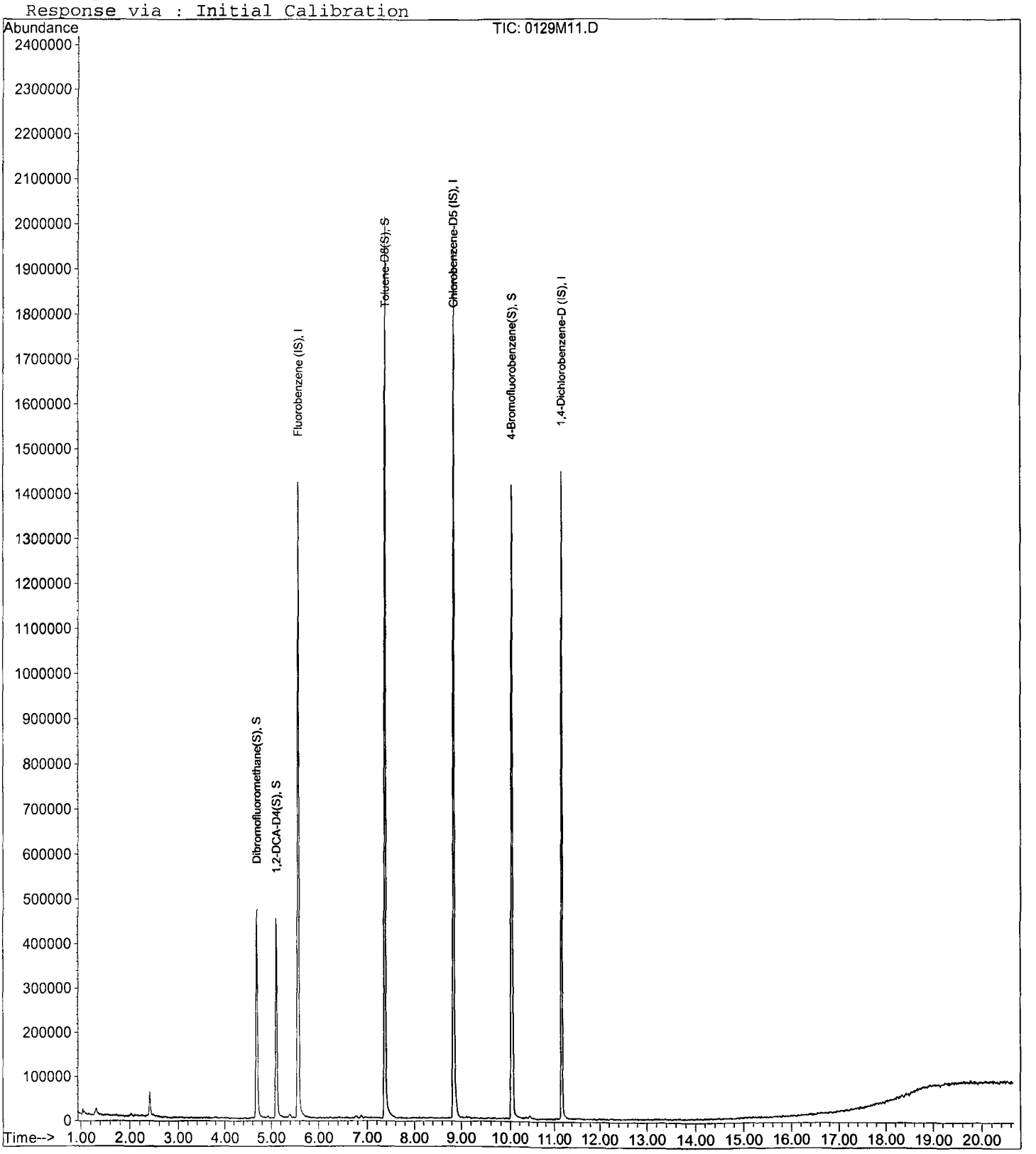
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M11.D Vial: 11
Acq On : 29 Jan 21 20:53 Operator: LP,DG,CH
Sample : BA26162W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:38 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M12.D Vial: 12
Acq On : 29 Jan 21 21:22 Operator: LP,DG,CH
Sample : BA26163W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 15:39 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1450747	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1234818	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	502057	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	343482	29.2291 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.916%	
44) 1,2-DCA-D4(S)	5.11	65	356290	26.5223 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.088%	
64) Toluene-D8(S)	7.37	98	1345626	26.0814 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.324%	
72) 4-Bromofluorobenzene(S)	10.03	95	536837	24.9934 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.972%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

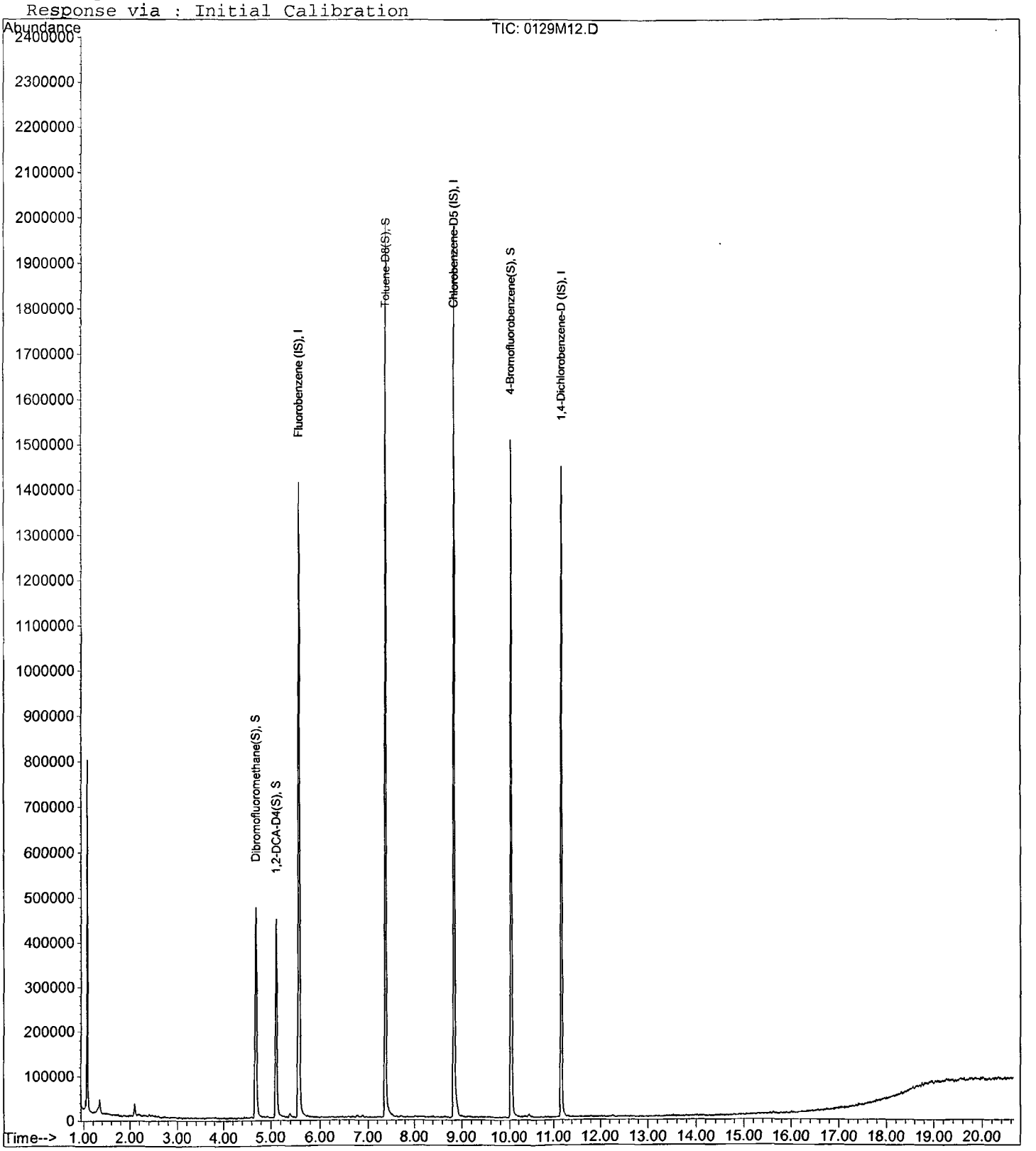
Data File : M:\MAX\DATA\210128\0129M12.D
Acq On : 29 Jan 21 21:22
Sample : BA26163W01
Misc : IS 10/16/20

Vial: 12
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 15:39 2021

Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D
Acq On : 29 Jan 21 19:26
Sample : 210129A BLK
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 15:35 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1463100	25.0000 ppb	0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1262639	25.0000 ppb	0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	519641	25.0000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	4.69	111	349346	29.5215 ppb	0.00
Spiked Amount 25.000			Recovery	= 118.084%	
44) 1,2-DCA-D4(S)	5.11	65	368864	27.2987 ppb	0.00
Spiked Amount 25.000			Recovery	= 109.196%	
64) Toluene-D8(S)	7.37	98	1412296	26.8710 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.484%	
72) 4-Bromofluorobenzene(S)	10.03	95	569182	26.0428 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.172%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration

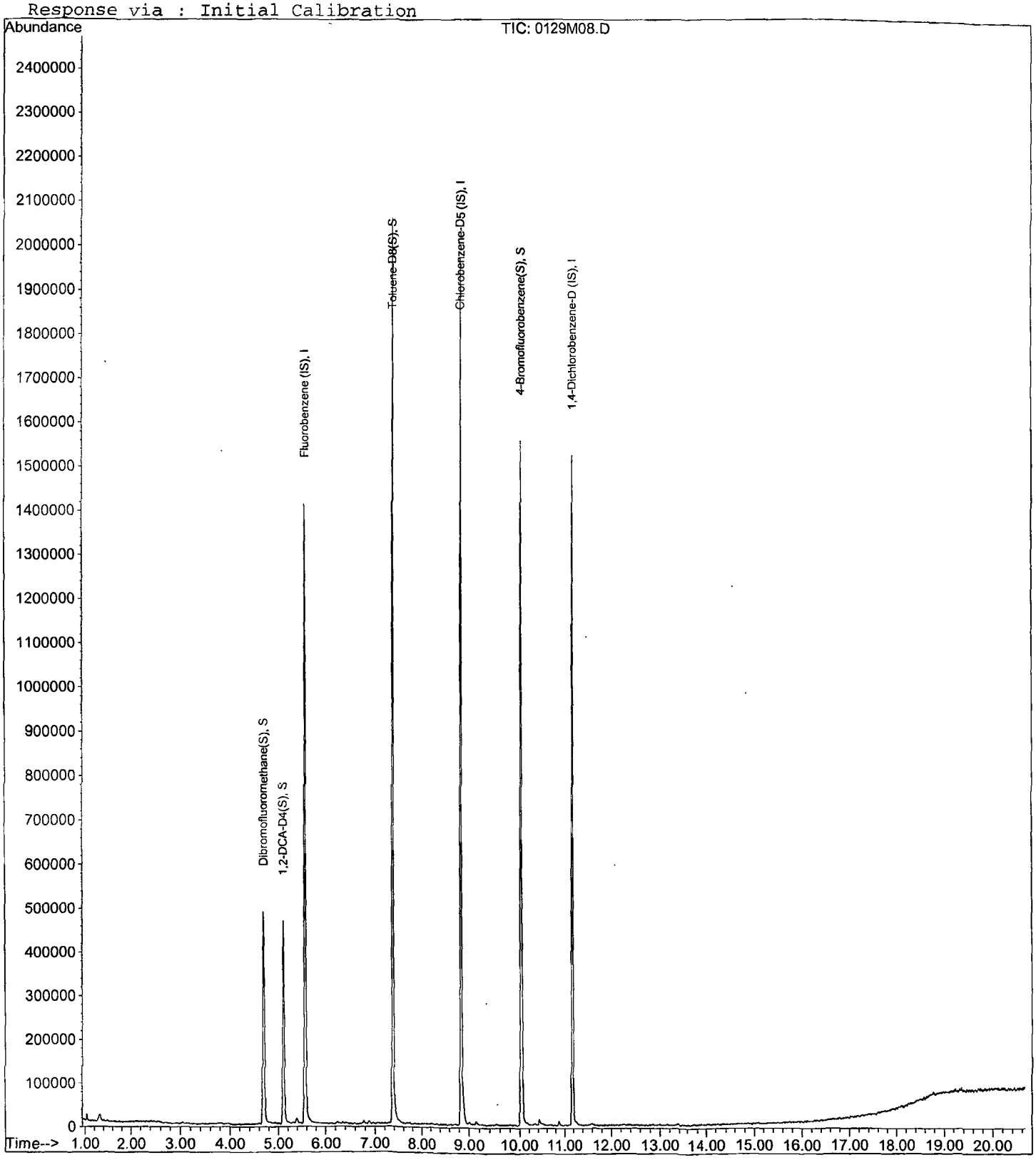
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M08.D
Acq On : 29 Jan 21 19:26
Sample : 210129A BLK
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 15:35 2021 Quant Results File: M0128W.RES

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D
Acq On : 29 Jan 21 17:30
Sample : 210129A CCV/LCS 10ug/L
Misc : IS 10/16/20

Vial: 4
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475866	25.0000 ppb		0.00
63) Chlorobenzene-D5 (IS)	8.84	117	1231358	25.0000 ppb		0.00
78) 1,4-Dichlorobenzene-D (IS)	11.17	152	677527	25.0000 ppb		0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	4.69	111	347870	29.0753 ppb		0.00
Spiked Amount 25.000			Recovery = 116.300%			
44) 1,2-DCA-D4(S)	5.11	65	358124	26.1726 ppb		0.00
Spiked Amount 25.000			Recovery = 104.692%			
64) Toluene-D8(S)	7.37	98	1345448	26.1614 ppb		0.00
Spiked Amount 25.000			Recovery = 104.644%			
72) 4-Bromofluorobenzene(S)	10.03	95	564564	26.5467 ppb		0.00
Spiked Amount 25.000			Recovery = 106.188%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.97	85	59520	13.0956 ppb		90
4) Freon 114	1.04	85	52200	14.5449 ppb		100
5) Chloromethane	1.08	50	64712	11.1105 ppb		97
6) Vinyl chloride	1.15	62	63769	11.7310 ppb		96
8) Bromomethane	1.34	94	30016	13.5308 ppb		96
9) Chloroethane	1.42	64	34657	11.0441 ppb		90
10) Dichlorofluoromethane	1.56	67	70774	12.5750 ppb		100
11) Trichlorofluoromethane	1.60	101	85624	13.0096 ppb		96
13) Acrolein	1.90	56	19560	136.4180 ppb	#	78
14) Acetone	2.03	43	58211	52.5228 ppb		98
15) Freon-113	2.02	103	16357	12.9343 ppb		92
16) Acetonitrile	2.25	41	62755	123.5996 ppb		92
18) 1,1-DCE	1.99	61	75013	11.7008 ppb		97
19) t-Butanol	2.59	59	47414	136.1291 ppb		92
20) Methyl Acetate	2.34	43	35433	11.5519 ppb		95
21) Iodomethane	2.10	142	61650	10.0517 ppb		98
22) Acrylonitrile	2.72	53	1412	3.4136 ppb	#	13
24) Methylene chloride	2.41	84	57414	11.8442 ppb		90
25) Carbon disulfide	2.15	76	98256	11.8867 ppb		97
26) Methyl t-butyl ether (MtBE	2.73	73	144270	10.9057 ppb		96
27) Trans-1,2-DCE	2.70	96	63652	11.5186 ppb		94
29) Diisopropyl Ether	3.35	45	168837	11.2153 ppb		99
30) 1,1-DCA	3.16	63	101184	11.6748 ppb	#	95
32) Ethyl tert Butyl Ether	3.87	59	152750	11.6369 ppb	#	86
34) MEK (2-Butanone)	4.04	43	86493	58.3822 ppb		95
35) Cis-1,2-DCE	3.97	96	68267	12.0935 ppb		95
36) 2,2-Dichloropropane	3.96	77	86810	11.6805 ppb		95
37) Chloroform	4.48	83	104987	11.6183 ppb		98
38) Bromochloromethane	4.31	130	45208	11.3022 ppb		98
40) 1,1,1-TCA	4.70	97	94681	11.7658 ppb		97
41) Cyclohexane	4.79	41	45953	12.8811 ppb		97
42) 1,1-Dichloropropene	4.95	75	77648	12.0449 ppb		96
43) 2,2,4-Trimethylpentane	5.39	57	147166	14.7256 ppb		94
45) Carbon Tetrachloride	4.94	117	86067	12.2623 ppb		96
46) Tert Amyl Methyl Ether	5.44	73	127546	12.0530 ppb		99
47) 1,2-DCA	5.21	62	76760	11.6760 ppb		99
48) Benzene	5.19	78	231281	11.4575 ppb		99
49) TCE	6.02	95	62441	11.1751 ppb		91
50) 2-Pentanone	6.28	43	358225	138.2188 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M04.D Vial: 4
Acq On : 29 Jan 21 17:30 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 10ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 18:11 2021 Quant Results File: M0128W.RES

Quant Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
51)	1,2-Dichloropropane	6.25	63	28832	11.1356	ppb		98
52)	Bromodichloromethane	6.59	83	78757	11.4013	ppb		95
53)	Methyl Cyclohexane	6.24	83	91006	13.1694	ppb		96
54)	Dibromomethane	6.37	93	34615	11.6266	ppb		99
55)	MIBK (methyl isobutyl ket	7.29	43	184508	53.6610	ppb		96
56)	1-Bromo-2-chloroethane	6.90	144	10858	11.0504	ppb		94
59)	Toluene	7.44	91	257353	11.7848	ppb		100
60)	Trans-1,3-Dichloropropene	7.69	75	83403	11.6178	ppb		98
61)	1,1,2-TCA	7.86	83	38099	10.3371	ppb		93
62)	2-Hexanone	8.18	43	115008	52.3900	ppb		94
65)	1,2-EDB	8.34	107	51411	10.9457	ppb		94
66)	Tetrachloroethene	8.01	164	44144	12.2926	ppb		96
67)	1-Chlorohexane	8.91	91	78214	11.9198	ppb		99
68)	1,1,1,2-Tetrachloroethane	8.96	131	69328	11.5516	ppb		96
69)	m&p-Xylene	9.14	106	260432	24.0199	ppb		97
70)	o-Xylene	9.52	106	131191	11.7590	ppb		99
71)	Styrene	9.53	104	214247	12.1964	ppb		97
73)	1,3-Dichloropropane	8.03	76	81238	11.2406	ppb		96
74)	Dibromochloromethane	8.25	129	68497	11.6283	ppb		98
75)	Chlorobenzene	8.87	112	187894	11.5596	ppb		93
76)	Ethylbenzene	9.01	91	304967	11.9563	ppb		95
77)	Bromoform	9.68	173	52039	10.9108	ppb		99
79)	Isopropylbenzene	9.91	105	319522	12.6793	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	57258	12.3292	ppb		92
81)	1,2,3-Trichloropropane	10.21	110	21085	12.1607	ppb	#	79
82)	t-1,4-Dichloro-2-Butene	10.25	53	11907	12.9644	ppb		79
83)	Bromobenzene	10.15	156	101752	12.8231	ppb		99
84)	n-Propylbenzene	10.32	91	334395	11.6955	ppb		98
85)	4-Ethyltoluene	10.44	105	289668	12.1395	ppb		98
86)	2-Chlorotoluene	10.37	91	218847	9.5752	ppb		98
87)	1,3,5-Trimethylbenzene	10.50	105	249587	12.4302	ppb		99
88)	4-Chlorotoluene	10.48	91	247113	12.7389	ppb		96
89)	Tert-Butylbenzene	10.82	119	122904	12.4316	ppb		98
90)	1,2,4-Trimethylbenzene	10.87	105	207283	12.3457	ppb		99
91)	Sec-Butylbenzene	11.04	105	258977	12.7835	ppb		99
92)	p-Isopropyltoluene	11.19	119	193587	11.1050	ppb		99
93)	Benzyl Chloride	11.33	91	44507	11.6557	ppb	#	91
94)	1,3-DCB	11.10	146	170936	11.9953	ppb		98
95)	1,4-DCB	11.19	146	162054	11.6303	ppb		96
96)	n-Butylbenzene	11.59	91	110141	10.7365	ppb		98
97)	1,2-DCB	11.55	146	148427	12.2943	ppb		97
98)	Hexachloroethane	11.81	117	45489	11.3584	ppb		88
99)	1,2-Dibromo-3-chloropropan	12.31	157	9152	10.1217	ppb		98
100)	1,2,4-Trichlorobenzene	13.15	180	24056	10.4944	ppb		88
101)	Hexachlorobutadiene	13.35	225	35194	11.2147	ppb		97
102)	Naphthalene	13.38	128	57907	9.9576	ppb		100
103)	1,2,3-Trichlorobenzene	13.62	180	27952	10.3656	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

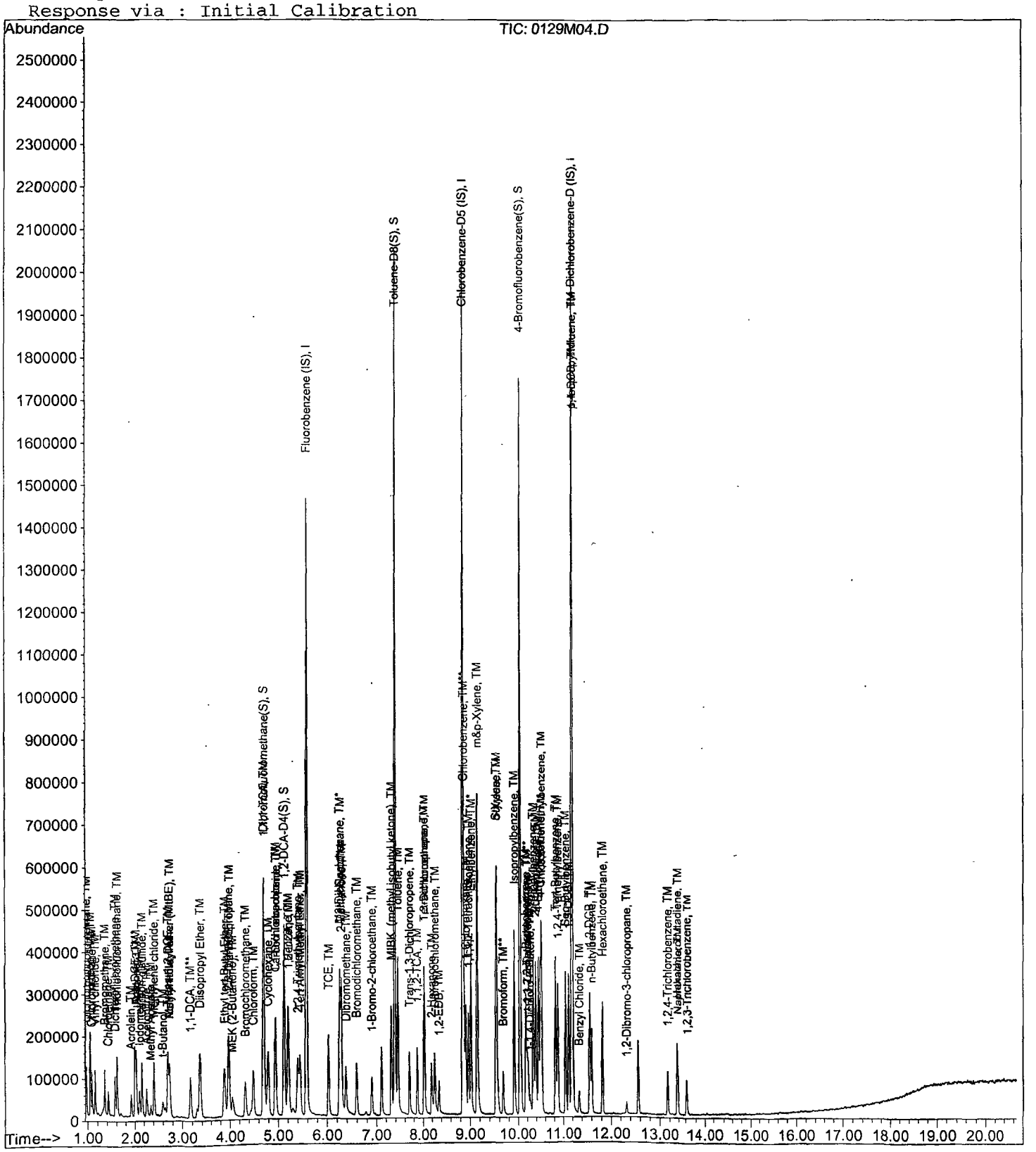
Data File : M:\MAX\DATA\210128\0129M04.D
Acq On : 29 Jan 21 17:30
Sample : 210129A CCV/LCS 10ug/L
Misc : IS 10/16/20

Vial: 4
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 18:11 2021

Quant Results File: M0128W.RES

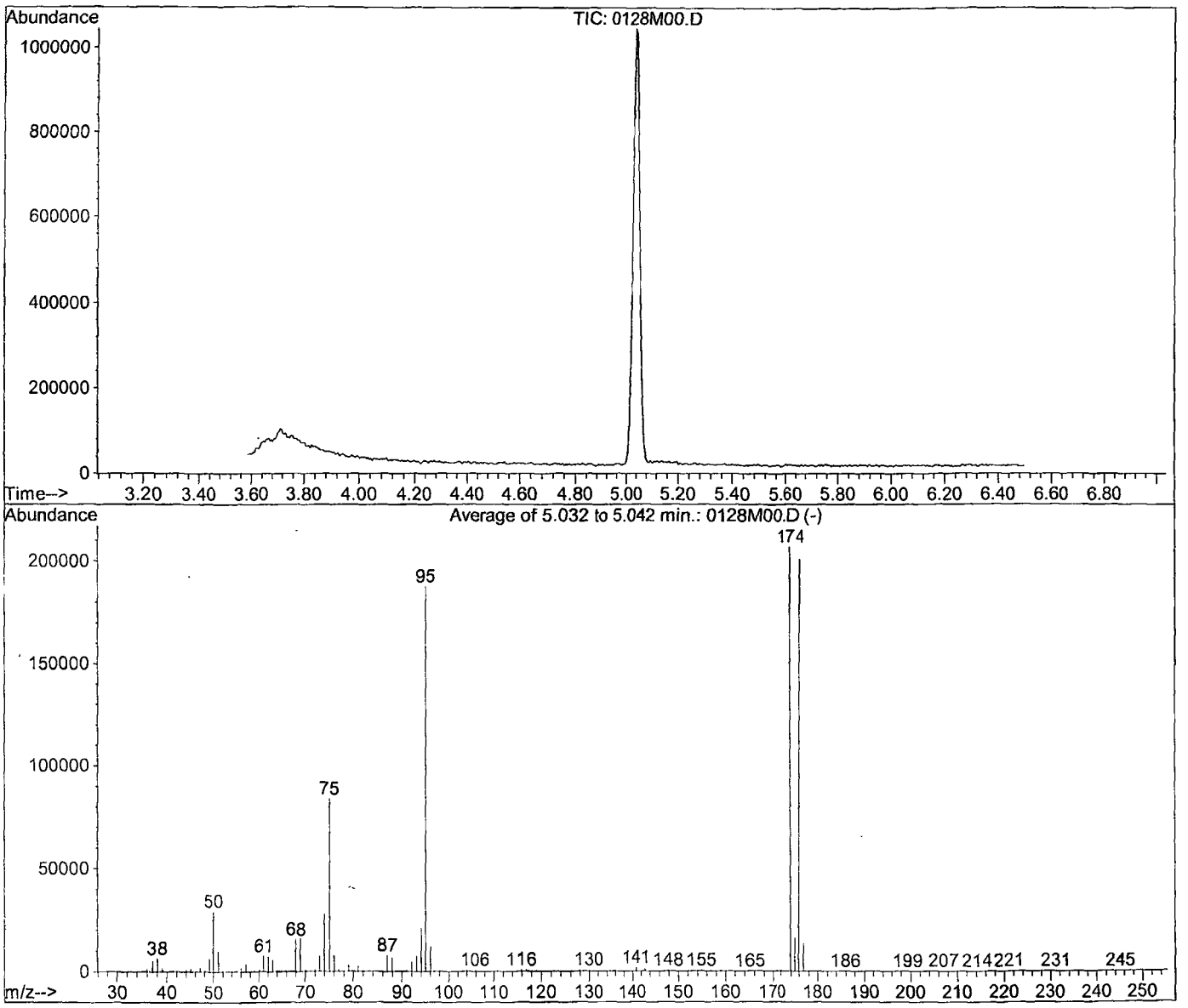
Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Data File : M:\MAX\DATA\210128\0128M00.D
Acq On : 28 Jan 21 14:41
Sample : 25ug/L BFB STD 12/22/20
Misc : 2ul

Vial: 1
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Method : M:\MAX\DATA\210128\M0128W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 289, 290, 291; Background Corrected with Scan 279

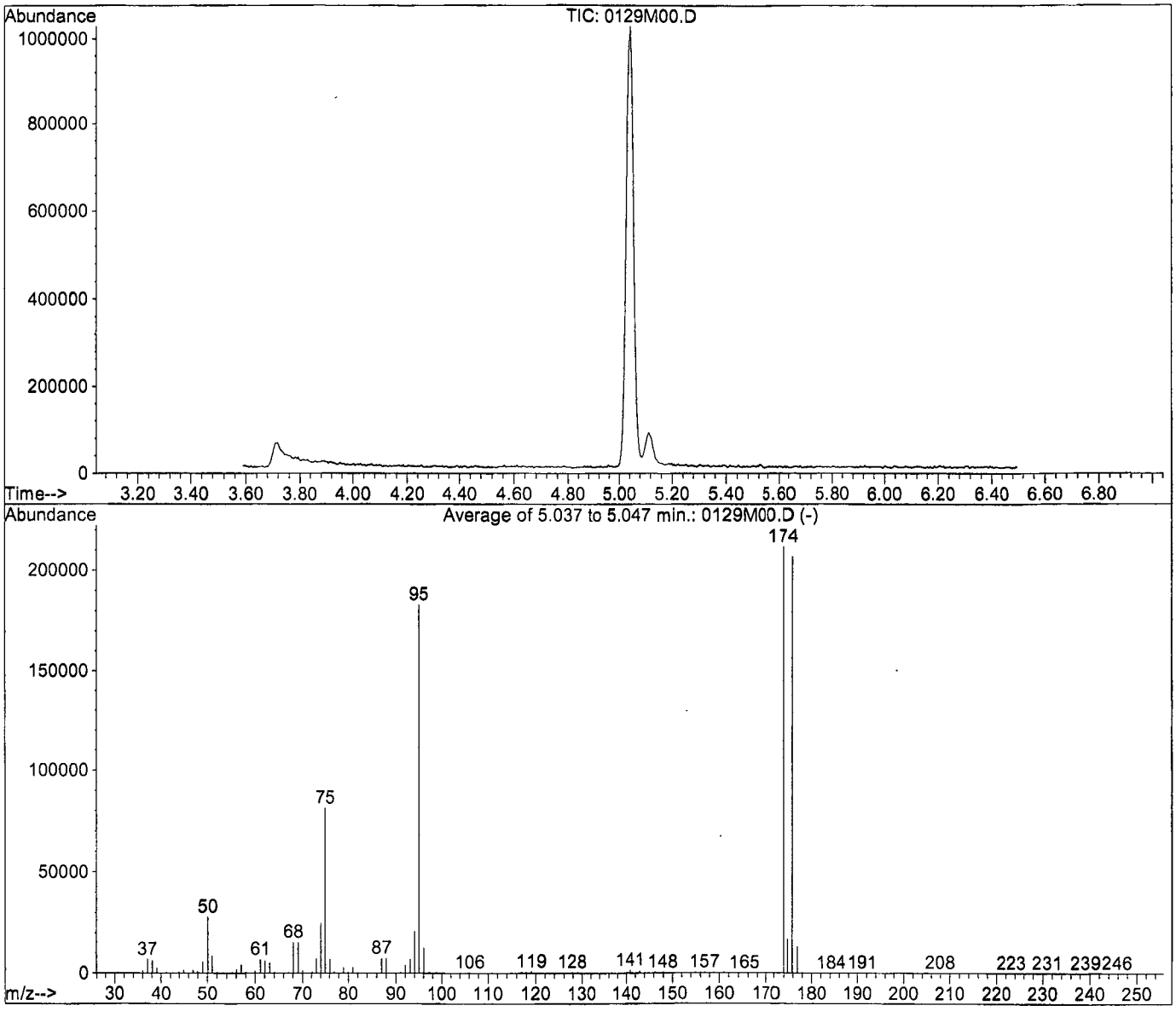
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.6	29227	PASS
75	95	30	60	44.7	83837	PASS
95	95	100	200	100.0	187532	PASS
96	95	5	9	6.5	12118	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	110.2	206741	PASS
175	174	5	9	7.8	16213	PASS
176	174	95	101	97.2	200853	PASS
177	176	5	9	6.7	13448	PASS

0128M00.D M0128W.M Fri Jan 29 11:38:28 2021

Data File : M:\MAX\DATA\210128\0129M00.D
Acq On : 29 Jan 21 15:38
Sample : 25ug/L BFB STD 12/22/20
Misc : 2ul

Vial: 1
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Method : M:\THOR\DATA\210128\T0128S.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 5.037 to 5.047 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	27925	PASS
75	95	30	60	44.5	81504	PASS
95	95	100	100	100.0	183083	PASS
96	95	5	9	6.9	12652	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	115.6	211712	PASS
175	174	5	9	8.0	16962	PASS
176	174	95	100	97.6	206661	PASS
177	176	5	9	6.3	12998	PASS

MAX 8260 Standard Prep

MAX 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/28/21	03/29/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD 9	Various	1.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/28/21	03/29/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	80uL			80
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/28/21	03/29/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	40uL			200

MAX 8260 Water Second Source (SS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	100	Prepared 01/28/21	03/29/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/28/21	01/28/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/28/21	03/29/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD 2	Phenova	CCV/ LCS	100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/28/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\MAX\DATA\210128\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0128M00.D	1	25ug/L BFB STD 12/22/20	2ul	28 Jan 21 14:41
2	2	0128M02.D	1	0.3ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:26
3	3	0128M03.D	1	0.5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:55
4	4	0128M04.D	1	1ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:24
5	5	0128M05.D	1	2ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:53
6	6	0128M06.D	1	5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:22
7	7	0128M07.D	1	10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:51
8	8	0128M08.D	1	20ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:20
9	9	0128M09.D	1	40ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:49
10	10	0128M10.D	1	100ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 21:19
11	12	0128M12.D	1	(SS) 10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 22:16
12	1	0129M00.D	1	25ug/L BFB STD 12/22/20	2ul	29 Jan 21 15:38
13	4	0129M04.D	1	210129A CCV/LCS 10ug/L	IS 10/16/20	29 Jan 21 17:30
14	8	0129M08.D	1	210129A BLK	IS 10/16/20	29 Jan 21 19:26
15	9	0129M09.D	1	BA26159W01	IS 10/16/20	29 Jan 21 19:55
16	10	0129M10.D	1	BA26160W01	IS 10/16/20	29 Jan 21 20:24
17	11	0129M11.D	1	BA26162W01	IS 10/16/20	29 Jan 21 20:53
18	12	0129M12.D	1	BA26163W01	IS 10/16/20	29 Jan 21 21:22
19	29	0129M29.D	1	Ending CCV 10ug/L 1/29/21	IS 10/16/20	30 Jan 21 5:35

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Instrument: Max
Initials: SS

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
			0128M02.D	0128M03.D	0128M04.D	0128M05 D	0128M06.D	0128M07.D	0128M08 D	0128M09 D	0128M10.D							
1	I	Fluorobenzene (IS)																
2	SL	Dibromofluoromethane(S)	0.3233	0.2998	0.2270	0.2652	0.2095	0.2195	0.1967	0.1990	0.1763		0.24	21	S	0.996		
3	SL	1,2-DCA-D4(S)	0.3286	0.3183	0.2362	0.2862	0.2241	0.2397	0.2200	0.2286	0.2145		0.26	17	S	0.999		
4	I	Chlorobenzene-D5 (IS)																
5	SL	Toluene-D8(S)	1.389	1.567	1.104	1.337	1.038	1.110	0.9753	1.027	0.9346		1.2	19	S	0.998		
6	SL	4-Bromofluorobenzene(S)	0.5733	0.6541	0.4599	0.5424	0.4320	0.4606	0.4017	0.4195	0.3932		0.48	18	S	0.999		
7	I	1,4-Dichlorobenzene-D (IS)																
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Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M02.D Vial: 2
Acq On : 28 Jan 21 17:26 Operator: LP,DG,CH
Sample : 0.3ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.56	96	1849966	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1440324	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	420605	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.68	111	119602	4.1770 ppb	0.00
Spiked Amount 25.000			Recovery	= 16.708%	
3) 1,2-DCA-D4(S)	5.11	65	121587	5.1057 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.424%	
5) Toluene-D8(S)	7.37	98	400207	3.8143 ppb	0.00
Spiked Amount 25.000			Recovery	= 15.256%	
6) 4-Bromofluorobenzene(S)	10.03	95	165161	4.0497 ppb	0.00
Spiked Amount 25.000			Recovery	= 16.200%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

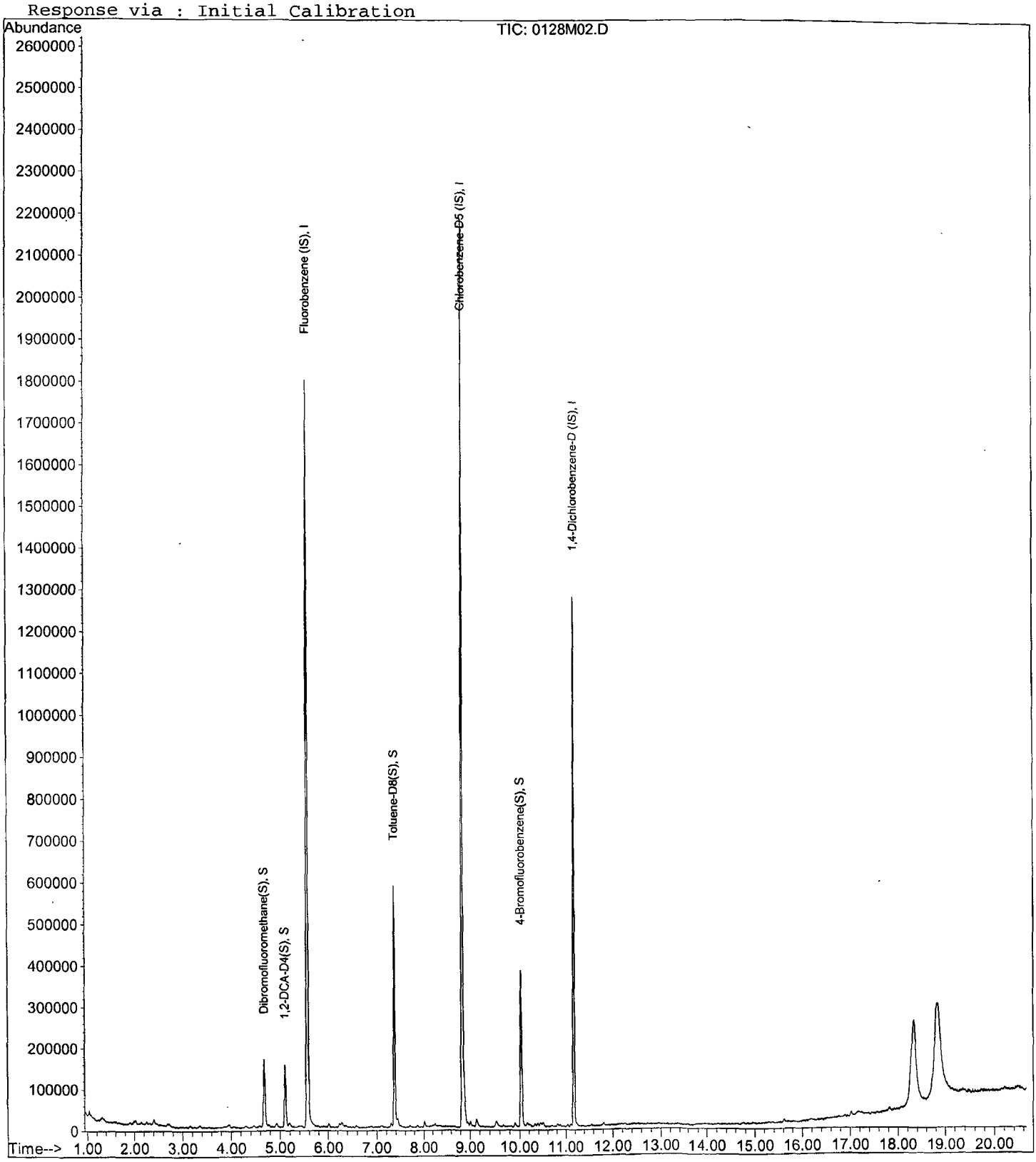
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M02.D
Acq On : 28 Jan 21 17:26
Sample : 0.3ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 2
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1703128	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1442379	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	506390	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	102134	3.4954 ppb	0.00
Spiked Amount 25.000			Recovery	= 13.980%	
3) 1,2-DCA-D4(S)	5.11	65	108428	4.8604 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.440%	
5) Toluene-D8(S)	7.37	98	452170	4.7915 ppb	0.00
Spiked Amount 25.000			Recovery	= 19.164%	
6) 4-Bromofluorobenzene(S)	10.03	95	188679	5.1058 ppb	0.00
Spiked Amount 25.000			Recovery	= 20.424%	

Target Compounds Qvalue

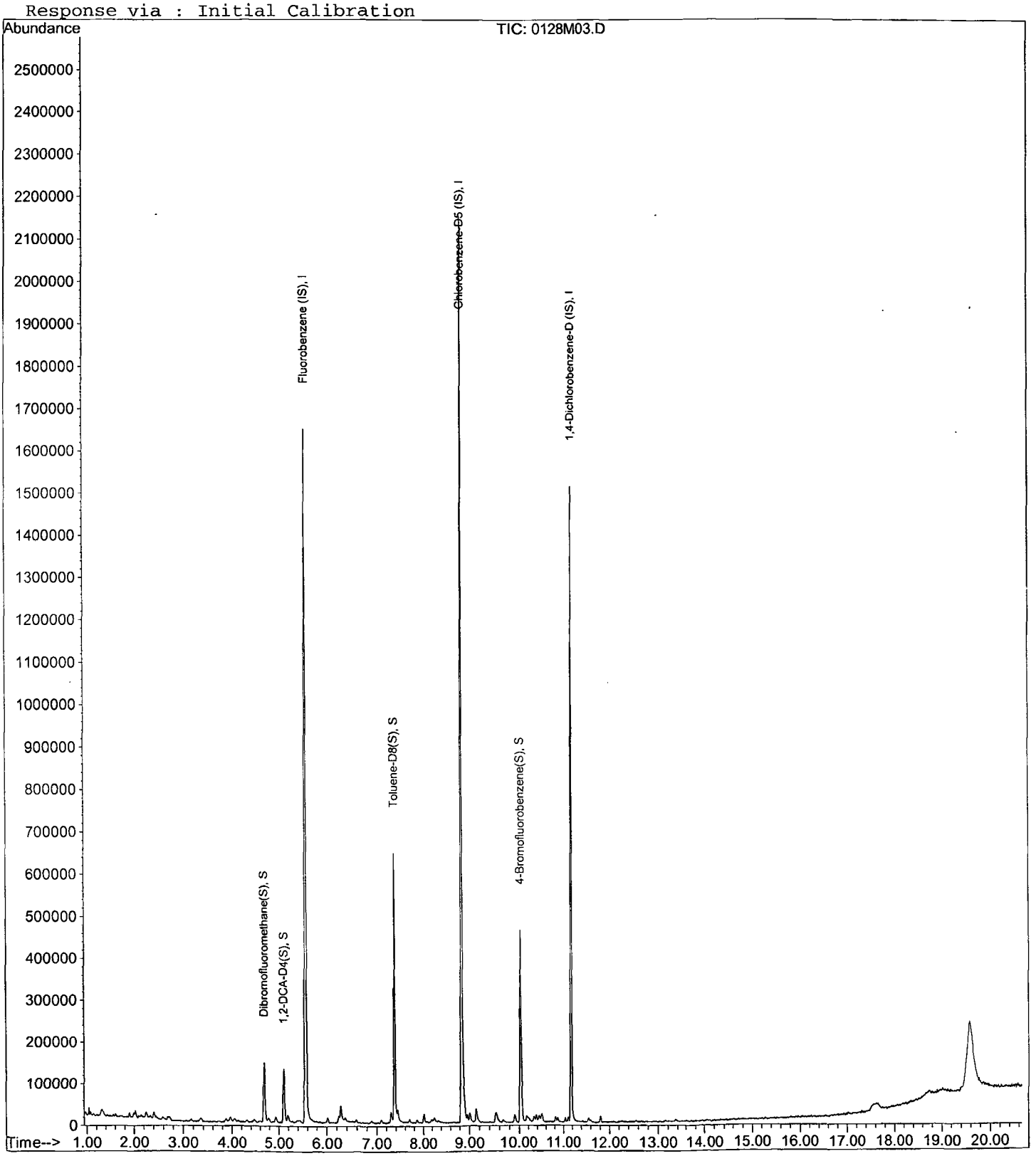
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M03.D Vial: 3
Acq On : 28 Jan 21 17:55 Operator: LP,DG,CH
Sample : 0.5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M04.D Vial: 4
Acq On : 28 Jan 21 18:24 Operator: LP,DG,CH
Sample : 1ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1780184	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1490103	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	579540	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	161611	7.9807 ppb	0.00
Spiked Amount 25.000			Recovery	= 31.924%	
3) 1,2-DCA-D4(S)	5.11	65	168204	8.5305 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.120%	
5) Toluene-D8(S)	7.37	98	657981	8.3043 ppb	0.00
Spiked Amount 25.000			Recovery	= 33.216%	
6) 4-Bromofluorobenzene(S)	10.03	95	274125	8.5838 ppb	0.00
Spiked Amount 25.000			Recovery	= 34.336%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0128M04.D M012SUR.M Wed Feb 10 10:11:22 2021 Page 1

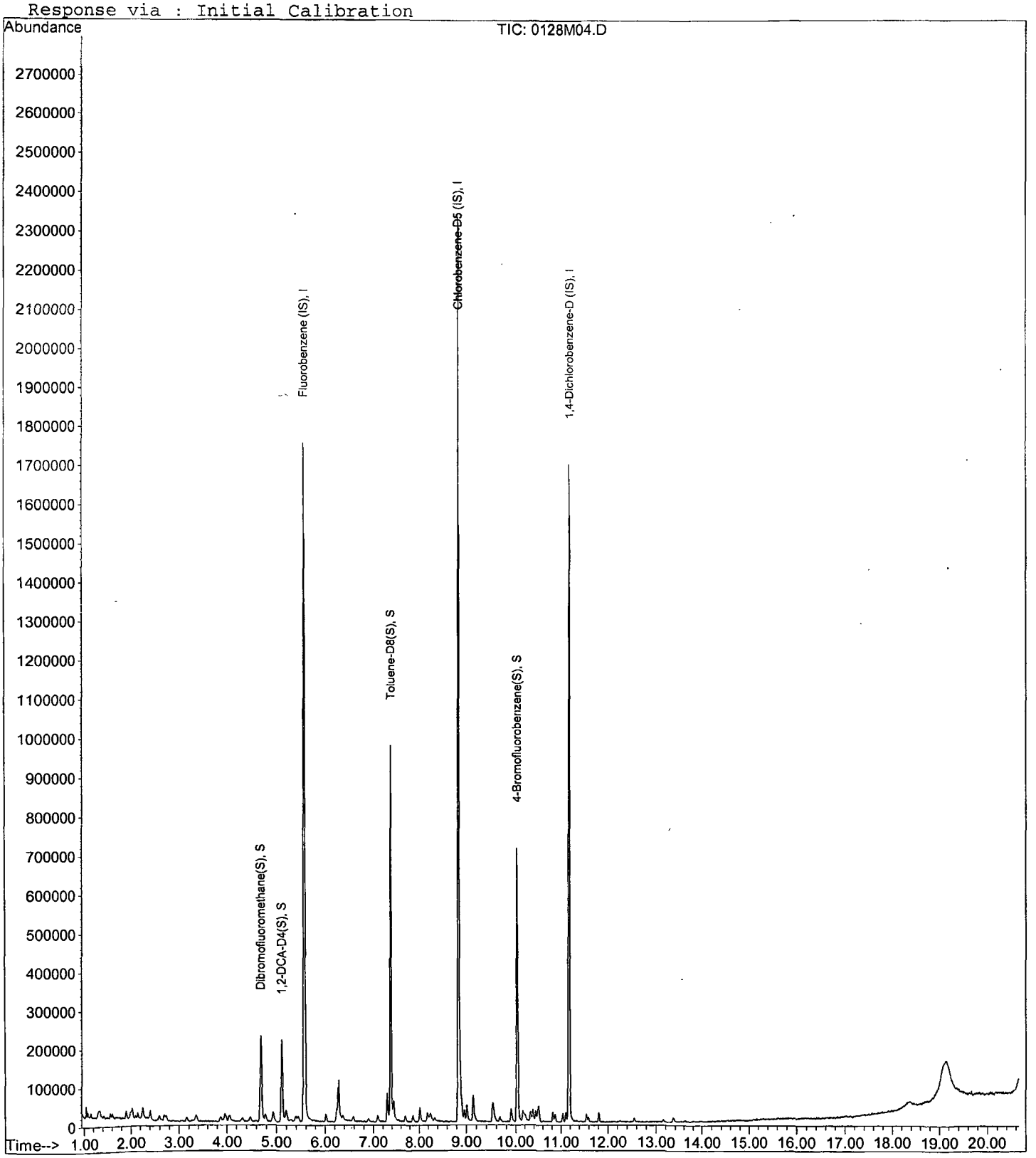
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M04.D
Acq On : 28 Jan 21 18:24
Sample : 1ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 4
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1793882	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1489443	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	621742	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	190286	10.2066 ppb	0.00
Spiked Amount 25.000			Recovery =	40.828%	
3) 1,2-DCA-D4(S)	5.11	65	205399	10.9134 ppb	0.00
Spiked Amount 25.000			Recovery =	43.652%	
5) Toluene-D8(S)	7.37	98	796795	10.8658 ppb	0.00
Spiked Amount 25.000			Recovery =	43.464%	
6) 4-Bromofluorobenzene(S)	10.03	95	323162	10.7434 ppb	0.00
Spiked Amount 25.000			Recovery =	42.972%	

Target Compounds Qvalue

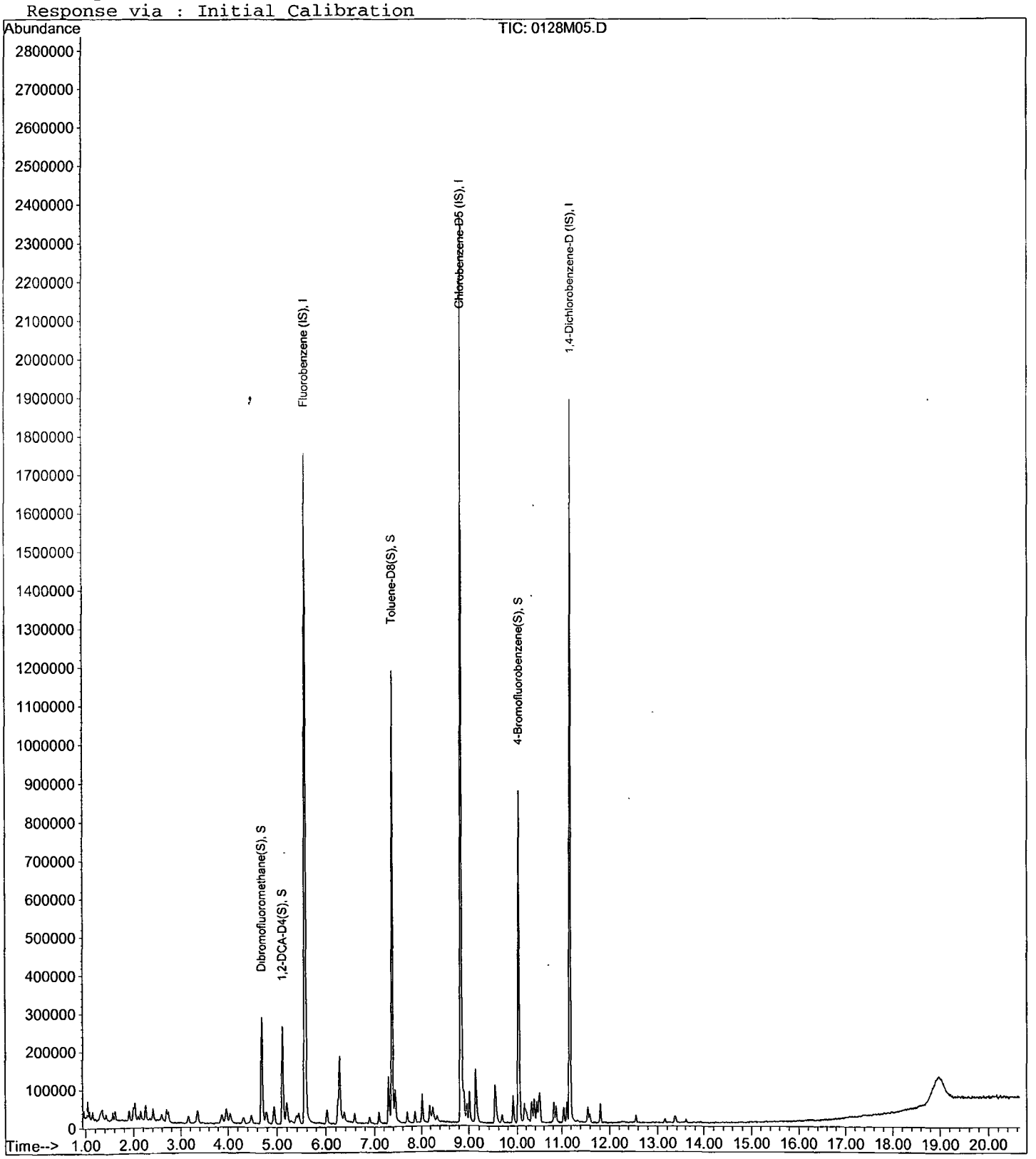
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0128M05.D Vial: 5
Acq On : 28 Jan 21 18:53 Operator: LP,DG,CH
Sample : 2ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M06.D Vial: 6
Acq On : 28 Jan 21 19:22 Operator: LP,DG,CH
Sample : 5ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1785695	25.0000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1469528	25.0000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	713253	25.0000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.69	111	374035	25.2553	ppb	0.00
Spiked Amount 25.000			Recovery =	101.020%		
3) 1,2-DCA-D4(S)	5.11	65	400143	23.9613	ppb	0.00
Spiked Amount 25.000			Recovery =	95.844%		
5) Toluene-D8(S)	7.37	98	1524890	24.6535	ppb	0.00
Spiked Amount 25.000			Recovery =	98.612%		
6) 4-Bromofluorobenzene(S)	10.03	95	634843	24.8138	ppb	0.00
Spiked Amount 25.000			Recovery =	99.256%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0128M06.D M012SUR.M Wed Feb 10 10:11:26 2021 Page 1

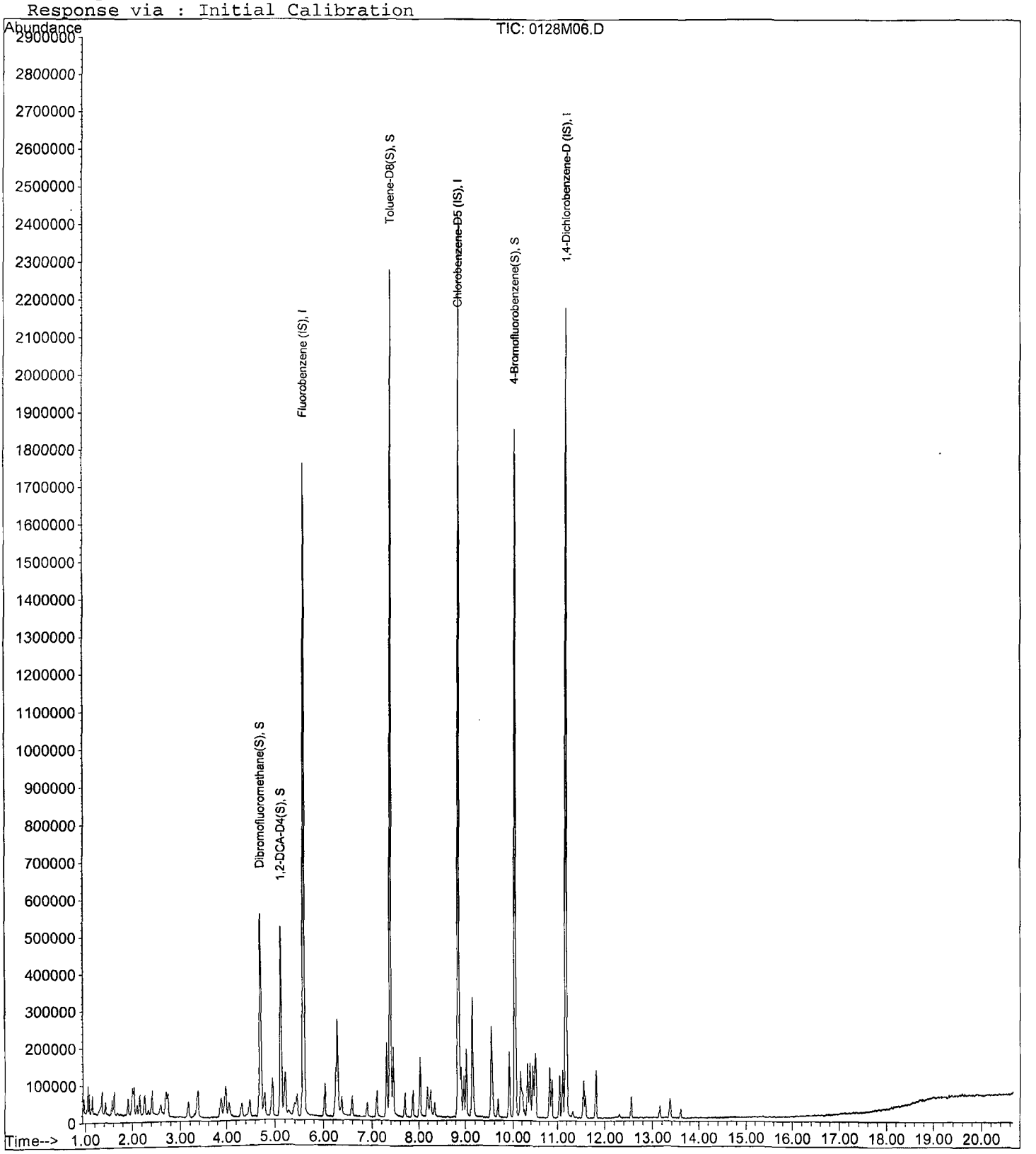
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M06.D
Acq On : 28 Jan 21 19:22
Sample : 5ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 6
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M07.D Vial: 7
Acq On : 28 Jan 21 19:51 Operator: LP,DG,CH
Sample : 10ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1794396	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1470371	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	775353	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	393894	26.7184 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.872%	
3) 1,2-DCA-D4(S)	5.11	65	430179	25.8250 ppb	0.00
Spiked Amount 25.000			Recovery	= 103.300%	
5) Toluene-D8(S)	7.37	98	1631791	26.6312 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.524%	
6) 4-Bromofluorobenzene(S)	10.02	95	677231	26.6839 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.736%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

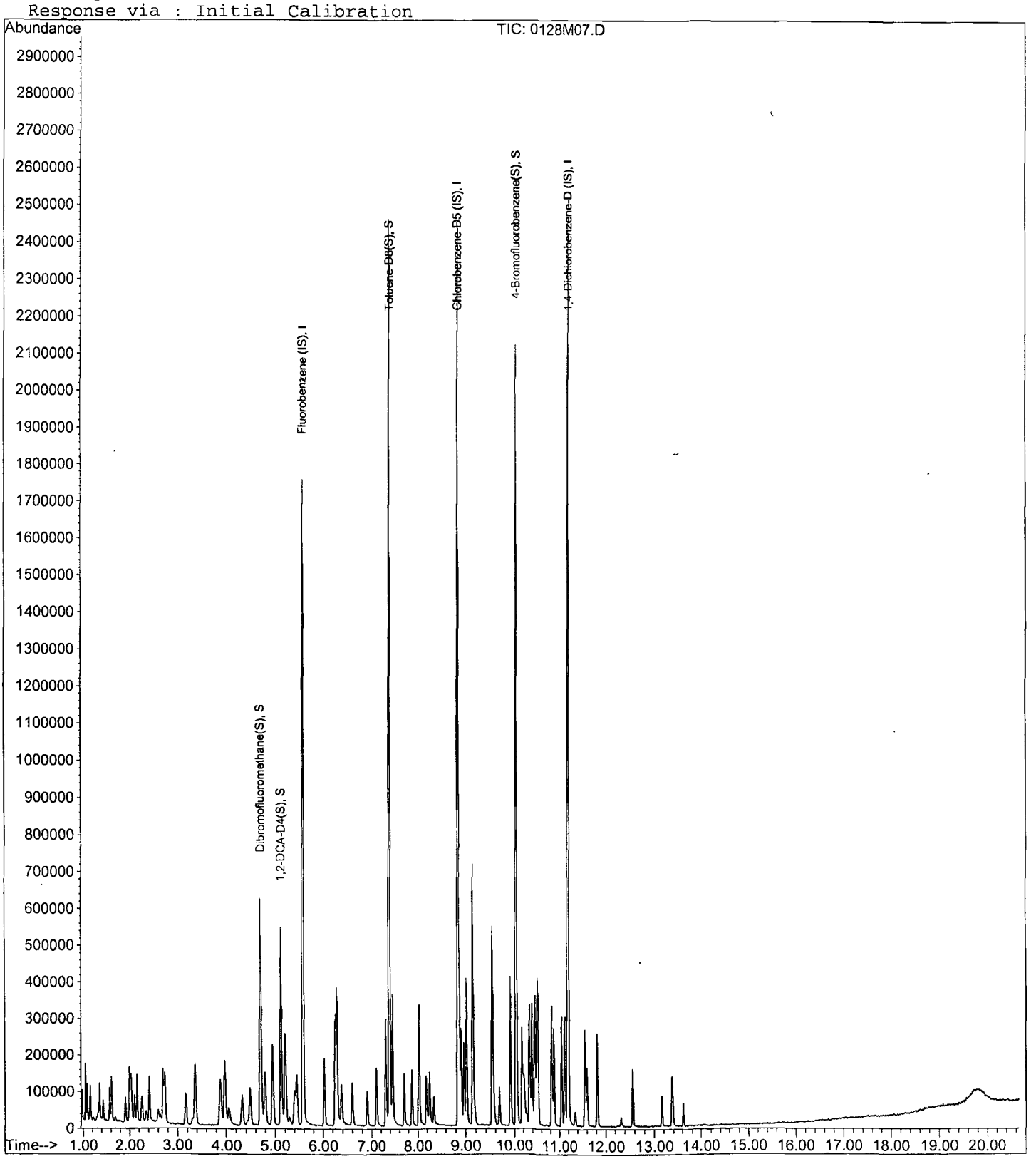
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M07.D
Acq On : 28 Jan 21 19:51
Sample : 10ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M08.D Vial: 8
Acq On : 28 Jan 21 20:20 Operator: LP,DG,CH
Sample : 20ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1759511	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1465524	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	854648	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	692089	52.0204 ppb	0.00
Spiked Amount 25.000			Recovery	= 208.080%	
3) 1,2-DCA-D4(S)	5.11	65	774296	49.6780 ppb	0.00
Spiked Amount 25.000			Recovery	= 198.712%	
5) Toluene-D8(S)	7.37	98	2858593	49.6910 ppb	0.00
Spiked Amount 25.000			Recovery	= 198.764%	
6) 4-Bromofluorobenzene(S)	10.02	95	1177537	49.1212 ppb	0.00
Spiked Amount 25.000			Recovery	= 196.484%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

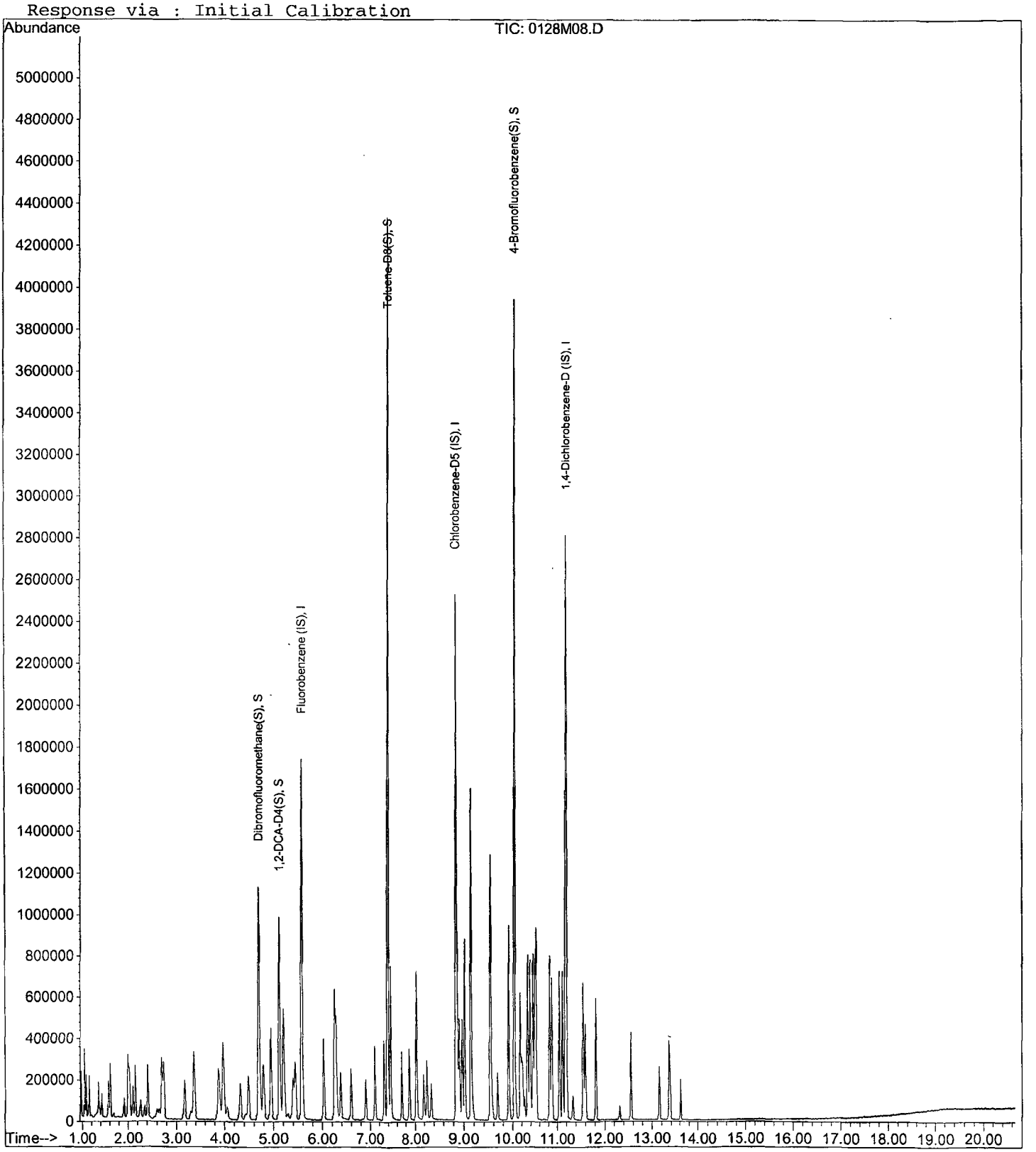
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M08.D
Acq On : 28 Jan 21 20:20
Sample : 20ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M09.D Vial: 9
Acq On : 28 Jan 21 20:49 Operator: LP,DG,CH
Sample : 40ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1774235	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1454760	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	897871	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	706217	52.7043 ppb	0.00
Spiked Amount 25.000			Recovery	= 210.816%	
3) 1,2-DCA-D4(S)	5.11	65	811024	51.7079 ppb	0.00
Spiked Amount 25.000			Recovery	= 206.832%	
5) Toluene-D8(S)	7.37	98	2987917	52.5250 ppb	0.00
Spiked Amount 25.000			Recovery	= 210.100%	
6) 4-Bromofluorobenzene(S)	10.02	95	1220621	51.4481 ppb	0.00
Spiked Amount 25.000			Recovery	= 205.792%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

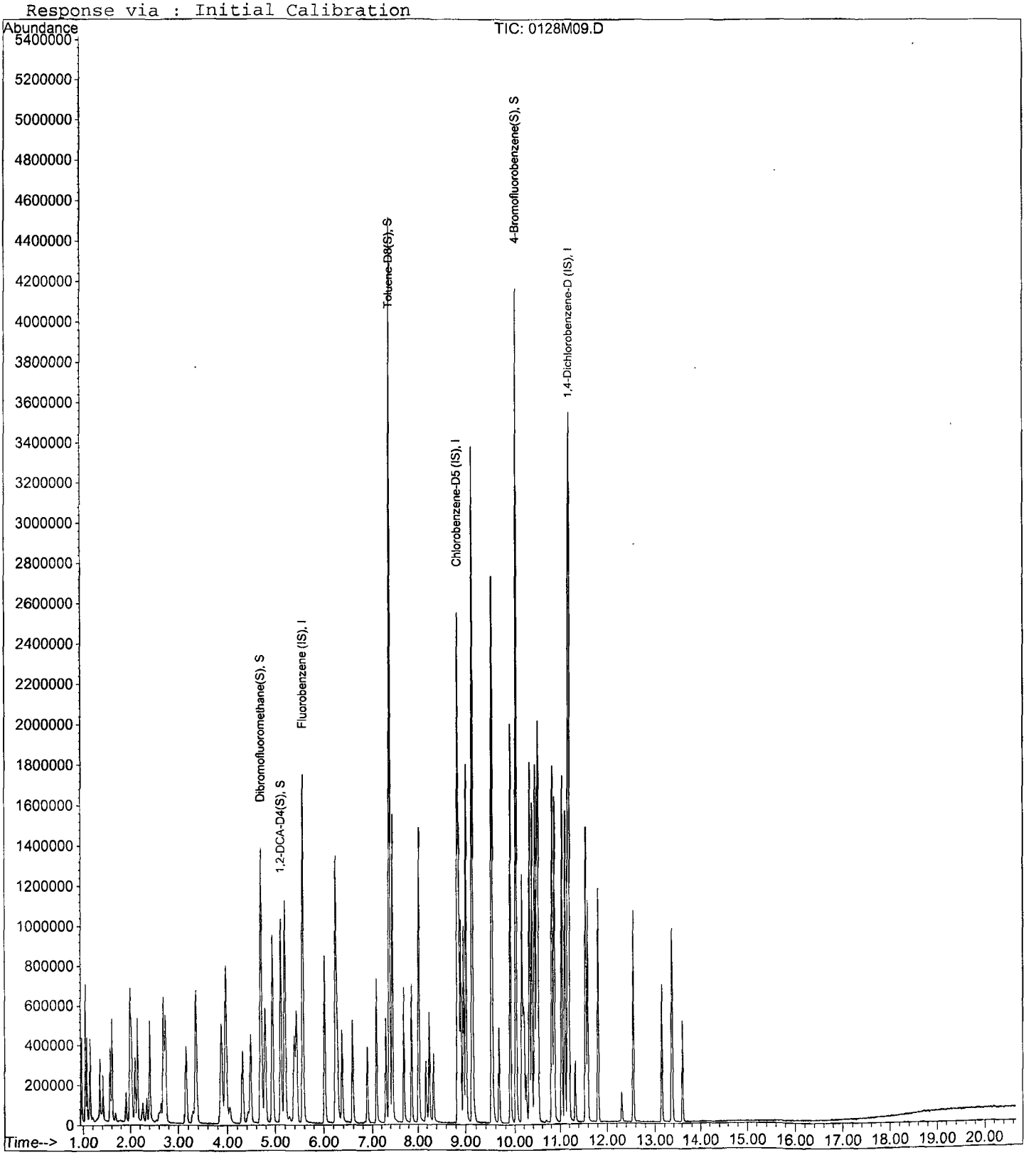
Data File : M:\MAX\DATA\210128\0128M09.D
Acq On : 28 Jan 21 20:49
Sample : 40ug/L VOC STD 1/28/21
Misc : IS 10/16/20

Vial: 9
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021

Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0128M10.D Vial: 10
Acq On : 28 Jan 21 21:19 Operator: LP,DG,CH
Sample : 100ug/L VOC STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 1 13:56 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1714227	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1451958	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	1006428	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	1209203	97.4418 ppb	0.00
Spiked Amount 25.000			Recovery = 389.768%		
3) 1,2-DCA-D4(S)	5.11	65	1470467	99.4178 ppb	0.00
Spiked Amount 25.000			Recovery = 397.672%		
5) Toluene-D8(S)	7.37	98	5427895	98.7236 ppb	0.00
Spiked Amount 25.000			Recovery = 394.896%		
6) 4-Bromofluorobenzene(S)	10.02	95	2283448	99.4505 ppb	0.00
Spiked Amount 25.000			Recovery = 397.800%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

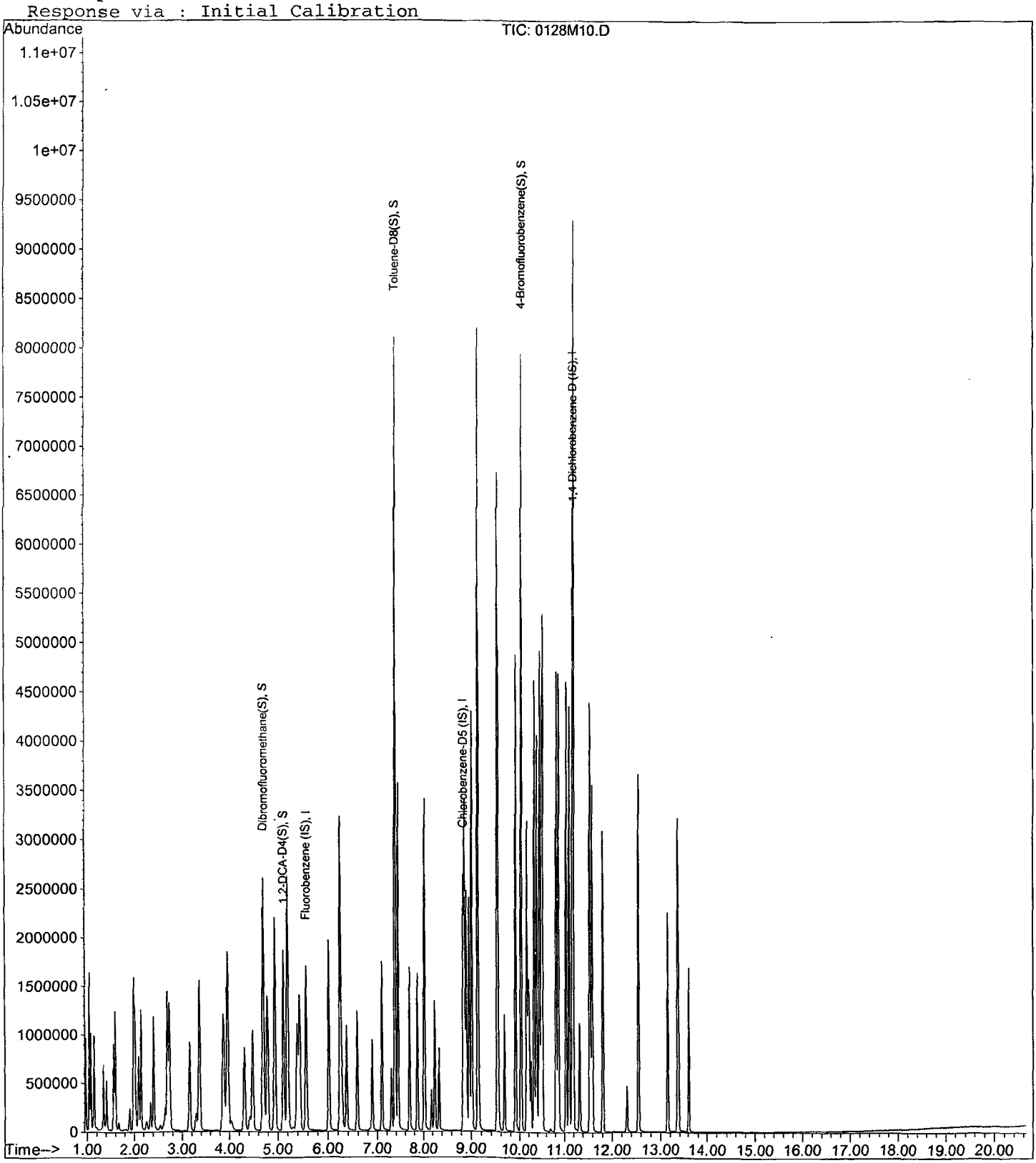
Data File : M:\MAX\DATA\210128\0128M10.D
Acq On : 28 Jan 21 21:19
Sample : 100ug/L VOC STD 1/28/21
Misc : IS 10/16/20

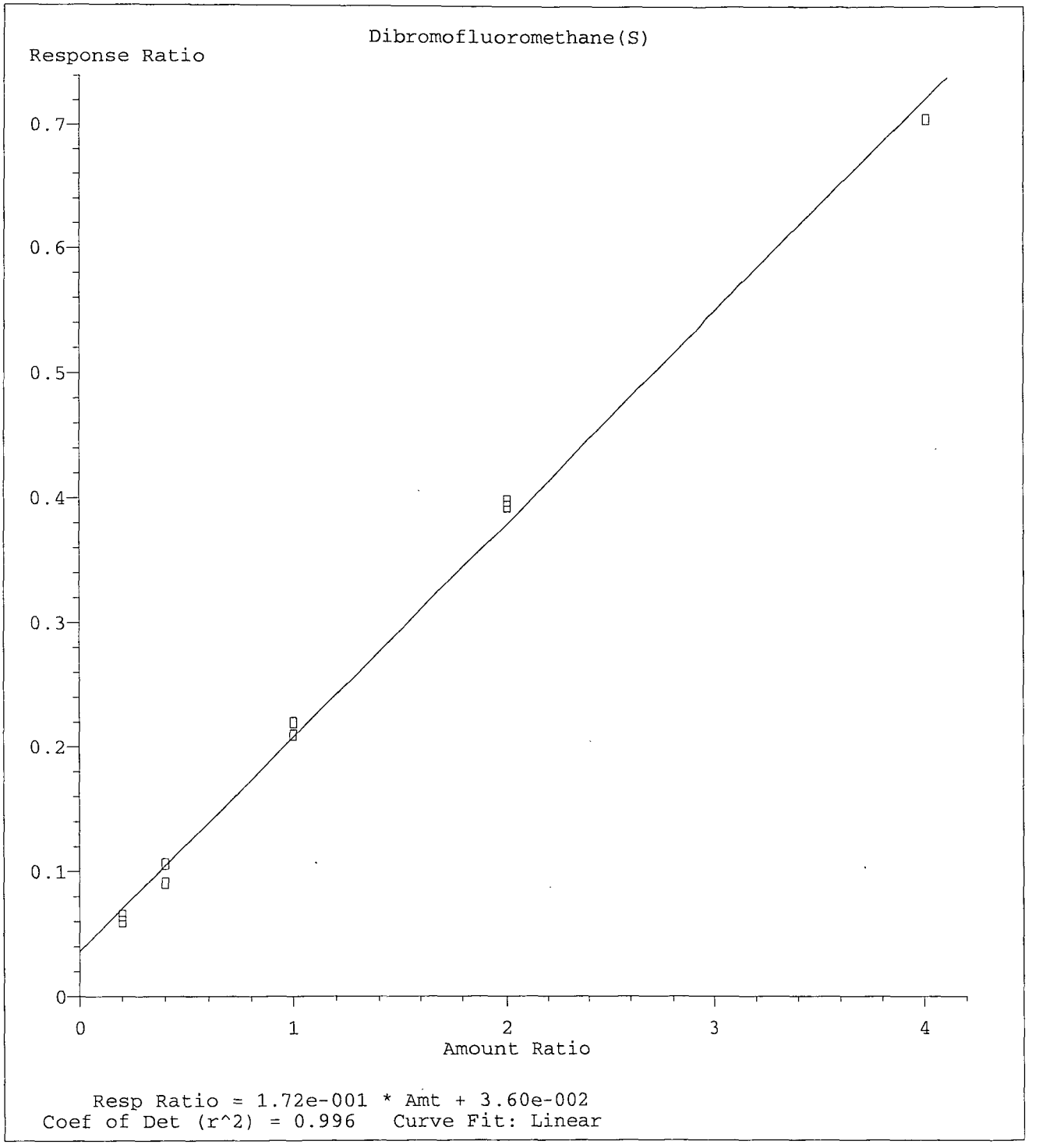
Vial: 10
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 1 13:56 2021

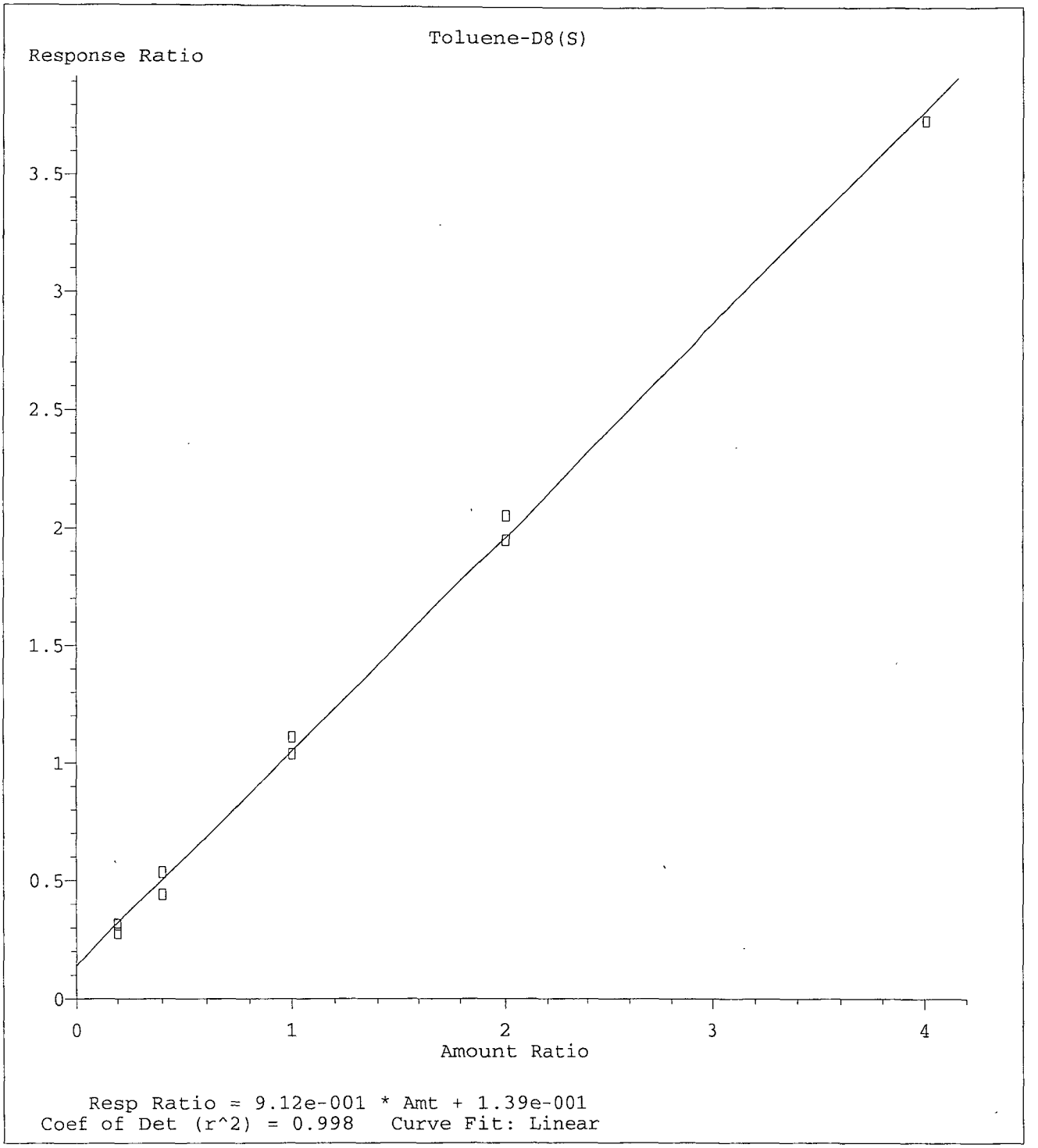
Quant Results File: M012SUR.RES

Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration

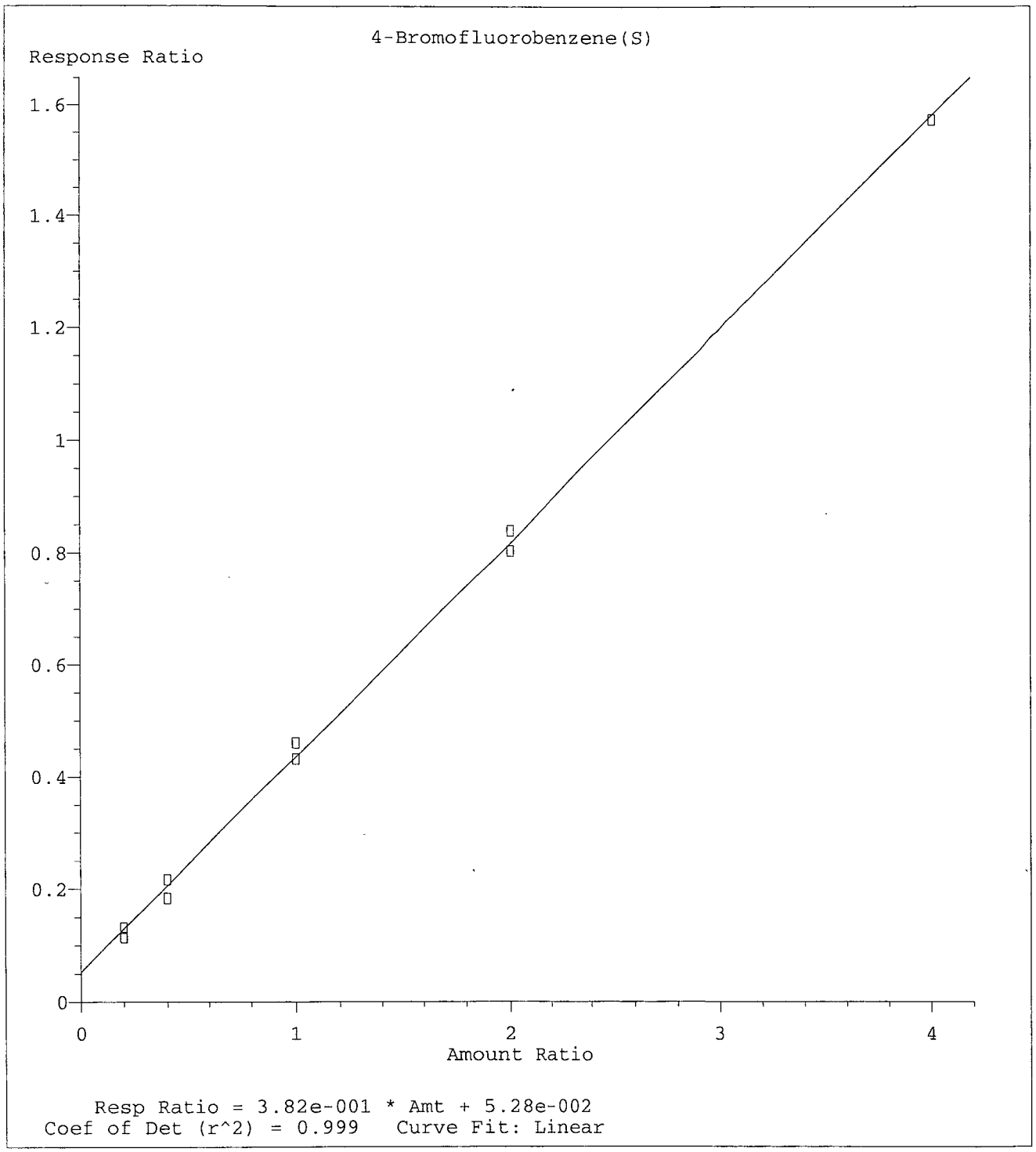




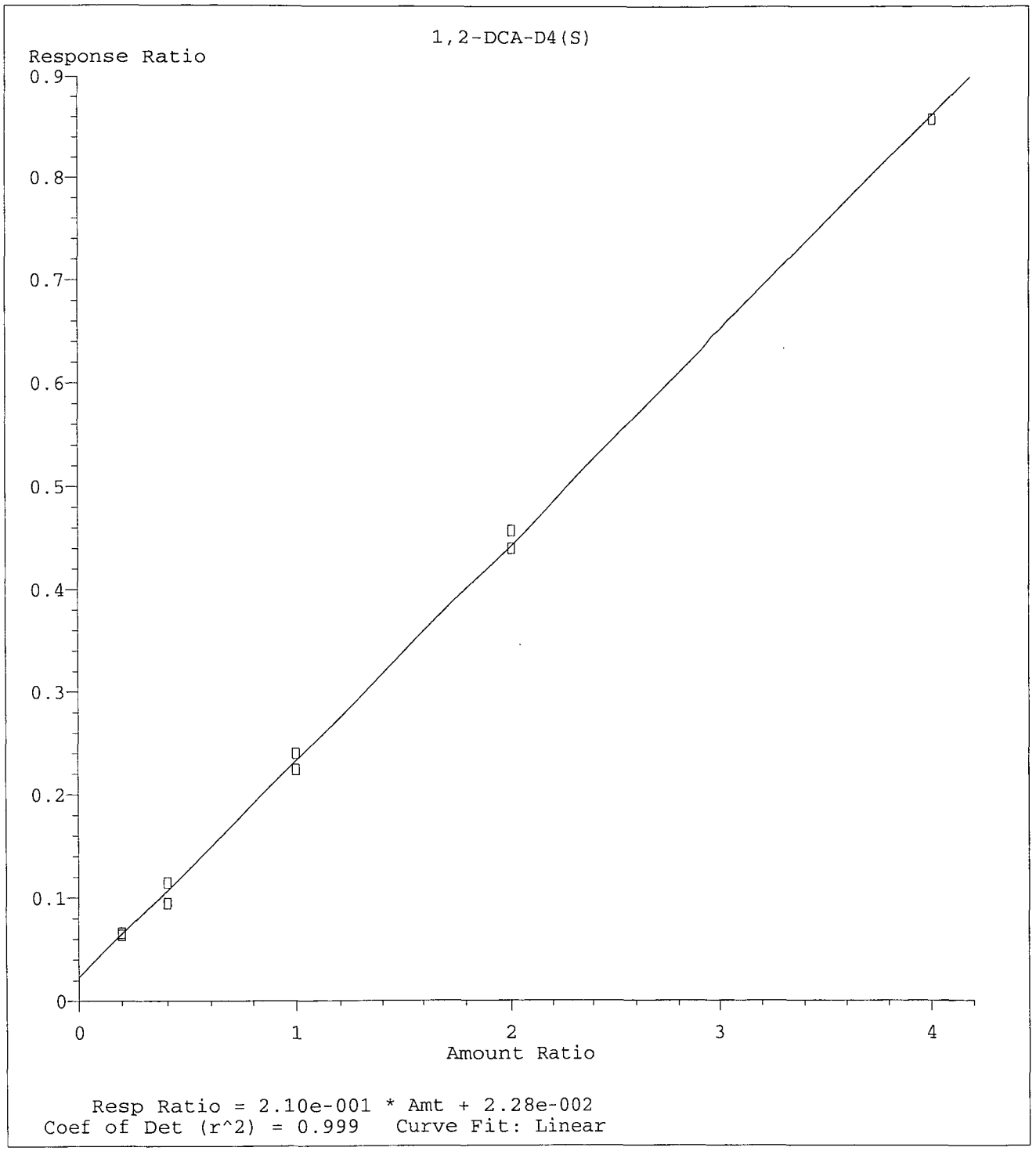
Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021



Method Name: M:\MAX\DATA\210128\M012SUR.M
Calibration Table Last Updated: Fri Jan 29 10:04:45 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/28/21
Matrix: Instrument: Max
Initials: CH

0128M13.D 0128M14.D 0128M15.D 0128M16.D 0128M17.D 0128M18.D 0128M19.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	13.3	5.751	3.015	1.307	0.8278	0.7042	0.6496				3.7	127	TMHB	0.998		
3	TMHB	Chlorobenzene-D5 (IS)																
4	TMHB	1,4-Dichlorobenzene (IS)																
5																		
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Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M13.D Vial: 13
Acq On : 28 Jan 21 22:45 Operator: LP,DG,CH
Sample : 20ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:30 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1722386	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1457753m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	18563m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	18360305m	-43.4618	ppb	100

(#) = qualifier out of range (m) = manual integration

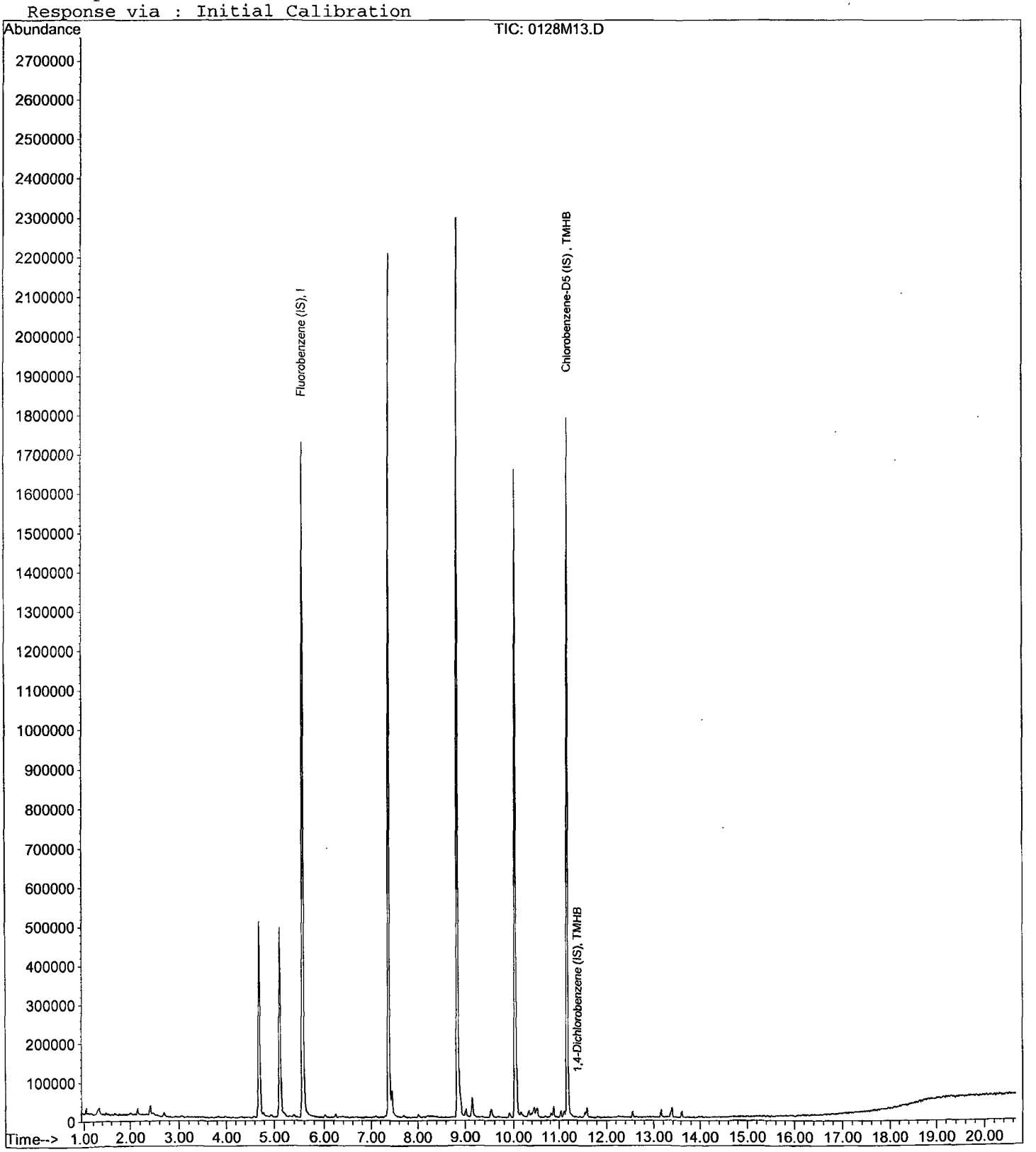
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M13.D
Acq On : 28 Jan 21 22:45
Sample : 20ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 13
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:30 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M14.D Vial: 14
Acq On : 28 Jan 21 23:14 Operator: LP,DG,CH
Sample : 50ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:31 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1704437	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1330521m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	18966m	25.0000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline C6-C10	7.37	TIC	19605184m	19.8230 ppb	100

(#) = qualifier out of range (m) = manual integration

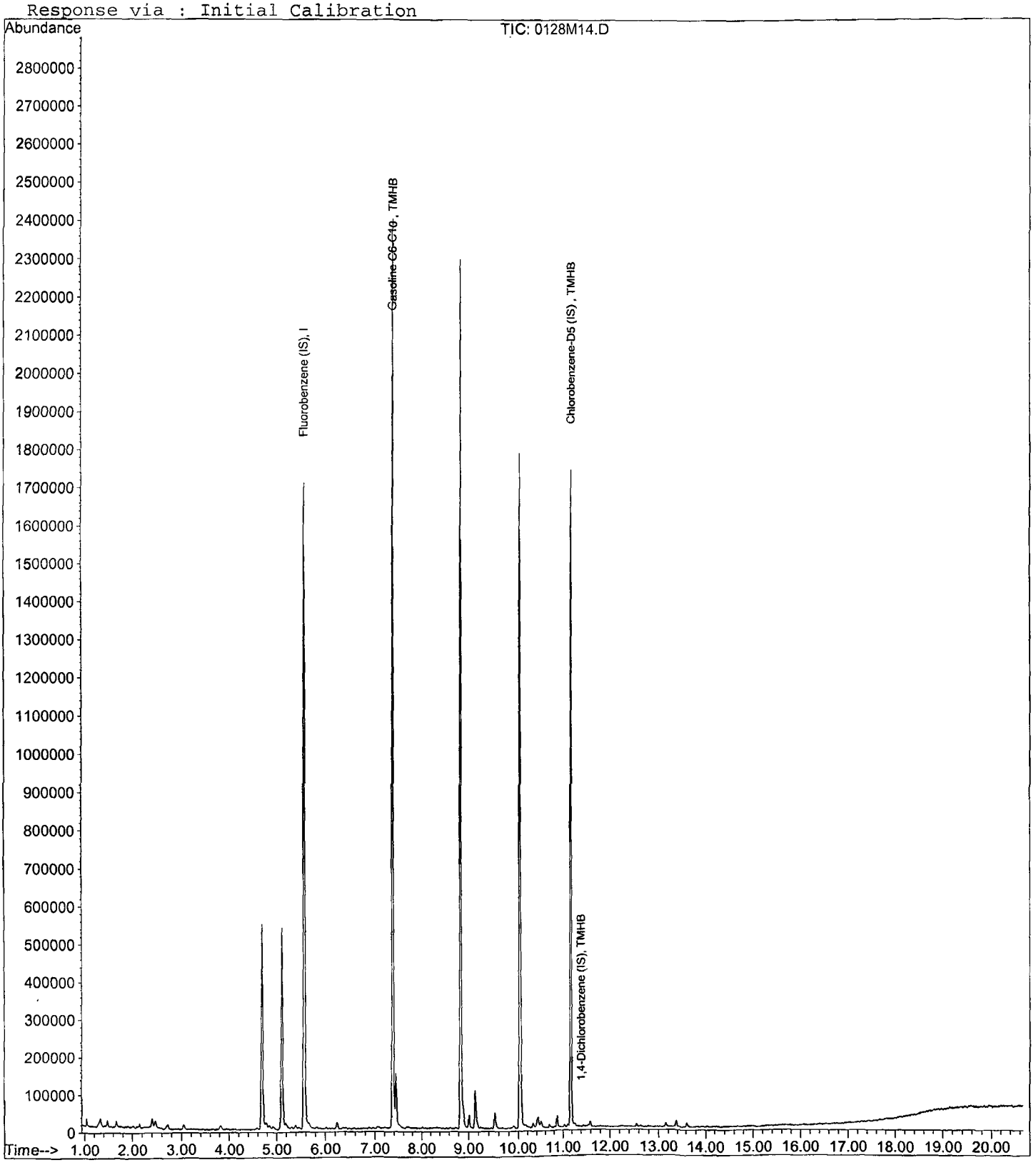
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M14.D
Acq On : 28 Jan 21 23:14
Sample : 50ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 14
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:31 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M15.D
Acq On : 28 Jan 21 23:43
Sample : 100ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 15
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:32 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1681042	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1348586m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	20997m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	20273948m	61.7239	ppb	100

(#) = qualifier out of range (m) = manual integration

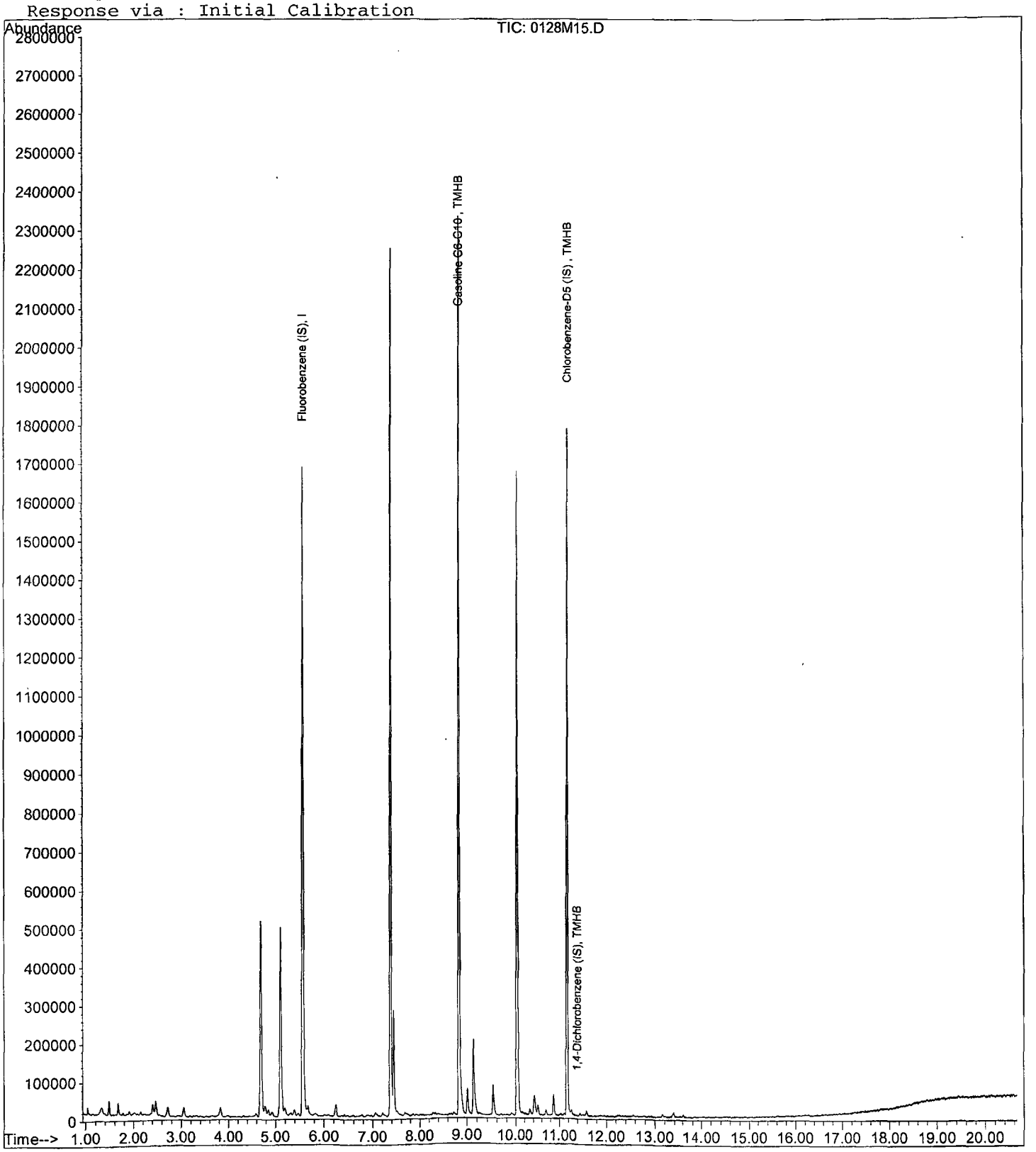
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M15.D
Acq On : 28 Jan 21 23:43
Sample : 100ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 15
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:32 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M16.D
Acq On : 29 Jan 21 00:12
Sample : 300ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 16
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1667850	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1395262m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	106930m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	26156509m	333.7817	ppb	100

(#) = qualifier out of range (m) = manual integration

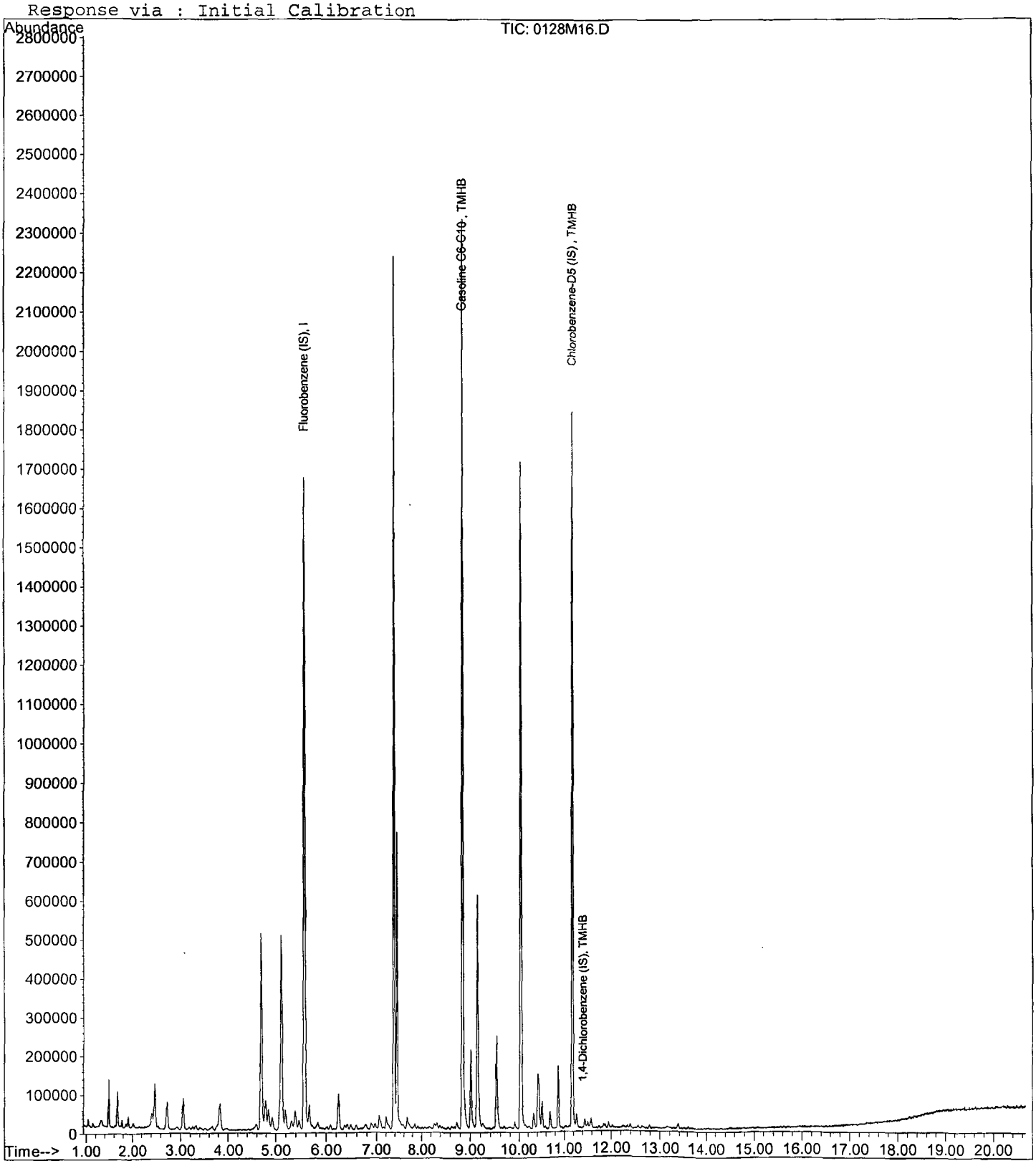
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M16.D
Acq On : 29 Jan 21 00:12
Sample : 300ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 16
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M17.D Vial: 17
Acq On : 29 Jan 21 00:41 Operator: LP,DG,CH
Sample : 600ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:33 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1657067	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1589532m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	204739m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	32922352m	648.0967	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

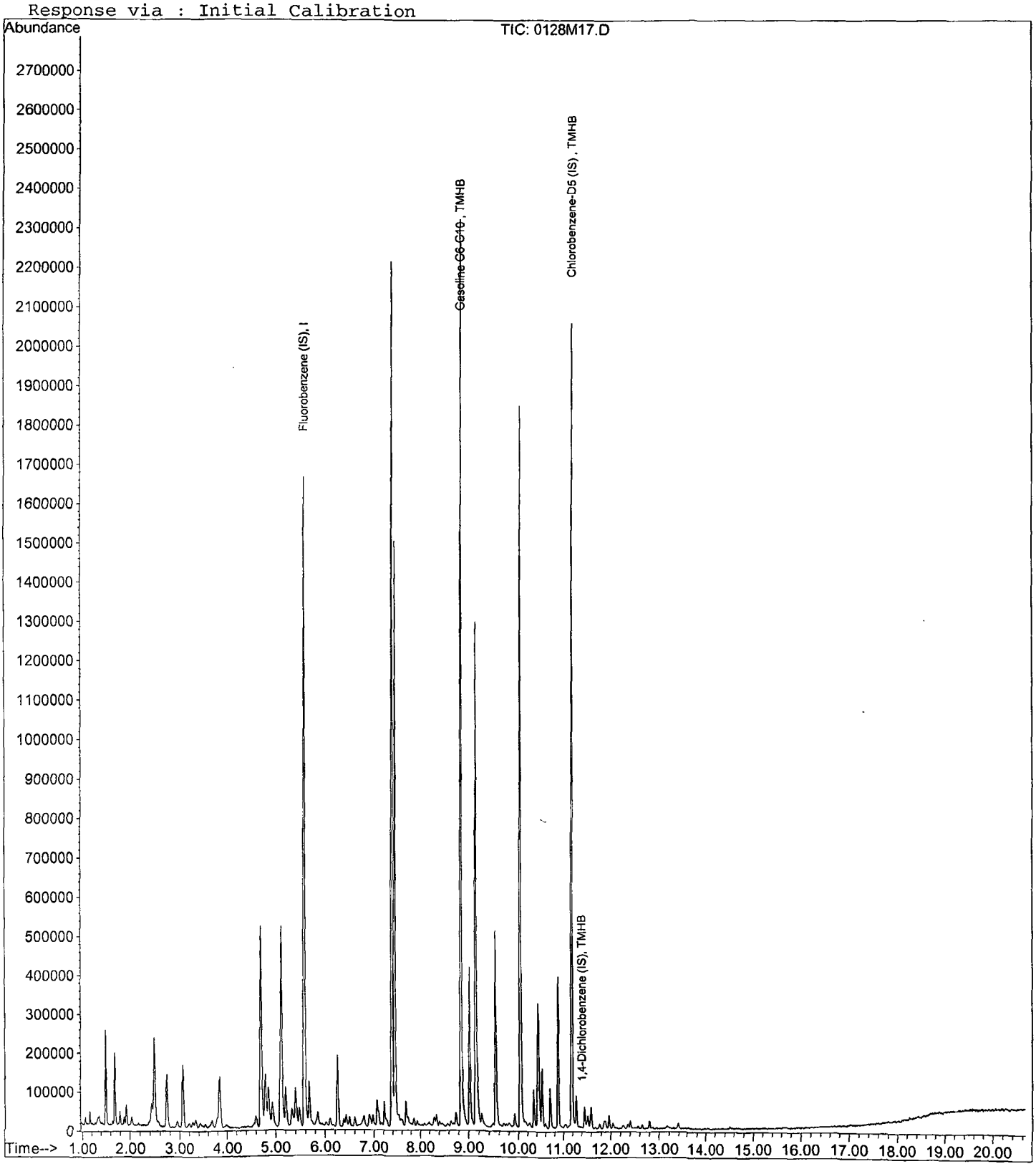
Data File : M:\MAX\DATA\210128\0128M17.D
Acq On : 29 Jan 21 00:41
Sample : 600ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 17
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:33 2021

Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M18.D Vial: 18
Acq On : 29 Jan 21 1:10 Operator: LP,DG,CH
Sample : 800ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1679963	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1712081m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	316505m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	37859615m	848.4838	ppb	100

(#) = qualifier out of range (m) = manual integration
0128M18.D MGAS0128.M Wed Feb 10 10:14:26 2021 Page 1

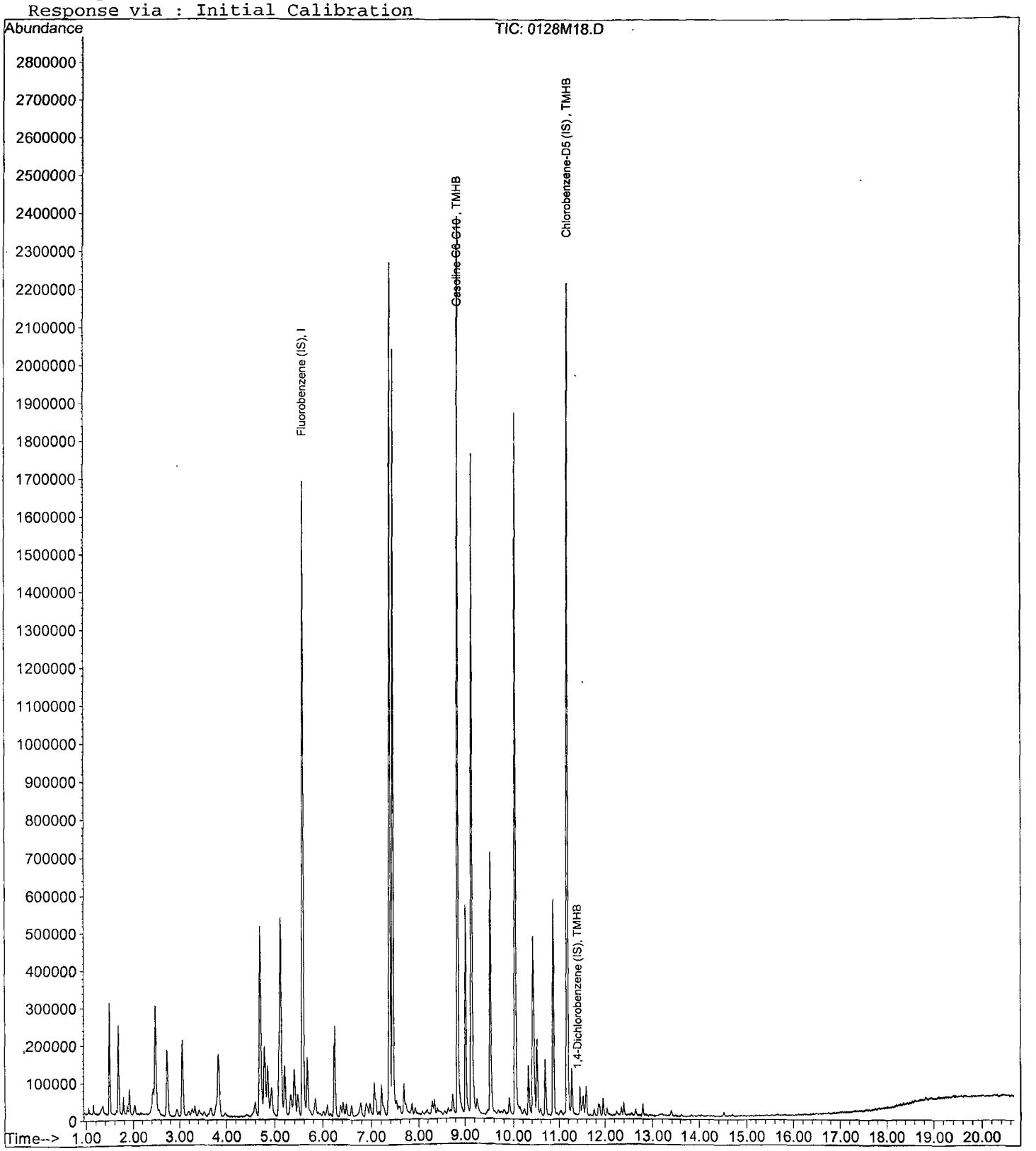
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M18.D
Acq On : 29 Jan 21 1:10
Sample : 800ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 18
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M19.D Vial: 19
Acq On : 29 Jan 21 1:39 Operator: LP,DG,CH
Sample : 1000ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:29:05 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1688574	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1889550m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	461343m	25.0000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	7.44	TIC	43876631m	1107.4753	ppb	100

(#) = qualifier out of range (m) = manual integration

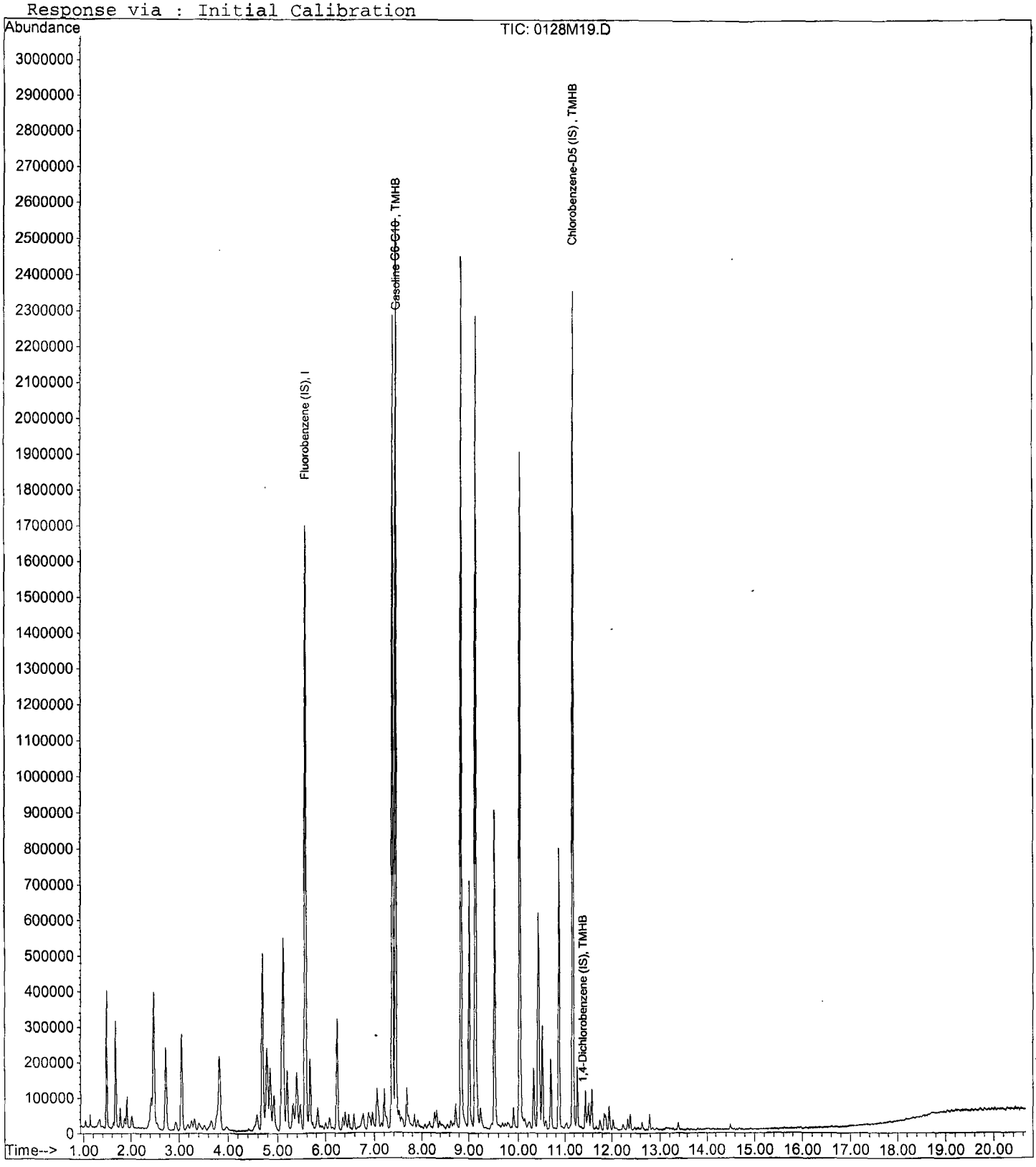
Quantitation Report

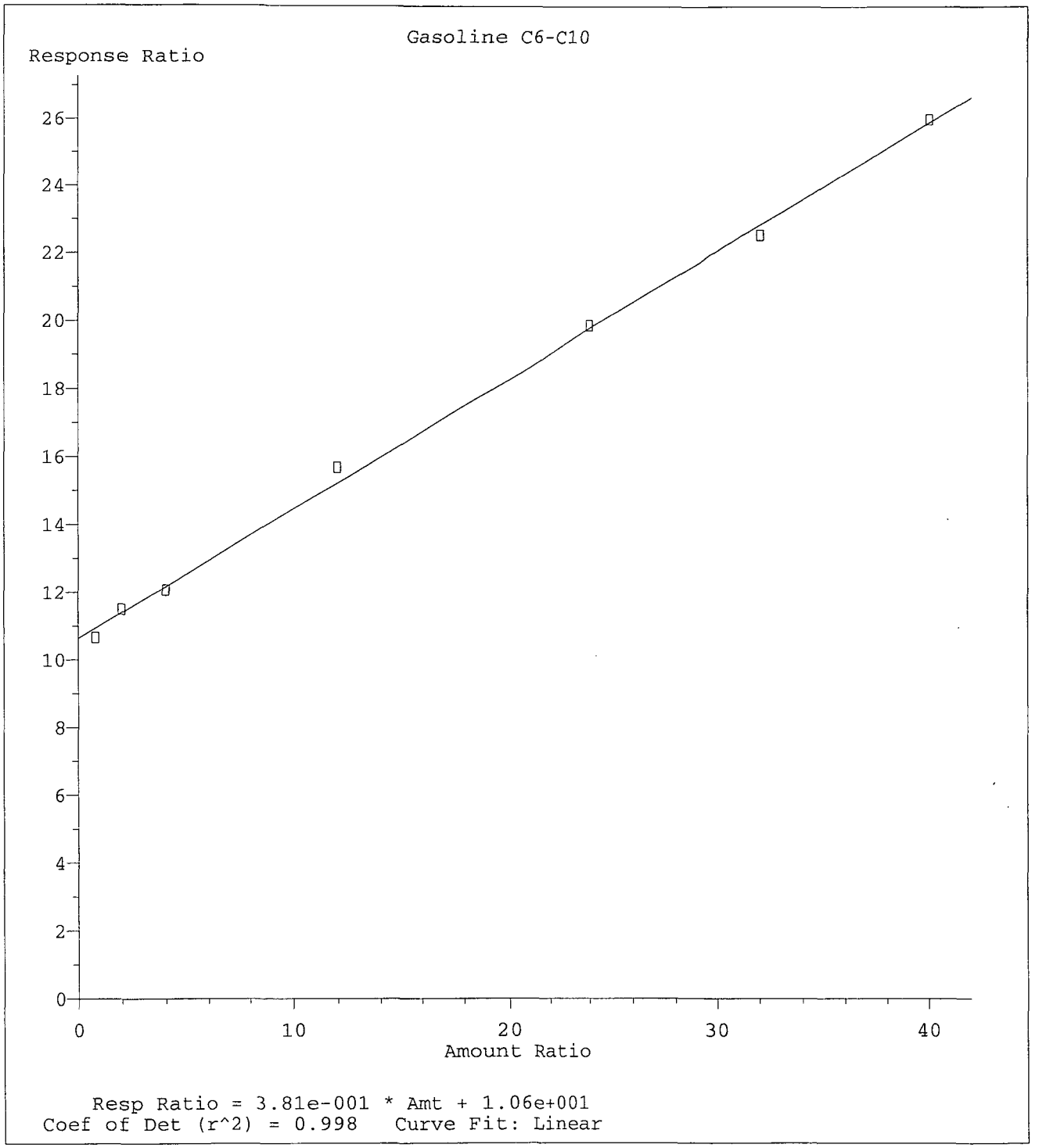
Data File : M:\MAX\DATA\210128\0128M19.D
Acq On : 29 Jan 21 1:39
Sample : 1000ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 19
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:34 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration





Method Name: M:\MAX\DATA\210128\MGAS0128.M
Calibration Table Last Updated: Fri Jan 29 10:35:03 2021

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0128M21.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	3.654	1.218	67	TMHBL	13
2							
3							
4							
5							
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38							
39							
40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0128M21.D Vial: 21
Acq On : 29 Jan 21 2:38 Operator: LP,DG,CH
Sample : (SS) 300ug/L GAS STD 1/28/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 29 10:37 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1714608	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1529265m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	93993m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.84	TIC	25060989m	260.3865	ppb	100

(#) = qualifier out of range (m) = manual integration

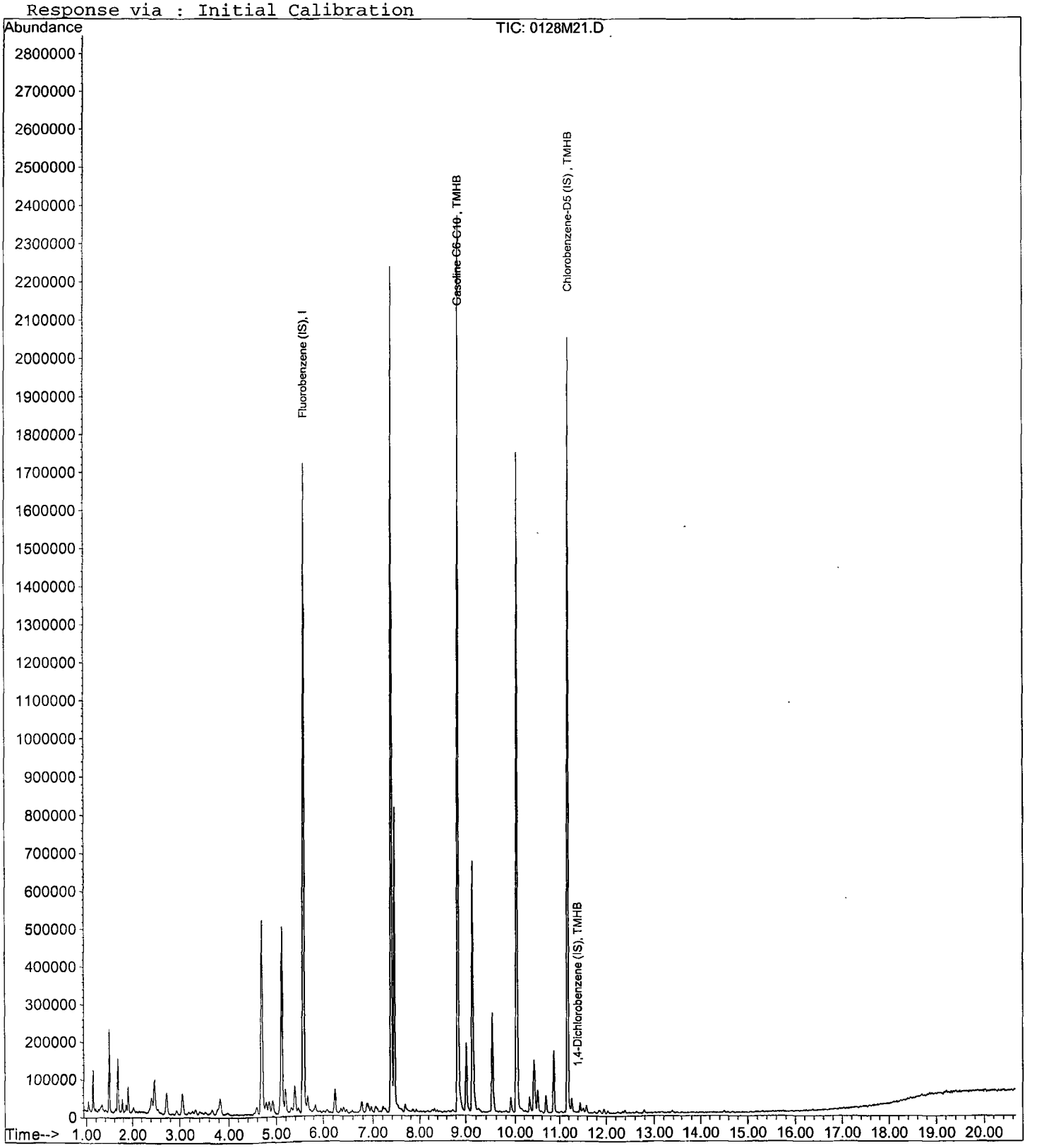
Quantitation Report

Data File : M:\MAX\DATA\210128\0128M21.D
Acq On : 29 Jan 21 2:38
Sample : (SS) 300ug/L GAS STD 1/28/21
Misc : IS 10/16/20

Vial: 21
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 29 10:37 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/29/21
Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M05.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.654	1.335	63	TMHBL	18
3	TMHB	Chlorobenzene-D5 (IS)	ISTD			TMHB	
4	TMHB	1,4-Dichlorobenzene (IS)	ISTD			TMHB	
5							
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37							
38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/29/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M05.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2351	0.2369	0.76	SL	17
3	SL	1,2-DCA-D4(S)	0.2551	0.2516	1.4	SL	8.9
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.165	1.116	4.2	SL	7.2
6	SL	4-Bromofluorobenzene(S)	0.4819	0.4598	4.6	SL	6.5
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
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36							
37							
38							
39							
40							
		Average			2.7		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1443905	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1455310m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	107293m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	23138993m	352.7347	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475281	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1254183	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	616517	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	349527	29.2524 ppb	0.00
Spiked Amount 25.000			Recovery	= 117.008%	
3) 1,2-DCA-D4(S)	5.11	65	371150	27.2353 ppb	0.00
Spiked Amount 25.000			Recovery	= 108.940%	
5) Toluene-D8(S)	7.37	98	1399460	26.7972 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.188%	
6) 4-Bromofluorobenzene(S)	10.03	95	576684	26.6330 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.532%	

Target Compounds Qvalue

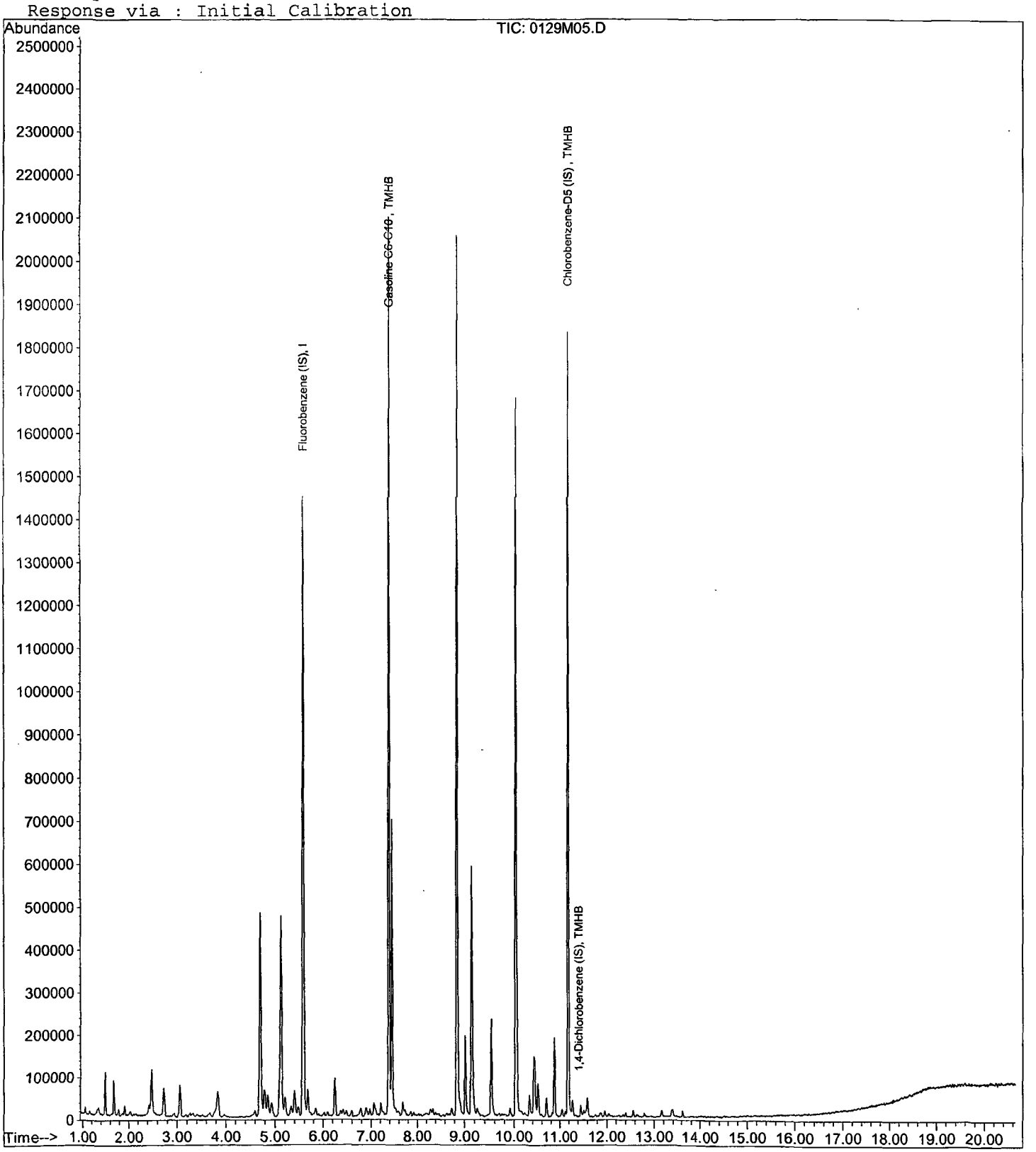
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M30.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	3.654	1.353	63	TMHBL	22
3	TMHB	Chlorobenzene-D5 (IS)	ISTD			TMHB	
4	TMHB	1,4-Dichlorobenzene (IS)	ISTD			TMHB	
5							
6							
7							
8							
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36							
37							
38							
39							
40							
		Average			63.0		

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 01/30/21
Matrix: Instrument: Max
Initial Cal. Date: 01/28/21
Data File: 0129M30.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.2351	0.2399	2.0	SL	19
3	SL	1,2-DCA-D4(S)	0.2551	0.2414	5.4	SL	4.1
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.165	1.077	7.5	SL	2.9
6	SL	4-Bromofluorobenzene(S)	0.4819	0.4509	6.4	SL	4.2
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.3		

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M30.D Vial: 30
Acq On : 30 Jan 21 6:04 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:08 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1390380	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1322827m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	86529m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	22582456m	366.9326	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M30.D Vial: 30
Acq On : 30 Jan 21 6:04 Operator: LP,DG,CH
Sample : Ending CCV 300ug/L 1/29/21 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:23 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1433043	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1233005	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	587802	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	343778	29.6849 ppb	0.00
Spiked Amount 25.000			Recovery	= 118.740%	
3) 1,2-DCA-D4(S)	5.11	65	345966	26.0257 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.104%	
5) Toluene-D8(S)	7.37	98	1327698	25.7266 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.908%	
6) 4-Bromofluorobenzene(S)	10.03	95	555925	26.0482 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.192%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

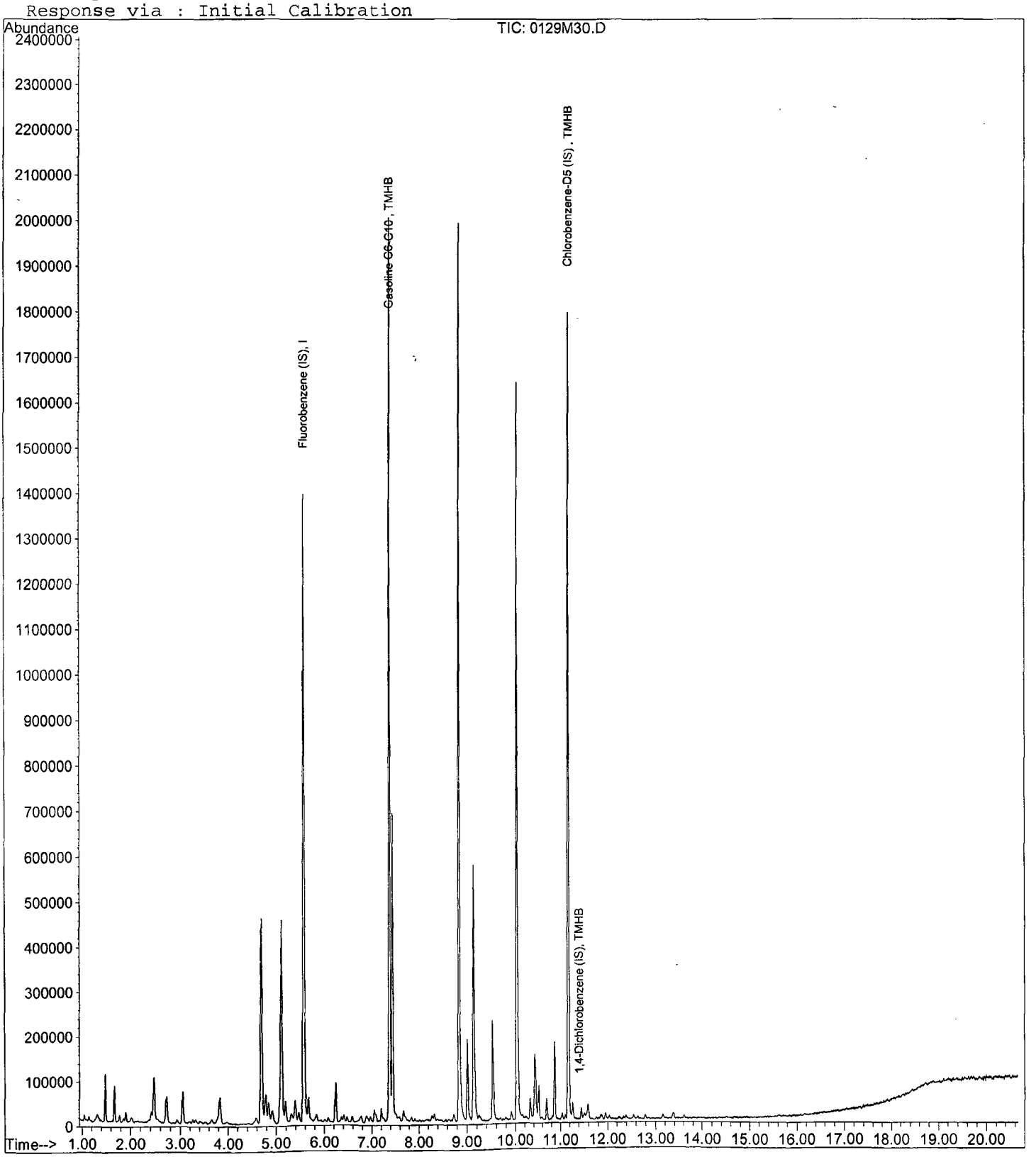
Data File : M:\MAX\DATA\210128\0129M30.D
Acq On : 30 Jan 21 6:04
Sample : Ending CCV 300ug/L 1/29/21
Misc : IS 10/16/20

Vial: 30
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:08 2021

Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M09.D Vial: 9
Acq On : 29 Jan 21 19:55 Operator: LP,DG,CH
Sample : BA26159W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1470687	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1202285m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	9991m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M09.D Vial: 9
Acq On : 29 Jan 21 19:55 Operator: LP,DG,CH
Sample : BA26159W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1516783	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1300040	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	531458	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	366643	29.9513 ppb	0.00
Spiked Amount 25.000			Recovery	= 119.804%	
3) 1,2-DCA-D4(S)	5.11	65	378408	26.9855 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.940%	
5) Toluene-D8(S)	7.37	98	1453577	26.8594 ppb	0.00
Spiked Amount 25.000			Recovery	= 107.436%	
6) 4-Bromofluorobenzene(S)	10.03	95	570895	25.2804 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.120%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

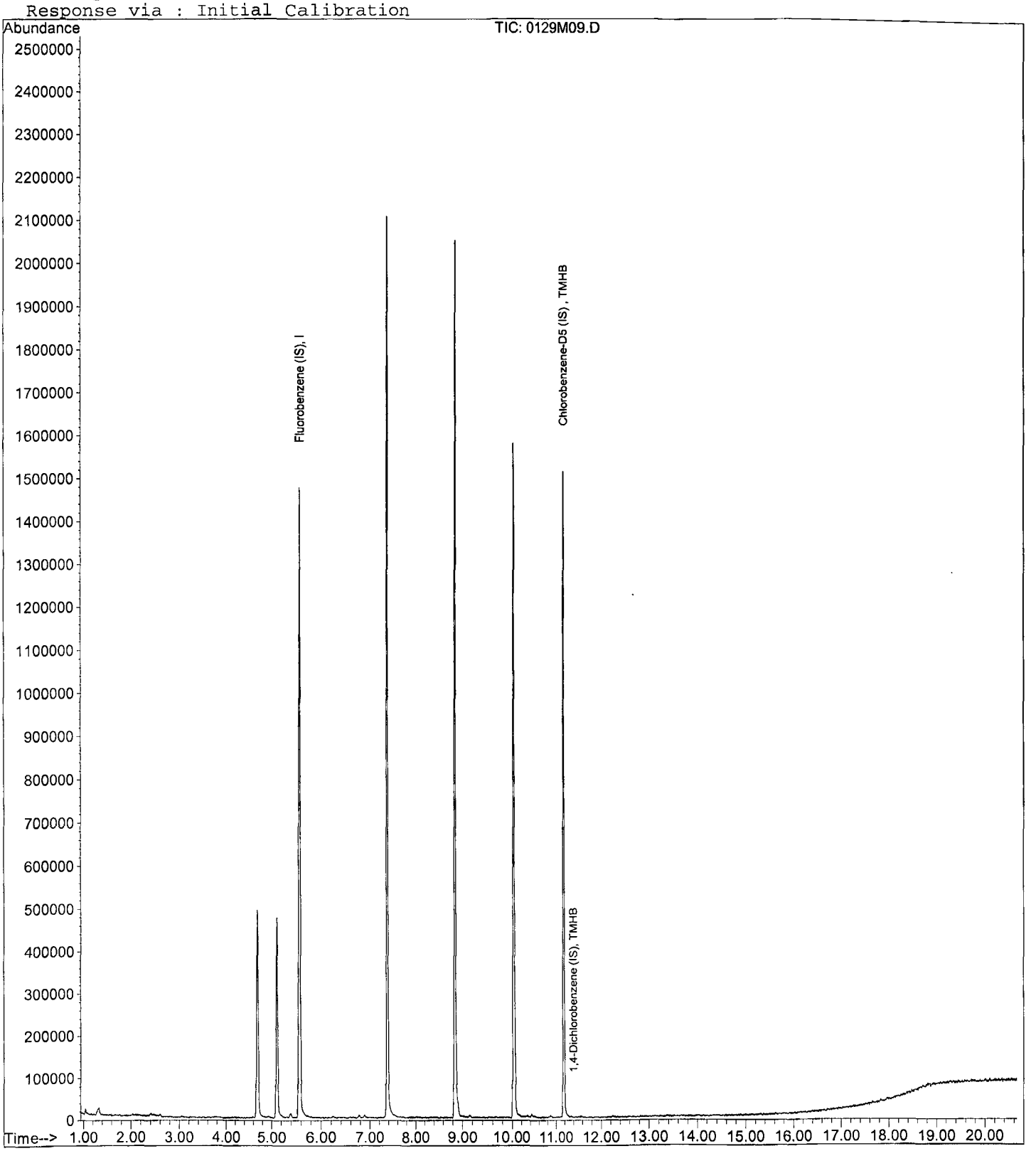
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M09.D
Acq On : 29 Jan 21 19:55
Sample : BA26159W01
Misc : IS 10/16/20

Vial: 9
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M10.D Vial: 10
Acq On : 29 Jan 21 20:24 Operator: LP,DG,CH
Sample : BA26160W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1459567	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1164900m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	4492m	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M10.D Vial: 10
Acq On : 29 Jan 21 20:24 Operator: LP,DG,CH
Sample : BA26160W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1505627	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1280218	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	529237	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	353337	28.9257 ppb	0.00
Spiked Amount 25.000			Recovery	= 115.704%	
3) 1,2-DCA-D4(S)	5.11	65	359647	25.7219 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.888%	
5) Toluene-D8(S)	7.37	98	1399888	26.1840 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.736%	
6) 4-Bromofluorobenzene(S)	10.03	95	561942	25.2677 ppb	0.00
Spiked Amount 25.000			Recovery	= 101.072%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

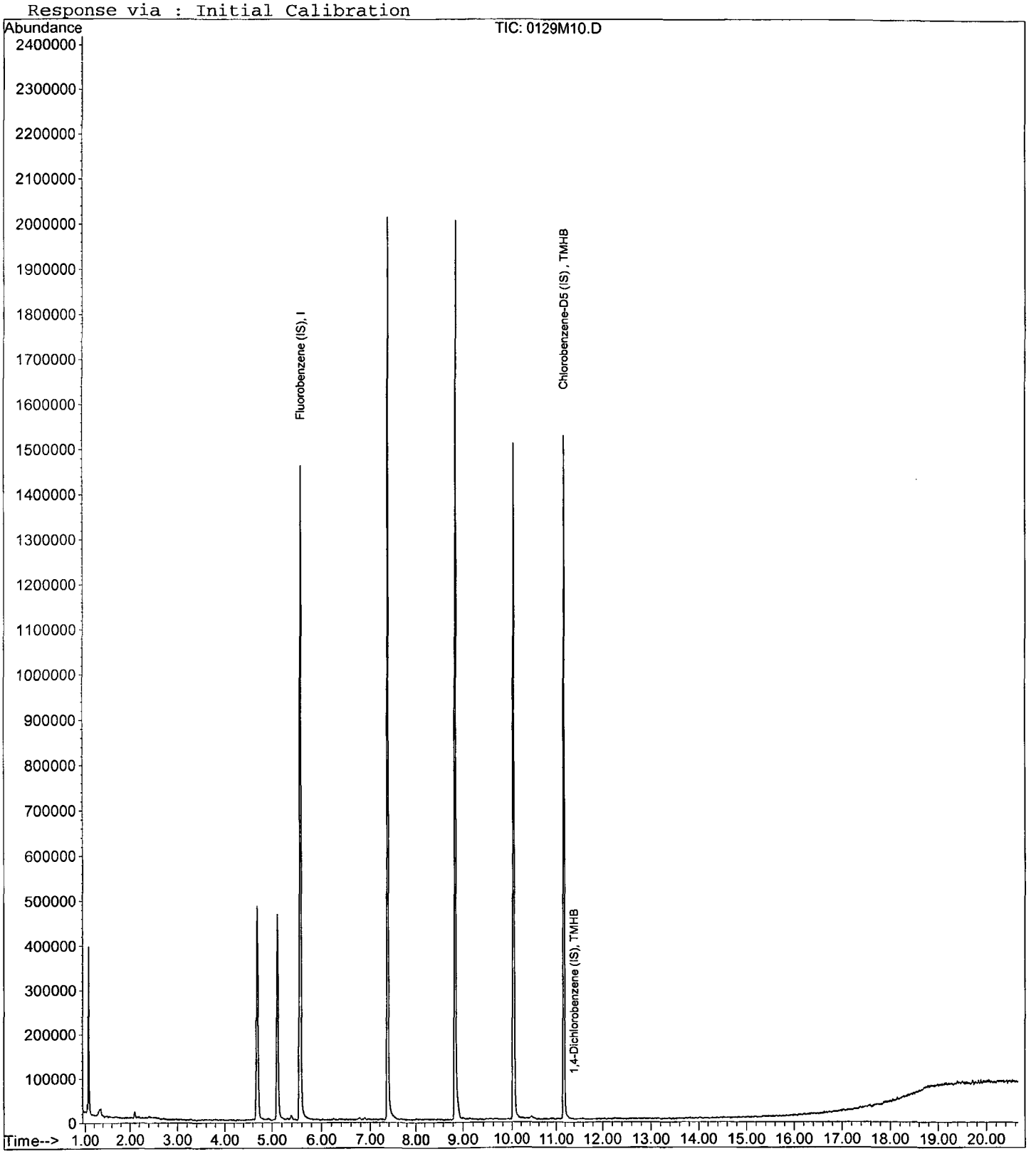
Data File : M:\MAX\DATA\210128\0129M10.D
Acq On : 29 Jan 21 20:24
Sample : BA26160W01
Misc : IS 10/16/20

Vial: 10
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:11 2021

Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M11.D Vial: 11
Acq On : 29 Jan 21 20:53 Operator: LP,DG,CH
Sample : BA26162W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1419160	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1161186m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	1441m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M11.D MGAS0128.M Tue Feb 02 10:21:41 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M11.D Vial: 11
Acq On : 29 Jan 21 20:53 Operator: LP,DG,CH
Sample : BA26162W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1491865	25.0000	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1275941	25.0000	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	502180	25.0000	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	4.69	111	343778	28.3081	ppb	0.00
Spiked Amount 25.000			Recovery = 113.232%			
3) 1,2-DCA-D4(S)	5.11	65	353299	25.4776	ppb	0.00
Spiked Amount 25.000			Recovery = 101.912%			
5) Toluene-D8(S)	7.37	98	1384065	25.9444	ppb	0.00
Spiked Amount 25.000			Recovery = 103.776%			
6) 4-Bromofluorobenzene(S)	10.03	95	547078	24.6017	ppb	0.00
Spiked Amount 25.000			Recovery = 98.408%			

Target Compounds Qvalue

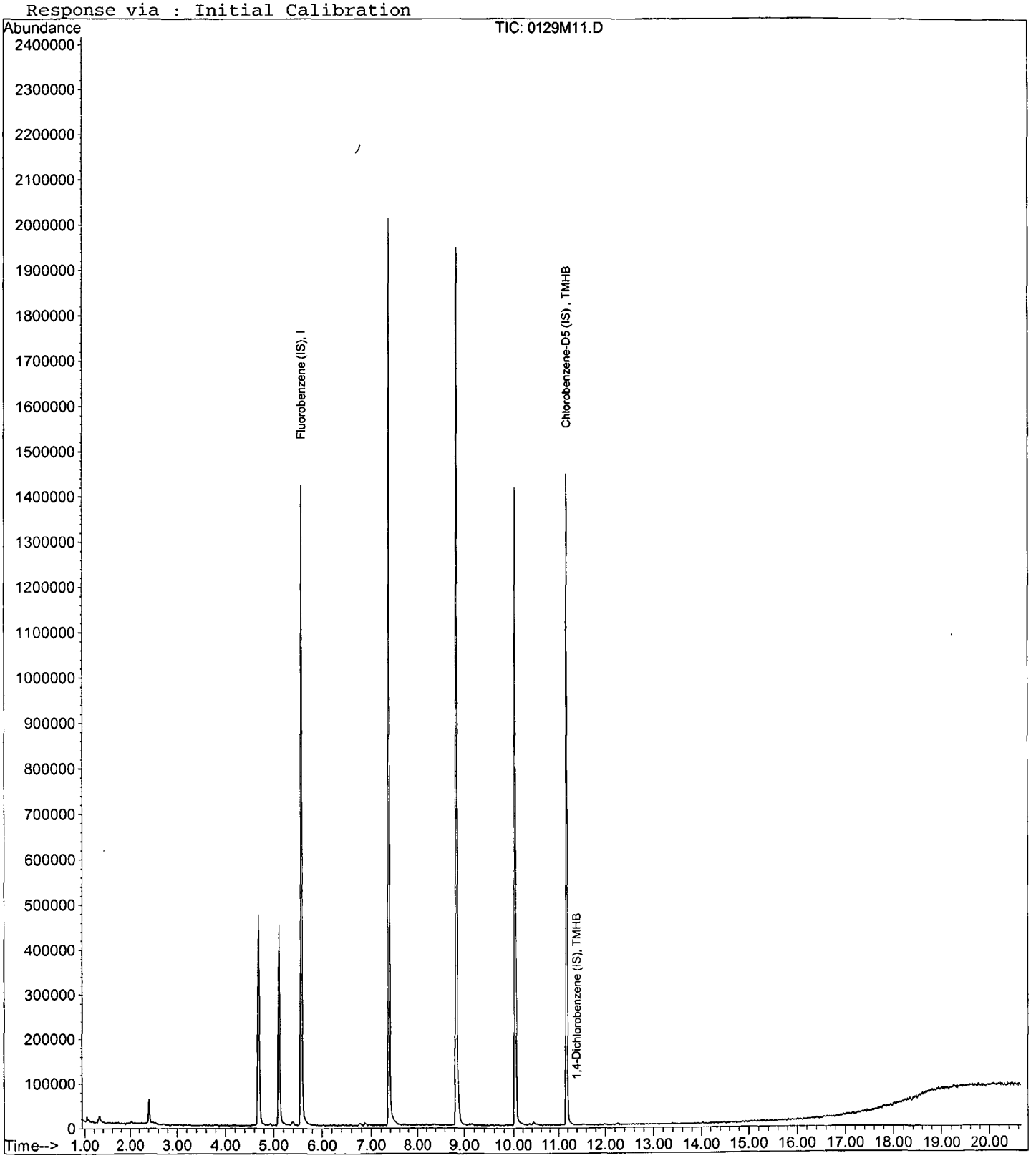
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M11.D Vial: 11
Acq On : 29 Jan 21 20:53 Operator: LP,DG,CH
Sample : BA26162W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M12.D Vial: 12
Acq On : 29 Jan 21 21:22 Operator: LP,DG,CH
Sample : BA26163W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1410219	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1144668m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	3668m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M12.D MGAS0128.M Tue Feb 02 10:21:43 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M12.D Vial: 12
Acq On : 29 Jan 21 21:22 Operator: LP,DG,CH
Sample : BA26163W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1450747	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1234818	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	502057	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	343482	29.2291 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.916%	
3) 1,2-DCA-D4(S)	5.11	65	356290	26.5223 ppb	0.00
Spiked Amount 25.000			Recovery	= 106.088%	
5) Toluene-D8(S)	7.37	98	1345626	26.0814 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.324%	
6) 4-Bromofluorobenzene(S)	10.03	95	536837	24.9934 ppb	0.00
Spiked Amount 25.000			Recovery	= 99.972%	

Target Compounds Qvalue

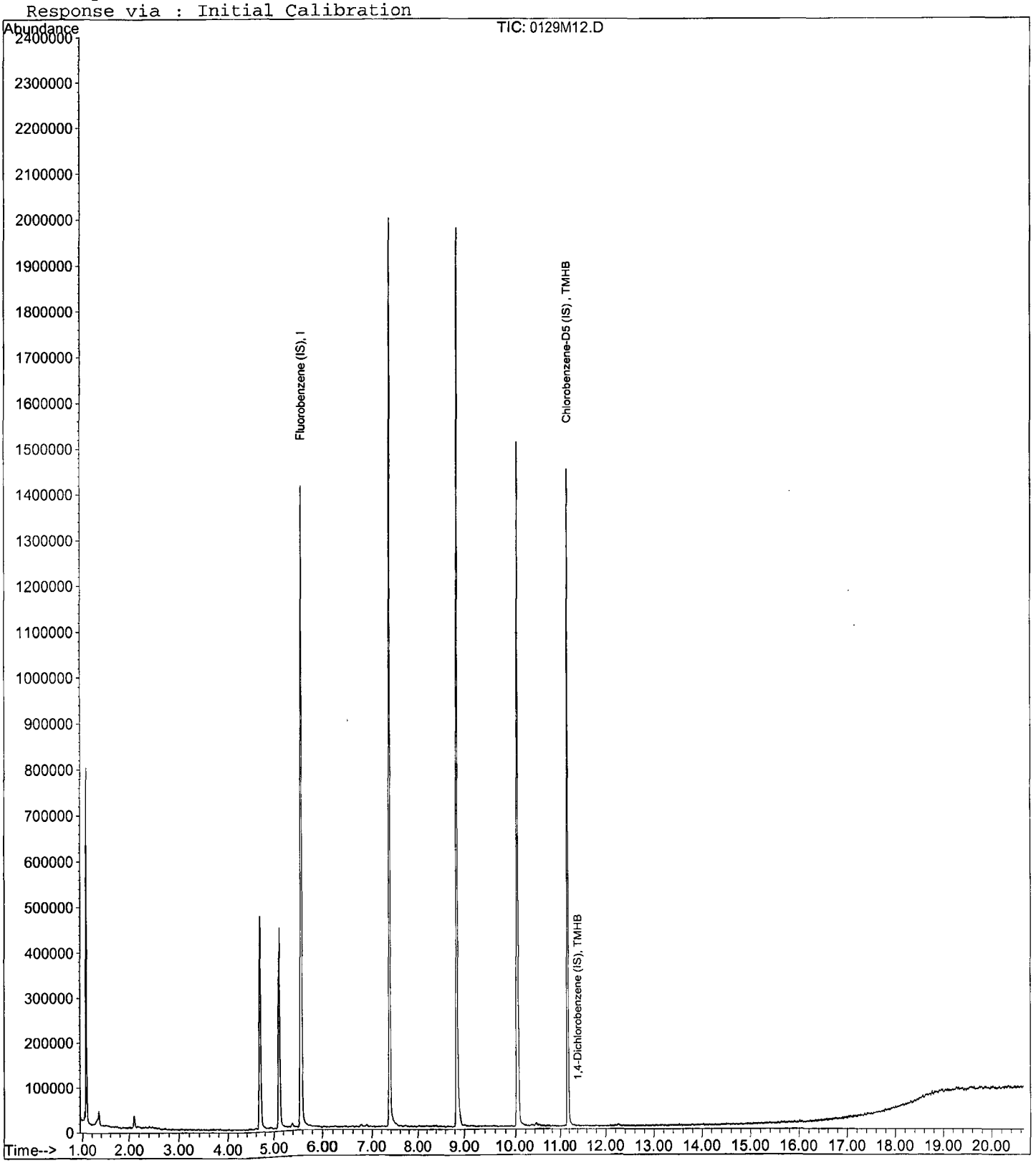
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MAX\DATA\210128\0129M12.D Vial: 12
Acq On : 29 Jan 21 21:22 Operator: LP,DG,CH
Sample : BA26163W01 Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:11 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D Vial: 8
Acq On : 29 Jan 21 19:26 Operator: LP,DG,CH
Sample : 210129A BLK Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:06 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1408441	25.0000 ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1151322m	25.0000 ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	5632m	25.0000 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0129M08.D MGAS0128.M Tue Feb 02 10:21:36 2021 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M08.D Vial: 8
Acq On : 29 Jan 21 19:26 Operator: LP,DG,CH
Sample : 210129A BLK Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1463100	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1262639	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	519641	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	349346	29.5215 ppb	0.00
Spiked Amount 25.000			Recovery = 118.084%		
3) 1,2-DCA-D4(S)	5.11	65	368864	27.2987 ppb	0.00
Spiked Amount 25.000			Recovery = 109.196%		
5) Toluene-D8(S)	7.37	98	1412296	26.8710 ppb	0.00
Spiked Amount 25.000			Recovery = 107.484%		
6) 4-Bromofluorobenzene(S)	10.03	95	569182	26.0428 ppb	0.00
Spiked Amount 25.000			Recovery = 104.172%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

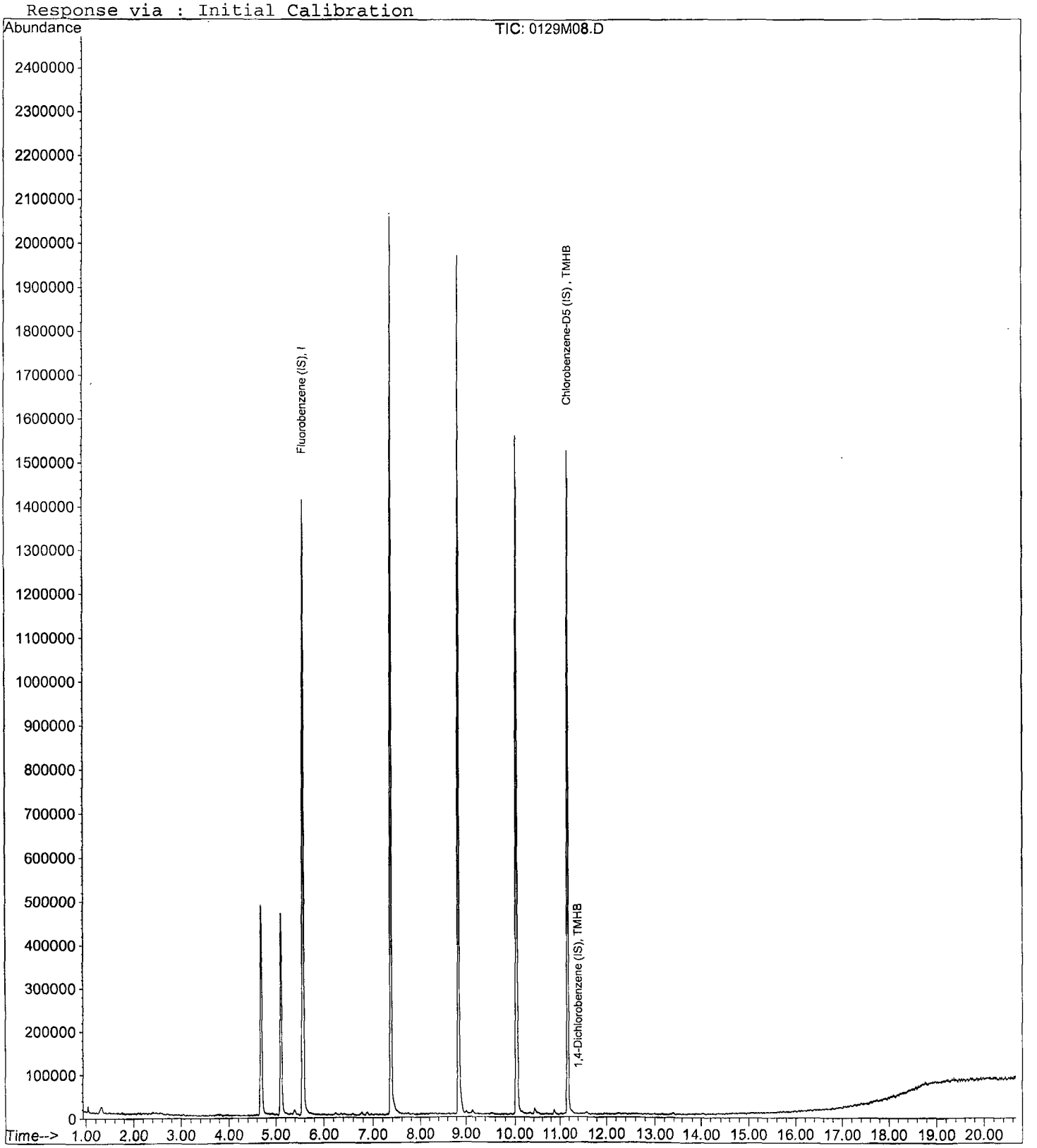
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M08.D
Acq On : 29 Jan 21 19:26
Sample : 210129A BLK
Misc : IS 10/16/20

Vial: 8
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Feb 2 10:06 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1443905	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1455310m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	107293m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	23138993m	352.7347	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M05.D Vial: 5
Acq On : 29 Jan 21 17:59 Operator: LP,DG,CH
Sample : 210129A CCV/LCS 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1475281	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1254183	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	616517	25.0000 ppb	0.00
System Monitoring Compounds					
2) *Dibromofluoromethane(S)*	4.69	111	349527	29.2524 ppb	0.00
Spiked Amount 25.000			Recovery = 117.008%		
3) 1,2-DCA-D4(S)	5.11	65	371150	27.2353 ppb	0.00
Spiked Amount 25.000			Recovery = 108.940%		
5) Toluene-D8(S)	7.37	98	1399460	26.7972 ppb	0.00
Spiked Amount 25.000			Recovery = 107.188%		
6) 4-Bromofluorobenzene(S)	10.03	95	576684	26.6330 ppb	0.00
Spiked Amount 25.000			Recovery = 106.532%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

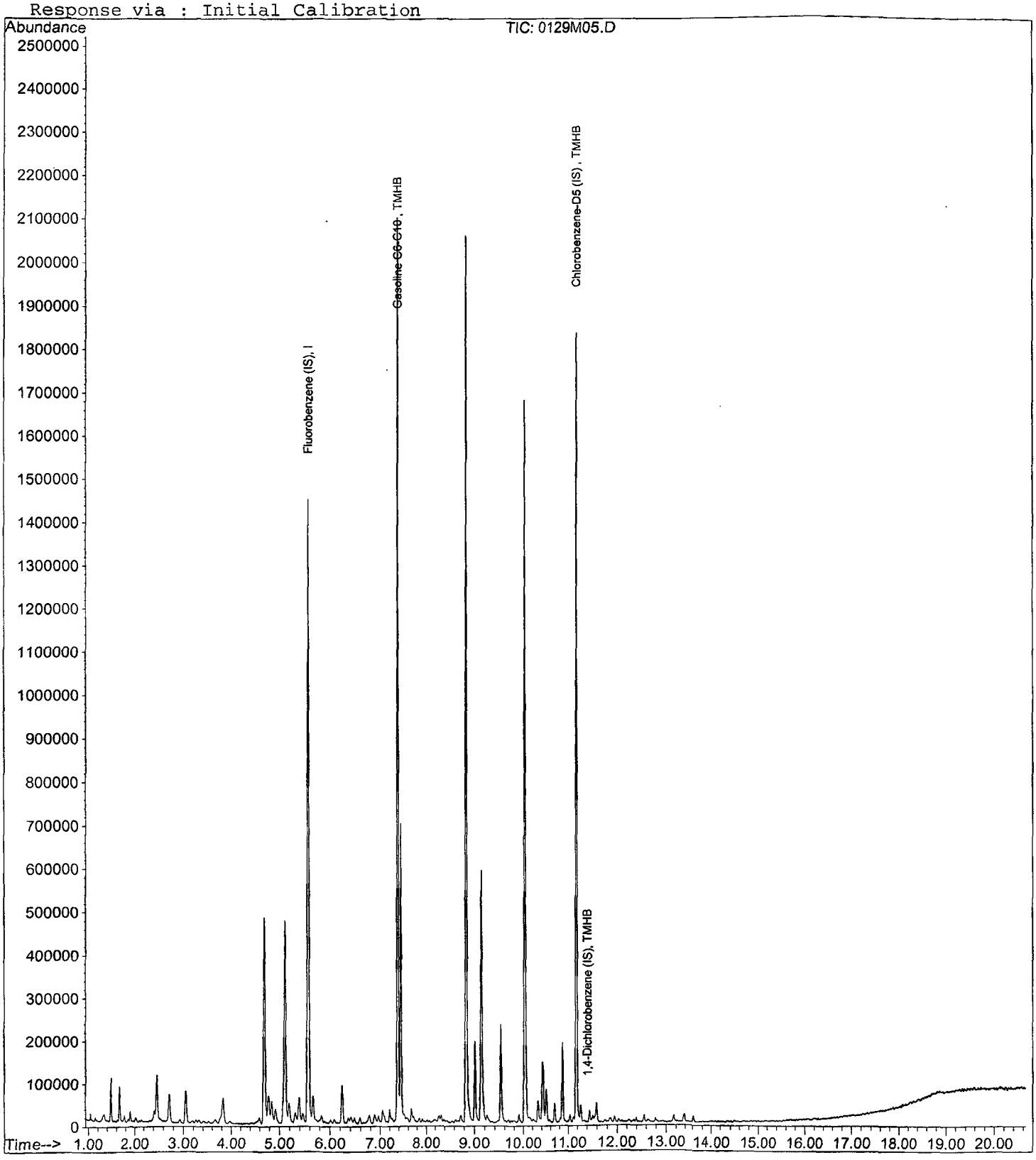
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M05.D
Acq On : 29 Jan 21 17:59
Sample : 210129A CCV/LCS 300ug/L
Misc : IS 10/16/20

Vial: 5
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 30 10:03 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MAX\DATA\210128\0129M07.D Vial: 7
Acq On : 29 Jan 21 18:57 Operator: LP,DG,CH
Sample : 210129A LCSD 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Jan 30 10:05 2021 Quant Results File: MGAS0128.RES

Quant Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	TIC	1469350	25.0000	ppb	0.00
3) Chlorobenzene-D5 (IS)	11.17	TIC	1312601m	25.0000	ppb	0.00
4) 1,4-Dichlorobenzene (IS)	11.40	TIC	116658m	25.0000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	7.37	TIC	23479439m	349.7322	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\MAX\DATA\210128\0129M07.D Vial: 7
Acq On : 29 Jan 21 18:57 Operator: LP,DG,CH
Sample : 210129A LCSD 300ug/L Inst : Max
Misc : IS 10/16/20 Multiplr: 1.00

Quant Time: Feb 2 10:22 2021 Quant Results File: M012SUR.RES

Quant Method : M:\MAX\DATA\210128\M012SUR.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:04:45 2021
Response via : Initial Calibration
DataAcq Meth : M8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	5.57	96	1509286	25.0000 ppb	0.00
4) Chlorobenzene-D5 (IS)	8.84	117	1291415	25.0000 ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	11.17	152	588855	25.0000 ppb	0.00
System Monitoring Compounds					
2) Dibromofluoromethane(S)	4.69	111	356691	29.1663 ppb	0.00
Spiked Amount 25.000			Recovery	= 116.664%	
3) 1,2-DCA-D4(S)	5.11	65	367113	26.2419 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.968%	
5) Toluene-D8(S)	7.37	98	1404481	26.0215 ppb	0.00
Spiked Amount 25.000			Recovery	= 104.084%	
6) 4-Bromofluorobenzene(S)	10.03	95	572722	25.5649 ppb	0.00
Spiked Amount 25.000			Recovery	= 102.260%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

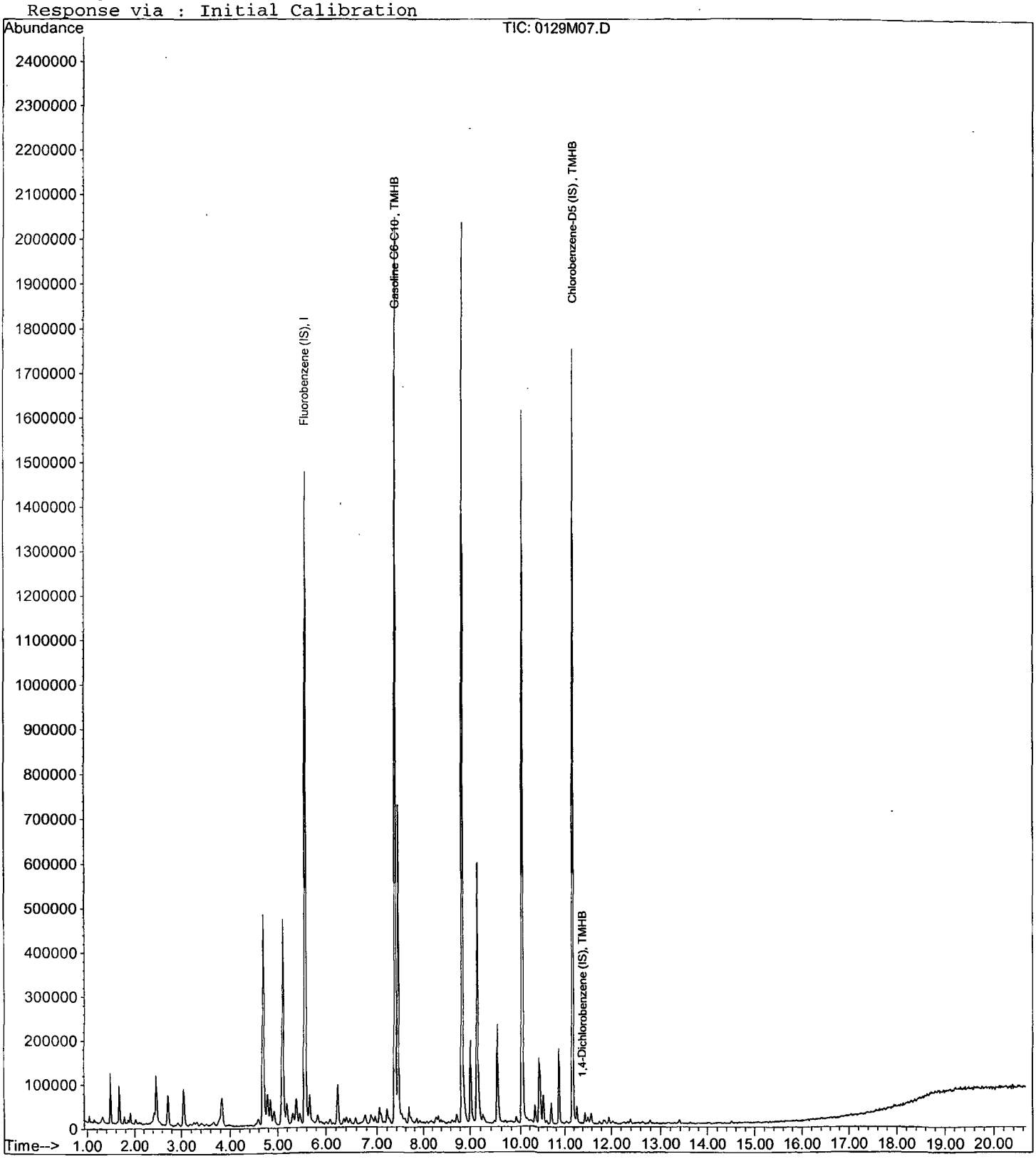
Quantitation Report

Data File : M:\MAX\DATA\210128\0129M07.D
Acq On : 29 Jan 21 18:57
Sample : 210129A LCSD 300ug/L
Misc : IS 10/16/20

Vial: 7
Operator: LP,DG,CH
Inst : Max
Multiplr: 1.00

Quant Time: Jan 30 10:05 2021 Quant Results File: MGAS0128.RES

Method : M:\MAX\DATA\210128\MGAS0128.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jan 29 10:35:03 2021
Response via : Initial Calibration



MAX Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/04/21 — **Prepared By (Initials): CH**

Expires: 01/04/22

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-	01/04/22	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 08/20/20 — **Prepared By (Initials): CH**

Expires: 01/31/30

Methanol Lot No.

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40998	01/04/22	01/31/30	800uL	2mL	Methanol	2,000

MAX Gas Calibration Curve

Prepared: 01/28/21 — **Prepared By (Initials): CH**

Expires: 03/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	50uL	100mL	P&T Water	1,000

Zeus Gas Second Source

Prepared: 01/28/21 — **Prepared By (Initials): CH**

Expires: 03/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 08/20/20	01/31/30	N/A	15uL	100mL	P&T Water	300

MAX Gas Continuing Calibrations/Lab Control Spikes

Prepared: 01/28/21 — **Prepared By (Initials): CH**

Expires: 01/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/04/21	01/04/22	N/A	15uL	100mL	P&T Water	300

MAX 8260 Standard Prep

MAX 8260 Water Calibration Curve

Prepared By (Initials): CH

0.3ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.3ug/L	5	Prepared 01/28/21	03/29/21	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	5uL			5
VOA STD 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	2uL			10

0.5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	0.5ug/L	5	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	5uL			25

1.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	1.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	10uL			50

2.0ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Various	2.0ug/L	5	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	2
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	30uL			30
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	15uL			30
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	15uL			75

5ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 01/28/21	03/29/21	N/A	5uL	50mL	P&T Water	5
VOA STD 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	5uL			5
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	20uL			100

10ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	25uL			125

20ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 01/28/21	03/29/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	20uL			20
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	60uL			60
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	30uL			150

40ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 01/28/21	03/29/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	40uL			40
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	80uL			80
VOA STD 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	35uL			175

100ug/L

Prepared: 01/28/21

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 01/28/21	03/29/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 01/28/21	01/27/21	N/A	100uL			100
VOA STD. 1	Absolute		50	Prepared 01/28/21	03/29/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 01/28/21	03/29/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 01/28/21	01/27/21	N/A	40uL			200

MAX 8260 Water Second Source (SS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/27/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD 3	Phenova	8260 Water SS	100	Prepared 01/28/21	03/29/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 0	Phenova	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
VOA STD. 2-CEVE	Absolute	8260 Water SS	50	Prepared 01/28/21	01/28/21	N/A	50uL			50
VOA STD. 6	Various	8260 Water SS	50	Prepared 01/28/21	03/29/21	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 01/28/21	03/29/21	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 01/28/21

Prepared By (Initials): CH

Expires: 01/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 01/28/21	01/27/21	N/A	10uL			10
VOA STD. 1	Absolute	CCV/ LCS	50	Prepared 01/28/21	03/29/21	N/A	50uL			50
VOA STD. 2	Phenova	CCV/ LCS	100	Prepared 01/28/21	03/29/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 01/28/21	01/27/21	N/A	25uL			125

Injection Log

Directory: M:\MAX\DATA\210128\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0128M02.D	1	0.3ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:26
2	3	0128M03.D	1	0.5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 17:55
3	4	0128M04.D	1	1ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:24
4	5	0128M05.D	1	2ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 18:53
5	6	0128M06.D	1	5ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:22
6	7	0128M07.D	1	10ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 19:51
7	8	0128M08.D	1	20ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:20
8	9	0128M09.D	1	40ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 20:49
9	10	0128M10.D	1	100ug/L VOC STD 1/28/21	IS 10/16/20	28 Jan 21 21:19
10	13	0128M13.D	1	20ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 22:45
11	14	0128M14.D	1	50ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 23:14
12	15	0128M15.D	1	100ug/L GAS STD 1/28/21	IS 10/16/20	28 Jan 21 23:43
13	16	0128M16.D	1	300ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 00:12
14	17	0128M17.D	1	600ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 00:41
15	18	0128M18.D	1	800ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 1:10
16	19	0128M19.D	1	1000ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 1:39
17	21	0128M21.D	1	(SS) 300ug/L GAS STD 1/28/21	IS 10/16/20	29 Jan 21 2:38
18	5	0129M05.D	1	210129A CCV/LCS 300ug/L	IS 10/16/20	29 Jan 21 17:59
19	7	0129M07.D	1	210129A LCSD 300ug/L	IS 10/16/20	29 Jan 21 18:57
20	8	0129M08.D	1	210129A BLK	IS 10/16/20	29 Jan 21 19:26
21	9	0129M09.D	1	BA26159W01	IS 10/16/20	29 Jan 21 19:55
22	10	0129M10.D	1	BA26160W01	IS 10/16/20	29 Jan 21 20:24
23	11	0129M11.D	1	BA26162W01	IS 10/16/20	29 Jan 21 20:53
24	12	0129M12.D	1	BA26163W01	IS 10/16/20	29 Jan 21 21:22
25	30	0129M30.D	1	Ending CCV 300ug/L 1/29/21	IS 10/16/20	30 Jan 21 6:04

ORGANICS

Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 09/14/20
Matrix: Instrument: 7890
Initials: CD

			0914R07.D	0914R08.D	0914R09.D	0914R10.D	0914R11.D	0914R12.D	0914R13.D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	31176	26056	25996	23232	23337	25358	24640				25685	10	ATM	1.000	
2	ATML	Ethane	21362	19532	19181	17082	17815	18853	18215				18863	7.3	ATM	1.000	
3	ATML	Ethene	16420	15064	15131	13510	13711	15061	14685				14797	6.6	ATM	1.000	
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35																	

0.696467

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R07.D Vial: 1
Acq On : 14 Sep 20 12:06 Operator: CD
Sample : RSK STD1 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

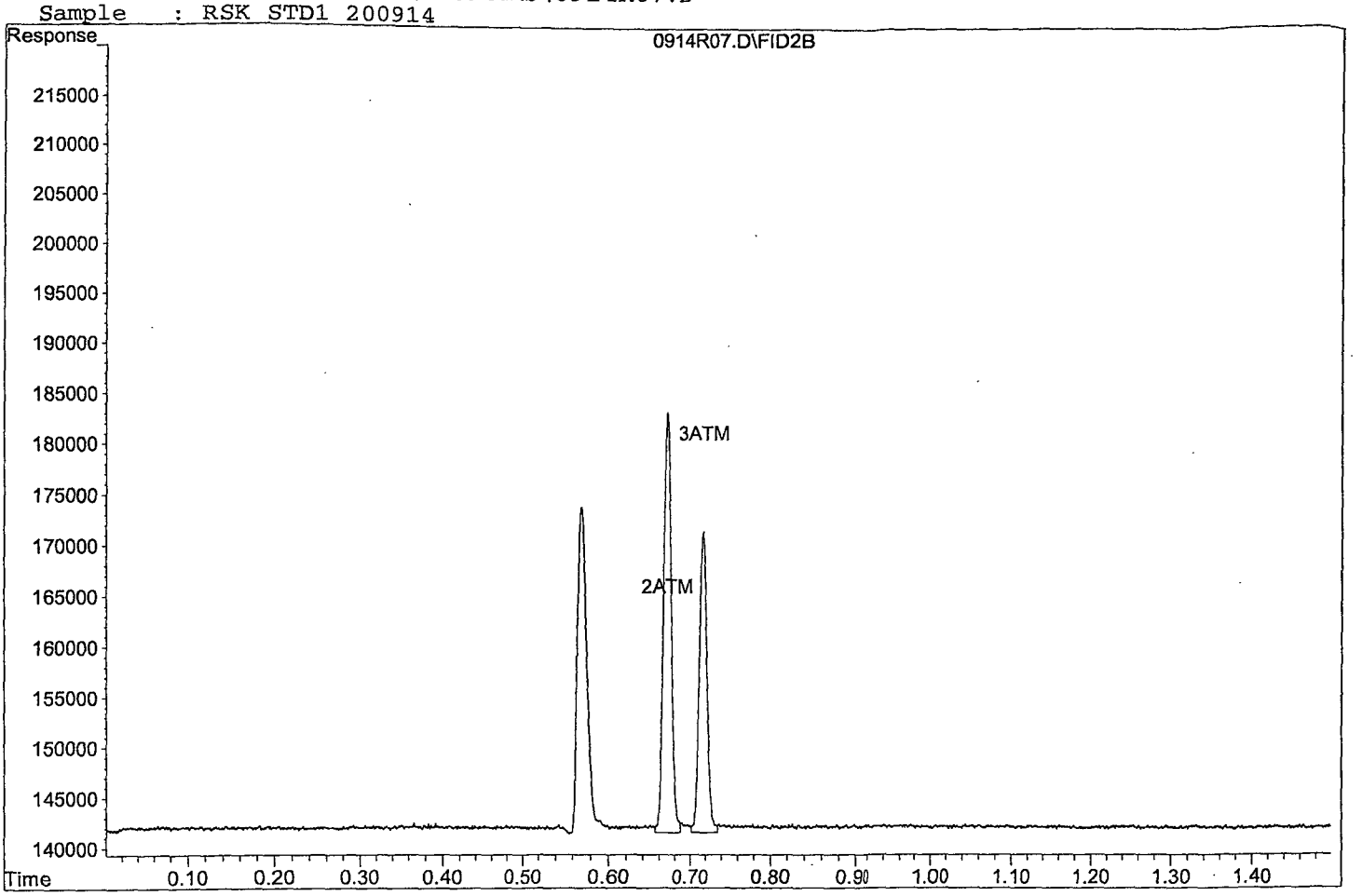
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	41762	102628.492	ppb
3) ATM Ethene	0.72	29966	4.139	ppb
Target Compounds				
1) ATM Methane	0.57	32423	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R07.D
Sample : RSK STD1 200914



Quantitation Report (Not Reviewed)

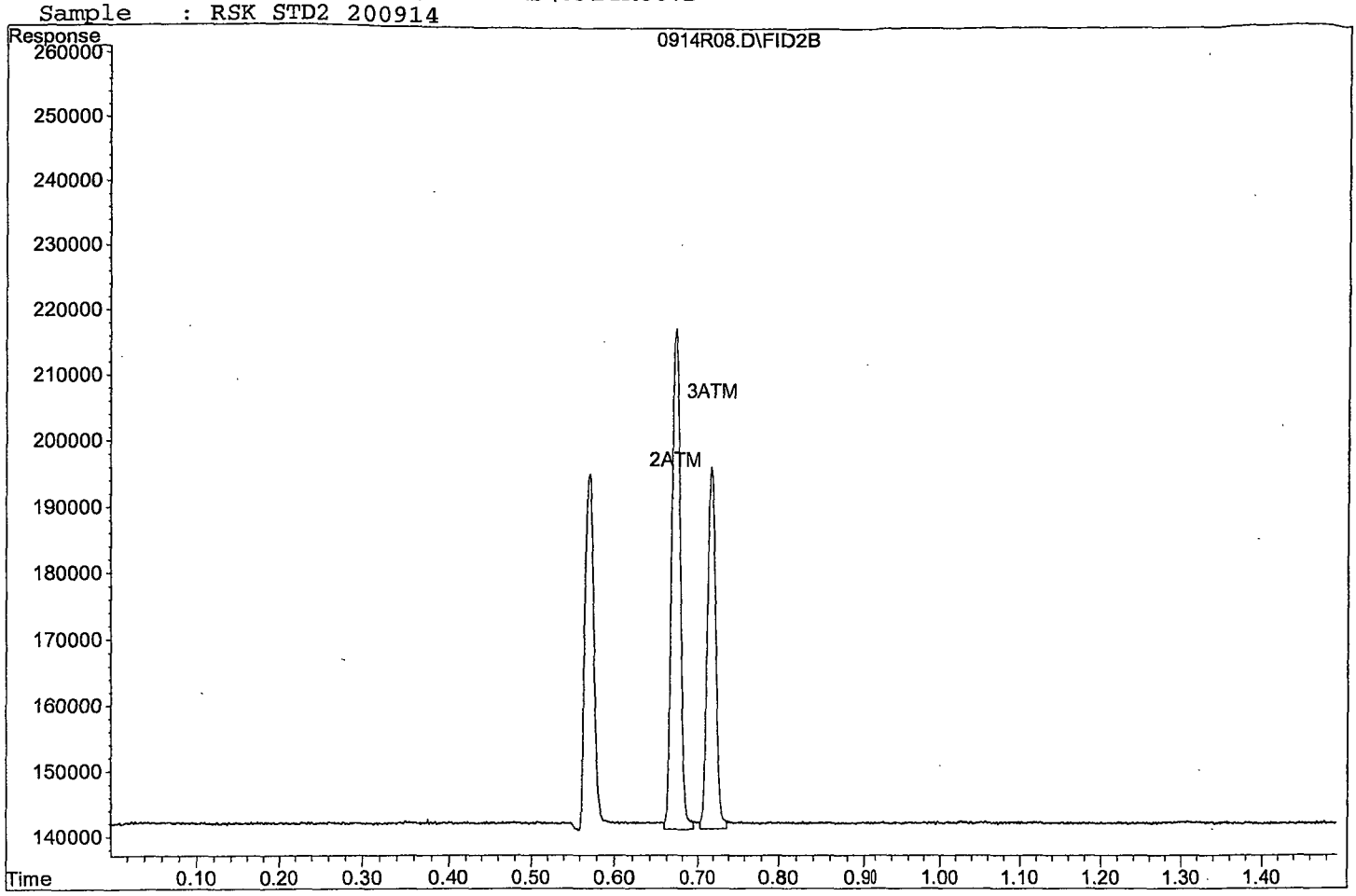
Data File : G:\ROCKY\DATA\200914RS\0914R08.D Vial: 1
Acq On : 14 Sep 20 12:10 Operator: CD
Sample : RSK STD2 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	76271	190289.144	ppb
3) ATM Ethene	0.72	54983	7.686	ppb
Target Compounds				
1) ATM Methane	0.57	54196	N.D.	ppb

Data File: G:\ROCKY\DATA\200914RS\0914R08.D
Sample : RSK STD2 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R09.D Vial: 1
Acq On : 14 Sep 20 12:13 Operator: CD
Sample : RSK STD3 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

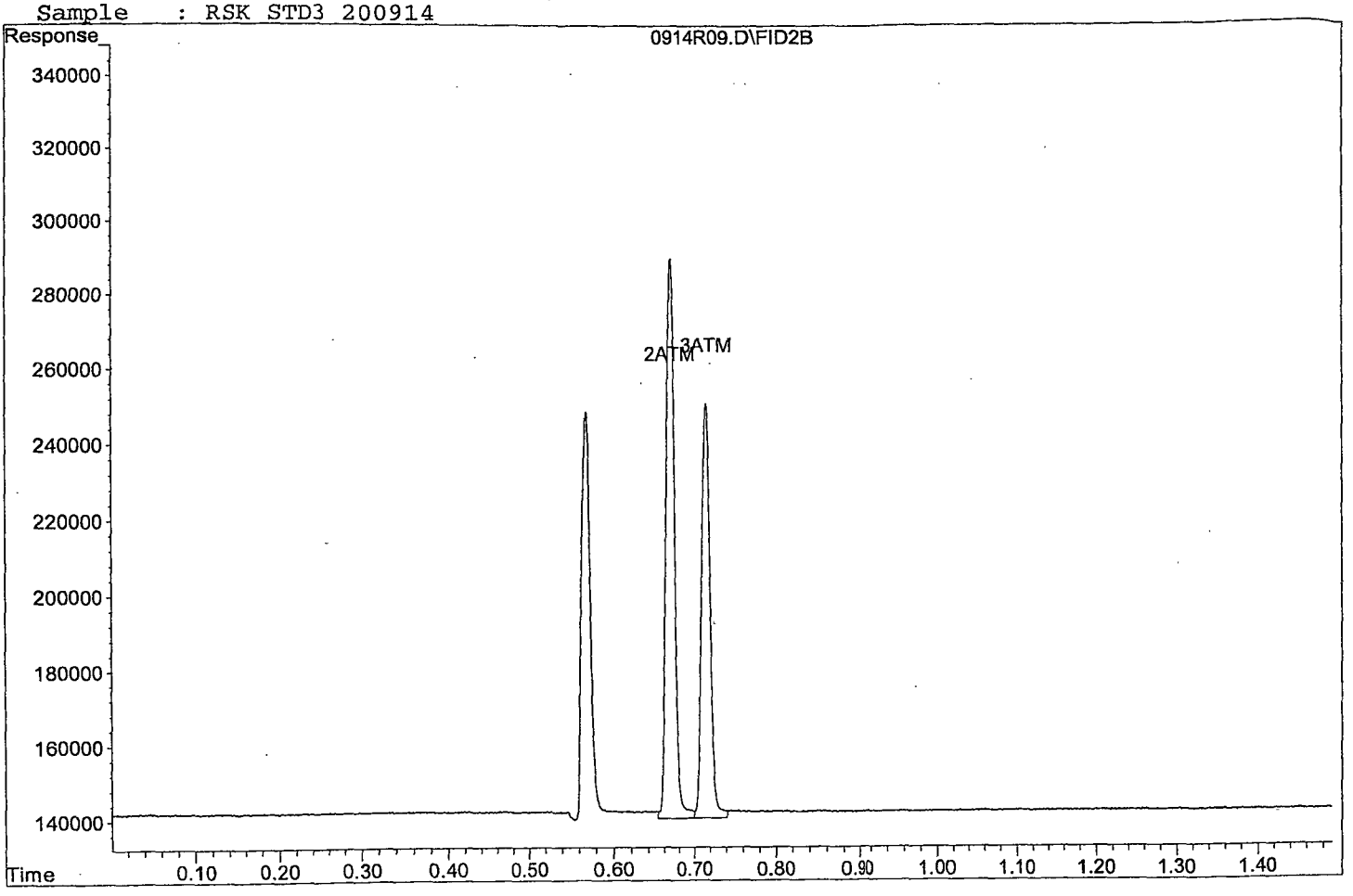
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	149612	376595.524 ppb
3) ATM Ethene	0.72	110455	15.551 ppb
Target Compounds			
1) ATM Methane	0.57	108403	N.D. ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R09.D
Sample : RSK STD3 200914



Quantitation Report (Not Reviewed)

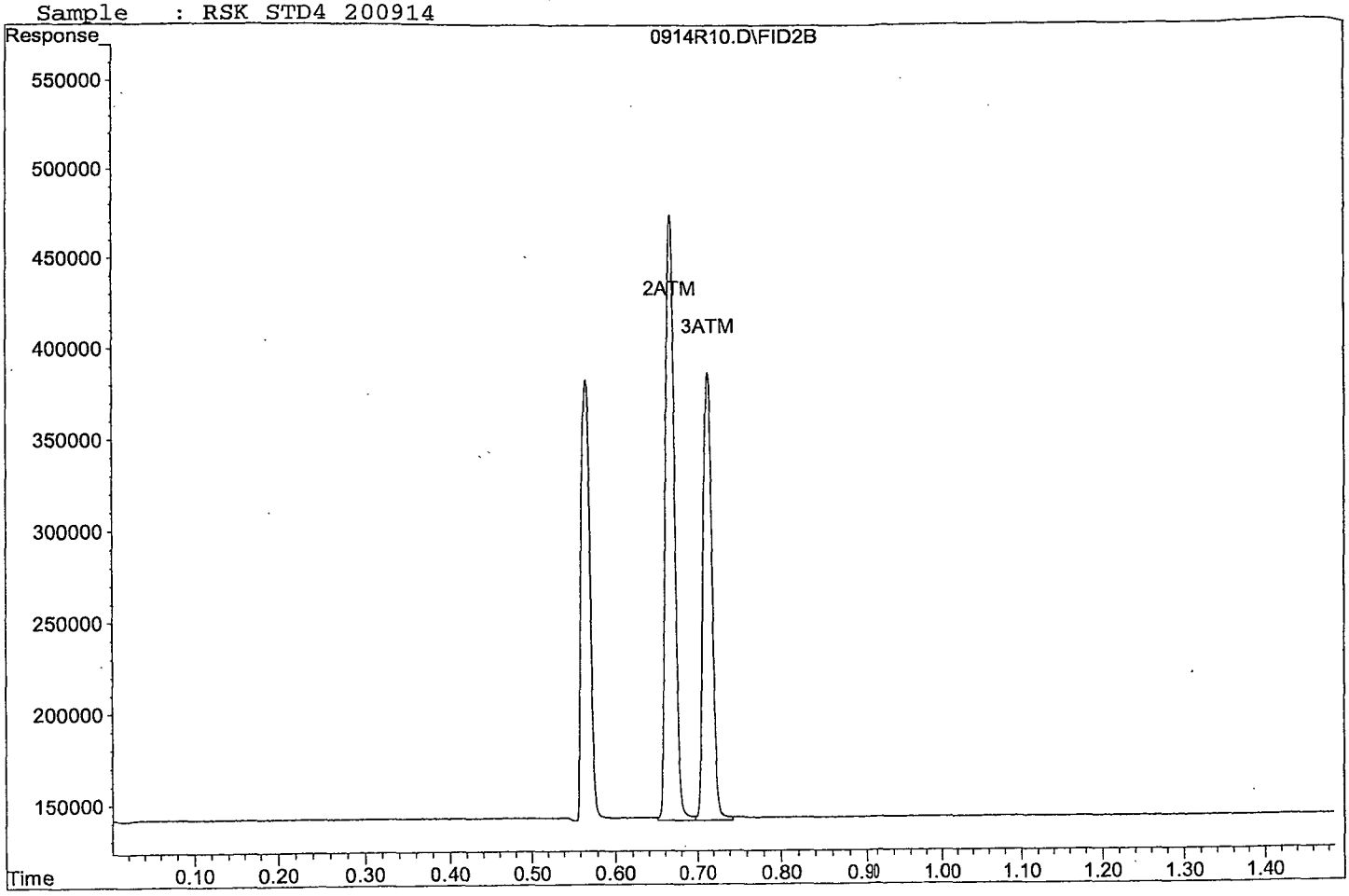
Data File : G:\ROCKY\DATA\200914RS\0914R10.D Vial: 1
Acq On : 14 Sep 20 12:18 Operator: CD
Sample : RSK STD4 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
2) ATM Ethane	0.67	333873	844667.853 ppb
3) ATM Ethene	0.71	246286	34.810 ppb
Target Compounds			
1) ATM Methane	0.57	242197	N.D. ppb

Data File: G:\ROCKY\DATA\200914RS\0914R10.D
Sample : RSK STD4 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R11.D Vial: 1
Acq On : 14 Sep 20 12:21 Operator: CD
Sample : RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

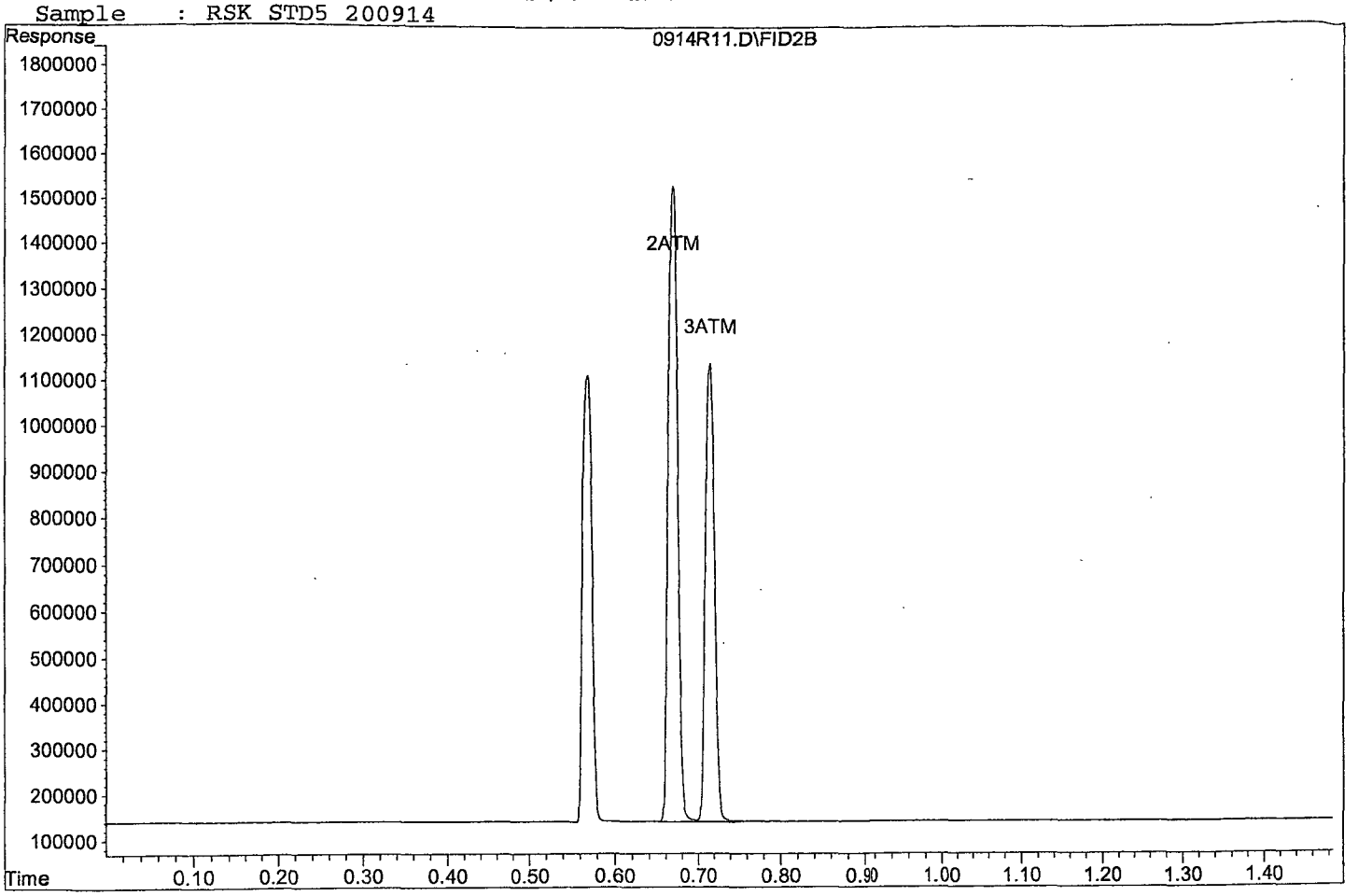
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	1392673	3534302.847	ppb
3) ATM Ethene	0.71	999836	141.654	ppb
Target Compounds				
1) ATM Methane	0.57	973152	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R11.D
Sample : RSK STD5 200914



524 of 633

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R12.D Vial: 1
Acq On : 14 Sep 20 12:25 Operator: CD
Sample : RSK STD6 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

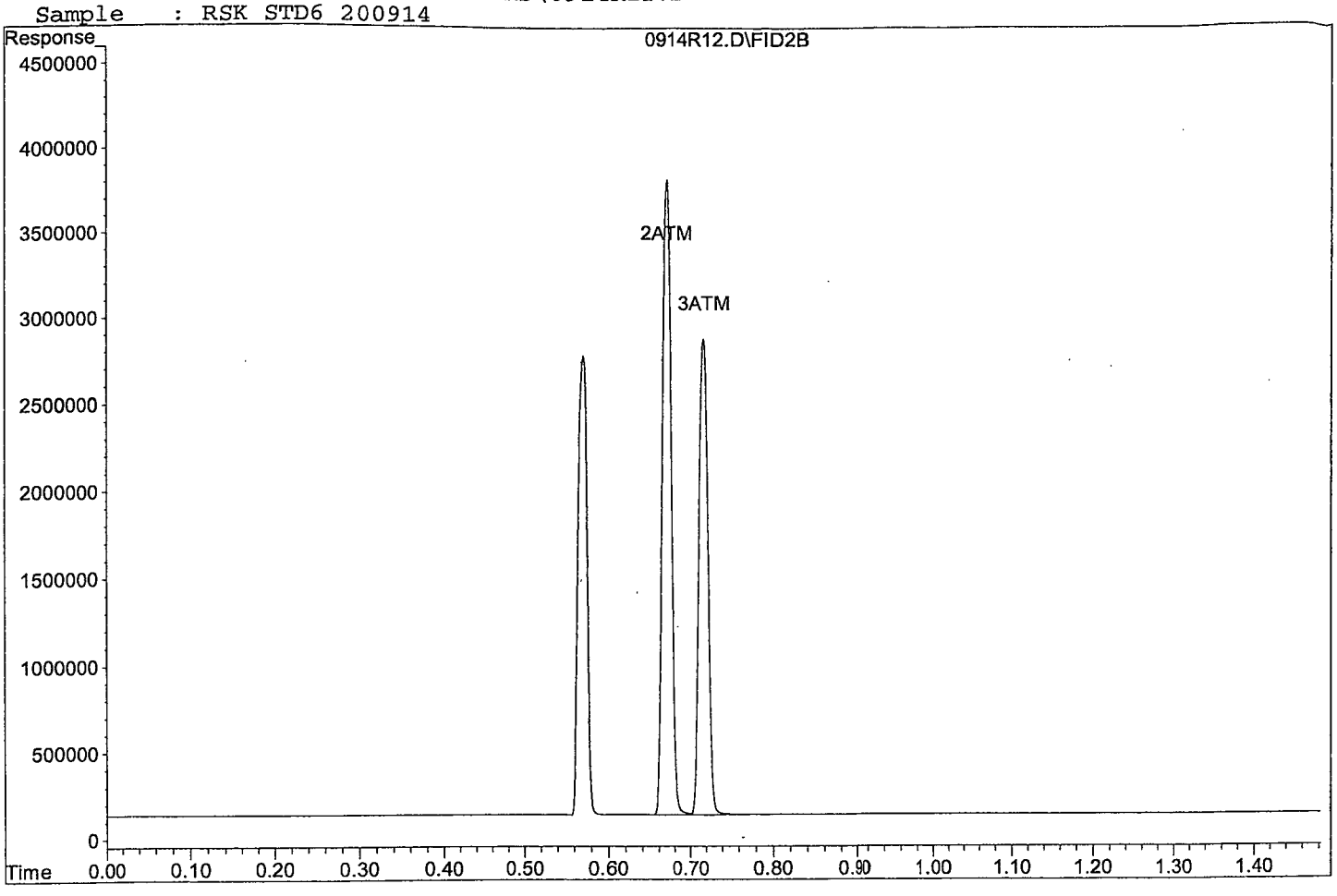
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	3684845	9357031.284	ppb
3) ATM Ethene	0.72	2745673	389.192	ppb
Target Compounds				
1) ATM Methane	0.57	2643568	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R12.D
Sample : RSK STD6 200914



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R13.D Vial: 1
Acq On : 14 Sep 20 12:28 Operator: CD
Sample : RSK STD7 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:38 2020 Quant Results File: RSK0914A.RES

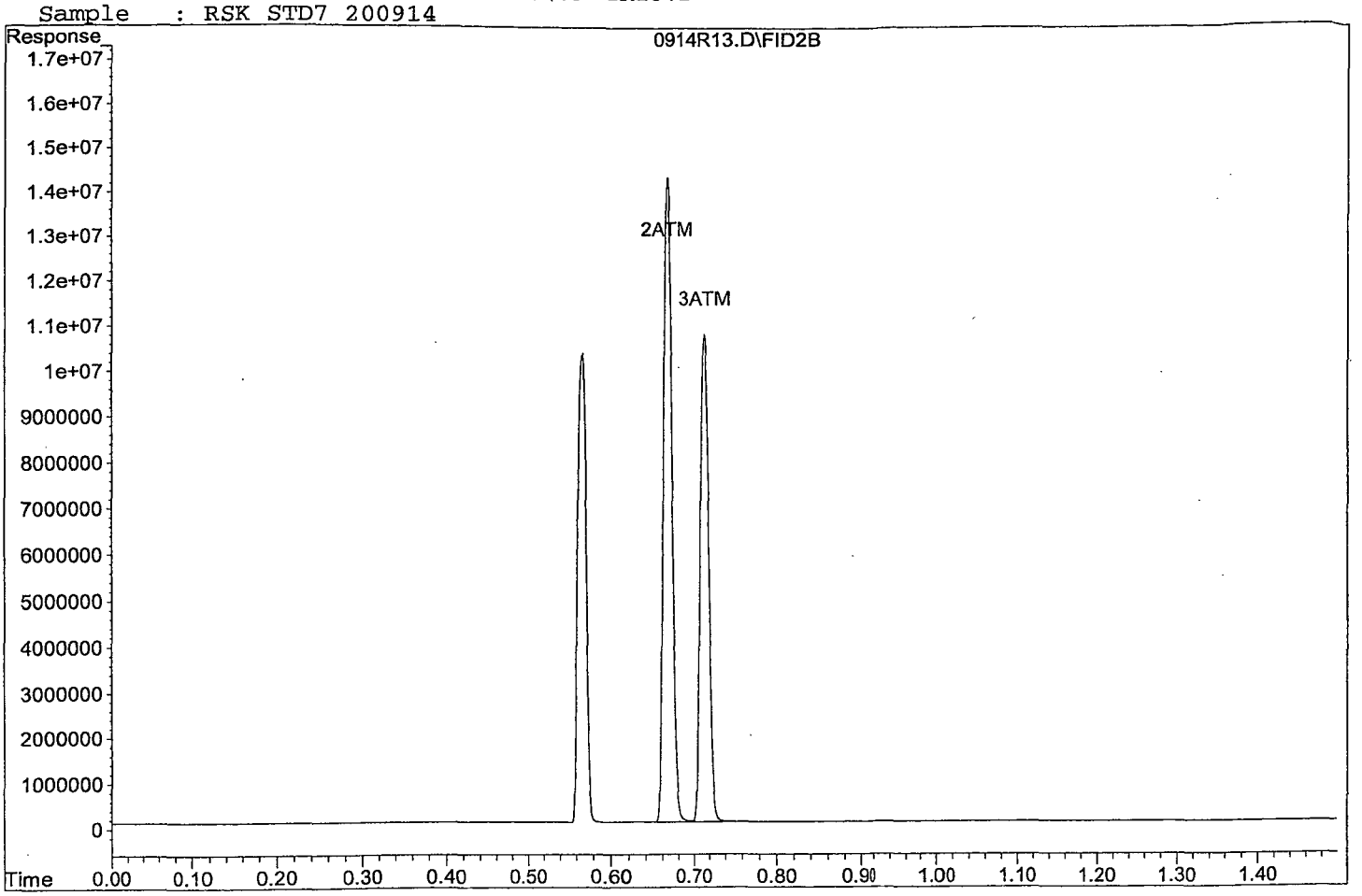
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

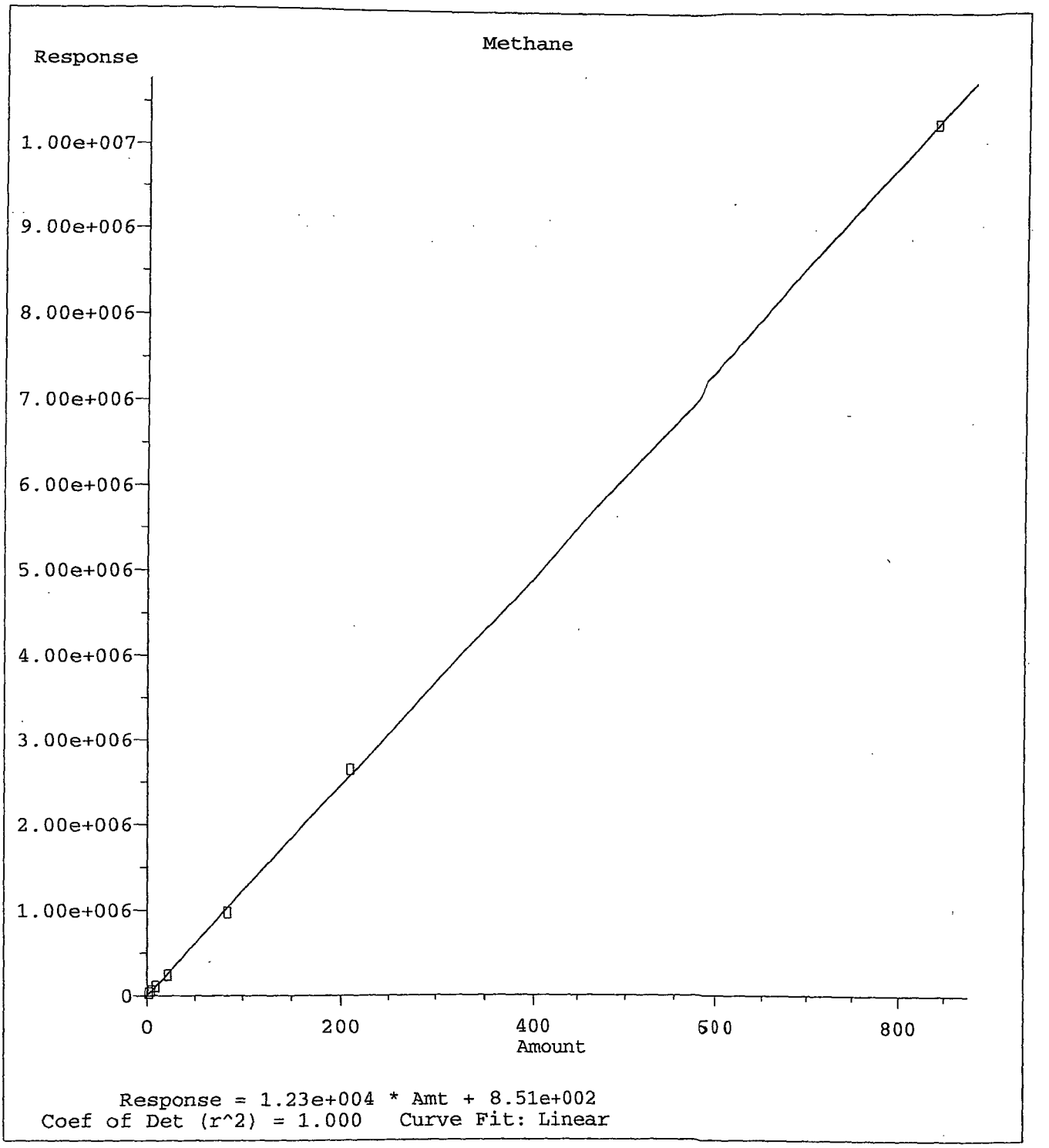
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
2) ATM Ethane	0.67	14239394	3616 8407.278	ppb
3) ATM Ethene	0.71	10708428	1518.210	ppb
Target Compounds				
1) ATM Methane	0.57	10274710	N.D.	ppb

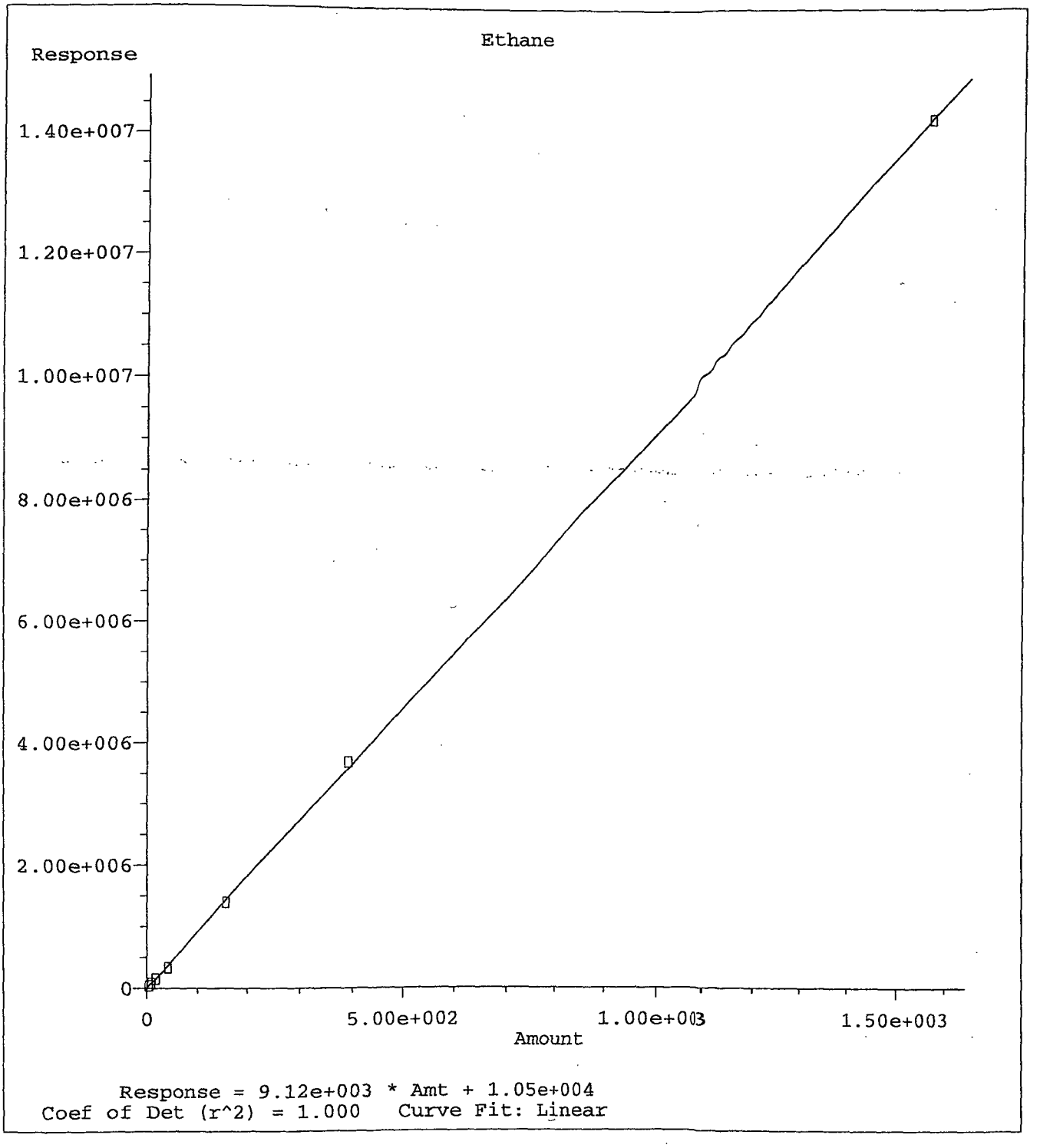
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R13.D
Sample : RSK STD7 200914

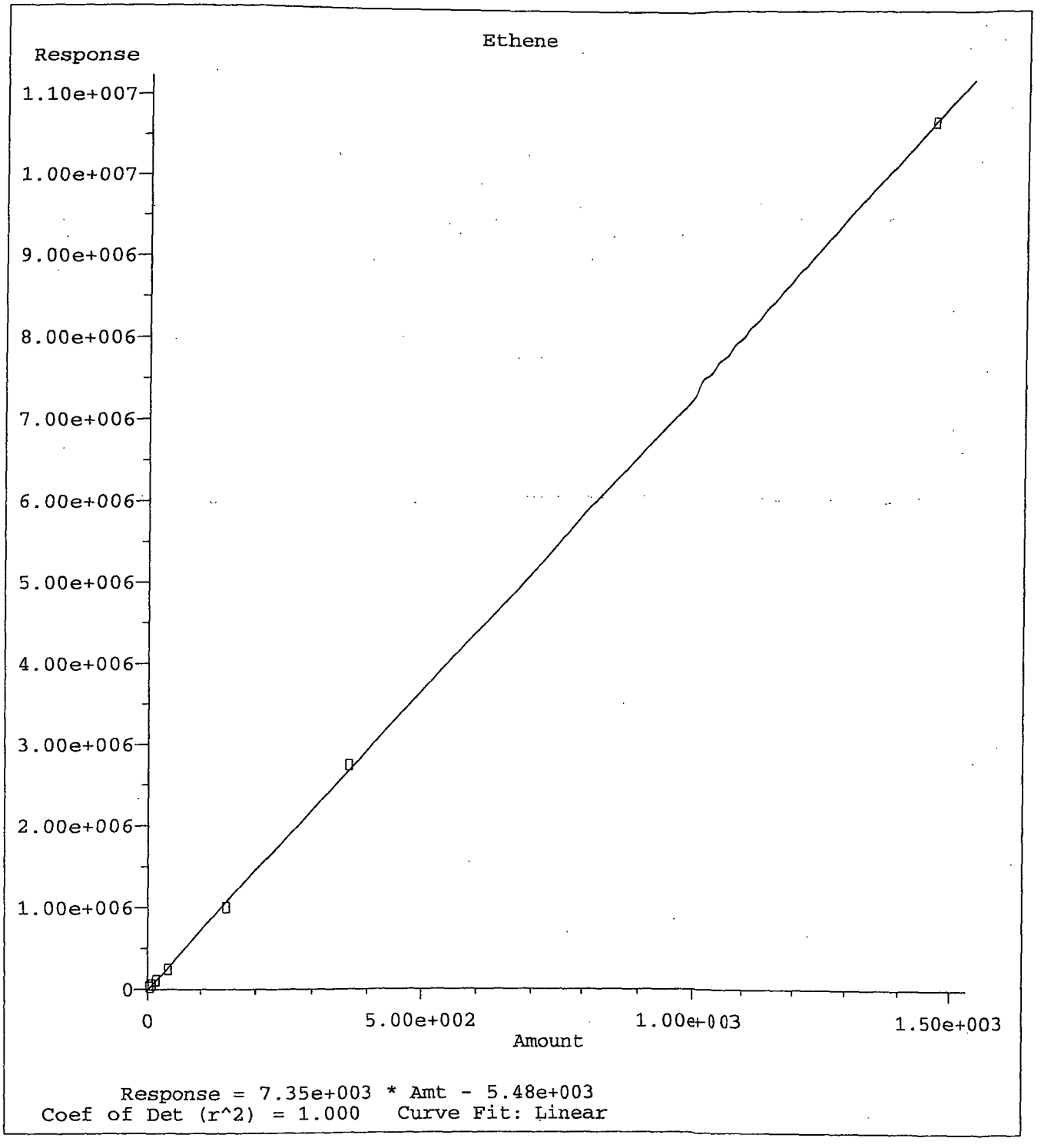




Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020



Method Name: G:\ROCKY\DATA\200624RS\RSK0914A.M
Calibration Table Last Updated: Mon Sep 14 12:40:32 2020

RSK 175
RSK 175

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 09/14/20
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0914R14.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	23394	8.9	ATML	5.2
2	ATML	Ethane	18863	17545	7.0	ATML	4.5
3	ATML	Ethene	14798	13693	7.5	ATML	6.4
4							
5							
6							
7							
8							
9							
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11							
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39							
40							
		Average			7.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0914R14.D Vial: 1
Acq On : 14 Sep 20 12:32 Operator: CD
Sample : SS RSK STD5 200914 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 14 12:48 2020 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Mon Sep 14 12:40:32 2020
Response via : Multiple Level Calibration

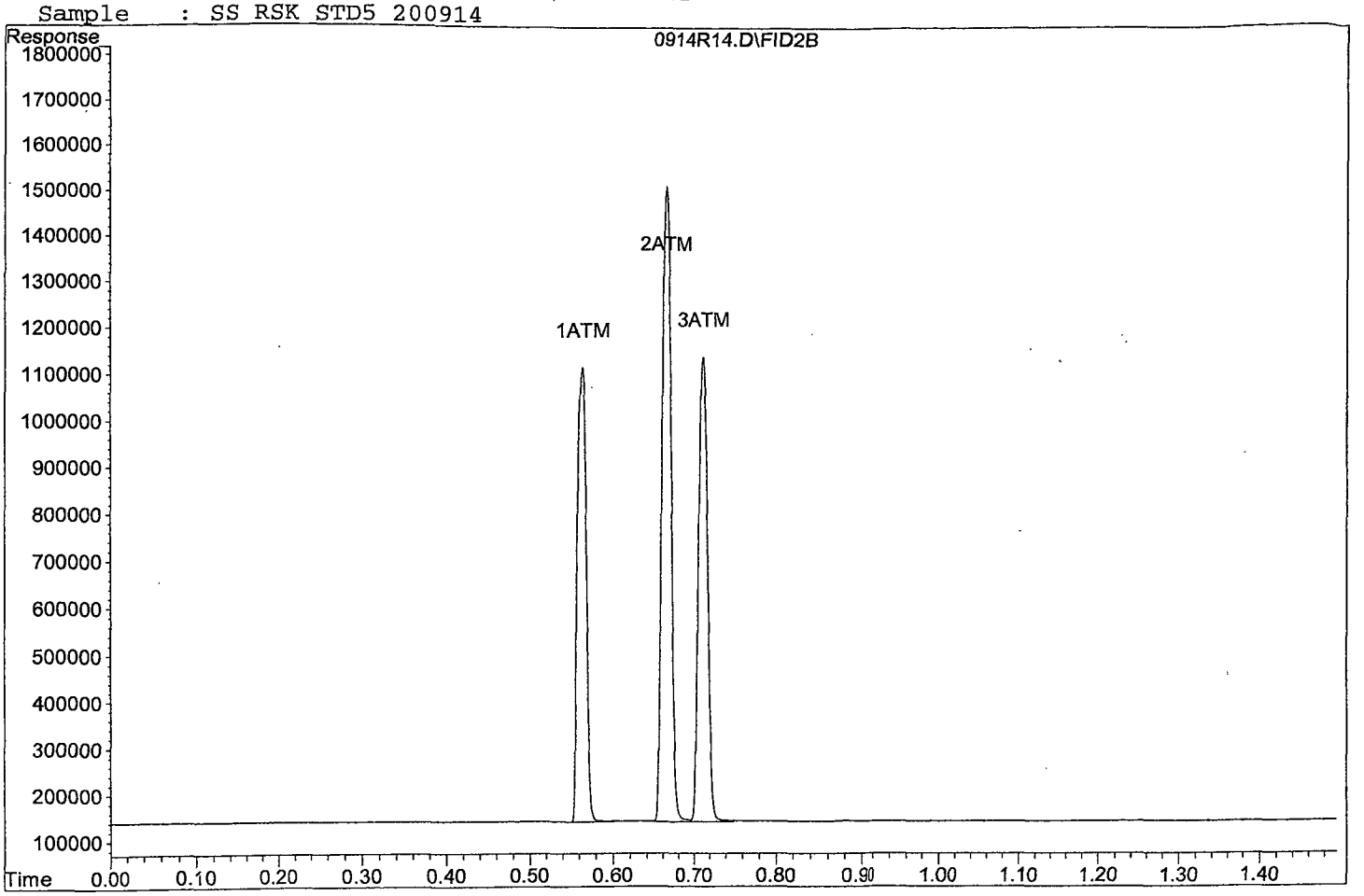
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.56	975516	79.029 ppb
2) ATM Ethane	0.66	1371570	149.323 ppb
3) ATM Ethene	0.71	998467	136.525 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0914R14.D
Sample : SS RSK STD5 200914



RSK 175
RSK 175

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 11:57
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0201R01.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	25290	1.5	ATML	2.4
2	ATML	Ethane	18863	20250	7.4	ATML	10
3	ATML	Ethene	14798	17362	17	ATML	19
4							
5							
6							
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38							
39							
40							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R01.D Vial: 1
Acq On : 1 Feb 21 11:57 Operator: LS
Sample : 210201A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:00 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

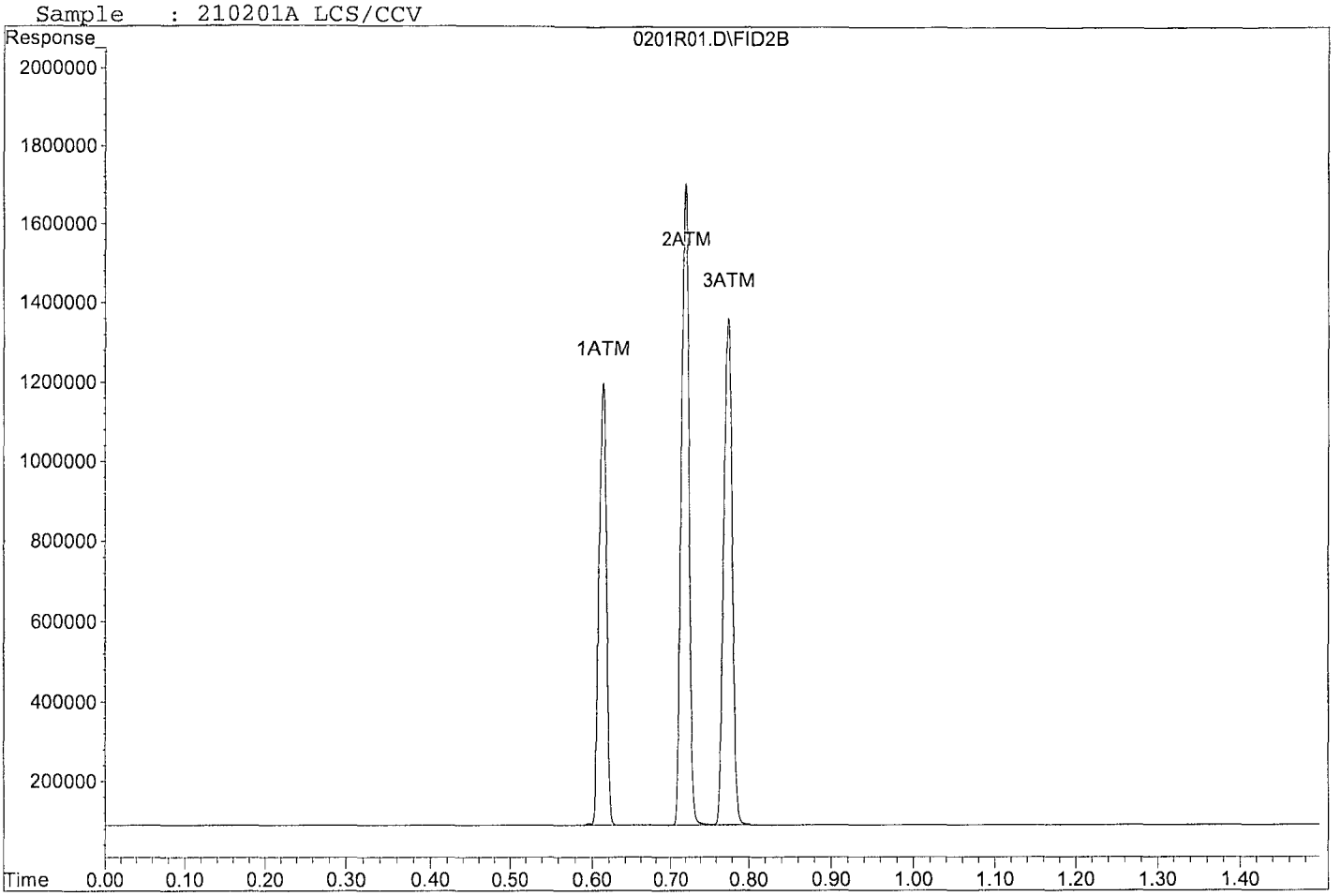
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1054610	85.442	ppb
2) ATM Ethane	0.72	1583074	172.527	ppb
3) ATM Ethene	0.77	1266017	172.909	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R01.D
Sample : 210201A LCS/CCV



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 1 Feb 21 13:17
Instrument: 7890
Initial Cal. Date: 09/14/20
Data File: 0201R20.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	25685	24391	5.0	ATML	1.2
2	ATML	Ethane	18863	19928	5.6	ATML	8.6
3	ATML	Ethene	14798	15947	7.8	ATML	8.9
4							
5							
6							
7							
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35							
36							
37							
38							
39							
40							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R20.D Vial: 20
Acq On : 1 Feb 21 13:17 Operator: LS
Sample : 210201A ENDING CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:22 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

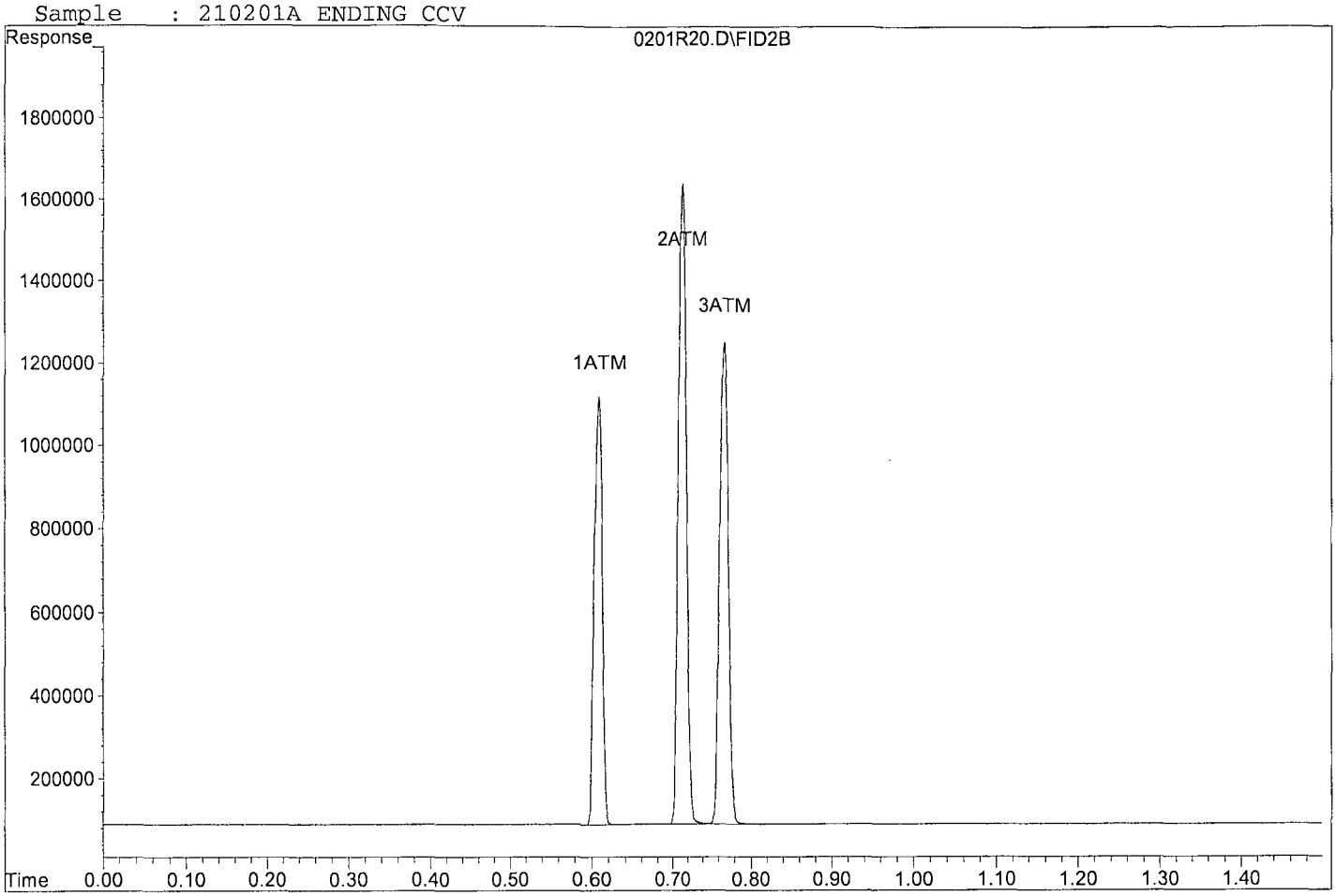
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1017112	82.402 ppb
2) ATM Ethane	0.71	1557839	169.758 ppb
3) ATM Ethene	0.77	1162869	158.882 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R20.D
Sample : 210201A ENDING CCV



ORGANICS

Raw Data

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R16.D Vial: 16
Acq On : 1 Feb 21 13:01 Operator: LS
Sample : BA26159W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:06 2021 Quant Results File: RSK0914A.RES

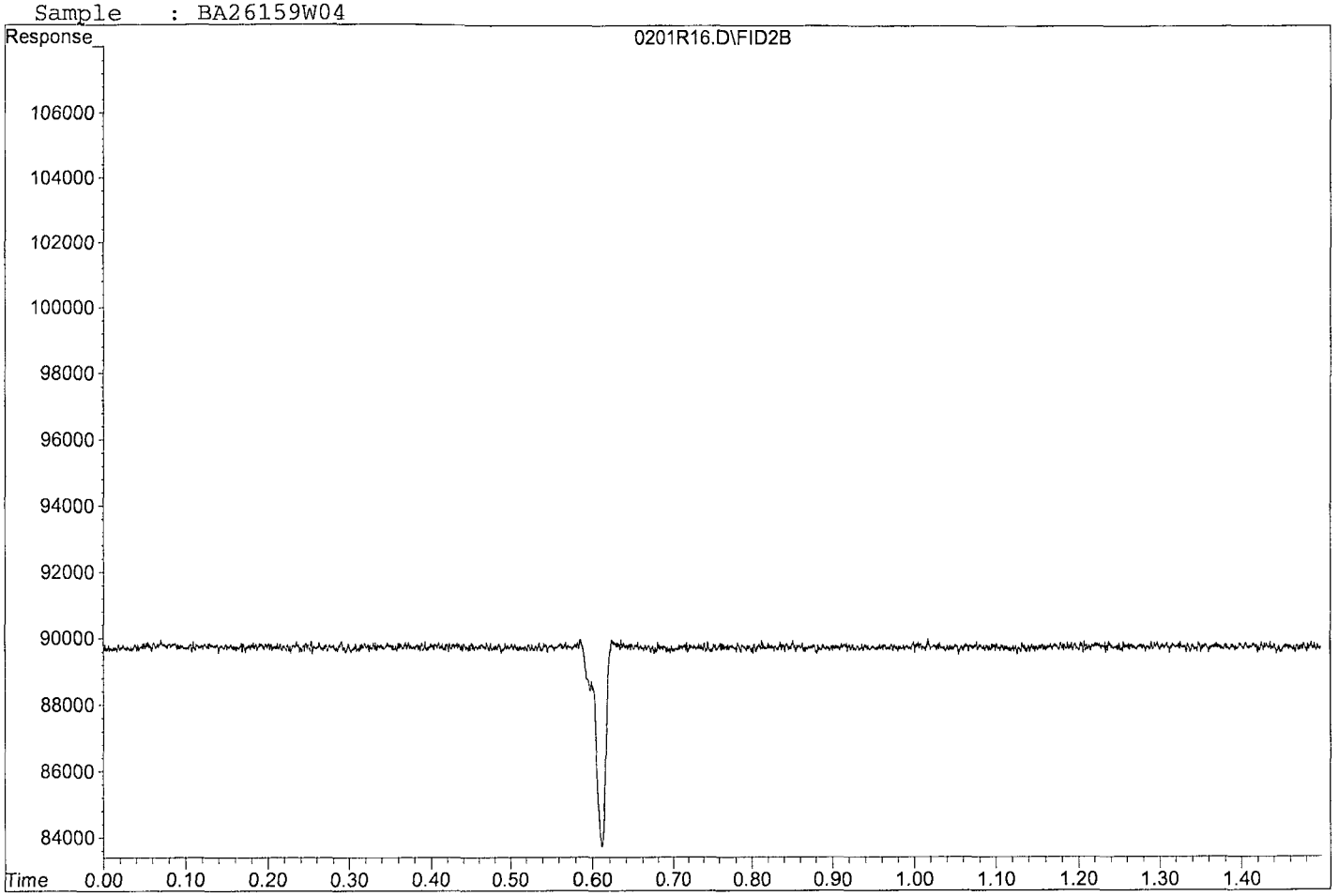
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R16.D
Sample : BA26159W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R17.D Vial: 17
Acq On : 1 Feb 21 13:06 Operator: LS
Sample : BA26160W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:10 2021 Quant Results File: RSK0914A.RES

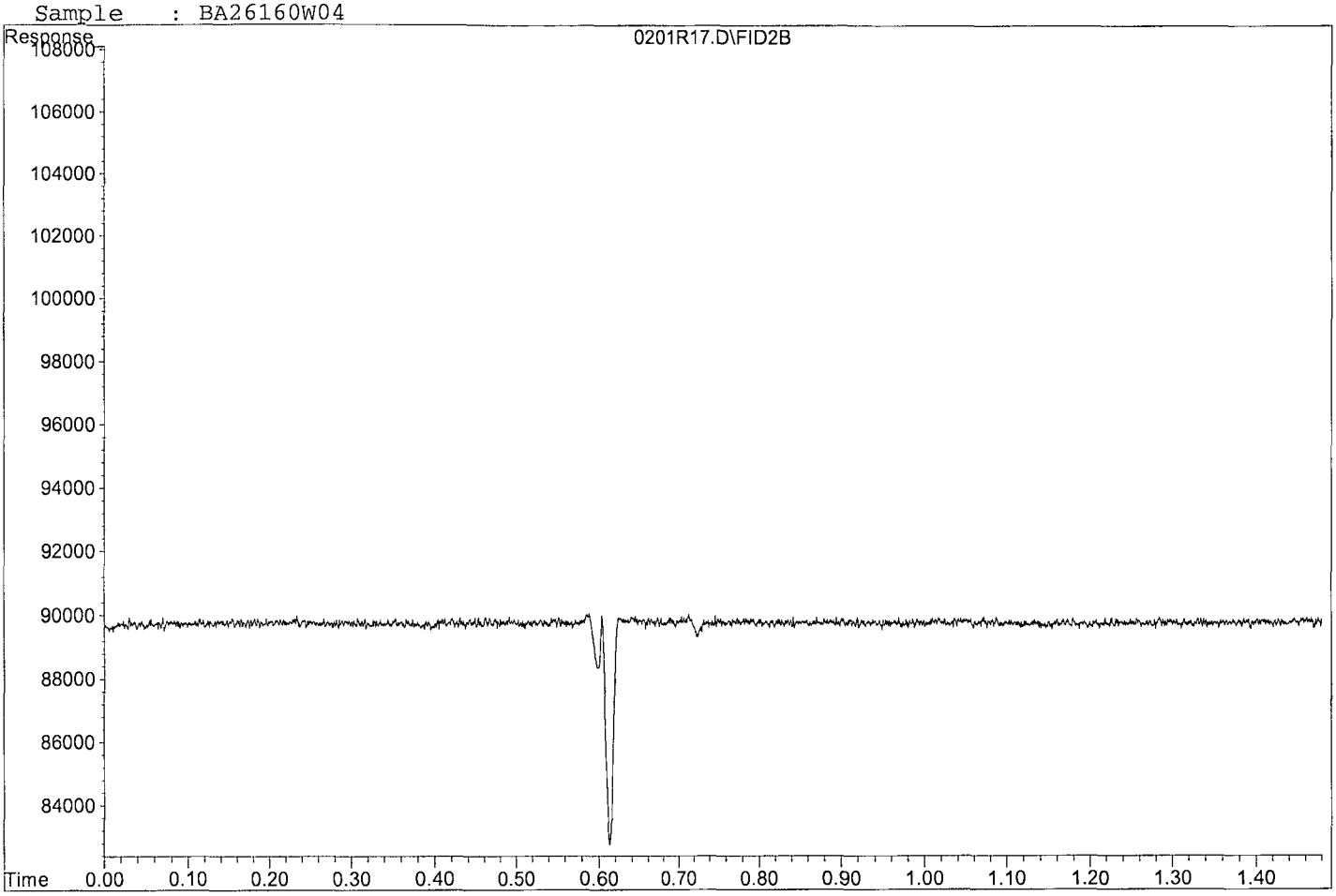
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R17.D
Sample : BA26160W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R18.D Vial: 18
Acq On : 1 Feb 21 13:11 Operator: LS
Sample : BA26162W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:13 2021 Quant Results File: RSK0914A.RES

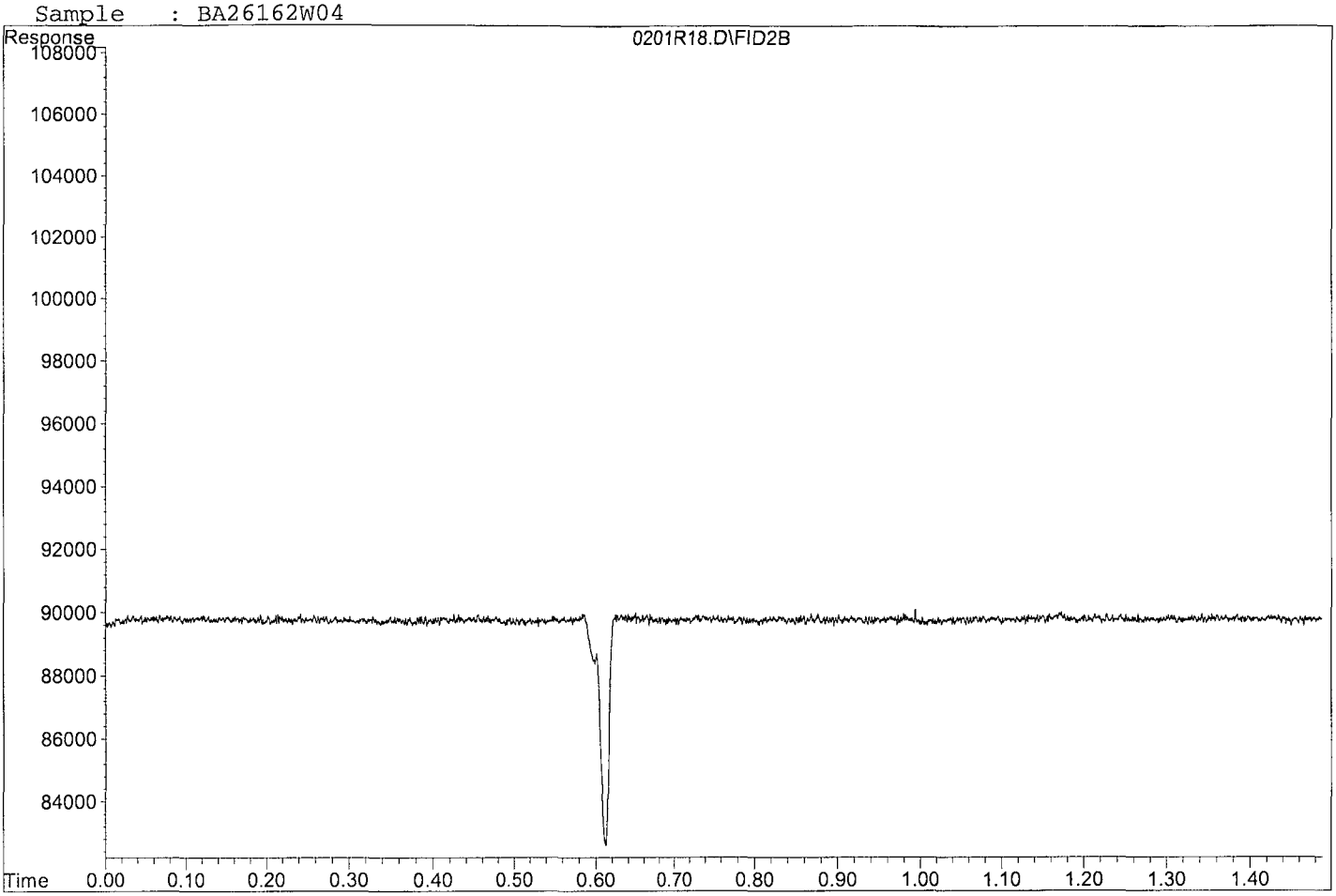
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R18.D
Sample : BA26162W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R19.D Vial: 19
Acq On : 1 Feb 21 13:14 Operator: LS
Sample : BA26163W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 13:16 2021 Quant Results File: RSK0914A.RES

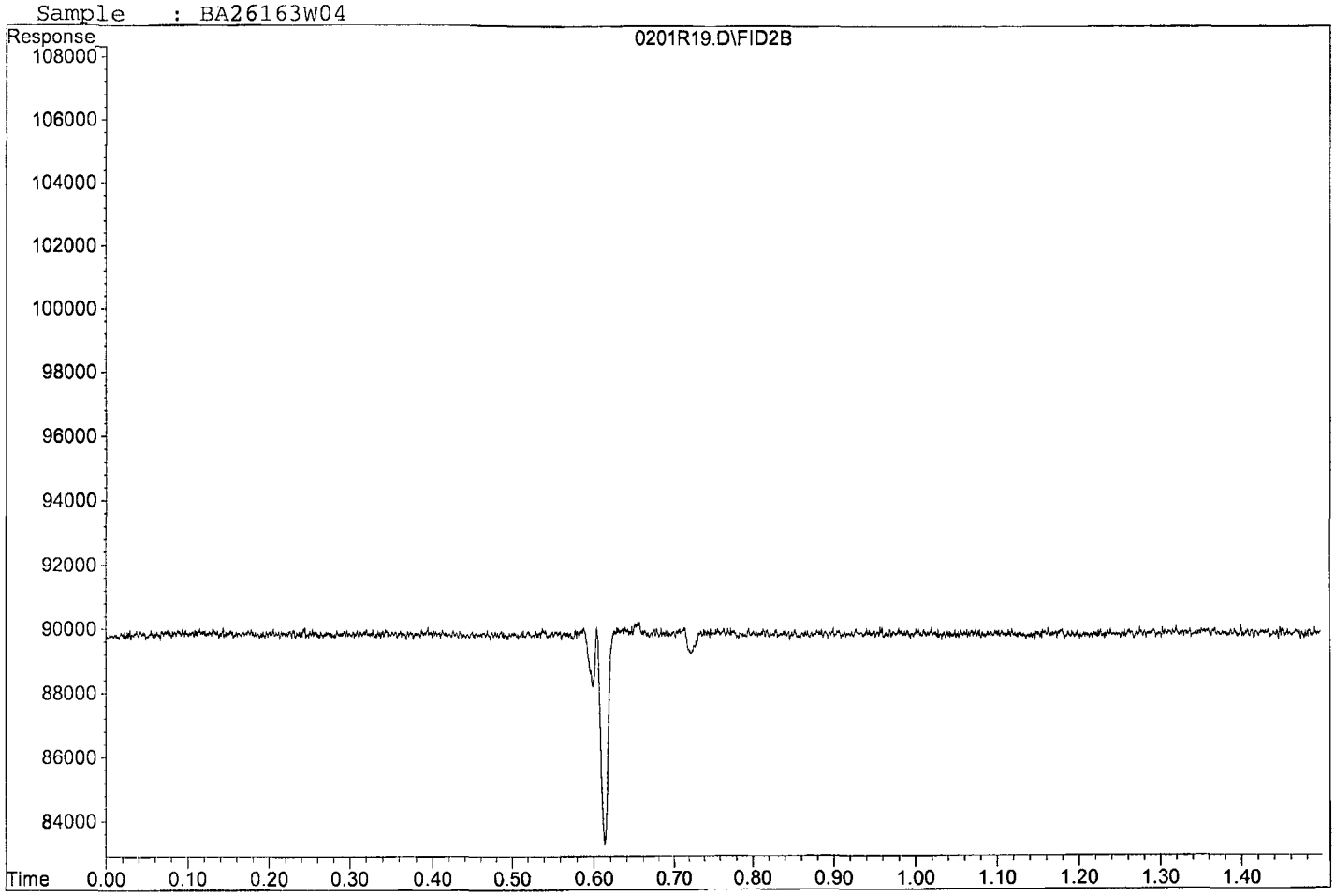
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R19.D
Sample : BA26163W04



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R04.D Vial: 4
Acq On : 1 Feb 21 12:08 Operator: LS
Sample : 210201A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:11 2021 Quant Results File: RSK0914A.RES

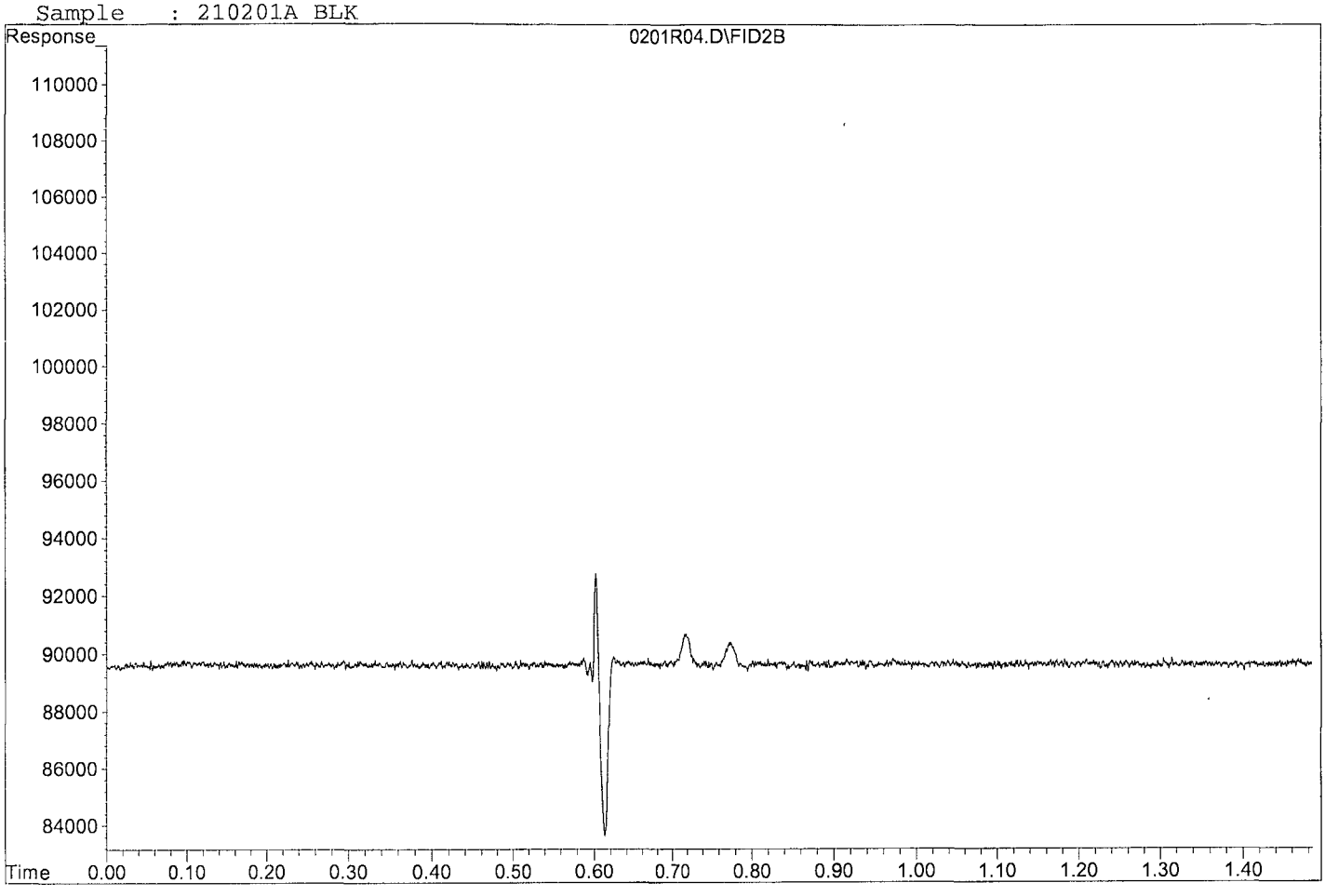
Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.00	0	N.D.	ppb
2) ATM Ethane	0.00	0	N.D.	ppb
3) ATM Ethene	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R04.D
Sample : 210201A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R01.D Vial: 1
Acq On : 1 Feb 21 11:57 Operator: LS
Sample : 210201A LCS/CCV Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:00 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

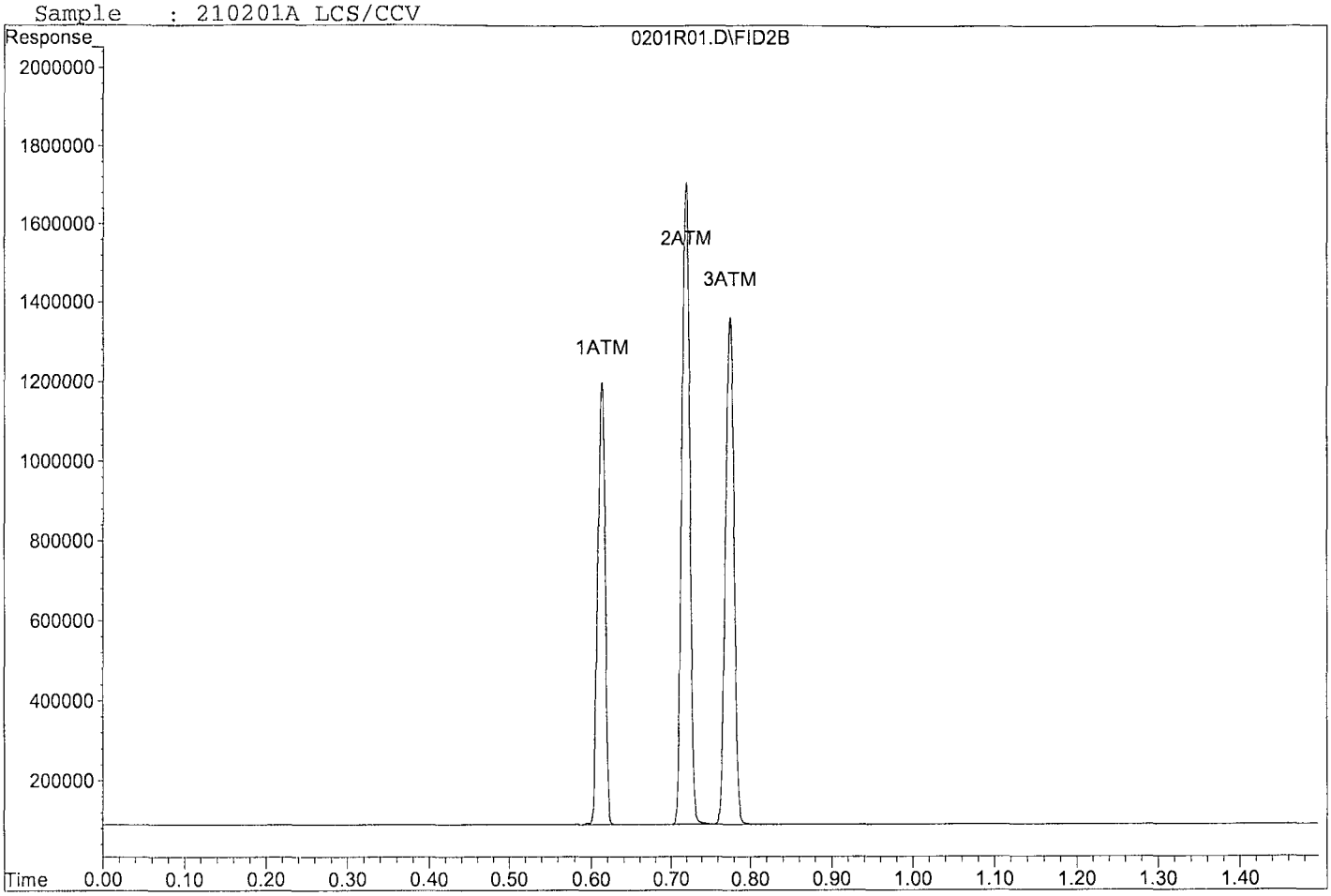
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.61	1054610	85.442 ppb
2) ATM Ethane	0.72	1583074	172.527 ppb
3) ATM Ethene	0.77	1266017	172.909 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R01.D
Sample : 210201A LCS/CCV



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200914RS\0201R03.D Vial: 3
Acq On : 1 Feb 21 12:04 Operator: LS
Sample : 210201A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 1 12:06 2021 Quant Results File: RSK0914A.RES

Method : G:\ROCKY\DATA\200624RS\RSK0914A.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Jan 26 13:11:21 2021
Response via : Multiple Level Calibration

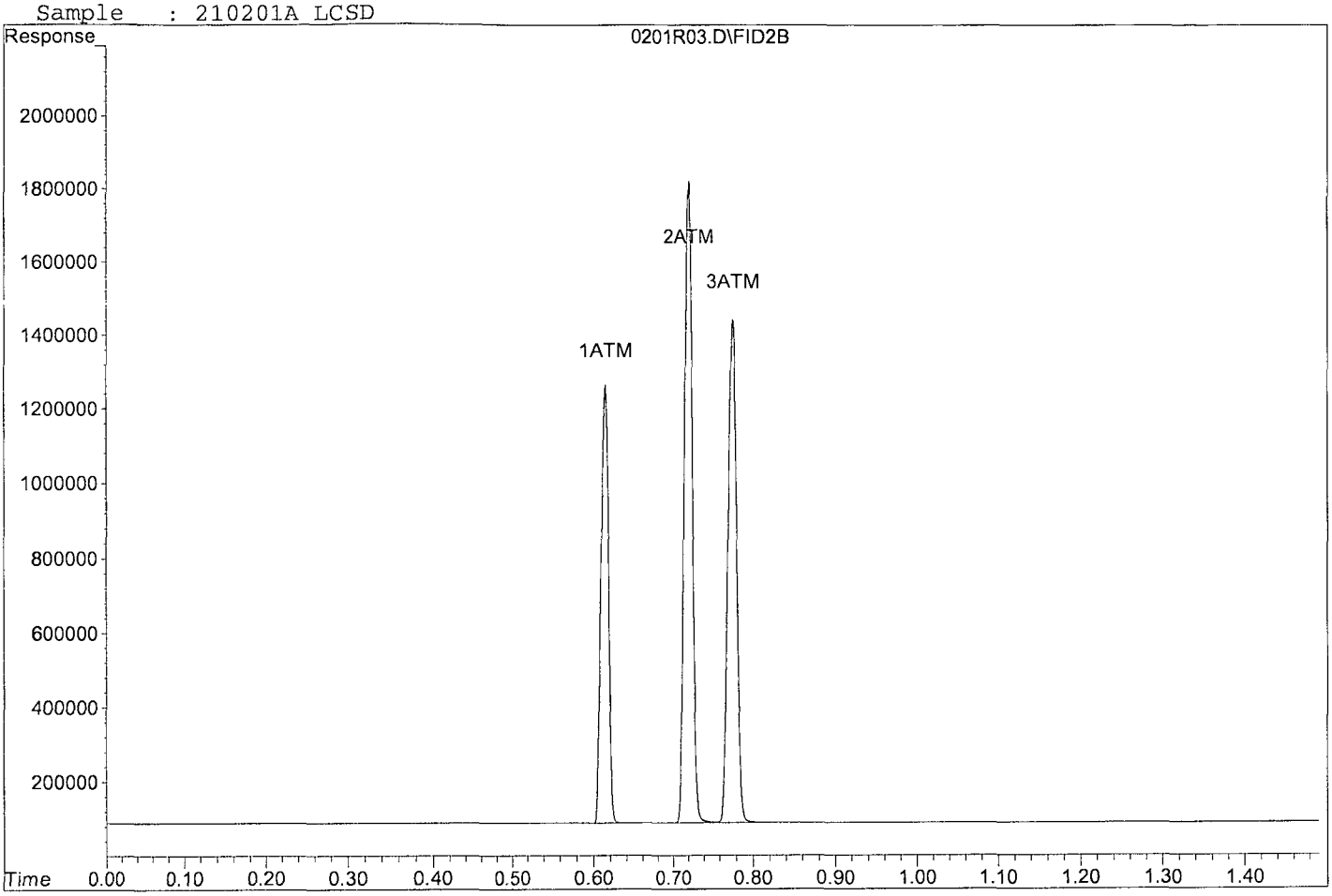
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.61	1180222	95.627	ppb
2) ATM Ethane	0.72	1733912	189.075	ppb
3) ATM Ethene	0.78	1335255	182.324	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200914RS\0201R03.D
Sample : 210201A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL
Curve Prep:	09/14/20						
Expiration Date	09/15/20						
Analyst	CD						

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source ***Expires 09/15/2020*** **CD 09/14/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

CCV/LCS/LCSD **LS 2/01/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

BA26001W08 MS/MSD **LS 2/01/21**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace
final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200914RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0201R01.D	1	210201A LCS/CCV		1 Feb 21 11:57
2	3	0201R03.D	1	210201A LCSD		1 Feb 21 12:04
3	4	0201R04.D	1	210201A BLK		1 Feb 21 12:08
4	16	0201R16.D	1	BA26159W04		1 Feb 21 13:01
5	17	0201R17.D	1	BA26160W04		1 Feb 21 13:06
6	18	0201R18.D	1	BA26162W04		1 Feb 21 13:11
7	19	0201R19.D	1	BA26163W04		1 Feb 21 13:14
8	20	0201R20.D	1	210201A ENDING CCV		1 Feb 21 13:17
9	1	0914R07.D	1	RSK STD1 200914		14 Sep 20 12:06
10	1	0914R08.D	1	RSK STD2 200914		14 Sep 20 12:10
11	1	0914R09.D	1	RSK STD3 200914		14 Sep 20 12:13
12	1	0914R10.D	1	RSK STD4 200914		14 Sep 20 12:18
13	1	0914R11.D	1	RSK STD5 200914		14 Sep 20 12:21
14	1	0914R12.D	1	RSK STD6 200914		14 Sep 20 12:25
15	1	0914R13.D	1	RSK STD7 200914		14 Sep 20 12:28
16	1	0914R14.D	1	SS RSK STD5 200914		14 Sep 20 12:32

INORGANIC ANALYSIS
Calibration Data

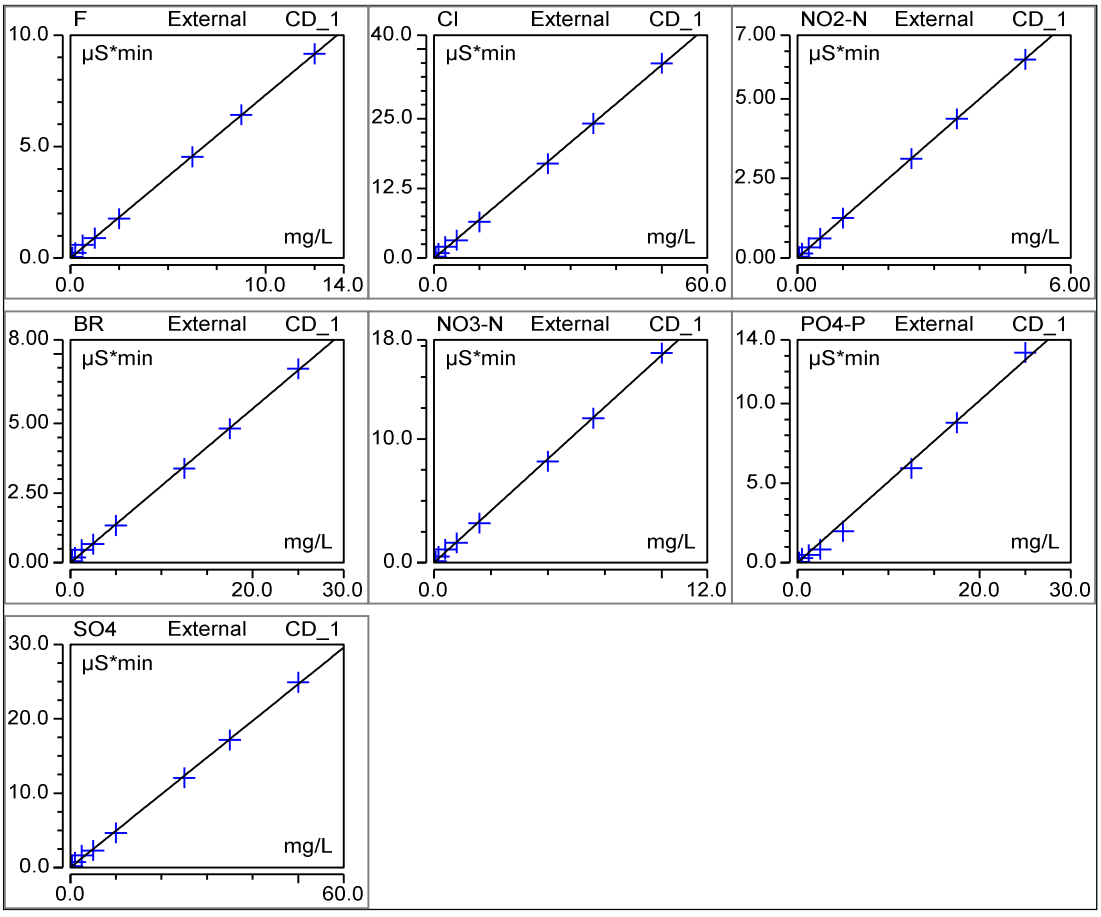
Calibration Batch Report

Sequence:	**210127**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.3**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	9.000	0.000	0.732	0.000	99.9686
Cl	Area	Lin, WithOffset	9.000	-0.065	0.694	0.000	99.9516
NO2-N	Area	Lin, 1/A	9.000	0.000	1.250	0.000	99.9565
BR	Area	Lin	9.000	0.000	0.276	0.000	99.9445
NO3-N	Area	Lin	9.000	0.000	1.677	0.000	99.9354
PO4-P	Area	Lin	9.000	0.000	0.509	0.000	99.4697
SO4	Area	Lin	9.000	0.000	0.493	0.000	99.9284

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2021.01.27	0.026	0.3223	0.0177	0.1242	0.0548	0.0541	0.1929
Cal 2 2021.01.27	0.054	0.4809	0.0324	0.1908	0.0758	0.0846	0.3479
Cal 3 2021.01.27	0.319	1.3363	0.1161	0.6859	0.3061	0.5562	1.4333
Cal 4 2021.01.27	0.804	3.0075	0.2642	1.6813	0.6414	0.9824	3.2763
Cal 5 2021.01.27	1.220	4.6876	0.4934	2.4106	0.9577	1.6501	4.6329
Cal 6 2021.01.27	2.412	9.4517	1.0028	4.8367	1.9099	3.8840	9.4387
Cal 7 2021.01.27	6.202	24.4866	2.4975	12.2539	4.8803	11.6439	24.4424
Cal 8 2021.01.27	8.777	34.8760	3.4968	17.4152	6.9590	17.2573	34.7830
Cal 9 2021.01.27	12.516	50.4512	4.9892	25.1987	10.1016	25.9195	50.5326

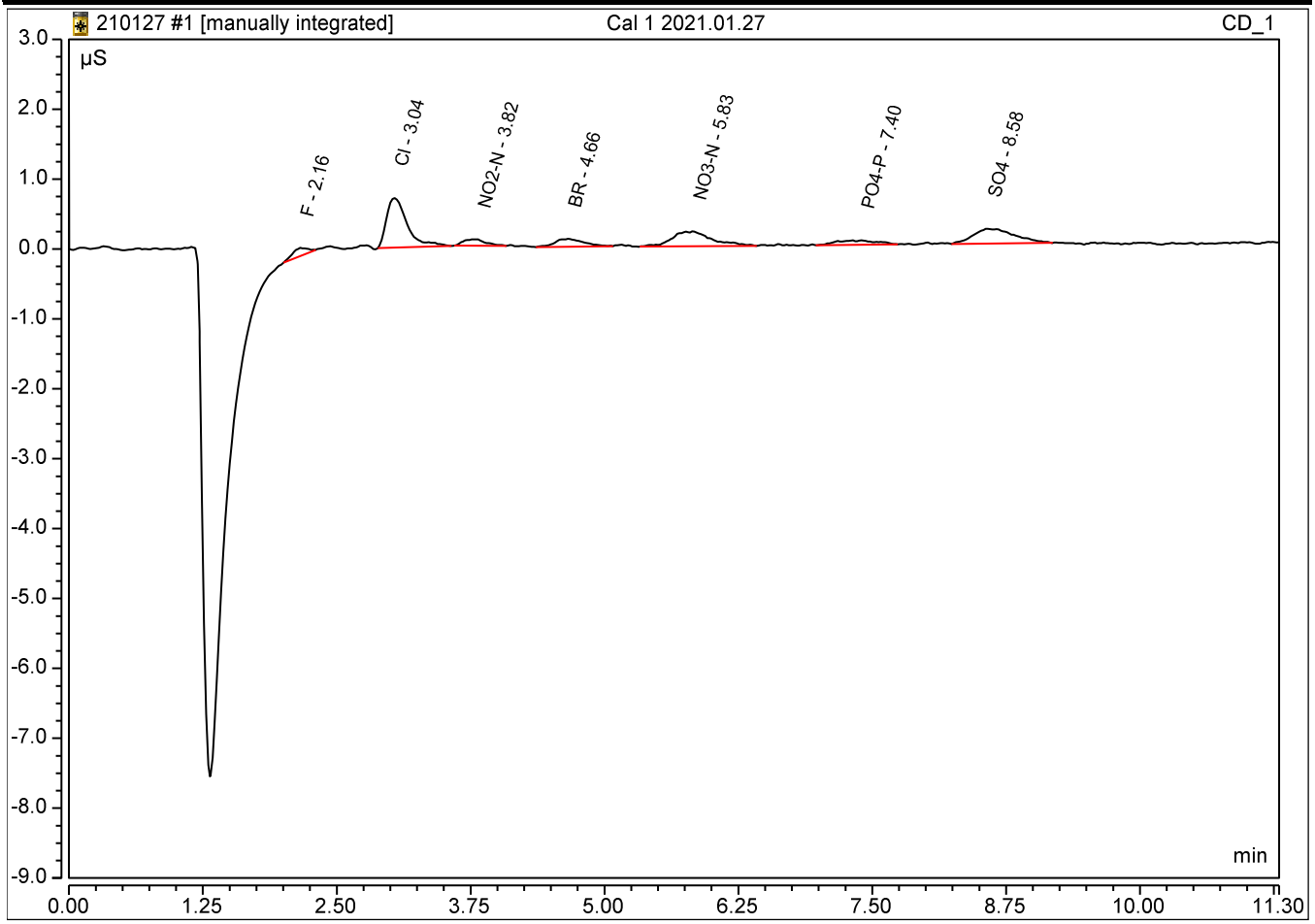


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 1 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:00**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB*	0.019	0.115	0.03	0.05	52.0%
2	3.04	**Cl**	BMB	0.158	0.712	0.32	0.2	161.1%
3	3.82	**NO2-N**	BMB*	0.022	0.092	0.02	0.02	88.6%
4	4.66	**BR**	BMB*	0.034	0.112	0.12	0.1	124.2%
5	5.83	**NO3-N**	BMB*	0.092	0.214	0.05	0.04	136.9%
6	7.40	**PO4-P**	BMB*	0.028	0.065	0.05	0.1	54.1%
7	8.58	**SO4**	BMB*	0.095	0.212	0.19	0.2	96.4%



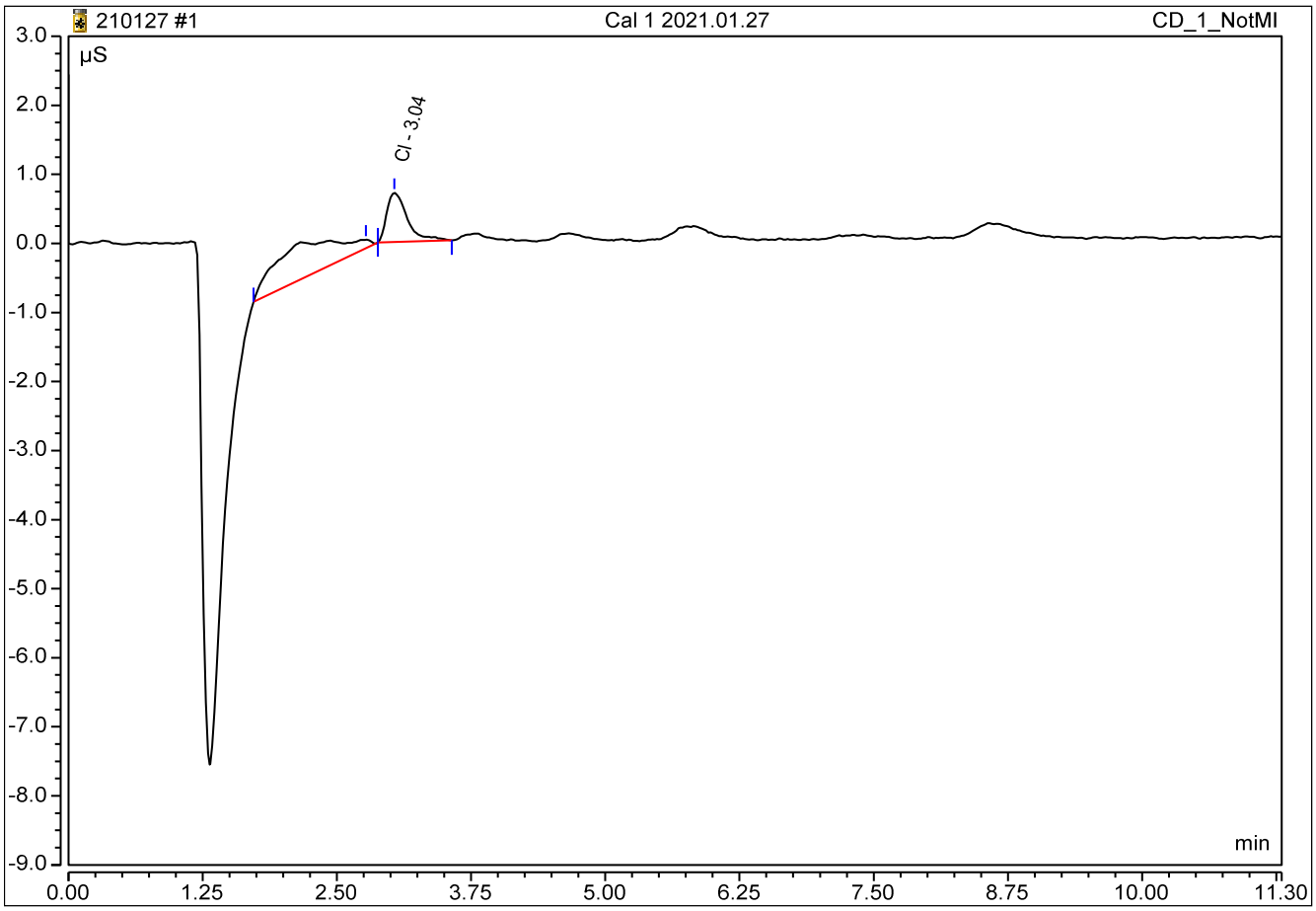
MI 5 F Br NO2 no3 PO4 SO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:00**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	n.a.	**F**	BMB*	n.a.	n.a.	n.a.
2	3.04	**Cl**	BMB	0.158	0.712	0.3024
3	n.a.	**NO2-N**	BMB*	n.a.	n.a.	n.a.
4	n.a.	**BR**	BMB*	n.a.	n.a.	n.a.
5	n.a.	**NO3-N**	BMB*	n.a.	n.a.	n.a.
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	n.a.	**SO4**	BMB*	n.a.	n.a.	n.a.

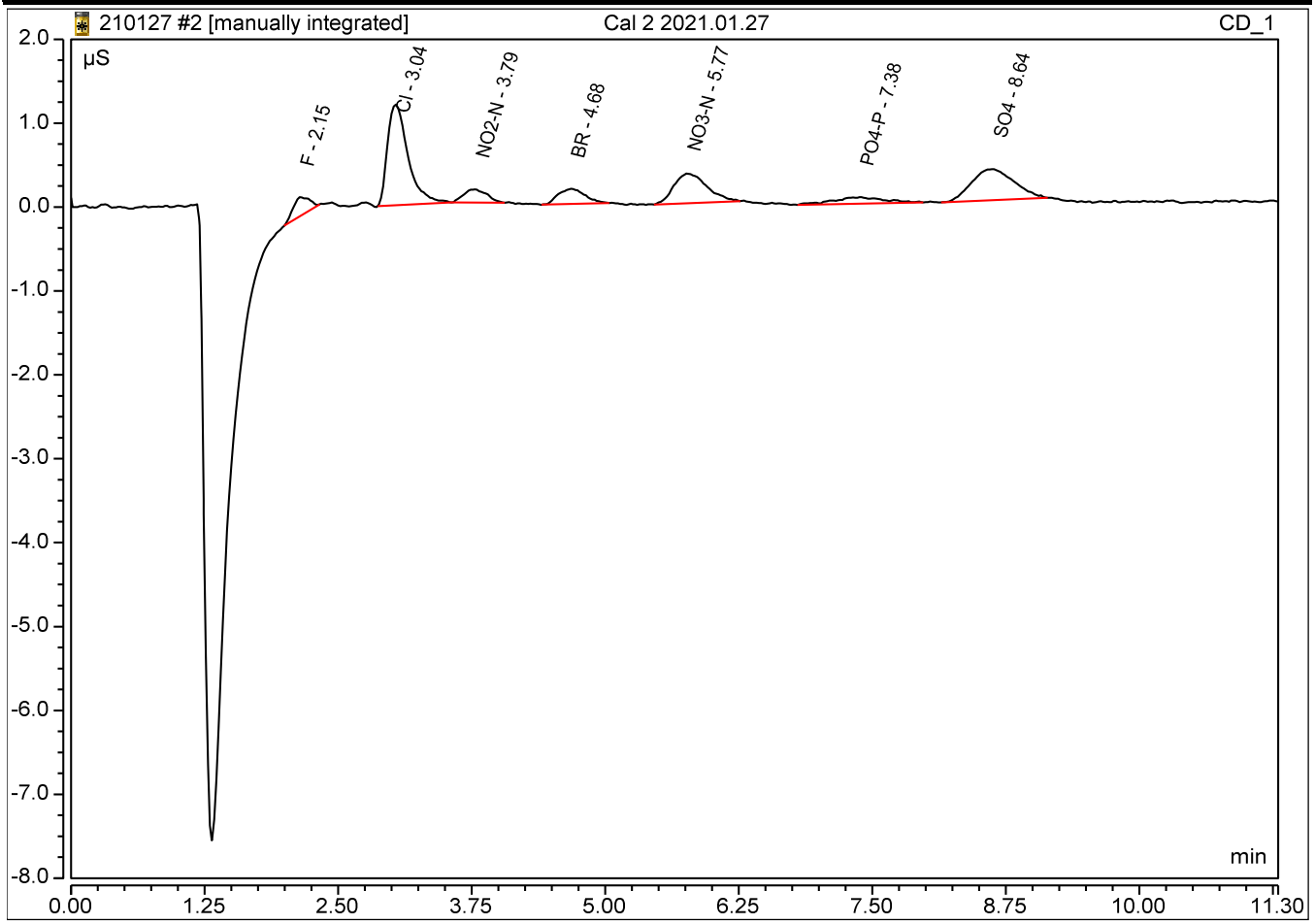


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 2 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:15**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	0.039	0.224	0.05	0.1	53.7%
2	3.04	**Cl**	BMB	0.268	1.199	0.48	0.4	120.2%
3	3.79	**NO2-N**	BMB	0.040	0.161	0.03	0.04	80.9%
4	4.68	**BR**	BMB	0.053	0.184	0.19	0.2	95.4%
5	5.77	**NO3-N**	BMB	0.127	0.356	0.08	0.08	94.8%
6	7.38	**PO4-P**	BMB*	0.043	0.080	0.08	0.2	42.3%
7	8.64	**SO4**	BMB	0.172	0.371	0.35	0.4	87.0%



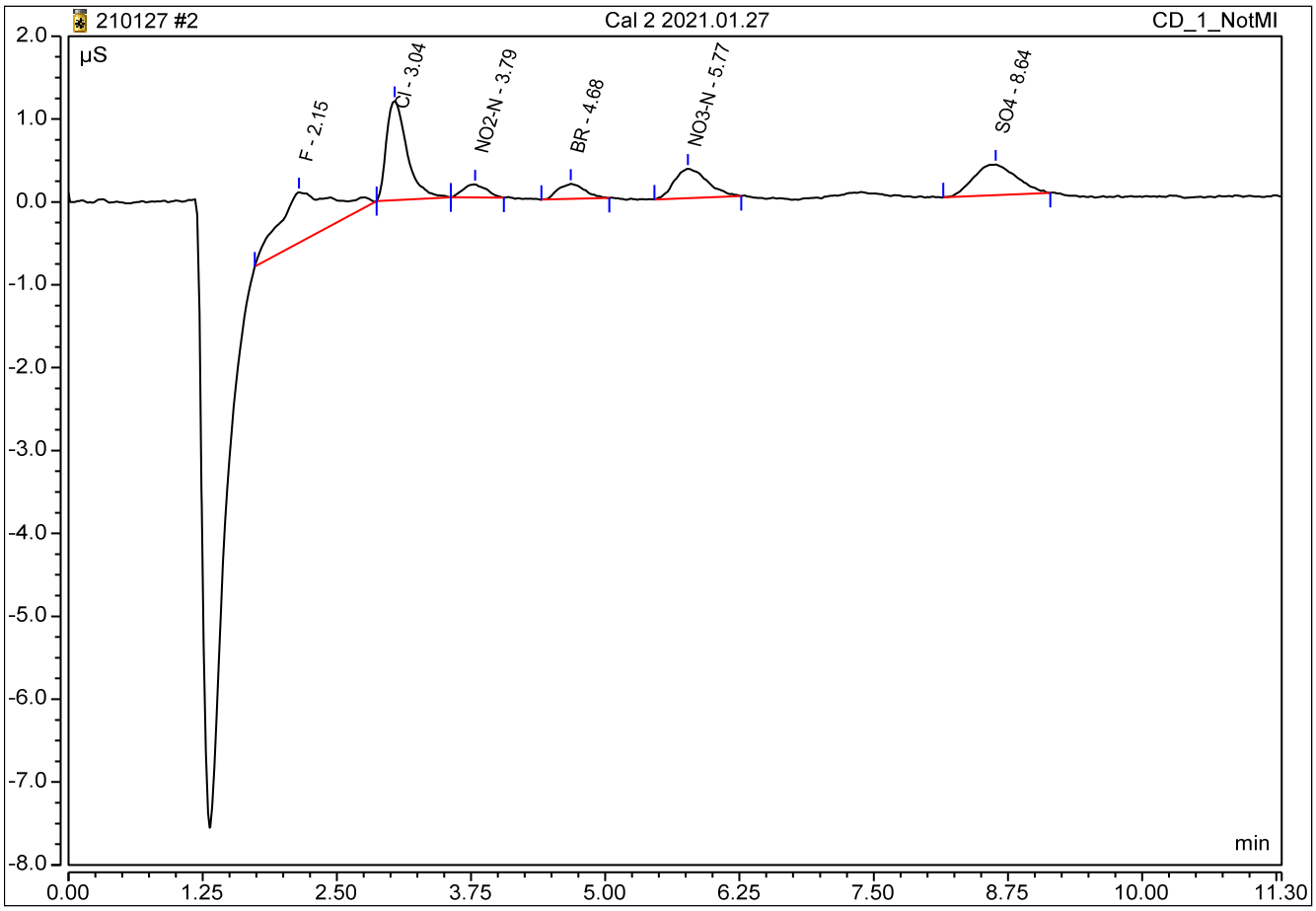
MI 5 F Br NO2 no3 PO4 SO4 GA 01/26/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:15**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	0.347	0.611	0.5147
2	3.04	**Cl**	BMB	0.268	1.199	0.4673
3	3.79	**NO2-N**	BMB	0.040	0.161	0.0405
4	4.68	**BR**	BMB	0.053	0.184	0.1908
5	5.77	**NO3-N**	BMB	0.127	0.356	0.0758
6	n.a.	**PO4-P**	BMB*	n.a.	n.a.	n.a.
7	8.64	**SO4**	BMB	0.172	0.371	0.3479

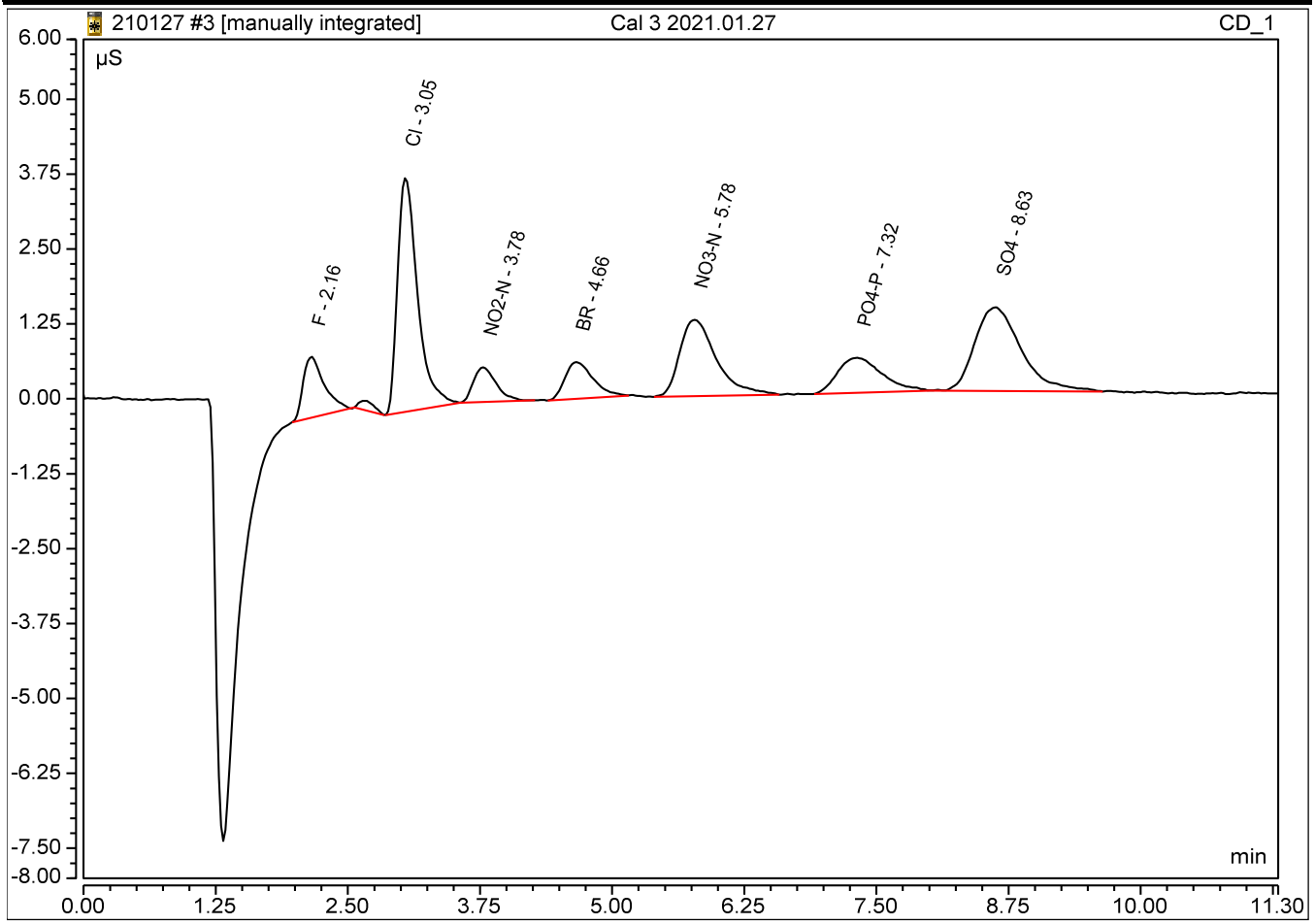


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 3 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.16	**F**	BMB*	0.234	1.014	0.32	0.25	127.8%
3	3.05	**Cl**	BMB	0.862	3.903	1.34	1	133.6%
4	3.78	**NO2-N**	BMB	0.145	0.578	0.12	0.1	116.1%
5	4.66	**BR**	BMB	0.190	0.613	0.69	0.5	137.2%
6	5.78	**NO3-N**	BMB	0.513	1.275	0.31	0.2	153.1%
7	7.32	**PO4-P**	BMB	0.283	0.584	0.56	0.5	111.2%
8	8.63	**SO4**	BMB	0.707	1.396	1.43	1	143.3%



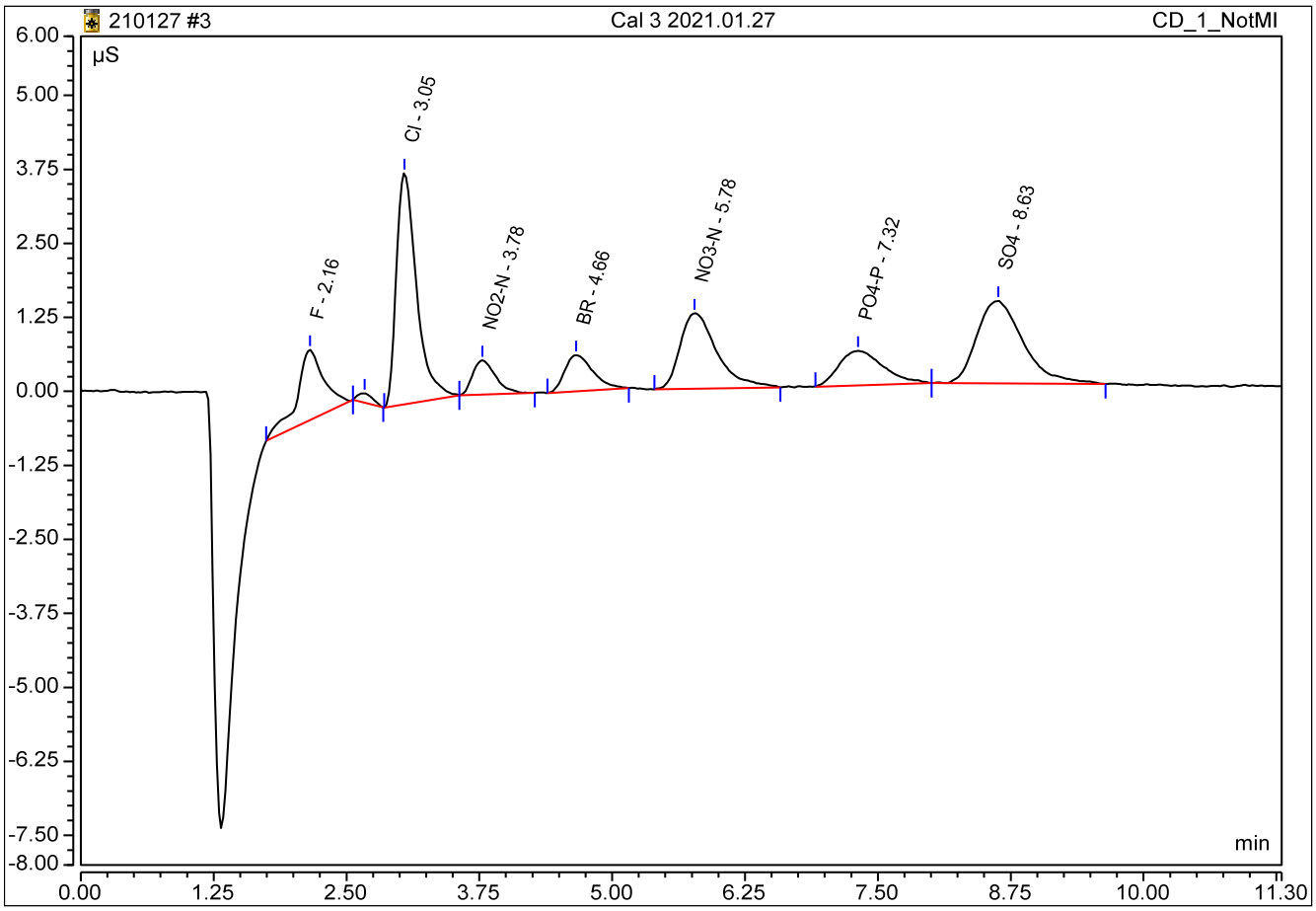
MI 5 F GA 01/27/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:30**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.16	**F**	BMB*	0.349	1.187	0.5179
3	3.05	**Cl**	BMB	0.862	3.903	1.3567
4	3.78	**NO2-N**	BMB	0.145	0.578	0.1452
5	4.66	**BR**	BMB	0.190	0.613	0.6859
6	5.78	**NO3-N**	BMB	0.513	1.275	0.3061
7	7.32	**PO4-P**	BMB	0.283	0.584	0.5562
8	8.63	**SO4**	BMB	0.707	1.396	1.4333

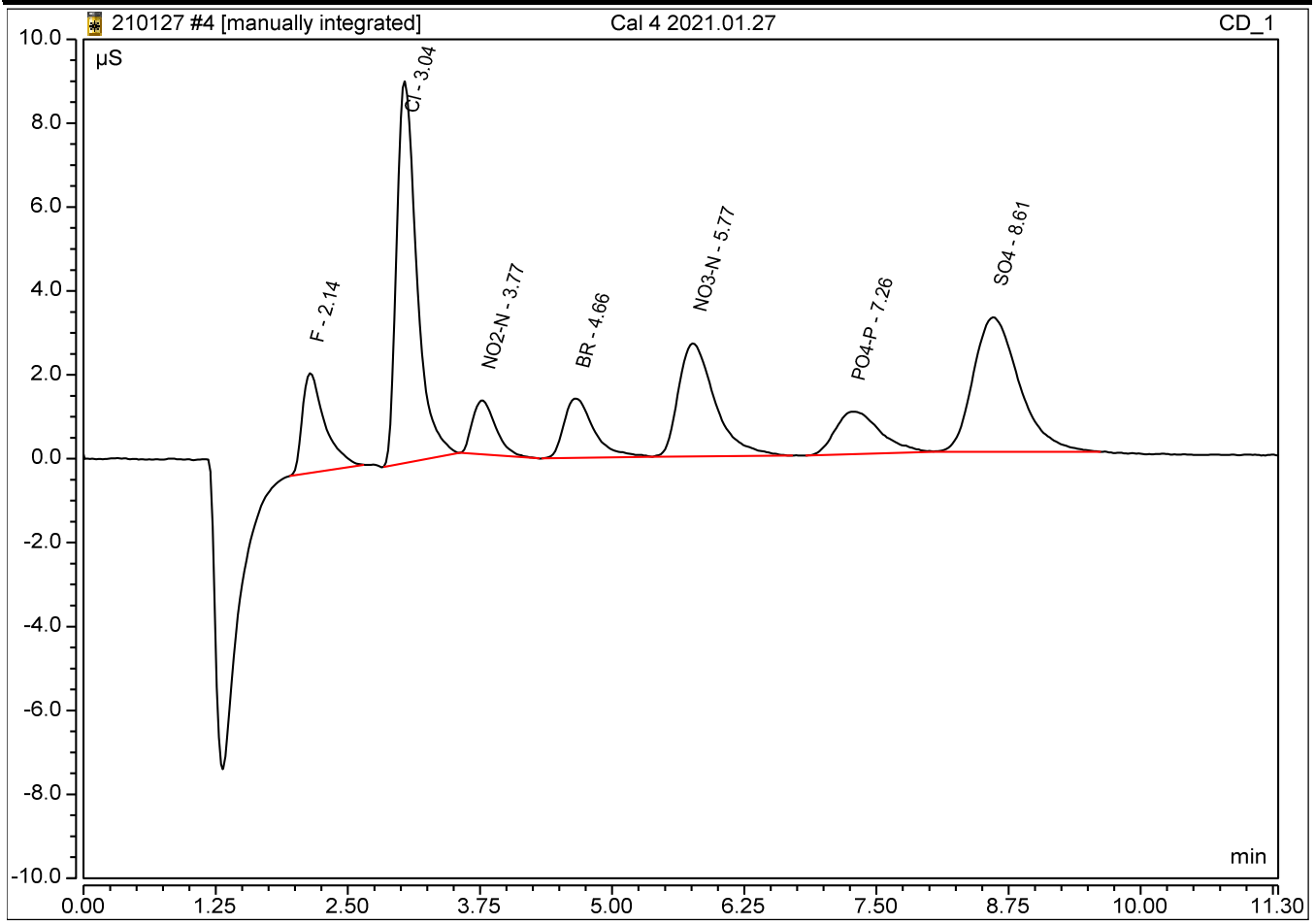


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 4 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	0.588	2.378	0.80	0.625	128.6%
2	3.04	**Cl**	BMB	2.022	9.104	3.01	2.5	120.3%
3	3.77	**NO2-N**	BMB	0.330	1.289	0.26	0.25	105.7%
4	4.66	**BR**	BMB	0.465	1.415	1.68	1.25	134.5%
5	5.77	**NO3-N**	BMB	1.075	2.696	0.64	0.5	128.3%
6	7.26	**PO4-P**	BMB	0.500	1.014	0.98	1.25	78.6%
7	8.61	**SO4**	BMB	1.616	3.204	3.28	2.5	131.1%



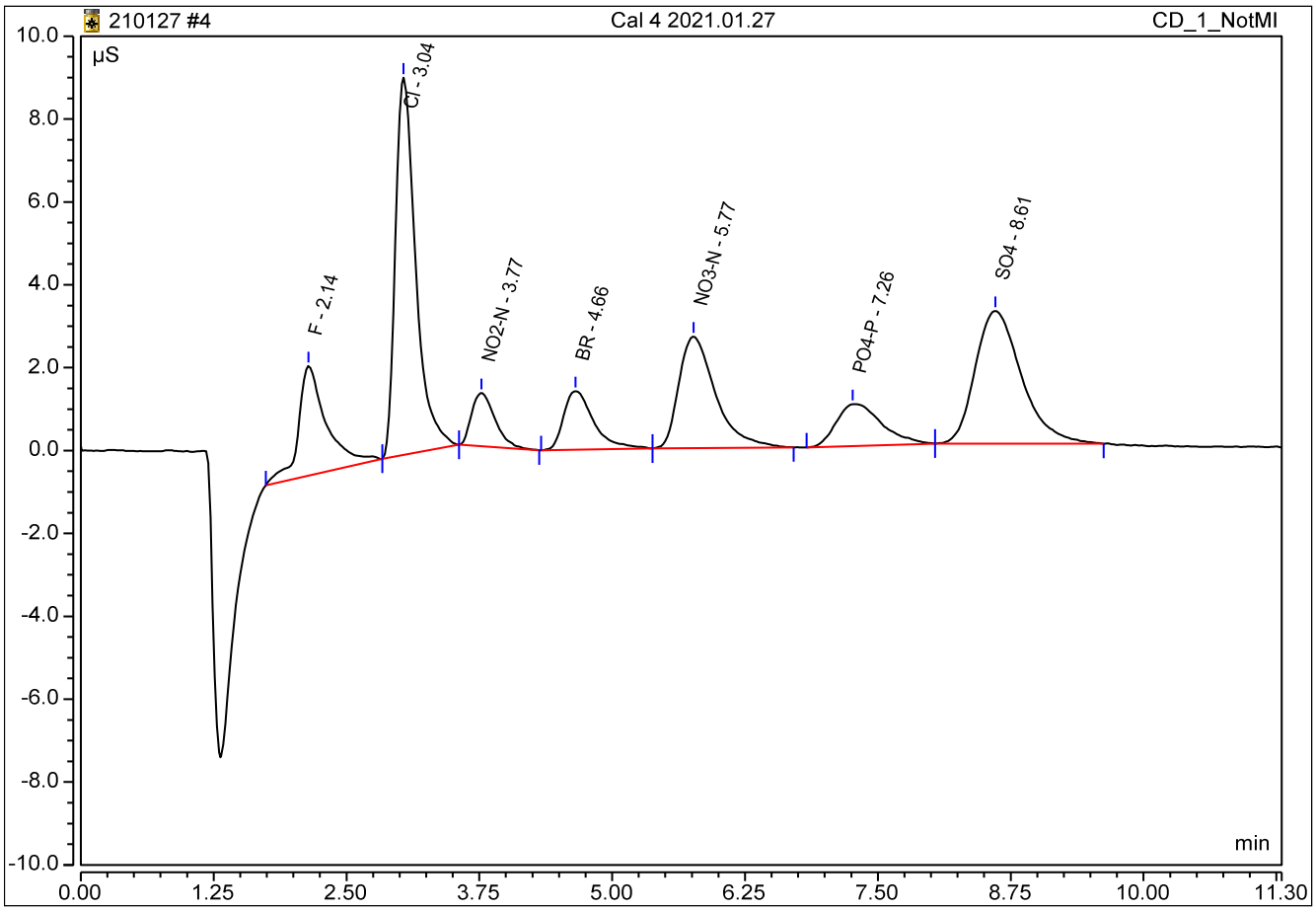
MI 5 F GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:44**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	0.811	2.641	1.2025
2	3.04	**Cl**	BMB	2.022	9.104	3.0942
3	3.77	**NO2-N**	BMB	0.330	1.289	0.3305
4	4.66	**BR**	BMB	0.465	1.415	1.6813
5	5.77	**NO3-N**	BMB	1.075	2.696	0.6414
6	7.26	**PO4-P**	BMB	0.500	1.014	0.9823
7	8.61	**SO4**	BMB	1.616	3.204	3.2763

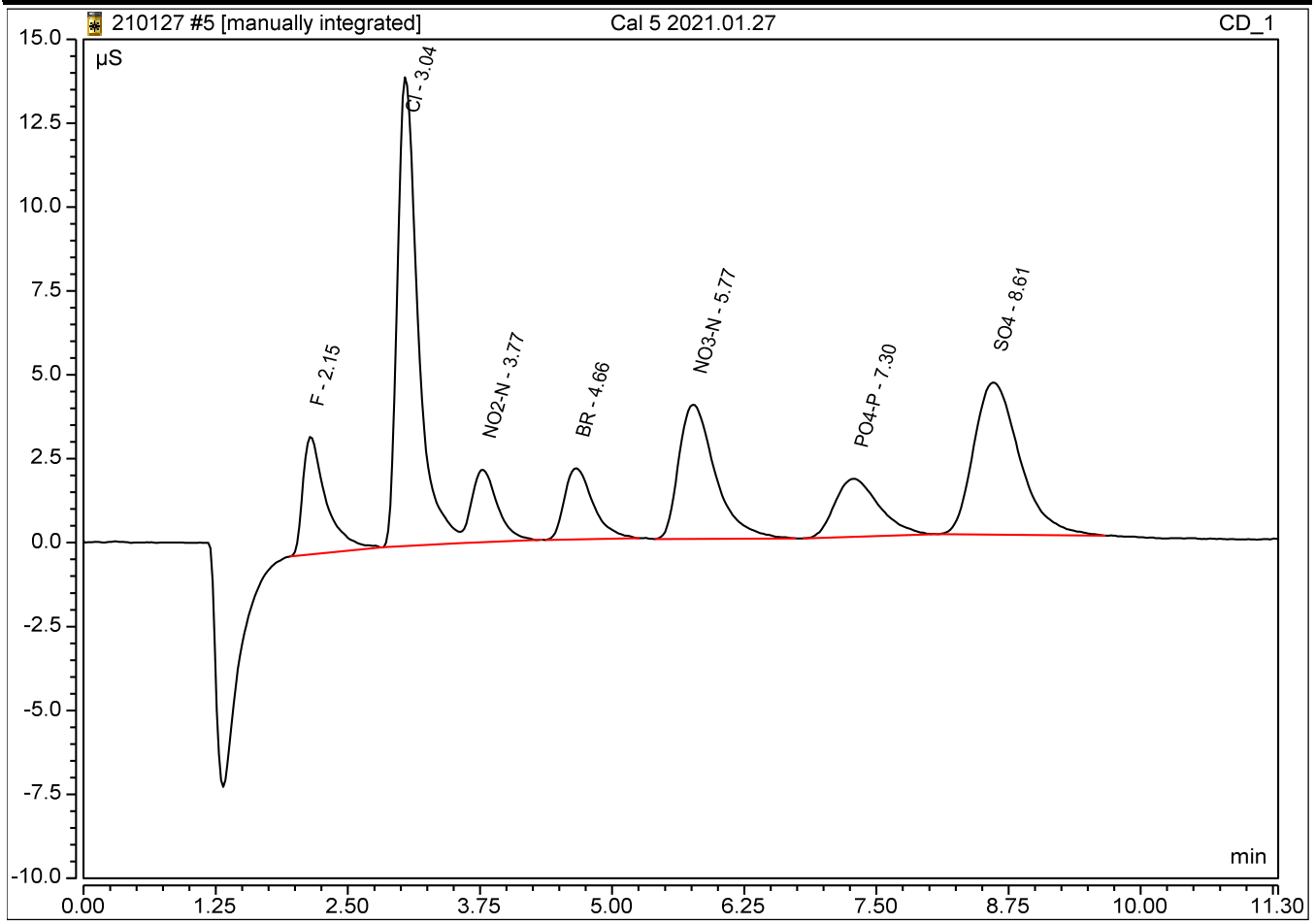


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 5 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:59**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	0.893	3.509	1.22	1.25	97.6%
2	3.04	**Cl**	bM *	3.188	13.986	4.69	5	93.8%
3	3.77	**NO2-N**	MB*	0.617	2.165	0.49	0.5	98.7%
4	4.66	**BR**	BMB	0.666	2.120	2.41	2.5	96.4%
5	5.77	**NO3-N**	BMB	1.606	4.004	0.96	1	95.8%
6	7.30	**PO4-P**	BMB	0.841	1.732	1.65	2.5	66.0%
7	8.61	**SO4**	BMB	2.286	4.532	4.63	5	92.7%



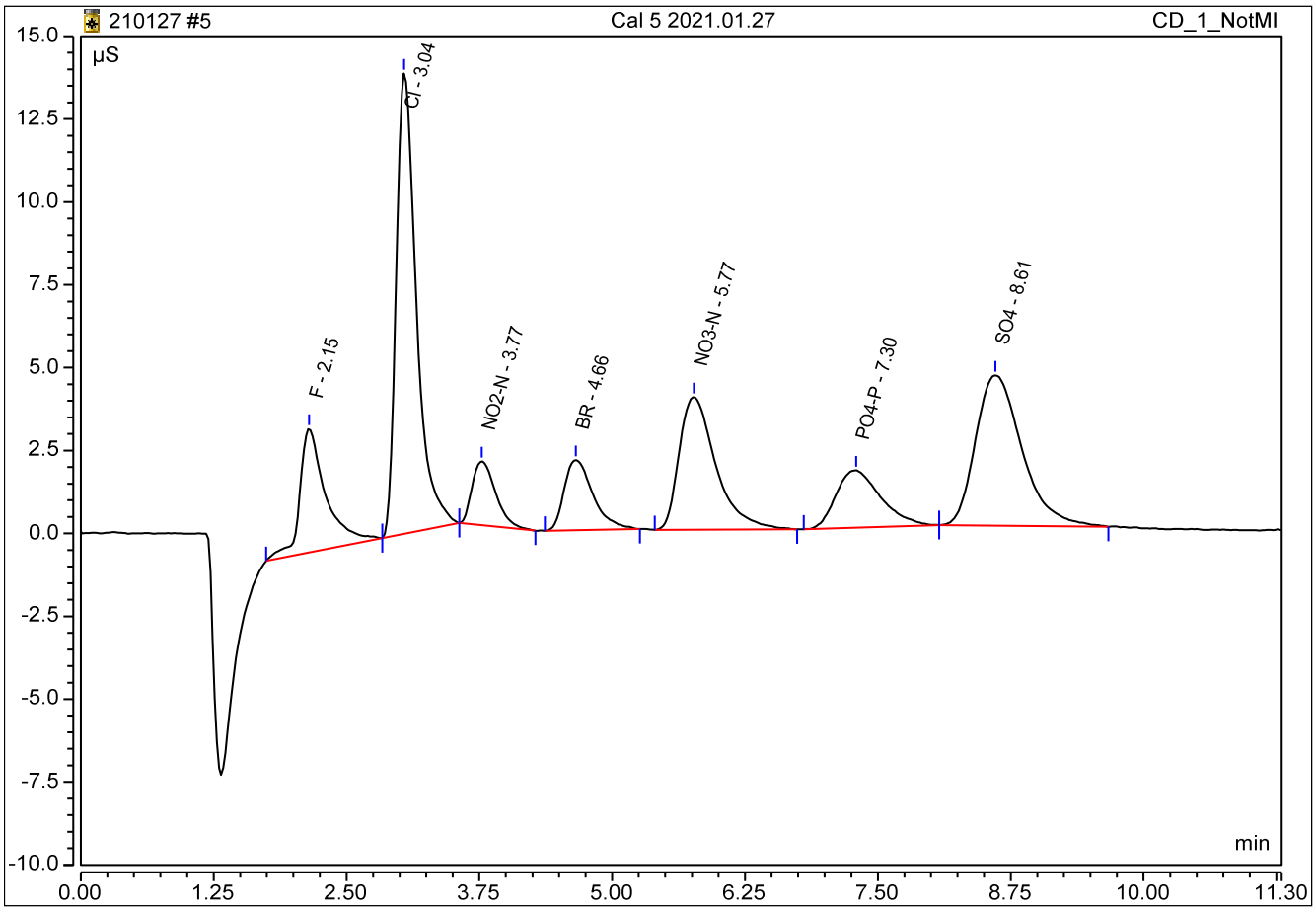
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 16:59**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	1.061	3.733	1.5736
2	3.04	**Cl**	bM *	3.068	13.891	4.6609
3	3.77	**NO2-N**	MB*	0.495	1.929	0.4951
4	4.66	**BR**	BMB	0.666	2.120	2.4106
5	5.77	**NO3-N**	BMB	1.606	4.004	0.9577
6	7.30	**PO4-P**	BMB	0.841	1.732	1.6501
7	8.61	**SO4**	BMB	2.286	4.532	4.6329

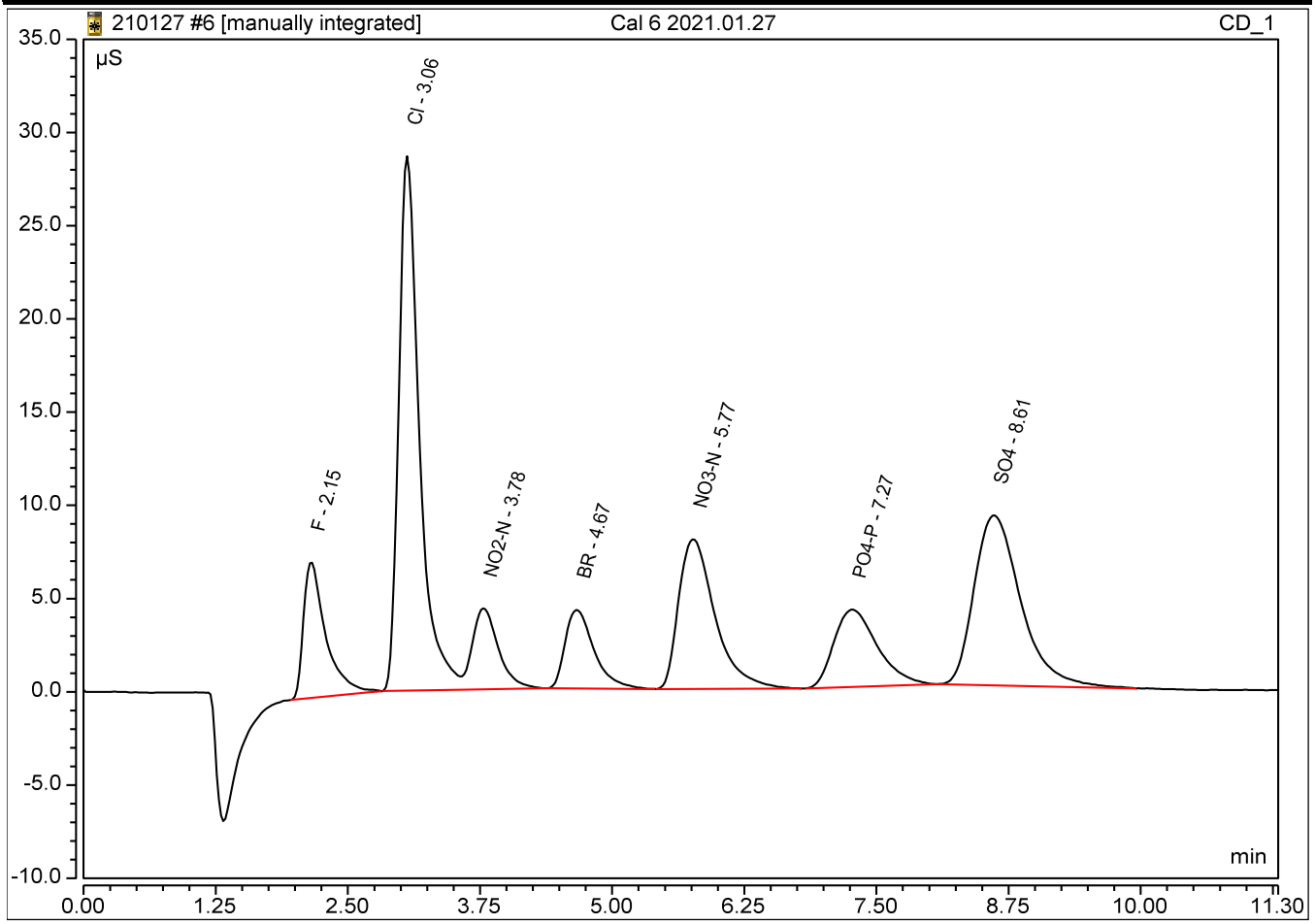


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 6 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:13**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BM *	1.766	7.298	2.41	2.5	96.5%
3	3.06	**Cl**	BM *	6.494	28.673	9.45	10	94.5%
4	3.78	**NO2-N**	Mb*	1.254	4.347	1.00	1	100.3%
5	4.67	**BR**	bMB*	1.337	4.215	4.84	5	96.7%
6	5.77	**NO3-N**	BMB	3.202	8.023	1.91	2	95.5%
7	7.27	**PO4-P**	BMB	1.979	4.159	3.88	5	77.7%
8	8.61	**SO4**	BMB	4.657	9.120	9.44	10	94.4%



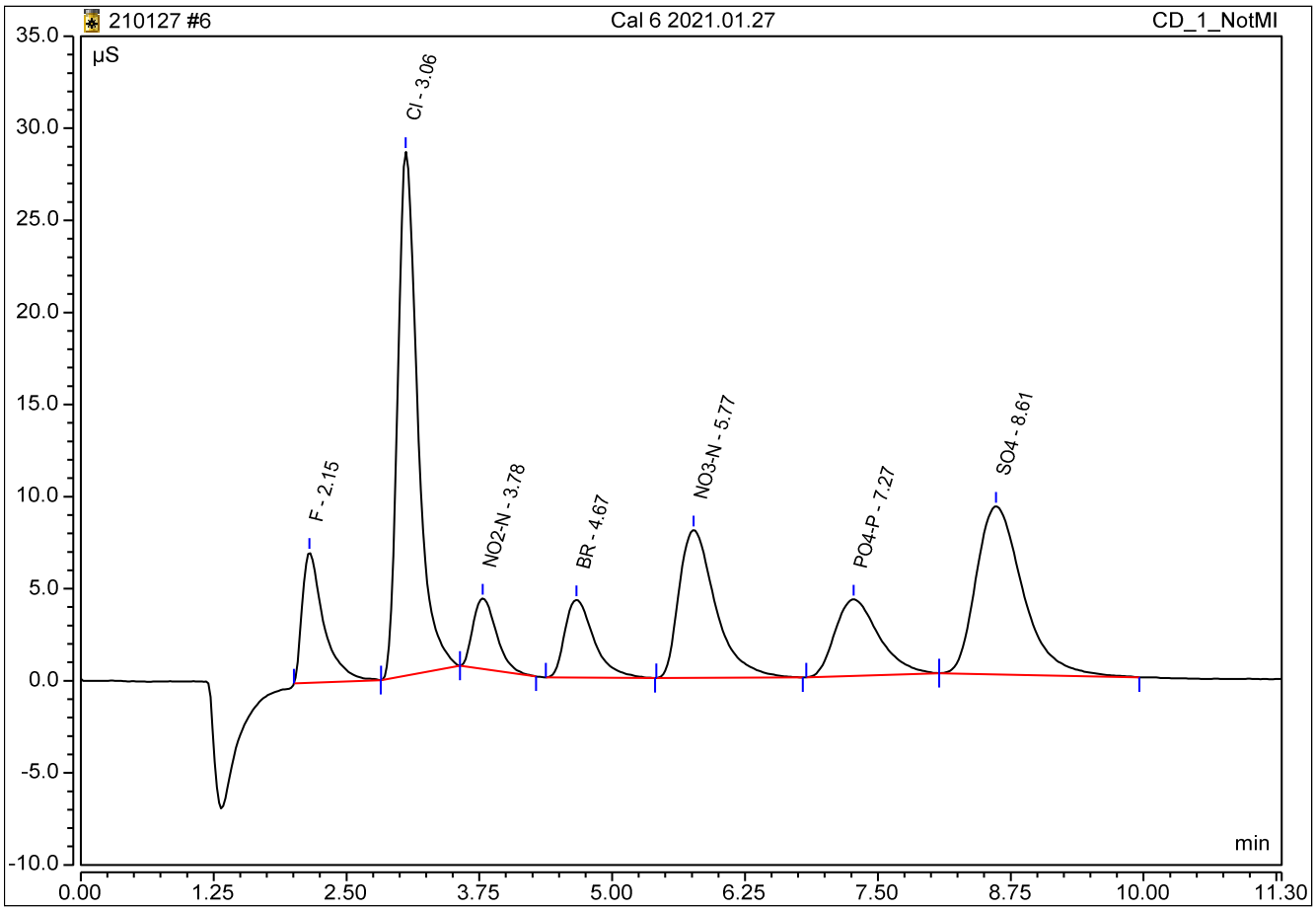
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:13**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BM *	1.664	7.081	2.4688
3	3.06	**Cl**	BM *	6.232	28.451	9.4005
4	3.78	**NO2-N**	Mb*	0.976	3.833	0.9769
5	4.67	**BR**	bMB*	1.337	4.215	4.8367
6	5.77	**NO3-N**	BMB	3.202	8.023	1.9099
7	7.27	**PO4-P**	BMB	1.979	4.159	3.8839
8	8.61	**SO4**	BMB	4.657	9.120	9.4387

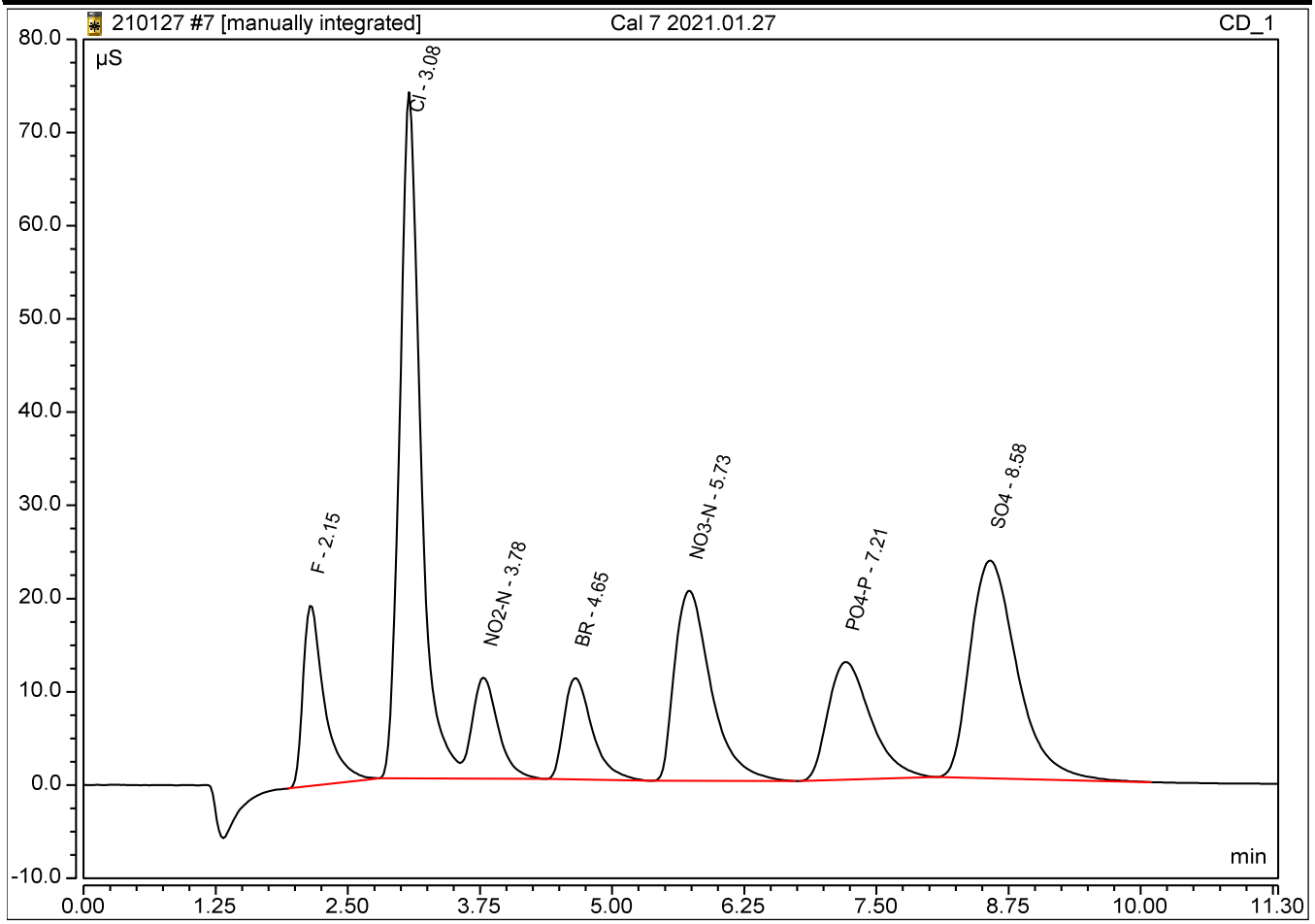


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 7 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:28**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BM *	4.541	19.418	6.20	6.25	99.2%
3	3.08	**Cl**	BM *	16.929	73.613	24.49	25	97.9%
4	3.78	**NO2-N**	Mb*	3.122	10.847	2.50	2.5	99.9%
5	4.65	**BR**	bMB*	3.387	10.890	12.25	12.5	98.0%
6	5.73	**NO3-N**	BMB	8.182	20.424	4.88	5	97.6%
7	7.21	**PO4-P**	BMB	5.932	12.626	11.64	12.5	93.2%
8	8.58	**SO4**	BMB	12.059	23.361	24.44	25	97.8%

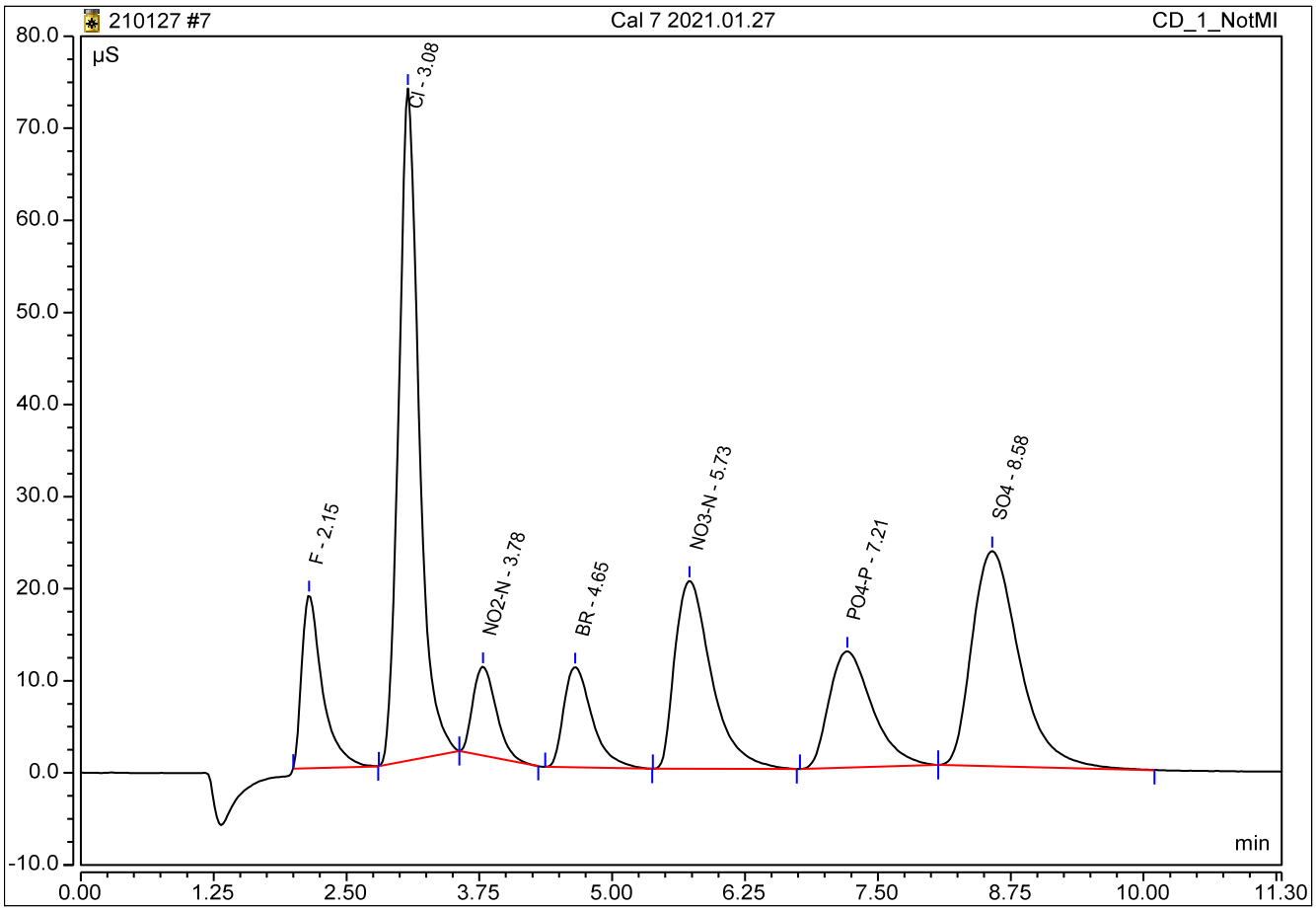


MI 5 F Cl NO2 GA 01/28/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:28**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BM *	4.240	18.808	6.2905
3	3.08	**Cl**	BM *	16.290	73.006	24.4693
4	3.78	**NO2-N**	Mb*	2.462	9.639	2.4633
5	4.65	**BR**	bMB*	3.387	10.890	12.2539
6	5.73	**NO3-N**	BMB	8.182	20.424	4.8803
7	7.21	**PO4-P**	BMB	5.932	12.626	11.6436
8	8.58	**SO4**	BMB	12.059	23.361	24.4424

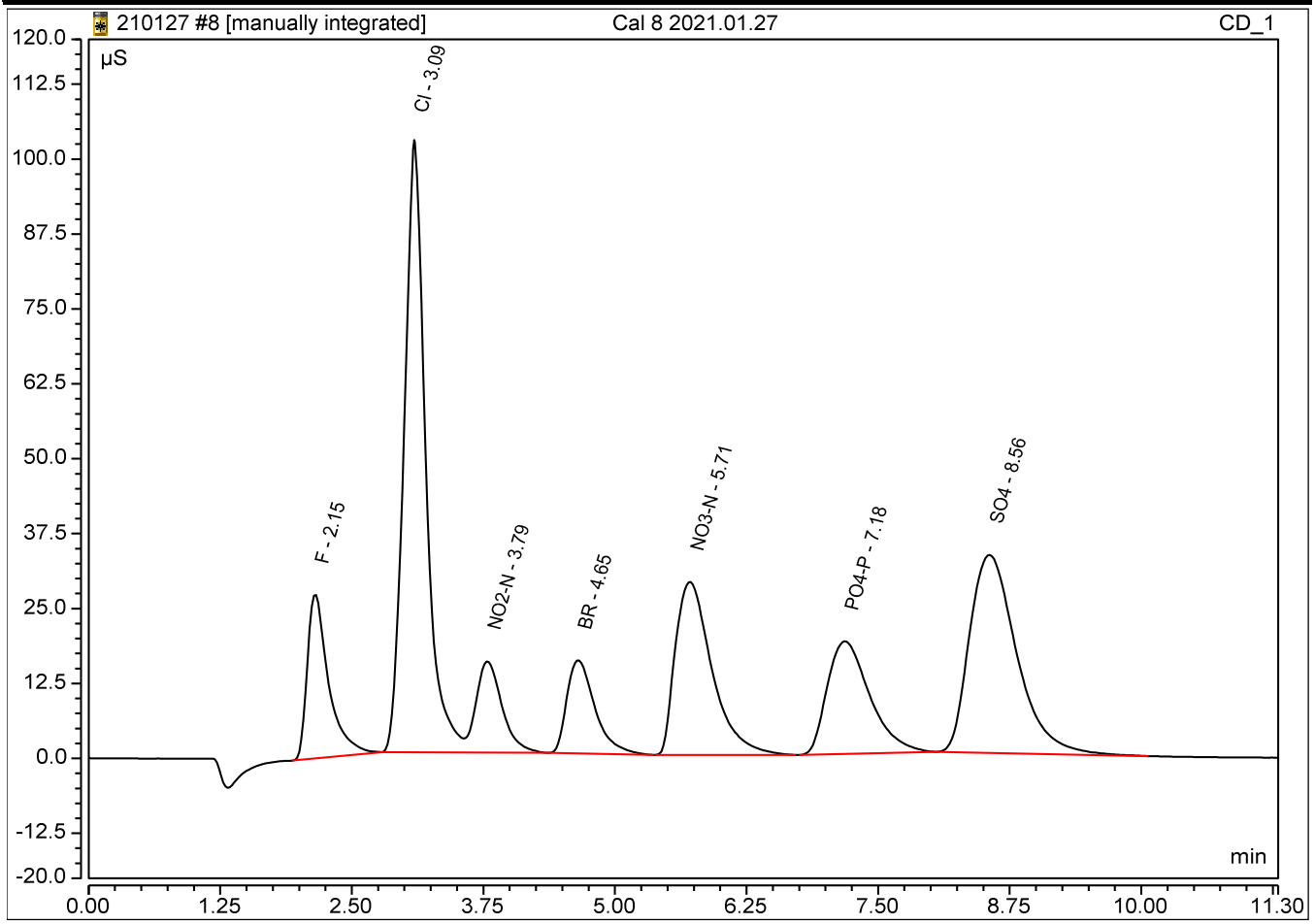


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 8 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:43**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	6.425	27.442	8.78	8.75	100.3%
2	3.09	**Cl**	BM *	24.139	102.180	34.88	35	99.6%
3	3.79	**NO2-N**	Mb*	4.372	15.217	3.50	3.5	99.9%
4	4.65	**BR**	bMB*	4.813	15.575	17.42	17.5	99.5%
5	5.71	**NO3-N**	BMB	11.667	28.903	6.96	7	99.4%
6	7.18	**PO4-P**	BMB	8.792	18.798	17.26	17.5	98.6%
7	8.56	**SO4**	BMB	17.161	33.024	34.78	35	99.4%



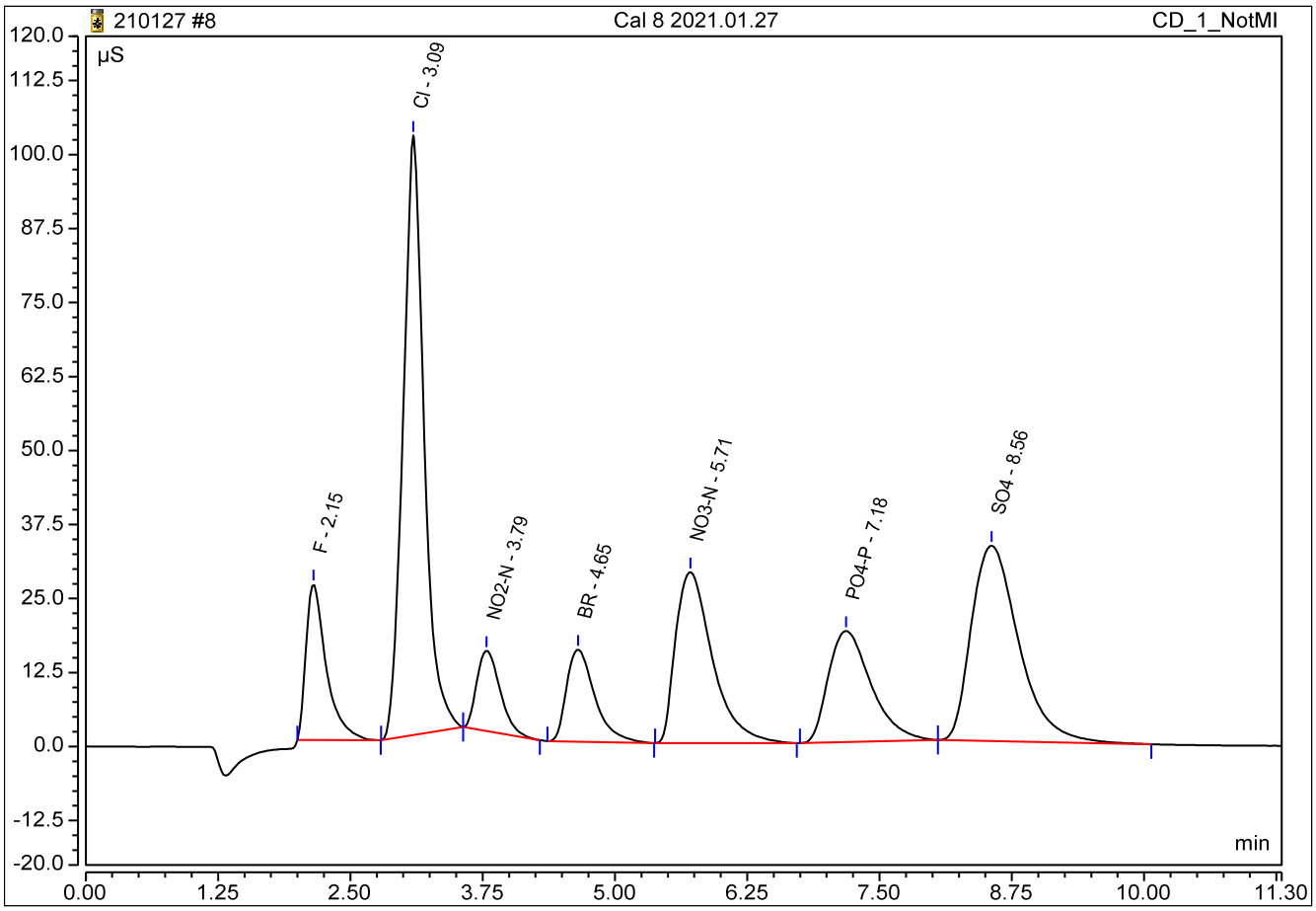
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:43**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	5.863	26.334	8.6988
2	3.09	**Cl**	BM *	23.247	101.279	34.8910
3	3.79	**NO2-N**	Mb*	3.478	13.572	3.4804
4	4.65	**BR**	bMB*	4.813	15.575	17.4152
5	5.71	**NO3-N**	BMB	11.667	28.903	6.9590
6	7.18	**PO4-P**	BMB	8.792	18.798	17.2569
7	8.56	**SO4**	BMB	17.161	33.024	34.7830

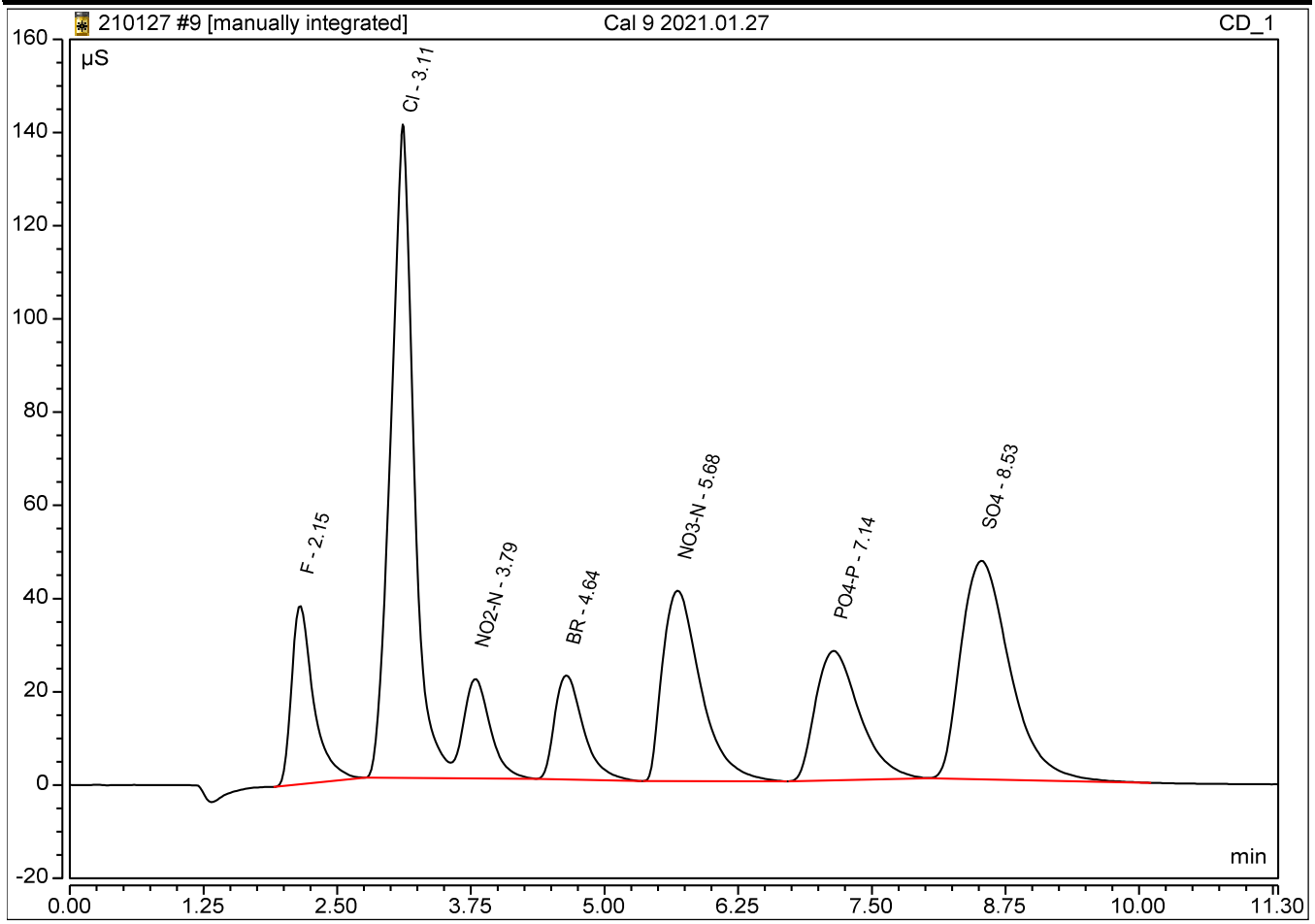


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**Cal 9 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	9.162	38.375	12.52	12.5	100.1%
2	3.11	**Cl**	bM *	34.949	140.217	50.45	50	100.9%
3	3.79	**NO2-N**	Mb*	6.237	21.339	4.99	5	99.8%
4	4.64	**BR**	bMB*	6.964	22.350	25.20	25	100.8%
5	5.68	**NO3-N**	BMB	16.936	40.916	10.10	10	101.0%
6	7.14	**PO4-P**	BMB	13.205	27.774	25.92	25	103.7%
7	8.53	**SO4**	BMB	24.931	46.883	50.53	50	101.1%



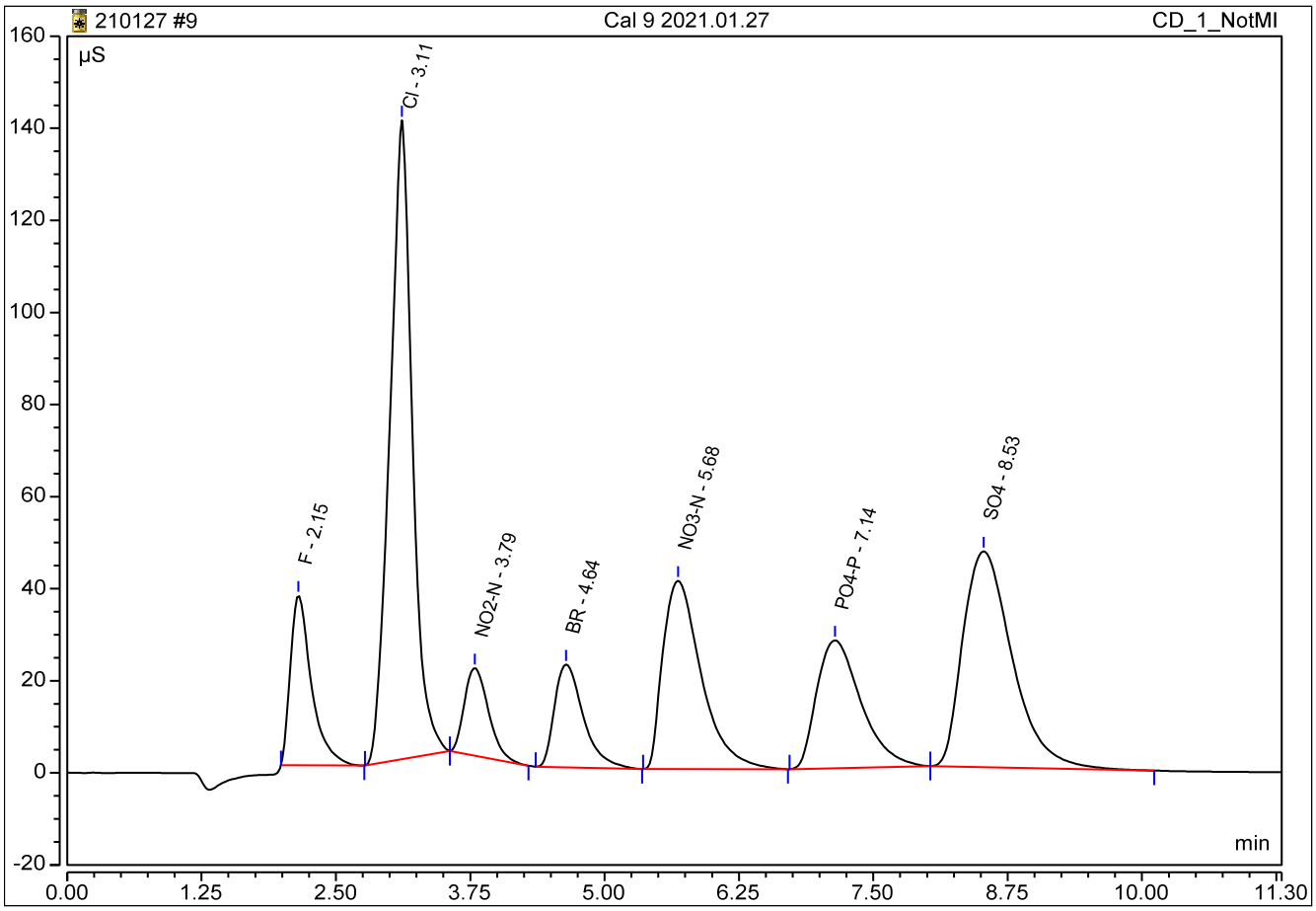
MI 5 F Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.01.27**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 17:57**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	8.393	36.874	12.4519
2	3.11	**Cl**	bM *	33.638	138.772	50.4576
3	3.79	**NO2-N**	Mb*	4.955	19.022	4.9581
4	4.64	**BR**	bMB*	6.964	22.350	25.1988
5	5.68	**NO3-N**	BMB	16.936	40.916	10.1016
6	7.14	**PO4-P**	BMB	13.205	27.774	25.9188
7	8.53	**SO4**	BMB	24.931	46.883	50.5326

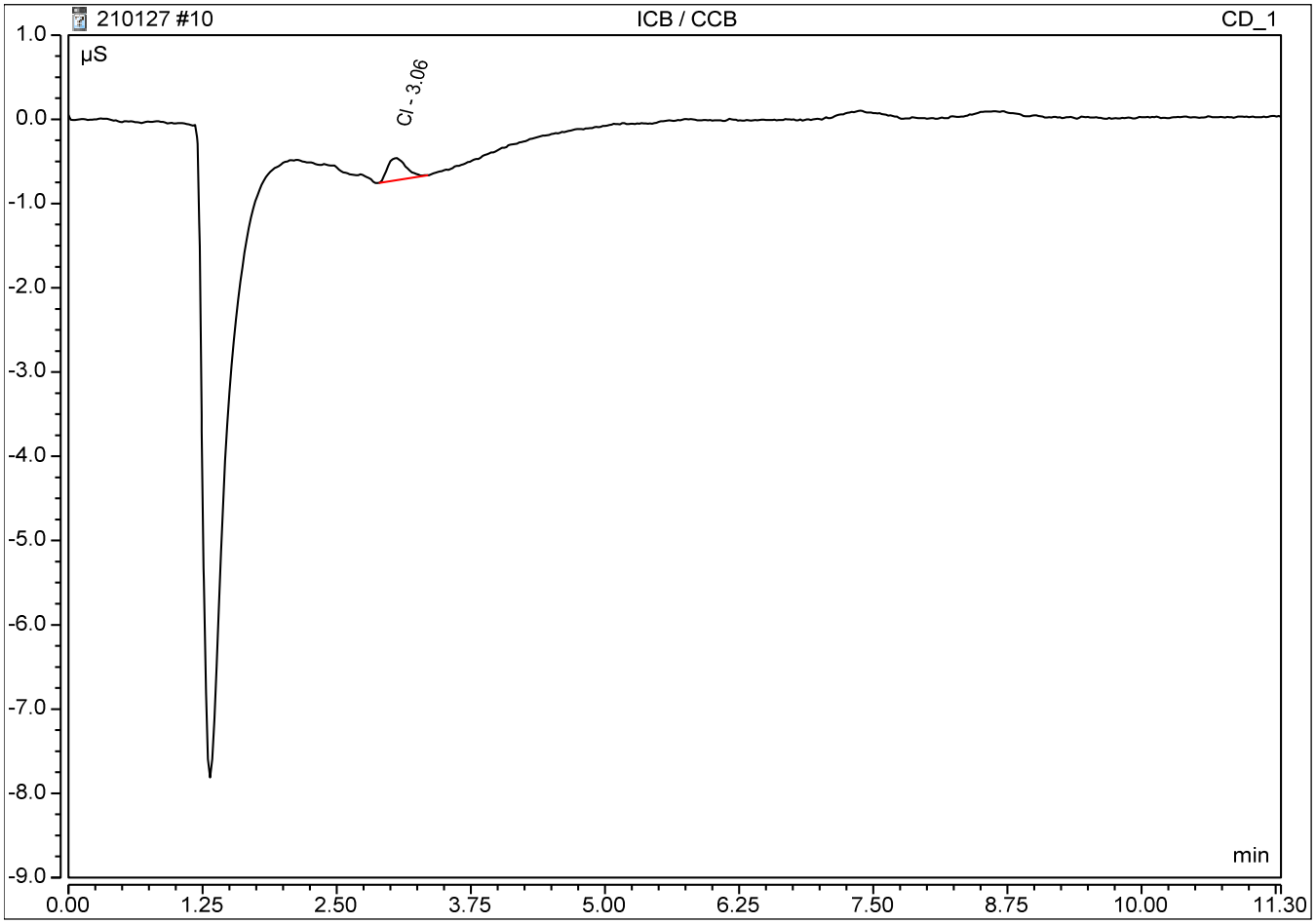


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:12**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.06	**Cl**	BMB	0.053	0.263	0.17		



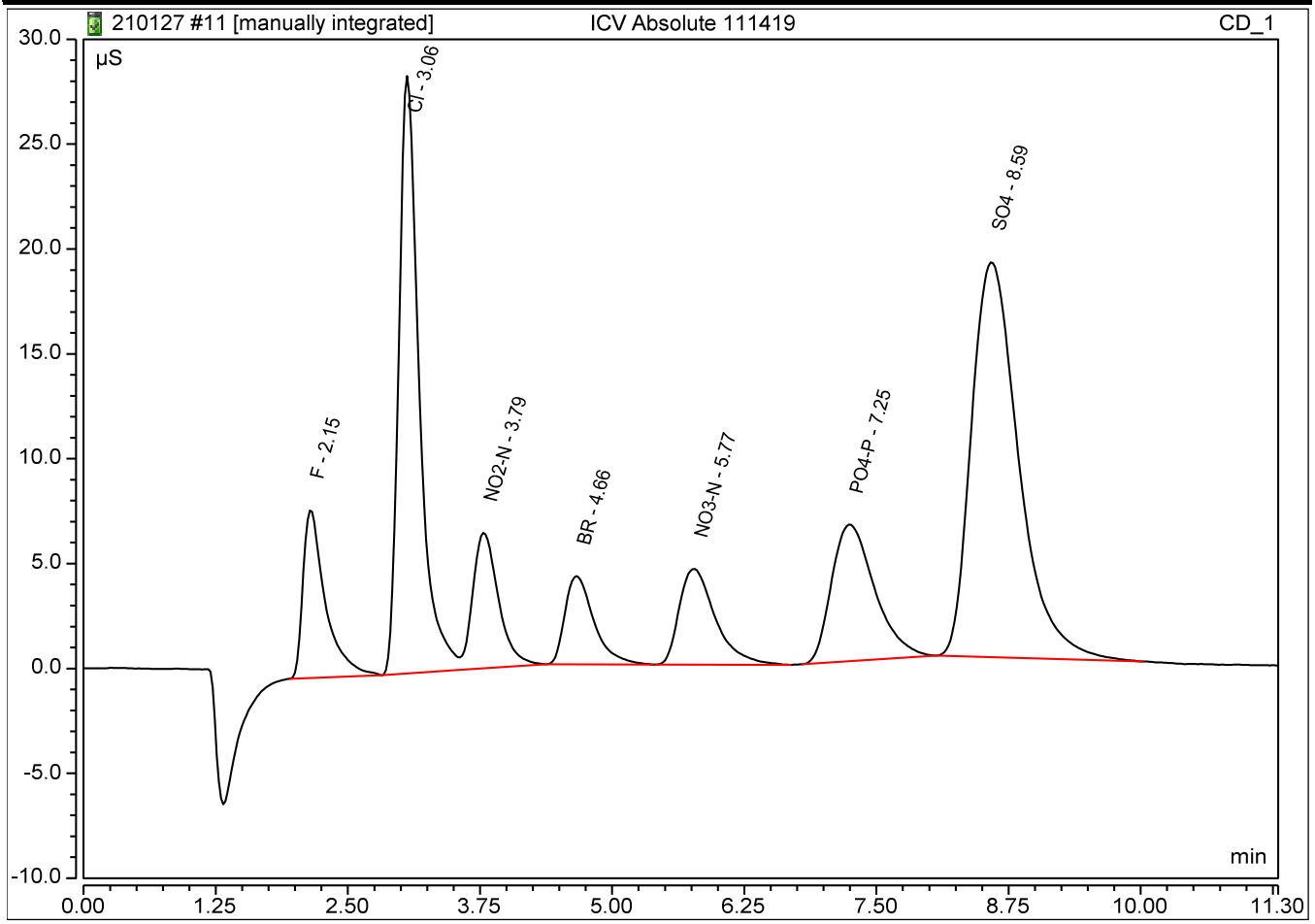
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:27**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMb*	1.961	8.025	2.68	2.5	107.2%
2	3.06	**Cl**	bM *	6.401	28.487	9.32	10	93.2%
3	3.79	**NO2-N**	Mb*	1.824	6.464	1.46	1.522334	95.8%
4	4.66	**BR**	bMB*	1.337	4.211	4.84	5	96.8%
5	5.77	**NO3-N**	BMB	1.807	4.570	1.08	1.129525	95.4%
6	7.25	**PO4-P**	BMB	3.079	6.518	6.04	6.522	92.7%
7	8.59	**SO4**	BMB	9.776	18.832	19.81	20	99.1%



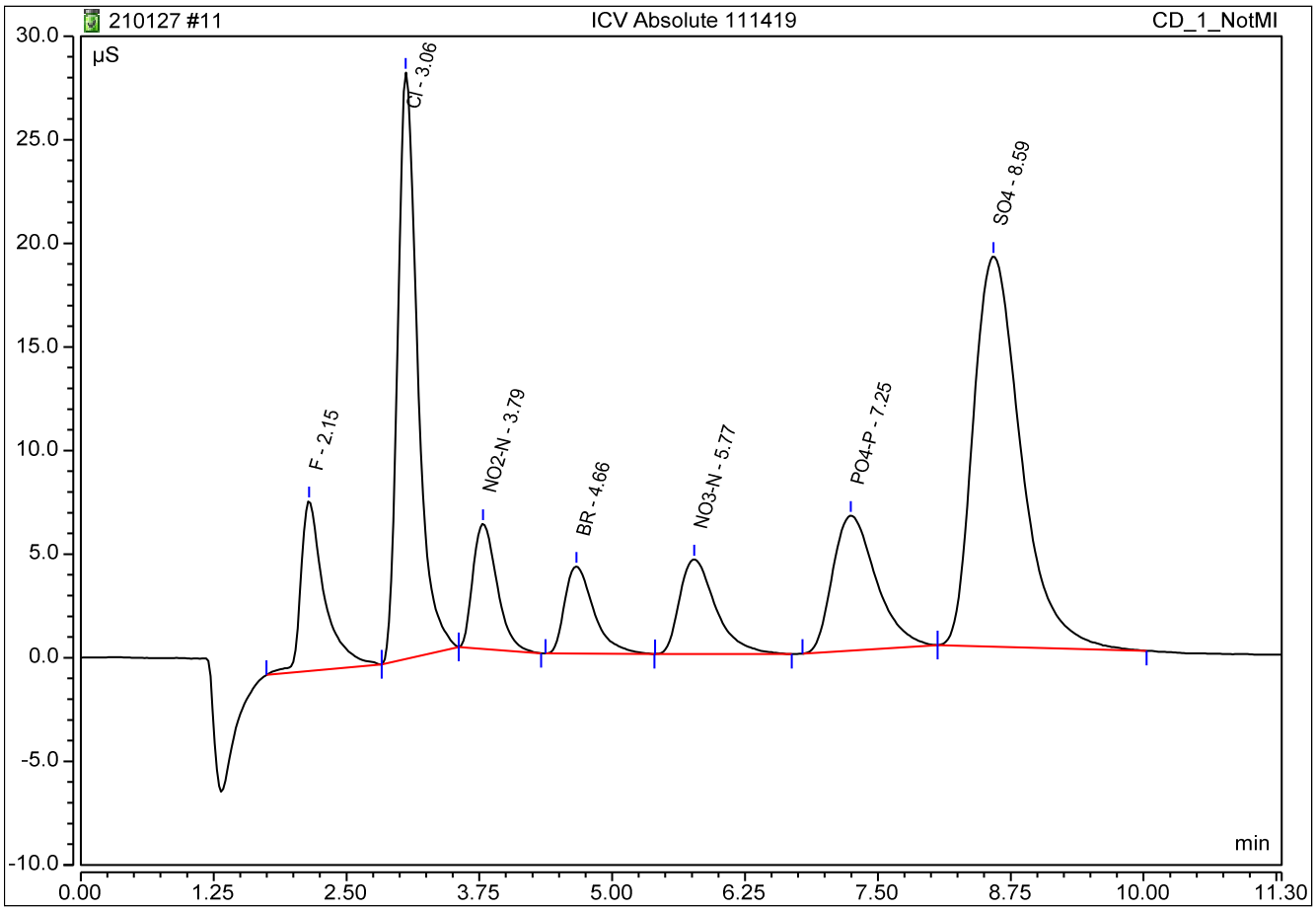
MI 1 Cl NO2 MI 5 F GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**ICV Absolute 111419**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**27-Jan-2021 / 18:27**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMb*	2.098	8.209	3.1129
2	3.06	**Cl**	bM *	6.186	28.301	9.3317
3	3.79	**NO2-N**	Mb*	1.583	6.038	1.5843
4	4.66	**BR**	bMB*	1.337	4.211	4.8389
5	5.77	**NO3-N**	BMB	1.807	4.570	1.0780
6	7.25	**PO4-P**	BMB	3.079	6.518	6.0435
7	8.59	**SO4**	BMB	9.776	18.832	19.8139

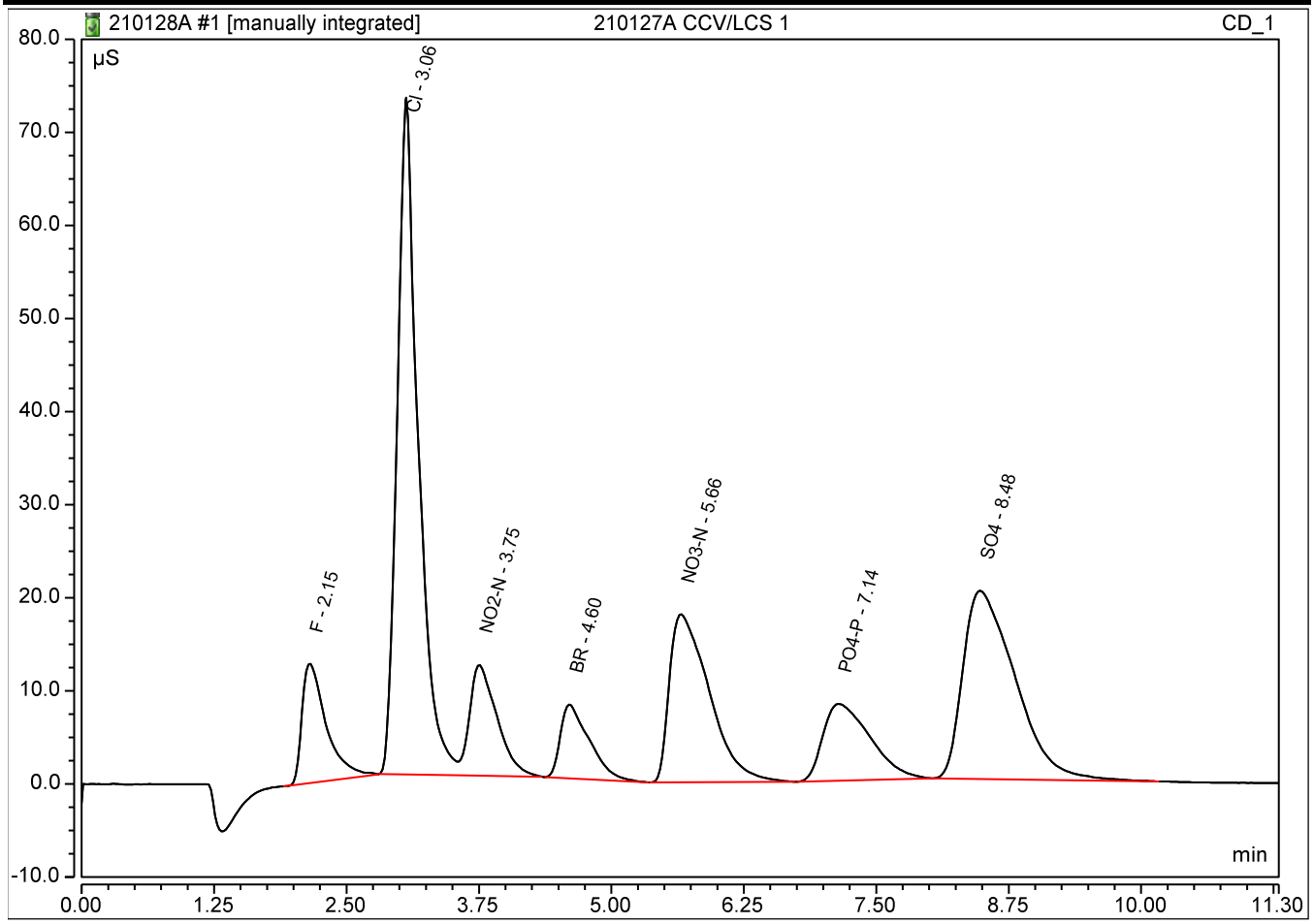


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**210127A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 11:04**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.15	**F**	BMB*	3.400	12.831	4.64	5	92.9%
2	3.06	**Cl**	BM *	16.760	72.722	24.24	25	97.0%
3	3.75	**NO2-N**	MB*	3.586	11.928	2.87	3.04	94.4%
4	4.60	**BR**	BMB	2.514	7.945	9.09	10	90.9%
5	5.66	**NO3-N**	BMB	7.860	18.047	4.69	5	93.8%
6	7.14	**PO4-P**	BMB	4.246	8.252	8.33	10	83.3%
7	8.48	**SO4**	BMB	11.545	20.233	23.40	25	93.6%



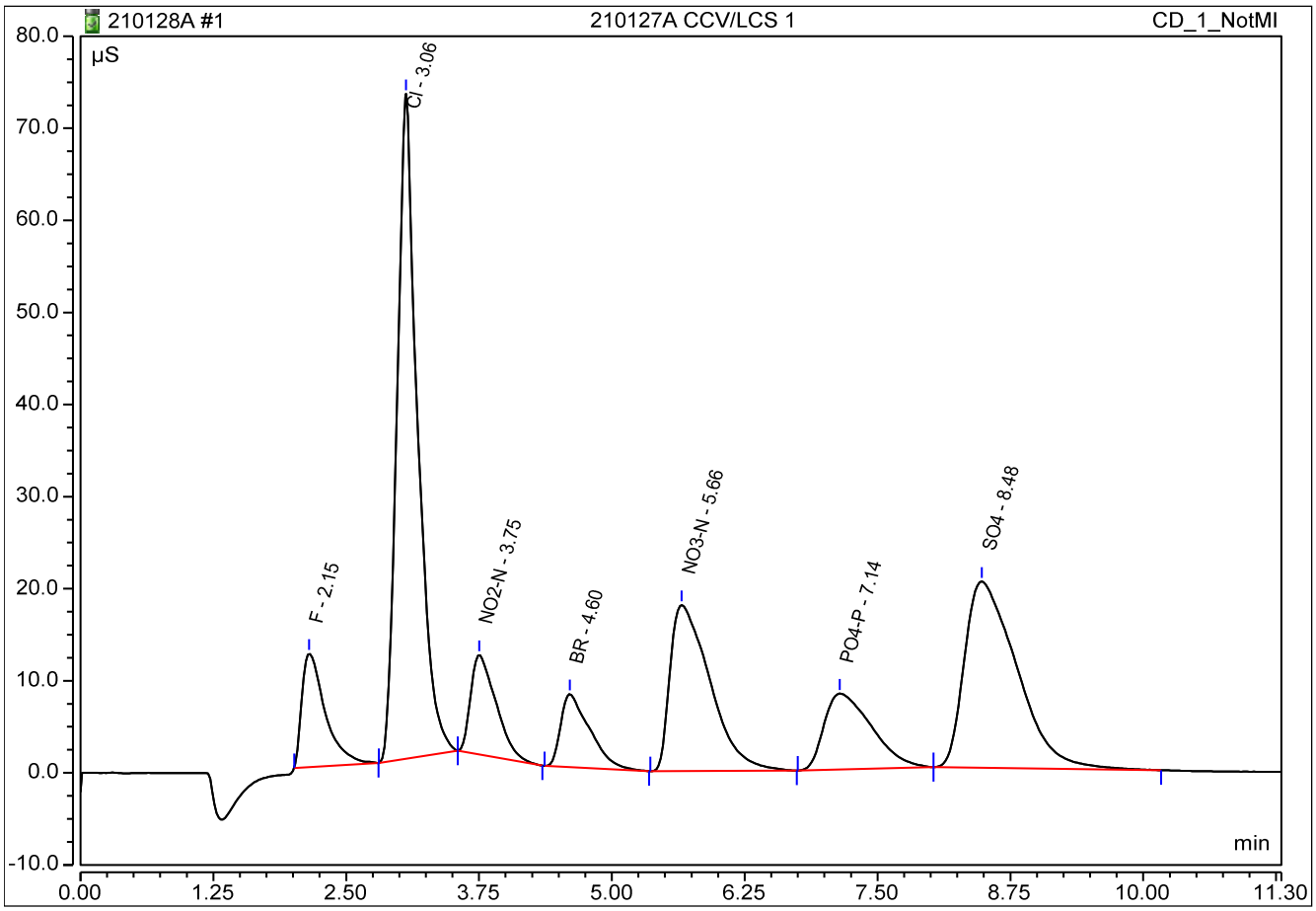
MI 1 Cl NO2 F GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**210127A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 11:04**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.15	**F**	BMB*	3.153	12.333	4.6773
2	3.06	**Cl**	BM *	16.217	72.219	24.3594
3	3.75	**NO2-N**	MB*	3.004	10.836	3.0059
4	4.60	**BR**	BMB	2.514	7.945	9.0945
5	5.66	**NO3-N**	BMB	7.860	18.047	4.6881
6	7.14	**PO4-P**	BMB	4.246	8.252	8.3344
7	8.48	**SO4**	BMB	11.545	20.233	23.4000

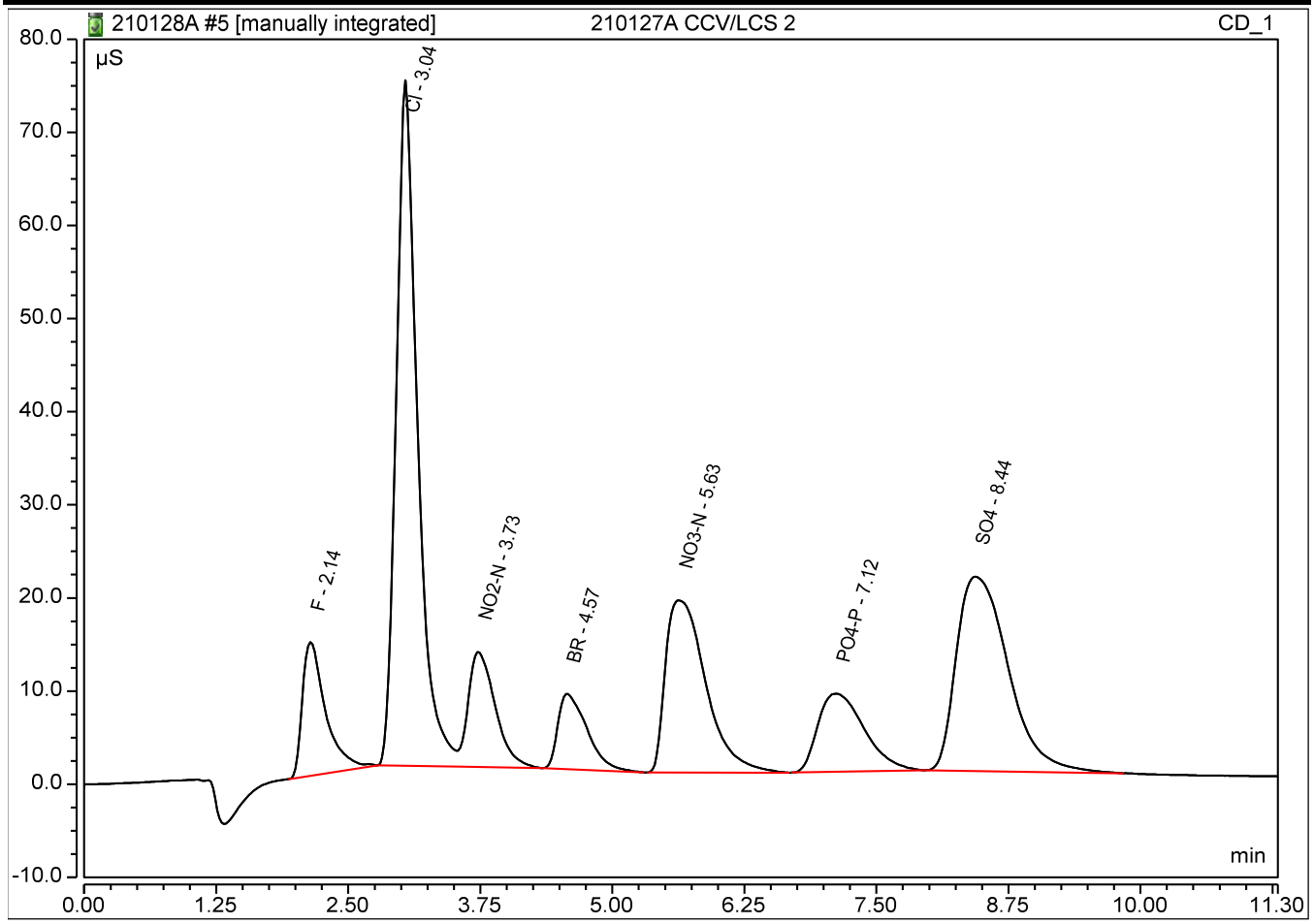


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**210127A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 12:36**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.14	**F**	BMB*	3.651	14.354	4.99	5	99.7%
2	3.04	**Cl**	BM *	17.238	73.596	24.93	25	99.7%
3	3.73	**NO2-N**	Mb*	3.700	12.389	2.96	3.04	97.4%
4	4.57	**BR**	bMB*	2.591	8.109	9.38	10	93.8%
5	5.63	**NO3-N**	BMB	8.189	18.503	4.88	5	97.7%
6	7.12	**PO4-P**	BMB	4.266	8.386	8.37	10	83.7%
7	8.44	**SO4**	BMB	11.888	20.874	24.09	25	96.4%



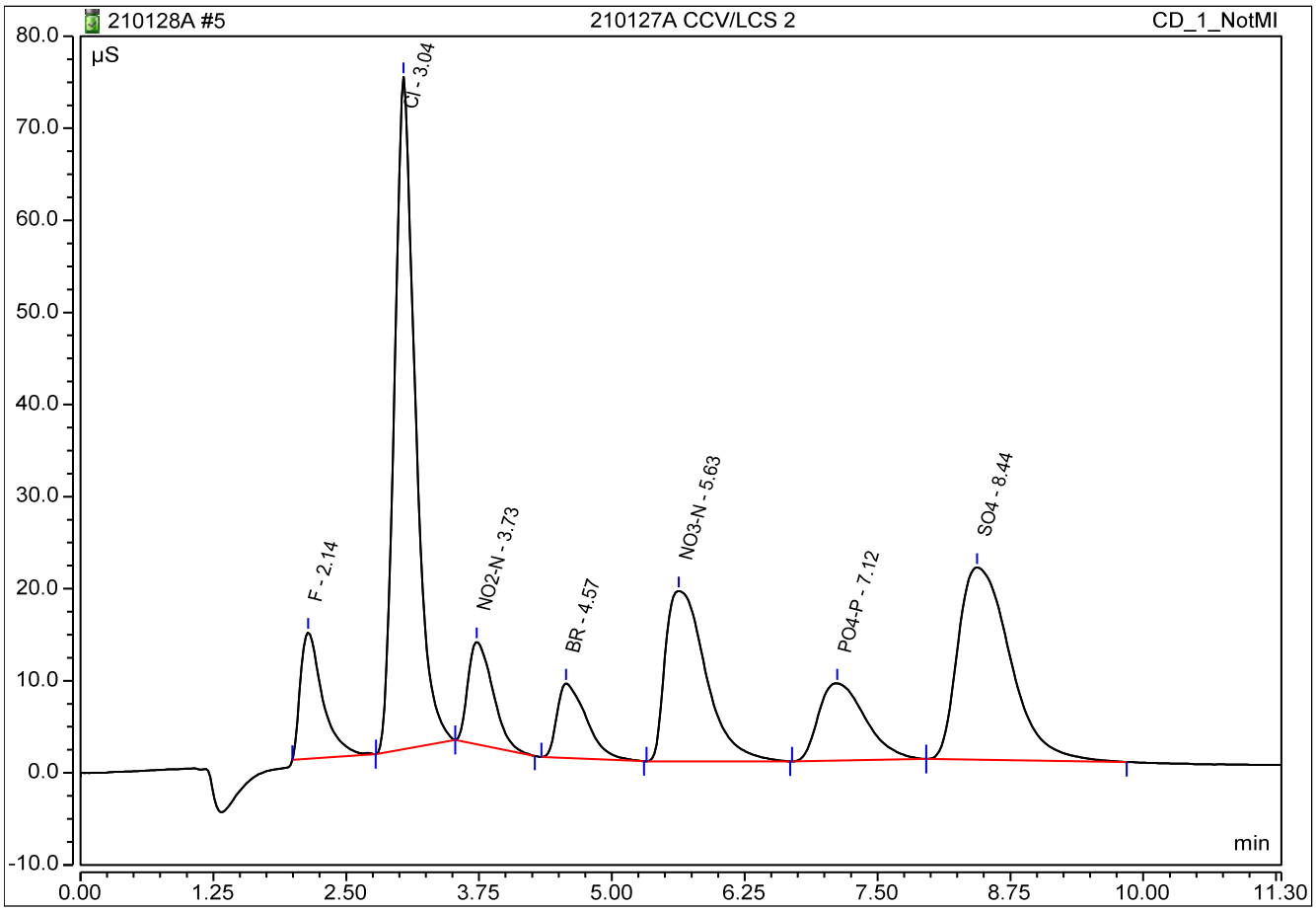
MI 1 Cl NO2 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**210127A CCV/LCS 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 12:36**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.14	**F**	BMB*	3.336	13.725	4.9492
2	3.04	**Cl**	BM *	16.607	73.008	24.9441
3	3.73	**NO2-N**	Mb*	3.025	11.126	3.0269
4	4.57	**BR**	bMB*	2.591	8.109	9.3757
5	5.63	**NO3-N**	BMB	8.189	18.503	4.8847
6	7.12	**PO4-P**	BMB	4.266	8.386	8.3726
7	8.44	**SO4**	BMB	11.888	20.874	24.0949

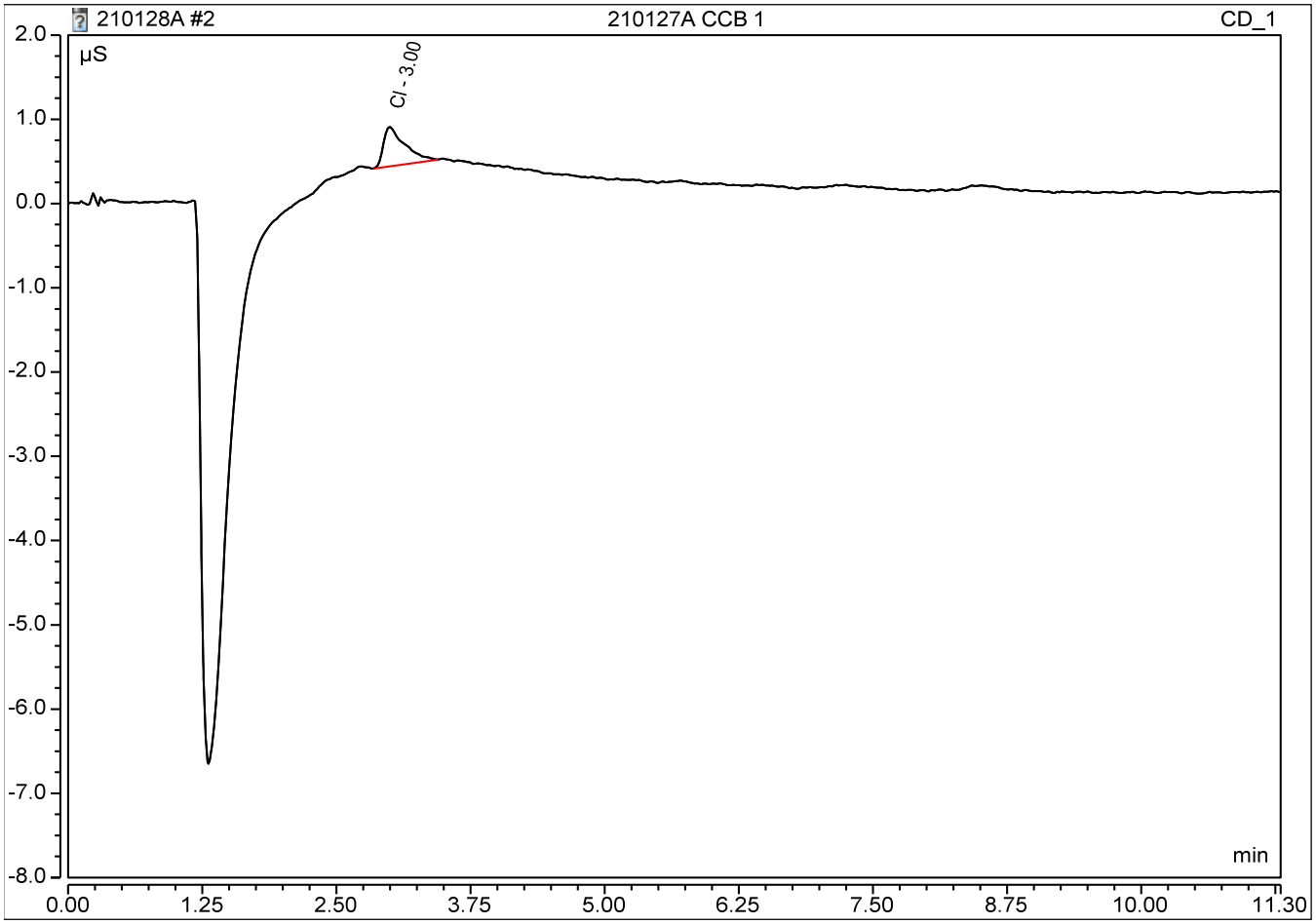


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**210127A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 11:19**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.00	**Cl**	BMB	0.108	0.469	0.25		



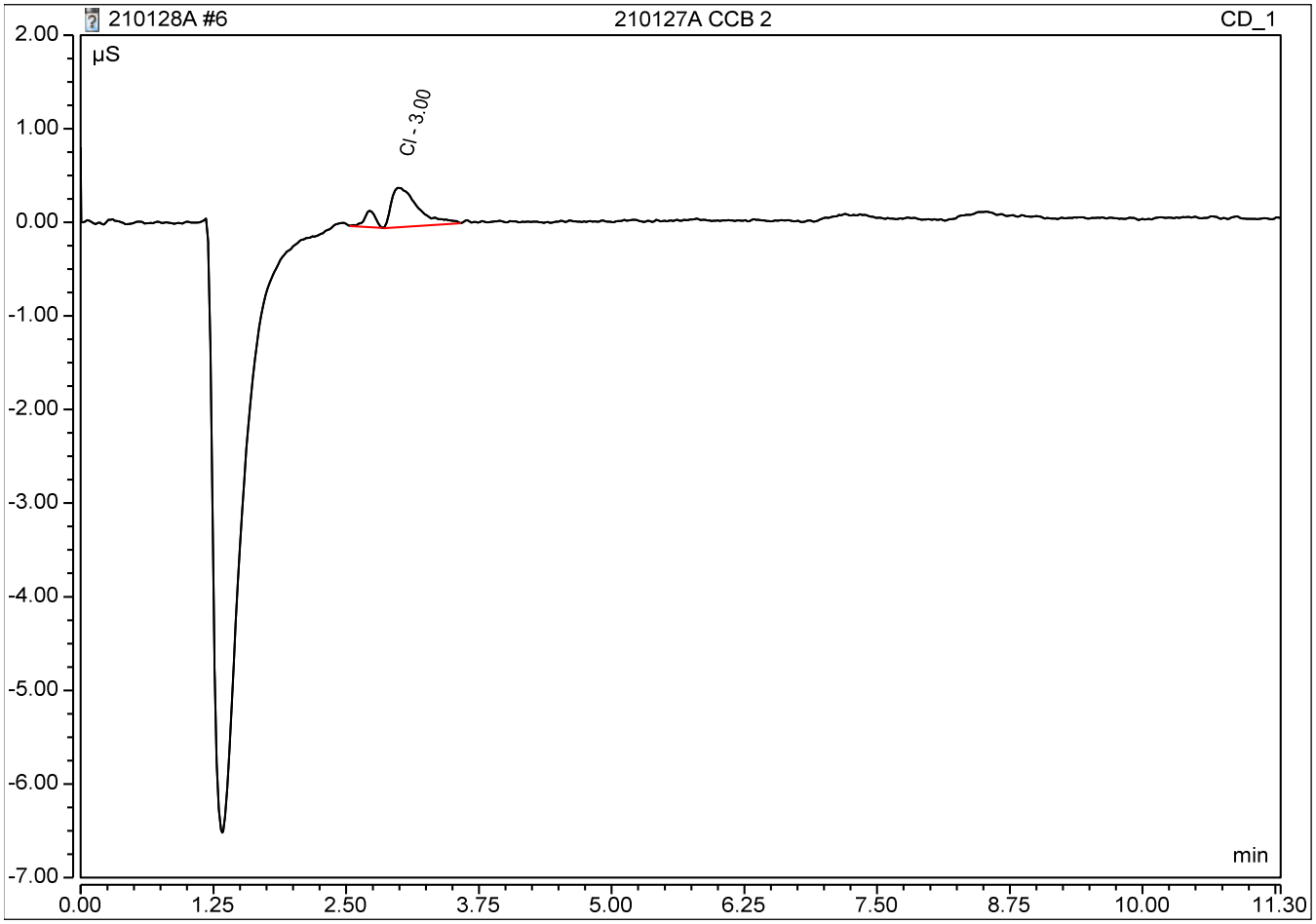
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**210127A CCB 2**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 12:51**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	3.00	**Cl**	BMB	0.122	0.420	0.27		



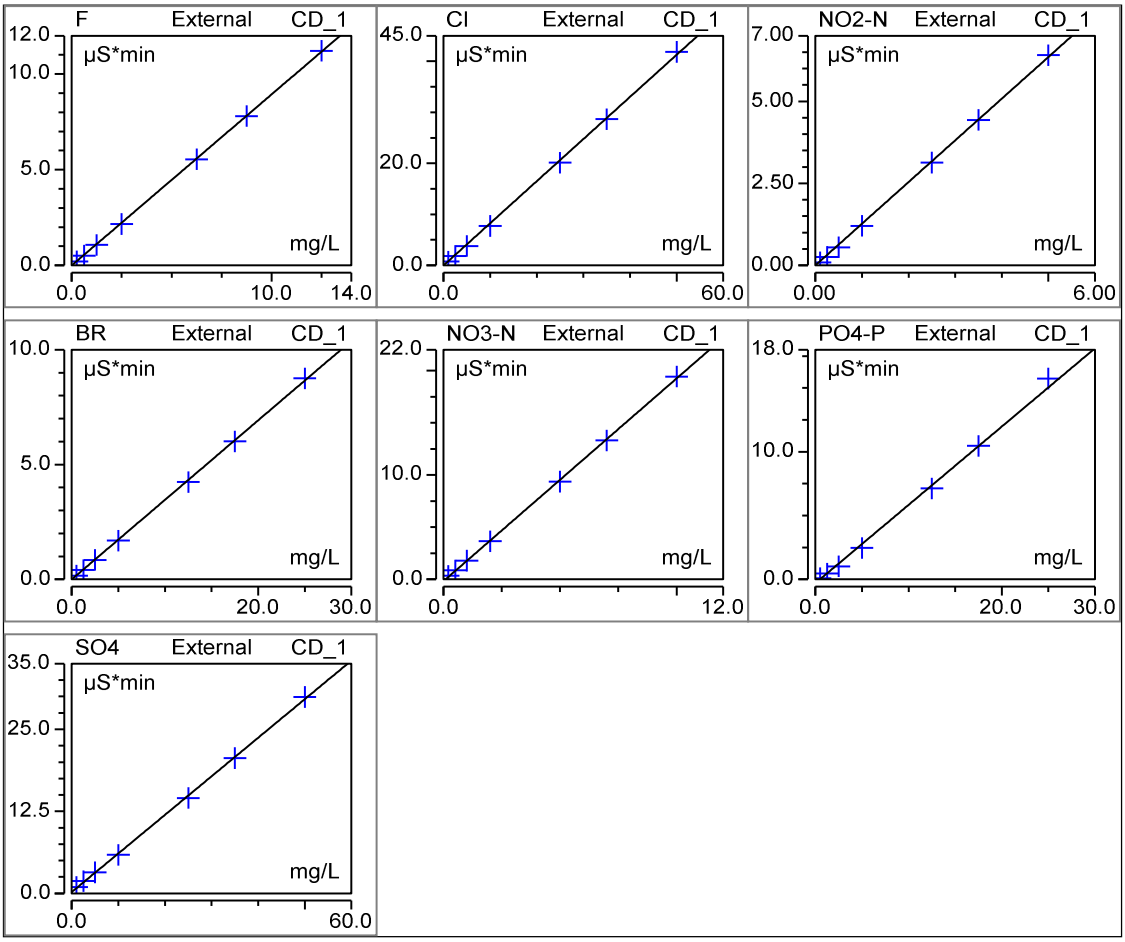
Calibration Batch Report

Sequence:	**210203A**	*Injection Volume:*	**100.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.5**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin	7.000	0.000	0.893	0.000	99.9871
Cl	Area	Lin	7.000	0.000	0.825	0.000	99.9273
NO2-N	Area	Lin	7.000	0.000	1.271	0.000	99.9381
BR	Area	Lin	7.000	0.000	0.346	0.000	99.9644
NO3-N	Area	Lin, WithOffset	7.000	-0.165	1.942	0.000	99.9688
PO4-P	Area	Lin, WithOffset, 1/A	7.000	-0.298	0.614	0.000	99.6191
SO4	Area	Lin, WithOffset	7.000	0.204	0.588	0.000	99.9463

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 3 2021.02.02	0.237	0.9173	0.0705	0.4608	0.2625	0.6209	1.3057
Cal 4 2021.02.02	0.569	2.2144	0.2005	1.1782	0.5265	1.2294	2.8210
Cal 5 2021.02.02	1.193	4.5949	0.4335	2.4409	1.0060	2.1549	5.0945
Cal 6 2021.02.02	2.420	9.3635	0.9484	4.8795	1.9657	4.4909	9.6485
Cal 7 2021.02.02	6.210	24.3939	2.4658	12.2333	4.9072	12.0961	24.3523
Cal 8 2021.02.02	8.738	34.7080	3.4902	17.3510	6.9400	17.5274	34.7181
Cal 9 2021.02.02	12.553	50.6912	5.0440	25.2720	10.0921	26.1304	50.5599

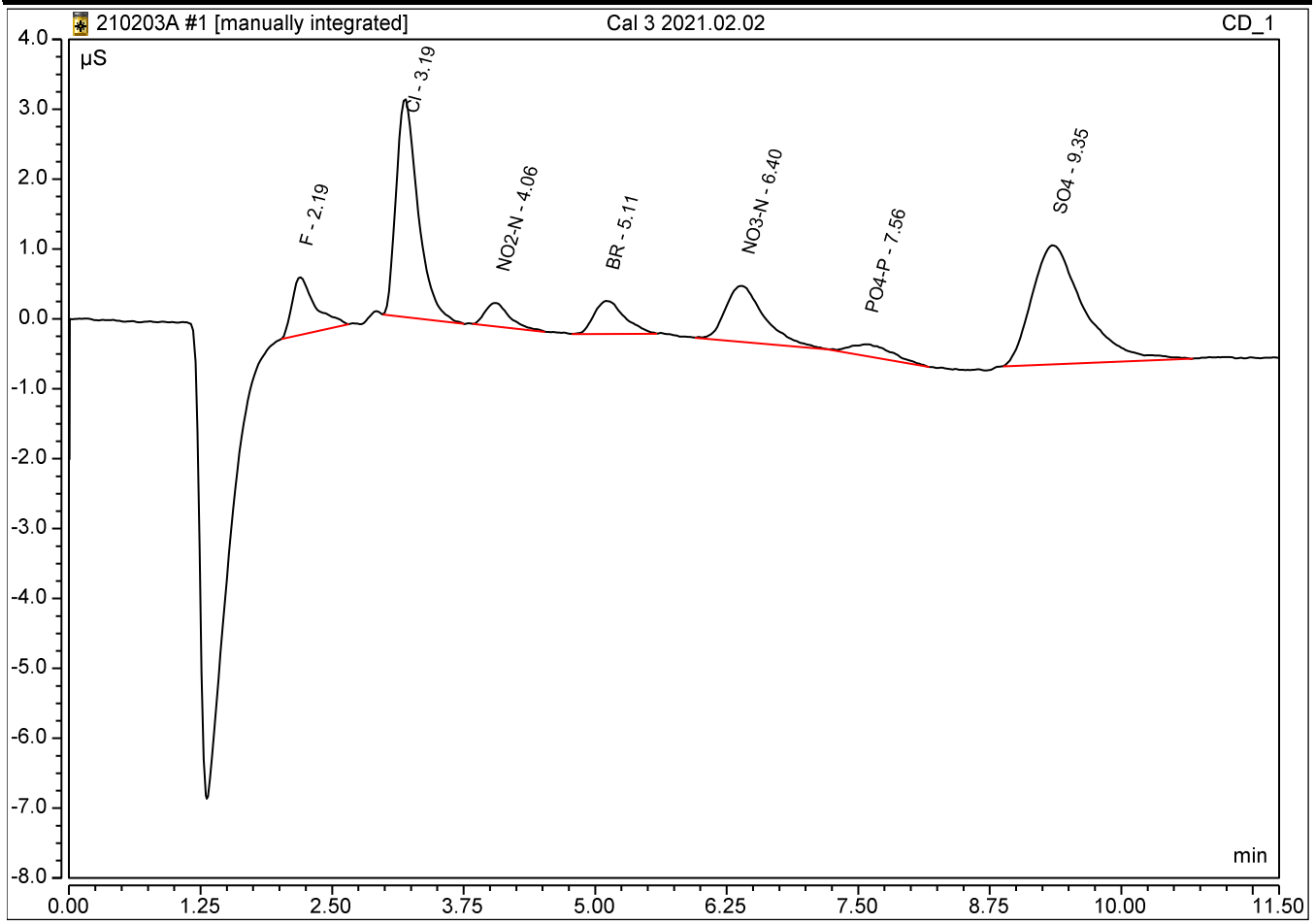


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.212	0.828	0.24	0.25	95.0%
2	3.19	**Cl**	BMB	0.757	3.125	0.92	1	91.7%
3	4.06	**NO2-N**	BMB	0.090	0.335	0.07	0.1	70.5%
4	5.11	**BR**	BMB	0.160	0.474	0.46	0.5	92.2%
5	6.40	**NO3-N**	BMB	0.345	0.799	0.26	0.2	131.2%
6	7.56	**PO4-P**	BMB	0.083	0.167	0.62	0.5	124.2%
7	9.35	**SO4**	BMB*	0.972	1.704	1.31	1	130.6%



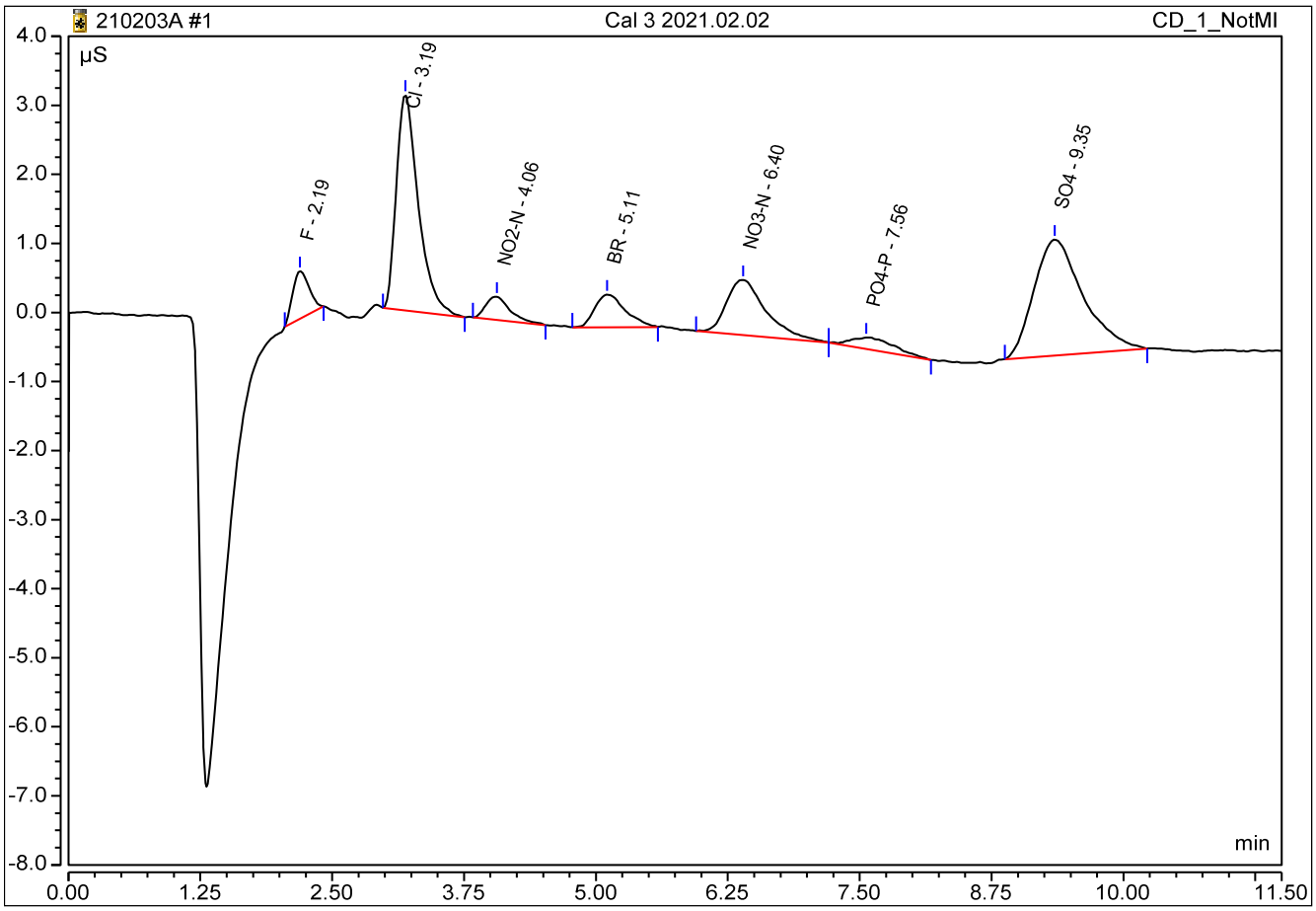
MI 5 F SO4 GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 3 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 13:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.125	0.692	0.1533
2	3.19	**Cl**	BMB	0.757	3.125	0.9173
3	4.06	**NO2-N**	BMB	0.090	0.335	0.0705
4	5.11	**BR**	BMB	0.160	0.474	0.4608
5	6.40	**NO3-N**	BMB	0.345	0.799	0.2625
6	7.56	**PO4-P**	BMB	0.083	0.167	0.6209
7	9.35	**SO4**	BMB*	0.906	1.679	1.2254

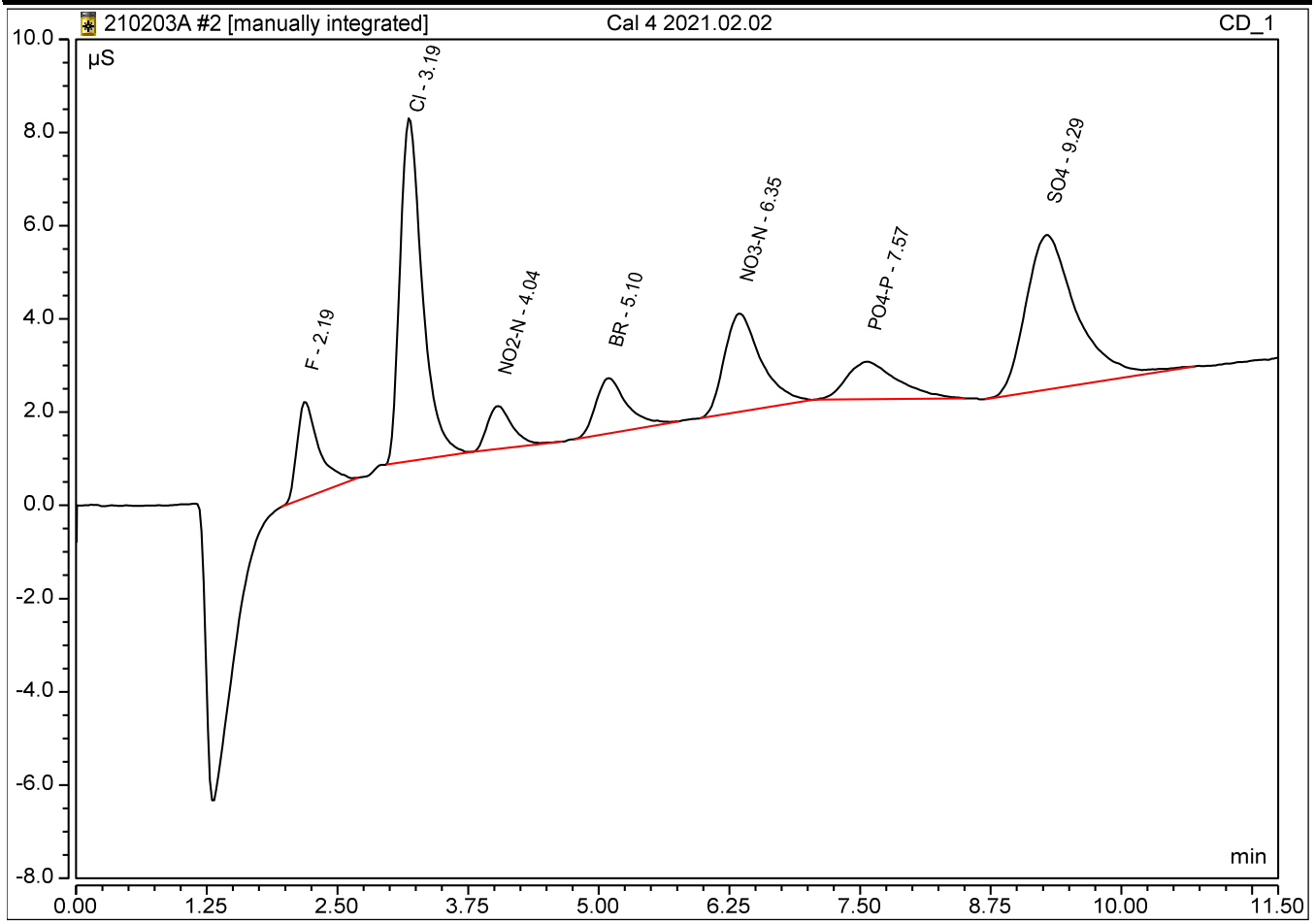


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	0.508	2.069	0.57	0.625	91.1%
2	3.19	**Cl**	BMB	1.828	7.371	2.21	2.5	88.6%
3	4.04	**NO2-N**	BMB	0.255	0.922	0.20	0.25	80.2%
4	5.10	**BR**	BMB	0.408	1.188	1.18	1.25	94.3%
5	6.35	**NO3-N**	BMB	0.858	2.111	0.53	0.5	105.3%
6	7.57	**PO4-P**	BMB	0.456	0.806	1.23	1.25	98.4%
7	9.29	**SO4**	BMB	1.863	3.319	2.82	2.5	112.8%



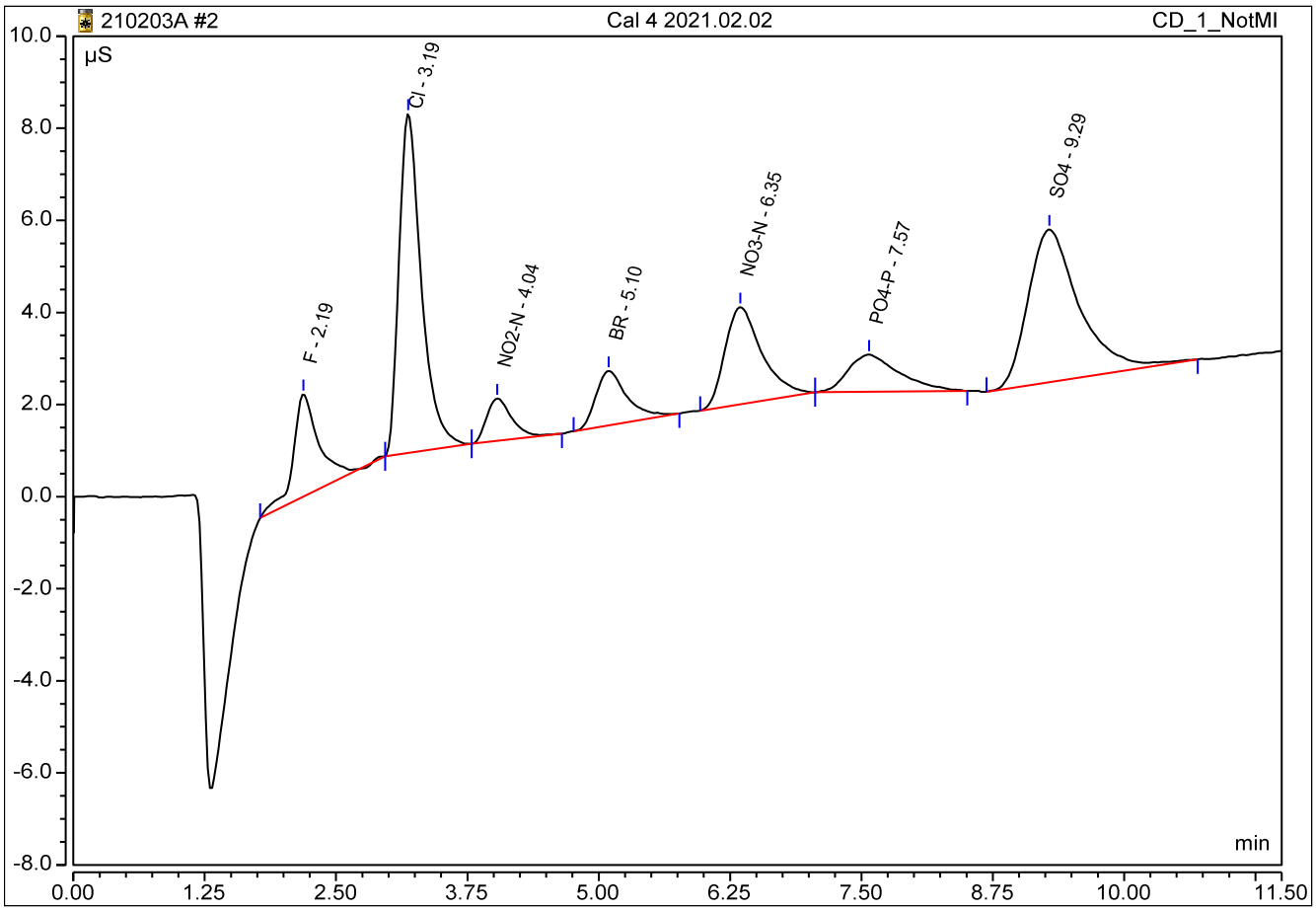
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 4 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:08**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.626	2.228	0.7683
2	3.19	**Cl**	BMB	1.828	7.371	2.2144
3	4.04	**NO2-N**	BMB	0.255	0.922	0.2005
4	5.10	**BR**	BMB	0.408	1.188	1.1782
5	6.35	**NO3-N**	BMB	0.858	2.111	0.5265
6	7.57	**PO4-P**	BMB	0.456	0.806	1.2294
7	9.29	**SO4**	BMB	1.863	3.319	2.8512

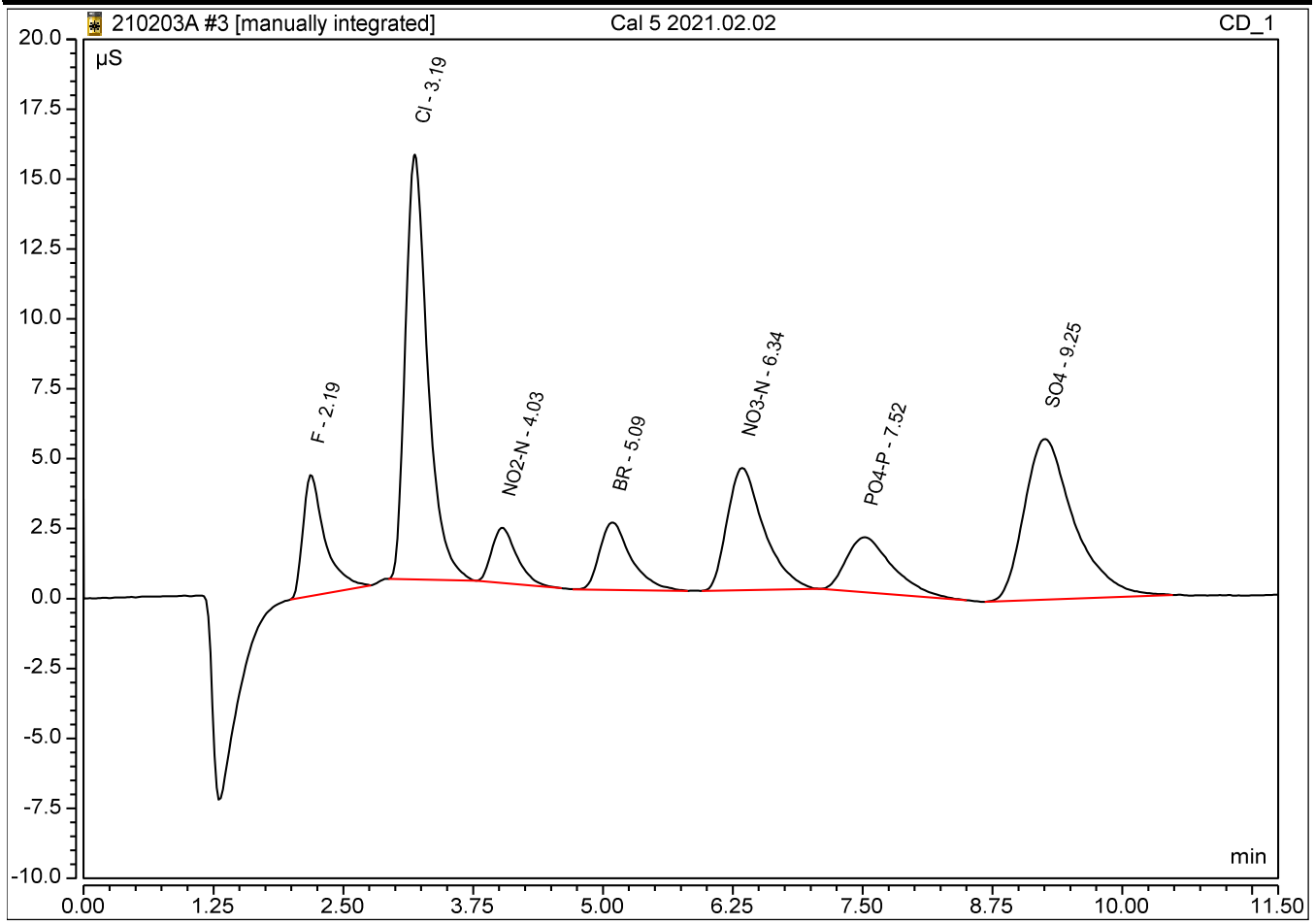


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	1.066	4.348	1.19	1.25	95.4%
2	3.19	**Cl**	BMB	3.792	15.189	4.59	5	91.9%
3	4.03	**NO2-N**	BMB	0.551	1.971	0.43	0.5	86.7%
4	5.09	**BR**	BMB	0.845	2.414	2.44	2.5	97.6%
5	6.34	**NO3-N**	BMB	1.789	4.375	1.01	1	100.6%
6	7.52	**PO4-P**	BMB	1.024	1.967	2.15	2.5	86.2%
7	9.25	**SO4**	BMB	3.199	5.751	5.09	5	101.9%



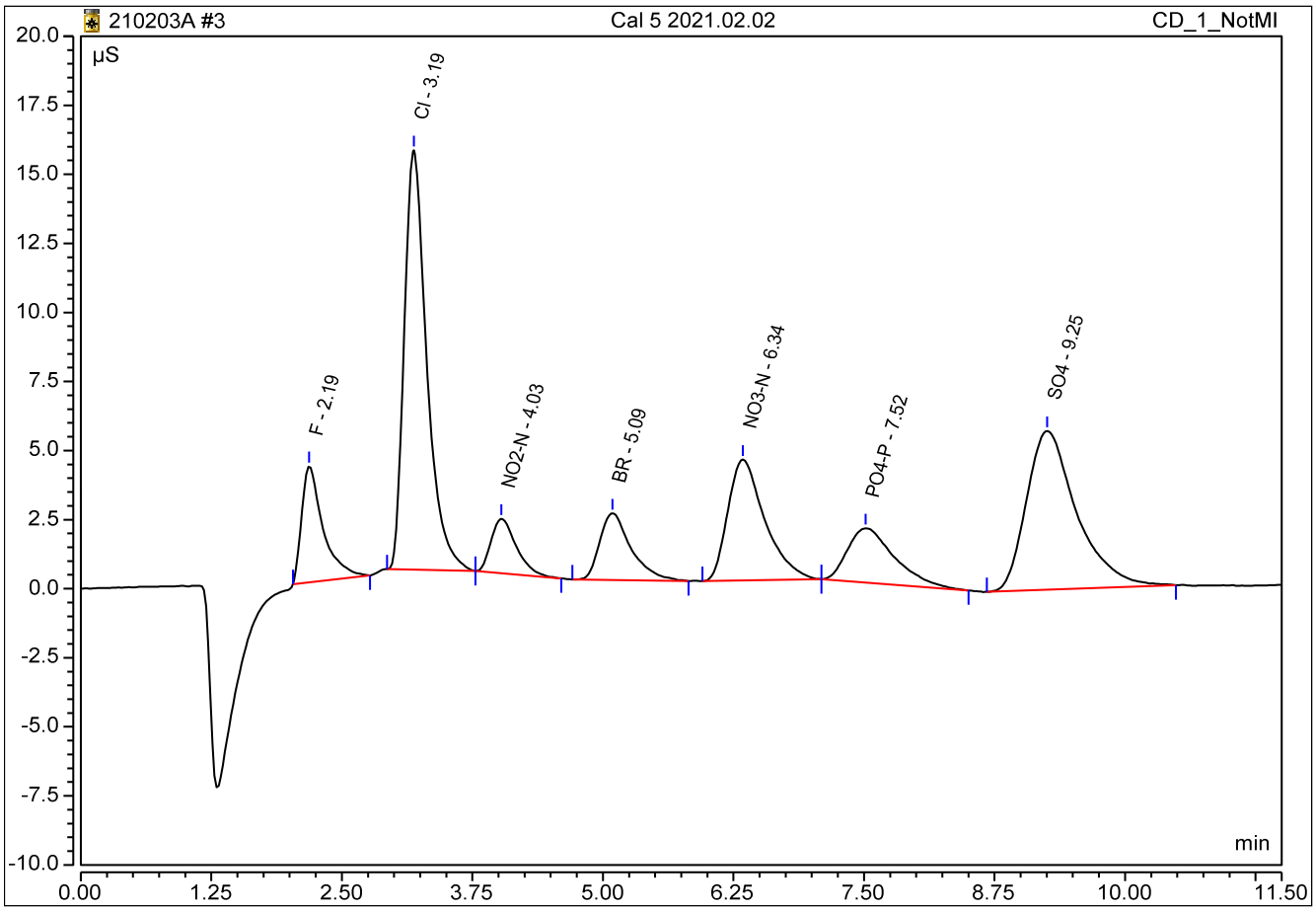
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 5 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:23**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	0.997	4.205	1.2240
2	3.19	**Cl**	BMB	3.792	15.189	4.5949
3	4.03	**NO2-N**	BMB	0.551	1.971	0.4335
4	5.09	**BR**	BMB	0.845	2.414	2.4409
5	6.34	**NO3-N**	BMB	1.789	4.375	1.0060
6	7.52	**PO4-P**	BMB	1.024	1.967	2.1549
7	9.25	**SO4**	BMB	3.199	5.751	5.1227

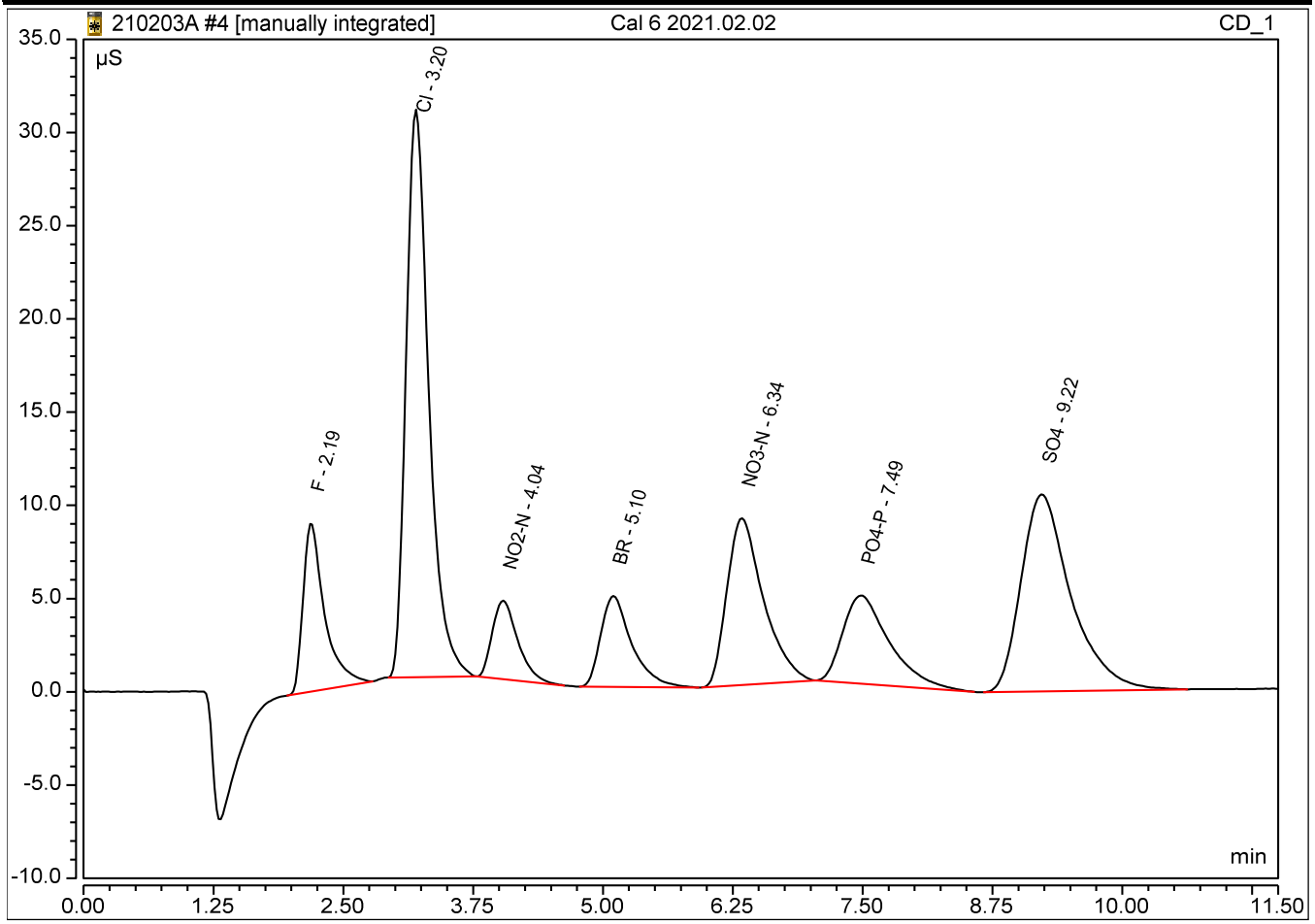


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	2.162	9.056	2.42	2.5	96.8%
2	3.20	**Cl**	BMB	7.728	30.456	9.36	10	93.6%
3	4.04	**NO2-N**	BMB	1.205	4.210	0.95	1	94.8%
4	5.10	**BR**	BMB	1.690	4.876	4.88	5	97.6%
5	6.34	**NO3-N**	BMB	3.652	8.947	1.97	2	98.3%
6	7.49	**PO4-P**	BMB	2.458	4.735	4.49	5	89.8%
7	9.22	**SO4**	BMB	5.877	10.569	9.65	10	96.5%

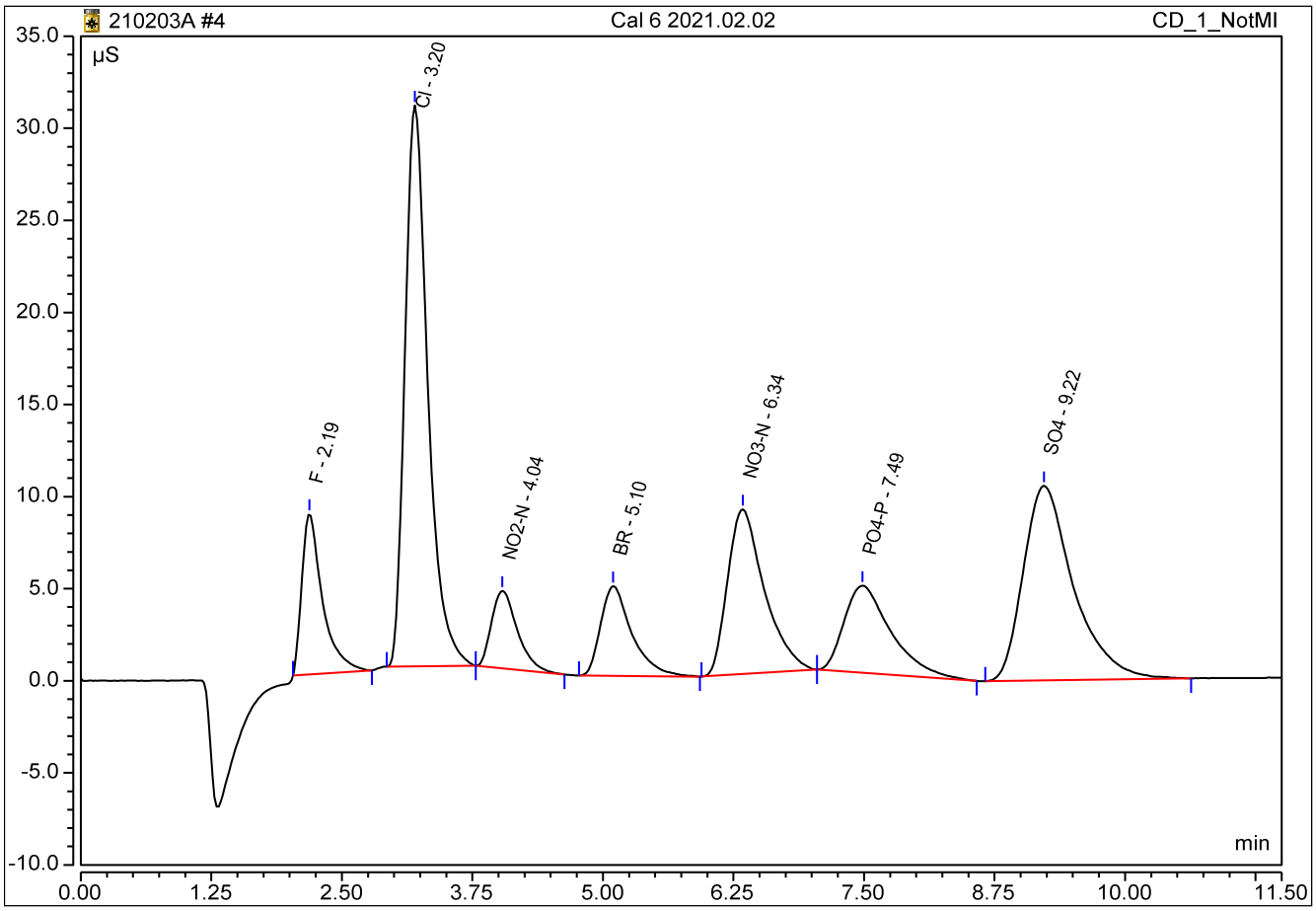


MI 5 F GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**Cal 6 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:38**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	1.996	8.721	2.4511
2	3.20	**Cl**	BMB	7.728	30.456	9.3635
3	4.04	**NO2-N**	BMB	1.205	4.210	0.9484
4	5.10	**BR**	BMB	1.690	4.876	4.8795
5	6.34	**NO3-N**	BMB	3.652	8.947	1.9657
6	7.49	**PO4-P**	BMB	2.458	4.735	4.4909
7	9.22	**SO4**	BMB	5.877	10.569	9.6724

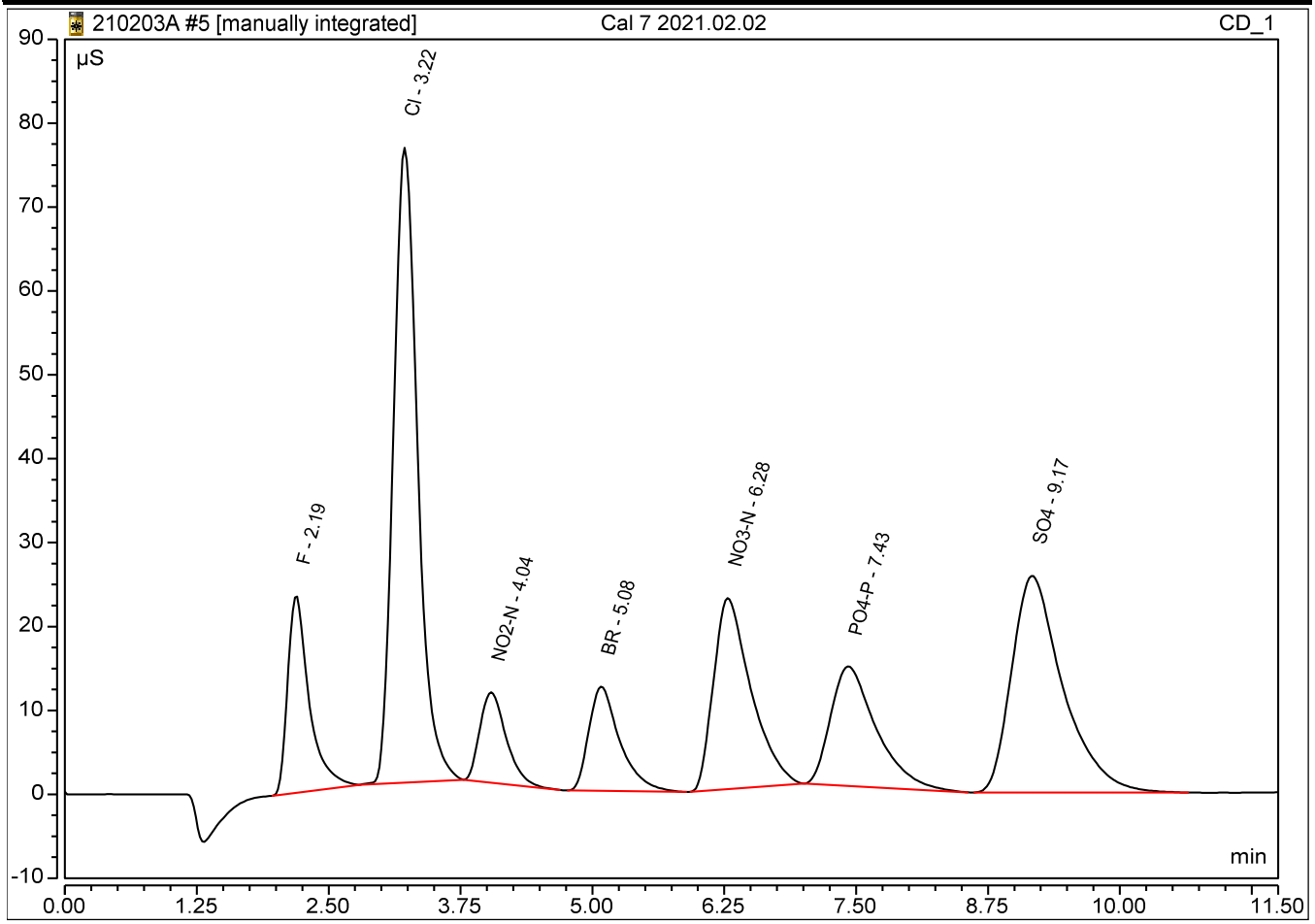


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.19	**F**	BMB*	5.546	23.521	6.21	6.25	99.4%
2	3.22	**Cl**	BMB	20.132	75.675	24.39	25	97.6%
3	4.04	**NO2-N**	BMB	3.133	10.776	2.47	2.5	98.6%
4	5.08	**BR**	BMB	4.236	12.431	12.23	12.5	97.9%
5	6.28	**NO3-N**	BMB	9.364	22.776	4.91	5	98.1%
6	7.43	**PO4-P**	BMB	7.126	14.242	12.10	12.5	96.8%
7	9.17	**SO4**	BMB	14.521	25.835	24.35	25	97.4%



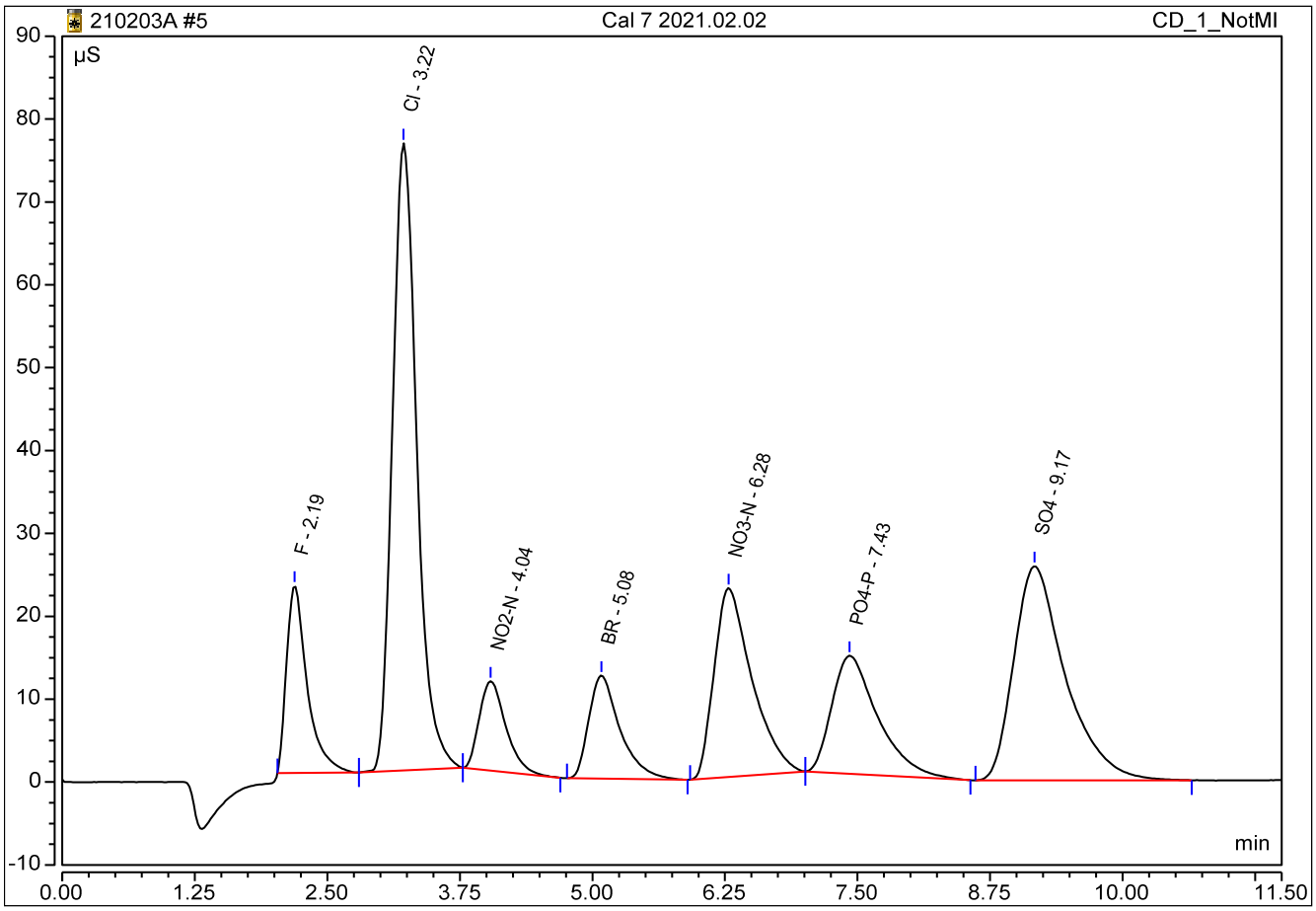
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 7 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 14:53**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.19	**F**	BMB*	5.087	22.614	6.2472
2	3.22	**Cl**	BMB	20.132	75.675	24.3939
3	4.04	**NO2-N**	BMB	3.133	10.776	2.4658
4	5.08	**BR**	BMB	4.236	12.431	12.2333
5	6.28	**NO3-N**	BMB	9.364	22.776	4.9072
6	7.43	**PO4-P**	BMB	7.126	14.242	12.0961
7	9.17	**SO4**	BMB	14.521	25.835	24.3628

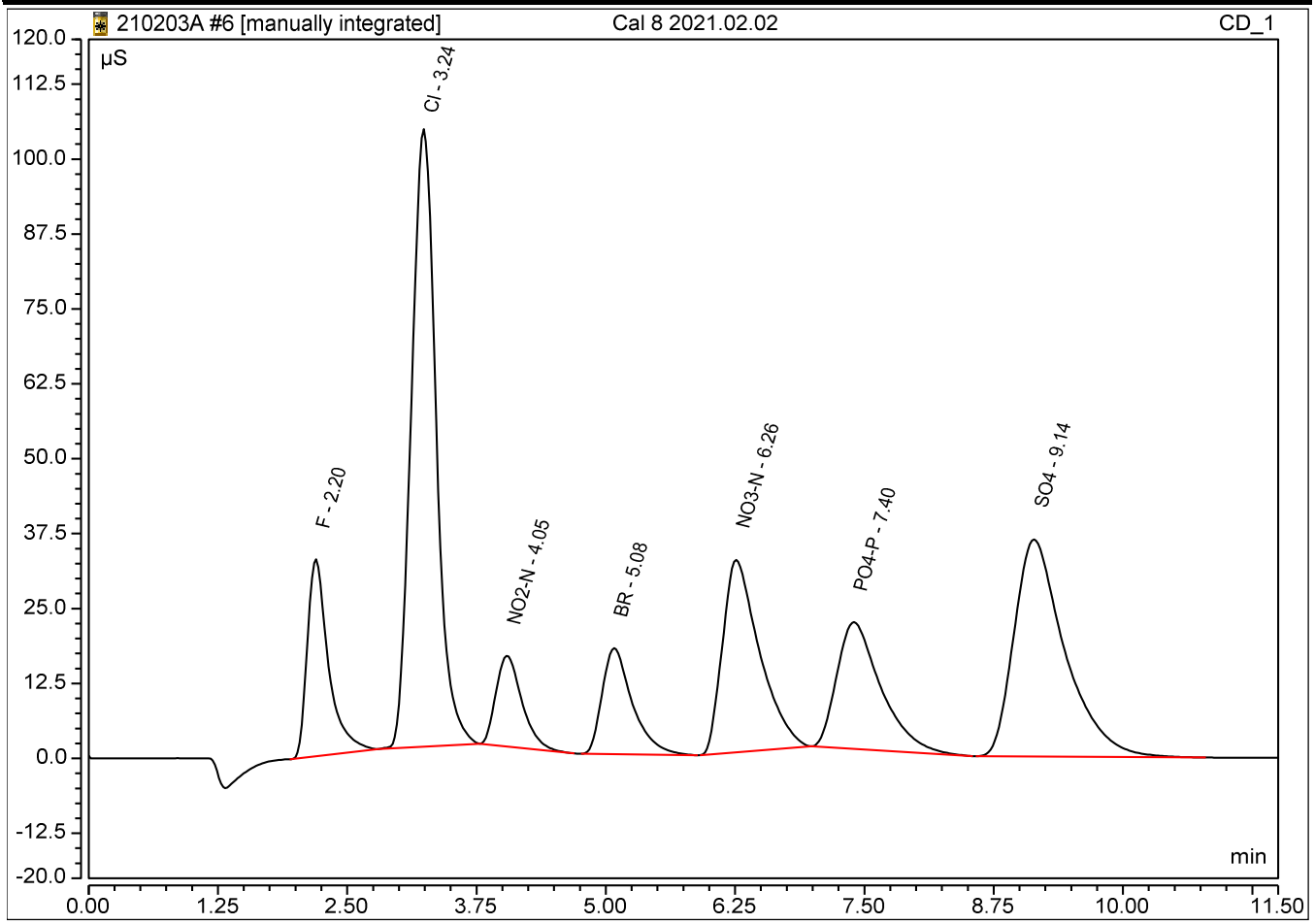


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	7.804	32.914	8.74	8.75	99.9%
2	3.24	**Cl**	BMB	28.644	103.088	34.71	35	99.2%
3	4.05	**NO2-N**	BMB	4.434	15.154	3.49	3.5	99.7%
4	5.08	**BR**	BMB	6.008	17.692	17.35	17.5	99.1%
5	6.26	**NO3-N**	BMB	13.311	32.129	6.94	7	99.1%
6	7.40	**PO4-P**	BMB	10.459	21.166	17.53	17.5	100.2%
7	9.14	**SO4**	BMB	20.615	36.256	34.72	35	99.2%



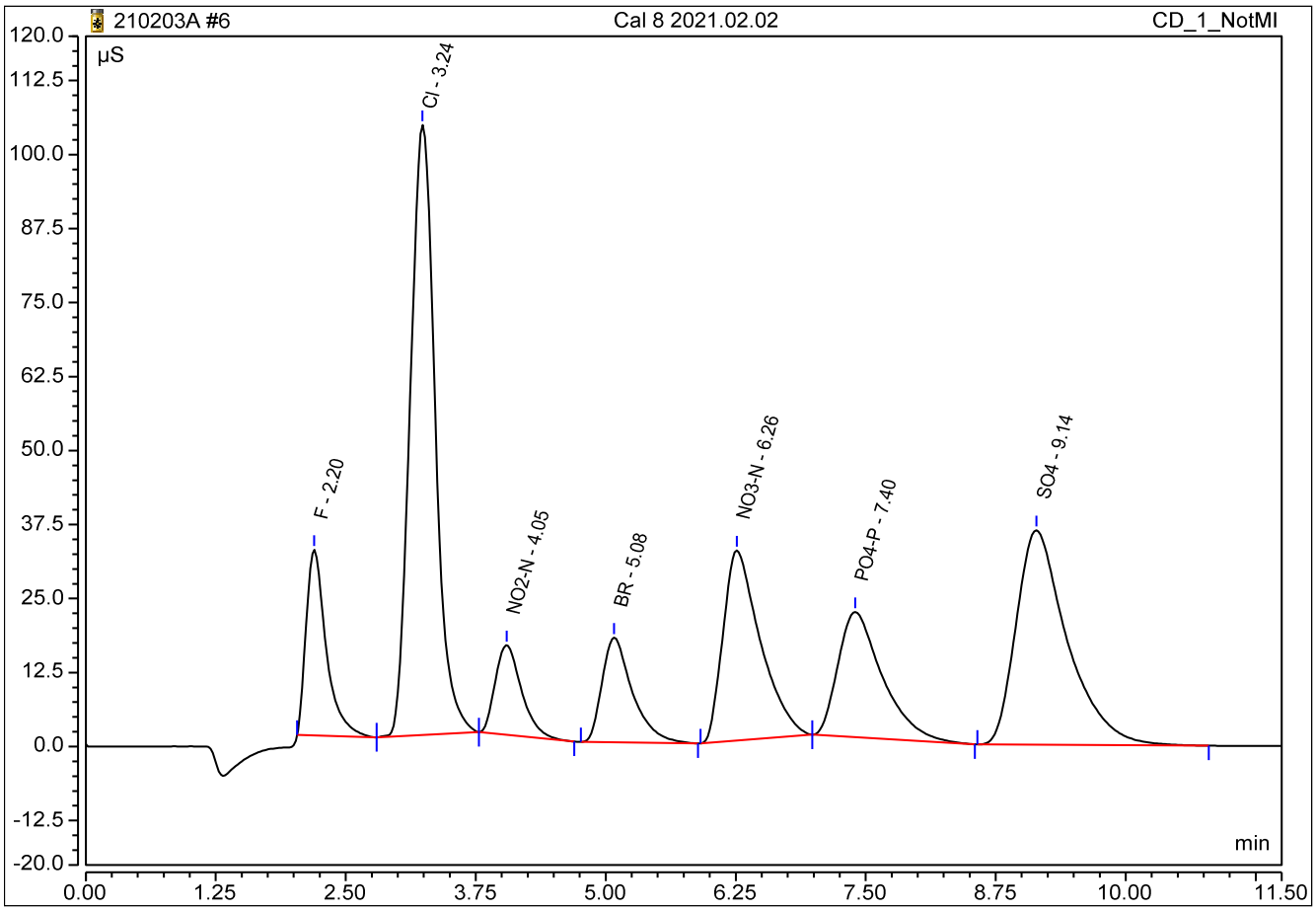
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 8 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:07**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	7.029	31.386	8.6319
2	3.24	**Cl**	BMB	28.644	103.088	34.7080
3	4.05	**NO2-N**	BMB	4.434	15.154	3.4902
4	5.08	**BR**	BMB	6.008	17.692	17.3510
5	6.26	**NO3-N**	BMB	13.311	32.129	6.9400
6	7.40	**PO4-P**	BMB	10.459	21.166	17.5274
7	9.14	**SO4**	BMB	20.615	36.256	34.7191

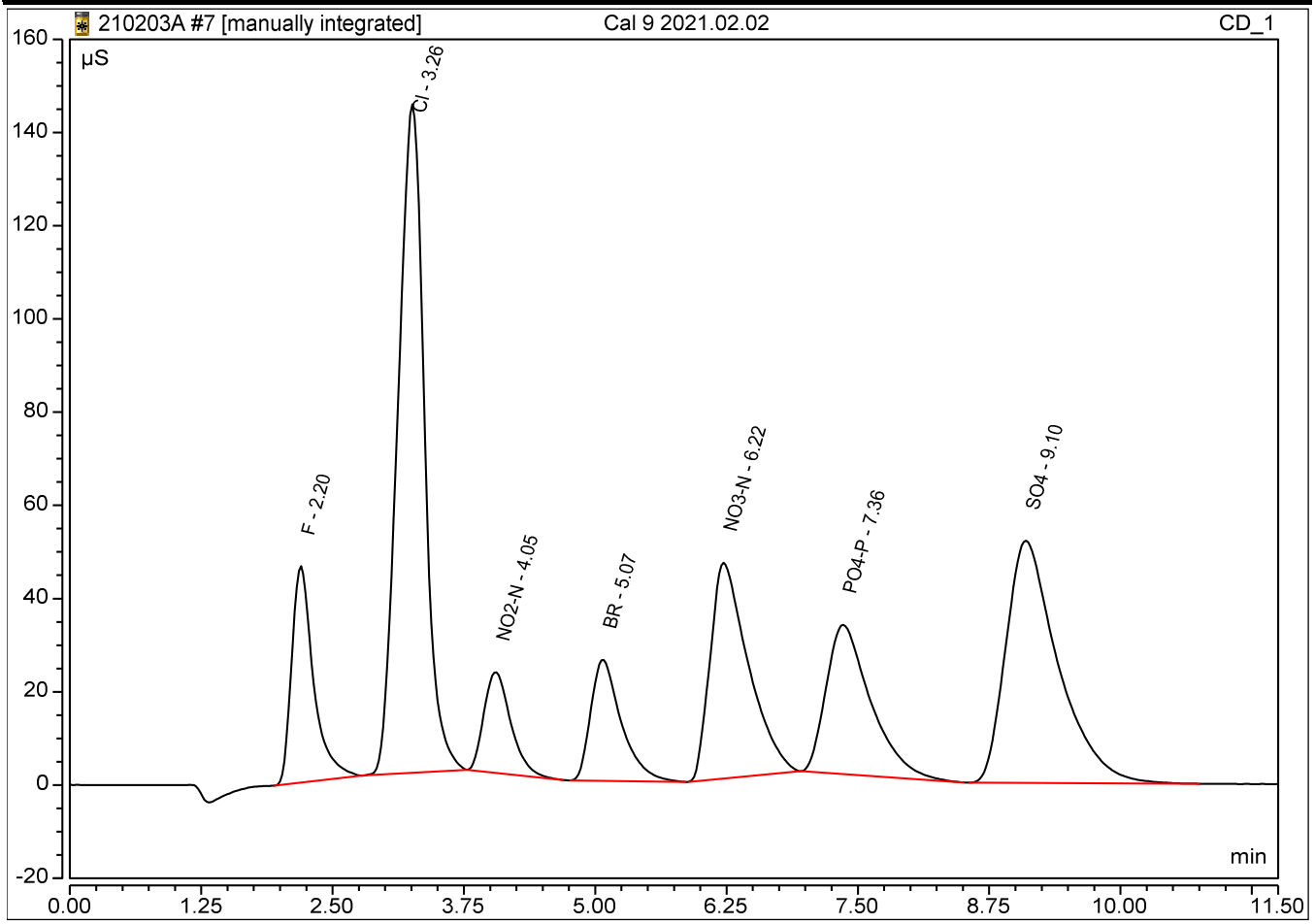


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB*	11.211	46.442	12.55	12.5	100.4%
2	3.26	**Cl**	BMB	41.835	143.444	50.69	50	101.4%
3	4.05	**NO2-N**	BMB	6.408	21.642	5.04	5	100.9%
4	5.07	**BR**	BMB	8.751	26.016	25.27	25	101.1%
5	6.22	**NO3-N**	BMB	19.431	46.298	10.09	10	100.9%
6	7.36	**PO4-P**	BMB	15.739	32.038	26.13	25	104.5%
7	9.10	**SO4**	BMB	29.929	51.969	50.56	50	101.1%



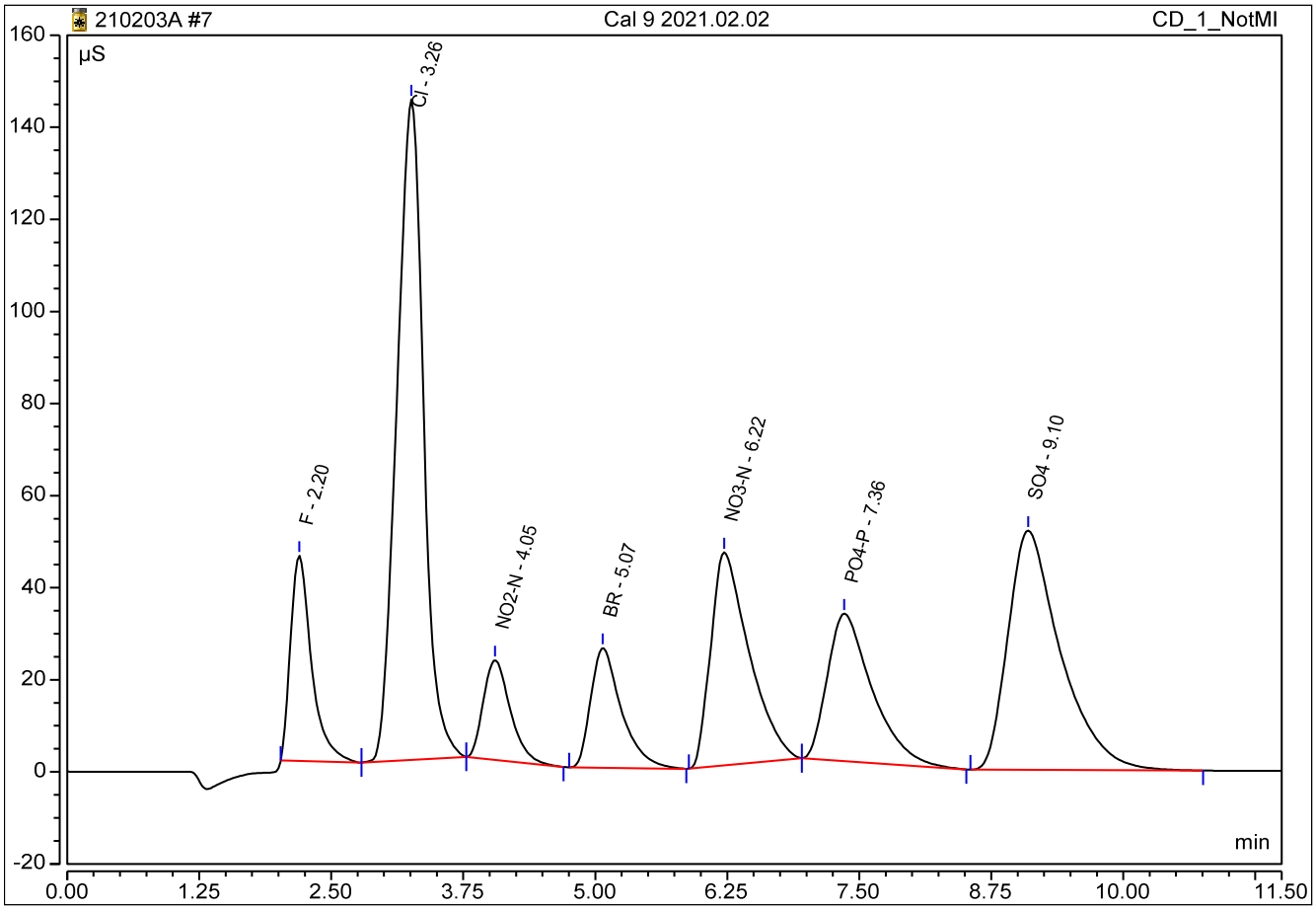
MI 5 F GA 02/03/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**Cal 9 2021.02.02**	*Inj. Vol.:*	**100uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:22**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	2.20	**F**	BMB*	10.253	44.598	12.5913
2	3.26	**Cl**	BMB	41.835	143.444	50.6912
3	4.05	**NO2-N**	BMB	6.408	21.642	5.0440
4	5.07	**BR**	BMB	8.751	26.016	25.2720
5	6.22	**NO3-N**	BMB	19.431	46.298	10.0921
6	7.36	**PO4-P**	BMB	15.739	32.038	26.1304
7	9.10	**SO4**	BMB	29.929	51.969	50.5464

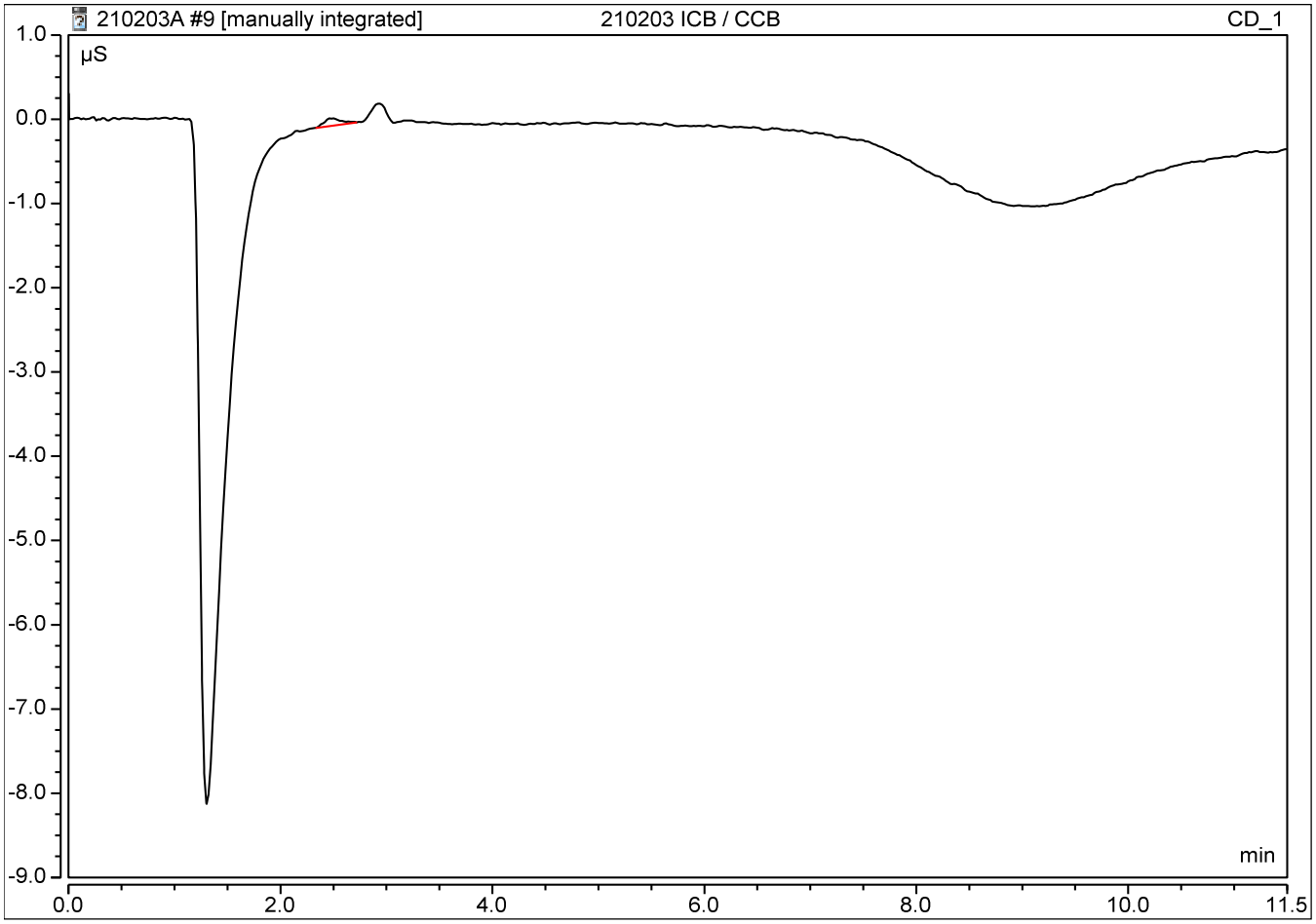


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery

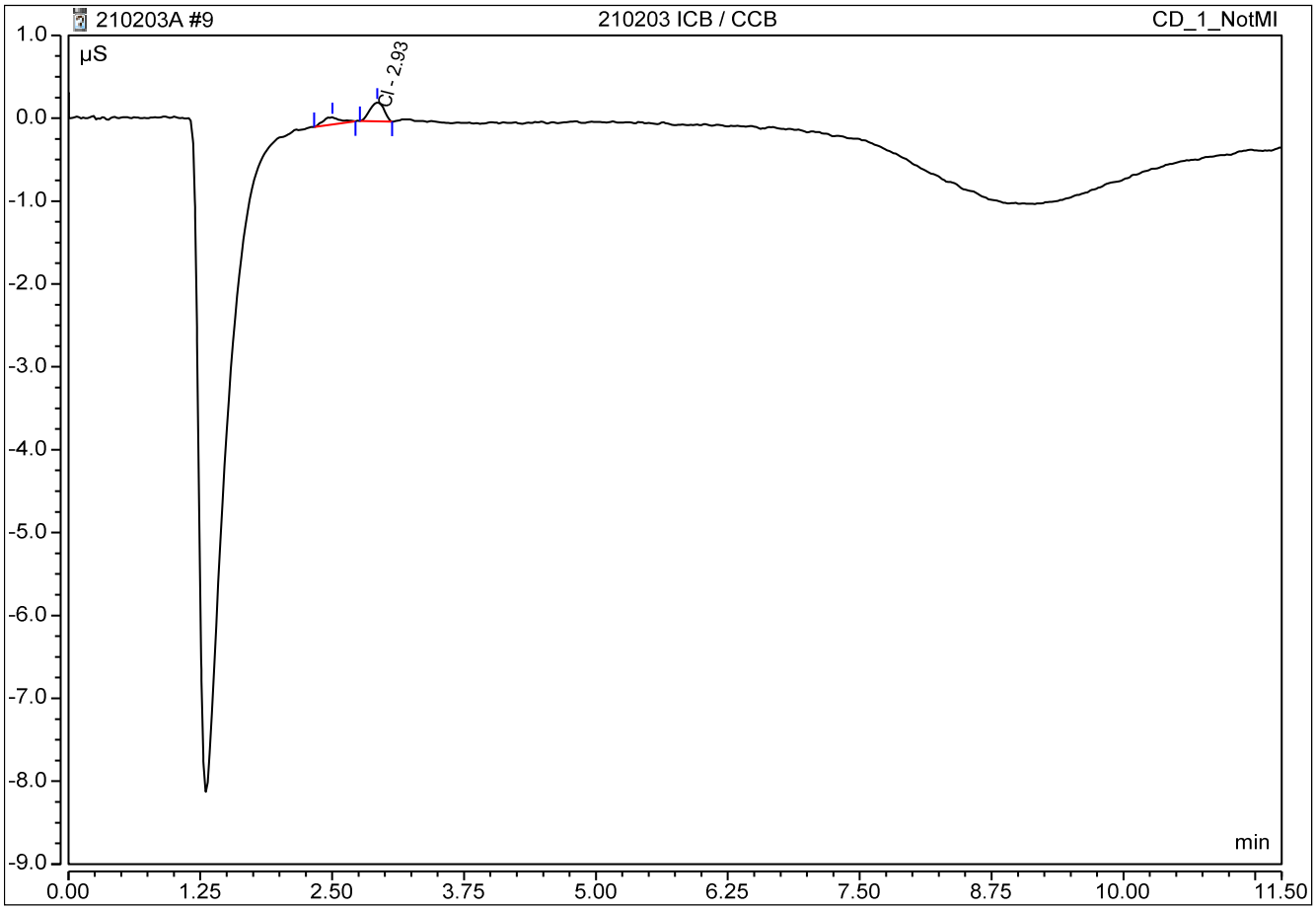


MI7 CI GA 02/03/21

Not Manipulated Peak Integration Report

Sample Name:	**210203 ICB / CCB**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 15:52**	*Run Time:*	**11.50**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L

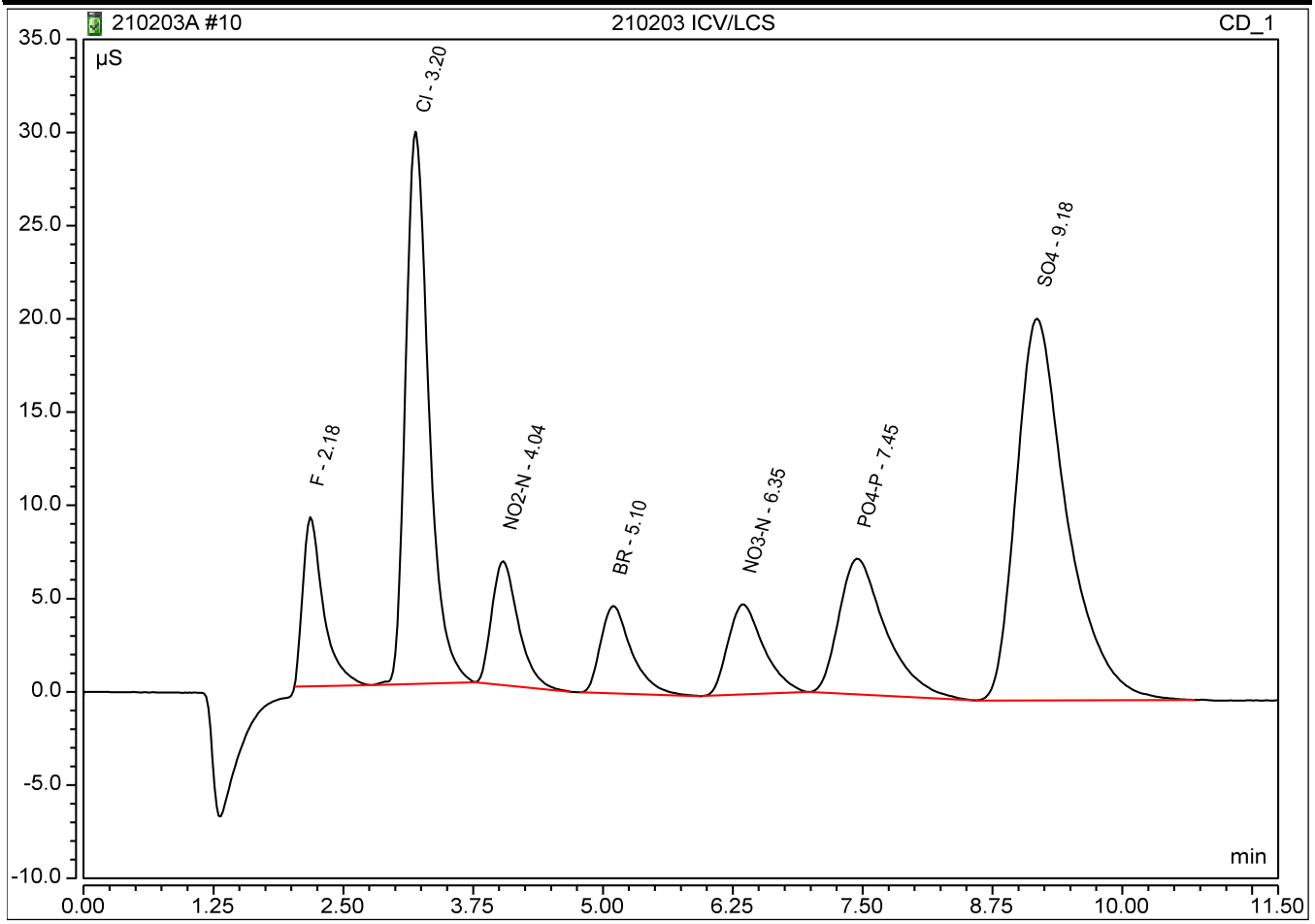


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210203A

Peak Integration Report

Sample Name:	**210203 ICV/LCS**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**03-Feb-2021 / 16:07**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.18	**F**	BMB	2.086	9.078	2.34	2.5	93.4%
2	3.20	**Cl**	BMB	7.701	29.618	9.33	10	93.3%
3	4.04	**NO2-N**	BMB	1.968	6.640	1.55	1.522334	101.7%
4	5.10	**BR**	BMB	1.627	4.686	4.70	5	94.0%
5	6.35	**NO3-N**	BMB	1.932	4.836	1.08	1.129525	95.6%
6	7.45	**PO4-P**	BMB	3.795	7.286	6.67	6.522	102.3%
7	9.18	**SO4**	BMB	11.558	20.473	19.31	20	96.6%



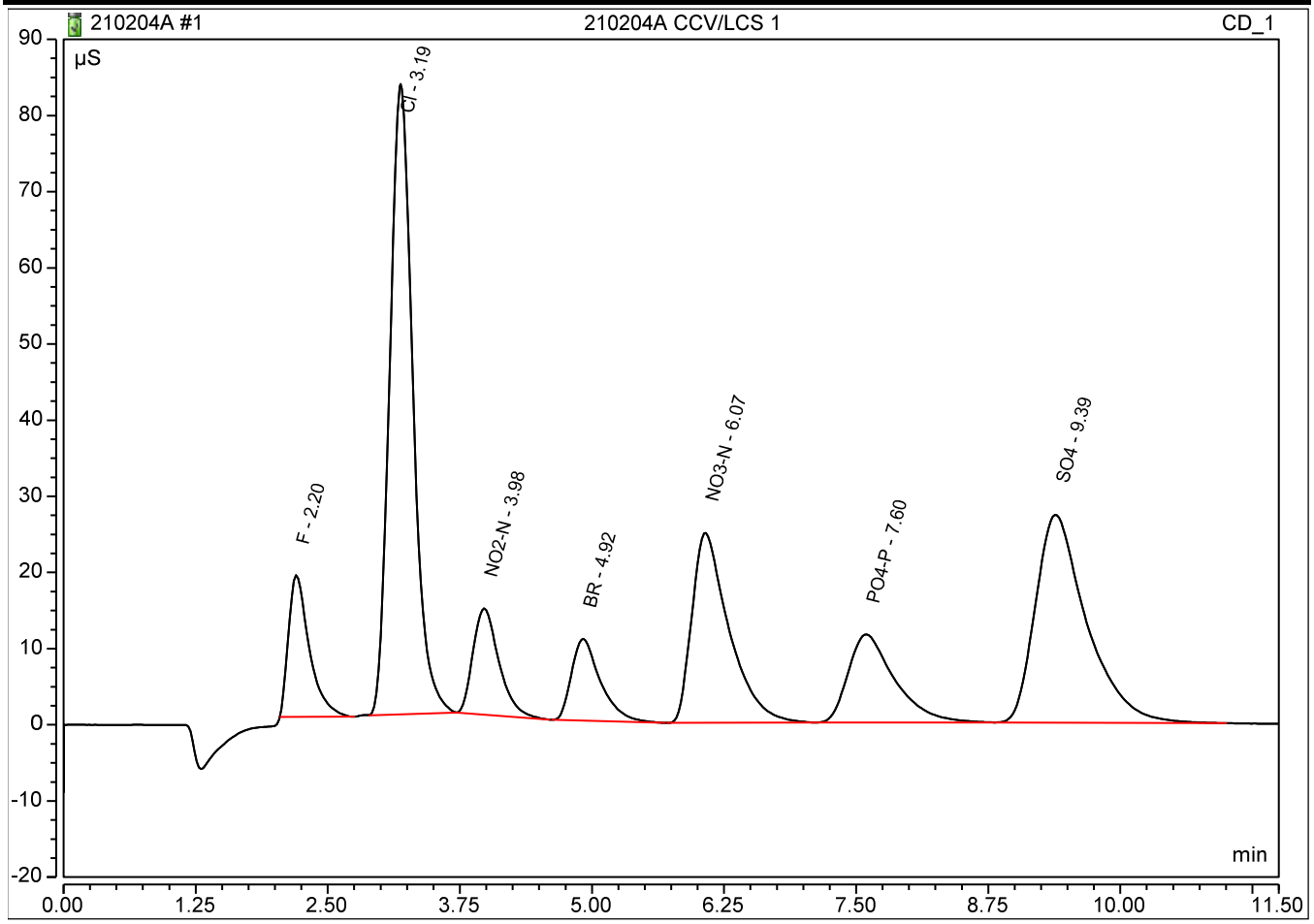
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**210204A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 12:01**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB	4.253	18.619	4.76	5	95.2%
2	3.19	**Cl**	BMB	20.980	82.763	25.42	25	101.7%
3	3.98	**NO2-N**	BMB	3.970	13.959	3.12	3.04	102.8%
4	4.92	**BR**	BMB	3.409	10.761	9.85	10	98.5%
5	6.07	**NO3-N**	BMB	10.150	24.985	5.31	5	106.2%
6	7.60	**PO4-P**	BMB	5.874	11.557	10.06	10	100.6%
7	9.39	**SO4**	BMB	15.307	27.310	25.69	25	102.8%



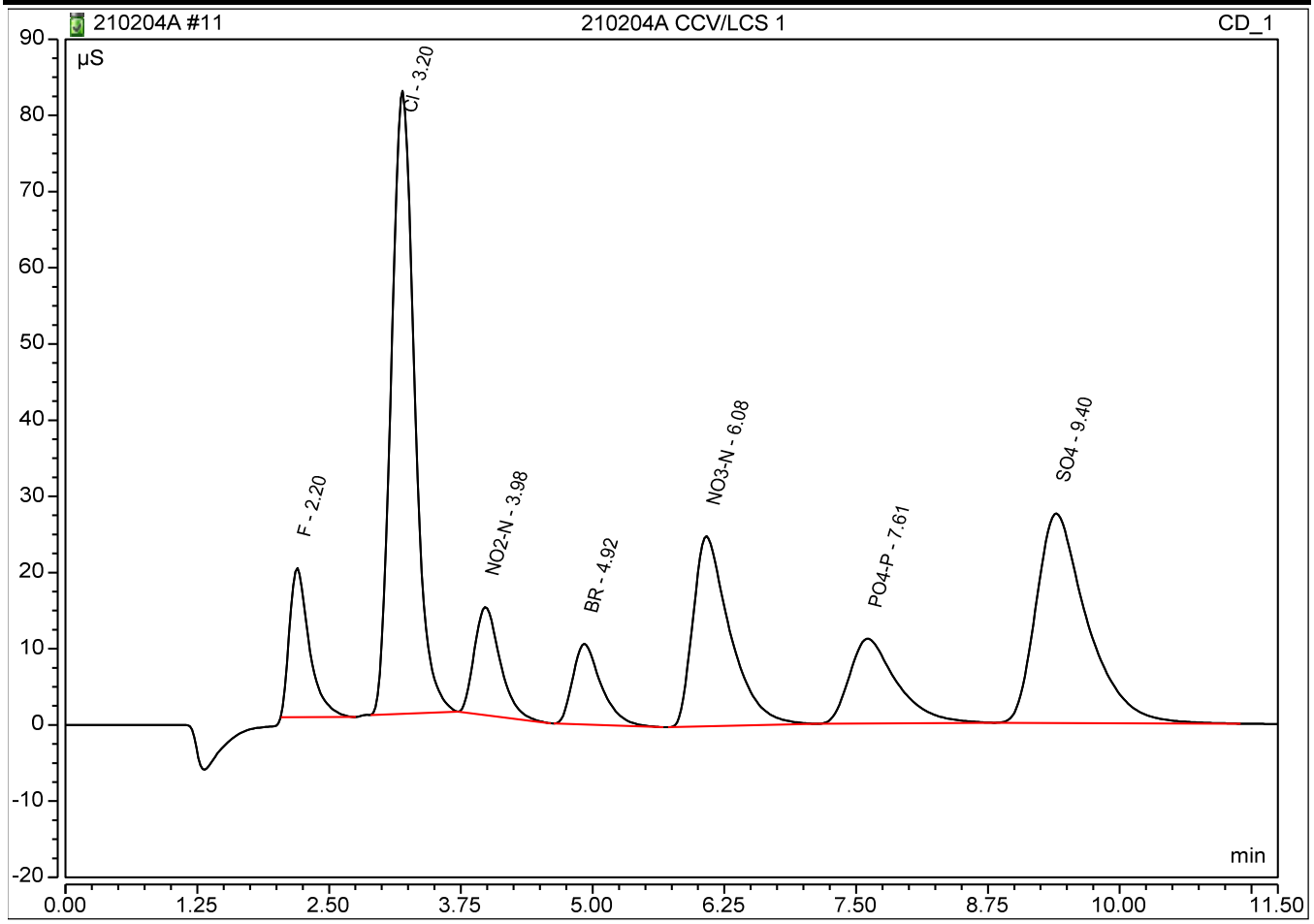
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**210204A CCV/LCS 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 14:30**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.20	**F**	BMB	4.272	19.590	4.78	5	95.7%
2	3.20	**Cl**	BMB	20.991	81.746	25.43	25	101.7%
3	3.98	**NO2-N**	BMB	4.041	14.197	3.18	3.04	104.6%
4	4.92	**BR**	BMB	3.315	10.611	9.57	10	95.7%
5	6.08	**NO3-N**	BMB	10.152	24.968	5.31	5	106.3%
6	7.61	**PO4-P**	BMB	5.734	11.123	9.83	10	98.3%
7	9.40	**SO4**	BMB	15.411	27.496	25.87	25	103.5%



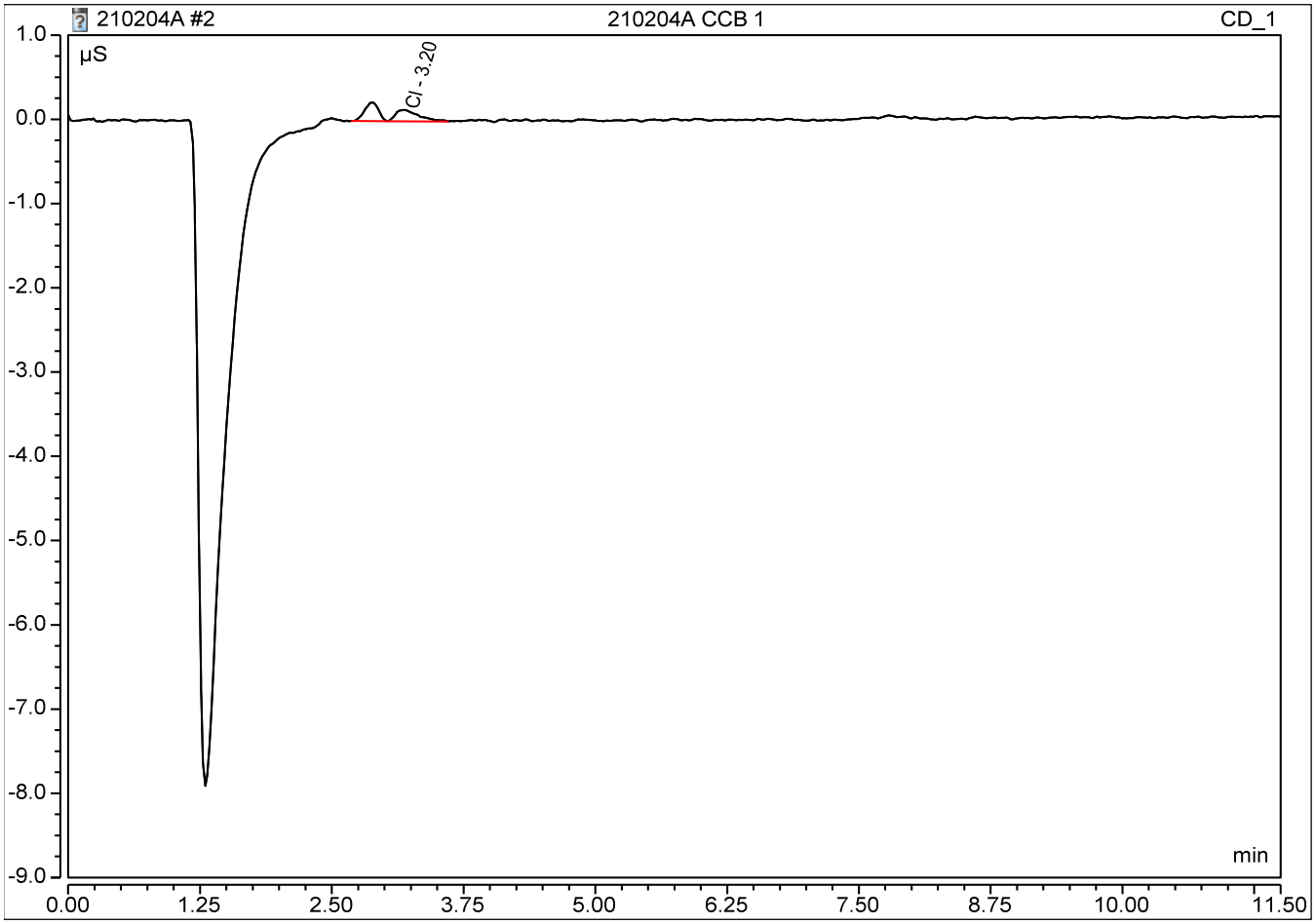
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**210204A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 12:16**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	3.20	**Cl**	BMB	0.035	0.136	0.04		

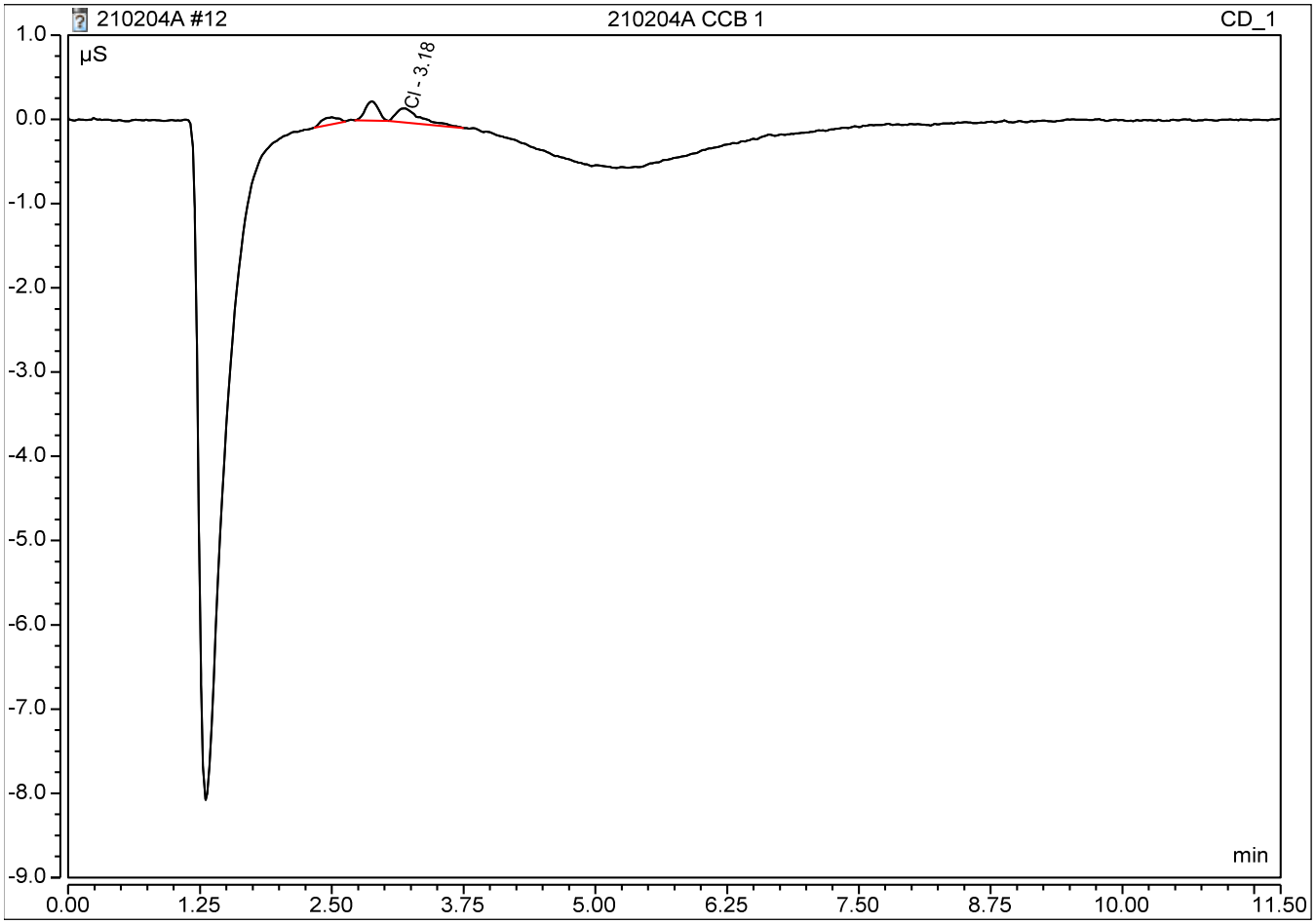


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**210204A CCB 1**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 14:44**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
3	3.18	**Cl**	BMB	0.046	0.168	0.06		



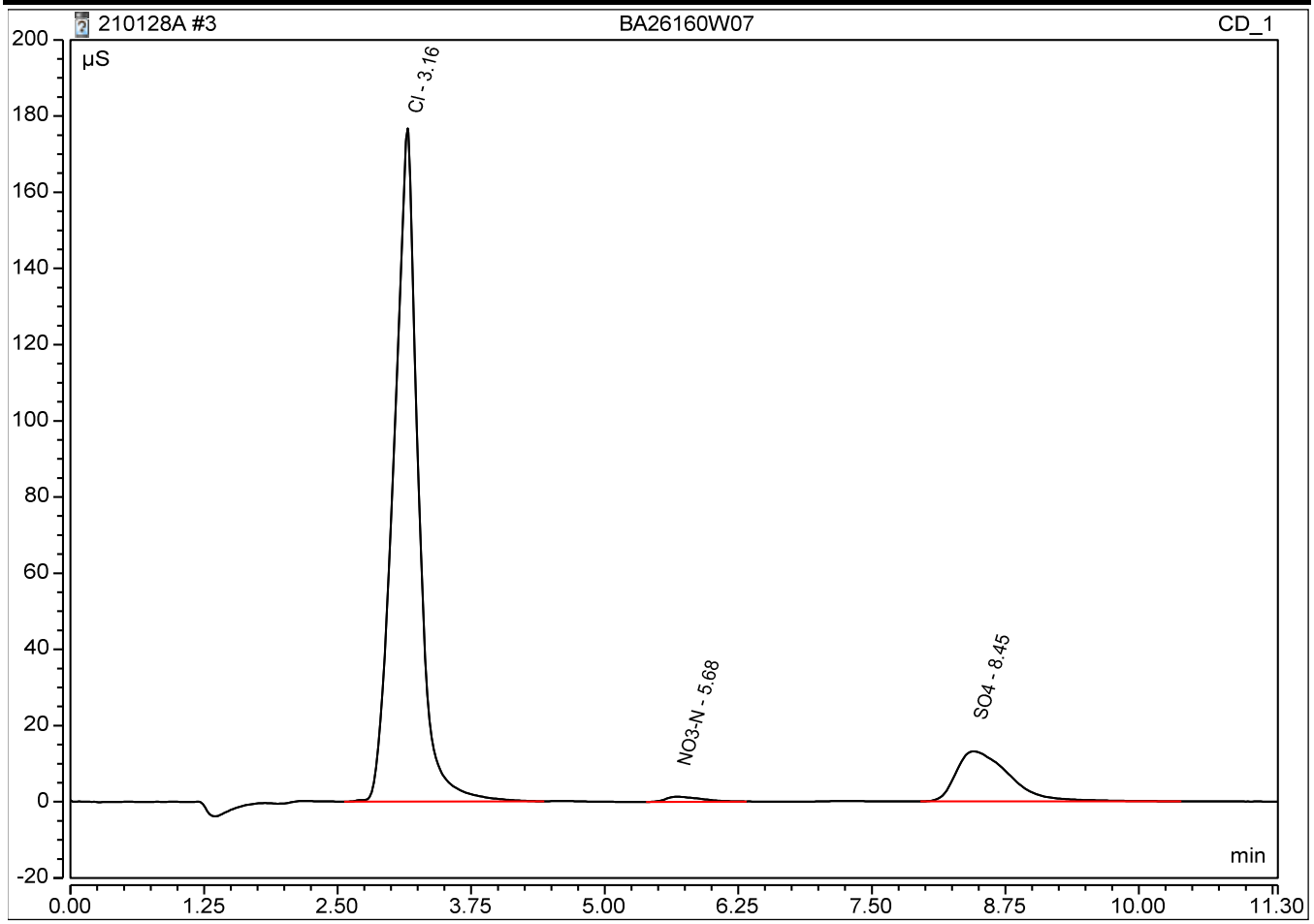
INORGANIC ANALYSIS
Raw Data

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**BA26160W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 11:50**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.16	**Cl**	BMB	46.677	176.722	67.35		
2	5.68	**NO3-N**	BMB	0.500	1.320	0.30		
3	8.45	**SO4**	BMB	7.576	13.173	15.36		



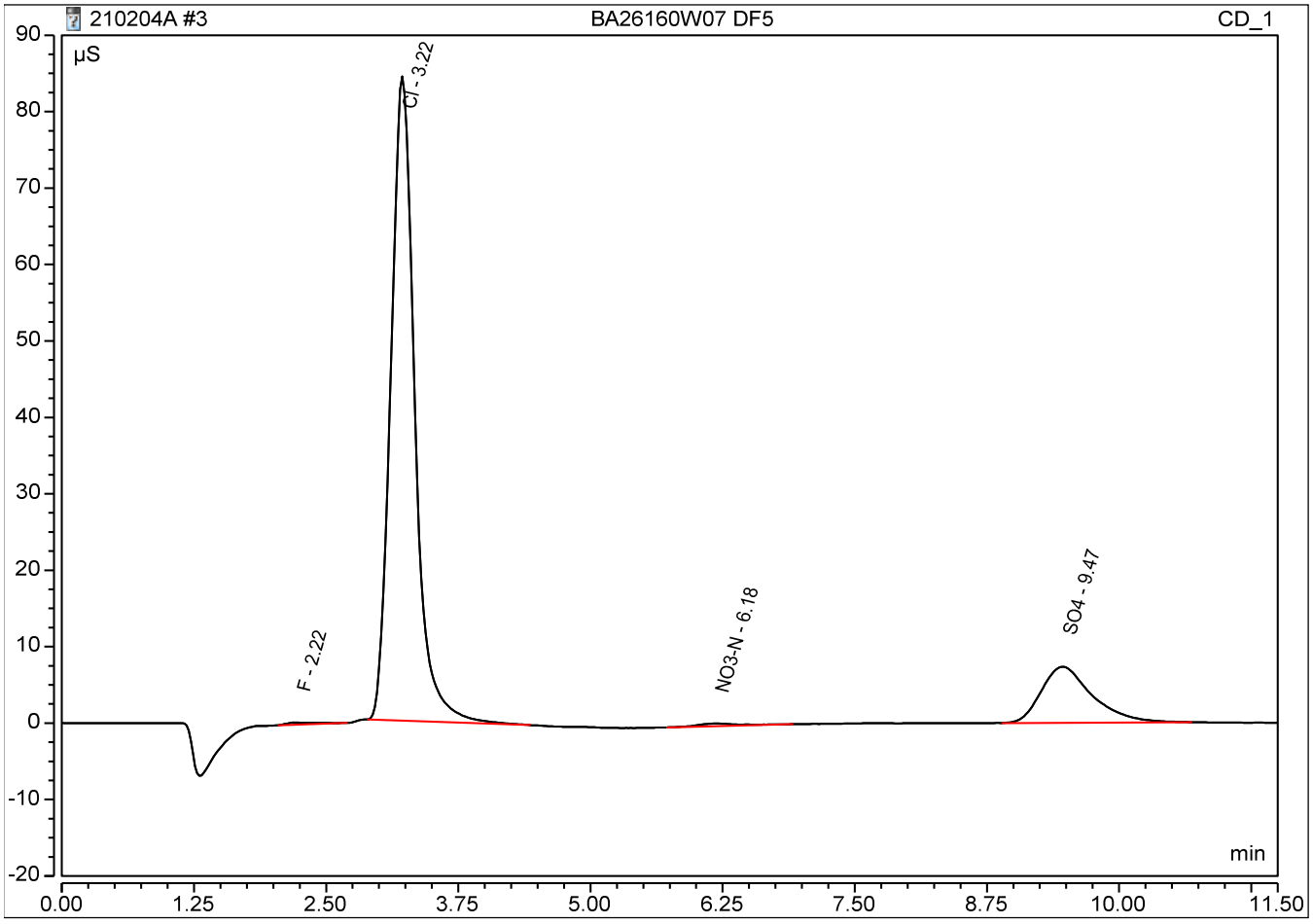
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**BA26160W07 DF5**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 12:31**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.22	**F**	BMB	0.084	0.260	0.47		
2	3.22	**Cl**	BMB	22.136	84.292	134.11		
3	6.18	**NO3-N**	BMB	0.145	0.350	0.80		
4	9.47	**SO4**	BMB	4.086	7.325	33.01		



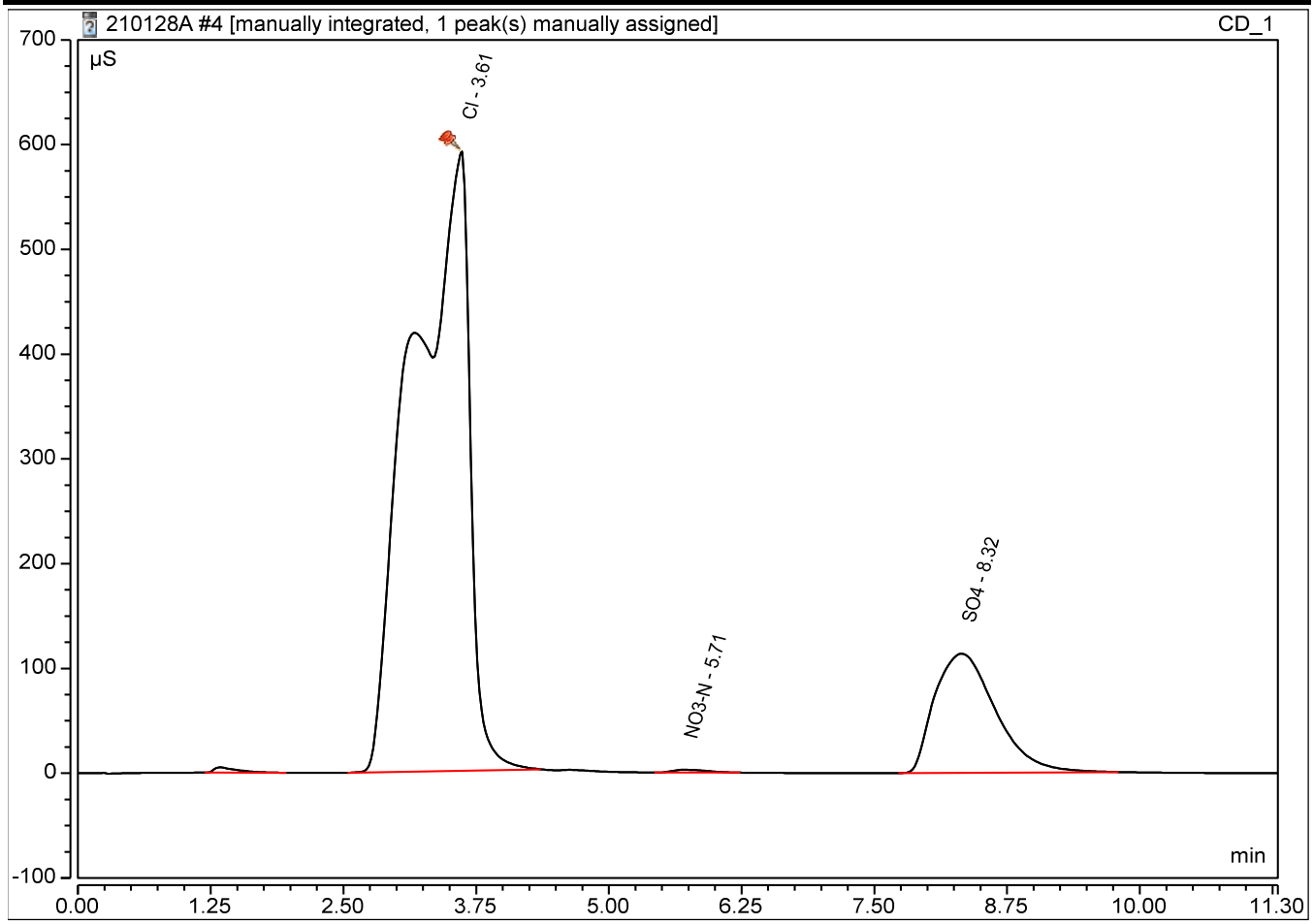
Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210128A

Peak Integration Report

Sample Name:	**BA26163W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 12:04**	*Run Time:*	**11.30**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	3.61	**Cl**	BMB*^	366.928	591.335	528.79		
3	5.71	**NO3-N**	BMB	0.987	2.645	0.59		
4	8.32	**SO4**	BMB*	75.596	113.747	153.22		



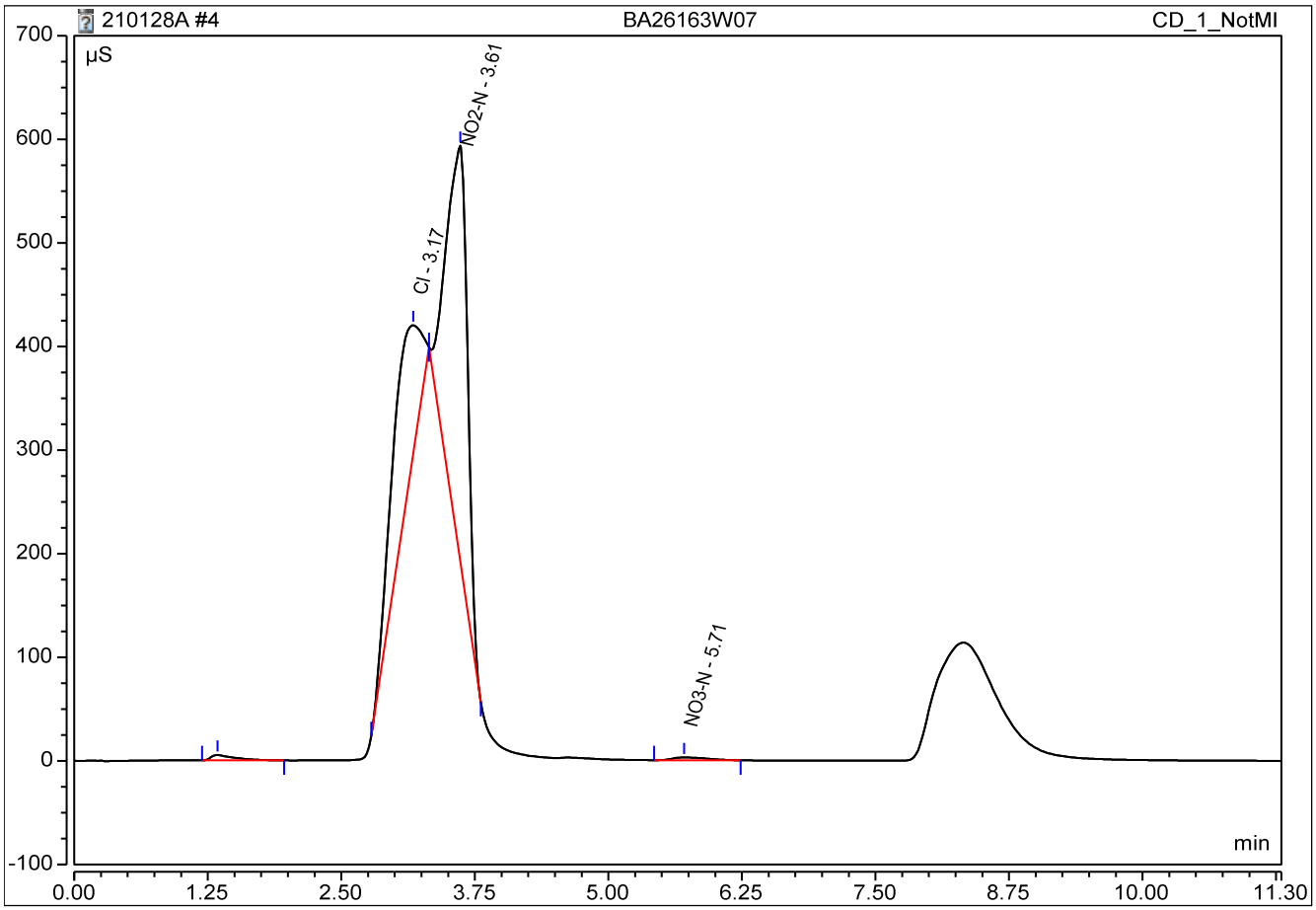
MI 5 Cl SO4 GA 01/28/21

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Not Manipulated Peak Integration Report

Sample Name:	**BA26163W07**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2021.01.27**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Jan-2021 / 12:04**	*Run Time:*	**11.30**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
2	3.17	**Cl**	BMB*^	48.244	124.352	72.3382
3	5.71	**NO3-N**	BMB	0.987	2.645	0.5886
4	n.a.	**SO4**	BMB*	n.a.	n.a.	n.a.

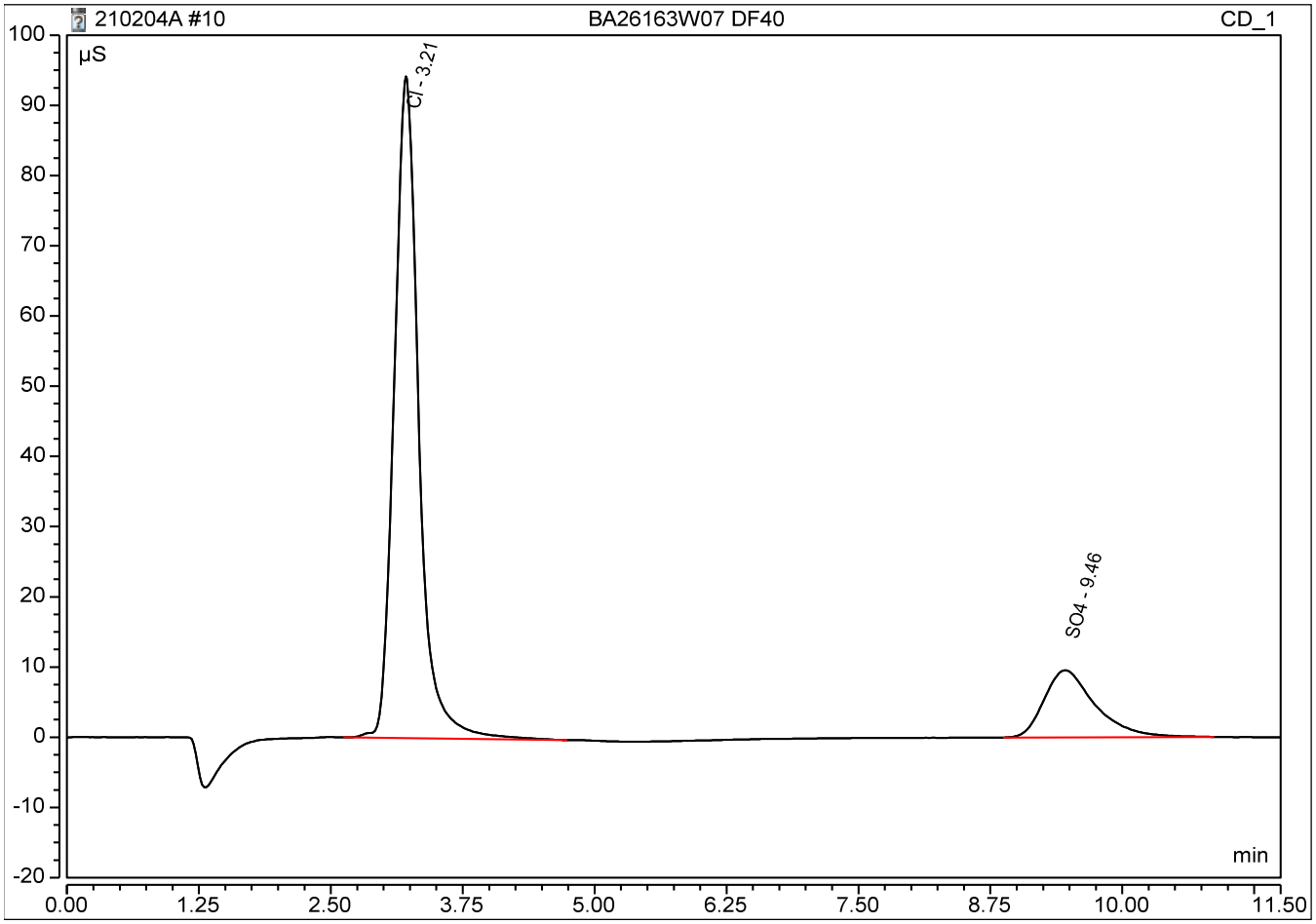


Logged on User: GA
Instrument: Charlie System_1
Sequence: 210204A

Peak Integration Report

Sample Name:	**BA26163W07 DF40**	*Inj. Vol.:*	**100uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**40.00**
Program:	**Anion APM 2021.02.03**	*Operator:*	**Instrument Controller**
Inj. Date / Time:	**04-Feb-2021 / 14:15**	*Run Time:*	**11.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.21	**Cl**	BMB	25.457	94.255	1233.84		
2	9.46	**SO4**	BMB	5.357	9.557	350.61		



Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Anion Chromatography Working Standard

Prep Date: 01/27/21

Exp Date: 01/28/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 01/27/21

Exp Date: 01/28/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 01/27/21	01/28/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 01/27/21	01/28/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 01/27/21	01/28/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 01/27/21	01/28/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 01/27/21	01/28/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 01/27/21	01/28/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 01/27/21	01/28/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 01/27/21	01/28/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 01/27/21	01/28/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Anion Chromatography Working Standard

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	313	25 mL	Millipore Water	12.5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	411 µL	25 mL	Millipore Water	5 as NO2-N
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 02/02/21

Exp Date: 02/03/21

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 02/02/21	02/03/21	4 µL	1000 µL	Millipore Water	0.02-0.20
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 02/02/21	02/03/21	8 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 02/02/21	02/03/21	20 µL	1000 µL	Millipore Water	0.10-1.0
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 02/02/21	02/03/21	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 02/02/21	02/03/21	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 02/02/21	02/03/21	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 02/02/21	02/03/21	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 02/02/21	02/03/21	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal9	5.0-50.0	Prepared 02/02/21	02/03/21	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Fluoride Standard	Inorganic Ventures	ICF-1	1000	**P2-F686382-50369**	**12/06/23**	50 µL	10 mL	Millipore Water	5
Nitrite Standard	Inorganic Ventures	ICN021	1000	**M2-NOX660562-40468**	**08/25/21**	100 µL	10 mL	Millipore Water	10
Chloride Standard	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/30/23**	250 µL	10 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**CS-1687-49590**	**05/31/25**	100 µL	10 mL	Millipore Water	10
Nitrate as N Standard	Inorganic Ventures	ICNN031	1000	**R2-NOX688298-50738**	**02/06/24**	50 µL	10 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	100 µL	10 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315-50368**	**04/03/23**	250 µL	10 mL	Millipore Water	25

Logged on User: GA
Instrument: Charlie System_1
Sequence: 210127

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GA5	Cal 1 2021.01.27	27/Jan/2021	16:00	Calibration Standard	
2	GA6	Cal 2 2021.01.27	27/Jan/2021	16:15	Calibration Standard	
3	GA7	Cal 3 2021.01.27	27/Jan/2021	16:30	Calibration Standard	
4	GA8	Cal 4 2021.01.27	27/Jan/2021	16:44	Calibration Standard	
5	GB1	Cal 5 2021.01.27	27/Jan/2021	16:59	Calibration Standard	
6	GB2	Cal 6 2021.01.27	27/Jan/2021	17:13	Calibration Standard	
7	GB3	Cal 7 2021.01.27	27/Jan/2021	17:28	Calibration Standard	
8	GB4	Cal 8 2021.01.27	27/Jan/2021	17:43	Calibration Standard	
9	GB5	Cal 9 2021.01.27	27/Jan/2021	17:57	Calibration Standard	
10	R1	ICB / CCB	27/Jan/2021	18:12	Unknown	
11	GB6	ICV Absolute 111419	27/Jan/2021	18:27	Check Standard	
12	GC1	BA25956W04	27/Jan/2021	18:41	Unknown	
13	GC2	BA25957W04	27/Jan/2021	18:56	Unknown	
14	GC3	BA25955W01	27/Jan/2021	19:11	Unknown	
15	GC4	BA26001W11	27/Jan/2021	19:25	Unknown	94899 ERH1214
16	GC5	BA26006W07	27/Jan/2021	19:40	Unknown	94899 ERH1219
17	GC6	BA26013W07	27/Jan/2021	19:55	Unknown	94899 ERH1222
18	GC7	BA26016W07	27/Jan/2021	20:09	Unknown	94899 ERH1240
19	R2	210127A CCV/LCS 1	27/Jan/2021	20:24	Check Standard	
20	R1	210127A CCB 1	27/Jan/2021	20:39	Unknown	
21	R2	stop	27/Jan/2021	20:50	Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	210127A CCV/LCS 1	28/Jan/2021	11:04	Check Standard	
2	R1	210127A CCB 1	28/Jan/2021	11:19	Unknown	
3	GC8	BA26160W07	28/Jan/2021	11:50	Unknown	94920 ERH1226
4	GD1	BA26163W07	28/Jan/2021	12:04	Unknown	94920 ERH1238
5	R2	210127A CCV/LCS 2	28/Jan/2021	12:36	Check Standard	
6	R1	210127A CCB 2	28/Jan/2021	12:51	Unknown	
7	R2	CCV TEST	28/Jan/2021	17:58	Check Standard	Checking chromotography
8	R2	CCV TEST	28/Jan/2021	18:13	Check Standard	Checking chromotography
9	R2	CCV TEST	28/Jan/2021	18:27	Check Standard	Checking chromotography
10	R2	CCV TEST	28/Jan/2021	18:42	Check Standard	Checking chromotography
11	R2	CCV TEST	28/Jan/2021	18:57	Check Standard	Checking chromotography
12	R2	CCV TEST	28/Jan/2021	19:11	Check Standard	Checking chromotography
13	R2	CCV TEST	28/Jan/2021	19:26	Check Standard	Checking chromotography
14	R3	stop	28/Jan/2021	19:37	Unknown	Checking chromotography
15	R2	CCV TEST	29/Jan/2021	14:30	Check Standard	Checking chromotography

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	BD3	Cal 3 2021.02.02	03/Feb/2021	13:53	Calibration Standard	F and PO4>PQL
2	BD4	Cal 4 2021.02.02	03/Feb/2021	14:08	Calibration Standard	
3	BD5	Cal 5 2021.02.02	03/Feb/2021	14:23	Calibration Standard	
4	BD6	Cal 6 2021.02.02	03/Feb/2021	14:38	Calibration Standard	
5	BD7	Cal 7 2021.02.02	03/Feb/2021	14:53	Calibration Standard	
6	BD8	Cal 8 2021.02.02	03/Feb/2021	15:07	Calibration Standard	
7	BE1	Cal 9 2021.02.02	03/Feb/2021	15:22	Calibration Standard	
8	R1	ICB / CCBxxx	03/Feb/2021	15:37	Unknown	
9	R1	210203 ICB / CCB	03/Feb/2021	15:52	Unknown	replaced ICB
10	BE2	210203 ICV/LCS	03/Feb/2021	16:07	Check Standard	Absolute 111419
11	BE3	BA26344W01	03/Feb/2021	16:22	Unknown	
12	BE4	BA26345W01	03/Feb/2021	16:46	Unknown	
13	BE5	BA26346W01	03/Feb/2021	17:01	Unknown	
14	BE6	BA26347W01	03/Feb/2021	17:16	Unknown	
15	BE7	BA26348W01	03/Feb/2021	17:30	Unknown	
16	GA6	BA25870W07 DF5	03/Feb/2021	17:45	Unknown	
17	GA7	BA26001W11 DF5	03/Feb/2021	18:00	Unknown	
18	R2	210203A LCSD	03/Feb/2021	18:15	Unknown	
19	R2	210203A CCV/LCS 1	03/Feb/2021	18:30	Check Standard	
20	R1	210203A CCB 1	03/Feb/2021	18:45	Unknown	
21	BE8	BA26349W01	03/Feb/2021	19:00	Unknown	
22	GA8	BA26385W01	03/Feb/2021	19:14	Unknown	
23	R2	210203A CCV/LCS 1	03/Feb/2021	19:29	Check Standard	
24	R1	210203A CCB 1	03/Feb/2021	19:44	Unknown	baseline shifted
25	R1	210203A CCB 1	03/Feb/2021	19:59	Unknown	
26	R2	stop	03/Feb/2021	20:11	Unknown	

Chromeleon (c) Dionex 1996-2009
Version 7.2.4.8340

INORGANIC ANALYSIS
Calibration and Raw Data

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 210202 | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

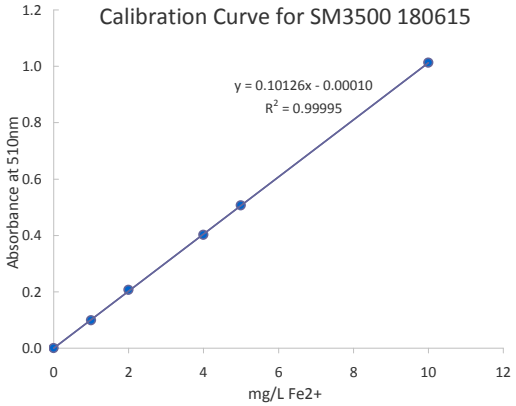
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/26/20	10:49	ICB	0.00	0.000	
06/26/20	10:49	Ical 1	1.00	0.099	97.9%
06/26/20	10:50	Ical 2	2.00	0.207	102.3%
06/26/20	10:51	Ical 3	4.00	0.402	99.3%
06/26/20	10:51	Ical 4	5.00	0.506	100.0%
06/26/20	10:52	Ical 5	10.00	1.013	100.1%
06/26/20	10:52	ICV	3.00	0.313	103.1%
06/26/20	10:53	ICB	0.00	0.000	

Slope	0.101255102
Intercept	-0.000102041
Coefficient of Determination	0.999948376

Algortithm Check:	Appl ID	Absorbance	Result
	LCS A210209	0.316	3.12

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	02/02/21	3.12



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
02/02/21	16:39	CCV 4.0 A210202	1	0.400	25mL		3.95	3.95	4.00	98.8%
02/02/21	16:37	Blk/ CCB A210202	1	0.000	25mL		0.00	0.00		
02/02/21	16:39	LCS A210209	1	0.316	25mL		3.12	3.12	3.00	104.1%
02/02/21	16:40	LCSD A210209	1	0.315	25mL		3.11	3.11	3.00	103.7%
02/02/21	16:41	BA26001W13	1	0.001	25mL		0.01	0.01		
02/02/21	16:41	BA26006W09	1	0.189	25mL		1.87	1.87		
02/02/21	16:42	BA26013W09	1	0.003	25mL		0.03	0.03		
02/02/21	16:43	BA26016W09	1	0.001	25mL		0.01	0.01		
02/02/21	16:44	BA26160W09	1	0.002	25mL		0.02	0.02		
02/02/21	16:45	BA26163W09	1	-0.001	25mL		-0.01	-0.01		
02/02/21	16:45	BA26163W09 MS	1	0.309	25mL		3.05	3.05		
02/02/21	16:46	BA26163W09 MSD	1	0.308	25mL		3.04	3.04		
02/02/21	16:46	CCV 4.0 A210202	1	0.412	25mL		4.07	4.07	4.00	101.7%
02/02/21	16:47	Blk/ CCB A210202	1	-0.002	25mL		-0.02	-0.02		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	Prep Daily	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	Prep Daily	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/26/20						
Exp Date	06/26/21						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/26/21	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/26/21	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/26/21	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/26/21	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/26/21	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/26/21	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/26/21	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	0.2056	07/28/20
		HCL conc	na	enough to dissolve	
Buffer	Z28B018	Ammonia Acetate	na	249.2	04/29/20
	2018071399	Glacial Acetic Acid	na	700mL	

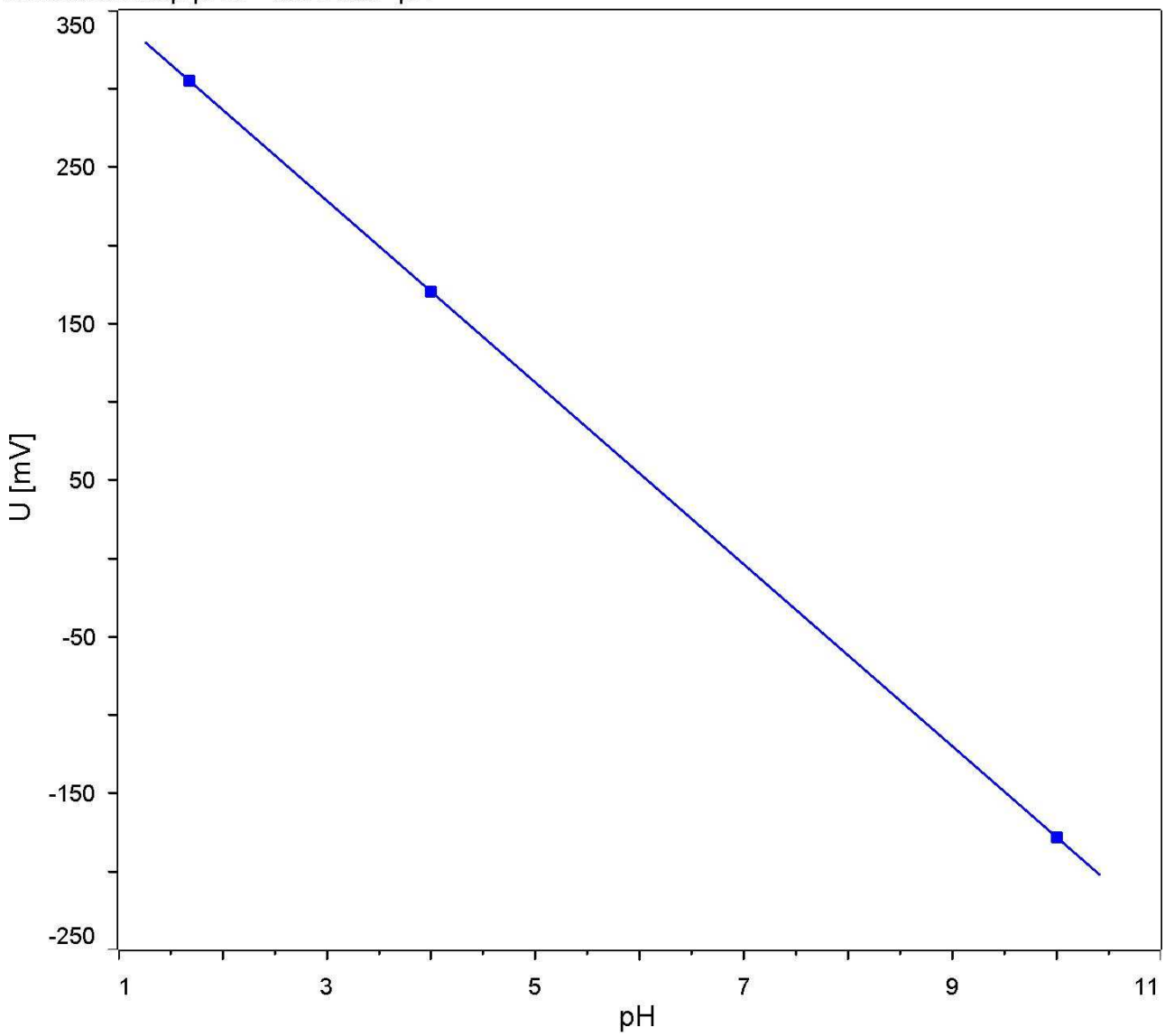
Timao Calibration Curve

2021-02-01 16:12:58

Calculations

Buffer 7	7.04	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0423	
Slope	99.50	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.5	
pH(as)	6.93	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.931	
Res19	21.1	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.1171	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA26302W01	2021-02-01 18:21:52 UTC-8	Alkalinity	0.000	4.680	0.00	0.00	187.20	187.20	mg/L	25 mL	0.0200	210201A	AR
BA26163W07	2021-02-01 18:15:11 UTC-8	Alkalinity	0.000	4.020	0.00	0.00	160.80	160.80	mg/L	25 mL	0.0200	210201A	AR
BA26160W07	2021-02-01 18:10:33 UTC-8	Alkalinity	0.000	2.054	0.00	0.00	82.16	82.16	mg/L	25 mL	0.0200	210201A	AR
BA26016W07	2021-02-01 18:06:16 UTC-8	Alkalinity	0.000	1.606	0.00	0.00	64.24	64.24	mg/L	25 mL	0.0200	210201A	AR
BA26013W07	2021-02-01 17:56:22 UTC-8	Alkalinity	0.000	6.936	0.00	0.00	277.44	277.44	mg/L	25 mL	0.0200	210201A	AR
BA26006W07	2021-02-01 17:48:33 UTC-8	Alkalinity	0.000	4.734	0.00	0.00	189.36	189.36	mg/L	25 mL	0.0200	210201A	AR
BA26001W11	2021-02-01 17:44:23 UTC-8	Alkalinity	0.000	1.564	0.00	0.00	62.56	62.56	mg/L	25 mL	0.0200	210201A	AR
BA25870W07	2021-02-01 17:39:46 UTC-8	Alkalinity	0.000	1.914	0.00	0.00	76.56	76.56	mg/L	25 mL	0.0200	210201A	AR
BA25867W07	2021-02-01 17:34:53 UTC-8	Alkalinity	0.000	2.030	0.00	0.00	81.20	81.20	mg/L	25 mL	0.0200	210201A	AR
210201A LCSD	2021-02-01 17:26:12 UTC-8	Alkalinity	0.272	6.292	0.00	21.76	229.92	251.68	mg/L	25 mL	0.0200	210201A	AR
210201A LCS	2021-02-01 17:16:36 UTC-8	Alkalinity	0.278	6.460	0.00	22.24	236.16	258.40	mg/L	25 mL	0.0200	210201A	AR
210201A BLK	2021-02-01 17:13:35 UTC-8	Alkalinity	0.000	0.086	0.00	0.00	3.44	3.44	mg/L	25 mL	0.0200	210201A	AR

Tiamo Alkalinity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	**167828**	**NA**	**NA**	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	**167828**	**03/06/20**	**03/06/21**	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	**167828**	**03/06/20**	**03/06/21**	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	**19K0856189**	**04/09/20**	**NA**	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	**1575C510**	**01/21/21**	**07/21/21**	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	**223443**	**07/02/20**	**03/11/21**	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	**6858 KHMV**	**NA**	**NA**	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	**6858 KHMV**	**04/23/20**	4/23/21	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	**6858 KHMV**	05/25/20	5/25/21	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA
ORP standard	Thermo Fisher Scientific	mV	NA	WZ1-40222	01/11/19	1/31/20	20mL	20mL	ORP STD	220mV

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR **AR**

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	VWR	pH Units	1.68	**1006705**	**07/02/20**	**11/27/20**	NA	NA	NA	NA
pH 4.00 Buffer	VWR	pH Units	4	**1901A35-40706**	**01/19/19**	**01/13/21**	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	**1004B81**	**07/02/20**	**10/12/21**	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	**1912A15**	**07/02/20**	**12/01/21**	NA	NA	NA	NA

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 94920 SDG: 94920
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 02/02/21

Analyte	Calibration Verification									M
	True ICV	Found 18:41	%R(1)	True CCV1	Found 11:46	%R(1)	True CCV1	Found 12:03	%R(1)	
TOXN	3	3.0189	101	3	3.1737	106	3	3.182	106	

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 94920 SDG: 94920

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	ICB 02/02/21 18:43	C	CCB 02/03/21 11:48	C	CCB 02/03/21 12:04	C		C		C	
TOXN	.100	U	.031	J	.100	U					

AQ2 Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Eric RR
Date & Time:	2021-02-03 17:04:12
Tray Number:	2
Tray Name:	210202A TOXN

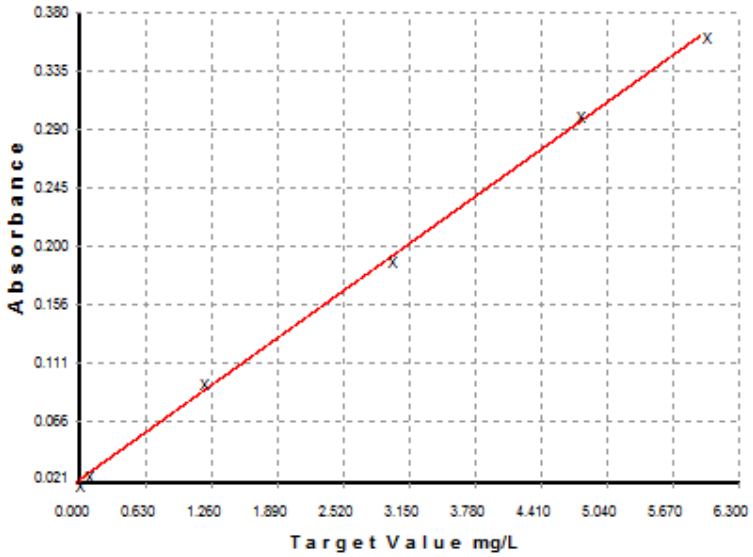
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0211	-0.0461	0.0000	
S90	0.0276	0.0679	0.1000	-32.12
S91	0.0981	1.3059	1.2000	8.83
S92	0.1917	2.9498	3.0000	-1.67
S93	0.3023	4.8904	4.8000	1.88
S94	0.3616	5.9321	6.0000	-1.13
S0	0.0228	-0.0163	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9995
Carryover(%):	0.5
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-4.159974E-001
b =:	1.755366E+001
Date & Time:	2021-02-03 16:09:39

Calibration Graph



Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0211			0.021070			ERR	2021-02-02 18:21:46
	S90	Standard 90	0.0276			0.027566			ERR	2021-02-02 18:23:57
	S91	Standard 91	0.0981			0.098094			ERR	2021-02-02 18:26:09
	S92	Standard 92	0.1917			0.191745			ERR	2021-02-02 18:28:20
	S93	Standard 93	0.3023			0.302298			ERR	2021-02-02 18:30:32
	S94	Standard 94	0.3616			0.361639			ERR	2021-02-02 18:32:43
	S0	Standard 0	0.0228			0.022770			ERR	2021-02-02 18:34:55
	CCV	CCV	-0.0133	mg/L		0.022940			ERR	2021-02-02 18:37:07
	CCB	CCB	-0.0451	mg/L		0.021127			ERR	2021-02-02 18:39:19
3	U1	ICV TOXN	3.0189	mg/L		0.195679			ERR	2021-02-02 18:41:31
4	U2	ICB TOXN	-0.0268	mg/L		0.022174			ERR	2021-02-02 18:43:43
5	U3	210202A Blk TOXN	-0.0397	mg/L		0.021438			ERR	2021-02-02 18:45:56
6	U4	210202A Blk_S TOXN	0.2370	mg/L		0.037201			ERR	2021-02-02 18:48:08
7	U5	210202A LCS TOXN	3.0453	mg/L		0.197183			ERR	2021-02-02 18:50:20
8	U6	210202A LCSD TOXN	3.0241	mg/L		0.195975			ERR	2021-02-02 18:52:32
9	U7	210202A LCS_S TOXN	2.8302	mg/L		0.184929			ERR	2021-02-02 18:54:44
10	U8	1 ppm TOXN	0.9586	mg/L		0.078309			ERR	2021-02-02 18:56:56
11	U9	BA26001W12 pH 6.91	0.6618	mg/L		0.061399			ERR	2021-02-02 18:59:09
12	U10	BA26006W08 pH 7.84	-0.0290	mg/L		0.022047			ERR	2021-02-02 19:01:21
	CCV	CCV	-0.0290	mg/L		0.022047			ERR	2021-02-02 19:03:34
	CCB	CCB	-0.0265	mg/L		0.022188			ERR	2021-02-02 19:05:47
13	U11	BA26013W08 pH 7.27	1.3938	mg/L		0.103103			ERR	2021-02-02 19:08:00
14	U12	BA26016W08 pH 7.51	0.4451	mg/L		0.049056			ERR	2021-02-02 19:10:12
15	U13	BA26165W02 pH 6.44	0.1770	mg/L		0.033781			ERR	2021-02-02 19:12:25
16	U14	BA26166W02 pH 6.17	0.0533	mg/L		0.026734			ERR	2021-02-02 19:14:38
17	U15	BA26167W02 pH 6.89	0.0987	mg/L		0.029320			ERR	2021-02-02 19:16:50
18	U16	BA26168W02 pH 6.05	0.0848	mg/L		0.028528			ERR	2021-02-02 19:19:03

19	U17	BA26169W02 pH 6.24	0.0252	mg/L	0.025133	ERR	2021-02-02 19:21:15
20	U18	BA26170W02 pH 6.10	0.4438	mg/L	0.048981	ERR	2021-02-02 19:23:27
21	U19	BA26171W02 pH 6.46	0.0545	mg/L	0.026806	ERR	2021-02-02 19:25:39
22	U20	BA26172W02 pH 5.79	0.0724	mg/L	0.027824	ERR	2021-02-02 19:27:51
	CCV	CCV	-0.0255	mg/L	0.022245	ERR	2021-02-02 19:30:04
	CCB	CCB	-0.0506	mg/L	0.020816	ERR	2021-02-02 19:32:18
23	U21	BA26173W02 pH 7.39	0.3494	mg/L	0.043602	ERR	2021-02-02 19:33:26
24	U22	BA26174W02 pH 7.32	0.1177	mg/L	0.030402	ERR	2021-02-02 19:34:22
25	U23	BA26175W02 pH 5.99	0.2329	mg/L	0.036967	ERR	2021-02-02 19:35:18
26	U24	BA26176W02 pH 6.41	0.2242	mg/L	0.036468	ERR	2021-02-02 19:36:14
27	U25	BA26160W08 pH 8.01	0.6790	mg/L	0.062378	ERR	2021-02-02 19:37:10
28	U26	BA26163W08 pH 5.69	1.8494	mg/L	0.129053	ERR	2021-02-02 19:38:06
29	U27	BA26092M01	0.0177	mg/L	0.024705	ERR	2021-02-02 19:39:02
	CCV	CCV	-0.0320	mg/L	0.021877	ERR	2021-02-02 19:39:58
	CCB	CCB	-0.0474	mg/L	0.020999	ERR	2021-02-02 19:40:55
	CCV	CCV	2.9727	mg/L	0.193045		2021-02-03 09:27:41
	CCB	CCB	-0.0305	mg/L	0.021962		2021-02-03 09:29:57
5	U3	210202A Blk TOXN	-0.0422	mg/L	0.021296	ERR	2021-02-03 09:32:12
6	U4	210202A Blk_S TOXN	0.0873	mg/L	0.028672	ERR	2021-02-03 09:34:27
7	U5	210202A LCS TOXN	3.2943	mg/L	0.211367	ERR	2021-02-03 09:36:44
8	U6	210202A LCSD TOXN	3.4024	mg/L	0.217524	ERR	2021-02-03 09:39:02
9	U7	210202A LCS_S TOXN	3.2406	mg/L	0.208310	ERR	2021-02-03 09:41:21
10	U8	1 ppm TOXN	1.0857	mg/L	0.085547	ERR	2021-02-03 09:43:39
11	U9	BA26001W12 pH 6.91	0.7779	mg/L	0.068012	ERR	2021-02-03 09:45:58
12	U10	BA26006W08 pH 7.84	-0.0292	mg/L	0.022033	ERR	2021-02-03 09:48:17
	CCV	CCV	3.0182	mg/L	0.195637	ERR	2021-02-03 09:50:36
	CCV	CCV	3.0673	mg/L	0.198436		2021-02-03 10:18:21
	CCB	CCB	-0.0357	mg/L	0.021664		2021-02-03 10:20:37
5	U3	210202A Blk TOXN	-0.0422	mg/L	0.021296	ERR	2021-02-03 10:22:53
6	U4	210202A Blk_S TOXN	0.0722	mg/L	0.027810	ERR	2021-02-03 10:25:07
7	U5	210202A LCS TOXN	3.4808	mg/L	0.221992	ERR	2021-02-03 10:27:21
	CCV	CCV	3.0747	mg/L	0.198861		2021-02-03 10:59:33
	CCB	CCB	0.0179	mg/L	0.024719		2021-02-03 11:01:48
5	U3	210202A Blk TOXN	0.0324	mg/L	0.025547	ERR	2021-02-03 11:04:01
6	U4	210202A Blk_S TOXN	1.1691	mg/L	0.030359	ERR	2021-02-03 11:06:14
7	U5	210202A LCS TOXN	3.0905	mg/L	0.199756	ERR	2021-02-03 11:08:26
8	U6	210202A LCSD TOXN	3.1148	mg/L	0.201145	ERR	2021-02-03 11:10:39
9	U7	210202A LCS_S TOXN	33.2356	mg/L	0.213036	ERR	2021-02-03 11:12:51
11	U9	BA26001W12 pH 6.91	0.8211	mg/L	0.070477	ERR	2021-02-03 11:15:04
12	U10	BA26006W08 pH 7.84	0.0387	mg/L	0.025904	ERR	2021-02-03 11:17:17
	CCV	CCV	3.0022	mg/L	0.194729	ERR	2021-02-03 11:19:30
	CCB	CCB	0.0342	mg/L	0.025647	ERR	2021-02-03 11:21:43
13	U11	BA26013W08 pH 7.27	1.7901	mg/L	0.125676	ERR	2021-02-03 11:23:56
14	U12	BA26016W08 pH 7.51	0.5894	mg/L	0.057277	ERR	2021-02-03 11:26:08
15	U13	BA26165W02 pH 6.44	0.2781	mg/L	0.039541	ERR	2021-02-03 11:28:22
16	U14	BA26166W02 pH 6.17	0.1058	mg/L	0.029724	ERR	2021-02-03 11:30:34
17	U15	BA26167W02 pH 6.89	0.1946	mg/L	0.034787	ERR	2021-02-03 11:32:47
18	U16	BA26168W02 pH 6.05	0.1446	mg/L	0.031936	ERR	2021-02-03 11:35:00
19	U17	BA26169W02 pH 6.24	0.0929	mg/L	0.028989	ERR	2021-02-03 11:37:11
20	U18	BA26170W02 pH 6.10	0.5948	mg/L	0.057584	ERR	2021-02-03 11:39:24
21	U19	BA26171W02 pH 6.46	0.1032	mg/L	0.029580	ERR	2021-02-03 11:41:35
22	U20	BA26172W02 pH 5.79	0.1543	mg/L	0.032487	ERR	2021-02-03 11:43:47
	CCV	CCV	3.1737	mg/L	0.204497	ERR	2021-02-03 11:46:00
	CCB	CCB	0.0314	mg/L	0.025490	ERR	2021-02-03 11:48:14
23	U21	BA26173W02 pH 7.39	0.4343	mg/L	0.048439	ERR	2021-02-03 11:50:27
24	U22	BA26174W02 pH 7.32	0.2249	mg/L	0.036512	ERR	2021-02-03 11:52:41
25	U23	BA26175W02 pH 5.99	0.3235	mg/L	0.042130	ERR	2021-02-03 11:54:53
26	U24	BA26176W02 pH 6.41	0.3449	mg/L	0.043349	ERR	2021-02-03 11:57:07
27	U25	BA26160W08 pH 8.01	0.8297	mg/L	0.070968	ERR	2021-02-03 11:59:19
28	U26	BA26163W08 pH 5.69	2.2110	mg/L	0.149658	ERR	2021-02-03 12:01:33
29	U27	BA26092M01	152.3789	mg/L	0.027164	ERR	2021-02-03 12:02:40
	CCV	CCV	3.1820	mg/L	0.204972	ERR	2021-02-03 12:03:36
	CCB	CCB	0.0084	mg/L	0.024178	ERR	2021-02-03 12:04:33
	CCV	CCV	3.0804	mg/L	0.199181		2021-02-03 12:05:30
	CCB	CCB	0.0184	mg/L	0.024748		2021-02-03 12:06:27
	CCV	CCV	3.1058	mg/L	0.200632		2021-02-03 12:07:25
	CCB	CCB	0.0077	mg/L	0.024135		2021-02-03 12:08:22
	CCV	CCV	3.0856	mg/L	0.199479		2021-02-03 12:09:20
	CCB	CCB	0.0254	mg/L	0.025147		2021-02-03 12:10:17

NO2

Prep Date: 01/25/21

Exp Date: 02/01/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock(uL)	Final Volume(mL)	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	M2-NOX660562-40468	08/25/21	61.6	25	DI Water	0.73
CCV	Inorganic Ventures		1000	N2-NOX672889	01/15/23	60	25	DI Water	0.75
HP	Inorganic Ventures		1000	N2-NOX672889	01/15/23	123.2	25	DI Water	1.5

NO3/TOXN

Prep Date: 02/02/21

Exp Date: 02/09/21 **Prep'd By (Initials):** ERR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Product Number	Conc. (ppm)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
ICB								DI Water	0
ICV	Inorganic Ventures		1000	P2-NOX675324-49391	02/14/23	75	25	DI Water	3
CCV	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	75	25	DI Water	3
HP	Inorganic Ventures		1000	R2-NOX688298-50738	02/06/21	150	25	DI Water	6

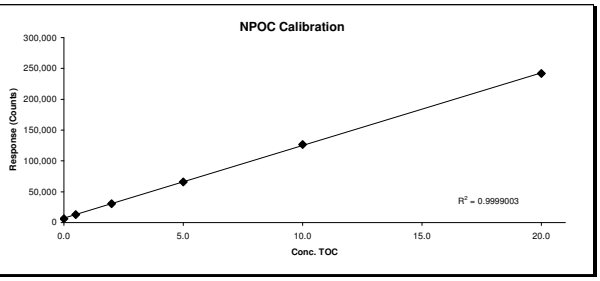
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 210128A

Analyist: AAR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-01-29	10:12 AM	CCV	1	62502	40mL	0.000	5.1	5.10	0.21	5.00	102.0%
2021-01-29	10:52 AM	CCB	1	2042	40mL	0.000	0	0.00	0.00		
2021-01-29	11:31 AM	210128A LCS	1	63548	40mL	0.000	5.189	5.19	0.13	5.00	103.8%
2021-01-29	12:11 PM	210128A LCSD	1	63079	40mL	0.000	5.149	5.15	0.19	5.00	103.0%
2021-01-29	12:51 PM	BA25956W01	1	45496	40mL	0.000	3.718	3.72	0.28		
2021-01-29	01:30 PM	BA25957W01	1	27747	40mL	0.000	2.212	2.21	0.02		
2021-01-29	02:09 PM	BA26001W09	1	4039	40mL	0.000	0.199	0.20	0.03		
2021-01-29	02:45 PM	BA26006W05	1	39397	40mL	0.000	3.2	3.20	0.48		
2021-01-29	03:23 PM	BA26013W05	1	18644	40mL	0.000	1.439	1.44	0.07		
2021-01-29	03:59 PM	BA26016W06	1	3886	40mL	0.000	0.186	0.19	0.02		
2021-01-29	04:36 PM	BA26094M03 DF400	*	1200657	40mL	*	101.77	#VALUE!	#VALUE!		
2021-01-29	05:15 PM	BA26082W02	1	56811	40mL	0.000	4.679	4.68	0.57		
2021-01-29	05:54 PM	BA26130W03	1	81169	40mL	0.000	6.746	6.75	0.59		
2021-01-29	06:33 PM	BA26131W04	1	102235	40mL	0.000	8.534	8.53	0.12		
2021-01-29	07:12 PM	BA26131W04 DUP	1	103390	40mL	0.000	8.632	8.63	0.10		
2021-01-29	07:51 PM	CCV	1	64184	40mL	0.000	5.242	5.24	0.10	5.00	104.8%
2021-01-29	08:32 PM	CCB	1	1715	40mL	0.000	0	0.00	0.00		
2021-01-29	09:11 PM	BA26132W01	1	108304	40mL	0.000	9.05	9.05	0.43		
2021-01-29	09:50 PM	BA26133W02	1	100442	40mL	0.000	8.382	8.38	0.84		
2021-01-29	10:30 PM	BA26134W03	1	95713	40mL	0.000	7.981	7.98	1.05		
2021-01-29	11:09 PM	BA26135W01	1	87027	40mL	0.000	7.244	7.24	0.78		
2021-01-29	11:48 PM	BA26136W01	*	422516	40mL	*	35.72	#VALUE!	#VALUE!		
2021-01-30	12:27 AM	BA26136W01 DUP	*	411180	40mL	*	34.758	#VALUE!	#VALUE!		
2021-01-30	01:06 AM	BA26136W02 MS	*	416312	40mL	*	35.194	#VALUE!	#VALUE!		
2021-01-30	01:45 AM	BA26136W02 MSD	*	485726	40mL	*	41.085	#VALUE!	#VALUE!		
2021-01-30	02:24 AM	BA26137W02	1	105217	40mL	0.000	8.787	8.79	0.65		
2021-01-30	03:03 AM	BA26160W06	1	7662	40mL	0.000	0.507	0.51	0.02		
2021-01-30	03:40 AM	BA26163W05	1	7737	40mL	0.000	0.513	0.51	0.04		
2021-01-30	04:19 AM	CCV	1	64714	40mL	0.000	5.288	5.29	0.10	5.00	105.8%
2021-01-30	04:59 AM	CCB	1	1529	40mL	0.000	0	0.00	0.00		

Name of Final Standard TOC Calibration Curve — **Prep'd By (Initials)** AR

Prep Date 06/11/20

Exp Date 06/11/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	20 uL	40 mL	DI Water	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	100 uL	40 mL	DI Water	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	250 uL	40 mL	DI Water	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	500 uL	40 mL	DI Water	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	1000 uL	40 mL	DI Water	20 ppm

Name of Final Standard ICV (TOC) — **Prep'd By (Initials)** AR

Prep Date 06/11/20

Exp Date 06/11/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	6465171-49409	06/30/21	500 uL	40mL	DI Water	10 ppm

Name of Final Standard CCV (TOC) — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_LCS/LCSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_MS/MSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	sample	5 ppm

Appendix C.2:
Data Validation Reports

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LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

AECOM
1001 Bishop Street Suite 1600
Honolulu, HI 96813
ATTN: Ms. Margie Pascua
Margie.Pascua@aecom.com

April 9, 2021

SUBJECT: Revised Red Hill Bulk Storage Facility, CTO 18F0126, Data Validation

Dear Ms. Pascua,

Enclosed are the revised validation reports for the fractions listed below. These SDGs were received on February 12th, 16th, 18th, 2021 and March 8th, 2021. Attachment 1 is a summary of the samples that were reviewed for each analysis.

- Updated %RSD limit for ICAL
- Updated affected samples for headspace

LDC Project #50475_RV1:

SDG #	Fraction
94808, 94863, 94883 94825, 94899, 94920 94826	Volatiles, Phenol, Polynuclear Aromatic Hydrocarbons, 2-(2-Methoxyethoxy)-ethanol, Wet Chemistry, Gasoline Range Organics, Total Petroleum Hydrocarbons as Extractables, Ethylene Dibromide, Methane

The data validation was performed under Level C & D validation guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

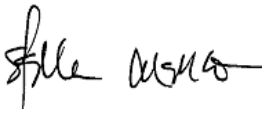
- Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; Revision 02, January 2017
- Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; Revision 01, April 2017
- Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; Revision 00, September 2017
- Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; Revision 00, June 2018
- Project Procedures Manual U.S. Naval Facilities Engineering Command Environmental Restoration Program, NAVFAC Pacific; DON 2015
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.1; 2017

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,



Stella Cuenco
scuenco@lab-data.com
Operations Manager/Senior Chemist

1,031 pages-DL R3 (added G) Attachment 1

90/10 2B/4 EDD **LDC #50475 (AECOM-Honolulu, HI / Red Hill Bulk Storage Facility, CTO 18F0126)**

LDC	SDG#	DATE REC'D	(2) DATE DUE	BTEX & 1,2-DCA (8260B)		Phenol (8270D)		(3)PAHs (8270D -SIM)		2,2-MEE (8270D-M)		GRO (8260B)		TPH-E (8015B)		SGCU TPH-E (8015B)		EDB (8011)		Methane (175)		Alk. (2320B)		Cl, SO_4 NO_3-N, (300.0)		NO_3/ NO_2-N (353.2)		Fe II (3500-Fe B)		TOC (9060A)			
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	94808	02/16/21	03/02/21	2	0	1	0	1	0	1	0	2	0	1	0	-	-	-	-	2	0	1	0	1	0	1	0	1	0	1	0		
B	94863	02/16/21	03/02/21	10	0	6	0	6	0	6	0	10	0	6	0	-	-	7	0	6	0	3	0	3	0	3	0	3	0	3	0		
B	94863	02/16/21	03/02/21	2	0	1	0	1	0	1	0	2	0	1	0	-	-	1	0	2	0	1	0	1	0	1	0	1	0	1	0		
C	94883	02/12/21	03/01/21	4	0	2	0	2	0	2	0	4	0	2	0	-	-	-	-	4	0	2	0	2	0	2	0	2	0	2	0		
D	94825	02/18/21	03/04/21	2	0	1	0	1	0	1	0	2	0	1	0	-	-	-	-	2	0	1	0	1	0	1	0	1	0	1	0		
E	94899	02/18/21	03/04/21	7	0	4	0	4	0	4	0	7	0	5	0	3	0	-	-	7	0	3	0	3	0	3	0	3	0	3	0		
E	94899	02/18/21	03/04/21	3	0	2	0	2	0	2	0	3	0	2	0	1	0	-	-	2	0	1	0	1	0	1	0	1	0	1	0		
F	94920	02/18/21	03/04/21	4	0	2	0	2	0	2	0	4	0	2	0	-	-	-	-	4	0	2	0	2	0	2	0	2	0	2	0		
G	94826	03/08/21	03/22/21	8	0	4	0	4	0	4	0	8	0	4	0	-	-	-	-	8	0	4	0	4	0	4	0	4	0	4	0		
Total	J/SC			42	0	23	0	23	0	23	0	42	0	24	0	4	0	8	0	37	0	18	0	18	0	18	0	18	0	18	0	0	316

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\AECOM\Red Hill\50475ST-18F0126.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Volatiles

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1248	BA25433	Water	01/18/21
ERH1249	BA25434	Water	01/18/21
ERH1249MS	BA25434MS	Water	01/18/21
ERH1249MSD	BA25434MSD	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1248 was identified as a trip blank. No contaminants were found.

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A1a
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B) BTEX

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration	pending A	CCV ≤ 20/20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1 FB = ERH1251, FB = ERH1252 (94463)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS 1D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1248	BA25433	Water	01/18/21
2	ERH1249	BA25434	Water	01/18/21
3	ERH1249MS	BA25434MS	Water	01/18/21
4	ERH1249MSD	BA25434MSD	Water	01/18/21
5				
6				
7				
8				
9				

Notes:

	210121AZ -						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Phenol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1249	BA25434	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A2a
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	0/0 RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = ERH1251, EB = ERH1252 (94863)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	OS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1249	BA25434	Water	01/18/21
2				
3				
4				
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9				

Notes:

	210122A-						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1249	BA25434	Water	01/18/21
ERH1249MS	BA25434MS	Water	01/18/21
ERH1249MSD	BA25434MSD	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A2b
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: M

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20/20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = ERH1251, EB = ERH1252 (94863)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1249	BA25434	Water	01/18/21
2	ERH1249MS	BA25434MS	Water	01/18/21
3	ERH1249MSD	BA25434MSD	Water	01/18/21
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Notes:

	210122A - Blank						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1249	BA25434	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A2c
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: PD
2nd Reviewer: MC

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20 / 20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB= ERH1251 EB=ERH1252 (94863)
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	MS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1249	BA25434	Water	01/18/21
2				
3				
4				
5				
6				
7				
8				
9				

Notes:

	210125A						

LDC #: 50475 A2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified since the LCS/LCSD percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
			( )	
			( )	
			( )	
			( )	
			( )	
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			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Wet Chemistry

Validation Level: Level B & C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1249#	BA25434#	Water	01/18/21
ERH1249MS	BA25434MS	Water	01/18/21
ERH1249MSD	BA25434MSD	Water	01/18/21

# Indicates sample underwent Level B validation for ferrous iron

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Ferrous Iron by Standard Method 3500-Fe B
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level B and Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

Initial calibration data were not reviewed for Level B validation.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

Continuing calibration data were not reviewed for Level B validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total Chloride	0.87 mg/L 0.87 mg/L 0.40 mg/L	2.0 mg/L 2.0 mg/L 1.0 mg/L	All samples in SDG 94808
ICB/CCB	Chloride	0.40 mg/L	1.0 mg/L	All samples in SDG 94808

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

Raw data were not reviewed for Level B and Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A6
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B / 2A

Date: 2/23/21
Page: 1 of 1
Reviewer: AV
2nd Reviewer: AC

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II	Initial calibration	A	
III.	Calibration verification	SW	see below add text.
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	A	(2,3)
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date	
1	ERH1249 #	BA25434 #	Water	01/18/21	10:00
2	ERH1249MS	BA25434MS	Water	01/18/21	
3	ERH1249MSD	BA25434MSD	Water	01/18/21	
4					
5					
6	# stage 2A for Fe^{2+}				
7					
8					
9					
10					
11					
12					
13					
14					
15					

Notes: CCVs Ferrous Iron was not provided because the raw data on that day was inadvertently saved over in error by the analyst. Therefore CCVs for ferrous Iron was not reviewed.

LDC #: 50475A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATL

All circled methods are applicable to each sample.

Sample ID	Parameter
1	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
QC	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
2,3	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4 (NO3/NO2-N)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

LDC #: 50475A6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Blank ID	Blank Action Limit										
	PB	ICB/CCB (mg/L)		LOQ									
Alkalinity Bicarbonate	0.87			2.0									
Alkalinity Total	0.87			2.0									
Cl	0.40			1.0									
Cl		0.40		1.0									

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

* CCBs - Ferrous Irons was not provided because the raw data on that day was inadvertently saved over in error by the analyst. Therefore CCBs for Ferrous Irons was not reviewed.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1248	BA25433	Water	01/18/21
ERH1249	BA25434	Water	01/18/21
ERH1249MS	BA25434MS	Water	01/18/21
ERH1249MSD	BA25434MSD	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1248 was identified as a trip blank. No contaminants were found.

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A7
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A A	r² ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	NP	TB = 1 FB= ERH1251 EB= ERH1252
VII.	Surrogate spikes	A	94863
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1248 TB	BA25433	Water	01/18/21
2	ERH1249	BA25434	Water	01/18/21
3	ERH1249MS	BA25434MS	Water	01/18/21
4	ERH1249MSD	BA25434MSD	Water	01/18/21
5				
6				
7				
8				
9				

Notes:

	210121AZ						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: April 8, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1249	BA25434	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A8
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	20
II.	Initial calibration/ICV	A / A	%RSD ≤ 15, r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	FB= ERH1251 EB= ERH1252 (94863)
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	OS
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	N	
X.	Compound quantitation RL/LOQ/LODs	N	
XI.	Target compound identification	N	
XII	Overall assessment of data	A	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1249	BA25434	Water	01/18/21
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Notes:

-	210122A						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Methane

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94808

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1248	BA25433	Water	01/18/21
ERH1249	BA25434	Water	01/18/21
ERH1249MS	BA25434MS	Water	01/18/21
ERH1249MSD	BA25434MSD	Water	01/18/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1248 was identified as a trip blank. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

Raw data were not reviewed for Level C validation.

X. Target Compound Identification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94808

No Sample Data Qualified in this SDG

LDC #: 50475A51
SDG #: 94808
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: EZ
2nd Reviewer:

METHOD: GC Methane (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	1r ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS 1D
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	N	
X.	Target compound identification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1248 TB	BA25433	Water	01/18/21
2	ERH1249	BA25434	Water	01/18/21
3	ERH1249MS	BA25434MS	Water	01/18/21
4	ERH1249MSD	BA25434MSD	Water	01/18/21
5				
6				
7				
8				
9				
10				
11				
12				
13				

Notes:

	210126A						

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1249	BA25434	1	ALKALINITY, TOTAL (AS CACO3)	1/18/2021 10:00:00 AM	1/22/2021 5:01:00 PM	C	65.6	MG_L		2.0	1.70		
ERH1249	BA25434	1	BICARBONATE	1/18/2021 10:00:00 AM	1/22/2021 5:01:00 PM	C	65.6	MG_L		2.0	1.70		
ERH1249	BA25434	1	CARBONATE (AS CO3)	1/18/2021 10:00:00 AM	1/22/2021 5:01:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1249	BA25434	5	CHLORIDE (AS CL)	1/18/2021 10:00:00 AM	1/20/2021 2:07:00 PM	C	50.5	MG_L	D	5.0	1.00		
ERH1249	BA25434	1	NITRATE AS NO3 (ANION)	1/18/2021 10:00:00 AM	1/20/2021 11:30:00 AM	C	1.8	MG_L		0.5	0.18		
ERH1249	BA25434	1	SULFATE (AS SO4)	1/18/2021 10:00:00 AM	1/20/2021 11:30:00 AM	C	9.2	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													
ERH1249	BA25434	1	Iron, Ion (Fe2+)	1/18/2021 10:00:00 AM	1/20/2021 10:56:00 PM	B	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1249	BA25434	1	NITROGEN, NITRATE-NITRITE	1/18/2021 10:00:00 AM	1/21/2021 2:48:00 PM	C	0.43	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1249	BA25434	1	C10-C24 DIESEL RANGE ORGANICS	1/18/2021 10:00:00 AM	1/26/2021 11:15:00 AM	C	300.0	UG_L	U	320	300.0	U	
ERH1249	BA25434	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/18/2021 10:00:00 AM	1/26/2021 11:15:00 AM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1248	BA25433	1	BENZENE	1/18/2021 8:45:00 AM	1/21/2021 11:27:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1248	BA25433	1	ETHYLBENZENE	1/18/2021 8:45:00 AM	1/21/2021 11:27:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1248	BA25433	1	PETROLEUM HYDROCARBONS C6-C10	1/18/2021 8:45:00 AM	1/21/2021 11:28:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1248	BA25433	1	TOLUENE	1/18/2021 8:45:00 AM	1/21/2021 11:27:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1248	BA25433	1	Xylenes	1/18/2021 8:45:00 AM	1/21/2021 11:27:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1249	BA25434	1	BENZENE	1/18/2021 10:00:00 AM	1/21/2021 11:51:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1249	BA25434	1	ETHYLBENZENE	1/18/2021 10:00:00 AM	1/21/2021 11:51:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1249	BA25434	1	PETROLEUM HYDROCARBONS C6-C10	1/18/2021 10:00:00 AM	1/21/2021 11:50:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1249	BA25434	1	TOLUENE	1/18/2021 10:00:00 AM	1/21/2021 11:51:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1249	BA25434	1	Xylenes	1/18/2021 10:00:00 AM	1/21/2021 11:51:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1249	BA25434	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/18/2021 10:00:00 AM	1/26/2021 12:28:00 PM	C	80.0	UG_L	U	100	80.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270D**													
ERH1249	BA25434	1	PHENOL	1/18/2021 10:00:00 AM	1/25/2021 5:47:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1249	BA25434	1	1-METHYLNAPHTHALENE	1/18/2021 10:00:00 AM	1/25/2021 6:06:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1249	BA25434	1	2-METHYLNAPHTHALENE	1/18/2021 10:00:00 AM	1/25/2021 6:06:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1249	BA25434	1	NAPHTHALENE	1/18/2021 10:00:00 AM	1/25/2021 6:06:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1249	BA25434	1	TOTAL ORGANIC CARBON	1/18/2021 10:00:00 AM	1/21/2021 5:15:00 AM	C	1.3	MG_L		0.93	0.350		
METHOD: **RSK175**													
ERH1248	BA25433	1	METHANE	1/18/2021 8:45:00 AM	1/26/2021 1:34:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1249	BA25434	1	METHANE	1/18/2021 10:00:00 AM	1/26/2021 1:38:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Volatiles

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1211	BA25689	Water	01/20/21
ERH1212**	BA25690**	Water	01/20/21
ERH1233	BA25692	Water	01/21/21
ERH1234	BA25693	Water	01/21/21
ERH1241	BA25695	Water	01/21/21
ERH1242**	BA25696**	Water	01/21/21
ERH1243	BA25698	Water	01/20/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1250	BA25703	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and 1,2-Dichloroethane by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1211 ERH1250	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples ERH1211, ERH1233, ERH1241, ERH1243, and ERH1250 were identified as trip blanks. No contaminants were found.

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94863

Sample	Compound	Flag	A or P	Reason (Code)
ERH1211 ERH1250	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B1a
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)
BTEX + L

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	ccv ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3, 5, 7, 10 FB = 11 EB = 12
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	ND	D = 8, 9
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XIII.	Target compound identification	A	Not reviewed for Level C validation
XIV.	System performance	A	Not reviewed for Level C validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1 1	ERH1211	TB	BA25689	Water	01/20/21
2 1	ERH1212**		BA25690**	Water	01/20/21
3 2	ERH1233	TB	BA25692	Water	01/21/21
4 3	ERH1234		BA25693	Water	01/21/21
5 3	ERH1241	TB	BA25695	Water	01/21/21
6 3	ERH1242**		BA25696**	Water	01/21/21
7 1	ERH1243	TB	BA25698	Water	01/20/21
8 1	ERH1244	D	BA25699	Water	01/20/21
9 1	ERH1245	D	BA25701	Water	01/20/21
10 1	ERH1250	TB	BA25703	Water	01/20/21
11 1	ERH1251	FB	BA25704	Water	01/20/21
12 1	ERH1252	EB	BA25706	Water	01/20/21
13 1	210125AZ	③ 210126AZ			
14 2	210125AZ1				

1, 2, 7 → 12 BTEX + L 3 → 6 BTEX

LDC #: 50475 13B1a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO.1,1-Difluoroethane	O1. 3-Methylpentane
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methyl cyclohexane	T1. 2-Methylhexane
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.

LDC #: 50475B1a

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?
Y N N/A Were air bubbles > 1/4 inch or was headspace present in the vials?

METHOD : GC/MS VOA (EPA SW 846 Method 8260 B) √

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1,10	Vo a	contained		Headspace			J | UJ/A
							ND

TECHNICAL HOLDING TIME CRITERIA

Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
Water preserved:	Within 14 days of sample collection.
Soil:	Within 14 days of sample collection.

LDC #: 50475B1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GCMS 8260B

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 2ug/L std)	Recalculated (RRF 2 ug/L std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	1/25/2021	V	0.4683	0.4683	0.4429	0.4429	7.3	7.3
	Zeus		EE	0.6913	0.6913	0.6710	0.6710	8.6	8.6

LDC #: 50475B/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv 010	1/26/21	V (IS1)	0.4429	0.4621	0.4621	4.4	4.4
	0125245		EE (IS2)	0.6710	0.7193	0.7193	7.2	7.2
			(IS3)					
			(IS4)					
	270		(IS5)					
2	ccv 1436	1/26/21	V (IS1)	↓	0.4496	0.4496	1.5	1.5
	0126203		EE (IS2)		0.6837	0.6837	1.9	1.9
			(IS3)					
			(IS4)					
	0126229		(IS5)					
3			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475 B1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	25.0	28.211	113	113	0
1,2-Dichloroethane-d4	↓	28.8008	115	115	↓
Toluene-d8		26.8405	107	107	
Bromofluorobenzene		24.2308	96.9	96.9	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 50475B1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 210125A2 LCS 1P

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene										
Benzene	10.0	10.0	10.4	9.76	104	104	97.6	97.6	6.3	6.3
Toluene	10.0	10.0	10.6	10.0	106	106	100	100	5.8	5.8
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B1a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 210125 A2 lcs ✓

Conc. = $\frac{694361\ (25)}{3756224\ (0.4429)}$

= 10.43 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	lcs	✓	10.4	10.43	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Phenol

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1212**	BA25690**	Water	01/20/21
ERH1234	BA25693	Water	01/21/21
ERH1242	BA25696	Water	01/21/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B2a
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = 6 EB = 7
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	cs
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	ND	D = 4, 5
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XIII.	Target compound identification	A	Not reviewed for Level C validation
XIV.	System performance	A	Not reviewed for Level C validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1	ERH1212**		BA25690**	Water	01/20/21
2	ERH1234		BA25693	Water	01/21/21
3	ERH1242		BA25696	Water	01/21/21
4	ERH1244	D	BA25699	Water	01/20/21
5	ERH1245	D	BA25701	Water	01/20/21
6	ERH1251	FB	BA25704	Water	01/20/21
7	ERH1252	EB	BA25706	Water	01/20/21
8					
9					

Notes:

	210125A						

LDC #: 50475B2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 50475B2a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 50 std)	Recalculated (RRF 50 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	1/5/2021	A	2.394	2.394	2.418	2.418	2.00	2.00

LDC #: 50475B2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv 1044 0105Y118 Y129 1535	1/28/21	Phenol (1st IS)	2.418	2.731	2.731	13	13
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100.0	88.16411	88.2	88.2	0
2-Fluorobiphenyl	↓	84.55299	84.6	84.6	↓
Terphenyl-d14	↓	110.4581	110	110	↓
Phenol-d5	200.0	173.1361	86.6	86.6	↓
2-Fluorophenol	↓	165.29912	82.7	82.7	↓
2,4,6-Tribromophenol	↓	176.162	88.1	88.1	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 50475 B2a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210125A LCS ID

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	50.0	50.0	43.2	43.6	86.4	86.4	87.2	87.2	0.92	0.92
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 210ISA ICS : Pheno I

Conc. = $\frac{1073805\ (40)\ (1)\ (1000)}{410779\ (2.418)\ (1000)}$

=

= 43.2 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	ICS	Pheno I	43.2	43.2	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1212**	BA25690**	Water	01/20/21
ERH1234	BA25693	Water	01/21/21
ERH1242	BA25696	Water	01/21/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B2b
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = 6 EB = 7
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS / D
X.	Field duplicates	ND	D = 4, 5
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XIII.	Target compound identification	A	Not reviewed for Level C validation
XIV.	System performance	A	Not reviewed for Level C validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID	Lab ID	Matrix	Date
1	ERH1212**	BA25690**	Water	01/20/21
2	ERH1234	BA25693	Water	01/21/21
3	ERH1242	BA25696	Water	01/21/21
4	ERH1244 D	BA25699	Water	01/20/21
5	ERH1245 D	BA25701	Water	01/20/21
6	ERH1251 FB	BA25704	Water	01/20/21
7	ERH1252 EB	BA25706	Water	01/20/21
8				
9				

Notes:

	210125A						

LDC #: 50475B26 **VALIDATION FINDINGS CHECKLIST** Page: 1 of 2
Reviewer: FT

Method: Semivolatiles (EPA SW 846 Method 8270 D) SIM

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 50475B2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF1.0 std)	Recalculated (RRF1.0 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL Linus	1/18/2021	S	1.0550	1.0550	1.0170	1.0170	7.3	7.3

LDC #: 30475B2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 1028	1/28/21	S (1st IS)	1.017	1.054	1.054	3.6	3.6
	0118L049		(2nd IS)					
			(3rd IS)					
			(4th IS)					
	L060		(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270 D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ W-d10	5.0	4.55484	91.1	91.1	0
2-Fluorobiphenyl Y4-d10	↓	4.96365	99.3	99.3	↓
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 50475B26

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210125A lcs ID

Compound	Spike Added (ug/L)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
~~Pyrene~~										
S	5.0	5.0	4.05	4.18	81.0	81.0	83.6	83.6	3.2	3.2

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 210125A lcs : S

Conc. = $\frac{(97640)(2.5)(1)(1000)}{(59299)(1.017)(1000)}$

=

4.0476 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	lcs	S	4.05	4.0476	

LDC Report# 50475B2c

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1212**	BA25690**	Water	01/20/21
ERH1234	BA25693	Water	01/21/21
ERH1242	BA25696	Water	01/21/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS/LCSD percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B2c
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	FB = 6 EB = 7
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	ND	D = 4, 5
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XIII.	Target compound identification	A	Not reviewed for Level C validation
XIV.	System performance	A	Not reviewed for Level C validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID	Lab ID	Matrix	Date
1	ERH1212**	BA25690**	Water	01/20/21
2	ERH1234	BA25693	Water	01/21/21
3	ERH1242	BA25696	Water	01/21/21
4	ERH1244 D	BA25699	Water	01/20/21
5	ERH1245 D	BA25701	Water	01/20/21
6	ERH1251 FB	BA25704	Water	01/20/21
7	ERH1252 EB	BA25706	Water	01/20/21
8				
9				

Notes:

	210127A						

LDC #: 50475B2C

VALIDATION FINDINGS CHECKLIST

Method: Semivolatiles (EPA SW 846 Method 8270 D) Modified

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 50475B2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?

Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified since the LCS/D percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
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			( )	
			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

LDC #: 50475B2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 400 std)	Recalculated (RRF400 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	1/25/2021	2-(2-Methoxyethoxy) Ethanol	0.2698	0.2698	0.2572	0.2572	8.10	8.10
	Kylo								

LDC #: 50475B2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV1246 0125K032 K047	1/28/21	2(2 MEE) (1st IS)	0.2572	0.2515	0.2515	2.2	2.2
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2C

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210127A les/lD

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
2 (2 MEE)	80.0	80.0	89.6	84.6	112	112	106	106	5.7	5.7

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 210127A LCS: 2 (2 MEE)

Conc. = $\frac{(11561)(40)(2)}{(200500)(0.2572)(2)}$

=

89.6 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	LCS	2 (2 MEE)	89.6	89.6	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Wet Chemistry

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1212**	BA25690**	Water	01/20/21
ERH1234	BA25693	Water	01/21/21
ERH1242	BA25696	Water	01/21/21
ERH1244	BA25699	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H	Holding times were exceeded.
S	The sequence or number of standards used for the calibration was incorrect.
C	Correlation coefficient is <0.995.
R	%R for calibration is not within control limits.
B	Presumed contamination from preparation (method) blank or calibration blank.
L	Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.
Q	MS/MSD recovery was poor.
E	MS/MSD or Duplicate RPD or difference was high.
I	ICP ICS results were unsatisfactory.
A	ICP Serial Dilution %D were not within control limits.
F	Presumed contamination from FB or ER.
D	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Post Digestion Spike recovery was not within control limits.
V	Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
ERH1244	Nitrate	52.93 hours	48 hours	UJ (all non-detects)	P

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
01/25/21	CCV (18:50)	Total organic carbon	113.2 (90-110)	ERH1234 ERH1242 ERH1244	J (all detects)	P
01/25/21	CCV (18:50)	Total organic carbon	113.2 (90-110)	ERH1212**	NA	-

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total Chloride	3.2 mg/L 3.2 mg/L 0.083 mg/L	2.0 mg/L 2.0 mg/L 1.0 mg/L	All samples in SDG 94863
ICB/CCB	Chloride	0.10 mg/L	1.0 mg/L	All samples in SDG 94863

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

All sample result verifications were acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods.

Due to technical holding time, and continuing calibration %R, data were qualified as estimated in three samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94863

Sample	Analyte	Flag	A or P	Reason (Code)
ERH1244	Nitrate	UJ (all non-detects)	P	Technical holding times (H)
ERH1234 ERH1242 ERH1244	Total organic carbon	J (all detects)	P	Continuing calibration (%R) (C)

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B6
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/23/21
Page: 1 of 1
Reviewer: ATV
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/SW	
II	Initial calibration	A	
III.	Calibration verification	SW	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	N	CS
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	A	Not reviewed for Stage 2B validation
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date	
1	ERH1212**	BA25690**	Water	01/20/21	15:28
2	ERH1234	BA25693	Water	01/21/21	
3	ERH1242	BA25696	Water	01/21/21	
4	ERH1244	BA25699	Water	01/20/21	9:45
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Notes:

LDC #: 50475B6

VALIDATION FINDINGS CHECKLIST

Reviewer: ATV

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
II. Calibration				
Were all instruments calibrated daily, each set-up time?		✓		
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.			✓	
V. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 50475B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATV

All circled methods are applicable to each sample.

Sample ID	Parameter
1→4	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

omments:

LDC #: 50475B6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: ATL

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria?

Code: H

Method:	NO3 (EPA 300.0)						
Parameters:	water						
Technical holding time:	48 hrs.						
Sample ID	**Sampling date**	**Analysis date**	**Total Time**	**Qualifier**	**Analysis date**	**Total Time**	**Qualifier**
4	9:45→11:45 01/20/21	16:41 01/22/21	52.93 hrs.	J/UJ/P(ND)			

Hold time wpd

LDC #: 50475B6

VALIDATION FINDINGS WORKSHEET
Calibration

Reviewer: ATL

METHOD: Inorganics, EPA Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?
Y (N) N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% ?
(Y) N N/A Are all correlation coefficients ≥0.995 ?

LEVEL IV/D ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recaluculation Worksheet for recalulations.
Y N (N/A) Was a balance check conducted prior to the TDS analysis.?
(Y) N N/A Was the titrant normality checked?

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualifications Code: C
	01/25/21	CCV (18:50)	TOC	113.2 (90-110)	all	Jdet/P (detect = 2,3,4)

Comments:

LDC #: 50475B6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Alkalinity Bicarbonate	3.2			2.0								
Alkalinity Total	3.2			2.0								
Cl	0.083			1.0								
Cl		0.10		1.0								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 50475B6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Reviewer: ATL

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of TOC was recalculated. Calibration date: 06/11/20

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution

True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	FOUND Standard	TRUE Conc. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	TOC	s1	0.0	6172	*0.99990*	*0.99990*	Y
		s2	0.5	13120			
		s3	2	30622			
		s4	5	66151			
		s5	10	126505			
		s6	20	241922			
CCV (1/22 @ 15:28) Calibration verification	SO_4^{2-}	24.966	25.000		99.9	99.9	Y
CCV (1/25 @ 23:04) Calibration verification	NO_3/NO_2-N	3.232	3.000		108	108	Y
CCV (1/26 @ 00:31) Calibration verification	Fe^{2+}	3.852	4.000		96.3	96.3	Y

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: SD475B6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: ATV

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{Found}{True} \times 100$$

Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (mg/L) (units)	True / D (mg/L) (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Alkalinity	253.202	250.00	101	101	Y
	Matrix spike sample		(SSR-SR)				
	Duplicate sample						

Comments: _____

LDC #: 50475B6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: ATL

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Have results been reported and calculated correctly?
(Y) N N/A Are results within the calibrated range of the instruments?
(Y) N N/A Are all detection limits below the CRQL?

Compound (analyte) results for Cl- reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

19.792 / 0.883 = 22.414

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Alkalinity	66.6	66.6	Y
	1	Cl-	22.4	22.414	↓
	1	NO3/NO2-N	0.39	0.3935	
	1	Fe2+	ND	ND (0.050)	
	1	TOC	ND	ND (0.09)	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C & D

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1211	BA25689	Water	01/20/21
ERH1212**	BA25690**	Water	01/20/21
ERH1233	BA25692	Water	01/21/21
ERH1234	BA25693	Water	01/21/21
ERH1241	BA25695	Water	01/21/21
ERH1242**	BA25696**	Water	01/21/21
ERH1243	BA25698	Water	01/20/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1250	BA25703	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics (GRO) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1211 ERH1250	Gasoline range organics	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1211, ERH1233, ERH1241, ERH1243, and ERH1250 were identified as trip blanks. No contaminants were found.

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

X. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94863

Sample	Compound	Flag	A or P	Reason (Code)
ERH1211 ERH1250	Gasoline range organics	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B7
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: FC

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	r² ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3, 5, 7, 10 FB = 11 EB = 12
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	MS
IX.	Laboratory control samples	A	LCS 1P
X.	Field duplicates	ND	D = 8, 9
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XIII.	Target compound identification	A	Not reviewed for Level C validation
XIV.	System performance	A	Not reviewed for Level C validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1 1	ERH1211	TB	BA25689	Water	01/20/21
2 1	ERH1212**		BA25690**	Water	01/20/21
3 1	ERH1233	TB	BA25692	Water	01/21/21
4 2	ERH1234		BA25693	Water	01/21/21
5 2	ERH1241	TB	BA25695	Water	01/21/21
6 2	ERH1242**		BA25696**	Water	01/21/21
7 1	ERH1243	TB	BA25698	Water	01/20/21
8 1	ERH1244	D	BA25699	Water	01/20/21
9 1	ERH1245	D	BA25701	Water	01/20/21
10 1	ERH1250	TB	BA25703	Water	01/20/21
11 1	ERH1251	FB	BA25704	Water	01/20/21
12 1	ERH1252	EB	BA25706	Water	01/20/21
13 1	210125AZ				
14 2	210126AZ				

LDC #: 50475B7

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?			✓	
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data	✓			
Overall assessment of data was found to be acceptable.				

LDC #: 50475B7

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : ✓ GC ___ HPLC ✓

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1,10	VOA	contained	Headspace				J/UJ/A
							ND

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

LDC#: 50475B7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Method: Gasoline (EPA SW 846 Method 8260B)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
9/22/2020	GCMS	Gasoline C6-C10	1	11.2	0.8
			2	11.886	2.0
			3	12.888	4.0
			4	17.076	12.0
			5	24.456	24.0
			6	28.848	32.0
			7	33.82	40.0

Regression Output		***Reported***
Constant	*10.582480*	*10.600000*
Std Err of Y Est		
R Squared	*0.999407*	*0.999000*
Degrees of Freedom		
X Coefficient(s)	*0.575755*	*0.576000*
Std Err of Coef.		
Correlation Coefficient	*0.999703*	
Coefficient of Determination (r^2)	*0.999407*	*0.999000*

LDC #: 50475B7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0056 0125745	1/26/21	GRO (IS1)	300	300.19	300.19	0.06	0.06
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					
2	CCV 1522 0126205	1/26/21	GRO (IS1)	300	284.3509	284.3509	5.2	5.2
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					
3			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene	25.0	24.2308	96.9	96.9	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 50475B7

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 210125AZ VOA 1D

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
GRO ~~1,1 Dichloroethene~~	300	300	300	300	100	100	100	100	0	0
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 210125AZ lcs: GRO

Conc. = $\frac{\left(\frac{62741336}{3586677} - 1.06\times10^{1}\right)(25)}{(5.76\times10^{-1})}$

= 299.170 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	lcs	GRO	300	299.170	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1212**	BA25690**	Water	01/20/21
ERH1234	BA25693	Water	01/21/21
ERH1242	BA25696	Water	01/21/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

X. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B8
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / Δ	
II.	Initial calibration/ICV	A / Δ	%RSD ≤ 20, r² ICV ≤ 20
III.	Continuing calibration	Δ	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	FB=6 EB=7
VI.	Surrogate spikes	Δ	
VII.	Matrix spike/Matrix spike duplicates	N	es
VIII.	Laboratory control samples	Δ	LCS 1D
IX.	Field duplicates	ND	D = 4,5
X.	Compound quantitation RL/LOQ/LODs	Δ	Not reviewed for Level C validation
XI.	Target compound identification	Δ	Not reviewed for Level C validation
XII.	Overall assessment of data	Δ	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1	ERH1212**		BA25690**	Water	01/20/21
2	ERH1234		BA25693	Water	01/21/21
3	ERH1242		BA25696	Water	01/21/21
4	ERH1244	D	BA25699	Water	01/20/21
5	ERH1245	D	BA25701	Water	01/20/21
6	ERH1251	FB	BA25704	Water	01/20/21
7	ERH1252	EB	BA25706	Water	01/20/21
8					
9					
10					
11					
12					

Notes:

	210126A						
	210127B						

LDC #: 50475 B4

VALIDATION FINDINGS CHECKLIST

Method: ✓ GC ___ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
IIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?			✓	
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
V. Field Blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed per analytical or extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				

Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
X. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 50475B8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC __X_____ HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported (std=250ppb)	Recalculated (std=250ppb)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	12/18/2020	Diesel C10-C24)	2288780	2288780	2451973	2451973	11.0	11.0
	Apollo								

LDC #: 50475138

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 1919 107133	1/27/21	Diesel C10-C24	2451970	2497740	2497740	1.9	1.9
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B8

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
octacosane		144.231	127.103	88.1	88.1	0
o terphenyl		144.231	112.992	78.3	78.3	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C`	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 50475B8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; LCS = Laboratory Control Sample; SA = Spike added; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 210126A LCS 1D

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Diesel C10-C24	2000	2000	1670	1580	83.5	83.5	79.0	79.0	5.5	5.5

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475 B8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 210126A LCS Compound Name Diesel C10-C24

Concentration = $\frac{(1637494186)(5)(1000)}{(2451973)(2)(1000)}$ = 1669.56 ug/L

#	Sample ID	Compound	Reported Concentrations (ug/L)	Recalculated Results Concentrations (ug/L)	Qualifications
	LCS	Diesel C10-C24	1670	1669.56	

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Ethylene Dibromide

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1211	BA25689	Water	01/20/21
ERH1212**	BA25690**	Water	01/20/21
ERH1243	BA25698	Water	01/20/21
ERH1244	BA25699	Water	01/20/21
ERH1245	BA25701	Water	01/20/21
ERH1250	BA25703	Water	01/20/21
ERH1251	BA25704	Water	01/20/21
ERH1252	BA25706	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Ethylene Dibromide by Environmental Protection Agency (EPA) SW 846 Method 8011

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

Where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1211, ERH1243, and ERH1250 were identified as trip blanks. No contaminants were found.

Sample ERH1252 was identified as an equipment blank. No contaminants were found.

Sample ERH1251 was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

Samples ERH1244 and ERH1245 were identified as field duplicates. No results were detected in any of the samples.

X. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Target Compound Identification

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Ethylene Dibromide - Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Ethylene Dibromide - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Ethylene Dibromide - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B10
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: bf 1
Reviewer: T
2nd Reviewer: A

METHOD: GC Ethylene Dibromide (EPA SW846 Method 8011)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	%D / r ≤ 20
III.	Continuing calibration	A	ccv ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1, 3, 6 FB = 7 EB = 8
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	CS
VIII.	Laboratory control samples	A	LCS ID
IX.	Field duplicates	ND	D = 4, 5
X.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
XI.	Target compound identification	A	Not reviewed for Level C validation
XII.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1	ERH1211	TB	BA25689	Water	01/20/21
2	ERH1212**		BA25690**	Water	01/20/21
3	ERH1243	TB	BA25698	Water	01/20/21
4	ERH1244	D	BA25699	Water	01/20/21
5	ERH1245	D	BA25701	Water	01/20/21
6	ERH1250	TB	BA25703	Water	01/20/21
7	ERH1251	FB	BA25704	Water	01/20/21
8	ERH1252	EB	BA25706	Water	01/20/21
9					
10					
11					
12					

Notes:

1	210127A						

LDC #: 50475 B1D

VALIDATION FINDINGS CHECKLIST

Method: ✓ GC ___ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
IIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?			✓	
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
V. Field Blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed per analytical or extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				

Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
X. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 56475B1V

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC X HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported (CF4 std=0.25)	Recalculated (CF4 std=0.25)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/27/2021	EDB (DB-35MS)	37834	37834	38574	38574	9.0	9.0
	Herbie		EDB (DB-XLB)	151454	151454	158679	158679	10.6	10.6

LDC #: 50475 B10

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	ICV 1631	1/27/21	EDB (DB-35MS)	38574	33335	33335	14	14
			EDB (DB-XLB)	158679	137725	137725	13	13
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 52475B10

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1,3-Dibromopropane	DB35MS	0.350	0.321	91.7	91.7	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C`	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Methane

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94863

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1211	BA25689	Water	01/20/21
ERH1212**	BA25690**	Water	01/20/21
ERH1233	BA25692	Water	01/21/21
ERH1234	BA25693	Water	01/21/21
ERH1241	BA25695	Water	01/21/21
ERH1242**	BA25696**	Water	01/21/21
ERH1243	BA25698	Water	01/20/21
ERH1244	BA25699	Water	01/20/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1211	Methane	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	J (all detects) UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

Retention time windows were established as required by the method for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

Retention times in the calibration standards were within the established retention time windows for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1211, ERH1233, ERH1241, and ERH1243 were identified as trip blanks. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

X. Target Compound Identification

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94863

Sample	Compound	Flag	A or P	Reason (Code)
ERH1211	Methane	J (all detects) UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94863

No Sample Data Qualified in this SDG

LDC #: 50475B51
SDG #: 94863
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C/D

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	A/A	%RSD ≤ . r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1, 3, 5, 7
VI.	Matrix spike/Matrix spike duplicates	N	OS
VII.	Laboratory control samples	A	LCS ID
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level C validation
X.	Target compound identification	A	Not reviewed for Level C validation
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Level D validation

	Client ID		Lab ID	Matrix	Date
1	ERH1211	TB	BA25689	Water	01/20/21
2	ERH1212**		BA25690**	Water	01/20/21
3	ERH1233	TB	BA25692	Water	01/21/21
4	ERH1234		BA25693	Water	01/21/21
5	ERH1241	TB	BA25695	Water	01/21/21
6	ERH1242**		BA25696**	Water	01/21/21
7	ERH1243	TB	BA25698	Water	01/20/21
8	ERH1244		BA25699	Water	01/20/21
9					
10					
11					
12					
13					

Notes:

	210127A - BLK						

LDC #: 50473B51

VALIDATION FINDINGS CHECKLIST

Method: ✓ GC ___ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
IIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?			✓	
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
V. Field Blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed per analytical or extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				

Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 50475B51

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y/N N/A Were all cooler temperatures within validation criteria? (V)

METHOD : √ GC ___ HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	VOA	contained	Headspace				J/UJ/A

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

LDC#: ~~50351A51~~
50475 B3)

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Method: RSK 175

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
9/14/2020	GC	Methane	1	32423	2.080
			2	54196	4.160
			3	108403	8.340
			4	242197	20.850
			5	973152	83.400
			6	2643568	208.500
			7	10274710	834.000

Regression Output		***Reported***
Constant	*850.639732*	*851.00*
Std Err of Y Est		
R Squared	*0.999897*	*1.000000*
Degrees of Freedom		
X Coefficient(s)	*12333.010016*	*12300.00*
Std Err of Coef.		
Correlation Coefficient	*0.999948*	
Coefficient of Determination (r^2)	*0.999897*	*1.000000*

LDC #: 50475135)

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	ccv1223 0127R07	1/27/21	Methane	83.4	94.959	94.959	14	13.8
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475 B5 1

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; SA = Spike added
LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 210127A lcs

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Methane	83.4	83.4	95.0	74.9	114	114	89.8	89.8	23.7	23.7

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475 BS1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 210127A LCS Compound Name Methane

Concentration = $\frac{(1171977 - 8.51 \times 10^{2})}{(1.23 \times 10^{4})}$ = 95.2 ug/L

#	Sample ID	Compound	Reported Concentrations (ug/L)	Recalculated Results Concentrations ( )	Qualifications
	LCS	Methane	95.0		

Comments:

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1212	BA25690	1	ALKALINITY, TOTAL (AS CACO3)	1/20/2021 3:28:00 PM	1/25/2021 5:37:00 PM	D	66.6	MG_L		2.0	1.70		
ERH1212	BA25690	1	BICARBONATE	1/20/2021 3:28:00 PM	1/25/2021 5:37:00 PM	D	66.6	MG_L		2.0	1.70		
ERH1212	BA25690	1	CARBONATE (AS CO3)	1/20/2021 3:28:00 PM	1/25/2021 5:37:00 PM	D	1.70	MG_L	U	2.0	1.70	U	
ERH1234	BA25693	1	ALKALINITY, TOTAL (AS CACO3)	1/21/2021 9:58:00 AM	1/25/2021 5:41:00 PM	C	47.1	MG_L		2.0	1.70		
ERH1234	BA25693	1	BICARBONATE	1/21/2021 9:58:00 AM	1/25/2021 5:41:00 PM	C	47.1	MG_L		2.0	1.70		
ERH1234	BA25693	1	CARBONATE (AS CO3)	1/21/2021 9:58:00 AM	1/25/2021 5:41:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1242	BA25696	1	ALKALINITY, TOTAL (AS CACO3)	1/21/2021 10:00:00 AM	1/25/2021 5:46:00 PM	C	110	MG_L		2.0	1.70		
ERH1242	BA25696	1	BICARBONATE	1/21/2021 10:00:00 AM	1/25/2021 5:46:00 PM	C	110	MG_L		2.0	1.70		
ERH1242	BA25696	1	CARBONATE (AS CO3)	1/21/2021 10:00:00 AM	1/25/2021 5:46:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1244	BA25699	1	ALKALINITY, TOTAL (AS CACO3)	1/20/2021 9:45:00 AM	1/25/2021 5:50:00 PM	C	96.0	MG_L		2.0	1.70		
ERH1244	BA25699	1	BICARBONATE	1/20/2021 9:45:00 AM	1/25/2021 5:50:00 PM	C	96.0	MG_L		2.0	1.70		
ERH1244	BA25699	1	CARBONATE (AS CO3)	1/20/2021 9:45:00 AM	1/25/2021 5:50:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1212	BA25690	1	CHLORIDE (AS CL)	1/20/2021 3:28:00 PM	1/22/2021 3:57:00 PM	D	22.4	MG_L		1.0	0.20		
ERH1212	BA25690	1	NITRATE AS NO3 (ANION)	1/20/2021 3:28:00 PM	1/22/2021 3:57:00 PM	D	0.84	MG_L		0.5	0.18		
ERH1212	BA25690	1	SULFATE (AS SO4)	1/20/2021 3:28:00 PM	1/22/2021 3:57:00 PM	D	2.9	MG_L		1.0	0.20		
ERH1234	BA25693	5	CHLORIDE (AS CL)	1/21/2021 9:58:00 AM	1/22/2021 7:22:00 PM	C	90.0	MG_L	D	5.0	1.00		
ERH1234	BA25693	1	NITRATE AS NO3 (ANION)	1/21/2021 9:58:00 AM	1/22/2021 4:12:00 PM	C	0.94	MG_L		0.5	0.18		
ERH1234	BA25693	1	SULFATE (AS SO4)	1/21/2021 9:58:00 AM	1/22/2021 4:12:00 PM	C	28.2	MG_L		1.0	0.20		
ERH1242	BA25696	5	CHLORIDE (AS CL)	1/21/2021 10:00:00 AM	1/22/2021 7:37:00 PM	C	52.7	MG_L	D	5.0	1.00		
ERH1242	BA25696	1	NITRATE AS NO3 (ANION)	1/21/2021 10:00:00 AM	1/22/2021 4:26:00 PM	C	0.18	MG_L	U	0.5	0.18	U	
ERH1242	BA25696	1	SULFATE (AS SO4)	1/21/2021 10:00:00 AM	1/22/2021 4:26:00 PM	C	11.2	MG_L		1.0	0.20		
ERH1244	BA25699	5	CHLORIDE (AS CL)	1/20/2021 9:45:00 AM	1/22/2021 7:51:00 PM	C	54.0	MG_L	D	5.0	1.00		
ERH1244	BA25699	1	NITRATE AS NO3 (ANION)	1/20/2021 9:45:00 AM	1/22/2021 4:41:00 PM	C	0.18	MG_L	U	0.5	0.18	UJ	h
ERH1244	BA25699	1	SULFATE (AS SO4)	1/20/2021 9:45:00 AM	1/22/2021 4:41:00 PM	C	9.7	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **3500-FE-B**													
ERH1212	BA25690	1	Iron, Ion (Fe2+)	1/20/2021 3:28:00 PM	1/26/2021 12:32:00 AM	D	0.32	MG_L	U	1.0	0.32	U	
ERH1234	BA25693	1	Iron, Ion (Fe2+)	1/21/2021 9:58:00 AM	1/26/2021 12:32:00 AM	C	0.77	MG_L	J	1.0	0.32	J	
ERH1242	BA25696	1	Iron, Ion (Fe2+)	1/21/2021 10:00:00 AM	1/26/2021 12:33:00 AM	C	0.32	MG_L	U	1.0	0.32	U	
ERH1244	BA25699	1	Iron, Ion (Fe2+)	1/20/2021 9:45:00 AM	1/26/2021 12:33:00 AM	C	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1212	BA25690	1	NITROGEN, NITRATE-NITRITE	1/20/2021 3:28:00 PM	1/25/2021 11:01:00 PM	D	0.39	MG_L		0.10	0.090		
ERH1234	BA25693	1	NITROGEN, NITRATE-NITRITE	1/21/2021 9:58:00 AM	1/26/2021 12:07:00 PM	C	0.23	MG_L		0.10	0.090		
ERH1242	BA25696	1	NITROGEN, NITRATE-NITRITE	1/21/2021 10:00:00 AM	1/26/2021 12:09:00 PM	C	0.090	MG_L	U	0.10	0.090	U	
ERH1244	BA25699	1	NITROGEN, NITRATE-NITRITE	1/20/2021 9:45:00 AM	1/26/2021 12:11:00 PM	C	0.090	MG_L	U	0.10	0.090	U	
METHOD: **8011**													
ERH1211	BA25689	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 2:26:00 PM	1/27/2021 6:33:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1212	BA25690	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 3:28:00 PM	1/27/2021 6:54:00 PM	D	0.019	UG_L	U	0.02	0.019	U	
ERH1243	BA25698	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 8:45:00 AM	1/27/2021 7:14:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1244	BA25699	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 9:45:00 AM	1/27/2021 7:34:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1245	BA25701	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 9:45:00 AM	1/27/2021 7:55:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1250	BA25703	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 10:00:00 AM	1/27/2021 8:15:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1251	BA25704	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 11:00:00 AM	1/27/2021 8:35:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
ERH1252	BA25706	1	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	1/20/2021 12:00:00 PM	1/27/2021 8:56:00 PM	C	0.019	UG_L	U	0.02	0.019	U	
METHOD: **8015B_E**													
ERH1212	BA25690	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 3:28:00 PM	1/27/2021 10:35:00 PM	D	300.0	UG_L	U	320	300.0	U	
ERH1212	BA25690	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 3:28:00 PM	1/27/2021 10:35:00 PM	D	300.0	UG_L	U	320	300.0	U	
ERH1234	BA25693	1	C10-C24 DIESEL RANGE ORGANICS	1/21/2021 9:58:00 AM	1/27/2021 11:03:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1234	BA25693	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/21/2021 9:58:00 AM	1/27/2021 11:03:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1242	BA25696	1	C10-C24 DIESEL RANGE ORGANICS	1/21/2021 10:00:00 AM	1/27/2021 11:31:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1242	BA25696	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/21/2021 10:00:00 AM	1/27/2021 11:31:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1244	BA25699	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 9:45:00 AM	1/27/2021 11:59:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1244	BA25699	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 9:45:00 AM	1/27/2021 11:59:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1245	BA25701	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 9:45:00 AM	1/29/2021 11:47:00 AM	C	300.0	UG_L	U	320	300.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8015B_E**													
ERH1245	BA25701	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 9:45:00 AM	1/29/2021 11:47:00 AM	C	300.0	UG_L	U	320	300.0	U	
ERH1251	BA25704	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 11:00:00 AM	1/29/2021 12:15:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1251	BA25704	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 11:00:00 AM	1/29/2021 12:15:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1252	BA25706	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 12:00:00 PM	1/29/2021 12:43:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1252	BA25706	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 12:00:00 PM	1/29/2021 12:43:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1211	BA25689	1	1,2-DICHLOROETHANE	1/20/2021 2:26:00 PM	1/26/2021 6:18:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1211	BA25689	1	BENZENE	1/20/2021 2:26:00 PM	1/26/2021 6:18:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1211	BA25689	1	ETHYLBENZENE	1/20/2021 2:26:00 PM	1/26/2021 6:18:00 AM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1211	BA25689	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 2:26:00 PM	1/26/2021 6:19:00 AM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1211	BA25689	1	TOLUENE	1/20/2021 2:26:00 PM	1/26/2021 6:18:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1211	BA25689	1	Xylenes	1/20/2021 2:26:00 PM	1/26/2021 6:18:00 AM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1212	BA25690	1	1,2-DICHLOROETHANE	1/20/2021 3:28:00 PM	1/26/2021 6:41:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1212	BA25690	1	BENZENE	1/20/2021 3:28:00 PM	1/26/2021 6:41:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1212	BA25690	1	ETHYLBENZENE	1/20/2021 3:28:00 PM	1/26/2021 6:41:00 AM	D	0.50	UG_L	U	1.0	0.50	U	
ERH1212	BA25690	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 3:28:00 PM	1/26/2021 6:42:00 AM	D	18.0	UG_L	U	20	18.0	U	
ERH1212	BA25690	1	TOLUENE	1/20/2021 3:28:00 PM	1/26/2021 6:41:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1212	BA25690	1	Xylenes	1/20/2021 3:28:00 PM	1/26/2021 6:41:00 AM	D	0.30	UG_L	U	2.0	0.30	U	
ERH1233	BA25692	1	BENZENE	1/21/2021 9:34:00 AM	1/26/2021 9:23:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1233	BA25692	1	ETHYLBENZENE	1/21/2021 9:34:00 AM	1/26/2021 9:23:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1233	BA25692	1	PETROLEUM HYDROCARBONS C6-C10	1/21/2021 9:34:00 AM	1/26/2021 9:22:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1233	BA25692	1	TOLUENE	1/21/2021 9:34:00 AM	1/26/2021 9:23:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1233	BA25692	1	Xylenes	1/21/2021 9:34:00 AM	1/26/2021 9:23:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1234	BA25693	1	BENZENE	1/21/2021 9:58:00 AM	1/26/2021 6:49:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1234	BA25693	1	ETHYLBENZENE	1/21/2021 9:58:00 AM	1/26/2021 6:49:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1234	BA25693	1	PETROLEUM HYDROCARBONS C6-C10	1/21/2021 9:58:00 AM	1/26/2021 6:50:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1234	BA25693	1	TOLUENE	1/21/2021 9:58:00 AM	1/26/2021 6:49:00 PM	C	0.30	UG_L	U	1.0	0.30	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1234	BA25693	1	Xylenes	1/21/2021 9:58:00 AM	1/26/2021 6:49:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1241	BA25695	1	BENZENE	1/21/2021 8:03:00 AM	1/26/2021 4:54:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1241	BA25695	1	ETHYLBENZENE	1/21/2021 8:03:00 AM	1/26/2021 4:54:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1241	BA25695	1	PETROLEUM HYDROCARBONS C6-C10	1/21/2021 8:03:00 AM	1/26/2021 4:55:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1241	BA25695	1	TOLUENE	1/21/2021 8:03:00 AM	1/26/2021 4:54:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1241	BA25695	1	Xylenes	1/21/2021 8:03:00 AM	1/26/2021 4:54:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1242	BA25696	1	BENZENE	1/21/2021 10:00:00 AM	1/26/2021 7:12:00 PM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1242	BA25696	1	ETHYLBENZENE	1/21/2021 10:00:00 AM	1/26/2021 7:12:00 PM	D	0.50	UG_L	U	1.0	0.50	U	
ERH1242	BA25696	1	PETROLEUM HYDROCARBONS C6-C10	1/21/2021 10:00:00 AM	1/26/2021 7:13:00 PM	D	18.0	UG_L	U	20	18.0	U	
ERH1242	BA25696	1	TOLUENE	1/21/2021 10:00:00 AM	1/26/2021 7:12:00 PM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1242	BA25696	1	Xylenes	1/21/2021 10:00:00 AM	1/26/2021 7:12:00 PM	D	0.30	UG_L	U	2.0	0.30	U	
ERH1243	BA25698	1	1,2-DICHLOROETHANE	1/20/2021 8:45:00 AM	1/26/2021 7:05:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1243	BA25698	1	BENZENE	1/20/2021 8:45:00 AM	1/26/2021 7:05:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1243	BA25698	1	ETHYLBENZENE	1/20/2021 8:45:00 AM	1/26/2021 7:05:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1243	BA25698	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 8:45:00 AM	1/26/2021 7:04:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1243	BA25698	1	TOLUENE	1/20/2021 8:45:00 AM	1/26/2021 7:05:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1243	BA25698	1	Xylenes	1/20/2021 8:45:00 AM	1/26/2021 7:05:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1244	BA25699	1	1,2-DICHLOROETHANE	1/20/2021 9:45:00 AM	1/26/2021 7:27:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1244	BA25699	1	BENZENE	1/20/2021 9:45:00 AM	1/26/2021 7:27:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1244	BA25699	1	ETHYLBENZENE	1/20/2021 9:45:00 AM	1/26/2021 7:27:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1244	BA25699	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 9:45:00 AM	1/26/2021 7:28:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1244	BA25699	1	TOLUENE	1/20/2021 9:45:00 AM	1/26/2021 7:27:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1244	BA25699	1	Xylenes	1/20/2021 9:45:00 AM	1/26/2021 7:27:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1245	BA25701	1	1,2-DICHLOROETHANE	1/20/2021 9:45:00 AM	1/26/2021 7:50:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1245	BA25701	1	BENZENE	1/20/2021 9:45:00 AM	1/26/2021 7:50:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1245	BA25701	1	ETHYLBENZENE	1/20/2021 9:45:00 AM	1/26/2021 7:50:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1245	BA25701	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 9:45:00 AM	1/26/2021 7:51:00 AM	C	18.0	UG_L	U	20	18.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1245	BA25701	1	TOLUENE	1/20/2021 9:45:00 AM	1/26/2021 7:50:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1245	BA25701	1	Xylenes	1/20/2021 9:45:00 AM	1/26/2021 7:50:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1250	BA25703	1	1,2-DICHLOROETHANE	1/20/2021 10:00:00 AM	1/26/2021 8:14:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1250	BA25703	1	BENZENE	1/20/2021 10:00:00 AM	1/26/2021 8:14:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1250	BA25703	1	ETHYLBENZENE	1/20/2021 10:00:00 AM	1/26/2021 8:14:00 AM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1250	BA25703	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 10:00:00 AM	1/26/2021 8:13:00 AM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1250	BA25703	1	TOLUENE	1/20/2021 10:00:00 AM	1/26/2021 8:14:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1250	BA25703	1	Xylenes	1/20/2021 10:00:00 AM	1/26/2021 8:14:00 AM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1251	BA25704	1	1,2-DICHLOROETHANE	1/20/2021 11:00:00 AM	1/26/2021 8:37:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1251	BA25704	1	BENZENE	1/20/2021 11:00:00 AM	1/26/2021 8:37:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1251	BA25704	1	ETHYLBENZENE	1/20/2021 11:00:00 AM	1/26/2021 8:37:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1251	BA25704	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 11:00:00 AM	1/26/2021 8:36:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1251	BA25704	1	TOLUENE	1/20/2021 11:00:00 AM	1/26/2021 8:37:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1251	BA25704	1	Xylenes	1/20/2021 11:00:00 AM	1/26/2021 8:37:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1252	BA25706	1	1,2-DICHLOROETHANE	1/20/2021 12:00:00 PM	1/26/2021 8:59:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1252	BA25706	1	BENZENE	1/20/2021 12:00:00 PM	1/26/2021 8:59:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1252	BA25706	1	ETHYLBENZENE	1/20/2021 12:00:00 PM	1/26/2021 8:59:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1252	BA25706	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 12:00:00 PM	1/26/2021 9:00:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1252	BA25706	1	TOLUENE	1/20/2021 12:00:00 PM	1/26/2021 8:59:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1252	BA25706	1	Xylenes	1/20/2021 12:00:00 PM	1/26/2021 8:59:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1212	BA25690	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 3:28:00 PM	1/28/2021 2:55:00 PM	D	80.0	UG_L	U	100	80.0	U	
ERH1212	BA25690	1	PHENOL	1/20/2021 3:28:00 PM	1/28/2021 12:37:00 PM	D	4.00	UG_L	U	5.0	4.00	U	
ERH1234	BA25693	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/21/2021 9:58:00 AM	1/28/2021 3:16:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1234	BA25693	1	PHENOL	1/21/2021 9:58:00 AM	1/28/2021 1:03:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1242	BA25696	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/21/2021 10:00:00 AM	1/28/2021 3:37:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1242	BA25696	1	PHENOL	1/21/2021 10:00:00 AM	1/28/2021 1:28:00 PM	C	4.00	UG_L	U	5.0	4.00	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270D**													
ERH1244	BA25699	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 9:45:00 AM	1/28/2021 3:58:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1244	BA25699	1	PHENOL	1/20/2021 9:45:00 AM	1/28/2021 1:53:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1245	BA25701	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 9:45:00 AM	1/28/2021 4:18:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1245	BA25701	1	PHENOL	1/20/2021 9:45:00 AM	1/28/2021 2:19:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1251	BA25704	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 11:00:00 AM	1/28/2021 4:39:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1251	BA25704	1	PHENOL	1/20/2021 11:00:00 AM	1/28/2021 2:44:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1252	BA25706	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 12:00:00 PM	1/28/2021 5:00:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1252	BA25706	1	PHENOL	1/20/2021 12:00:00 PM	1/28/2021 3:09:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1212	BA25690	1	1-METHYLNAPHTHALENE	1/20/2021 3:28:00 PM	1/28/2021 12:09:00 PM	D	0.10	UG_L	U	0.2	0.10	U	
ERH1212	BA25690	1	2-METHYLNAPHTHALENE	1/20/2021 3:28:00 PM	1/28/2021 12:09:00 PM	D	0.10	UG_L	U	0.2	0.10	U	
ERH1212	BA25690	1	NAPHTHALENE	1/20/2021 3:28:00 PM	1/28/2021 12:09:00 PM	D	0.10	UG_L	U	0.2	0.10	U	
ERH1234	BA25693	1	1-METHYLNAPHTHALENE	1/21/2021 9:58:00 AM	1/28/2021 12:31:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1234	BA25693	1	2-METHYLNAPHTHALENE	1/21/2021 9:58:00 AM	1/28/2021 12:31:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1234	BA25693	1	NAPHTHALENE	1/21/2021 9:58:00 AM	1/28/2021 12:31:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1242	BA25696	1	1-METHYLNAPHTHALENE	1/21/2021 10:00:00 AM	1/28/2021 12:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1242	BA25696	1	2-METHYLNAPHTHALENE	1/21/2021 10:00:00 AM	1/28/2021 12:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1242	BA25696	1	NAPHTHALENE	1/21/2021 10:00:00 AM	1/28/2021 12:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1244	BA25699	1	1-METHYLNAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1244	BA25699	1	2-METHYLNAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1244	BA25699	1	NAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1245	BA25701	1	1-METHYLNAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:37:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1245	BA25701	1	2-METHYLNAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:37:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1245	BA25701	1	NAPHTHALENE	1/20/2021 9:45:00 AM	1/28/2021 1:37:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1251	BA25704	1	1-METHYLNAPHTHALENE	1/20/2021 11:00:00 AM	1/28/2021 1:59:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1251	BA25704	1	2-METHYLNAPHTHALENE	1/20/2021 11:00:00 AM	1/28/2021 1:59:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1251	BA25704	1	NAPHTHALENE	1/20/2021 11:00:00 AM	1/28/2021 1:59:00 PM	C	0.10	UG_L	U	0.2	0.10	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270DSIM**													
ERH1252	BA25706	1	1-METHYLNAPHTHALENE	1/20/2021 12:00:00 PM	1/28/2021 2:21:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1252	BA25706	1	2-METHYLNAPHTHALENE	1/20/2021 12:00:00 PM	1/28/2021 2:21:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1252	BA25706	1	NAPHTHALENE	1/20/2021 12:00:00 PM	1/28/2021 2:21:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1212	BA25690	1	TOTAL ORGANIC CARBON	1/20/2021 3:28:00 PM	1/25/2021 9:30:00 PM	D	0.350	MG_L	U	0.93	0.350	U	
ERH1234	BA25693	1	TOTAL ORGANIC CARBON	1/21/2021 9:58:00 AM	1/25/2021 10:06:00 PM	C	0.13	MG_L	J	0.93	0.350	J	c
ERH1242	BA25696	1	TOTAL ORGANIC CARBON	1/21/2021 10:00:00 AM	1/25/2021 10:42:00 PM	C	13.7	MG_L		0.93	0.350	J	c
ERH1244	BA25699	1	TOTAL ORGANIC CARBON	1/20/2021 9:45:00 AM	1/25/2021 11:21:00 PM	C	1.1	MG_L		0.93	0.350	J	c
METHOD: **RSK175**													
ERH1211	BA25689	1	METHANE	1/20/2021 2:26:00 PM	1/27/2021 2:51:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1212	BA25690	1	METHANE	1/20/2021 3:28:00 PM	1/27/2021 2:54:00 PM	D	1.00	UG_L	U	5.0	1.00	U	
ERH1233	BA25692	1	METHANE	1/21/2021 9:34:00 AM	1/27/2021 2:57:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1234	BA25693	1	METHANE	1/21/2021 9:58:00 AM	1/27/2021 2:59:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1241	BA25695	1	METHANE	1/21/2021 8:03:00 AM	1/27/2021 3:03:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1242	BA25696	1	METHANE	1/21/2021 10:00:00 AM	1/27/2021 3:12:00 PM	D	1.00	UG_L	U	5.0	1.00	U	
ERH1243	BA25698	1	METHANE	1/20/2021 8:45:00 AM	1/27/2021 3:15:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1244	BA25699	1	METHANE	1/20/2021 9:45:00 AM	1/27/2021 3:18:00 PM	C	9.6	UG_L		5.0	1.00		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Volatiles

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1216	BA25866	Water	01/25/21
ERH1217	BA25867	Water	01/25/21
ERH1223	BA25869	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1216 ERH1223	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples ERH1216 and ERH1223 were identified as trip blanks. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
ERH1217	Toluene-d8	113 (89-112)	All compounds	NA	-

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94883

Sample	Compound	Flag	A or P	Reason (Code)
ERH1216 ERH1223	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C1a
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B) BTEX

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	OS
IX.	Laboratory control samples	A	LCS/LCSD
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1216 TB	BA25866	Water	01/25/21
2	ERH1217	BA25867	Water	01/25/21
3	ERH1223 TB	BA25869	Water	01/25/21
4	ERH1224	BA25870	Water	01/25/21
5				
6				
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9				

Notes:

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LDC #: 50475c1a

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?
Y N N/A Were air bubbles > 1/4 inch or was headspace present in the vials?

METHOD : GC/MS VOA (EPA SW 846 Method 8260 B) (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1,3	VOA	contained		headspace			J|UJ/A
							NO

TECHNICAL HOLDING TIME CRITERIA

Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
Water preserved:	Within 14 days of sample collection.
Soil:	Within 14 days of sample collection.

LDC #: 50475C1a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Page: 1 of 1
Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
	2	TOL	113 (89-112)	J det/P ND (S)
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	

SMC1 (TOL) = Toluene-d8
SMC2 (BFB) = Bromofluorobenzene
SMC3 (DCE) = 1,2-Dichloroethane-d4
SMC4 (DFM) = Dibromofluoromethane

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Phenol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1217	BA25867	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C2a
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	cs
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1217	BA25867	Water	01/25/21
2	ERH1224	BA25870	Water	01/25/21
3				
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8				
9				

Notes:

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LDC Report# 50475C2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1217	BA25867	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C2b
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: EV
2nd Reviewer: AA

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration / ending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1217	BA25867	Water	01/25/21
2	ERH1224	BA25870	Water	01/25/21
3				
4				
5				
6				
7				
8				
9				

Notes:

	210127A - BIK						

TTI, W, S

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1217	BA25867	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field duplicates were identified in this SDG.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS/LCSD percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C2c
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1217	BA25867	Water	01/25/21
2	ERH1224	BA25870	Water	01/25/21
3				
4				
5				
6				
7				
8				
9				

Notes:

	210127A - BIK						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Wet Chemistry

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1217	BA25867	Water	01/25/21
ERH1224	BA25870	Water	01/25/21
ERH1224MS	BA25870MS	Water	01/25/21
ERH1224MSD	BA25870MSD	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
01/26/21	ICV (19:21)	Chloride	89.8 (90-110)	ERH1217	J (all detects)	P
01/26/21	CCV (22:52)	Total organic carbon	111.2 (90-110)	All samples in SDG 94883	J (all detects)	P

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total	3.4 mg/L 3.4 mg/L	2.0 mg/L 2.0 mg/L	All samples in SDG 94883

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods.

Due to continuing calibration %R, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94883

Sample	Analyte	Flag	A or P	Reason (Code)
ERH1217	Chloride	J (all detects)	P	Continuing calibration (%R) (C)
ERH1217 ERH1224	Total organic carbon	J (all detects)	P	Continuing calibration (%R) (C)

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94883

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C6
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/23/21
Page: 1 of 1
Reviewer: ATV
2nd Reviewer: AC

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II	Initial calibration	A	
III.	Calibration verification	SW	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	A	(3,4)
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1217	BA25867	Water	01/25/21
2	ERH1224	BA25870	Water	01/25/21
3	ERH1224MS	BA25870MS	Water	01/25/21
4	ERH1224MSD	BA25870MSD	Water	01/25/21
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Notes:

LDC #: 50475C6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATL

All circled methods are applicable to each sample.

Sample ID	Parameter
1, 2	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
OC	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
3, 4	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4 (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

LDC #: 50475C6

VALIDATION FINDINGS WORKSHEET
Calibration

Reviewer: ATL

METHOD: Inorganics, EPA Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?
Y (N) N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% ?
(Y) N N/A Are all correlation coefficients ≥0.995 ?

LEVEL IV/D ONLY:

Y N (N/A) Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recaluculation Worksheet for recalulations.
Y N (N/A) Was a balance check conducted prior to the TDS analysis.?
Y N (N/A) Was the titrant normality checked?

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualifications Code: C
	01/26/21	ICV (19:21)	Cl	89.8 (90-110)	1	J/UJ/P (detect)
	01/26/21	CCV (22:52)	TOC	111.2 (90-110)	all	Jdet/P (detect)

Comments:

LDC #: 50475C6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Alkalinity Bicarbonate	3.4			2.0								
Alkalinity Total	3.4			2.0								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1216	BA25866	Water	01/25/21
ERH1217	BA25867	Water	01/25/21
ERH1223	BA25869	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1216 ERH1223	Gasoline range organics	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1216 and ERH1223 were identified as trip blanks. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94883

Sample	Compound	Flag	A or P	Reason (Code)
ERH1216 ERH1223	Gasoline range organics	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C7
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	r² ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	cs
IX.	Laboratory control samples	A	LCS WD
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	ERH1216	TB	BA25866	Water	01/25/21
2	ERH1217		BA25867	Water	01/25/21
3	ERH1223	TB	BA25869	Water	01/25/21
4	ERH1224		BA25870	Water	01/25/21
5					
6					
7					
8					
9					

Notes:

	210127AZ						

LDC #: 50475C7

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria? (Y)

METHOD : ✓ GC MS HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1, 3	VOA	container	Headspace				J/UJ/A
							MD

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

LDC Report# 50475C8

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1217	BA25867	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C8
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	%RSD ≤ 20, r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	CS
VIII.	Laboratory control samples	A	LCS ID
IX.	Field duplicates	N	
X.	Compound quantitation RL/LOQ/LODs	N	
XI.	Target compound identification	N	
XII.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1217	BA25867	Water	01/25/21
2	ERH1224	BA25870	Water	01/25/21
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Notes:

	210127B						

LDC Report# 50475C51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: February 24, 2021

Parameters: Methane

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94883

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1216	BA25866	Water	01/25/21
ERH1217	BA25867	Water	01/25/21
ERH1223	BA25869	Water	01/25/21
ERH1224	BA25870	Water	01/25/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1216 ERH1223	Methane	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1216 and ERH1223 were identified as trip blanks. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

Raw data were not reviewed for Level C validation.

X. Target Compound Identification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94883

Sample	Compound	Flag	A or P	Reason (Code)
ERH1216 ERH1223	Methane	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94883

No Sample Data Qualified in this SDG

LDC #: 50475C51
SDG #: 94883
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level C

Date: 2/24/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	Initial calibration/ICV	A/A	r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1,3
VI.	Matrix spike/Matrix spike duplicates	N	CS
VII.	Laboratory control samples	A	LCS ID
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	N	
X.	Target compound identification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	ERH1216	TB	BA25866	Water	01/25/21
2	ERH1217		BA25867	Water	01/25/21
3	ERH1223	TB	BA25869	Water	01/25/21
4	ERH1224		BA25870	Water	01/25/21
5					
6					
7					
8					
9					
10					
11					
12					
13					

Notes:

	210129A						

LDC #: 50475c51

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
(Y) N N/A Were all cooler temperatures within validation criteria?

METHOD : ✓ GC ___ HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1,3	VOA	contained	Headspace				J/UJ/A ND

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:
- Water unpreserved: Aromatic within 7 days, non-aromatic within 14 days of sample collection.
- Water preserved: Both within 14 days of sample collection.
- Soils: Both within 14 days of sample collection.
- Encores unpreserved: Both within 48 hours of sample collection.
- Encores preserved: Both within 14 days of sample collection.

EXTRACTABLES:
- Water: Extracted within 7 days, analyzed within 40 days.
- Soil: Extracted within 14 days, analyzed within 40 days.

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1217	BA25867	1	ALKALINITY, TOTAL (AS CACO3)	1/25/2021 9:00:00 AM	2/1/2021 5:34:00 PM	C	81.2	MG_L		2.0	1.70		
ERH1217	BA25867	1	BICARBONATE	1/25/2021 9:00:00 AM	2/1/2021 5:34:00 PM	C	81.2	MG_L		2.0	1.70		
ERH1217	BA25867	1	CARBONATE (AS CO3)	1/25/2021 9:00:00 AM	2/1/2021 5:34:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1224	BA25870	1	ALKALINITY, TOTAL (AS CACO3)	1/25/2021 11:38:00 AM	2/1/2021 5:39:00 PM	C	76.6	MG_L		2.0	1.70		
ERH1224	BA25870	1	BICARBONATE	1/25/2021 11:38:00 AM	2/1/2021 5:39:00 PM	C	76.6	MG_L		2.0	1.70		
ERH1224	BA25870	1	CARBONATE (AS CO3)	1/25/2021 11:38:00 AM	2/1/2021 5:39:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1217	BA25867	1	CHLORIDE (AS CL)	1/25/2021 9:00:00 AM	1/26/2021 7:35:00 PM	C	42.7	MG_L		1.0	0.20	J	c
ERH1217	BA25867	1	NITRATE AS NO3 (ANION)	1/25/2021 9:00:00 AM	1/26/2021 7:35:00 PM	C	0.18	MG_L	U	0.5	0.18	U	
ERH1217	BA25867	1	SULFATE (AS SO4)	1/25/2021 9:00:00 AM	1/26/2021 7:35:00 PM	C	4.9	MG_L		1.0	0.20		
ERH1224	BA25870	5	CHLORIDE (AS CL)	1/25/2021 11:38:00 AM	2/3/2021 5:45:00 PM	C	72.8	MG_L	D	5.0	1.00		
ERH1224	BA25870	1	NITRATE AS NO3 (ANION)	1/25/2021 11:38:00 AM	1/26/2021 7:50:00 PM	C	2.1	MG_L		0.5	0.18		
ERH1224	BA25870	1	SULFATE (AS SO4)	1/25/2021 11:38:00 AM	1/26/2021 7:50:00 PM	C	9.2	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													
ERH1217	BA25867	1	Iron, Ion (Fe2+)	1/25/2021 9:00:00 AM	1/26/2021 12:34:00 AM	C	0.37	MG_L	J	1.0	0.32	J	
ERH1224	BA25870	1	Iron, Ion (Fe2+)	1/25/2021 11:38:00 AM	1/26/2021 12:35:00 AM	C	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1217	BA25867	1	NITROGEN, NITRATE-NITRITE	1/25/2021 9:00:00 AM	1/26/2021 1:11:00 PM	C	0.090	MG_L	U	0.10	0.090	U	
ERH1224	BA25870	1	NITROGEN, NITRATE-NITRITE	1/25/2021 11:38:00 AM	1/26/2021 1:12:00 PM	C	0.49	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1217	BA25867	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 9:00:00 AM	1/29/2021 1:11:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1217	BA25867	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 9:00:00 AM	1/29/2021 1:11:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1224	BA25870	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 11:38:00 AM	1/29/2021 1:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1224	BA25870	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 11:38:00 AM	1/29/2021 1:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1216	BA25866	1	BENZENE	1/25/2021 8:30:00 AM	1/27/2021 11:46:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1216	BA25866	1	ETHYLBENZENE	1/25/2021 8:30:00 AM	1/27/2021 11:46:00 AM	C	0.50	UG_L	U	1.0	0.50	UJ	v

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1216	BA25866	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 8:30:00 AM	1/27/2021 11:45:00 AM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1216	BA25866	1	TOLUENE	1/25/2021 8:30:00 AM	1/27/2021 11:46:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1216	BA25866	1	Xylenes	1/25/2021 8:30:00 AM	1/27/2021 11:46:00 AM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1217	BA25867	1	BENZENE	1/25/2021 9:00:00 AM	1/27/2021 1:17:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1217	BA25867	1	ETHYLBENZENE	1/25/2021 9:00:00 AM	1/27/2021 1:17:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1217	BA25867	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 9:00:00 AM	1/27/2021 1:18:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1217	BA25867	1	TOLUENE	1/25/2021 9:00:00 AM	1/27/2021 1:17:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1217	BA25867	1	Xylenes	1/25/2021 9:00:00 AM	1/27/2021 1:17:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1223	BA25869	1	BENZENE	1/25/2021 10:58:00 AM	1/27/2021 12:08:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1223	BA25869	1	ETHYLBENZENE	1/25/2021 10:58:00 AM	1/27/2021 12:08:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1223	BA25869	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 10:58:00 AM	1/27/2021 12:09:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1223	BA25869	1	TOLUENE	1/25/2021 10:58:00 AM	1/27/2021 12:08:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1223	BA25869	1	Xylenes	1/25/2021 10:58:00 AM	1/27/2021 12:08:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1224	BA25870	1	BENZENE	1/25/2021 11:38:00 AM	1/27/2021 1:41:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1224	BA25870	1	ETHYLBENZENE	1/25/2021 11:38:00 AM	1/27/2021 1:41:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1224	BA25870	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 11:38:00 AM	1/27/2021 1:40:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1224	BA25870	1	TOLUENE	1/25/2021 11:38:00 AM	1/27/2021 1:41:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1224	BA25870	1	Xylenes	1/25/2021 11:38:00 AM	1/27/2021 1:41:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1217	BA25867	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/25/2021 9:00:00 AM	1/28/2021 5:38:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1217	BA25867	1	PHENOL	1/25/2021 9:00:00 AM	1/29/2021 1:38:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1224	BA25870	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/25/2021 11:38:00 AM	1/28/2021 5:59:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1224	BA25870	1	PHENOL	1/25/2021 11:38:00 AM	1/29/2021 2:03:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1217	BA25867	1	1-METHYLNAPHTHALENE	1/25/2021 9:00:00 AM	1/29/2021 1:05:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1217	BA25867	1	2-METHYLNAPHTHALENE	1/25/2021 9:00:00 AM	1/29/2021 1:05:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1217	BA25867	1	NAPHTHALENE	1/25/2021 9:00:00 AM	1/29/2021 1:05:00 PM	C	0.10	UG_L	U	0.2	0.10	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270DSIM**													
ERH1224	BA25870	1	1-METHYLNAPHTHALENE	1/25/2021 11:38:00 AM	1/29/2021 1:27:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1224	BA25870	1	2-METHYLNAPHTHALENE	1/25/2021 11:38:00 AM	1/29/2021 1:27:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1224	BA25870	1	NAPHTHALENE	1/25/2021 11:38:00 AM	1/29/2021 1:27:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1217	BA25867	1	TOTAL ORGANIC CARBON	1/25/2021 9:00:00 AM	1/26/2021 8:57:00 PM	C	0.45	MG_L	J	0.93	0.350	J	c
ERH1224	BA25870	1	TOTAL ORGANIC CARBON	1/25/2021 11:38:00 AM	1/26/2021 8:21:00 PM	C	0.22	MG_L	J	0.93	0.350	J	c
METHOD: **RSK175**													
ERH1216	BA25866	1	METHANE	1/25/2021 8:30:00 AM	1/29/2021 1:40:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1217	BA25867	1	METHANE	1/25/2021 9:00:00 AM	1/29/2021 1:43:00 PM	C	560	UG_L		5.0	1.00		
ERH1223	BA25869	1	METHANE	1/25/2021 10:58:00 AM	1/29/2021 1:46:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1224	BA25870	1	METHANE	1/25/2021 11:38:00 AM	1/29/2021 1:49:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Volatiles

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1246	BA25525	Water	01/19/21
ERH1247	BA25526	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1246 was identified as a trip blank. No contaminants were found.

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D1a
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: AC

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)
BTEX

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB= ERH1252, FB= ERH1251 (94863) TB = 1
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CD
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1246	BA25525	Water	01/19/21
2	ERH1247	BA25526	Water	01/19/21
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Notes:

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Phenol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1247	BA25526	Water	01/19/21
ERH1247MS	BA25526MS	Water	01/19/21
ERH1247MSD	BA25526MSD	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D2a
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: F
2nd Reviewer: M

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = ERH1252 FB = ERH1251 (94863)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1247	BA25526	Water	01/19/21
2	ERH1247MS	BA25526MS	Water	01/19/21
3	ERH1247MSD	BA25526MSD	Water	01/19/21
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Notes:

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1247	BA25526	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D2b
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = ERH1252 FB = ERH1251 (94863)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	LCS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1247	BA25526	Water	01/19/21
2				
3				
4				
5				
6				
7				
8				
9				

Notes:

	210122A						

LDC Report# 50475D2c

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1247	BA25526	Water	01/19/21
ERH1247MS	BA25526MS	Water	01/19/21
ERH1247MSD	BA25526MSD	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the MS/MSD and LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
ERH1247MS/MSD (ERH1247)	2-(2-Methoxyethoxy)-ethanol	30.7 (≤20)	NA	-

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D2c
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: FJ
2nd Reviewer: JC

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = ERH1252 FB = ERH1251 (94863)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates SW	~~A~~	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1247	BA25526	Water	01/19/21
2	ERH1247MS	BA25526MS	Water	01/19/21
3	ERH1247MSD	BA25526MSD	Water	01/19/21
4				
5				
6				
7				
8				
9				

Notes:

	210125A						

LDC #: 50475D2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

N/A Were percent recoveries (%R) for surrogates within QC limits?

N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified. ~~Although, MS/MSD %RPD was out of QC limit, the %RPD in the phenol analysis was within the criteria.~~ The LCS percent recoveries was also within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
	MS/MSD			
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
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			( )	
			( )	
			( )	
			( )	

LDC #: 50475D2C

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water. (C)

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits? (E)

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	2 + 3	*	( )	( )	30.7 (20)	1	Jdet /A ND
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
	* 2-(2-Methoxyethoxy)-Ethanol		( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Wet Chemistry

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1247	BA25526	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
ERH1247	Nitrate	51.05 hours	48 hours	J (all detects)	P

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
01/21/21	CCV (16:30)	Nitrate	110.4 (90-110)	All samples in SDG 94825	J (all detects)	P

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total	0.87 mg/L 0.87 mg/L	2.0 mg/L 2.0 mg/L	All samples in SDG 94825

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods.

Due to technical holding times, and continuing calibration %R, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94825

Sample	Analyte	Flag	A or P	Reason (Code)
ERH1247	Nitrate	J (all detects)	P	Technical holding times (H)
ERH1247	Nitrate	J (all detects)	P	Continuing calibration (%R) (C)

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94825

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D6
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/23/21
Page: 1 of 1
Reviewer: ATV
2nd Reviewer: AM

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/SW	
II	Initial calibration	A	
III.	Calibration verification	SW	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	N	C,S
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1247	BA25526	Water	01/19/21 9:15
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Notes:

LDC #: 50475D6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATV

All circled methods are applicable to each sample.

Sample ID	Parameter
1	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

LDC #: 50475D6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: ATV

All circled dates have exceeded the technical holding time.
Y N N/A Were all samples preserved as applicable to each method ?
Y N N/A Were all cooler temperatures within validation criteria? Code: H

Method:	NO_3 (EPA 300.0)	
Parameters:	water	
Technical holding time:	48hrs.	

Sample ID	Sampling date	Analysis date	Total Time	Qualifier	Analysis date	Total Time	Qualifier
1	9:15→11:15 01/19/21	14:18 01/21/21	51.05hrs.	J/UJ/P(detect)			

LDC #: 50475D6

VALIDATION FINDINGS WORKSHEET
Calibration

Reviewer: ATL

METHOD: Inorganics, EPA Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?
Y (N) N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% ?
(Y) N N/A Are all correlation coefficients ≥0.995 ?

LEVEL IV/D ONLY:

Y N (N/A) Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recaluculation Worksheet for recalulations.
Y N (N/A) Was a balance check conducted prior to the TDS analysis.?
(Y) N N/A Was the titrant normality checked?

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualifications Code: C
	01/21/21	CCV (16:30)	NO3	110.4 (90-110)	all	Jdet/P (detect)

Comments:

LDC #: 50475D6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Alkalinity Bicarbonate	0.87			2.0								
Alkalinity Total	0.87			2.0								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1246	BA25525	Water	01/19/21
ERH1247	BA25526	Water	01/19/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1246 was identified as a trip blank. No contaminants were found.

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D7
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: AC

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	r² ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	EB=
VI.	Field blanks	ND	ERH1252 FB= ERH1251 (94863)
VII.	Surrogate spikes	A	TB = 1
VIII.	Matrix spike/Matrix spike duplicates	N	ms
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1246 TB	BA25525	Water	01/19/21
2	ERH1247	BA25526	Water	01/19/21
3				
4				
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9				

Notes:

	210122AZ						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1247	BA25526	Water	01/19/21
ERH1247MS	BA25526MS	Water	01/19/21
ERH1247MSD	BA25526MSD	Water	01/19/21

Introduction

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The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1252 (from SDG 94863) was identified as an equipment blank. No contaminants were found.

Sample ERH1251 (from SDG 94863) was identified as a field blank. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D8
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	A / A	%RSD ≤ 20, r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	EB = ERH1252 FB = ERH1251 (94863)
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	N	
X.	Compound quantitation RL/LOQ/LODs	N	
XI.	Target compound identification	N	
XII	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1247	BA25526	Water	01/19/21
2	ERH1247MS	BA25526MS	Water	01/19/21
3	ERH1247MSD	BA25526MSD	Water	01/19/21
4				
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10				
11				
12				

Notes:

	210122A						

LDC Report# 50475D51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Methane

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94825

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1246	BA25525	Water	01/19/21
ERH1247	BA25526	Water	01/19/21
ERH1247MS	BA25526MS	Water	01/19/21
ERH1247MSD	BA25526MSD	Water	01/19/21

Introduction

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The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample ERH1246 was identified as a trip blank. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

Raw data were not reviewed for Level C validation.

X. Target Compound Identification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94825

No Sample Data Qualified in this SDG

LDC #: 50475D51
SDG #: 94825
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Methane (Method RSK-175)

.The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	A/A	r2 ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS ID
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	N	
X.	Target compound identification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1246	BA25525	Water	01/19/21
2	ERH1247	BA25526	Water	01/19/21
3	ERH1247MS	BA25526MS	Water	01/19/21
4	ERH1247MSD	BA25526MSD	Water	01/19/21
5				
6				
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11				
12				
13				

Notes:

	210126A						

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1247	BA25526	1	ALKALINITY, TOTAL (AS CACO3)	1/19/2021 9:15:00 AM	1/22/2021 5:06:00 PM	C	62.9	MG_L		2.0	1.70		
ERH1247	BA25526	1	BICARBONATE	1/19/2021 9:15:00 AM	1/22/2021 5:06:00 PM	C	62.9	MG_L		2.0	1.70		
ERH1247	BA25526	1	CARBONATE (AS CO3)	1/19/2021 9:15:00 AM	1/22/2021 5:06:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1247	BA25526	1	CHLORIDE (AS CL)	1/19/2021 9:15:00 AM	1/21/2021 2:18:00 PM	C	17.5	MG_L		1.0	0.20		
ERH1247	BA25526	1	NITRATE AS NO3 (ANION)	1/19/2021 9:15:00 AM	1/21/2021 2:18:00 PM	C	0.64	MG_L		0.5	0.18	J	h,c
ERH1247	BA25526	1	SULFATE (AS SO4)	1/19/2021 9:15:00 AM	1/21/2021 2:18:00 PM	C	3.0	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													
ERH1247	BA25526	1	Iron, Ion (Fe2+)	1/19/2021 9:15:00 AM	1/21/2021 11:49:00 PM	C	0.16	MG_L	J	1.0	0.32	J	
METHOD: **353.2**													
ERH1247	BA25526	1	NITROGEN, NITRATE-NITRITE	1/19/2021 9:15:00 AM	1/25/2021 10:45:00 PM	C	0.37	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1247	BA25526	1	C10-C24 DIESEL RANGE ORGANICS	1/19/2021 9:15:00 AM	1/26/2021 12:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1247	BA25526	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/19/2021 9:15:00 AM	1/26/2021 12:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1246	BA25525	1	BENZENE	1/19/2021 8:30:00 AM	1/22/2021 8:15:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1246	BA25525	1	ETHYLBENZENE	1/19/2021 8:30:00 AM	1/22/2021 8:15:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1246	BA25525	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 8:30:00 AM	1/22/2021 8:14:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1246	BA25525	1	TOLUENE	1/19/2021 8:30:00 AM	1/22/2021 8:15:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1246	BA25525	1	Xylenes	1/19/2021 8:30:00 AM	1/22/2021 8:15:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1247	BA25526	1	BENZENE	1/19/2021 9:15:00 AM	1/22/2021 8:38:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1247	BA25526	1	ETHYLBENZENE	1/19/2021 9:15:00 AM	1/22/2021 8:38:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1247	BA25526	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 9:15:00 AM	1/22/2021 8:37:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1247	BA25526	1	TOLUENE	1/19/2021 9:15:00 AM	1/22/2021 8:38:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1247	BA25526	1	Xylenes	1/19/2021 9:15:00 AM	1/22/2021 8:38:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1247	BA25526	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/19/2021 9:15:00 AM	1/26/2021 1:30:00 PM	C	80.0	UG_L	U	100	80.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270D**													
ERH1247	BA25526	1	PHENOL	1/19/2021 9:15:00 AM	1/25/2021 7:03:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1247	BA25526	1	1-METHYLNAPHTHALENE	1/19/2021 9:15:00 AM	1/25/2021 6:28:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1247	BA25526	1	2-METHYLNAPHTHALENE	1/19/2021 9:15:00 AM	1/25/2021 6:28:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1247	BA25526	1	NAPHTHALENE	1/19/2021 9:15:00 AM	1/25/2021 6:28:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1247	BA25526	1	TOTAL ORGANIC CARBON	1/19/2021 9:15:00 AM	1/22/2021 5:41:00 PM	C	13.9	MG_L		0.93	0.350		
METHOD: **RSK175**													
ERH1246	BA25525	1	METHANE	1/19/2021 8:30:00 AM	1/26/2021 1:47:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1247	BA25526	1	METHANE	1/19/2021 9:15:00 AM	1/26/2021 1:51:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: Volatiles

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1213	BA26000	Water	01/26/21
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1218	BA26005	Water	01/25/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1221	BA26012	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1239	BA26015	Water	01/26/21
ERH1240**	BA26016**	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1218 ERH1221	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples ERH1213, ERH1218, ERH1221, and ERH1239 were identified as trip blanks. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
ERH1214**	Dibromofluoromethane	121 (80-119)	All compounds	NA	-
ERH1215	Dibromofluoromethane	120 (80-119)	All compounds	NA	-
ERH1218	Dibromofluoromethane Toluene-d8	129 (80-119) 115 (89-112)	All compounds	NA	-
ERH1219**	Dibromofluoromethane	123 (80-119)	All compounds	NA	-
ERH1220	Dibromofluoromethane	120 (80-119)	All compounds	NA	-

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples ERH1214** and ERH1215 and samples ERH1219** and ERH1220 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94899

Sample	Compound	Flag	A or P	Reason (Code)
ERH1218 ERH1221	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E1a
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: F
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B) WPEY

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20|50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 4, 7, 9
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	ND	D = 2, 3 5, 6
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
1	ERH1213 TB	BA26000	Water	01/26/21
2	ERH1214W ** D	BA26001**	Water	01/26/21
3	ERH1215 D	BA26003	Water	01/26/21
4	ERH1218 / TB	BA26005	Water	01/25/21
5	ERH1219** D	BA26006**	Water	01/25/21
6	ERH1220 D	BA26008	Water	01/25/21
7	ERH1221 / TB	BA26012	Water	01/25/21
8	ERH1222	BA26013	Water	01/25/21
9	ERH1239 TB	BA26015	Water	01/26/21
10	ERH1240 **	BA26016 **	Water	01/26/21
11	ERH1214MS	BA26001MS	Water	01/26/21
12	ERH1214MSD	BA26001MSD	Water	01/26/21
13	210129AM			
14				

LDC #: 50475E1a

VALIDATION FINDINGS CHECKLIST

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO.1,1-Difluoroethane	O1. 3-Methylpentane
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methyl cyclohexane	T1. 2-Methylhexane
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

(V)

All circled dates have exceeded the technical holding times.
(Y) N N/A Were all cooler temperatures within validation criteria?
(Y) N N/A Were air bubbles > 1/4 inch or was headspace present in the vials?

METHOD : GC/MS VOA (EPA SW 846 Method 8260)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
4, 7	VOA	contained		HS			J|UJ/A
							ND

TECHNICAL HOLDING TIME CRITERIA

Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
Water preserved:	Within 14 days of sample collection.
Soil:	Within 14 days of sample collection.

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A". (S)

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
	2	DFM	121 (80-119)	J det /P ND
			( )	
	3	↓	120 (↓)	↓
			( )	
	4	DFM	129 (80-119)	J det /P ND
		Tol	115 (89-112)	↓
			( )	
	5	DFM	123 (80-119)	J det /P ND
			( )	
	6	↓	120 (↓)	↓
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	

SMC1 (TOL) = Toluene-d8
SMC2 (BFB) = Bromofluorobenzene
SMC3 (DCE) = 1,2-Dichloroethane-d4
SMC4 (DFM) = Dibromofluoromethane

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GCMS 8260B

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

***

#	Standard ID	Calibration Date	Compound	Reported (RRF 5ug/L std)	Recalculated (RRF 5 ug/L std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	1/28/2021	V	0.2990	0.2990	0.3419	0.3419	12.0	12.0
	Max		EE	0.4557	0.4557	0.5179	0.5179	8.9	8.9

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0129M04	1/29/21	V (IS1)	0.3419	0.3918	0.3918	15	15
			EE (IS2)	0.5179	0.6192	0.6192	20	20
			(IS3)					
			(IS4)					
			(IS5)					
2			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					
3			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 5

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	25.0	30.68	123	123	0
1,2-Dichloroethane-d4	↓	27.77	111	111	↓
Toluene-d8		27.23	109	109	
Bromofluorobenzene		28.05	112	112	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 50475F1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD sample: 11, 12

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene											
Trichloroethene											
Benzene	10.0	10.0	ND	11.3	11.3	113	113	113	113	0	0
Toluene	↓	↓	ND	11.9	11.9	119	119	119	119	0	0
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30475E1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 210129AM LCS

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene										
Benzene	10.0	NA	11.5	~~11.5~~ NA	115	115				
Toluene	10.0	NA	11.8	NA	118	118				
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E1a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 210129AM LCS V

Conc. = $\frac{1 \times (231281)(25)}{(1475866)(0.3419)}$ = 11.458 ug/l V

#	Sample ID	Compound	Reported Concentration (ug/l)	Calculated Concentration (ug/l)	Qualification
	LCS	V	11.5	11.458	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: Phenol

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1240	BA26016	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples ERH1214** and ERH1215 and samples ERH1219** and ERH1220 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E2a
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration | ending	A	CCV ≤ 20|50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	ND	D = 1,2 3,4
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID		Lab ID	Matrix	Date
1	ERH1214**	D	BA26001**	Water	01/26/21
2	ERH1215	D	BA26003	Water	01/26/21
3	ERH1219 **	D	BA26006 **	Water	01/25/21
4	ERH1220	D	BA26008	Water	01/25/21
5	ERH1222		BA26013	Water	01/25/21
6	ERH1240		BA26016	Water	01/26/21
7	ERH1214MS		BA26001MS	Water	01/26/21
8	ERH1214MSD		BA26001MSD	Water	01/26/21
9					

Notes:

	210129A						

LDC #: 50475E2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: __50475E2a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 50 std)	Recalculated (RRF 50 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL (YODA)	1/5/2021	A	2.394	2.394	2.418	2.418	2.00	2.00

LDC #: 50475 E2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0105Y14B	2/1/21	Phenol (1st IS)	~~2.394~~	2.651	2.651	9.6	9.6
			(2nd IS)	2.418				
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 3

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	96.154	83.58127	86.9	86.9	0
2-Fluorobiphenyl	↓	70.42895	73.2	73.2	↓
Terphenyl-d14	↓	102.33038	106	106	
Phenol-d5	192.308	147.96115	76.9	76.9	
2-Fluorophenol	↓	151.06512	78.6	78.6	
2,4,6-Tribromophenol	↓	166.13036	86.4	86.4	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 50475 E 2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 7 + 8

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol	50	50	ND	39.8	39.4	79.6	79.6	78.8	78.8	1.0	1.0
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210129A LCS

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	50.0	NA	40.1	NA	80.2	80.2	NA	—		
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 210129A LCS: A

Conc. = $\frac{(1019034)(40.0)(1)(1000)}{(420096)(2.418)(1000)}$

= 40.1 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	LCS	A	40.1	40.1	

LDC Report# 50475E2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1240	BA26016	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
ERH1214MS/MSD (ERH1214**)	2-Methylnaphthalene	31.6 (39-114)	36.8 (39-114)	UJ (all non-detects)	A

Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

Samples ERH1214** and ERH1215 and samples ERH1219** and ERH1220 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	ERH1219**	ERH1220	
1-Methylnaphthalene	25	23	8 (≤50)
2-Methylnaphthalene	17	16	6 (≤50)
Naphthalene	44	41	7 (≤50)

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to MS/MSD %R, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94899

Sample	Compound	Flag	A or P	Reason (Code)
ERH1214**	2-Methylnaphthalene	UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E2b
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15 RF ≤ 20
IV.	Continuing calibration | ending	A	CCV ≤ 20 | 50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	* LCS
X.	Field duplicates	SW	D=1,2 3,4
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID		Lab ID	Matrix	Date
1	ERH1214 SW **	D	BA26001 SW **	Water	01/26/21
2	ERH1215	D	BA26003	Water	01/26/21
3 +	ERH1219 * *	D	BA26006 * *	Water	01/25/21
4 +	ERH1220	D1	BA26008	Water	01/25/21
5 -	ERH1222		BA26013	Water	01/25/21
6 -	ERH1240		BA26016	Water	01/26/21
7	ERH1214MS		BA26001MS	Water	01/26/21
8	ERH1214MSD		BA26001MSD	Water	01/26/21
9					

Notes:

	210129 A						

TTT, W, S

LDC #: 50475 E2b

VALIDATION FINDINGS CHECKLIST

Method: Semivolatiles (EPA SW 846 Method 8270 D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 30475E26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits? (a)

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	7+8	W	31.6 (39-114)	36.8 (39-114)	( )	1	J/UJ/A ND
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 50475E26

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD (≤ 50%)	QUAL
	3	4		
TTT	25	23	8	
W	17	16	6	
S	44	41	7	

Compound	Concentration ( )		RPD (≤ %)	QUAL

Compound	Concentration ( )		RPD (≤ %)	QUAL

LDC #: _50475E2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF1.0 std)	Recalculated (RRF1.0 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL Linus	1/18/2021	S	1.0550	1.0550	1.0170	1.0170	7.3	7.3

LDC #: 30475 E26

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0118L072	2/1/21	S (1st IS)	1.0170	1.062	1.062	4.4	4.4
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E26

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270 D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #3

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ N-d10	4.80 X	4.52034	94.0	94.0	0
2-Fluorobiphenyl YY-d10	↓	4.60996	95.9	95.9	0
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 50475E26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 7+8

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											
S	5.0	5.0	ND	4.04	4.05	80.8	80.8	81.0	81.0	0.25	0.25

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2b

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210129A LCS

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
~~Pyrene~~										
S	5.00	NA	4.04	NA	80.8	80.1	NA	—		

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475 E6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #3, S:

Conc. = $\frac{(1156971)(2.5)(1)(1000)}{(62613)(1.0170)(1040)}$

= 43.68 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	#3	S	44	43.68	

LDC Report# 50475E2c

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1240	BA26016	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples ERH1214** and ERH1215 and samples ERH1219** and ERH1220 were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E2c
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: AK

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A /A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A /A	%D RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	ND	D = 1,2 3,4
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
1	ERH1214W ** D	BA26001W **	Water	01/26/21
2	ERH1215 D	BA26003	Water	01/26/21
3	ERH1219 ** D1	BA26006 **	Water	01/25/21
4	ERH1220 D1	BA26008	Water	01/25/21
5	ERH1222	BA26013	Water	01/25/21
6	ERH1240	BA26016	Water	01/26/21
7	ERH1214MS	BA26001MS	Water	01/26/21
8	ERH1214MSD	BA26001MSD	Water	01/26/21
9				

Notes:

	210201A						

LDC #: 50475E2C

VALIDATION FINDINGS CHECKLIST

Method: Semivolatiles (EPA SW 846 Method 8270 D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check (Not required)				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) ≥ 0.05?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent differences (%R) within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 10 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Did compound quantitation limits meet QAPP limits?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o''-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 50475E2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified since the LCS/B percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
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			( )	
			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

LDC #: _50475E2c

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT____

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 400 std)	Recalculated (RRF400 std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	1/25/2021	2-(2-Methoxyethoxy) Ethanol	0.2698	0.2698	0.2572	0.2572	8.10	8.10
	Kylo								

LDC #: 50475E2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0125K058	2/2/21	2-(2 MEE) (1st IS)	0.2577	0.3065	0.3065	19	19
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
2			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 7, 8

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											
2-(2 MEE)	80.0	80.0	ND	73.6	70.6	92.0	92.0	88.3	88.3	4.2	4.2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 8 50475E2C

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 210201A 103

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
2-(2 MEE)	80.0	NA	73.4	NA	91.8	91.8	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 210201A LCS: 2(2 MEE)

Conc. = $\frac{(86452)(40.0)}{(183301)(0.2575)}$

= 73.26 ug/L

#	Sample ID	Compound	Reported Concentration ug/L	Calculated Concentration ug/L	Qualification
	LCS	2(2 MEE)	73.4	73.26	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Wet Chemistry

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1214**	BA26001**	Water	01/26/21
ERH1219	BA26006	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1240	BA26016	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
ERH1219	Ferrous Iron	8 days	7 days	J (all detects)	P
ERH1219	Nitrate	53.33 hours	48 hours	UJ (all non-detects)	P
ERH1222	Ferrous Iron	8 days	7 days	UJ (all non-detects)	P
ERH1222	Nitrate	50.75 hours	48 hours	J (all detects)	P

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable when applicable.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total Nitrate/Nitrite as N	3.4 mg/L 3.4 mg/L 0.032 mg/L	2.0 mg/L 2.0 mg/L 0.1 mg/L	All samples in SDG 94899
ICB/CCB	Nitrate/Nitrite as N	0.034 mg/L	0.1 mg/L	All samples in SDG 94899
PB (prep blank)	Chloride	0.18 mg/L	1.0 mg/L	ERH1219 ERH1222 ERH1240
ICB/CCB	Chloride	0.18 mg/L	1.0 mg/L	ERH1219 ERH1222 ERH1240

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
ERH1219	Nitrate/Nitrite as N	0.039 mg/L	0.039U mg/L

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

All sample result verifications were acceptable for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods.

Due to technical holding time, data were qualified as estimated in two samples.

Due to laboratory blank contamination, data were qualified as not detected in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94899

Sample	Analyte	Flag	A or P	Reason (Code)
ERH1219 ERH1222	Ferrous Iron Nitrate as N	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Technical holding times (H)

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94899

Sample	Analyte	Modified Final Concentration	A or P	Code
ERH1219	Nitrate/Nitrite as N	0.039U mg/L	A	B

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E6
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: ATV
2nd Reviewer: A

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A SW	
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	A	From SDG # 94920 (ERH 1238 MS/MSD)
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	A	Not reviewed for Stage 2B validation
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date	
1	ERH1214**	BA26001**	Water	01/26/21	
2	ERH1219	BA26006	Water	01/25/21	12:20
3	ERH1222	BA26013	Water	01/25/21	15:10
4	ERH1240	BA26016	Water	01/26/21	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Notes:

Method: Inorganics (EPA Method see cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
II. Calibration				
Were all instruments calibrated daily, each set-up time?		✓		
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.			✓	
V. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 50475E6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATV

All circled methods are applicable to each sample.

Sample ID	Parameter
1-24	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

LDC #: 50475E6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: ATL

All circled dates have exceeded the technical holding time.
Y N N/A Were all samples preserved as applicable to each method ?
Y N N/A Were all cooler temperatures within validation criteria? Code: H

Method:	Fe2+ (SM 3500-Fe B)			NO3 (EPA 300.0)		
Parameters:	water			water		
Technical holding time:	7days			48hrs		

Sample ID	Sampling date	Analysis date	Total Time	Qualifier	Analysis date	Total Time	Qualifier
2	12:20→14:20 1/25/21	2/2/21	8days	J/UJ/P(detect)	19:40 1/27/21	53.33 hrs	J/UJ/P(ND)
3	15:10→17:10 1/25/21	↓	↓	J/UJ/P(ND)	19:55 1/27/21	50.75 hrs.	J/UJ/P(detect)

LDC #: 50475E6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All **Code:** B

Analyte	Blank ID	Blank ID	Blank Action Limit										
	PB	ICB/CCB (mg/L)		LOQ	2								
Alkalinity Bicarbonate	3.4			2.0									
Alkalinity Total	3.4			2.0									
NO3/NO2-N	0.032			0.1	0.039								
NO3/NO2-N		0.034		0.1	see above								

Conc. units: mg/L **Associated Samples:** 2,3,4

Analyte	Blank ID	Blank ID	Blank Action Limit										
	PB	ICB/CCB (mg/L)		LOQ									
Cl	0.18			1.0									
Cl		0.18		1.0									

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 50475E6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: ATV

Method: Inorganics, Method _____

The correlation coefficient (r) for the calibration of _____ was recalculated.Calibration date: 01/27/21

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution

True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/l)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	SO4	s1	0.2	0.095	*0.999643*	*0.999284*	Y
		s2	0.4	0.172			
		s3	1	0.707			
		s4	2.5	1.616			
		s5	5	2.286			
		s6	10	4.657			
		s7	25	12.059			
		s8	35	17.161			
		s9	50	24.931			
CCV (2/3 @ 18:30) Calibration verification	Cl	25.879	25.000		103.5	103.5	Y
CCV (1/29 @ 19:51) Calibration verification	TOC	5.213	5.000		104.3	104.8	Y
CCV (2/3 @ 11:19) Calibration verification	NO3/NO2-N	3.002	3.000		100	100	Y

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results._____

LDC #: 50475E6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: ATV

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units) mg/L	True / D (units) mg/L	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Alkalinity Total	258.4	250	103	103	Y
ERH 1238 MS From SDG # 94920	Matrix spike sample	Fe2+	(SSR-SR) 3.0525	3.000	102	102	Y
ERH 1238 MS/MSD From SDG # 94920	Duplicate sample	Fe2+	3.0427	3.0525	0.32	0.33	Y

Comments: _____

LDC #: 50475E6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: ATL

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Have results been reported and calculated correctly?
(Y) N N/A Are results within the calibrated range of the instruments?
(Y) N N/A Are all detection limits below the CRQL?

Compound (analyte) results for NO3 reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

$$\frac{0.995}{1.677} \times \frac{62}{14} = 2.6276 \approx 2.6$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	NO3	2.6	2.628	Y
	1	NO3/NO2-N	0.82	0.8211	↓
	1	Alkalinity Total	62.6	62.56	↓
	1	Ferrous Iron	ND	ND	↓
	1	TOC	0.20	0.33	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C & D

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1213	BA26000	Water	01/26/21
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1218	BA26005	Water	01/25/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1221	BA26012	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1239	BA26015	Water	01/26/21
ERH1240**	BA26016**	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics (GRO) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1218 ERH1221	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1213, ERH1218, ERH1221, and ERH1239 were identified as trip blanks. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

Samples ERH1214** and ERH1215 and samples ERH1219** and ERH1220 were identified as field duplicates. No results were detected in any of the samples.

X. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in two samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94899

Sample	Compound	Flag	A or P	Reason (Code)
ERH1218 ERH1221	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E7
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: JE

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%D ≤ 20 ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 4, 7, 9
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	ND	D = 2, 3 5, 6
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XIII.	Target compound identification	A	Not reviewed for Stage 2B validation
XIV.	System performance	A	Not reviewed for Stage 2B validation
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID		Lab ID	Matrix	Date
1	ERH1213	TB	BA26000	Water	01/26/21
2	ERH1214**	D	BA26001**	Water	01/26/21
3	ERH1215	D	BA26003	Water	01/26/21
4	ERH1218	TB	BA26005	Water	01/25/21
5	ERH1219**	D	BA26006**	Water	01/25/21
6	ERH1220	D	BA26008	Water	01/25/21
7	ERH1221	TB	BA26012	Water	01/25/21
8	ERH1222		BA26013	Water	01/25/21
9	ERH1239	TB	BA26015	Water	01/26/21
10	ERH1240	**	BA26016	Water	01/26/21
11	ERH1214MS		BA26001MS	Water	01/26/21
12	ERH1214MSD		BA26001MSD	Water	01/26/21
13	210129AM				
14					

LDC #: 50475 E7 **VALIDATION FINDINGS CHECKLIST** Page: 1 of 2
Reviewer: FT

Method: Volatiles (EPA SW 846 Method 8260 B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) within method criteria?	•		✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Were all percent differences (%D) ≤ 50% for closing calibration verifications?			✓	
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?		✓		
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 50475E7

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : GC HPLC

(V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
4,7	VOA	contained	H.S.				J/UJ/A (ND)

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

Method: Gasoline (EPA SW 846 Method 8260B)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
1/28/2021	GCMS Max	Gasoline C6-C10	1	10.64	0.8
			2	11.502	2.0
			3	12.06	4.0
			4	15.684	12.0
			5	19.8672	24.0
			6	22.5344	32.0
			7	25.984	40.0

Regression Output		*Reported*
Constant	*10.636788*	*10.600000*
Std Err of Y Est		
R Squared	*0.997958*	*0.999000*
Degrees of Freedom		
X Coefficient(s)	*0.381656*	*0.381000*
Std Err of Coef.		
Correlation Coefficient	*0.998978*	
Coefficient of Determination (r^2)	*0.997958*	*0.999000*

LDC #: 50475E7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0129M05	1/29/21	GRO (IS1)	300	352.7347	352.7347	18	17.5
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					
2			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					
3			(IS1)					
			(IS2)					
			(IS3)					
			(IS4)					
			(IS5)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #5

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Dibromofluoromethane~~					
1,2-Dichloroethane-d4					
~~Toluene-d8~~					
Bromofluorobenzene	25.0	28.0522	112	112	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 50475E7

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = I MSC - MSC I * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 11 + 12

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
GRO 1,1 Dichloroethene	300	300	ND	300	329	100	100	110	110	9.2	9.2
Trichloroethene											
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30475E7

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 210129AM LCSD

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
GRO ~~1,1 Dichloroethene~~	300	300	353	350	118	118	118	118	0.85	0.85
Trichloroethene										
Benzene										
Toluene										
~~Chlorobenzene~~										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30475E7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 210129AM :LCS

Conc. = $\frac{\left(\frac{23138993}{1443905} - 10.6368\right)(25)}{0.381656}$

= 352.967 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	LCS	GRO	353	352.967	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 11, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1214**	BA26001**	Water	01/26/21
ERH1215	BA26003	Water	01/26/21
ERH1219**	BA26006**	Water	01/25/21
ERH1220	BA26008	Water	01/25/21
ERH1267	BA26010	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1240	BA26016	Water	01/26/21
ERH1219(SGCU)**	BA26006(SGCU)**	Water	01/25/21
ERH1220(SGCU)	BA26008(SGCU)	Water	01/25/21
ERH1267(SGCU)	BA26010(SGCU)	Water	01/25/21
ERH1222(SGCU)	BA26013(SGCU)	Water	01/25/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation
Samples ending in "SGCU" underwent Silica Gel cleanup

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples ERH1214** and ERH1215, samples ERH1219** and ERH1220, and samples ERH1219(SGCU)** and ERH1220(SGCU) were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	ERH1219**	ERH1220	
Diesel (C10-C24)	1500	1600	6 (≤50)
Oil (C24-C40)	180	330	59 (≤50)

Compound	Concentration (ug/L)		RPD (Limits)
	ERH1219(SGCU)**	ERH1220(SGCU)	
Diesel (C10-C24)	390	380	3 (≤50)

X. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E8
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	A/A	%RSD ≤ 20, r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	* LCS
IX.	Field duplicates	SW	D = 1,2 3,4 8,9
X.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Stage 2B validation
XI.	Target compound identification	A	Not reviewed for Stage 2B validation
XII	Overall assessment of data	A	

Note: A = Acceptable; ND = No compounds detected; D = Duplicate; SB=Source blank
N = Not provided/applicable; R = Rinsate; TB = Trip blank; OTHER:
SW = See worksheet; FB = Field blank; EB = Equipment blank

**Indicates sample underwent Stage 4 validation / Samples appended with SGCU underwent Silica Gel Clean Up

	Client ID		Lab ID	Matrix	Date
1	ERH1214 **	D	BA26001 **	Water	01/26/21
2	ERH1215	D	BA26003	Water	01/26/21
3	ERH1219 **	D1	BA26006 **	Water	01/25/21
4	ERH1220	D1	BA26008	Water	01/25/21
5	ERH1267		BA26010	Water	01/25/21
6	ERH1222		BA26013	Water	01/25/21
7	ERH1240		BA26016	Water	01/26/21
8	ERH1219(SGCU)**	D	BA26006(SGCU)**	Water	01/25/21
9	ERH1220(SGCU)	D	BA26008(SGCU)	Water	01/25/21
10	ERH1267(SGCU)		BA26010(SGCU)	Water	01/25/21
11	ERH1222(SGCU)		BA26013(SGCU)	Water	01/25/21
12	ERH1214MS		BA26001MS	Water	01/26/21
13	ERH1214MSD		BA26001MSD	Water	01/26/21
14					
15	210201A				
16	210201A1 (SGCU)				
17					

LDC #: 90475E4

VALIDATION FINDINGS CHECKLIST

Method: ✓ GC ___ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
IIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?			✓	
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
V. Field Blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed per analytical or extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				

Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 50475E8

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: ✓ **GC** ___ **HPLC**

Y N N/A Were field duplicate pairs identified in this SDG?

Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		%RPD Limit (≤ 50 %)	Qualification (Parent only)
	3	4		
Diesel (C10-C24)	1500	1600	6	
Oil (C24-C40)	180	330	59	✓

Compound	Concentration (ug/L)		%RPD Limit (≤ 50 %)	Qualification (Parent only)
	8	9		
Diesel (C10-C24)	390	380	3	✓

Compound	Concentration ( )		%RPD Limit (≤ %))	Qualification (Parent only)

LDC # 50475E8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GC __X_____ HPLC _____

The calibration factors (CF), average CF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported (std=250ppb)	Recalculated (std=250ppb)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	12/18/2020	Diesel C10-C24)	2288780	2288780	2451973	2451973	11.0	11.0
	Apollo								

LDC #: 50475E8

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 201050	2/2/21	Diesel C10-C24	2451970	2327120	2327120	5.1	5.1
2	CCV 208007	2/8/21	↓	↓	2075760	2075760	15	15
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30475 EX

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: / GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #3

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
octacosane		144.231	128.547	89.1	89.1	0
o-Terphenyl		↓	118.947	82.5	82.5	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C`	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	Chloro-octadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-Dichlorophenylacetic acid
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate	CC	2,5-Dibromotoluene
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 50475E8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added

MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 12 + 13

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Diesel C10-C24	2000	2000	~~ND~~ 43	1790	1830	87.3	87.3	89.3	89.3	2.2	2.2

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475F8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; LCS = Laboratory Control Sample; SA = Spike added; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 210201A LCS

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Diesel (C10-C24)	2000	NA	1700	NA	85.0	85.0	NA	—		

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30475F8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: ✓ **GC** __ **HPLC**

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #3 Compound Name Diesel $C_{10}-C_{24}$

Concentration = $\frac{155\,0952838\ (5)\ (1000)}{(2451970)\ (1040)\ (2)} = 1520.5\ \frac{ug}{L}$

#	Sample ID	Compound	Reported Concentrations (ug/L)	Recalculated Results Concentrations (ug/L)	Qualifications
	#3	Diesel $C_{10}-C_{24}$	1500	1520.5	

Comments:

LDC #: 50475B10

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; LCS = Laboratory Control Sample; SA = Spike added; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 210127A Lab ID

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
EDB	0.250	0.250	0.248	0.247	99.2	99.2	96.8	96.8	2.4	2.4

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475B1U

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. 210127A LCS Compound Name EDB

Concentration = $\frac{19138}{38574(2)}$ = 0.248 ug/L

DB 35MS p 242

#	Sample ID	Compound	Reported Concentrations (ug/L)	Recalculated Results Concentrations ( )	Qualifications
	LCS	EDB	0.248		

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Methane

Validation Level: Level C & D

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94899

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1213	BA26000	Water	01/26/21
ERH1214	BA26001	Water	01/26/21
ERH1218	BA26005	Water	01/25/21
ERH1219**	BA26006**	Water	01/25/21
ERH1219DL**	BA26006DL**	Water	01/25/21
ERH1221	BA26012	Water	01/25/21
ERH1222	BA26013	Water	01/25/21
ERH1239	BA26015	Water	01/26/21
ERH1240	BA26016	Water	01/26/21
ERH1214MS	BA26001MS	Water	01/26/21
ERH1214MSD	BA26001MSD	Water	01/26/21

**Indicates sample underwent Level D validation

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level D data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1218 ERH1221	Methane	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	J (all detects) UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

Retention time windows were established as required by the method for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

Retention times in the calibration standards were within the established retention time windows for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1213, ERH1218, ERH1221, and ERH1239 were identified as trip blanks. No contaminants were found with the following exceptions:

Blank ID	Collection Date	Compound	Concentration	Limit of Quantitation	Associated Samples
ERH1221	01/26/21	Methane	2.8 ug/L	5.0 ug/L	ERH1222

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

X. Target Compound Identification

All target compound identifications met validation criteria for samples which underwent Level D validation. Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

In the case where more than one result was reported for an individual sample, the least technically acceptable results were deemed unusable as follows:

Sample	Compound	Reason	Flag	A or P
ERH1219**	Methane	Results exceeded calibration range.	R	A

Due to headspace, data were qualified as estimated in two samples.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94899

Sample	Compound	Flag	A or P	Reason (Code)
ERH1218 ERH1221	Methane	J (all detects) UJ (all non-detects)	A	Sample condition (headspace) (V)
ERH1219**	Methane	R	A	Overall assessment of data (D)

Note: The R flag will always take precedence over the J or UJ qualifier.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94899

No Sample Data Qualified in this SDG

LDC #: 50475E51
SDG #: 94899
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B/4

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: MC

METHOD: GC Methane (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW / A	
II.	Initial calibration/ICV	A / A	1 2 ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	* * *
V.	Field blanks	SW	TB = 1, 3, 6, 8
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS 1D
VIII.	Field duplicates	N	ND.
IX.	Compound quantitation RL/LOQ/LODs	SW	Not reviewed for Stage 2B validation
X.	Target compound identification	A	Not reviewed for Stage 2B validation
XI.	Overall assessment of data	SW	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

**Indicates sample underwent Stage 4 validation

	Client ID	Lab ID	Matrix	Date
1	ERH1213 TB	BA26000	Water	01/26/21
2	ERH1214	BA26001	Water	01/26/21
3	ERH1218 TB	BA26005	Water	01/25/21
4	ERH1219 **	BA26006 **	Water	01/25/21
5	ERH1219DL **	BA26006DL **	Water	01/25/21
6	ERH1221 TB	BA26012	Water	01/25/21
7	ERH1222	BA26013	Water	01/25/21
8	ERH1239 TB	BA26015	Water	01/26/21
9	ERH1240	BA26016	Water	01/26/21
10	ERH1214MS	BA26001MS	Water	01/26/21
11	ERH1214MSD	BA26001MSD	Water	01/26/21
12				
13				

Notes:

	2/02/21 A						

LDC #: 50475 ES1

VALIDATION FINDINGS CHECKLIST

Method: ✓GC ___HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
IIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥0.990?	✓			
Were the RT windows properly established?	✓			
IIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
III. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%?	✓			
Were all the retention times within the acceptance windows?	✓			
IV. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
V. Field Blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?	✓			
VI. Surrogate spikes				
Were all surrogate percent recovery (%R) within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed per analytical or extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				

Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 50475E51

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : V GC ___ HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
3,6	VOA	contained H.S.					J/NJ/A NDTDet

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

LDC #: 50475E51

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: ✓ **GC** __ **HPLC**

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/L

Sampling date: 1/26/21

Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: TB

Associated Samples: 7 (ND)

Compound	Blank ID	Blank ID	Sample Identification							
	6									
Methane	2.8									
CRQL										

Blank units: _____ **Associated sample units:** _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other: _____

Associated Samples: _____

Compound	Blank ID	Blank ID	Sample Identification							
CRQL										

LDC #: 50475E5)

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

METHOD: ✓ **GC** __ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

(Y) N N/A Was the overall quality and usability of the data acceptable? (D)

#	Associated samples	Compounds	Findings	Qualifications
	4	Methane	x'ol cal Range	R/A

Comments: _____

Method: RSK 175

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
9/14/2020	GC	Methane	1	32423	2.080
			2	54196	4.160
			3	108403	8.340
			4	242197	20.850
			5	973152	83.400
			6	2643568	208.500
			7	10274710	834.000

Regression Output		*Reported*
Constant	*850.639732*	*851.00*
Std Err of Y Est		
R Squared	*0.999897*	*1.000000*
Degrees of Freedom		
X Coefficient(s)	*12333.010016*	*12300.00*
Std Err of Coef.		
Correlation Coefficient	*0.999948*	
Coefficient of Determination (r^2)	*0.999897*	*1.000000*

LDC #: 50475ES1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ICAL)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	CCV 020R01	2/1/21	Methane	83.4	85.442	85.442	2.4	2.4
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E51

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

METHOD: ✓ **GC** __ **HPLC**

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 10 & 11

Compound	Spike Added (ug/L)		Sample Conc. (ug/L)	Spike Sample Concentration (ug/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Methane	83.4	83.4	ND	86.1	82.1	103	103	98.4	98.4	4.8	4.8

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475E5)

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; LCS = Laboratory Control Sample; SA = Spike added; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: 210201A LCS ID

Compound	Spike Added (ug/L)		Spike Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Methane	83.4	83.4	85.4	95.6	102	102	115	115	11.3	11.3

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 50475ES1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #5 Compound Name Methane

Concentration = $\frac{(6719854 - 8506039732)(10)}{(12333.01)}$ = 5447.98 ug/L

02O1R11

#	Sample ID	Compound	Reported Concentrations (ug/L)	Recalculated Results Concentrations (ug/L)	Qualifications
	#5	Methane	5400	5447.98	

Comments:

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1214	BA26001	1	ALKALINITY, TOTAL (AS CACO3)	1/26/2021 9:10:00 AM	2/1/2021 5:44:00 PM	D	62.6	MG_L		2.0	1.70		
ERH1214	BA26001	1	BICARBONATE	1/26/2021 9:10:00 AM	2/1/2021 5:44:00 PM	D	62.6	MG_L		2.0	1.70		
ERH1214	BA26001	1	CARBONATE (AS CO3)	1/26/2021 9:10:00 AM	2/1/2021 5:44:00 PM	D	1.70	MG_L	U	2.0	1.70	U	
ERH1219	BA26006	1	ALKALINITY, TOTAL (AS CACO3)	1/25/2021 12:20:00 PM	2/1/2021 5:48:00 PM	C	189	MG_L		2.0	1.70		
ERH1219	BA26006	1	BICARBONATE	1/25/2021 12:20:00 PM	2/1/2021 5:48:00 PM	C	189	MG_L		2.0	1.70		
ERH1219	BA26006	1	CARBONATE (AS CO3)	1/25/2021 12:20:00 PM	2/1/2021 5:48:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1222	BA26013	1	ALKALINITY, TOTAL (AS CACO3)	1/25/2021 3:10:00 PM	2/1/2021 5:56:00 PM	C	277	MG_L		2.0	1.70		
ERH1222	BA26013	1	BICARBONATE	1/25/2021 3:10:00 PM	2/1/2021 5:56:00 PM	C	277	MG_L		2.0	1.70		
ERH1222	BA26013	1	CARBONATE (AS CO3)	1/25/2021 3:10:00 PM	2/1/2021 5:56:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1240	BA26016	1	ALKALINITY, TOTAL (AS CACO3)	1/26/2021 10:57:00 AM	2/1/2021 6:06:00 PM	C	64.2	MG_L		2.0	1.70		
ERH1240	BA26016	1	BICARBONATE	1/26/2021 10:57:00 AM	2/1/2021 6:06:00 PM	C	64.2	MG_L		2.0	1.70		
ERH1240	BA26016	1	CARBONATE (AS CO3)	1/26/2021 10:57:00 AM	2/1/2021 6:06:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1214	BA26001	5	CHLORIDE (AS CL)	1/26/2021 9:10:00 AM	2/3/2021 6:00:00 PM	D	119	MG_L	D	5.0	1.00		
ERH1214	BA26001	1	NITRATE AS NO3 (ANION)	1/26/2021 9:10:00 AM	1/27/2021 7:25:00 PM	D	2.6	MG_L		0.5	0.18		
ERH1214	BA26001	1	SULFATE (AS SO4)	1/26/2021 9:10:00 AM	1/27/2021 7:25:00 PM	D	19.0	MG_L		1.0	0.20		
ERH1219	BA26006	1	CHLORIDE (AS CL)	1/25/2021 12:20:00 PM	1/27/2021 7:40:00 PM	C	21.6	MG_L		1.0	0.20		
ERH1219	BA26006	1	NITRATE AS NO3 (ANION)	1/25/2021 12:20:00 PM	1/27/2021 7:40:00 PM	C	0.18	MG_L	U	0.5	0.18	UJ	v
ERH1219	BA26006	1	SULFATE (AS SO4)	1/25/2021 12:20:00 PM	1/27/2021 7:40:00 PM	C	0.20	MG_L	U	1.0	0.20	U	
ERH1222	BA26013	1	CHLORIDE (AS CL)	1/25/2021 3:10:00 PM	1/27/2021 7:55:00 PM	C	21.7	MG_L		1.0	0.20		
ERH1222	BA26013	1	NITRATE AS NO3 (ANION)	1/25/2021 3:10:00 PM	1/27/2021 7:55:00 PM	C	3.0	MG_L		0.5	0.18	J	v
ERH1222	BA26013	1	SULFATE (AS SO4)	1/25/2021 3:10:00 PM	1/27/2021 7:55:00 PM	C	22.6	MG_L		1.0	0.20		
ERH1240	BA26016	1	CHLORIDE (AS CL)	1/26/2021 10:57:00 AM	1/27/2021 8:09:00 PM	C	22.7	MG_L		1.0	0.20		
ERH1240	BA26016	1	NITRATE AS NO3 (ANION)	1/26/2021 10:57:00 AM	1/27/2021 8:09:00 PM	C	0.71	MG_L		0.5	0.18		
ERH1240	BA26016	1	SULFATE (AS SO4)	1/26/2021 10:57:00 AM	1/27/2021 8:09:00 PM	C	3.8	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **3500-FE-B**													
ERH1214	BA26001	1	Iron, Ion (Fe2+)	1/26/2021 9:10:00 AM	2/2/2021 4:41:00 PM	D	0.32	MG_L	U	1.0	0.32	U	
ERH1219	BA26006	1	Iron, Ion (Fe2+)	1/25/2021 12:20:00 PM	2/2/2021 4:41:00 PM	C	1.9	MG_L		1.0	0.32	J	v
ERH1222	BA26013	1	Iron, Ion (Fe2+)	1/25/2021 3:10:00 PM	2/2/2021 4:42:00 PM	C	0.32	MG_L	U	1.0	0.32	UJ	v
ERH1240	BA26016	1	Iron, Ion (Fe2+)	1/26/2021 10:57:00 AM	2/2/2021 4:43:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1214	BA26001	1	NITROGEN, NITRATE-NITRITE	1/26/2021 9:10:00 AM	2/3/2021 11:15:00 AM	D	0.82	MG_L		0.10	0.090		
ERH1219	BA26006	1	NITROGEN, NITRATE-NITRITE	1/25/2021 12:20:00 PM	2/3/2021 11:17:00 AM	C		MG_L	J	0.10	0.039	U	b
ERH1222	BA26013	1	NITROGEN, NITRATE-NITRITE	1/25/2021 3:10:00 PM	2/3/2021 11:23:00 AM	C	1.8	MG_L		0.10	0.090		
ERH1240	BA26016	1	NITROGEN, NITRATE-NITRITE	1/26/2021 10:57:00 AM	2/3/2021 11:26:00 AM	C	0.59	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1214	BA26001	1	C10-C24 DIESEL RANGE ORGANICS	1/26/2021 9:10:00 AM	2/2/2021 4:48:00 PM	D	300.0	UG_L	U	320	300.0	U	
ERH1214	BA26001	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/26/2021 9:10:00 AM	2/2/2021 4:48:00 PM	D	300.0	UG_L	U	320	300.0	U	
ERH1215	BA26003	1	C10-C24 DIESEL RANGE ORGANICS	1/26/2021 9:10:00 AM	2/2/2021 5:17:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1215	BA26003	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/26/2021 9:10:00 AM	2/2/2021 5:17:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1219	BA26006	1	C10-C24 DIESEL RANGE ORG SILICA GEL CLEAN U	1/25/2021 12:20:00 PM	2/8/2021 6:01:00 PM	D	390	UG_L	T2MD	320	300.0		
ERH1219	BA26006	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 12:20:00 PM	2/2/2021 5:45:00 PM	D	1500	UG_L	T2M	320	300.0		
ERH1219	BA26006	1	C24-C40 OIL RANGE ORGANICS SILICA GEL CLEAN	1/25/2021 12:20:00 PM	2/8/2021 6:01:00 PM	D	300.0	UG_L	U	320	300.0	U	
ERH1219	BA26006	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 12:20:00 PM	2/2/2021 5:45:00 PM	D	180	UG_L	J	320	300.0	J	
ERH1220	BA26008	1	C10-C24 DIESEL RANGE ORG SILICA GEL CLEAN U	1/25/2021 12:20:00 PM	2/8/2021 6:29:00 PM	C	380	UG_L	T2MD	320	300.0		
ERH1220	BA26008	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 12:20:00 PM	2/2/2021 6:13:00 PM	C	1600	UG_L	T2M	320	300.0		
ERH1220	BA26008	1	C24-C40 OIL RANGE ORGANICS SILICA GEL CLEAN	1/25/2021 12:20:00 PM	2/8/2021 6:29:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1220	BA26008	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 12:20:00 PM	2/2/2021 6:13:00 PM	C	330	UG_L		320	300.0		
ERH1267	BA26010	1	C10-C24 DIESEL RANGE ORG SILICA GEL CLEAN U	1/25/2021 12:20:00 PM	2/8/2021 6:57:00 PM	C	340	UG_L	T2MD	320	300.0		
ERH1267	BA26010	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 12:20:00 PM	2/2/2021 6:41:00 PM	C	970	UG_L	T2M	320	300.0		
ERH1267	BA26010	1	C24-C40 OIL RANGE ORGANICS SILICA GEL CLEAN	1/25/2021 12:20:00 PM	2/8/2021 6:57:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1267	BA26010	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 12:20:00 PM	2/2/2021 6:41:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1222	BA26013	1	C10-C24 DIESEL RANGE ORG SILICA GEL CLEAN U	1/25/2021 3:10:00 PM	2/8/2021 7:25:00 PM	C	300.0	UG_L	U	320	300.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8015B_E**													
ERH1222	BA26013	1	C10-C24 DIESEL RANGE ORGANICS	1/25/2021 3:10:00 PM	2/2/2021 7:09:00 PM	C	180	UG_L	J	320	300.0	J	
ERH1222	BA26013	1	C24-C40 OIL RANGE ORGANICS SILICA GEL CLEAN	1/25/2021 3:10:00 PM	2/8/2021 7:25:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1222	BA26013	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/25/2021 3:10:00 PM	2/2/2021 7:09:00 PM	C	220	UG_L	JT4M	320	300.0	J	
ERH1240	BA26016	1	C10-C24 DIESEL RANGE ORGANICS	1/26/2021 10:57:00 AM	2/2/2021 7:37:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1240	BA26016	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/26/2021 10:57:00 AM	2/2/2021 7:37:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1213	BA26000	1	BENZENE	1/26/2021 9:00:00 AM	1/29/2021 10:50:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1213	BA26000	1	ETHYLBENZENE	1/26/2021 9:00:00 AM	1/29/2021 10:50:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1213	BA26000	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 9:00:00 AM	1/29/2021 10:49:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1213	BA26000	1	TOLUENE	1/26/2021 9:00:00 AM	1/29/2021 10:50:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1213	BA26000	1	Xylenes	1/26/2021 9:00:00 AM	1/29/2021 10:50:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1214	BA26001	1	BENZENE	1/26/2021 9:10:00 AM	1/29/2021 11:18:00 PM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1214	BA26001	1	ETHYLBENZENE	1/26/2021 9:10:00 AM	1/29/2021 11:18:00 PM	D	0.50	UG_L	U	1.0	0.50	U	
ERH1214	BA26001	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 9:10:00 AM	1/29/2021 11:19:00 PM	D	18.0	UG_L	U	20	18.0	U	
ERH1214	BA26001	1	TOLUENE	1/26/2021 9:10:00 AM	1/29/2021 11:18:00 PM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1214	BA26001	1	Xylenes	1/26/2021 9:10:00 AM	1/29/2021 11:18:00 PM	D	0.30	UG_L	U	2.0	0.30	U	
ERH1215	BA26003	1	BENZENE	1/26/2021 9:10:00 AM	1/29/2021 11:47:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1215	BA26003	1	ETHYLBENZENE	1/26/2021 9:10:00 AM	1/29/2021 11:47:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1215	BA26003	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 9:10:00 AM	1/29/2021 11:48:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1215	BA26003	1	TOLUENE	1/26/2021 9:10:00 AM	1/29/2021 11:47:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1215	BA26003	1	Xylenes	1/26/2021 9:10:00 AM	1/29/2021 11:47:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1218	BA26005	1	BENZENE	1/25/2021 11:50:00 AM	1/30/2021 12:17:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1218	BA26005	1	ETHYLBENZENE	1/25/2021 11:50:00 AM	1/30/2021 12:17:00 AM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1218	BA26005	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 11:50:00 AM	1/30/2021 12:16:00 AM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1218	BA26005	1	TOLUENE	1/25/2021 11:50:00 AM	1/30/2021 12:17:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1218	BA26005	1	Xylenes	1/25/2021 11:50:00 AM	1/30/2021 12:17:00 AM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1219	BA26006	1	BENZENE	1/25/2021 12:20:00 PM	1/30/2021 12:46:00 AM	D	0.30	UG_L	U	1.0	0.30	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1219	BA26006	1	ETHYLBENZENE	1/25/2021 12:20:00 PM	1/30/2021 12:46:00 AM	D	0.50	UG_L	U	1.0	0.50	U	
ERH1219	BA26006	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 12:20:00 PM	1/30/2021 12:45:00 AM	D	18.0	UG_L	U	20	18.0	U	
ERH1219	BA26006	1	TOLUENE	1/25/2021 12:20:00 PM	1/30/2021 12:46:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1219	BA26006	1	Xylenes	1/25/2021 12:20:00 PM	1/30/2021 12:46:00 AM	D	0.30	UG_L	U	2.0	0.30	U	
ERH1220	BA26008	1	BENZENE	1/25/2021 12:20:00 PM	1/30/2021 1:14:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1220	BA26008	1	ETHYLBENZENE	1/25/2021 12:20:00 PM	1/30/2021 1:14:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1220	BA26008	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 12:20:00 PM	1/30/2021 1:15:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1220	BA26008	1	TOLUENE	1/25/2021 12:20:00 PM	1/30/2021 1:14:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1220	BA26008	1	Xylenes	1/25/2021 12:20:00 PM	1/30/2021 1:14:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1221	BA26012	1	BENZENE	1/25/2021 2:45:00 PM	1/30/2021 1:43:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1221	BA26012	1	ETHYLBENZENE	1/25/2021 2:45:00 PM	1/30/2021 1:43:00 AM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1221	BA26012	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 2:45:00 PM	1/30/2021 1:44:00 AM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1221	BA26012	1	TOLUENE	1/25/2021 2:45:00 PM	1/30/2021 1:43:00 AM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1221	BA26012	1	Xylenes	1/25/2021 2:45:00 PM	1/30/2021 1:43:00 AM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1222	BA26013	1	BENZENE	1/25/2021 3:10:00 PM	1/30/2021 2:12:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1222	BA26013	1	ETHYLBENZENE	1/25/2021 3:10:00 PM	1/30/2021 2:12:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1222	BA26013	1	PETROLEUM HYDROCARBONS C6-C10	1/25/2021 3:10:00 PM	1/30/2021 2:13:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1222	BA26013	1	TOLUENE	1/25/2021 3:10:00 PM	1/30/2021 2:12:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1222	BA26013	1	Xylenes	1/25/2021 3:10:00 PM	1/30/2021 2:12:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1239	BA26015	1	BENZENE	1/26/2021 9:49:00 AM	1/30/2021 2:41:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1239	BA26015	1	ETHYLBENZENE	1/26/2021 9:49:00 AM	1/30/2021 2:41:00 AM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1239	BA26015	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 9:49:00 AM	1/30/2021 2:42:00 AM	C	18.0	UG_L	U	20	18.0	U	
ERH1239	BA26015	1	TOLUENE	1/26/2021 9:49:00 AM	1/30/2021 2:41:00 AM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1239	BA26015	1	Xylenes	1/26/2021 9:49:00 AM	1/30/2021 2:41:00 AM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1240	BA26016	1	BENZENE	1/26/2021 10:57:00 AM	1/30/2021 3:11:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1240	BA26016	1	ETHYLBENZENE	1/26/2021 10:57:00 AM	1/30/2021 3:11:00 AM	D	0.50	UG_L	U	1.0	0.50	U	
ERH1240	BA26016	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 10:57:00 AM	1/30/2021 3:10:00 AM	D	18.0	UG_L	U	20	18.0	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1240	BA26016	1	TOLUENE	1/26/2021 10:57:00 AM	1/30/2021 3:11:00 AM	D	0.30	UG_L	U	1.0	0.30	U	
ERH1240	BA26016	1	Xylenes	1/26/2021 10:57:00 AM	1/30/2021 3:11:00 AM	D	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1214	BA26001	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/26/2021 9:10:00 AM	2/2/2021 2:59:00 PM	D	80.0	UG_L	U	100	80.0	U	
ERH1214	BA26001	1	PHENOL	1/26/2021 9:10:00 AM	2/1/2021 5:49:00 PM	D	4.00	UG_L	U	5.0	4.00	U	
ERH1215	BA26003	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/26/2021 9:10:00 AM	2/2/2021 3:20:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1215	BA26003	1	PHENOL	1/26/2021 9:10:00 AM	2/1/2021 6:15:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1219	BA26006	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/25/2021 12:20:00 PM	2/2/2021 3:41:00 PM	D	80.0	UG_L	U	100	80.0	U	
ERH1219	BA26006	1	PHENOL	1/25/2021 12:20:00 PM	2/1/2021 6:41:00 PM	D	4.00	UG_L	U	5.0	4.00	U	
ERH1220	BA26008	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/25/2021 12:20:00 PM	2/2/2021 4:03:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1220	BA26008	1	PHENOL	1/25/2021 12:20:00 PM	2/1/2021 7:06:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1222	BA26013	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/25/2021 3:10:00 PM	2/2/2021 4:24:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1222	BA26013	1	PHENOL	1/25/2021 3:10:00 PM	2/1/2021 7:32:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1240	BA26016	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/26/2021 10:57:00 AM	2/2/2021 4:45:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1240	BA26016	1	PHENOL	1/26/2021 10:57:00 AM	2/1/2021 7:57:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1214	BA26001	1	1-METHYLNAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:12:00 PM	D	0.10	UG_L	U	0.2	0.10	U	
ERH1214	BA26001	1	2-METHYLNAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:12:00 PM	D	0.10	UG_L	U	0.2	0.10	UJ	q
ERH1214	BA26001	1	NAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:12:00 PM	D	0.10	UG_L	U	0.2	0.10	U	
ERH1215	BA26003	1	1-METHYLNAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:35:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1215	BA26003	1	2-METHYLNAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:35:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1215	BA26003	1	NAPHTHALENE	1/26/2021 9:10:00 AM	2/1/2021 5:35:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1219	BA26006	1	1-METHYLNAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 5:57:00 PM	D	25	UG_L		0.2	0.10		
ERH1219	BA26006	1	2-METHYLNAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 5:57:00 PM	D	17	UG_L		0.2	0.10		
ERH1219	BA26006	1	NAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 5:57:00 PM	D	44	UG_L		0.2	0.10		
ERH1220	BA26008	1	1-METHYLNAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 6:19:00 PM	C	23	UG_L		0.2	0.10		
ERH1220	BA26008	1	2-METHYLNAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 6:19:00 PM	C	16	UG_L		0.2	0.10		

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270DSIM**													
ERH1220	BA26008	1	NAPHTHALENE	1/25/2021 12:20:00 PM	2/1/2021 6:19:00 PM	C	41	UG_L		0.2	0.10		
ERH1222	BA26013	1	1-METHYLNAPHTHALENE	1/25/2021 3:10:00 PM	2/1/2021 6:41:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1222	BA26013	1	2-METHYLNAPHTHALENE	1/25/2021 3:10:00 PM	2/1/2021 6:41:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1222	BA26013	1	NAPHTHALENE	1/25/2021 3:10:00 PM	2/1/2021 6:41:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1240	BA26016	1	1-METHYLNAPHTHALENE	1/26/2021 10:57:00 AM	2/1/2021 7:03:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1240	BA26016	1	2-METHYLNAPHTHALENE	1/26/2021 10:57:00 AM	2/1/2021 7:03:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1240	BA26016	1	NAPHTHALENE	1/26/2021 10:57:00 AM	2/1/2021 7:03:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1214	BA26001	1	TOTAL ORGANIC CARBON	1/26/2021 9:10:00 AM	1/29/2021 2:09:00 PM	D	0.20	MG_L	J	0.93	0.350	J	
ERH1219	BA26006	1	TOTAL ORGANIC CARBON	1/25/2021 12:20:00 PM	1/29/2021 2:45:00 PM	C	3.2	MG_L		0.93	0.350		
ERH1222	BA26013	1	TOTAL ORGANIC CARBON	1/25/2021 3:10:00 PM	1/29/2021 3:23:00 PM	C	1.4	MG_L		0.93	0.350		
ERH1240	BA26016	1	TOTAL ORGANIC CARBON	1/26/2021 10:57:00 AM	1/29/2021 3:59:00 PM	C	0.19	MG_L	J	0.93	0.350	J	
METHOD: **RSK175**													
ERH1213	BA26000	1	METHANE	1/26/2021 9:00:00 AM	2/1/2021 12:11:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1214	BA26001	1	METHANE	1/26/2021 9:10:00 AM	2/1/2021 12:15:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1218	BA26005	1	METHANE	1/25/2021 11:50:00 AM	2/1/2021 12:27:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1219	BA26006	10	METHANE	1/25/2021 12:20:00 PM	2/1/2021 12:38:00 PM	D	5400	UG_L	D	50.0	10.00		
ERH1219	BA26006	1	METHANE	1/25/2021 12:20:00 PM	2/1/2021 12:30:00 PM	D	3900	UG_L	E	5.0	1.00	R	d
ERH1221	BA26012	1	METHANE	1/25/2021 2:45:00 PM	2/1/2021 12:42:00 PM	C	2.8	UG_L	J	5.0	1.00	J	v
ERH1222	BA26013	1	METHANE	1/25/2021 3:10:00 PM	2/1/2021 12:46:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1239	BA26015	1	METHANE	1/26/2021 9:49:00 AM	2/1/2021 12:50:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1240	BA26016	1	METHANE	1/26/2021 10:57:00 AM	2/1/2021 12:54:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

LDC Report# 50475F1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Volatiles

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1225	BA26159	Water	01/26/21
ERH1226	BA26160	Water	01/26/21
ERH1237	BA26162	Water	01/27/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1225	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples ERH1225 and ERH1237 were identified as trip blanks. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
ERH1225	Dibromofluoromethane	120 (80-119)	All compounds	NA	-

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94920

Sample	Compound	Flag	A or P	Reason (Code)
ERH1225	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F1a
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)
BTEX

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	cs
IX.	Laboratory control samples	A	lcs
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1225 TB	BA26159	Water	01/26/21
2	ERH1226	BA26160	Water	01/26/21
3	ERH1237 TB	BA26162	Water	01/27/21
4	ERH1238	BA26163	Water	01/27/21
5				
6				
7				
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9				

Notes:

	210129AM						

LDC #: 50475Fb

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Page: 1 of 1
Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?
Y N N/A Were air bubbles > 1/4 inch or was headspace present in the vials?

METHOD : GC/MS VOA (EPA SW 846 Method 8260 B) (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	VOA	contained		HS			J|UJ/A ND

TECHNICAL HOLDING TIME CRITERIA

Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
Water preserved:	Within 14 days of sample collection.
Soil:	Within 14 days of sample collection.

LDC #: 50475 F1a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

(S)

#	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
	1	DFM	120 (80-119)	Jdet/P ND
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	

SMC1 (TOL) = Toluene-d8
SMC2 (BFB) = Bromofluorobenzene
SMC3 (DCE) = 1,2-Dichloroethane-d4
SMC4 (DFM) = Dibromofluoromethane

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Phenol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1226	BA26160	Water	01/26/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F2a
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: AC

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20|SD
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	LCS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1226	BA26160	Water	01/26/21
2	ERH1238	BA26163	Water	01/27/21
3				
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Notes:

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1226	BA26160	Water	01/26/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F2b
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EF
2nd Reviewer: AC

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration ending	A	CCV ≤ 20 | 50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1226	BA26160	Water	01/26/21
2	ERH1238	BA26163	Water	01/27/21
3				
4				
5				
6				
7				
8				
9				

Notes:

	210129 A						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1226	BA26160	Water	01/26/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F2c
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	%RSD ≤ 15 ICV ≤ 20
IV.	Continuing calibration pending	A	CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	MS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1226	BA26160	Water	01/26/21
2	ERH1238	BA26163	Water	01/27/21
3				
4				
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Notes:

	210201A						

LDC #: 50475F2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N (N/A) Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A) If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified since the LCS/D percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
			( )	
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			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Wet Chemistry

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1226	BA26160	Water	01/26/21
ERH1238	BA26163	Water	01/27/21
ERH1238MS	BA26163MS	Water	01/27/21
ERH1238MSD	BA26163MSD	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Alkalinity, bicarbonate Alkalinity, total Nitrate/Nitrite as N	3.4 mg/L 3.4 mg/L 0.032 mg/L	2.0 mg/L 2.0 mg/L 0.1 mg/L	All samples in SDG 94920
ICB/CCB	Nitrate/Nitrite as N	0.031 mg/L	0.1 mg/L	All samples in SDG 94920

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94920

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F6
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: ATV
2nd Reviewer: 9

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	A	
VII.	Duplicate sample analysis	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1226	BA26160	Water	01/26/21
2	ERH1238	BA26163	Water	01/27/21
3	ERH1238MS	BA26163MS	Water	01/27/21
4	ERH1238MSD	BA26163MSD	Water	01/27/21
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10				
11				
12				
13				
14				
15				

Notes:

LDC #: 50475F6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATV

All circled methods are applicable to each sample.

Sample ID	Parameter
1,2	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
QC	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
3,4	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4 (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

VALIDATION FINDINGS WORKSHEET
Blanks

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** All **Code:** B

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Alkalinity Bicarbonate	3.4			2.0								
Alkalinity Total	3.4			2.0								
NO3/NO2-N	0.032			0.1								
NO3/NO2-N		0.031		0.1								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1225	BA26159	Water	01/26/21
ERH1226	BA26160	Water	01/26/21
ERH1237	BA26162	Water	01/27/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1225	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1225 and ERH1237 were identified as trip blanks. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94920

Sample	Compound	Flag	A or P	Reason (Code)
ERH1225	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F7
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Gasoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	1 2 ICV ≤ 20
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	OD
IX.	Laboratory control samples	A	LCS ID
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1225 TB	BA26159	Water	01/26/21
2	ERH1226	BA26160	Water	01/26/21
3	ERH1237 TB	BA26162	Water	01/27/21
4	ERH1238	BA26163	Water	01/27/21
5				
6				
7				
8				
9				

Notes:

	2/01/21 AM						

LDC #: 50475F7

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : √ GC MS HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	VOA	contained	Headspace				J/UJ/A
							ND

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1226	BA26160	Water	01/26/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F8
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	A/A	%RSD ≤ 20, r² ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	C7
VIII.	Laboratory control samples	A	LC7
IX.	Field duplicates	N	
X.	Compound quantitation RL/LOQ/LODs	N	
XI.	Target compound identification	N	
XII.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1226	BA26160	Water	01/26/21
2	ERH1238	BA26163	Water	01/27/21
3				
4				
5				
6				
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8				
9				
10				
11				
12				

Notes:

	210201A						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 1, 2021

Parameters: Methane

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1225	BA26159	Water	01/26/21
ERH1226	BA26160	Water	01/26/21
ERH1237	BA26162	Water	01/27/21
ERH1238	BA26163	Water	01/27/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1225	Methane	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1225 and ERH1237 were identified as trip blanks. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

Raw data were not reviewed for Level C validation.

X. Target Compound Identification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in one sample.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94920

Sample	Compound	Flag	A or P	Reason (Code)
ERH1225	Methane	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94920

No Sample Data Qualified in this SDG

LDC #: 50475F51
SDG #: 94920
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 2/25/21
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: EC

METHOD: GC Methane (Method RSK-175)

.The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW / A	
II.	Initial calibration/ICV	A / A	%D RSD ≤ 15 ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1, 3
VI.	Matrix spike/Matrix spike duplicates	N	CS
VII.	Laboratory control samples	A	LCS ID
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	N	
X.	Target compound identification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1225 TB	BA26159	Water	01/26/21
2	ERH1226	BA26160	Water	01/26/21
3	ERH1237 TB	BA26162	Water	01/27/21
4	ERH1238	BA26163	Water	01/27/21
5				
6				
7				
8				
9				
10				
11				
12				
13				

Notes:

	210201A						

LDC #: 50475F5)

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD : GC HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	VOA	contained	H	S			J/UJ/A NP

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1226	BA26160	1	ALKALINITY, TOTAL (AS CACO3)	1/26/2021 12:50:00 PM	2/1/2021 6:10:00 PM	C	82.2	MG_L		2.0	1.70		
ERH1226	BA26160	1	BICARBONATE	1/26/2021 12:50:00 PM	2/1/2021 6:10:00 PM	C	82.2	MG_L		2.0	1.70		
ERH1226	BA26160	1	CARBONATE (AS CO3)	1/26/2021 12:50:00 PM	2/1/2021 6:10:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1238	BA26163	1	ALKALINITY, TOTAL (AS CACO3)	1/27/2021 12:00:00 PM	2/1/2021 6:15:00 PM	C	161	MG_L		2.0	1.70		
ERH1238	BA26163	1	BICARBONATE	1/27/2021 12:00:00 PM	2/1/2021 6:15:00 PM	C	161	MG_L		2.0	1.70		
ERH1238	BA26163	1	CARBONATE (AS CO3)	1/27/2021 12:00:00 PM	2/1/2021 6:15:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1226	BA26160	5	CHLORIDE (AS CL)	1/26/2021 12:50:00 PM	2/4/2021 12:31:00 PM	C	134	MG_L	D	5.0	1.00		
ERH1226	BA26160	1	NITRATE AS NO3 (ANION)	1/26/2021 12:50:00 PM	1/28/2021 11:50:00 AM	C	1.3	MG_L		0.5	0.18		
ERH1226	BA26160	1	SULFATE (AS SO4)	1/26/2021 12:50:00 PM	1/28/2021 11:50:00 AM	C	15.4	MG_L		1.0	0.20		
ERH1238	BA26163	40	CHLORIDE (AS CL)	1/27/2021 12:00:00 PM	2/4/2021 2:15:00 PM	C	1230	MG_L	D	40.0	8.00		
ERH1238	BA26163	1	NITRATE AS NO3 (ANION)	1/27/2021 12:00:00 PM	1/28/2021 12:04:00 PM	C	2.6	MG_L		0.5	0.18		
ERH1238	BA26163	40	SULFATE (AS SO4)	1/27/2021 12:00:00 PM	2/4/2021 2:15:00 PM	C	351	MG_L	D	40.0	8.00		
METHOD: **3500-FE-B**													
ERH1226	BA26160	1	Iron, Ion (Fe2+)	1/26/2021 12:50:00 PM	2/2/2021 4:44:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
ERH1238	BA26163	1	Iron, Ion (Fe2+)	1/27/2021 12:00:00 PM	2/2/2021 4:45:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1226	BA26160	1	NITROGEN, NITRATE-NITRITE	1/26/2021 12:50:00 PM	2/3/2021 11:59:00 AM	C	0.83	MG_L		0.10	0.090		
ERH1238	BA26163	1	NITROGEN, NITRATE-NITRITE	1/27/2021 12:00:00 PM	2/3/2021 12:01:00 PM	C	2.2	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1226	BA26160	1	C10-C24 DIESEL RANGE ORGANICS	1/26/2021 12:50:00 PM	2/2/2021 11:22:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1226	BA26160	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/26/2021 12:50:00 PM	2/2/2021 11:22:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1238	BA26163	1	C10-C24 DIESEL RANGE ORGANICS	1/27/2021 12:00:00 PM	2/2/2021 11:51:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1238	BA26163	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/27/2021 12:00:00 PM	2/2/2021 11:51:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1225	BA26159	1	BENZENE	1/26/2021 12:30:00 PM	1/29/2021 7:56:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1225	BA26159	1	ETHYLBENZENE	1/26/2021 12:30:00 PM	1/29/2021 7:56:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1225	BA26159	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 12:30:00 PM	1/29/2021 7:55:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1225	BA26159	1	TOLUENE	1/26/2021 12:30:00 PM	1/29/2021 7:56:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1225	BA26159	1	Xylenes	1/26/2021 12:30:00 PM	1/29/2021 7:56:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1226	BA26160	1	BENZENE	1/26/2021 12:50:00 PM	1/29/2021 8:24:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1226	BA26160	1	ETHYLBENZENE	1/26/2021 12:50:00 PM	1/29/2021 8:24:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1226	BA26160	1	PETROLEUM HYDROCARBONS C6-C10	1/26/2021 12:50:00 PM	1/29/2021 8:25:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1226	BA26160	1	TOLUENE	1/26/2021 12:50:00 PM	1/29/2021 8:24:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1226	BA26160	1	Xylenes	1/26/2021 12:50:00 PM	1/29/2021 8:24:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1237	BA26162	1	BENZENE	1/27/2021 9:30:00 AM	1/29/2021 8:53:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1237	BA26162	1	ETHYLBENZENE	1/27/2021 9:30:00 AM	1/29/2021 8:53:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1237	BA26162	1	PETROLEUM HYDROCARBONS C6-C10	1/27/2021 9:30:00 AM	1/29/2021 8:54:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1237	BA26162	1	TOLUENE	1/27/2021 9:30:00 AM	1/29/2021 8:53:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1237	BA26162	1	Xylenes	1/27/2021 9:30:00 AM	1/29/2021 8:53:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1238	BA26163	1	BENZENE	1/27/2021 12:00:00 PM	1/29/2021 9:23:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1238	BA26163	1	ETHYLBENZENE	1/27/2021 12:00:00 PM	1/29/2021 9:23:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1238	BA26163	1	PETROLEUM HYDROCARBONS C6-C10	1/27/2021 12:00:00 PM	1/29/2021 9:22:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1238	BA26163	1	TOLUENE	1/27/2021 12:00:00 PM	1/29/2021 9:23:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1238	BA26163	1	Xylenes	1/27/2021 12:00:00 PM	1/29/2021 9:23:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1226	BA26160	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/26/2021 12:50:00 PM	2/2/2021 5:07:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1226	BA26160	1	PHENOL	1/26/2021 12:50:00 PM	2/1/2021 10:05:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1238	BA26163	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/27/2021 12:00:00 PM	2/2/2021 5:28:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1238	BA26163	1	PHENOL	1/27/2021 12:00:00 PM	2/1/2021 10:31:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1226	BA26160	1	1-METHYLNAPHTHALENE	1/26/2021 12:50:00 PM	2/1/2021 8:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1226	BA26160	1	2-METHYLNAPHTHALENE	1/26/2021 12:50:00 PM	2/1/2021 8:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1226	BA26160	1	NAPHTHALENE	1/26/2021 12:50:00 PM	2/1/2021 8:53:00 PM	C	0.10	UG_L	U	0.2	0.10	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8270DSIM**													
ERH1238	BA26163	1	1-METHYLNAPHTHALENE	1/27/2021 12:00:00 PM	2/1/2021 9:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1238	BA26163	1	2-METHYLNAPHTHALENE	1/27/2021 12:00:00 PM	2/1/2021 9:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1238	BA26163	1	NAPHTHALENE	1/27/2021 12:00:00 PM	2/1/2021 9:15:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1226	BA26160	1	TOTAL ORGANIC CARBON	1/26/2021 12:50:00 PM	1/30/2021 3:03:00 AM	C	0.51	MG_L	J	0.93	0.350	J	
ERH1238	BA26163	1	TOTAL ORGANIC CARBON	1/27/2021 12:00:00 PM	1/30/2021 3:40:00 AM	C	0.51	MG_L	J	0.93	0.350	J	
METHOD: **RSK175**													
ERH1225	BA26159	1	METHANE	1/26/2021 12:30:00 PM	2/1/2021 1:01:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1226	BA26160	1	METHANE	1/26/2021 12:50:00 PM	2/1/2021 1:06:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1237	BA26162	1	METHANE	1/27/2021 9:30:00 AM	2/1/2021 1:11:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1238	BA26163	1	METHANE	1/27/2021 12:00:00 PM	2/1/2021 1:14:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Volatiles

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1227	BA25528	Water	01/19/21
ERH1228	BA25529	Water	01/19/21
ERH1229	BA25531	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1231	BA25534	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1235	BA25537	Water	01/20/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) which are Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1227 ERH1229 ERH1231 ERH1235	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples ERH1227, ERH1229, ERH1231, and ERH1235 were identified as trip blanks. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in four samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Data Qualification Summary - SDG 94826

Sample	Compound	Flag	A or P	Reason (Code)
ERH1227 ERH1229 ERH1231 ERH1235	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Volatiles - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G1a
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21
Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B) BTEX

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers = 8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15% ICV ≤ 20%
IV.	Continuing calibration/ending	A	%CCV ≤ 20/50
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 1, 3, 5, 7
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	
IX.	Laboratory control samples	A	LCS/LCSD
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1227	BA25528	Water	01/19/21
2	ERH1228	BA25529	Water	01/19/21
3	ERH1229	BA25531	Water	01/19/21
4	ERH1230	BA25532	Water	01/19/21
5	ERH1231	BA25534	Water	01/19/21
6	ERH1232	BA25535	Water	01/19/21
7	ERH1235	BA25537	Water	01/20/21
8	ERH1236	BA25538	Water	01/20/21
9				

Notes:

	210122AZ-Blank						

LDC #: 50475G1a

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

N Were all cooler temperatures within validation criteria?
Y Were air bubbles > 1/4 inch or was headspace present in the vials?

METHOD : GC/MS VOA (EPA SW 846 Method 8260B) (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1,3,5,7	W	VOA contained Headspace					J/UJ/A all ND

TECHNICAL HOLDING TIME CRITERIA

Water unpreserved: Aromatic within 7 days, non-aromatic within 14 days of sample collection.
Water preserved: Within 14 days of sample collection.
Soil: Within 14 days of sample collection.

LDC Report# 50475G2a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Phenol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1228	BA25529	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Phenol by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Phenol - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G2a
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21
Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS Phenol (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers = 8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 15% ICV ≤ 20%
IV.	Continuing calibratio/ending CCV	A	%CCV ≤ 20/50%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	~~AN~~	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1228	BA25529	Water	01/19/21
2	ERH1230	BA25532	Water	01/19/21
3	ERH1232	BA25535	Water	01/19/21
4	ERH1236	BA25538	Water	01/20/21
5				
6				

Notes:

	210122A-Blank						

LDC Report# 50475G2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1228	BA25529	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) which are 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene by Environmental Protection Agency (EPA) SW 846 Method 8270D in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G2b
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/20
Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers = 8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤15% ICV ≤ 20%
IV.	Continuing calibration/ending	A	%CCV ≤ 20/50%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1228	BA25529	Water	01/19/21
2	ERH1230	BA25532	Water	01/19/21
3	ERH1232	BA25535	Water	01/19/21
4	ERH1236	BA25538	Water	01/20/21
5				
6				
7				
8				
9				

Notes:

	210122A-Blank						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: 2-(2-Methoxyethoxy)-ethanol

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1228	BA25529	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

2-(2-Methoxyethoxy)-ethanol by Environmental Protection Agency (EPA) SW 846 Method 8270D Modified

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 15.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not added to all samples by the laboratory. Using professional judgement, no data were qualified since the LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.

VIII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

Raw data were not reviewed for Level C validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XIV. System Performance

Raw data were not reviewed for Level C validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method with the exception noted in Section VII. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
2-(2-Methoxyethoxy)-ethanol - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G2c
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21
Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS 2-(2-Methoxyethoxy)-Ethanol (EPA SW 846 Method 8270D-Modified)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers = 8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤15% ICV ≤ 20%
IV.	Continuing calibration/ending	A	%CCV ≤ 20/50%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1228	BA25529	Water	01/19/21
2	ERH1230	BA25532	Water	01/19/21
3	ERH1232	BA25535	Water	01/19/21
4	ERH1236	BA25538	Water	01/20/21
5				
6				
7				
8				
9				

Notes:

	210125A-Blank						

LDC #: 50475G2c

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

METHOD: GC/MS2-2 MEE (EPA SW 846 Method 8270D modified)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

N/A Were percent recoveries (%R) for surrogates within QC limits?

N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	all	Surrogates were not added to all samples by the laboratory. Using professional judgment, no data were qualified since the LCS percent recoveries were within QC limits. Additionally, all base surrogate percent recoveries were within QC limits in the phenol analysis.		Text
			( )	
			( )	
			( )	
			( )	
			( )	
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			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 10, 2021

Parameters: Wet Chemistry

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1228	BA25529	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1236	BA25538	Water	01/20/21
ERH1236MS	BA25538MS	Water	01/20/21
ERH1236MSD	BA25538MSD	Water	01/20/21
ERH1236DUP	BA25538DUP	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate by Environmental Protection Agency (EPA) Method 300.0
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Ferrous Iron by Standard Method 3500-Fe B
Total Organic Carbon by EPA SW 846 Method 9060A

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S The sequence or number of standards used for the calibration was incorrect.

C Correlation coefficient is <0.995.

R %R for calibration is not within control limits.

B Presumed contamination from preparation (method) blank or calibration blank.

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD or difference was high.

I ICP ICS results were unsatisfactory.

A ICP Serial Dilution %D were not within control limits.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Post Digestion Spike recovery was not within control limits.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met with the following exceptions:

Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
ERH1228	Nitrate	50.28 hours	48 hours	J (all detects)	P

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
01/21/21	CCV (16:30)	Nitrate	110.4 (90-110)	All samples in SDG 94826	J (all detects)	P

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Limit of Quantitation	Associated Samples
PB (prep blank)	Chloride	0.10 mg/L	1.0 mg/L	ERH1228 ERH1232
ICB/CCB	Chloride	0.10 mg/L	1.0 mg/L	ERH1228 ERH1232
PB (prep blank)	Alkalinity total Alkalinity bicarbonate	0.87 mg/L 0.87 mg/L	2.0 mg/L 2.0 mg/L	All samples in SDG 94826

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods.

Due to technical holding time and continuing calibration %R, data were qualified as estimated in four samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Data Qualification Summary - SDG 94826

Sample	Analyte	Flag	A or P	Reason (Code)
ERH1228	Nitrate	J (all detects)	P	Technical holding times (H)
ERH1228 ERH1230 ERH1232 ERH1236	Nitrate	J (all detects)	P	Continuing calibration (%R) (C)

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Wet Chemistry - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G6
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/8/21
Page: 1 of 1
Reviewer: ATC
2nd Reviewer: A

METHOD: (Analyte) Alkalinity (SM 2320B), Chloride, Nitrate-N, Sulfate (EPA Method 300.0), Nitrate/Nitrite-N (EPA Method 353.2), Ferrous Iron (SM 3500-Fe B), TOC (EPA SW846 Method 9060A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/SW	
II	Initial calibration	A	
III.	Calibration verification	SW	
IV	Laboratory Blanks	SW	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	A	(5,6)
VII.	Duplicate sample analysis	A	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date	
1	ERH1228	BA25529	Water	01/19/21	10:15
2	ERH1230	BA25532	Water	01/19/21	13:19
3	ERH1232	BA25535	Water	01/19/21	15:58
4	ERH1236	BA25538	Water	01/20/21	
5	ERH1236MS	BA25538MS	Water	01/20/21	
6	ERH1236MSD	BA25538MSD	Water	01/20/21	
7	↓ DUP	↓ DUP	↓	↓	
8					
9					
10					
11					
12					
13					
14					

Notes:

LDC #: 50475G6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: ATV

All circled methods are applicable to each sample.

Sample ID	Parameter
1→4	pH TDS (Cl) F (NO3) NO2 (SO4) O-PO4 (Alk) CN NH3 TKN (TOC) Cr6+ ClO4 (NO3/NO2-N) (Fe2+)
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
QC	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
5,6	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4 (Fe2+)
7	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN (TOC) Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS Cl F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4

Comments:

LDC #: 50475G6

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: ATL

All circled dates have exceeded the technical holding time.
(Y) N N/A Were all samples preserved as applicable to each method ?
(Y) N N/A Were all cooler temperatures within validation criteria? Code : H

Method:	NO_3 (EPA 300.0)	
Parameters:	water	
Technical holding time:	48hrs (2days).	

Sample ID	Sampling date	Analysis date	Total Time	Qualifier	Analysis date	Total Time	Qualifier
1	10:15→12:15 1/19/21	14:32 1/21/21	50.28 hrs	J/UJ/P (detect)			

LDC #: 50475G6

VALIDATION FINDINGS WORKSHEET
Calibration

Reviewer: ATL

METHOD: Inorganics, EPA Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?
Y (N) N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% ?
(Y) N N/A Are all correlation coefficients ≥0.995 ?

LEVEL IV/D ONLY:

Y N (N/A) Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recaluculation Worksheet for recalulations.
Y N (N/A) Was a balance check conducted prior to the TDS analysis.?
Y N (N/A) Was the titrant normality checked?

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualifications
	01/21/21	CCV (16:30)	NO3	110.4 (90-110)	all	Jdet/P (detect) Code: R

Comments:

LDC #: 50475G6

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: ATL

METHOD: Inorganics, Method See Cover

Conc. units: mg/L **Associated Samples:** 1,3

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Cl	0.10			1.0								
Cl		0.10		1.0								

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Blank ID	Blank Action Limit									
	PB	ICB/CCB (mg/L)		LOQ								
Alkalinity Total	0.87			2.0								
Alkalinity Bicarbonate	0.87			2.0								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: April 8, 2021

Parameters: Gasoline Range Organics

Validation Level: Level C

Laboratory: APPL, Inc

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1227	BA25528	Water	01/19/21
ERH1228	BA25529	Water	01/19/21
ERH1229	BA25531	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1231	BA25534	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1235	BA25537	Water	01/20/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by Environmental Protection Agency (EPA) SW 846 Method 8260B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1227 ERH1229 ERH1231 ERH1235	All compounds	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1227, ERH1229, ERH1231, and ERH1235 were identified as trip blanks. No contaminants were found.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in four samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Data Qualification Summary - SDG 94826

Sample	Compound	Flag	A or P	Reason (Code)
ERH1227 ERH1229 ERH1231 ERH1235	All compounds	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G7
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21
Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS Gsoline Range Organics (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers =8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	r2 ICV ≤20%
IV.	Continuing calibration	A	CCV ≤20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS/LCSD
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1227	BA25528	Water	01/19/21
2	ERH1228	BA25529	Water	01/19/21
3	ERH1229	BA25531	Water	01/19/21
4	ERH1230	BA25532	Water	01/19/21
5	ERH1231	BA25534	Water	01/19/21
6	ERH1232	BA25535	Water	01/19/21
7	ERH1235	BA25537	Water	01/20/21
8	ERH1236	BA25538	Water	01/20/21
9				

Notes:

	210122AZ-Blank						

LDC #: 50475G7

VALIDATION FINDINGS WORKSHEET

Technical Holding Times

Reviewer Reviewer:

N Were all cooler temperatures within validation criteria?

METHOD : GC HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1, 3, 5, 7	water	VOA contained headspace					J/UJ/A all ND

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:
- Water unpreserved: Aromatic within 7 days, non-aromatic within 14 days of sample collection.
- Water preserved: Both within 14 days of sample collection.
- Soils: Both within 14 days of sample collection.
- Encores unpreserved: Both within 48 hours of sample collection.
- Encores preserved: Both within 14 days of sample collection.

EXTRACTABLES:
- Water: Extracted within 7 days, analyzed within 40 days.
- Soil: Extracted within 14 days, analyzed within 40 days.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1228	BA25529	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by Environmental Protection Agency (EPA) SW 846 Method 8015B

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level C validation.

XI. Target Compound Identifications

Raw data were not reviewed for Level C validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G8
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21

Reviewer: FT
2nd Reviewer: A

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

Two out of four coolers =8.0°C

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	A/A	%RSD ≤ 20% , r2 /ICV ≤ 20%
III.	Continuing calibration	A	%CCV ≤ 20%
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Field duplicates	N	
X.	Compound quantitation RL/LOQ/LODs	N	
XI.	Target compound identification	N	
XII	Overall assessment of data	A	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1228	BA25529	Water	01/19/21
2	ERH1230	BA25532	Water	01/19/21
3	ERH1232	BA25535	Water	01/19/21
4	ERH1236	BA25538	Water	01/20/21
5				
6				
7				
8				

Notes:

	210126A-Blank						
	210122A-Blank						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Red Hill Bulk Storage Facility, CTO 18F0126

LDC Report Date: March 9, 2021

Parameters: Methane

Validation Level: Level C

Laboratory: APPL, Inc.

Sample Delivery Group (SDG): 94826

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
ERH1227	BA25528	Water	01/19/21
ERH1228	BA25529	Water	01/19/21
ERH1229	BA25531	Water	01/19/21
ERH1230	BA25532	Water	01/19/21
ERH1231	BA25534	Water	01/19/21
ERH1232	BA25535	Water	01/19/21
ERH1235	BA25537	Water	01/20/21
ERH1236	BA25538	Water	01/20/21

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Work Plan/Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 02, January 2017), the Sampling and Analysis Plan, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 01, April 2017), the Sampling and Analysis Plan, Addendum 01, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, September 2017), the Sampling and Analysis Plan, Addendum 03, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i (Revision 00, June 2018), the Project Procedures Manual, U.S. Naval Facilities Engineering Command (NAVFAC) Environmental Restoration (ER) Program, NAVFAC Pacific (DON 2015), and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Methane by Method RSK-175

All sample results were subjected to Level C data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

H Holding times were exceeded.

S Surrogate recovery was outside QC limits.

C Calibration %RSD, r, r^2 or %D were noncompliant.

R Calibration RRF was <0.05.

B Presumed contamination from preparation (method blank).

L Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.

Q MS/MSD recovery was poor.

E MS/MSD or Duplicate RPD was high.

I Internal standard performance was unsatisfactory.

M Instrument Performance Check (BFB or DFTPP) was noncompliant.

T Presumed contamination from trip blank.

F Presumed contamination from FB or ER.

D The analysis with this flag should not be used because another more technically sound analysis is available.

P Instrument performance for pesticides was poor.

V Unusual problems found with the data not defined elsewhere. Description of the problem can be found in the validation report.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
ERH1227 ERH1229 ERH1231 ERH1235	Methane	A headspace was apparent in the sample containers.	There should be no headspace in the sample containers.	UJ (all non-detects)	A

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Samples ERH1227, ERH1229, ERH1231, and ERH1235 were identified as trip blanks. No contaminants were found.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Field Duplicates

No field duplicates were identified in this SDG.

IX. Compound Quantitation

Raw data were not reviewed for Level C validation.

X. Target Compound Identification

Raw data were not reviewed for Level C validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to headspace, data were qualified as estimated in four samples.

No results were rejected in this SDG.

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Data Qualification Summary - SDG 94826

Sample	Compound	Flag	A or P	Reason (Code)
ERH1227 ERH1229 ERH1231 ERH1235	Methane	UJ (all non-detects)	A	Sample condition (headspace) (V)

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Laboratory Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

Red Hill Bulk Storage Facility, CTO 18F0126
Methane - Field Blank Data Qualification Summary - SDG 94826

No Sample Data Qualified in this SDG

LDC #: 50475G51
SDG #: 94826
Laboratory: APPL, Inc.

VALIDATION COMPLETENESS WORKSHEET
Stage 2B

Date: 3/9/21

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC Methane (Method RSK-175)

.The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SWA	
II.	Initial calibration/ICV	A/A	r2 ICV ≤ 20
III.	Continuing calibration	A	CCV ≤ 20 %
IV.	Laboratory Blanks	A	
V.	Field blanks	ND	TB = 1,3,5,7
VI.	Matrix spike/Matrix spike duplicates	N	CS
VII.	Laboratory control samples	A	LCS/LCSD
VIII.	Field duplicates	N	
IX.	Compound quantitation RL/LOQ/LODs	N	
X.	Target compound identification	N	
XI.	Overall assessment of data	A	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	ERH1227	BA25528	Water	01/19/21
2	ERH1228	BA25529	Water	01/19/21
3	ERH1229	BA25531	Water	01/19/21
4	ERH1230	BA25532	Water	01/19/21
5	ERH1231	BA25534	Water	01/19/21
6	ERH1232	BA25535	Water	01/19/21
7	ERH1235	BA25537	Water	01/20/21
8	ERH1236	BA25538	Water	01/20/21
9				
10				
11				
12				
13				

Notes:

	210126A-Blank						

LDC #: 50475G51

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: FT

All circled dates have exceeded the technical holding times.
N Were all cooler temperatures within validation criteria?

METHOD : X GC HPLC (V)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1, 3, 5, 7	water	Voa contained head space					J/UJ/A all ND

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:	Water unpreserved:	Aromatic within 7 days, non-aromatic within 14 days of sample collection.
	Water preserved:	Both within 14 days of sample collection.
	Soils:	Both within 14 days of sample collection.
	Encores unpreserved:	Both within 48 hours of sample collection.
	Encores preserved:	Both within 14 days of sample collection.
EXTRACTABLES:		
	Water:	Extracted within 7 days, analyzed within 40 days.
	Soil:	Extracted within 14 days, analyzed within 40 days.

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **2320B**													
ERH1228	BA25529	1	ALKALINITY, TOTAL (AS CACO3)	1/19/2021 10:15:00 AM	1/22/2021 5:10:00 PM	C	116	MG_L		2.0	1.70		
ERH1228	BA25529	1	BICARBONATE	1/19/2021 10:15:00 AM	1/22/2021 5:10:00 PM	C	116	MG_L		2.0	1.70		
ERH1228	BA25529	1	CARBONATE (AS CO3)	1/19/2021 10:15:00 AM	1/22/2021 5:10:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1230	BA25532	1	ALKALINITY, TOTAL (AS CACO3)	1/19/2021 1:19:00 PM	1/22/2021 5:16:00 PM	C	103	MG_L		2.0	1.70		
ERH1230	BA25532	1	BICARBONATE	1/19/2021 1:19:00 PM	1/22/2021 5:16:00 PM	C	103	MG_L		2.0	1.70		
ERH1230	BA25532	1	CARBONATE (AS CO3)	1/19/2021 1:19:00 PM	1/22/2021 5:16:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1232	BA25535	1	ALKALINITY, TOTAL (AS CACO3)	1/19/2021 3:58:00 PM	1/22/2021 5:21:00 PM	C	78.0	MG_L		2.0	1.70		
ERH1232	BA25535	1	BICARBONATE	1/19/2021 3:58:00 PM	1/22/2021 5:21:00 PM	C	78.0	MG_L		2.0	1.70		
ERH1232	BA25535	1	CARBONATE (AS CO3)	1/19/2021 3:58:00 PM	1/22/2021 5:21:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
ERH1236	BA25538	1	ALKALINITY, TOTAL (AS CACO3)	1/20/2021 12:08:00 PM	1/22/2021 5:26:00 PM	C	69.8	MG_L		2.0	1.70		
ERH1236	BA25538	1	BICARBONATE	1/20/2021 12:08:00 PM	1/22/2021 5:26:00 PM	C	69.8	MG_L		2.0	1.70		
ERH1236	BA25538	1	CARBONATE (AS CO3)	1/20/2021 12:08:00 PM	1/22/2021 5:26:00 PM	C	1.70	MG_L	U	2.0	1.70	U	
METHOD: **300.0**													
ERH1228	BA25529	10	CHLORIDE (AS CL)	1/19/2021 10:15:00 AM	1/22/2021 8:50:00 PM	C	475	MG_L	D	10.0	2.00	D	
ERH1228	BA25529	1	NITRATE AS NO3 (ANION)	1/19/2021 10:15:00 AM	1/21/2021 2:32:00 PM	C	0.93	MG_L		0.5	0.18	J	h,c
ERH1228	BA25529	1	SULFATE (AS SO4)	1/19/2021 10:15:00 AM	1/21/2021 2:32:00 PM	C	36.5	MG_L		1.0	0.20		
ERH1230	BA25532	1	CHLORIDE (AS CL)	1/19/2021 1:19:00 PM	1/21/2021 2:47:00 PM	C	45.0	MG_L		1.0	0.20		
ERH1230	BA25532	1	NITRATE AS NO3 (ANION)	1/19/2021 1:19:00 PM	1/21/2021 2:47:00 PM	C	1.5	MG_L		0.5	0.18	J	c
ERH1230	BA25532	1	SULFATE (AS SO4)	1/19/2021 1:19:00 PM	1/21/2021 2:47:00 PM	C	9.8	MG_L		1.0	0.20		
ERH1232	BA25535	10	CHLORIDE (AS CL)	1/19/2021 3:58:00 PM	1/22/2021 9:04:00 PM	C	455	MG_L	D	10.0	2.00	D	
ERH1232	BA25535	1	NITRATE AS NO3 (ANION)	1/19/2021 3:58:00 PM	1/21/2021 3:02:00 PM	C	1.6	MG_L		0.5	0.18	J	c
ERH1232	BA25535	1	SULFATE (AS SO4)	1/19/2021 3:58:00 PM	1/21/2021 3:02:00 PM	C	44.2	MG_L		1.0	0.20		
ERH1236	BA25538	1	CHLORIDE (AS CL)	1/20/2021 12:08:00 PM	1/21/2021 3:16:00 PM	C	19.9	MG_L		1.0	0.20		
ERH1236	BA25538	1	NITRATE AS NO3 (ANION)	1/20/2021 12:08:00 PM	1/21/2021 3:16:00 PM	C	0.72	MG_L		0.5	0.18	J	c
ERH1236	BA25538	1	SULFATE (AS SO4)	1/20/2021 12:08:00 PM	1/21/2021 3:16:00 PM	C	3.4	MG_L		1.0	0.20		
METHOD: **3500-FE-B**													

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **3500-FE-B**													
ERH1228	BA25529	1	Iron, Ion (Fe2+)	1/19/2021 10:15:00 AM	1/21/2021 11:50:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
ERH1230	BA25532	1	Iron, Ion (Fe2+)	1/19/2021 1:19:00 PM	1/21/2021 11:50:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
ERH1232	BA25535	1	Iron, Ion (Fe2+)	1/19/2021 3:58:00 PM	1/21/2021 11:58:00 PM	C	0.32	MG_L	U	1.0	0.32	U	
ERH1236	BA25538	1	Iron, Ion (Fe2+)	1/20/2021 12:08:00 PM	1/21/2021 12:01:00 AM	C	0.32	MG_L	U	1.0	0.32	U	
METHOD: **353.2**													
ERH1228	BA25529	1	NITROGEN, NITRATE-NITRITE	1/19/2021 10:15:00 AM	1/25/2021 10:48:00 PM	C	0.60	MG_L		0.10	0.090		
ERH1230	BA25532	1	NITROGEN, NITRATE-NITRITE	1/19/2021 1:19:00 PM	1/25/2021 10:50:00 PM	C	1.4	MG_L		0.10	0.090		
ERH1232	BA25535	1	NITROGEN, NITRATE-NITRITE	1/19/2021 3:58:00 PM	1/25/2021 10:52:00 PM	C	1.1	MG_L		0.10	0.090		
ERH1236	BA25538	1	NITROGEN, NITRATE-NITRITE	1/20/2021 12:08:00 PM	1/25/2021 10:55:00 PM	C	0.41	MG_L		0.10	0.090		
METHOD: **8015B_E**													
ERH1228	BA25529	1	C10-C24 DIESEL RANGE ORGANICS	1/19/2021 10:15:00 AM	1/26/2021 1:07:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1228	BA25529	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/19/2021 10:15:00 AM	1/26/2021 1:07:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1230	BA25532	1	C10-C24 DIESEL RANGE ORGANICS	1/19/2021 1:19:00 PM	1/27/2021 9:11:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1230	BA25532	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/19/2021 1:19:00 PM	1/27/2021 9:11:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1232	BA25535	1	C10-C24 DIESEL RANGE ORGANICS	1/19/2021 3:58:00 PM	1/27/2021 9:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1232	BA25535	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/19/2021 3:58:00 PM	1/27/2021 9:39:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1236	BA25538	1	C10-C24 DIESEL RANGE ORGANICS	1/20/2021 12:08:00 PM	1/27/2021 10:07:00 PM	C	300.0	UG_L	U	320	300.0	U	
ERH1236	BA25538	1	C24-C40 TOTAL PETROLEUM HYDROCARBONS, OI	1/20/2021 12:08:00 PM	1/27/2021 10:07:00 PM	C	300.0	UG_L	U	320	300.0	U	
METHOD: **8260B**													
ERH1227	BA25528	1	BENZENE	1/19/2021 9:42:00 AM	1/22/2021 5:11:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1227	BA25528	1	ETHYLBENZENE	1/19/2021 9:42:00 AM	1/22/2021 5:11:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1227	BA25528	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 9:42:00 AM	1/22/2021 5:10:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1227	BA25528	1	TOLUENE	1/19/2021 9:42:00 AM	1/22/2021 5:11:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1227	BA25528	1	Xylenes	1/19/2021 9:42:00 AM	1/22/2021 5:11:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1228	BA25529	1	BENZENE	1/19/2021 10:15:00 AM	1/22/2021 5:33:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1228	BA25529	1	ETHYLBENZENE	1/19/2021 10:15:00 AM	1/22/2021 5:33:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1228	BA25529	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 10:15:00 AM	1/22/2021 5:34:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1228	BA25529	1	TOLUENE	1/19/2021 10:15:00 AM	1/22/2021 5:33:00 PM	C	0.30	UG_L	U	1.0	0.30	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1228	BA25529	1	Xylenes	1/19/2021 10:15:00 AM	1/22/2021 5:33:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1229	BA25531	1	BENZENE	1/19/2021 12:11:00 PM	1/22/2021 5:56:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1229	BA25531	1	ETHYLBENZENE	1/19/2021 12:11:00 PM	1/22/2021 5:56:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1229	BA25531	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 12:11:00 PM	1/22/2021 5:57:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1229	BA25531	1	TOLUENE	1/19/2021 12:11:00 PM	1/22/2021 5:56:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1229	BA25531	1	Xylenes	1/19/2021 12:11:00 PM	1/22/2021 5:56:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1230	BA25532	1	BENZENE	1/19/2021 1:19:00 PM	1/22/2021 6:19:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1230	BA25532	1	ETHYLBENZENE	1/19/2021 1:19:00 PM	1/22/2021 6:19:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1230	BA25532	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 1:19:00 PM	1/22/2021 6:20:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1230	BA25532	1	TOLUENE	1/19/2021 1:19:00 PM	1/22/2021 6:19:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1230	BA25532	1	Xylenes	1/19/2021 1:19:00 PM	1/22/2021 6:19:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1231	BA25534	1	BENZENE	1/19/2021 3:06:00 PM	1/22/2021 6:43:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1231	BA25534	1	ETHYLBENZENE	1/19/2021 3:06:00 PM	1/22/2021 6:43:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1231	BA25534	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 3:06:00 PM	1/22/2021 6:42:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1231	BA25534	1	TOLUENE	1/19/2021 3:06:00 PM	1/22/2021 6:43:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1231	BA25534	1	Xylenes	1/19/2021 3:06:00 PM	1/22/2021 6:43:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1232	BA25535	1	BENZENE	1/19/2021 3:58:00 PM	1/22/2021 7:05:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1232	BA25535	1	ETHYLBENZENE	1/19/2021 3:58:00 PM	1/22/2021 7:05:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1232	BA25535	1	PETROLEUM HYDROCARBONS C6-C10	1/19/2021 3:58:00 PM	1/22/2021 7:06:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1232	BA25535	1	TOLUENE	1/19/2021 3:58:00 PM	1/22/2021 7:05:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1232	BA25535	1	Xylenes	1/19/2021 3:58:00 PM	1/22/2021 7:05:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
ERH1235	BA25537	1	BENZENE	1/20/2021 12:05:00 PM	1/22/2021 7:28:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1235	BA25537	1	ETHYLBENZENE	1/20/2021 12:05:00 PM	1/22/2021 7:28:00 PM	C	0.50	UG_L	U	1.0	0.50	UJ	v
ERH1235	BA25537	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 12:05:00 PM	1/22/2021 7:29:00 PM	C	18.0	UG_L	U	20	18.0	UJ	v
ERH1235	BA25537	1	TOLUENE	1/20/2021 12:05:00 PM	1/22/2021 7:28:00 PM	C	0.30	UG_L	U	1.0	0.30	UJ	v
ERH1235	BA25537	1	Xylenes	1/20/2021 12:05:00 PM	1/22/2021 7:28:00 PM	C	0.30	UG_L	U	2.0	0.30	UJ	v
ERH1236	BA25538	1	BENZENE	1/20/2021 12:08:00 PM	1/22/2021 7:51:00 PM	C	0.30	UG_L	U	1.0	0.30	U	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **8260B**													
ERH1236	BA25538	1	ETHYLBENZENE	1/20/2021 12:08:00 PM	1/22/2021 7:51:00 PM	C	0.50	UG_L	U	1.0	0.50	U	
ERH1236	BA25538	1	PETROLEUM HYDROCARBONS C6-C10	1/20/2021 12:08:00 PM	1/22/2021 7:52:00 PM	C	18.0	UG_L	U	20	18.0	U	
ERH1236	BA25538	1	TOLUENE	1/20/2021 12:08:00 PM	1/22/2021 7:51:00 PM	C	0.30	UG_L	U	1.0	0.30	U	
ERH1236	BA25538	1	Xylenes	1/20/2021 12:08:00 PM	1/22/2021 7:51:00 PM	C	0.30	UG_L	U	2.0	0.30	U	
METHOD: **8270D**													
ERH1228	BA25529	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/19/2021 10:15:00 AM	1/26/2021 2:14:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1228	BA25529	1	PHENOL	1/19/2021 10:15:00 AM	1/25/2021 7:28:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1230	BA25532	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/19/2021 1:19:00 PM	1/26/2021 2:34:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1230	BA25532	1	PHENOL	1/19/2021 1:19:00 PM	1/25/2021 7:53:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1232	BA25535	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/19/2021 3:58:00 PM	1/26/2021 2:55:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1232	BA25535	1	PHENOL	1/19/2021 3:58:00 PM	1/25/2021 8:19:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
ERH1236	BA25538	1	2-(2-METHOXY ETHOXY)-ETHANOL	1/20/2021 12:08:00 PM	1/26/2021 3:16:00 PM	C	80.0	UG_L	U	100	80.0	U	
ERH1236	BA25538	1	PHENOL	1/20/2021 12:08:00 PM	1/25/2021 8:44:00 PM	C	4.00	UG_L	U	5.0	4.00	U	
METHOD: **8270DSIM**													
ERH1228	BA25529	1	1-METHYLNAPHTHALENE	1/19/2021 10:15:00 AM	1/25/2021 6:50:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1228	BA25529	1	2-METHYLNAPHTHALENE	1/19/2021 10:15:00 AM	1/25/2021 6:50:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1228	BA25529	1	NAPHTHALENE	1/19/2021 10:15:00 AM	1/25/2021 6:50:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1230	BA25532	1	1-METHYLNAPHTHALENE	1/19/2021 1:19:00 PM	1/25/2021 7:12:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1230	BA25532	1	2-METHYLNAPHTHALENE	1/19/2021 1:19:00 PM	1/25/2021 7:12:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1230	BA25532	1	NAPHTHALENE	1/19/2021 1:19:00 PM	1/25/2021 7:12:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1232	BA25535	1	1-METHYLNAPHTHALENE	1/19/2021 3:58:00 PM	1/25/2021 7:34:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1232	BA25535	1	2-METHYLNAPHTHALENE	1/19/2021 3:58:00 PM	1/25/2021 7:34:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1232	BA25535	1	NAPHTHALENE	1/19/2021 3:58:00 PM	1/25/2021 7:34:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1236	BA25538	1	1-METHYLNAPHTHALENE	1/20/2021 12:08:00 PM	1/25/2021 7:56:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1236	BA25538	1	2-METHYLNAPHTHALENE	1/20/2021 12:08:00 PM	1/25/2021 7:56:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
ERH1236	BA25538	1	NAPHTHALENE	1/20/2021 12:08:00 PM	1/25/2021 7:56:00 PM	C	0.10	UG_L	U	0.2	0.10	U	
METHOD: **9060A**													
ERH1228	BA25529	1	TOTAL ORGANIC CARBON	1/19/2021 10:15:00 AM	1/22/2021 6:19:00 PM	C	0.23	MG_L	J	0.93	0.350	J	

EPA_NO	LAB_ID	DF	ANALYTE	COLL_DATE	ANAL_DATE	QCLev	RESULT	UNITS	LAB_Q	LOQ	LOD	REV	Q_C
METHOD: **9060A**													
ERH1230	BA25532	1	TOTAL ORGANIC CARBON	1/19/2021 1:19:00 PM	1/22/2021 6:56:00 PM	C	0.47	MG_L	J	0.93	0.350	J	
ERH1232	BA25535	1	TOTAL ORGANIC CARBON	1/19/2021 3:58:00 PM	1/22/2021 7:33:00 PM	C	0.32	MG_L	J	0.93	0.350	J	
ERH1236	BA25538	1	TOTAL ORGANIC CARBON	1/20/2021 12:08:00 PM	1/22/2021 8:11:00 PM	C	0.14	MG_L	J	0.93	0.350	J	
METHOD: **RSK175**													
ERH1227	BA25528	1	METHANE	1/19/2021 9:42:00 AM	1/26/2021 2:08:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1228	BA25529	1	METHANE	1/19/2021 10:15:00 AM	1/26/2021 2:11:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1229	BA25531	1	METHANE	1/19/2021 12:11:00 PM	1/26/2021 2:15:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1230	BA25532	1	METHANE	1/19/2021 1:19:00 PM	1/26/2021 2:19:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1231	BA25534	1	METHANE	1/19/2021 3:06:00 PM	1/26/2021 2:23:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1232	BA25535	1	METHANE	1/19/2021 3:58:00 PM	1/26/2021 2:25:00 PM	C	1.00	UG_L	U	5.0	1.00	U	
ERH1235	BA25537	1	METHANE	1/20/2021 12:05:00 PM	1/26/2021 2:28:00 PM	C	1.00	UG_L	U	5.0	1.00	UJ	v
ERH1236	BA25538	1	METHANE	1/20/2021 12:08:00 PM	1/26/2021 2:32:00 PM	C	1.00	UG_L	U	5.0	1.00	U	

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Margie.Pascua@aecom.com

April 20, 2021

SUBJECT: **Data Quality Assessment Report**
January 2021
Environmental Investigation and
Groundwater Monitoring
Red Hill Bulk Fuel Storage Facility
Joint Base Pearl Harbor-Hickam
Oahu, Hawaii
CTO 18F0126

Enclosed is the Data Quality Assessment Report, January 2021, Environmental Investigation and Groundwater Monitoring for Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, Oahu, Hawaii, CTO 18F0126.

We appreciate this opportunity to support AECOM in the performance of this project.

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Operations Manager/Senior Chemist

DATA QUALITY ASSESSMENT REPORT

JANUARY 2021
ENVIRONMENTAL INVESTIGATION AND GROUNDWATER MONITORING

RED HILL BULK FUEL STORAGE FACILITY
JOINT BASE PEARL HARBOR-HICKAM
OAHU, HAWAII
CTO 18F0126

April 20, 2021

Table of Contents

Section	Title	Page No.
1.0	INTRODUCTION	1
2.0	VOLATILE ORGANIC COMPOUNDS	6
2.1	Precision and Accuracy	6
2.2	Representativeness	7
2.3	Comparability	7
2.4	Completeness	8
2.5	Sensitivity	8
3.0	PHENOL	8
3.1	Precision and Accuracy	8
3.2	Representativeness	9
3.3	Comparability	9
3.4	Completeness	9
3.5	Sensitivity	9
4.0	POLYNUCLEAR AROMATIC HYDROCARBONS	9
4.1	Precision and Accuracy	9
4.2	Representativeness	10
4.3	Comparability	11
4.4	Completeness	11
4.5	Sensitivity	11
5.0	2-(2-METHOXYETHOXY)-ETHANOL	11
5.1	Precision and Accuracy	11
5.2	Representativeness	12
5.3	Comparability	12
5.4	Completeness	12
5.5	Sensitivity	13
6.0	GASOLINE RANGE ORGANICS	13
6.1	Precision and Accuracy	13
6.2	Representativeness	13
6.3	Comparability	14
6.4	Completeness	14
6.5	Sensitivity	14
7.0	TOTAL PETROLEUM HYDROCARBONS AS EXTRACTABLES	14
7.1	Precision and Accuracy	14
7.2	Representativeness	15
7.3	Comparability	16
7.4	Completeness	16
7.5	Sensitivity	16

Table of Contents

Section	Title	Page No.
8.0	ETHYLENE DIBROMIDE	16
8.1	Precision and Accuracy	16
8.2	Representativeness	17
8.3	Comparability	17
8.4	Completeness	17
8.5	Sensitivity	17
9.0	METHANE	17
9.1	Precision and Accuracy	18
9.2	Representativeness	18
9.3	Comparability	19
9.4	Completeness	19
9.5	Sensitivity	19
10.0	WET CHEMISTRY	19
10.1	Precision and Accuracy	19
10.2	Representativeness	20
10.3	Comparability	20
10.4	Completeness	20
10.5	Sensitivity	21
11.0	VARIANCES IN ANALYTICAL PERFORMANCE	21
12.0	SUMMARY OF PARCCS CRITERIA	21
12.1	Precision and Accuracy	21
12.2	Representativeness	21
12.3	Comparability	21
12.4	Completeness	21
12.5	Sensitivity	22

GLOSSARY

BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CTO	Contract Task Order
DCA	1,2-Dichloroethane
DQAR	Data Quality Assessment Report
DOD	Department of Defense
DL	Detection Limit
DUP	Laboratory Duplicate
EB	Equipment Blank
EDB	Ethylene Dibromide
FB	Field Blank
FD	Field Duplicate
GRO	Gasoline Range Organics
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LDC	Laboratory Data Consultants, Inc
LOD	Limit of Detection
LOQ	Limit of Quantitation
MEE	2-(2-Methoxyethoxy)-ethanol
MS/MSD	Matrix Spike / Matrix Spike Duplicate
NAVFAC	Naval Facilities Engineering Command
PAH	Polynuclear Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, Sensitivity
PQO	Project Quality Objectives
PT	Proficiency Testing sample
QA/QC	Quality Assurance/Quality Control
QSM	Quality Systems Manual
RPD	Relative Percent Difference
RRF	Relative Response Factor
SDG	Sample Delivery Group
SGCU	Silica Gel Clean Up
SIM	Selected Ion Monitoring
TB	Trip Blank
TOC	Total Organic Carbon
TPHE	Total Petroleum Hydrocarbons as Extractables
VOC	Volatile Organic Compounds
%D	Percent Difference
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation
mg/L	Milligrams per Liter
ug/L	Micrograms per Liter

1.0 INTRODUCTION

An environmental investigation and groundwater monitoring were conducted on January 2021 at the Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam in Oahu, Hawaii. This part of the investigation included the collection and analyses of 43 environmental and quality control (QC) samples. The analyses were performed by the following methods:

Benzene, Toluene, Ethylbenzene, Xylenes, total (BTEX) and 1,2-Dichloroethane (DCA) by Environmental Protection Agency (EPA) SW-846 Method 8260B
Phenol by EPA SW-846 Method 8270D
Polynuclear Aromatic Hydrocarbons (PAH) by EPA SW-846 Method 8270D-Selected Ion Monitoring (SIM) mode
2-(2-Methoxyethoxy)-ethanol by (MEE) EPA SW-846 Method 8270D Modified
Gasoline Range Organics (GRO) by EPA SW-846 Method 8260B
Total Petroleum Hydrocarbons as Extractables (TPHE) by EPA SW-846 Method 8015B
Ethylene Dibromide (EDB) by EPA SW-846 Method 8011
Methane by Method RSK-175

Wet Chemistry:
Alkalinity by Standard Method 2320B
Chloride, Nitrate, and Sulfate (Anions) by EPA Method 300.0
Ferrous Iron by Standard Method 3500-Fe B
Nitrate/Nitrite as Nitrogen by EPA Method 353.2
Total Organic Carbon (TOC) by EPA SW-846 Method 9060A

Analytical services for the water samples were provided by APPL, Inc. The samples were grouped into sample delivery groups (SDGs) as received by the laboratory. The environmental samples are associated with quality assurance (QA) and QC samples designed to document the data quality of the entire SDG or a sub-group of samples within a SDG. Table I is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample number, matrix, and validation level.

Approximately ten percent of the analytical data were validated according to Naval Facilities Engineering Command (NAVFAC) Pacific Level D data validation procedures and ninety percent of the analytical data were validated according to NAVFAC Pacific Level C data validation procedures. The analytical data were evaluated for QA/QC based on the *NAVFAC Pacific Environmental Restoration (ER) Program Data Validation Procedures (DON 2015)* and the *Department of Defense Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (DoD 2017)*.

This data quality assessment report (DQAR) summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) relative to the project quality objectives (PQOs). This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability.

The DQAR evaluates and summarizes the results of QA/QC data validation for the entire sampling program. Each analytical fraction has a separate section for each of the PARCCS criteria. These sections interpret specific QC deviations and their effects on both individual data points and the analyses as a whole. Section 12 presents a summary of the PARCCS criteria by comparing quantitative parameters with acceptability criteria defined in the PQOs. Qualitative PARCCS criteria are also summarized in this section.

Precision and Accuracy of Environmental Data

Environmental data quality depends on sample collection procedures, analytical methods and instrumentation, documentation, and sample matrix properties. Both sampling procedures and laboratory analyses contain potential sources of uncertainty, error, and/or bias, which affect the overall quality of a measurement. Errors in sample data may result from incomplete equipment decontamination, inappropriate sampling techniques, sample heterogeneity, improper filtering, and improper preservation. The accuracy of analytical results is dependent on selecting appropriate analytical methods, maintaining equipment properly, and complying with QC requirements. The sample matrix also is an important factor in the ability to obtain precise and accurate results within a given media.

Environmental and laboratory QA/QC samples assess the effects of sampling procedures and evaluate laboratory contamination, laboratory performance, and matrix effects. QA/QC samples include: method blanks, calibration blanks, laboratory control samples/laboratory control sample duplicates (LCS/LCSD), matrix spike samples/matrix spike sample duplicates (MS/MSD), laboratory duplicates (DUP), field duplicate samples (FD), trip blanks (TB), equipment blanks (EB), field blanks (FB), and proficiency testing (PT) samples.

Before conducting the PARCCS evaluation, the analytical data were validated according to the NAVFAC procedures and DoD QSM. Samples not meeting the NAVFAC procedures and DoD QSM acceptance criteria were qualified with a flag, an abbreviation indicating a deficiency with the data. The following are flags used in data validation.

J Estimated The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise. The "J" qualification indicates the data fell outside the QC limits, but the exceedance was not sufficient to cause rejection of the data.

R Rejected The data is unusable (the compound or analyte may or may not be present). Use of the "R" qualifier indicates a significant variance from functional guideline acceptance criteria. Either resampling or reanalysis is necessary to determine the presence or absence of the rejected analyte.

U Nondetected Analyses were performed for the compound or analyte, but it was not detected. The "U" designation is also applied to suspected blank contamination. The "U" flag is used to qualify any result detected in an environmental sample at a concentration less than 10 times the value of the concentration in any associated blank for common laboratory contaminants and less than 5 times the concentration in any associated blank for all other contaminants.

UJ Estimated/Nondetected Analyses were performed for the compound or analyte, but it was not detected and the limit of detection (LOD) is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate, internal standard, or other spike recovery.

Once the data are reviewed and qualified according to the NAVFAC procedures and DoD QSM, the data set is then evaluated using PARCCS criteria. PARCCS criteria provide an evaluation of overall data usability. The following is a discussion of PARCCS criteria as related to the PQOs.

Precision is a measure of the agreement or reproducibility of analytical results under a given set of conditions. It is a quantity that cannot be measured directly but is calculated from the reported concentrations.

Precision is expressed as the relative percent difference (RPD):

$$RPD = (D1-D2)/\{1/2(D1+D2)\} \times 100$$

Where:
D1 = the reported concentration for primary sample analyses
D2 = the reported concentrations for duplicate analyses

Precision is primarily assessed by calculating a RPD from the reported concentrations of the spiked compounds for each sample in the MS/MSD pair. In the absence of a MS/MSD pair, a laboratory duplicate or LCS/LCSD pair can be analyzed as an alternative means of assessing precision. In some cases, samples from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. An additional measure of sampling precision may be obtained by collecting and analyzing field duplicate samples, which are compared using the RPD result as the evaluation criteria.

MS and MSD samples are field samples spiked by the laboratory with target analytes prior to preparation and analysis. These samples measure the overall efficiency of the analytical method in recovering target analytes from an environmental matrix. A LCS is similar to a MS/MSD sample in that the LCS is spiked with the same target analytes prior to preparation and analysis. However, the LCS is prepared using a controlled interference-free matrix instead of a field sample aliquot. Laboratory reagent water is used to prepare aqueous LCS. The LCS measures laboratory efficiency in recovering target analytes from an aqueous matrix in the absence of matrix interferences.

For inorganic analysis, one primary sample is analyzed and accompanied by an unspiked laboratory duplicate. The data reviewer compares the reported results of the primary analysis and the laboratory duplicate and calculates RPDs to assess laboratory precision.

Laboratory and field precision are further evaluated by calculating RPDs for field duplicate pairs. The sampler collects two field samples at the same location and under identically controlled conditions. The laboratory then analyzes the samples under identical conditions.

An RPD outside the numerical QC limit in MS/MSD samples, LCS/LCSDs, or FDs indicates imprecision. Imprecision is the variance in the consistency with which the laboratory arrives at a particular reported result. Thus, the actual analyte concentration may be higher or lower than the reported result.

Possible causes of poor precision include sample matrix interference, improper sample collection or handling, inconsistent sample preparation, and poor instrument stability. In some duplicates, results maybe reported in either the primary or duplicate samples at levels below the limit of quantitation (LOQ) or non-detected. Since these values are considered to be estimates, RPD exceedances from these duplicate sets do not suggest a significant impact on the data quality.

Accuracy is a measure of the agreement of an experimental determination and the true value of the parameter being measured. It is used to identify bias in a given measurement system. Recoveries outside acceptable QC limits may be caused by factors such as instrumentation, analyst error, or matrix interference. Accuracy is assessed through the analysis of MS, MSD, LCS, and samples containing surrogate spikes. In some cases, samples from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. Surrogate spikes are either isotopically labeled compounds or compounds that are not typically detected in the samples. Surrogate spikes are added to every blank, environmental sample, MS/MSD, LCS/LCSD and standard, for all applicable organic analyses. Accuracy of inorganic analyses is determined using the percent recoveries of MS and LCS analyses.

Percent recovery (%R) is calculated using the following equation:

$\%R = (A–B)/C \times 100$

Where:
A = measured concentration in the spiked sample
B = measured concentration of the spike compound in the unspiked sample
C = concentration of the spike

The percent recovery of each analyte spiked in MS/MSD samples, LCS, and surrogate compounds added to environmental samples is evaluated against the acceptance criteria specified by the previously noted documents. Spike recoveries outside the acceptable QC accuracy limits provide an indication of bias, where the reported data may overestimate or underestimate the actual concentration of compounds detected or LODs reported for environmental samples.

Accuracy can also be evaluated by analyzing PT samples. PT testing determines the performance of individual laboratories for specific tests or measurements and is used to monitor laboratories' continuing performance.

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of a population and is evaluated by reviewing the QC results of blank samples and holding times. Positive detects of compounds in the blank samples identify compounds that may have been introduced into the samples during sample collection, transport, preparation, or analysis. The QA/QC blanks collected and analyzed are method blanks, calibration blanks, field blanks, equipment blanks, and trip blanks.

A method blank is a laboratory grade water or solid matrix that contains the method reagents and has undergone the same preparation and analysis as the environmental samples. The method blank provides a measure of the combined contamination derived from the laboratory source water, glassware, instruments, reagents, and sample preparation steps. Method blanks are prepared for each sample of a similar matrix extracted by the same method at a similar concentration level.

For inorganic analyses, initial and continuing calibration blanks (ICB/CCB) consist of acidified laboratory grade water, which are injected at the beginning and at a regular frequency during each 12 - hour sample analysis run. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopy.

Trip blanks are used to identify possible volatile organic contamination introduced into the sample during transport. A trip blank is a sample volatile organics analysis vial filled in the laboratory with reagent-grade water and preserved to a pH less than 2 with hydrochloric acid. It is transported to the site, stored with the sample containers, and returned unopened to the laboratory for analysis. Trip blanks were collected and analyzed for BTEX, DCA, GRO, EDB, and methane.

Equipment blanks consist of analyte-free water poured over or through the sample collection equipment. The water is collected in a sample container for laboratory analysis. These blanks are collected after the sampling equipment is decontaminated and measure efficiency of the decontamination procedure. Equipment blanks were collected and analyzed for BTEX, DCA, phenol, PAH, MEE, GRO, TPHE, and EDB.

Field blanks consist of analyte-free source water stored at the sample collection site. The water is collected from each source water used during each sampling event. Field blanks were collected and analyzed for BTEX, DCA, phenol, PAH, MEE, GRO, TPHE, and EDB.

Contaminants found in both the environmental sample and a blank sample are assumed to be laboratory artifacts if the concentration in the environmental sample is less than 5 times the blank value.

Holding times are evaluated to assure that the sample integrity is intact for accurate sample preparation and analysis. Holding times will be specific for each method and matrix analyzed. Holding time exceedances can cause loss of sample constituents due to biodegradation, precipitation, volatilization, and chemical degradation.

Comparability is a qualitative expression of the confidence with which one data set may be compared to another. It provides an assessment of the equivalence of the analytical results to data obtained from other analyses. It is important that data sets be comparable if they are used in conjunction with other data sets. The factors affecting comparability include the following: sample collection and handling techniques, matrix type, and analytical method. If these aspects of sampling and analysis are carried out according to standard analytical procedures, the data are considered comparable. Comparability can only be compared with confidence when precision, accuracy, and representativeness are known.

Completeness is defined as the percentage of acceptable sample results compared to the total number of sample results. Completeness is evaluated to determine if an acceptable amount of usable data were obtained so that a valid scientific site assessment can be completed. Completeness equals the total number of sample results for each fraction minus the total number of rejected sample results divided by the total number of sample results multiplied by 100. As specified in the PQOs, the goal for completeness for target analytes in each analytical fraction is 90 percent.

Percent completeness is calculated using the following equation:

$$\%C = (T - R)/T \times 100$$

Where:
%C = percent completeness
T = total number of sample results
R = total number of rejected sample results

Completeness is also determined by comparing the planned number of samples per method and matrix as specified in the project planning document, with the number determined above.

Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. This capability is established during the planning phase to meet the PQOs. It is important that calibration requirements, detection limits (DLs), and project-specific LODs and LOQs presented in the work plan are achieved and that target analytes can be detected at concentrations necessary to support the PQOs. In addition, sample results are compared to method blank and field blank results to identify potential effects of laboratory background and field procedures on sensitivity.

The following sections present a review of QC data for each analytical method. The details regarding the qualification of results are provided in the data validation reports.

2.0 VOLATILE ORGANIC COMPOUNDS

A total of 42 water samples were analyzed for BTEX and a total of eight (8) water samples were analyzed for 1,2-DCA by EPA SW 846 Method 8260B. All volatile organic compounds (VOC) data were assessed to be valid since none of the 176 total results were rejected due to holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

2.1 Precision and Accuracy

2.1.1 Instrument Calibration

Initial and continuing calibration results provide a means of evaluating accuracy within a particular SDG. Relative response factor (RRF), percent relative standard deviation (%RSD), and percent difference (%D) are the three major parameters used to measure the effectiveness of instrument calibration. RRF is a measure of the relative spectral response of an analyte compared to its internal standard. %RSD is an expression of the linearity of instrument response. %D is a comparison of a continuing calibration instrumental response with its initial response. %RSD and %D exceedances suggest routine instrumental anomalies, which typically impact all sample results for the affected compounds.

The RRFs met the validation acceptance criteria of ≥ 0.05 in the initial and continuing calibrations. The %RSDs met the method acceptance criteria of 15 percent in the initial calibration. The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent. The %Ds in the ending continuing calibration verifications met the validation acceptance criteria of 50 percent.

2.1.2 Surrogates

In instances where surrogate %Rs were above the acceptance criteria and the associated results were not detected no data were qualified.

2.1.3 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

2.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

2.1.5 FD Samples

No VOC were detected for field duplicate samples ERH1244 and ERH1245; field duplicate samples ERH1214 and ERH1215; and field duplicate samples ERH1219 and ERH1220.

2.1.6 Internal Standards

All internal standard areas and retention areas were within the acceptance criteria.

2.1.7 Proficiency Testing Samples

Proficiency testing (PT) samples were not performed for the sampling event.

2.1.8 Compound Quantitation and Target Identification

All compound quantitation and target identifications were found to be acceptable.

2.2 Representativeness

2.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

As a result of headspace in sample containers, the VOC results in samples ERH1211, ERH1250, ERH1216, ERH1223, ERH1218, ERH1221, ERH1225, ERH1227, ERH1229, ERH1231, and ERH1235 were qualified as non-detected estimated (UJ). Results may be biased low in the associated samples.

2.2.2 Blanks

Method blanks, EBs, FBs, and TBs were collected and analyzed to evaluate representativeness. The concentration for an individual target compound in any of the types of QA/QC blanks was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results based on the following criteria.

> Results Below or Above the LOQ If a sample result for the blank contaminant was less than the LOQ or greater than the sample LOQ and less than 5 times the blank value for all contaminants, the sample result for the blank contaminant was amended as a non-detect at the concentration reported in the sample results.
>
> No Action If a sample result for the blank contaminant was greater than 5 times the blank value for all contaminants, the result was not amended.

2.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

2.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

2.2.2.3 Trip Blanks

No contaminants were detected in the trip blanks for this analysis.

2.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

2.4 Completeness

The completeness level attained for VOC field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

2.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the QAPP.

3.0 PHENOL

A total of 23 water samples were analyzed for phenol by EPA SW-846 Method 8270D. All phenol data were assessed to be valid since none of the 23 total results were rejected due to holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

3.1 Precision and Accuracy

3.1.1 Instrument Calibration

The RRFs met the validation acceptance criteria of ≥ 0.05 in the initial and continuing calibrations. The %RSDs met the method acceptance criteria of 15 percent in the initial calibration. The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent. The %Ds in the ending continuing calibration verifications met the validation acceptance criteria of 50 percent.

3.1.2 Surrogates

All surrogate %Rs were within the acceptance criteria.

3.1.3 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

3.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

3.1.5 FD Samples

No phenol was detected for field duplicate samples ERH1244 and ERH1245; field duplicate samples ERH1214 and ERH1215; and field duplicate samples ERH1219 and ERH1220.

3.1.6 Internal Standards

All internal standard areas and retention times were within the acceptance criteria.

3.1.7 Proficiency Testing Samples

PT samples were not performed for the sampling event.

3.1.8 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

3.2 Representativeness

3.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

3.2.2 Blanks

Method blanks, EBs, and FBs were collected and analyzed to evaluate representativeness.

3.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

3.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

3.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

3.4 Completeness

The completeness level attained for phenol was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

3.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

4.0 POLYNUCLEAR AROMATIC HYDROCARBONS

A total of 23 water samples were analyzed for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene by EPA SW-846 Method 8270D-SIM. All PAH data were assessed to be valid since none of the 69 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

4.1 Precision and Accuracy

4.1.1 Instrument Calibration

The RRFs met the validation acceptance criteria of ≥ 0.05 in the initial and continuing calibrations. The %RSDs met the method acceptance criteria of 15 percent in the initial calibration. The %Ds in the initial

and continuing calibration verifications met the method acceptance criteria of 20 percent. The %Ds in the ending continuing calibration verifications met the validation acceptance criteria of 50 percent.

4.1.2 Surrogates

All surrogate %Rs were within the acceptance criteria.

4.1.3 MS/MSD Samples

As a result of low MS/MSD %Rs, the 2-methylnaphthalene result in sample ERH1214 was qualified as non-detected estimated (UJ). Low MS/MSD %R indicates that the result may be biased low in the associated sample.

All MS/MSD RPDs were within the acceptance criteria.

4.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

4.1.5 FD Samples

The FD RPDs were within the acceptance criteria for field duplicate samples ERH1219 and ERH1220.

No PAH were detected for field duplicate samples ERH1244 and ERH1245 and field duplicate samples ERH1214 and ERH1215.

4.1.6 Internal Standards

All internal standard areas and retention times were within the acceptance criteria.

4.1.7 Proficiency Testing Samples

PT samples were not performed for the sampling event.

4.1.8 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

4.2 Representativeness

4.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

4.2.2 Blanks

Method blanks, EBs, and FBs were collected and analyzed to evaluate representativeness.

4.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

4.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

4.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

4.4 Completeness

The completeness level attained for PAH field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

4.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

5.0 2-(2-METHOXYETHOXY)-ETHANOL

A total of 23 water samples were analyzed for MEE by EPA SW 846 Method 8270D modified. All MEE data were assessed to be valid since none of the 23 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

5.1 Precision and Accuracy

5.1.1 Instrument Calibration

The RRFs met the validation acceptance criteria of ≥ 0.05 in the initial and continuing calibrations. The %RSDs met the method acceptance criteria of 15 percent in the initial calibration. The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent. The %Ds in the ending continuing calibration verifications met the validation acceptance criteria of 50 percent.

5.1.2 Surrogates

Surrogates were not added to all samples as required by the method. No data were qualified since the LCS/LCSD %Rs and all base surrogate %Rs for phenol were within the acceptance criteria.

5.1.3 MS/MSD Samples

All MS/MSD %Rs were within the acceptance criteria.

In instances where MS/MSD RPDs were above the acceptance criteria and the associated results were not detected no data were qualified.

5.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

5.1.5 FD Samples

No MEE was detected for field duplicate samples ERH1244 and ERH1245; field duplicate samples ERH1214 and ERH1215; and field duplicate samples ERH1219 and ERH1220.

5.1.6 Internal Standards

All internal standard areas and retention times were within the acceptance criteria.

5.1.7 Proficiency Testing Samples

PT samples were not performed for the sampling event.

5.1.8 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

5.2 Representativeness

5.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

5.2.2 Blanks

Method blanks, EBs, and FBs were collected and analyzed to evaluate representativeness.

5.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

5.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

5.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

5.4 Completeness

The completeness level attained for MEE field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

5.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

6.0 GASOLINE RANGE ORGANICS

A total of 42 water samples were analyzed for GRO by EPA SW-846 Method 8260B. All GRO data were assessed to be valid since none of the 42 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

6.1 Precision and Accuracy

6.1.1 Instrument Calibration

The coefficient of determination (r^2) was $\geq$ 0.990 in the initial calibration. The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent.

6.1.2 Surrogates

All surrogate %Rs were within the acceptance criteria.

6.1.3 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

6.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

6.1.5 FD Samples

No GRO were detected for field duplicate samples ERH1244 and ERH1245; field duplicate samples ERH1214 and ERH1215; and field duplicate samples ERH1219 and ERH1220.

6.1.6 Proficiency Testing Samples

PT samples were not performed for the sampling event.

6.1.7 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

6.2 Representativeness

6.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

As a result of headspace in sample containers, the GRO results in samples ERH1211, ERH1250, ERH1216, ERH1223, ERH1218, ERH1221, ERH1225, ERH1227, ERH1229, ERH1231, and ERH1235 were qualified as non-detected estimated (UJ). Results may be biased low in the associated samples.

6.2.2 Blanks

Method blanks, EBs, FBs, and TBs were collected and analyzed to evaluate representativeness.

6.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

6.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

6.2.2.3 Trip Blanks

No contaminants were detected in the trip blanks for this analysis.

6.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

6.4 Completeness

The completeness level attained for GRO field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

6.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

7.0 TOTAL PETROLEUM HYDROCARBONS AS EXTRACTABLES

A total of 24 water samples were analyzed for DRO and ORO by EPA SW-846 Method 8015B and four (4) water samples were also analyzed for DRO and ORO with SGCU by EPA SW-846 Method 8015B. All TPHE data were assessed to be valid since none of the 56 total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

7.1 Precision and Accuracy

7.1.1 Instrument Calibration

The %RSDs met the method acceptance criteria of 20 percent or the coefficient of determination (r2) was ≥ 0.990 in the initial calibration.

The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent.

7.1.2 Surrogates

All surrogate %Rs were within the acceptance criteria.

7.1.3 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

7.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

7.1.5 FD Samples

The FD RPD was within the acceptance criteria for field duplicate samples ERH1219(SGCU) and ERH1220(SGCU).

The FD RPD was outside the acceptance criteria for field duplicate samples ERH1219 and ERH1220. Sample data were not qualified on the basis of field duplicate imprecision.

No TPHE were detected for field duplicate samples ERH1244 and ERH1245 and field duplicate samples ERH1214 and ERH1215.

7.1.6 Proficiency Testing Samples

PT samples were not performed for the sampling event.

7.1.7 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

7.2 Representativeness

7.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

7.2.2 Blanks

Method blanks, EBs, and FBs were collected and analyzed to evaluate representativeness.

7.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

7.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

7.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

7.4 Completeness

The completeness level attained for TPHE field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

7.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

8.0 ETHYLENE DIBROMIDE

A total of eight (8) water samples were analyzed for EDB by EPA SW-846 Method 8011. All EDB data were assessed to be valid since none of the eight (8) total results were rejected based on holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

8.1 Precision and Accuracy

8.1.1 Instrument Calibration

The %RSDs in the initial calibration and the %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent.

8.1.2 Surrogates

All surrogate %Rs were within the acceptance criteria.

8.1.3 MS/MSD Samples

MS/MSD was not performed for this analysis.

8.1.4 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

8.1.5 FD Samples

No EDB was detected for field duplicate samples ERH1244 and ERH1245.

8.1.6 Proficiency Testing Samples

PT samples were not performed for the sampling event.

8.1.7 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

8.2 Representativeness

8.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

8.2.2 Blanks

Method blanks, EBs, FBs, and TBs were collected and analyzed to evaluate representativeness.

8.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

8.2.2.2 EBs and FBs

No contaminants were detected in the equipment blank and field blank for this analysis.

8.2.2.3 Trip Blanks

No contaminants were detected in the trip blanks for this analysis.

8.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. The comparability of the data is regarded as acceptable.

8.4 Completeness

The completeness level attained for EDB field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

8.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

9.0 METHANE

A total of 36 water samples were analyzed for methane by Method RSK-175. All methane data were assessed to be valid since none of the 36 total results were rejected based on holding time or QC

exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

9.1 Precision and Accuracy

9.1.1 Instrument Calibration

The coefficient of determination (r^2) was $\geq$ 0.990 in the initial calibration. The %Ds in the initial and continuing calibration verifications met the method acceptance criteria of 20 percent.

9.1.2 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

9.1.3 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

9.1.4 FD Samples

Field duplicate samples were not collected for this analysis.

9.1.5 Proficiency Testing Samples

PT samples were not performed for the sampling event.

9.1.6 Compound Quantitation and Target Identification

All compound quantitation and target compound identification were found to be acceptable.

In the case where more than one result was reported for an individual sample, the least technically acceptable results were deemed unusable.

9.2 Representativeness

9.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All holding times were met.

As a result of headspace in sample containers, the methane result in samples ERH1211, ERH1216, ERH1223, ERH1218, ERH1221, ERH1225, ERH1227, ERH1229, ERH1231, and ERH1235 were qualified as non-detected estimated (UJ) or detected estimated (J). Results may be biased low in the associated samples.

9.2.2 Blanks

Method blanks and trip blanks were collected and analyzed to evaluate representativeness.

9.2.2.1 Method Blanks

No contaminants were detected in the method blanks for this analysis.

9.2.2.2 Trip Blanks

No data were qualified due to contamination detected in the trip blanks.

9.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

9.4 Completeness

The completeness level attained for methane field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

9.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

10.0 WET CHEMISTRY

A total of 18 water samples were analyzed for alkalinity by Standard Method 2320B; anions by EPA Method 300.0; ferrous iron by Standard Method 3500-Fe B; nitrate/nitrite as nitrogen by EPA Method 353.2; and TOC by EPA SW-846 Method 9060A. All wet chemistry data were assessed to be valid since none of the 162 total results were rejected due to holding time or QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the PQOs.

10.1 Precision and Accuracy

10.1.1 Instrument Calibration

The correlation coefficients in the initial calibrations were within the method acceptance criteria of $\geq$ 0.995.

One (1) chloride, five (5) nitrate, and five (5) TOC results were qualified as detected estimated (J). The continuing calibration verification (CCV) or initial calibration verification (ICV) %Rs were outside the method acceptance criteria of 90-110 percent. Bias cannot be determined.

In instances where CCV %Rs were above the acceptance criteria and the associated results were not detected no data were qualified.

10.1.2 MS/MSD Samples

All MS/MSD %Rs and RPDs were within the acceptance criteria.

10.1.3 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs were within the acceptance criteria.

10.1.4 Laboratory Duplicate Samples

All DUP RPDs were within the acceptance criteria.

10.1.5 FD Samples

Field duplicates were not collected for these analyses.

10.1.6 Proficiency Testing Samples

PT samples were not performed for the sampling event.

10.1.7 Sample Result Verification

All sample results were found to be acceptable.

10.2 Representativeness

10.2.1 Holding Times

The evaluation of holding times to verify compliance with the method was conducted.

As a result of analysis holding time exceedances, two (2) ferrous iron and five (5) nitrate results were qualified as non-detected estimated (UJ) or detected estimated (J) . Results may be biased low in the associated samples.

10.2.2 Blanks

Method blanks and calibration blanks were analyzed to evaluate representativeness.

10.2.2.1 Method and Calibration Blanks

As a result of calibration blank contamination, one (1) nitrate/nitrite as N result was qualified as not detected (U).

As a result of method blank contamination, one (1) nitrate/nitrite as N result was qualified as not detected (U).

10.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the DLs and LODs attained were below the specified LOQs. Target compounds detected below the LOQs flagged (J) by the laboratory should be considered estimated. The comparability of the data is regarded as acceptable.

10.4 Completeness

The completeness level attained for wet chemistry field samples was 100 percent. This percentage was

calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

10.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory DLs and LOQs met the specified requirements described in the work plan.

11.0 VARIANCES IN ANALYTICAL PERFORMANCE

The laboratory used standard analytical methods for all of the analyses throughout the project. No systematic variances in analytical performance were noted in the case narratives.

12.0 SUMMARY OF PARCCS CRITERIA

The validation reports present the PARCCS results for all SDGs. Each PARCCS criterion is discussed in detail in the following sections.

12.1 Precision and Accuracy

Low MS/MSD %R and sample container condition indicates that the associated VOC, PAH, GRO, methane results may be biased low in the associated samples.

Bias cannot be determined for chloride, nitrate, and TOC results due to calibrations outside the acceptance criteria.

Precision and accuracy were evaluated using data quality indicators such as calibration, surrogates, MS/MSD, LCS/LCSD, DUP, FD, and internal standards. The precision and accuracy of the data set were considered acceptable after integration of qualification of estimated results as noted above.

12.2 Representativeness

All samples for each method and matrix were evaluated for holding time compliance. All holding times were met with the exceptions noted in Section 10.2.1. All samples were associated with a method blank in each individual SDG. The representativeness of the project data is considered acceptable.

12.3 Comparability

Sampling frequency requirements were met in obtaining field duplicates and necessary field blanks. The laboratory used standard analytical methods for their analyses. The analytical results were reported in correct standard units. The overall comparability is considered acceptable.

12.4 Completeness

Of the 595 total results reported, none of the results were rejected. The completeness for all SDGs is as follows:

Parameter	Total Analytes	No. of Rejects	% Completeness
VOC	176	0	100
Phenol	23	0	100
PAH	69	0	100

MEE	23	0	100
GRO	42	0	100
TPH as Extractables	56	0	100
EDB	8	0	100
Methane	36	0	100
Wet Chemistry	162	0	100
Total	**595**	**0**	**100**

The completeness percentage based on rejected data met the 90 percent PQO goal. A less quantifiable loss of data occurred in the application of blank qualifications as noted in Section 10.2.2.1.

12.5 Sensitivity

Sensitivity was achieved by the laboratory to support the PQOs. Calibration concentrations, DLs, LODs and LOQs met the project requirements and low-level contamination in the method and calibration blanks did not affect sensitivity.

Table I. Sample Cross-Reference

LDC	SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	BTEX (8260B)	1,2-DCA (8260B)	Phenol (8270D)	PAH (8270D SIM)	2MEE (8270D)	GRO (8260B)	TPHE (8015B)	TPHE SGCU (8015B)	EDB (8011)	Methane (RSK 175)	Alkalinity (2320B)	Anions (300.0)	Ferrous Iron (3500-Fe-B)	NO3/NO2 as N (353.2)	TOC (9060A)
50475A	94808	ERH1248	BA25433	Water	01/18/21	TB	Level C	X					X				X					
50475A	94808	ERH1249	BA25434	Water	01/18/21		Level B													X		
50475A	94808	ERH1249	BA25434	Water	01/18/21		Level C	X		X	X	X	X	X			X	X	X		X	X
50475B	94863	ERH1211	BA25689	Water	01/20/21	TB	Level C	X	X				X			X	X					
50475B	94863	ERH1212	BA25690	Water	01/20/21		Level D	X	X	X	X	X	X	X		X	X	X	X	X	X	X
50475B	94863	ERH1233	BA25692	Water	01/21/21	TB	Level C	X					X				X					
50475B	94863	ERH1234	BA25693	Water	01/21/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475B	94863	ERH1241	BA25695	Water	01/21/21	TB	Level C	X					X				X					
50475B	94863	ERH1242	BA25696	Water	01/21/21		Level C			X	X	X		X				X	X	X	X	X
50475B	94863	ERH1242	BA25696	Water	01/21/21		Level D	X					X				X					
50475B	94863	ERH1243	BA25698	Water	01/20/21	TB	Level C	X	X				X			X	X					
50475B	94863	ERH1244	BA25699	Water	01/20/21	FD1	Level C	X	X	X	X	X	X	X		X	X	X	X	X	X	X
50475B	94863	ERH1245	BA25701	Water	01/20/21	FD1	Level C	X	X	X	X	X	X	X		X						
50475B	94863	ERH1250	BA25703	Water	01/20/21	TB	Level C	X	X				X			X						
50475B	94863	ERH1251	BA25704	Water	01/20/21	FB	Level C	X	X	X	X	X	X	X		X						
50475B	94863	ERH1252	BA25706	Water	01/20/21	EB	Level C	X	X	X	X	X	X	X		X						
50475C	94883	ERH1216	BA25866	Water	01/25/21	TB	Level C	X					X				X					
50475C	94883	ERH1217	BA25867	Water	01/25/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475C	94883	ERH1223	BA25869	Water	01/25/21	TB	Level C	X					X				X					
50475C	94883	ERH1224	BA25870	Water	01/25/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475D	94825	ERH1246	BA25525	Water	01/19/21	TB	Level C	X					X				X					
50475D	94825	ERH1247	BA25526	Water	01/19/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475E	94899	ERH1213	BA26000	Water	01/26/21	TB	Level C	X					X				X					
50475E	94899	ERH1214	BA26001	Water	01/26/21	FD2	Level C										X					
50475E	94899	ERH1214	BA26001	Water	01/26/21	FD2	Level D	X		X	X	X	X	X				X	X	X	X	X
50475E	94899	ERH1215	BA26003	Water	01/26/21	FD2	Level C	X		X	X	X	X	X								
50475E	94899	ERH1218	BA26005	Water	01/25/21	TB	Level C	X					X				X					
50475E	94899	ERH1219	BA26006	Water	01/25/21	FD3	Level C											X	X	X	X	X
50475E	94899	ERH1219	BA26006	Water	01/25/21	FD3	Level D	X		X	X	X	X	X	X		X					
50475E	94899	ERH1220	BA26008	Water	01/25/21	FD3	Level C	X		X	X	X	X	X	X							
50475E	94899	ERH1267	BA26010	Water	01/25/21		Level C							X	X							

Table I. Sample Cross-Reference

LDC	SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	BTEX (8260B)	1,2-DCA (8260B)	Phenol (8270D)	PAH (8270D SIM)	2MEE (8270D)	GRO (8260B)	TPHE (8015B)	TPHE SGCU (8015B)	EDB (8011)	Methane (RSK 175)	Alkalinity (2320B)	Anions (300.0)	Ferrous Iron (3500-Fe-B)	NO3/NO2 as N (353.2)	TOC (9060A)
50475E	94899	ERH1221	BA26012	Water	01/25/21	TB	Level C	X					X				X					
50475E	94899	ERH1222	BA26013	Water	01/25/21		Level C	X		X	X	X	X	X	X		X	X	X	X	X	X
50475E	94899	ERH1239	BA26015	Water	01/26/21	TB	Level C	X					X				X					
50475E	94899	ERH1240	BA26016	Water	01/26/21		Level C			X	X	X		X			X	X	X	X	X	X
50475E	94899	ERH1240	BA26016	Water	01/26/21		Level D	X					X									
50475F	94920	ERH1225	BA26159	Water	01/26/21	TB	Level C	X					X				X					
50475F	94920	ERH1226	BA26160	Water	01/26/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475F	94920	ERH1237	BA26162	Water	01/27/21	TB	Level C	X					X				X					
50475F	94920	ERH1238	BA26163	Water	01/27/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475G	94826	ERH1227	BA25528	Water	01/19/21	TB	Level C	X					X				X					
50475G	94826	ERH1228	BA25529	Water	01/19/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475G	94826	ERH1229	BA25531	Water	01/19/21	TB	Level C	X					X				X					
50475G	94826	ERH1230	BA25532	Water	01/19/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475G	94826	ERH1231	BA25534	Water	01/19/21	TB	Level C	X					X				X					
50475G	94826	ERH1232	BA25535	Water	01/19/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X
50475G	94826	ERH1235	BA25537	Water	01/20/21	TB	Level C	X					X				X					
50475G	94826	ERH1236	BA25538	Water	01/20/21		Level C	X		X	X	X	X	X			X	X	X	X	X	X

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Appendix C.3:
Fact Sheet

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Fact Sheet: Detection and Quantitation – What Project Managers and Data Users Need to Know

As a Project Manager or decision-maker, you may use environmental data to accomplish one or more of the following tasks:

- Determine whether a chemical substance is present in an environmental sample at or above some threshold value or action level;
- Verify that a pollutant concentration remains below a permit limit;
- Evaluate potential risks to human health or the environment;
- Monitor changes in concentrations of contaminants; or
- Determine the effectiveness of remediation activities.

Making correct decisions in these cases often depends on the ability of an analytical method to detect and measure extremely low concentrations of a substance.

This Fact Sheet has been prepared to: 1) provide Project Managers and data users with basic information about detection and quantitation concepts; and 2) acquaint the reader with detection and quantitation terminology and requirements contained in the *DoD Quality Systems Manual for Environmental Laboratories (DoD QSM),* Version 5.1. This information should help clarify the uncertainty associated with reporting low-concentration data. It should also help project teams understand the importance of selecting analytical methods that are sensitive enough for their intended uses, i.e., capable of generating reliable data (data of known precision and bias) at the project-specific decision levels.[1]

Measures of Sensitivity – Basic Concepts

The following terms are used to describe the routine sensitivity of analytical procedures:

- DL – Detection Limit
- LOD – Limit of Detection
- LOQ – Limit of Quantitation

All measures of sensitivity are specific to the analyte, sample matrix, test method, instrumentation, and analyst/laboratory performance. Therefore, analytical performance must be demonstrated for each variable (e.g., it is possible that two "identical" instruments from the same manufacturer may exhibit different sensitivities). A graphical representation of these terms is shown as Figure 1.

The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration with 99% confidence. At the DL, the false positive rate (Type I error) is 1% (red shaded region in Figure 1). A DL may be used as the lowest

[1] A discussion on the Minimum Detectable Concentration (or Minimum Detectable Activity) for radiological data is beyond the scope of this Fact Sheet. For a discussion on this, see DoD/DOE QSM 5.1 Module 6, Section 1.5.2.1.1.

concentration for reliably reporting a detection of a specific analyte in a specific matrix with a specific method with 99% confidence.

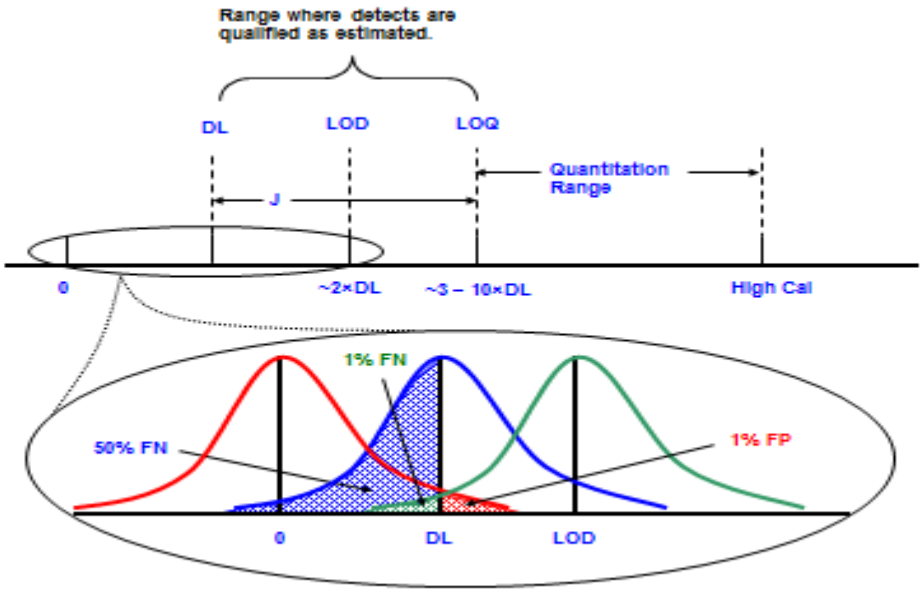

Figure 1: Summary of data quality characteristics below and above DL, LOD, and LOQ. The red trace shows the distribution of results given a sample with a true concentration of zero. The blue trace shows the distribution of results given a sample with a true concentration at the Detection Limit. The green trace shows the distribution of results given a sample with a true concentration at the Limit of Detection. The red shaded region represents those results which would yield a false positive (i.e., the true concentration is zero but the analytical result is detection). The blue and green shaded regions represent those results which would yield a false negative if the true concentration is at the reporting limit and the reporting limit is set at the DL or LOD, respectively (i.e., a sample with a true concentration at the DL has a 50% chance of yielding a false negative, and a sample with a true concentration at the LOD has a 1% chance of yielding a false negative).

Note that for reporting purposes, any result at or above the DL must also meet qualitative identification criteria required by the test method. Although a result at or above the DL indicates that the analyte is present, the absence of a result at or above the DL is inconclusive (i.e., one cannot confidently state whether the analyte is present or absent), because the false negative rate if the analyte is present at the DL is 50% (blue shaded region in Figure 1).

The Limit of Detection (LOD) is defined as the lowest concentration for reliable reporting of a non-detect of a specific analyte in a specific matrix with a specific method at 99% confidence. At the LOD, the false negative rate (Type II error) is 1% (green shaded region in Figure 1). In other words, if a sample has a true concentration at the LOD, there is at least a 99% probability of reporting a "detection" (a measured value ≥ DL) and a 1% chance of falsely reporting a non-detect (a false negative).

For reporting purposes, the failure to obtain a "detection" should be reported as "<LOD," because the false negative rate at the LOD is only 1%. Reporting the sample result as "<DL," is inappropriate because the false negative rate at the DL is 50%.

The Limit of Quantitation (LOQ) is the smallest concentration that produces a quantitative result with known and recorded precision and bias. For DoD/DOE projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard and within the calibration range. Because of the requirements on precision and bias, the LOQ is larger than the LOD[2]; therefore, the following is true:

$$DL < LOD < LOQ$$

Quantitative results, with a known degree of precision and bias, can only be achieved at or above the LOQ. Detections between the DL and the LOQ assure the *presence* of the analyte, but their numeric values are estimates and are therefore indicated as such on test reports. Figure 2 summarizes the differences and the relationship between DL, LOD, and LOQ.

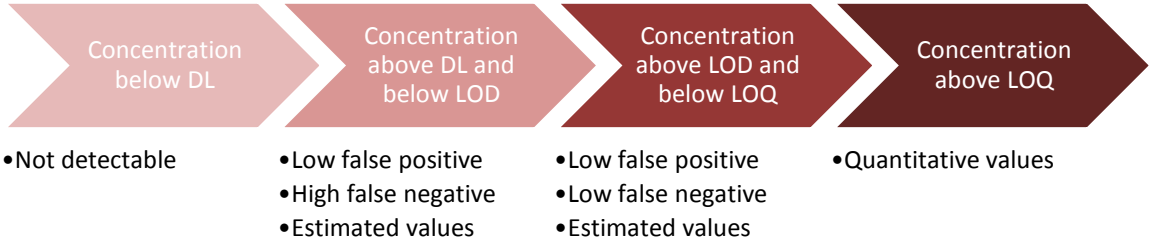

Figure 2: Summary of data quality characteristics below and above DL, LOD, and LOQ.

Types of Procedures for Estimating Sensitivity

Numerical estimates of the DL, LOD, or LOQ for a specific analyte, matrix, and method can be calculated using various statistical procedures, which involve spiking reagent water or other specific matrix with low concentrations of the analyte of interest. At this time, unfortunately, universally accepted statistical procedures do not exist.

The estimator that has been most commonly used by environmental laboratories is the EPA Method Detection Limit (MDL), which is an approximation of the DL. EPA has defined the MDL as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero."[3] Calculating the MDL at 99% confidence means there is a 1% probability of a false positive when a sample has a result at the MDL. The EPA MDL was designed to protect against false positives; however, it does not protect against false negatives.

[2] See TNI Module 4, Section 1.5.2.2d.
[3] 40 Code of Federal Regulations (CFR) Part 136, Appendix B, rev.2

Uses and Limitations of the MDL

When performed correctly and consistently, MDLs determined using the EPA procedure can be useful for comparing the performance of different laboratories using the same methods or the performance of different methods within the same laboratory. Laboratories typically determine the MDL in reagent water, resulting in a "best-case" MDL, which provides limited information about method performance on real-world samples.

The EPA MDL procedure as originally defined in 40 CFR Part 136, (Appendix B, 1984) has been criticized as a poor estimator of the DL for numerous reasons including but not limited to:

1. It is a single laboratory, short-term estimator that fails to account for analytical bias, changing instrument conditions or analyst skill.
2. It assumes uniform variance across all possible spike concentrations, failing to account for the fact that variance changes at higher concentrations.
3. It assumes that measured values at the spike concentration are normally distributed. By using the procedure and spiking at very low concentrations, laboratories have been able to calculate MDLs that cannot be achieved in practice.
4. It does not require a demonstration of the ability to detect an analyte at the calculated MDL.
5. It is not reproducible from day-to-day, lab-to-lab, etc.

Since 2000 the EPA has increased efforts to address these issues. In 2016 the EPA updated the MDL procedure in 40 CFR 136 which did include provisions for addressing background contamination, multiple analysts and instruments, and included verification requirements; however, the MDL calculation of spikes remains unchanged.

DoD QSM Requirements

Requirements for the DL, LOD and the LOQ which are designed to address some of the concerns discussed in the previous paragraph are contained in DoD QSM Module 4 Sections 1.5.2.1 and 1.5.2.2. Requirements that may be of particular note to Project Managers and Data Users are:

- Laboratories are required to verify measures of sensitivity, in terms of the LOD and LOQ, at least quarterly.
- Laboratories shall establish a detection limit (DL) for each suite of analyte-matrix-method, including surrogates. The DL shall be used to determine the LOD for each analyte and matrix as well as for all preparatory and cleanup methods routinely used on samples.
- After each DL determination, the laboratory must establish the LOD. It is specific to each suite of analyte, matrix, and method (including sample preparation).
- The laboratory must establish the LOD by spiking a quality system matrix at a concentration of at least 2 times but no greater than four times the DL.
- The signal to noise (S/N) ratio at the LOD must be at least three, and the results must meet all method requirements for analyte identification.

- The DL and LOD must be reported for all analyte-matrix-method suites unless it is not applicable to the test or specifically excluded by project requirements.
- The laboratory procedure for establishing the LOQ must empirically demonstrate precision and bias at the LOQ for each suite of analyte-matrix-method, including surrogates. The LOQ and associated precision and bias must meet client requirements and must be reported. If the method is modified, precision and bias at the new LOQ must be demonstrated and reported For DoD/DOE projects, the LOQ must be set within the calibration range, including the lowest calibration level.

Establishing Project-Specific Requirements for Method Sensitivity

Project teams should establish their project-specific requirements for method sensitivity in terms of a Reporting Limit (RL) for each analyte and matrix. As defined in the DoD QSM, the RL is a customer-specified lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix. The RL cannot be less than the LOQ, if precision and bias of the RL and the LOQ are identical. If the LOQ for a particular analytical method or laboratory cannot meet the RL, then a project team has four options:

1. Consult with the laboratory to improve method performance or modify the method to achieve a lower LOQ.
2. Select a different method with an LOQ less than or equal to the RL.
3. Raise the RL.
4. If no other options are available to meet project needs, allow for increased level of uncertainty such that adjusted LOQ can meet RL. This LOQ must be verified.

Please note that precision and bias must be taken into consideration when assessing the LOQ versus the RL. Also note that data below the RL may be reported; however, they are estimated values if less than the LOQ. Although data reporting and flagging requirements are project-specific, all reported LOD and LOQ shall be adjusted for the size of sample aliquots, concentration/dilution factors, and percent solids.

Reporting and Flagging Analytical Data

The following example (based on QSM 5.1 Module 2 section 5.10.3.1.1) illustrates the proper use of the “U” and “J” data qualifier flags for non-detect and estimated analytical results, respectively.

Data Qualifier flags in this example are defined as:
U- Analyte was not detected and is reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.
J- The reported result is an estimated value (e.g. matrix interference was observed, or the analyte was detected at a concentration outside the calibration range).

Example: Detection Limit (DL) = 2, Limit of Detection (LOD) = 4, Limit of Quantitation (LOQ) = 20, Reporting Limit (RL) for the project = 30, with precision and bias of the LOQ meeting precision and bias of the RL. All samples are undiluted.

Sample #1:	Analytical Result: Non-detect	Reported Result: 4U
Sample #2:	Analytical Result: 2	Reported Result: 2J
Sample #3:	Analytical Result: 10	Reported Result: 10J
Sample #4:	Analytical Result: 20	Reported Result: 20
Sample #5:	Analytical Result: 30	Reported Result: 30

Note that the laboratory may use additional data qualifiers or different letters or symbols to denote the qualifiers as long as they are appropriately defined and their use is consistent with project-specific requirements. Additionally, the laboratory-defined data qualifiers are for laboratory use only. Data usability must be determined by the project team.

Understanding and Documenting Uncertainty for Low-Concentration Data

As mentioned above, detection and quantitation limits are laboratory specific. The following are some steps Project Managers can take to document measurement uncertainty for low concentration data.

- As part of the laboratory selection process, provide the laboratory with project-specific RLs, including precision and bias, for each analyte and matrix. Ask the laboratory to provide its DL, LOD, and LOQ with associated precision and bias for each target analyte in each matrix of concern (e.g., reagent water, clean sand, etc.) and verify that these values meet project-specific RLs. Request laboratory SOPs for establishing the DL and for establishing and verifying the LOD and LOQ.
- Ask the laboratory to verify the LOD by processing an LOD verification check sample with each batch of samples. This is a quality control sample that is spiked at a concentration at or slightly above the LOD to evaluate whether the analyte of interest is in fact "detectable" in the matrix of interest. To accurately report non-detects, set the reporting for non-detects to "less than the LOD" or report the LOD with a "U" flag.
- If the project involves the collection of unusual or difficult matrices, or if the project-specific RL is near the LOQ, ask the laboratory to verify the LOQ in the project-specific matrix by analyzing a minimum of four replicate samples with known concentrations at the LOQ.
- Review low concentration raw data (e.g., chromatograms). If a result is reported above the DL, make sure that the signal-to-noise ratio is at least 3.
- Compare sample result with blank results. If sample results (including chromatograms) cannot be distinguished from blank results, the data may not be useable for decision making.