



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

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

## Data Validatable Report

June 3, 2021

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, Hawaii 96813

Attn: Alethea Ramos

Title: Report of Data: Case 96222

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

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

Dear Ms. Ramos:

Three water samples were received May 20, 2021. Written results for the requested analyses are being provided on this June 3, 2021.

The 525.2 analysis was subcontracted to Weck Laboratories. Their report is separate.

The 8015B analysis was subcontracted to Energy Laboratories. Their report is separate.

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

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director  
APPL, Inc.

LP/lac  
Enclosure  
cc: File

Data Validation Package  
for  
60571032 CV18F0126 Red Hill Fuel Storage  
APPL SDG 96222  
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# **CASE NARRATIVE**

# Case Narrative

ARF: 96222

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

## **Sample Receipt Information:**

Three water samples were received May 20, 2021 at 1.0°C and 2.0°C. The sample group was assigned Analytical Request Form (ARF) number 96222.

## **Sample Preparation and Analysis Information:**

For the EPA 524.2 analysis, the samples were purged according to the method.

For the EPA 200.8 analysis, the samples were digested according to EPA method 200.8/11.2.

For the SM5310B, the samples were prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

## **Analytical Exceptions, Deviations and Abnormalities.**

**EPA 524.2:** In the second source calibration 0520L15.D, 1,2,4-Trichlorobenzene and Naphthalene increased in sensitivity above the upper limit. 1,2,4-Trichlorobenzene and Naphthalene were not detected in the associated samples.

qryCOC\_APPLCaseNarrativeReport

<b>SDG</b>	<b>Received</b>	<b>Client ID</b>	<b>APPL ID</b>	<b>Collected DateTime</b>	<b>Matrix</b>	<b>Method</b>	<b>Method Description</b>
96222	05/20/21	ERH1359	BA32813	05/19/21 8:05:00 AM	WATER	200.8	ICPMS 200.8 H2O TOTAL
96222	05/20/21	ERH1359	BA32813	05/19/21 8:05:00 AM	WATER	EPA 524.2	EPA 524.2
96222	05/20/21	ERH1359	BA32813	05/19/21 8:05:00 AM	WATER	SM 5310C	DOC WATERS BY SM 5310C
96222	05/20/21	ERH1360	BA32814	05/19/21 8:55:00 AM	WATER	200.8	ICPMS 200.8 H2O TOTAL
96222	05/20/21	ERH1360	BA32814	05/19/21 8:55:00 AM	WATER	EPA 524.2	EPA 524.2
96222	05/20/21	ERH1360	BA32814	05/19/21 8:55:00 AM	WATER	SM 5310C	DOC WATERS BY SM 5310C
96222	05/20/21	ERH1361	BA32815	05/19/21 9:10:00 AM	WATER	SUB	Sub to WECK LABORATORIES

## Abbreviations and Flags


FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

**SAMPLE RECORDS MANAGEMENT  
CHAIN OF CUSTODY,  
ARF, CRF, AND  
CLIENT COMMUNICATION**

# APPL - Analysis Request Form

96222

Client: AECOM  
 Address: 1001 Bishop Street, Suite 1600  
Honolulu, HI 96813  
 Attn: Alethea Ramos  
 Phone: 808-954-4536 Fax: 808-523-8950  
 Job: 60571032 CV18F0126 Red Hill Fuel Storage  
 PO #: 18S-22209-HI27 PO# 102604  
 Chain of Custody (Y/N): Y # 51849,51850,51851  
 RAD Screen (Y/N): Y pH (Y/N): Y  
 Turn Around Type: 1 WEEK

Received by: MSA   
 Date Received: 05/20/21 Time: 09:25  
 Delivered by: FEDEX  
 Shuttle Custody Seals (Y/N): Y Time Zone: -10  
 Chest Temp(s): 2.0,1.0°C  
 Color: VFRG/F-Pi/AA-BIO/SUB  
 Samples Chilled until Placed in Refrig/Freezer: Y  
 Project Manager: Libby Cheesebor  
 QC Report Type: DVP4DOD/EQUIS/Hi  
 Due Date: 05/27/21

**Comments:**

*PM: login and F1s to Margie.Pascua@aecom.com & alethea.amos@aecom.com*

*AN: 5 day TAT for F1s; 21 day TAT PKG STYLE 1; DOD v5.1; DOD Forms: LOD database*

*Report MS/MSD/DUPs when AECOM sample used*






*VOC: Add DBCP, 1-2,3-TCP, see attached analyte list*

*FR: email ftp info to Margie, alethea.amos@aecom.com, Stella, trommelfanger@lab-data.com & jcanlas@la*

*EDD: AECOM EQUIS EDD 2.5.3 Red Hill 87DMEE->3535A to alethea.amos@, Margie.Pascua@aecom.com, jecklund*

*SUB: 525.2 subcontracted to Weck; TPH-d/o subcontracted to Energy Labs*

<p><u>Sample Distribution:</u>                  VOA: 2-\$524                  Metals: 2-\$2008(Pb)                  Wetlab: 2-\$5310CD                  Other: 6-HOLD, 2- M2008, 2-SUB, 3-SUB-WECK</p>	<p><u>Charges:</u></p>	<p><u>Invoice To:</u>                  ACCOUNTS PAYABLE                  1001 Bishop Street, Ste 1600                  USAPImaging@aecom.com                  mary.basano@aecom.com</p>
--	------------------------	---

Client ID	APPL ID	Sampled	Analyses Requested
1. ERH1358	LCSD BA32812W 	05/19/21 07:55	HOLD -- See Comments
2. ERH1359	LCSD BA32813W 	05/19/21 08:05	\$2008(Pb), \$524, \$5310CD, HOLD, SUB, SUB-WECK -- See Comments
3. ERH1360	LCSD BA32814W 	05/19/21 08:55	\$2008(Pb), \$524, \$5310CD, HOLD, SUB, SUB-WECK -- See Comments
4. ERH1361	LCSD BA32815W 	05/19/21 09:10	HOLD, SUB-WECK -- See Comments
5. ERH1359 BLANK	LCSD BA32816W 	05/19/21 08:05	HOLD -- See Comments

APPL - Analysis Request Form

96222

6. ERH1360 BLANK

LCSB BA32817W 05/19/21 08:55 HOLD -- See Comments

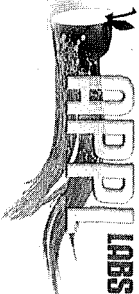


# APPL Sample Receipt Form

ARF# 96222

Sample	Container Type	Count	p
BA32812	<sup>13</sup> VOAs - HCL	3	NA
BA32813	<sup>6</sup> PL 500mL - HNO3	1	1.3
	<sup>13</sup> VOAs - HCL	3	NA
	<sup>17</sup> Amber Liter	3	NA
	<sup>32</sup> Clear VOA - H2SO4	3	NA
	<sup>39</sup> Amber Liter, HCL prsvd	2	1.3
BA32814	<sup>6</sup> PL 500mL - HNO3	1	1.3
	<sup>13</sup> VOAs - HCL	3	NA
	<sup>17</sup> Amber Liter	3	NA
	<sup>32</sup> Clear VOA - H2SO4	3	NA
	<sup>39</sup> Amber Liter, HCL prsvd	2	1.3
BA32815	<sup>17</sup> Amber Liter	3	NA
BA32816	<sup>39</sup> Amber Liter, HCL prsvd	1	NA
BA32817	<sup>39</sup> Amber Liter, HCL prsvd	1	NA

Sample    Container Type    Count    p



APPL, Inc.  
 908 N Temperance Ave  
 Clovis, CA 93611  
 www.applinc.com

Phone: (559) 275-2175  
 Fax: (559) 275-4422  
 coc@applinc.com  
 C.O.C. 51849

CHAIN OF CUSTODY RECORD

96222

PLEASE PRINT

Report to:

Invoice to:

Company Name: AECOM  
 1001 Bishop St., Suite 1600  
 Honolulu, HI 96813  
 Attn: Alethea Ramos (808)521-3051  
 Alethea.Ramos@aecom.com  
 CV\_18F0126 / 60571032

Company Name: AECOM  
 1001 Bishop St., Suite 1600  
 Honolulu, HI 96813  
 Attn: Sherree Smith (808)521-3051  
 Sherree.Smith@aecom.com  
 USAImaging@aecom.com

Email:

Email:

Project Name/Number

CV18F0126

W/2  
 60571032-02-2001

Sampler (Print)  
 GM JV

Sampler (Signature)  
 Credit Brown

Date Shipped: 5/19/21

Purchase Order Number

102604

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification

Location

Date Collected

Time Collected

Time Zone

No. of Containers

Matrix

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix	Analysis Requested/Method Number	Date Shipped
ERH1358	Trip Blank	5/19/21	0755	HST	3	X	VOCs 524.2 Total Pb 200.8 TPHD 8015 DOC SMT310 SVOC 525.2	5/19/21
ERH1359	Pre-chlorination	5/19/21	0805	HST	12	X		
ERH1360	Post-chlorination	5/19/21	0855	HST	12	X		
ERH1361	Field Blank	5/19/21	0910	HST	3	X		

Analysis Requested/Method Number

Date Shipped: 5/19/21

Turnaround Requested: Check one  
 Standard 2-3 wk  
 One week  
 3 days  
 24/48 Hrs.  
 Other: \_\_\_\_\_

Sample Disposal:  
 Return to client  
 Disposal by Lab (30-day retention)

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

White: Return to client with report

Yellow: Laboratory Copy

See reverse side for Container Preservative and Sampling Information

TPHD: 8-48;  
 60-625  
 DOC: Field Filtered





COOLER RECEIPT FORM

ARF: 96222

- 1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 05/20/21
- 2) Coolers: Number of Coolers: 2
- 3) YES Were custody seals present and intact?  
How many? 4 Name/Date on seal? SEE BELOW
- 4) YES Was there a shipping slip? Carrier name: FEDEX
- 5) Type of packing in cooler:  bubble wrap  popcorn  foam  plastic bags  other  
 wet ice  dry ice  no ice  gel ice
- 6) YES Were cooler temperatures acceptable?
- 7) Serial number of calibrated thermometer used: R5 CF:+0.0°C
- 8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp  
1: 2.0/2.0 2: 1.0/1.0 3: \_\_\_\_\_ 4: \_\_\_\_\_ 5: \_\_\_\_\_ 6: \_\_\_\_\_  
7: \_\_\_\_\_ 8: \_\_\_\_\_ 9: \_\_\_\_\_ 10: \_\_\_\_\_ 11: \_\_\_\_\_ 12: \_\_\_\_\_

Chain of custody:

- 9) YES Was a chain of custody received?
- 10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

- 11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?
- 12) YES Did all container labels agree with custody papers?

Sample Containers:

- 13) YES Were all containers sealed in separate bags?
- 14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?
- 15) YES Were correct containers and preservatives used for the tests indicated?
- 16) YES Was a sufficient amount of sample sent for tests indicated?
- 17) Yes Were bubbles present in volatile samples?

If yes, the following were received with air bubbles:

Larger than a pea: \_\_\_\_\_

Smaller than a pea: BA32812all, BA32813w03

Preservation Hold time:

- 18) Yes Was a sufficient amount of holding time remaining to analyze the samples?
- 19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?
- 20) Yes Was the pH of acid preserved non-VOA samples < 2?
- 21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?
- 22) NO Were unpreserved VOA Vials received for VOA Dept analysis?
- 23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?

pH strip lot number: HC029115

Lab notified if pH was not adequate: \_\_\_\_\_

Notes/Deficiencies:

CUSTODY SEAL

AECOM (808)521-3051

Initials WZ Date 5/19/21

Personnel receiving samples: SS

Second reviewer: SS

Personnel labeling samples: MS

Project manager notified: SS

Date/Time of notification 05/20/21

Name of client notified: \_\_\_\_\_

Date/Time of notification \_\_\_\_\_

# **SAMPLE RESULTS**

## EPA 524.2

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1359**

Sample Collection Date: 05/19/21

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

ARF: 96222

**APPL ID: BA32813**

CGC: #524-210520AL-264407

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 524.2	1,1,1,2-TETRACHLOROETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,1-TRICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2,2-TETRACHLOROETHANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2-TRICHLORO-1,2,2-TRIFLUOROET	0.04 U	0.5	0.04	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2-TRICHLOROETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROPROPENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,3-TRICHLOROBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,3-TRICHLOROPROPANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,4-TRICHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,4-TRIMETHYLBENZENE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DIBROMO-3-CHLOROPROPANE	0.92 U	2.0	0.92	0.23	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DIBROMOETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROPROPANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,3,5-TRIMETHYLBENZENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,3-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,3-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,4-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	2,2-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	2-CHLOROTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	4-CHLOROTOLUENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	BENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	BROMODICHLOROMETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOFORM	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOMETHANE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
EPA 524.2	C-1,2-DICHLOROETHENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	C-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	CARBON TETRACHLORIDE	0.18 U	0.2	0.18	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROETHANE	0.40 U	0.5	0.40	0.14	ug/L	05/20/21	05/20/21

Quant Method: L0520524.M  
Run #: 0520L22  
Instrument: Loki  
Sequence: 210520  
Dilution Factor: 1  
Initials: CHE

Printed: 05/27/21 11:03:59 AM  
APPL-F1-SC-NoMC-REG MDLs-DOD

## EPA 524.2

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1359**

Sample Collection Date: 05/19/21

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

ARF: 96222

**APPL ID: BA32813**

CGC: #524-210520AL-264407

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 524.2	CHLOROFORM	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	DIBROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	DIBROMOMETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
EPA 524.2	DICHLORODIFLUOROMETHANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
EPA 524.2	ETHYLBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	HEXACHLOROBUTADIENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	ISOPROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	METHYLENE CHLORIDE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
EPA 524.2	MTBE	0.47 U	0.5	0.47	0.23	ug/L	05/20/21	05/20/21
EPA 524.2	N-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	N-PROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	NAPHTHALENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	P-ISOPROPYLTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	SEC-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	STYRENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	T-1,2-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	T-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	TERT-BUTYLBENZENE	0.04 U	0.5	0.04	0.01	ug/L	05/20/21	05/20/21
EPA 524.2	TETRACHLOROETHENE	0.20 U	0.2	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	TOLUENE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
EPA 524.2	TRICHLOROETHENE	0.12 U	0.2	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	TRICHLOROFLUOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	VINYL CHLORIDE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	XYLENES	0.44 U	0.5	0.44	0.11	ug/L	05/20/21	05/20/21
EPA 524.2	SURROGATE: 1,2-DICHLOROETHANE-	101	70-130			%	05/20/21	05/20/21
EPA 524.2	SURROGATE: 4-BROMOFLUOROBENZ	96.2	70-130			%	05/20/21	05/20/21

Quant Method: L0520524.M
Run #: 0520L22
Instrument: Loki
Sequence: 210520
Dilution Factor: 1
Initials: CHE

Printed: 05/27/21 11:03:59 AM  
APPL-F1-SC-NoMC-REG MDLs-DOD

## EPA 524.2

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1360**

Sample Collection Date: 05/19/21

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

ARF: 96222

**APPL ID: BA32814**

CGC: #524-210520AL-264407

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 524.2	1,1,1,2-TETRACHLOROETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,1-TRICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2,2-TETRACHLOROETHANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2-TRICHLORO-1,2,2-TRIFLUOROET	0.04 U	0.5	0.04	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,1,2-TRICHLOROETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,1-DICHLOROPROPENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,3-TRICHLOROBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,3-TRICHLOROPROPANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,4-TRICHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	1,2,4-TRIMETHYLBENZENE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DIBROMO-3-CHLOROPROPANE	0.92 U	2.0	0.92	0.23	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DIBROMOETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,2-DICHLOROPROPANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	1,3,5-TRIMETHYLBENZENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	1,3-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	1,3-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	1,4-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	2,2-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	2-CHLOROTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	4-CHLOROTOLUENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	BENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	BROMODICHLOROMETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOFORM	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	BROMOMETHANE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
EPA 524.2	C-1,2-DICHLOROETHENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
EPA 524.2	C-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	CARBON TETRACHLORIDE	0.18 U	0.2	0.18	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROETHANE	0.40 U	0.5	0.40	0.14	ug/L	05/20/21	05/20/21

Quant Method: L0520524.M  
Run #: 0520L23  
Instrument: Loki  
Sequence: 210520  
Dilution Factor: 1  
Initials: CHE

Printed: 05/27/21 11:03:59 AM  
APPL-F1-SC-NoMC-REG MDLs-DOD

## EPA 524.2

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 96222

**Sample ID: ERH1360**

**APPL ID: BA32814**

Sample Collection Date: 05/19/21

CGC: #524-210520AL-264407

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 524.2	CHLOROFORM	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	CHLOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	DIBROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	DIBROMOMETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
EPA 524.2	DICHLORODIFLUOROMETHANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
EPA 524.2	ETHYLBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	HEXACHLOROBUTADIENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	ISOPROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	METHYLENE CHLORIDE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
EPA 524.2	MTBE	0.47 U	0.5	0.47	0.23	ug/L	05/20/21	05/20/21
EPA 524.2	N-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	N-PROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	NAPHTHALENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	P-ISOPROPYLTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	SEC-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	STYRENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
EPA 524.2	T-1,2-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	T-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	TERT-BUTYLBENZENE	0.04 U	0.5	0.04	0.01	ug/L	05/20/21	05/20/21
EPA 524.2	TETRACHLOROETHENE	0.20 U	0.2	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	TOLUENE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
EPA 524.2	TRICHLOROETHENE	0.12 U	0.2	0.12	0.03	ug/L	05/20/21	05/20/21
EPA 524.2	TRICHLOROFLUOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
EPA 524.2	VINYL CHLORIDE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
EPA 524.2	XYLENES	0.44 U	0.5	0.44	0.11	ug/L	05/20/21	05/20/21
EPA 524.2	SURROGATE: 1,2-DICHLOROETHANE-	101	70-130			%	05/20/21	05/20/21
EPA 524.2	SURROGATE: 4-BROMOFLUOROBENZ	96.3	70-130			%	05/20/21	05/20/21

Quant Method: L0520524.M
Run #: 0520L23
Instrument: Loki
Sequence: 210520
Dilution Factor: 1
Initials: CHE

Printed: 05/27/21 11:03:59 AM  
APPL-F1-SC-NoMC-REG MDLs-DOD

## Metals Analysis

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Attn: Alethea Ramos  
Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 96222

**Sample ID: ERH1359**

**APPL ID: BA32813**

Sample Collection Date: 05/19/21

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
200.8	LEAD (PB)	0.18 U	0.2	0.18	0.09	ug/L	1	06/01/21	06/03/21

## Metals Analysis

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

Attn: Alethea Ramos  
Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1360**

Sample Collection Date: 05/19/21

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

ARF: 96222

**APPL ID: BA32814**

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
200.8	LEAD (PB)	0.59	0.2	0.18	0.09	ug/L	1	06/01/21	06/03/21

## Wet Lab Analysis

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1359**

Sample Collection Date: 05/19/21

**APPL ID: BA32813**

ARF: 96222

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM 5310C	DISSOLVED ORGANIC CARB	0.61	0.5	0.35	0.13	mg/L	1	05/21/21	05/21/21

## Wet Lab Analysis

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

**Sample ID: ERH1360**

Sample Collection Date: 05/19/21

**APPL ID: BA32814**

ARF: 96222

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM 5310C	DISSOLVED ORGANIC CARB	0.28 J	0.5	0.35	0.13	mg/L	1	05/21/21	05/21/21

J = Estimated value.

Printed: 05/24/21 10:47:35 AM

APPL-F1-SC-NoMC-REG MDLs

# QC FORMS

# EPA 524.2

Form 2 & 8

## Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 96222

Case No: 96222

Date Analyzed: 05/20/21

Matrix: WATER

Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
210520AL-LCS	Lab Control Spike	70-130	97.6		70-130	103	
210520AL-LCSD	Lab Control SpikeD	70-130	98.4		70-130	102	
210520AL-BLK	Blank	70-130	100		70-130	97.3	
BA32813	ERH1359	70-130	101		70-130	96.2	
BA32814	ERH1360	70-130	101		70-130	96.3	

Comments: Batch: #524-210520AL

Printed: 05/27/21 11:03:44 AM  
Form 2 & 8, Surrogate Recovery Summary

# EPA 524.2

Form 4

## Blank Summary

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
Blank ID: 210520AL-BLK

SDG No: 96222  
Date Analyzed: 05/20/21  
Instrument: Loki  
Time Analyzed: 1826

<b>APPL ID.</b>	<b>Client Sample No.</b>	<b>File ID.</b>	<b>Date Analyzed</b>
210520AL-LCS	Lab Control Spike	0520L16	05/20/21 1731
210520AL-LCSD	Lab Control Spiked	0520L17	05/20/21 1758
210520AL-BLK	Blank	0520L18	05/20/21 1826
BA32813	ERH1359	0520L22	05/20/21 2016
BA32814	ERH1360	0520L23	05/20/21 2044

Comments: Batch: #524-210520AL

Printed: 05/27/21 11:03:47 AM  
Form 4, Blank Summary

# Method Blank

## EPA 524.2

Blank Name/QCG: **210520W-32679 - 264407**  
 Batch ID: #524-210520AL

APPL Inc.  
 908 North Temperance Avenue  
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	1,1,1-TRICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	1,1,2,2-TETRACHLOROETHANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	1,1,2-TRICHLORO-1,2,2-TRIFLUO	0.04 U	0.5	0.04	0.02	ug/L	05/20/21	05/20/21
BLANK	1,1,2-TRICHLOROETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
BLANK	1,1-DICHLOROETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
BLANK	1,1-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	1,1-DICHLOROPROPENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	1,2,3-TRICHLOROBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	1,2,3-TRICHLOROPROPANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
BLANK	1,2,4-TRICHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	1,2,4-TRIMETHYLBENZENE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
BLANK	1,2-DIBROMO-3-CHLOROPROPA	0.92 U	2.0	0.92	0.23	ug/L	05/20/21	05/20/21
BLANK	1,2-DIBROMOETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	1,2-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	1,2-DICHLOROETHANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	1,2-DICHLOROPROPANE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	1,3,5-TRIMETHYLBENZENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
BLANK	1,3-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	1,3-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	1,4-DICHLOROBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	2,2-DICHLOROPROPANE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	2-CHLOROTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	4-CHLOROTOLUENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
BLANK	BENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	BROMOBENZENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	BROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	BROMODICHLOROMETHANE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
BLANK	BROMOFORM	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	BROMOMETHANE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
BLANK	C-1,2-DICHLOROETHENE	0.08 U	0.5	0.08	0.02	ug/L	05/20/21	05/20/21
BLANK	C-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	CARBON TETRACHLORIDE	0.18 U	0.2	0.18	0.06	ug/L	05/20/21	05/20/21
BLANK	CHLOROBENZENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21

Quant Method:L0520524.M  
 Run #:0520L18  
 Instrument:Loki  
 Sequence:210520  
 Initials:CHE

GC SC-Blank-REG MDLs-DOD  
 Printed: 05/27/21 11:03:51 AM

# Method Blank

## EPA 524.2

Blank Name/QCG: **210520W-32679 - 264407**  
 Batch ID: #524-210520AL

APPL Inc.  
 908 North Temperance Avenue  
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	CHLOROETHANE	0.40 U	0.5	0.40	0.14	ug/L	05/20/21	05/20/21
BLANK	CHLOROFORM	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	CHLOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	DIBROMOCHLOROMETHANE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	DIBROMOMETHANE	0.32 U	0.5	0.32	0.08	ug/L	05/20/21	05/20/21
BLANK	DICHLORODIFLUOROMETHANE	0.36 U	0.5	0.36	0.09	ug/L	05/20/21	05/20/21
BLANK	ETHYLBENZENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	HEXACHLOROBUTADIENE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	ISOPROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	METHYLENE CHLORIDE	0.45 U	0.5	0.45	0.15	ug/L	05/20/21	05/20/21
BLANK	MTBE	0.47 U	0.5	0.47	0.23	ug/L	05/20/21	05/20/21
BLANK	N-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	N-PROPYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	NAPHTHALENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	P-ISOPROPYLTOLUENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	SEC-BUTYLBENZENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	STYRENE	0.24 U	0.5	0.24	0.06	ug/L	05/20/21	05/20/21
BLANK	T-1,2-DICHLOROETHENE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	T-1,3-DICHLOROPROPENE	0.12 U	0.5	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	TERT-BUTYLBENZENE	0.04 U	0.5	0.04	0.01	ug/L	05/20/21	05/20/21
BLANK	TETRACHLOROETHENE	0.20 U	0.2	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	TOLUENE	0.40 U	0.5	0.40	0.10	ug/L	05/20/21	05/20/21
BLANK	TRICHLOROETHENE	0.12 U	0.2	0.12	0.03	ug/L	05/20/21	05/20/21
BLANK	TRICHLOROFLUOROMETHANE	0.20 U	0.5	0.20	0.05	ug/L	05/20/21	05/20/21
BLANK	VINYL CHLORIDE	0.16 U	0.5	0.16	0.04	ug/L	05/20/21	05/20/21
BLANK	XYLENES	0.44 U	0.5	0.44	0.11	ug/L	05/20/21	05/20/21
BLANK	SURROGATE: 1,2-DICHLOROET	100	70-130			%	05/20/21	05/20/21
BLANK	SURROGATE: 4-BROMOFLUORO	97.3	70-130			%	05/20/21	05/20/21

Quant Method:L0520524.M
Run #:0520L18
Instrument:Loki
Sequence:210520
Initials:CHE

GC SC-Blank-REG MDLs-DOD  
 Printed: 05/27/21 11:03:51 AM

# EPA 524.2

Form 4

## LCS Summary

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
LCS ID: 210520AL-LCS

SDG No: 96222  
Date Analyzed: 05/20/21  
Instrument: Loki  
Time Analyzed: 1731

<b>APPL ID.</b>	<b>Client Sample No.</b>	<b>File ID.</b>	<b>Date Analyzed</b>
210520AL-LCS	Lab Control Spike	0520L16	05/20/21 1731
210520AL-LCSD	Lab Control Spiked	0520L17	05/20/21 1758
210520AL-BLK	Blank	0520L18	05/20/21 1826
BA32813	ERH1359	0520L22	05/20/21 2016
BA32814	ERH1360	0520L23	05/20/21 2044

Comments: Batch: #524-210520AL

# Laboratory Control Spike Recoveries

## EPA 524.2

APPL ID: 210520W-32679 LCS - 264407

Batch ID: #524-210520AL

APPL Inc.

908 North Temperance Avenue  
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1,2-TETRACHLOROETHANE	10.00	9.57	9.90	95.7	99.0	70-130	3.4	20
1,1,1-TRICHLOROETHANE	10.00	9.44	9.54	94.4	95.4	70-130	1.1	20
1,1,2,2-TETRACHLOROETHANE	10.00	9.34	9.71	93.4	97.1	70-130	3.9	20
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10.00	9.77	10.1	97.7	101	70-130	3.3	20
1,1,2-TRICHLOROETHANE	10.00	9.61	9.75	96.1	97.5	70-130	1.4	20
1,1-DICHLOROETHANE	10.00	9.56	9.56	95.6	95.6	70-130	0.0	20
1,1-DICHLOROETHENE	10.00	9.40	9.65	94.0	96.5	70-130	2.6	20
1,1-DICHLOROPROPENE	10.00	9.37	9.49	93.7	94.9	70-130	1.3	20
1,2,3-TRICHLOROBENZENE	10.00	11.4	11.6	114	116	70-130	1.7	20
1,2,3-TRICHLOROPROPANE	10.00	10.3	11.1	103	111	60-120	7.5	20
1,2,4-TRICHLOROBENZENE	10.00	12.4	11.6	124	116	70-130	6.7	20
1,2,4-TRIMETHYLBENZENE	10.00	10.1	10.3	101	103	70-130	2.0	20
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.2	11.1	102	111	60-120	8.5	20
1,2-DIBROMOETHANE	10.00	9.09	9.75	90.9	97.5	70-130	7.0	20
1,2-DICHLOROBENZENE	10.00	9.88	10.2	98.8	102	70-130	3.2	20
1,2-DICHLOROETHANE	10.00	9.07	9.89	90.7	98.9	70-130	8.6	20
1,2-DICHLOROPROPANE	10.00	9.16	9.87	91.6	98.7	70-130	7.5	20
1,3,5-TRIMETHYLBENZENE	10.00	10.1	10.3	101	103	70-130	2.0	20
1,3-DICHLOROBENZENE	10.00	10.1	10.7	101	107	70-130	5.8	20
1,3-DICHLOROPROPANE	10.00	9.66	10.3	96.6	103	70-130	6.4	20
1,4-DICHLOROBENZENE	10.00	10.0	10.1	100	101	70-130	1.00	20
2,2-DICHLOROPROPANE	10.00	8.92	9.14	89.2	91.4	70-130	2.4	20
2-CHLOROTOLUENE	10.00	10.4	10.6	104	106	70-130	1.9	20
4-CHLOROTOLUENE	10.00	10.4	10.6	104	106	70-130	1.9	20

Comments: \_\_\_\_\_

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Quant Method :	L0520524.M	L0520524.M
Extraction Date :	05/20/21	05/20/21
Analysis Date :	05/20/21	05/20/21
Instrument :	Loki	Loki
Run :	0520L16	0520L17
Initials :	CHE	

# Laboratory Control Spike Recoveries

## EPA 524.2

APPL ID: 210520W-32679 LCS - 264407

Batch ID: #524-210520AL

APPL Inc.

908 North Temperance Avenue  
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	9.18	9.75	91.8	97.5	70-130	6.0	20
BROMOBENZENE	10.00	10.1	10.2	101	102	70-130	0.99	20
BROMOCHLOROMETHANE	10.00	9.46	10.2	94.6	102	70-130	7.5	20
BROMODICHLOROMETHANE	10.00	9.08	9.48	90.8	94.8	70-130	4.3	20
BROMOFORM	10.00	9.97	9.54	99.7	95.4	70-130	4.4	20
BROMOMETHANE	10.00	10.1	9.82	101	98.2	70-130	2.8	20
C-1,2-DICHLOROETHENE	10.00	9.24	9.45	92.4	94.5	70-130	2.2	20
C-1,3-DICHLOROPROPENE	10.00	9.43	9.75	94.3	97.5	70-130	3.3	20
CARBON TETRACHLORIDE	10.00	9.58	9.95	95.8	99.5	70-130	3.8	20
CHLOROBENZENE	10.00	9.41	9.44	94.1	94.4	70-130	0.32	20
CHLOROETHANE	10.00	9.84	10.6	98.4	106	70-130	7.4	20
CHLOROFORM	10.00	9.26	9.78	92.6	97.8	70-130	5.5	20
CHLOROMETHANE	10.00	9.37	9.73	93.7	97.3	70-130	3.8	20
DIBROMOCHLOROMETHANE	10.00	9.48	9.96	94.8	99.6	70-130	4.9	20
DIBROMOMETHANE	10.00	9.09	10.1	90.9	101	70-130	10.5	20
DICHLORODIFLUOROMETHANE	10.00	10.0	9.19	100	91.9	70-130	8.4	20
ETHYLBENZENE	10.00	9.68	9.87	96.8	98.7	70-130	1.9	20
HEXACHLOROBUTADIENE	10.00	10.7	11.7	107	117	70-130	8.9	20
ISOPROPYLBENZENE	10.00	10.2	10.8	102	108	70-130	5.7	20
METHYLENE CHLORIDE	10.00	11.0	10.1	110	101	70-130	8.5	20
MTBE	10.00	10.0	10.6	100	106	70-130	5.8	20
N-BUTYLBENZENE	10.00	10.5	10.8	105	108	70-130	2.8	20
N-PROPYLBENZENE	10.00	10.2	10.7	102	107	70-130	4.8	20
NAPHTHALENE	10.00	11.8	12.0	118	120	70-130	1.7	20

Comments: \_\_\_\_\_

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Quant Method :	L0520524.M	L0520524.M
Extraction Date :	05/20/21	05/20/21
Analysis Date :	05/20/21	05/20/21
Instrument :	Loki	Loki
Run :	0520L16	0520L17
Initials :	CHE	

# Laboratory Control Spike Recoveries

## EPA 524.2

APPL ID: 210520W-32679 LCS - 264407

Batch ID: #524-210520AL

APPL Inc.

908 North Temperance Avenue  
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
P-ISOPROPYLTOLUENE	10.00	9.97	10.3	99.7	103	70-130	3.3	20
SEC-BUTYLBENZENE	10.00	10.6	11.0	106	110	70-130	3.7	20
STYRENE	10.00	9.42	9.58	94.2	95.8	70-130	1.7	20
T-1,2-DICHLOROETHENE	10.00	9.72	9.65	97.2	96.5	70-130	0.72	20
T-1,3-DICHLOROPROPENE	10.00	9.65	9.68	96.5	96.8	70-130	0.31	20
TERT-BUTYLBENZENE	10.00	9.96	10.2	99.6	102	70-130	2.4	20
TETRACHLOROETHENE	10.00	10.4	10.1	104	101	70-130	2.9	20
TOLUENE	10.00	9.59	9.80	95.9	98.0	70-130	2.2	20
TRICHLOROETHENE	10.00	9.15	9.77	91.5	97.7	70-130	6.6	20
TRICHLOROFLUOROMETHANE	10.00	9.61	10.3	96.1	103	70-130	6.9	20
VINYL CHLORIDE	10.00	10.0	10.1	100	101	70-130	1.00	20
XYLENES	30.0	29.7	30.3	99.0	101	70-130	2.0	20
-----								
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.4	24.6	97.6	98.4	70-130		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.7	25.5	103	102	70-130		
-----								

Comments: \_\_\_\_\_

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Quant Method :	L0520524.M	L0520524.M
Extraction Date :	05/20/21	05/20/21
Analysis Date :	05/20/21	05/20/21
Instrument :	Loki	Loki
Run :	0520L16	0520L17
Initials :	CHE	

Form 5  
Tune Summary

Lab Name: APPL Inc.  
 Case No: 96222  
 Matrix: Water  
 ID: 0520L00.D

SDG No: 96222  
 Date Analyzed: 05/20/21  
 Instrument: Loki  
 Time Analyzed: 10:14

Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	0.2ug/L 524 HCL 5/20	0520L06.D	05/20/21 12:54	
2	0.5ug/L 524 HCL 5/20	0520L07.D	05/20/21 13:22	
3	1ug/L 524 HCL 5/20/2	0520L08.D	05/20/21 13:50	
4	5ug/L 524 HCL 5/20/2	0520L09.D	05/20/21 14:17	
5	10ug/L 524 HCL 5/20/	0520L10.D	05/20/21 14:45	
6	20ug/L 524 HCL 5/20/	0520L11.D	05/20/21 15:12	
7	40ug/L 524 HCL 5/20/	0520L12.D	05/20/21 15:40	
8	100ug/L 524 HCL 5/20	0520L13.D	05/20/21 16:08	
9	(SS) 10ug/L 524 HCL	0520L15.D	05/20/21 17:03	
10	Lab Control Spike	210520A LCS 10ug/L	0520L16.D	05/20/21 17:31
11	Lab Control Spiked	210520A LCSD 10ug/L	0520L17.D	05/20/21 17:58
12	Blank	210520A BLK	0520L18.D	05/20/21 18:26
13	ERH1359	BA32813W01	0520L22.D	05/20/21 20:16
14	ERH1360	BA32814W01	0520L23.D	05/20/21 20:44
15	Ending CCV 10ug/L 5/	0520L24.D	05/20/21 21:11	
16				
17				
18				
19				
20				
21				
22				

m/e

50 15 - 40% of mass 95	<u>20.9</u>
75 30 - 60% of mass 95	<u>54.4</u>
95 100 - 100% of mass 95	<u>100.0</u>
96 5 - 9% of mass 95	<u>7.5</u>
173 0 - 2% of mass 174	<u>0.0</u>
174 50 - 200% of mass 95	<u>97.3</u>
175 5 - 9% of mass 174	<u>8.8</u>
176 94.9 - 100% of mass 174	<u>98.5</u>
177 5 - 9% of mass 176	<u>7.9</u>

8A  
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ SDG No.: \_\_\_\_\_  
 Lab File ID (Standard): 0520L10.D Date Analyzed: 05/20/21  
 Instrument ID: Loki Time Analyzed: 14:45  
 GC Column: \_\_\_\_\_ ID: \_\_\_\_\_ Heated Purge: (Y/N) \_\_\_\_\_

	Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D4 (IS)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	441107	6.59	365215	10.04	214208	12.61
UPPER LIMIT	882214	6.76	730430	10.21	428416	12.78
LOWER LIMIT	220554	6.42	182608	9.87	107104	12.44
SAMPLE NO.						
01 (SS) 10ug/L 524 HCL 5/	487413	6.59	399950	10.04	231121	12.61
02 210520A LCS 10ug/L	479435	6.59	397426	10.04	228030	12.61
03 210520A LCSD 10ug/L	481695	6.59	396811	10.04	224576	12.61
04 210520A BLK	457892	6.59	377408	10.04	197986	12.61
05 BA32813W01	444873	6.59	373473	10.04	193440	12.61
06 BA32814W01	452092	6.59	379504	10.04	194709	12.61
07 Ending CCV 10ug/L 5/20	450762	6.59	374554	10.04	219879	12.61
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = -50% of internal standard area.  
 RT UPPER LIMIT = +0.17 minutes of internal standard RT  
 RT LOWER LIMIT = -0.17 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

**200.8**

Form 4

**Blank Summary**

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
Blank ID: 210601B-BLK

SDG No: 96222  
Date Analyzed: 06/03/21  
Instrument: Megatron  
Time Analyzed: 0252

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210601B-MS	Matrix Spike	210602A	06/03/21 0328
210601B-LCSD	Lab Control SpikeD	210602A	06/03/21 0306
210601B-LCS	Lab Control Spike	210602A	06/03/21 0259
210601B-BLK	Blank	210602A	06/03/21 0252
BA32814	ERH1360	210602A	06/03/21 0321
BA32813	ERH1359	210602A	06/03/21 0314

Comments: Batch: #2008-210601B

# METALS BLANK

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
200.8	LEAD (PB)	0.18 U	0.2	0.18	0.09	ug/L	06/01/21	06/03/21	#2008-210601B-BA32814

**200.8**

Form 4

**LCS Summary**

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
LCS ID: 210601B-LCS

SDG No: 96222  
Date Analyzed: 06/03/21  
Instrument: Megatron  
Time Analyzed: 0259

APPL ID.	Client Sample No.	File ID.	Date Analyzed
210601B-MS	Matrix Spike	210602A	06/03/21 0328
210601B-LCSD	Lab Control SpikeD	210602A	06/03/21 0306
210601B-LCS	Lab Control Spike	210602A	06/03/21 0259
210601B-BLK	Blank	210602A	06/03/21 0252
BA32814	ERH1360	210602A	06/03/21 0321
BA32813	ERH1359	210602A	06/03/21 0314

Comments: Batch: #2008-210601B

## Laboratory Control Spike Recoveries

### METALS

APPL Inc.  
 908 North Temperance Avenue  
 Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
200.8	LEAD (PB)	100.0	95.2	94.2	95.2	94.2	1.1	20	80-120	06/01/21	06/03/21	06/01/21	06/03/21	#2008-210601B-BA32814

Comments:

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**Matrix Spike Recovery**  
**METALS**

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Sample ID: BA32814  
Client ID: ERH1360

Method	Compound Name	Spike Level ug/L	Matrix Result ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group	QC Sample
200.8	LEAD (PB)	250	0.59	211	84.2	80-120	06/01/21	06/03/21	#2008-210601B	BA32814

Comments:

# SM 5310C

Form 4

## Blank Summary

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
Blank ID: 210521A-BLK

SDG No: 96222  
Date Analyzed: 05/21/21  
Instrument: TICTOC  
Time Analyzed: 1112

<b>APPL ID.</b>	<b>Client Sample No.</b>	<b>File ID.</b>	<b>Date Analyzed</b>
210521A-BLK	Blank	31	05/21/21 1112
210521A-LCS	Lab Control Spike	32	05/21/21 1151
210521A-LCSD	Lab Control Spiked	33	05/21/21 1231
210521A-DUP	Duplicate	35	05/21/21 1428
BA32813	ERH1359	35	05/21/21 1506
210521A-MS	Matrix Spike	36	05/21/21 1543
210521A-MSD	Matrix Spiked	37	05/21/21 1621
BA32814	ERH1360	38	05/21/21 1658

Comments: Batch: #5310C-210521A

Printed: 05/24/21 10:46:40 AM  
Form 4, Blank Summary

# WETLAB BLANK

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 5310C	DISSOLVED ORGA	0.35 U	0.5	0.35	0.13	mg/L	05/21/21	05/21/21	#5310C-210521A-BA32813

# **SM 5310C**

Form 4

## **LCS Summary**

Lab Name: APPL, Inc.  
Case No: 96222  
Matrix: WATER  
LCS ID: 210521A-LCS

SDG No: 96222  
Date Analyzed: 05/21/21  
Instrument: TICTOC  
Time Analyzed: 1151

<b>APPL ID.</b>	<b>Client Sample No.</b>	<b>File ID.</b>	<b>Date Analyzed</b>
210521A-BLK	Blank	31	05/21/21 1112
210521A-LCS	Lab Control Spike	32	05/21/21 1151
210521A-LCSD	Lab Control Spiked	33	05/21/21 1231
210521A-DUP	Duplicate	35	05/21/21 1428
BA32813	ERH1359	35	05/21/21 1506
210521A-MS	Matrix Spike	36	05/21/21 1543
210521A-MSD	Matrix SpikeD	37	05/21/21 1621
BA32814	ERH1360	38	05/21/21 1658

Comments: Batch: #5310C-210521A

Printed: 05/24/21 10:46:40 AM  
Form 4, LCS Summary

# Laboratory Control Spike Recoveries

## WETLAB

APPL Inc.  
 908 North Temperance Avenue  
 Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM 5310C	DISSOLVED ORGANIC CA	5.00	5.05	5.05	101	101	0.0	20	80-120	05/21/21	05/21/21	05/21/21	05/21/21	#5310C-210521A-BA32813

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Matrix Spike Recoveries

## WETLAB

APPL ID: 210521W-32813 MS - 264205

APPL Inc.

908 North Temperance Avenue

Sample ID: BA32813

Clovis, CA 93611

Client ID: ERH1359

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Recovery Max	Extract Limits	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 5310C	DISSOLVED ORGANIC	5.00	0.61	5.75	5.70	103	102	0.87	20	80-120	05/21/21	05/21/21	05/21/21	264205	BA32813

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# WETLAB

## Sample/Sample Duplicate Results

AECOM  
1001 Bishop Street, Suite 1600  
Honolulu, HI 96813

Sample ID: BA32813  
Client ID: ERH1359

APPL Inc.  
908 North Temperance Avenue  
Clovis, CA 93611

Attn: Alethea Ramos

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 96222

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	MDL	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SM 5310C	DISSOLVED ORG	BA32813	0.61	0.74	19	20	0.13	0.5	mg/L	05/21/21	05/21/21	05/21/21	05/21/21

**ORGANICS**  
**Calibration Data**

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 6  
Initial Calibration

Lab Name: APPL, Inc.

Case No: \_\_\_\_\_

Matrix: Water

SDG No: \_\_\_\_\_

Initial Cal. Date: 05/20/21

Instrument: Loki

Initials: CH

0520L06.D    0520L07.D    0520L08.D    0520L09.D    0520L10.D    0520L11.D    0520L12.D    0520L13.D

	Compound	1	2	3	4	5	6	7	8		Avg	%RSD	Type	r^2	Q	MRF
1	I Fluorobenzene (IS)															
2	TMC Dichlorodifluoromethane		0.0957	0.1017	0.0791	0.0911	0.0857	0.0885	0.0873		0.09	8.1	TMC			
3	TML Freon 114		0.0940	0.1055	0.0559	0.0767	0.0760	0.0769	0.0772		0.08	20	TM	1.000		
4	TMC*L Chloromethane		0.1531	0.1464	0.1056	0.1051	0.0987	0.0970	0.0919		0.11	22	TMC**	1.000		
5	TMC* Vinyl chloride		0.0900	0.0916	0.0867	0.0980	0.0866	0.0925	0.0902		0.09	4.3	TMC*			
6	TMC Bromomethane		0.0833	0.0724	0.0693	0.0640	0.0638	0.0624	0.0632		0.07	11	TMC			
7	TMCL Chloroethane		0.1047	0.0795	0.0691	0.0638	0.0598	0.0617	0.0618		0.07	23	TMC	1.000		
8	TM Dichlorofluoromethane		0.2132	0.2000	0.1733	0.1662	0.1553	0.1559	0.1592		0.17	13	TM			
9	TMC Trichlorofluoromethane		0.0944	0.0822	0.0861	0.0913	0.0829	0.0879	0.0886		0.09	5.0	TMC			
10	TM Acrolein		0.0086	0.0084	0.0079	0.0083	0.0081	0.0083	0.0083		0.01	2.7	TM			
11	TMC Acetone		0.0354	0.0338	0.0278	0.0280	0.0288	0.0282	0.0276		0.03	11	TMC			
12	TMC Freon-113		0.0882	0.0783	0.0721	0.0806	0.0779	0.0785	0.0803		0.08	6.0	TMC			
13	TMC* 1,1-DCE		0.1417	0.1469	0.1140	0.1234	0.1144	0.1184	0.1207		0.13	11	TMC*			
14	TMQ t-Butanol												TM			
15	TM Acetonitrile		0.0133	0.0144	0.0129	0.0133	0.0121	0.0134	0.0126		0.01	5.5	TM			
16	TMCL Methyl Acetate		0.1054	0.0858	0.0642	0.0720	0.0596	0.0690	0.0617		0.07	22	TMC	0.998		
17	TML Iodomethane			0.0210	0.0296	0.0393	0.0469	0.0537	0.0706		0.04	41	TM	0.991		
18	TML Acrylonitrile												TM			
19	TMCL Methylene chloride		0.1994	0.1496	0.1069	0.1105	0.0970	0.0956	0.0961		0.12	32	TMC	1.000		
20	TMCL Carbon disulfide		0.1435	0.1746	0.1120	0.1239	0.1111	0.1112	0.1147		0.13	19	TMC	1.000		
21	TMC Methyl t-butyl ether (MtBE)		0.0817	0.0828	0.0833	0.0875	0.0882	0.0971	0.1201		0.09	15	TMC			
22	TMC Trans-1,2-DCE		0.1269	0.1188	0.1106	0.1194	0.1050	0.1083	0.1147		0.11	6.5	TMC			
23	TM Diisopropyl Ether		0.2324	0.2044	0.2156	0.2187	0.2050	0.2296	0.2495		0.22	7.3	TM			
24	TMC** 1,1-DCA		0.1628	0.1885	0.1638	0.1674	0.1534	0.1551	0.1601		0.16	7.1	TMC**			
25	TM Vinyl Acetate		0.0604	0.0582	0.0494	0.0489	0.0435	0.0495	0.0537		0.05	11	TM			
26	TM Ethyl tert Butyl Ether												TM			
27	TMC MEK (2-Butanone)		0.0344	0.0344	0.0336	0.0362	0.0349	0.0363	0.0361		0.04	3.0	TMC			
28	TMC Cis-1,2-DCE		0.1594	0.1445	0.1329	0.1342	0.1206	0.1307	0.1371		0.14	8.9	TMC			
29	TM 2,2-Dichloropropane		0.1364	0.1310	0.1276	0.1241	0.1107	0.1156	0.1204		0.12	7.2	TM			
30	TMC* Chloroform		0.2147	0.1688	0.1750	0.1815	0.1672	0.1676	0.1695		0.18	9.6	TMC*			
31	TM Bromochloromethane		0.0836	0.0756	0.0822	0.0752	0.0715	0.0731	0.0716		0.08	6.5	TM			
32	S Dibromofluoromethane(S)	0.3414	0.2827	0.2867	0.2946	0.2891	0.2866	0.2750	0.2708		0.29	7.5	S			
33	TMC 1,1,1-TCA		0.1537	0.1780	0.1485	0.1507	0.1392	0.1425	0.1494		0.15	8.3	TMC			
34	TMC Cyclohexane		0.0995	0.0976	0.0813	0.0914	0.0949	0.1036	0.1172		0.10	11	TMC			
35	TM 1,1-Dichloropropene		0.1139	0.1030	0.0928	0.1008	0.0972	0.1040	0.1097		0.10	7.0	TM			

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 6  
Initial Calibration

Lab Name: APPL, Inc.  
Case No: \_\_\_\_\_  
Matrix: Water

SDG No: \_\_\_\_\_  
Initial Cal. Date: 05/20/21  
Instrument: Loki

Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	Q	MRF
36	TM	2,2,4-Trimethylpentane		0.0701	0.0845	0.0598	0.0782	0.0807	0.0864	0.0947			0.08	14	TM		
37	S	1,2-DCA-D4(S)	0.3668	0.3142	0.3072	0.3137	0.3181	0.3092	0.2951	0.2850			0.31	7.7	S		
38	TMCL	Carbon Tetrachloride	0.0506	0.1418	0.1242	0.1296	0.1265	0.1166	0.1224	0.1266			0.12	24	TMC	1.000	
39	TM	Tert Amyl Methyl Ether													TM		
40	TMC	1,2-DCA		0.1649	0.1673	0.1423	0.1436	0.1296	0.1330	0.1356			0.15	10	TMC		
41	TMC	Benzene		0.4218	0.3576	0.3320	0.3459	0.3221	0.3362	0.3473			0.35	9.4	TMC		
42	TMC	TCE	0.1331	0.1187	0.1137	0.1056	0.1072	0.0996	0.1022	0.1052			0.11	9.9	TMC		
43	TM	2-Pentanone		0.0457	0.0481	0.0527	0.0547	0.0554	0.0586	0.0618			0.05	10	TM		
44	TMC*	1,2-Dichloropropane		0.1176	0.0986	0.0964	0.0972	0.0882	0.0932	0.0961			0.10	9.4	TMC*		
45	TMC	Bromodichloromethane		0.1557	0.1510	0.1393	0.1334	0.1229	0.1268	0.1324			0.14	8.8	TMC		
46	TMCL	Methyl Cyclohexane		0.0381	0.0536	0.0474	0.0564	0.0489	0.0573	0.0644			0.05	16	TMC	0.997	
47	TM	Dibromomethane		0.0923	0.0795	0.0879	0.0848	0.0794	0.0818	0.0833			0.08	5.5	TM		
48	TM	2-Chloroethyl vinyl ether													TM		
49	TMC	MIBK (methyl isobutyl ketone)		0.0554	0.0573	0.0606	0.0643	0.0670	0.0688	0.0717			0.06	9.5	TMC		
50	TM	1-Bromo-2-chloroethane		0.0730	0.0763	0.0708	0.0729	0.0665	0.0665	0.0675			0.07	5.4	TM		
51	TMC	Cis-1,3-Dichloropropene		0.1514	0.1395	0.1272	0.1265	0.1222	0.1325	0.1423			0.13	7.7	TMC		
52	TMC*	Toluene		0.3974	0.4057	0.3904	0.4008	0.3802	0.3884	0.3986			0.39	2.2	TMC*		
53	TMC	Trans-1,3-Dichloropropene		0.0802	0.0760	0.0712	0.0705	0.0657	0.0710	0.0753			0.07	6.4	TMC		
54	TMC	1,1,2-TCA		0.1171	0.1036	0.0993	0.1009	0.0907	0.0928	0.0946			0.10	8.9	TMC		
55	TMCL	2-Hexanone		0.0265	0.0297	0.0327	0.0355	0.0386	0.0402	0.0442			0.04	17	TMC	0.990	
56	I	Chlorobenzene-D5 (IS)															
57	S	Toluene-D8(S)	1.213	1.075	1.080	1.180	1.218	1.207	1.209	1.178			1.2	5.0	S		
58	TMC	1,2-EDB		0.1509	0.1225	0.1156	0.1227	0.1090	0.1208	0.1239			0.12	11	TMC		
59	TMCL	Tetrachloroethene	0.1015	0.1264	0.0861	0.0884	0.0878	0.0812	0.0865	0.0863			0.09	16	TMC	1.000	
60	TML	1-Chlorohexane		0.1671	0.1505	0.1048	0.1101	0.1004	0.1169	0.1277			0.13	20	TM	0.998	
61	TM	1,1,1,2-Tetrachloroethane		0.1346	0.1339	0.1376	0.1384	0.1221	0.1330	0.1362			0.13	4.1	TM		
62	TMC	m&p-Xylene		0.3377	0.3224	0.3179	0.3612	0.3600	0.4076	0.4327			0.36	12	TMC		
63	TMC	o-Xylene		0.3073	0.3413	0.3397	0.3611	0.3577	0.4122	0.4455			0.37	13	TMC		
64	TMCL	Styrene		0.2080	0.2295	0.2577	0.2930	0.2996	0.3526	0.3831			0.29	22	TMC	0.998	
65	S	4-Bromofluorobenzene(S)	0.4273	0.3640	0.3617	0.3944	0.4277	0.4473	0.4505	0.4583			0.42	9.2	S		
66	TM	1,3-Dichloropropane		0.1742	0.1737	0.1769	0.1865	0.1644	0.1803	0.1831			0.18	4.1	TM		
67	TMC	Dibromochloromethane		0.1337	0.1399	0.1391	0.1408	0.1272	0.1338	0.1411			0.14	3.8	TMC		
68	TMC**	Chlorobenzene		0.4147	0.3724	0.3518	0.3537	0.3173	0.3413	0.3489			0.36	8.5	TMC**		
69	TMC*	Ethylbenzene		0.2752	0.2619	0.2468	0.2665	0.2479	0.2915	0.3141			0.27	8.9	TMC*		
70	TMC**	Bromoform		0.0787	0.0936	0.1079	0.1053	0.0952	0.1025	0.1125			0.10	11	TMC**		

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 6  
Initial Calibration

Lab Name: APPL, Inc.  
Case No: \_\_\_\_\_  
Matrix: Water

SDG No: \_\_\_\_\_  
Initial Cal. Date: 05/20/21  
Instrument: Loki

Initials: CH

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type		Q	MRF
71	I	1,4-Dichlorobenzene-D4 (IS)																
72	TMC	Isopropylbenzene		0.7359	0.6732	0.6654	0.7341	0.7059	0.7985	0.8330			0.74	8.4	TMC			
73	TMC**	1,1,2,2-Tetrachloroethane		0.3272	0.3016	0.2909	0.2684	0.2380	0.2518	0.2550			0.28	11	TMC**			
74	TM	1,2,3-Trichloropropane		0.0637	0.0891	0.0892	0.0862	0.0836	0.0834	0.0850			0.08	11	TM			
75	TM	t-1,4-Dichloro-2-Butene													TM			
76	TM	Bromobenzene		0.2915	0.2564	0.2555	0.2615	0.2375	0.2554	0.2511			0.26	6.3	TM			
77	TM	n-Propylbenzene		0.8240	0.7845	0.8005	0.8975	0.8323	0.9438	0.9752			0.87	8.5	TM			
78	TM	4-Ethyltoluene		0.5565	0.5491	0.5843	0.6787	0.6620	0.7300	0.7465			0.64	13	TM			
79	TM	2-Chlorotoluene		0.6521	0.6597	0.6403	0.6981	0.6503	0.7153	0.7148			0.68	4.8	TM			
80	TML	1,3,5-Trimethylbenzene		0.5211	0.5178	0.5459	0.6429	0.6427	0.7400	0.7733			0.63	17	TM	0.999		
81	TM	4-Chlorotoluene		0.6521	0.6597	0.6403	0.6981	0.6503	0.7153	0.7148			0.68	4.8	TM			
82	TM	Tert-Butylbenzene		0.6416	0.5113	0.5235	0.5644	0.5440	0.6268	0.6618			0.58	10	TM			
83	TML	1,2,4-Trimethylbenzene		0.5211	0.5178	0.5459	0.6429	0.6427	0.7400	0.7733			0.63	17	TM	0.999		
84	TM	Sec-Butylbenzene		0.6214	0.6983	0.6746	0.7884	0.7628	0.8825	0.9396			0.77	15	TM			
85	TML	p-Isopropyltoluene		0.6163	0.5175	0.5862	0.6701	0.6718	0.7998	0.8428			0.67	17	TM	0.999		
86	TM	Benzyl Chloride		0.2022	0.1508	0.1392	0.1498	0.1386	0.1533	0.1734			0.16	14	TM			
87	TMC	1,3-DCB		0.5075	0.5114	0.4828	0.4961	0.4598	0.4875	0.4979			0.49	3.5	TMC			
88	TMC	1,4-DCB		0.5649	0.4434	0.4830	0.4885	0.4527	0.4991	0.5088			0.49	8.2	TMC			
89	TM	n-Butylbenzene		0.5256	0.5009	0.4664	0.5286	0.5241	0.6197	0.6787			0.55	13	TM			
90	TMC	1,2-DCB		0.6106	0.5968	0.5039	0.5168	0.4685	0.4995	0.5073			0.53	10	TMC			
91	TM	Hexachloroethane		0.1629	0.1181	0.1240	0.1294	0.1183	0.1255	0.1301			0.13	12	TM			
92	TMCL	1,2-Dibromo-3-chloropropane		0.0802	0.0786	0.0524	0.0530	0.0495	0.0552	0.0582			0.06	21	TMC	0.999		
93	TMC	1,2,4-Trichlorobenzene		0.1511	0.1150	0.1184	0.1293	0.1293	0.1483	0.1608			0.14	13	TMC			
94	TML	Hexachlorobutadiene		0.1229	0.1192	0.0681	0.0795	0.0709	0.0729	0.0821			0.09	26	TM	0.997		
95	TML	Naphthalene		0.3131	0.3812	0.3852	0.4311	0.4727	0.5789	0.6930			0.47	28	TM	0.994		
96	TM	1,2,3-Trichlorobenzene		0.1517	0.1327	0.1098	0.1229	0.1130	0.1317	0.1427			0.13	12	TM			
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Data File : M:\LOKI\DATA\210520\0520L06.D  
 Acq On : 20 May 21 12:54  
 Sample : 0.2ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 6  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RPE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.59	96	398099	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	323991	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	162743	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	5.75	113	27184	5.87	ppb	0.00
Spiked Amount	25.000		Recovery	=	23.476%	
37) 1,2-DCA-D4(S)	6.16	65	29204	5.85	ppb	0.00
Spiked Amount	25.000		Recovery	=	23.388%	
57) Toluene-D8(S)	8.44	98	78611	5.18	ppb	0.00
Spiked Amount	25.000		Recovery	=	20.736%	
65) 4-Bromofluorobenzene(S)	11.34	174	27688	5.13	ppb	0.00
Spiked Amount	25.000		Recovery	=	20.524%	
Target Compounds						
3) Freon 114	1.28	85	78	0.32	ppb	# 12
4) Chloromethane	1.32	50	626	-0.66	ppb	# 63
7) Chloroethane	1.80	64	1386	1.19	ppb	# 40
10) Acrolein	2.49	56	1310	9.95	ppb	97
11) Acetone	2.68	43	3027	6.35	ppb	88
15) Acetonitrile	3.00	41	2392	11.43	ppb	85
16) Methyl Acetate	3.10	43	297	-0.56	ppb	# 53
19) Methylene chloride	3.18	84	1737	0.48	ppb	92
25) Vinyl Acetate	4.42	43	286	0.35	ppb	100
27) MEK (2-Butanone)	5.17	43	2680	4.79	ppb	# 75
38) Carbon Tetrachloride	5.96	119	161	0.39	ppb	82
43) 2-Pentanone	7.31	43	6410	7.47	ppb	94
49) MIBK (methyl isobutyl ket	8.36	43	4031	3.98	ppb	95
55) 2-Hexanone	9.30	43	2035	10.95	ppb	93
60) 1-Chlorohexane	10.03	91	754	1.84	ppb	# 1
62) m&p-Xylene	10.33	91	1744	0.37	ppb	# 85
64) Styrene	10.78	104	500	2.02	ppb	# 77
80) 1,3,5-Trimethylbenzene	12.24	105	716	1.58	ppb	# 67
83) 1,2,4-Trimethylbenzene	12.24	105	716	1.58	ppb	# 67
85) p-Isopropyltoluene	12.59	119	841	1.81	ppb	93
94) Hexachlorobutadiene	15.01	225	196	1.32	ppb	# 21
95) Naphthalene	15.10	128	475	3.08	ppb	# 77

Quantitation Report

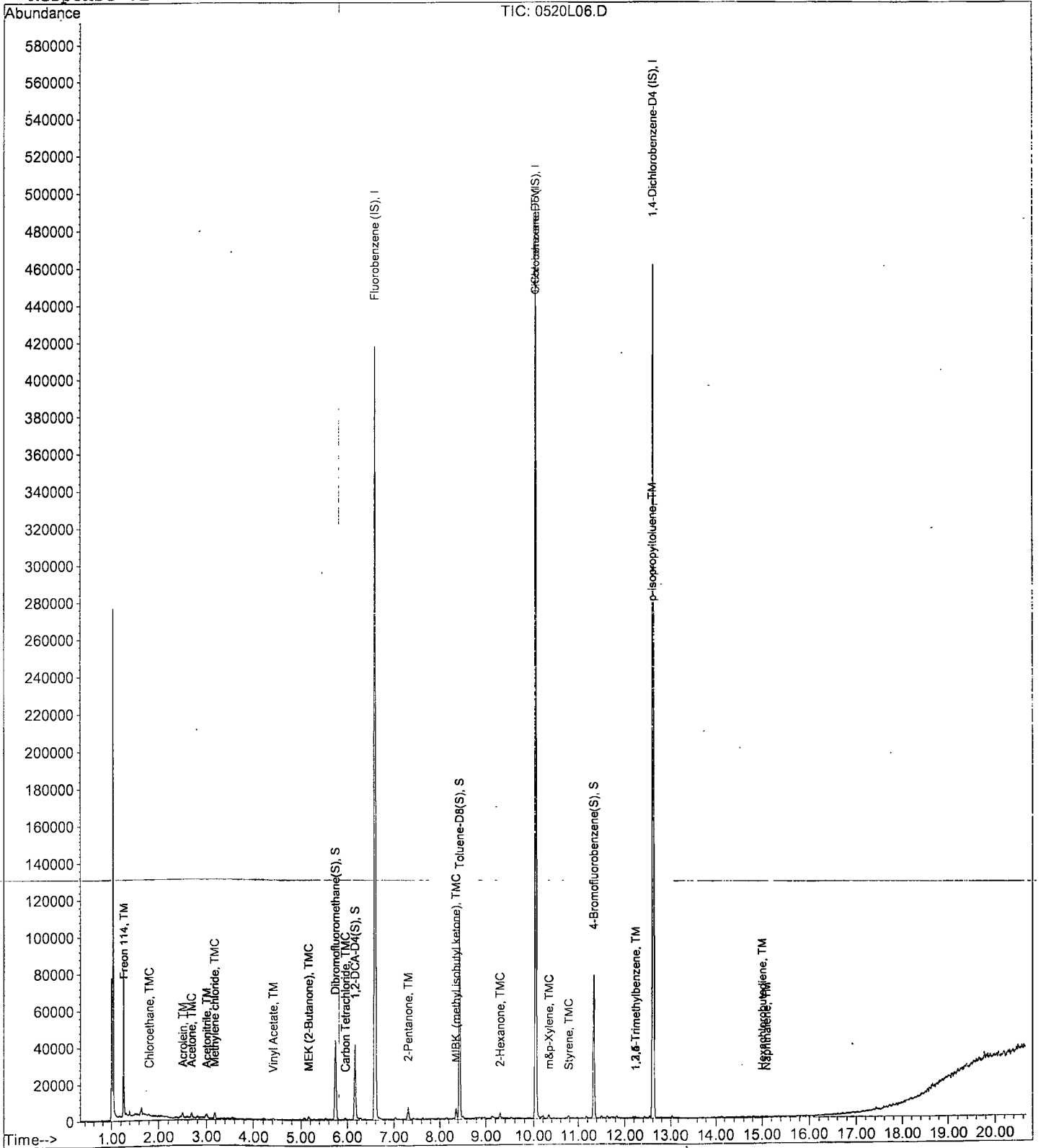
Data File : M:\LOKI\DATA\210520\0520L06.D  
Acq On : 20 May 21 12:54  
Sample : 0.2ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 6  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTI Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L07.D  
 Acq On : 20 May 21 13:22  
 Sample : 0.5ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 7  
 Operator:  
 Inst : loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QI on	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	405898	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	333583	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	166393	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	45897	9.72	ppb	0.00
Spiked Amount	25.000		Recovery	=	38.876%	
37) 1,2-DCA-D4(S)	6.16	65	51020	10.02	ppb	0.00
Spiked Amount	25.000		Recovery	=	40.076%	
57) Toluene-D8(S)	8.44	98	143494	9.19	ppb	0.00
Spiked Amount	25.000		Recovery	=	36.764%	
65) 4-Bromofluorobenzene(S)	11.34	174	48575	8.74	ppb	0.00
Spiked Amount	25.000		Recovery	=	34.972%	
<b>Target Compounds</b>						Qvalue
2) Dichlorodifluoromethane	1.17	85	777	0.53	ppb	89
3) Freon 114	1.28	85	763	0.86	ppb	99
5) Vinyl chloride	1.42	62	731	0.50	ppb #	78
6) Bromomethane	1.70	96	676	0.61	ppb	98
7) Chloroethane	1.80	64	850	0.63	ppb #	53
8) Dichlorofluoromethane	2.00	67	1731	0.61	ppb #	81
9) Trichlorofluoromethane	2.05	101	766	0.54	ppb	86
10) Acrolein	2.49	56	3489	25.98	ppb	92
11) Acetone	2.68	43	5750	11.83	ppb	96
12) Freon-113	2.60	101	716	0.56	ppb #	85
13) 1,1-DCE	2.59	61	1150	0.56	ppb #	84
15) Acetonitrile	3.00	41	5386	25.25	ppb	89
17) Iodomethane	2.73	142	61	4.59	ppb #	1
19) Methylene chloride	3.18	84	1619	0.38	ppb #	78
20) Carbon disulfide	2.79	76	1165	0.57	ppb #	77
21) Methyl t-butyl ether (MtBE)	3.61	73	663	0.45	ppb #	53
22) Trans-1,2-DCE	3.56	61	1030	0.55	ppb #	81
23) Diisopropyl Ether	4.41	45	1887	0.52	ppb #	73
24) 1,1-DCA	4.21	63	1322	0.50	ppb #	78
25) Vinyl Acetate	4.41	43	490	0.58	ppb	100
27) MEK (2-Butanone)	5.16	43	5580	9.79	ppb	93
28) Cis-1,2-DCE	5.07	61	1294	0.58	ppb	87
29) 2,2-Dichloropropane	5.06	77	1107	0.55	ppb #	52
30) Chloroform	5.54	83	1743	0.60	ppb	93
31) Bromochloromethane	5.40	130	679	0.55	ppb	91
33) 1,1,1-TCA	5.74	97	1248	0.51	ppb	100
34) Cyclohexane	5.80	56	808	0.51	ppb #	72
35) 1,1-Dichloropropene	5.96	75	925	0.55	ppb #	83
36) 2,2,4-Trimethylpentane	6.35	57	569	0.44	ppb #	58
38) Carbon Tetrachloride	5.95	119	1151	0.87	ppb	87
40) 1,2-DCA	6.26	62	1339	0.57	ppb #	82
41) Benzene	6.22	78	3424	0.60	ppb	96
42) TCE	7.03	130	964	0.54	ppb	84
43) 2-Pentanone	7.31	43	18556	21.22	ppb	99
44) 1,2-Dichloropropane	7.29	63	955	0.60	ppb #	58
45) Bromodichloromethane	7.62	83	1264	0.57	ppb	76
46) Methyl Cyclohexane	7.24	98	309	2.09	ppb #	65
47) Dibromomethane	7.42	174	749	0.55	ppb	88
49) MIBK (methyl isobutyl ket)	8.36	43	9002	8.72	ppb	96

(#) = qualifier out of range (m) = manual integration  
 0520L07.D L0520524.M Thu May 27 10:47:49 2021

Data File : M:\LOKI\DATA\210520\0520L07.D  
 Acq On : 20 May 21 13:22  
 Sample : 0.5ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 7  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50) 1-Bromo-2-chloroethane	7.96	63	593	0.52	ppb	96
51) Cis-1,3-Dichloropropene	8.15	75	1229	0.56	ppb	95
52) Toluene	8.52	91	3226	0.50	ppb	95
53) Trans-1,3-Dichloropropene	8.79	75	651	0.55	ppb #	90
54) 1,1,2-TCA	8.98	97	951	0.59	ppb #	67
55) 2-Hexanone	9.29	43	4307	13.95	ppb	98
58) 1,2-EDB	9.51	107	1007	0.61	ppb #	69
59) Tetrachloroethene	9.12	166	843	0.78	ppb #	76
60) 1-Chlorohexane	10.05	91	1115	2.04	ppb #	10
61) 1,1,1,2-Tetrachloroethane	10.18	131	898	0.50	ppb	98
62) m&p-Xylene	10.33	91	4506	0.93	ppb	89
63) o-Xylene	10.77	91	2050	0.42	ppb	93
64) Styrene	10.78	104	1388	2.19	ppb	96
66) 1,3-Dichloropropane	9.16	76	1162	0.49	ppb	100
67) Dibromochloromethane	9.40	129	892	0.49	ppb	76
68) Chlorobenzene	10.07	112	2767	0.58	ppb #	88
69) Ethylbenzene	10.20	91	1836	0.51	ppb	83
70) Bromoform	10.97	173	525	0.40	ppb	98
72) Isopropylbenzene	11.17	105	2449	0.50	ppb	97
73) 1,1,2,2-Tetrachloroethane	11.51	83	1089	0.59	ppb #	63
74) 1,2,3-Trichloropropane	11.55	110	212	0.38	ppb	89
76) Bromobenzene	11.49	158	970	0.56	ppb #	64
77) n-Propylbenzene	11.63	91	2742	0.48	ppb	100
78) 4-Ethyltoluene	11.83	105	1852	0.43	ppb	97
79) 2-Chlorotoluene	11.83	91	2170	0.48	ppb	85
80) 1,3,5-Trimethylbenzene	12.23	105	1734	1.77	ppb	90
81) 4-Chlorotoluene	11.83	91	2170	0.48	ppb	85
82) Tert-Butylbenzene	12.18	119	2135	0.55	ppb	81
83) 1,2,4-Trimethylbenzene	12.23	105	1734	1.77	ppb	90
84) Sec-Butylbenzene	12.42	105	2068	0.41	ppb	90
85) p-Isopropyltoluene	12.59	119	2051	2.02	ppb #	78
86) Benzyl Chloride	12.79	91	673	0.64	ppb #	56
87) 1,3-DCB	12.53	146	1689	0.52	ppb #	88
88) 1,4-DCB	13.04	146	1880	0.57	ppb	91
89) n-Butylbenzene	13.04	91	1749	0.48	ppb #	77
90) 1,2-DCB	12.64	146	2032	0.58	ppb	95
91) Hexachloroethane	13.32	117	542	0.63	ppb #	59
92) 1,2-Dibromo-3-chloropropan	13.89	157	267	1.52	ppb #	14
93) 1,2,4-Trichlorobenzene	14.81	180	503	0.56	ppb	83
94) Hexachlorobutadiene	15.01	225	409	1.70	ppb	87
95) Naphthalene	15.08	128	1042	3.20	ppb #	77
96) 1,2,3-Trichlorobenzene	15.36	182	505	0.59	ppb #	62

Quantitation Report

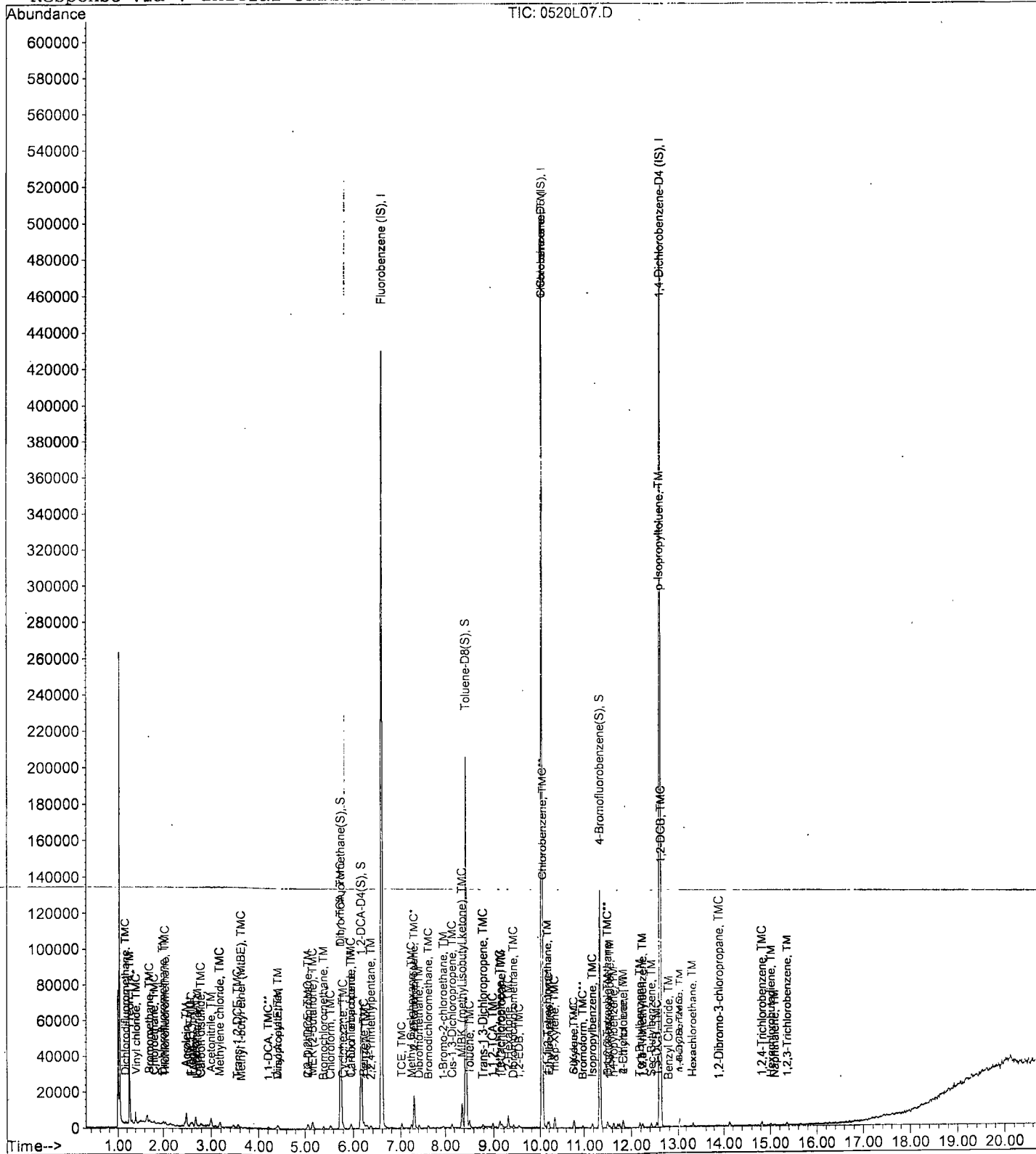
Data File : M:\LOKI\DATA\210520\0520L07.D  
Acq On : 20 May 21 13:22  
Sample : 0.5ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 7  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L08.D  
 Acq On : 20 May 21 13:50  
 Sample : lug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 8  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.59	96	406493	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	337311	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	176571	25.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Dibromofluoromethane(S)	5.75	113	46612	9.86	ppb	0.00
Spiked Amount	25.000		Recovery	39.424%		
37) 1,2-DCA-D4(S)	6.16	65	49945	9.79	ppb	0.00
Spiked Amount	25.000		Recovery	39.172%		
57) Toluene-D8(S)	8.44	98	145718	9.23	ppb	0.00
Spiked Amount	25.000		Recovery	36.924%		
65) 4-Bromofluorobenzene(S)	11.34	174	48803	8.69	ppb	0.00
Spiked Amount	25.000		Recovery	34.748%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.17	85	1654	1.13	ppb	96
3) Freon 114	1.28	85	1716	1.62	ppb	85
4) Chloromethane	1.32	50	2380	0.51	ppb	94
5) Vinyl chloride	1.42	62	1489	1.01	ppb #	73
6) Bromomethane	1.70	96	1177	1.06	ppb	89
7) Chloroethane	1.80	64	1292	1.07	ppb #	81
8) Dichlorofluoromethane	2.00	67	3252	1.14	ppb	92
9) Trichlorofluoromethane	2.05	101	1336	0.94	ppb	80
10) Acrolein	2.49	56	6833	50.81	ppb	89
11) Acetone	2.68	43	10983	22.56	ppb	96
12) Freon-113	2.61	101	1273	0.99	ppb #	93
13) 1,1-DCE	2.58	61	2388	1.17	ppb #	86
15) Acetonitrile	3.00	41	11696	54.76	ppb #	84
16) Methyl Acetate	3.09	43	1395	0.52	ppb	86
17) Iodomethane	2.73	142	341	4.83	ppb #	34
19) Methylene chloride	3.18	84	2432	0.90	ppb #	84
20) Carbon disulfide	2.80	76	2839	1.47	ppb #	94
21) Methyl t-butyl ether (MtBE)	3.62	73	1346	0.90	ppb #	63
22) Trans-1,2-DCE	3.55	61	1931	1.03	ppb	97
23) Diisopropyl Ether	4.42	45	3324	0.92	ppb #	78
24) 1,1-DCA	4.21	63	3065	1.15	ppb #	65
25) Vinyl Acetate	4.41	43	946	1.12	ppb	100
27) MEK (2-Butanone)	5.17	43	11199	19.61	ppb	94
28) Cis-1,2-DCE	5.08	61	2350	1.05	ppb	91
29) 2,2-Dichloropropane	5.06	77	2130	1.06	ppb	93
30) Chloroform	5.53	83	2745	0.95	ppb	99
31) Bromochloromethane	5.40	130	1230	0.99	ppb	95
33) 1,1,1-TCA	5.75	97	2894	1.17	ppb	86
34) Cyclohexane	5.80	56	1587	1.00	ppb #	78
35) 1,1-Dichloropropene	5.96	75	1675	1.00	ppb	92
36) 2,2,4-Trimethylpentane	6.36	57	1374	1.07	ppb	93
38) Carbon Tetrachloride	5.96	119	2020	1.29	ppb	82
40) 1,2-DCA	6.25	62	2721	1.15	ppb	89
41) Benzene	6.22	78	5815	1.02	ppb	97
42) TCE	7.03	130	1849	1.03	ppb	96
43) 2-Pentanone	7.31	43	39111	44.65	ppb	96
44) 1,2-Dichloropropane	7.29	63	1603	1.00	ppb	82
45) Bromodichloromethane	7.63	83	2455	1.10	ppb	76
46) Methyl Cyclohexane	7.24	98	871	2.62	ppb	93

(#) = qualifier out of range (m) = manual integration  
 0520L08.D L0520524.M Thu May 27 10:47:52 2021

Data File : M:\LOKI\DATA\210520\0520L08.D  
 Acq On : 20 May 21 13:50  
 Sample : lug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 8  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	Qlon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	1293	0.95	ppb	# 76
49) MIBK (methyl isobutyl ket	8.36	43	18627	18.02	ppb	99
50) 1-Bromo-2-chloroethane	7.97	63	1240	1.08	ppb	92
51) Cis-1,3-Dichloropropene	8.15	75	2268	1.04	ppb	87
52) Toluene	8.51	91	6597	1.03	ppb	98
53) Trans-1,3-Dichloropropene	8.78	75	1235	1.04	ppb	# 89
54) 1,1,2-TCA	8.98	97	1685	1.04	ppb	88
55) 2-Hexanone	9.29	43	9645	21.10	ppb	92
58) 1,2-EDB	9.52	107	1653	0.99	ppb	98
59) Tetrachloroethene	9.13	166	1162	1.05	ppb	96
60) 1-Chlorohexane	10.07	91	2030	2.56	ppb	# 81
61) 1,1,1,2-Tetrachloroethane	10.17	131	1806	1.00	ppb	97
62) m&p-Xylene	10.33	91	8700	1.78	ppb	99
63) o-Xylene	10.77	91	4605	0.93	ppb	83
64) Styrene	10.78	104	3097	2.51	ppb	86
66) 1,3-Dichloropropane	9.16	76	2344	0.98	ppb	# 80
67) Dibromochloromethane	9.41	129	1888	1.03	ppb	79
68) Chlorobenzene	10.07	112	5025	1.04	ppb	94
69) Ethylbenzene	10.20	91	3533	0.96	ppb	98
70) Bromoform	10.98	173	1263	0.94	ppb	96
72) Isopropylbenzene	11.17	105	4755	0.92	ppb	92
73) 1,1,2,2-Tetrachloroethane	11.50	83	2130	1.09	ppb	97
74) 1,2,3-Trichloropropane	11.54	110	629	1.07	ppb	# 73
76) Bromobenzene	11.50	158	1811	0.99	ppb	85
77) n-Propylbenzene	11.63	91	5541	0.91	ppb	93
78) 4-Ethyltoluene	11.82	105	3878	0.85	ppb	99
79) 2-Chlorotoluene	11.83	91	4659	0.98	ppb	83
80) 1,3,5-Trimethylbenzene	12.23	105	3657	2.10	ppb	91
81) 4-Chlorotoluene	11.83	91	4659	0.98	ppb	83
82) Tert-Butylbenzene	12.18	119	3611	0.88	ppb	85
83) 1,2,4-Trimethylbenzene	12.23	105	3657	2.10	ppb	91
84) Sec-Butylbenzene	12.42	105	4932	0.91	ppb	95
85) p-Isopropyltoluene	12.58	119	3655	2.27	ppb	90
86) Benzyl Chloride	12.79	91	1065	0.95	ppb	# 84
87) 1,3-DCB	12.54	146	3612	1.04	ppb	95
88) 1,4-DCB	13.05	146	3132	0.90	ppb	# 70
89) n-Butylbenzene	13.03	91	3538	0.91	ppb	88
90) 1,2-DCB	12.63	146	4215	1.13	ppb	95
91) Hexachloroethane	13.32	117	834	0.91	ppb	82
92) 1,2-Dibromo-3-chloropropan	13.90	157	555	2.18	ppb	90
93) 1,2,4-Trichlorobenzene	14.81	180	812	0.85	ppb	100
94) Hexachlorobutadiene	15.01	225	842	2.71	ppb	90
95) Naphthalene	15.09	128	2692	3.52	ppb	# 77
96) 1,2,3-Trichlorobenzene	15.35	182	937	1.03	ppb	99

(#) = qualifier out of range (m) = manual integration  
 0520L08.D L0520524.M Thu May 27 10:47:53 2021

Quantitation Report

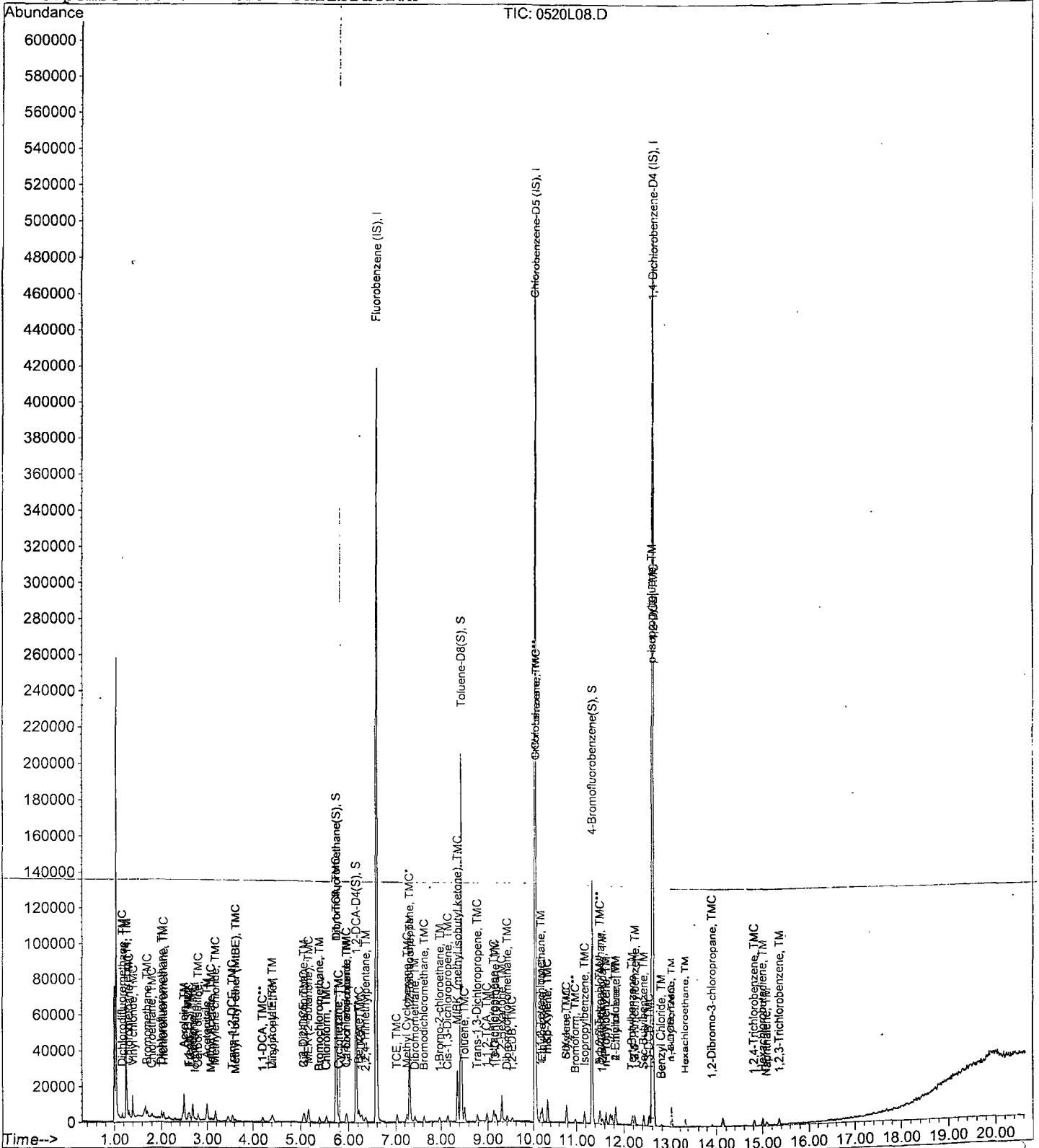
Data File : M:\LOKI\DATA\210520\0520L08.D  
Acq On : 20 May 21 13:50  
Sample : lug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 8  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\210520\0520L09.D  
 Acq On : 20 May 21 14:17  
 Sample : 5ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 9  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	432847	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	360305	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	206775	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	5.75	113	127515	25.32	ppb	0.00
Spiked Amount	25.000		Recovery	=	101.284%	
37) 1,2-DCA-D4(S)	6.16	65	135777	25.00	ppb	0.00
Spiked Amount	25.000		Recovery	=	100.008%	
57) Toluene-D8(S)	8.44	98	425058	25.21	ppb	0.00
Spiked Amount	25.000		Recovery	=	100.828%	
65) 4-Bromofluorobenzene(S)	11.34	174	142092	23.68	ppb	0.00
Spiked Amount	25.000		Recovery	=	94.708%	
Target Compounds						
2) Dichlorodifluoromethane	1.17	85	6849	4.40	ppb	97
3) Freon 114	1.28	85	4839	3.87	ppb	98
4) Chloromethane	1.32	50	9143	4.68	ppb	93
5) Vinyl chloride	1.42	62	7504	4.77	ppb	99
6) Bromomethane	1.70	96	6001	5.07	ppb	81
7) Chloroethane	1.80	64	5982	5.39	ppb	97
8) Dichlorofluoromethane	2.00	67	15003	4.96	ppb	94
9) Trichlorofluoromethane	2.05	101	7451	4.91	ppb	96
10) Acrolein	2.19	56	13683	95.54	ppb	99
11) Acetone	2.68	43	19280	37.18	ppb	93
12) Freon-113	2.61	101	6240	4.54	ppb	93
13) 1,1-DCE	2.58	61	9870	4.54	ppb	95
15) Acetonitrile	3.00	41	22314	98.11	ppb	100
16) Methyl Acetate	3.09	43	5557	4.32	ppb	86
17) Iodomethane	2.73	142	2564	6.60	ppb	89
19) Methylene chloride	3.18	84	9256	4.94	ppb	96
20) Carbon disulfide	2.79	76	9698	4.85	ppb	# 90
21) Methyl t-butyl ether (MtBE)	3.62	73	7213	4.55	ppb	97
22) Trans-1,2-DCE	3.56	61	9573	4.82	ppb	96
23) Diisopropyl Ether	4.42	45	18661	4.85	ppb	97
24) 1,1-DCA	4.22	63	14182	4.98	ppb	93
25) Vinyl Acetate	4.41	43	4278	4.76	ppb	100
27) MEK (2-Butanone)	5.16	43	23296	38.32	ppb	94
28) Cis-1,2-DCE	5.07	61	11507	4.85	ppb	96
29) 2,2-Dichloropropane	5.06	77	11045	5.16	ppb	99
30) Chloroform	5.54	83	15152	4.92	ppb	94
31) Bromochloromethane	5.39	130	7117	5.40	ppb	94
33) 1,1,1-TCA	5.74	97	12858	4.90	ppb	94
34) Cyclohexane	5.79	56	7037	4.15	ppb	89
35) 1,1-Dichloropropene	5.96	75	8030	4.50	ppb	96
36) 2,2,4-Trimethylpentane	6.36	57	5174	3.77	ppb	97
38) Carbon Tetrachloride	5.95	119	11223	5.44	ppb	81
40) 1,2-DCA	6.25	62	12315	4.90	ppb	94
41) Benzene	6.22	78	28743	4.72	ppb	97
42) TCE	7.03	130	9140	4.77	ppb	95
43) 2-Pentanone	7.30	43	91278	97.87	ppb	99
44) 1,2-Dichloropropane	7.29	63	8349	4.91	ppb	91
45) Bromodichloromethane	7.63	83	12059	5.07	ppb	91
46) Methyl Cyclohexane	7.24	98	4104	5.46	ppb	97

(#) = qualifier out of range (m) = manual integration  
 0520L09.D L0520524.M Thu May 27 10:47:56 2021

Data File : M:\LOKI\DATA\210520\0520109.D  
 Acq On : 20 May 21 14:17  
 Sample : 5ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 9  
 Operator:  
 Inst : LOKI  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTF Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	7608	5.22	ppb	94
49) MIBK (methyl isobutyl ket	8.36	43	41975	38.13	ppb	99
50) 1-Bromo-2-chloroethane	7.97	63	6128	5.02	ppb	94
51) Cis-1,3-Dichloropropene	8.15	75	11008	4.73	ppb	94
52) Toluene	8.51	91	33797	4.95	ppb	94
53) Trans-1,3-Dichloropropene	8.78	75	6164	4.89	ppb	97
54) 1,1,2-TCA	8.98	97	8592	4.97	ppb	96
55) 2-Hexanone	9.29	43	22673	36.71	ppb	94
58) 1,2-EDB	9.52	107	8327	4.67	ppb #	79
59) Tetrachloroethene	9.12	166	6367	5.17	ppb	94
60) 1-Chlorohexane	10.07	91	7554	5.48	ppb	89
61) 1,1,1,2-Tetrachloroethane	10.16	131	9914	5.15	ppb	94
62) m&p-Xylene	10.33	91	45818	8.76	ppb	97
63) o-Xylene	10.77	91	24477	4.64	ppb	97
64) Styrene	10.78	104	18570	5.26	ppb	97
66) 1,3-Dichloropropane	9.16	76	12747	5.00	ppb	87
67) Dibromochloromethane	9.40	129	10023	5.09	ppb	90
68) Chlorobenzene	10.07	112	25353	4.93	ppb	93
69) Ethylbenzene	10.20	91	17784	4.54	ppb	98
70) Bromoform	10.97	173	7772	5.43	ppb	97
72) Isopropylbenzene	11.18	105	27519	4.53	ppb #	89
73) 1,1,2,2-Tetrachloroethane	11.50	83	12030	5.27	ppb	92
74) 1,2,3-Trichloropropane	11.55	110	3687	5.38	ppb	93
76) Bromobenzene	11.50	158	10568	4.94	ppb	98
77) n-Propylbenzene	11.63	91	33106	4.63	ppb	99
78) 4-Ethyltoluene	11.82	105	24165	4.54	ppb	97
79) 2-Chlorotoluene	11.83	91	26480	4.74	ppb	95
80) 1,3,5-Trimethylbenzene	12.24	105	22575	4.94	ppb	92
81) 4-Chlorotoluene	11.83	91	26480	4.74	ppb	95
82) Tert-Butylbenzene	12.18	119	21649	4.50	ppb	98
83) 1,2,4-Trimethylbenzene	12.24	105	22575	4.94	ppb	92
84) Sec-Butylbenzene	12.42	105	27896	4.40	ppb	99
85) p-Isopropyltoluene	12.59	119	24244	5.11	ppb	99
86) Benzyl Chloride	12.78	91	5757	4.40	ppb	97
87) 1,3-DCB	12.54	146	19966	4.91	ppb	97
88) 1,4-DCB	13.05	146	19974	4.91	ppb	97
89) n-Butylbenzene	13.03	91	19288	4.25	ppb	93
90) 1,2-DCB	12.63	146	20840	4.76	ppb	95
91) Hexachloroethane	13.33	117	5127	4.78	ppb	90
92) 1,2-Dibromo-3-chloropropan	13.90	157	2168	5.34	ppb	91
93) 1,2,4-Trichlorobenzene	14.82	180	4898	4.35	ppb	89
94) Hexachlorobutadiene	15.01	225	2818	5.12	ppb	91
95) Naphthalene	15.09	128	15928	5.73	ppb	100
96) 1,2,3-Trichlorobenzene	15.35	182	4539	4.25	ppb	99

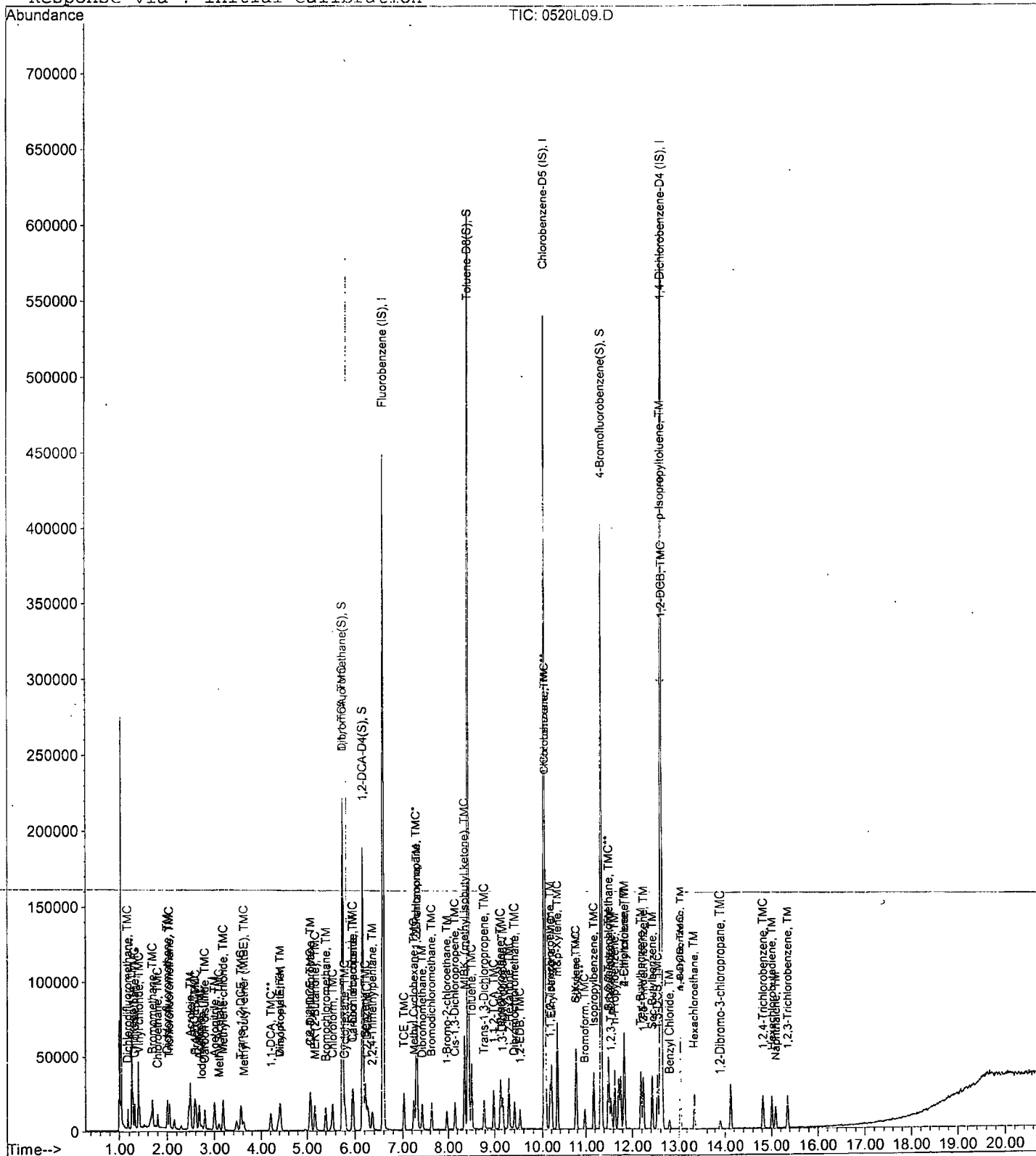
Data File : M:\LOKI\DATA\210520\0520L09.D  
Acq On : 20 May 21 14:17  
Sample : 5ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 9  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\10520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L10.D  
 Acq On : 20 May 21 14:45  
 Sample : 10ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 10  
 Operator:  
 Inst : loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.59	96	441107	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	365215	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	214208	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	127544	24.85	ppb	0.00
Spiked Amount	25.000		Recovery			99.408%
37) 1,2-DCA-D4(S)	6.16	65	140302	25.35	ppb	0.00
Spiked Amount	25.000		Recovery			101.404%
57) Toluene-D8(S)	8.44	98	444715	26.02	ppb	0.00
Spiked Amount	25.000		Recovery			104.076%
65) 4-Bromofluorobenzene(S)	11.34	174	156197	25.68	ppb	0.00
Spiked Amount	25.000		Recovery			102.712%
<b>Target Compounds</b>						
2) Dichlorodifluoromethane	1.17	85	16075	10.14	ppb	100
3) Freon 114	1.28	85	13535	10.18	ppb	100
4) Chloromethane	1.32	50	18552	10.40	ppb	100
5) Vinyl chloride	1.42	62	17291	10.79	ppb	100
6) Bromomethane	1.70	96	11287	9.36	ppb	100
7) Chloroethane	1.80	64	11265	10.15	ppb	100
8) Dichlorofluoromethane	2.00	67	29320	9.51	ppb	100
9) Trichlorofluoromethane	2.05	101	16107	10.42	ppb	100
10) Acrolein	2.49	56	18328	125.58	ppb	100
11) Acetone	2.68	43	24740	46.82	ppb	100
12) Freon-113	2.60	101	14218	10.15	ppb	100
13) 1,1-DCE	2.58	61	21775	9.82	ppb	100
15) Acetonitrile	3.00	41	29371	126.71	ppb	100
16) Methyl Acetate	3.09	43	12711	10.77	ppb	100
17) Iodomethane	2.73	142	6929	10.00	ppb	100
19) Methylene chloride	3.18	84	19498	10.93	ppb	100
20) Carbon disulfide	2.80	76	21856	10.80	ppb	100
21) Methyl t-butyl ether (MTBE)	3.61	73	15435	9.56	ppb	100
22) Trans-1,2-DCE	3.56	61	21067	10.40	ppb	100
23) Diisopropyl Ether	4.41	45	38590	9.84	ppb	100
24) 1,1-DCA	4.21	63	29533	10.18	ppb	100
25) Vinyl Acetate	4.41	43	8636	9.42	ppb	100
27) MEK (2-Butanone)	5.16	43	31903	51.49	ppb	100
28) Cis-1,2-DCE	5.07	61	23681	9.79	ppb	100
29) 2,2-Dichloropropane	5.06	77	21905	10.04	ppb	100
30) Chloroform	5.54	83	32027	10.21	ppb	100
31) Bromochloromethane	5.39	130	13274	9.88	ppb	100
33) 1,1,1-TCA	5.74	97	26582	9.93	ppb	100
34) Cyclohexane	5.79	56	16118	9.33	ppb	100
35) 1,1-Dichloropropene	5.96	75	17779	9.78	ppb	100
36) 2,2,4-Trimethylpentane	6.36	57	13801	9.88	ppb	100
38) Carbon Tetrachloride	5.95	119	22323	10.32	ppb	100
40) 1,2-DCA	6.25	62	25332	9.89	ppb	100
41) Benzene	6.22	78	61040	9.83	ppb	100
42) TCE	7.03	130	18914	9.69	ppb	100
43) 2-Pentanone	7.31	43	120556	126.84	ppb	100
44) 1,2-Dichloropropane	7.29	63	17153	9.90	ppb	100
45) Bromodichloromethane	7.63	83	23540	9.71	ppb	100
46) Methyl Cyclohexane	7.24	98	9943	10.52	ppb	100

(#) = qualifier out of range (m) = manual integration  
 0520L10.D L0520524.M Thu May 27 10:47:59 2021

Data File : M:\LOKI\DATA\210520\0520L10.D  
 Acq On : 20 May 21 14:45  
 Sample : 10ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 10  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\10520524.M (RTM Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	14959	10.08	ppb	100
49) MIBK (methyl isobutyl ket	8.36	43	56712	50.55	ppb	100
50) 1-Bromo-2-chloroethane	7.97	63	12866	10.34	ppb	100
51) Cis-1,3-Dichloropropene	8.15	75	22315	9.40	ppb	100
52) Toluene	8.51	91	70720	10.16	ppb	100
53) Trans-1,3-Dichloropropene	8.78	75	12444	9.68	ppb	100
54) 1,1,2-TCA	8.98	97	17803	10.10	ppb	100
55) 2-Hexanone	9.29	43	31299	46.83	ppb	100
58) 1,2-EDB	9.52	107	17923	9.92	ppb	100
59) Tetrachloroethene	9.12	166	12830	10.24	ppb	100
60) 1-Chlorohexane	10.06	91	16089	10.00	ppb	100
61) 1,1,1,2-Tetrachloroethane	10.17	131	20217	10.35	ppb	100
62) m&p-Xylene	10.33	91	105518	19.91	ppb	100
63) o-Xylene	10.77	91	52748	9.85	ppb	100
64) Styrene	10.78	104	42810	9.51	ppb	100
66) 1,3-Dichloropropane	9.16	76	27250	10.54	ppb	100
67) Dibromochloromethane	9.41	129	20562	10.31	ppb	100
68) Chlorobenzene	10.07	112	51672	9.90	ppb	100
69) Ethylbenzene	10.20	91	38936	9.80	ppb	100
70) Bromoform	10.97	173	15380	10.59	ppb	100
72) Isopropylbenzene	11.18	105	62903	9.99	ppb	100
73) 1,1,2,2-Tetrachloroethane	11.50	83	23000	9.72	ppb	100
74) 1,2,3-Trichloropropane	11.55	110	7390	10.41	ppb	100
76) Bromobenzene	11.50	158	22407	10.12	ppb	100
77) n-Propylbenzene	11.63	91	76904	10.37	ppb	100
78) 4-Ethyltoluene	11.83	105	58156	10.54	ppb	100
79) 2-Chlorotoluene	11.84	91	59814	10.33	ppb	100
80) 1,3,5-Trimethylbenzene	12.23	105	55089	9.69	ppb	100
81) 4-Chlorotoluene	11.84	91	59814	10.33	ppb	100
82) Tert-Butylbenzene	12.18	119	48356	9.70	ppb	100
83) 1,2,4-Trimethylbenzene	12.23	105	55089	9.69	ppb	100
84) Sec-Butylbenzene	12.42	105	67552	10.28	ppb	100
85) p-Isopropyltoluene	12.59	119	57420	9.54	ppb	100
86) Benzyl Chloride	12.78	91	12836	9.47	ppb	100
87) 1,3-DCB	12.54	146	42509	10.09	ppb	100
88) 1,4-DCB	13.04	146	41852	9.94	ppb	100
89) n-Butylbenzene	13.03	91	45294	9.63	ppb	100
90) 1,2-DCB	12.63	146	44283	9.77	ppb	100
91) Hexachloroethane	13.33	117	11084	9.97	ppb	100
92) 1,2-Dibromo-3-chloropropan	13.90	157	4541	9.94	ppb	100
93) 1,2,4-Trichlorobenzene	14.82	180	11075	9.50	ppb	100
94) Hexachlorobutadiene	15.01	225	6809	10.69	ppb	100
95) Naphthalene	15.09	128	36939	9.15	ppb	100
96) 1,2,3-Trichlorobenzene	15.35	182	10533	9.51	ppb	100

Quantitation Report

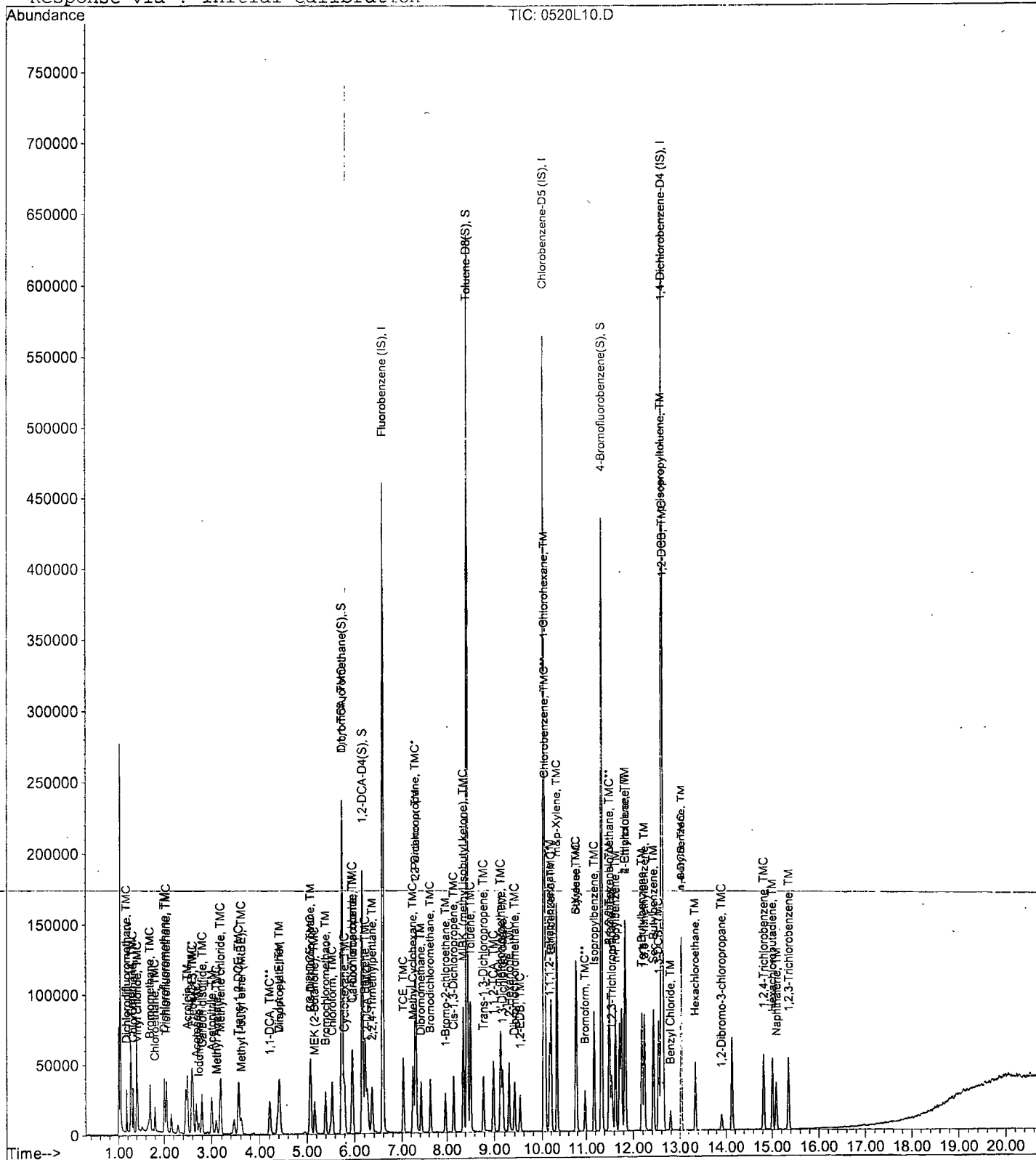
Data File : M:\LOKI\DATA\210520\0520L10.D  
Acq On : 20 May 21 14:45  
Sample : 10ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 10  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L11.D  
 Acq On : 20 May 21 15:12  
 Sample : 20ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 11  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RMTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	445878	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	371563	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	228306	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	255538	49.26	ppb	0.00
Spiked Amount	25.000		Recovery	=	197.040%	
37) 1,2-DCA-D4(S)	6.16	65	275749	49.29	ppb	0.00
Spiked Amount	25.000		Recovery	=	197.172%	
57) Toluene-D8(S)	8.44	98	897089	51.59	ppb	0.00
Spiked Amount	25.000		Recovery	=	206.356%	
65) 4-Bromofluorobenzene(S)	11.34	174	332401	53.71	ppb	0.00
Spiked Amount	25.000		Recovery	=	214.844%	
<b>Target Compounds</b>						
2) Dichlorodifluoromethane	1.17	85	30576	19.08	ppb	97
3) Freon 114	1.28	85	27100	19.90	ppb	99
4) Chloromethane	1.32	50	35208	20.49	ppb	97
5) Vinyl chloride	1.42	62	30878	19.07	ppb	95
6) Bromomethane	1.70	96	22741	18.66	ppb	98
7) Chloroethane	1.79	64	21332	19.21	ppb	94
8) Dichlorofluoromethane	2.00	67	55409	17.78	ppb	92
9) Trichlorofluoromethane	2.05	101	29576	18.93	ppb	98
10) Acrolein	2.49	56	21688	147.01	ppb	99
11) Acetone	2.68	43	30786	57.64	ppb	98
12) Freon-113	2.60	101	27788	19.62	ppb	97
13) 1,1-DCE	2.58	61	40824	18.22	ppb	97
15) Acetonitrile	3.00	41	32354	138.09	ppb	99
16) Methyl Acetate	3.09	43	21267	18.39	ppb	92
17) Iodomethane	2.73	142	16728	17.58	ppb	96
19) Methylene chloride	3.18	84	34605	19.70	ppb	96
20) Carbon disulfide	2.79	76	39624	19.42	ppb	97
21) Methyl t-butyl ether (MtBE)	3.61	73	31469	19.28	ppb	99
22) Trans-1,2-DCE	3.56	61	37467	18.30	ppb	98
23) Diisopropyl Ether	4.41	45	73122	18.45	ppb	97
24) 1,1-DCA	4.21	63	54719	18.66	ppb	97
25) Vinyl Acetate	4.41	43	15527	16.76	ppb	# 100
27) MEK (2-Butanone)	5.16	43	37299	59.55	ppb	95
28) Cis-1,2-DCE	5.07	61	43010	17.59	ppb	96
29) 2,2-Dichloropropane	5.06	77	39503	17.91	ppb	94
30) Chloroform	5.54	83	59623	18.81	ppb	97
31) Bromochloromethane	5.39	130	25491	18.78	ppb	94
33) 1,1,1-TCA	5.74	97	49657	18.35	ppb	95
34) Cyclohexane	5.80	56	33841	19.38	ppb	85
35) 1,1-Dichloropropene	5.96	75	34661	18.86	ppb	96
36) 2,2,4-Trimethylpentane	6.36	57	28784	20.38	ppb	96
38) Carbon Tetrachloride	5.95	119	41584	18.77	ppb	100
40) 1,2-DCA	6.26	62	46237	17.86	ppb	98
41) Benzene	6.22	78	114884	18.31	ppb	98
42) TCE	7.03	130	35527	18.00	ppb	96
43) 2-Pentanone	7.30	43	148267	154.33	ppb	99
44) 1,2-Dichloropropane	7.29	63	31455	17.96	ppb	100
45) Bromodichloromethane	7.63	83	43852	17.90	ppb	98
46) Methyl Cyclohexane	7.24	98	17425	16.92	ppb	82

(#) = qualifier out of range (m) = manual integration  
 0520L11.D L0520524.M Thu May 27 10:48:02 2021

Data File : M:\LOKI\DATA\210520\052011.D  
 Acq On : 20 May 21 15:12  
 Sample : 20ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 11  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	28307	18.87	ppb	97
49) MIBK (methyl isobutyl ket	8.36	43	71669	63.20	ppb	97
50) 1-Bromo-2-chloroethane	7.97	63	23736	18.88	ppb	98
51) Cis-1,3-Dichloropropene	8.15	75	43582	18.17	ppb	96
52) Toluene	8.51	91	135604	19.27	ppb	98
53) Trans-1,3-Dichloropropene	8.78	75	23448	18.05	ppb	99
54) 1,1,2-TCA	8.98	97	32349	18.16	ppb	95
55) 2-Hexanone	9.29	43	41340	58.68	ppb	95
58) 1,2-EDB	9.52	107	32388	17.63	ppb	98
59) Tetrachloroethene	9.12	166	24136	18.88	ppb	94
60) 1-Chlorohexane	10.07	91	29833	17.10	ppb	94
61) 1,1,1,2-Tetrachloroethane	10.17	131	36298	18.27	ppb	97
62) m&p-Xylene	10.33	91	214033	39.70	ppb	98
63) o-Xylene	10.77	91	106321	19.52	ppb	98
64) Styrene	10.78	104	89052	17.44	ppb	98
66) 1,3-Dichloropropane	9.16	76	48869	18.58	ppb	89
67) Dibromochloromethane	9.40	129	37804	18.63	ppb	89
68) Chlorobenzene	10.07	112	94321	17.77	ppb	96
69) Ethylbenzene	10.20	91	73688	18.23	ppb	97
70) Bromoform	10.97	173	28284	19.15	ppb	91
72) Isopropylbenzene	11.18	105	128937	19.21	ppb	96
73) 1,1,2,2-Tetrachloroethane	11.50	83	43464	17.24	ppb	92
74) 1,2,3-Trichloropropane	11.55	110	15267	20.17	ppb	99
76) Bromobenzene	11.50	158	43385	18.38	ppb	95
77) n-Propylbenzene	11.63	91	152013	19.23	ppb	100
78) 4-Ethyltoluene	11.82	105	120911	20.56	ppb	99
79) 2-Chlorotoluene	11.84	91	118779	19.25	ppb	97
80) 1,3,5-Trimethylbenzene	12.23	105	117385	17.93	ppb	94
81) 4-Chlorotoluene	11.84	91	118779	19.25	ppb	97
82) Tert-Butylbenzene	12.18	119	99362	18.70	ppb	94
83) 1,2,4-Trimethylbenzene	12.23	105	117385	17.93	ppb	94
84) Sec-Butylbenzene	12.42	105	139315	19.90	ppb	97
85) p-Isopropyltoluene	12.59	119	122701	17.46	ppb	100
86) Benzyl Chloride	12.79	91	25314	17.52	ppb	96
87) 1,3-DCB	12.54	146	83983	18.70	ppb	99
88) 1,4-DCB	13.05	146	82680	18.42	ppb	95
89) n-Butylbenzene	13.03	91	95731	19.09	ppb	98
90) 1,2-DCB	12.63	146	85567	17.71	ppb	97
91) Hexachloroethane	13.33	117	21615	18.24	ppb	98
92) 1,2-Dibromo-3-chloropropan	13.90	157	9038	17.84	ppb	# 85
93) 1,2,4-Trichlorobenzene	14.82	180	23624	19.02	ppb	85
94) Hexachlorobutadiene	15.01	225	12945	18.33	ppb	90
95) Naphthalene	15.09	128	86332	16.51	ppb	100
96) 1,2,3-Trichlorobenzene	15.36	182	20632	17.48	ppb	93

(#) = qualifier out of range (m) = manual integration  
 0520L11.D L0520524.M Thu May 27 10:48:03 2021



Data File : M:\LOKI\DATA\210520\0520L12.D  
 Acq On : 20 May 21 15:40  
 Sample : 40ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 12  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method.: M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	486489	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	396750	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	249108	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	267555	47.27	ppb	0.00
Spiked Amount	25.000		Recovery	=	189.084%	
37) 1,2-DCA-D4(S)	6.16	65	287080	47.03	ppb	0.00
Spiked Amount	25.000		Recovery	=	188.136%	
57) Toluene-D8(S)	8.44	98	959288	51.66	ppb	0.00
Spiked Amount	25.000		Recovery	=	206.652%	
65) 4-Bromofluorobenzene(S)	11.34	174	357481	54.10	ppb	0.00
Spiked Amount	25.000		Recovery	=	216.388%	
<b>Target Compounds</b>						Qvalue
2) Dichlorodifluoromethane	1.17	85	68853	39.37	ppb	98
3) Freon 114	1.28	85	59849	40.02	ppb	96
4) Chloromethane	1.32	50	75478	41.32	ppb	96
5) Vinyl chloride	1.42	62	71989	40.75	ppb	98
6) Bromomethane	1.70	96	48552	36.52	ppb	97
7) Chloroethane	1.79	64	48003	39.85	ppb	92
8) Dichlorofluoromethane	2.00	67	121332	35.68	ppb	95
9) Trichlorofluoromethane	2.04	101	68440	40.14	ppb	98
10) Acrolein	2.49	56	28160	174.95	ppb	96
11) Acetone	2.68	43	43950	75.42	ppb	99
12) Freon-113	2.60	101	61130	39.56	ppb	96
13) 1,1-DCE	2.58	61	92130	37.68	ppb	98
15) Acetonitrile	3.00	41	45600	178.38	ppb	93
16) Methyl Acetate	3.09	43	53721	43.71	ppb	93
17) Iodomethane	2.73	142	41764	34.37	ppb	97
19) Methylene chloride	3.18	84	74399	39.46	ppb	98
20) Carbon disulfide	2.79	76	86536	38.92	ppb	97
21) Methyl t-butyl ether (MtBE)	3.61	73	75550	42.42	ppb	96
22) Trans-1,2-DCE	3.56	61	84334	37.75	ppb	95
23) Diisopropyl Ether	4.41	45	178739	41.34	ppb	99
24) 1,1-DCA	4.21	63	120747	37.73	ppb	99
25) Vinyl Acetate	4.37	43	38512	38.10	ppb	# 100
27) MEK (2-Butanone)	5.16	43	56494	82.67	ppb	91
28) Cis-1,2-DCE	5.07	61	101740	38.14	ppb	93
29) 2,2-Dichloropropane	5.06	77	90019	37.40	ppb	98
30) Chloroform	5.54	83	130434	37.71	ppb	98
31) Bromochloromethane	5.40	130	56867	38.39	ppb	97
33) 1,1,1-TCA	5.74	97	110932	37.58	ppb	97
34) Cyclohexane	5.79	56	80663	42.33	ppb	89
35) 1,1-Dichloropropene	5.96	75	80929	40.36	ppb	95
36) 2,2,4-Trimethylpentane	6.36	57	67264	43.65	ppb	93
38) Carbon Tetrachloride	5.95	119	95252	39.06	ppb	99
40) 1,2-DCA	6.25	62	103494	36.63	ppb	96
41) Benzene	6.22	78	261667	38.22	ppb	99
42) TCE	7.03	130	79536	36.93	ppb	94
43) 2-Pentanone	7.30	43	199655	190.47	ppb	98
44) 1,2-Dichloropropane	7.29	63	72541	37.96	ppb	94
45) Bromodichloromethane	7.63	83	98698	36.92	ppb	96
46) Methyl Cyclohexane	7.24	98	44609	37.29	ppb	80

(#) = qualifier out of range (m) = manual integration  
 0520L12.D L0520524.M Thu May 27 10:48:06 2021

Data File : M:\LOKI\DATA\210520\0520L12.D  
 Acq On : 20 May 21 15:40  
 Sample : 40ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 12  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	63674	38.89	ppb	98
49) MIBK (methyl isobutyl ket	8.36	43	107162	86.61	ppb	98
50) 1-Bromo-2-chloroethane	7.97	63	51784	37.74	ppb	96
51) Cis-1,3-Dichloropropene	8.15	75	103099	39.40	ppb	98
52) Toluene	8.51	91	302297	39.38	ppb	97
53) Trans-1,3-Dichloropropene	8.78	75	55248	38.98	ppb	99
54) 1,1,2-TCA	8.98	97	72221	37.17	ppb	95
55) 2-Hexanone	9.29	43	62614	78.29	ppb	96
58) 1,2-EDB	9.52	107	76679	39.09	ppb	99
59) Tetrachloroethene	9.12	166	54896	40.16	ppb	98
60) 1-Chlorohexane	10.07	91	74189	37.98	ppb	95
61) 1,1,1,2-Tetrachloroethane	10.17	131	84438	39.80	ppb	93
62) m&p-Xylene	10.33	91	517454	89.88	ppb	100
63) o-Xylene	10.77	91	261678	45.00	ppb	99
64) Styrene	10.78	104	223825	38.45	ppb	98
66) 1,3-Dichloropropane	9.16	76	114453	40.74	ppb	95
67) Dibromochloromethane	9.41	129	84946	39.21	ppb	91
68) Chlorobenzene	10.07	112	216646	38.22	ppb	95
69) Ethylbenzene	10.20	91	185024	42.87	ppb	100
70) Bromoform	10.97	173	65095	41.28	ppb	99
72) Isopropylbenzene	11.18	105	318247	43.44	ppb	95
73) 1,1,2,2-Tetrachloroethane	11.51	83	100379	36.48	ppb	96
74) 1,2,3-Trichloropropane	11.55	110	33244	40.25	ppb	100
76) Bromobenzene	11.50	158	101784	39.53	ppb	93
77) n-Propylbenzene	11.63	91	376157	43.62	ppb	98
78) 4-Ethyltoluene	11.82	105	290944	45.35	ppb	99
79) 2-Chlorotoluene	11.84	91	285082	42.34	ppb	98
80) 1,3,5-Trimethylbenzene	12.23	105	294925	39.41	ppb	96
81) 4-Chlorotoluene	11.84	91	285082	42.34	ppb	98
82) Tert-Butylbenzene	12.18	119	249839	43.09	ppb	97
83) 1,2,4-Trimethylbenzene	12.23	105	294925	39.41	ppb	96
84) Sec-Butylbenzene	12.42	105	351732	46.04	ppb	98
85) p-Isopropyltoluene	12.58	119	318761	39.29	ppb	99
86) Benzyl Chloride	12.78	91	61118	38.77	ppb	99
87) 1,3-DCB	12.54	146	194310	39.65	ppb	98
88) 1,4-DCB	13.05	146	198925	40.62	ppb	93
89) n-Butylbenzene	13.03	91	246980	45.14	ppb	98
90) 1,2-DCB	12.63	146	199079	37.76	ppb	97
91) Hexachloroethane	13.33	117	50003	38.68	ppb	98
92) 1,2-Dibromo-3-chloropropan	13.90	157	22008	38.80	ppb	99
93) 1,2,4-Trichlorobenzene	14.82	180	59096	43.60	ppb	89
94) Hexachlorobutadiene	15.01	225	29048	36.69	ppb	92
95) Naphthalene	15.09	128	230724	36.14	ppb	100
96) 1,2,3-Trichlorobenzene	15.35	182	52496	40.77	ppb	97

Quantitation Report

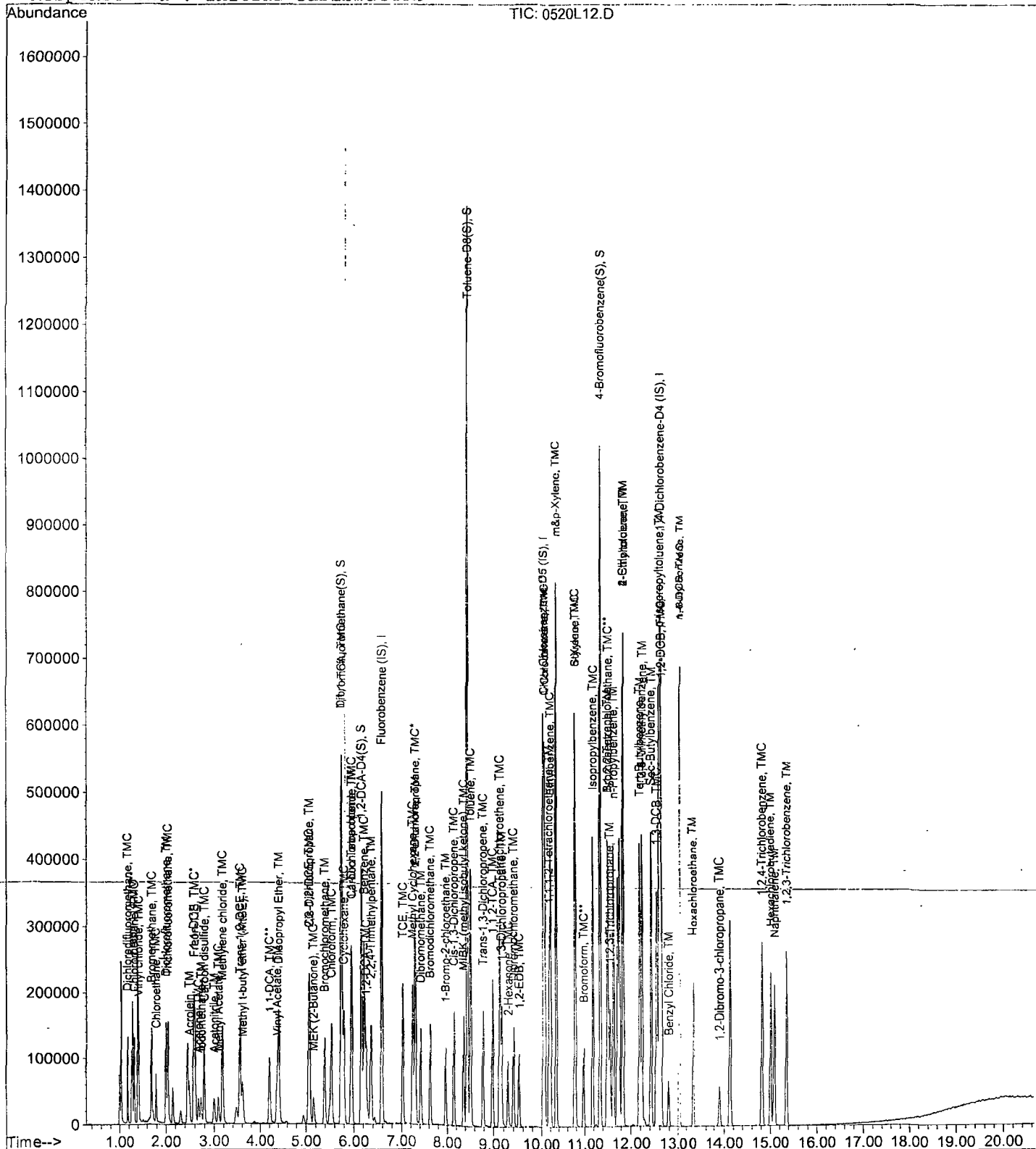
Data File : M:\LOKI\DATA\210520\052012.D  
Acq On : 20 May 21 15:40  
Sample : 40ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 12  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\0520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L13.D  
 Acq On : 20 May 21 16:08  
 Sample : 100ug/L 524 HCl 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 13  
 Operator:  
 Inst : loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	Q Ion	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	490905	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	402269	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	268921	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	531822	93.12	ppb	0.00
Spiked Amount	25.000		Recovery	=	372.460%	
37) 1,2-DCA-D4(S)	6.16	65	559707	90.88	ppb	0.00
Spiked Amount	25.000		Recovery	=	363.500%	
57) Toluene-D8(S)	8.44	98	1895488	100.68	ppb	0.00
Spiked Amount	25.000		Recovery	=	402.732%	
65) 4-Bromofluorobenzene(S)	11.34	174	737374	110.05	ppb	0.00
Spiked Amount	25.000		Recovery	=	440.216%	
<b>Target Compounds</b>						
2) Dichlorodifluoromethane	1.17	85	171375	97.11	ppb	99
3) Freon 114	1.28	85	151544	100.04	ppb	97
4) Chloromethane	1.32	50	180397	99.36	ppb	97
5) Vinyl chloride	1.42	62	177088	99.33	ppb	96
6) Bromomethane	1.70	96	124141	92.52	ppb	98
7) Chloroethane	1.79	64	121323	100.18	ppb	94
8) Dichlorofluoromethane	2.00	67	312553	91.10	ppb	92
9) Trichlorofluoromethane	2.04	101	174016	101.14	ppb	97
10) Acrolein	2.49	56	32640	200.96	ppb	98
11) Acetone	2.68	43	54106	92.01	ppb	98
12) Freon-113	2.60	101	157647	101.10	ppb	96
13) 1,1-DCE	2.58	61	237036	96.08	ppb	98
15) Acetonitrile	3.01	41	49532	192.02	ppb	98
16) Methyl Acetate	3.09	43	121228	98.80	ppb	93
17) Iodomethane	2.73	142	138568	102.62	ppb	98
19) Methylene chloride	3.18	84	188715	100.19	ppb	97
20) Carbon disulfide	2.79	76	225216	100.47	ppb	97
21) Methyl t-butyl ether (MtBE)	3.61	73	235798	131.21	ppb	98
22) Trans-1,2-DCE	3.55	61	225204	99.89	ppb	100
23) Diisopropyl Ether	4.41	45	490000	112.31	ppb	98
24) 1,1-DCA	4.21	63	314298	97.33	ppb	99
25) Vinyl Acetate	4.37	43	105440	103.37	ppb	# 100
27) MEK (2-Butanone)	5.16	43	70814	102.70	ppb	98
28) Cis-1,2-DCE	5.07	61	269271	100.04	ppb	91
29) 2,2-Dichloropropane	5.06	77	236391	97.32	ppb	99
30) Chloroform	5.54	83	332912	95.37	ppb	95
31) Bromochloromethane	5.40	130	140799	94.01	ppb	92
33) 1,1,1-TCA	5.74	97	293288	98.45	ppb	97
34) Cyclohexane	5.79	56	230041	119.64	ppb	86
35) 1,1-Dichloropropene	5.96	75	215310	106.42	ppb	94
36) 2,2,4-Trimethylpentane	6.36	57	185920	119.55	ppb	95
38) Carbon Tetrachloride	5.95	119	248638	100.56	ppb	97
40) 1,2-DCA	6.25	62	266301	93.41	ppb	96
41) Benzene	6.22	78	682049	98.72	ppb	98
42) TCE	7.03	130	206601	95.07	ppb	96
43) 2-Pentanone	7.31	43	242780	229.52	ppb	100
44) 1,2-Dichloropropane	7.29	63	188687	97.86	ppb	93
45) Bromodichloromethane	7.63	83	259979	96.39	ppb	93
46) Methyl Cyclohexane	7.24	98	126541	101.60	ppb	89

(#) = qualifier out of range (m) = manual integration  
 0520L13.D L0520524.M Thu May 27 10:48:09 2021

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\210520\0520L13.D  
 Acq On : 20 May 21 16:08  
 Sample : 100ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 13  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	Qlon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	163585	99.02	ppb	98
49) MIBK (methyl isobutyl ket	8.36	43	140702	112.69	ppb	98
50) 1-Bromo-2-chloroethane	7.96	63	132480	95.69	ppb	99
51) Cis-1,3-Dichloropropene	8.15	75	279353	105.78	ppb	97
52) Toluene	8.51	91	782783	101.05	ppb	98
53) Trans-1,3-Dichloropropene	8.78	75	147776	103.32	ppb	99
54) 1,1,2-TCA	8.98	97	185681	94.70	ppb	96
55) 2-Hexanone	9.29	43	86745	104.44	ppb	88
58) 1,2-EDB	9.52	107	199323	100.21	ppb	99
59) Tetrachloroethene	9.12	166	138880	100.13	ppb	97
60) 1-Chlorohexane	10.07	91	205450	101.34	ppb	96
61) 1,1,1,2-Tetrachloroethane	10.17	131	219206	101.91	ppb	93
62) m&p-Xylene	10.33	91	1392393	238.53	ppb	98
63) o-Xylene	10.77	91	716837	121.59	ppb	99
64) Styrene	10.78	104	616406	101.14	ppb	99
66) 1,3-Dichloropropane	9.16	76	294569	103.42	ppb	91
67) Dibromochloromethane	9.41	129	226997	103.35	ppb	90
68) Chlorobenzene	10.07	112	561343	97.67	ppb	96
69) Ethylbenzene	10.20	91	505344	115.48	ppb	100
70) Bromoform	10.97	173	180994	113.19	ppb	94
72) Isopropylbenzene	11.18	105	896061	113.31	ppb	95
73) 1,1,1,2-Tetrachloroethane	11.51	83	274349	92.36	ppb	99
74) 1,2,3-Trichloropropane	11.55	110	91460	102.58	ppb	100
76) Bromobenzene	11.50	158	270144	97.18	ppb	93
77) n-Propylbenzene	11.63	91	1048964	112.68	ppb	99
78) 4-Ethyltoluene	11.82	105	802955	115.93	ppb	100
79) 2-Chlorotoluene	11.84	91	768925	105.78	ppb	97
80) 1,3,5-Trimethylbenzene	12.23	105	831873	100.67	ppb	95
81) 4-Chlorotoluene	11.84	91	768925	105.78	ppb	97
82) Tert-Butylbenzene	12.18	119	711872	113.73	ppb	95
83) 1,2,4-Trimethylbenzene	12.23	105	831873	100.67	ppb	95
84) Sec-Butylbenzene	12.42	105	1010700	122.54	ppb	97
85) p-Isopropyltoluene	12.59	119	906633	100.81	ppb	100
86) Benzyl Chloride	12.79	91	186498	109.60	ppb	93
87) 1,3-DCB	12.54	146	535579	101.23	ppb	96
88) 1,4-DCB	13.04	146	547342	103.53	ppb	95
89) n-Butylbenzene	13.03	91	730095	123.60	ppb	96
90) 1,2-DCB	12.63	146	545660	95.88	ppb	99
91) Hexachloroethane	13.33	117	139982	100.30	ppb	97
92) 1,2-Dibromo-3-chloropropan	13.90	157	62606	100.88	ppb	97
93) 1,2,4-Trichlorobenzene	14.82	180	172928	118.18	ppb	90
94) Hexachlorobutadiene	15.01	225	88280	101.56	ppb	93
95) Naphthalene	15.09	128	745442	102.25	ppb	100
96) 1,2,3-Trichlorobenzene	15.36	182	153536	110.46	ppb	95

Quantitation Report

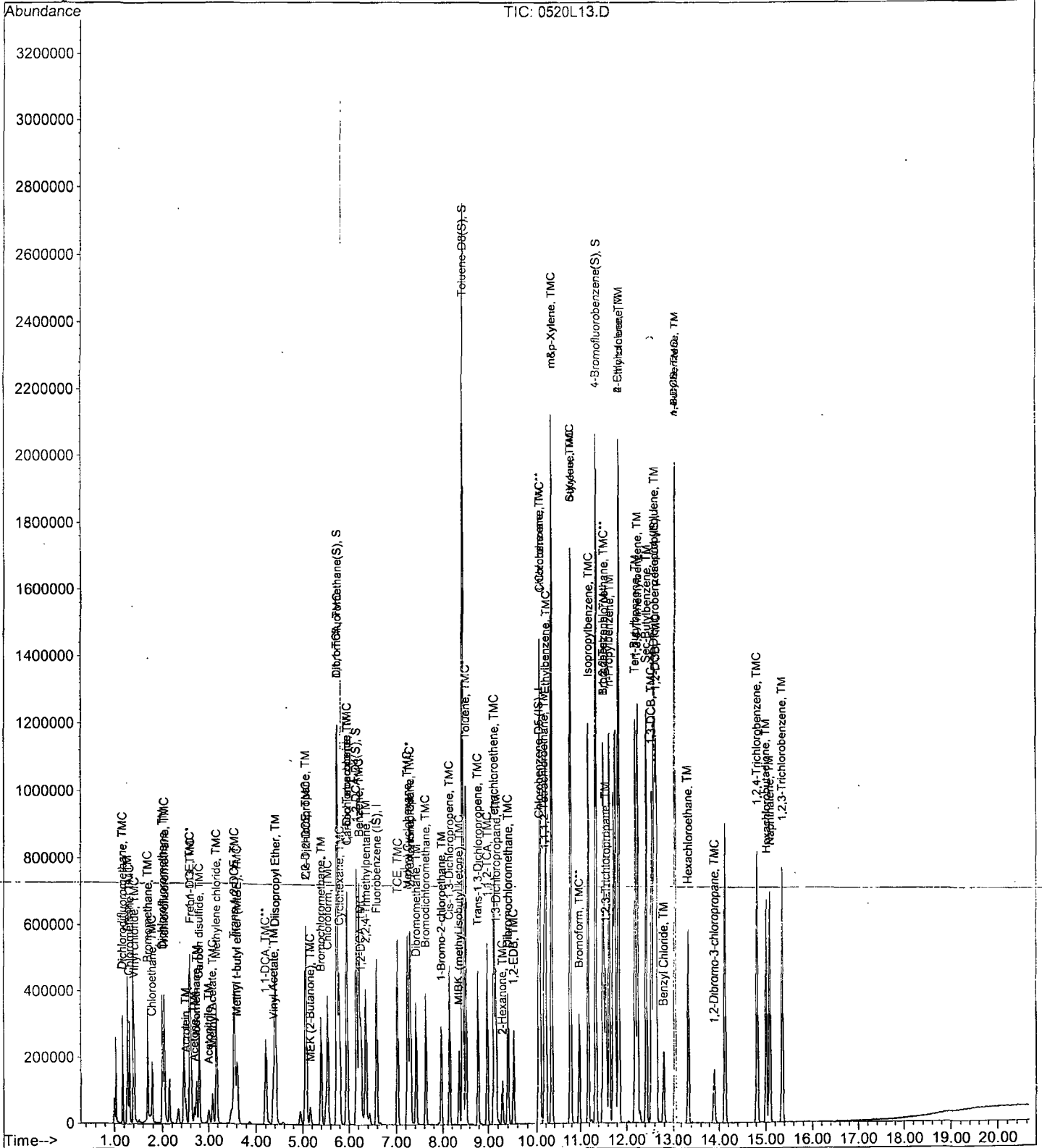
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Acq On : 20 May 21 16:08  
Sample : 100ug/L 524 HCL 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

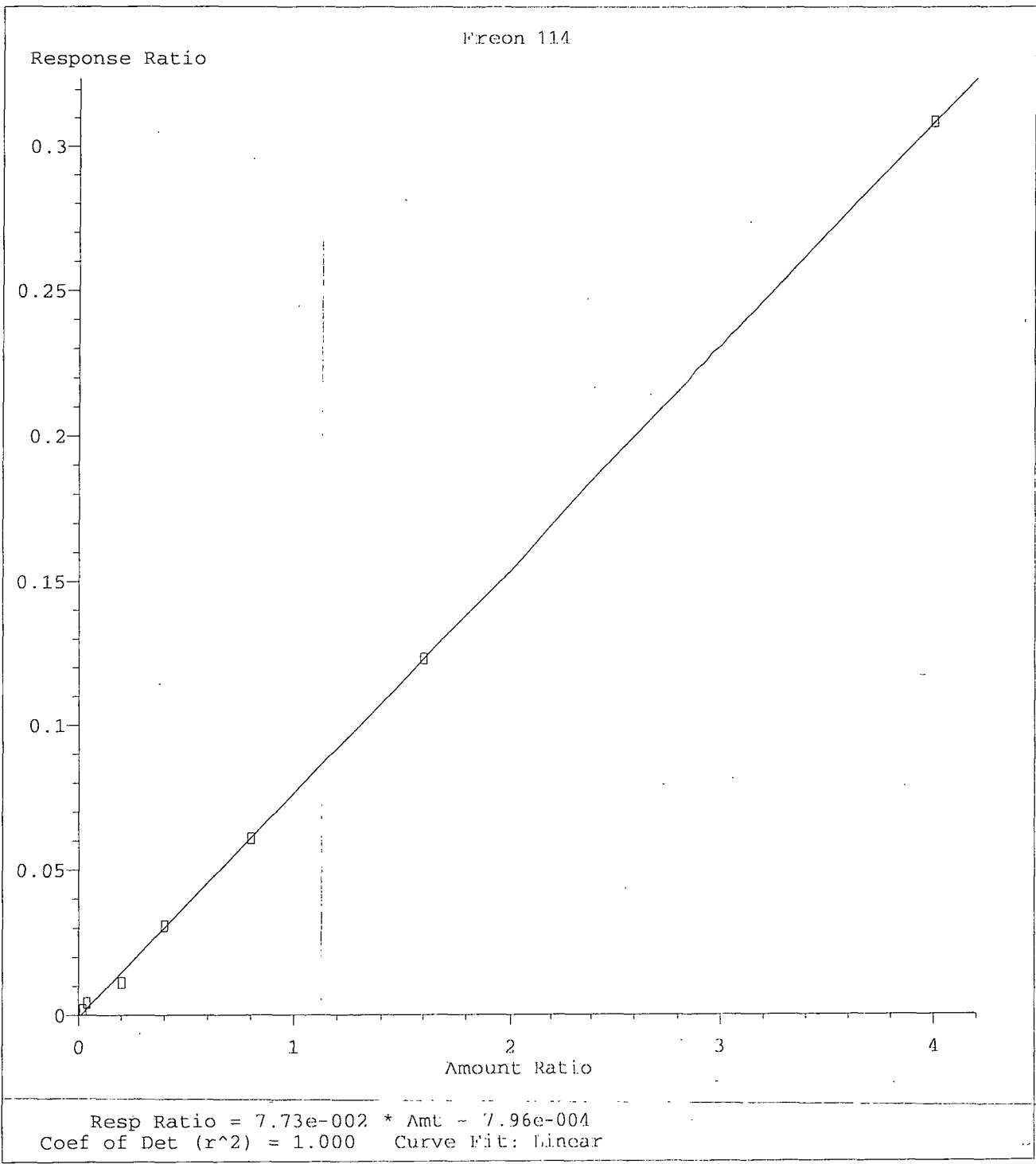
Vial: 13  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

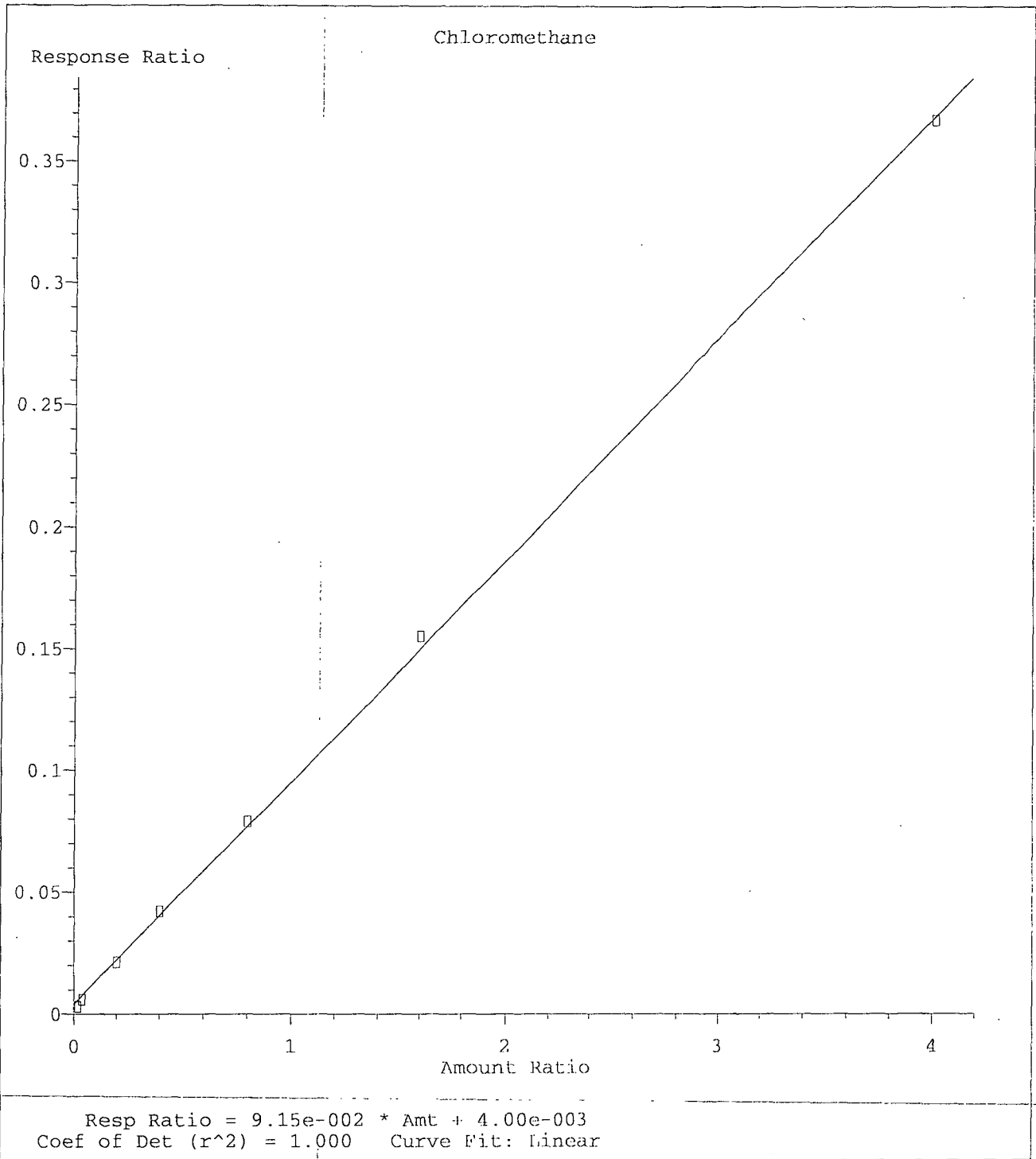
Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration

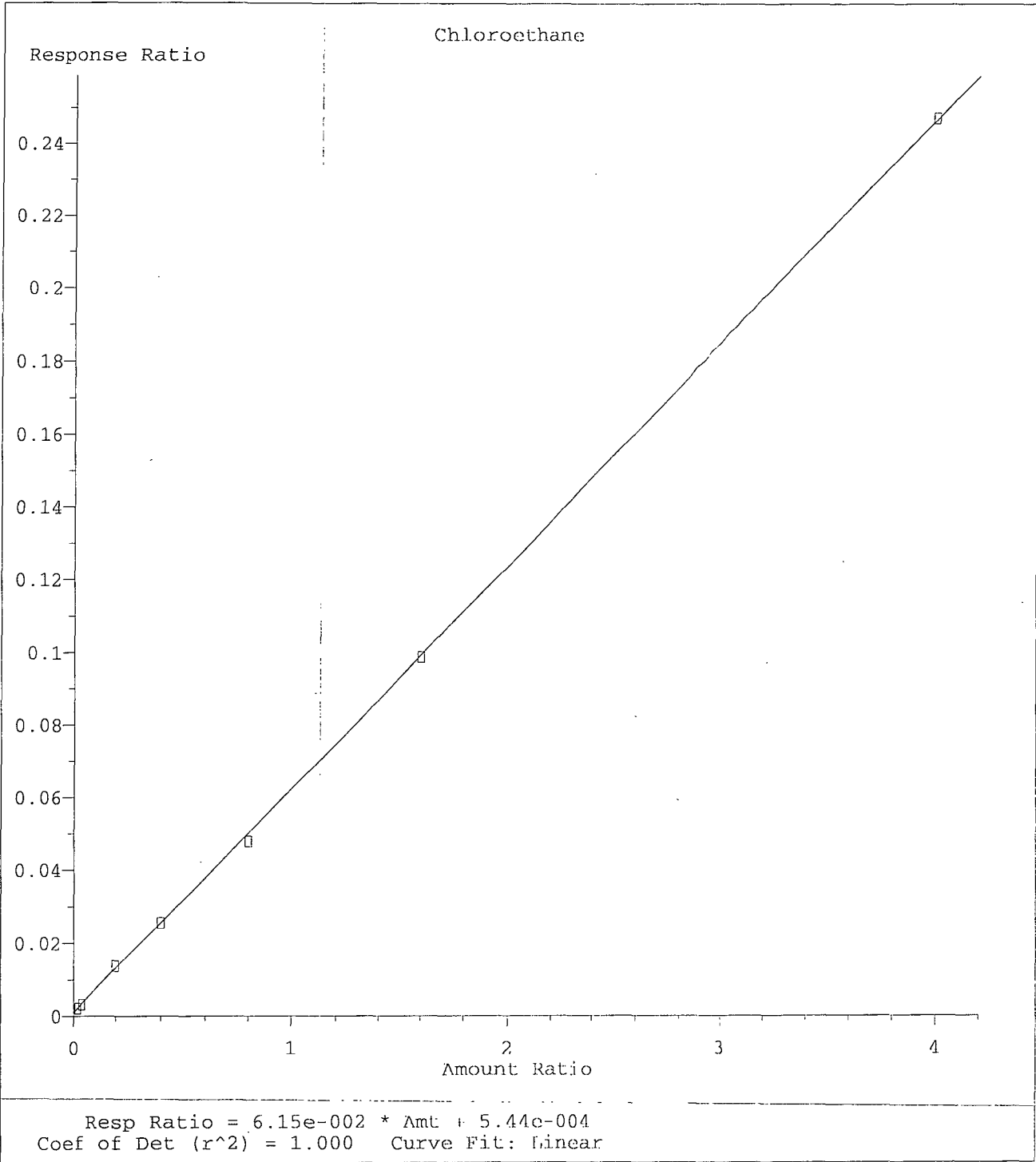




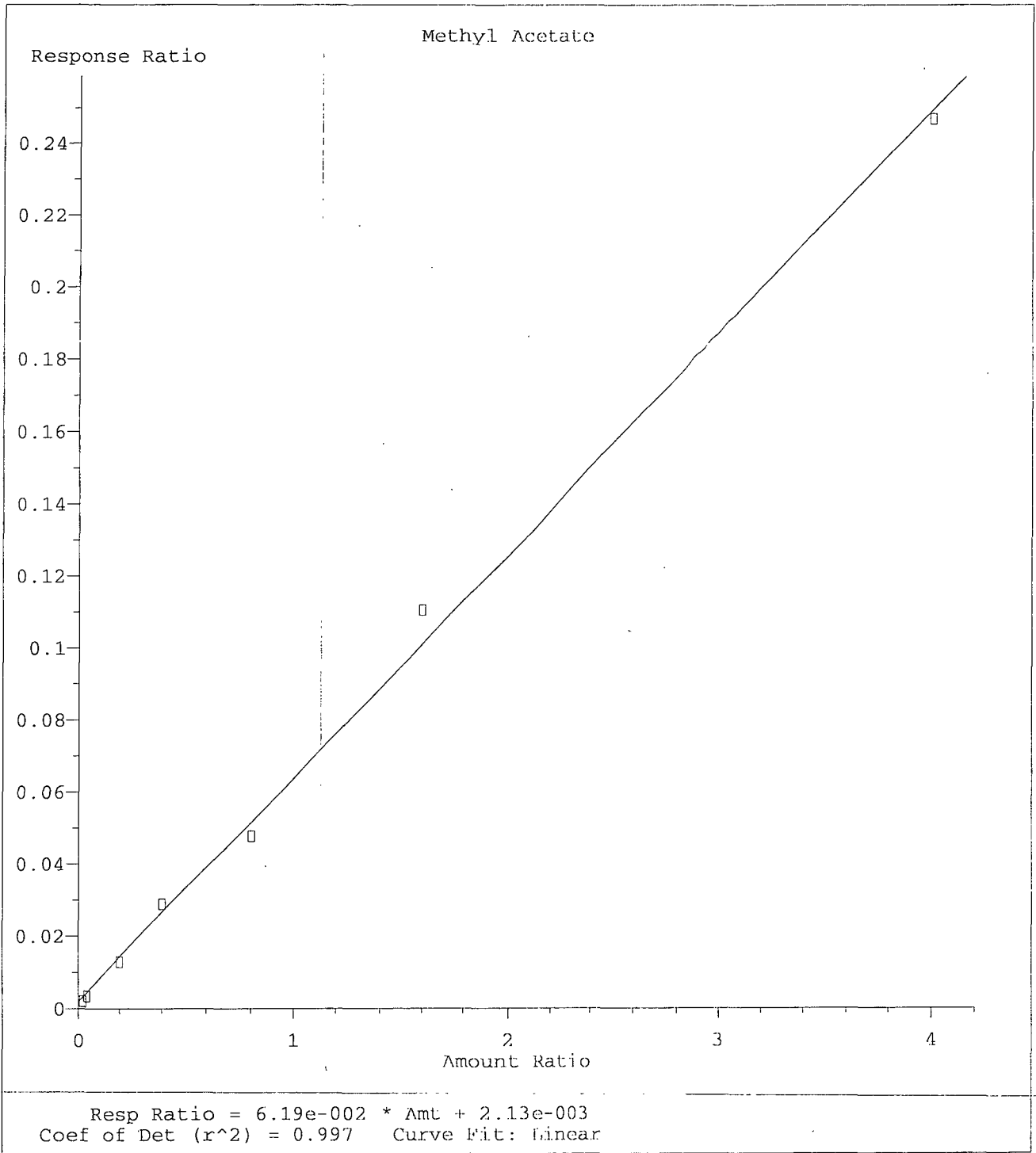
Method Name: M:\LOKI\DATA\210520\I.0520524.M  
 Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



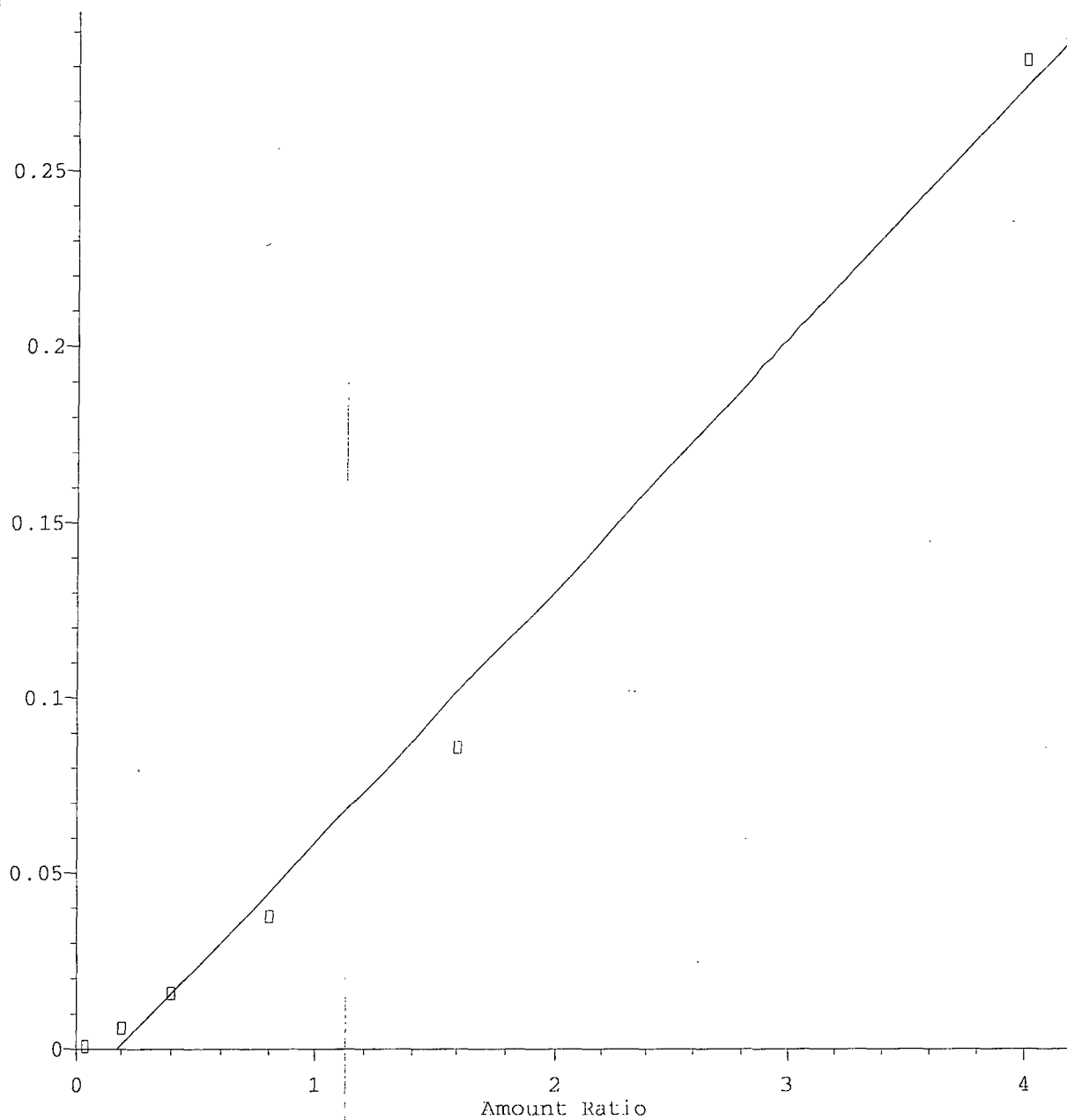
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\I.0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021

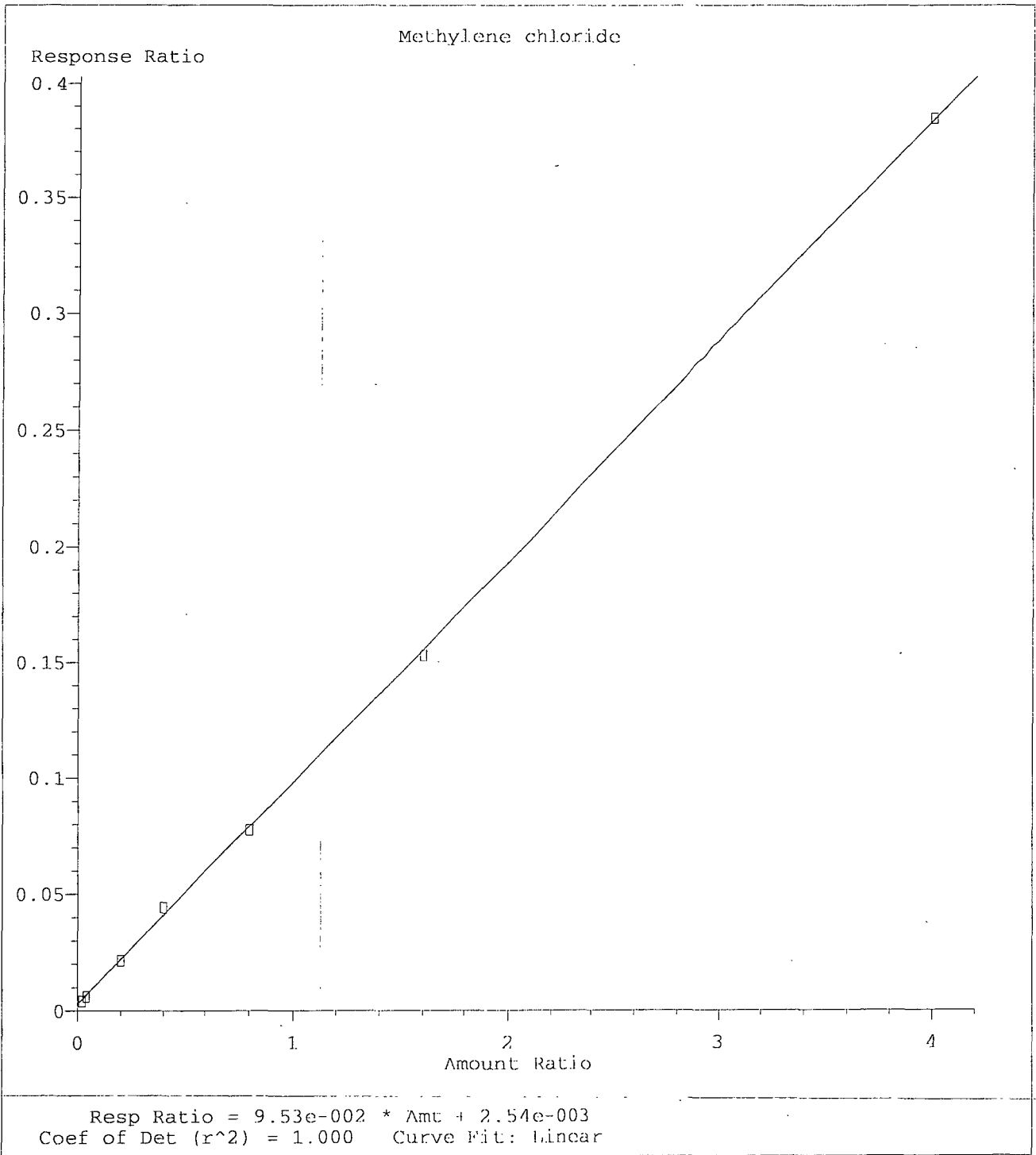
Iodomethane

Response Ratio

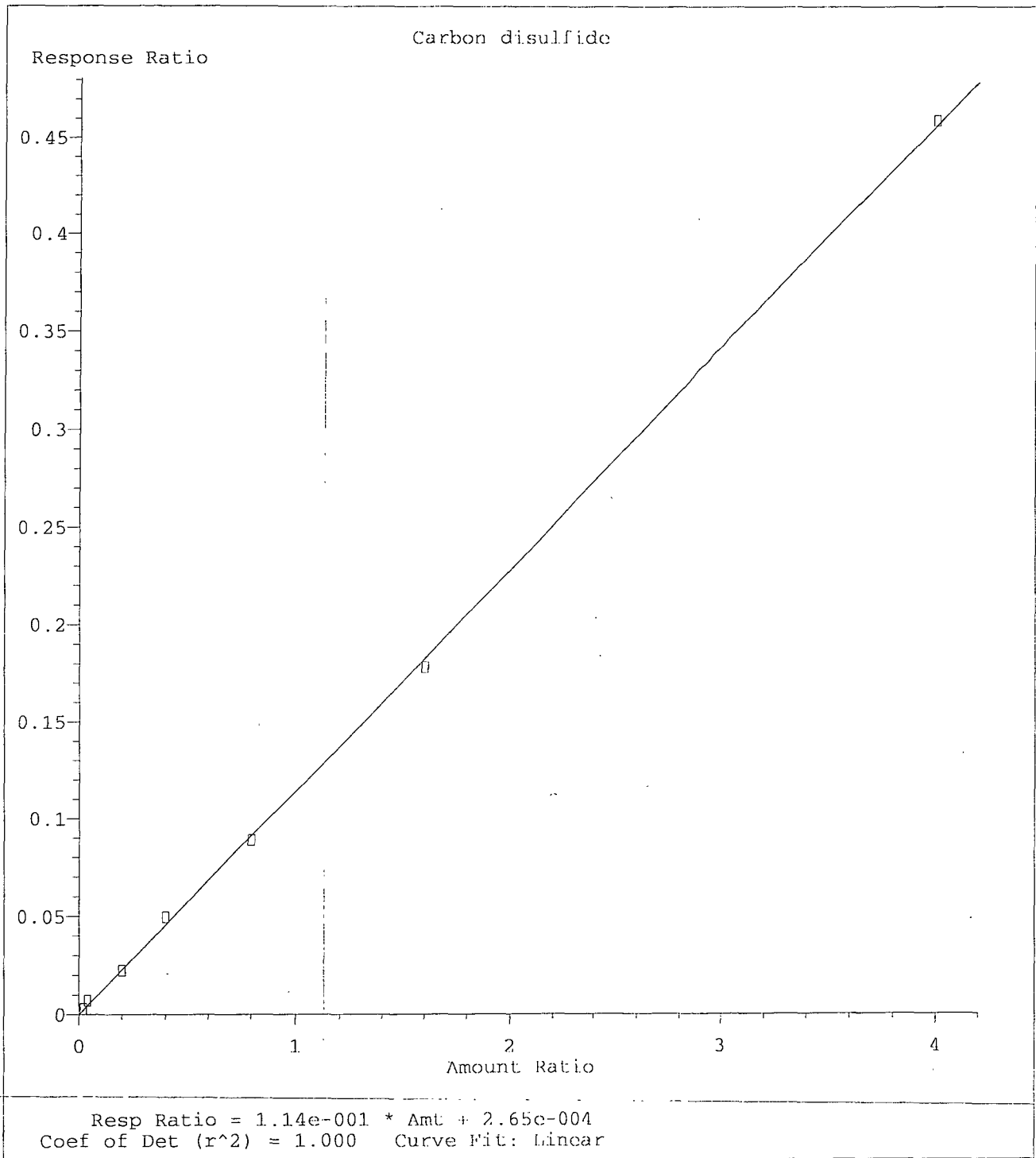


Resp Ratio = 7.20e-002 \* Amt - 1.31e-002  
Coef of Det (r^2) = 0.991 Curve Fit: Linear

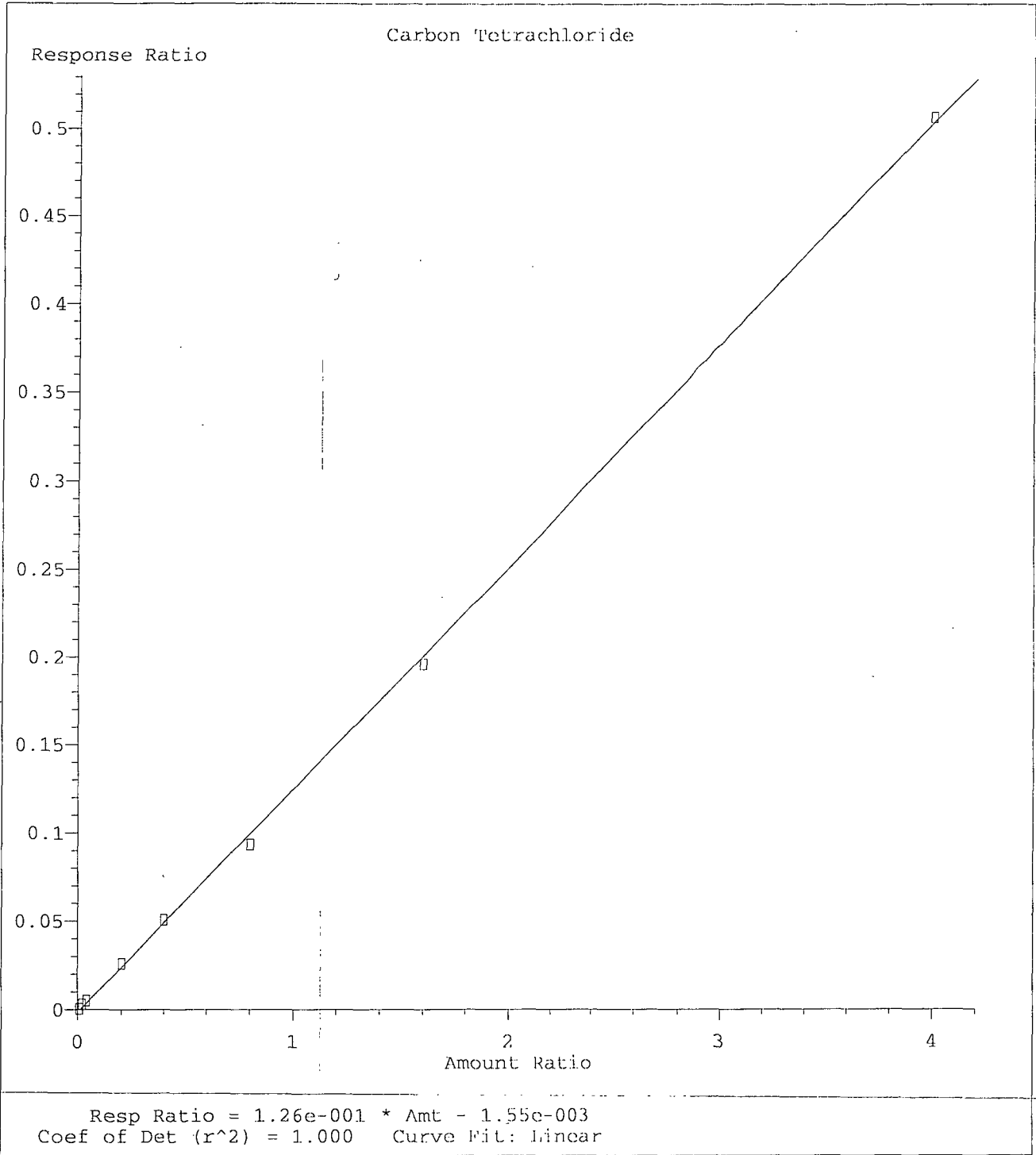
Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



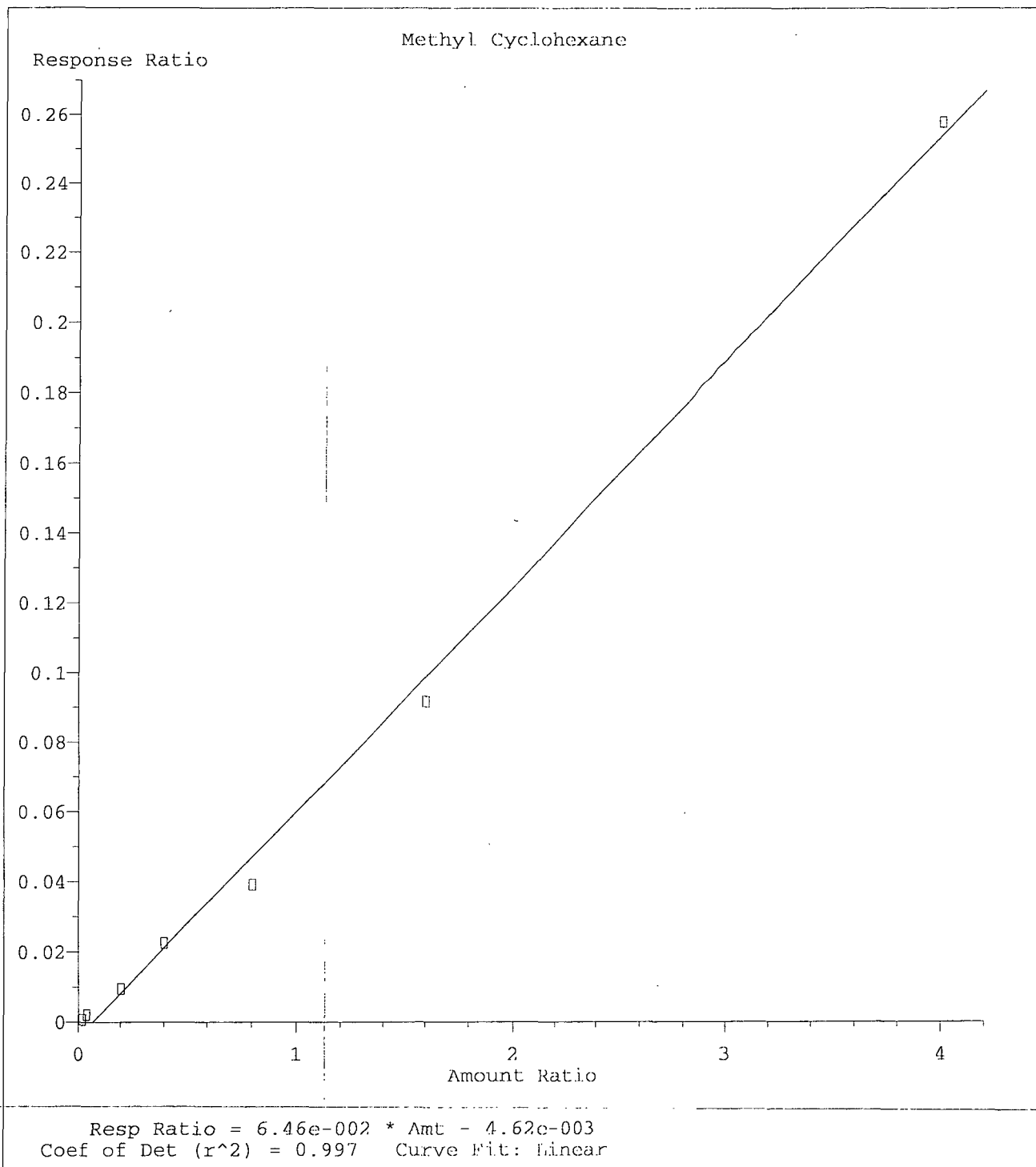
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



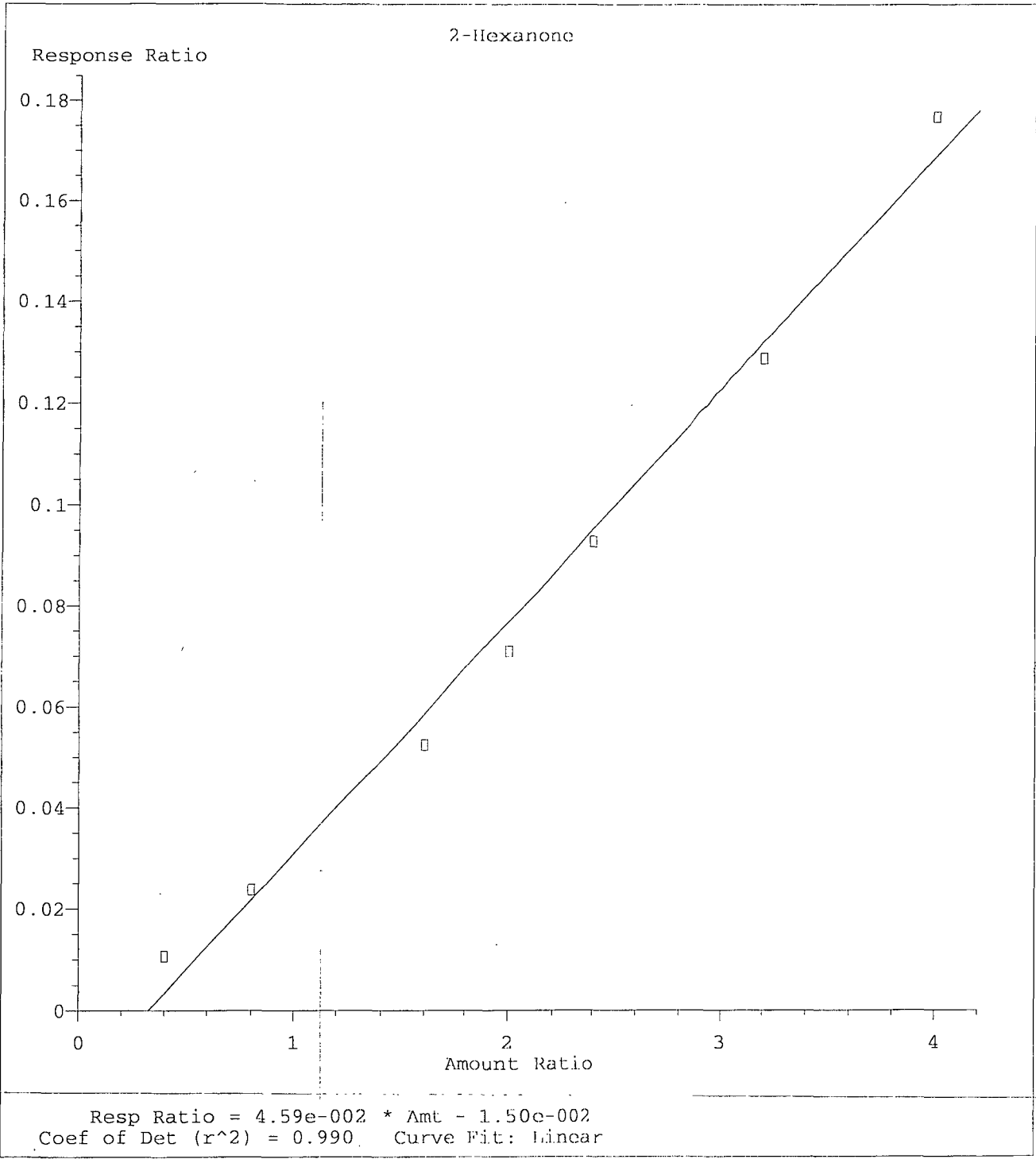
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



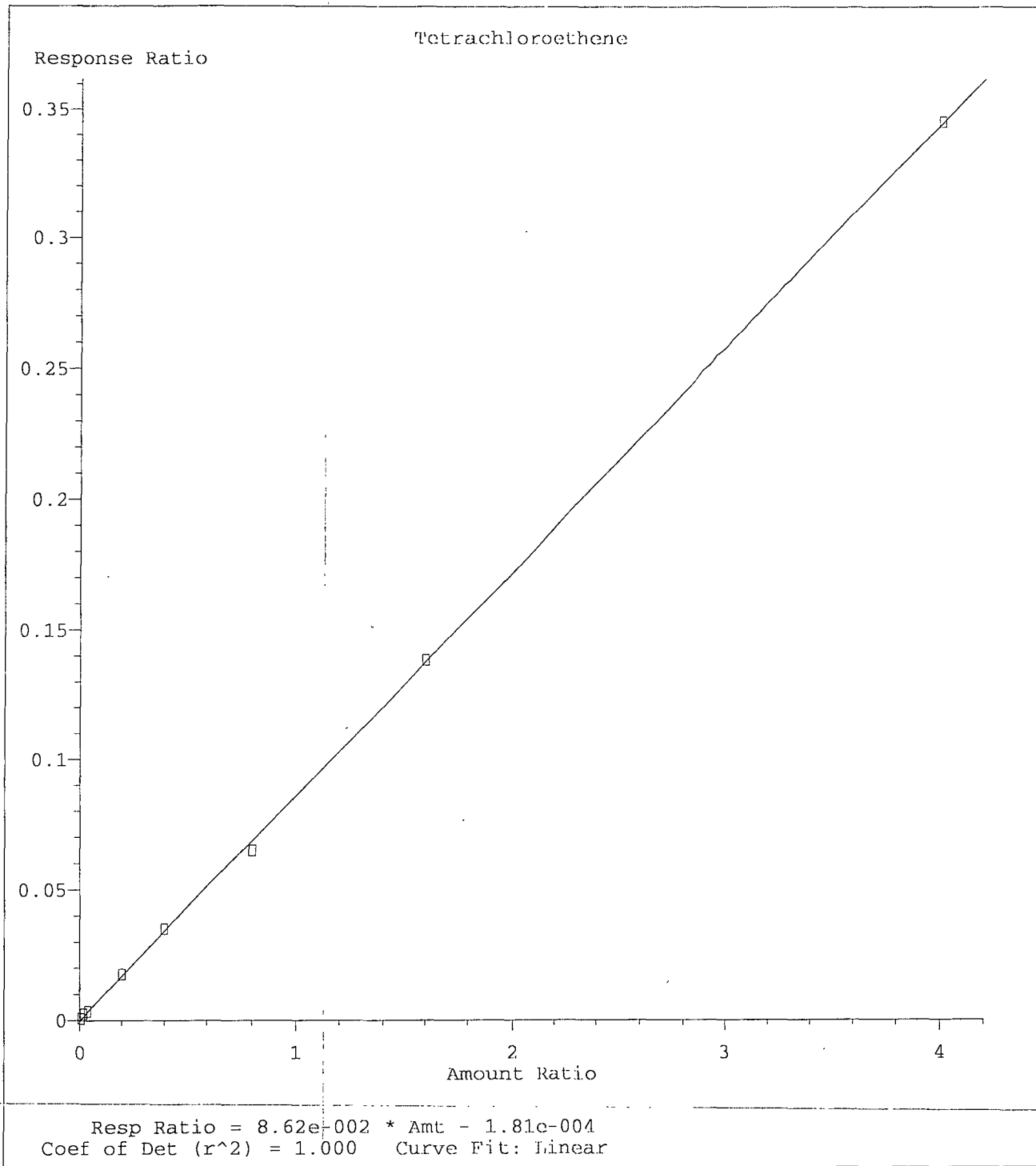
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



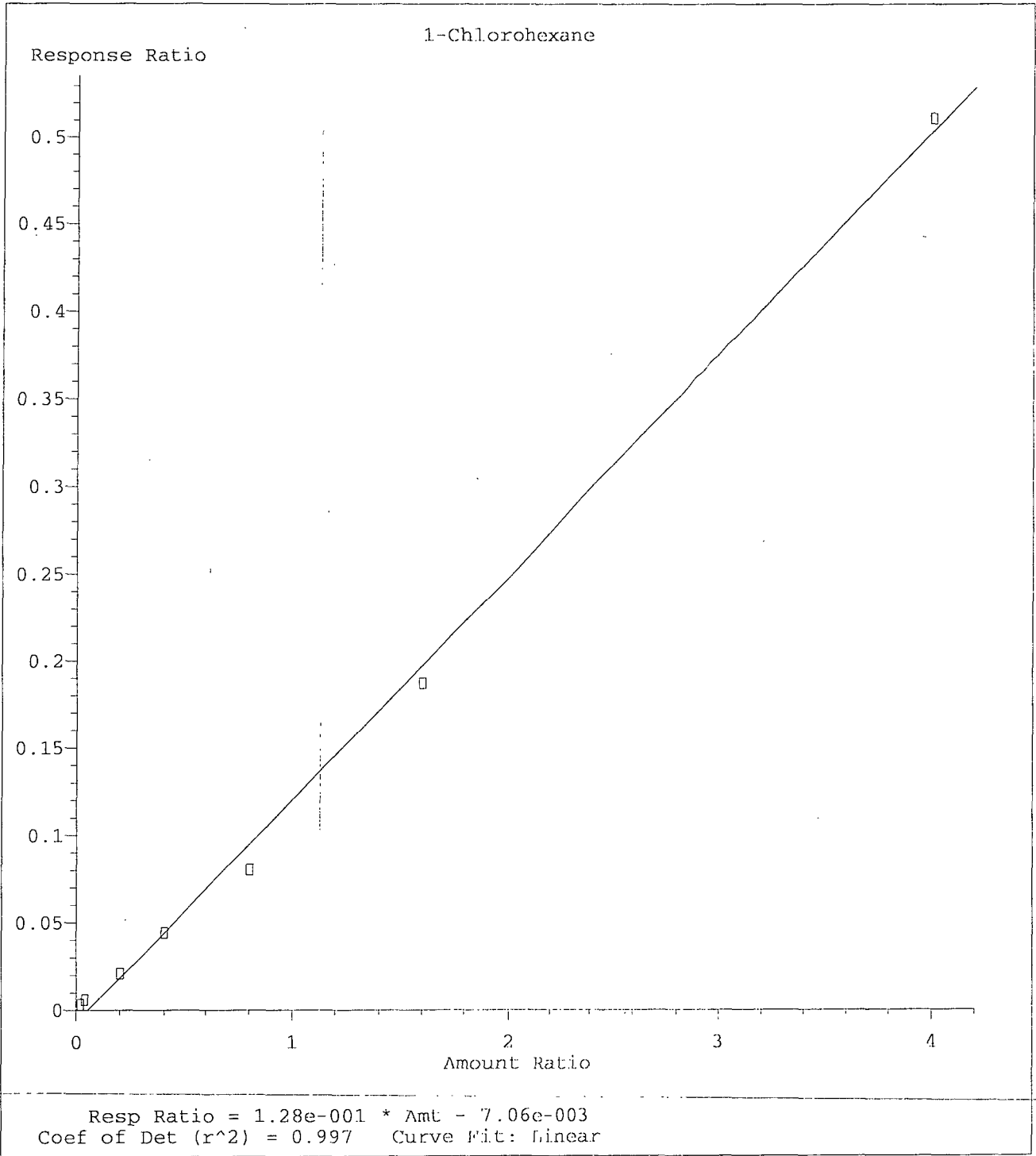
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



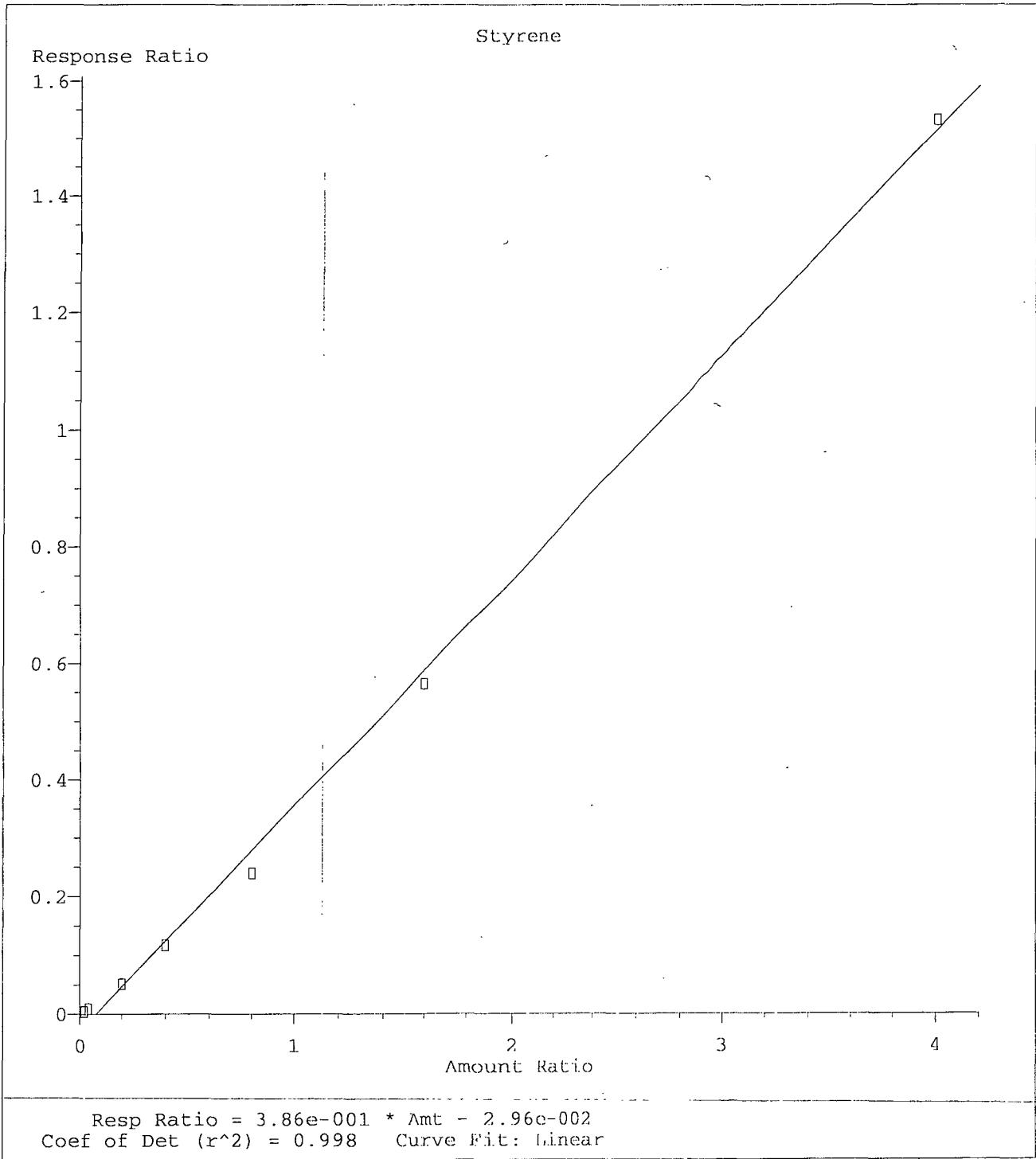
Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



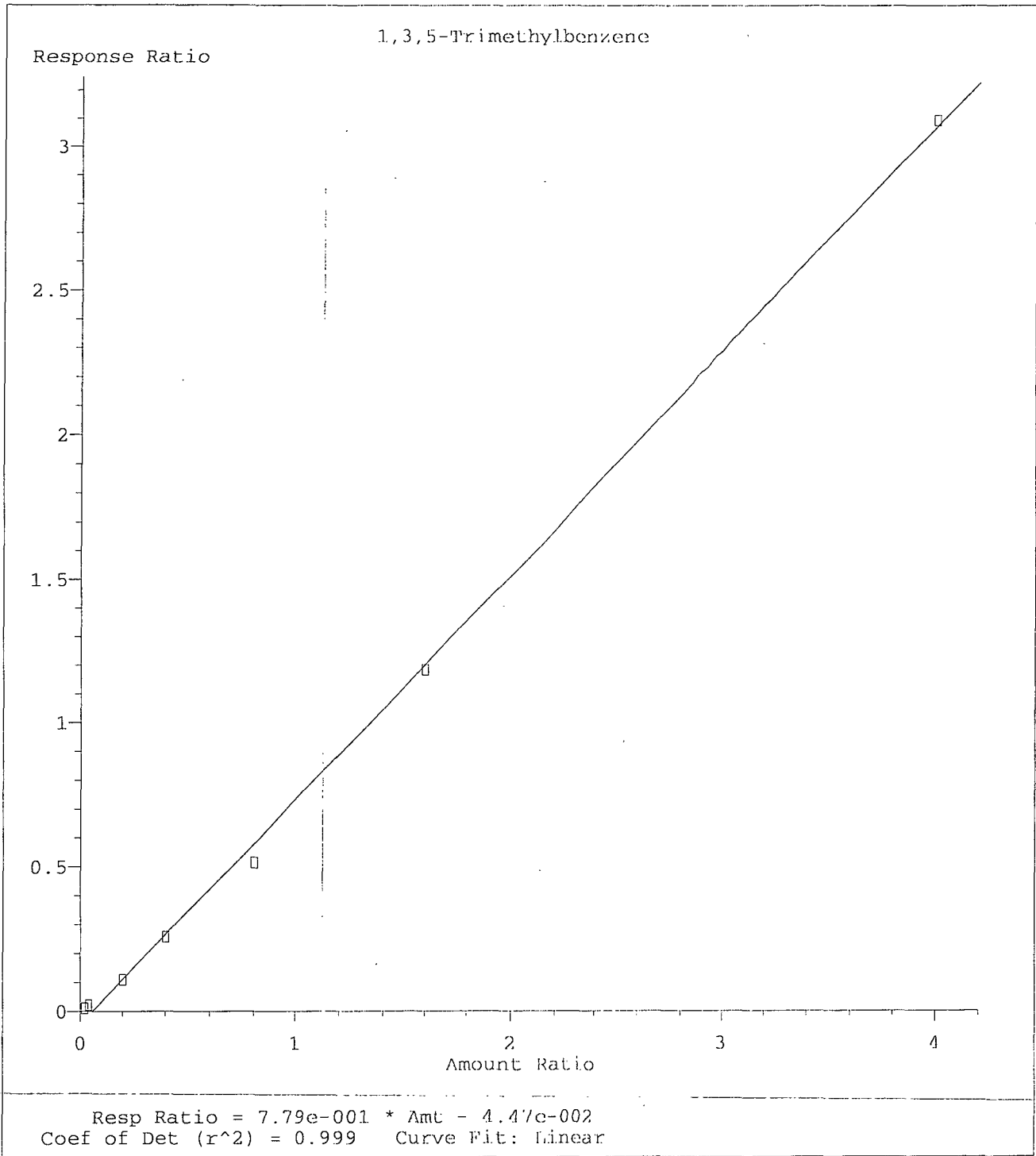
Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\10520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



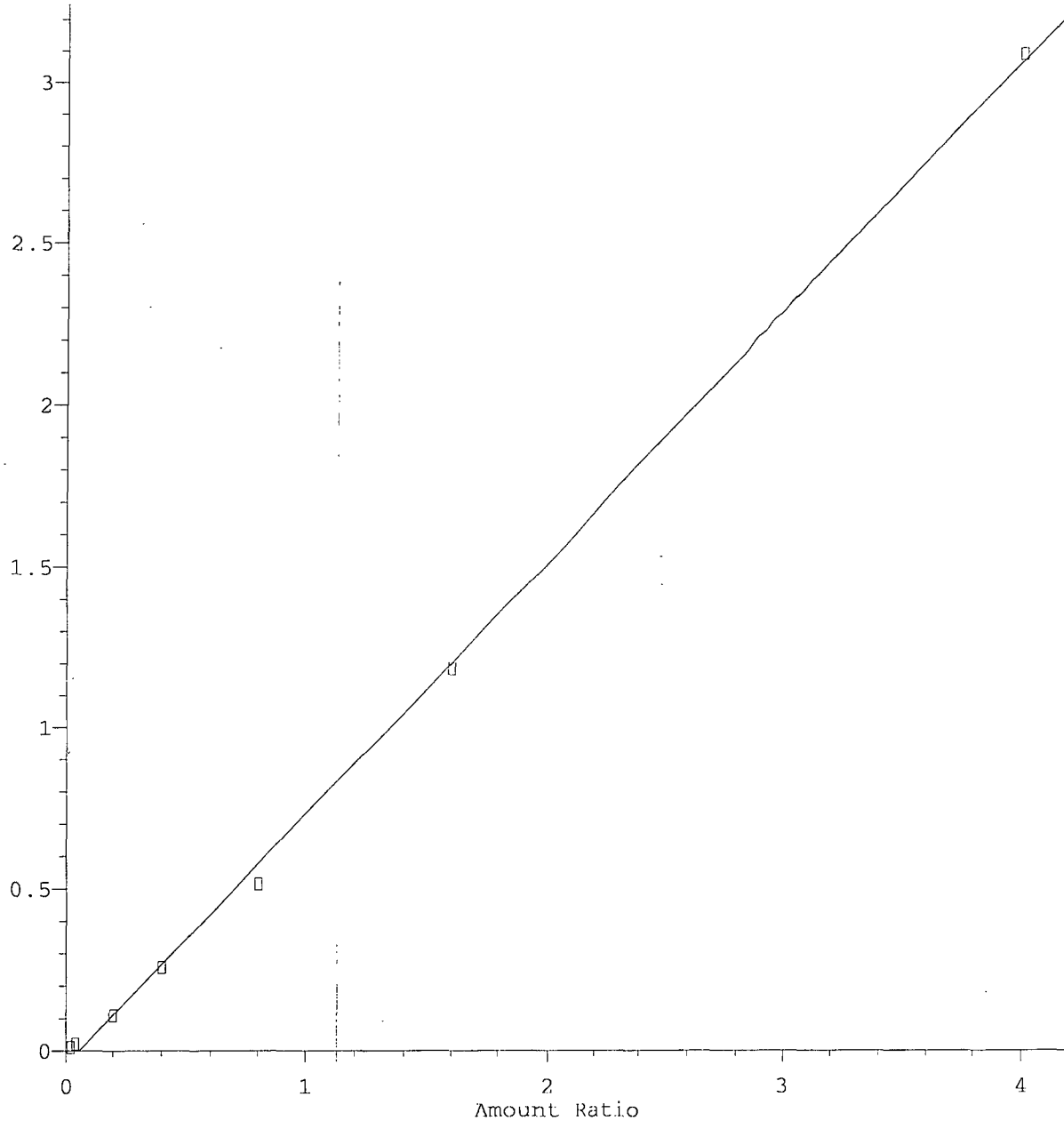
Method Name: M:\LOKI\DATA\210520\I.0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021

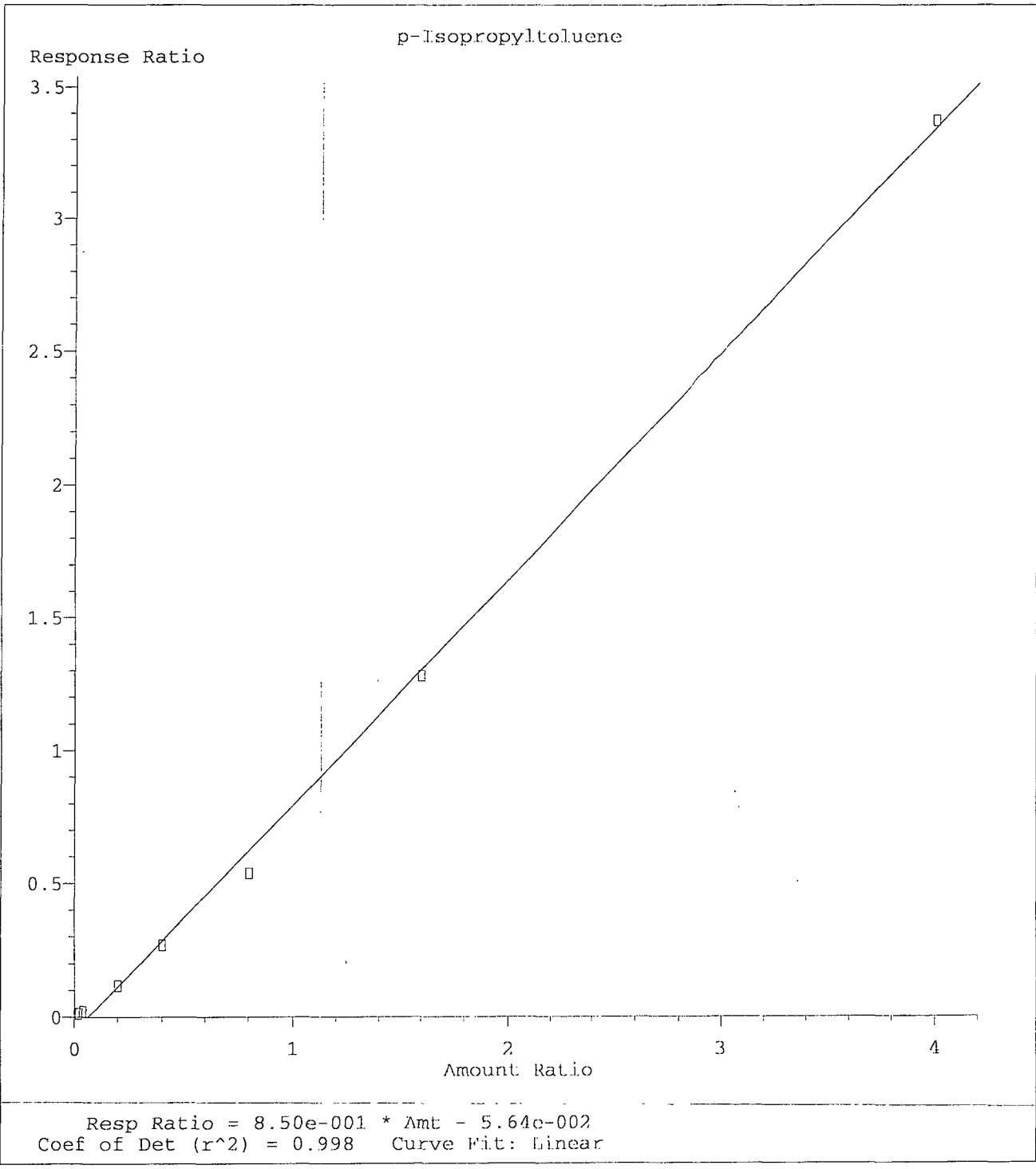
1,2,4-Trimethylbenzene

Response Ratio

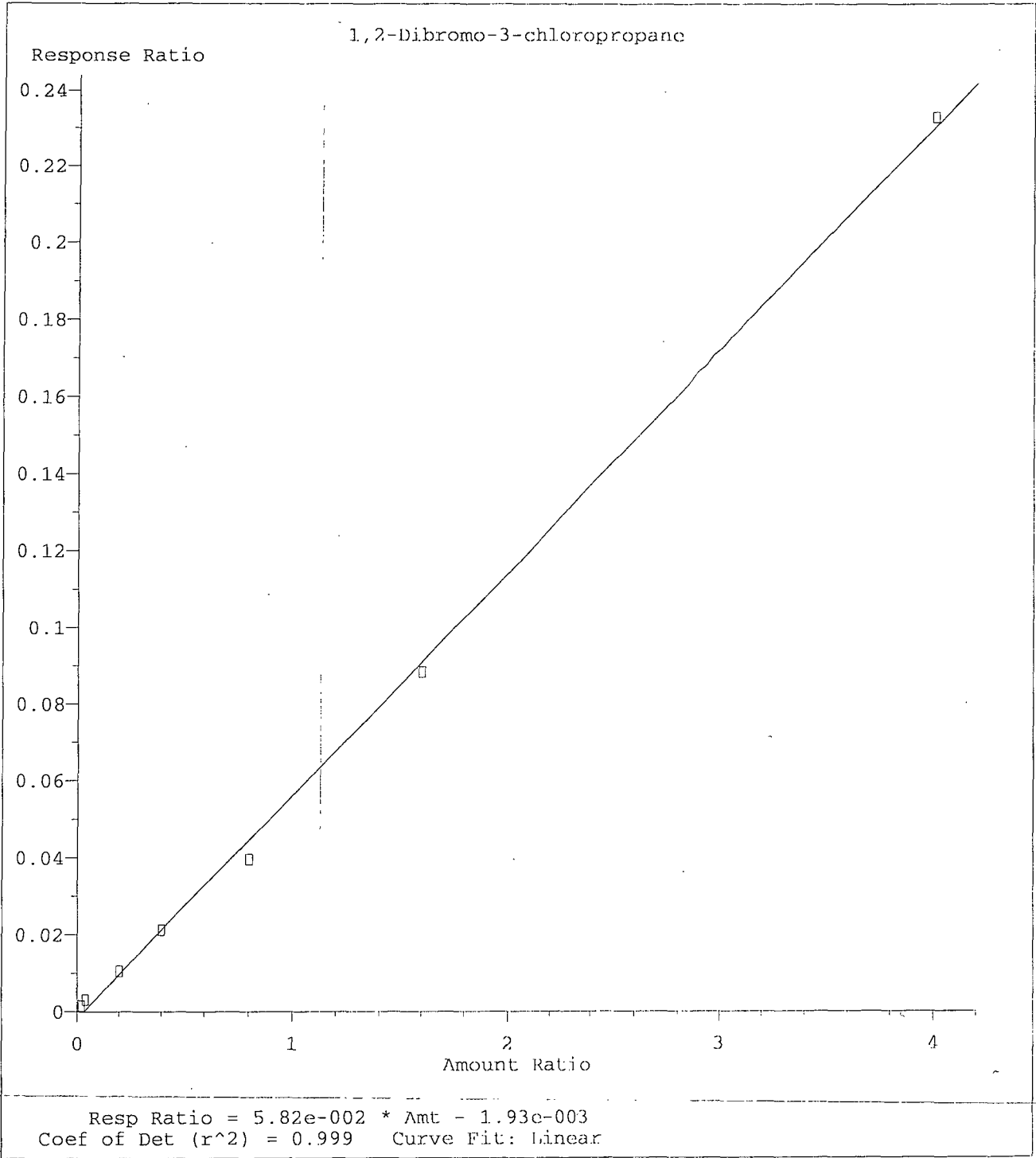


Resp Ratio = 7.79e-001 \* Amt - 4.47e-002  
Coef of Det (r^2) = 0.999 Curve Fit: Linear

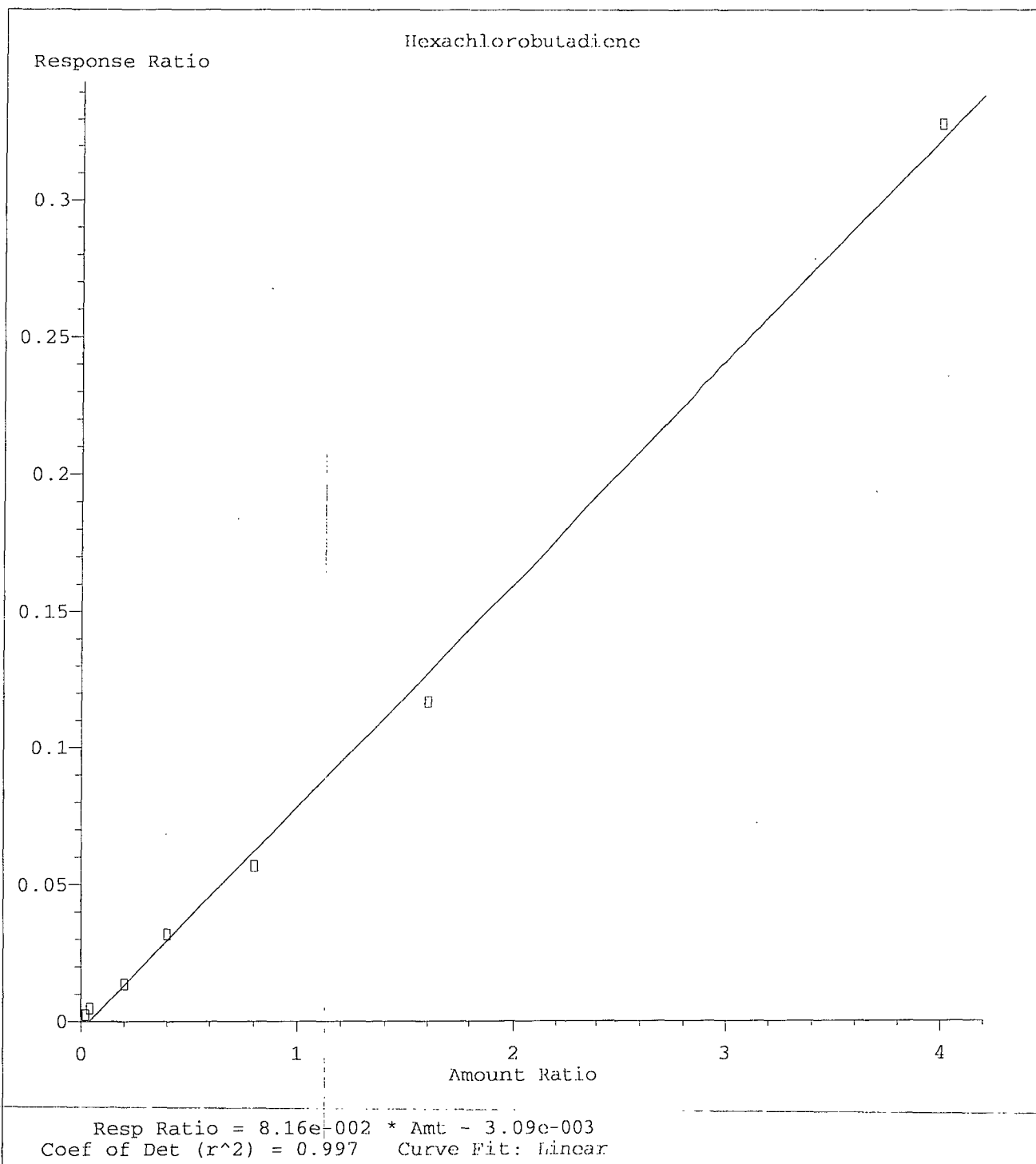
Method Name: M:\LOK1\DATA\210520\i.0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



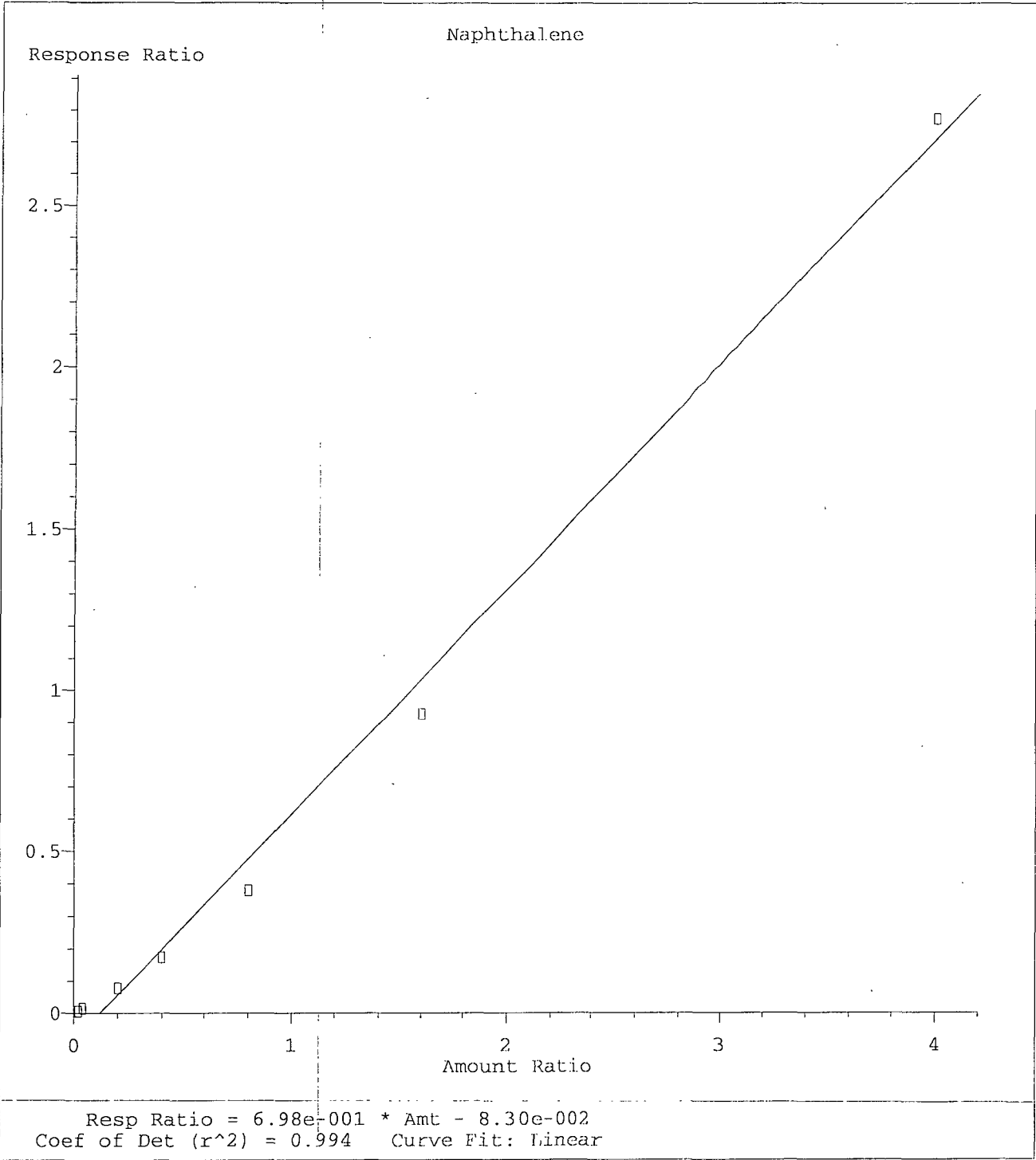
Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\L0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021



Method Name: M:\LOKI\DATA\210520\1.0520524.M  
Calibration Table Last Updated: Thu May 27 10:30:37 2021

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.

SDG No: \_\_\_\_\_

Case No: \_\_\_\_\_

Date Analyzed: 05/20/21

Matrix: Water

Instrument: Loki

Initial Cal. Date: 05/20/21

Data File: 0520L15.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMC	Dichlorodifluoromethane	0.0899	0.0913	1.6	TMC	
2	TML	Freon 114	0.0803	0.0611	24	TML	18
3	TMC**	Chloromethane	0.1140	0.0941	17	TMC**L	8.1
4	TMC*	Vinyl chloride	0.0908	0.0901	0.73	TMC*	
5	TMC	Bromomethane	0.0683	0.0690	0.93	TMC	
6	TMCL	Chloroethane	0.0715	0.0567	21	TMCL	10
7	TM	Dichlorofluoromethane	0.1747	0.1496	14	TM	
8	TMC	Trichlorofluoromethane	0.0876	0.0851	2.9	TMC	
9	TM	Acrolein	0.0083	0.0075	9.2	TM	
10	TMC	Acetone	0.0299	0.0281	6.1	TMC	
11	TMC	Freon-113	0.0794	0.0714	10	TMC	
12	TMC*	1,1-DCE	0.1256	0.1214	3.3	TMC*	
13	TMQ	t-Butanol	0.0000	0.0070	0.00	TMQ	
14	TM	Acetonitrile	0.0131	0.0134	1.7	TM	
15	TMCL	Methyl Acetate	0.0740	0.0587	21	TMCL	14
16	TML	Iodomethane	0.0435	0.0568	31	TML	24
17	TML	Acrylonitrile	0.0000	0.0150	0.00	TML	
18	TMCL	Methylene chloride	0.1222	0.1028	16	TMCL	1.2
19	TMCL	Carbon disulfide	0.1273	0.1248	1.9	TMCL	8.8
20	TMC	Methyl t-butyl ether (MtBE)	0.0915	0.0961	5.0	TMC	
21	TMC	Trans-1,2-DCE	0.1148	0.1126	1.9	TMC	
22	TM	Diisopropyl Ether	0.2222	0.2056	7.5	TM	
23	TMC**	1,1-DCA	0.1644	0.1505	8.5	TMC**	
24	TM	Vinyl Acetate	0.0519	0.0450	13	TM	
25	TM	Ethyl tert Butyl Ether	0.0000	0.0163	0.00	TM	
26	TMC	MEK (2-Butanone)	0.0351	0.0348	0.97	TMC	
27	TMC	Cis-1,2-DCE	0.1371	0.1302	5.0	TMC	
28	TM	2,2-Dichloropropane	0.1237	0.1091	12	TM	
29	TMC*	Chloroform	0.1778	0.1625	8.6	TMC*	
30	TM	Bromochloromethane	0.0761	0.0764	0.39	TM	
31	TMC	1,1,1-TCA	0.1517	0.1386	8.6	TMC	
32	TMC	Cyclohexane	0.0979	0.0953	2.7	TMC	
33	TM	1,1-Dichloropropene	0.1030	0.0933	9.4	TM	
34	TM	2,2,4-Trimethylpentane	0.0792	0.0737	6.9	TM	
35	TMCL	Carbon Tetrachloride	0.1173	0.1253	6.8	TMCL	2.3
36	TM	Tert Amyl Methyl Ether	0.0000	0.0100	0.00	TM	
37	TMC	1,2-DCA	0.1452	0.1343	7.5	TMC	
38	TMC	Benzene	0.3519	0.3401	3.3	TMC	
39	TMC	TCE	0.1107	0.1064	3.8	TMC	
40	TM	2-Pentanone	0.0539	0.0549	2.0	TM	

\*NT

Average

7.4

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.

SDG No: \_\_\_\_\_

Case No: \_\_\_\_\_

Date Analyzed: 05/20/21

Matrix: Water

Instrument: Loki

Cal. Date: 05/20/21

Data File: 0520L15.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TMC*	1,2-Dichloropropane	0.0982	0.0924	5.9	TMC*	
42	TMC	Bromodichloromethane	0.1374	0.1211	12	TMC	
43	TMCL	Methyl Cyclohexane	0.0523	0.0466	11	TMCL	9.9
44	TM	Dibromomethane	0.0841	0.0806	4.2	TM	
45	TM	2-Chloroethyl vinyl ether	0.0000	0.0180	0.00	TM	
46	TMC	MIBK (methyl isobutyl ketone)	0.0636	0.0642	0.92	TMC	
47	TM	1-Bromo-2-chloroethane	0.0705	0.0640	9.2	TM	
48	TMC	Cis-1,3-Dichloropropene	0.1345	0.1255	6.7	TMC	
49	TMC*	Toluene	0.3945	0.3733	5.4	TMC*	
50	TMC	Trans-1,3-Dichloropropene	0.0728	0.0697	4.2	TMC	
51	TMC	1,1,2-TCA	0.0999	0.0914	8.5	TMC	
52	TMCL	2-Hexanone	0.0353	0.0359	1.6	TMCL	5.4
53	TMC	1,2-EDB	0.1236	0.1203	2.7	TMC	
54	TMCL	Tetrachloroethene	0.0930	0.0840	9.6	TMCL	2.0
55	TML	1-Chlorohexane	0.1254	0.1051	16	TML	3.9
56	TM	1,1,1,2-Tetrachloroethane	0.1337	0.1197	10	TM	
57	TMC	m&p-Xylene	0.3628	0.3549	2.2	TMC	
58	TMC	o-Xylene	0.3664	0.3657	0.20	TMC	
59	TMCL	Styrene	0.2891	0.2873	0.62	TMCL	6.4
60	TM	1,3-Dichloropropane	0.1770	0.1688	4.6	TM	
61	TMC	Dibromochloromethane	0.1365	0.1316	3.6	TMC	
62	TMC**	Chlorobenzene	0.3572	0.3324	6.9	TMC**	
63	TMC*	Ethylbenzene	0.2720	0.2569	5.5	TMC*	
64	TMC**	Bromoform	0.0994	0.0915	7.9	TMC**	
65	TMC	Isopropylbenzene	0.7352	0.7523	2.3	TMC	
66	TMC**	1,1,2,2-Tetrachloroethane	0.2761	0.2501	9.4	TMC**	
67	TM	1,2,3-Trichloropropane	0.0829	0.0847	2.2	TM	
68	TM	t-1,4-Dichloro-2-Butene	0.0000	0.0351	0.00	TM	
69	TM	Bromobenzene	0.2584	0.2596	0.46	TM	
70	TM	n-Propylbenzene	0.8654	0.8885	2.7	TM	
71	TM	4-Ethyltoluene	0.6439	0.6880	6.9	TM	
72	TM	2-Chlorotoluene	0.6758	0.6842	1.2	TM	
73	TML	1,3,5-Trimethylbenzene	0.6262	0.6759	7.9	TML	1.1
74	TM	4-Chlorotoluene	0.6758	0.6842	1.2	TM	
75	TM	Tert-Butylbenzene	0.5819	0.5690	2.2	TM	
76	TML	1,2,4-Trimethylbenzene	0.6262	0.6759	7.9	TML	1.1
77	TM	Sec-Butylbenzene	0.7668	0.8012	4.5	TM	
78	TML	p-Isopropyltoluene	0.6721	0.6982	3.9	TML	1.3
79	TM	Benzyl Chloride	0.1582	0.1326	16	TM	
80	TMC	1,3-DCB	0.4919	0.4991	1.5	TMC	

Average

5.2

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.  
Case No: \_\_\_\_\_  
Matrix: Water

SDG No: \_\_\_\_\_  
Date Analyzed: 05/20/21  
Instrument: Loki  
Cal. Date: 05/20/21  
Data File: 0520L15.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TMC	1,4-DCB	0.4915	0.4925	0.21	TMC	
82	TM	n-Butylbenzene	0.5491	0.5907	7.6	TM	
83	TMC	1,2-DCB	0.5291	0.5233	1.1	TMC	
84	TM	Hexachloroethane	0.1297	0.1194	8.0	TM	
85	TMCL	1,2-Dibromo-3-chloropropane	0.0610	0.0557	8.8	TMCL	4.0
86	TMC	1,2,4-Trichlorobenzene	0.1360	0.1716	26	TMC	*High
87	TML	Hexachlorobutadiene	0.0879	0.0790	10	TML	6.3
88	TML	Naphthalene	0.4650	0.6645	43	TML	25 *High
89	TM	1,2,3-Trichlorobenzene	0.1292	0.1467	14	TM	
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
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114							
115							
116							
117							
118							
119							
120		Average			13.2		

Data File : M:\LOKI\DATA\210520\0520L15.D  
 Acq On : 20 May 21 17:03  
 Sample : (SS) 10ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 15  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	Qlon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	487413	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	399950	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	231121	25.00	ppb	0.00

System Monitoring Compounds

32) Dibromofluoromethane(S)	5.75	113	136075	24.00	ppb	0.00
Spiked Amount	25.000		Recovery	= 95.984%		
37) 1,2-DCA-D4 (S)	6.16	65	147002	24.04	ppb	0.00
Spiked Amount	25.000		Recovery	= 96.156%		
57) Toluene-D8 (S)	8.44	98	477411	25.51	ppb	0.00
Spiked Amount	25.000		Recovery	= 102.024%		
65) 4-Bromofluorobenzene(S)	11.34	174	170903	25.66	ppb	0.00
Spiked Amount	25.000		Recovery	= 102.620%		

Target Compounds

	R.T.	Q	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.17	85	17797	10.16	ppb	98
3) Freon 114	1.28	85	11919	8.16	ppb	93
4) Chloromethane	1.32	50	18344	9.19	ppb	95
5) Vinyl chloride	1.42	62	17572	9.93	ppb	94
6) Bromomethane	1.70	96	13446	10.09	ppb	94
7) Chloroethane	1.80	64	11063	9.00	ppb	95
8) Dichlorofluoromethane	2.00	67	29163	8.56	ppb	96
9) Trichlorofluoromethane	2.05	101	16592	9.71	ppb	99
10) Acrolein	2.49	56	18296	113.45	ppb	98
11) Acetone	2.68	43	27417	46.96	ppb	100
12) Freon-113	2.61	101	13914	8.99	ppb	92
13) 1,1-DCE	2.58	61	23676	9.67	ppb	97
15) Acetonitrile	3.00	41	32568	127.16	ppb	98
16) Methyl Acetate	3.09	43	11435	8.61	ppb	100
17) Iodomethane	2.73	142	11075	12.44	ppb	91
19) Methylene chloride	3.18	84	20046	10.12	ppb	93
20) Carbon disulfide	2.80	76	24336	10.88	ppb	99
21) Methyl t-butyl ether (MtBE)	3.61	73	18729	10.50	ppb	94
22) Trans-1,2-DCE	3.56	61	21956	9.81	ppb	97
23) Diisopropyl Ether	4.41	45	40091	9.25	ppb	100
24) 1,1-DCA	4.21	63	29339	9.15	ppb	98
25) Vinyl Acetate	4.41	43	8781	8.67	ppb	100
27) MEK (2-Butanone)	5.16	43	33899	49.51	ppb	98
28) Cis-1,2-DCE	5.07	61	25384	9.50	ppb	92
29) 2,2-Dichloropropane	5.06	77	21275	8.82	ppb	97
30) Chloroform	5.54	83	31677	9.14	ppb	90
31) Bromochloromethane	5.39	130	14898	10.04	ppb	97
33) 1,1,1-TCA	5.74	97	27030	9.14	ppb	91
34) Cyclohexane	5.80	56	18582	9.73	ppb	91
35) 1,1-Dichloropropene	5.96	75	18191	9.06	ppb	92
36) 2,2,4-Trimethylpentane	6.36	57	14373	9.31	ppb	96
38) Carbon Tetrachloride	5.95	119	24425	10.23	ppb	96
40) 1,2-DCA	6.26	62	26179	9.25	ppb	93
41) Benzene	6.22	78	66315	9.67	ppb	93
42) TCE	7.03	130	20752	9.62	ppb	92
43) 2-Pentanone	7.30	43	133885	127.48	ppb	99
44) 1,2-Dichloropropane	7.29	63	18018	9.41	ppb	90
45) Bromodichloromethane	7.63	83	23613	8.82	ppb	98
46) Methyl Cyclohexane	7.24	98	9085	9.01	ppb	83

(#) = qualifier out of range (m) = manual integration  
 0520L15.D L0520524.M Thu May 27 10:51:38 2021

Data File : M:\LOKI\DATA\210520\0520L15.D  
 Acq On : 20 May 21 17:03  
 Sample : (SS) 10ug/L 524 HCL 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 15  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	15708	9.58	ppb	96
49) MIBK (methyl isobutyl ket	8.36	43	62553	50.46	ppb	98
50) 1-Bromo-2-chloroethane	7.97	63	12483	9.08	ppb	96
51) Cis-1,3-Dichloropropene	8.15	75	24459	9.33	ppb	99
52) Toluene	8.51	91	72772	9.46	ppb	96
53) Trans-1,3-Dichloropropene	8.78	75	13597	9.58	ppb	100
54) 1,1,2-TCA	8.98	97	17813	9.15	ppb	93
55) 2-Hexanone	9.29	43	35000	47.29	ppb	95
58) 1,2-EDB	9.52	107	19249	9.73	ppb	96
59) Tetrachloroethene	9.12	166	13445	9.80	ppb	96
60) 1-Chlorohexane	10.07	91	16818	9.61	ppb	95
61) 1,1,1,2-Tetrachloroethane	10.17	131	19153	8.96	ppb	93
62) m&p-Xylene	10.33	91	113554	19.57	ppb	98
63) o-Xylene	10.77	91	58497	9.98	ppb	97
64) Styrene	10.78	104	45959	9.36	ppb	97
66) 1,3-Dichloropropane	9.16	76	27012	9.54	ppb	89
67) Dibromochloromethane	9.40	129	21046	9.64	ppb	95
68) Chlorobenzene	10.07	112	53181	9.31	ppb	96
69) Ethylbenzene	10.20	91	41104	9.45	ppb	97
70) Bromoform	10.98	173	14642	9.21	ppb	96
72) Isopropylbenzene	11.18	105	69548	10.23	ppb	91
73) 1,1,2,2-Tetrachloroethane	11.51	83	23126	9.06	ppb	98
74) 1,2,3-Trichloropropane	11.55	110	7834	10.22	ppb	97
76) Bromobenzene	11.50	158	24002	10.05	ppb	96
77) n-Propylbenzene	11.63	91	82138	10.27	ppb	98
78) 4-Ethyltoluene	11.82	105	63602	10.69	ppb	95
79) 2-Chlorotoluene	11.84	91	63249	10.12	ppb	100
80) 1,3,5-Trimethylbenzene	12.23	105	62487	10.11	ppb	99
81) 4-Chlorotoluene	11.84	91	63249	10.12	ppb	100
82) Tert-Butylbenzene	12.18	119	52604	9.78	ppb	98
83) 1,2,4-Trimethylbenzene	12.23	105	62487	10.11	ppb	99
84) Sec-Butylbenzene	12.42	105	74067	10.45	ppb	99
85) p-Isopropyltoluene	12.58	119	64546	9.87	ppb	99
86) Benzyl Chloride	12.78	91	12254	8.38	ppb	97
87) 1,3-DCB	12.54	146	46143	10.15	ppb	98
88) 1,4-DCB	13.04	146	45531	10.02	ppb	92
89) n-Butylbenzene	13.03	91	54609	10.76	ppb	99
90) 1,2-DCB	12.63	146	48381	9.89	ppb	99
91) Hexachloroethane	13.33	117	11034	9.20	ppb	93
92) 1,2-Dibromo-3-chloropropan	13.90	157	5146	10.40	ppb	90
93) 1,2,4-Trichlorobenzene	14.82	180	15861	12.61	ppb	91
94) Hexachlorobutadiene	15.01	225	7300	10.63	ppb	95
95) Naphthalene	15.09	128	61432	12.49	ppb	96
96) 1,2,3-Trichlorobenzene	15.36	182	13564	11.35	ppb	96

(#) = qualifier out of range (m) = manual integration  
 0520L15.D L0520524.M Thu May 27 10:51:39 2021



VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.

SDG No: \_\_\_\_\_

Case No: \_\_\_\_\_

Date Analyzed: 05/20/21

Matrix: Water

Instrument: Loki

Initial Cal. Date: 05/20/21

Data File: 0520L24.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMC	Dichlorodifluoromethane	0.0899	0.0979	9.0	TMC	
3	TML	Freon 114	0.0803	0.0771	4.0	TML	2.2
4	TMC**	Chloromethane	0.1140	0.1101	3.4	TMC**L	9.4
5	TMC*	Vinyl chloride	0.0908	0.1009	11	TMC*	
6	TMC	Bromomethane	0.0683	0.0717	4.9	TMC	
7	TMCL	Chloroethane	0.0715	0.0629	12	TMCL	0.02
8	TM	Dichlorofluoromethane	0.1747	0.1679	3.9	TM	
9	TMC	Trichlorofluoromethane	0.0876	0.0972	11	TMC	
10	TM	Acrolein	0.0083	0.0078	5.5	TM	
11	TMC	Acetone	0.0299	0.0266	11	TMC	
12	TMC	Freon-113	0.0794	0.0857	8.0	TMC	
13	TMC*	1,1-DCE	0.1256	0.1184	5.8	TMC*	
14	TMQ	t-Butanol	0.0000	0.0061	0.00	TMQ	
15	TM	Acetonitrile	0.0131	0.0126	4.3	TM	
16	TMCL	Methyl Acetate	0.0740	0.0586	21	TMCL	14
17	TML	Iodomethane	0.0435	0.0439	1.00	TML	6.5
18	TML	Acrylonitrile	0.0000	0.0261	0.00	TML	
19	TMCL	Methylene chloride	0.1222	0.1120	8.3	TMCL	11
20	TMCL	Carbon disulfide	0.1273	0.1203	5.5	TMCL	4.9
21	TMC	Methyl t-butyl ether (MtBE)	0.0915	0.0922	0.79	TMC	
22	TMC	Trans-1,2-DCE	0.1148	0.1139	0.79	TMC	
23	TM	Diisopropyl Ether	0.2222	0.2266	2.0	TM	
24	TMC**	1,1-DCA	0.1644	0.1655	0.66	TMC**	
25	TM	Vinyl Acetate	0.0519	0.0458	12	TM	
26	TM	Ethyl tert Butyl Ether	0.0000	0.0121	0.00	TM	
27	TMC	MEK (2-Butanone)	0.0351	0.0333	5.3	TMC	
28	TMC	Cis-1,2-DCE	0.1371	0.1347	1.7	TMC	
29	TM	2,2-Dichloropropane	0.1237	0.1036	16	TM	
30	TMC*	Chloroform	0.1778	0.1750	1.5	TMC*	
31	TM	Bromochloromethane	0.0761	0.0764	0.34	TM	
32	S	Dibromofluoromethane(S)	0.2909	0.2877	1.1	S	
33	TMC	1,1,1-TCA	0.1517	0.1489	1.8	TMC	
34	TMC	Cyclohexane	0.0979	0.1003	2.5	TMC	
35	TM	1,1-Dichloropropene	0.1030	0.1053	2.2	TM	
36	TM	2,2,4-Trimethylpentane	0.0792	0.0727	8.2	TM	
37	S	1,2-DCA-D4(S)	0.3137	0.3139	0.07	S	
38	TMCL	Carbon Tetrachloride	0.1173	0.1292	10	TMCL	5.3
39	TM	Tert Amyl Methyl Ether	0.0000	0.0087	0.00	TM	
40	TMC	1,2-DCA	0.1452	0.1396	3.9	TMC	

Average

5.1

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.  
Case No: \_\_\_\_\_  
Matrix: Water

SDG No: \_\_\_\_\_  
Date Analyzed: 05/20/21  
Instrument: Loki  
Cal. Date: 05/20/21  
Data File: 0520L24.D

		Compound	MEAN	CCRF	%D	%Drift
41	TMC	Benzene	0.3519	0.3465	1.5	TMC
42	TMC	TCE	0.1107	0.1063	3.9	TMC
43	TM	2-Pentanone	0.0539	0.0500	7.2	TM
44	TMC*	1,2-Dichloropropane	0.0982	0.0999	1.7	TMC*
45	TMC	Bromodichloromethane	0.1374	0.1299	5.4	TMC
46	TMCL	Methyl Cyclohexane	0.0523	0.0533	1.9	TMCL 0.44
47	TM	Dibromomethane	0.0841	0.0887	5.5	TM
48	TM	2-Chloroethyl vinyl ether	0.0000	0.0201	0.00	TM
49	TMC	MIBK (methyl isobutyl ketone)	0.0636	0.0608	4.4	TMC
50	TM	1-Bromo-2-chloroethane	0.0705	0.0724	2.7	TM
51	TMC	Cis-1,3-Dichloropropene	0.1345	0.1291	4.0	TMC
52	TMC*	Toluene	0.3945	0.3895	1.3	TMC*
53	TMC	Trans-1,3-Dichloropropene	0.0728	0.0753	3.4	TMC
54	TMC	1,1,2-TCA	0.0999	0.0970	2.9	TMC
55	TMCL	2-Hexanone	0.0353	0.0328	7.1	TMCL 12
56	I	Chlorobenzene-D5 (IS)	ISTD			I
57	S	Toluene-D8(S)	1.170	1.198	2.4	S
58	TMC	1,2-EDB	0.1236	0.1195	3.4	TMC
59	TMCL	Tetrachloroethene	0.0930	0.0912	2.0	TMCL 6.2
60	TML	1-Chlorohexane	0.1254	0.1129	9.9	TML 2.2
61	TM	1,1,1,2-Tetrachloroethane	0.1337	0.1369	2.4	TM
62	TMC	m&p-Xylene	0.3628	0.3645	0.48	TMC
63	TMC	o-Xylene	0.3664	0.3707	1.2	TMC
64	TMCL	Styrene	0.2891	0.2968	2.7	TMCL 3.9
65	S	4-Bromofluorobenzene(S)	0.4164	0.4281	2.8	S
66	TM	1,3-Dichloropropane	0.1770	0.1763	0.41	TM
67	TMC	Dibromochloromethane	0.1365	0.1319	3.3	TMC
68	TMC**	Chlorobenzene	0.3572	0.3529	1.2	TMC**
69	TMC*	Ethylbenzene	0.2720	0.2659	2.2	TMC*
70	TMC**	Bromoform	0.0994	0.0970	2.4	TMC**
71	I	1,4-Dichlorobenzene-D4 (IS)	ISTD			I
72	TMC	Isopropylbenzene	0.7352	0.7685	4.5	TMC
73	TMC**	1,1,2,2-Tetrachloroethane	0.2761	0.2680	3.0	TMC**
74	TM	1,2,3-Trichloropropane	0.0829	0.0900	8.6	TM
75	TM	t-1,4-Dichloro-2-Butene	0.0000	0.0291	0.00	TM
76	TM	Bromobenzene	0.2584	0.2579	0.22	TM
77	TM	n-Propylbenzene	0.8654	0.8972	3.7	TM
78	TM	4-Ethyltoluene	0.6439	0.6843	6.3	TM
79	TM	2-Chlorotoluene	0.6758	0.6666	1.4	TM
80	TML	1,3,5-Trimethylbenzene	0.6262	0.6611	5.6	TML 0.82
Average					3.2	

VOLATILE ORGANIC ANALYSIS  
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.

SDG No: \_\_\_\_\_

Case No: \_\_\_\_\_

Date Analyzed: 05/20/21

Matrix: Water

Instrument: Loki

Cal. Date: 05/20/21

Data File: 0520L24.D

		Compound	MEAN	CCRF	%D	%Drift
81	TM	4-Chlorotoluene	0.6758	0.6666	1.4	TM
82	TM	Tert-Butylbenzene	0.5819	0.5913	1.6	TM
83	TML	1,2,4-Trimethylbenzene	0.6262	0.6611	5.6	TML 0.82
84	TM	Sec-Butylbenzene	0.7668	0.8100	5.6	TM
85	TML	p-Isopropyltoluene	0.6721	0.6907	2.8	TML 2.2
86	TM	Benzyl Chloride	0.1582	0.1149	27	TM
87	TMC	1,3-DCB	0.4919	0.4898	0.42	TMC
88	TMC	1,4-DCB	0.4915	0.4906	0.19	TMC
89	TM	n-Butylbenzene	0.5491	0.5409	1.5	TM
90	TMC	1,2-DCB	0.5291	0.4990	5.7	TMC
91	TM	Hexachloroethane	0.1297	0.1247	3.9	TM
92	TMCL	1,2-Dibromo-3-chloropropane	0.0610	0.0516	15	TMCL 3.0
93	TMC	1,2,4-Trichlorobenzene	0.1360	0.1400	2.9	TMC
94	TML	Hexachlorobutadiene	0.0879	0.0729	17	TML 1.2
95	TML	Naphthalene	0.4650	0.4097	12	TML 12
96	TM	1,2,3-Trichlorobenzene	0.1292	0.1212	6.2	TM
97						
98						
99						
100						
101						
102						
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107						
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116						
117						
118						
119						
120						

Average

6.8

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\210520\0520L24.D  
 Acq On : 20 May 21 21:11  
 Sample : Ending CCV 10ug/L 5/20/21  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 24  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)

Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	450762	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	374554	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	219879	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	129672	24.73	ppb	0.00
Spiked Amount	25.000		Recovery	=	98.904%	
37) 1,2-DCA-D4(S)	6.16	65	141490	25.02	ppb	0.00
Spiked Amount	25.000		Recovery	=	100.076%	
57) Toluene-D8(S)	8.44	98	448618	25.59	ppb	0.00
Spiked Amount	25.000		Recovery	=	102.372%	
65) 4-Bromofluorobenzene(S)	11.34	174	160329	25.70	ppb	0.00
Spiked Amount	25.000		Recovery	=	102.800%	
<b>Target Compounds</b>						
2) Dichlorodifluoromethane	1.17	85	17656	10.90	ppb	98
3) Freon 114	1.28	85	13899	10.22	ppb	96
4) Chloromethane	1.32	50	19848	10.94	ppb	100
5) Vinyl chloride	1.42	62	18197	1.12	ppb	96
6) Bromomethane	1.70	96	12928	10.49	ppb	95
7) Chloroethane	1.80	64	11339	10.00	ppb	95
8) Dichlorofluoromethane	2.00	67	30267	9.61	ppb	98
9) Trichlorofluoromethane	2.05	101	17521	1.09	ppb	94
10) Acrolein	2.49	56	17624	118.17	ppb	94
11) Acetone	2.68	43	24012	44.47	ppb	98
12) Freon-113	2.61	101	15457	10.80	ppb	96
13) 1,1-DCE	2.58	61	21345	9.42	ppb	92
15) Acetonitrile	3.00	41	28327	119.59	ppb	96
16) Methyl Acetate	3.09	43	10574	8.61	ppb	95
17) Iodomethane	2.74	142	7921	10.65	ppb	88
19) Methylene chloride	3.18	84	20203	11.09	ppb	96
20) Carbon disulfide	2.80	76	21696	10.49	ppb	# 94
21) Methyl t-butyl ether (MtBE)	3.61	73	16631	10.08	ppb	91
22) Trans-1,2-DCE	3.56	61	20537	9.92	ppb	89
23) Diisopropyl Ether	4.41	45	40854	10.20	ppb	98
24) 1,1-DCA	4.21	63	29846	10.07	ppb	95
25) Vinyl Acetate	4.41	43	8260	8.82	ppb	# 100
27) MEK (2-Butanone)	5.16	43	29981	47.35	ppb	98
28) Cis-1,2-DCE	5.07	61	24283	9.83	ppb	92
29) 2,2-Dichloropropane	5.06	77	18671	8.37	ppb	96
30) Chloroform	5.54	83	31560	9.85	ppb	96
31) Bromochloromethane	5.39	130	13771	10.03	ppb	95
33) 1,1,1-TCA	5.74	97	26855	9.82	ppb	94
34) Cyclohexane	5.80	56	18089	10.25	ppb	88
35) 1,1-Dichloropropene	5.96	75	18978	10.22	ppb	91
36) 2,2,4-Trimethylpentane	6.36	57	13106	9.18	ppb	98
38) Carbon Tetrachloride	5.95	119	23288	10.53	ppb	95
40) 1,2-DCA	6.26	62	25170	9.61	ppb	98
41) Benzene	6.22	78	62481	9.85	ppb	94
42) TCE	7.03	130	19172	9.61	ppb	95
43) 2-Pentanone	7.30	43	112698	116.03	ppb	98
44) 1,2-Dichloropropane	7.29	63	18005	10.17	ppb	90
45) Bromodichloromethane	7.63	83	23425	9.46	ppb	97
46) Methyl Cyclohexane	7.24	98	9609	10.04	ppb	78

(#) = qualifier out of range (m) = manual integration  
 0520L24.D L0520524.M Thu May 27 10:51:51 2021

Data File : M:\LOKI\DATA\210520\0520L24.D Vial: 24  
 Acq On : 20 May 21 21:11 Operator:  
 Sample : Ending CCV 10ug/L 5/20/21 Inst : Loki  
 Misc : IS&S: 10/21/20, 11/11/20 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	15998	10.55	ppb	96
49) MIBK (methyl isobutyl ket	8.36	43	54813	47.81	ppb	97
50) 1-Bromo-2-chloroethane	7.97	63	13055	10.27	ppb	99
51) Cis-1,3-Dichloropropene	8.15	75	23283	9.60	ppb	97
52) Toluene	8.51	91	70232	9.87	ppb	99
53) Trans-1,3-Dichloropropene	8.78	75	13575	10.34	ppb	96
54) 1,1,2-TCA	8.98	97	17490	9.71	ppb	99
55) 2-Hexanone	9.29	43	29606	43.95	ppb	98
58) 1,2-EDB	9.51	107	17899	9.66	ppb	95
59) Tetrachloroethene	9.12	166	13658	10.62	ppb	96
60) 1-Chlorohexane	10.07	91	16913	10.22	ppb	94
61) 1,1,1,2-Tetrachloroethane	10.17	131	20514	10.24	ppb	99
62) m&p-Xylene	10.33	91	109229	20.10	ppb	97
63) o-Xylene	10.77	91	55535	10.12	ppb	95
64) Styrene	10.78	104	44470	9.61	ppb	98
66) 1,3-Dichloropropane	9.16	76	26412	9.96	ppb	92
67) Dibromochloromethane	9.41	129	19767	9.67	ppb	94
68) Chlorobenzene	10.07	112	52869	9.88	ppb	92
69) Ethylbenzene	10.20	91	39832	9.78	ppb	97
70) Bromoform	10.97	173	14530	9.76	ppb	94
72) Isopropylbenzene	11.18	105	67592	10.45	ppb	97
73) 1,1,2,2-Tetrachloroethane	11.51	83	23568	9.70	ppb	95
74) 1,2,3-Trichloropropane	11.55	110	7915	10.86	ppb	94
76) Bromobenzene	11.50	158	22680	9.98	ppb	91
77) n-Propylbenzene	11.63	91	78912	10.37	ppb	99
78) 4-Ethyltoluene	11.83	105	60187	10.63	ppb	95
79) 2-Chlorotoluene	11.84	91	58631	9.86	ppb	94
80) 1,3,5-Trimethylbenzene	12.24	105	58146	9.92	ppb	98
81) 4-Chlorotoluene	11.84	91	58631	9.86	ppb	94
82) Tert-Butylbenzene	12.18	119	52010	10.16	ppb	96
83) 1,2,4-Trimethylbenzene	12.24	105	58146	9.92	ppb	98
84) Sec-Butylbenzene	12.42	105	71237	10.56	ppb	95
85) p-Isopropyltoluene	12.59	119	60750	9.78	ppb	94
86) Benzyl Chloride	12.78	91	10106	7.26	ppb	95
87) 1,3-DCB	12.54	146	43080	9.96	ppb	97
88) 1,4-DCB	13.05	146	43146	9.98	ppb	94
89) n-Butylbenzene	13.04	91	47572	9.85	ppb	99
90) 1,2-DCB	12.63	146	43888	9.43	ppb	96
91) Hexachloroethane	13.33	117	10968	9.61	ppb	91
92) 1,2-Dibromo-3-chloropropan	13.90	157	4536	9.70	ppb	# 76
93) 1,2,4-Trichlorobenzene	14.82	180	12314	10.29	ppb	90
94) Hexachlorobutadiene	15.01	225	6412	9.88	ppb	90
95) Naphthalene	15.09	128	36038	8.84	ppb	98
96) 1,2,3-Trichlorobenzene	15.35	182	10661	9.38	ppb	96

(#) = qualifier out of range (m) = manual integration  
 0520L24.D L0520524.M Thu May 27 10:51:51 2021

Quantitation Report

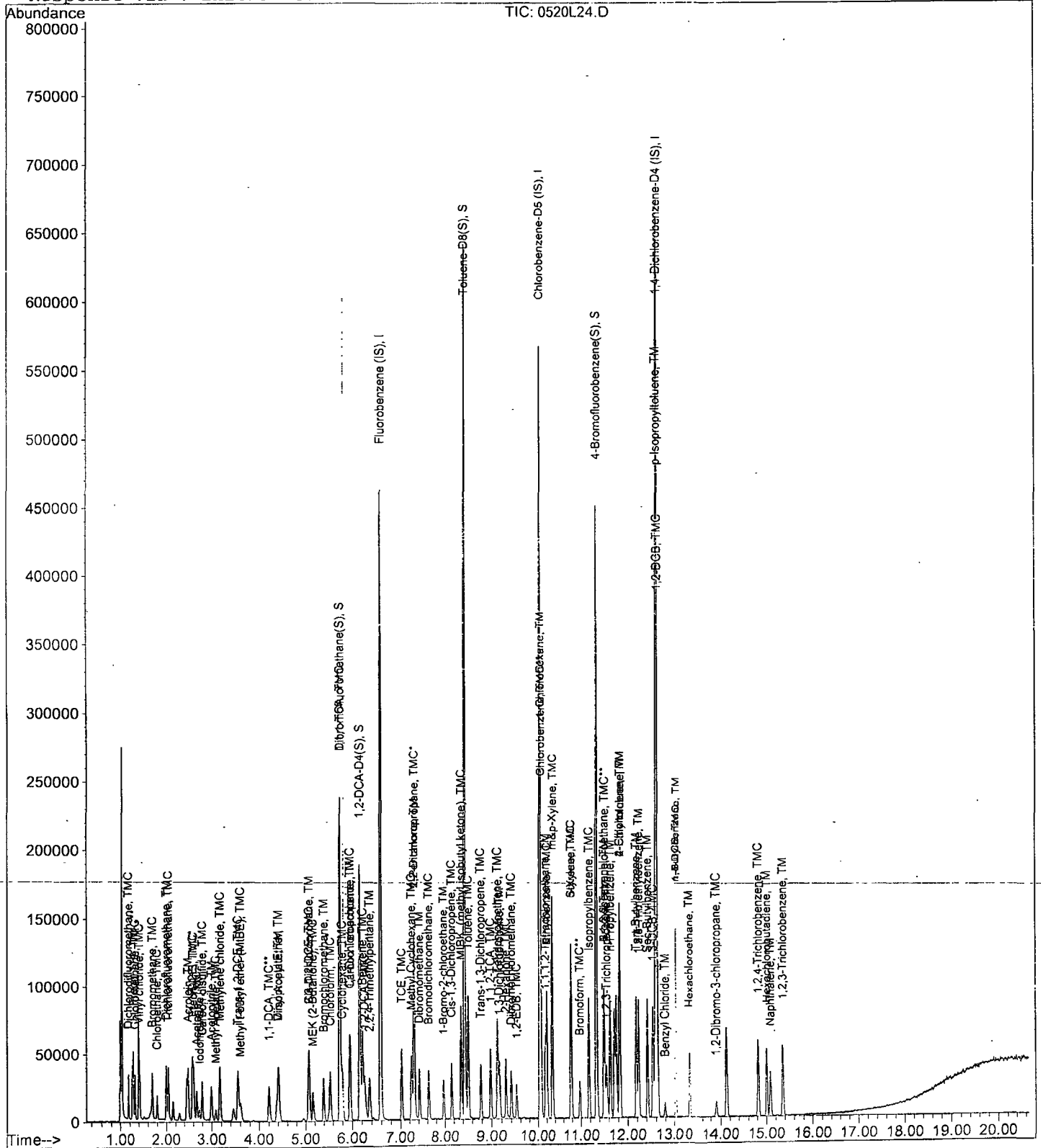
Data File : M:\LOKI\DATA\210520\0520L24.D  
Acq On : 20 May 21 21:11  
Sample : Ending CCV 10ug/L 5/20/21  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 24  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\10520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



# **ORGANICS**

## **Raw Data**

Data File : M:\LOKI\DATA\210520\0520L22.D Vial: 22  
 Acq On : 20 May 21 20:16 Operator:  
 Sample : BA32813W01 Inst : Loki  
 Misc : IS&S: 10/21/20, 11/11/20 Multiplr: 1.00

Quant Time: May 27 10:34 2021 Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	Q1on	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.59	96	444873	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	373473	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	193440	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	129340	24.99	ppb	0.00
Spiked Amount	25.000		Recovery	= 99.956%		
37) 1,2-DCA-D4(S)	6.16	65	140253	25.13	ppb	0.00
Spiked Amount	25.000		Recovery	= 100.512%		
57) Toluene-D8(S)	8.44	98	426082	24.38	ppb	0.00
Spiked Amount	25.000		Recovery	= 97.508%		
65) 4-Bromofluorobenzene(S)	11.34	174	149597	24.05	ppb	0.00
Spiked Amount	25.000		Recovery	= 96.196%		

Target Compounds Qvalue

Quantitation Report

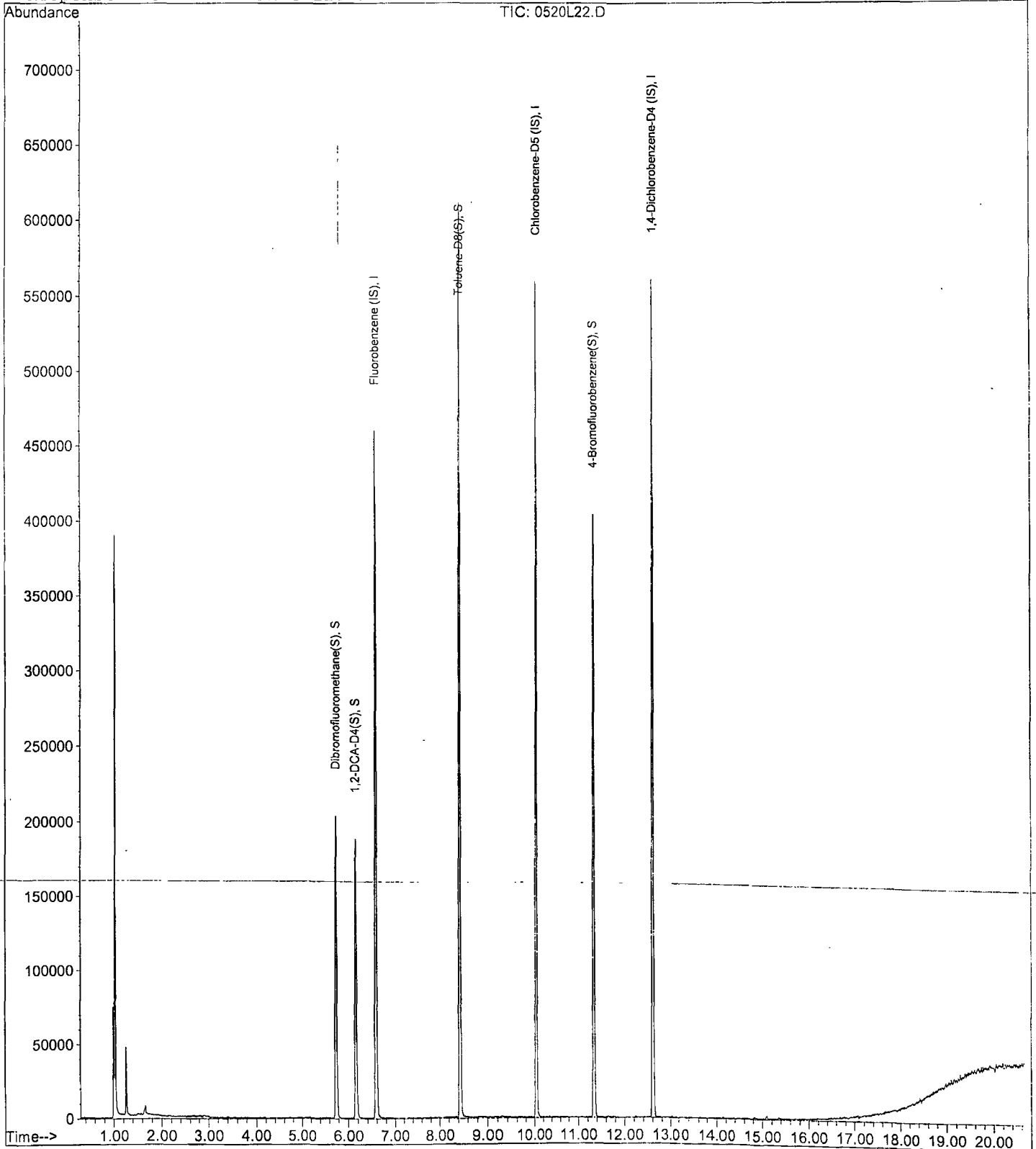
Data File : M:\LOKI\DATA\210520\0520L22.D  
Acq On : 20 May 21 20:16  
Sample : BA32813W01  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 22  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:34 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L23.D Vial: 23  
 Acq On : 20 May 21 20:44 Operator:  
 Sample : BA32814W01 Inst : Loki  
 Misc : IS&S: 10/21/20, 11/11/20 Multiplr: 1.00

Quant Time: May 27 10:34 2021 Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QTon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	452092	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	379504	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	194709	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	5.75	113	132352	25.16	ppb	0.00
Spiked Amount				25.000		
			Recovery		=	100.652%
37) 1,2-DCA-D4(S)	6.16	65	143734	25.34	ppb	0.00
Spiked Amount				25.000		
			Recovery		=	101.364%
57) Toluene-D8(S)	8.44	98	434480	24.46	ppb	0.00
Spiked Amount				25.000		
			Recovery		=	97.852%
65) 4-Bromofluorobenzene(S)	11.34	174	152130	24.07	ppb	0.00
Spiked Amount				25.000		
			Recovery		=	96.272%

Target Compounds Qvalue

Quantitation Report

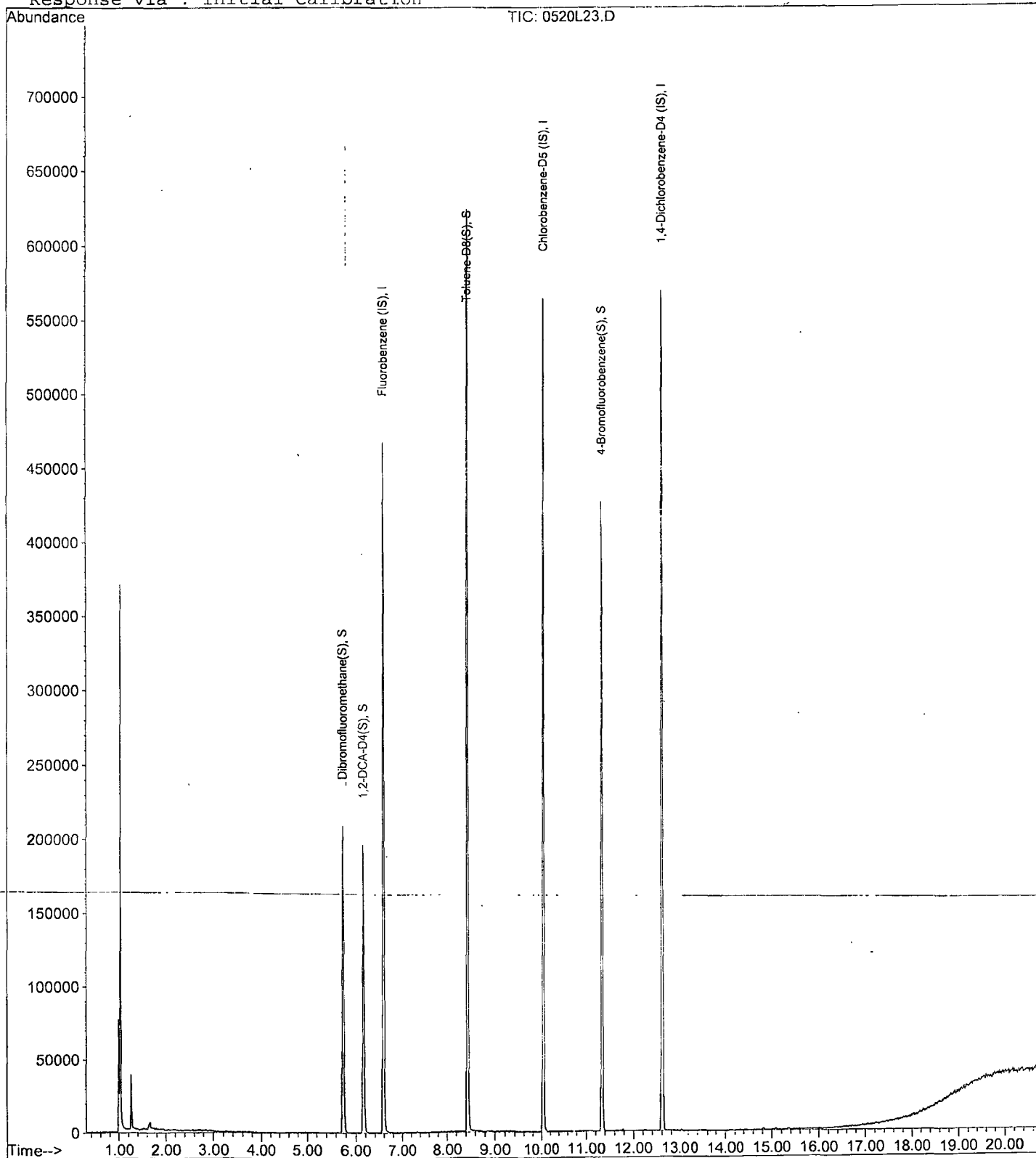
Data File : M:\LOKI\DATA\210520\0520L23.D  
Acq On : 20 May 21 20:44  
Sample : BA32814W01  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 23  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:34 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L18.D Vial: 18  
 Acq On : 20 May 21 18:26 Operator:  
 Sample : 210520A BLK Inst : Loki  
 Misc : IS&S: 10/21/20, 11/11/20 Multiplr: 1.00

Quant Time: May 27 10:32 2021 Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QTon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.59	96	457892	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	377408	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	197986	25.00	ppb	0.00
System Monitoring Compounds						
32) Dibromofluoromethane(S)	5.75	113	131525	24.69	ppb	0.00
Spiked Amount	25.000		Recovery	=	98.756%	
37) 1,2-DCA-D4(S)	6.16	65	143925	25.05	ppb	0.00
Spiked Amount	25.000		Recovery	=	100.212%	
57) Toluene-D8(S)	8.44	98	436484	24.71	ppb	0.00
Spiked Amount	25.000		Recovery	=	98.848%	
65) 4-Bromofluorobenzene(S)	11.34	174	152952	24.33	ppb	0.00
Spiked Amount	25.000		Recovery	=	97.328%	

Target Compounds Qvalue

Quantitation Report

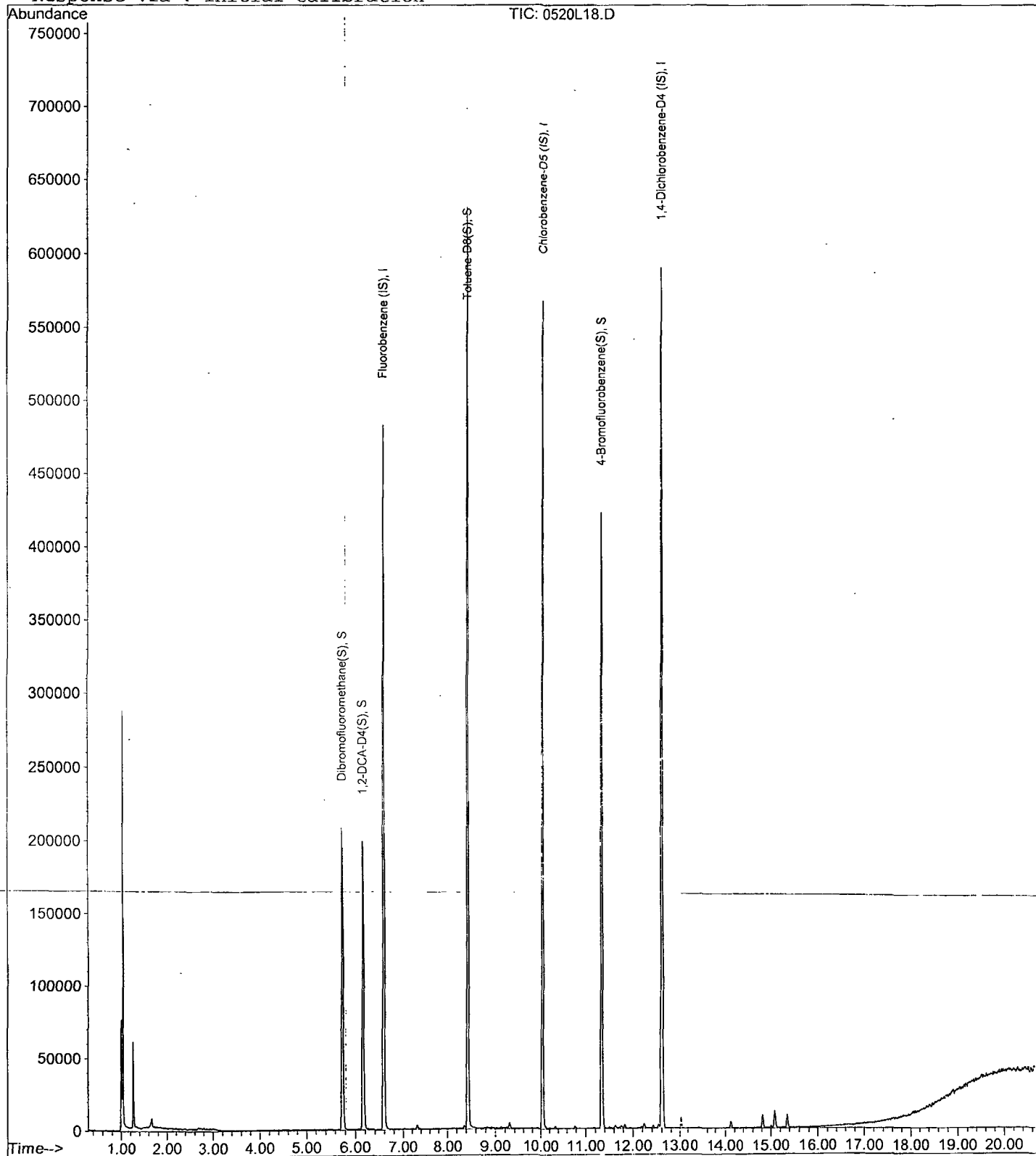
Data File : M:\LOKI\DATA\210520\0520L18.D  
Acq On : 20 May 21 18:26  
Sample : 210520A BLK  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 18  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:32 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\L0520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L16.D  
 Acq On : 20 May 21 17:31  
 Sample : 210520A LCS 10ug/L  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 16  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	479435	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	397426	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	228030	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	133509	23.93	ppb	0.00
Spiked Amount	25.000		Recovery	=	95.740%	
37) 1,2-DCA-D4(S)	6.16	65	146583	24.37	ppb	0.00
Spiked Amount	25.000		Recovery	=	97.476%	
57) Toluene-D8(S)	8.44	98	468391	25.18	ppb	0.00
Spiked Amount	25.000		Recovery	=	100.732%	
65) 4-Bromofluorobenzene(S)	11.34	174	169936	25.67	ppb	0.00
Spiked Amount	25.000		Recovery	=	102.688%	
<b>Target Compounds</b>						<b>Qvalue</b>
2) Dichlorodifluoromethane	1.17	85	17318	10.05	ppb	98
3) Freon 114	1.28	85	14272	9.88	ppb	95
4) Chloromethane	1.32	50	18352	9.37	ppb	99
5) Vinyl chloride	1.42	62	17427	10.01	ppb	98
6) Bromomethane	1.70	96	13277	10.13	ppb	95
7) Chloroethane	1.80	64	11869	9.84	ppb	# 88
8) Dichlorofluoromethane	2.00	67	29684	8.86	ppb	92
9) Trichlorofluoromethane	2.05	101	16149	9.61	ppb	95
10) Acrolein	2.49	56	19400	122.30	ppb	92
11) Acetone	2.68	43	27002	47.02	ppb	96
12) Freon-113	2.61	101	14879	9.77	ppb	93
13) 1,1-DCE	2.58	61	22640	9.40	ppb	98
15) Acetonitrile	3.00	41	28188	111.89	ppb	100
16) Methyl Acetate	3.09	43	11413	8.75	ppb	94
17) Iodomethane	2.74	142	10307	12.01	ppb	99
19) Methylene chloride	3.18	84	21265	10.97	ppb	95
20) Carbon disulfide	2.80	76	22928	10.42	ppb	97
21) Methyl t-butyl ether (MtBE)	3.61	73	17570	10.01	ppb	91
22) Trans-1,2-DCE	3.56	61	21398	9.72	ppb	92
23) Diisopropyl Ether	4.41	45	41301	9.69	ppb	99
24) 1,1-DCA	4.21	63	30165	9.56	ppb	96
25) Vinyl Acetate	4.41	43	8761	8.79	ppb	100
27) MEK (2-Butanone)	5.16	43	32777	48.67	ppb	95
28) Cis-1,2-DCE	5.08	61	24291	9.24	ppb	95
29) 2,2-Dichloropropane	5.06	77	21157	8.92	ppb	97
30) Chloroform	5.54	83	31577	9.26	ppb	93
31) Bromochloromethane	5.40	130	13803	9.76	ppb	91
33) 1,1,1-TCA	5.74	97	27458	9.44	ppb	99
34) Cyclohexane	5.80	56	17834	9.50	ppb	89
35) 1,1-Dichloropropene	5.96	75	18516	9.37	ppb	95
36) 2,2,4-Trimethylpentane	6.36	57	14320	9.43	ppb	97
38) Carbon Tetrachloride	5.95	119	22449	9.58	ppb	94
40) 1,2-DCA	6.26	62	25242	9.07	ppb	100
41) Benzene	6.22	78	61965	9.18	ppb	98
42) TCE	7.03	130	19415	9.15	ppb	92
43) 2-Pentanone	7.30	43	126170	122.13	ppb	99
44) 1,2-Dichloropropane	7.29	63	17243	9.16	ppb	94
45) Bromodichloromethane	7.63	83	23921	9.08	ppb	98
46) Methyl Cyclohexane	7.24	98	9679	9.61	ppb	85

(#) = qualifier out of range (m) = manual integration  
 0520L16.D L0520524.M Thu May 27 10:51:42 2021

Data File : M:\LOKI\DATA\210520\0520L16.D  
 Acq On : 20 May 21 17:31  
 Sample : 210520A LCS 10ug/L  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 16  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	14659	9.09	ppb	94
49) MIBK (methyl isobutyl ket	8.36	43	60264	49.42	ppb	99
50) 1-Bromo-2-chloroethane	7.97	63	13036	9.64	ppb	95
51) Cis-1,3-Dichloropropene	8.15	75	24329	9.43	ppb	99
52) Toluene	8.51	91	72528	9.59	ppb	92
53) Trans-1,3-Dichloropropene	8.78	75	13486	9.65	ppb	97
54) 1,1,2-TCA	8.98	97	18404	9.61	ppb	95
55) 2-Hexanone	9.29	43	34979	47.92	ppb	99
58) 1,2-EDB	9.52	107	17872	9.09	ppb	94
59) Tetrachloroethene	9.12	166	14229	10.43	ppb	95
60) 1-Chlorohexane	10.07	91	16413	9.46	ppb	97
61) 1,1,1,2-Tetrachloroethane	10.17	131	20328	9.57	ppb	96
62) m&p-Xylene	10.33	91	113448	19.67	ppb	98
63) o-Xylene	10.77	91	58471	10.04	ppb	99
64) Styrene	10.78	104	46023	9.42	ppb	100
66) 1,3-Dichloropropane	9.16	76	27174	9.66	ppb	90
67) Dibromochloromethane	9.40	129	20568	9.48	ppb	90
68) Chlorobenzene	10.07	112	53447	9.41	ppb	91
69) Ethylbenzene	10.20	91	41840	9.68	ppb	98
70) Bromoform	10.97	173	15750	9.97	ppb	85
72) Isopropylbenzene	11.18	105	68203	10.17	ppb	94
73) 1,1,2,2-Tetrachloroethane	11.50	83	23537	9.34	ppb	97
74) 1,2,3-Trichloropropane	11.55	110	7809	10.33	ppb	95
76) Bromobenzene	11.50	158	23719	10.06	ppb	93
77) n-Propylbenzene	11.63	91	80125	10.15	ppb	99
78) 4-Ethyltoluene	11.82	105	62981	10.72	ppb	97
79) 2-Chlorotoluene	11.84	91	64242	10.42	ppb	98
80) 1,3,5-Trimethylbenzene	12.23	105	61833	10.13	ppb	93
81) 4-Chlorotoluene	11.84	91	64242	10.42	ppb	98
82) Tert-Butylbenzene	12.18	119	52855	9.96	ppb	92
83) 1,2,4-Trimethylbenzene	12.23	105	61833	10.13	ppb	93
84) Sec-Butylbenzene	12.42	105	74027	10.58	ppb	97
85) p-Isopropyltoluene	12.59	119	64457	9.97	ppb	97
86) Benzyl Chloride	12.79	91	12377	8.58	ppb	95
87) 1,3-DCB	12.54	146	45517	10.15	ppb	95
88) 1,4-DCB	13.04	146	45038	10.05	ppb	98
89) n-Butylbenzene	13.03	91	52609	10.50	ppb	97
90) 1,2-DCB	12.63	146	47676	9.88	ppb	97
91) Hexachloroethane	13.32	117	11923	10.07	ppb	97
92) 1,2-Dibromo-3-chloropropan	13.90	157	4987	10.23	ppb	94
93) 1,2,4-Trichlorobenzene	14.82	180	15348	12.37	ppb	76
94) Hexachlorobutadiene	15.01	225	7221	10.65	ppb	94
95) Naphthalene	15.09	128	56127	11.79	ppb	99
96) 1,2,3-Trichlorobenzene	15.36	182	13407	11.38	ppb	94

Quantitation Report

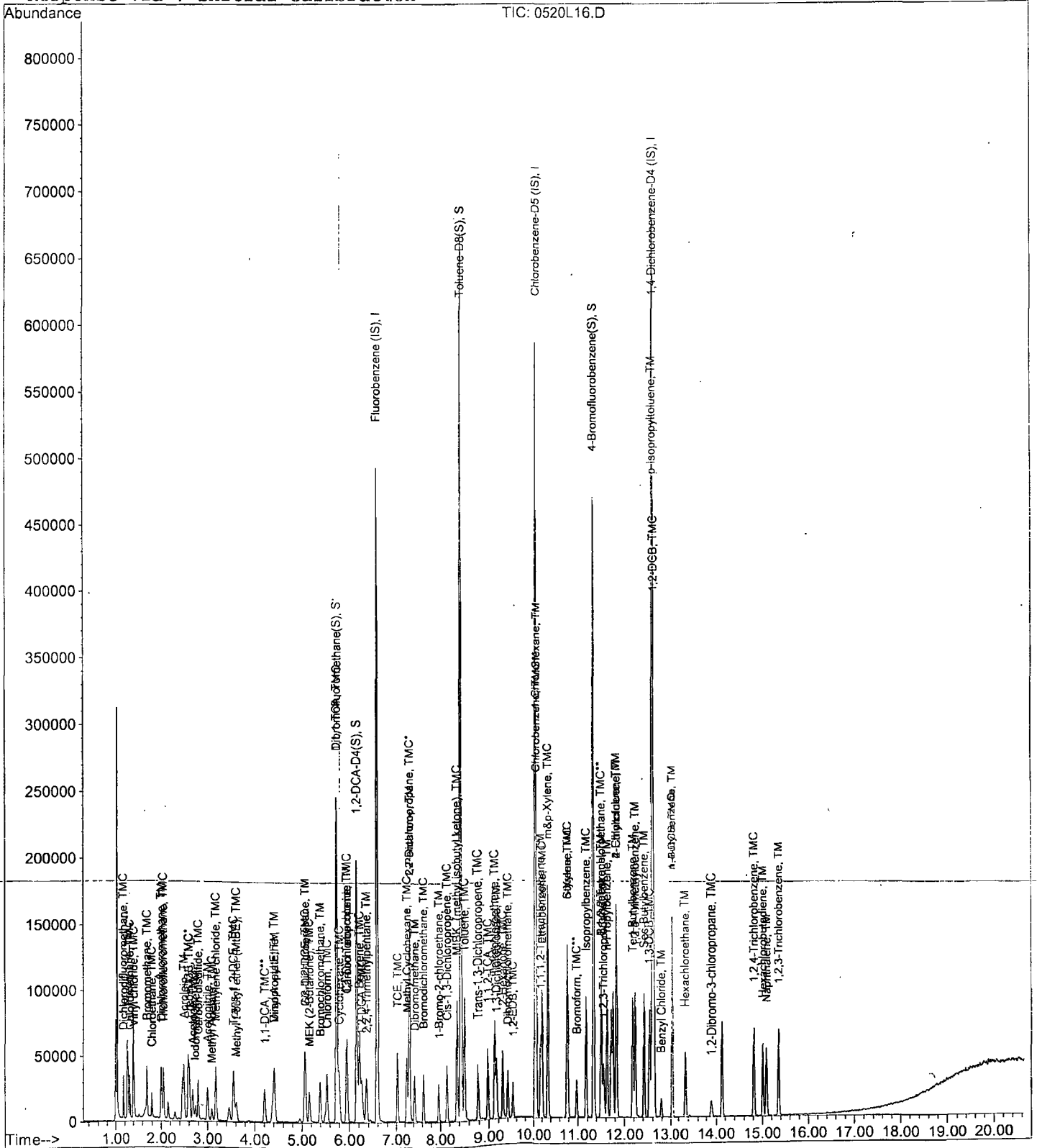
Data File : M:\LOKI\DATA\210520\0520116.D  
Acq On : 20 May 21 17:31  
Sample : 210520A LCS 10ug/L  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 16  
Operator:  
Inst : loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Method : M:\LOKI\DATA\210520\0520524.M (RTM Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L17.D  
 Acq On : 20 May 21 17:58  
 Sample : 210520A LCSD 10ug/L  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 17  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Internal Standards	R.T.	Q/Ion	Response	Conc	Units	Dev (Min)
1) Fluorobenzene (IS)	6.59	96	481695	25.00	ppb	0.00
56) Chlorobenzene-D5 (IS)	10.04	117	396811	25.00	ppb	0.00
71) 1,4-Dichlorobenzene-D4 (IS)	12.61	152	224576	25.00	ppb	0.00
<b>System Monitoring Compounds</b>						
32) Dibromofluoromethane(S)	5.75	113	136732	24.40	ppb	0.00
Spiked Amount	25.000		Recovery	=	97.592%	
37) 1,2-DCA-D4(S)	6.16	65	148918	24.64	ppb	0.00
Spiked Amount	25.000		Recovery	=	98.564%	
57) Toluene-D8(S)	8.44	98	474092	25.53	ppb	0.00
Spiked Amount	25.000		Recovery	=	102.116%	
65) 4-Bromofluorobenzene(S)	11.34	174	168229	25.45	ppb	0.00
Spiked Amount	25.000		Recovery	=	101.816%	
<b>Target Compounds</b>						
						Qvalue
2) Dichlorodifluoromethane	1.17	85	15908	9.19	ppb	97
3) Freon 114	1.28	85	14160	9.76	ppb	99
4) Chloromethane	1.32	50	19071	9.73	ppb	100
5) Vinyl chloride	1.42	62	17581	10.05	ppb	98
6) Bromomethane	1.70	96	12934	9.82	ppb	94
7) Chloroethane	1.80	64	12861	10.63	ppb	98
8) Dichlorofluoromethane	2.00	67	31979	9.50	ppb	91
9) Trichlorofluoromethane	2.05	101	17384	10.30	ppb	98
10) Acrolein	2.49	56	19120	119.97	ppb	98
11) Acetone	2.68	43	28401	49.22	ppb	98
12) Freon-113	2.61	101	15482	10.12	ppb	89
13) 1,1-DCE	2.58	61	23353	9.65	ppb	97
15) Acetonitrile	3.00	41	31391	124.02	ppb	97
16) Methyl Acetate	3.09	43	12491	9.60	ppb	91
17) Iodomethane	2.74	142	10647	12.22	ppb	89
19) Methylene chloride	3.18	84	19840	10.14	ppb	94
20) Carbon disulfide	2.80	76	21272	9.62	ppb	# 94
21) Methyl t-butyl ether (MtBE)	3.61	73	18741	10.63	ppb	95
22) Trans-1,2-DCE	3.56	61	21349	9.65	ppb	97
23) Diisopropyl Ether	4.41	45	43018	10.05	ppb	96
24) 1,1-DCA	4.21	63	30304	9.56	ppb	100
25) Vinyl Acetate	4.42	43	9392	9.38	ppb	100
27) MEK (2-Butanone)	5.16	43	34292	50.68	ppb	90
28) Cis-1,2-DCE	5.07	61	24952	9.45	ppb	89
29) 2,2-Dichloropropane	5.06	77	21787	9.14	ppb	94
30) Chloroform	5.54	83	33496	9.78	ppb	99
31) Bromochloromethane	5.70	130	17887	10.15	ppb	94
33) 1,1,1-TCA	5.74	97	27880	9.54	ppb	96
34) Cyclohexane	5.80	56	18747	9.94	ppb	87
35) 1,1-Dichloropropene	5.96	75	18839	9.49	ppb	92
36) 2,2,4-Trimethylpentane	6.36	57	15836	10.38	ppb	94
38) Carbon Tetrachloride	5.95	119	23473	9.95	ppb	91
40) 1,2-DCA	6.26	62	27655	9.89	ppb	100
41) Benzene	6.22	78	66096	9.75	ppb	95
42) TCE	7.03	130	20834	9.77	ppb	93
43) 2-Pentanone	7.30	43	133780	128.89	ppb	97
44) 1,2-Dichloropropane	7.29	63	18669	9.87	ppb	97
45) Bromodichloromethane	7.63	83	25085	9.48	ppb	100
46) Methyl Cyclohexane	7.24	98	10125	9.93	ppb	89

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\210520\0520L17.D  
 Acq On : 20 May 21 17:58  
 Sample : 210520A LCSD 10ug/L  
 Misc : IS&S: 10/21/20, 11/11/20

Vial: 17  
 Operator:  
 Inst : Loki  
 Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

Quant Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B  
 Last Update : Thu May 27 10:30:37 2021  
 Response via : Initial Calibration  
 DataAcq Meth : 020321\_L8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47) Dibromomethane	7.42	174	16304	10.06	ppb	92
49) MIBK (methyl isobutyl ket	8.36	43	63286	51.66	ppb	97
50) 1-Bromo-2-chloroethane	7.96	63	12734	9.37	ppb	91
51) Cis-1,3-Dichloropropene	8.15	75	25268	9.75	ppb	94
52) Toluene	8.51	91	74475	9.80	ppb	97
53) Trans-1,3-Dichloropropene	8.78	75	13582	9.68	ppb	99
54) 1,1,2-TCA	8.98	97	18757	9.75	ppb	94
55) 2-Hexanone	9.29	43	36463	49.41	ppb	91
58) 1,2-EDB	9.52	107	19124	9.75	ppb	99
59) Tetrachloroethene	9.12	166	13771	10.11	ppb	93
60) 1-Chlorohexane	10.07	91	17389	9.96	ppb	92
61) 1,1,1,2-Tetrachloroethane	10.17	131	21017	9.90	ppb	96
62) m&p-Xylene	10.33	91	116660	20.26	ppb	96
63) o-Xylene	10.77	91	58280	10.02	ppb	99
64) Styrene	10.78	104	46973	9.58	ppb	95
66) 1,3-Dichloropropane	9.16	76	28807	10.25	ppb	94
67) Dibromochloromethane	9.40	129	21579	9.96	ppb	92
68) Chlorobenzene	10.07	112	53540	9.44	ppb	93
69) Ethylbenzene	10.20	91	42600	9.87	ppb	98
70) Bromoform	10.97	173	15043	9.54	ppb	98
72) Isopropylbenzene	11.18	105	71333	10.80	ppb	93
73) 1,1,2,2-Tetrachloroethane	11.50	83	24082	9.71	ppb	96
74) 1,2,3-Trichloropropane	11.55	110	8295	11.14	ppb	88
76) Bromobenzene	11.50	158	23641	10.18	ppb	98
77) n-Propylbenzene	11.63	91	83051	10.68	ppb	97
78) 4-Ethyltoluene	11.82	105	62662	10.83	ppb	99
79) 2-Chlorotoluene	11.84	91	64591	10.64	ppb	97
80) 1,3,5-Trimethylbenzene	12.23	105	62091	10.30	ppb	99
81) 4-Chlorotoluene	11.84	91	64591	10.64	ppb	97
82) Tert-Butylbenzene	12.18	119	53187	10.17	ppb	98
83) 1,2,4-Trimethylbenzene	12.23	105	62091	10.30	ppb	99
84) Sec-Butylbenzene	12.42	105	76085	11.05	ppb	99
85) p-Isopropyltoluene	12.59	119	65877	10.28	ppb	96
86) Benzyl Chloride	12.79	91	12993	9.14	ppb	99
87) 1,3-DCB	12.54	146	47481	10.75	ppb	97
88) 1,4-DCB	13.04	146	44434	10.06	ppb	95
89) n-Butylbenzene	13.04	91	53402	10.83	ppb	97
90) 1,2-DCB	12.63	146	48664	10.24	ppb	95
91) Hexachloroethane	13.33	117	11901	10.21	ppb	88
92) 1,2-Dibromo-3-chloropropan	13.90	157	5390	11.14	ppb	94
93) 1,2,4-Trichlorobenzene	14.82	180	14195	11.62	ppb	87
94) Hexachlorobutadiene	15.01	225	7910	11.74	ppb	87
95) Naphthalene	15.09	128	56850	12.04	ppb	100
96) 1,2,3-Trichlorobenzene	15.36	182	13411	11.55	ppb	99

(#) = qualifier out of range (m) = manual integration  
 0520L17.D L0520524.M Thu May 27 10:51:46 2021

Quantitation Report

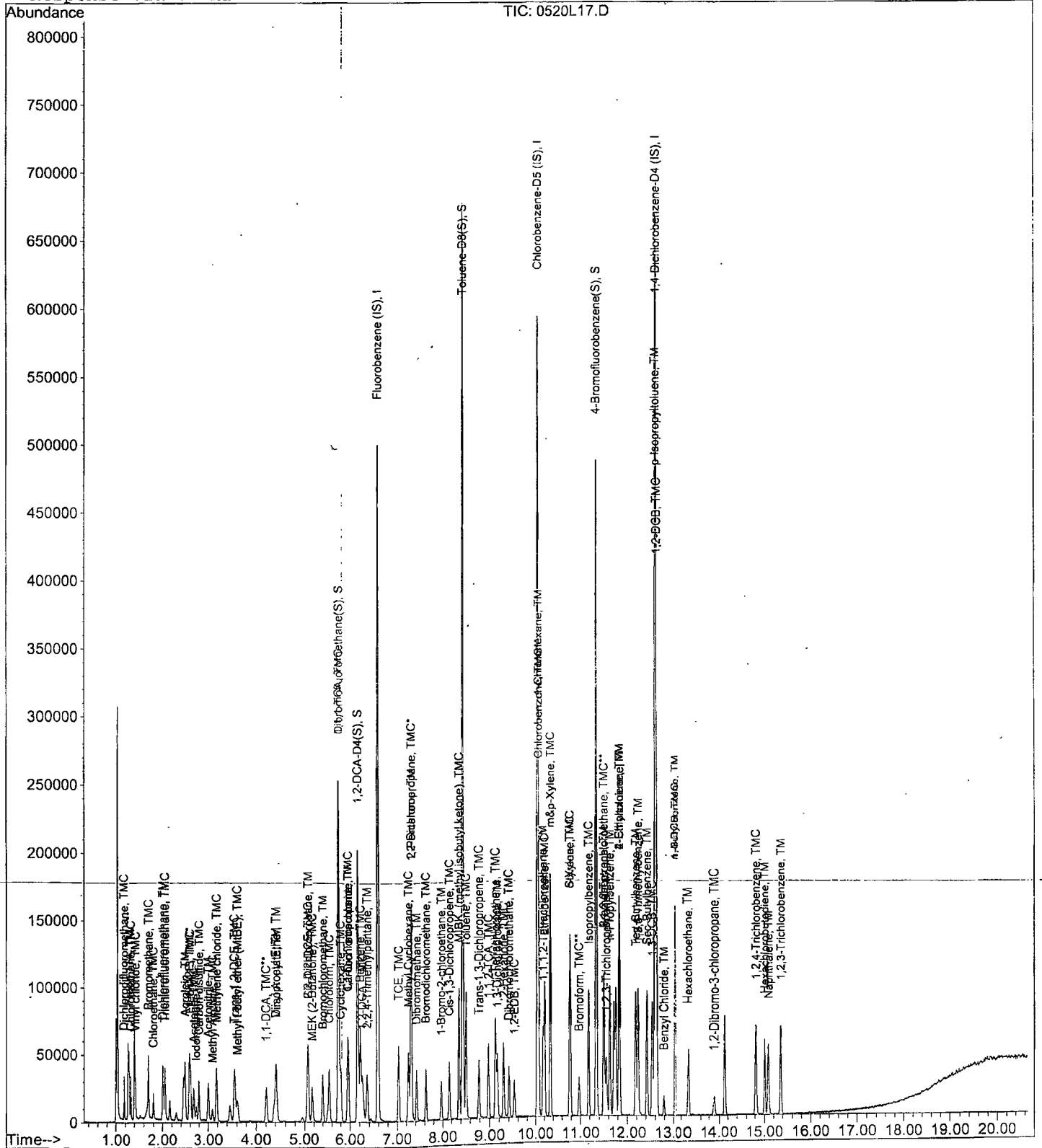
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Acq On : 20 May 21 17:58  
Sample : 210520A LCSD 10ug/L  
Misc : IS&S: 10/21/20, 11/11/20

Vial: 17  
Operator:  
Inst : Loki  
Multiplr: 1.00

Quant Time: May 27 10:31 2021

Quant Results File: L0520524.RES

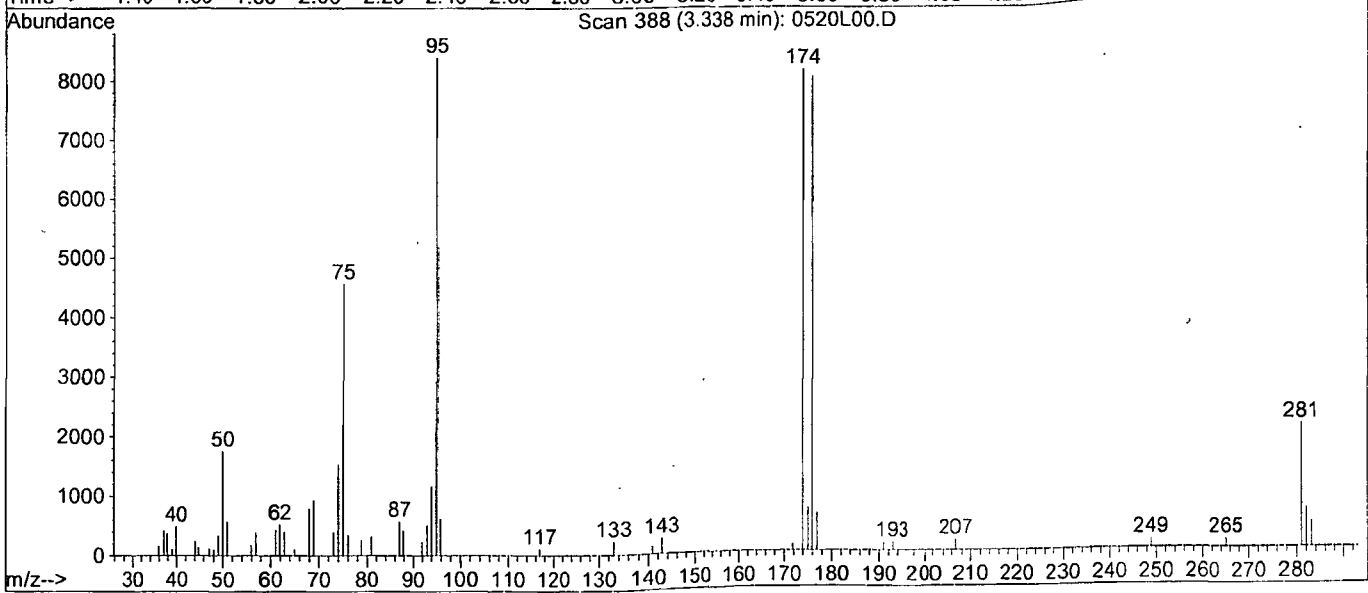
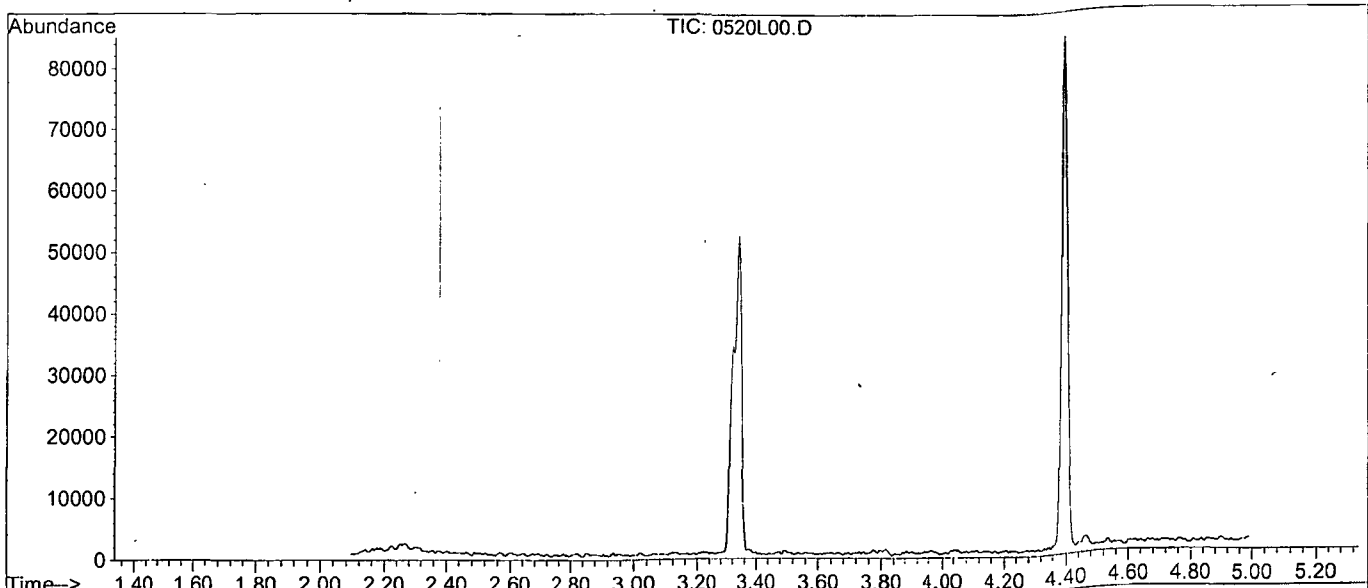
Method : M:\LOKI\DATA\210520\I:0520524.M (RTE Integrator)  
Title : METHOD 8260B  
Last Update : Thu May 27 10:30:37 2021  
Response via : Initial Calibration



Data File : M:\LOKI\DATA\210520\0520L00.D  
 Acq On : 20 May 21 10:14  
 Sample : 25ug/L BFB STD 5/3/21  
 Misc : 2uL

Vial: 1  
 Operator:  
 Inst : LOKI  
 Multiplr: 1.00

Method : M:\LOKI\DATA\210520\L0520524.M (RTE Integrator)  
 Title : METHOD 8260B



Spectrum Information: Scan 388

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.9	1754	PASS
75	95	30	60	54.4	4565	PASS
95	95	100	100	100.0	8398	PASS
96	95	5	9	7.5	626	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	97.3	8175	PASS
175	174	5	9	8.8	720	PASS
176	174	95	100	98.5	8050	PASS
177	176	5	9	7.9	636	PASS

**LOKI 524 Standard Prep**

LOKI 524 Water Calibration Curve										
<b>0.2ug/L</b>						Prepared By (Initials): <u>DG</u>				
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Phenova	0.2ug/L	5	Prepared 05/13/21	07/12/21	N/A	2uL	50mL	P&T Water	0.2
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	2.5uL			5
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	2uL			10
<b>0.5ug/L</b>										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Phenova	0.5ug/L	5	Prepared 05/13/21	07/12/21	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	5uL			10
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	5uL			25
<b>1.0ug/L</b>										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	Phenova	1.0ug/L	5	Prepared 05/13/21	07/12/21	N/A	10uL	50mL	P&T Water	1
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	10uL			20
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	10uL			50
<b>5ug/L</b>										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 05/13/21	07/12/21	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 05/13/21	06/02/21	N/A	5uL			5
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	20uL			40
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	20uL			100
<b>10ug/L</b>										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 05/13/21	07/12/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 05/13/21	06/02/21	N/A	10uL			10
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	25uL			50
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	25uL			125

20ug/L										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 05/13/21	07/12/21	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 05/13/21	06/02/21	N/A	20uL			20
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	30uL			60
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	30uL			150
40ug/L										
Prepared: 05/20/21										
Expires: 06/18/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 05/13/21	07/12/21	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 05/13/21	06/02/21	N/A	40uL			40
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	40uL			80
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	35uL			175
100ug/L										
Prepared: 05/20/21										
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 05/13/21	07/12/21	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 05/13/21	06/02/21	N/A	100uL			100
VOA STD. 2	Phenova		100	Prepared 05/13/21	07/12/21	N/A	50uL			100
VOA STD. TBA	Various		250	Prepared 05/13/21	06/02/21	N/A	40uL			200
LOKI 524 Calibration Curve (SS)										
Prepared: 05/20/21						Prepared By (Initials): DG				
Expires: 06/19/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 05/13/21	07/12/21	N/A	25uL	50mL	P&T Water	50
VOA STD. GASES	Phenova	8260 Water SS	50	Prepared 05/13/21	07/12/21	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 05/13/21	07/12/21	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 05/13/21	06/02/21	N/A	10uL			10
VOA STD. TBA	Various	8260 Water SS	250	Prepared 05/13/21	06/02/21	N/A	25uL			250
524 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)										
Prepared: 05/20/21						Prepared By (Initials): DG				
Expires: 05/21/21										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 05/13/21	07/12/21	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 05/13/21	06/02/21	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 05/13/21	07/12/21	N/A	25uL			50
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 05/13/21	06/02/21	N/A	25uL			125

### Primary and Secondary Working Standards

Primary Standards										
<b>VOA STD 7</b>										
Prepared: 05/13/21 A						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14505-51550	05/13/22	10/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Phenova	70199	1,000	021621-52154	05/13/22	02/18/28	200uL			50
Benzyl Chloride	Absolute	70037	1,000	011421-52159	05/13/22	01/14/22	200uL			50
<b>VOA STD 8</b>										
Prepared: 05/13/21 B						Prepared By (Initials): EO				
Expires: 06/02/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL14058-52055	05/13/22	08/31/21	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL16052-52066	05/13/22	11/30/25	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16822-52206	05/13/22	06/02/21	100uL			50
<b>VOA STD TBA</b>										
Prepared: 05/13/21 C						Prepared By (Initials): EO				
Expires: 06/02/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL16012-51865	05/13/22	11/30/23	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL16826-52208	05/13/22	06/02/21	100uL			250
<b>VOA STD 1</b>										
Prepared: 05/13/21 D						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	111419-52164	05/13/22	11/14/22	50	2mL	Methanol	50
<b>VOA STD 2</b>										
Prepared: 05/13/21 E						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL16067-52087	05/13/22	11/30/30	100	4mL	Methanol	50
<b>VOA STD 9</b>										
Prepared: 05/13/21 F						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 05/13/21	05/13/22	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 05/13/21	05/13/22	N/A	200uL			5
<b>VOA STD. 10</b>										
Prepared: 05/13/21 G						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 05/13/21	05/13/22	N/A	200uL	2mL	Methanol	5
<b>VOA STD. 12</b>										
Prepared: 05/13/21 H						Prepared By (Initials): EO				
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 05/13/21	05/13/22	N/A	200uL	2mL	Methanol	5

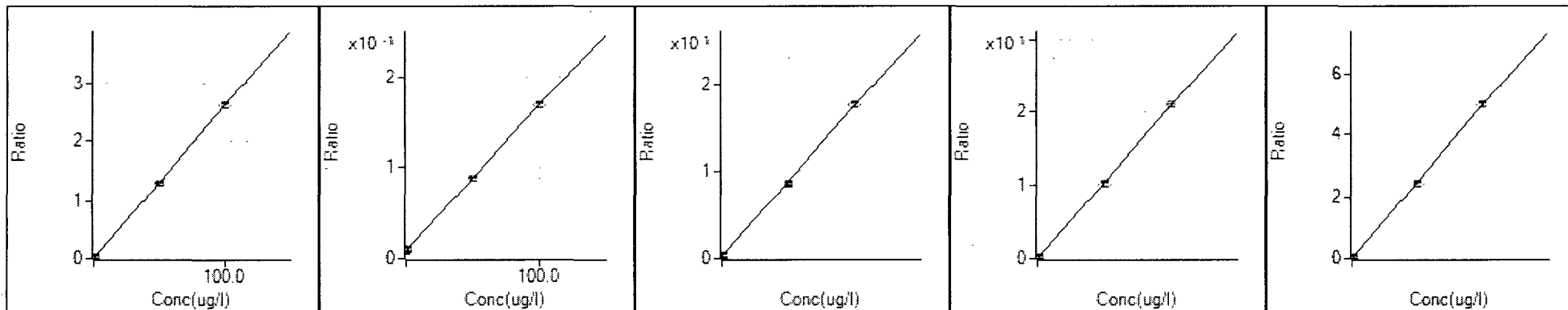
Second Source (SS) Standards										
VOA STD. 3										
Prepared: 05/13/21 I										
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL16074-52091	05/13/22	11/30/30	50uL	2mL	Methanol	50
VOA STD. Gases										
Prepared: 05/13/21 J										
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL15533-52051	05/13/22	07/31/25	50uL	2mL	Methanol	50
VOA STD. 6										
Prepared: 05/13/21 K										
Expires: 06/02/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL16071-52071	05/13/22	11/30/25	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL16822-52207	05/13/22	06/02/21	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219081767-52010	05/13/22	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219111303-01-52121	05/13/22	01/30/23	500uL			50
VOA STD. TBA										
Prepared: 05/13/21 L										
Expires: 06/02/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL15725-51870	05/13/22	09/30/23	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL16828-52209	05/13/22	06/02/21	50uL			250
VOA STD. 0										
Prepared: 05/13/21 M										
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL15724-52062	05/13/22	09/30/22	50uL	2mL	Methanol	50
VOA STD. 2-CEVE										
Prepared: 05/13/21 N										
Expires: 07/12/21										
Methanol Lot No. DW117-US-0095										
Initial Standard Information						Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	12119-52169	05/13/22	12/11/22	50uL	2mL	Methanol	50

## Injection Log

Directory: M:\LOK\DATA\210520\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0520L00.D	1	25ug/L BFB STD 5/3/21	2uL	20 May 21 10:14
2	6	0520L06.D	1	0.2ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 12:54
3	7	0520L07.D	1	0.5ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 13:22
4	8	0520L08.D	1	1ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 13:50
5	9	0520L09.D	1	5ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 14:17
6	10	0520L10.D	1	10ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 14:45
7	11	0520L11.D	1	20ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 15:12
8	12	0520L12.D	1	40ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 15:40
9	13	0520L13.D	1	100ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 16:08
10	15	0520L15.D	1	(SS) 10ug/L 524 HCL 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 17:03
11	16	0520L16.D	1	210520A LCS 10ug/L	IS&S: 10/21/20, 11/11/20	20 May 21 17:31
12	17	0520L17.D	1	210520A LCSD 10ug/L	IS&S: 10/21/20, 11/11/20	20 May 21 17:58
13	18	0520L18.D	1	210520A BLK	IS&S: 10/21/20, 11/11/20	20 May 21 18:26
14	22	0520L22.D	1	BA32813W01	IS&S: 10/21/20, 11/11/20	20 May 21 20:16
15	23	0520L23.D	1	BA32814W01	IS&S: 10/21/20, 11/11/20	20 May 21 20:44
16	24	0520L24.D	1	Ending CCV 10ug/L 5/20/21	IS&S: 10/21/20, 11/11/20	20 May 21 21:11

**METALS**  
**Calibration Data**



9 Be [ NoGas ]

ISTD: 6 Li

$y = 2.624E-2 x$

R 1.0000

DL 0

BEC 0

11 B [ NoGas ]

ISTD: 45 Sc

$y = 1.601E-3 x + 8.788E-3$

R 1.0000

DL 0.5967

BEC 5.489

23 Na [ He ]

ISTD: 45 Sc

$y = 6.922E-3 x + 2.467E-1$

R 0.9998

DL 0.7731

BEC 35.63

24 Mg [ He ]

ISTD: 45 Sc

$y = 4.151E-3 x + 4.996E-4$

R 0.9999

DL 0.1193

BEC 0.1204

27 Al [ He ]

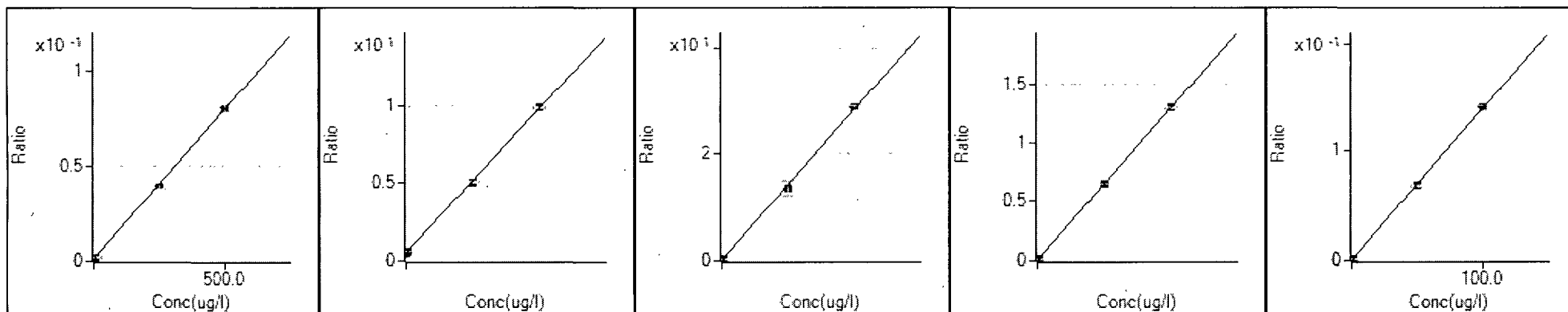
ISTD: 45 Sc

$y = 2.483E-3 x + 5.014E-3$

R 0.9999

DL 1.073

BEC 2.02



31 P [ He ]

ISTD: 45 Sc

$y = 1.582E-4 x + 1.058E-3$

R 0.9998

DL 0.468

BEC 6.689

39 K [ He ]

ISTD: 45 Sc

$y = 4.678E-3 x + 4.963E-1$

R 0.9999

DL 1.235

BEC 106.1

40 Ca [ H2 ]

ISTD: 45 Sc

$y = 5.663E-3 x + 1.039E-2$

R 0.9995

DL 0.5417

BEC 1.834

44 Ca [ He ]

ISTD: 45 Sc

$y = 2.604E-4 x + 8.428E-4$

R 1.0000

DL 4.092

BEC 3.236

47 Ti [ He ]

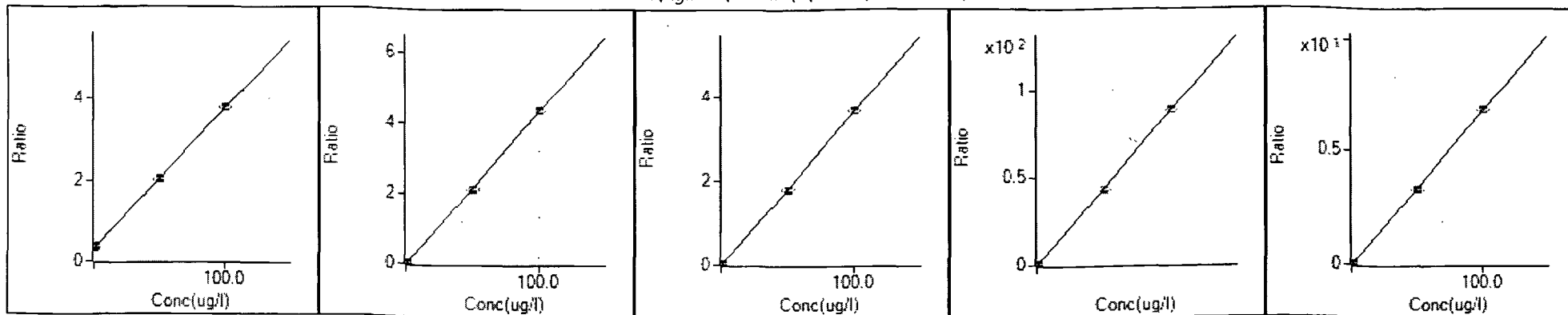
ISTD: 45 Sc

$y = 1.395E-3 x + 1.187E-5$

R 0.9999

DL 0.0442

BEC 0.008505



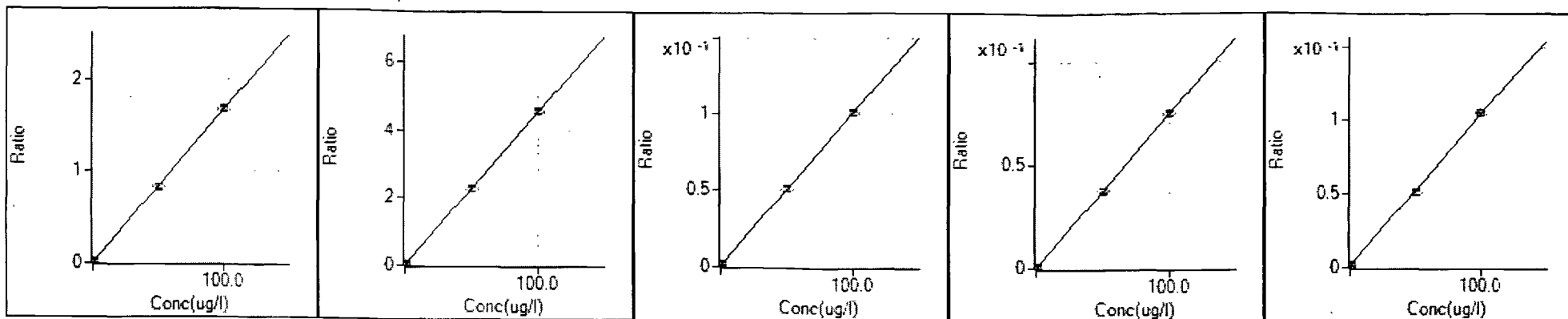
51 V [ He ]  
 ISTD: 45 Sc  
 $y = 3.424E-2 x + 3.334E-1$   
 R 0.9999  
 DL 0.667  
 BEC 9.737

52 Cr [ He ]  
 ISTD: 45 Sc  
 $y = 4.330E-2 x + 5.340E-3$   
 R 0.9999  
 DL 0.04533  
 BEC 0.1233

55 Mn [ He ]  
 ISTD: 45 Sc  
 $y = 3.653E-2 x + 1.070E-3$   
 R 1.0000  
 DL 0.00337  
 BEC 0.02929

56 Fe [ He ]  
 ISTD: 45 Sc  
 $y = 4.387E-2 x + 1.082E-1$   
 R 0.9999  
 DL 0.1384  
 BEC 2.467

59 Co [ He ]  
 ISTD: 45 Sc  
 $y = 6.804E-2 x + 5.940E-5$   
 R 0.9999  
 DL 0.001811  
 BEC 0.0008731



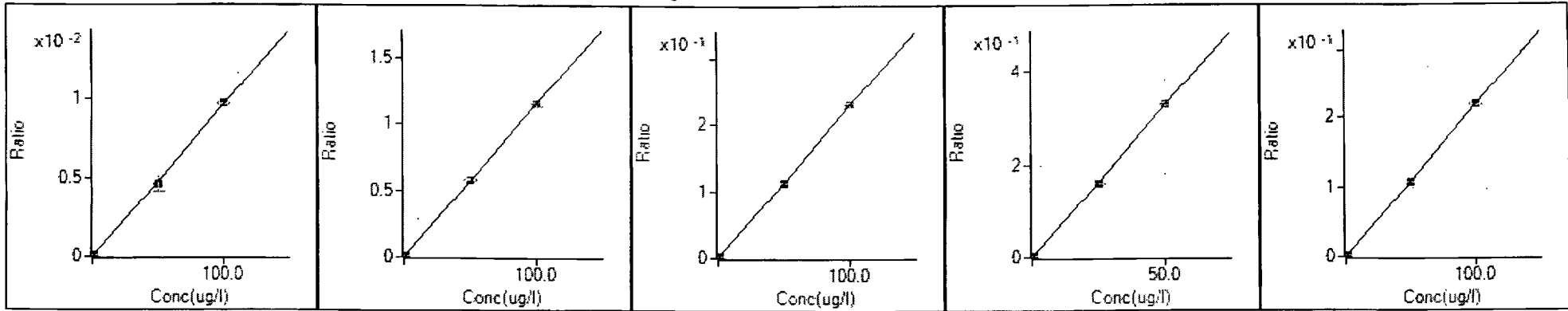
60 Ni [ He ]  
 ISTD: 45 Sc  
 $y = 1.677E-2 x + 1.900E-4$   
 R 1.0000  
 DL 0.0314  
 BEC 0.01133

63 Cu [ He ]  
 ISTD: 45 Sc  
 $y = 4.538E-2 x + 1.950E-3$   
 R 1.0000  
 DL 0.03074  
 BEC 0.04296

66 Zn [ He ]  
 ISTD: 115 In  
 $y = 1.005E-3 x + 4.354E-4$   
 R 1.0000  
 DL 0.2831  
 BEC 0.4331

75 As [ He ]  
 ISTD: 115 In  
 $y = 7.484E-4 x + 1.536E-4$   
 R 1.0000  
 DL 0.1004  
 BEC 0.2052

78 Se [ He ]  
 ISTD: 45 Sc  
 $y = 1.028E-3 x + 1.242E-3$   
 R 0.9997  
 DL 0.2834  
 BEC 1.208



78 Se [ H2 ]

ISTD: 115 In

$y = 9.614E-5 x + 4.384E-6$

R 0.9998

DL 0.189

BEC 0.0456

88 Sr [ NoGas ]

ISTD: 115 In

$y = 1.152E-2 x + 4.777E-5$

R 1.0000

DL 0.002569

BEC 0.004148

95 Mo [ NoGas ]

ISTD: 115 In

$y = 2.279E-3 x + 8.944E-6$

R 1.0000

DL 0.005751

BEC 0.003924

107 Ag [ NoGas ]

ISTD: 115 In

$y = 6.526E-3 x$

R 1.0000

DL 0

BEC 0

111 Cd [ He ]

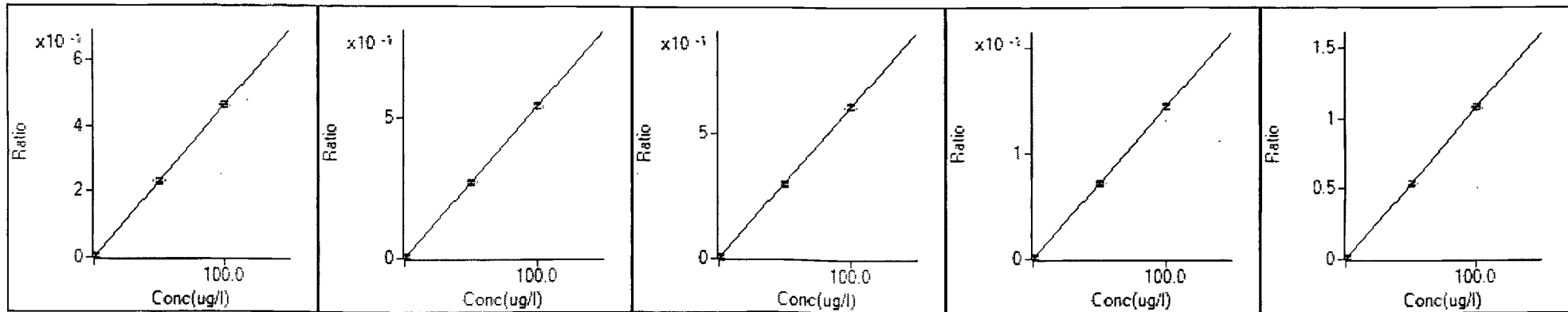
ISTD: 115 In

$y = 2.197E-3 x$

R 1.0000

DL 0

BEC 0



118 Sn [ NoGas ]

ISTD: 115 In

$y = 4.602E-3 x + 4.886E-5$

R 1.0000

DL 0.002928

BEC 0.01062

118 Sn [ He ]

ISTD: 115 In

$y = 5.413E-3 x + 7.838E-5$

R 1.0000

DL 0.02634

BEC 0.01448

121 Sb [ NoGas ]

ISTD: 115 In

$y = 6.026E-3 x + 3.396E-4$

R 1.0000

DL 0.01573

BEC 0.05635

137 Ba [ NoGas ]

ISTD: 165 Ho

$y = 1.440E-3 x + 1.424E-5$

R 1.0000

DL 0.02585

BEC 0.00989

205 Tl [ NoGas ]

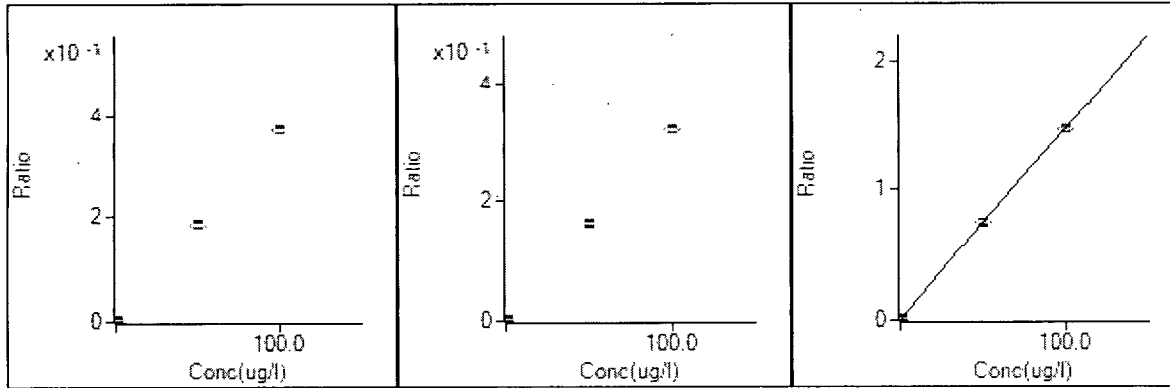
ISTD: 165 Ho

$y = 1.078E-2 x + 5.125E-5$

R 1.0000

DL 0.004082

BEC 0.004754



206 [Pb] [ NoGas ]

ISTD: 165 Ho

Excluded

R

207 [Pb] [ NoGas ]

ISTD: 165 Ho

Excluded

R

208 Pb [ NoGas ]

ISTD: 165 Ho

$y = 1.470E-2 x + 8.568E-5$

R 1.0000

DL 0.006308

BEC 0.005827

A.P.P.L. INC.  
2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM  
 ARF No: 96222 SDG: 96222

Analysis Date: 06/02/21 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:33	%R(1)	True CCVI	Found 2:38	%R(1)	True CCVI	Found 5:44	%R(1)	
Lead (Pb)	50	51.7595	104	50	48.5810	97.2	50	49.5964	99.2	P

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: AECOM

ARF No.: 96222

SDG: 96222

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 06/02/21

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M	
		C	1	C	2	C	3	C		C		
	11:48		02:45		05:51					02:52		
Lead (Pb)	.20	U	.20	U	.20	U				.20	U	P
Lead (Pb)	.20	U	.20	U	.20	U				.20	U	P

# Low Level ICV

Sample Name	Acq Date Time	Run Sequence	Analyte	Actual Conc (ug/L)	Spiked Conc (ug/L)	Control Limits	% Recovery	QC Flag
0.5ppb LLICV	06/02/21 12:01	210602A.b	Beryllium	0.471	0.5	80-120%	94	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Sodium	11.959	12.5	80-120%	96	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Magnesium	25.145	25	80-120%	101	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Aluminum	10.087	10	80-120%	101	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Potassium	11.446	10	80-120%	114	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Calcium (He)	29.975	25	80-120%	120	
1.0ppb LLICV	06/02/21 12:08	210602A.b	Vanadium	1.035	1	80-120%	104	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Chromium	0.492	0.5	80-120%	98	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Manganese	0.510	0.5	80-120%	102	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Iron	10.074	10	80-120%	101	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Cobalt	0.496	0.5	80-120%	99	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Nickel	0.521	0.5	80-120%	104	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Copper	0.489	0.5	80-120%	98	
2.0ppb LLICV	06/02/21 12:15	210602A.b	Zinc	2.354	2	80-120%	118	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Arsenic	0.462	0.5	80-120%	92	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Selenium (H2)	0.413	0.5	80-120%	83	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Strontium	0.514	0.5	80-120%	103	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Molybdenum	0.491	0.5	80-120%	98	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Silver	0.237	0.25	80-120%	95	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Cadmium	0.501	0.5	80-120%	100	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Tin (He)	0.493	0.5	80-120%	99	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Antimony	0.568	0.5	80-120%	114	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Barium	0.534	0.5	80-120%	107	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Thallium	0.531	0.5	80-120%	106	
0.5ppb LLICV	06/02/21 12:01	210602A.b	Lead	0.515	0.5	80-120%	103	

Analyte	0.5ppb LLICV	1.0ppb LLICV	2.0ppb LLICV	4.0ppb LLICV	20ppb LLICV	Standard 2
Beryllium	0.5	1	2	4	20	1
Sodium	12.5	25	50	100	500	25
Magnesium	25	50	100	200	1000	50
Aluminum	10	20	40	80	400	20
Potassium	10	20	40	80	400	20
Calcium	25	50	100	200	1000	50
Vanadium	0.5	1	2	4	20	1
Chromium	0.5	1	2	4	20	1
Manganese	0.5	1	2	4	20	1
Iron	10	20	40	80	400	20
Cobalt	0.5	1	2	4	20	1
Nickel	0.5	1	2	4	20	1
Copper	0.5	1	2	4	20	1
Zinc	0.5	1	2	4	20	1
Arsenic	0.5	1	2	4	20	1
Selenium	0.5	1	2	4	20	1
Strontium	0.5	1	2	4	20	1
Molybdenum	0.5	1	2	4	20	1
Silver	0.25	0.5	1	2	10	0.5
Cadmium	0.5	1	2	4	20	1
Tin	0.5	1	2	4	20	1
Antimony	0.5	1	2	4	20	1
Barium	0.5	1	2	4	20	1
Thallium	0.5	1	2	4	20	1
Lead	0.5	1	2	4	20	1

# Sample Report

**Sample Name** 0.5 ppb LLICV 06/01/2021  
**File Name** 025SMPL.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:01 29 PM  
**Sample Type** Sample  
**Total Dilution** 1 0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	0.471	ug/l	13.5	720.05	10000	
B	11	45	NoGas	2.842	ug/l	4.6	8615.74	10000	
Na	23	45	He	11.959	ug/l	7.7	17662.49	1000000	
Mg	24	45	He	25.145	ug/l	1.1	5622.91	1000000	
Al	27	45	He	10.087	ug/l	3.1	1611.42	1000000	
P	31	45	He	2.042	ug/l	63.7	74.00	500000	
K	39	45	He	11.446	ug/l	12.7	29481.37	500000	
Ca	40	45	H2	29.290	ug/l	3.2	2480.86	500000	
Ca	44	45	He	29.975	ug/l	17.7	464.01	500000	
Ti	47	45	He	0.527	ug/l	18.9	40.00	10000	
V	51	45	He	0.335	ug/l	26.6	18489.76	10000	
Cr	52	45	He	0.492	ug/l	7.3	1427.40	10000	
Mn	55	45	He	0.510	ug/l	3.9	1055.37	50000	
Fe	56	45	He	10.074	ug/l	1.3	29501.54	1000000	
Co	59	45	He	0.496	ug/l	1.8	1814.10	10000	
Ni	60	45	He	0.521	ug/l	10.3	478.68	10000	
Cu	63	45	He	0.489	ug/l	2.1	1294.73	10000	
Zn	66	115	He	1.471	ug/l	10.4	1089.37	50000	
As	75	115	He	0.462	ug/l	3.6	284.00	2000	
Se	78	45	He	0.341	ug/l	73.6	85.33	10000	
Se	78	115	H2	0.413	ug/l	33.3	9.20	10000	
Sr	88	115	NoGas	0.514	ug/l	3.0	12718.39	50000	
Mo	95	115	NoGas	0.491	ug/l	5.0	2403.61	10000	
Ag	107	115	NoGas	0.237	ug/l	11.5	3293.79	5000	
Cd	111	115	He	0.501	ug/l	6.9	626.02	10000	
Sn	118	115	He	0.493	ug/l	1.7	1562.75	10000	
Sb	121	115	NoGas	0.568	ug/l	3.3	8022.23	10000	
Ba	137	165	NoGas	0.534	ug/l	1.8	2626.98	50000	
Tl	205	165	NoGas	0.531	ug/l	3.8	19355.67	5000	
Pb	208	165	NoGas	0.515	ug/l	1.3	25679.06	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	58316.33	2.8	58420.39	99.82	70	120	
Sc	45	NoGas	645970.64	1.6	679566.6	95.06	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	53617.25	0.7	56080.27	95.61	70	120	
Sc	45	H2	14080.87	1.8	14893.52	94.54	70	120	
Ge	72	NoGas	197791.74	1.8	209841.59	94.26	70	120	
Ge	72	He	38666.91	0.5	40861.14	94.63	70	120	
Ge	72	H2	2054.13	5.8	2091.47	98.21	70	120	
In	115	NoGas	2132026.54	1.4	2229294.33	95.64	70	120	
In	115	He	569064.78	0.2	586109.04	97.09	70	120	
In	115	H2	208556.86	0.6	213180.49	97.83	70	120	
Tb	159	NoGas	3404303.28	1.4	3574426.19	95.24	70	120	
Tb	159	He	1532192.67	0.5	1552975.29	98.66	70	120	
Tb	159	H2	1000030.54	0.5	1013635.35	98.66	70	120	
Ho	165	NoGas	3351694.95	1.1	3507364.22	95.56	70	120	
Ho	165	He	1548486.25	0.9	1591211.17	97.31	70	120	
Ho	165	H2	1042838.88	0.3	1056968.25	98.66	70	120	

# Sample Report

**Sample Name** 1.0 ppb LLICV 06/01/2021  
**File Name** 026SMPL.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:08:41 PM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_Metals

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	0.938	ug/l	13.4	1390.12	10000	
B	11	45	NoGas	1.559	ug/l	25.7	7215.09	10000	
Na	23	45	He	24.911	ug/l	2.0	22188.01	1000000	
Mg	24	45	He	51.201	ug/l	1.8	11277.57	1000000	
Al	27	45	He	20.338	ug/l	2.5	2938.26	1000000	
P	31	45	He	1.909	ug/l	94.1	72.00	500000	
K	39	45	He	22.240	ug/l	7.3	31781.99	500000	
Ca	40	45	H2	55.912	ug/l	1.6	4524.60	500000	
Ca	44	45	He	55.866	ug/l	11.0	814.69	500000	
Ti	47	45	He	1.010	ug/l	35.5	75.33	10000	
V	51	45	He	1.035	ug/l	31.5	19523.52	10000	
Cr	52	45	He	1.000	ug/l	3.4	2576.20	10000	
Mn	55	45	He	0.993	ug/l	5.5	1976.79	50000	
Fe	56	45	He	19.913	ug/l	1.6	51981.49	1000000	
Co	59	45	He	0.992	ug/l	1.5	3577.06	10000	
Ni	60	45	He	0.994	ug/l	4.6	892.03	10000	
Cu	63	45	He	1.028	ug/l	7.0	2572.87	10000	
Zn	66	115	He	1.556	ug/l	4.7	1124.04	50000	
As	75	115	He	0.922	ug/l	7.2	474.01	2000	
Se	78	45	He	0.837	ug/l	35.4	111.33	10000	
Se	78	115	H2	0.875	ug/l	3.5	18.27	10000	
Sr	88	115	NoGas	1.018	ug/l	2.9	24638.15	50000	
Mo	95	115	NoGas	1.016	ug/l	0.5	4864.23	10000	
Ag	107	115	NoGas	0.495	ug/l	8.9	6761.62	5000	
Cd	111	115	He	0.995	ug/l	4.2	1228.72	10000	
Sn	118	115	He	1.000	ug/l	3.0	3085.64	10000	
Sb	121	115	NoGas	1.042	ug/l	7.2	13839.45	10000	
Ba	137	165	NoGas	0.979	ug/l	5.1	4700.87	50000	
Tl	205	165	NoGas	0.982	ug/l	6.4	35082.66	5000	
Pb	208	165	NoGas	1.032	ug/l	2.0	50382.33	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	56380.85	2.1	58420.39	96.51	70	120	
Sc	45	NoGas	639329.05	0.9	679566.6	94.08	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	52942.04	0.7	56080.27	94.4	70	120	
Sc	45	H2	13838.01	1.1	14893.52	92.91	70	120	
Ge	72	NoGas	197031.16	0.5	209841.59	93.9	70	120	
Ge	72	He	38533.96	0.4	40861.14	94.3	70	120	
Ge	72	H2	1976.13	4.6	2091.47	94.48	70	120	
In	115	NoGas	2092486.52	1.0	2229294.33	93.86	70	120	
In	115	He	562127.50	0.3	586109.04	95.91	70	120	
In	115	H2	206383.97	0.2	213180.49	96.81	70	120	
Tb	159	NoGas	3371251.62	0.6	3574426.19	94.32	70	120	
Tb	159	He	1519601.42	2.3	1552975.29	97.85	70	120	
Tb	159	H2	993071.17	0.4	1013635.35	97.97	70	120	
Ho	165	NoGas	3300967.14	1.8	3507364.22	94.12	70	120	
Ho	165	He	1550537.00	1.0	1591211.17	97.44	70	120	
Ho	165	H2	1036597.86	0.6	1056968.25	98.07	70	120	

# Sample Report

**Sample Name** 2.0 ppb LLICV 06/01/2021  
**File Name** 027SMPL.d  
**Data Path Name** C:\Agilent\ICPMH1\DATA\210602A b  
**Acq Time** 06/02/21 12:15:53 PM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	1.920	ug/l	4.2	2793.68	10000	
B	11	45	NoGas	2.427	ug/l	12.2	8102.11	10000	
Na	23	45	He	47.108	ug/l	4.5	30596.84	1000000	
Mg	24	45	He	97.034	ug/l	1.2	21545.60	1000000	
Al	27	45	He	39.589	ug/l	3.7	5520.22	1000000	
P	31	45	He	8.687	ug/l	10.9	130.00	500000	
K	39	45	He	41.249	ug/l	0.2	36827.43	500000	
Ca	40	45	H2	103.393	ug/l	1.7	8271.27	500000	
Ca	44	45	He	98.855	ug/l	9.3	1420.07	500000	
Ti	47	45	He	1.752	ug/l	15.4	131.33	10000	
V	51	45	He	2.051	ug/l	5.7	21561.93	10000	
Cr	52	45	He	1.981	ug/l	1.9	4868.03	10000	
Mn	55	45	He	1.918	ug/l	2.1	3800.43	50000	
Fe	56	45	He	39.240	ug/l	2.0	97760.53	1000000	
Co	59	45	He	1.975	ug/l	2.9	7180.84	10000	
Ni	60	45	He	1.932	ug/l	3.8	1740.76	10000	
Cu	63	45	He	1.973	ug/l	0.8	4888.70	10000	
Zn	66	115	He	2.354	ug/l	5.4	1582.75	50000	
As	75	115	He	1.930	ug/l	7.3	903.03	2000	
Se	78	45	He	1.832	ug/l	4.4	167.00	10000	
Se	78	115	H2	1.957	ug/l	9.2	39.87	10000	
Sr	88	115	NoGas	2.062	ug/l	0.6	50219.44	50000	
Mo	95	115	NoGas	1.948	ug/l	3.2	9386.21	10000	
Ag	107	115	NoGas	1.031	ug/l	1.2	14202.90	5000	
Cd	111	115	He	1.968	ug/l	2.6	2442.86	10000	
Sn	118	115	He	1.953	ug/l	2.3	6017.08	10000	
Sb	121	115	NoGas	2.010	ug/l	5.8	26267.52	10000	
Ba	137	165	NoGas	2.027	ug/l	4.9	9966.69	50000	
Tl	205	165	NoGas	1.979	ug/l	3.2	72673.59	5000	
Pb	208	165	NoGas	2.010	ug/l	3.3	100706.15	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	55416.67	1.8	58420.39	94.86	70	120	
Sc	45	NoGas	639108.04	1.6	679566.6	94.05	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	53428.68	0.9	56080.27	95.27	70	120	
Sc	45	H2	13883.38	1.8	14893.52	93.22	70	120	
Ge	72	NoGas	198294.50	1.7	209841.59	94.5	70	120	
Ge	72	He	38280.80	1.0	40861.14	93.69	70	120	
Ge	72	H2	1973.46	4.0	2091.47	94.36	70	120	
In	115	NoGas	2110453.81	1.2	2229294.33	94.67	70	120	
In	115	He	565088.26	1.0	586109.04	96.41	70	120	
In	115	H2	207141.01	1.1	213180.49	97.17	70	120	
Tb	159	NoGas	3474516.51	0.8	3574426.19	97.2	70	120	
Tb	159	He	1520341.21	0.9	1552975.29	97.9	70	120	
Tb	159	H2	996237.46	0.6	1013635.35	98.28	70	120	
Ho	165	NoGas	3398101.41	1.0	3507364.22	96.88	70	120	
Ho	165	He	1531383.50	3.5	1591211.17	96.24	70	120	
Ho	165	H2	1042965.25	1.2	1056968.25	98.68	70	120	

# Sample Report

**Sample Name** 4.0 ppb LLICV 06/01/2021  
**File Name** 028SMPL.d  
**Data Path Name** C:\Agilent\NCPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:23.04 PM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	3.895	ug/l	4.1	5644.40	10000	
B	11	45	NoGas	4.471	ug/l	16.5	9983.24	10000	
Na	23	45	He	97.187	ug/l	4.6	48490.06	1000000	
Mg	24	45	He	194.314	ug/l	3.0	42567.88	1000000	
Al	27	45	He	78.340	ug/l	4.5	10520.45	1000000	
P	31	45	He	20.390	ug/l	2.5	226.00	500000	
K	39	45	He	79.541	ug/l	4.5	45810.85	500000	
Ca	40	45	H2	202.638	ug/l	2.5	15809.61	500000	
Ca	44	45	He	199.569	ug/l	2.1	2786.90	500000	
Ti	47	45	He	4.106	ug/l	13.3	303.34	10000	
V	51	45	He	3.915	ug/l	10.4	24652.53	10000	
Cr	52	45	He	3.885	ug/l	1.7	9156.37	10000	
Mn	55	45	He	3.838	ug/l	5.4	7448.25	50000	
Fe	56	45	He	77.900	ug/l	2.3	185988.56	1000000	
Co	59	45	He	3.885	ug/l	2.3	13946.14	10000	
Ni	60	45	He	3.935	ug/l	3.1	3491.03	10000	
Cu	63	45	He	3.916	ug/l	2.7	9477.89	10000	
Zn	66	115	He	4.941	ug/l	1.4	3036.95	50000	
As	75	115	He	3.928	ug/l	5.4	1738.09	2000	
Se	78	45	He	3.802	ug/l	11.9	271.67	10000	
Se	78	115	H2	3.896	ug/l	14.1	77.73	10000	
Sr	88	115	NoGas	4.044	ug/l	0.6	96057.86	50000	
Mo	95	115	NoGas	3.899	ug/l	2.3	18326.86	10000	
Ag	107	115	NoGas	1.978	ug/l	2.3	26591.43	5000	
Cd	111	115	He	3.916	ug/l	2.7	4834.70	10000	
Sn	118	115	He	3.889	ug/l	0.9	11874.76	10000	
Sb	121	115	NoGas	3.961	ug/l	2.9	49873.09	10000	
Ba	137	165	NoGas	4.002	ug/l	1.7	18794.25	50000	
Tl	205	165	NoGas	3.969	ug/l	0.5	139372.02	5000	
Pb	208	165	NoGas	4.087	ug/l	1.2	195805.31	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	55206.69	1.2	58420.39	94.5	70	120	
Sc	45	NoGas	626202.18	0.9	679566.6	92.15	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	52762.35	1.9	56080.27	94.08	70	120	
Sc	45	H2	13657.87	1.9	14893.52	91.7	70	120	
Ge	72	NoGas	194597.93	0.5	209841.59	92.74	70	120	
Ge	72	He	38350.35	1.3	40861.14	93.86	70	120	
Ge	72	H2	1949.46	3.8	2091.47	93.21	70	120	
In	115	NoGas	2060478.09	1.6	2229294.33	92.43	70	120	
In	115	He	562071.54	1.1	586109.04	95.9	70	120	
In	115	H2	205318.81	1.0	213180.49	96.31	70	120	
Tb	159	NoGas	3330200.47	1.2	3574426.19	93.17	70	120	
Tb	159	He	1499432.42	1.5	1552975.29	96.55	70	120	
Tb	159	H2	988742.23	0.8	1013635.35	97.54	70	120	
Ho	165	NoGas	3253662.76	1.0	3507364.22	92.77	70	120	
Ho	165	He	1518491.50	1.1	1591211.17	95.43	70	120	
Ho	165	H2	1032452.56	0.3	1056968.25	97.68	70	120	

# Sample Report

**Sample Name** 20 ppb LLICV 06/01/2021.  
**File Name** 029SMPL.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:30 14 PM  
**Sample Type** Sample  
**Total Dilution** 1 0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	19.081	ug/l	3.8	27999.62	10000	
B	11	45	NoGas	18.954	ug/l	0.7	24404.52	10000	
Na	23	45	He	492.793	ug/l	2.9	188096.07	1000000	
Mg	24	45	He	990.245	ug/l	2.5	211394.79	1000000	
Al	27	45	He	394.485	ug/l	1.0	50628.65	1000000	
P	31	45	He	106.323	ug/l	2.0	919.36	500000	
K	39	45	He	401.460	ug/l	1.9	122111.89	500000	
Ca	40	45	H2	1005.774	ug/l	1.8	77219.58	500000	
Ca	44	45	He	981.920	ug/l	1.2	13195.55	500000	
Ti	47	45	He	18.493	ug/l	1.2	1328.06	10000	
V	51	45	He	17.942	ug/l	2.7	48735.19	10000	
Cr	52	45	He	19.737	ug/l	3.0	44215.53	10000	
Mn	55	45	He	19.716	ug/l	2.2	37090.15	50000	
Fe	56	45	He	398.196	ug/l	2.5	903939.62	1000000	
Co	59	45	He	19.918	ug/l	2.0	69693.42	10000	
Ni	60	45	He	19.954	ug/l	1.3	17219.64	10000	
Cu	63	45	He	19.996	ug/l	0.9	46774.77	10000	
Zn	66	115	He	20.865	ug/l	1.6	11937.38	50000	
As	75	115	He	19.591	ug/l	1.3	8259.60	2000	
Se	78	45	He	19.828	ug/l	2.6	1112.04	10000	
Se	78	115	H2	18.884	ug/l	5.6	366.67	10000	
Sr	88	115	NoGas	19.786	ug/l	1.7	469941.20	50000	
Mo	95	115	NoGas	19.094	ug/l	1.4	89756.46	10000	
Ag	107	115	NoGas	9.609	ug/l	0.9	129300.29	5000	
Cd	111	115	He	19.578	ug/l	1.1	23976.47	10000	
Sn	118	115	He	19.691	ug/l	0.2	59459.56	10000	
Sb	121	115	NoGas	19.500	ug/l	2.1	242972.64	10000	
Ba	137	165	NoGas	19.797	ug/l	2.4	93976.63	50000	
Tl	205	165	NoGas	19.876	ug/l	2.2	706247.10	5000	
Pb	208	165	NoGas	20.007	ug/l	2.6	969604.21	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	55907.84	1.8	58420.39	95.7	70	120	
Sc	45	NoGas	623575.69	1.2	679566.6	91.76	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	51435.44	1.5	56080.27	91.72	70	120	
Sc	45	H2	13535.78	1.7	14893.52	90.88	70	120	
Ge	72	NoGas	195491.27	1.2	209841.59	93.16	70	120	
Ge	72	He	37727.65	1.4	40861.14	92.33	70	120	
Ge	72	H2	1976.13	3.0	2091.47	94.48	70	120	
In	115	NoGas	2061932.92	0.7	2229294.33	92.49	70	120	
In	115	He	557471.65	0.7	586109.04	95.11	70	120	
In	115	H2	201438.87	0.6	213180.49	94.49	70	120	
Tb	159	NoGas	3376069.22	1.0	3574426.19	94.45	70	120	
Tb	159	He	1514334.04	1.9	1552975.29	97.51	70	120	
Tb	159	H2	974994.00	0.6	1013635.35	96.19	70	120	
Ho	165	NoGas	3296360.99	2.3	3507364.22	93.98	70	120	
Ho	165	He	1548151.67	0.7	1591211.17	97.29	70	120	
Ho	165	H2	1026155.56	0.2	1056968.25	97.08	70	120	



A.P.P.L. INC.

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC.  
 ARF No.: 96222  
 ICP ID Number: Megatron

Contract: AECOM  
 SDG: 96222  
 ICS Source: Environmental Express

Analysis Date: 06/02/21

Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:37	Sol AB 12:44	%R(1)
Lead (Pb)		100	0.029165	94.054654	94.1

(1) Control Limits: Metals 80-120

# Interference Check Solution A (ICS-A) Report

**Sample Name** ICSA 06/01/2021  
**File Name** 030ICSA.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:37:24 PM  
**Sample Type** ICSA  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Fail  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	NoGas	0.003	ug/l	173.2	3.33	-0.1	100	100	
B	11	45	NoGas	0.480	ug/l	94.0	5417.72	-8	100	100	
Na	23	45	He	44260.391	ug/l	0.6	13506489.00	50000	80	120	
Mg	24	45	He	43902.199	ug/l	1.4	8026325.67	50000	80	120	
Al	27	45	He	44224.759	ug/l	1.8	4835657.50	50000	80	120	
P	31	45	He	45249.451	ug/l	0.9	315326.48	50000	80	120	
K	39	45	He	43845.896	ug/l	0.9	9057802.67	50000	80	120	
Ca	40	45	H2	51581.727	ug/l	2.9	3450103.25	50000	80	120	
Ca	44	45	He	45873.793	ug/l	1.2	526224.98	50000	80	120	
Ti	47	45	He	947.346	ug/l	1.0	58228.26	1000	80	120	
V	51	45	He	-7.181	ug/l	N/A	3852.45	-0.2	100	100	>RL
Cr	52	45	He	0.429	ug/l	4.4	1052.71	-2	80	120	
Mn	55	45	He	0.147	ug/l	10.1	283.33	-8	100	120	
Fe	56	45	He	45643.513	ug/l	1.6	88203058.67	50000	80	120	
Co	59	45	He	0.093	ug/l	8.4	280.67	-1	100	100	
Ni	60	45	He	0.113	ug/l	18.4	92.00	-1	100	100	
Cu	63	45	He	0.153	ug/l	17.2	391.34	-1	100	100	
Zn	66	115	He	0.595	ug/l	19.5	512.01	-20	100	100	
As	75	115	He	-0.021	ug/l	N/A	68.33	-0.4	100	100	
Se	78	45	He	0.061	ug/l	857.0	57.33	-0.4	100	100	
Se	78	115	H2	0.045	ug/l	100.1	1.60	-0.4	100	100	
Sr	88	115	NoGas	0.460	ug/l	3.9	9929.85	-0.5	100	100	
Mo	95	115	NoGas	925.733	ug/l	1.4	3917763.28	1000	80	120	
Ag	107	115	NoGas	0.031	ug/l	2.5	380.02	-0.5	100	100	
Cd	111	115	He	0.197	ug/l	11.9	214.00	-0.5	100	100	
Sn	118	115	He	0.024	ug/l	13.9	103.33	-0.5	100	100	
Sb	121	115	NoGas	0.121	ug/l	7.2	1980.19	-0.5	100	100	
Ba	137	165	NoGas	0.032	ug/l	19.7	190.01	-1.5	100	100	
Tl	205	165	NoGas	0.115	ug/l	10.5	4037.36	-0.2	100	100	
Pb	208	165	NoGas	0.029	ug/l	19.9	1613.44	-1	100	100	

**QC ISTD Table**

# Interference Check Solution A (ICS-A) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	48517.36	0.7	58420.39	83.05	70	120	
Sc	45	NoGas	566530.67	1.5	679566.6	83.37	70	120	
Sc	45	He	44050.57	1.7	56080.27	78.55	70	120	
Sc	45	H2	11815.25	1.9	14893.52	79.33	70	120	
Ge	72	NoGas	179051.41	3.0	209841.59	85.33	70	120	
Ge	72	He	33455.26	1.3	40861.14	81.88	70	120	
Ge	72	H2	1684.09	5.7	2091.47	80.52	70	120	
In	115	NoGas	1856867.60	1.3	2229294.33	83.29	70	120	
In	115	He	495318.55	0.3	586109.04	84.51	70	120	
In	115	H2	184301.52	0.6	213180.49	86.45	70	120	
Tb	159	NoGas	3210344.43	0.7	3574426.19	89.81	70	120	
Tb	159	He	1520337.17	0.6	1552975.29	97.9	70	120	
Tb	159	H2	954310.27	0.5	1013635.35	94.15	70	120	
Ho	165	NoGas	3131621.72	1.3	3507364.22	89.29	70	120	
Ho	165	He	1546075.00	0.4	1591211.17	97.16	70	120	
Ho	165	H2	1001866.92	1.0	1056968.25	94.79	70	120	

# Interference Check Solution AB (ICS-AB) Report

**Sample Name** ICSAB 06/01/2021  
**File Name** 031ICSB.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 12:44:27 PM  
**Sample Type** ICSB  
**Total Dilution** 1.0000  
**Comment** ---  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	NoGas	47.982	ug/l	2.2	54717.49	50	80	120	
B	11	45	NoGas	0.200	ug/l	14.0	4980.90	-8	80	120	
Na	23	45	He	45228.144	ug/l	1.3	12909830.67	50000	80	120	
Mg	24	45	He	45322.571	ug/l	1.6	7751249.17	50000	80	120	
Al	27	45	He	45219.738	ug/l	1.2	4625651.33	50000	80	120	
P	31	45	He	46191.935	ug/l	1.5	301103.95	50000	80	120	
K	39	45	He	44519.851	ug/l	0.6	8602312.00	50000	80	120	
Ca	40	45	H2	52044.969	ug/l	1.1	3280920.25	50000	80	120	
Ca	44	45	He	46848.292	ug/l	1.8	502690.65	50000	80	120	
Ti	47	45	He	957.615	ug/l	1.3	55058.44	1000	80	120	
V	51	45	He	46.285	ug/l	1.8	79028.14	50	80	120	
Cr	52	45	He	49.763	ug/l	1.1	88996.52	50	80	120	
Mn	55	45	He	48.498	ug/l	1.3	73033.85	50	80	120	
Fe	56	45	He	47265.471	ug/l	2.0	85445336.00	50000	80	120	
Co	59	45	He	49.292	ug/l	0.8	138185.08	50	80	120	
Ni	60	45	He	98.990	ug/l	1.5	68405.30	100	80	120	
Cu	63	45	He	47.828	ug/l	1.7	89510.14	50	80	120	
Zn	66	115	He	89.577	ug/l	0.5	43742.79	100	80	120	
As	75	115	He	47.899	ug/l	2.2	17403.52	50	80	120	
Se	78	45	He	49.663	ug/l	0.6	2154.81	50	80	120	
Se	78	115	H2	45.429	ug/l	0.8	789.75	50	80	120	
Sr	88	115	NoGas	0.477	ug/l	4.2	10320.11	-5	80	120	
Mo	95	115	NoGas	993.086	ug/l	0.5	4219665.98	1050	80	120	
Ag	107	115	NoGas	93.213	ug/l	0.9	1134023.39	100	80	120	
Cd	111	115	He	97.587	ug/l	0.4	103623.35	100	80	120	
Sn	118	115	He	0.022	ug/l	41.9	94.67	-0.5	100	100	
Sb	121	115	NoGas	49.320	ug/l	1.0	554639.54	50	80	120	
Ba	137	165	NoGas	47.436	ug/l	1.7	221972.82	50	80	120	
Tl	205	165	NoGas	48.163	ug/l	0.6	1687310.03	50	80	120	
Pb	208	165	NoGas	94.055	ug/l	1.4	4493690.85	100	80	120	

**QC ISTD Table**

# Interference Check Solution AB (ICS-AB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	43467.30	2.2	58420.39	74.4	70	120	
Sc	45	NoGas	546803.72	0.9	679566.6	80.46	70	120	
Sc	45	He	41206.14	1.2	56080.27	73.48	70	120	
Sc	45	H2	11132.15	0.5	14893.52	74.74	70	120	
Ge	72	NoGas	179014.28	1.3	209841.59	85.31	70	120	
Ge	72	He	31954.72	0.9	40861.14	78.2	70	120	
Ge	72	H2	1541.41	0.8	2091.47	73.7	70	120	
In	115	NoGas	1864146.01	0.9	2229294.33	83.62	70	120	
In	115	He	483395.10	0.4	586109.04	82.48	70	120	
In	115	H2	180634.43	0.4	213180.49	84.73	70	120	
Tb	159	NoGas	3250991.93	0.9	3574426.19	90.95	70	120	
Tb	159	He	1517042.54	0.9	1552975.29	97.69	70	120	
Tb	159	H2	946052.86	0.2	1013635.35	93.33	70	120	
Ho	165	NoGas	3249600.37	1.4	3507364.22	92.65	70	120	
Ho	165	He	1542322.92	0.3	1591211.17	96.93	70	120	
Ho	165	H2	996031.67	0.6	1056968.25	94.23	70	120	

# Continuing Calibration Verification (CCV) Report

**Sample Name** CCV 210601  
**File Name** 172\_CC.V.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/03/21 5:44:17 AM  
**Sample Type** CCV  
**Total Dilution** 1.0000  
**Comment** ---  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Fail  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	NoGas	53.718	ug/l	2.4	30278.46	50	107.44	89.6	110.4	
B	11	45	NoGas	110.272	ug/l	2.7	78235.84	50	220.54	89.6	110.4	>+/- 10%
Na	23	45	He	5228.701	ug/l	3.2	780254.04	1250	418.3	89.6	110.4	>+/- 10%
Mg	24	45	He	2453.500	ug/l	2.4	218032.04	2500	98.14	89.6	110.4	
Al	27	45	He	1013.856	ug/l	2.6	53984.42	1000	101.39	89.6	110.4	
P	31	45	He	225.911	ug/l	12.1	786.69	250	90.36	89.6	110.4	
K	39	45	He	976.018	ug/l	2.5	108368.43	1000	97.6	89.6	110.4	
Ca	40	45	H2	2443.835	ug/l	4.2	108778.59	2500	97.75	89.6	110.4	
Ca	44	45	He	2380.361	ug/l	3.3	13285.75	2500	95.21	89.6	110.4	
Ti	47	45	He	47.870	ug/l	3.0	1430.73	50	95.74	89.6	110.4	
V	51	45	He	46.182	ug/l	2.8	40983.49	50	92.36	89.6	110.4	
Cr	52	45	He	53.121	ug/l	3.3	49350.74	50	106.24	89.6	110.4	
Mn	55	45	He	53.251	ug/l	1.8	41667.31	50	106.5	89.6	110.4	
Fe	56	45	He	1093.831	ug/l	2.3	1029631.87	1000	109.38	89.6	110.4	
Co	59	45	He	58.709	ug/l	2.2	85505.40	50	117.42	89.6	110.4	>+/- 10%
Ni	60	45	He	67.825	ug/l	1.1	24356.17	50	135.65	89.6	110.4	>+/- 10%
Cu	63	45	He	61.923	ug/l	2.5	60199.72	50	123.85	89.6	110.4	>+/- 10%
Zn	66	115	He	44.989	ug/l	0.9	13772.07	50	89.98	89.6	110.4	
As	75	115	He	42.943	ug/l	2.5	9739.36	50	85.89	89.6	110.4	>+/- 10%
Se	78	45	He	50.299	ug/l	3.1	1133.37	50	100.6	89.6	110.4	
Se	78	115	H2	45.023	ug/l	4.0	676.41	50	90.05	89.6	110.4	
Sr	88	115	NoGas	47.808	ug/l	2.1	934976.60	50	95.62	89.6	110.4	
Mo	95	115	NoGas	45.605	ug/l	2.9	176491.34	50	91.21	89.6	110.4	
Ag	107	115	NoGas	23.481	ug/l	2.3	260189.19	25	93.92	89.6	110.4	
Cd	111	115	He	52.371	ug/l	1.3	34697.15	50	104.74	89.6	110.4	
Sn	118	115	He	50.908	ug/l	0.7	83130.74	50	101.82	89.6	110.4	
Sb	121	115	NoGas	47.070	ug/l	3.0	482126.72	50	94.14	89.6	110.4	
Ba	137	165	NoGas	49.729	ug/l	0.5	196956.52	50	99.46	89.6	110.4	
Tl	205	165	NoGas	49.202	ug/l	1.0	1458745.71	50	98.4	89.6	110.4	
Pb	208	165	NoGas	49.596	ug/l	1.0	2005574.53	50	99.19	89.6	110.4	

QC ISTD Table

# Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	21480.19	2.9	58420.39	36.77	70	120	ISTD Failed
Sc	45	NoGas	422131.30	1.3	679566.6	62.12	70	120	ISTD Failed
Sc	45	He	21413.02	2.1	56080.27	38.18	70	120	ISTD Failed
Sc	45	H2	7864.44	4.6	14893.52	52.8	70	120	ISTD Failed
Ge	72	NoGas	162381.25	0.4	209841.59	77.38	70	120	
Ge	72	He	19283.24	1.1	40861.14	47.19	70	120	ISTD Failed
Ge	72	H2	1282.73	0.3	2091.47	61.33	70	120	ISTD Failed
In	115	NoGas	1698456.59	2.4	2229294.33	76.19	70	120	
In	115	He	301602.45	0.3	586109.04	51.46	70	120	ISTD Failed
In	115	H2	156229.87	3.1	213180.49	73.29	70	120	
Tb	159	NoGas	2812136.52	1.5	3574426.19	78.67	70	120	
Tb	159	He	1085757.88	0.6	1552975.29	69.91	70	120	ISTD Failed
Tb	159	H2	802195.69	2.2	1013635.35	79.14	70	120	
Ho	165	NoGas	2750100.06	0.8	3507364.22	78.41	70	120	
Ho	165	He	1109147.50	0.6	1591211.17	69.7	70	120	ISTD Failed
Ho	165	H2	837781.65	2.7	1056968.25	79.26	70	120	

# Continuing Calibration Blank (CCB) Report

**Sample Name** CCB 210602  
**File Name** 173\_CCB.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/03/21 5:51 29 AM  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Fail  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	NoGas	0.000	ug/l	N/A	0.00	0.1	
B	11	45	NoGas	59.991	ug/l	2.7	41801.76	8	>LOD
Na	23	45	He	3115.771	ug/l	0.9	461354.10	50	>LOD
Mg	24	45	He	11.875	ug/l	8.0	1052.71	20	
Al	27	45	He	0.200	ug/l	452.6	117.34	10	
P	31	45	He	3.310	ug/l	80.0	33.33	10	
K	39	45	He	62.888	ug/l	5.2	16719.51	40	>LOD
Ca	40	45	H2	0.400	ug/l	108.8	100.00	150	
Ca	44	45	He	3.165	ug/l	28.3	35.33	150	
Ti	47	45	He	0.036	ug/l	107.0	1.33	0.5	
V	51	45	He	-9.398	ug/l	N/A	245.33	0.4	
Cr	52	45	He	-0.038	ug/l	N/A	78.67	0.2	
Mn	55	45	He	0.656	ug/l	6.1	530.01	0.3	>LOD
Fe	56	45	He	6.066	ug/l	6.5	7912.53	30	
Co	59	45	He	0.066	ug/l	5.6	96.00	0.4	
Ni	60	45	He	6.241	ug/l	3.3	2217.50	0.4	>LOD
Cu	63	45	He	0.337	ug/l	10.3	364.68	0.4	
Zn	66	115	He	0.078	ug/l	144.6	152.00	15	
As	75	115	He	-0.136	ug/l	N/A	15.33	0.2	
Se	78	45	He	0.118	ug/l	481.3	29.00	0.4	
Se	78	115	H2	0.068	ug/l	80.4	1.73	0.4	
Sr	88	115	NoGas	0.005	ug/l	5.3	166.68	0.1	
Mo	95	115	NoGas	0.120	ug/l	2.9	470.03	0.3	
Ag	107	115	NoGas	0.012	ug/l	40.1	130.01	0.1	
Cd	111	115	He	0.003	ug/l	173.2	2.00	0.1	
Sn	118	115	He	0.021	ug/l	47.9	56.67	0.1	
Sb	121	115	NoGas	0.108	ug/l	20.6	1660.15	0.5	
Ba	137	165	NoGas	0.014	ug/l	35.9	93.33	0.4	
Tl	205	165	NoGas	0.096	ug/l	12.5	2957.07	0.2	
Pb	208	165	NoGas	0.003	ug/l	59.2	353.35	0.4	

QC ISTD Table

# Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	20183.48	5.8	58420.39	34.55	70	120	ISTD Failed
Sc	45	NoGas	398829.61	2.2	679566.6	58.69	70	120	ISTD Failed
Sc	45	He	21150.77	2.5	56080.27	37.72	70	120	ISTD Failed
Sc	45	H2	7911.81	2.2	14893.52	53.12	70	120	ISTD Failed
Ge	72	NoGas	149721.03	0.9	209841.59	71.35	70	120	
Ge	72	He	18689.88	1.8	40861.14	45.74	70	120	ISTD Failed
Ge	72	H2	1190.72	7.2	2091.47	56.93	70	120	ISTD Failed
In	115	NoGas	1670551.99	0.7	2229294.33	74.94	70	120	
In	115	He	295327.44	1.0	586109.04	50.39	70	120	ISTD Failed
In	115	H2	158331.88	0.5	213180.49	74.27	70	120	
Tb	159	NoGas	2820371.94	2.0	3574426.19	78.9	70	120	
Tb	159	He	1071787.21	0.6	1552975.29	69.02	70	120	ISTD Failed
Tb	159	H2	815849.50	0.3	1013635.35	80.49	70	120	
Ho	165	NoGas	2728494.85	2.6	3507364.22	77.79	70	120	
Ho	165	He	1092743.17	0.2	1591211.17	68.67	70	120	ISTD Failed
Ho	165	H2	857115.50	0.7	1056968.25	81.09	70	120	

# Calibration Blank Report

**Sample Name** Calibration Blank 06/01/2021  
**File Name** 017CALB.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A b  
**Acq Time** 06/02/21 10:57:23 AM  
**Sample Type** CalBlk  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	6	NoGas	0.00	N/A
B	11	45	NoGas	5971.26	3.0
Na	23	45	He	13832.51	0.6
Mg	24	45	He	28.00	32.7
Al	27	45	He	281.34	18.1
P	31	45	He	59.33	1.9
K	39	45	He	27832.87	0.1
Ca	40	45	H2	154.67	9.8
Ca	44	45	He	47.33	42.5
Ti	47	45	He	0.67	173.2
V	51	45	He	18694.03	1.8
Cr	52	45	He	299.34	11.7
Mn	55	45	He	60.00	3.3
Fe	56	45	He	6070.41	2.3
Co	59	45	He	3.33	69.3
Ni	60	45	He	10.67	92.5
Cu	63	45	He	109.33	23.9
Zn	66	115	He	255.34	22.2
As	75	115	He	90.00	16.1
Se	78	45	He	69.67	7.9
Se	78	115	H2	0.93	137.8
Sr	88	115	NoGas	106.67	21.7
Mo	95	115	NoGas	20.00	50.0
Ag	107	115	NoGas	0.00	N/A
Cd	111	115	He	0.00	N/A
Sn	118	115	He	46.00	60.9
Sb	121	115	NoGas	756.72	8.6
Ba	137	165	NoGas	50.00	87.2
Tl	205	165	NoGas	180.01	29.4
[Pb]	206	165	NoGas	83.34	30.2
[Pb]	207	165	NoGas	73.33	39.4
Pb	208	165	NoGas	300.01	35.3

QC ISTD Table

# Calibration Blank Report

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Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	NoGas	58420.39	1.7
Sc	45	NoGas	679566.60	1.0
Sc	45	He	56080.27	0.5
Sc	45	H2	14893.52	0.1
Ge	72	NoGas	209841.59	1.6
Ge	72	He	40861.14	1.8
Ge	72	H2	2091.47	4.5
In	115	NoGas	2229294.33	1.6
In	115	He	586109.04	0.8
In	115	H2	213180.49	0.8
Tb	159	NoGas	3574426.19	1.2
Tb	159	He	1552975.29	1.3
Tb	159	H2	1013635.35	0.8
Ho	165	NoGas	3507364.22	0.8
Ho	165	He	1591211.17	3.3
Ho	165	H2	1056968.25	0.7

# Calibration Standard Report

**Sample Name** Standard 1 06/01/2021  
**File Name** 018CAL.S.d  
**Data Path Name** C:\Agilent\ICPMH1\DATA\210602A.b  
**Acq Time** 06/02/21 11:04:38 AM  
**Sample Type** CalStd  
**Total Dilution** 1 0000  
**Comment** --  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	6	NoGas	153.34	19.9
B	11	45	NoGas	6207.95	6.3
Na	23	45	He	14573.78	1.6
Mg	24	45	He	1176.71	7.7
Al	27	45	He	532.01	10.7
P	31	45	He	70.67	8.2
K	39	45	He	28645.53	1.9
Ca	40	45	H2	905.36	7.1
Ca	44	45	He	196.67	23.5
Ti	47	45	He	16.00	21.7
V	51	45	He	19293.36	2.0
Cr	52	45	He	556.68	3.6
Mn	55	45	He	280.00	15.0
Fe	56	45	He	11441.04	0.4
Co	59	45	He	349.34	10.1
Ni	60	45	He	140.67	7.3
Cu	63	45	He	385.34	2.0
Zn	66	115	He	570.01	9.1
As	75	115	He	139.00	11.2
Se	78	45	He	69.33	10.6
Se	78	115	H2	1.87	44.6
Sr	88	115	NoGas	3013.72	8.7
Mo	95	115	NoGas	503.36	18.5
Ag	107	115	NoGas	766.72	10.0
Cd	111	115	He	122.00	18.9
Sn	118	115	He	401.34	2.9
Sb	121	115	NoGas	2216.89	7.7
Ba	137	165	NoGas	666.71	31.6
Tl	205	165	NoGas	3673.90	6.1
[Pb]	206	165	NoGas	1496.81	10.3
[Pb]	207	165	NoGas	1246.77	14.2
Pb	208	165	NoGas	5757.33	1.3

QC ISTD Table

# Calibration Standard Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	56876.92	0.7	58420.39	97.36	70	120	
Sc	45	NoGas	683693.92	0.3	679566.6	100.61	70	120	
Sc	45	He	56577.79	0.6	56080.27	100.89	70	120	
Sc	45	H2	14518.54	2.4	14893.52	97.48	70	120	
Ge	72	NoGas	211160.64	1.2	209841.59	100.63	70	120	
Ge	72	He	40527.65	0.3	40861.14	99.18	70	120	
Ge	72	H2	2096.81	3.7	2091.47	100.26	70	120	
In	115	NoGas	2232349.94	0.2	2229294.33	100.14	70	120	
In	115	He	591185.44	0.2	586109.04	100.87	70	120	
In	115	H2	212827.41	0.5	213180.49	99.83	70	120	
Tb	159	NoGas	3580050.99	0.5	3574426.19	100.16	70	120	
Tb	159	He	1583516.42	1.3	1552975.29	101.97	70	120	
Tb	159	H2	1017511.50	0.4	1013635.35	100.38	70	120	
Ho	165	NoGas	3510797.86	1.0	3507364.22	100.1	70	120	
Ho	165	He	1597140.83	3.2	1591211.17	100.37	70	120	
Ho	165	H2	1051735.75	0.2	1056968.25	99.5	70	120	

# Calibration Standard Report

**Sample Name** Standard 2 06/01/2021  
**File Name** 019CAL.S.d  
**Data Path Name** C:\Agilent\ICPM\H1\DATA\210602A.b  
**Acq Time** 06/02/21 11 11 56 AM  
**Sample Type** CalStd  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CAL.B.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	6	NoGas	1783.48	6.2
B	11	45	NoGas	6708.19	2.0
Na	23	45	He	23180.59	1.7
Mg	24	45	He	11474.34	1.7
Al	27	45	He	2992.27	2.7
P	31	45	He	107.33	21.4
K	39	45	He	33182.58	1.4
Ca	40	45	H2	4492.58	1.2
Ca	44	45	He	863.36	4.4
Ti	47	45	He	93.33	14.3
V	51	45	He	20933.25	1.1
Cr	52	45	He	2724.90	1.8
Mn	55	45	He	2127.48	0.7
Fe	56	45	He	55246.52	1.8
Co	59	45	He	3819.77	3.4
Ni	60	45	He	994.70	2.0
Cu	63	45	He	2764.23	1.3
Zn	66	115	He	1146.71	5.7
As	75	115	He	524.68	1.6
Se	78	45	He	117.00	8.9
Se	78	115	H2	20.27	9.1
Sr	88	115	NoGas	26908.07	2.3
Mo	95	115	NoGas	5194.33	6.9
Ag	107	115	NoGas	7601.94	5.8
Cd	111	115	He	1305.39	3.8
Sn	118	115	He	3203.65	4.8
Sb	121	115	NoGas	14453.15	2.9
Ba	137	165	NoGas	5397.75	1.9
Tl	205	165	NoGas	36031.06	4.7
[Pb]	206	165	NoGas	13713.07	1.9
[Pb]	207	165	NoGas	11864.81	4.4
Pb	208	165	NoGas	53299.19	2.1

QC ISTD Table

# Calibration Standard Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	57290.75	2.8	58420.39	98.07	70	120	
Sc	45	NoGas	677482.78	1.1	679566.6	99.69	70	120	
Sc	45	He	56052.48	0.1	56080.27	99.95	70	120	
Sc	45	H2	14155.60	1.0	14893.52	95.05	70	120	
Ge	72	NoGas	211090.27	1.3	209841.59	100.6	70	120	
Ge	72	He	40536.37	0.3	40861.14	99.21	70	120	
Ge	72	H2	2112.14	3.7	2091.47	100.99	70	120	
In	115	NoGas	2244808.05	2.2	2229294.33	100.7	70	120	
In	115	He	586115.89	0.7	586109.04	100	70	120	
In	115	H2	212840.67	0.3	213180.49	99.84	70	120	
Tb	159	NoGas	3590886.51	1.2	3574426.19	100.46	70	120	
Tb	159	He	1565542.62	1.2	1552975.29	100.81	70	120	
Tb	159	H2	1019037.82	0.2	1013635.35	100.53	70	120	
Ho	165	NoGas	3502926.92	1.4	3507364.22	99.87	70	120	
Ho	165	He	1600282.25	2.0	1591211.17	100.57	70	120	
Ho	165	H2	1061660.71	0.2	1056968.25	100.44	70	120	



# Calibration Standard Report

**Sample Name** Standard 3 06/01/2021  
**File Name** 020CAL.S.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 11:19 13 AM  
**Sample Type** CalStd  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	6	NoGas	70617.77	1.6
B	11	45	NoGas	55663.08	5.3
Na	23	45	He	452669.99	0.4
Mg	24	45	He	531234.58	0.2
Al	27	45	He	127389.93	1.2
P	31	45	He	2058.80	7.0
K	39	45	He	265885.22	0.4
Ca	40	45	H2	188075.28	2.0
Ca	44	45	He	33961.93	0.5
Ti	47	45	He	3566.38	2.1
V	51	45	He	105640.44	1.5
Cr	52	45	He	111742.92	0.1
Mn	55	45	He	94340.62	0.5
Fe	56	45	He	2267758.67	0.7
Co	59	45	He	174680.80	0.6
Ni	60	45	He	43343.57	0.4
Cu	63	45	He	117755.33	0.5
Zn	66	115	He	28261.63	1.3
As	75	115	He	20904.52	0.7
Se	78	45	He	2659.88	2.0
Se	78	115	H2	958.16	2.7
Sr	88	115	NoGas	1216342.82	0.5
Mo	95	115	NoGas	235790.99	0.9
Ag	107	115	NoGas	334476.45	1.4
Cd	111	115	He	60696.78	0.9
Sn	118	115	He	149745.29	0.3
Sb	121	115	NoGas	617830.51	1.1
Ba	137	165	NoGas	241230.46	0.7
Tl	205	165	NoGas	1814223.88	0.7
[Pb]	206	165	NoGas	622636.32	0.8
[Pb]	207	165	NoGas	539467.01	0.4
Pb	208	165	NoGas	2476487.01	0.3

QC ISTD Table

# Calibration Standard Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	53978.43	4.4	58420.39	92.4	70	120	
Sc	45	NoGas	623194.43	0.9	679566.6	91.7	70	120	
Sc	45	He	52485.34	1.3	56080.27	93.59	70	120	
Sc	45	H2	14427.51	21.3	14893.52	96.87	70	120	
Ge	72	NoGas	199931.56	0.9	209841.59	95.28	70	120	
Ge	72	He	38294.82	1.8	40861.14	93.72	70	120	
Ge	72	H2	2048.80	15.8	2091.47	97.96	70	120	
In	115	NoGas	2079042.71	1.3	2229294.33	93.26	70	120	
In	115	He	555996.46	0.4	586109.04	94.86	70	120	
In	115	H2	213066.57	22.4	213180.49	99.95	70	120	
Tb	159	NoGas	3431955.57	2.1	3574426.19	96.01	70	120	
Tb	159	He	1501527.58	0.9	1552975.29	96.69	70	120	
Tb	159	H2	1040429.27	22.3	1013635.35	102.64	70	120	
Ho	165	NoGas	3362349.54	1.3	3507364.22	95.87	70	120	
Ho	165	He	1559904.04	1.5	1591211.17	98.03	70	120	
Ho	165	H2	1086144.71	22.0	1056968.25	102.76	70	120	

# Calibration Standard Report

**Sample Name** Standard 4 06/01/2021  
**File Name** 021CAL.S.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/02/21 11.26.29 AM  
**Sample Type** CalStd  
**Total Dilution** 1 0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	6	NoGas	138716.14	1.5
B	11	45	NoGas	101111.85	0.8
Na	23	45	He	872450.58	0.3
Mg	24	45	He	1029902.08	1.7
Al	27	45	He	246612.89	0.8
P	31	45	He	3987.80	6.0
K	39	45	He	488632.12	0.7
Ca	40	45	H2	368189.64	0.4
Ca	44	45	He	64379.81	0.3
Ti	47	45	He	6927.39	2.1
V	51	45	He	186098.64	0.4
Cr	52	45	He	214824.65	0.8
Mn	55	45	He	180948.98	0.7
Fe	56	45	He	4352219.83	1.0
Co	59	45	He	337379.71	0.4
Ni	60	45	He	83034.91	0.2
Cu	63	45	He	224610.95	0.8
Zn	66	115	He	54299.75	0.7
As	75	115	He	40351.58	1.4
Se	78	45	He	5179.43	1.4
Se	78	115	H2	1861.16	1.9
Sr	88	115	NoGas	2316294.49	1.3
Mo	95	115	NoGas	460796.46	0.5
Ag	107	115	NoGas	661277.98	1.5
Cd	111	115	He	118398.89	0.6
Sn	118	115	He	291713.97	0.6
Sb	121	115	NoGas	1222119.93	1.2
Ba	137	165	NoGas	476163.52	1.7
Tl	205	165	NoGas	3560179.53	1.4
[Pb]	206	165	NoGas	1234373.91	0.4
[Pb]	207	165	NoGas	1066439.39	0.4
Pb	208	165	NoGas	4855159.82	0.1

QC ISTD Table

# Calibration Standard Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	52843.05	1.0	58420.39	90.45	70	120	
Sc	45	NoGas	599442.26	0.3	679566.6	88.21	70	120	
Sc	45	He	49323.00	0.8	56080.27	87.95	70	120	
Sc	45	H2	12837.94	2.1	14893.52	86.2	70	120	
Ge	72	NoGas	189839.09	1.2	209841.59	90.47	70	120	
Ge	72	He	36605.30	1.3	40861.14	89.58	70	120	
Ge	72	H2	1838.78	0.5	2091.47	87.92	70	120	
In	115	NoGas	2019895.58	2.6	2229294.33	90.61	70	120	
In	115	He	538172.04	0.3	586109.04	91.82	70	120	
In	115	H2	191921.02	0.4	213180.49	90.03	70	120	
Tb	159	NoGas	3337628.91	0.8	3574426.19	93.38	70	120	
Tb	159	He	1524595.63	0.7	1552975.29	98.17	70	120	
Tb	159	H2	949869.02	1.4	1013635.35	93.71	70	120	
Ho	165	NoGas	3303656.10	0.8	3507364.22	94.19	70	120	
Ho	165	He	1534155.33	0.6	1591211.17	96.41	70	120	
Ho	165	H2	992971.69	0.7	1056968.25	93.95	70	120	

# Initial Calibration Verification (ICV) Report

**Sample Name** ICV 06/01/2021  
**File Name** 022\_ICV.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/02/21 11:33:44 AM  
**Sample Type** ICV  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_Metals

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	NoGas	48.521	ug/l	3.2	68146.20	50	97.04	89.6	110.4	
B	11	45	NoGas	51.438	ug/l	3.6	54362.09	50	102.88	89.6	110.4	
Na	23	45	He	1288.892	ug/l	0.8	459070.15	1250	103.11	89.6	110.4	
Mg	24	45	He	1288.733	ug/l	0.9	267868.53	1250	103.1	89.6	110.4	
Al	27	45	He	1298.324	ug/l	0.7	161631.68	1250	103.87	89.6	110.4	
P	31	45	He	247.118	ug/l	3.5	2010.13	250	98.85	89.6	110.4	
K	39	45	He	1298.098	ug/l	0.7	328918.49	1250	103.85	89.6	110.4	
Ca	40	45	H2	1289.775	ug/l	1.6	96517.70	1250	103.18	89.6	110.4	
Ca	44	45	He	1310.641	ug/l	1.6	17132.18	1250	104.85	89.6	110.4	
Ti	47	45	He	50.792	ug/l	3.9	3549.71	50	101.58	89.6	110.4	
V	51	45	He	48.116	ug/l	0.1	99175.35	50	96.23	89.6	110.4	
Cr	52	45	He	50.505	ug/l	0.4	109755.74	50	101.01	89.6	110.4	
Mn	55	45	He	50.491	ug/l	1.6	92395.53	50	100.98	89.6	110.4	
Fe	56	45	He	1289.904	ug/l	0.5	2839005.42	1250	103.19	89.6	110.4	
Co	59	45	He	50.448	ug/l	0.8	171853.36	50	100.9	89.6	110.4	
Ni	60	45	He	51.412	ug/l	0.7	43177.90	50	102.82	89.6	110.4	
Cu	63	45	He	51.044	ug/l	0.9	116085.33	50	102.09	89.6	110.4	
Zn	66	115	He	51.365	ug/l	1.0	28260.24	50	102.73	89.6	110.4	
As	75	115	He	51.923	ug/l	0.9	21171.19	50	103.85	89.6	110.4	
Se	78	45	He	49.113	ug/l	1.4	2590.20	50	98.23	89.6	110.4	
Se	78	115	H2	50.053	ug/l	0.4	948.16	50	100.11	89.6	110.4	
Sr	88	115	NoGas	51.345	ug/l	0.7	1180012.77	50	102.69	89.6	110.4	
Mo	95	115	NoGas	49.355	ug/l	1.9	224462.50	50	98.71	89.6	110.4	
Ag	107	115	NoGas	25.885	ug/l	0.8	337073.38	25	103.54	89.6	110.4	
Cd	111	115	He	50.765	ug/l	0.9	60517.33	50	101.53	89.6	110.4	
Sn	118	115	He	25.473	ug/l	0.2	74869.01	25	101.89	89.6	110.4	
Sb	121	115	NoGas	49.173	ug/l	0.6	591943.05	50	98.35	89.6	110.4	
Ba	137	165	NoGas	51.012	ug/l	0.6	233967.82	50	102.02	89.6	110.4	
Tl	205	165	NoGas	52.605	ug/l	1.8	1806224.14	50	105.21	89.6	110.4	
Pb	208	165	NoGas	51.760	ug/l	0.8	2423917.70	50	103.52	89.6	110.4	

QC ISTD Table

# Initial Calibration Verification (ICV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	53537.69	2.0	58420.39	91.64	70	120	
Sc	45	NoGas	596586.06	1.6	679566.6	87.79	70	120	
Sc	45	He	50069.54	0.4	56080.27	89.28	70	120	
Sc	45	H2	13199.55	3.0	14893.52	88.63	70	120	
Ge	72	NoGas	186852.53	1.7	209841.59	89.04	70	120	
Ge	72	He	36777.00	0.6	40861.14	90	70	120	
Ge	72	H2	1946.79	7.3	2091.47	93.08	70	120	
In	115	NoGas	1995327.40	1.2	2229294.33	89.5	70	120	
In	115	He	542696.01	0.6	586109.04	92.59	70	120	
In	115	H2	196849.06	1.0	213180.49	92.34	70	120	
Tb	159	NoGas	3279802.66	1.1	3574426.19	91.76	70	120	
Tb	159	He	1517644.16	0.7	1552975.29	97.72	70	120	
Tb	159	H2	969574.83	0.9	1013635.35	95.65	70	120	
Ho	165	NoGas	3184736.83	0.9	3507364.22	90.8	70	120	
Ho	165	He	1491737.79	1.5	1591211.17	93.75	70	120	
Ho	165	H2	1012310.29	1.1	1056968.25	95.77	70	120	

# Initial Calibration Blank (ICB) Report

**Sample Name** ICB 06/01/2021  
**File Name** 024\_ICB.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/02/21 11:48.04 AM  
**Sample Type** ICB  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Pass  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	NoGas	0.019	ug/l	96.3	26.67	0.1	
B	11	45	NoGas	1.181	ug/l	28.5	6644.85	8	
Na	23	45	He	-0.544	ug/l	N/A	12442.89	50	
Mg	24	45	He	0.046	ug/l	82.4	35.33	20	
Al	27	45	He	-0.143	ug/l	N/A	238.67	10	
P	31	45	He	-0.429	ug/l	N/A	50.67	10	
K	39	45	He	2.792	ug/l	38.1	26094.28	40	
Ca	40	45	H2	-0.011	ug/l	N/A	138.67	150	
Ca	44	45	He	0.158	ug/l	472.5	45.33	150	
Ti	47	45	He	0.010	ug/l	316.5	1.33	0.5	
V	51	45	He	-3.278	ug/l	N/A	11329.72	0.4	
Cr	52	45	He	-0.015	ug/l	N/A	240.00	0.2	
Mn	55	45	He	-0.002	ug/l	N/A	52.00	0.3	
Fe	56	45	He	-0.124	ug/l	N/A	5265.48	30	
Co	59	45	He	0.000	ug/l	312.3	4.67	0.4	
Ni	60	45	He	0.020	ug/l	18.9	26.67	0.4	
Cu	63	45	He	-0.007	ug/l	N/A	84.00	0.4	
Zn	66	115	He	0.015	ug/l	209.3	248.67	15	
As	75	115	He	-0.041	ug/l	N/A	68.00	0.2	
Se	78	45	He	-0.152	ug/l	N/A	55.67	0.4	
Se	78	115	H2	-0.004	ug/l	N/A	0.80	0.4	
Sr	88	115	NoGas	-0.001	ug/l	N/A	83.33	0.1	
Mo	95	115	NoGas	0.005	ug/l	23.3	43.33	0.3	
Ag	107	115	NoGas	0.001	ug/l	173.2	10.00	0.1	
Cd	111	115	He	0.001	ug/l	173.2	0.67	0.1	
Sn	118	115	He	0.003	ug/l	110.9	51.33	0.1	
Sb	121	115	NoGas	0.076	ug/l	19.8	1656.83	0.5	
Ba	137	165	NoGas	-0.003	ug/l	N/A	33.33	0.4	
Tl	205	165	NoGas	0.056	ug/l	16.2	2183.58	0.2	
Pb	208	165	NoGas	0.011	ug/l	8.0	813.38	0.4	

QC ISTD Table

# Initial Calibration Blank (ICB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	55744.11	3.6	58420.39	95.42	70	120	
Sc	45	NoGas	622710.63	2.2	679566.6	91.63	70	120	
Sc	45	He	51230.59	0.7	56080.27	91.35	70	120	
Sc	45	H2	13435.02	0.2	14893.52	90.21	70	120	
Ge	72	NoGas	193750.90	1.0	209841.59	92.33	70	120	
Ge	72	He	37191.86	0.1	40861.14	91.02	70	120	
Ge	72	H2	2006.13	4.8	2091.47	95.92	70	120	
In	115	NoGas	2077473.90	0.8	2229294.33	93.19	70	120	
In	115	He	551771.57	1.1	586109.04	94.14	70	120	
In	115	H2	201853.31	0.5	213180.49	94.69	70	120	
Tb	159	NoGas	3384079.12	0.5	3574426.19	94.67	70	120	
Tb	159	He	1493164.29	2.8	1552975.29	96.15	70	120	
Tb	159	H2	974877.15	0.7	1013635.35	96.18	70	120	
Ho	165	NoGas	3346349.01	1.5	3507364.22	95.41	70	120	
Ho	165	He	1549609.12	0.8	1591211.17	97.39	70	120	
Ho	165	H2	1019992.17	0.4	1056968.25	96.5	70	120	

# Continuing Calibration Verification (CCV) Report

**Sample Name** CCV 210601  
**File Name** 146\_CC.V.d  
**Data Path Name** C:\Agilent\ICPMS\1\1\DATA\210602A.b  
**Acq Time** 06/03/21 2:38 19 AM  
**Sample Type** CCV  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Fail  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_Metals

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	NoGas	48.531	ug/l	2.7	46893.80	50	97.06	89.6	110.4	
B	11	45	NoGas	60.641	ug/l	3.7	53048.55	50	121.28	89.6	110.4	>+/- 10%
Na	23	45	He	1690.441	ug/l	23.7	316241.94	1250	135.24	89.6	110.4	>+/- 10%
Mg	24	45	He	2321.578	ug/l	24.6	253837.96	2500	92.86	89.6	110.4	
Al	27	45	He	1102.460	ug/l	29.4	71691.94	1000	110.25	89.6	110.4	
P	31	45	He	276.321	ug/l	19.6	1183.38	250	110.53	89.6	110.4	>+/- 10%
K	39	45	He	1144.686	ug/l	21.4	154683.09	1000	114.47	89.6	110.4	>+/- 10%
Ca	40	45	H2	2395.957	ug/l	0.9	136121.31	2500	95.84	89.6	110.4	
Ca	44	45	He	2683.621	ug/l	7.3	18750.36	2500	107.34	89.6	110.4	
Ti	47	45	He	44.152	ug/l	9.4	1650.09	50	88.3	89.6	110.4	>+/- 10%
V	51	45	He	36.693	ug/l	18.4	42380.60	50	73.39	89.6	110.4	>+/- 10%
Cr	52	45	He	44.047	ug/l	18.2	50718.65	50	88.09	89.6	110.4	>+/- 10%
Mn	55	45	He	45.283	ug/l	20.8	43745.45	50	90.57	89.6	110.4	
Fe	56	45	He	1032.397	ug/l	26.1	1191405.16	1000	103.24	89.6	110.4	
Co	59	45	He	59.713	ug/l	24.0	106854.86	50	119.43	89.6	110.4	>+/- 10%
Ni	60	45	He	64.394	ug/l	19.2	28564.57	50	128.79	89.6	110.4	>+/- 10%
Cu	63	45	He	63.625	ug/l	13.0	76975.87	50	127.25	89.6	110.4	>+/- 10%
Zn	66	115	He	41.644	ug/l	9.3	14942.30	50	83.29	89.6	110.4	>+/- 10%
As	75	115	He	35.871	ug/l	8.0	9534.90	50	71.74	89.6	110.4	>+/- 10%
Se	78	45	He	45.381	ug/l	24.7	1259.38	50	90.76	89.6	110.4	
Se	78	115	H2	46.206	ug/l	1.7	723.35	50	92.41	89.6	110.4	
Sr	88	115	NoGas	48.018	ug/l	2.3	967305.90	50	96.04	89.6	110.4	
Mo	95	115	NoGas	45.022	ug/l	2.0	179502.46	50	90.04	89.6	110.4	
Ag	107	115	NoGas	23.274	ug/l	1.3	265671.51	25	93.1	89.6	110.4	
Cd	111	115	He	51.726	ug/l	2.7	40135.38	50	103.45	89.6	110.4	
Sn	118	115	He	48.832	ug/l	4.2	93395.81	50	97.66	89.6	110.4	
Sb	121	115	NoGas	46.644	ug/l	0.8	492226.06	50	93.29	89.6	110.4	
Ba	137	165	NoGas	47.761	ug/l	3.0	197516.88	50	95.52	89.6	110.4	
Tl	205	165	NoGas	49.045	ug/l	2.4	1518503.73	50	98.09	89.6	110.4	
Pb	208	165	NoGas	48.581	ug/l	2.1	2051660.40	50	97.16	89.6	110.4	

QC ISTD Table

# Continuing Calibration Verification (CCV) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	36827.60	1.8	58420.39	63.04	70	120	ISTD Failed
Sc	45	NoGas	501197.82	1.8	679566.6	73.75	70	120	
Sc	45	He	26958.86	15.4	56080.27	48.07	70	120	ISTD Failed
Sc	45	H2	10025.51	1.2	14893.52	67.31	70	120	ISTD Failed
Ge	72	NoGas	155206.93	0.4	209841.59	73.96	70	120	
Ge	72	He	18831.98	9.8	40861.14	46.09	70	120	ISTD Failed
Ge	72	H2	1400.73	5.5	2091.47	66.97	70	120	ISTD Failed
In	115	NoGas	1749132.91	0.9	2229294.33	78.46	70	120	
In	115	He	353224.82	0.4	586109.04	60.27	70	120	ISTD Failed
In	115	H2	162655.51	1.1	213180.49	76.3	70	120	
Tb	159	NoGas	2941051.00	1.3	3574426.19	82.28	70	120	
Tb	159	He	1156227.96	2.5	1552975.29	74.45	70	120	
Tb	159	H2	819178.90	0.4	1013635.35	80.82	70	120	
Ho	165	NoGas	2872711.62	2.0	3507364.22	81.91	70	120	
Ho	165	He	1171999.42	1.7	1591211.17	73.65	70	120	
Ho	165	H2	859652.33	1.2	1056968.25	81.33	70	120	

# Continuing Calibration Blank (CCB) Report

**Sample Name** CCB 210602  
**File Name** 147\_CCB.d  
**Data Path Name** C:\Agilent\ICPMH1\1\DATA\210602A.b  
**Acq Time** 06/03/21 2:45:30 AM  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fail** Fail  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	Limit	QC Flag
Be	9	6	NoGas	0.000	ug/l	N/A	0.00	0.1	
B	11	45	NoGas	17.780	ug/l	4.6	18717.75	8	>LOD
Na	23	45	He	488.167	ug/l	13.5	111687.75	50	>LOD
Mg	24	45	He	1.298	ug/l	15.8	182.00	20	
Al	27	45	He	-0.506	ug/l	N/A	117.33	10	
P	31	45	He	-0.730	ug/l	N/A	29.33	10	
K	39	45	He	-2.025	ug/l	N/A	15060.47	40	
Ca	40	45	H2	0.175	ug/l	359.3	112.00	150	
Ca	44	45	He	4.519	ug/l	23.6	62.67	150	
Ti	47	45	He	0.053	ug/l	101.5	2.67	0.5	
V	51	45	He	-9.099	ug/l	N/A	674.69	0.4	
Cr	52	45	He	-0.049	ug/l	N/A	100.00	0.2	
Mn	55	45	He	0.043	ug/l	38.4	82.67	0.3	
Fe	56	45	He	-0.797	ug/l	N/A	2266.83	30	
Co	59	45	He	0.007	ug/l	70.6	16.00	0.4	
Ni	60	45	He	0.032	ug/l	40.2	22.67	0.4	
Cu	63	45	He	0.510	ug/l	10.1	779.36	0.4	>LOD
Zn	66	115	He	0.139	ug/l	82.7	202.00	15	
As	75	115	He	-0.148	ug/l	N/A	14.67	0.2	
Se	78	45	He	-0.383	ug/l	N/A	26.00	0.4	
Se	78	115	H2	-0.020	ug/l	N/A	0.40	0.4	
Sr	88	115	NoGas	0.006	ug/l	20.3	200.01	0.1	
Mo	95	115	NoGas	0.055	ug/l	10.2	236.68	0.3	
Ag	107	115	NoGas	0.012	ug/l	12.5	140.01	0.1	
Cd	111	115	He	0.003	ug/l	44.0	2.67	0.1	
Sn	118	115	He	0.016	ug/l	43.4	56.67	0.1	
Sb	121	115	NoGas	0.139	ug/l	11.0	2053.54	0.5	
Ba	137	165	NoGas	0.003	ug/l	281.3	53.33	0.4	
Tl	205	165	NoGas	0.095	ug/l	7.1	3067.08	0.2	
Pb	208	165	NoGas	0.005	ug/l	34.3	446.69	0.4	

QC ISTD Table

# Continuing Calibration Blank (CCB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	38005.24	1.8	58420.39	65.05	70	120	ISTD Failed
Sc	45	NoGas	502390.58	1.5	679566.6	73.93	70	120	
Sc	45	He	31015.62	8.6	56080.27	55.31	70	120	ISTD Failed
Sc	45	H2	9854.09	0.6	14893.52	66.16	70	120	ISTD Failed
Ge	72	NoGas	154909.74	1.5	209841.59	73.82	70	120	
Ge	72	He	20520.50	3.7	40861.14	50.22	70	120	ISTD Failed
Ge	72	H2	1396.07	2.2	2091.47	66.75	70	120	ISTD Failed
In	115	NoGas	1746342.20	1.9	2229294.33	78.34	70	120	
In	115	He	348999.33	4.9	586109.04	59.55	70	120	ISTD Failed
In	115	H2	163935.72	0.9	213180.49	76.9	70	120	
Tb	159	NoGas	2950193.19	0.3	3574426.19	82.54	70	120	
Tb	159	He	1188003.92	2.8	1552975.29	76.5	70	120	
Tb	159	H2	810312.94	0.6	1013635.35	79.94	70	120	
Ho	165	NoGas	2863604.64	1.0	3507364.22	81.65	70	120	
Ho	165	He	1189425.33	2.0	1591211.17	74.75	70	120	
Ho	165	H2	851413.17	0.8	1056968.25	80.55	70	120	

# Sample Report

**Sample Name** BA32813W09  
**File Name** 151SMPL.d  
**Data Path Name** C:\Agilent\ICPMH\1\1\DATA\210602A.b  
**Acq Time** 06/03/21 3.14.07 AM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** RedHill  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	0.021	ug/l	99.5	20.00	10000	
B	11	45	NoGas	57.998	ug/l	1.3	53144.88	10000	
Na	23	45	He	49932.124	ug/l	1.8	8785215.33	1000000	
Mg	24	45	He	22327.533	ug/l	1.2	2353772.58	1000000	
Al	27	45	He	5.624	ug/l	6.9	481.34	1000000	
P	31	45	He	52.160	ug/l	9.0	236.00	500000	
K	39	45	He	2606.028	ug/l	0.5	322232.60	500000	
Ca	40	45	H2	20758.668	ug/l	11.5	1189634.67	500000	
Ca	44	45	He	20844.683	ug/l	1.9	137838.79	500000	
Ti	47	45	He	0.180	ug/l	81.1	6.67	10000	
V	51	45	He	7.885	ug/l	3.7	15317.97	10000	
Cr	52	45	He	2.234	ug/l	2.7	2590.87	10000	
Mn	55	45	He	0.253	ug/l	7.8	262.67	50000	
Fe	56	45	He	7.088	ug/l	1.4	10649.89	1000000	
Co	59	45	He	0.011	ug/l	29.2	20.67	10000	
Ni	60	45	He	0.234	ug/l	9.6	104.67	10000	
Cu	63	45	He	0.601	ug/l	9.4	743.36	10000	
Zn	66	115	He	2.501	ug/l	2.7	918.70	50000	
As	75	115	He	-0.080	ug/l	N/A	29.00	2000	
Se	78	45	He	-0.085	ug/l	N/A	29.33	10000	
Se	78	115	H2	0.162	ug/l	34.5	3.33	10000	
Sr	88	115	NoGas	156.325	ug/l	1.8	3012419.75	50000	
Mo	95	115	NoGas	0.381	ug/l	9.5	1466.80	10000	
Ag	107	115	NoGas	0.026	ug/l	25.1	286.68	5000	
Cd	111	115	He	0.004	ug/l	112.9	2.67	10000	
Sn	118	115	He	0.062	ug/l	7.2	128.67	10000	
Sb	121	115	NoGas	0.022	ug/l	42.2	790.05	10000	
Ba	137	165	NoGas	7.573	ug/l	1.5	30838.68	50000	
Tl	205	165	NoGas	0.402	ug/l	2.5	12378.58	5000	
Pb	208	165	NoGas	0.042	ug/l	9.4	1973.47	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	35950.89	2.7	58420.39	61.54	70	120	ISTD Failed
Sc	45	NoGas	522835.25	0.6	679568.6	76.94	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	25399.47	3.9	56080.27	45.29	70	120	ISTD Failed
Sc	45	H2	10206.33	11.2	14893.52	68.53	70	120	ISTD Failed
Ge	72	NoGas	150185.15	2.8	209841.59	71.57	70	120	
Ge	72	He	19763.65	2.1	40861.14	48.37	70	120	ISTD Failed
Ge	72	H2	1505.41	7.0	2091.47	71.98	70	120	
In	115	NoGas	1673452.51	1.8	2229294.33	75.07	70	120	
In	115	He	311368.23	2.8	586109.04	53.12	70	120	ISTD Failed
In	115	H2	163715.04	11.0	213180.49	76.8	70	120	
Tb	159	NoGas	2863121.41	1.2	3574426.19	80.1	70	120	
Tb	159	He	1125978.58	1.3	1552975.29	72.5	70	120	
Tb	159	H2	830116.61	11.6	1013635.35	81.89	70	120	
Ho	165	NoGas	2824857.77	1.0	3507364.22	80.54	70	120	
Ho	165	He	1153110.21	1.6	1591211.17	72.47	70	120	
Ho	165	H2	871271.89	11.0	1056968.25	82.43	70	120	

# Sample Report

**Sample Name** BA32814W09  
**File Name** 152SMPL d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/03/21 3:21 17 AM  
**Sample Type** Sample  
**Total Dilution** 1 0000  
**Comment** RedHill  
**ISTD Ref FileName** 017CALB d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	0.007	ug/l	173.2	6.67	10000	
B	11	45	NoGas	55.782	ug/l	2.7	49135.61	10000	
Na	23	45	He	49168.795	ug/l	0.9	8639913.67	1000000	
Mg	24	45	He	21280.010	ug/l	0.4	2240761.50	1000000	
Al	27	45	He	6.230	ug/l	14.8	519.34	1000000	
P	31	45	He	54.308	ug/l	3.2	244.67	500000	
K	39	45	He	2511.520	ug/l	1.0	310712.96	500000	
Ca	40	45	H2	20849.051	ug/l	2.5	1149961.17	500000	
Ca	44	45	He	20435.013	ug/l	0.7	135021.12	500000	
Ti	47	45	He	0.066	ug/l	97.8	2.67	10000	
V	51	45	He	7.018	ug/l	4.9	14557.32	10000	
Cr	52	45	He	2.105	ug/l	4.6	2448.19	10000	
Mn	55	45	He	0.185	ug/l	18.3	199.33	50000	
Fe	56	45	He	6.521	ug/l	0.9	10002.85	1000000	
Co	59	45	He	0.008	ug/l	54.4	14.67	10000	
Ni	60	45	He	2.158	ug/l	6.3	922.03	10000	
Cu	63	45	He	14.677	ug/l	2.5	16941.44	10000	
Zn	66	115	He	7.790	ug/l	0.8	2563.54	50000	
As	75	115	He	-0.108	ug/l	N/A	22.67	2000	
Se	78	45	He	-0.024	ug/l	N/A	31.00	10000	
Se	78	115	H2	0.193	ug/l	23.8	3.60	10000	
Sr	88	115	NoGas	155.835	ug/l	0.2	2893994.02	50000	
Mo	95	115	NoGas	0.384	ug/l	6.2	1426.79	10000	
Ag	107	115	NoGas	0.009	ug/l	26.1	100.00	5000	
Cd	111	115	He	0.005	ug/l	91.7	3.33	10000	
Sn	118	115	He	0.319	ug/l	1.4	559.34	10000	
Sb	121	115	NoGas	0.047	ug/l	28.2	1000.08	10000	
Ba	137	165	NoGas	7.737	ug/l	4.8	30478.24	50000	
Tl	205	165	NoGas	0.100	ug/l	12.4	3087.11	5000	
Pb	208	165	NoGas	0.592	ug/l	6.6	23994.44	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	35002.55	2.9	58420.39	59.91	70	120	ISTD Failed
Sc	45	NoGas	500972.05	1.4	679566.6	73.72	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	25369.36	2.6	56080.27	45.24	70	120	ISTD Failed
Sc	45	H2	9743.35	2.5	14893.52	65.42	70	120	ISTD Failed
Ge	72	NoGas	146112.17	0.4	209841.59	69.63	70	120	ISTD Failed
Ge	72	He	20003.98	1.0	40861.14	48.96	70	120	ISTD Failed
Ge	72	H2	1412.73	3.8	2091.47	67.55	70	120	ISTD Failed
In	115	NoGas	1612399.12	1.1	2229294.33	72.33	70	120	
In	115	He	310104.96	2.2	586109.04	52.91	70	120	ISTD Failed
In	115	H2	157170.97	0.2	213180.49	73.73	70	120	
Tb	159	NoGas	2763819.96	2.3	3574426.19	77.32	70	120	
Tb	159	He	1117029.38	1.0	1552975.29	71.93	70	120	
Tb	159	H2	800107.25	0.6	1013635.35	78.93	70	120	
Ho	165	NoGas	2733941.00	2.6	3507364.22	77.95	70	120	
Ho	165	He	1147244.58	0.6	1591211.17	72.1	70	120	
Ho	165	H2	837794.29	0.7	1056968.25	79.26	70	120	

# Sample Report

**Sample Name** 210601B BLK  
**File Name** 148SMPL.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/03/21 2.52 41 AM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** BSK/RedHill  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	0.010	ug/l	173.2	10.00	10000	
B	11	45	NoGas	18.431	ug/l	7.6	18981.30	10000	
Na	23	45	He	897.013	ug/l	26.6	157359.45	1000000	
Mg	24	45	He	13.964	ug/l	29.7	1407.40	1000000	
Al	27	45	He	5.571	ug/l	44.5	450.68	1000000	
P	31	45	He	3.860	ug/l	61.9	41.33	500000	
K	39	45	He	9.342	ug/l	308.7	13061.45	500000	
Ca	40	45	H2	21.237	ug/l	6.0	1326.06	500000	
Ca	44	45	He	25.336	ug/l	11.4	184.00	500000	
Ti	47	45	He	0.098	ug/l	147.7	3.33	10000	
V	51	45	He	-8.730	ug/l	N/A	860.02	10000	
Cr	52	45	He	-0.002	ug/l	N/A	127.33	10000	
Mn	55	45	He	0.288	ug/l	20.7	282.00	50000	
Fe	56	45	He	5.106	ug/l	48.3	7945.81	1000000	
Co	59	45	He	0.007	ug/l	43.8	13.33	10000	
Ni	60	45	He	0.092	ug/l	25.4	42.00	10000	
Cu	63	45	He	0.867	ug/l	18.1	1011.37	10000	
Zn	66	115	He	4.936	ug/l	20.2	1723.43	50000	
As	75	115	He	-0.137	ug/l	N/A	16.33	2000	
Se	78	45	He	-0.052	ug/l	N/A	28.33	10000	
Se	78	115	H2	-0.012	ug/l	N/A	0.53	10000	
Sr	88	115	NoGas	0.029	ug/l	36.9	650.04	50000	
Mo	95	115	NoGas	0.011	ug/l	37.0	60.00	10000	
Ag	107	115	NoGas	0.004	ug/l	79.3	50.00	5000	
Cd	111	115	He	0.000	ug/l	N/A	0.00	10000	
Sn	118	115	He	0.033	ug/l	29.6	81.33	10000	
Sb	121	115	NoGas	0.036	ug/l	0.6	963.40	10000	
Ba	137	165	NoGas	0.046	ug/l	35.2	230.01	50000	
Tl	205	165	NoGas	0.023	ug/l	7.6	853.40	5000	
Pb	208	165	NoGas	0.072	ug/l	6.5	3290.29	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	36958.34	1.1	58420.39	63.26	70	120	ISTD Failed
Sc	45	NoGas	495828.99	1.1	679566.6	72.96	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	24858.68	17.5	56080.27	44.33	70	120	ISTD Failed
Sc	45	H2	10144.94	1.3	14893.52	68.12	70	120	ISTD Failed
Ge	72	NoGas	153078.61	0.8	209841.59	72.95	70	120	
Ge	72	He	21679.24	14.2	40861.14	53.06	70	120	ISTD Failed
Ge	72	H2	1470.74	2.7	2091.47	70.32	70	120	
In	115	NoGas	1728083.77	2.1	2229294.33	77.52	70	120	
In	115	He	319635.69	0.8	586109.04	54.54	70	120	ISTD Failed
In	115	H2	164878.06	1.0	213180.49	77.34	70	120	
Tb	159	NoGas	2902342.98	1.2	3574426.19	81.2	70	120	
Tb	159	He	1161753.50	4.1	1552975.29	74.81	70	120	
Tb	159	H2	822611.73	0.5	1013635.35	81.15	70	120	
Ho	165	NoGas	2882214.95	1.0	3507364.22	82.18	70	120	
Ho	165	He	1202474.50	3.6	1591211.17	75.57	70	120	
Ho	165	H2	861620.71	0.5	1056968.25	81.52	70	120	



# Sample Report

**Sample Name** 210601B LCS  
**File Name** 149SMPL.d  
**Data Path Name** C:\Agilent\ICPMH1\DATA\210602A.b  
**Acq Time** 06/03/21 2:59:52 AM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** BSK/RedHill  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	20.229	ug/l	7.3	18744.33	10000	
B	11	45	NoGas	101.443	ug/l	4.0	85259.68	10000	
Na	23	45	He	11077.301	ug/l	1.6	2084215.79	1000000	
Mg	24	45	He	10759.780	ug/l	2.9	1209563.75	1000000	
Al	27	45	He	886.705	ug/l	2.8	59754.34	1000000	
P	31	45	He	782.868	ug/l	2.0	3385.02	500000	
K	39	45	He	1909.020	ug/l	0.7	255508.05	500000	
Ca	40	45	H2	10331.729	ug/l	1.7	576833.31	500000	
Ca	44	45	He	9875.165	ug/l	0.8	69716.81	500000	
Ti	47	45	He	99.674	ug/l	1.7	3769.09	10000	
V	51	45	He	101.431	ug/l	1.4	103126.92	10000	
Cr	52	45	He	102.241	ug/l	1.9	120065.05	10000	
Mn	55	45	He	99.518	ug/l	1.5	98518.78	50000	
Fe	56	45	He	417.917	ug/l	1.7	499681.28	1000000	
Co	59	45	He	107.913	ug/l	2.8	198853.73	10000	
Ni	60	45	He	111.120	ug/l	3.7	50463.27	10000	
Cu	63	45	He	112.841	ug/l	3.3	138722.33	10000	
Zn	66	115	He	187.505	ug/l	2.3	62856.55	50000	
As	75	115	He	88.455	ug/l	0.5	22087.05	2000	
Se	78	45	He	91.072	ug/l	1.0	2571.53	10000	
Se	78	115	H2	88.726	ug/l	2.2	1401.39	10000	
Sr	88	115	NoGas	99.050	ug/l	1.6	1966529.87	50000	
Mo	95	115	NoGas	93.201	ug/l	2.4	366183.57	10000	
Ag	107	115	NoGas	38.314	ug/l	2.8	430976.04	5000	
Cd	111	115	He	21.070	ug/l	2.5	15394.22	10000	
Sn	118	115	He	103.392	ug/l	2.0	186189.46	10000	
Sb	121	115	NoGas	93.293	ug/l	1.8	969651.11	10000	
Ba	137	165	NoGas	97.635	ug/l	2.2	408860.49	50000	
Tl	205	165	NoGas	95.219	ug/l	1.7	2985507.14	5000	
Pb	208	165	NoGas	95.246	ug/l	2.2	4072757.08	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	35369.99	3.7	58420.39	60.54	70	120	ISTD Failed
Sc	45	NoGas	498198.80	2.0	679566.6	73.31	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	27105.92	4.7	56080.27	48.33	70	120	ISTD Failed
Sc	45	H2	9859.45	1.9	14893.52	66.2	70	120	ISTD Failed
Ge	72	NoGas	153749.04	0.8	209841.59	73.27	70	120	
Ge	72	He	20917.05	3.0	40861.14	51.19	70	120	ISTD Failed
Ge	72	H2	1446.74	5.1	2091.47	69.17	70	120	ISTD Failed
In	115	NoGas	1724083.81	1.8	2229294.33	77.34	70	120	
In	115	He	332831.97	4.2	586109.04	56.79	70	120	ISTD Failed
In	115	H2	164210.41	0.6	213180.49	77.03	70	120	
Tb	159	NoGas	2923306.41	1.7	3574426.19	81.78	70	120	
Tb	159	He	1171312.00	2.2	1552975.29	75.42	70	120	
Tb	159	H2	823354.15	0.4	1013635.35	81.23	70	120	
Ho	165	NoGas	2908753.91	1.6	3507364.22	82.93	70	120	
Ho	165	He	1192949.13	1.4	1591211.17	74.97	70	120	
Ho	165	H2	859420.65	0.6	1056968.25	81.31	70	120	

# Sample Report

**Sample Name** 210601B LCSD  
**File Name** 150SMPL.d  
**Data Path Name** C:\Agilent\ICPMH\1\DATA\210602A.b  
**Acq Time** 06/03/21 3 06:59 AM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** BSK/RedHill  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist  
**Metals**

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	19 192	ug/l	3.7	18670.94	10000	
B	11	45	NoGas	102.546	ug/l	1.6	85399.57	10000	
Na	23	45	He	10786.710	ug/l	1.3	2000105.13	1000000	
Mg	24	45	He	10540.589	ug/l	1.1	1168003.50	1000000	
Al	27	45	He	878.668	ug/l	2.3	58356.75	1000000	
P	31	45	He	771 906	ug/l	4.6	3286 99	500000	
K	39	45	He	1870.644	ug/l	0.3	246939.06	500000	
Ca	40	45	H2	9793.888	ug/l	1.5	570148 19	500000	
Ca	44	45	He	9489.614	ug/l	2.2	65983.47	500000	
Ti	47	45	He	94.225	ug/l	3.0	3509.04	10000	
V	51	45	He	97.368	ug/l	0.6	97903.86	10000	
Cr	52	45	He	100.690	ug/l	1.2	116548.89	10000	
Mn	55	45	He	97.178	ug/l	1.9	94772 01	50000	
Fe	56	45	He	431.677	ug/l	1.2	508593.64	1000000	
Co	59	45	He	106.371	ug/l	2.0	193170.46	10000	
Ni	60	45	He	107.475	ug/l	3.7	48089 94	10000	
Cu	63	45	He	110.451	ug/l	1.9	133839 45	10000	
Zn	66	115	He	178 764	ug/l	1.3	59145.86	50000	
As	75	115	He	84.734	ug/l	1.1	20872 55	2000	
Se	78	45	He	88.890	ug/l	5.4	2475.18	10000	
Se	78	115	H2	89.766	ug/l	2.1	1416.19	10000	
Sr	88	115	NoGas	97.648	ug/l	1.5	1926929.87	50000	
Mo	95	115	NoGas	91 650	ug/l	2.0	357931.87	10000	
Ag	107	115	NoGas	37 816	ug/l	0.5	422848 63	5000	
Cd	111	115	He	20.735	ug/l	1.7	14952.46	10000	
Sn	118	115	He	99.688	ug/l	1.5	177215 68	10000	
Sb	121	115	NoGas	91.170	ug/l	0.2	941849 80	10000	
Ba	137	165	NoGas	96 883	ug/l	2.0	397343 55	50000	
Tl	205	165	NoGas	94.212	ug/l	2.9	2892387.56	5000	
Pb	208	165	NoGas	94 196	ug/l	1.6	3945069.94	50000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	37066 93	2.8	58420 39	63.45	70	120	ISTD Failed
Sc	45	NoGas	493748.48	1.1	679566.6	72.66	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	26701.25	3.4	56080.27	47.61	70	120	ISTD Failed
Sc	45	H2	10279.64	1.6	14893.52	69.02	70	120	ISTD Failed
Ge	72	NoGas	153828.19	0.2	209841.59	73.31	70	120	
Ge	72	He	20579.24	2.9	40861.14	50.36	70	120	ISTD Failed
Ge	72	H2	1553.41	2.8	2091.47	74.27	70	120	
In	115	NoGas	1713268.35	0.2	2229294.33	76.85	70	120	
In	115	He	328318.60	2.1	586109.04	56.02	70	120	ISTD Failed
In	115	H2	164047.47	2.0	213180.49	76.95	70	120	
Tb	159	NoGas	2900791.31	0.9	3574426.19	81.15	70	120	
Tb	159	He	1156573.63	1.1	1552975.29	74.47	70	120	
Tb	159	H2	824126.62	0.5	1013635.35	81.3	70	120	
Ho	165	NoGas	2848945.90	2.2	3507364.22	81.23	70	120	
Ho	165	He	1182910.25	0.8	1591211.17	74.34	70	120	
Ho	165	H2	863805.17	1.4	1056968.25	81.72	70	120	

# Sample Report

**Sample Name** BA32814W09 MS  
**File Name** 153SMPL.d  
**Data Path Name** C:\Agilent\ICPM\H11\DATA\210602A.b  
**Acq Time** 06/03/21 3:28:26 AM  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** RedHill  
**ISTD Ref FileName** 017CALB.d  
**Sample QC Pass/Fial** Pass  
**ISTD QC Pass/Fail** Fail  
**Operator** Chemist\_  
**Metals**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	LDR	QC Flag
Be	9	6	NoGas	47.453	ug/l	2.3	41451.88	10000	
B	11	45	NoGas	245.859	ug/l	1.5	199334.16	10000	
Na	23	45	He	71734.985	ug/l	0.4	12422623.00	1000000	
Mg	24	45	He	44329.003	ug/l	1.0	4600991.83	1000000	
Al	27	45	He	2055.736	ug/l	0.6	127736.58	1000000	
P	31	45	He	1865.588	ug/l	3.3	7406.27	500000	
K	39	45	He	6770.407	ug/l	1.4	804417.25	500000	
Ca	40	45	H2	47373.275	ug/l	2.2	2672557.00	500000	
Ca	44	45	He	42481.444	ug/l	0.8	276647.18	500000	
Ti	47	45	He	226.878	ug/l	0.3	7916.47	10000	
V	51	45	He	263.428	ug/l	0.4	233853.34	10000	
Cr	52	45	He	239.390	ug/l	0.5	259304.21	10000	
Mn	55	45	He	227.595	ug/l	0.8	207901.64	50000	
Fe	56	45	He	956.038	ug/l	0.6	1051527.79	1000000	
Co	59	45	He	245.940	ug/l	0.3	418398.46	10000	
Ni	60	45	He	251.703	ug/l	0.5	105550.61	10000	
Cu	63	45	He	265.423	ug/l	0.3	301246.54	10000	
Zn	66	115	He	419.188	ug/l	0.4	127289.56	50000	
As	75	115	He	209.190	ug/l	0.9	47288.12	2000	
Se	78	45	He	200.774	ug/l	2.2	5192.10	10000	
Se	78	115	H2	209.451	ug/l	1.6	3172.68	10000	
Sr	88	115	NoGas	376.725	ug/l	3.0	6965694.69	50000	
Mo	95	115	NoGas	220.226	ug/l	2.0	805920.72	10000	
Ag	107	115	NoGas	85.027	ug/l	2.0	890912.09	5000	
Cd	111	115	He	48.842	ug/l	1.1	32376.00	10000	
Sn	118	115	He	242.149	ug/l	0.7	395508.58	10000	
Sb	121	115	NoGas	205.619	ug/l	1.9	1989860.44	10000	
Ba	137	165	NoGas	233.294	ug/l	1.5	917145.90	50000	
Tl	205	165	NoGas	213.646	ug/l	1.0	6288428.03	5000	
Pb	208	165	NoGas	211.192	ug/l	1.0	8478448.62	50000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	33285.60	2.4	58420.39	56.98	70	120	ISTD Failed
Sc	45	NoGas	495354.51	1.2	679566.6	72.89	70	120	

# Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	He	25004.15	0.4	56080.27	44.59	70	120	ISTD Failed
Sc	45	H2	9964.13	1.6	14893.52	66.9	70	120	ISTD Failed
Ge	72	NoGas	141157.61	1.4	209841.59	67.27	70	120	ISTD Failed
Ge	72	He	19269.83	1.0	40861.14	47.16	70	120	ISTD Failed
Ge	72	H2	1442.07	4.3	2091.47	68.95	70	120	ISTD Failed
In	115	NoGas	1605916.00	2.2	2229294.33	72.04	70	120	
In	115	He	301743.09	0.8	586109.04	51.48	70	120	ISTD Failed
In	115	H2	157525.07	0.7	213180.49	73.89	70	120	
Tb	159	NoGas	2795026.31	2.0	3574426.19	78.2	70	120	
Tb	159	He	1112561.92	0.5	1552975.29	71.64	70	120	
Tb	159	H2	803073.60	1.2	1013635.35	79.23	70	120	
Ho	165	NoGas	2730533.82	1.2	3507364.22	77.85	70	120	
Ho	165	He	1133193.83	0.5	1591211.17	71.22	70	120	
Ho	165	H2	840036.94	0.4	1056968.25	79.48	70	120	

**METALS**

**Raw Data**

# US EPA Tune Check Report

**Operator Name** Chemist\_Metals  
**Acq/Data Batch** C:\Agilent\ICPMH1\DATA\210602A.b  
**Acq. Date-Time** 06/02/21 8:50:17 AM  
**Report Comment** C:\Agilent\ICPMH1\Report Templates\en\Letter\Tune Report\New and Improved  
**Instrument Name** 200\_8TuneCheckSampleReport.xlsx  
 G3281A JP12101628

[NoGas]

**Sensitivity**

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		7932	79324.56			0.747	5.000
24		26911	269108.75			0.354	5.000
25		3567	35673.87			0.466	5.000
26		4332	43323.23			0.728	5.000
59		66391	663912.44			0.726	5.000
115		185536	1855359.16			0.823	5.000
206		58173	581726.35			1.584	5.000
207		51047	510469.22			1.598	5.000
208		121615	1216147.69			1.625	5.000

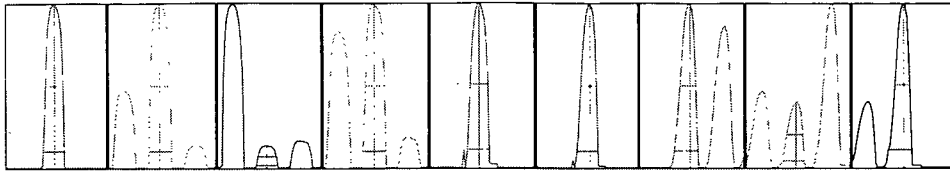
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	7903	7877	7924	7927	8032
24	26837	26909	26849	27074	26886
25	3541	3568	3582	3565	3581
26	4315	4296	4347	4326	4378
59	66351	66310	65789	67138	66368
115	183628	184149	186330	186856	186718
206	56860	57637	58511	58675	59181
207	49963	50516	51221	51505	52029
208	119225	120630	121090	122839	124290

Integration Time [sec] 0.1

Resolution/Axis

# US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	15657.76	9.00	8.90 - 9.10	
24	49989.38	23.95	23.90 - 24.10	
25	6829.68	24.95	24.90 - 25.10	
26	8184.58	25.95	25.90 - 26.10	
59	130147.80	59.00	58.90 - 59.10	
115	402044.66	115.05	114.90 - 115.10	
206	127813.87	206.00	205.90 - 206.10	
207	109766.17	206.95	206.90 - 207.10	
208	274171.76	208.00	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.52	0.624	0.900	
24	0.56	0.633	0.900	
25	0.54	0.634	0.900	
26	0.55	0.660	0.900	
59	0.51	0.638	0.900	
115	0.47	0.627	0.900	
206	0.45	0.674	0.900	
207	0.47	0.650	0.900	
208	0.43	0.672	0.900	

Integration Time [sec]      0.1  
 Acquisition Time [sec]      235  
 Y Axis                              Linear

## Tune Parameters

### Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.91 L/min	Dilution Gas	0.20 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	---
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	---
Sample Depth	8.0 mm	S/C Temp	2 °C		

### Lens Parameters

Extract 1	0.0 V	Omega Lens	13.5 V	Deflect	15.4 V
Extract 2	-140.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-75 V	Cell Exit	-50 V		

### Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
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# US EPA Tune Check Report

He Flow 0.0 mL/min  
H2 Flow 0.0 mL/min

OctP Bias -8.0 V  
OctP RF 150 V

## QP Parameters

Mass Gain 120  
Mass Offset 129

Axis Gain 0.9990  
Axis Offset 0.02

QP Bias -3.0 V

## Hardware Settings

### Torch

Torch H -0.3 mm

Torch V 0.0 mm

### EM

Discriminator 4.7 mV

Analog HV 1818 V

Pulse HV 1456 V

ICP-MS Calibration Standard Prep									
Prepared: 06/01/21					Prepared By (Initials): <u>WD</u>				
Expires: 06/08/21									
1% HNO3 / 1%HCl Prep: 06/01/21					*The high point of the ICAL is used as a P/A tune				
ICP-MS Calibration Standard 4*									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Solution A	Inorganic Ventures	35-APPLTSP-A	200 - 5000	R2-MEB696603-51845	09/04/24	50uL	100mL	1% HNO3 / 1%HCl	100 - 2500
Solution B	Inorganic Ventures	35-APPLTSP-B	4000 - 10,000	R2-MEB696602-51846	09/04/24	50uL			2000 - 5000
Solution C	Inorganic Ventures	35-APPLTSP-C	100 - 200	R2-MEB696601-51847	09/04/24	50uL			50 - 100
Calibration Standards 1,2,3									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference to APPL Prep Date	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
ICP-MS Calib Standard 4	Inorganic Ventures	Calib Standard 1	0.05 - 5.0	Prepared 06/01/21	06/08/21	50uL	50mL	1% HNO3 / 1%HCl	0.05 - 5.0
ICP-MS Calib Standard 4	Inorganic Ventures	Calib Standard 2	0.05 - 5.0			500uL			0.5 - 50
ICP-MS Calib Standard 4	Inorganic Ventures	Calib Standard 3	0.05 - 5.0			25mL			25 - 2500
ICP-MS Low Levels (LLICV)									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/L)	Reference to APPL Prep Date	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Calib Standard 2	Inorganic Ventures	LLICV 0.5 ppb	0.5 - 50	Prepared 06/01/21	06/08/21	5mL	10mL	1% HNO3 / 1%HCl	0.25 - 25
Calib Standard 2	Inorganic Ventures	LLICV 1.0 ppb	0.5 - 50	Prepared 06/01/21	06/08/21	10mL	10mL	1% HNO3 / 1%HCl	0.5 - 50
Calib Standard 3	Inorganic Ventures	LLICV 2.0 ppb	25 - 2500	Prepared 06/01/21	06/08/21	400uL	10mL	1% HNO3 / 1%HCl	1 - 100
Calib Standard 4	Inorganic Ventures	LLICV4.0 ppb	50 - 5000	Prepared 06/01/21	06/08/21	400uL	10mL	1% HNO3 / 1%HCl	2 - 200
ICP-MS ICV (SS)									
Prepared: 06/01/21					Prepared By (Initials): <u>WD</u>				
Expires: 06/08/21									
1% HNO3 / 1%HCl Prep: 06/01/21									
ICP-MS ICV									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/L)	Lot Number - QA Number	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Custom Soln A ICV	CPI	4400-070615RH01-A	50 - 500	10062445-13-52340	11/11/22	25uL	50mL	1% HNO3 / 1%HCl	25 - 1125
Custom Soln B ICV	CPI	4400-070615RH01-B	2500	10062445-14-52341	11/11/22	25uL			1125
ICP-MS Interference Check Solution A									
Prepared: 06/01/21					Prepared By (Initials): <u>WD</u>				
Expires: 06/08/21									
1% HNO3 / 1%HCl Prep: 06/01/21									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Multi Analyte Custom Grade Soln ICSA	Inorganic Ventures	6020ICS-0A-125mL	20 - 1000	P2-MEB687560-51922	02/20/23	1mL (DF2)	10mL	1% HNO3 / 1%HCl	2 - 100
ICP-MS Interference Check Solution AB									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Multi Analyte Custom Grade Soln ICSA	Inorganic Ventures	6020ICS-0A-125mL	20 - 1000	P2-MEB687560-51922	02/20/23	1mL (DF2)	10mL	1% HNO3 / 1%HCl	2-100
Special Mix (Interference)	O2SI	160495-01-01	100	10081266-1-49725	07/13/22	100uL			i

ICP-MS Internal Standards									
Prepared: 05/24/21					Prepared By (Initials): WD				
Expires: 08/22/21									
1% HNO <sub>3</sub> / 1% HCl Prep: 06/01/21									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Scandium	Inorganic Ventures	35-APPLTSP-ISMIX	100	220125110-51634	07/05/22	2.5mL	250mL	1% HNO <sub>3</sub> / 1% HCL	1
Germanium			100						1
Indium			100						1
Terbium			100						1
Holmium			100						1
Triton X-100	VWR	VW3929-2	N/A	46223630	NEA	250uL		0.1% v/v	

ICP-MS Agilent Tune									
Prepared: 05/24/21					Prepared By (Initials): WD				
Expires: 08/22/21									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/L)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
Tuning Solution, 5-25	o2si	160637-01-03	10	19070923-4-81618	05-28/22	20mL	200mL	DI Water	1

ICP-MS EPA Tune									
Prepared: 05/24/21					Prepared By (Initials): WD				
Expires: 05/24/22									
1% HNO <sub>3</sub> / 1% HCl Prep: 06/01/21									
Initial Standard Information					Final Standard Information				
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
Beryllium	Inorganic Ventures	35-APPLTSP-TUNE	10	R2-MEB698993-51923	11/12/24	500uL	50mL	1% HNO <sub>3</sub> / 1% HCL	100
Magnesium									
Cobalt									
Indium									
Lead									

# Metals Digestion Worksheet

Method Name 200.8 11.2 Digestion

Prep Method M2008

Set 210601B

Units mL

Spikes		
Spiked ID 1	LCSW LOT# 10064561-17-52291 Pipette AP-21	
Spiked ID 2	LCSW LOT# 10064561-18-52292	
Spiked ID 3		
Spiked ID 4		
Spiked By	NM	Date: 06/01/21 8:15:00 AM
Witnessed By	NA	Date: 06/01/21 8:15:00 AM

Starting Temp:	SLOT 17 THERM:MT1 86C/85C
Ending Temp:	SLOT 17 88C/87C
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	YES
End Date/Time	06/01/21 14:56

Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1 210601B BIK				50mL	25mL	06/01/21 8:15	equip: Modblock2
2 210601B LCS		200uL	1+2	50mL	25mL	06/01/21 8:15	equip: Modblock2 200.8
3 210601B LCS 2		500uL	1+2	50mL	25mL	06/01/21 8:15	equip: Modblock2 200.7
4 210601B LCSD		200uL	1+2	50mL	25mL	06/01/21 8:15	equip: Modblock2 200.8
5 BA32813	BA32813W09			50mL	25mL	06/01/21 8:15	equip: Modblock2 96222
6 BA32814	BA32814W09			50mL	25mL	06/01/21 8:15	equip: Modblock2 96222
7 BA32814 MS	BA32814W09	500uL	1+2	50mL	25mL	06/01/21 8:15	equip: Modblock2 96222
8 BA32833	BA32833W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
9 BA32834	BA32834W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
10 BA32835	BA32835W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
11 BA32836	BA32836W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
12 BA32837	BA32837W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
13 BA32838	BA32838W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
14 BA32839	BA32839W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
15 BA32840	BA32840W01			50mL	25mL	06/01/21 8:15	equip: Modblock2 96235
16 BA32840 MS	BA32840W01	500uL	1+2	50mL	25mL	06/01/21 8:15	equip: Modblock2
17 BA33513	BA33513W02			50mL	25mL	06/01/21 8:15	equip: Modblock2
18 BA33514	BA33514W02			50mL	25mL	06/01/21 8:15	equip: Modblock2

Solvent and Lot#
1:1 HNO3 2-16-21
1:1 HCL 2-16-21
50mL vessel 00500000021

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	
Modified	06/01/21 7:49:43 AM

Reviewed By:

Date:

## 200.8 Injection Log

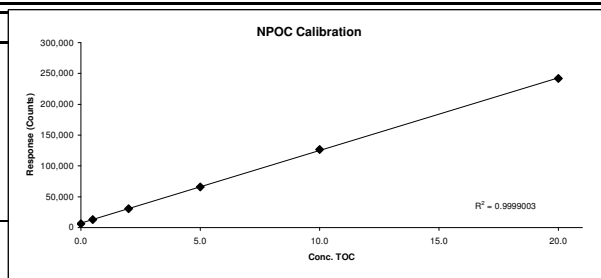
Directory: K:\ICP-MS Megatron\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	02 Jun 2021	10:57	Calibration Blank 06/01/2021		210602A Re	2021.
2	02 Jun 2021	11:04	Standard 1 06/01/2021		210602A Re	2021.
3	02 Jun 2021	11:11	Standard 2 06/01/2021		210602A Re	2021.
4	02 Jun 2021	11:19	Standard 3 06/01/2021		210602A Re	2021.
5	02 Jun 2021	11:26	Standard 4 06/01/2021		210602A Re	2021.
6	02 Jun 2021	11:33	ICV 06/01/2021		210602A Re	2021.
7	02 Jun 2021	11:40	ICB 06/01/2021		210602A Re	2021.
8	02 Jun 2021	11:48	ICB 06/01/2021		210602A Re	2021.
9	02 Jun 2021	12:01	0.5 ppb LLICV 06/01/2021		210602A Re	2021.
10	02 Jun 2021	12:08	1.0 ppb LLICV 06/01/2021		210602A Re	2021.
11	02 Jun 2021	12:15	2.0 ppb LLICV 06/01/2021		210602A Re	2021.
12	02 Jun 2021	12:23	4.0 ppb LLICV 06/01/2021		210602A Re	2021.
13	02 Jun 2021	12:30	20 ppb LLICV 06/01/2021		210602A Re	2021.
14	02 Jun 2021	12:37	ICSA 06/01/2021		210602A Re	2021.
15	02 Jun 2021	12:44	ICSAB 06/01/2021		210602A Re	2021.
16	03 Jun 2021	02:38	CCV 210601		210602A Re	1.
17	03 Jun 2021	02:45	CCB 210602		210602A Re	1.
18	03 Jun 2021	02:52	210601B BLK		210602A Re	1.
19	03 Jun 2021	02:59	210601B LCS		210602A Re	1.
20	03 Jun 2021	03:06	210601B LCSD		210602A Re	1.
21	03 Jun 2021	03:14	BA32813W09		210602A Re	1.
22	03 Jun 2021	03:21	BA32814W09		210602A Re	1.
23	03 Jun 2021	03:28	BA32814W09 MS		210602A Re	1.
24	03 Jun 2021	05:44	CCV 210601		210602A Re	1.
25	03 Jun 2021	05:51	CCB 210602		210602A Re	1.

**INORGANIC ANALYSIS**  
**Calibration and Raw Data**

Method: WetChem	TOTAL ORGANIC CARBON	Instrument: Tic Toc
Analyte: DOC	Units mg/L	
Analyst: EA	QCG: 210521A	
	Final Volume: 40mL	

Date	Time	Appl ID	[TOC]	Raw	% Recovery
06/11/20	0:01	QC blank	0.00	6172	
06/11/20	0:41	Ical 1	0.50	13120	
06/11/20	1:19	Ical 2	2.00	30622	
06/11/20	1:58	Ical 3	5.00	66151	
06/11/20	2:37	Ical 4	10.00	126505	
06/11/20	3:16	Ical 5	20.00	241922	
06/11/20	18:06	ICB	0.00	6336	
06/11/20	18:46	ICV	4.99	65817	99.8%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2021-05-21	09:53 AM	QCB	1	6774	40mL	0.000	0	0.00	0.00		
2021-05-21	10:32 AM	CCV	1	66498	40mL	0.000	5.07	5.07	0.50	5.00	101.4%
2021-05-21	11:12 AM	CCB	1	6126	40mL	0.000	0	0.00	0.00		
2021-05-21	11:51 AM	LCS	1	66330	40mL	0.000	5.055	5.06	0.02	5.00	101.1%
2021-05-21	12:31 PM	LCS	1	66289	40mL	0.000	5.051	5.05	0.07	5.00	101.0%
2021-05-21	02:28 PM	BA32813W06	1	10399	40mL	0.000	0.739	0.74	0.02		
2021-05-21	03:06 PM	BA32813W05 Dup	1	8880	40mL	0.000	0.61	0.61	0.04		
2021-05-21	03:43 PM	BA32813W04 MS	1	69413	40mL	0.000	5.748	5.75	0.17		
2021-05-21	04:21 PM	BA32813W04 MSD	1	68879	40mL	0.000	5.703	5.70	0.08		
2021-05-21	04:58 PM	BA32814W05	1	4951	40mL	0.000	0.277	0.28	0.02		
2021-05-21	05:35 PM	CCV	1	66469	40mL	0.000	5.067	5.07	0.00	5.00	101.3%
2021-05-21	06:15 PM	CCB	1	5848	40mL	0.000	0	0.00	0.00		

Name of Final Standard TOC Calibration Curve  
 Prep Date 06/11/20  
 Exp Date 06/11/21

Prep'd By (Initials) AR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	20 uL	40 mL	DI Water	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	100 uL	40 mL	DI Water	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	250 uL	40 mL	DI Water	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	500 uL	40 mL	DI Water	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	1000 uL	40 mL	DI Water	20 ppm

Name of Final Standard ICV (TOC)  
 Prep Date 06/11/20  
 Exp Date 06/11/21

Prep'd By (Initials) AR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	6465171-49409	06/30/21	500 uL	40mL	DI Water	10 ppm

Name of Final Standard CCV (TOC)  
 Prep Date See Data  
 Exp Date 1 year

Prep'd By (Initials) AR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC LCS/LCSD  
 Prep Date See Data  
 Exp Date 1 year

Prep'd By (Initials) AR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC MS/MSD  
 Prep Date See Data  
 Exp Date 1 year

Prep'd By (Initials) AR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	6465171-49409	06/30/21	200 uL	40 mL	sample	5 ppm